

DIRECT INTERELECTRODE CAPACITANCES (Shielded)⁽¹⁾

Pentode Section

Grid No. 1 to Plate (Max.).....	0.01 Pf
Input: Pg1 to (h + Pk + Pg2 + Pg3 + IS)	5.5 Pf
Output: Pp to (h + Pk + Pg2 + Pg3 + IS)	3.4 Pf

Triode Section

Grid to Plate	1.7 Pf
Input: g to (h + Tk + Pk + Pg3 + IS).....	3.2 Pf
Output: p to (h + Tk + Pk + Pg3 + IS).....	2.2 Pf

RATINGS (Design Maximum Rating System)

	Pentode Section	Triode Section
Plate Voltage (Max.)	300	300 Volts
Screen Supply Voltage (Max.)	300	— Volts
Screen Voltage	See Rating Chart (Gen. Info. Sec.)	
Positive DC Grid No. 1 Voltage (Max.)	0	0 Volt
Plate Dissipation (Max.)	2.5	2.5 Watts
Screen Dissipation (Max.)	0.55	— Watt
Grid No. 1 Circuit Resistance		
Fixed Bias (Max.)	2.2	2.2 Megohms
Cathode Bias (Max.)	2.2	2.2 Megohms

CHARACTERISTICS AND TYPICAL OPERATION

	Pentode Section	Triode Section
Plate Voltage	125	125 Volts
Screen Voltage.....	125	— Volts
Grid No. 1 Voltage	-1.0	-1.0 Volt
Amplification Factor	—	46
Plate Resistance (Approx.)	200,000	5400 Ohms
Transconductance	7500	8500 μ mhos
Plate Current	12	13.5 Ma
Screen Current	4.0	— Ma
Grid No. 1 Voltage (Approx.)		
Ib = 10 μ a.....	-8	-8 Volts

NOTE:

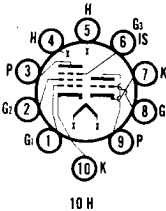
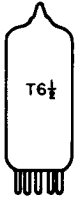
(1) With external shield (EIA 315) connected to cathode of section under test.

190Q

RF AMPLIFIER and
AUTODYNE MIXER

Medium Mu Triode and
Semi-Remote Cutoff Pentode

Construction	Miniature T-6½
Base	Button 10 Pin, E9-1
	With Center Pin Added
Basing	10H
Outline	6-13
Maximum Diameter	0.875 In.
Maximum Seated Height	1.940 In.
Maximum Overall Height	2.190 In.



ELECTRICAL DATA

HEATER OPERATION

Heater Voltage.....	18.9 Volts
Heater Current	150 Ma
Heater Warm-up Time	17 Seconds
Maximum Heater-Cathode Voltage	
Heater Negative with Respect to Cathode	
Total DC and Peak.....	200 Volts
Heater Positive with Respect to Cathode	
DC	100 Volts
Total DC and Peak.....	200 Volts

DIRECT INTERELECTRODE CAPACITANCES

	Shielded ⁽¹⁾	Unshielded
Triode Section		
Grid to Plate	1.7	1.7 Pf
Input: g to (h + k + Pk + IS).....	3.2	3.2 Pf
Output: p to (h + k + Pk + IS).....	1.9	1.1 Pf
Heater to Cathode	3.0	3.0 Pf

Pentode Section

Grid No. 1 to Plate (Max.)	0.035	0.050 Pf
Input: g_1 to $(h + k + g_2 + P_k + I_S)$	5.0	5.0 Pf
Output: p to $(h + k + g_2 + P_k + I_S)$	3.3	2.4 Pf
Heater to Cathode	3.0 ⁽²⁾	3.0 Pf

Coupling

Pentode g_1 to Triode Plate (Max.)	0.030	0.035 Pf
Pentode Plate to Triode Plate (Max.)	0.030	0.13 Pf
Triode Grid to Pentode Plate (Max.)	0.002	0.009 Pf

RATINGS (Design Maximum Rating System)

	Triode Section	Pentode Section
Plate Voltage (Max.)	330	330 Volts
Grid No. 2 Supply Voltage (Max.)	—	330 Volts
Grid No. 2 Voltage	See Rating Chart (Gen. Info. Sec.)	
Plate Dissipation (Max.)	2.5	3.0 Watts
Grid No. 2 Dissipation (Max.)	—	0.55 Watt
Positive Grid No. 1 Voltage (Max.)	0	0 Volt
Grid No. 1 Circuit Resistance		
Fixed Bias (Max.)	0.5	0.25 Megohm
Self Bias (Max.)	1.0	1.0 Megohm

Control grid to cathode spacing in the triode section of this type is of such order to magnitude as to preclude the use of voltage between these elements of more than 100 volts dc or peak ac in commercial tube checkers and shorts indicating devices, particularly where mechanical excitation of the tube is employed.

CHARACTERISTICS AND TYPICAL OPERATION

	Triode Section	Pentode Section
Class A1 Amplifier		
Plate Voltage	125	125 Volts
Grid No. 2 Voltage	—	125 Volts
Grid No. 1 Voltage	-1.0	-1.0 Volt
Plate Current	14	12 Ma
Grid No. 2 Current	—	4.0 Ma
Transconductance	8000	6500 μ mhos
Amplification Factor	40	—
Plate Resistance	5000	200 K Ohms
Grid No. 1 Voltage for $I_b = 20 \mu a$ (Approx.)	-9	-9
Gm with $E_c1 = 0 V$, $E_b = 100 V$ and $E_c2 = 70 V$	—	7000 μ mhos

NOTES:

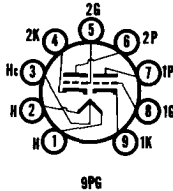
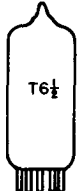
- (1) Shield No. 315 connected to Pin No. 4.
- (2) Shield No. 315 connected to Pin No. 3.

AF AMPLIFIER

20E27

Twin High Mu Triode

Construction	Miniature T-6½
Base	Button 9 Pin, E9-1
Basing	.9PG
Outline	6-2
Maximum Diameter	0.875 In.
Maximum Seated Height	1.937 In.
Maximum Overall Height	2.187 In.



ELECTRICAL DATA

HEATER OPERATION

Heater Voltage	20/10 Volts
Heater Current	100/200 Ma
Heater Warm-up Time	20 Seconds
Maximum Heater-Cathode Voltage	
Heater Negative with Respect to Cathode	
Total DC and Peak	200 Volts
Heater Positive with Respect to Cathode	
DC	100 Volts
Total DC and Peak	200 Volts

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

	Section No. 1	Section No. 2
Grid to Plate	1.5	1.5 Pf
Grid to Cathode and Heater	1.6	1.6 Pf
Plate to Cathode and Heater	0.2	0.3 Pf