CPC COOPERATIVE PATENT CLASSIFICATION

H ELECTRICITY

(NOTE omitted)

H03 ELECTRONIC CIRCUITRY

H03F AMPLIFIERS

NOTE

This subclass covers:

- linear amplification, there being linear relationship between the amplitudes of input and output, and the output having substantially the same waveform as the input;
- dielectric amplifiers, magnetic amplifiers, and parametric amplifiers when used as oscillators or frequency-changers;
- · constructions of active elements of dielectric amplifiers and parametric amplifiers if no provision exists elsewhere.

WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

H03F 1/44	covered by	H03F 1/42
H03F 1/46	covered by	H03F 1/42
H03F 3/18	covered by	H03F 3/00
H03F 3/32	covered by	H03F 3/30
H03F 7/06	covered by	H03F 7/00

2. {In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}

1/00	Details of amplifiers with only discharge tubes,	1/0294	• • • {using vector summing of two or more constant
	only semiconductor devices or only unspecified		amplitude phase-modulated signals}
	devices as amplifying elements	1/04	in discharge-tube amplifiers
1/02	 Modifications of amplifiers to raise the efficiency, e.g. gliding Class A stages, use of an auxiliary oscillation 	1/06	 to raise the efficiency of amplifying modulated radio frequency waves; to raise the efficiency of amplifiers acting also as modulators
1/0205	• • {in transistor amplifiers}		{(modulation <u>H03C</u>)}
1/0211	• • { with control of the supply voltage or current}	1/07	Doherty-type amplifiers
1/0216	{Continuous control}	1/08	 Modifications of amplifiers to reduce detrimental
1/0222	• • • • {by using a signal derived from the input signal}		influences of internal impedances of amplifying elements (wide-band amplifiers with inter-stage
1/0227	• • • • {using supply converters}		coupling networks incorporating these impedances
1/0233	• • • • {by using a signal derived from the output		<u>H03F 1/42</u>)
	signal, e.g. bootstrapping the voltage supply }	1/083	• • {in transistor amplifiers (<u>H03F 1/10</u> - <u>H03F 1/22</u> take precedence)}
1/0238	• • • • • {using supply converters}	1/086	• • • {with FET's}
1/0244	{Stepped control}	1/10	• • by use of amplifying elements with multiple
1/025	{by using a signal derived from the input		electrode connections
	signal}	1/12	• • by use of attenuating means {(attenuators <u>H03G</u>)}
1/0255	{by using a signal derived from the output	1/13	• • • in discharge-tube amplifiers
	signal}	1/14	• • by use of neutralising means
1/0261	• • • { with control of the polarisation voltage or	1/16	in discharge-tube amplifiers
	current, e.g. gliding Class A}	1/18	• • by use of distributed coupling {, i.e. distributed
1/0266	• • • {by using a signal derived from the input signal}		amplifiers (distributed amplifiers using coupling networks with distributed constants <u>H03F 3/605</u>)}
1/0272	• • • {by using a signal derived from the output	1/20	• • • in discharge-tube amplifiers
	signal}	1/22	by use of cascode coupling, i.e. earthed cathode
1/0277	• • • {Selecting one or more amplifiers from a plurality of amplifiers}		or emitter stage followed by earthed grid or base stage respectively
1/0283	• • • {Reducing the number of DC-current paths}	1/223	• • { with MOSFET's }
1/0288	{using a main and one or several auxiliary	1/226	• • • {with junction-FET's}
	peaking amplifiers whereby the load is	1/24	in discharge-tube amplifiers
	connected to the main amplifier using an	1/26	Modifications of amplifiers to reduce influence of
	impedance inverter, e.g. Doherty amplifiers}		noise generated by amplifying elements

