

**GLASS PASSIVATED JUNCTION SILICON ZENER DIODE**

**VOLTAGE** 3.3 to 100 Volts **POWER** 1.0 Watts

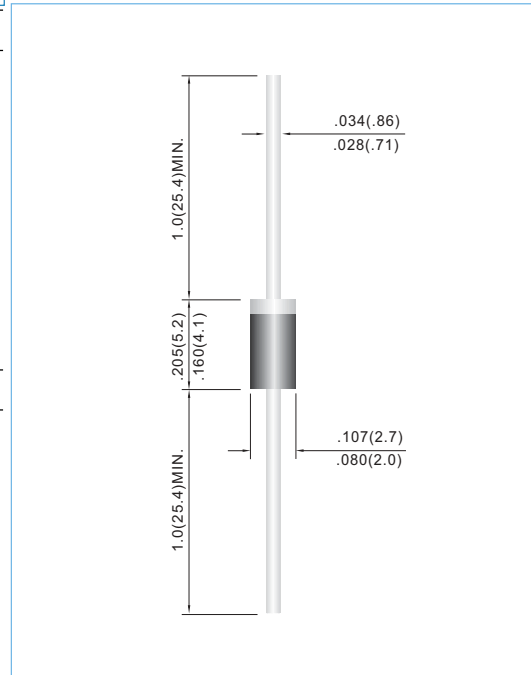
**DO-41/DO-41G** Unit: inch(mm)

**FEATURES**

- Low profile package
- Built-in strain relief
- Low inductance
- High temperature soldering : 260°C /10 seconds at terminals
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Pb free product are available : 99% Sn above can meet Rohs environment substance directive request

**MECHANICAL DATA**

- Case: Molded Glass DO-41G / Molded plastic DO-41
- Epoxy:UL 94V-O rate flame retardant
- Terminals: Axial leads, solderable per MIL-STD-202G,
- Method 208 guaranteed
- Polarity: Color band denotes positive end
- Mounting position:Any
- Weight: 0.012 ounces , 0.336 gram
- Ordering information :
  - Suffix : " -G " to order Molded Glass Package
  - Suffix : " -P " to order Molded plastic Package
- Packing information
  - B - 1K per Bulk box
  - T/R - 5K per 13" paper Reel
  - T/B - 2.5K per horiz. tape & Ammo box



Note :  
This outline drawing is model plastics.  
Its appearance size same as glass.

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter                         | Symbol           | Value        | Units |
|-----------------------------------|------------------|--------------|-------|
| Power Dissipation at Tamb = 25 °C | P <sub>TOT</sub> | 1*           | W     |
| Junction Temperature              | T <sub>J</sub>   | 150          | °C    |
| Storage Temperature Range         | T <sub>STG</sub> | -55 to + 150 | °C    |

\*Valid provided that leads at a distance of 10mm from case are kept at ambient temperature.

| Parameter                                  | Symbol           | Min. | Typ. | Max. | Units |
|--|------------------|------|------|------|-------|
| Thermal Resistance Junction to Ambient Air | R <sub>thA</sub> | —    | —    | 170* | K/W   |
| Forward Voltage at I <sub>F</sub> = 200mA  | V <sub>F</sub>   | —    | —    | 1.2  | V     |

