



## HIGH-MU TRIODE— POWER PENTODE

# 6T9

Duodecar type used in audio-frequency circuits. The triode unit is used as a voltage amplifier; the pentode unit is used as a power amplifier. Outlines section, 8B; requires duodecar 12-contact socket.

Heater Voltage (ac/dc) .....	6.3	volts
Heater Current .....	0.93	ampere
Heater-Cathode Voltage:		
Peak value .....	±200 max	volts
Average value .....	100 max	volts
Direct Interelectrode Capacitances:		
Pentode Section:		
Grid No.1 to Plate .....	0.2	pF
Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield .....	11	pF
Plate to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield .....	11	pF
Triode Unit:		
Grid to Plate .....	2.6	pF
Grid to Cathode, Heater, and Internal Shield .....	3.4	pF
Plate to Cathode, Heater, and Internal Shield .....	1.1	pF

### Class A<sub>1</sub> Amplifier

MAXIMUM RATINGS (Design-Maximum Values)	Triode Unit	Pentode Unit	
Plate Voltage .....	300	275	volts
Grid-No.2 (Screen-Grid) Voltage .....	—	275	volts
Grid-No.1 (Control-Grid) Voltage. Positive-bias value .....	0	0	volts
Plate Dissipation .....	1.5	12	watts
Grid-No.2 Input .....	—	2	watts
<b>CHARACTERISTICS (Triode Unit)</b>			
Plate Voltage .....		250	volts
Grid Voltage .....		—2	volts
Amplification Factor .....		95	
Plate Resistance (Approx.) .....		45000	ohms
Transconductance .....		2100	μmhos
Plate Current .....		1.5	mA
<b>TYPICAL OPERATION (Pentode Unit)</b>			
Plate Voltage .....		250	volts
Grid-No.2 Voltage .....		250	volts
Grid-No.1 Voltage .....		—8	volts
Peak AF Grid-No.1 Voltage .....		8	volts
Zero-Signal Plate Current .....		35	mA
Maximum-Signal Plate Current .....		39	mA
Zero-Signal Grid-No.2 Current .....		2.5	mA
Maximum-Signal Grid-No.2 Current .....		7	mA
Plate Resistance (Approx.) .....		0.1	megohm
Transconductance .....		6500	μmhos
Load Resistance .....		5000	ohms
Total Harmonic Distortion (Approx.) .....		10	per cent
Maximum-Signal Power Output .....		4.2	watts
<b>MAXIMUM CIRCUIT VALUES</b>			
Grid-No.1-Circuit Resistance:			
For fixed-bias operation .....	0.5	0.25	megohm
For cathode-bias operation .....	1*	0.5	megohm

\* For cathode-bias operation of the triode unit, a maximum resistance of 10 megohms can be used provided the plate dissipation never exceeds 0.25 watt.