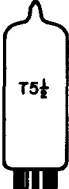
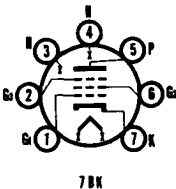


12AF6

RF/IF AMPLIFIER

Remote Cutoff Pentode

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



ELECTRICAL DATA
HEATER OPERATION

Heater Voltage ⁽¹⁾	12.6 Volts
Heater Current	150 Ma
Maximum Heater-Cathode Voltage	
Heater Negative with Respect to Cathode	16 Volts
Heater Positive with Respect to Cathode	16 Volts

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

Grid to Plate	0.006 Pf
Input	5.5 Pf
Output	4.8 Pf

RATINGS (Design Maximum Rating System)

Plate Voltage (Max.)	16 Volts
Grid No. 2 Voltage (Max.)	16 Volts
Positive DC Grid No. 1 Voltage (Max.)	0 Volt
Grid No. 1 Circuit Resistance (Max.)	2.2 Megohms

CHARACTERISTICS AND TYPICAL OPERATION

Plate Voltage	12.6 Volts
Grid No. 3 Voltage	0 Volt
Grid No. 2 Voltage	12.6 Volts
Grid No. 1 Supply Voltage.....	0 Volt
Plate Current	1.1 Ma
Grid No. 2 Current	0.45 Ma
Transconductance	1500 μ mhos
Plate Resistance (Approx.)	0.35 Megohm
Grid No. 1 Resistor (Bypassed)	2.2 Megohm
Grid No. 1 Voltage ⁽²⁾ (Approx.) for Gm = 10 μ mhos.....	~3.5 Volts

NOTES:

- (1) This tube is intended for use in automobile radios operated from a nominal 12 volt battery. Design of the tube is such that the heater will operate satisfactorily over the range 10.0 volts to 15.9 volts, and that the maximum ratings provide a safety factor for the wide voltage variation encountered with this type of supply.
- (2) Grid No. 1 tied to Grid No. 3.

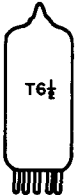
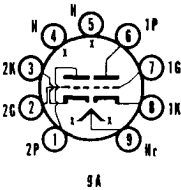
12AT7/ECC81

Color Television Type

GROUNDING GRID AMPLIFIER

Double High Mu Triode

Construction Miniature T-6½
Base Button 9 Pin, E9-1
Basing 9A
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.....	12.6/6.3 Volts
Heater Current	150/300 Ma
Maximum Heater-Cathode Voltage	90 Volts

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

	Section 1	Section 2
Grid to Plate	1.5	1.5 Pf
Input	2.2	2.2 Pf
Output	0.5	0.4 Pf
Grid to Grid (Max.)		.005 Pf
Plate to Plate (Max.)		0.4 Pf
Heater to Cathode	2.4	2.4 Pf
Grounded Grid Section		
Plate to Cathode	0.2	0.2 Pf
Input	4.6	4.6 Pf
Output	1.8	1.8 Pf

RATINGS (Design Center Rating System) (Each Section)

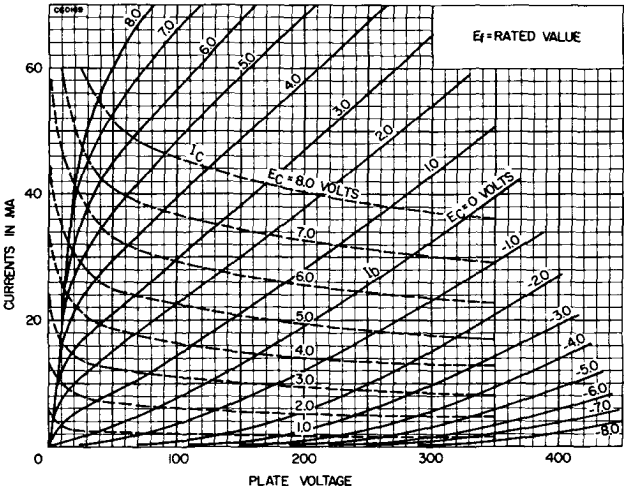
Plate Voltage (Max.)	300 Volts
Plate Dissipation (Max.)	2.5 Watts

CHARACTERISTICS AND TYPICAL OPERATION

Class A1 Amplifier (Each Section)

Grid Voltage	100	180	250 Volts
Grid Voltage	-1	-1	-2 Volts
Cathode Bias Resistor	270	90	200 Ohms
Plate Current	3.7	11.0	10.0 Ma
Plate Resistance	15,000	9400	10,900 Ohms
Transconductance	4000	6000	5500 μ mhos
Amplification Factor	60	62	60
E_c for $I_b = 10 \mu$ a (Approx.)	-5	-8	-12 Volts

AVERAGE PLATE CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS