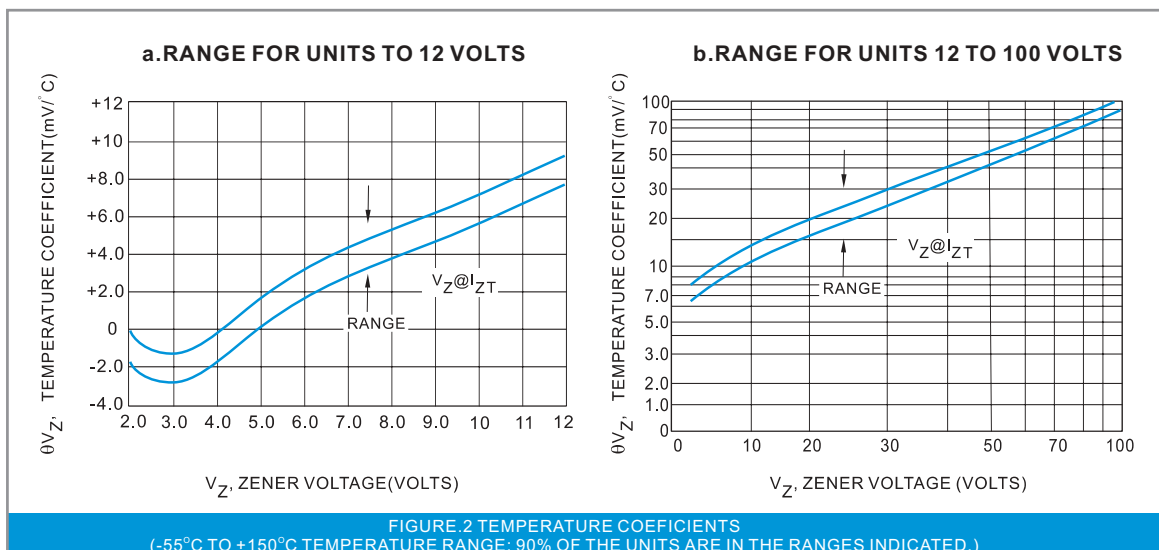
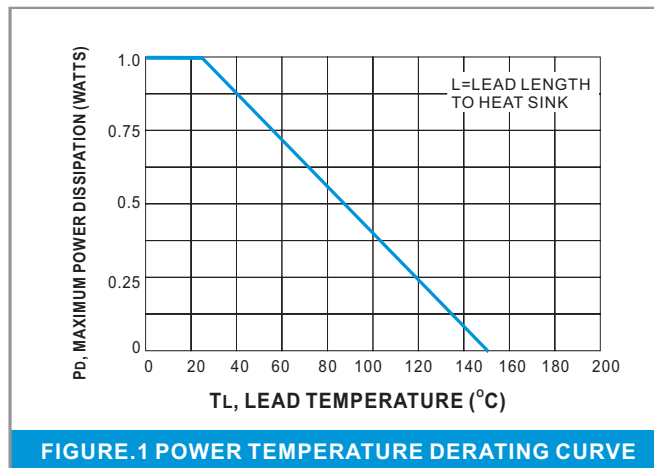
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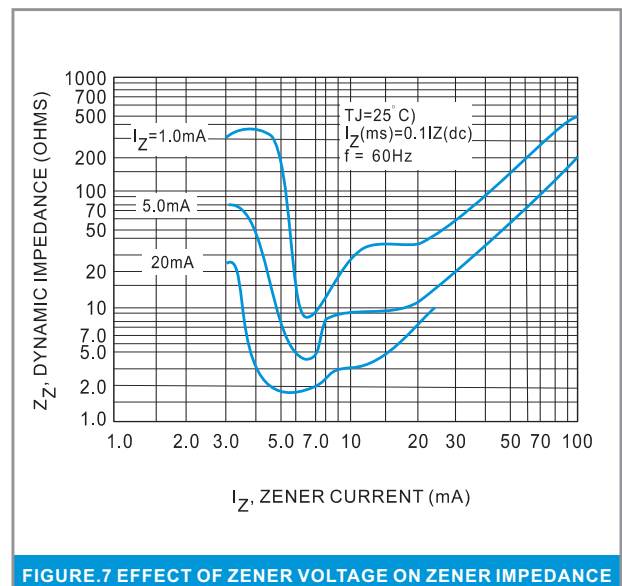
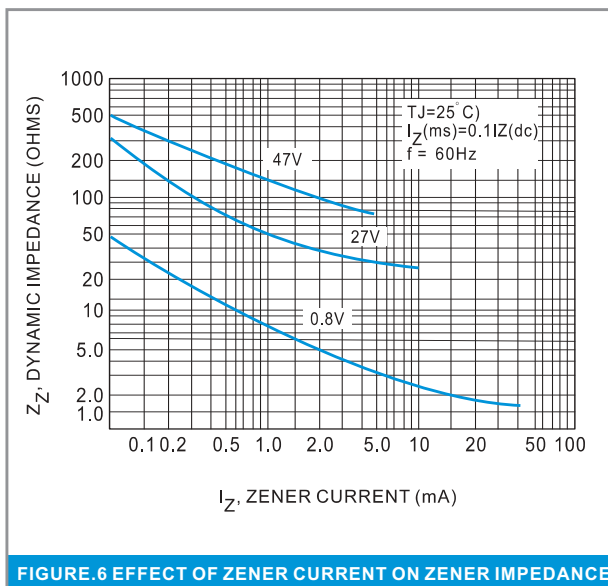
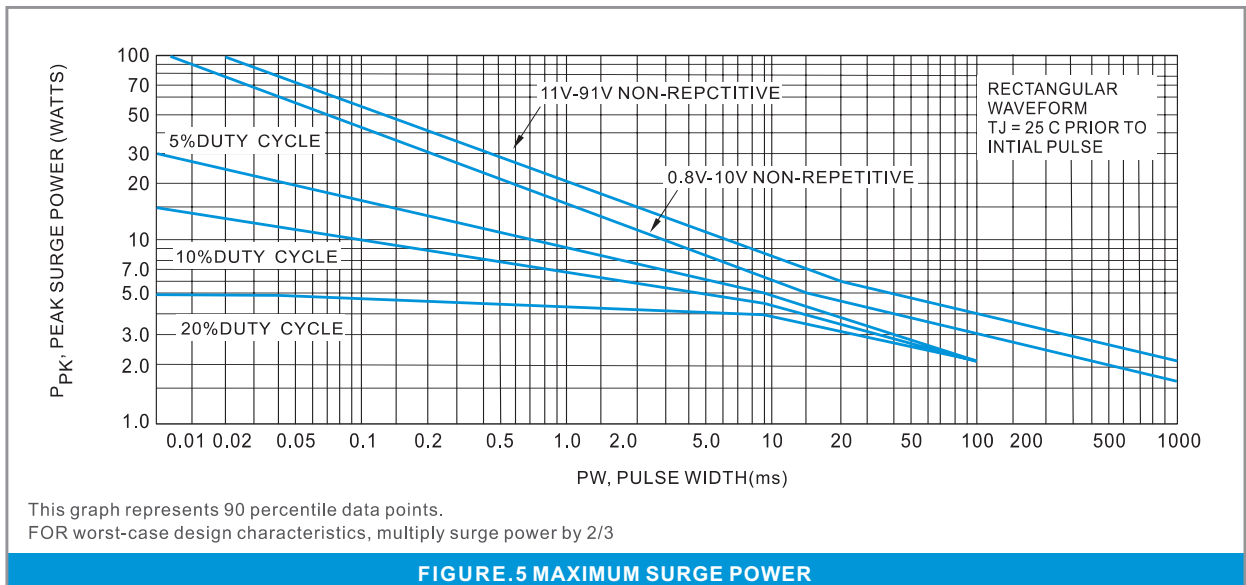
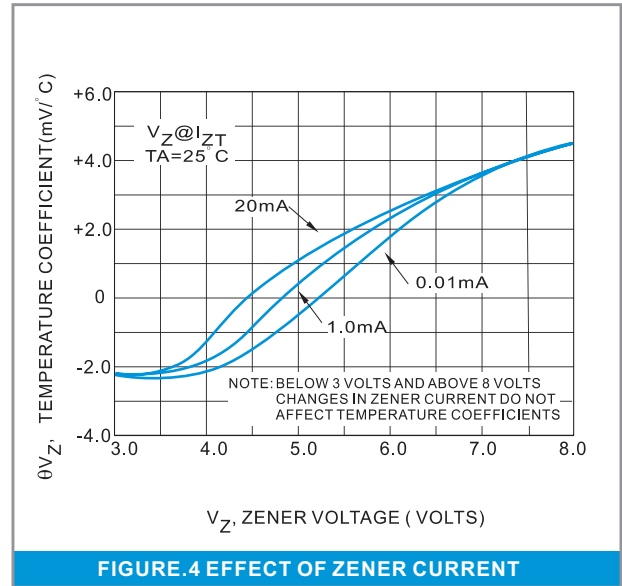
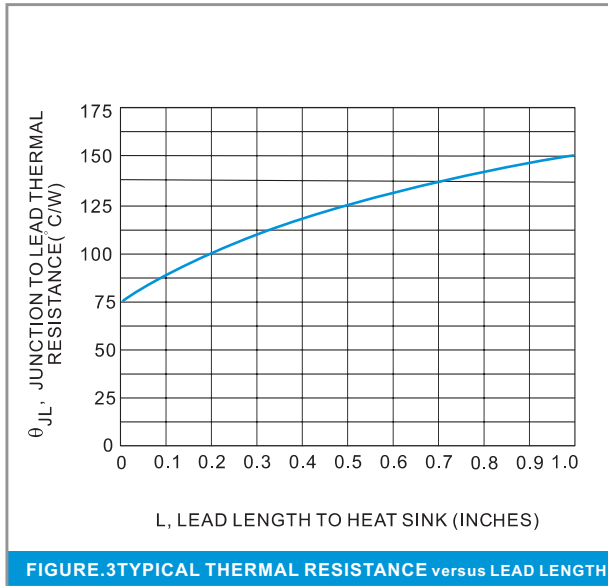
| Part Number           | Vz @ Iz |        |        | Iz   | Maximum Zener Impedance |          |      | Maximum Leakage Current |      | Marking Code |        | Package      |
|-----------------------|---------|--------|--------|------|-------------------------|----------|------|-------------------------|------|--------------|--------|--------------|
|                       | Nom. V  | Min. V | Max. V |      | Zzt @ Iz                | Zzk @ Iz | Zk   | Ik @ Vr                 |      | DO-41        | DO-41G |              |
|                       |         |        |        | Ω    | Ω                       | mA       | uA   | V                       |      |              |        |              |
| <b>1.0 Watt ZENER</b> |         |        |        |      |                         |          |      |                         |      |              |        |              |
| 1N4728A               | 3.3     | 3.1    | 3.5    | 76   | 10                      | 400      | 1.0  | 100                     | 1.0  | -            | 4728A  | DO-41G       |
| 1N4729A               | 3.6     | 3.4    | 3.8    | 69   | 10                      | 400      | 1.0  | 100                     | 1.0  | -            | 4729A  | DO-41G       |
| 1N4730A               | 3.9     | 3.7    | 4.1    | 64   | 9.0                     | 400      | 1.0  | 50                      | 1.0  | -            | 4730A  | DO-41G       |
| 1N4731A               | 4.3     | 4.1    | 4.5    | 58   | 9.0                     | 400      | 1.0  | 10                      | 1.0  | -            | 4731A  | DO-41G       |