1483 (with field-effect transistors)				
of variations of templatines to reduce influence of variations of temperature or supply voltage for other physical parameters (in differential amplifiers 11052 1522 1522 1523 1524 1523 1524 1525 1	1/28			
of variations of temperature or supply voltage for other physical parameters (in differential amplifiers properties) in MOSFET amplifiers (H03F 1303, H03F	1/20			•
other physical parameters (in differential amplifiers H037 343-479) 1/301	1/30			
HOSE 345479 1301 (in MOSEET amplifiers (HOSE 1/303.) HOSE 1/305 HOSE 1/308 to precedence) 1302 (in bipolar transistor amplifiers (HOSE 1/305.) HOSE 1/305 HOSE 1/307 to deep recedence) 1303 (in sing a switching device (HOSE 1/305.) HOSE 1/305 HOSE 1/307 to deep recedence) 1304 (in dusing a diptile means) 1305 (in case of writching on or off of a power supply) 1306 (in case of writching on or off of a power supply) 1308 (in case of writching on or off of a power supply) 1309 (in junction-PET amplifiers (HOSE 1/303.) 1308 (using MOSEET) 1309 (using MOSEET) 1320 (using pull-dimitiers to reduce non-linear distortion (by negative feedback HOSE 1/321 takes precedence) 1322 (using in loop for error extraction and another loop for error extraction and mother loop for error extraction and another loop for error extraction and error loop for error extraction and another loop for error extraction and error loop for error extraction and er			1/52	
1301 in MOSFET amplifiers (103F 1/303, H03F 1/305, H03F 1/305 the 1/305 to in bipolar transistor amplifiers (103F 1/305, H03F 1/305 the 1/307 take precedence) 1/303 is single switching device (H03F 1/305, H03F 3/305 the 1/303 the transistor amplifiers (H03F 1/305, H03F 3/305 the 1/303 the transistor amplifiers (H03F 1/305, H03F 3/305 the 1/305 to in case of switching on or off of a power supply) 1/305 in case of switching on or off of a power supply 1/305 in case of switching on or off of a power supply 1/305 in case of switching on or off of a power supply 1/305 in case of switching on or off of a power supply 1/305 in protection-H7T amplifiers (H10SF 1/305) 1/305 in single control (H10SF 1/305) in single control (H10SF 1/305) in single control (H10SF 1/304) in single ended push-pull amplifiers) 1/305 in single ended push-pull amplifiers 1/3222 (using feed-fower (H03F 1/321 It also precedence)) 1/3222 (using feed-fower (H03F 1/321 It also precedence)) 1/3223 (using feed-fower (H03F 1/321 It also precedence) 1/3224 (using feed-fower (H03F 1/321 It also precedence) 1/3225 (using feed-fower precedence) 1/3225 (using feed-fower precedence) 1/3226 (using feed-fower				
H03F 1305, H03F 1308 tabe precedence) 1323 H03F 1305, H03F 1305 table precedence) 1526 H03F 1305, H03F 1305, H03F 338 tabe precedence) 1526 H03F 1305, H03F 1305, H03F 1309 tabe precedence) 1544 Protection of filaments 1548 H03F 1305, H03F 1309 tabe precedence) 1549 H03F 1305, H03F 1309 tabe precedence) 1540 H03F 1308 H03F 1309 tabe precedence) 1540 H03F 1322 H03F	1/301			
1/302 (in bipolar transistor amplifiers (1603: 1/205. H03F 1/205. H03F 1/205 the precedence) 1/303 (using a switching device (H03F 1/205. H03F 3/205. H03F 3/205. H03F 1/205. H03F 3/205. H03F 1/205. H0			1/523	
Justing a switching device (HOTE 1/205, HOTE 3/05, HO	1/302	• • {in bipolar transistor amplifiers (H03F 1/303,		
H03F 3005. H03F 3/38 uke precedence) 1/304 • (in case of switching on or off of a power supply) 1/305 • (in case of switching on or off of a power supply) 1/306 • (in junction-FET amplifiers (H03F 1/303. 1) 1/344 1/307 • (lin push-pull amplifiers) 1/308 • (using MOSFET) 1/309 • (using pullifiers) 1/309 • (using innetion-FET) 1/329 • (using innetion-FET) 1/320 • (using innetion-FET) 1/321 • (using innetion-FET) 1/3221 • (in field-effect transistor amplifiers) 1/3217 • (in field-effect transistor amplifiers) 1/3223 • (using feed-forward (H03F 1/3211 takes precedence)) 1/3224 • (using allog for error extraction and another loop for error subtraction) 1/3225 • (using allog for error extraction and another loop for error subtraction) 1/3226 • (using allog feed-forward (H03F 1/3211 takes precedence)) 1/3227 • (using allog fine feed-feed) 1/3228 • (using multiple parallel paths between input and output H03F 1/3224 take precedence)) 1/3258 • (using another input and output H03F 1/3224 take precedence)) 1/3264 • (in audio amplifiers) 1/3275 • (using another input and output H03F 1/3224 take precedence)) 1/3286 • (based on polynomial terms) 1/3296 • (using the noninearity inherent to components, e.g., a diode) 1/3287 • (using the noninearity inherent to components, e.g., a diode) 1/3288 • (Locompensate phase and the amplitude of the amplitude) 1/3294 • (Acting on the phase and the amplitude) 1/3295 • (Acting on the phase and the amplitude) 1/3296 • (Acting on the phase and the amplitude) 1/3297 • (In field-effect devices (H03F 1/32) H03F 1/30 H03F 1/			1/526	• • {protecting by using redundant amplifiers}
1,305 (and using digital means) 1,542 (Replacing by standby devices) 1,306 (in iunction-FET amplifiers (H03F 1/303, 103F 1/309 take precedence)) 1,544 (Protection of filaments) 1,545 (Delaying application of anode power supply) with respect to application of filaments heating power supply) 1,548 (Delaying application of anode power supply) with respect to application of filaments heating power supply) 1,548 (Protection of anode or grid circuit against overload) 1,549 (Protection of anode or grid circuit against overload) 1,549 (Protection of anode or grid circuit against overload) 1,549 (Protection of mode or grid circuit against overload) (in inferential amplifiers) (in inferential amplifiers) (in ingle ended post-pull amplifiers) (in single ended post-pull amplifiers) (using gededors obstruction) (using prediotrion circuits (H03F 1/321) takes precedence) (using prediotrion circuits (H03F 1/321) take precedence) (using prediotrion circuits (H03F 1/321) take precedence) (using prediotrion circuits (H03F 1/324) take precedence) (using gendorion circuits (H03F 1/324) take precedence) (using gendorion circuits (H03F 1/324) take precedence) (using gendorion circuits (H03F 1/324) take precedence) (using dead caching on predistortion circuits (H03F 1/324) take precedence) (using the molitorion circuits (H03F 1/324) take precedence)	1/303		1/54	
1/305 . (in case of switching on or off of a power supply) 1/544 . (Protection of filaments) 1/306 . (in junction-FET amplifiers (H03F 1/303, 1605 1/309 take precedence)) 1/307 . ((in push-pull amplifiers) 1/308 . ((using Modifications of amplifiers) 1/329 . ((using iunction-FET) 1/329 . ((in field-effect transistor amplifiers) 1/3205 . ((in field-effect transistor amplifiers) 1/3211 . ((in differential amplifiers) 1/3211 . ((in differential amplifiers) 1/3217 . ((in single ended posh-pull amplifiers) 1/3221 . ((in single ended posh-pull amplifiers) 1/3223 . ((using feeld-orward [H03F 1/324] takes precedence)) 1/3224 . ((using a pilot signal) 1/3245 ((using a pilot signal) 1/3246 ((using a pilot signal) 1/3247 ((using a pilot signal) 1/3247 ((using a pilot signal) 1/3248 ((using a milot signal) 1/3249 ((using a milot signal) 1/3249 ((using a milot signal) 1/3240 ((using a milot signal) 1/3240 ((using a milot signal) 1/3241 ((using a milot signal) ((using a milot signal) ((using a milot signal) ((using milot or output impedances, not otherwise provided for or output impedances, not otherwise provided for output impedances, not otherwis	1/201	The state of the s		
Im junction-PET amplifiers (H03F 1/303, H37F 1/305 H03F 1/305 H03F 1/306 H0		,		
H03F1/305 (in push-pull amplifiers) 1/308 (using MOSFET) 1/309 (using mothertal mapplifiers) 1/320 . (using innetion-FET) 1/321 Modifications of amplifiers to reduce non-linear distortion (by negative feedback H03F1/34) 1/3205 . (in field-effect transistor amplifiers) 1/3217 . (in field-effect transistor amplifiers) 1/3218 . (using feed-foward (H03F1/34) 1/3223 . (using feed-foward (H03F1/321) takes precedence) 1/3229 . (using a loop for error extraction and another loop for error subtraction) 1/3234 . (using predistortion circuits (H03F1/321) takes precedence) 1/3241 . (using predistortion circuits (H03F1/321) takes precedence) 1/3252 . (using a loop for predistortion circuits (H03F1/3226) takes precedence) 1/3258 . (based on polynomial terms) 1/3258 . (based on polynomial terms) 1/3264 . (in audio amplifiers) 1/3265 . (tin audio amplifiers) 1/3266 . (using multiple parallel paths between input and output (H03F1/3228, H03F1/3282, H03F1/3282) 1/3267 . (to emulate discharge tube amplifier 1/3268 . (to compensate phase shift as a function of the amplitude) 1/3288 . (to compensate phase shift as a function of the amplitude) 1/3289 . (Acting on the real and imaginary components of the input signal) 1/3280 . (to compensate phase shift as a function of the amplitude) 1/3294 . (Acting on the real and imaginary components of the input signal) 1/3287 . (to go the cedeback (H03F1/02 +H03F1/32) 1/3288 . (to compensate phase shift as a function of the amplitude) 1/3294 . (Acting on the real and imaginary components of the input signal) 1/3295 . (using phother circuit arrangements with or without positive feedback circuit arrangements with or without positive feedback circuit arrangements with or negative feedback circuit arrangements without negative feedback place the amplifiers 1/3296 . (in discharge-tube amplifiers) 1/3297 . (using transformers) 1/3298 . (to compensate phas				
1308 (using MOSFET) 1/548 [Protection of anode or grid circuit against overload] 1/548 [Protection of anode or grid circuit against overload] 1/548 [Protection of anode or grid circuit against overload] 1/548 [Protection of anode or grid circuit against overload] 1/548 [Protection of anode or grid circuit against overload] 1/548 [Protection of anode or grid circuit against overload] 1/548 [Protection of anode or grid circuit against overload] 1/548 [Protection of anode or grid circuit against overload] [Protection of anode or grid circuit against overload] [Protection of anode or grid circuit against overload]	1/306		1/546	
1/308 (using MONFET) 1/348	1/307			
1/320 [using junction-FET]			1/5/19	
Modifications of amplifiers to reduce non-linear distortion (by negative feedback HQ3F 1/34) 1/3205 (in field-effect transistor amplifiers) 1/3211 (in differential amplifiers) 1/3211 (in differential amplifiers) 1/3212 (in single ended push-pull amplifiers) 1/3213 (in single ended push-pull amplifiers) 1/3213 (using feed-forward (HQ3F 1/3211 takes precedence) 1/3229 (using feed-forward (HQ3F 1/3211 takes precedence) 1/3235 (using predistortion circuits (HQ3F 1/3211 takes precedence) 1/3241 (using predistortion circuits (HQ3F 1/3211 takes precedence) 1/3241 (using predistortion circuits (HQ3F 1/3211 takes precedence) 1/3255 (using medistortion circuits (HQ3F 1/3258 takes precedence)) 1/3256 takes precedence) 1/3256 takes precedence) 1/3256 takes precedence) 1/3256 takes precedence) 1/326 takes precedence) 1/326 takes precedence) 1/327 (using multiple parallel paths between input and output (HQ3F 1/3258, HQ3F 1/3282, HQ3F 1/3294 take precedence)) 1/326 takes precedence) 1/327 (to emulate discharge tube amplifiers deharcateristics) 1/326 takes precedence) 1/327 (to emulate discharge tube amplifiers deharcateristics) 1/328 (Acting on the phase and the amplitude of the imput signal) 1/328 (Acting on the real and imaginary components of the imput signal) 1/328 (Acting on the real and imaginary components of the imput signal) 1/329 (Acting on the real and imaginary components of the imput signal) 1/329 (Acting on the real and imaginary components of the imput signal) 1/329 (Acting on the real and imaginary components of the imput signal) 1/329 (Acting on the real and imaginary components of the imput signal) 1/329 (Acting on the real and imaginary components of the imput signal) 1/329 (Acting on the real and imaginary components of the imput signal) 1/329 (Acting on the real and imaginary components of the imput signal) 1/329 (Acting on the real and imaginary components of the imput signal) 1/329 (1/340	
distortion (by negative feedback H03F 1/34) 1/3217 . {in field-effect transistor amplifiers} 1/3218 . {in field-effect transistor amplifiers} 1/3219 . {in single ended push-pull amplifiers} 1/3229 . {using feed-froward (H03F 1/3211 takes precedence)} 1/3229 . {using a loop for error extraction and another loop for error subtraction} 1/3219 . {using a pilot signal} 1/3241 . {using peedback acting on predistortion circuits (H03F 1/3211 take precedence)} 1/3242 . {using peedback acting on predistortion circuits (H03F 1/32128, H03F 1/328, H03F 1/35, H			1/56	,
1/3205 (in field-effect transistor amplifiers) 1/3211 (in differential amplifiers) 1/3217 (in single ended push-pull amplifiers) 1/3217 (using feed-forward (Ho3E 1/3211 takes precedence) 1/3229 (using a loop for error extraction and another loop for error subtraction) 1/3235 (using predistortion circuits (Ho3E 1/3211, take precedence) 1/3241 (using predistortion circuits (Ho3E 1/3211, take precedence) 1/3242 (using feed-back acting on predistortion circuits (Ho3E 1/326, Ho3E 1/326) 1/3264 (using feed-back acting on predistortion circuits (Ho3E 1/326, Ho3E 1/328) 1/3252 (using feed-back acting on predistortion circuits (Ho3E 1/328, Ho3E 1/328) 1/3252 (using feed-back acting on predistortion circuits (Ho3E 1/328, Ho3E 1/328) 1/3253 (using feed-back acting on predistortion circuits (Ho3E 1/328, Ho3E 1/328) 1/3264 (using feed-back acting on predistortion circuits amplifiers (Ho3E 3/38, Ho3E 1/328) (using switched capacitors, e.g., dynamic amplifiers) 1/3264 (in audio amplifiers) 1/328 (base precedence) (using dedback acting on predistortion circuits amplifiers (Ho3E 3/38, Ho3E 1/328) (using the monimearity inherent to components, e.g., a diode) (in audio amplifiers) 1/328 (using the nonlinearity inherent to components, e.g., a diode) (using dedback circuit) inherent to components, e.g., a diode) (using dedback circuit) inherent to components of the amplitude) 1/3284 (Acting on the phase and the amplitude of the input signal) 1/328 (Acting on the real and imaginary components of the input signal) 1/328 (Acting on the real and imaginary components of the input signal) 1/328 (Acting on the real and imaginary components of the input signal) 1/328 (Acting on the real and imaginary components of the input signal) 1/328 (Acting on the real and imaginary components of the input signal) 1/328 (Acting on the real and imaginary components of the input signal) 1/328 (In field-effect deviaces) 1/328 (In field-effect dev	1,02		1,00	
1/3217 (in single ended push-pull amplifiers) 1/3223 . (using feed-forward (H03F 1/3211 takes precedence)) 1/3229 (using a pilot signal) 1/3235 (using a pilot signal) 1/3241 . (using predistorrion circuits (H03F 1/3211 take precedence) 1/3241 . (using predistorrion circuits (H03F 1/321 take precedence)) 1/3247 (using feed-back acting on predistorrion circuits (H03F 1/3224 take precedence)) 1/3250 (using feed-back acting on predistorrion circuits (H03F 1/3294 take precedence)) 1/3252 (using multiple parallel paths between input and output (H03F 1/3258, H03F 1/3282, H03F 1/3294 take precedence)) 3/04 with semiconductor devices only 1/3258 (based on polynomial terms) 3/06 using hole storage effect using hole storage effect using hole storage effect (in inadio amplifiers) 3/08 (using the nonlinearity inherent to components, e.g. a diode) (using the nonlinearity inherent to components, e.g. a diode) (using the nonlinearity inherent to components, e.g. a diode) (using the nonlinearity inherent to components, e.g. a diode) (using the nonlinearity inherent to components, e.g. a diode) (using the nonlinearity inherent to components, e.g. a diode) (using the nonlinearity inherent to components, e.g. a diode) (using the nonlinearity inherent to components, e.g. a diode) (using the nonlinearity inherent to components, e.g. a diode) (using the nonlinearity inherent to components, e.g. a diode) (using the storage effect (using the storage effect using hole storage effect (using the nonlinearity inherent to components, e.g. a diode) (using the nonlinearity inherent to components, e.g. a (using the storage effect (using the nonlinearity inherent to components, e.g. a (using the precedence) (using the storage effect (using the storage effect (using the precedence) (using the original type and the amplitude)	1/3205		1/565	
1/3217 (in single ended push-pull amplifiers) 1/3228 (using a loop for error extraction and another loop for error subtraction) 1/3235 (using a pilot signal) 1/3235 (using a pilot signal) 1/3241 (using feedback acting on predistortion circuits (H03F 1/3211 take precedence)) 1/3247 (using feedback acting on predistortion circuits (H03F 1/3224 takes precedence)) 1/3248 (using multiple parallel paths between input and output (H03F 1/328, H03F 1/3282, H03F 1/3294 take precedence)) 1/3252 (using multiple parallel paths between input and output (H03F 1/328, H03F 1/3282, H03F 1/3294 take precedence)) 1/3264 (in audio amplifiers) 1/3275 (to emulate discharge tube amplifier characteristics) 1/3276 (using the nonlinearity inherent to components, e.g., a diode) 1/3281 (acting on the phase and the amplitude of the input signal) 1/3282 (Acting on the phase and the amplitude of the amplitide) 1/3294 (Acting on the phase shift as a function of the numptisignal) 1/3294 (Acting on the peace and inhered without positive feedback (H03F 1/02 - H03F 1/30, H03F 1/38 + H03F 1/30, H03F 1/38 - H03F 1/30, H03F 1/35 1/35 1/35 1/35 1/35 1/35 1/35 1/35	1/3211	The state of the s	2/00	
1/3229 . (using leed-forward (H03F 1/321) takes precedence) 1/3229 . (using a plot signal) 1/3235 (using a plot signal) 1/3241 . (using predistortion circuits (H03F 1/3211, H03F 1/3264 takes precedence)) 1/3247 (using feedback acting on predistortion circuits (H03F 1/3264 takes precedence)) 1/3252 (using multiple parallel paths between input and output (H03F 1/3284, H03F 1/3282, H03F 1/3294 take precedence)) 1/3258 (based on polynomial terms) 3/06 1/3264 (in audio amplifiers) 3/08 (at maudic amplifiers)	1/3217	• • {in single ended push-pull amplifiers}	3/00	
1/3229 (tusing a loop for error extraction and another loop for error subtraction 1/3235 (tusing a pilot signal) 1/3241 . (using predistortion circuits (H03F 1/3211, H03F 1/3212) take precedence) 1/3247 (tusing predistortion circuits (H03F 1/3211, H03F 1/3264 takes precedence)) 1/3252 . (using multiple parallel paths between input and output (H03F 1/3288, H03F 1/3282, H03F 1/3294 take precedence)) 3/04 with semiconductor devices only 1/3258 (based on polynomial terms 3/05 3/05 with semiconductor devices only 1/327 (to emulate discharge tube amplifier 3/082 (atting on the phase and the amplitude) 1/3282 (Acting on the pracedence) 3/14 with diddes ((parametric amplifiers H03F 3/085) 1/3294 (Acting on the real and imaginary components of the input signal) 1/33 Negative-feedback (H03F 1/02 - H03F 1/30 H03F 3/194 (H03F 1/32 - H03F 3/194 (H03F 3/195 takes precedence) 3/19 with semiconductor devices only 1/36 (in field-effect transistor amplifiers 3/195 take precedence) 3/193 (using hybrid or directional couplers) 3/193 (using hybrid or directional couplers) 3/194 (in field-effect transistor amplifiers 3/193 (using transformers) 3/194 (using stransformers) 3/194 (using transformers) 3/194 (using transformers) 3/195 takes precedence) 3/193 (using transformers) 3/194	1/3223	• • {using feed-forward (<u>H03F 1/3211</u> takes		
loop for error subtraction				NOTE
1/3235 (using a pilot signal) (Insi Note corresponds to IPC Note (1) relating to H03F 3/02 - H03F 3/189.) (Insi Note corresponds to IPC Note (1) relating to H03F 3/02 - H03F 3/189.) (Insi Note corresponds to IPC Note (1) relating to H03F 3/02 - H03F 3/189.) (Insi Note corresponds to IPC Note (1) relating to H03F 3/02 - H03F 3/189.) (Insi Note corresponds to IPC Note (1) relating to H03F 3/02 - H03F 3/189.) (Insi Note corresponds to IPC Note (1) relating to H03F 3/02 - H03F 3/189.) (Insi Note corresponds to IPC Note (1) relating to H03F 3/02 - H03F 3/189.) (Insi Note corresponds to IPC Note (1) relating to H03F 3/02 - H03F 3/189.) (Insi Note corresponds to IPC Note (1) relating to H03F 3/02 - H03F 3/189.) (Insi Note corresponds to IPC Note (1) relating to H03F 3/02 - H03F 3/189.) (Insi Note corresponds to IPC Note (1) relating to H03F 3/02 - H03F 3/189.) (Insi Note corresponds to IPC Note (1) relating to H03F 3/02 - H03F 3/189.) (Insi Note corresponds to IPC Note (1) relating to H03F 3/02 - H03F 3/189.) (Insi Note corresponds to IPC Note (1) relating to H03F 3/02 - H03F 3/189.) (Insi Note corresponds to IPC Note (1) relating to H03F 3/02 - H03F 3/189.) (Insi Note corresponds to IPC Note (1) relating to H03F 3/02 - H03F 3/189.) (Insi Note corresponds to IPC Note (1) relating to H03F 3/189. (Insi Note corresponds to IPC Note (1) relating to H03F 3/189. (Insi Note corresponds to IPC Note (1) relating to H03F 3/189. (Insi Note corresponds to IPC Note (1) relating to H03F 3/189. (Insi Note corresponds to IPC Note (1) relating to H03F 3/189. (Insi Note corresponds to IPC Note (1) relating to H03F 3/189.} (Insi Note corresponds to IPC Note (1) relating to H03F 3/189 (Insi Note corresponds to IPC Note (1) relating to H03F 3/189 (Insi Note corresponds to IPC Note (1) relating to H03F 3/189 (Insi Note corresponds to IPC Note (1) relating to H03F 3/189 (Insi Note Corresponds to IPC Note (1) relating to H03F 3/189 (Insi Note Corresponds to IPC Note (1) relati	1/3229			Groups <u>H03F 3/20</u> - <u>H03F 3/72</u> take precedence
1/3241 . (using predistortion circuits (H03F 1/3211, H03F 1/3217 take precedence))		The state of the s		over groups <u>H03F 3/02</u> - <u>H03F 3/189</u> .
H03F 1/3217 take precedence				{This Note corresponds to IPC Note (1) relating to
1/3247 (using feedback acting on predistortion circuits (HO3F 1/3264 takes precedence) 1/3252 (using multiple parallel paths between input and output (HO3F 1/3258, HO3F 1/3282, HO3F 1/3294 take precedence) 1/3268 (based on polynomial terms) 3/06	1/3241			<u>H03F 3/02</u> - <u>H03F 3/189</u> .}
1/3252 (using multiple parallel paths between input and output (H03F 1/3258, H03F 1/3282, H03F 1/3294 take precedence) 3/04 with tubes only	1/32/17		3/005	Jusing switched capacitors, e.g. dynamic amplifiers:
1/3252 (using multiple parallel paths between input and output (H03F 1/3258, H03F 1/3282, H03F 1/3294 take precedence) 3/02 with tubes only with tubes only 1/3258 (based on polynomial terms) 3/06 using hole storage effect 1/3264 (in audio amplifiers) 3/08 controlled by light 1/327 (to emulate discharge tube amplifier characteristics) 3/085 (with FET's (H03F 3/085 takes precedence)) 1/3276 (using the nonlinearity inherent to components e.g. a diode) (Acting on the phase and the amplitude of the input signal) 3/12 (Acting on the phase shift as a function of the amplitude) (acting on the real and imaginary components of the input signal) 3/16 (Acting on the real and imaginary components of the input signal) 3/16 (acting on the real and imaginary components of the input signal) 3/16 (acting on the real and imaginary components of the input signal) 3/16 (acting on the real and imaginary components of the input signal) 3/16 (acting on the real and imaginary components of the input signal) 3/16 (acting on the real and imaginary components of the input signal) 3/16 (acting on the real and imaginary components of the input signal) 3/16 (acting on the real and imaginary components of the input signal) 3/16 (acting on the real and imaginary components of the input signal) 3/18 (acting on the real and imaginary components of the input signal) 3/18 (acting on the real and imaginary components of the input signal) 3/18 (acting on the real and imaginary components of the input signal) 3/18 (acting on the real and imaginary components of the input signal) 3/18 (acting on the real and imaginary components of the input signal) 3/18 (acting on the real and imaginary components of the input signal) 3/18 (acting on the real and imaginary components of the input signal) 3/18 (acting on the real and	1/3247		3/003	
and output (H03F 1/3258, H03F 1/3282. H03F 1/3294 take precedence) 1/3258 (based on polynomial terms) 1/3264 (in audio amplifiers) 1/327 (to emulate discharge tube amplifier characteristics) 1/328 (using the nonlinearity inherent to components, e.g. a diode) 1/3282 (Acting on the phase and the amplitude of the input signal) 1/3288 (to compensate phase shift as a function of the amplitude) 1/3294 (Acting on the real and imaginary components of the input signal) 1/3394 (Acting on the real and imaginary components of the input signal) 1/340 (asing the real and imaginary components of the input signal) 1/341 . Negative-feedback-circuit arrangements with or without positive feedback (H03F 1/02 + H03F 1/30, H03F 1/38 + H03F 1/50, H03F 3/50 take precedence (; for rejection of common mode signals H03F 3/45479) 1/342 . (using thybrid or directional couplers) 1/343 . (using transformers) 1/344 . (using transformers) 1/345 . (using transformers) 1/346 . in discharge-tube amplifiers 1/347 . (using transformers) 1/348 . Positive-feedback circuit arrangements without negative feedback circuit arrangements without negative feedba	1/3252			
1/3258			3/02	
1/3264		H03F 1/3294 take precedence)}	3/04	 with semiconductor devices only
1/327 { to emulate discharge tube amplifier characteristics }	1/3258	• • {based on polynomial terms}	3/06	using hole storage effect
characteristics} 1/3276 {using the nonlinearity inherent to components, e.g. a diode} 1/3287 {using the nonlinearity inherent to components, e.g. a diode} 1/3288 {acting on the phase and the amplitude of the input signal} 1/3288 {to compensate phase shift as a function of the amplitude} 1/3294 {acting on the real and imaginary components of the input signal} 1/3294 {acting on the real and imaginary components of the input signal} 1/330 in discharge-tube amplifiers 1/341 . Negative-feedback-circuit arrangements with or without positive feedback (H03F 1/02 - H03F 1/30, H03F 1/38 - H03F 1/50, H03F 3/50 take precedence { : for rejection of common mode signals H03F 3/45479} 1/342 . { in field-effect transistor amplifiers} 1/343 . { using phybrid or directional couplers} 1/344 . { using pybrid or directional couplers} 1/345 . { using pybrid or directional couplers} 1/346 . in discharge-tube amplifiers 1/347 . { using transformers} 1/348 . Positive-feedback circuit arrangements without negative feedback 1/349 . in discharge-tube amplifiers 1/340 . in discharge-tube amplifiers 1/341 . using pybrid or directional couplers} 1/342 . in discharge-tube amplifiers 1/343 . in discharge-tube amplifiers 1/344 . using transformers} 1/345 . in discharge-tube amplifiers 1/346 . in discharge-tube amplifiers 1/347 . with semiconductor devices only 3/189 . with semiconductor devices only 3/189 . with semiconductor devices only 3/180 . in discharge-tube amplifiers 1/349 . with semiconductor devices only 3/190 . with semiconductor devices only 3/191 . Tuned amplifiers (H03F 3/193, H03F 3/195 take precedence) 1/40 . in discharge-tube amplifiers 1/40 . with field-effect devices (H03F 3/195 takes precedence) 1/40 . with grade devices (H03F 3/195 takes precedence) 1/419 . with grade devices (H03F 3/195 takes precedence) 1/420 . with grade devices (H03F 3/195 takes precedence) 1/430 . with grade devices (H03F 3/195 takes precedence) 1/441 . with grade devices (H03F 3	1/3264	• • {in audio amplifiers}	3/08	controlled by light
1/3276 {using the nonlinearity inherent to components, e.g. a diode} 1/3282 {Acting on the phase and the amplitude of the input signal} 1/3288 {to compensate phase shift as a function of the amplitude} 1/3294 {Acting on the real and imaginary components of the input signal} 1/33 in discharge-tube amplifiers 1/34 . Negative-feedback-circuit arrangements with or without positive feedback (H03F 1/02 - H03F 1/30, H03F 1/38 + H03F 1/30, H03F 1/35) take precedence {; for rejection of common mode signals H03F 3/45479}) 1/342 {in field-effect transistor amplifiers} 1/343 (using the nonlinearity inherent to components of the input signal} 1/344 (using the nonlinearity inherent to components and the amplitude of the amplitude of the input signal} 1/35 . (using bythid or directional couplers) 1/36 . (using transformers) 1/37 . (using transformers) 1/38 . Positive-feedback circuit arrangements without negative feedback 1/40 . (understand the amplifiers to extend the bandwidth) 1/414 . Modifications of amplifiers to extend the bandwidth 1/42 . Modifications of amplifiers to extend the bandwidth 1/43 . (using transformers) 1/44 . (using transformers) 1/45 . (using devices having more than two PN junctions 1/46 . (with junction-FET's) 1/47 . (using transformers) 1/48 . (using transformers) 1/49 . (using transformers) 1/40 . (using transformers) 1/40 . (using transformers) 1/41 . (using transformers) 1/42 . (using transformers) 1/43 . (using transformers) 1/44 . (using transformers) 1/45 . (using transformers) 1/46 . (using transformers) 1/47 . (using transformers) 1/48 . (using transformers) 1/49 . (using transformers) 1/40 . (using transformers) 1/41 . (using transformers) 1/42 . (using transformers) 1/43 . (using transformers) 1/44 . (using transformers) 1/45 . (using transformers) 1/46 . (using transformers) 1/47 . (using transformers) 1/48 . (using transformers) 1/49 . (using transformers) 1/40 . (using transformers) 1/41 . (using transformers)	1/327		3/082	• • • { with FET's ($\underline{\text{H03F 3/085}}$ takes precedence)}
e.g. a diode} 1/3282 {Acting on the phase and the amplitude of the input signal}				
1/3282 {Acting on the phase and the amplitude of the input signal} 1/3288 {to compensate phase shift as a function of the amplitude} 1/3294 {Acting on the real and imaginary components of the input signal} 1/3294 {Acting on the real and imaginary components of the input signal} 1/33 in discharge-tube amplifiers 1/34 . Negative-feedback-circuit arrangements with or without positive feedback (H03F 1/02 - H03F 1/30, H03F 1/38 - H03F 1/50, H03F 3/50 take precedence {; for rejection of common mode signals H03F 3/45479} 1/342 {in field-effect transistor amplifiers} 1/343 {using hybrid or directional couplers} 1/347 {using hybrid or directional couplers} 1/348 . Positive-feedback circuit arrangements without negative feedback 1/40 in discharge-tube amplifiers 1/42 . Modifications of amplifiers to extend the bandwidth 1/42 . Modifications of amplifiers to extend the bandwidth 1/42 . Modifications of amplifiers to extend the bandwidth 1/328 (to compensate phase shift as a function of the input signal} 3/12 with Esaki diodes 3/14 with amplifying devices having more than three electrodes or more than two PN junctions 3/16 with field-effect devices 3/16 with field-effect devices 3/183 with field-effect devices only 3/183 with semiconductor devices only 3/185 {with junction-FET devices} 3/185 with semiconductor devices only 3/187 truned amplifiers 3/190 with field-effect devices (H03F 3/195 takes precedence) 3/190 with field-effect devices (H03F 3/195 takes precedence) 3/190 with field-effect devices (H03F 3/195 takes precedence) 3/187 with semiconductor devices only 3/189 with semiconductor devices only 3/191 Tuned amplifiers 3/192 with field-effect devices (H03F 3/195 takes precedence) 3/193 with field-effect devices (H03F 3/195 takes precedence) 3/193 with field-effect devices (H03F 3/195 takes precedence)	1/3276	•	3/087	
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1/3288 {to compensate phase shift as a function of the amplitude} 1/3294 {Acting on the real and imaginary components of the input signal} 1/33 in discharge-tube amplifiers 1/34 . Negative-feedback-circuit arrangements with or without positive feedback (H03F 1/02 - H03F 1/30, H03F 1/35 take precedence { ; for rejection of common mode signals H03F 3/45479}) 1/342 {in field-effect transistor amplifiers} 1/345 . {using hybrid or directional couplers} 1/346 . in discharge-tube amplifiers 1/347 . {using transformers} 1/348 . Positive-feedback circuit arrangements without negative feedback circuit arrangements without negative feedback 1/40 . in discharge-tube amplifiers 1/42 . Modifications of amplifiers to extend the bandwidth 1/48 . of coexistic complifiers 1/49 . of coexistic complifiers 1/40 . of coexistic complifiers 1/41 . with amplifying devices having more than three electrodes or more than two PN junctions 3/16 . with field-effect devices 3/165 . with field-effect devices only 3/181 . Low-frequency amplifiers, e.g. audio preamplifiers 3/183 . with semiconductor devices only 3/185 {with junction-FET devices} 3/185 {with junction-FET devices} 3/187 in integrated circuits 3/189 . High-frequency amplifiers, e.g. radio frequency amplifiers 1/40 . in discharge-tube amplifiers 3/191 . Tuned amplifiers (H03F 3/193, H03F 3/195 takes precedence) 1/42 . with field-effect devices (H03F 3/195 takes precedence) 1/43 . with field-effect devices (H03F 3/195 takes precedence) 1/44 . with field-effect devices (H03F 3/195 takes precedence) 1/45 . with field-effect devices (H03F 3/195 takes precedence) 1/46 . with field-effect devices (H03F 3/195 takes precedence) 1/47 . with field-effect devices (H03F 3/195 takes precedence) 1/48 . with semiconductor devices only 1/49 . with semiconductor devices only 1/40 . with semiconductor devices only 1/41 . with field-effect devices (H03F 3/195 takes precedence) 1/42 . with field-effect devices (H03F 3/195 takes preceden	1/3282			
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1/33 . in discharge-tube amplifiers 1/34 . Negative-feedback-circuit arrangements with or without positive feedback (H03F 1/02 - H03F 1/30, H03F 1/38 - H03F 1/50, H03F 3/50 take precedence {; for rejection of common mode signals H03F 3/45479}) 1/342 . { in field-effect transistor amplifiers} 1/345 . { using hybrid or directional couplers} 1/347 . { using transformers} 1/348 . in discharge-tube amplifiers 1/349 . Positive-feedback circuit arrangements without negative feedback 1/40 . in discharge-tube amplifiers 1/42 . Modifications of amplifiers to extend the bandwidth 1/42 . Modifications of amplifiers 1/42 . Modifications of amplifiers 1/42 . Modifications of amplifiers 1/43 . In discharge-tube amplifiers 1/44 . Modifications of amplifiers to extend the bandwidth 1/45 . In discharge-tube amplifiers 1/46 . In discharge-tube amplifiers 1/47 . Modifications of amplifiers to extend the bandwidth 1/48 . In discharge-tube amplifiers 1/49 . Modifications of amplifiers to extend the bandwidth 1/40 . In discharge-tube amplifiers 1/410 . Modifications of amplifiers to extend the bandwidth 1/42 . Modifications of amplifiers to extend the bandwidth 1/43 . With junction-FET devices 1/44 . Modifications of amplifiers to extend the bandwidth 1/45 . Modifications of amplifiers to extend the bandwidth 1/46 . Modifications of amplifiers to extend the bandwidth 1/47 . Modifications of amplifiers to extend the bandwidth 1/48 . Modifications of amplifiers to extend the bandwidth 1/49 . Modifications of amplifiers to extend the bandwidth 1/40 . Modifications of amplifiers to extend the bandwidth 1/410 . Modifications of amplifiers to extend the bandwidth 1/42 . Modifications of amplifiers to extend the bandwidth 1/43 . Modifications of amplifiers to extend the bandwidth 1/44 . Modifications of amplifiers to extend the bandwidth 1/45 . Modifications of amplifiers to extend the bandwidth 1/46 . Modifications of amplifiers to extend the bandwidth 1/47 . Modifications of amplifiers to extend the bandwidth 1/48 . Modifications of ampli				
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without positive feedback (H03F 1/02 - H03F 1/30, H03F 1/38 - H03F 1/50, H03F 3/50 take precedence {; for rejection of common mode signals H03F 3/45479}) 1/342	1/34	Negative-feedback-circuit arrangements with or		
H03F 1/38 - H03F 1/50, H03F 3/50 take precedence { ; for rejection of common mode signals H03F 3/45479})		- · · · · · · · · · · · · · · · · · · ·		
{; for rejection of common mode signals H03F 3/45479}) 1/342 . {in field-effect transistor amplifiers} 1/345 . {using hybrid or directional couplers} 1/347 . {using transformers} 1/36 . in discharge-tube amplifiers 1/38 . Positive-feedback circuit arrangements without negative feedback 1/40 . in discharge-tube amplifiers 1/42 . Modifications of amplifiers to extend the bandwidth 1/48 . of angelia amplifiers 3/185 {with junction-FET devices} 1/187 in integrated circuits 3/189 in integrated circuits 3/189 in integrated circuits 3/189 with semiconductor devices only 1/190 Tuned amplifiers (H03F 3/193, H03F 3/195) 1/190 with field-effect devices (H03F 3/195 takes precedence) 1/191 with field-effect devices (H03F 3/195 takes precedence) 1/193 (with junction-FET devices)			2, 202	
1/342 . {in field-effect transistor amplifiers} 1/345 . {using hybrid or directional couplers} 1/347 . {using transformers} 1/36 . in discharge-tube amplifiers 1/38 . Positive-feedback circuit arrangements without negative feedback 1/40 . in discharge-tube amplifiers 1/42 . Modifications of amplifiers to extend the bandwidth 1/48 . of angelia amplifiers 1/38 in integrated circuits 3/189 . High-frequency amplifiers, e.g. radio frequency amplifiers 1/18 with semiconductor devices only 1/19 Tuned amplifiers (H03F 3/193, H03F 3/195) 1/19 takes 1/19 precedence) 1/19 3/193 with field-effect devices (H03F 3/195 takes 1/193 with junction-FET devices}			3/1855	
1/342 . {In field-effect transistor amplifiers} 1/345 . {using hybrid or directional couplers} 1/347 . {using transformers} 1/36 . in discharge-tube amplifiers 1/38 . Positive-feedback circuit arrangements without negative feedback 1/40 . in discharge-tube amplifiers 1/42 . Modifications of amplifiers to extend the bandwidth 1/48 . of angelies amplifiers 1/48 . {using transformers} 1/49 {using transformers} 1/40 in discharge-tube amplifiers 1/40 in discharge-tube amplifiers 1/40 in discharge-tube amplifiers 1/40 in discharge-tube amplifiers 1/40 (with field-effect devices (H03F 3/195 takes precedence) 1/40 (with junction-FET devices)	1/2/2		3/187	
1/347 . {using transformers} 1/36 . in discharge-tube amplifiers 1/38 . Positive-feedback circuit arrangements without negative feedback 1/40 . in discharge-tube amplifiers 1/42 . Modifications of amplifiers to extend the bandwidth 1/48 . of angelia amplifiers 1/48 {using transformers} 3/19 with semiconductor devices only 1/193 Tuned amplifiers (H03F 3/193, H03F 3/195) 1/193 with field-effect devices (H03F 3/195 takes precedence) 1/193 {with junction-FET devices}				
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1/42 . Modifications of amplifiers to extend the bandwidth 3/1935 {with junction-FET devices}	1/40		3/193	
1/49 of anglishing annulification			2/1025	
5/193 • • • In integrated circuits				
			3/193	· · · in integrated circuits

