

Grid No. 2 Supply Voltage (Max.)	—	275 Volts
Grid No. 2 (Screen-Grid) Voltage	See Rating Chart (Gen. Info. Sec.)	
Grid No. 1 (Control-Grid) Voltage		
Negative Bias Value (Max.)	40	40 Volts
Positive Bias Value (Max.)	0	0 Volt
Plate Dissipation (Max.)	1.7	— Watts
Plate No. 1 Dissipation (Max.)	—	2.3 Watts
Plate No. 2 Dissipation (Max.)	—	0.3 Watt
Plate No. 3 Dissipation (Max.)	—	0.3 Watt
Grid No. 2 Input		
For Grid No. 2 Voltages Up to 137.5 Volts (Max.)	—	0.45 Watt
For Grid No. 2 Voltages Between 137.5 and 275 Volts	See Rating Chart (Gen. Info. Sec.)	
Grid No. 1 Circuit Resistance		
For Fixed Bias Operation (Max.)	0.5	0.5 Megohm

CHARACTERISTICS AND TYPICAL OPERATION**Class A1 Amplifier****Triode Unit**

Plate Voltage	100 Volts
Grid Voltage	-1 Volt
Amplification Factor	40
Plate Resistance (Approx.)	7400 Ohms
Transconductance	5400 μ mhos
Plate Current	7.9 Ma
Grid Voltage (Approx.) for Plate Current of 100 μ a	-7 Volts

Tetrode Unit with Plates No. 2 and No. 3 Connected to Cathode

Plate No. 1 Voltage	250 Volts
Grid No. 2 Voltage	250 Volts
Grid No. 1 Voltage	-2 Volts
Plate No. 1 Resistance (Approx.)	750,000 Ohms
Transconductance, Grid No. 1 to Plate No. 1	4400 μ mhos
Plate No. 1 Current	7.3 Ma
Grid No. 2 Current	1.4 Ma
Grid No. 1 Voltage (Approx.) for Plate No. 1 Current of 100 μ a	-7 Volts

Typical Operation with Separate Plate Operation

Plates No. 1, No. 2, and No. 3 Voltage	100 Volts
Grid No. 2 Voltage	50 Volts
Grid No. 1 Voltage	-1 Volt
Plate No. 1 Current	1.6 Ma
Plate No. 2 Current	0.04 Ma
Plate No. 3 Current	0.04 Ma
Grid No. 2 Current	0.3 Ma
Transconductance (Approx.)	
Grid No. 1 to Plate No. 1	2500 μ mhos
Grid No. 1 to Plate No. 2	70 μ mhos
Grid No. 1 to Plate No. 3	70 μ mhos

NOTE:

- (1) Shield No. 315 connected to cathode.

6FJ7

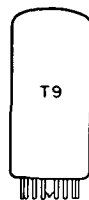
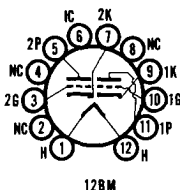
Color Television Type

**VERTICAL DEFLECTION
OSCILLATOR and AMPLIFIER****Double Dissimilar Triode**

Construction	Compactron T-9
Base	Button 12 Pin, E12-70
Basing	.12BM
Outline	9-58
Maximum Diameter	1.188 In.
Maximum Seated Height	2.000 In.
Maximum Overall Height	2.375 In.

**ELECTRICAL DATA
HEATER OPERATION**

Heater Voltage	6.3 Volts
Heater Current	900 Ma
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 1	Section 2
Grid to Plate: (g to p)	3.8	5.0 Pf
Input: g to (h + k)	2.2	4.0 Pf
Output: p to (h + k)	0.48	0.54 Pf

RATINGS (Design Maximum Rating System)

	Vertical Oscillator Service ⁽¹⁾ (Section 1)	Vertical Deflection Amplifier ⁽¹⁾ (Section 2)
DC Plate Voltage (Max.)	350	550 Volts
Peak Positive Pulse Plate Voltage (Max.)	—	2500 Volts
Peak Negative Grid Voltage (Max.)	400	250 Volts
Plate Dissipation (Max.)	1.0	10 ⁽²⁾ Watts
DC Cathode Current (Max.)	—	50 Ma
Peak Cathode Current (Max.)	—	150 Ma
Grid Circuit Resistance		
With Fixed Bias	2.2	2.2 Megohms
With Cathode Bias	2.2	— Megohms

CHARACTERISTICS AND TYPICAL OPERATION

	Section 1 (Oscillator)	Section 2 (Amplifier)
Plate Voltage	250	150 250 Volts
Grid Voltage	-8.0	0 ⁽³⁾ -9.5 Volts
Amplification Factor	22.5	— 15.4
Plate Resistance (Approx.)	9000	— 2000 Ohms
Transconductance	2500	— 7700 μ mhos
Plate Current	8.0	68 41 Ma
Grid Voltage (Approx.)		
Ib = 10 μ a	-18	— — Volts
Grid Voltage (Approx.)		
Ib = 50 μ a	—	— -23 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 device in the absence of excitation.
- (3) Applied for short interval (two seconds maximum) so as not to damage device.

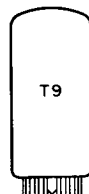
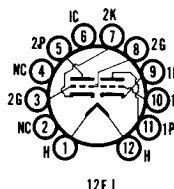
Color Television Type

**VERTICAL DEFLECTION
OSCILLATOR and AMPLIFIER****6FM7**

13FM7, 15FM7

Double Dissimilar Triode

Construction.....Compactron T-9
 Base Button 12 Pin, E12-70
 Basing 12EJ
 Outline 9-58
 Maximum Diameter 1.188 In.
 Maximum Seated Height 2.000 In.
 Maximum Overall Height 2.375 In.

**ELECTRICAL DATA
HEATER OPERATION**

	15FM7	13FM7	6FM7
Heater Voltage.....	14.8	13.0	6.3 Volts
Heater Current	450	450	1005 Ma
Heater Warm-up Time	11	11	— 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	4.0	7.0 Pf
Input: g to (h + k)	2.4	7.0 Pf
Output: p to (h + k)	0.40	1.1 Pf