

## COLD CATHODE

*Western Electric*

### DESCRIPTION

The 333A 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.

### MAXIMUM RATINGS

Peak Anode Voltage	150 volts
Average Cathode Current	10 100 milliamperes
Average Life, approximate	10000 10 hours
Transfer Current	5 microamperes

**MAXIMUM RATINGS, Absolute Values**

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

**ELECTRICAL DATA**

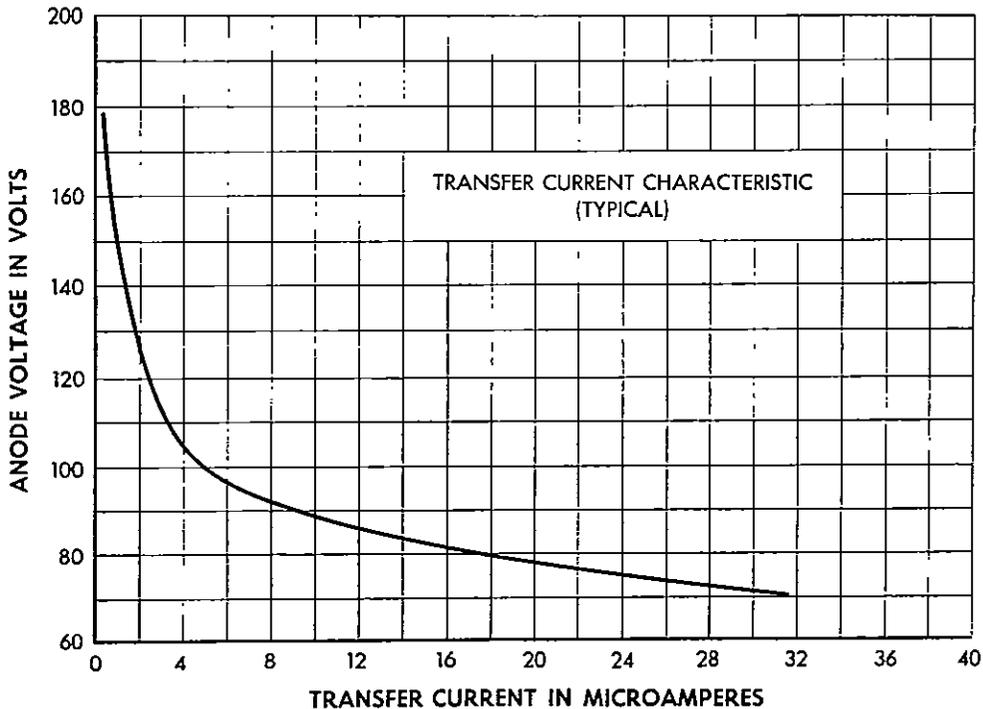
	Min.	Bogey	Max.
Starter Breakdown Voltage*	62	70	89 volts
Starter Voltage Drop at 20 milliamperes	52	60	74 volts
Anode Voltage Drop at 20 milliamperes	68	75	90 volts
Required Transfer Current at 130 Anode Volts (D.C.)	5		microamperes
Deionization Time, approximate			
Starter Gap		3	milliseconds
Main Gap		10	milliseconds
Inverse Current at -120 Volts Anode Potential**			3 milliamperes