2/20		2/2042
3/20	• Power amplifiers, e.g. Class B amplifiers, Class C	3/3042 { with asymmetric control, i.e. one control
	amplifiers (<u>H03F 3/26</u> - <u>H03F 3/30</u> take precedence)	branch containing a supplementary phase
3/21	• with semiconductor devices only {(<u>H03F 3/245</u>	inverting stage}
	takes precedence)}	3/3044 {Junction FET SEPP output stages
3/211	• • • {using a combination of several amplifiers	(<u>H03F 3/3008</u> takes precedence)}
	(H03F 3/60 takes precedence)	3/3045 { with asymmetrical driving of the end stage}
3/213	in integrated circuits	3/3047 {using a common drain driving stage, i.e.
3/217	Class D power amplifiers; Switching amplifiers	follower stage}
		3/3049 {using a common source driving stage, i.e.
3/2171	• • • { with field-effect devices	
	$(\underline{\text{H03F } 3/2173} - \underline{\text{H03F } 3/2178} \text{ take})$	inverting stage}
	precedence)}	3/305 • • • • { with symmetrical driving of the end stage}
3/2173	• • • {of the bridge type}	3/3052 {using opamps as driving stages}
3/2175	• • • { using analogue-digital or digital-analogue	3/3054 {using two SEPP driving stages}
	conversion (H03F 3/2173 takes precedence)	3/3055 {Parallelled mixed SEPP stages, e.g. a CMOS
3/2176	{Class E amplifiers}	common drain and a CMOS common source
3/2178	• • • {using more than one switch or	in parallel or bipolar SEPP and FET SEPP in
3/21/0	switching amplifier in parallel or in	parallel}
	series (<u>H03F 3/2173</u> , <u>H03F 3/2175</u> take	3/3057 { with asymmetrical driving of the end stage}
2/22	precedence)}	3/3059 {with symmetrical driving of the end stage}
3/22	• • with tubes only ($\underline{\text{H03F 3/24}}$ takes precedence)	3/3061 {Bridge type, i.e. two complementary
3/24	• of transmitter output stages	controlled SEPP output stages}
3/245	• • • { with semiconductor devices only }	3/3062 { with asymmetrical driving of the end stage}
3/26	• Push-pull amplifiers; Phase-splitters therefor	3/3064 { with symmetrical driving of the end stage}
	(duplicated single-ended push-pull arrangements or	3/3066 • • {the collectors of complementary power
	phase-splitters therefor <u>H03F 3/30</u>)	transistors being connected to the output}
3/265	• {with field-effect transistors only}	
		3/3067 {with asymmetrical driving of the end stage}
3/28	• with tubes only	3/3069 • • { the emitters of complementary power transistors
3/30	• Single-ended push-pull {[SEPP]} amplifiers	being connected to the output}
	{(single-ended sense amplifiers <u>G11C 7/067</u>)};	3/3071 • • • {with asymmetrical driving of the end stage}
	Phase-splitters therefor	3/3072 {using Darlington transistors (H03F 3/3074
3/3001	• • {with field-effect transistors}	takes precedence)}
3/3008	{Bifet SEPP output stages}	3/3074 {using parallel power transistors}
3/301	{CMOS common drain output SEPP amplifiers	3/3076 {with symmetrical driving of the end stage}
2/201	(H03F 3/3008 takes precedence)}	
3/3011	• • • {with asymmetrical driving of the end stage}	
		takes precedence)}
3/3013	• • • • {using a common drain driving stage, i.e.	3/3079 {using parallel power transistors}
	follower stage}	3/3081 • • {Duplicated single-ended push-pull arrangements,
3/3015	• • • • {using a common source driving stage, i.e.	i.e. bridge circuits (using FET's H03F 3/3061)}
	inverting stage}	3/3083 {the power transistors being of the same type
3/3016	• • • { with symmetrical driving of the end stage }	(H03F 3/3001 takes precedence)
3/3018	• • • • {using opamps as driving stages}	3/3084 { one of the power transistors being controlled
3/302	• • • {using two SEPP driving stages}	by the output signal}
3/3022	{CMOS common source output SEPP	3/3086 {two power transistors being controlled by the
3/3022	amplifiers (<u>H03F 3/3008</u> takes precedence)}	input signal}
2/2022		1 0 /
3/3023	• • • { with asymmetrical driving of the end stage }	3/3088 { with asymmetric control, i.e. one control
3/3025	• • • • {using a common drain driving stage, i.e.	branch containing a supplementary phase
	follower stage}	inverting transistor}
3/3027	• • • • {using a common source driving stage, i.e.	3/3089 {comprising field-effect transistors in the
	inverting stage}	control circuit}
3/3028	• • • { with symmetrical driving of the end stage }	3/3091 {comprising two complementary transistors
3/303	• • • {using opamps as driving stages}	for phase-splitting}
3/3032	{using two SEPP driving stages}	3/3093 {comprising a differential amplifier as phase-
		splitting element}
3/3033	• • • {NMOS SEPP output stages (<u>H03F 3/3008</u>	The state of the s
	takes precedence)}	3/3094 {Phase splitters therefor (<u>H03F 3/3088</u> ,
3/3035	{using differential amplifiers as phase-	H03F 3/3091, H03F 3/3093, H03F 3/3096,
	splitting elements}	H03F 3/3098 take precedence)
3/3037	• • • { with asymmetric control, i.e. one control	3/3096 • • • • {using a single transistor with output on
	branch containing a supplementary phase	emitter and collector as phase splitter}
	inverting stage}	3/3098 {using a transformer as phase splitter}
3/3038	• • • {PMOS SEPP output stages (H03F 3/3008	3/34 . DC amplifiers in which all stages are DC-coupled
5,5050	takes precedence)}	(<u>H03F 3/45</u> takes precedence)
2/204		3/343 • with semiconductor devices only
3/304	(using differential amplifiers as phase-	3/3432 {with bipolar transistors}
	splitting element}	5/5752 • • { with dipolal transistors}

3/3435 {using Darlington amplifiers}	3/45183 {Long tailed pairs (<u>H03F 3/4521</u> ,
3/3437 { with complementary transistors }	<u>H03F 3/45237</u> take precedence)}
3/345 with field-effect devices (<u>H03F 3/347</u> takes	3/45188 {Non-folded cascode stages}
precedence)	3/45192 {Folded cascode stages}
3/3455 {with junction-FET's}	3/45197 {Pl types (<u>H03F 3/45224</u> , <u>H03F 3/45251</u>
3/347 in integrated circuits	take precedence)}
3/36 with tubes only	3/45201 {Non-folded cascode stages}
3/38 . DC amplifiers with modulator at input and	3/45206 {Folded cascode stages}
demodulator at output; Modulators or demodulators	3/4521 {Complementary long tailed pairs having
specially adapted for use in such amplifiers	parallel inputs and being supplied in
{(switched capacitor amplifiers <u>H03F 3/005</u>)}	parallel}
3/387 with semiconductor devices only	3/45215 {Non-folded cascode stages}
3/393 with field-effect devices	3/45219 {Folded cascode stages}
3/40 • with tubes only	3/45224 {Complementary Pl types having parallel
3/42 • Amplifiers with two or more amplifying elements	inputs and being supplied in parallel}
having their dc paths in series with the load, the	3/45228 {Non-folded cascode stages}
control electrode of each element being excited by	3/45233 {Folded cascode stages}
at least part of the input signal, e.g. so-called totem-	3/45237 • • • • • {Complementary long tailed pairs having
pole amplifiers	parallel inputs and being supplied in
3/423 • • {with MOSFET's}	series}
3/426 • • {with junction-FET's}	3/45242 {Non-folded cascode stages}
3/44 • with tubes only	3/45246 {Folded cascode stages}
3/45 • Differential amplifiers (differential sense amplifiers	3/45251 {Complementary Pl types having parallel
G11C 7/062)	inputs and being supplied in series}
3/45071 • { with semiconductor devices only }	3/45255 {Non-folded cascode stages}
3/45076 {characterised by the way of implementation of	3/4526 {Folded cascode stages}
the active amplifying circuit in the differential	3/45264 {Complementary cross coupled types}
amplifier}	3/45269 {Complementary cross coupled types}
3/4508 { using bipolar transistors as the active	
amplifying circuit (H03F 3/45278 takes	3/45273 {Mirror types}
precedence)}	3/45278 {using BiFET transistors as the active
3/45085 {Long tailed pairs (<u>H03F 3/45112</u> ,	amplifying circuit}
H03F 3/45139 take precedence)}	3/45282 {Long tailed pairs (<u>H03F 3/45309</u> ,
3/45089 {Non-folded cascode stages}	<u>H03F 3/45336</u> take precedence)}
3/45094 {Folded cascode stages}	3/45286 {Non-folded cascode stages}
3/45098 {PI types (<u>H03F 3/45125</u> , <u>H03F 3/45152</u>	3/45291 {Folded cascode stages}
take precedence)}	3/45295 {Pl types (<u>H03F 3/45322</u> , <u>H03F 3/45349</u>
3/45103 {Non-folded cascode stages}	take precedence)}
3/45107 {Folded cascode stages}	3/453 {Non-folded cascode stages}
3/45112 {Complementary long tailed pairs having	3/45304 {Folded cascode stages}
parallel inputs and being supplied in	3/45309 (Complementary long tailed pairs having
parallel}	parallel inputs and being supplied in
3/45116 {Non-folded cascode stages}	parallel}
3/45121 • • • • {Folded cascode stages}	3/45313 {Non-folded cascode stages}
3/45125 {Complementary PI types having parallel	3/45318 {Folded cascode stages}
inputs and being supplied in parallel	3/45322 {Complementary Pl types having parallel
3/4513 {Non-folded cascode stages}	inputs and being supplied in parallel}
3/45134 {Folded cascode stages}	3/45327 {Non-folded cascode stages}
3/45139 {Complementary long tailed pairs having	3/45331 {Folded cascode stages}
parallel inputs and being supplied in	3/45336 (Complementary long tailed pairs having
series}	parallel inputs and being supplied in
3/45143 {Non-folded cascode stages}	series}
3/45147 {Folded cascode stages}	3/4534 {Non-folded cascode stages}
3/45152 {Complementary PI types having parallel	3/45345 {Folded cascode stages}
inputs and being supplied in series}	3/45349 {Complementary Pl types having parallel
3/45156 {Non-folded cascode stages}	inputs and being supplied in series}
3/45161 {Folded cascode stages}	3/45354 {Non-folded cascode stages}
· · · · · · · · · · · · · · · · · · ·	3/45358 {Folded cascode stages}
3/45165 {Complementary cross coupled types}	3/45363 • • • • {Complementary cross coupled types}
3/4517 {Complementary non-cross coupled types}	3/45367 {Complementary non-cross coupled types}
3/45174 {Mirror types}	3/45372 {Mirror types}
3/45179 { using MOSFET transistors as the active	3/45376 {using junction FET transistors as the active
amplifying circuit (<u>H03F 3/45278</u> takes	amplifying circuit (H03F 3/45278 takes
precedence)}	precedence)}

