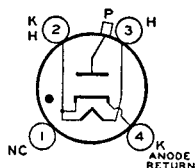


HALF-WAVE MERCURY-VAPOR RECTIFIER



5561

Heater-cathode type used in power supply of transmitting and industrial equipment. Rating I: maximum peak inverse anode volts, 3,000; maximum average anode amperes, 6.4.

Rating II: maximum peak inverse anode volts, 10,000; maximum average anode amperes, 4. Requires Super-Jumbo four-contact socket and may be mounted in vertical position only, base down. OUTLINE 61, *Outlines* Section. For curve showing rate of rise of condensed-mercury temperature see preceding page.

HEATER VOLTAGE*	5	volts
HEATER CURRENT	10	amperes
PEAK TUBE VOLTAGE DROP (Approx.)	15	volts

• Heater voltage must be applied at least 5 minutes before application of anode voltage.

HALF-WAVE RECTIFIER

Maximum Ratings (For power-supply frequency of 60 cps):

PEAK INVERSE ANODE VOLTAGE	3000 max	10000 max	volts
ANODE CURRENT:			
Peak	40 max	16 max	amperes
Average [‡]	6.4 max	4 max	amperes
Fault, for duration of 0.1 second maximum	400 max	160 max	amperes
CONDENSED-MERCURY-TEMPERATURE RANGE	40 to 80	25 to 50	°C

‡ Averaged over any interval of 15 seconds maximum.

Operating Values:

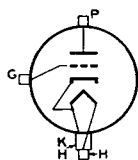
Circuit (For circuit figures, refer to Rectifier Considerations Section)	Fig.	Max. Trans. Sec. Volts (RMS) E	Approx. DC Output Volts To Filter E _{av}	Max. DC Output Amperes I _{av}	Max. DC Output KW To Filter P _{dc}
In-Phase Operation					
Half-Wave Single-Phase...	54	2100*	950	6.4	6.0
Full-Wave Single-Phase...	55	1000*	950	12.8	12.0
Series Single-Phase...	56	2100*	1900	12.8	24.0
Half-Wave Three-Phase...	57	1200*	1450	19.2	27.5
Quadrature Operation					
Parallel Three-Phase.....	58	1200*	1450	38.4	55.0
Series Three-Phase.....	59	1200*	2850	19.2	55.0
Half-Wave Four-Phase....	60	1000*	1350	36.0* 40.0■	48.5* 54.0■
Half-Wave Six-Phase.....	61	1000*	1450	38.0* 40.0■	54.0* 57.0■

* For maximum peak inverse anode voltage of 3000 volts and maximum average anode current of 6.4 amperes.

* Resistive load.

■ Inductive load.

POWER TRIODE



5588

Forced-air-cooled heater-cathode type having integral radiator used in cathode-drive circuits as rf power amplifier and oscillator. May be used with full input up to 1200 Mc. For operation at 1350 Mc, plate voltage and plate input should be reduced to 90 per cent of maximum ratings; at 1500 Mc, to 89 per cent; at 2000 Mc, to 80 per cent. Type 5588 may be mounted in vertical position only, radiator up or down.

OUTLINE 71, *Outlines* Section. A minimum air flow of 10 cubic feet per minute should be directed through the radiator toward the bulb and grid terminal when the 5588 is operated at maximum rated dissipation.

RCA Transmitting Tubes

Air flow should start before and continue during the application of any voltages to the tube. Maximum temperatures: incoming air, 45°C; radiator, 180°C; and grid terminal, 140°C. The 5588 is used principally for renewal purposes. For new equipment design, refer to type 6161.

HEATER VOLTAGE (AC/DC) °	6.3	volts
HEATER CURRENT	2.5	amperes
AMPLIFICATION FACTOR	16	
DIRECT INTERELECTRODE CAPACITANCES:		
Grid to plate	6.0	μf
Grid to cathode and heater	13	μf
Plate to cathode and heater □	0.32 max	μf

° Rated heater voltage must be applied for a minimum time of one minute before voltages are applied to the other electrodes.

□ External shield connected to grid.

RF POWER AMPLIFIER AND OSCILLATOR—Class C Telegraphy# and RF POWER AMPLIFIER—Class C FM Telephony

Maximum CCS Ratings:

DC PLATE VOLTAGE	1000 max	volts
DC GRID VOLTAGE	-200 max	volts
DC PLATE CURRENT	300 max	ma
DC GRID CURRENT	100 max	ma
PLATE INPUT	250 max	watts
PLATE DISSIPATION	200 max	watts

Typical Operation in Cathode-Drive Circuit at 1000 Mc:

	Amplifier	Oscillator	
Heater Voltage°	4.5	3.0	volts
DC Plate Voltage	835	835	volts
DC Grid Voltage	-70	-70	volts
From grid resistor of	1750	—	ohms
From cathode resistor of	—	205	ohms
DC Plate Current	300	300	ma
DC Grid Current (Approx.)	40	40	ma
Driving Power (Approx.)•	32	—	watts
Power Output (Approx.)	100	75	watts

Key-down conditions per tube without amplitude modulation. Amplitude modulation essentially negative may be used if the positive peak of the audio-frequency envelope does not exceed 115 per cent of the carrier conditions.

° Rated heater voltage must be applied for a minimum time of one minute before voltages are applied to the other electrodes. Heater voltage may then be reduced to the indicated typical operating value.

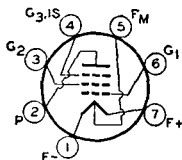
‡ Obtained from fixed supply, by grid resistor, by cathode resistor, or by combination methods.

• Required by tube and input circuit. A portion of this power appears in the load circuit.

POWER PENTODE

5618

Seven-pin miniature type having quick-heating, mid-tapped, coated filament used as af power amplifier and modulator, rf power amplifier and oscillator, and frequency multiplier in



mobile and other communications equipment when compactness and low filament-power consumption are primary requirements. Designed for intermittent operation only. May be used with full input up to 100 Mc and with reduced input up to 165 Mc. Class C Telegraphy maximum ICAS plate dissipation, 5 watts.

FILAMENT ARRANGEMENT

FILAMENT VOLTAGE (AC/DC)	Series 6.0 $\pm$ 10%	Parallel 3.0 $\pm$ 10%	volts
FILAMENT CURRENT	0.23	0.46	ampere

DIRECT INTERELECTRODE CAPACITANCES:

Grid No.1 to plate	0.24 max	μf
Grid No.1 to filament mid-tap, grid No.3, internal shield, and grid No.2	7.0	μf
Plate to filament mid-tap, grid No.3, internal shield, and grid No.2	5.0	μf