12DP-A CATHODE-RAY TUBES

The Type 12DP-A Cathode-ray Tubes are 12-inch magnetically focussed and deflected cathode-ray tubes, primarily designed for radar indicator applications. They feature a large screen area and a long persistence screen (although screens with any persistence characteristic may be ordered).

The Type 12DP-A is recommended only for replacement purposes.

GENERAL CHARACTERISTICS

Electrical

Heater Voltage	6.3 Volts
Heater Current	0.6 ± 10% Ampere
Focusing Method	Magnetic
Deflecting Method	Magnetic
Deflecting Angle (Approx.)	50 Degrees
Phosphor	No. 7
Fluorescence	Blue
Phosphorescence	Yellow
Persistence	Long

Direct Interelectrode Capacitances, Approx.

Cathode to all other electrodes	6 $\mu\mu$f.
Grid No. 1 to all other electrodes	9 $\mu\mu$f.
Grid No. 2 to all other electrodes	7.5 $\mu\mu$f.

Mechanical

Overall Length	19⅝ ± ½ Inches
Greatest Diameter of Bulb	12 ± 3/16 Inches
Minimum Useful Screen Diameter	10 Inches
Bulb Contact (Medium Cap)	C1-5
Base (Medium-Shell Octal 8-Pin)	B8-65
Basing	5AN
Bulb Contact Alignment C1-5 cap aligns with pin No. 5	± 10 Degrees

MAXIMUM RATINGS—(Design Center Values)

Anode Voltage	10,000 Max. Volts D-C
Grid No. 2 Voltage	700 Max. Volts D-C
Grid No. 1 Voltage	
Negative Bias Value	125 Max. Volts D-C
Positive Bias Value[1]	0 Max. Volts D-C
Positive Peak Value	2 Max. Volts
Peak Grid No. 1 Drive from Cut-off	65 Max. Volts
Peak Heater-Cathode Voltage	
Heater Negative with respect to cathode	125 Max. Volts D-C
Heater Positive with respect to cathode	125 Max. Volts D-C

TYPICAL OPERATING CONDITIONS

Anode Voltage	4,000	7,000	Volts D-C
Grid No. 2 Voltage	250	250	Volts D-C
Grid No. 1 Voltage[2]	−25 to −70	−25 to −70	Volts D-C
Focusing Coil Current[3]	75 to 102	99 to 135	Ma. D-C
Spot Position[4]	20	—	mm.

MAXIMUM CIRCUIT VALUES

Grid No. 1 Circuit Resistance ..... 1.5 Max. Megohms

MINIMUM CIRCUIT VALUES

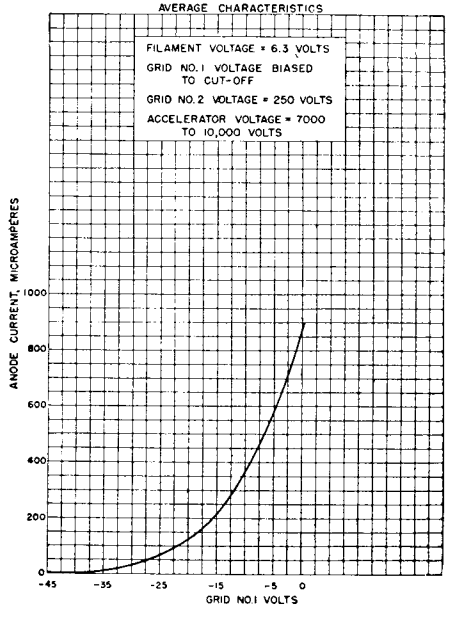
When the output capacitor of the power supply is capable of storing more than 250 microcoulombs, and when the inherent regulation of the power supply permits the instantaneous short-circuit current to exceed 1 ampere, the effective resistance in the circuit between the indicated electrode and the output capacitor should be as follows:

Grid No. 1 Circuit Resistance ..... 150 Min. Ohms
Grid No. 2 Circuit Resistance ..... 820 Min. Ohms
Anode Circuit Resistance ..... 11,000 Min. Ohms

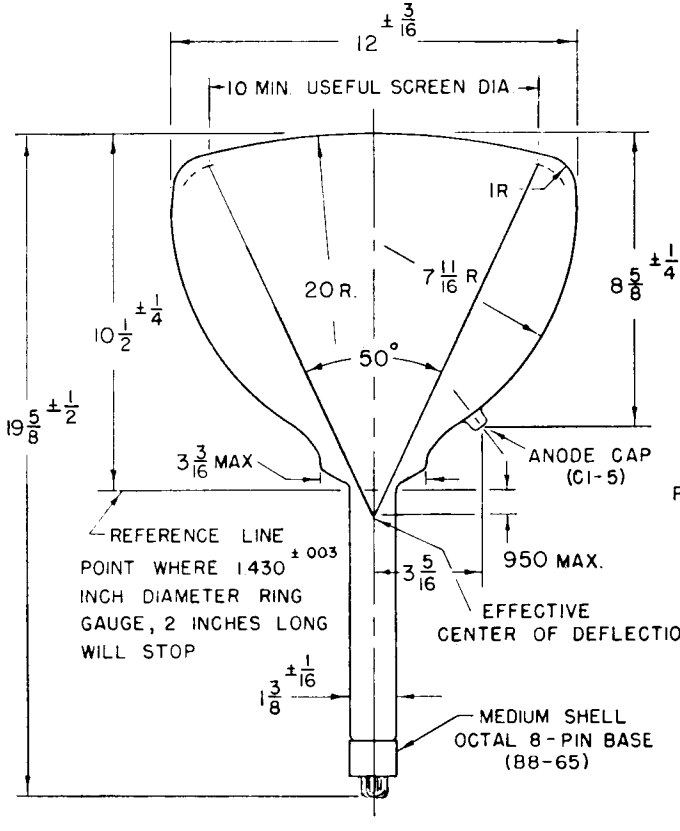
NOTES

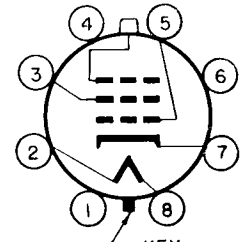
1. At or near this rating, the effective resistance of the anode supply should be adequate to limit the anode input power to 6 watts.
2. Visual extinction of undeflected focused spot.
3. For JETEC standard focus coil No. 106, or equivalent, with the Grid No. 1 voltage adjusted to produce an anode current of 200 microamperes and with distance (D) from reference line to center of air gap equal to 4.125 inches.
4. The center of the undeflected, unfocused spot will fall within a circle of 20 mm. radius concentric with the center of the tube face.

12DP-A



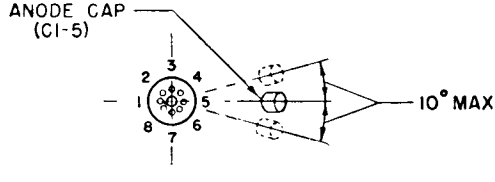
TYPE 12DP-A





BOTTOM VIEW OF BASE

PIN NO	ELEMENT
2	HEATER
3	GRID NO 2
5	GRID NO 1
7	CATHODE
8	HEATER
CAP	ANODE



BOTTOM VIEW OF TUBE