ADVANCE DATA

DESCRIPTION

Sylvania Type SC-3185 is a 21-inch rectangular cathode-ray tube for character writing and television display applications. It has two pairs of electrostatic deflection plates having high sensitivity and limited scan, for writing alpha-numeric characters and symbols, and uses 72 degree magnetic deflection for positioning the characters and for full-screen scanning.

CHARACTERISTICS

GENERAL DATA

Focusing Method	Electrostatic
Character Writing	Electrostatic
Deflection Method	Magnetic
Deflection Angles (Approx.)	
Vertical	53 Degrees
Horizontal	67 Degrees
Diagonal	72 Degrees
Phosphor*	P4
Fluorescence	White
Persistence	Short to Medium
Faceplate	Gray Filter Glass
Light Transmittance (Approx.)	75 Percent

*In addition to the type shown, the SC-3185 can be supplied with several other phosphors.

ELECTRICAL DATA

Heater Voltage	6.3 Volts
Heater Current	0.6 ± 5 % Ampere
Direct Interelectrode Capacitances (Approx.)	
Cathode to All Other Electrodes	5 pf
Grid No. 1 to All Other Electrodes	6.5 pf
D1 to D2	2 pf
D3 to D4	2.5 pf

MECHANICAL DATA

Minimum Useful Screen Dimensions	19 1/16 x 15 1/16 Inches
Minimum Useful Screen Area	262 Sq. Inches
Bulb	J171B or J171F
Bulb Contact (Recessed Small Cavity Cap)	J1-21
Neck Contacts (5)	J1-25
Base (Short Small Shell Duodecal 6-Pin)	B6-203
Basing	See Diagram

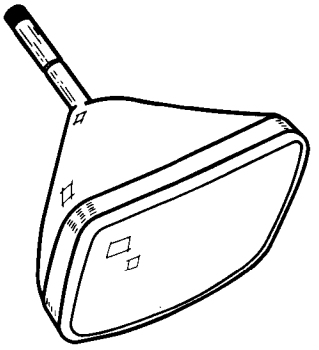
RATINGS

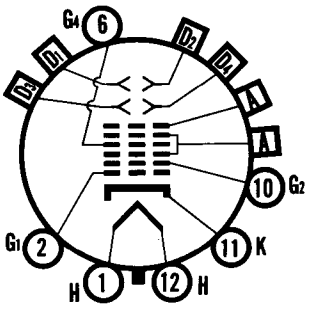
MAXIMUM RATINGS (Absolute Maximum Values)

Anode Voltage[1]	22,000 Volts
Grid No. 4 (Focusing Electrode) Voltage	−550 to +1100 Volts
Grid No. 2 Voltage	700 Volts
Grid No. 1 Voltage	
Negative Bias Value	180 Volts
Negative Peak Value	220 Volts
Positive Bias Value	0 Volts
Positive Peak Value	2 Volts
Peak Heater-Cathode Voltage	
Heater Negative with Respect to Cathode	
During Warm-up Period Not to Exceed 15 Seconds	450 Volts
After Equipment Warm-up Period	200 Volts
Heater Positive with Respect to Cathode	200 Volts
Peak Voltage Between Anode and Any Deflection Plate	550 Volts

QUICK REFERENCE DATA

Character Writing Tube
21" Direct Viewed
Rectangular Glass Type
Spherical Faceplate
Gray Filter Glass
Low Voltage Electrostatic Focus
Electrostatic Character Writing
Magnetic Deflection
No Ion Trap
Aluminized Screen





SYLVANIA
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SPECIAL AND GENERAL
PURPOSE CATHODE RAY TUBES

TYPICAL OPERATING CONDITIONS (Grid Drive Service)

Anode Voltage[1]	15,000 Volts	dc
Grid No. 4 Voltage for Focus	0 to +400 Volts	dc
Grid No. 2 Voltage	300 Volts	dc
Grid No. 1 Voltage Required for Cutoff[2]	−35 to −72 Volts	dc
Deflection Factors (Approx.)[3]		
D1-D2	170 Volts	dc/In.
D3-D4	185 Volts	dc/In.

CIRCUIT VALUES

Grid No. 1 Circuit Resistance	1.5 Megohms Max.
Deflection Circuit Resistance	5 Megohms Max.

NOTES:

1. *Connect both bulb and neck anode contacts to anode supply.*
2. *Visual extinction of focused raster. Extinction of the stationary focused spot will require that these values be about 5 volts more negative.*
3. *Useful electrostatic deflection is limited to ±1 inch on each axis.*

WARNING:

X-ray radiation shielding may be necessary to protect against possible danger of personal injury from prolonged exposure at close range if this tube is operated at higher than the manufacturer's Maximum Rated Anode Voltage or 16,000 volts, whichever is less.

