

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.

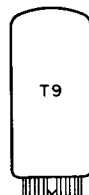
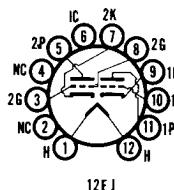
Color Television Type

**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**

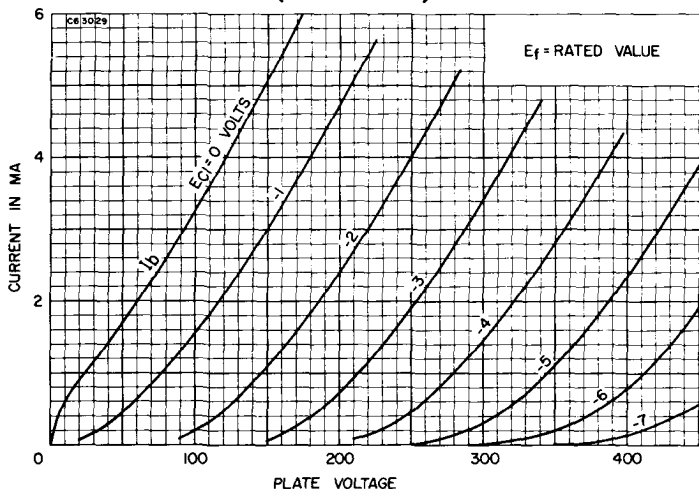
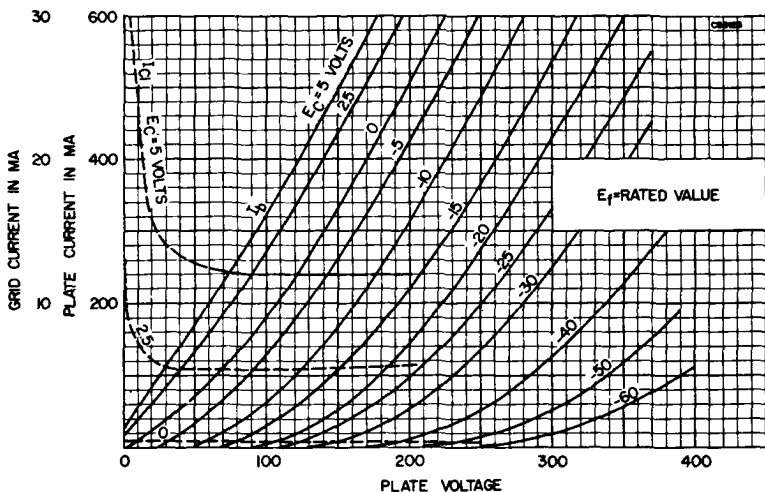
	15FM7	13FM7	6FM7
Heater Voltage.....	14.8	13.0	6.3 Volts
Heater Current	450	450	1005 Ma
Heater Warm-up Time	11	11	— Seconds
Maximum Heater-Cathode Voltage			
Heater Negative with Respect to Cathode			
Total DC and Peak.....			200 Volts
Heater Positive with Respect to Cathode			
DC			100 Volts
Total DC 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

RATINGS (Design Maximum Rating System)
Vertical Deflection Oscillator and Amplifier⁽¹⁾

	Section ⁽²⁾ No. 1 Oscillator	Section ⁽²⁾ No. 2 Amplifier
Plate Voltage (Max.)	350	550 Volts
Peak Positive Pulse Plate Voltage (Max.)	—	1500 Volts
Peak Negative Pulse Grid Voltage (Max.)	400	250 Volts
Plate Dissipation (Max.) ⁽³⁾	1.0	10 Watts
Average Cathode Current (Max.)	—	50 Ma
Peak Cathode Current (Max.)	—	175 Ma
Grid Circuit Resistance, Self Bias (Max.)	2.2	2.2 Megohms

AVERAGE PLATE CHARACTERISTICS
(Section No. 1)

AVERAGE PLATE CHARACTERISTICS
(Section No. 2)


CHARACTERISTICS AND TYPICAL OPERATION

	Section No. 1	Section No. 2
Plate Voltage	250	175 Volts
Grid No. 1 Voltage	-3	-25 Volts
Plate Current	2.0	40 Ma
Transconductance	2200	6000 μ mhos
Amplification Factor	66	5.5
Plate Resistance (Approx.)	30,000	920 Ohms
Ec for Ib = 20 μ a (Approx.)	-5.3	— Volts
Ec for Ib = 200 μ a (Approx.)	—	-45 Volts

NOTES:

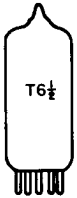
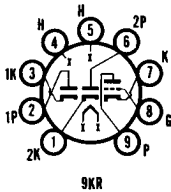
- (1) For operation in a 525 line, 30 frame system as described in "Standards of Good Engineering Practice for Television Broadcast Stations; Federal Communications Commission," the duty cycle of the voltage pulse not to exceed 15% of one horizontal scanning cycle.
- (2) Section No. 1 connects to Pins 6, 7 and 8. Section No. 2 connects to Pins 1, 2, 3, and 9.
- (3) In stages operating with grid leak bias, an adequate bias resistor or other suitable means is required to protect the tube in the absence of excitation.

FM DETECTOR
AF AMPLIFIER

6FM8

Double Diode and High Mu Triode

Construction	Miniature T-6½
Base	Button, 9 Pin, E9-1
Basing	9KR
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	6.3 Volts
Heater Current	450 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)

Triode

Grid to Plate	1.8 Pf
Input: g to (h + Tk)	1.5 Pf
Output: p to (h + Tk)	0.16 Pf

Diodes

No. 1 Diode Plate to Grid	0.05 Pf
No. 2 Diode Plate to Grid	0.04 Pf
No. 1 Diode Cathode to All	4.6 Pf
No. 2 Diode Cathode to All	4.8 Pf
No. 1 Diode Input	2.4 Pf
No. 2 Diode Input	2.2 Pf

RATINGS (Design Maximum Rating System)

Triode

Plate Voltage (Max.)	330 Volts
Positive DC Grid Voltage (Max.)	0 Volt
Plate Dissipation (Max.)	1.1 Watts

Diodes (Continuous Operation)

DC Current, Each Plate (Max.)	5 Ma
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CHARACTERISTICS AND TYPICAL OPERATION

Triode: Class A1 Amplifier

Plate Voltage	250 Volts
Grid Voltage	-3 Volts
Plate Current	1.0 Ma
Transconductance	1200 μ mhos
Amplification Factor	70
Plate Resistance (Approx.)	58,000 Ohms

Diodes

Average Current Each Plate at 5 Volts DC ⁽¹⁾	20 Ma
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NOTE:

- (1) Test condition only.