3/45381	{Long tailed pairs (<u>H03F 3/45408</u> , <u>H03F 3/45434</u> take precedence)}	3/45547 {by using feedforward means (H03F 3/45596 takes precedence)}
	• • • • {Non-folded cascode stages}	3/45551 {Measuring at the input circuit of the
	• • • • {Folded cascode stages}	differential amplifier}
3/45394	• • • • {Pl types (<u>H03F 3/45421</u> , <u>H03F 3/45448</u> take precedence)}	3/45556 {Controlling the input circuit of the differential amplifier}
3/45399	• • • • {Non-folded cascode stages}	3/4556 {Controlling the common emitter
	Folded cascode stages}	circuit of the differential amplifier}
	{Complementary long tailed pairs having	3/45565 {Controlling the active amplifying
3/43406	parallel inputs and being supplied in	circuit of the differential amplifier
	parallel parallel	3/45569 {Controlling the loading circuit of the
2/45412	• • • • {Non-folded cascode stages}	differential amplifier}
	•	3/45573 {Measuring at the active amplifying
	{Folded cascode stages}	circuit of the differential amplifier}
3/43421	(Complementary Pl types having parallel	3/45578 {Controlling the loading circuit of the
2/45426	inputs and being supplied in parallel}	differential amplifier}
	{Non-folded cascode stages}	3/45582 {Measuring at the common emitter
	{Folded cascode stages}	circuit of the differential amplifier}
3/45434	{Complementary long tailed pairs having	3/45587 (Controlling the active amplifying
	parallel inputs and being supplied in	circuit of the differential amplifier}
2/45/420	series}	3/45591 {Controlling the loading circuit of the
	{Non-folded cascode stages}	differential amplifier}
	{Folded cascode stages}	3/45596 {by offset reduction}
3/45448	{Complementary Pl types having parallel	3/456 {by using a feedback circuit}
2/45 452	inputs and being supplied in series}	3/45605 {using switching means, e.g. sample
	{Non-folded cascode stages}	and hold}
	{Folded cascode stages}	3/45609 {by using a feedforward circuit}
	{Complementary cross coupled types}	3/45614 {using switching means, e.g. sample
	{Complementary non-cross coupled types}	and hold}
	{Mirror types}	3/45618 {by using balancing means}
3/45475	• • • • {using IC blocks as the active amplifying	3/45623 {using switching means}
	circuit}	or re-de-
0/45/50	,	3/45627 {by using cross switches}
3/45479	{characterised by the way of common mode	3/45627 {by using cross switches}
	• • • {characterised by the way of common mode signal rejection}	3/45632 {in differential amplifiers with FET
	 {characterised by the way of common mode signal rejection} {in differential amplifiers with bipolar	3/45632 {in differential amplifiers with FET transistors as the active amplifying circuit
	 {characterised by the way of common mode signal rejection} {in differential amplifiers with bipolar transistors as the active amplifying circuit 	3/45632 {in differential amplifiers with FET transistors as the active amplifying circuit (H03F 3/4578 takes precedence)}
3/45484	 . • {characterised by the way of common mode signal rejection} . • {in differential amplifiers with bipolar transistors as the active amplifying circuit (H03F 3/4578 takes precedence)} 	3/45632 {in differential amplifiers with FET transistors as the active amplifying circuit
3/45484	 {characterised by the way of common mode signal rejection} {in differential amplifiers with bipolar transistors as the active amplifying circuit (H03F 3/4578 takes precedence)} {by using feedback means (H03F 3/4578 	3/45632 {in differential amplifiers with FET transistors as the active amplifying circuit (H03F 3/4578 takes precedence)} 3/45636 {by using feedback means (H03F 3/45744
3/45484	 {characterised by the way of common mode signal rejection} {in differential amplifiers with bipolar transistors as the active amplifying circuit (H03F 3/4578 takes precedence)} {by using feedback means (H03F 3/4578 takes precedence)} 	3/45632 {in differential amplifiers with FET transistors as the active amplifying circuit (H03F 3/4578 takes precedence)} 3/45636 {by using feedback means (H03F 3/45744 takes precedence)}
3/45484	 {characterised by the way of common mode signal rejection} {in differential amplifiers with bipolar transistors as the active amplifying circuit (H03F 3/4578 takes precedence)} {by using feedback means (H03F 3/4578 takes precedence)} {Measuring at the loading circuit of the 	3/45632 {in differential amplifiers with FET transistors as the active amplifying circuit (H03F 3/4578 takes precedence)} 3/45636 {by using feedback means (H03F 3/45744 takes precedence)} 3/45641 {Measuring at the loading circuit of the
3/45484 3/45488 3/45493	 {characterised by the way of common mode signal rejection} {in differential amplifiers with bipolar transistors as the active amplifying circuit (H03F 3/4578 takes precedence)} {by using feedback means (H03F 3/4578 takes precedence)} {Measuring at the loading circuit of the differential amplifier} 	3/45632 {in differential amplifiers with FET transistors as the active amplifying circuit (H03F 3/4578 takes precedence)} 3/45636 {by using feedback means (H03F 3/45744 takes precedence)} 3/45641 {Measuring at the loading circuit of the differential amplifier}
3/45484 3/45488 3/45493	 {characterised by the way of common mode signal rejection} {in differential amplifiers with bipolar transistors as the active amplifying circuit (H03F 3/4578 takes precedence)} {by using feedback means (H03F 3/4578 takes precedence)} {Measuring at the loading circuit of the differential amplifier} {Controlling the input circuit of the 	3/45632 {in differential amplifiers with FET transistors as the active amplifying circuit (H03F 3/4578 takes precedence)} 3/45636 {by using feedback means (H03F 3/45744 takes precedence)} 3/45641 {Measuring at the loading circuit of the differential amplifier} 3/45645 {Controlling the input circuit of the
3/45484 3/45488 3/45493 3/45497	 {characterised by the way of common mode signal rejection} {in differential amplifiers with bipolar transistors as the active amplifying circuit (H03F 3/4578 takes precedence)} {by using feedback means (H03F 3/4578 takes precedence)} {Measuring at the loading circuit of the differential amplifier} {Controlling the input circuit of the differential amplifier} 	3/45632 {in differential amplifiers with FET transistors as the active amplifying circuit (H03F 3/4578 takes precedence)} 3/45636 {by using feedback means (H03F 3/45744 takes precedence)} 3/45641 {Measuring at the loading circuit of the differential amplifier} 3/45645 {Controlling the input circuit of the differential amplifier}
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3/45484 3/45488 3/45493 3/45497 3/45502	 . • {characterised by the way of common mode signal rejection} . • {in differential amplifiers with bipolar transistors as the active amplifying circuit (H03F 3/4578 takes precedence)} . • {by using feedback means (H03F 3/4578 takes precedence)} . • {Measuring at the loading circuit of the differential amplifier} . • {Controlling the input circuit of the differential amplifier} . • {Controlling the common emitter circuit of the differential amplifier} 	3/45632 {in differential amplifiers with FET transistors as the active amplifying circuit (H03F 3/4578 takes precedence)} 3/45636 {by using feedback means (H03F 3/45744 takes precedence)} 3/45641 {Measuring at the loading circuit of the differential amplifier} 3/45645 {Controlling the input circuit of the differential amplifier} 3/4565 {Controlling the common source circuit of the differential amplifier} 3/45654 {Controlling the active amplifying circuit of the differential amplifier}
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3/45484 3/45488 3/45493 3/45497 3/45502	 {characterised by the way of common mode signal rejection} {in differential amplifiers with bipolar transistors as the active amplifying circuit (H03F 3/4578 takes precedence)} {by using feedback means (H03F 3/4578 takes precedence)} {Measuring at the loading circuit of the differential amplifier} {Controlling the input circuit of the differential amplifier} {Controlling the common emitter circuit of the differential amplifier} {Controlling the active amplifying circuit of the differential amplifier} 	3/45632 {in differential amplifiers with FET transistors as the active amplifying circuit (H03F 3/4578 takes precedence)} 3/45636 {by using feedback means (H03F 3/45744 takes precedence)} 3/45641 {Measuring at the loading circuit of the differential amplifier} 3/45645 {Controlling the input circuit of the differential amplifier} 3/4565 {Controlling the common source circuit of the differential amplifier} 3/45654 {Controlling the active amplifying circuit of the differential amplifier} 3/45659 {Controlling the loading circuit of the differential amplifier}
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3/45484 3/45488 3/45493 3/45497 3/45502 3/45506 3/45511 3/45515	 . (characterised by the way of common mode signal rejection) . (in differential amplifiers with bipolar transistors as the active amplifying circuit (H03F 3/4578 takes precedence)) . (by using feedback means (H03F 3/4578 takes precedence)) . (Measuring at the loading circuit of the differential amplifier) . (Controlling the input circuit of the differential amplifier) . (Controlling the common emitter circuit of the differential amplifier) . (Controlling the active amplifying circuit of the differential amplifier) . (Controlling the loading circuit of the differential amplifier) . (Measuring at the active amplifying circuit of the differential amplifier) . (Measuring at the active amplifying circuit of the differential amplifier) 	3/45632 {in differential amplifiers with FET transistors as the active amplifying circuit (H03F 3/4578 takes precedence)} 3/45636 {by using feedback means (H03F 3/45744 takes precedence)} 3/45641 {Measuring at the loading circuit of the differential amplifier} 3/45645 {Controlling the input circuit of the differential amplifier} 3/4565 {Controlling the common source circuit of the differential amplifier} 3/45654 {Controlling the active amplifying circuit of the differential amplifier} 3/45659 {Controlling the loading circuit of the differential amplifier} 3/45668 {Measuring at the active amplifying circuit of the differential amplifier} 3/45668 {Controlling the input circuit of the differential amplifier} 3/45672 {Controlling the common source}
3/45484 3/45488 3/45493 3/45497 3/45502 3/45506 3/45511 3/45515 3/4552	 {characterised by the way of common mode signal rejection} {in differential amplifiers with bipolar transistors as the active amplifying circuit (H03F 3/4578 takes precedence)} {by using feedback means (H03F 3/4578 takes precedence)} {Measuring at the loading circuit of the differential amplifier} {Controlling the input circuit of the differential amplifier} {Controlling the common emitter circuit of the differential amplifier} {Controlling the active amplifying circuit of the differential amplifier} {Controlling the loading circuit of the differential amplifier} {Measuring at the active amplifying circuit of the differential amplifier} {Measuring at the active amplifying circuit of the differential amplifier} {Controlling the input circuit of the 	3/45632 {in differential amplifiers with FET transistors as the active amplifying circuit (H03F 3/4578 takes precedence)} 3/45636 {by using feedback means (H03F 3/45744 takes precedence)} 3/45641 {Measuring at the loading circuit of the differential amplifier} 3/45645 {Controlling the input circuit of the differential amplifier} 3/4565 {Controlling the common source circuit of the differential amplifier} 3/45654 {Controlling the active amplifying circuit of the differential amplifier} 3/45659 {Controlling the loading circuit of the differential amplifier} 3/45668 {Measuring at the active amplifying circuit of the differential amplifier} 3/45668 {Controlling the input circuit of the differential amplifier} 3/45672 {Controlling the common source circuit of the differential amplifier}
3/45484 3/45488 3/45493 3/45497 3/45502 3/45506 3/45511 3/45515 3/4552	 {characterised by the way of common mode signal rejection} {in differential amplifiers with bipolar transistors as the active amplifying circuit (H03F 3/4578 takes precedence)} {by using feedback means (H03F 3/4578 takes precedence)} {Measuring at the loading circuit of the differential amplifier} {Controlling the input circuit of the differential amplifier} {Controlling the common emitter circuit of the differential amplifier} {Controlling the active amplifying circuit of the differential amplifier} {Controlling the loading circuit of the differential amplifier} {Measuring at the active amplifying circuit of the differential amplifier} {Measuring at the input circuit of the differential amplifier} {Controlling the input circuit of the differential amplifier} 	3/45632 {in differential amplifiers with FET transistors as the active amplifying circuit (H03F 3/4578 takes precedence)} 3/45636 {by using feedback means (H03F 3/45744 takes precedence)} 3/45641 {Measuring at the loading circuit of the differential amplifier} 3/45645 {Controlling the input circuit of the differential amplifier} 3/4565 {Controlling the common source circuit of the differential amplifier} 3/45654 {Controlling the active amplifying circuit of the differential amplifier} 3/45659 {Controlling the loading circuit of the differential amplifier} 3/45663 {Measuring at the active amplifying circuit of the differential amplifier} 3/45668 {Controlling the input circuit of the differential amplifier} 3/45672 {Controlling the common source circuit of the differential amplifier} 3/45677 {Controlling the active amplifying
3/45484 3/45488 3/45493 3/45497 3/45502 3/45506 3/45511 3/45515 3/4552	 {characterised by the way of common mode signal rejection} {in differential amplifiers with bipolar transistors as the active amplifying circuit (H03F 3/4578 takes precedence)} {by using feedback means (H03F 3/4578 takes precedence)} {Measuring at the loading circuit of the differential amplifier} {Controlling the input circuit of the differential amplifier} {Controlling the common emitter circuit of the differential amplifier} {Controlling the active amplifying circuit of the differential amplifier} {Controlling the loading circuit of the differential amplifier} {Controlling the active amplifying circuit of the differential amplifier} {Controlling the input circuit of the differential amplifier} {Controlling the input circuit of the differential amplifier} {Controlling the common emitter circuit of the differential amplifier} {Controlling the common emitter circuit of the differential amplifier} {Controlling the active amplifying 	3/45632 {in differential amplifiers with FET transistors as the active amplifying circuit (H03F 3/4578 takes precedence)} 3/45636 {by using feedback means (H03F 3/45744 takes precedence)} 3/45641 {Measuring at the loading circuit of the differential amplifier} 3/45645 {Controlling the input circuit of the differential amplifier} 3/4565 {Controlling the common source circuit of the differential amplifier} 3/45654 {Controlling the active amplifying circuit of the differential amplifier} 3/45659 {Controlling the loading circuit of the differential amplifier} 3/45663 {Measuring at the active amplifying circuit of the differential amplifier} 3/45668 {Controlling the input circuit of the differential amplifier} 3/45670 {Controlling the common source circuit of the differential amplifier} 3/45671 {Controlling the active amplifying circuit of the differential amplifier}
3/45484 3/45488 3/45493 3/45497 3/45502 3/45506 3/45511 3/45515 3/4552 3/45524 3/45529	 {characterised by the way of common mode signal rejection} {in differential amplifiers with bipolar transistors as the active amplifying circuit (H03F 3/4578 takes precedence)} {by using feedback means (H03F 3/4578 takes precedence)} {Measuring at the loading circuit of the differential amplifier} {Controlling the input circuit of the differential amplifier} {Controlling the common emitter circuit of the differential amplifier} {Controlling the active amplifying circuit of the differential amplifier} {Controlling the loading circuit of the differential amplifier} {Controlling the active amplifying circuit of the differential amplifier} {Controlling the input circuit of the differential amplifier} {Controlling the input circuit of the differential amplifier} {Controlling the common emitter circuit of the differential amplifier} {Controlling the active amplifying circuit of the differential amplifier} {Controlling the active amplifying circuit of the differential amplifier} 	3/45632 {in differential amplifiers with FET transistors as the active amplifying circuit (H03F 3/4578 takes precedence)} 3/45636 {by using feedback means (H03F 3/45744 takes precedence)} 3/45641 {Measuring at the loading circuit of the differential amplifier} 3/45645 {Controlling the input circuit of the differential amplifier} 3/4565 {Controlling the common source circuit of the differential amplifier} 3/4565 {Controlling the active amplifying circuit of the differential amplifier} 3/45654 {Controlling the loading circuit of the differential amplifier} 3/45665 {Measuring at the active amplifying circuit of the differential amplifier} 3/45668 {Controlling the input circuit of the differential amplifier} 3/45672 {Controlling the common source circuit of the differential amplifier} 3/45677 {Controlling the active amplifying circuit of the differential amplifier} 3/45681 {Measuring at the common source}
3/45484 3/45488 3/45493 3/45497 3/45502 3/45506 3/45511 3/45515 3/45524 3/45524	 {characterised by the way of common mode signal rejection} {in differential amplifiers with bipolar transistors as the active amplifying circuit (H03F 3/4578 takes precedence)} {by using feedback means (H03F 3/4578 takes precedence)} {Measuring at the loading circuit of the differential amplifier} {Controlling the input circuit of the differential amplifier} {Controlling the common emitter circuit of the differential amplifier} {Controlling the active amplifying circuit of the differential amplifier} {Controlling the loading circuit of the differential amplifier} {Measuring at the active amplifying circuit of the differential amplifier} {Controlling the input circuit of the differential amplifier} {Controlling the common emitter circuit of the differential amplifier} {Controlling the active amplifying circuit of the differential amplifier} {Controlling the active amplifying circuit of the differential amplifier} {Controlling the active amplifying circuit of the differential amplifier} {Controlling the active amplifying circuit of the differential amplifier} {Controlling the active amplifying circuit of the differential amplifier} 	3/45632 {in differential amplifiers with FET transistors as the active amplifying circuit (H03F 3/4578 takes precedence)} 3/45636 {by using feedback means (H03F 3/45744 takes precedence)} 3/45641 {Measuring at the loading circuit of the differential amplifier} 3/45645 {Controlling the input circuit of the differential amplifier} 3/4565 {Controlling the common source circuit of the differential amplifier} 3/4565 {Controlling the active amplifying circuit of the differential amplifier} 3/45654 {Controlling the loading circuit of the differential amplifier} 3/45669 {Measuring at the active amplifying circuit of the differential amplifier} 3/45668 {Controlling the input circuit of the differential amplifier} 3/45672 {Controlling the common source circuit of the differential amplifier} 3/45671 {Controlling the active amplifying circuit of the differential amplifier} 3/45681 {Measuring at the common source circuit of the differential amplifier} 3/45681 {Measuring at the common source circuit of the differential amplifier}
3/45484 3/45488 3/45493 3/45497 3/45502 3/45506 3/45511 3/45515 3/4552 3/45524 3/45529 3/45533	 . (characterised by the way of common mode signal rejection) . (in differential amplifiers with bipolar transistors as the active amplifying circuit (H03F 3/4578 takes precedence)) . (by using feedback means (H03F 3/4578 takes precedence)) . (Measuring at the loading circuit of the differential amplifier) . (Controlling the input circuit of the differential amplifier) . (Controlling the common emitter circuit of the differential amplifier) . (Controlling the active amplifying circuit of the differential amplifier) . (Controlling the loading circuit of the differential amplifier) . (Measuring at the active amplifying circuit of the differential amplifier) . (Controlling the input circuit of the differential amplifier) . (Controlling the common emitter circuit of the differential amplifier) . (Controlling the active amplifying circuit of the differential amplifier) . (Controlling the common emitter circuit of the differential amplifier) . (Measuring at the common emitter circuit of the differential amplifier) . (Measuring at the common emitter circuit of the differential amplifier) 	3/45632 {in differential amplifiers with FET transistors as the active amplifying circuit (H03F 3/4578 takes precedence)} 3/45636 {by using feedback means (H03F 3/45744 takes precedence)} 3/45641 {Measuring at the loading circuit of the differential amplifier} 3/45645 {Controlling the input circuit of the differential amplifier} 3/4565 {Controlling the common source circuit of the differential amplifier} 3/4565 {Controlling the active amplifying circuit of the differential amplifier} 3/45654 {Controlling the loading circuit of the differential amplifier} 3/45669 {Measuring at the active amplifying circuit of the differential amplifier} 3/45668 {Controlling the input circuit of the differential amplifier} 3/45672 {Controlling the common source circuit of the differential amplifier} 3/45671 {Controlling the active amplifying circuit of the differential amplifier} 3/45681 {Measuring at the common source circuit of the differential amplifier} 3/45681 {Measuring at the common source circuit of the differential amplifier} 3/45681 {Measuring at the common source circuit of the differential amplifier}
3/45484 3/45488 3/45493 3/45497 3/45502 3/45506 3/45511 3/45515 3/4552 3/45524 3/45529	 . (characterised by the way of common mode signal rejection) . (in differential amplifiers with bipolar transistors as the active amplifying circuit (H03F 3/4578 takes precedence)) . (by using feedback means (H03F 3/4578 takes precedence)) . (Measuring at the loading circuit of the differential amplifier) . (Controlling the input circuit of the differential amplifier) . (Controlling the common emitter circuit of the differential amplifier) . (Controlling the active amplifying circuit of the differential amplifier) . (Controlling the loading circuit of the differential amplifier) . (Measuring at the active amplifying circuit of the differential amplifier) . (Controlling the input circuit of the differential amplifier) . (Controlling the common emitter circuit of the differential amplifier) . (Controlling the active amplifying circuit of the differential amplifier) . (Controlling the active amplifying circuit of the differential amplifier) . (Measuring at the common emitter circuit of the differential amplifier) . (Measuring at the common emitter circuit of the differential amplifier) . (Measuring at the common emitter circuit of the differential amplifier) 	3/45632 {in differential amplifiers with FET transistors as the active amplifying circuit (H03F 3/4578 takes precedence)} 3/45636 {by using feedback means (H03F 3/45744 takes precedence)} 3/45641 {Measuring at the loading circuit of the differential amplifier} 3/45645 {Controlling the input circuit of the differential amplifier} 3/4565 {Controlling the common source circuit of the differential amplifier} 3/45654 {Controlling the active amplifying circuit of the differential amplifier} 3/45659 {Controlling the loading circuit of the differential amplifier} 3/45663 {Measuring at the active amplifying circuit of the differential amplifier} 3/45668 {Controlling the input circuit of the differential amplifier} 3/45672 {Controlling the common source circuit of the differential amplifier} 3/45671 {Controlling the active amplifying circuit of the differential amplifier} 3/45681 {Measuring at the common source circuit of the differential amplifier} 3/45681 {Measuring at the common source circuit of the differential amplifier} 3/45681 {Controlling the input circuit of the differential amplifier}
3/45484 3/45488 3/45493 3/45497 3/45502 3/45506 3/45511 3/45515 3/4552 3/45524 3/45529 3/45533 3/45538	 {characterised by the way of common mode signal rejection} {in differential amplifiers with bipolar transistors as the active amplifying circuit (H03F 3/4578 takes precedence)} {by using feedback means (H03F 3/4578 takes precedence)} {Measuring at the loading circuit of the differential amplifier} {Controlling the input circuit of the differential amplifier} {Controlling the common emitter circuit of the differential amplifier} {Controlling the active amplifying circuit of the differential amplifier} {Controlling the loading circuit of the differential amplifier} {Controlling the input circuit of the differential amplifier} {Controlling the input circuit of the differential amplifier} {Controlling the common emitter circuit of the differential amplifier} {Controlling the active amplifying circuit of the differential amplifier} {Controlling the common emitter circuit of the differential amplifier} {Controlling the active amplifying circuit of the differential amplifier} {Controlling the input circuit of the differential amplifier} {Measuring at the common emitter circuit of the differential amplifier} {Controlling the input circuit of the differential amplifier} {Controlling the input circuit of the differential amplifier} 	3/45632 {in differential amplifiers with FET transistors as the active amplifying circuit (H03F 3/4578 takes precedence)} 3/45636 {by using feedback means (H03F 3/45744 takes precedence)} 3/45641 {Measuring at the loading circuit of the differential amplifier} 3/45645 {Controlling the input circuit of the differential amplifier} 3/4565 {Controlling the common source circuit of the differential amplifier} 3/45654 {Controlling the active amplifying circuit of the differential amplifier} 3/45659 {Controlling the loading circuit of the differential amplifier} 3/45663 {Measuring at the active amplifying circuit of the differential amplifier} 3/45668 {Controlling the input circuit of the differential amplifier} 3/45672 {Controlling the common source circuit of the differential amplifier} 3/45673 {Measuring at the common source circuit of the differential amplifier} 3/45674 {Controlling the active amplifying circuit of the differential amplifier} 3/45675 {Controlling the input circuit of the differential amplifier} 3/45681 {Measuring at the common source circuit of the differential amplifier} 3/45680 {Controlling the input circuit of the differential amplifier} 3/45680 {Controlling the input circuit of the differential amplifier}
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3/45699	• • • • {Measuring at the input circuit of the differential amplifier}	3/45856 {Controlling the common source circuit of the differential amplifier}
3/45704	• • • • • {Controlling the input circuit of the differential amplifier}	3/4586 {Controlling the active amplifying circuit of the differential amplifier}
3/45708	{Controlling the common source circuit of the differential amplifier}	3/45865 {Controlling the loading circuit of the differential amplifier}
3/45713	{Controlling the active amplifying circuit of the differential amplifier}	3/45869 {Measuring at the active amplifying circuit of the differential amplifier}
3/45717	• • • • • {Controlling the loading circuit of the differential amplifier}	3/45874 {Controlling the loading circuit of the differential amplifier}
3/45721	• • • • • {Measuring at the active amplifying circuit of the differential amplifier}	3/45878 {Measuring at the common source circuit of the differential amplifier}
3/45726	• • • • • {Controlling the loading circuit of the differential amplifier}	3/45883 {Controlling the active amplifying circuit of the differential amplifier}
3/4573	• • • • • {Measuring at the common source circuit of the differential amplifier}	3/45887 {Controlling the loading circuit of the differential amplifier}
3/45735	(Controlling the active amplifying	3/45892 {by offset reduction}
3/45739	circuit of the differential amplifier} {Controlling the loading circuit of the	3/45896 {by using a feedback circuit}
3/43/37	differential amplifier}	3/45901 {using switching means, e.g. sample and hold}
3/45744	{by offset reduction}	3/45905 {by using a feedforward circuit}
3/45748	• • • • {by using a feedback circuit}	3/4591 {using switching means, e.g. sample
3/45753	(using switching means, e.g. sample	and hold}
3/45757	and hold} {by using a feedforward circuit}	3/45914 {by using balancing means} 3/45919 {using switching means}
	{using switching means, e.g. sample	3/45923 {by using cross switches}
3/ 13/02	and hold}	3/45928 {using IC blocks as the active amplifying
3/45766	• • • • {by using balancing means}	circuit}
3/45771	• • • • {using switching means}	3/45932 {by using feedback means (<u>H03F 3/45968</u>
3/45775	• • • • {by using cross switches}	takes precedence)}
3/4578	transistors as the active amplifying circuit}	3/45937 {Measuring at the loading circuit of the differential amplifier}
3/45784	takes precedence)}	3/45941 {Controlling the input circuit of the differential amplifier}
3/45789	differential amplifier}	3/45946 {Controlling the loading circuit of the differential amplifier}
	• • • • • {Controlling the input circuit of the differential amplifier}	3/4595 {by using feedforward means (H03F 3/45968 takes precedence)}
3/45798	{Controlling the common source circuit of the differential amplifier}	3/45955 {Measuring at the input circuit of the differential amplifier}
3/45802	{Controlling the active amplifying circuit of the differential amplifier}	3/45959 {Controlling the input circuit of the differential amplifier}
3/45807	{Controlling the loading circuit of the differential amplifier}	3/45964 {Controlling the loading circuit of the differential amplifier}
3/45811	• • • • {Measuring at the active amplifying circuit of the differential amplifier}	3/45968 {by offset reduction} 3/45973 {by using a feedback circuit}
3/45816	{Controlling the input circuit of the differential amplifier}	3/45977 {by using a recuback circuit} 3/45977 {using switching means, e.g. sample and hold}
3/4582	• • • • • • {Controlling the common source	3/45982 {by using a feedforward circuit}
3/45825	circuit of the differential amplifier}	3/45986 {using switching means, e.g. sample and hold}
3/43023	circuit of the differential amplifier}	3/45991 {by using balancing means}
3/45829	{Measuring at the common source circuit of the differential amplifier}	3/45995 {using switching means}
3/45834	{Controlling the input circuit of the differential amplifier}	3/46 • Reflex amplifiers {(reflection amplifiers H03F 3/608)}
3/45838	{Controlling the common source	3/48 with tubes only3/50 . Amplifiers in which input is applied to, or output
2/45042	circuit of the differential amplifier}	is derived from, an impedance common to input
3/45843	{by using feedforward means (H03F 3/45892 takes precedence)}	and output circuits of the amplifying element, e.g. cathode follower
3/45847	• • • • • {Measuring at the input circuit of the	3/505 • • { with field-effect devices }
3/45852	differential amplifier} {Controlling the input circuit of the	3/52 with tubes only
5/75052	differential amplifier}	