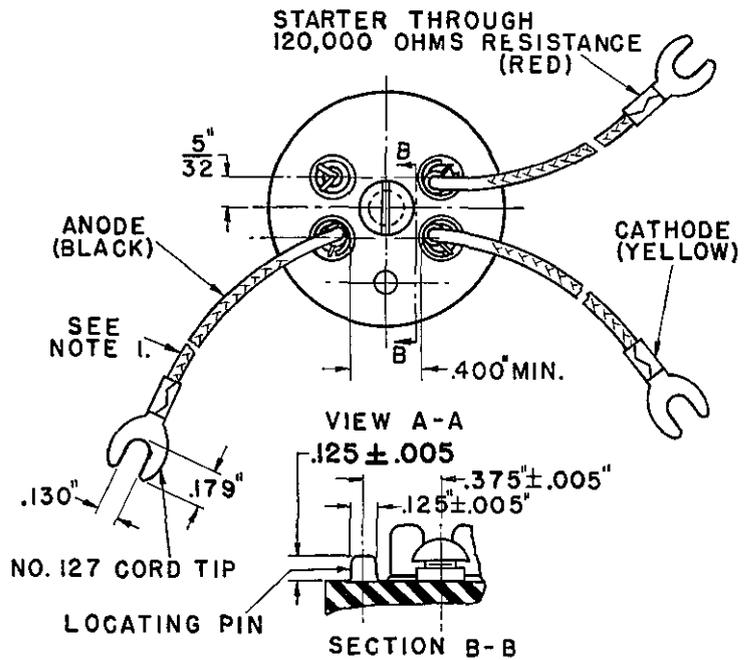
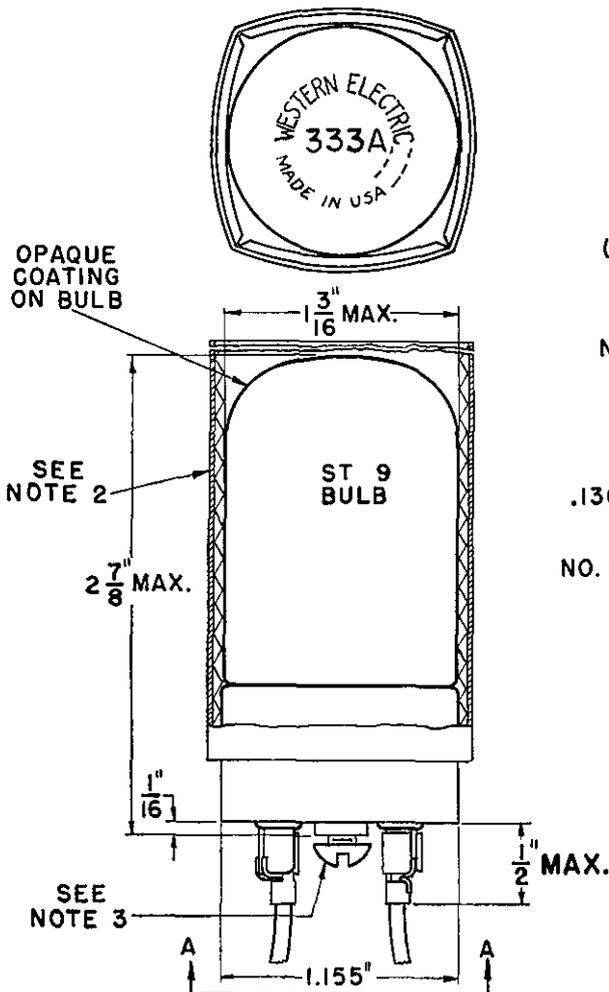
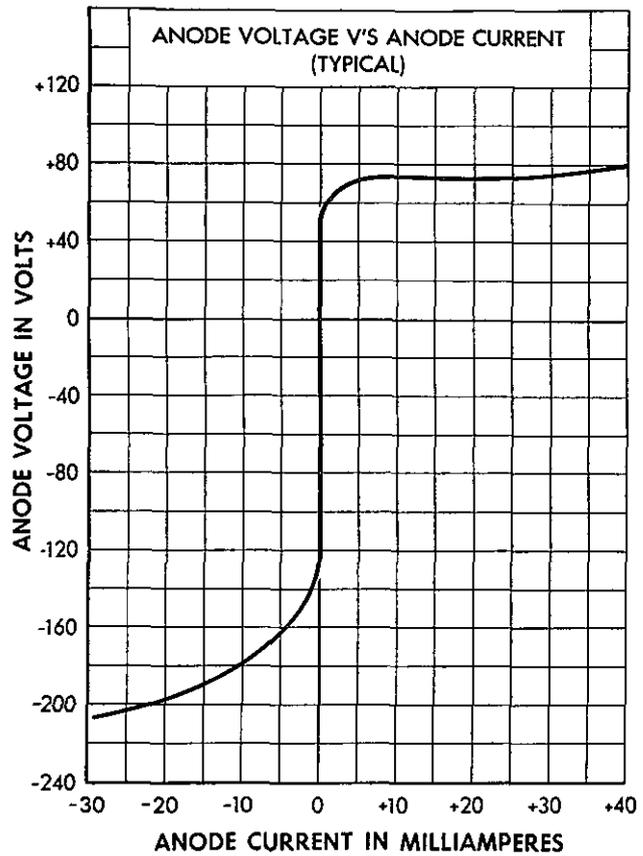
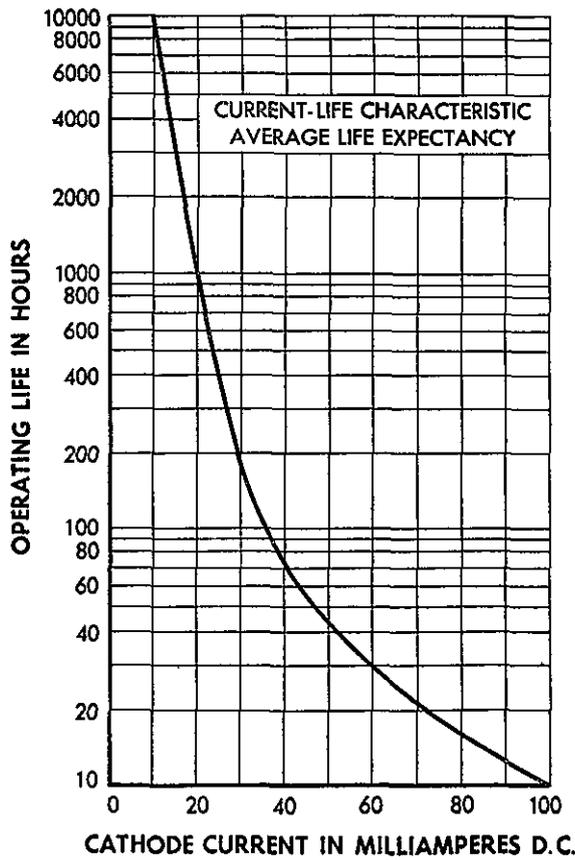
**MECHANICAL DATA**

Mounting Position	Any
Net Weight, approximate	1 ounce

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

\*\*Negative anode voltage applied through 8,000 ohms. Starter connected to anode through 100,000 ohms.





- NOTES -
1. LENGTH OF LEADS FROM END OF BASE SHELL TO END OF SPADE  $117 \pm \frac{1}{32}$ "
  2. TUBE SHIPPED WITH CORRUGATED PAPER SHOCK PROTECTIVE SLEEVE COVERING ENVELOPE AND PART OF BASE. SLEEVE SHOULD REMAIN ON TUBE WHEN INSTALLED IN TELEPHONE SET APPLICATIONS.
  3. THE  $.164 - 32 \times \frac{3}{16}$  SCREW, SUPPLIED WITH TUBE, ALLOWS FOR MOUNTING ON A BUCKET  $\frac{3}{64}$  THICK.

*Western Electric*

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