

- AVAILABLE IN JAN, JANTX, JANTXV AND JANS  
PER MIL-PRF-19500/406
- 1.5 WATT ZENER DIODES
- NON CAVITY CONSTRUCTION
- METALLURGICALLY BONDED

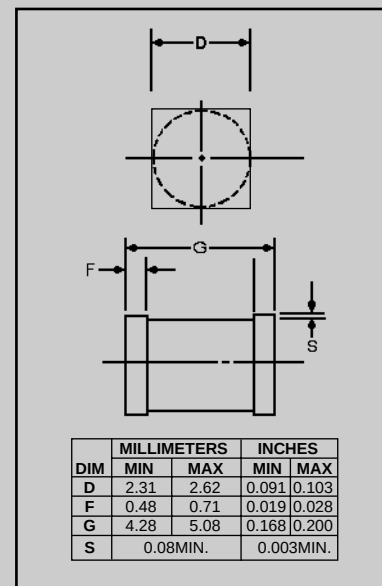
**1N6485US  
THRU  
1N6491US  
AND  
1N4460US  
AND  
1N4461US**

## MAXIMUM RATINGS

Operating Temperature: -65°C to +175°C  
Storage Temperature: -65°C to +200°C  
Power Dissipation: 1.5W @  $T_A=+25^\circ\text{C}$   
Power Derating: 10mW/°C above  $T_A=+25^\circ\text{C}$   
Forward Voltage: 1.0V dc @  $I_F=200\text{mA}$  dc  
1.5 V dc @  $I_F=1\text{A}$  dc

## ELECTRICAL CHARACTERISTICS @ 25°C, unless otherwise specified

| TYPE     | ZENER<br>VOLTAGE<br>(NOM.)<br>±5% | TEST<br>CURRENT<br>$I_{ZT}$ | DYNAMIC<br>IMPEDANCE<br>(MAX.)<br>$Z_{ZT}@I_{ZT}$ | KNEE<br>IMPEDANCE<br>(MAX.)<br>$Z_{ZK}@I_{ZT}$ | TEST<br>CURRENT<br>$I_{ZK}$ | REVERSE<br>CURRENT<br>(MAX.)<br>$I_R@V_R$ | TEST<br>VOLTAGE<br>$V_R$ | MAXIMUM<br>CURRENT<br>$I_{ZM}$ | $V_Z$ (REG)<br>$\Delta V_Z$ | MAXIMUM<br>SURGE |
|----------|-----------------------------------|-----------------------------|---------------------------------------------------|------------------------------------------------|-----------------------------|-------------------------------------------|--------------------------|--------------------------------|-----------------------------|------------------|
|          | VOLTS                             | mA                          | OHMS                                              | OHMS                                           | mA                          | $\mu\text{A}$                             | VOLTS                    | MA                             | VOLTS                       | AMPS             |
| 1N6485US | 3.3                               | 76.0                        | 10                                                | 400                                            | 1.0                         | 50                                        | 1.0                      | 433                            | .90                         | 4.2              |
| 1N6486US | 3.6                               | 69.0                        | 10                                                | 400                                            | 1.0                         | 50                                        | 1.0                      | 397                            | .80                         | 3.9              |
| 1N6487US | 3.9                               | 64.0                        | 9                                                 | 400                                            | 1.0                         | 35                                        | 1.0                      | 366                            | .75                         | 3.6              |
| 1N6488US | 4.3                               | 58.0                        | 9                                                 | 400                                            | 1.0                         | 5.0                                       | 1.0                      | 332                            | .70                         | 3.3              |
| 1N6489US | 4.7                               | 53.0                        | 8                                                 | 500                                            | 1.0                         | 4.0                                       | 1.0                      | 304                            | .60                         | 3.0              |
| 1N6490US | 5.1                               | 49.0                        | 7                                                 | 500                                            | 1.0                         | 1.0                                       | 1.0                      | 280                            | .50                         | 2.7              |
| 1N6491US | 5.6                               | 45.0                        | 5                                                 | 600                                            | 1.0                         | 0.5                                       | 2.0                      | 255                            | .40                         | 2.5              |
| 1N4460US | 6.2                               | 40.0                        | 4                                                 | 200                                            | 1.0                         | 10.0                                      | 3.72                     | 230                            | .35                         | 2.3              |
| 1N4461US | 6.8                               | 37.0                        | 2.5                                               | 200                                            | 1.0                         | 5.0                                       | 4.08                     | 210                            | .30                         | 2.1              |