3/54	Amplifiers using transit-time effect in tubes or	19/00	Amplifiers using superconductivity effects
	semiconductor devices (parametric amplifiers <u>H03F 7/00</u> ; solid state travelling-wave devices <u>H10N 70/10</u>)	99/00	Subject matter not provided for in other groups of this subclass
3/55	• • with semiconductor devices only	2200/00	Indexing scheme relating to amplifiers
3/56	• using klystrons	2200/03	the amplifier being designed for audio applications
3/58	• using travelling-wave tubes	2200/06	A balun, i.e. balanced to or from unbalanced
3/60	Amplifiers in which coupling networks have		converter, being present at the input of an amplifier
	distributed constants, e.g. with waveguide	2200/09	A balun, i.e. balanced to or from unbalanced
2/404	resonators (<u>H03F 3/54</u> takes precedence)		converter, being present at the output of an amplifier
3/601	• {using FET's, e.g. GaAs FET's (<u>H03F 3/607</u> , <u>H03F 3/608</u> take precedence)}	2200/102	A non-specified detector of a signal envelope being
3/602	• • {Combinations of several amplifiers}	2200/105	used in an amplifying circuit
3/604	{using FET's}	2200/105	• A non-specified detector of the power of a signal
3/605	• • {Distributed amplifiers}	2200/108	being used in an amplifying circuit • A coil being added in the drain circuit of a FET
3/607	{using FET's}	2200/108	amplifier stage, e.g. for noise reducing purposes
3/608	• • {Reflection amplifiers, i.e. amplifiers using a one-	2200/111	• the amplifier being a dual or triple band amplifier,
	port amplifying element and a multiport coupler (<u>H03F 7/00</u> takes precedence)}	2200/111	e.g. 900 and 1800 MHz, e.g. switched or not switched, simultaneously or not
3/62	 Two-way amplifiers 	2200/114	• the amplifier comprising means for electro-magnetic
3/64	with tubes only		interference [EMI] protection
3/66	Amplifiers simultaneously generating oscillations of one frequency and amplifying signals of another	2200/117	A coil being coupled in a feedback path of an amplifier stage
2/69	frequency	2200/12	A bias circuit for some stages being shown using
3/68	 Combinations of amplifiers, e.g. multi-channel amplifiers for stereophonics {(power amplifiers 		transmission lines
	using a combination of several semiconductor	2200/121	. A transistor in common gate configuration being
	amplifiers <u>H03F 3/211</u> ; combinations of amplifiers	2200/422	used in a feedback circuit of an amplifier stage
	using coupling networks with distributed constants	2200/123	A difference signal between an output and an input
	<u>H03F 3/602</u>)}		signal of an amplifier being coupled back at the input of the amplifier
3/70	Charge amplifiers	2200/126	A diode being coupled in a feedback path of an
3/72	· Gated amplifiers, i.e. amplifiers which are rendered	2200/120	amplifier stage, e.g. active or passive diode
	operative or inoperative by means of a control	2200/129	• there being a feedback over the complete amplifier
	signal	2200/132	Hybrid coupler placed in a feedback circuit of an
5/00	Amplifiers with both discharge tubes and		amplifier
	semiconductor devices as amplifying elements	2200/135	there being a feedback over one or more internal
7/00	Donomotoi o omulificano		stages in the global amplifier
7/00 7/02	Parametric amplifiers using variable-inductance element; using variable-	2200/138	the feedback circuit comprising a parallel resonance
7/02	permeability element		circuit
7/04	 using variable-capacitance element; using variable- 	2200/141	the feedback circuit of the amplifier stage
7704	permittivity element		comprising a resistor and a capacitor in series, at
		2200/144	least one of them being an active one
9/00	Magnetic amplifiers	2200/144	the feedback circuit of the amplifier stage comprising a passive resistor and passive capacitor
9/02	current-controlled, i.e. the load current flowing in	2200/147	the feedback circuit comprising a series resonance
0/04	both directions through a main coil	2200/147	circuit
9/04	 voltage-controlled, i.e. the load current flowing in only one direction through a main coil, e.g. Logan 	2200/15	• the supply or bias voltage or current at the drain
	circuits (H03F 9/06 takes precedence)		side of a FET being continuously controlled by a
9/06	• Control by voltage time integral, i.e. the load current		controlling signal
2700	flowing in only one direction through a main coil,	2200/151	A source follower being used in a feedback circuit
	whereby the main coil winding also can be used as a		of an amplifier stage
	control winding, e.g. Ramey circuits	2200/153	Feedback used to stabilise the amplifier
11/00	Dielectrie emplifiers	2200/156	One or more switches are realised in the feedback
11/00	Dielectric amplifiers		circuit of the amplifier stage
13/00	Amplifiers using amplifying element consisting	2200/159	• the feedback circuit being closed during a switching
	of two mechanically- or acoustically-coupled	2200/2/2	time
	transducers, e.g. telephone-microphone amplifier	2200/162	• FETs are biased in the weak inversion region
15/00	Amplifiers using galvano-magnetic effects not	2200/165	• A filter circuit coupled to the input of an amplifier
, ~	involving mechanical movement, e.g. using Hall	2200/168	Two amplifying stages are coupled by means of a filter circuit
	effect	2200/171	
15/00		2200/171 2200/174	A filter circuit coupled to the output of an amplifier Floating gate implemented in MOS technology
17/00	Amplifiers using electroluminescent element or photocell	2200/174	Folded cascode realised by a folding coil
	photoca	2200/1//	• 1 olded caseode realised by a folding con

2200/18	• the bias of the gate of a FET being controlled by a	2200/264 . An operational amplifier based integrator or
	control signal	transistor based integrator being used in an
2200/181	 A coil being added in the gate circuit of a FET amplifier stage, e.g. for noise reducing purposes 	amplifying circuit 2200/267 • A capacitor based passive circuit, e.g. filter, being
2200/183	• the amplifier comprising a gated diode	used in an amplifying circuit
2200/186	• the ground, reference potential being controlled	• A biasing circuit node being switched in an
2200/189	the ground, reference or shield potential difference between different chips being controlled	amplifier circuit 2200/271 • the DC-isolation amplifier, e.g. chopper amplifier,
2200/192	A hybrid coupler being used at the input of an	modulation/demodulation amplifier, uses capacitive
	amplifier circuit	isolation means, e.g. capacitors
2200/195	A hybrid coupler being used as power measuring circuit at the input of an amplifier circuit	2200/273 • the DC-isolation amplifier, e.g. chopper amplifier, modulation/demodulation amplifier, uses inductive
2200/198	A hybrid coupler being used as coupling circuit	isolation means, e.g. transformers
	between stages of an amplifier circuit	2200/276 • the DC-isolation amplifier, e.g. chopper amplifier, modulation/demodulation amplifier, uses optical
2200/201	A hybrid coupler being used as power measuring inter-stage circuit between two stages of an	isolation means, e.g. optical couplers
	amplifier circuit	2200/279 . the level shifting stage between two amplifying
2200/204	• A hybrid coupler being used at the output of an	stages being realised by an explicit differential amplifier
2200/207	amplifier circuitA hybrid coupler being used as power measuring	2200/282 . the level shifting stage between two amplifying
2200/207	circuit at the output of an amplifier circuit	stages being realised by a diode
2200/21	Bias resistors are added at the input of an amplifier	2200/285 . the level shifting stage between two amplifying stages being realised by an emitter follower
2200/211	the input of an amplifier can be attenuated by a continuously controlled transistor attenuator	2200/288 • the level shifting stage between two amplifying
2200/213	A variable capacitor being added in the input circuit,	stages being realised by a resistor or potentiometer
	e.g. base, gate, of an amplifier stage	2200/291 • the level shifting stage between two amplifying stages being realised by a source follower
2200/216	 A coil being added in the input circuit, e.g. base, gate, of an amplifier stage 	2200/294 • the amplifier being a low noise amplifier [LNA]
2200/219	• Follower transistors are added at the input of the	. the loading circuit of an amplifying stage
	amplifier, e.g. source or emitter followers	comprising a capacitor 2200/301 • the loading circuit of an amplifying stage
2200/222	 A circuit being added at the input of an amplifier to adapt the input impedance of the amplifier 	comprising a coil
2200/225	• the input circuit of an amplifying stage comprising	2200/303 . the loading circuit of an amplifying stage
2200/220	an LC-network	comprising a diode or diode coupled transistor 2200/306 • the loading circuit of an amplifying stage being a
2200/228	A measuring circuit being coupled to the input of an amplifier	parallel resonance circuit
2200/231	• the input of an amplifier can be switched on or off	• the loading circuit of an amplifying stage being a series resonance circuit
2200/234	by a switch to amplify or not an input signal the input amplifying stage being one or more	2200/31 . the switching power stage comprising circuitry for
2200/234	operational amplifiers	emulating the behaviour of a bootstrap diode
2200/237	A parallel resonance being added in series in the	2200/312 • the loading circuit of an amplifying stage comprising one or more switches
2200/24	input circuit, e.g. base, gate, of an amplifier stage the supply or bias voltage or current at the source	2200/315 • the loading circuit of an amplifying stage
2200/24	side of a FET being continuously controlled by a	comprising a transmission line
	controlling signal	2200/318 . A matching circuit being used as coupling element between two amplifying stages
2200/241	• A parallel resonance being added in shunt in the input circuit, e.g. base, gate, of an amplifier stage	2200/321 • Use of a microprocessor in an amplifier circuit or its
2200/243	A series resonance being added in series in the input	control circuit
	circuit, e.g. base, gate, of an amplifier stage	2200/324 • An amplitude modulator or demodulator being used in the amplifier circuit
2200/246	 A series resonance being added in shunt in the input circuit, e.g. base, gate, of an amplifier stage, e.g. as 	2200/327 . Amplitude shift keying modulation being used in an
	a trap	amplifying circuit
2200/249	• A switch coupled in the input circuit of an amplifier	 Bridge form coupled amplifiers; H-form coupled amplifiers
	being controlled by a circuit, e.g. feedback circuitry being controlling the switch	2200/331 • Sigma delta modulation being used in an amplifying
2200/252	Multiple switches coupled in the input circuit of an	circuit
	amplifier are controlled by a circuit, e.g. feedback	2200/333 • A frequency modulator or demodulator being used in the amplifier circuit
2200/255	circuitry being controlling the switch • Amplifier input adaptation especially for	2200/336 • A I/Q, i.e. phase quadrature, modulator or
	transmission line coupling purposes, e.g. impedance	demodulator being used in an amplifying circuit
2200/258	adaptation the input of the amplifier has voltage limiting means	• Pulse amplitude modulation being used in an amplifying circuit
2200/258	 the input of the amplifier has voltage limiting means Amplifier which being suitable for instrumentation 	2200/342 • Pulse code modulation being used in an amplifying
	applications	circuit

2200/345	Pulse density modulation being used in an amplifying circuit	• Two or more amplifiers of different type are coupled in parallel at the input or output, e.g. a class
2200/348	Pulse frequency modulation being used in an amplifying circuit	D and a linear amplifier, a class B and a class A amplifier
2200/351	Pulse width modulation being used in an amplifying circuit	2200/435 • A peak detection being used in a signal measuring circuit in a controlling circuit of an amplifier
2200/354	• the amplifier comprising MOS which are biased in the moderate inversion region	2200/438 • Separate feedback of amplitude and phase signals being present
2200/357	the amplifier comprising MOS which are biased in the weak inversion region	2200/441 • Protection of an amplifier being implemented by clamping means
2200/36	the amplifier comprising means for increasing the bandwidth	2200/444 • Diode used as protection means in an amplifier, e.g. as a limiter or as a switch
2200/361	Transistor with multiple collectors	. the amplifier being protected to temperature
2200/363	Transistor with multiple emitters	influence
2200/366	Multiple MOSFETs are coupled in parallel	• the load of the amplifier being a capacitive element,
2200/369	A negative impedance circuit being added to an	e.g. CRT
	amplifier circuit	2200/451 • the amplifier being a radio frequency amplifier
2200/372	Noise reduction and elimination in amplifier	2200/453 • Controlling being realised by adding a replica circuit or by using one among multiple identical
2200/375	• Circuitry to compensate the offset being present in	circuits as a replica circuit
	an amplifier	2200/456 • A scaled replica of a transistor being present in an
2200/378	• A variable capacitor being added in the output	amplifier
2200/201	circuit, e.g. collector, drain, of an amplifier stage	2200/459 • Ripple reduction circuitry being used in an
2200/381	 An active variable resistor, e.g. controlled transistor, being coupled in the output circuit of an amplifier to 	amplifying circuit
	control the output	2200/462 • the current being sensed
2200/384	Amplifier without output filter, i.e. directly	2200/465 • Power sensing
2200/301	connected to the load	2200/468 • the temperature being sensed
2200/387	A circuit being added at the output of an amplifier	2200/471 . the voltage being sensed
	to adapt the output impedance of the amplifier	2200/474 • A current mirror being used as sensor
2200/39	Different band amplifiers are coupled in parallel to	2200/477 . Paralleled transistors are used as sensors
	broadband the whole amplifying circuit	• the output of the amplifier being coupled out by a
2200/391	• the output circuit of an amplifying stage comprising	capacitor
	an LC-network	2200/481 . A resistor being used as sensor
2200/393	• A measuring circuit being coupled to the output of	2200/483 • A shunting switch being paralleled to the sensor
2200/204	an amplifier	• the current in the load of an amplifying stage being
2200/396	the output of an amplifier can be switched on or off by a switch to couple the output signal to a load	sensed by a torus
2200/399	A parallel resonance being added in shunt in the	• A coil being added in the source circuit of a
2200/399	output circuit, e.g. base, gate, of an amplifier stage	common source stage, e.g. as degeneration means 2200/492 • A coil being added in the source circuit of a
2200/402	A series resonance being added in shunt in the	2200/492 • A coil being added in the source circuit of a transistor amplifier stage as degenerating element
2200/ 102	output circuit, e.g. base, gate, of an amplifier stage	2200/495 • A parallel resonance circuit being added in the
2200/405	• the output amplifying stage of an amplifier	source circuit of a FET amplifier
	comprising more than three power stages	2200/498 • A resistor being added in the source circuit of a
2200/408	• the output amplifying stage of an amplifier	transistor amplifier stage as degenerating element
	comprising three power stages	2200/501 • A series resonance circuit being added in the source
2200/411	• the output amplifying stage of an amplifier	circuit of a FET amplifier
	comprising two power stages	the supply voltage or current being continuously
2200/414	• A switch being coupled in the output circuit of an	controlled by a controlling signal, e.g. the
2200/417	amplifier to switch the output on/off • A switch coupled in the output circuit of an	controlling signal of a transistor implemented as variable resistor in a supply path for, an IC-block
2200/417	amplifier being controlled by a circuit	showed amplifier
2200/42	• the input to the amplifier being made by capacitive	2200/507 • A switch being used for switching on or off a supply
	coupling means	or supplying circuit in an IC-block amplifier circuit
2200/421	• Multiple switches coupled in the output circuit of an	2200/51 • Capacitor in positive feedback circuit of an
	amplifier are controlled by a circuit	amplifier circuit to bootstrap a resistor
2200/423	Amplifier output adaptation especially for	2200/511 • Many discrete supply voltages or currents or voltage
	transmission line coupling purposes, e.g. impedance	levels can be chosen by a control signal in an IC-
0000/402	adaptation	block amplifier circuit
2200/426	the amplifier comprising circuitry for protection against everload.	2200/513 • the amplifier being made for low supply voltages
2200/429	against overload Two or more amplifiers or one amplifier with filters	2200/516 • Some amplifier stages of an amplifier use supply voltages of different value
2200/429	for different frequency bands are coupled in parallel	2200/519 • the bias or supply voltage or current of the drain
	at the input or output	side of a FET amplifier being controlled to be on or
		off by a switch
		•

