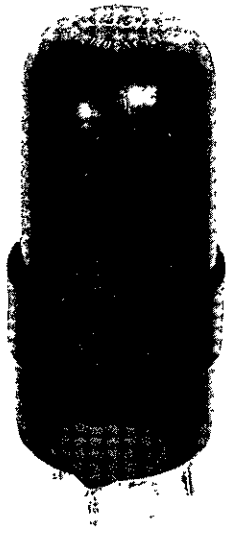
ELECTRON TUBE DATA SHEET

WESTERN ELECTRIC 353A ELECTRON TUBE



DESCRIPTION

The 353A is a three-electrode, inert-gas-filled, cold cathode tube for use in relay, voltage regulator, or rectifier circuits. This tube is especially suitable for use in control circuits such as in triggering, counting, or switching apparatus.

CHARACTERISTICS

Peak Anode Voltage	-	150	volts
Average Cathode Current	10	100	milliamperes
Average Life, approximate	10000	10	hours

File: Cold Cathode Section

MAXIMUM RATINGS, Absolute System (Note 1)

Forward Peak Anode Voltage	150	volts
Forward Cathode Current (Note 2)		
Peak	100	milliamperes
Average	35	milliamperes
Averaging Time	2	seconds
Peak Inverse Anode Current (Note 2)	5	milliamperes
Ambient Temperature Limits	-55 to +85	centigrade

ELECTRICAL DATA, Throughout Life

	Min.	Bogey	Max.	
Starter Breakdown Voltage (Note 3)	62	70	89	volts
Starter Voltage Drop at 20 milliamperes	52	60	74	volts
Anode Voltage Drop at 20 milliamperes	68	75	90	volts
Transfer Current		See Curve, Fig. 3		
Ionization Time, Starter Gap (Note 4)	-	6	-	milliseconds
Deionization Time, approximate				
Starter Gap	-	3	-	milliseconds
Main Gap	-	10	-	milliseconds
Inverse Current at -120 Volts Anode Potential (Note 5)	-	-	3	milliamperes

MECHANICAL DATA

Mounting Position	Any
Net Weight, approximate	1 Ounce

Dimensions and pin connections shown in outline drawing on Page 4.

HANDLING

This tube contains a small amount of krypton-85 gas which is a by-product radioactive material. The amount of krypton-85 is less than five microcuries, which is too small an amount to require any special care in use.

Atomic Energy Commission regulations require that the individual tube carton for tubes containing by-product radioactive material be appropriately marked. The marking includes the statement that tube disposal should be in approved manner.

Approved instructions for disposal of tubes containing krypton-85 are as follows;

> Tubes to be disposed of should be broken or crushed in a well ventilated place releasing any resulting vapors to the outside atmosphere. The residual broken or crushed tubes should be disposed of in a normal public trash disposal system. Tubes should be disposed of at a rate of not more than 100 each week from any one location. Avoid breathing vapors from broken tubes.

Note 1: In the "Absolute System" the maximum ratings specified are limiting values above which the serviceability of the device may be impaired from the viewpoint of life and satisfactory performance. Maximum ratings, as such, do not constitute a set of operating conditions and all values may not, therefore, be attained simultaneously.

Note 2: Sufficient resistance must be used in series with the tube to assure that the electrode currents do not exceed the maximum rated values.

