Symbol	Typ	Titel
H	**Sektion**	**SECTION H — ELECTRICITY**
H03	**Klasse**	**BASIC ELECTRONIC CIRCUITRY**
H03F	**Unterklasse**	**AMPLIFIERS (measuring, testing G01R; optical parametric amplifiers G02F; circuit arrangements with secondary emission tubes H01J 43/30; masers, lasers H01S; control of amplification H03G; coupling arrangements independent of the nature of the amplifier, voltage dividers H03H; amplifiers capable only of dealing with pulses H03K; repeater circuits in transmission lines H04B 3/36, H04B 3/58; application of speech amplifiers in telephonic communication H04M 1/60, H04M 3/40)**
H03F 1/00	**Hauptgruppe**	**Details of amplifiers with only discharge tubes, only semiconductor devices or only unspecified devices as amplifying elements**
H03F 1/02	1-Punkt Untergruppe	. Modifications of amplifiers to raise the efficiency, e.g. gliding Class A stages, use of an auxiliary oscillation
H03F 1/04	2-Punkt Untergruppe	. . in discharge-tube amplifiers
H03F 1/06	3-Punkt Untergruppe	. . . to raise the efficiency of amplifying modulated radio frequency waves; to raise the efficiency of amplifiers acting also as modulators [2]
H03F 1/07	4-Punkt Untergruppe	. . . . Doherty-type amplifiers [2]
H03F 1/08	1-Punkt Untergruppe	. Modifications of amplifiers to reduce detrimental influences of internal impedances of amplifying elements (wide-band amplifiers with inter-stage coupling networks incorporating these impedances H03F 1/42; eliminating transit-time effects in vacuum tubes H01J 21/34)
H03F 1/10	2-Punkt Untergruppe	. . by use of amplifying elements with multiple electrode connections
H03F 1/12	2-Punkt Untergruppe	. . by use of attenuating means
H03F 1/13	3-Punkt Untergruppe	. . . in discharge-tube amplifiers [2]
H03F 1/14	2-Punkt Untergruppe	. . by use of neutralising means
H03F 1/16	3-Punkt Untergruppe	. . . in discharge-tube amplifiers
H03F 1/18	2-Punkt Untergruppe	. . by use of distributed coupling
H03F 1/20	3-Punkt Untergruppe	. . . in discharge-tube amplifiers
H03F 1/22	2-Punkt Untergruppe	. . by use of cascode coupling, i.e. earthed cathode or emitter stage followed by earthed grid or base stage respectively
H03F 1/24	3-Punkt Untergruppe	. . . in discharge-tube amplifiers
H03F 1/26	1-Punkt Untergruppe	. Modifications of amplifiers to reduce influence of noise generated by amplifying elements
H03F 1/28	2-Punkt Untergruppe	. . in discharge-tube amplifiers
H03F 1/30	1-Punkt Untergruppe	. Modifications of amplifiers to reduce influence of variations of temperature or supply voltage
H03F 1/32	1-Punkt Untergruppe	. Modifications of amplifiers to reduce non-linear distortion (by negative feedback H03F 1/34)
H03F 1/33	2-Punkt Untergruppe	. . in discharge-tube amplifiers [2]
H03F 1/34	1-Punkt Untergruppe	. 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) [3]
H03F 1/36	2-Punkt Untergruppe	. . in discharge-tube amplifiers
H03F 1/38	1-Punkt Untergruppe	. Positive-feedback circuit arrangements without negative feedback

Symbol	Typ	Titel
H03F 1/40	2-Punkt Untergruppe	. . in discharge-tube amplifiers
H03F 1/42	1-Punkt Untergruppe	. Modifications of amplifiers to extend the bandwidth
H03F 1/44	2-Punkt Untergruppe	. . of tuned amplifiers
H03F 1/46	3-Punkt Untergruppe	. . . with tubes only
H03F 1/48	2-Punkt Untergruppe	. . of aperiodic amplifiers
H03F 1/50	3-Punkt Untergruppe	. . . with tubes only
H03F 1/52	1-Punkt Untergruppe	. Circuit arrangements for protecting such amplifiers [3]
H03F 1/54	2-Punkt Untergruppe	. . with tubes only [3]