| 1N4732A               | 4.7     | 4.5    | 4.9    | 53   | 8.0                     | 500      | 1.0  | 10                      | 1.0  | -            | 4732A  | DO-41G       |
| 1N4733A               | 5.1     | 4.8    | 5.4    | 49   | 7.0                     | 550      | 1.0  | 10                      | 1.0  | -            | 4733A  | DO-41G       |
| 1N4734A               | 5.6     | 5.3    | 5.9    | 45   | 5.0                     | 600      | 1.0  | 10                      | 2.0  | -            | 4734A  | DO-41G       |
| 1N4735A               | 6.2     | 5.9    | 6.5    | 41   | 2.0                     | 700      | 1.0  | 10                      | 3.0  | -            | 4735A  | DO-41G       |
| 1N4736A               | 6.8     | 6.5    | 7.1    | 37   | 3.5                     | 700      | 1.0  | 10                      | 4.0  | -            | 4736A  | DO-41G       |
| 1N4737A               | 7.5     | 7.1    | 7.9    | 34   | 4.0                     | 700      | 0.5  | 10                      | 5.0  | -            | 4737A  | DO-41G       |
| 1N4738A               | 8.2     | 7.8    | 8.6    | 31   | 4.5                     | 700      | 0.5  | 10                      | 6.0  | -            | 4738A  | DO-41G       |
| 1N4739A               | 9.1     | 8.6    | 9.6    | 28   | 5.0                     | 700      | 0.5  | 10                      | 7.0  | -            | 4739A  | DO-41G       |
| 1N4740A               | 10.0    | 9.5    | 10.5   | 25   | 7.0                     | 700      | 0.25 | 10                      | 7.6  | -            | 4740A  | DO-41G       |
| 1N4741A               | 11.0    | 10.5   | 11.6   | 23   | 8.0                     | 700      | 0.25 | 5.0                     | 8.4  | 1N4741A      | 4741A  | DO-41,DO-41G |
| 1N4742A               | 12.0    | 11.4   | 12.6   | 21   | 9.0                     | 700      | 0.25 | 5.0                     | 9.1  | 1N4742A      | 4742A  | DO-41,DO-41G |
