Plate Resistance (Approx.)	—	45,000 Ohms
Transconductance	—	10,400 μmhos
Plate Current	34	17 Ma
Screen Current	13	4.0 Ma
Grid No. 1 Voltage (Approx.) Ib = 100 μa	—	-6 Volts

NOTE:
(1) Applied for short interval (two seconds maximum) so as not to damage tube.

Color Television Type

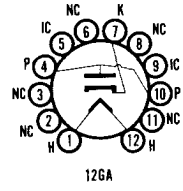
DAMPER

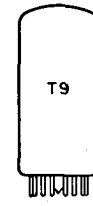
6BE3A

12BE3A, 17BE3A

Heater-Cathode Diode

Construction.....Compactron T-9
Base .....Button 12 Pin, E12-70
Basing 12GA
Outline 9-60
Maximum Diameter .....1.188 In.
Maximum Seated Height .....2.500 In.
Maximum Overall Height .....2.875 In.





ELECTRICAL DATA
HEATER OPERATION

	17BE3A	12BE3A	6BE3A
Heater Voltage	16.8	12.6	6.3 Volts
Heater Current	450	600	1200 Ma
Heater Warm-up Time	11	11	— Seconds

Maximum Heater-Cathode Voltage
Heater Negative with Respect to Cathode
DC ..... 900 Volts
Total DC and Peak..... 5000 Volts
Heater Positive with Respect to Cathode
DC ..... 100 Volts
Total DC and Peak..... 300 Volts

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)
Heater to Cathode ..... 3.4 Pf
Plate to Cathode and Heater..... 8.0 Pf
Cathode to Plate and Heater..... 10 Pf

RATINGS (Design Maximum Rating System)
Damper Service
Peak Inverse Plate Voltage(1) (Max.) ..... 5000 Volts
Plate Dissipation (Max.) ..... 6.5 Watts
Steady State Peak Current (Max.) ..... 1200 Ma
DC Plate Current (Max.) ..... 200 Ma

CHARACTERISTICS AND TYPICAL OPERATION
Tube Voltage Drop for Ib = 350 Ma DC..... 22.5 Volts

NOTE:
(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.

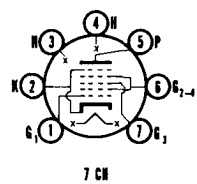
AM/FM PENTAGRID CONVERTER

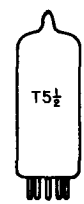
6BE6

3BE6, 4BE6, 12BE6

Heptode

Construction .....Miniature T-5½
Base .....Button 7 Pin, E7-1
Basing 7CH
Outline 5-2
Maximum Diameter .....0.750 In.
Maximum Seated Height .....1.875 In.
Maximum Overall Height .....2.125 In.





ELECTRICAL DATA

HEATER OPERATION

	3BE6	4BE6	12BE6	6BE6
Heater Voltage	3.15	4.2	12.6	6.3 Volts
Heater Current	600	450	150	300 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

	Shielded (2)	Unshielded
Grid No. 3 to Plate (Max.)	0.25	0.30 Pf
Grid No. 3 to Grid No. 1 (Max.)	0.15	0.15 Pf
Grid No. 3 Input: g3 to (h+k+g1+g2+g4+g5+p)	7.0	7.0 Pf
Grid No. 1 Input: g1 to (h+k+g2+g4+g3+g5+p)	5.5	5.5 Pf
Output: p to (h+k+g1+g2+g4+g3+g5)	13.0	8.0 Pf
Grid No. 1 to Cathode	3.0	3.0 Pf
Grid No. 1 to Plate	0.05	0.1 Pf
Cathode to All Electrodes Except Grid No. 1	20.0	15.0 Pf

RATINGS (Design Center Rating System)

Plate Voltage (Max.)	300 Volts
Plate Dissipation (Max.)	1.0 Watt
Grid No. 2 Voltage (Max.)	100 Volts
Grid No. 2 Supply Voltage (Max.)	300 Volts
Grid No. 2 Dissipation (Max.)	1.0 Watt
Positive Grid No. 3 Voltage (Max.)	0 Volt
Negative Grid No. 3 Voltage (Max.)	50 Volts
Cathode Current (Max.)	14 Ma

CHARACTERISTICS AND TYPICAL OPERATION

Separate Excitation (2)

Plate Voltage	100	250 Volts
Grid No. 2 Voltage	100	100 Volts
Grid No. 3 Voltage	−1.5	−1.5 Volts
Grid No. 1 Resistance	20,000	20,000 Ohms
Grid No. 1 Current	0.5	0.5 Ma
Conversion Transconductance	455	475 μmhos
Plate Resistance (Approx.)	0.4	1.0 Megohm
Plate Current	2.6	2.9 Ma
Grid No. 2 Current	7.0	6.8 Ma
Cathode Current	10.1	10.2 Ma
Grid No. 3 Voltage (Approx.) for Gc = 10 μmhos	−30	−30 Volts

Oscillator Section Characteristics (non-Oscillating)

Grid No. 3 Voltage	0 Volt
Grid No. 1 Voltage	0 Volt
Grid No. 2 Connected to Plate	100 Volts
Cathode Current	25 Ma
Transconductance Between Grid No. 1 and Grid No. 2 Connected to Plate	7250 μmhos
Amplification Factor	20
Grid No. 3 Voltage (Approx.) for Ib = 10 μa	−11 Volts

NOTES:

(1) Shield No. 316 connected to cathode.

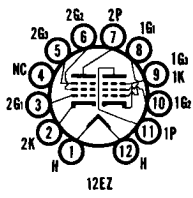
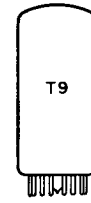
(2) Data for self-excitation in a zero bias circuit corresponds very closely to that for separate excitation.

6BF11

12BF11, 17BF11, 24BF11

Color Television Type

AUDIO POWER AMPLIFIER FM DETECTOR

Beam Pentode and Sharp Cutoff Pentode

Construction ..... Compactron T-9
Base ..... Button 12 Pin, E12-70
Basing 12EZ
Outline 9-59
Maximum Diameter ..... 1.188 In.
Maximum Seated Height ..... 2.250 In.
Maximum Overall Height ..... 2.625 In.