

Positive Grid No. 1 Voltage (Max.)	—	0 Volt
Grid No. 1 Circuit Resistance	—	—
Fixed Bias (Max.)	0.5	0.25 Megohm
Self Bias (Max.)	1.0	1.0 Megohm

CHARACTERISTICS AND TYPICAL OPERATION

Class A1 Amplifier

	Triode	Pentode
Plate Voltage	200	200 Volts
Grid No. 2 Voltage	—	150 Volts
Grid No. 1 Voltage	-8	0 Volts
Cathode Bias Resistor	—	180 Ohms
Plate Current	8.0	13 Ma
Grid No. 2 Current	—	3.5 Ma
Transconductance	2700	9000 μ mhos
Amplification Factor	18	—
Plate Resistance (Approx.)	6700	400,000 Ohms
Grid No. 1 Voltage for $I_b = 10 \mu a$ (Approx.)	-16	-10 Volts

INSTANTANEOUS PLATE KNEE VALUES

$E_b = 65$ V, $E_{c2} = 150$ V, and $E_{c1} = 0$ V;
 $I_b = 42$ Ma; and $I_{c2} = 12.5$ Ma

NOTE:

(1) Shield No. 315 ties to cathode base pin of section under test.

Color Television Type

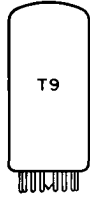
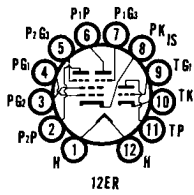
VERTICAL DEFLECTION OSC. (T)
SYNC/AGC AMPLIFIER (P)

6BA11

8BA11

Medium Mu Triode and Twin Pentode

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



ELECTRICAL DATA

HEATER OPERATION

	8BA11	6BA11
Heater Voltage.....	8.4	6.3 Volts
Heater Current	450	600 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)

Pentode Section

Grid No. 3 to Plate (Each Pentode)	2.0 Pf
Grid No. 1 to All.....	6.0 Pf
Grid No. 3 (Each Pentode to All)	3.6 Pf
Plate (Each Pentode to All)	3.0 Pf
Grid No. 3 (Pentode 1) to Grid No. 3 (Pentode 2) (Max.).....	0.026 Pf

Triode Section

Grid to Plate	2.0 Pf
Input: g_1 to $(k + h)$	2.0 Pf
Output: p to $(k + h + IS)$	1.9 Pf

RATINGS (Design Maximum Rating System)

	Triode Section	Pentode Section
Plate Voltage	300	300 Volts
Grid No. 2 Voltage	—	150 Volts
Positive DC Grid No. 3 Voltage	—	3.0 Volts
Negative DC Grid No. 3 Voltage	—	50 Volts
Peak Positive Grid No. 3 Voltage.....	—	50 Volts

Negative DC Grid No. 1 Voltage	—	50 Volts
Plate Dissipation (Each Plate)	1.5	1.1 Watts
Grid No. 2 Dissipation	—	0.75 Watt
DC Cathode Current	20	12 Ma
Grid No. 3 Circuit Resistance (Each Grid).....	—	0.5 Megohm
Grid No. 1 Circuit Resistance		
Fixed Bias	0.25	0.5 Megohm
Cathode Bias	1.0	0.5 Megohm

