OBJECTIVE FOR DEVELOPMENTAL TYPE

Z-2692*

CERAMIC-GLOW DISCHARGE DIODE

For Voltage-Reference Applications

The Z-2692 is a ceramic, cold-cathode, glow-discharge diode designed for voltage-reference service in electronically regulated d-c power supplies. The Z-2692 is especially suited for use where unfavorable conditions of temperature, mechanical shock, and mechanical vibration are encountered.

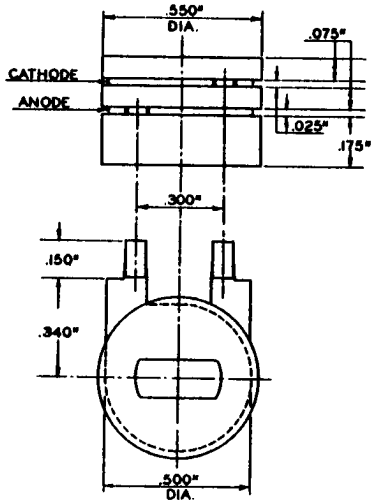
GENERAL

Electrical

Cathode - Cold

Mechanical

Mounting Position - Any
Outline Drawing



MAXIMUM RATINGS

Absolute-Maximum Values

DC Cathode Current		
Maximum	10	Milliamperes
Minimum	1.0	Milliamperes
Envelope Temperature	300	C

Absolute-Maximum ratings are limiting values of operating and environmental conditions applicable to any electron tube of a specified type as defined by its published data and should not be exceeded under the worst probable conditions.

The tube manufacturer chooses these values to provide acceptable serviceability of the tube, making no allowance for equipment variations, environmental variations, and the effects of changes in operating conditions due to variations in the characteristics of the tube under consideration and of all other electron devices in the equipment.

The equipment manufacturer should design so that initially and throughout life no absolute-maximum value for the intended service is exceeded with any tube under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, equipment control adjustment, load variation, signal variation, environmental conditions, and variations in the characteristics of the tube under consideration and of all other electron devices in the equipment.

AVERAGE CHARACTERISTICS

Anode Voltage Drop		
Anode Current 1.5 Milliamperes	83.0±0.5	Volts
Anode Current 2.5 Milliamperes	83.5±0.5	Volts
Anode Current 3.5 Milliamperes	84.0±0.5	Volts
Anode Current 5.0 Milliamperes	85.0±0.5	Volts
Anode Current 10 Milliamperes	87.0±0.5	Volts
Anode Breakdown Voltage		
In Ambient Light, maximum	125	Volts
In Total Darkness, maximum	125	Volts
Regulation, maximum		
Anode Current 1.0 to 10 Milliamperes	5	Volts
Anode Current 1.5 to 3.5 Milliamperes	1.0	Volts
Voltage Jump, maximum+		
Anode Current 1.0 to 10 Milliamperes	5	Millivolts

Drift, maximum			
Envelope Temperature	50C	300C	
During First 24 Hours of Operation			
Anode Current			
2.5 Milliamperes	100	100	Millivolts
5.0 Milliamperes	100	1000	Millivolts
From 24 Hours to 100 Hours of Operation			
Anode Current			
2.5 Milliamperes	50	50	Millivolts
5.0 Milliamperes	50	250	Millivolts

AVERAGE CHARACTERISTICS (Continued)

	50C	300C	
From 100 Hours to 1000 Hours of Operation			
Anode Current			
2.5 Milliamperes	200	200	Millivolts
5.0 Milliamperes	250	500	Millivolts
From 1000 Hours to End of Life			
2.5 Milliamperes	100	500	Millivolts per 1000 Hours
5.0 Milliamperes	150	1000	Millivolts per 1000 Hours
Repeatability, maximum‡			
Anode Current 5.0 Milliamperes		100	Millivolts
Temperature Coefficient of Operating Voltage, average			
-50C to +25C		-10	Millivolts per Degree C
25C to 300C		-3	Millivolts per Degree C
300C to 500C		-3	Millivolts per Degree C

SPECIAL TESTS AND RATINGS

Shock Rating - 720G
Statisitcal sample subjected to five impact accelerations of 720G in each of four different positions. The accelerating forces are applied by the Navy-type, High Impact (flyweight) Shock Machine for Electronic Devices or its equivalent.

Fatigue Rating - 10G
Statistical sample subjected to vibrational acceleration of 10G for 48 hours minimum in each of two different positions. The sinusoildal vibration is applied at a fixed frequency between 25 and 60 cycles per second.

Altitude Rating - 100000 Feet
Statistical sample subjected to pressure of 8.0 millimeters of mercury to evaluate and control arcing and corona.

Note: The conditions for some of the indicated tests have deliberately been selected to aggravate tube failures for test and evaluation purposes. In no sense should these conditions be interpreted as suitable circuit operating conditions.

* Publication of these data does not obligate the General Electric Company to manufacture a tube with these characteristics.

\+ Voltage jump is defined as a sudden jump in anode voltage drop when the operating current is varied slowly over the specified operating range.

‡ Repeatability is defined as the maximum change in anode voltage drop between successive firings of the tube.

12/8/61 (B)
Supersedes 6/27/61 (B)

RECEIVING TUBE DEPARTMENT

GENERAL ELECTRIC

Owensboro, Kentucky