H03F 1/56	1-Punkt Untergruppe	. Modifications of input or output impedances, not otherwise provided for [3]
H03F 3/00	**Hauptgruppe**	**Amplifiers with only discharge tubes or only semiconductor devices as amplifying elements**
H03F 3/02	1-Punkt Untergruppe	. with tubes only (subsequent subgroups take precedence)
H03F 3/04	1-Punkt Untergruppe	. with semiconductor devices only (subsequent subgroups take precedence)
H03F 3/06	2-Punkt Untergruppe	. . using hole storage effect
H03F 3/08	2-Punkt Untergruppe	. . controlled by light
H03F 3/10	2-Punkt Untergruppe	. . with diodes
H03F 3/12	3-Punkt Untergruppe	. . . with Esaki diodes
H03F 3/14	2-Punkt Untergruppe	. . with amplifying devices having more than three electrodes or more than two PN junctions
H03F 3/16	2-Punkt Untergruppe	. . with field-effect devices
H03F 3/18	1-Punkt Untergruppe	. with semiconductor devices of complementary types (subsequent subgroups take precedence)
H03F 3/181	1-Punkt Untergruppe	. Low-frequency amplifiers, e.g. audio preamplifiers [2]
H03F 3/183	2-Punkt Untergruppe	. . with semiconductor devices only [2]
H03F 3/185	3-Punkt Untergruppe	. . . with field-effect devices (H03F 3/187 takes precedence) [2]
H03F 3/187	3-Punkt Untergruppe	. . . in integrated circuits [2]
H03F 3/189	1-Punkt Untergruppe	. High-frequency amplifiers, e.g. radio frequency amplifiers [2]
H03F 3/19	2-Punkt Untergruppe	. . with semiconductor devices only [2]
H03F 3/191	3-Punkt Untergruppe	. . . Tuned amplifiers (H03F 3/193, H03F 3/195 take precedence) [2]
H03F 3/193	3-Punkt Untergruppe	. . . with field-effect devices (H03F 3/195 takes precedence) [2]
H03F 3/195	3-Punkt Untergruppe	. . . in integrated circuits [2]
H03F 3/20	1-Punkt Untergruppe	. Power amplifiers, e.g. Class B amplifiers, Class C amplifiers (H03F 3/26-H03F 3/30 take precedence)
H03F 3/21	2-Punkt Untergruppe	. . with semiconductor devices only [2]
H03F 3/213	3-Punkt Untergruppe	. . . in integrated circuits [2]
H03F 3/217	3-Punkt Untergruppe	. . . Class D power amplifiers; Switching amplifiers [2]

Symbol	Typ	Titel
H03F 3/22	2-Punkt Untergruppe	. . with tubes only (H03F 3/24 takes precedence)
H03F 3/24	2-Punkt Untergruppe	. . of transmitter output stages
H03F 3/26	1-Punkt Untergruppe	. Push-pull amplifiers; Phase-splitters therefor (duplicated single-ended push-pull arrangements or phase-splitters therefor H03F 3/30)
H03F 3/28	2-Punkt Untergruppe	. . with tubes only
H03F 3/30	1-Punkt Untergruppe	. Single-ended push-pull amplifiers; Phase-splitters therefor
H03F 3/32	2-Punkt Untergruppe	. . with tubes only
H03F 3/34	1-Punkt Untergruppe	. Dc amplifiers in which all stages are dc-coupled (H03F 3/45 takes precedence) [3]
H03F 3/343	2-Punkt Untergruppe	. . with semiconductor devices only [2]
H03F 3/345	3-Punkt Untergruppe	. . . with field-effect devices (H03F 3/347 takes precedence) [2]
H03F 3/347	3-Punkt Untergruppe	. . . in integrated circuits [2]
H03F 3/36	2-Punkt Untergruppe	. . with tubes only
H03F 3/38	1-Punkt Untergruppe	. Dc amplifiers with modulator at input and demodulator at output; Modulators or demodulators specially adapted for use in such amplifiers (modulators in general H03C; demodulators in general H03D; amplitude modulation of pulses in general H03K 7/02; amplitude demodulation of pulses in general H03K 9/02)
H03F 3/387	2-Punkt Untergruppe	. . with semiconductor devices only [2]
H03F 3/393	3-Punkt Untergruppe	. . . with field-effect devices [2]
H03F 3/40	2-Punkt Untergruppe	. . with tubes only