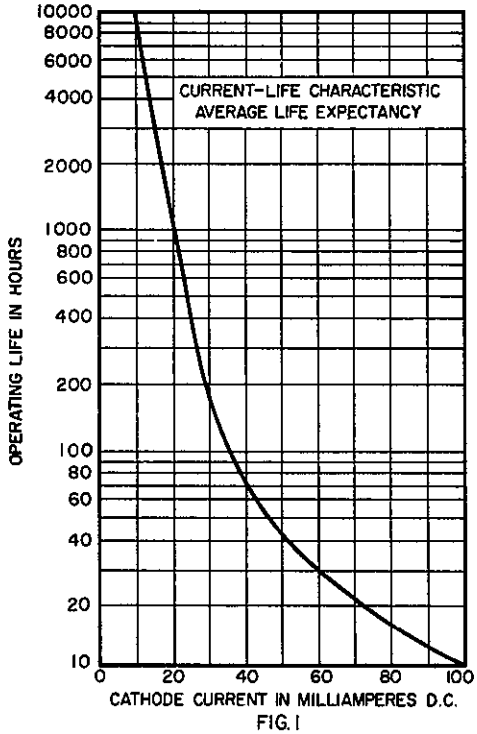


FIG. 1

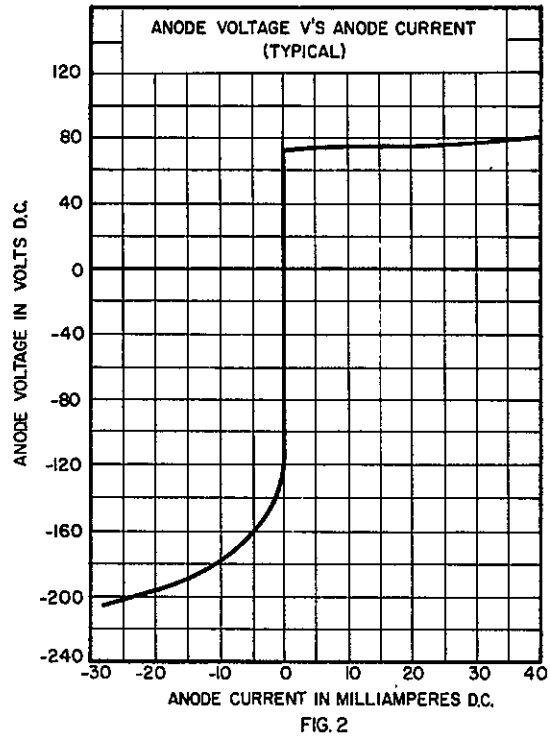


FIG. 2

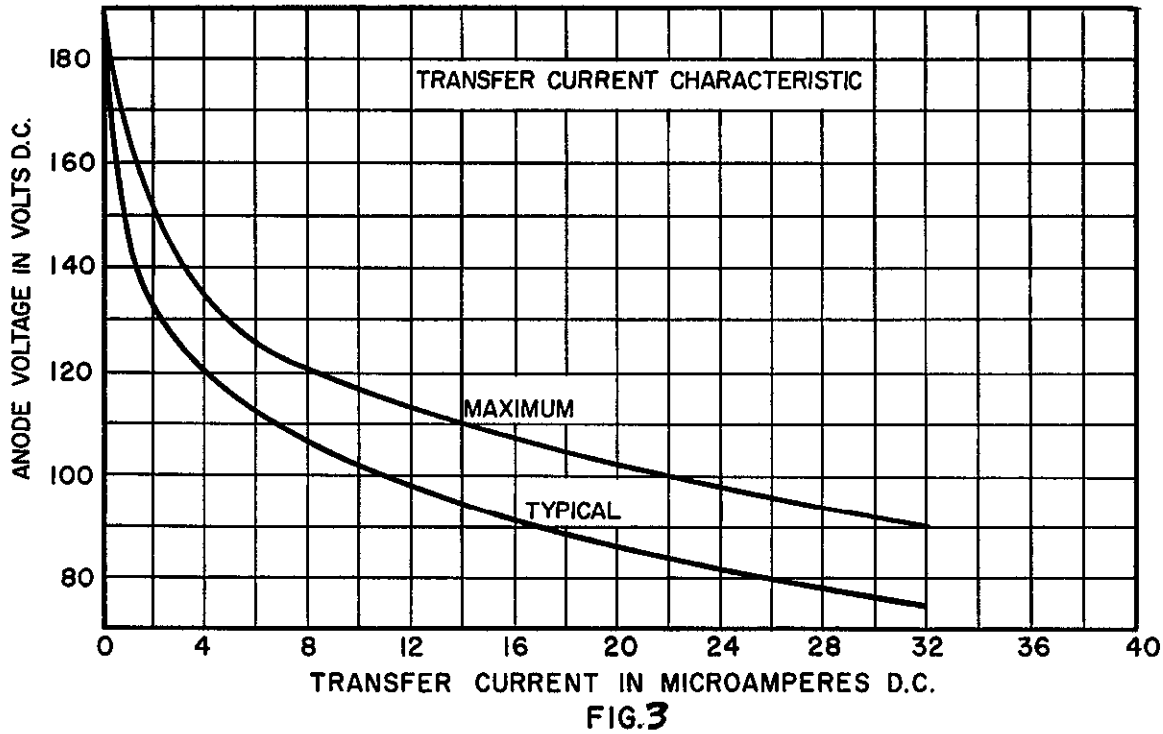
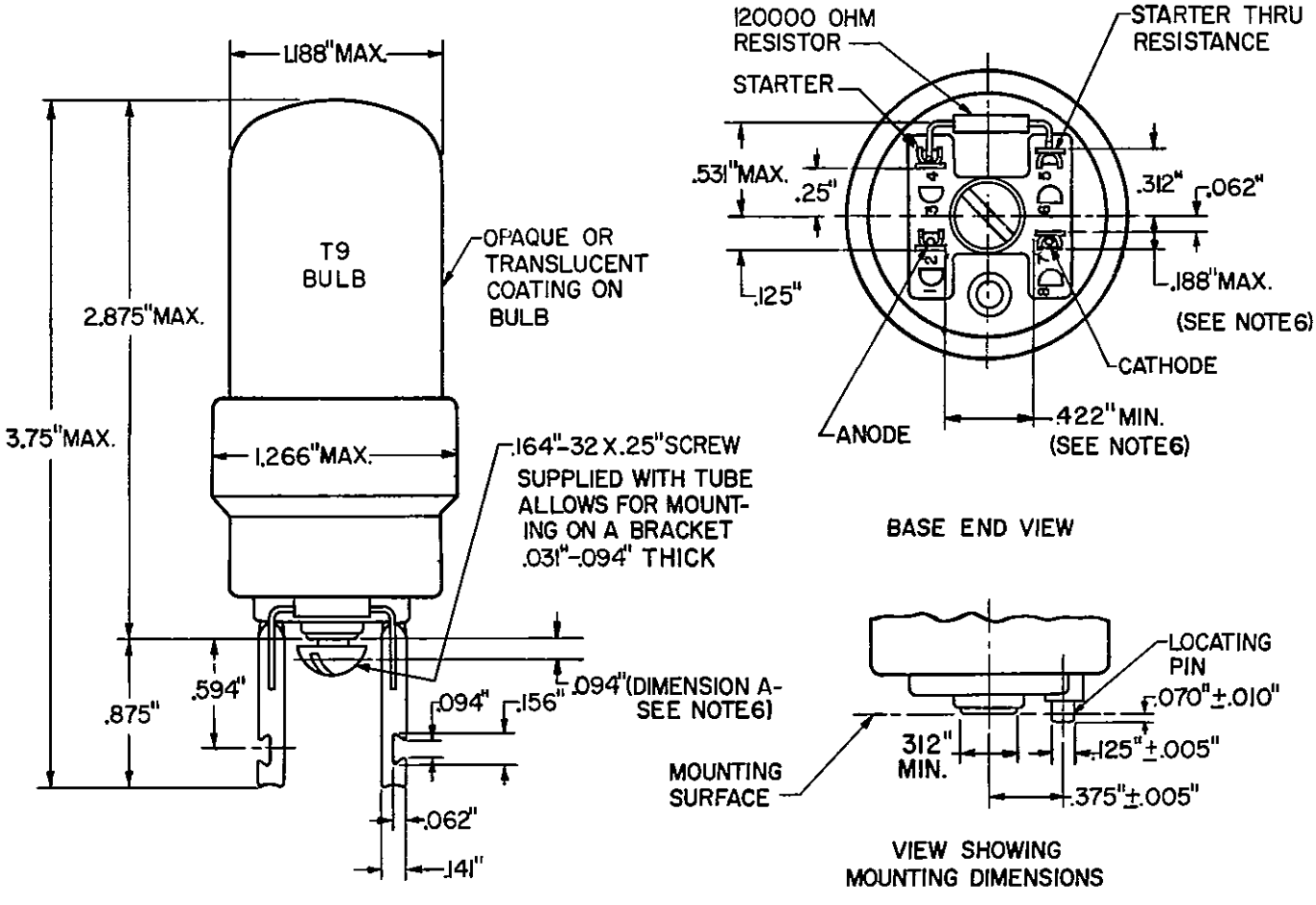


FIG. 3

Note 3: Limits apply immediately after the tube has conducted current. If tube has been idle, these values initially may be as much as 3 volts higher or lower.

Note 4: With 15 volts starter overvoltage (15 volts above starter breakdown voltage) with tube in total darkness.

Note 5: Negative anode voltage applied through 8000 ohms. Starter connected to anode through 100,000 ohms.



NOTE6 - CLEARANCE DIMENSIONS TO APPLY WITHIN THE LIMITS DEFINED BY DIMENSION "A" ONLY. (SEE BASE END VIEW)

A development of Bell Telephone Laboratories, the research laboratories of the American Telephone and Telegraph Company and the Western Electric Company.

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