

5CUP18 CATHODE RAY TUBE

TELEVISION FILM RECORDING TUBE

The 5CUP18 is a 5-inch electrostatic-focus and magnetic-deflection cathode ray tube intended primarily for use in high definition television recorders. A particular feature of this tube is an optically flat faceplate utilizing non-browning glass. Other features include a metal backed screen for high brightness and a straight electron gun. With other special phosphors the same generic tube may be used as a flying spot light source, monitor, or radar type cathode ray tube.

GENERAL CHARACTERISTICS

Electrical Data

Heater Voltage	6.3 Volts
Heater Current	0.6-1.0 Amperes
Focusing Method	Electrostatic
Deflecting Method	Magnetic
Deflection Angle, approximate	50 Degrees
No-Ion-Trap Gun	No Magnet Required
Direct Interelectrode Capacitances, approximate	
Grid No. 1 to All Other Electrodes	7.5 uuf
Cathode to All Other Electrodes	5.0 uuf

Optical Data

Screen	P18 Aluminized
Fluorescence	White
Persistence	Short

Mechanical Data

Over-all Length	11-5/8±3/8 Inches
Greatest Diameter of Bulb	5±1/16 Inches
Minimum Useful Screen Diameter (maximum assured)	4-1/4 Inches
Neck Length	7-3/4 Inches
Bulb Contact	Recessed Small Cavity Cap, JEDEC No. J1-21
Base	Small Shell Duodecal 7-pin, JEDEC No. B7-51
Basing	JEDEC Designation 12C

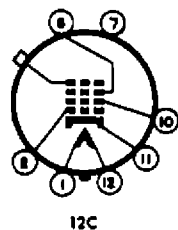
Maximum Ratings (Absolute Maximum Ratings)

Anode No. 2 Voltage	30,000 Max. Volts
Anode No. 1 Voltage (Focus)	6000 Max. Volts
Grid No. 2 Voltage	350 Max. Volts
Grid No. 1 Voltage:	
Negative Bias Value	150 Max. Volts
Positive Bias Value	2 Max. Volts
Peak Heater-Cathode Voltage:	
Heater negative with respect to cathode	175 Max. Volts
Heater positive with respect to cathode	10 Max. Volts

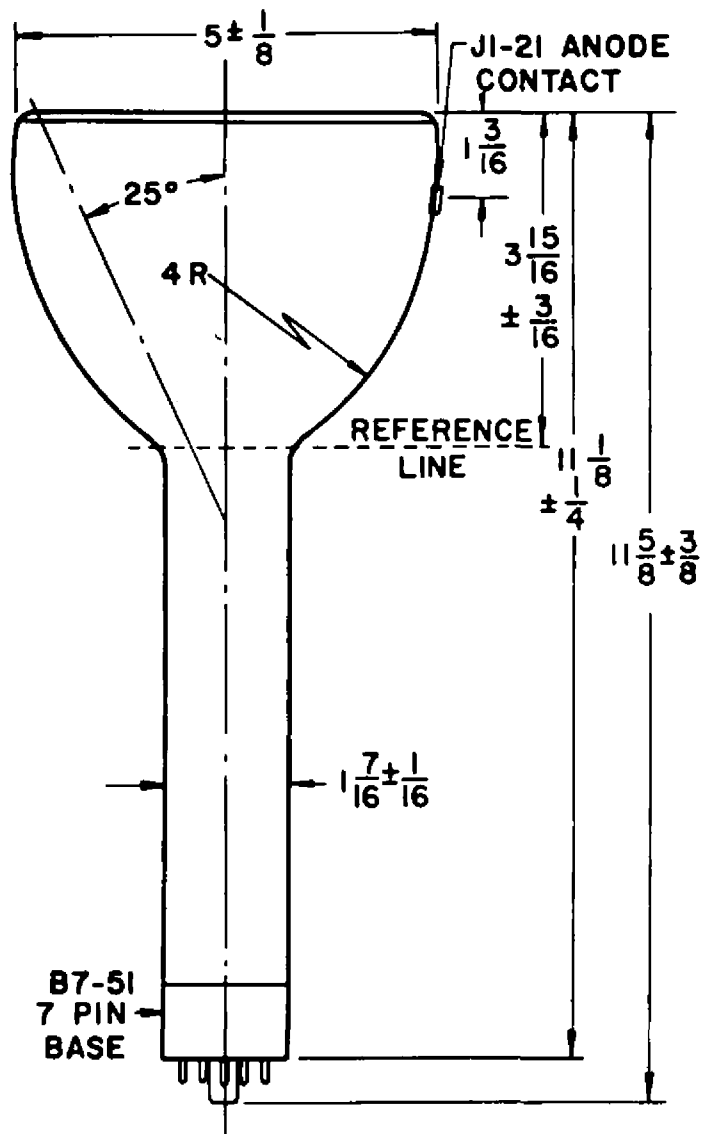
Typical Operating Conditions

Anode No. 2 Voltage*	27,000 Volts
Anode No. 1 (Focus)	4500 Volts
Grid No. 2 Voltage	200 Volts
Grid No. 1 Voltage for Visual Cutoff	-70 to -110 Volts

*Brilliance and definition decrease with decreasing anode voltages. In general, Anode No. 2 voltage should not be less than 20,000 volts.

OUTLINE DRAWING

BOTTOM VIEW

PIN 1: HEATER
 PIN 2: GRID 1
 PIN 6: GRID 3
 PIN 7: NO CONNECTION
 PIN 10: GRID 2
 PIN 11: CATHODE
 PIN 12: HEATER
 CAP : ANODE



1. The reference line is determined by the position where reference line gauge JEDEC No. 112 rests against the funnel.
2. X-ray radiation shielding may be necessary to protect against possible danger of personal injury from prolonged exposure at close range when this tube is operated at recommended anode voltages.
3. At or near maximum anode potential suitable precautions should be taken to prevent arcing between the anode button and the deflection yoke during high humidity conditions.
4. The anode contact aligns with vacant pin position No. 3 $\pm 10^\circ$.