2200/522	• the bias or supply voltage or current of the gate side of a FET amplifier being controlled to be on or off	2201/3206 Multiple channels are combined and amplified by only one amplifier
2200/525	by a switch the bias or supply voltage or current of the source	2201/3209 • • the amplifier comprising means for compensating memory effects
	side of a FET amplifier being controlled to be on or off by a switch	2201/3212 • Using a control circuit to adjust amplitude and phase of a signal in a signal path
2200/528	. the temperature dependence being controlled by	2201/3215 . To increase the output power or efficiency
2200/531	referencing to the band gap the temperature difference between different chips	2201/3218 the main amplifier or error amplifier being a feedforward amplifier
2200/534	being controlledTransformer coupled at the input of an amplifier	2201/3221 • Predistortion by overamplifying in a feedforward stage the distortion signal to have a combined
2200/537	A transformer being used as coupling element between two amplifying stages	main signal and "negative" distortion to form the predistorted signal for a further stage. so that
2200/54	Two or more capacitor coupled amplifier stages in cascade	after amplification in the further stage only the amplified main signal remains
2200/541	Transformer coupled at the output of an amplifier	2201/3224 • Predistortion being done for compensating
2200/543	• A transmission line being used as coupling element between two amplifying stages	memory effects 2201/3227 • Adaptive predistortion based on amplitude,
2200/546	A tunable capacitance being present in an amplifier circuit	envelope or power level feedback from the output of the main amplifier
2200/549	. the amplifier comprising means to emulate the	2201/3231 Adaptive predistortion using phase feedback from
2200/552	vacuum tube behaviour the amplifier being made for video applications	the output of the main amplifier 2201/3233 • Adaptive predistortion using lookup table, e.g.
2200/555	A voltage generating circuit being realised for biasing different circuit elements	memory, RAM, ROM, LUT, to generate the predistortion
2200/57	Separate feedback of real and complex signals being	2201/3236 . A generated signal, e.g. a pulse or an inverted
	present	synchronous signal, being added to avoid certain conditions, e.g. clipping
2200/61	the cascode amplifier has more than one common gate stage	2203/00 Indexing scheme relating to amplifiers with only
2200/63	• the amplifier being suitable for CATV applications	discharge tubes or only semiconductor devices as
2200/66	 Clipping circuitry being present in an amplifier, i.e. the shape of the signal being modified 	amplifying elements covered by H03F 3/00 2203/20 Indexing scheme relating to power amplifiers, e.g.
2200/69	the amplifier stage being a common drain coupled	2203/20 . Indexing scheme relating to power amplifiers, e.g. Class B amplifiers, Class C amplifiers
	the amplifier stage being a common drain coupled MOSFET, i.e. source follower	Class B amplifiers, Class C amplifiers 2203/21 with semiconductor devices only
2200/69 2200/72	the amplifier stage being a common drain coupled	Class B amplifiers, Class C amplifiers 2203/21 . with semiconductor devices only 2203/211 . using a combination of several amplifiers
	 the amplifier stage being a common drain coupled MOSFET, i.e. source follower the amplifier stage being a common gate configuration MOSFET the amplifier stage being a common source 	Class B amplifiers, Class C amplifiers 2203/21 . with semiconductor devices only 2203/211 . using a combination of several amplifiers 2203/21103 . An impedance adaptation circuit being added at the input of a power amplifier stage
2200/72	 the amplifier stage being a common drain coupled MOSFET, i.e. source follower the amplifier stage being a common gate configuration MOSFET the amplifier stage being a common source configuration MOSFET A comparator being used in a controlling circuit of 	Class B amplifiers, Class C amplifiers 2203/21 • with semiconductor devices only 2203/211 • using a combination of several amplifiers 2203/21103 • An impedance adaptation circuit being added at the input of a power amplifier stage 2203/21106 • An input signal being distributed in parallel over the inputs of a plurality of power
2200/72 2200/75	 the amplifier stage being a common drain coupled MOSFET, i.e. source follower the amplifier stage being a common gate configuration MOSFET the amplifier stage being a common source configuration MOSFET A comparator being used in a controlling circuit of an amplifier Inputs or outputs are crossed during a first switching 	Class B amplifiers, Class C amplifiers 2203/21 . with semiconductor devices only 2203/211 . using a combination of several amplifiers 2203/21103 . An impedance adaptation circuit being added at the input of a power amplifier stage 2203/21106 . An input signal being distributed in parallel over the inputs of a plurality of power amplifiers 2203/21109 . An input signal being distributed by
2200/72 2200/75 2200/78	 the amplifier stage being a common drain coupled MOSFET, i.e. source follower the amplifier stage being a common gate configuration MOSFET the amplifier stage being a common source configuration MOSFET A comparator being used in a controlling circuit of an amplifier 	Class B amplifiers, Class C amplifiers 2203/21 . with semiconductor devices only 2203/211 . using a combination of several amplifiers 2203/21103 . An impedance adaptation circuit being added at the input of a power amplifier stage 2203/21106 . An input signal being distributed in parallel over the inputs of a plurality of power amplifiers 2203/21109 . An input signal being distributed by switching to a plurality of paralleled power
2200/72 2200/75 2200/78 2200/81 2200/84	 the amplifier stage being a common drain coupled MOSFET, i.e. source follower the amplifier stage being a common gate configuration MOSFET the amplifier stage being a common source configuration MOSFET A comparator being used in a controlling circuit of an amplifier Inputs or outputs are crossed during a first switching time, not crossed during a second switching time A cross coupling circuit being realized by current mirrors 	Class B amplifiers, Class C amplifiers 2203/21 . with semiconductor devices only 2203/211 . using a combination of several amplifiers 2203/21103 An impedance adaptation circuit being added at the input of a power amplifier stage 2203/21106 An input signal being distributed in parallel over the inputs of a plurality of power amplifiers 2203/21109 An input signal being distributed by switching to a plurality of paralleled power amplifiers 2203/21112 A filter circuit being added at the input of a
2200/72 2200/75 2200/78 2200/81	 the amplifier stage being a common drain coupled MOSFET, i.e. source follower the amplifier stage being a common gate configuration MOSFET the amplifier stage being a common source configuration MOSFET A comparator being used in a controlling circuit of an amplifier Inputs or outputs are crossed during a first switching time, not crossed during a second switching time A cross coupling circuit being realized by current 	Class B amplifiers, Class C amplifiers 2203/21 . with semiconductor devices only 2203/211 . using a combination of several amplifiers 2203/21103 . An impedance adaptation circuit being added at the input of a power amplifier stage 2203/21106 . An input signal being distributed in parallel over the inputs of a plurality of power amplifiers 2203/21109 . An input signal being distributed by switching to a plurality of paralleled power amplifiers 2203/21112 . A filter circuit being added at the input of a power amplifier stage
2200/72 2200/75 2200/78 2200/81 2200/84 2200/87 2200/91	 the amplifier stage being a common drain coupled MOSFET, i.e. source follower the amplifier stage being a common gate configuration MOSFET the amplifier stage being a common source configuration MOSFET A comparator being used in a controlling circuit of an amplifier Inputs or outputs are crossed during a first switching time, not crossed during a second switching time A cross coupling circuit being realized by current mirrors the cross coupling circuit being realised only by MOSFETs the amplifier has a current mode topology 	Class B amplifiers, Class C amplifiers 2203/21 . with semiconductor devices only 2203/211 using a combination of several amplifiers 2203/21103 An impedance adaptation circuit being added at the input of a power amplifier stage 2203/21106 An input signal being distributed in parallel over the inputs of a plurality of power amplifiers 2203/21109 An input signal being distributed by switching to a plurality of paralleled power amplifiers 2203/21112 A filter circuit being added at the input of a power amplifier stage 2203/21115 An input signal dependant signal being measured by current measuring at the input
2200/72 2200/75 2200/78 2200/81 2200/84 2200/87	 the amplifier stage being a common drain coupled MOSFET, i.e. source follower the amplifier stage being a common gate configuration MOSFET the amplifier stage being a common source configuration MOSFET A comparator being used in a controlling circuit of an amplifier Inputs or outputs are crossed during a first switching time, not crossed during a second switching time A cross coupling circuit being realized by current mirrors the cross coupling circuit being realised only by MOSFETs the amplifier has a current mode topology Two or more transistors are coupled in a Darlington 	Class B amplifiers, Class C amplifiers 2203/21 . with semiconductor devices only 2203/211 . using a combination of several amplifiers 2203/21103 An impedance adaptation circuit being added at the input of a power amplifier stage 2203/21106 An input signal being distributed in parallel over the inputs of a plurality of power amplifiers 2203/21109 An input signal being distributed by switching to a plurality of paralleled power amplifiers 2203/21112 A filter circuit being added at the input of a power amplifier stage 2203/21115 An input signal dependant signal being measured by current measuring at the input of a power amplifier
2200/72 2200/75 2200/78 2200/81 2200/84 2200/87 2200/91	 the amplifier stage being a common drain coupled MOSFET, i.e. source follower the amplifier stage being a common gate configuration MOSFET the amplifier stage being a common source configuration MOSFET A comparator being used in a controlling circuit of an amplifier Inputs or outputs are crossed during a first switching time, not crossed during a second switching time A cross coupling circuit being realized by current mirrors the cross coupling circuit being realised only by MOSFETs the amplifier has a current mode topology 	Class B amplifiers, Class C amplifiers 2203/21 . with semiconductor devices only 2203/211 using a combination of several amplifiers 2203/21103 An impedance adaptation circuit being added at the input of a power amplifier stage 2203/21106 An input signal being distributed in parallel over the inputs of a plurality of power amplifiers 2203/21109 An input signal being distributed by switching to a plurality of paralleled power amplifiers 2203/21112 A filter circuit being added at the input of a power amplifier stage 2203/21115 An input signal dependant signal being measured by current measuring at the input
2200/72 2200/75 2200/78 2200/81 2200/84 2200/87 2200/91	 the amplifier stage being a common drain coupled MOSFET, i.e. source follower the amplifier stage being a common gate configuration MOSFET the amplifier stage being a common source configuration MOSFET A comparator being used in a controlling circuit of an amplifier Inputs or outputs are crossed during a first switching time, not crossed during a second switching time A cross coupling circuit being realized by current mirrors the cross coupling circuit being realised only by MOSFETs the amplifier has a current mode topology Two or more transistors are coupled in a Darlington composite transistor configuration, all transistors being of the same type Two or more complementary transistors are coupled 	Class B amplifiers, Class C amplifiers 2203/21
2200/72 2200/75 2200/78 2200/81 2200/84 2200/87 2200/91 2200/93	 the amplifier stage being a common drain coupled MOSFET, i.e. source follower the amplifier stage being a common gate configuration MOSFET the amplifier stage being a common source configuration MOSFET A comparator being used in a controlling circuit of an amplifier Inputs or outputs are crossed during a first switching time, not crossed during a second switching time A cross coupling circuit being realized by current mirrors the cross coupling circuit being realised only by MOSFETs the amplifier has a current mode topology Two or more transistors are coupled in a Darlington composite transistor configuration, all transistors being of the same type Two or more complementary transistors are coupled in a Darlington composite transistor configuration 	Class B amplifiers, Class C amplifiers 2203/21 . with semiconductor devices only 2203/211 using a combination of several amplifiers 2203/21103 An impedance adaptation circuit being added at the input of a power amplifier stage 2203/21106 An input signal being distributed in parallel over the inputs of a plurality of power amplifiers 2203/21109 An input signal being distributed by switching to a plurality of paralleled power amplifiers 2203/21112 A filter circuit being added at the input of a power amplifier stage 2203/21115 An input signal dependant signal being measured by current measuring at the input of a power amplifier 2203/21118 An input signal dependant signal being measured by power measuring at the input of a power amplifier 2203/21121 An input signal dependant signal being
2200/72 2200/75 2200/78 2200/81 2200/84 2200/87 2200/91 2200/93	 the amplifier stage being a common drain coupled MOSFET, i.e. source follower the amplifier stage being a common gate configuration MOSFET the amplifier stage being a common source configuration MOSFET A comparator being used in a controlling circuit of an amplifier Inputs or outputs are crossed during a first switching time, not crossed during a second switching time A cross coupling circuit being realized by current mirrors the cross coupling circuit being realised only by MOSFETs the amplifier has a current mode topology Two or more transistors are coupled in a Darlington composite transistor configuration, all transistors being of the same type Two or more complementary transistors are coupled 	Class B amplifiers, Class C amplifiers 2203/21 . with semiconductor devices only 2203/211 . using a combination of several amplifiers 2203/21103 . An impedance adaptation circuit being added at the input of a power amplifier stage 2203/21106 . An input signal being distributed in parallel over the inputs of a plurality of power amplifiers 2203/21109 . An input signal being distributed by switching to a plurality of paralleled power amplifiers 2203/21112 . A filter circuit being added at the input of a power amplifier stage 2203/21115 . An input signal dependant signal being measured by current measuring at the input of a power amplifier 2203/21118 . An input signal dependant signal being measured by power measuring at the input of a power amplifier 2203/21121 . An input signal dependant signal being measured by voltage measuring at the input of a power amplifier
2200/72 2200/75 2200/78 2200/81 2200/84 2200/87 2200/91 2200/93	 the amplifier stage being a common drain coupled MOSFET, i.e. source follower the amplifier stage being a common gate configuration MOSFET the amplifier stage being a common source configuration MOSFET A comparator being used in a controlling circuit of an amplifier Inputs or outputs are crossed during a first switching time, not crossed during a second switching time A cross coupling circuit being realized by current mirrors the cross coupling circuit being realised only by MOSFETs the amplifier has a current mode topology Two or more transistors are coupled in a Darlington composite transistor configuration, all transistors being of the same type Two or more complementary transistors are coupled in a Darlington composite transistor configuration A diode as rectifier being used as a detecting circuit in an amplifying circuit Indexing scheme relating to details of amplifiers 	Class B amplifiers, Class C amplifiers 2203/21 . with semiconductor devices only 2203/211 . using a combination of several amplifiers 2203/21103 . An impedance adaptation circuit being added at the input of a power amplifier stage 2203/21106 . An input signal being distributed in parallel over the inputs of a plurality of power amplifiers 2203/21109 . An input signal being distributed by switching to a plurality of paralleled power amplifiers 2203/21112 . A filter circuit being added at the input of a power amplifier stage 2203/21115 . An input signal dependant signal being measured by current measuring at the input of a power amplifier 2203/21118 . An input signal dependant signal being measured by power measuring at the input of a power amplifier 2203/21121 . An input signal dependant signal being measured by voltage measuring at the input of a power amplifier 2203/21121 . An input signal dependant signal being measured by voltage measuring at the input of a power amplifier 2203/21124 . A parallel resonance circuit being coupled at
2200/72 2200/75 2200/78 2200/81 2200/84 2200/87 2200/91 2200/93 2200/96 2200/99	 the amplifier stage being a common drain coupled MOSFET, i.e. source follower the amplifier stage being a common gate configuration MOSFET the amplifier stage being a common source configuration MOSFET A comparator being used in a controlling circuit of an amplifier Inputs or outputs are crossed during a first switching time, not crossed during a second switching time A cross coupling circuit being realized by current mirrors the cross coupling circuit being realised only by MOSFETs the amplifier has a current mode topology Two or more transistors are coupled in a Darlington composite transistor configuration, all transistors being of the same type Two or more complementary transistors are coupled in a Darlington composite transistor configuration A diode as rectifier being used as a detecting circuit in an amplifying circuit Indexing scheme relating to details of amplifiers with only discharge tubes, only semiconductor devices or only unspecified devices as amplifying 	Class B amplifiers, Class C amplifiers 2203/21 . with semiconductor devices only 2203/211 . using a combination of several amplifiers 2203/21103 . An impedance adaptation circuit being added at the input of a power amplifier stage 2203/21106 . An input signal being distributed in parallel over the inputs of a plurality of power amplifiers 2203/21109 . An input signal being distributed by switching to a plurality of paralleled power amplifiers 2203/21112 . A filter circuit being added at the input of a power amplifier stage 2203/21115 . An input signal dependant signal being measured by current measuring at the input of a power amplifier 2203/21118 . An input signal dependant signal being measured by power measuring at the input of a power amplifier 2203/21121 . An input signal dependant signal being measured by voltage measuring at the input of a power amplifier
2200/72 2200/75 2200/78 2200/81 2200/84 2200/87 2200/91 2200/93 2200/96 2200/99	 the amplifier stage being a common drain coupled MOSFET, i.e. source follower the amplifier stage being a common gate configuration MOSFET the amplifier stage being a common source configuration MOSFET A comparator being used in a controlling circuit of an amplifier Inputs or outputs are crossed during a first switching time, not crossed during a second switching time A cross coupling circuit being realized by current mirrors the cross coupling circuit being realised only by MOSFETs the amplifier has a current mode topology Two or more transistors are coupled in a Darlington composite transistor configuration, all transistors being of the same type Two or more complementary transistors are coupled in a Darlington composite transistor configuration A diode as rectifier being used as a detecting circuit in an amplifying circuit Indexing scheme relating to details of amplifiers with only discharge tubes, only semiconductor 	Class B amplifiers, Class C amplifiers 2203/21 . with semiconductor devices only 2203/2110 . using a combination of several amplifiers 2203/21103 . An impedance adaptation circuit being added at the input of a power amplifier stage 2203/21106 . An input signal being distributed in parallel over the inputs of a plurality of power amplifiers 2203/21109 . An input signal being distributed by switching to a plurality of paralleled power amplifiers 2203/21112 . A filter circuit being added at the input of a power amplifier stage 2203/21115 . An input signal dependant signal being measured by current measuring at the input of a power amplifier 2203/21118 . An input signal dependant signal being measured by power measuring at the input of a power amplifier 2203/21121 . An input signal dependant signal being measured by voltage measuring at the input of a power amplifier 2203/21124 . A parallel resonance circuit being coupled at the input of a power amplifier 2203/21127 . the input bias current of a power amplifier being controlled, e.g. by an active current source or a current mirror
2200/72 2200/75 2200/78 2200/81 2200/84 2200/87 2200/91 2200/93 2200/96 2200/99 2201/00	 the amplifier stage being a common drain coupled MOSFET, i.e. source follower the amplifier stage being a common gate configuration MOSFET the amplifier stage being a common source configuration MOSFET A comparator being used in a controlling circuit of an amplifier Inputs or outputs are crossed during a first switching time, not crossed during a second switching time A cross coupling circuit being realized by current mirrors the cross coupling circuit being realised only by MOSFETs the amplifier has a current mode topology Two or more transistors are coupled in a Darlington composite transistor configuration, all transistors being of the same type Two or more complementary transistors are coupled in a Darlington composite transistor configuration A diode as rectifier being used as a detecting circuit in an amplifying circuit Indexing scheme relating to details of amplifiers with only discharge tubes, only semiconductor devices or only unspecified devices as amplifying elements covered by H03F 1/00 Indexing scheme relating to modifications of amplifiers to reduce non-linear distortion 	Class B amplifiers, Class C amplifiers 2203/21 . with semiconductor devices only 2203/2110 . using a combination of several amplifiers 2203/21103 . An impedance adaptation circuit being added at the input of a power amplifier stage 2203/21106 . An input signal being distributed in parallel over the inputs of a plurality of power amplifiers 2203/21109 . An input signal being distributed by switching to a plurality of paralleled power amplifiers 2203/21112 . A filter circuit being added at the input of a power amplifier stage 2203/21115 . An input signal dependant signal being measured by current measuring at the input of a power amplifier 2203/21118 . An input signal dependant signal being measured by power measuring at the input of a power amplifier 2203/21121 . An input signal dependant signal being measured by voltage measuring at the input of a power amplifier 2203/21121 . An input signal dependant signal being measured by voltage measuring at the input of a power amplifier 2203/21121 . A parallel resonance circuit being coupled at the input of a power amplifier 2203/21127 . the input bias current of a power amplifier being controlled, e.g. by an active current
2200/72 2200/75 2200/78 2200/81 2200/84 2200/87 2200/91 2200/93 2200/96 2200/99 2201/00	 the amplifier stage being a common drain coupled MOSFET, i.e. source follower the amplifier stage being a common gate configuration MOSFET the amplifier stage being a common source configuration MOSFET A comparator being used in a controlling circuit of an amplifier Inputs or outputs are crossed during a first switching time, not crossed during a second switching time A cross coupling circuit being realized by current mirrors the cross coupling circuit being realised only by MOSFETs the amplifier has a current mode topology Two or more transistors are coupled in a Darlington composite transistor configuration, all transistors being of the same type Two or more complementary transistors are coupled in a Darlington composite transistor configuration A diode as rectifier being used as a detecting circuit in an amplifying circuit Indexing scheme relating to details of amplifiers with only discharge tubes, only semiconductor devices or only unspecified devices as amplifying elements covered by H03F 1/00 Indexing scheme relating to modifications of 	Class B amplifiers, Class C amplifiers 2203/211 . with semiconductor devices only 2203/21103 An impedance adaptation circuit being added at the input of a power amplifier stage 2203/21106 An input signal being distributed in parallel over the inputs of a plurality of power amplifiers 2203/21109 An input signal being distributed by switching to a plurality of paralleled power amplifiers 2203/21112 A filter circuit being added at the input of a power amplifier stage 2203/21115 An input signal dependant signal being measured by current measuring at the input of a power amplifier 2203/21118 An input signal dependant signal being measured by power measuring at the input of a power amplifier 2203/21121 An input signal dependant signal being measured by voltage measuring at the input of a power amplifier 2203/21124 A parallel resonance circuit being coupled at the input of a power amplifier 2203/21127 the input bias current of a power amplifier being controlled, e.g. by an active current source or a current mirror