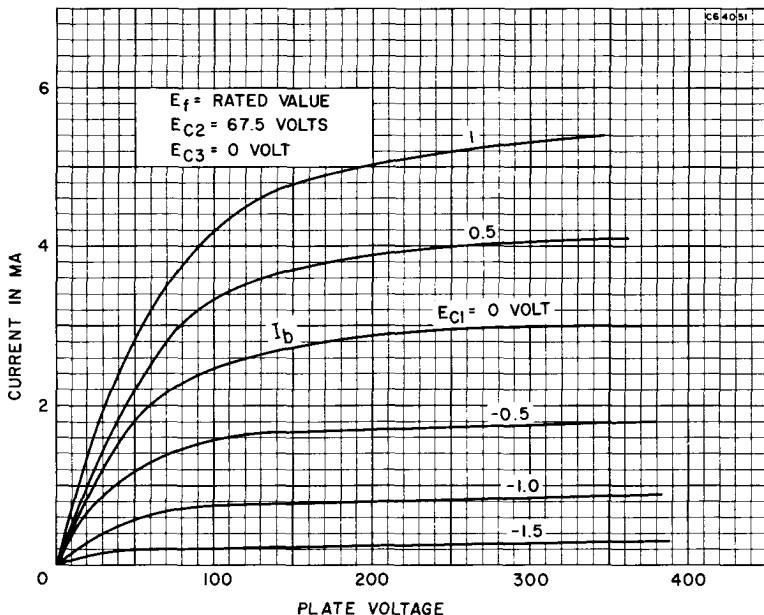
CHARACTERISTICS AND TYPICAL OPERATION

	Pentode					
	Triode Section	Each Section Separately ⁽²⁾		Both Sections Operating ⁽³⁾		
Plate Voltage	250	100	100	100	100	Volts
Grid No. 2 Voltage	—	67.5	67.5	67.5	67.5	Volts
Grid No. 3 Voltage	—	0	0	-10	0	Volts
Grid No. 1 Voltage	-11	0	Note 1	Note 1	Note 1	Volts
Plate Current	5.0	—	2.5	0	2.5	Ma
Grid No. 2 Current	—	—	—	7.0	4.4	Ma
Grid No. 1 Transconductance ...	1800	1700	—	—	—	μ mhos
Amplification Factor	18	—	—	—	—	
Grid No. 3 Transconductance ...	—	—	450	—	—	μ mhos
Grid No. 1 Voltage						
$I_b = 100 \mu a$	-18	2.3	—	—	—	Volts
Grid No. 3 Voltage (Approx.)						
For $I_b = 100 \mu a$	—	—	-3.2	—	—	Volts

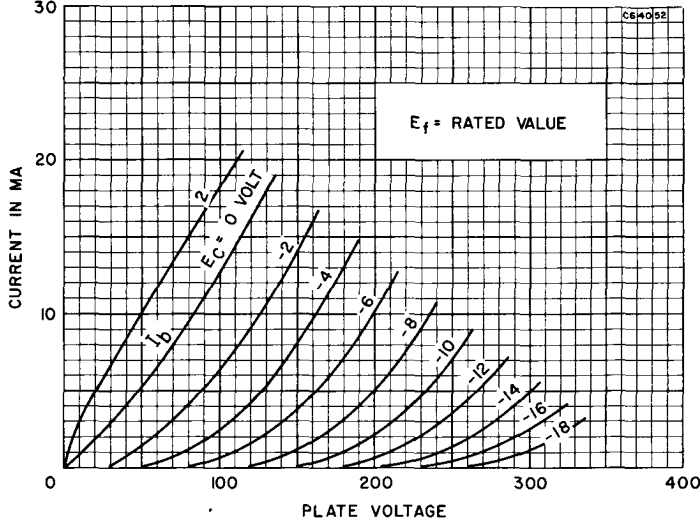
NOTES:

- (1) Grid current adjusted for 100 μa DC.
- (2) Plate and Grid No. 3 of opposite section grounded.
- (3) Voltages and plate current apply to each section.

AVERAGE PLATE CHARACTERISTICS
(Pentode Section)
(with Opposite Grid No. 3 and Plate Grounded)



AVERAGE PLATE CHARACTERISTICS
(Triode Section)

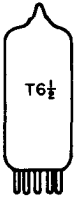
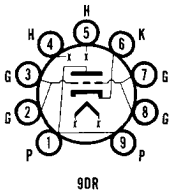


RF AMPLIFIER

6BC4

Medium Mu Triode

- Construction Miniature T-6½
- Base Button 9 Pin, E9-1
- Basing 9DR
- Outline 6-1
- Maximum Diameter 0.875 In.
- Maximum Seated Height 1.500 In.
- Maximum Overall Height 1.750 In.



ELECTRICAL DATA

HEATER OPERATION

- Heater Voltage.....6.3 Volts
- Heater Current.....225 Ma
- Maximum Heater-Cathode Voltage.....75 Volts

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

- Grid to Plate.....1.6 Pf
- Grid to Cathode and Heater.....2.9 Pf
- Plate to Cathode and Heater.....0.26 Pf
- Heater to Cathode.....2.7 Pf

RATINGS (Design Center Rating System)

- Plate Voltage (Max.).....250 Volts
- Plate Dissipation (Max.).....2.5 Watts
- Cathode Current (Max.).....25 Ma
- Grid Circuit Resistance.....Not recommended
- Fixed Bias.....0.5 Megohm
- Cathode Bias (Max.).....

CHARACTERISTICS AND TYPICAL OPERATION

Class A1 Amplifier

- Plate Supply Voltage.....150 Volts
- Cathode Bias Resistor.....100 Ohms
- Amplification Factor.....48
- Plate Resistance.....4800 Ohms
- Transconductance.....10,000 μ mhos
- Grid Bias for $I_b = 10 \mu$ a.....-10 Volts
- Plate Current.....14.5 Ma