| 1N4743A               | 13.0    | 12.4   | 13.7   | 19   | 10                      | 700      | 0.25 | 5.0                     | 9.9  | 1N4743A      | 4743A  | DO-41,DO-41G |
| 1N4744A               | 15.0    | 14.3   | 15.8   | 17   | 14                      | 700      | 0.25 | 5.0                     | 11.4 | 1N4744A      | 4744A  | DO-41,DO-41G |
| 1N4745A               | 16.0    | 15.2   | 16.8   | 15.5 | 16                      | 700      | 0.25 | 5.0                     | 12.2 | 1N4745A      | 4745A  | DO-41,DO-41G |
| 1N4746A               | 18.0    | 17.1   | 18.9   | 14   | 20                      | 750      | 0.25 | 5.0                     | 13.7 | 1N4746A      | 4746A  | DO-41,DO-41G |
| 1N4747A               | 20.0    | 19.0   | 21.0   | 12.5 | 22                      | 750      | 0.25 | 5.0                     | 15.2 | 1N4747A      | 4747A  | DO-41,DO-41G |
| 1N4748A               | 22.0    | 20.9   | 23.1   | 11.5 | 23                      | 750      | 0.25 | 5.0                     | 16.7 | 1N4748A      | 4748A  | DO-41,DO-41G |
| 1N4749A               | 24.0    | 22.8   | 25.2   | 10.5 | 25                      | 750      | 0.25 | 5.0                     | 18.2 | 1N4749A      | 4749A  | DO-41,DO-41G |
| 1N4750A               | 27.0    | 25.7   | 28.4   | 9.5  | 35                      | 750      | 0.25 | 5.0                     | 20.6 | 1N4750A      | 4750A  | DO-41,DO-41G |
| 1N4751A               | 30.0    | 28.5   | 31.5   | 8.5  | 40                      | 1000     | 0.25 | 5.0                     | 22.8 | 1N4751A      | 4751A  | DO-41,DO-41G |
| 1N4752A               | 33.0    | 31.4   | 34.7   | 7.5  | 45                      | 1000     | 0.25 | 5.0                     | 25.1 | 1N4752A      | 4752A  | DO-41,DO-41G |
| 1N4753A               | 36.0    | 34.2   | 37.8   | 7.0  | 50                      | 1000     | 0.25 | 5.0                     | 27.4 | 1N4753A      | 4753A  | DO-41,DO-41G |