2203/21136 An input signal of a power amplifier being on/off switched	2203/30012 the two SEPP amplifying transistors are Darlington composite transistors
2203/21139 An impedance adaptation circuit being added at the output of a power amplifier stage	2203/30015 • An input signal dependent control signal controls the bias of an output stage in the SEPP
2203/21142 Output signals of a plurality of power amplifiers are parallel combined to a	2203/30018 A series coupled active resistor and capacitor are coupled in a feedback circuit of a SEPP amplifier
common output	2203/30021 A capacitor being coupled in a feedback circuit of
2203/21145 Output signals are combined by switching a plurality of paralleled power amplifiers to a	a SEPP amplifier 2203/30024 the SEPP bias current being controlled by a
common output 2203/21148 An output signal of a power amplifier being	control signal from a feedback circuit 2203/30027 • the SEPP bias voltage being controlled by a
controlled by controlling current signal, e.g. by controlled current mirror	control signal from a feedback circuit
2203/21151 An output signal of a power amplifier being	2203/30031 A resistor being coupled as feedback circuit in the SEPP amplifier
controlled by controlling power signal, e.g. by an inductive coupler	2203/30033 A series coupled resistor and capacitor are coupled in a feedback circuit of a SEPP amplifier
2203/21154 An output signal of a power amplifier being controlled by controlling voltage signal	2203/30036 A feedback circuit to stabilise the SEPP being used
2203/21157 A filter circuit being added at the output of a	2203/30039 the SEPP bias current being controlled by a
power amplifier stage 2203/21161 An output signal dependant signal being	control signal from a feedforward circuit 2203/30042 the SEPP bias voltage being controlled by a
measured by current measuring at the output of a power amplifier	control signal from a feedforward circuit 2203/30045 the SEPP power transistors comprising measuring
2203/21163 An output signal dependant signal being measured by power measuring, e.g. by an	push or pull transistors to produce a controlling
inductive coupler, at the output of a power	signal 2203/30048 • • the SEPP amplifier has multiple SEPP outputs
amplifier 2203/21166 An output signal dependant signal being	from paralleled output stages coupled in one or more outputs
measured by voltage measuring at the output of a power amplifier	2203/30051 the SEPP amplifying transistors are composed of
2203/21169 A parallel resonance circuit being coupled at	multiple coupled transistors 2203/30054 the SEPP power transistors are realised as
the output of a power amplifier 2203/21172 A series resonance circuit being coupled at	paralleled cascode coupled transistors, i.e. the push or the pull transistors
the output of a power amplifier 2203/21175 An output signal of a power amplifier being	2203/30057 • the SEPP power transistors are realised as paralleled FETs, i.e. the push or the pull transistor
on/off switched 2203/21178 Power transistors are made by coupling a	2203/30061 One or more current mirrors are used as bias
plurality of single transistors in parallel	circuit or stages for the push or pull stages 2203/30063 . A differential amplifier being used in the bias
2203/21181 the supply current of a power amplifier being continuously controlled, e.g. by controlling	circuit or in the control circuit of the SEPP- amplifier
current sources or resistors 2203/21184 the supply current of a power amplifier being	2203/30066 • • A optical element being used in the bias circuit of the SEPP-amplifier
continuously measured, e.g. by a resistor, a current mirror, to produce a controlling	2203/30069 . A SEPP amplifier with a reactive element in the bias circuit
signal signal 2203/21187 the supply current of a power amplifier being	2203/30072 the SEPP has a power supply switchable by a
measured discontinuously in time, e.g. by	controlling signal derived from the input signal 2203/30075 • the SEPP has a power supply switchable by a
sampling, to produce a controlling signal 2203/21191 the supply current of a power amplifier	controlling signal derived from the output signal 2203/30078 • • A resistor being added in the pull stage of the
being switchable controlled, e.g. by choosing different current sources or resistors	SEPP amplifier
2203/21193 the supply voltage of a power amplifier being continuously controlled, e.g. by an active	2203/30081 the pull transistor circuit comprising one or more capacitors
potentiometer	2203/30084 . • the pull circuit of the SEPP amplifier being a cascode circuit
2203/21196 the supply voltage of a power amplifier being switchable controlled	2203/30087 . Only the bias of the pull transistor of the SEPP being dynamically controlled by the input signal
2203/30 • Indexing scheme relating to single-ended push-pull [SEPP]; Phase-splitters therefor	2203/30091 the pull side of the SEPP amplifier has an extra
2203/30003 the SEPP amplifier stage comprising calibration	drive follower stage to control this pull side 2203/30093 • the pull side of the SEPP amplifier has an extra
possibility 2203/30006 • the push and the pull stages of the SEPP amplifier	drive inverter stage to control this pull side 2203/30096 • • An op amp being used as extra drive amp for the
are both current mirrors 2203/30009 the push and pull stages of the SEPP amplifier are	pull side of the SEPP
both cascode current mirrors	2203/30099 the pull transistor being gated by a switching element

2203/30102 the pull transistor has a measuring transistor for controlling purposes	2203/45018 the differential amplifier amplifying transistors have added cross couplings
2203/30105 • the pull transistor of the asymmetrically driven SEPP amplifier being a driven current mirror	2203/45021 • One or more added diodes to the amplifying transistors in the differential amplifier
2203/30108 • • the pull transistor of the SEPP amplifier being a cascode current mirror	2203/45022 One or more added resistors to the amplifying transistors in the differential amplifier
2203/30111 . A resistor being added in the push stage of the SEPP amplifier	2203/45024 the differential amplifier amplifying transistors are cascode coupled transistors
2203/30114 the push transistor circuit comprising one or more capacitors	2203/45026 One or more current sources are added to the amplifying transistors in the differential amplifier
2203/30117 the push circuit of the SEPP amplifier being a cascode circuit	2203/45028 the differential amplifier amplifying transistors are folded cascode coupled transistors
2203/30121 • Only the bias of the push transistor of the SEPP being dynamically controlled by the input signal	2203/45031 the differential amplifier amplifying transistors are compositions of multiple transistors
2203/30123 • • the push side of the SEPP amplifier has an extra drive follower stage to control this push side	2203/45032 the differential amplifier amplifying transistors are multiple paralleled transistors
2203/30126 • the push side of the SEPP amplifier has an extra drive inverter stage to control this push side	2203/45034 • One or more added reactive elements, capacitive or inductive elements, to the amplifying
2203/30129 • An op amp being used as extra drive amp for the push side of the SEPP	transistors in the differential amplifier 2203/45036 the differential amplifier amplifying transistors are single transistors
2203/30132 • the push transistor being gated by a switching element	2203/45038 . One or more current sources are added or changed as balancing means to reduce the offset
2203/30135 the push transistor has a measuring transistor for controlling purposes	of the dif amp 2203/45041 • Fuses are blown to balance the dif amp to reduce
 2203/30138 the push transistor of the asymmetrically driven SEPP amplifier being a driven current mirror 2203/30141 the push transistor of the SEPP amplifier being a 	the offset of the dif amp 2203/45042 One or more resistors are added or changed as
cascode current mirror 2203/30144 the push transistor of the SETT amplifier being a cascode current mirror	balancing to reduce the offset of the dif amp 2203/45044 . One or more switches are opened or closed to
amplifying circuits 2203/30147 • the current sink of the push driven, i.e. source	balance the dif amp to reduce the offset of the dif
driven SEPP amplifier being a current mirror 2203/30151 • the current sink of the push driven, i.e. source	2203/45046 the base current of the amplifying transistors of a dif amp being compensated for providing a
driven SEPP amplifier being a cascode current mirror	greater input impedance of the amplifier 2203/45048 Calibrating and standardising a dif amp
2203/30153 • the current source of the pull driven, i.e. sink driven SEPP amplifier being a current mirror	2203/45051 Two or more differential amplifiers cascade coupled
2203/30156 the current source of the pull driven, i.e. sink driven SEPP amplifier being a cascode current mirror	2203/45052 • the cascode stage of the cascode differential amplifier being controlled by a controlling signal, which controlling signal can also be the input
2203/45 • Indexing scheme relating to differential amplifiers	signal 2203/45054 the cascode stage of the cascode dif amp being a
2203/45002 • • the addition of two signals being made by addition of two currents by coupling the outputs	current mirror 2203/45056 . One or both transistors of the cascode stage of a
of two current mirrors in parallel 2203/45004 • the addition of two signals being made by addition of two currents by coupling two current	differential amplifier being composed of more than one transistor
sources in parallel 2203/45006 • the addition of two signals being made by two	2203/45058 the cascode stage of the differential amplifier comprising a reactive element
emitter or source coupled followers 2203/45008 the addition of two signals being made by	2203/45061 the common mode reference signal being taken or deducted from the one or more inputs of the
a resistor addition circuit for producing the common mode signal	differential amplifier 2203/45062 the common mode signal, e.g. voltage or current
2203/45011 • • the addition of two signals being made in a source degeneration circuit of a current mirror for	being added to the cascode stage of the cascode or folded cascode differential amplifier
producing the common mode signal 2203/45012 • the addition of two signals being made in a	2203/45064 the resulting deducted common mode signal being added to the folding circuit of the folded differential amplifier
switched capacitor circuit for producing the common mode signal	2203/45066 the resulting deducted common mode signal
2203/45014 • the addition of two signals being made in the tail circuit of a differential amplifier for producing the	being added at the one or more inputs of the differential amplifier
common mode signal	2203/45068 the resulting deducted common mode signal being added at the one or more outputs of the
2203/45016 • • the addition of two signals being made by paralleling two triode biased transistors for producing the common mode signal	differential amplifier

2203/45071 • the resulting deducted common mode signal being added at the substrate or body regions of the components of the differential amplifier 2203/45072 • the common mode voltage or current signal	 2203/45121 . A floating gate element being part of a dif amp 2203/45122 . the folded cascode stage of the folded cascode differential amplifier being controlled by a controlling signal
being added to the tail circuit of the differential amplifier	2203/45124 the folded cascode stage of the folded cascode dif amp being a current mirror
2203/45074 A comparator circuit compares the common mode signal to a reference before controlling the differential amplifier or related stages	2203/45126 • One or both transistors of the folded cascode stage of a folded cascode dif amp are composed of more than one transistor
2203/45076 the resulting deducted common mode signal being added to or controls the differential amplifier, and being a current signal	2203/45128 the folded cascode stage of the folded cascode dif amp contains a reactive element
2203/45078 • the common mode signal being taken or deducted from the one or more inputs of the differential amplifier	 2203/45131 . A follower being added between the dif amp and other explicit stages in the amplifying circuit 2203/45132 . A source follower using multiple single follower
2203/45081 the common mode signal being level shifted	stages cascaded in a composed follower being added to the dif amp
before using it for controlling or adding 2203/45082 the common mode signal being taken or deducted from the one or more outputs of the differential	2203/45134 • • the whole differential amplifier together with other coupled stages being fully differential realised
amplifier 2203/45084 the common mode signal circuit comprising one	2203/45136 . One differential amplifier in IC-block form being shown
or more inductive or capacitive elements, e.g. filter circuitry	2203/45138 • • Two or more differential amplifiers in IC-block form are combined, e.g. measuring amplifiers
2203/45086 the common mode signal being taken or deducted from the tail circuit of the differential amplifier	2203/45141 . A cross coupled pair of transistors being added in the input circuit of a differential amplifier
2203/45088 the resulting deducted common mode signal being added to or controls the differential	2203/45142 At least one diode being added at the input of a dif amp
amplifier, and being a voltage signal 2203/45091 . Two complementary type differential amplifiers	2203/45144 . • At least one follower being added at the input of a dif amp
are paralleled, e.g. one of the p-type and one of the n-type	2203/45146 At least one op amp being added at the input of a dif amp
2203/45092 Two current sources bias one set of two common base transistors cascaded with two other common base transistors, the common base transistors	2203/45148 At least one reactive element being added at the input of a dif amp
being driven complementary	2203/45151 At least one resistor being added at the input of a dif amp
2203/45094 the dif amp being realized by coupling the emitters respectively sources of two common	2203/45152 . Balancing means being added at the input of a dif amp to reduce the offset of the dif amp
collector respectively drain transistors of a first type to the emitters respectively sources of two	2203/45154 • the bias at the input of the amplifying transistors being controlled
common base respectively gate transistors of a second complementary type	2203/45156 At least one capacitor being added at the input of
2203/45096 • the difference of two signals being made by, e.g. combining two or more current mirrors, e.g.	a dif amp 2203/45158 . One or more diodes coupled at the inputs of a dif
differential current mirror 2203/45098 Two current mirrors coupled in a subtracting	amp as clamping elements 2203/45161 . One or more diodes coupled at the inputs of a dif
configuration	amp as level shifting circuit elements 2203/45162 • A parallel resonance circuit being added in the
 2203/45101 Control of the DC level being present 2203/45102 A diode being used as clamping element at the 	one or more input circuits of the dif amp 2203/45164 • A series resonance circuit being added in the one
input of the dif amp 2203/45104 . A diode being used as clamping element at the	or more input circuits of the dif amp
loading circuit of the dif amp	2203/45166 . Only one input of the dif amp being used for an input signal
2203/45106 A diode being used as clamping element at the output of the dif amp	2203/45168 A dif amp being used as input stage to one or more other non-differential stages
2203/45108 . A diode being used as level shifter between stages or in a follower in relation with a dif amp	2203/45171 the input signal being switched to the one or more
2203/45111 Two dif amps of the same type are used one dif amp for each input signal	input terminals of the differential amplifier 2203/45172 . A transformer being added at the input of the dif
2203/45112 the biasing of the differential amplifier being controlled from the input or the output signal	amp 2203/45174 • the application of the differential amplifier being in an integrator circuit
2203/45114 the differential amplifier contains another differential amplifier in its feedback circuit	2203/45176 A cross coupling circuit, e.g. consisting of two
2203/45116 Feedback coupled to the input of the differential amplifier	cross coupled transistors, being added in the load circuit of the amplifying transistors of a differential amplifier
2203/45118 At least one reactive element being added to at least one feedback circuit of a dif amp	•

least one feedback circuit of a dif amp

2203/45178 the differential amplifier contains one or more	2203/45232 Two diff amps of the folded cascode type are
extra resistors in the active load circuit 2203/45181 • Compensation of unbalanced loading in dif amps, e.g. unbalancing by connecting unequal circuits	paralleled at their input gates or bases 2203/45234 . Two dif amps, one of them being of the cascade type and the other one of the folded cascade type,
on both load circuits of the dif amp 2203/45182 the differential amplifier contains one or more	are paralleled at their input gates or bases 2203/45236 . Two dif amps realised in MOS or JFET
cascode current mirrors in the load 2203/45184 the differential amplifier has one or more cascode current sources in the load	technology, one of them being of the p-channel type and the other one of the n-channel type, are coupled in parallel with their gates
2203/45186 the differential amplifier contains clamping components in the load circuit	2203/45238 Two dif amps realised in FET technology, the dif amps being either both of the NMOS type or both
2203/45188 the differential amplifier contains one or more current sources in the load	of the PMOS type, are coupled in parallel with their gates and their drains
 2203/45191 . One or more diodes not belonging to a current mirror as loads of a dif amp 2203/45192 . the differential amplifier contains current mirrors 	2203/45241 Two dif amps realised in MOS or JFET technology, the dif amps being either both of the p-channel type or both of the n-channel type, are
comprising diodes which act as a load for the differential amplifier	coupled in parallel with their gates 2203/45242 . Two dif amps are paralleled at their inputs, the dif
2203/45194 • At least one active load circuit of the two load circuits in a differential amplifier being realised with a combination of more than one transistor	amps being of different types, e.g. one long tail type and one complementary or pi type 2203/45244 the differential amplifier contains one or more
2203/45196 . A differential amplifier with one or more parallel coupled LC-circuits as load	explicit bias circuits, e.g. to bias the tail current sources, to bias the load transistors
2203/45198 A parallel resonance circuit being added in the one or more load circuits of the dif amp	2203/45246 the dif amp being biased in the subthreshold region
2203/45201 • the differential amplifier contains one or more reactive elements, i.e. capacitive or inductive elements, in the load	 2203/45248 the dif amp being designed for improving the slew rate 2203/45251 the dif amp has a cross coupling circuit in the
2203/45202 the differential amplifier contains only resistors in the load	source circuit of the amplifying transistors 2203/45252 . Diodes are added in the source circuit of the
2203/45204 A series resonance circuit being added in the one or more load circuits of the dif amp	amplifying FETs of the dif amp 2203/45254 . A parallel resonance circuit being added in the
2203/45206 • One or two switches are coupled in the loading circuit of the dif amp	one or more source circuits of the amplifying FETs of the dif amp
2203/45208 the dif amp being of the long tail pair type, one current source being coupled to the common emitter of the amplifying transistors	2203/45256 . One or more reactive elements are added in the source circuit of the amplifying FETs of the dif amp
2203/45211 • the amplifying transistors have multiple collectors with a cross coupling	2203/45258 Resistors are added in the source circuit of the amplifying FETs of the dif amp
2203/45212 the differential amplifier being designed to have a reduced offset	2203/45261 • A series resonance circuit being added in the one or more source circuits of the amplifying FETs of the dif amp
2203/45214 • Offset in a differential amplifier being reduced by control of the substrate voltage, the voltage being either fixed or variable	2203/45262 the two amplifying FETs, amplifying two complementary input signals, are not source
2203/45216 . A cross coupling circuit being added at the output terminals of the amplifying transistors of a	coupled, i.e. no tail being present 2203/45264 the dif amp comprising frequency or phase stabilisation means
differential amplifier 2203/45218 • Diode clamping means are present at the output of a differential amplifier	2203/45266 the stage cascaded to the dif amp being an asymmetrical follower stage
2203/45221 . the output signal being taken from the two complementary outputs of the differential	2203/45268 A common gate stage being coupled at the one or more outputs of the dif amp
amplifier 2203/45222 • the differential amplifier output being directly controlled by a feedback or feedforward circuit	2203/45271 • • the output current being reduced by a transistor which being controlled by the input signal to sink current
coupled at the output of the differential amplifier being	2203/45272 the output current being increased by a transistor which being controlled by the input signal to
taken into consideration 2203/45226 the output signal being switched taken from the	source current 2203/45274 . Level shifting stages are added to the differential amplifier at a position other than the one or more
one or more output terminals of the differential amplifier	amplifier at a position other than the one or more inputs of the dif amp 2203/45276 . An op amp as stage being coupled to the output of
2203/45228 • A transformer being added at the output or the load circuit of the dif amp	2203/45278 • An op amp as stage being coupled to the output of a dif amp 2203/45278 • Two SEPP stages are added to the differential
2203/45231 • Two dif amps of the cascode type are paralleled at their input gates or bases	amplifier, the outputs of the two SEPP stages being the two outputs of the whole amplifier