**FIGURE 1**

## DESIGN DATA

**CASE:** D-5A, hermetically sealed glass case, per MIL-PRF- 19500/406

**LEAD FINISH:** Tin / Lead

**THERMAL RESISTANCE:** ( $R_{\theta JC}$ ):  
20 °C/W maximum at L = 0

**THERMAL IMPEDANCE:** ( $Z_{\theta JX}$ ): 4.5  
°C/W maximum

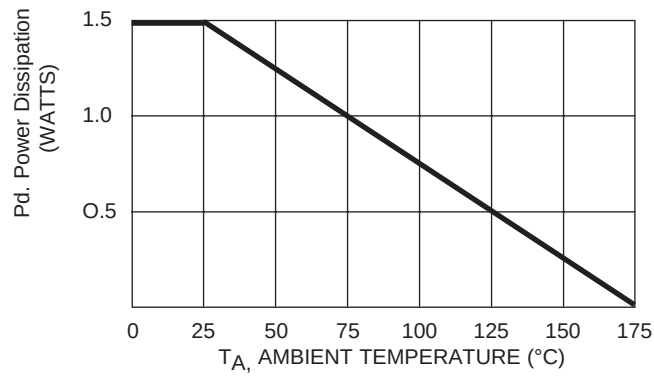
**POLARITY:** Diode to be operated with the banded (cathode) end positive.

**MOUNTING SURFACE SELECTION:**  
The Axial Coefficient of Expansion (COE) of this device is approximately + 4PPM / °C. The COE of the Mounting Surface System should be selected to provide a suitable match with this device.



# 1N6485US thru 1N6491US and 1N4460US and 1N4461US

FIGURE 2



POWER DERATING CURVE

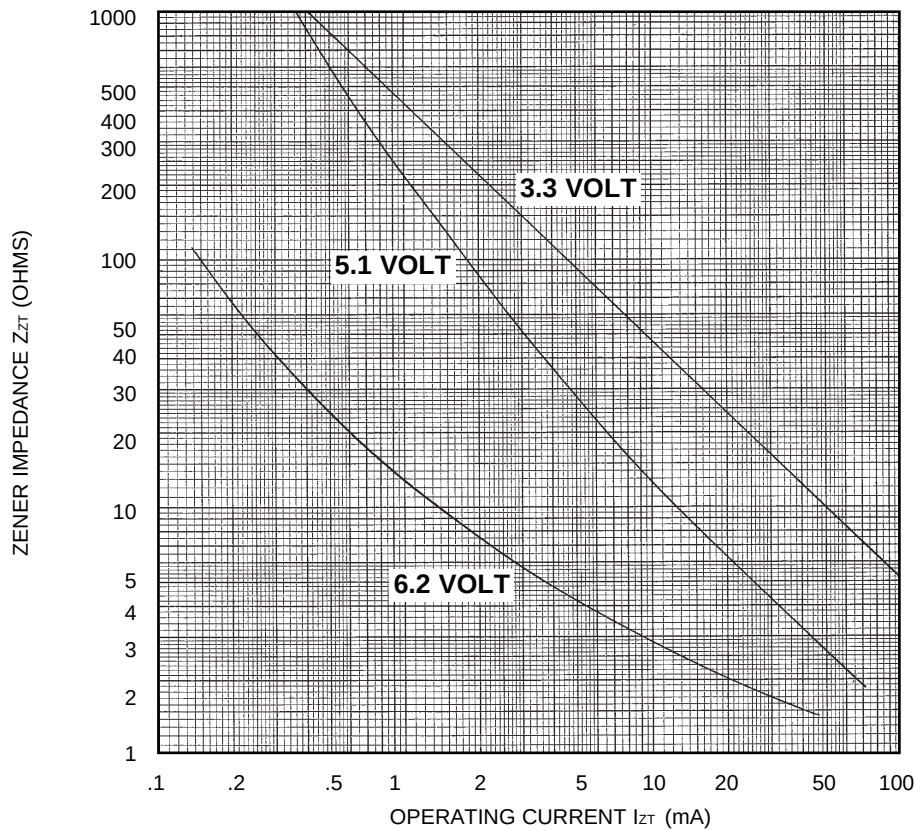


FIGURE 3

ZENER IMPEDANCE VS. OPERATING CURRENT