H03F 3/42	1-Punkt Untergruppe	. Amplifiers with two or more amplifying elements having their dc paths in series with the load, the control electrode of each element being excited by at least part of the input signal, e.g. so-called totem-pole amplifiers
H03F 3/44	2-Punkt Untergruppe	. . with tubes only
H03F 3/45	1-Punkt Untergruppe	. Differential amplifiers [2]
H03F 3/46	1-Punkt Untergruppe	. Reflex amplifiers
H03F 3/48	2-Punkt Untergruppe	. . with tubes only
H03F 3/50	1-Punkt Untergruppe	. Amplifiers in which input is applied to, or output is derived from, an impedance common to input and output circuits of the amplifying element, e.g. cathode follower
H03F 3/52	2-Punkt Untergruppe	. . with tubes only
H03F 3/54	1-Punkt Untergruppe	. Amplifiers using transit-time effect in tubes or semiconductor devices (parametric amplifiers H03F 7/00; solid state travelling-wave devices H01L 45/02)
H03F 3/55	2-Punkt Untergruppe	. . with semiconductor devices only [2]
H03F 3/56	2-Punkt Untergruppe	. . using klystrons
H03F 3/58	2-Punkt Untergruppe	. . using travelling-wave tubes
H03F 3/60	1-Punkt Untergruppe	. Amplifiers in which coupling networks have distributed constants, e.g. with waveguide resonators (H03F 3/54 takes precedence)
H03F 3/62	1-Punkt Untergruppe	. Two-way amplifiers

Symbol	Typ	Titel
H03F 3/64	2-Punkt Untergruppe	. . with tubes only
H03F 3/66	1-Punkt Untergruppe	. Amplifiers simultaneously generating oscillations of one frequency and amplifying signals of another frequency
H03F 3/68	1-Punkt Untergruppe	. Combinations of amplifiers, e.g. multi-channel amplifiers for stereophonics
H03F 3/70	1-Punkt Untergruppe	. Charge amplifiers [2]
H03F 3/72	1-Punkt Untergruppe	. Gated amplifiers, i.e. amplifiers which are rendered operative or inoperative by means of a control signal [2]
H03F 5/00	**Hauptgruppe**	**Amplifiers with both discharge tubes and semiconductor devices as amplifying elements**
H03F 7/00	**Hauptgruppe**	**Parametric amplifiers (devices or arrangements for the parametric generation or amplification of light, infra-red or ultra-violet waves G02F 1/39)**
H03F 7/02	1-Punkt Untergruppe	. using variable-inductance element; using variable-permeability element
H03F 7/04	1-Punkt Untergruppe	. using variable-capacitance element; using variable-permitivity element
H03F 7/06	1-Punkt Untergruppe	. with electron beam tube
H03F 9/00	**Hauptgruppe**	**Magnetic amplifiers**
H03F 9/02	1-Punkt Untergruppe	. current-controlled, i.e. the load current flowing in both directions through a main coil [2]
H03F 9/04	1-Punkt Untergruppe	. voltage-controlled, i.e. the load current flowing in only one direction through a main coil, e.g. Logan circuits (H03F 9/06 takes precedence) [2]
H03F 9/06	1-Punkt Untergruppe	. Control by voltage time integral, i.e. the load current flowing in only one direction through a main coil, whereby the main coil winding also can be used as a control winding, e.g. Ramey circuits [2]
H03F 11/00	**Hauptgruppe**	**Dielectric amplifiers**
H03F 13/00	**Hauptgruppe**	**Amplifiers using amplifying element consisting of two mechanically- or acoustically-coupled transducers, e.g. telephone-microphone amplifier**
H03F 15/00	**Hauptgruppe**	**Amplifiers using galvano-magnetic effects not involving mechanical movement, e.g. using Hall effect**
H03F 17/00	**Hauptgruppe**	**Amplifiers using electroluminescent element or photocell**
H03F 19/00	**Hauptgruppe**	**Amplifiers using superconductivity effects**
H03F 21/00	**Hauptgruppe**	**Amplifiers not covered by groups H03F 3/00-H03F 19/00 (dynamo-electric amplifiers H02K)**