2203/45281 • One SEPP output stage being added to the differential amplifier	2203/45338 the AAC comprising one or more series circuits of a resistor and a capacitor as feedback circuit
2203/45282 • • the differential amplifier being coupled to a symmetrical follower output stage	elements 2203/45341 the AAC comprising controlled floating gates
2203/45284 Sensing the temperature dependence by a temperature dependant sensor, e.g. a resistor, a	2203/45342 the AAC comprising control means on a back gate of the AAC
diode 2203/45286 the temperature dependence of a differential	2203/45344 . At least one of the AAC sub-circuits being a current mirror
amplifier being controlled 2203/45288 . Differential amplifier with circuit arrangements to	2203/45346 the AAC comprising one or more FETs with multiple drains
enhance the transconductance	2203/45348 the AAC comprising one or more FETs with
2203/45291 • the active amplifying circuit [AAC] comprising balancing means	multiple gates 2203/45351 the AAC comprising one or more FETs with
2203/45292 the AAC comprising biasing means controlled by the signal	multiple sources 2203/45352 the AAC comprising a combination of a plurality
2203/45294 the AAC comprising biasing means to stabilise itself	of transistors, e.g. Darlington coupled transistors 2203/45354 • the AAC comprising offset means
2203/45296 • the AAC comprising one or more discrete capacitive elements, e.g. a transistor coupled as	2203/45356 the AAC comprising one or more op-amps, e.g. IC-blocks
capacitor 2203/45298 the AAC comprising one or more combinations	2203/45358 the AAC comprising multiple transistors parallel coupled at their sources and drains only, e.g.
of discrete capacitor and resistor elements, e.g. active elements using a transistor as a capacitor or	in a cascode dif amp, only those forming the composite common source transistor
as a resistor	2203/45361 the AAC comprising multiple transistors parallel
2203/45301 • there are multiple cascaded folded or not folded common gate stages of a cascode dif amp	coupled at their drains only, e.g. in a cascode dif amp, only those forming the composite common
2203/45302 the common gate stage of a cascode dif amp being controlled	source transistor 2203/45362 the AAC comprising multiple transistors parallel
2203/45304 the common gate stage of a BIFET cascode dif amp being implemented fully by FETs	coupled at their gates and drains only, e.g. in a cascode dif amp, only those forming the
2203/45306 the common gate stage implemented as dif amp eventually for cascode dif amp	composite common source transistor 2203/45364 the AAC comprising multiple transistors parallel
2203/45308 the common gate stage of a cascode dif amp being implemented as one mirror circuit	coupled at their gates and sources only, e.g. in a cascode dif amp, only those forming the
2203/45311 the common gate stage of a cascode dif amp being implemented by multiple transistors	composite common source transistor [2203/45366] the AAC comprising multiple transistors parallel
2203/45312 • there being only one common gate stage of a cascode dif amp	coupled at their gates only, e.g. in a cascode dif amp, only those forming the composite common
2203/45314 the AAC comprising clamping means, e.g. diodes	source transistor
2203/45316 the AAC comprising one or more discrete inductive elements or coils	2203/45368 the AAC comprising multiple transistors parallel coupled at their sources only, e.g. in a cascode dif
2203/45318 the AAC comprising a cross coupling circuit, e.g. two extra transistors cross coupled	amp, only those forming the composite common source transistor
2203/45321 the common source stage of a BIFET cascode dif amp being implemented fully by FETs	2203/45371 the AAC comprising parallel coupled multiple transistors at their source and gate and drain
2203/45322 One or more current sources are added to the AAC	or at their base and emitter and collector, e.g. in a cascode dif amp, only those forming the composite common source transistor or the
2203/45324 the AAC comprising a Darlington transistor circuit	composite common emitter transistor respectively
2203/45326 • the AAC comprising one or more extra diodes, e.g. as level shifter, as diode coupled transistors	2203/45372 the AAC comprising one or more potentiometers2203/45374 the AAC comprising one or more discrete
2203/45328 the AAC comprising one diode coupled AAC-transistor in a follower combination with the other	resistors 2203/45376 . • the AAC comprising one or more discrete resistors as shunts between collectors or drains
AAC circuit part 2203/45331 the AAC comprising one or more diodes coupled	2203/45378 the AAC comprising saturation or cutoff avoiding
as a shunt between the AAC-transistors in the AAC	means, e.g. as a feedback circuit 2203/45381 the AAC comprising multiple transistors coupled
2203/45332 the AAC comprising one or more capacitors as feedback circuit elements	in shunt 2203/45382 the AAC comprising common gate stages in the
2203/45334 the AAC comprising one or more dif amps as feedback circuit elements	source circuit of the AAC before the common source coupling
2203/45336 the AAC comprising one or more resistors as feedback circuit elements	2203/45384 the AAC comprising common gate stages in the source circuit of the AAC before the common source coupling in which the common gate stage being controlled

being controlled

2203/45386 the AAC comprising one or more coils in the source circuit	 2203/45452 the CSC comprising balancing means 2203/45454 the CSC comprising biasing means controlled by
2203/45388 the AAC comprising diodes in the source circuit of the AAC before the common source coupling	the input signal 2203/45456 • the CSC comprising bias stabilisation means,
2203/45391 • the AAC comprising potentiometers in the source circuit of the AAC before the common source	e.g. DC-level stability, positive or negative temperature coefficient dependent control
coupling	2203/45458 the CSC comprising one or more capacitors
2203/45392 the AAC comprising resistors in the source circuit	2203/45461 the CSC comprising one or more switched
of the AAC before the common source coupling	capacitors
2203/45394 the AAC of the dif amp comprising FETs whose	2203/45462 the CSC comprising a cascode circuit
sources are not coupled, i.e. the AAC being a pseudo-differential amplifier	2203/45464 the CSC comprising one or more coils
2203/45396 • the AAC comprising one or more switches	2203/45466 the CSC being controlled, e.g. by a signal derived
2203/45398 • the AAC comprising a voltage generating circuit	from a non specified place in the dif amp circuit 2203/45468 • the CSC comprising a cross coupling circuit, e.g.
as bias circuit for the AAC	comprising two cross-coupled transistors
2203/45401 the common mode controlling loop [CMCL]	2203/45471 the CSC comprising one or more extra current
comprising a transistor resistor addition circuit	sources
2203/45402 the CMCL comprising a buffered addition circuit,	2203/45472 the CSC comprising one or more diodes
i.e. the signals are buffered before addition, e.g.	2203/45474 the CSC comprising controlled one or more
by a follower	floating gates
2203/45404 • • the CMCL comprising capacitors containing, not in parallel with the resistors, an addition circuit	2203/45476 the CSC comprising a mirror circuit
2203/45406 • the CMCL comprising a common source node of	2203/45478 the CSC comprising a cascode mirror circuit
a long tail FET pair as an addition circuit	2203/45481 the CSC comprising only a direct connection to
2203/45408 . • the CMCL comprising a short circuited	the supply voltage, no other components being
differential output of a dif amp as an addition	present 2203/45482 the CSC comprising offset means
circuit	2203/45484 the CSC comprising one or more op-amps
2203/45411 the CMCL comprising a diode addition circuit,	2203/45486 the CSC comprising two or more paralleled
e.g. using diode connected transistors	transistors as current source
2203/45412 the CMCL comprising a folding circuit as addition circuit	2203/45488 the CSC being a pi circuit and a capacitor being
2203/45414 the CMCL comprising a current mirror addition	used at the place of the resistor
circuit	2203/45491 the CSC being a pi circuit and the resistor being
2203/45416 the CMCL comprising no addition of the dif	implemented by one or more transistors
signals to produce a common mode signal	2203/45492 the CSC being a pi circuit and the resistor
2203/45418 the CMCL comprising a resistor addition circuit	being implemented by one or more controlled transistors
2203/45421 the CMCL comprising a switched capacitor	2203/45494 the CSC comprising one or more potentiometers
addition circuit	2203/45496 • the CSC comprising one or more extra resistors
2203/45422 the CMCL comprising one or more capacitors not	2203/45498 the CSC comprising only resistors
as integrating capacitor, e.g. for stability purposes	2203/45501 the CSC comprising a L-C parallel resonance
2203/45424 the CMCL comprising a comparator circuit 2203/45426 the CMCL comprising a comparator circuit with	circuit
extra buffering means before comparison of the	2203/45502 the CSC comprising a L-C series resonance
common mode signal, e.g. by a follower	circuit
2203/45428 the CMCL comprising a comparator circuit using	2203/45504 the CSC comprising more than one switch
a four inputs dif amp	2203/45508 the CSC comprising only one switch
2203/45431 the CMCL output control signal being a current	2203/45508 the CSC comprising a voltage generating circuit as bias circuit for the CSC
signal	2203/45511 the feedback circuit [FBC] comprising one or
2203/45432 the CMCL output control signal being a current signal and being buffered before used to control	more transistor stages, e.g. cascaded stages of the
2203/45434 • • the CMCL output control signal being a voltage	dif amp, and being coupled between the loading
signal	circuit [LC] and the input circuit [IC]
2203/45436 the CMCL output control signal being a voltage	2203/45512 the FBC comprising one or more capacitors, not
signal and being buffered before used to control	being switched capacitors, and being coupled
2203/45438 the CMCL uses digital signals	between the LC and the IC 2203/45514 the FBC comprising one or more switched
2203/45441 the CMCL comprising an integrating circuit	2203/45514 the FBC comprising one or more switched capacitors, and being coupled between the LC
2203/45442 • • the CMCL comprising multiple loops for the	and the IC
same stage or for different stages in the amplifier	2203/45516 the FBC comprising a coil and being coupled
2203/45444 the CMCL comprising a sample and hold circuit	between the LC and the IC
2203/45446 there are two or more CMCLs	2203/45518 the FBC comprising one or more diodes and
2203/45448 the common source circuit [CSC] comprising an addition circuit made by mirrors	being coupled between the LC and the IC
2203/45451 the CSC comprising an addition circuit made by	2203/45521 the FBC comprising op amp stages, e.g. cascaded stages of the dif amp and being coupled between
added current sources	the LC and the IC

2202/45522 d FDC	2202/45599
2203/45522 the FBC comprising one or more potentiometers 2203/45524 the FBC comprising one or more active resistors	2203/45588 the IC comprising offset compensating means 2203/45591 the IC comprising one or more potentiometers
and being coupled between the LC and the IC	2203/45592 the IC comprising one or more buffer stages other
2203/45526 the FBC comprising a resistor-capacitor	than emitter or source followers between the input
combination and being coupled between the LC	signal leads and input leads of the dif amp, e.g.
and the IC	inverter stages
2203/45528 the FBC comprising one or more passive resistors	2203/45594 • • the IC comprising one or more resistors, which
and being coupled between the LC and the IC	are not biasing resistor
2203/45531 the FBC comprising a parallel resonance circuit and being coupled between the LC and the IC	2203/45596 the IC comprising one or more biasing resistors
2203/45532 • the FBC comprising a series resonance circuit and	2203/45598 the IC comprising an input shunting circuit comprising a resistor and a capacitor in series
being coupled between the LC and the IC	2203/45601 the IC comprising one or more passive resistors
2203/45534 the FBC comprising multiple switches and being	by feedback
coupled between the LC and the IC	2203/45602 the IC comprising one or more active resistors by
2203/45536 the FBC comprising a switch and being coupled	feedback
between the LC and the IC	2203/45604 the IC comprising a input shunting resistor
2203/45538 the IC comprising balancing means, e.g. trimming	2203/45606 the IC comprising one or more parallel resonance
means	circuits
2203/45541 • • the IC comprising dynamic biasing means, i.e. controlled by the input signal	2203/45608 the IC comprising one or more series resonance circuits
2203/45542 the IC comprising bias stabilisation means,	2203/45611 the IC comprising only one input signal
e.g. DC level stabilisation, and temperature	connection lead for one phase of the signal
coefficient dependent control, e.g. by DC level	2203/45612 • • the IC comprising one or more input source
shifting	followers as input stages in the IC
2203/45544 the IC comprising one or more capacitors, e.g.	2203/45614 the IC comprising two cross coupled switches
coupling capacitors	2203/45616 the IC comprising more than one switch, which
2203/45546 the IC comprising one or more capacitors feedback coupled to the IC	are not cross coupled
2203/45548 the IC comprising one or more capacitors as	2203/45618 the IC comprising only one switch
shunts to earth or as short circuit between inputs	2203/45621 the IC comprising a transformer for phase splitting the input signal
2203/45551 the IC comprising one or more switched	2203/45622 the IC comprising a voltage generating circuit
capacitors	2203/45624 the LC comprising a voltage generating eneutr
2203/45552 the IC comprising clamping means, e.g. diodes	trimming means
2203/45554 the IC comprising one or more coils	2203/45626 the LC comprising biasing means controlled by
2203/45556 the IC comprising a common gate stage as input	the input signal
stage to the dif amp	2203/45628 the LC comprising bias stabilisation means, e.g.
2203/45558 the IC being coupled at the sources of the source coupled pair	DC level stabilisation means, and temperature
2203/45561 • • the IC being controlled, e.g. by a signal derived	coefficient dependent control, e.g. DC level shifting means
from a non specified place in the dif amp circuit	2203/45631 • • the LC comprising one or more capacitors, e.g.
2203/45562 the IC comprising a cross coupling circuit, e.g.	coupling capacitors
comprising two cross-coupled transistors	2203/45632 the LC comprising one or more capacitors
2203/45564 the IC comprising one or more extra current	coupled to the LC by feedback
sources	2203/45634 the LC comprising one or more switched
2203/45566 the IC comprising one or more dif stages in cascade with the dif amp	capacitors
2203/45568 the IC comprising one or more diodes as shunt to	2203/45636 the LC comprising clamping means, e.g. diodes 2203/45638 the LC comprising one or more coils
the input leads	2203/45641 the LC being controlled, e.g. by a signal derived
2203/45571 the IC comprising two diodes, e.g. Gilbert circuit	from a non specified place in the dif amp circuit
2203/45572 the IC comprising one or more Zener diodes to	2203/45642 the LC, and possibly also cascaded stages
the input leads	following it, being (are) controlled by the
2203/45574 the IC comprising four or more input leads	common mode signal derived to control a dif amp
connected to four or more AAC-transistors	2203/45644 the LC comprising a cross coupling circuit, e.g.
2203/45576 the IC comprising input impedance adapting or controlling means	comprising two cross-coupled transistors
2203/45578 the IC comprising one or more diodes as level	2203/45646 the LC comprising an extra current source
shifters	2203/45648 . • the LC comprising two current sources, which are not cascode current sources
2203/45581 the IC comprising one or more resistors as level	2203/45651 the LC comprising two cascode current sources
shifters	2203/45652 the LC comprising one or more further dif amp
2203/45582 the IC comprising one or more voltage sources as	stages, either identical to the dif amp or not, in
level shifters	cascade
2203/45584 the IC comprising extra differentially coupled	2203/45654 the LC comprising one or more extra diodes not
transistors for controlling purposes only 2203/45586 the IC comprising offset generating means	belonging to mirrors
2203743300 the ic comprising offset generating means	

2203/45656 the LC comprising one diode of a current mirror,	2203/45726 the LC comprising more than one switch, which
i.e. forming an asymmetrical load	are not cross coupled
2203/45658 the LC comprising two diodes of current mirrors	2203/45728 the LC comprising one switch
2203/45661 the LC comprising one or more controlled	2203/45731 the LC comprising a transformer
floating gates 2203/45662 • the LC comprising inductive coupled loading elements	 2203/45732 the LC comprising a voltage generating circuit 2203/50 . Indexing scheme relating to amplifiers in which input being applied to, or output being derived from,
2203/45664 . the LC comprising one or more cascaded inverter stages as output stage at one output of the dif amp	an impedance common to input and output circuits of the amplifying element, e.g. cathode follower
circuit	2203/5003 • the sources of two source followers are
2203/45666 the LC comprising two anti-phase controlled	differentially coupled
inverter circuits as output stages, e.g. fully differential	2203/5006 • the input signal being capacitively coupled to the gate of the source follower
2203/45668 the LC comprising a level shifter circuit, which does not comprise diodes	2203/5009 the output signal being capacitively coupled to the source of the source follower
2203/45671 the LC comprising one or more diodes as level	2203/5012 • • the source follower has a controlled source
shifter	circuit, the controlling signal being derived from
2203/45672 the LC comprising one or more resistors as level	the drain circuit of the follower
shifter	2203/5015 the source follower has a controlled source
2203/45674 the LC comprising one current mirror	circuit, the controlling signal being derived from
2203/45676 the LC comprising one cascode current mirror	the gate circuit of the follower
2203/45678 the LC comprising offset generating means	2203/5018 the source follower has a controlled source
2203/45681 the LC comprising offset compensating means	circuit, the controlling signal being derived from
2203/45682 the LC comprising one or more op-amps	the source circuit of the follower
2203/45684 the LC comprising one or more buffers or driving	the source follower has a controlled source circuit
stages not being of the emitter respectively source follower type, between the output of the dif amp and the output stage	2203/5024 . the source follower has a controlled source circuit, the source circuit being controlled via a capacitor, i.e. AC-controlled
2203/45686 • the LC comprising one or more potentiometers, which are not shunting potentiometers	2203/5027 the source follower has a current mirror output circuit in its source circuit
2203/45688 the LC comprising one or more shunting potentiometers	2203/5031 the source circuit of the follower being a current source
2203/45691 • the LC comprising one or more transistors as active loading resistors	2203/5033 • • Two source followers are controlled at their inputs by a differential signal
2203/45692 the LC comprising one or more resistors in series with a capacitor coupled to the LC by feedback	2203/5036 • the source follower has a resistor in its source circuit
2203/45694 • the LC comprising more than one shunting resistor	2203/5039 • • the source circuit of the follower has one or more capacitors between source and supply
2203/45696 the LC comprising more than two resistors	2203/5042 the source circuit of the follower has one or more
2203/45698 the LC comprising one or more resistors coupled	coils between source and supply
to the LC by feedback (active or passive)	2203/5045 • the source follower has a level shifter between
2203/45701 the LC comprising one resistor	source and output, e.g. a diode-connected
2203/45702 the LC comprising two resistors	transistor
2203/45704 the LC comprising one or more parallel resonance	2203/72 • Indexing scheme relating to gated amplifiers,
circuits	i.e. amplifiers which are rendered operative or
2203/45706 the LC comprising one or more series resonance	inoperative by means of a control signal
circuits	2203/7203 the gated amplifier being switched on or off
2203/45708 the LC comprising one SEPP circuit as output	by a switch in the bias circuit of the amplifier
stage	controlling a bias current in the amplifier
2203/45711 • • the LC comprising two anti-phase controlled SEPP circuits as output stages, e.g. fully	2203/7206 • the gated amplifier being switched on or off by a switch in the bias circuit of the amplifier controlling a bias voltage in the amplifier
differential	2203/7209 the gated amplifier being switched from a first
2203/45712 the LC comprising a capacitor as shunt	band to a second band
2203/45714 the LC comprising a coil as shunt	2203/7212 the gated amplifier being switched on or off by
2203/45716 the LC comprising a RC-series circuit as shunt, e.g. for stabilisation	switching off or on a feedback control loop of the amplifier
2203/45718 the LC comprising a resistor as shunt	2203/7215 the gated amplifier being switched on or off by a
2203/45721 • • the LC comprising only an output circuit for one	switch at the input of the amplifier
phase of the signal	2203/7218 the gated amplifier being switched on or off by
2203/45722 the LC comprising one or more source followers,	clamping by a switch at the input of the amplifier
as post buffer or driver stages, in cascade in the LC	2203/7221 the gated amplifier being switched on or off by a
	switch at the output of the amplifier
2203/45724 the LC comprising two cross coupled switches	

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2203/7224	by clamping by a switch at the output of the amplifier
2203/7227	the gated amplifier being switched on or off by a switch in the supply circuit of the amplifier
2203/7231	• • the gated amplifier being switched on or off by putting into cascade or not, by choosing between amplifiers by one or more switch(es)
2203/7233	• • the gated amplifier, switched on or off by putting into parallel or not, by choosing between amplifiers by one or more switch(es), being impedance adapted by switching an adapted passive network
2203/7236	• the gated amplifier being switched on or off by putting into parallel or not, by choosing between amplifiers by (a) switch(es)
2203/7239	• • the gated amplifier being switched on or off by putting into parallel or not, by choosing between amplifiers and shunting lines by one or more switch(es)