| 1N4754A               | 39.0    | 37.1   | 41.0   | 6.5  | 60                      | 1000     | 0.25 | 5.0                     | 29.7 | 1N4754A      | 4754A  | DO-41,DO-41G |
| 1N4755A               | 43.0    | 40.9   | 45.2   | 6.0  | 70                      | 1500     | 0.25 | 5.0                     | 32.7 | 1N4755A      | 4755A  | DO-41,DO-41G |
| 1N4756A               | 47.0    | 44.7   | 49.4   | 5.5  | 80                      | 1500     | 0.25 | 5.0                     | 35.8 | 1N4756A      | 4756A  | DO-41,DO-41G |
| 1N4757A               | 51.0    | 48.5   | 53.6   | 5.0  | 95                      | 1500     | 0.25 | 5.0                     | 38.8 | 1N4757A      | 4757A  | DO-41,DO-41G |
| 1N4758A               | 56.0    | 53.2   | 58.8   | 4.5  | 110                     | 2000     | 0.25 | 5.0                     | 42.6 | 1N4758A      | 4758A  | DO-41,DO-41G |
| 1N4759A               | 62.0    | 58.9   | 65.1   | 4.0  | 125                     | 2000     | 0.25 | 5.0                     | 47.1 | 1N4759A      | 4759A  | DO-41,DO-41G |
| 1N4760A               | 68.0    | 64.6   | 71.4   | 3.7  | 150                     | 2000     | 0.25 | 5.0                     | 51.7 | 1N4760A      | 4760A  | DO-41,DO-41G |
| 1N4761A               | 75.0    | 71.3   | 78.8   | 3.3  | 175                     | 2000     | 0.25 | 5.0                     | 56.0 | 1N4761A      | 4761A  | DO-41,DO-41G |
| 1N4762A               | 82.0    | 77.9   | 86.1   | 3.0  | 200                     | 3000     | 0.25 | 5.0                     | 62.2 | 1N4762A      | 4762A  | DO-41,DO-41G |
| 1N4763A               | 91.0    | 86.5   | 95.6   | 2.8  | 250                     | 3000     | 0.25 | 5.0                     | 69.2 | 1N4763A      | 4763A  | DO-41,DO-41G |
| 1N4764A               | 100.0   | 95.0   | 105.0  | 2.5  | 350                     | 3000     | 0.25 | 5.0                     | 76.0 | 1N4764A      | 4764A  | DO-41,DO-41G |

