

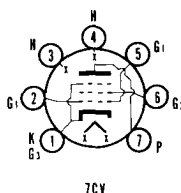
Grid No. 1 Voltage	0 ⁽²⁾	-8.0 Volts
Plate Resistance (Approx.)	—	11,700 μ mhos
Transconductance	—	7100 Ma
Plate Current	122	46 Ma
Screen Current	16.5	3.5 Ma
Grid No. 1 Voltage (Approx.) Ib = 100 μ a	—	-25 Volts
Triode Section 1		
Plate Voltage		150 Volts
Grid Voltage		-2.0 Volts
Amplification Factor		43
Plate Resistance (Approx.)		11,000 Ohms
Transconductance		3900 μ mhos
Plate Current		5.4 Ma
Grid Voltage (Approx.) Ib = 10 μ a		-5.7 Volts
Triode Section 2		
Plate Voltage		150 Volts
Grid Voltage		-5.0 Volts
Amplification Factor		20
Plate Resistance (Approx.)		8500 Ohms
Transconductance		2350 μ mhos
Plate Current		5.5 Ma
Grid Voltage (Approx.) Ib = 10 μ a		-11 Volts

NOTES:

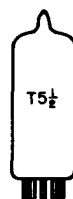
- (1) For operation in a 525 line, 30 frame system as described in "Standards of Good Engineering Practice for Television Broadcast Stations; Federal Communications Commission," the duty cycle of the voltage pulse must not exceed 15% of one horizontal scanning cycle.
- (2) Applied for short interval (two seconds maximum) so as not to damage tube.

AUDIO POWER AMPLIFIER**32ET5A****Beam Power Pentode**

Construction	Miniature T-5½
Base	Button 7 Pin, E7-1
Basing	7CV
Outline	5-3
Maximum Diameter	0.750 In.
Maximum Seated Height	2.375 In.
Maximum Overall Height	2.625 In.



7CV

**ELECTRICAL DATA****HEATER OPERATION**

Heater Voltage	32 Volts
Heater Current	100 Ma
Heater Warm-up Time	20 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)

Grid No. 1 to Plate	0.6 Pf
Input: g to (h + k + g ₂ + g ₃)	12 Pf
Output: p to (h + k + g ₂ + g ₃)	6.0 Pf

RATINGS (Design Maximum Rating System)

Plate Voltage (Max.)	150 Volts
Grid No. 2 Voltage (Max.)	130 Volts
Plate Dissipation (Max.)	5.4 Watts
Grid No. 2 Dissipation (Max.)	1.2 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	110 Volts
Grid No. 2 Voltage	110 Volts
Grid No. 1 Voltage	-7.5 Volts
Peak AF Grid No. 1 Voltage	7.5 Volts
Zero-Signal Plate Current	30 Ma

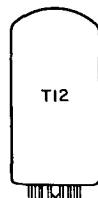
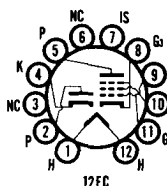
Zero-Signal Grid No. 2 Current	2.8 Ma
Transconductance	5500 μ mhos
Plate Resistance (Approx.)	21,000 Ohms
Load Resistance	2800 Ohms
Maximum Signal Power Output	1.2 Watts
Total Harmonic Distortion (Approx.)	10 Percent

33GT7

DAMPER HORIZONTAL DEFLECTION AMPLIFIER

Diode and Beam Power Pentode

Construction	Compactron T-12
Base	Button 12 Pin, E12-74
Basing	12FC
Outline	12-56
Maximum Diameter	1.562 In.
Maximum Seated Height	2.500 In.
Maximum Overall Height	2.875 In.



ELECTRICAL DATA HEATER OPERATION

Heater Voltage	33.6 Volts
Heater Current	450 Ma
Heater Warm-up Time	11 Seconds
Maximum Heater-Cathode Voltage	
Heater Negative with Respect to Cathode	Pentode
DC	—
Total DC and Peak	200
Heater Positive with Respect to Cathode	
DC	100
Total DC and Peak	200
	Diode
	400 Volts
	2500 Volts

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

Diode Section	
Cathode to Plate and Heater k to (p + h)	8.5 Pf
Plate to Cathode and Heater p to (k + h)	5.5 Pf
Heater to Cathode (h to k)	3.2 Pf
Pentode Section	
Grid No. 1 to Plate: (g1 to p)	0.2 Pf
Input: g1 to (h + k + g2 + bp)	17 Pf
Output: p to (h + k + g2 + bp)	7.0 Pf

RATINGS (Design Maximum Rating System)

Pentode Section—Horizontal Deflection Amplifier Service⁽¹⁾	
DC Plate Supply Voltage (Boost + DC Power Supply) (Max.)	400 Volts
Peak Positive Pulse Plate Voltage (Max.)	3500 Volts
Peak Negative Pulse Plate Voltage (Max.)	0 Volt
Screen Voltage (Max.)	150 Volts
Negative DC Grid No. 1 Voltage (Max.)	55 Volts
Peak Negative Grid No. 1 Voltage (Max.)	330 Volts
Plate Dissipation (Max.) ⁽²⁾	9.0 Watts
Screen Dissipation (Max.)	2.5 Watts
DC Cathode Current (Max.)	140 Ma
Peak Cathode Current (Max.)	490 Ma
Grid No. 1 Circuit Resistance (Max.)	1.0 Megohm
Diode Section—TV Damper Service	
Peak Inverse Plate Voltage (Max.)	2500 Volts
Plate Dissipation (Max.)	3.5 Watts
Steady State Peak Plate Current (Max.)	750 Ma
DC Output Current (Max.)	125 Ma
Bulb Temperature at Hottest Point (Max.)	220 °C

CHARACTERISTICS AND TYPICAL OPERATION

Pentode Section			
Plate Voltage	3500	60	130 Volts
Screen Voltage	130	130	130 Volts
Grid No. 1 Voltage	—	0 ⁽³⁾	-22.5 Volts
Plate Resistance (Approx.)	—	—	10,000 Ohms
Transconductance	—	—	6500 μ mhos
Plate Current	—	320	48 Ma
Screen Current	—	22	2.9 Ma
Grid No. 1 Voltage (Approx.) Ib = 1.0 Ma	-60	—	-40 Volts
Triode Amplification Factor ⁽⁴⁾	—	—	4.0