

NOTES:

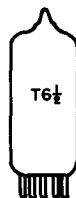
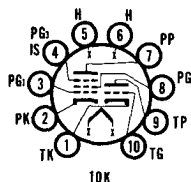
- (1) External shield No. 315 tied to cathode.
- (2) With separate excitation and triode unit grounded.
- (3) In TV or FM receivers, it is generally desirable to operate the oscillator with less power input than shown in the tabulated data in order to avoid overexcitation and excessive oscillator radiation.

6X9/ECF200**5X9, 8X9**

SOUND IF or VIDEO AMP. (P)
SYNC SEP., AGC AMP.
SOUND IF (T)

Triode and Pentode

Construction Miniature T-6½
 Base Button 9 Pin, E9-1
 Basing 10K
 Outline 6-2
 Maximum Diameter 0.875 In.
 Maximum Seated Height 1.937 In.
 Maximum Overall Height 2.187 In.

**ELECTRICAL DATA
HEATER OPERATION**

	8X9	5X9	6X9/ECF200
Heater Voltage.....	8.0	5.9	6.3 Volts
Heater Current.....	300	450	410 Ma
Maximum Heater-Cathode Voltage.....			165 Volts
Pentode Section.....			
Triode Section.....			
Cathode Negative.....			
6X9, 8X9.....			165 Volts
5X9.....			110 Volts
Cathode Positive.....			
6X9, 8X9.....			220 + 165 Volts RMS
5X9.....			220 + 110 Volts RMS

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

Pentode Section	
Plate to All Other Elements (Except Grid No. 1).....	3.5 Pf
Grid No. 1 to All Other Elements (Except Plate).....	6.5 Pf
Grid No. 1 to Cathode.....	4.0 Pf
Plate to Grid No. 1.....	0.0065 Pf
Grid No. 1 to Grid No. 2.....	1.8 Pf
Triode Section	
Plate to All Other Elements (Except Grid).....	3.0 Pf
Grid to All Other Elements (Except Plate).....	2.5 Pf
Plate to Grid.....	2.0 Pf
Between Pentode and Triode Section	
Plate of Pentode to Plate of Triode.....	0.015 Pf
Control Grid of Pentode to Plate of Triode.....	0.0012 Pf
Control Grid of Pentode to Grid of Triode.....	0.0015 Pf

RATINGS (Absolute Maximum Rating System)

Pentode Section	
Plate Voltage (Zero Plate Current).....	600 Volts
Plate Voltage.....	275 Volts
Plate Dissipation.....	2.4 Watts
Grid No. 2 Voltage (Zero Grid Current).....	600 Volts
Grid No. 2 Voltage.....	275 Volts
Grid No. 2 Dissipation.....	0.8 Watts
Cathode Current.....	20 Ma
Grid No. 1 Resistor.....	1 Megohm
Triode Section	
Peak Plate Voltage (Ib = 0.1 Ma) ⁽¹⁾	660 Volts
Plate Voltage (Zero Plate Current).....	600 Volts
Plate Voltage.....	275 Volts
Plate Dissipation.....	1.75 Watts
Cathode Current.....	20 Ma
Grid Resistor.....	1 Megohm

CHARACTERISTICS AND TYPICAL OPERATION

Pentode Section	
Plate Voltage.....	160 Volts
Grid No. 2 Voltage.....	135 Volts
Grid No. 1 Voltage.....	-1.7 Volts
Grid No. 3 Voltage.....	0 Volt

Plate Current			13 Ma
Grid No. 2 Current			5 Ma
Transconductance			14,000 μ mhos
Amplification Factor (Grid No. 1 to Grid No. 2)			55
Triode Section			
Plate Voltage			170 Volts
Grid Voltage			-1.0 Volt
Plate Current			8.5 Ma
Transconductance			4800 μ mhos
Amplification Factor			55
Pentode Section—Sound or Video Amplifier			
Supply Voltage	135	230	250 Volts
Grid No. 3 Voltage	0	0	0 Volt
Plate Resistance	0	5.6	6.8 K Ohms
Grid No. 2 Resistor	0	18	22 K Ohms
Cathode Resistor	95	100	100 Ohms
Plate Current	13	13.3	13.3 Ma
Grid No. 2 Current	4.8	4.9	4.9 Ma
Transconductance	14,000	14,000	14,000 μ mhos
Grid No. 1 Resistance (40 MHz)	6.6	6.6	6.6 K Ohms
Triode Section—Sync Separator			
Plate Voltage			130-150 Volts
Plate Resistance			33 K Ohms
Grid No. 1 Current			1 μ A
Plate Current			2 Ma

NOTE:(1) 18 μ sec. Maximum, 18% of 1 cycle.**AUDIO POWER AMPLIFIER****6Y6GA****Beam Power Pentode**

Construction	Octal T-12
Base	Octal 7 Pin, B7-12 or B7-119
Basing	7S
Outline	12-14
Maximum Diameter	1.562 In.
Maximum Seated Height	3.312 In.
Maximum Overall Height	3.875 In.

ELECTRICAL DATA**HEATER OPERATION**

Heater Voltage	
Heater Current	
Maximum Heater-Cathode Voltage	

DIRECT INTERELECTRODE CAPACITANCES

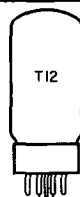
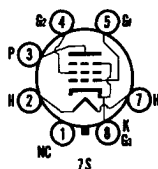
Grid No. 1 to Plate	
Input	
Output	

RATINGS (Design Center Rating System)

Plate Voltage (Max.)	200 Volts
Plate Dissipation (Max.)	12.5 Watts
Grid No. 2 Supply Voltage (Max.)	200 Volts
Grid No. 2 Voltage	See Rating Chart (Gen. Info. Sec.)
Grid No. 2 Dissipation (Max.)	1.75 Watts
Grid No. 1 Circuit Resistance	
Fixed Bias (Max.)	0.1 Megohm
Cathode Bias (Max.)	0.5 Megohm

CHARACTERISTICS AND TYPICAL OPERATION**Class A1 Amplifier**

Plate Voltage	135	200 Volts
Grid No. 2 Voltage	135	135 Volts
Grid No. 1 Voltage	-13.5	-14 Volts
Peak AF Grid No. 1 Voltage	13.5	14 Volts
Zero Signal Plate Current	58	61 Ma
Maximum Signal Plate Current	60	66 Ma
Zero Signal Grid No. 2 Current	3.5	2.2 Ma
Maximum Signal Grid No. 2 Current	11.5	9 Ma
Plate Resistance (Approx.)	9300	18,300 Ohms
Transconductance	7000	7100 μ mhos
Load Resistance	2000	2600 Ohms
Maximum Signal Power Output	3.6	6 Watts
Total Harmonic Distortion (Approx.)	10	10 Percent



T12
6.3 Volts
1250 Ma
180 Volts