OUTLINE

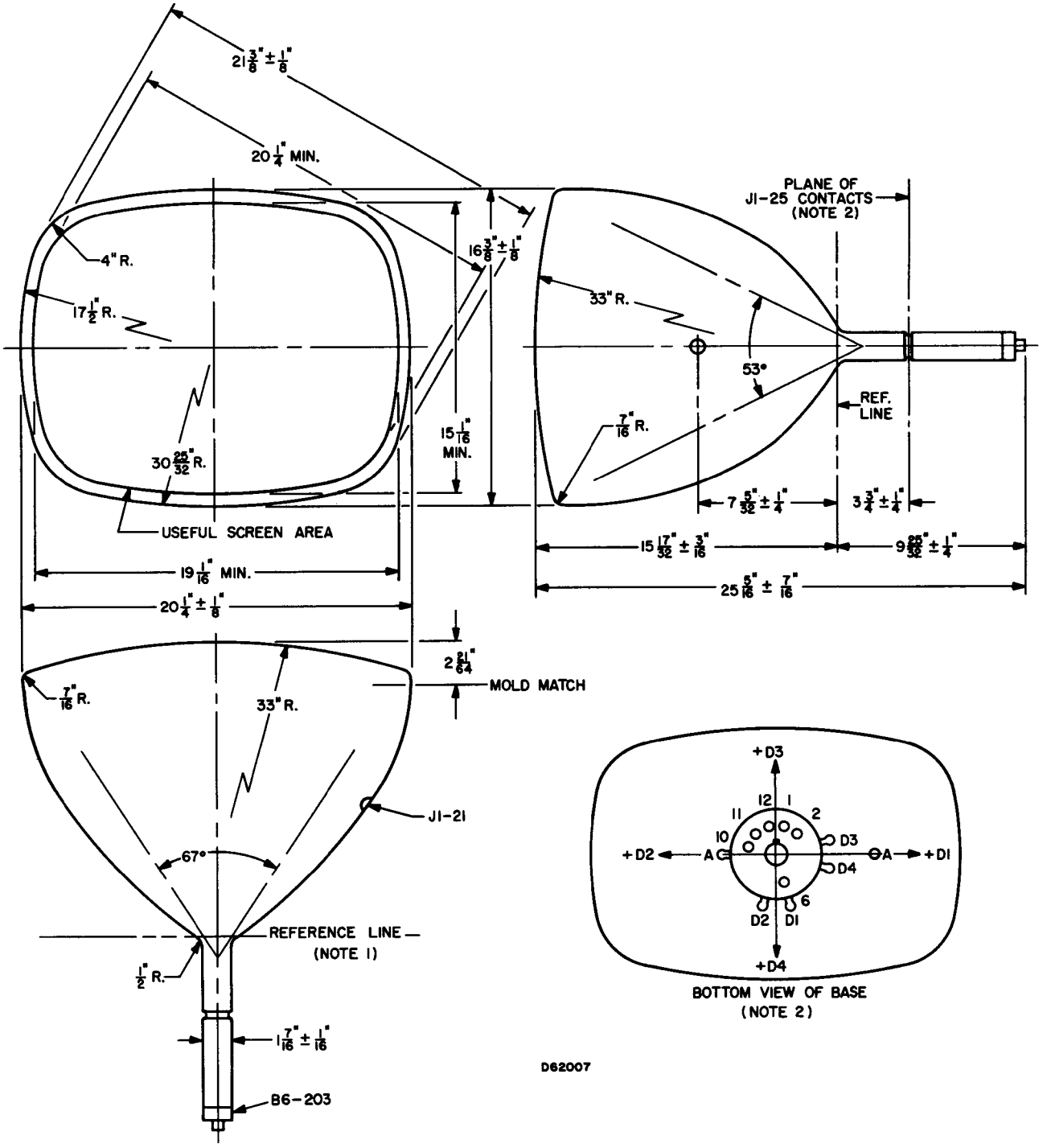

DIAGRAM NOTES:

1. *With the tube neck inserted through the flared end of Reference-Line Gauge (JEDEC No. 110) and with the tube seated in the gauge, the reference line is determined by the intersection of the Plane C-C' (face of the flared end) of the gauge with the glass funnel.*
2. *Deflection plates and anode are connected to J1-25 contacts which are recessed into neck. Alignment of contacts and orientation of deflection plates are shown at lower right.*