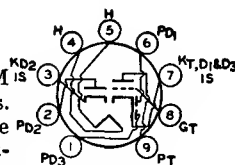


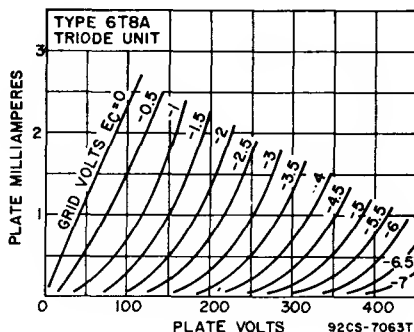
6T8A**5T8****TRIPLE DIODE—
HIGH-MU TRIODE**

Miniature type used as combined audio amplifier, AM detector, and FM detector in AM/FM radio receivers. Diode unit No.1 is used for AM detection, and diode units No.2 and No.3 are used for FM detection. Outlines section, 6B; requires miniature 9-contact socket. For typical operation as resistance-coupled amplifier, refer to Resistance-Coupled Amplifier section. Type 5T8 is identical with type 6T8A except for heater ratings.

**9E**

	5T8	6T8A	
Heater Voltage (ac/dc)	4.7	6.3	volts
Heater Current	0.6	0.45	ampere
Heater Warm-up Time (Average)	11	11	seconds
Heater-Cathode Voltage:			
Peak value	±200 max	±100 max	volts
Average value	100 max	—	volts
Direct Interelectrode Capacitances:	Unshielded	Shielded	
Triode Unit:			
Grid to Plate	1.7	1.7	pF
Grid to Cathode, Internal Shield (pin 7), and Heater	1.6	1.7	pF
Plate to Cathode, Internal Shield (pin 7), and Heater	1.2	2.4	pF
Diode Units:			
Diode-No.1 Plate to Cathode, Internal Shield (pin 7), and Heater	3.8	3.8	pF
Diode-No.2 Plate to Cathode, Internal Shield (pin 3), and Heater	3.8	3.8*	pF
Diode-No.3 Plate to Cathode, Internal Shield (pin 7), and Heater	3.4	3.6	pF
Diode-No.2 Cathode, Internal Shield (pin 3) to All Other Electrodes, and Heater	7.5	8.5*	pF
Triode Grid to any Diode Plate	0.034 max	0.034 max	pF

- * With external shield connected to pin 7 except as noted.
- * With external shield connected to pin 3.
- * With external shield connected to pins 4 and 5.

**Triode Unit as Class A₁ Amplifier**

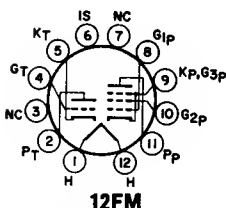
MAXIMUM RATINGS (Design-Maximum Values)			
Plate Voltage		330	volts
Grid Voltage, Positive-bias value		0	volts
Plate Dissipation		1.1	watts
CHARACTERISTICS			
Plate Voltage	100	250	volts
Grid Voltage	-1	-3	volts
Amplification Factor	70	70	

Plate Resistance (Approx.)	54000	58000	ohms
Transconductance	1300	1200	μ mhos
Plate Current	0.8	1	mA

Diode Units

MAXIMUM RATINGS (Design-Maximum Values)

Plate Current (Each Unit)	5.5	mA
---------------------------------	-----	----

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 A₁ 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

CHARACTERISTICS (Triode Unit)

Plate Voltage	250	volts
Grid Voltage	—2	volts
Amplification Factor	95	
Plate Resistance (Approx.)	45000	ohms
Transconductance	2100	μ mhos
Plate Current	1.5	mA

TYPICAL OPERATION (Pentode Unit)

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	μ mhos
Load Resistance	5000	ohms
Total Harmonic Distortion (Approx.)	10	per cent
Maximum-Signal Power Output	4.2	watts

MAXIMUM CIRCUIT VALUES

	Triode Unit	Pentode Unit	
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.