

DIRECT INTERELECTRODE CAPACITANCES

Grid to Plate	0.8 Pf
Input	15 Pf
Output	9.0 Pf

RATINGS (Design Maximum Rating System)

Class A1 Amplifier

Plate Voltage (Max.)	330 Volts
Grid No. 2 Voltage (Max.)	165 Volts
Plate Dissipation (Max.)	12 Watts
Grid No. 2 Dissipation (Max.)	1.35 Watts
Grid No. 1 Circuit Resistance	
Fixed Bias (Max.)	0.1 Megohm
Cathode Bias (Max.)	0.5 Megohm

Vertical Deflection Amplifier—Triode Connected⁽¹⁾

DC Plate Voltage (Max.)	330 Volts
Peak Positive Plate Voltage (Abs. Max.)	1200 Volts
Plate Dissipation (Max.)	8.5 Watts
Peak Negative Grid Voltage (Max.)	275 Volts
Average Cathode Current (Max.)	65 Ma
Peak Cathode Current (Max.)	195 Ma
Grid No. 1 Circuit Resistance Cathode Bias (Max.)	2.2 Megohm

CHARACTERISTICS AND TYPICAL OPERATION

Class A1 Amplifier

Plate Voltage	110	200 Volts
Grid No. 2 Voltage	110	125 Volts
Grid No. 1 Voltage	-7.5	— Volts
Cathode Bias Resistor	—	180 Ohms
Peak AF Grid No. 1 Voltage	7.5	8.5 Volts
Plate Current (Zero-Signal)	49	46 Ma
Plate Current (Maximum Signal)	50	47 Ma
Grid No. 2 Current (Zero Signal)	4.0	2.2 Ma
Grid No. 2 Current (Maximum Signal)	10	8.5 Ma
Plate Resistance (Approx.)	13,000	28,000 Ohms
Transconductance	8000	8000 μ mhos
Load Resistance	2000	4000 Ohms
Maximum Signal Power Output	2.1	3.8 Watts
Total Harmonic Distortion (Approx.)	10	10 Percent

Triode Connected

Plate Voltage	225 Volts
Grid No. 1 Voltage	-30 Volts
Plate Current	22 Ma
Transconductance	3800 μ mhos
Amplification Factor	6.2
Plate Resistance	1600 Ohms
Grid No. 1 Voltage (Approx.) for Ib = 0.5 Ma	-42 Volts

NOTES:

- (1) For operation in a 525 line, 30 frame system as described in "Standards of Good Engineering Practice for Television Broadcast Stations; Federal Communications Commission," the duty cycle of the voltage pulse must not exceed 15% of one horizontal scanning cycle.
- (2) In stages operating with grid leak bias, an adequate cathode bias resistor or other suitable means is required to protect the tube in the absence of excitation.

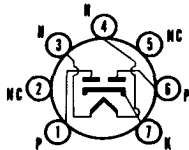
FULL-WAVE POWER RECTIFIER

6X4

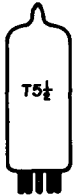
12X4

Heater-Cathode Twin Diode

Construction	Miniature T-5½
Base	Button 7 Pin, E7-1
Basing	5BS
Outline	5-3
Maximum Diameter	0.750 In.
Maximum Seated Height	2.375 In.
Maximum Overall Height	2.625 In.



5-BS



ELECTRICAL DATA
HEATER OPERATION

Heater Voltage	12X4 12.6	6X4 6.3 Volts
Heater Current	300	600 Ma

Maximum Heater-Cathode Voltage	
Heater Negative with Respect to Cathode	450 Volts
Heater Positive with Respect to Cathode	100 Volts
RATINGS (Design Center Rating System)	
Peak Inverse Plate Voltage	1250 Volts
AC Plate Supply Voltage (RMS) with DC Output Current	
of 35 Ma Per Plate	325 Volts
Steady State Peak Plate Current	210 Ma
Rectification Efficiency to keep within Steady State Peak	
Current Rating at 35 Ma Per Plate	67.5 Percent
Transient Peak Plate Current Per Plate ⁽¹⁾	1.0 Ampere
Minimum Plate Supply Resistance Per Plate for 325 Volt RMS Supply	325 Ohms
Tube Voltage Drop (70 Ma Per Plate)	22 Volts
DC Output Current Each Plate with 325 Volts AC Plate Supply Voltage (RMS)	
Capacitor Input to Filter	35 Ma
Choke Input to Filter	42 Ma

CHARACTERISTICS AND TYPICAL OPERATION**Full Wave Rectifier**

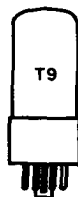
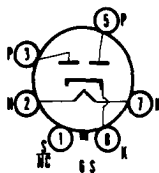
	Input to Filter	
	Capacitor	Choke
AC Plate Supply Voltage Per Plate (RMS)	325	450 Volts
Filter Input Capacitor ⁽²⁾	10	— μ f
Filter Input Choke (Minimum)	—	10 Henrys
Total Effective Plate Supply Impedance (Per Plate) ⁽²⁾	525	— Ohms
DC Output Current	70	70 Ma
DC Output Voltage at Filter Input (Approx.)		
For DC Cathode Current of 35 Ma	365	395 Volts
For DC Cathode Current of 70 Ma	310	385 Volts
Difference (Voltage Regulation)	55	10 Volts
Percentage Regulation	15	2.5 Percent

NOTES:

- (1) If capacitor input circuits are to be used, protect the circuits against the possibility of hot-switching and do not exceed a maximum peak current value of one (1) ampere during the initial cycles of the hot-switching transient.
- (2) When a filter capacitor larger than 10 μ f is used, it may be necessary to add additional plate supply impedance to limit the hot-switching transient plate current to rated maximum.

6X5GT**FULL-WAVE POWER RECTIFIER****Heater-Cathode Twin Diode**

Construction	Octal T-9
Base	Octal 6 Pin
Basing	.6S
Outline	9-11
Maximum Diameter	1.188 In.
Maximum Seated Height	2.750 In.
Maximum Overall Height	3.212 In.

**ELECTRICAL DATA****HEATER OPERATION**

Heater Voltage	6.3 Volts
Heater Current	600 Ma
Maximum Heater-Cathode Voltage	450 Volts

RATINGS (Design Center Rating System)

Peak Inverse Voltage (Max.)	1250 Volts
Steady State Peak Plate Current (Each Plate) (Max.)	210 Ma
Tube Voltage Drop (70 Ma Per Plate) (Max.)	22 Volts

CHARACTERISTICS AND TYPICAL OPERATION**Capacitor Input to Filter**

Plate Voltage (Each Plate—RMS)	325 Volts
DC Output Current	70 Ma
Effective Plate Supply Impedance (Each Plate) ⁽¹⁾	150 Ohms

Choke Input to Filter

Plate Voltage (Each Plate—RMS)	450 Volts
DC Output Current	70 Ma
Input Choke Value (Min.)	10 Henrys

NOTE:

- (1) Additional impedance may be required when a filter of more than 40 μ f is used.