



Excellence in Electronics

TYPE

1N438

The 1N438 is a hermetically sealed silicon junction diode designed for use as a voltage regulator or reference when biased in the Zener region. The flexible terminal leads may be soldered or welded directly to the terminals of circuit components without the use of sockets. Standard inline sub-miniature sockets may be used by cutting the leads to a suitable length.

MECHANICAL DATA

CASE: Metal and Glass

BASE: None (0.020" tinned kovar wire. Length: 1.5" minimum Spacing: 0.080" center-to-center)

TERMINAL CONNECTIONS: (Black Dot is adjacent to cathode terminal)

MOUNTING POSITION: Any

ELECTRICAL DATA

RATINGS - ABSOLUTE MAXIMUM VALUES: (at 25°C)

Ambient Temperature Range	-55 to +150 °C
Dissipations at:	
25°C	150 mw
65°C	110 mw
100°C	75 mw
150°C	25 mw.

ZENER REGULATOR

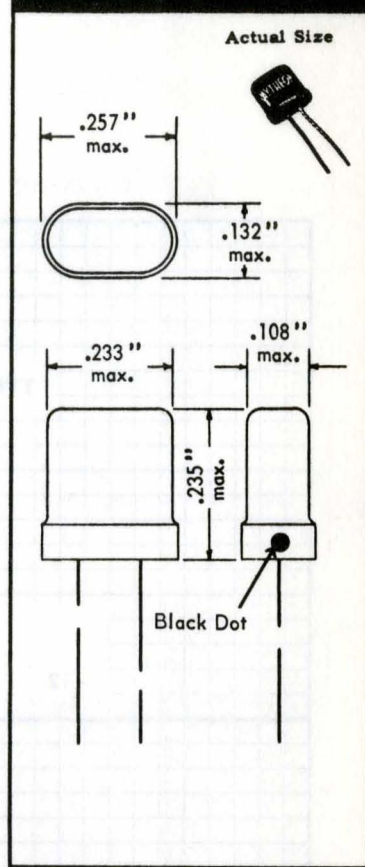
Zener Voltage	8.0 ± 1.0 volts
Zener Voltage Temperature Stability	0.08% per °C
Average Zener Current	15.0 ma.
Peak Zener Current (1.0 sec.)	50.0 ma.
Zener Impedance Z at 5.0 mAdc	10 ohms
Zener Impedance Z at 0.5 mAdc	100 ohms

RECTIFIER

Peak Inverse Voltage	7.0 volts
Continuous Inverse Voltage	7.0 volts
Average Rectified Current	125 ma.
Average Rectified Current (at 100°C)	80 ma.
Peak Rectified Current	300 ma.
Surge Current (for 1.0 sec.)	500 ma.

CHARACTERISTICS

	100°C	25°C
Maximum Inverse Current at -1.0 volts	1.0	0.1 µa.
Minimum Forward Current at +1.0 volts	100	100 ma.



Tentative Data

RAYTHEON MANUFACTURING COMPANY

RECEIVING AND CATHODE RAY TUBE OPERATIONS