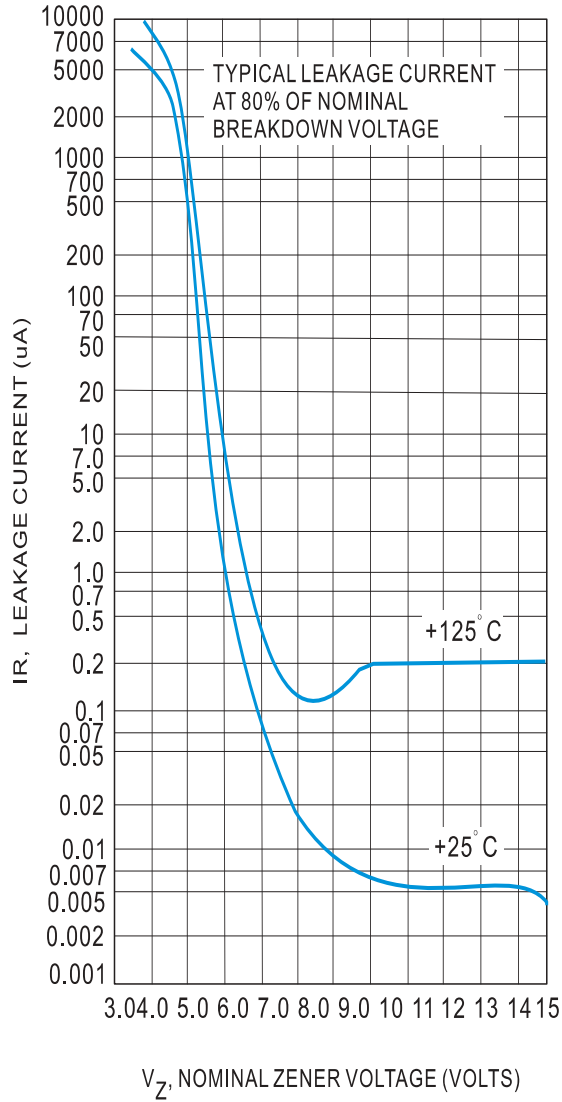
**NOTE:**

1. Tolerance and Type Number Designation. The type numbers listed have a standard tolerance on the nominal zener voltage of  $\pm 5\%$
2. Specials Available Include:
  - A. Nominal zener voltages between the voltages shown and tighter voltage tolerances.
  - B. Matched sets.
3. Zener Voltage ( $V_Z$ ) Measurement. Guarantees the zener voltage when measured at 90 seconds while maintaining the lead temperature ( $T_L$ ) at  $30^\circ\text{C} \pm 1^\circ\text{C}$ , from the diode body.
4. Zener Impedance ( $Z_Z$ ) Derivation. The zener impedance is derived from the 60 cycle ac voltage, which results when an ac current having an rms value equal to 10% of the dc zener current ( $I_{ZT}$  or  $I_{ZK}$ ) is superimposed on  $I_{ZT}$  or  $I_{ZK}$ .
5. Surge Current ( $I_r$ ) Non-Repetitive. The rating listed in the electrical characteristics table is maximum peak, non-repetitive, reverse surge current of 1/2

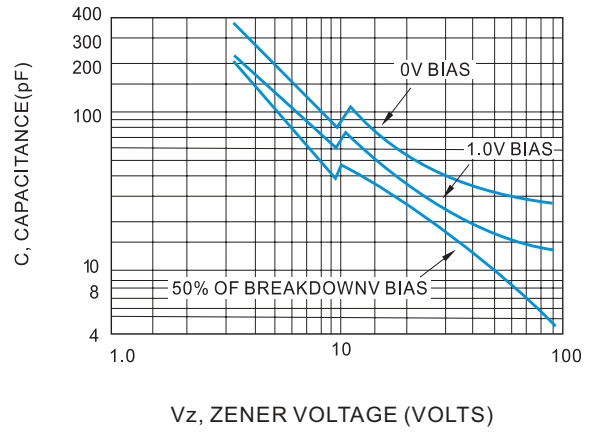
**RATING AND CHARACTERISTICS CURVES**



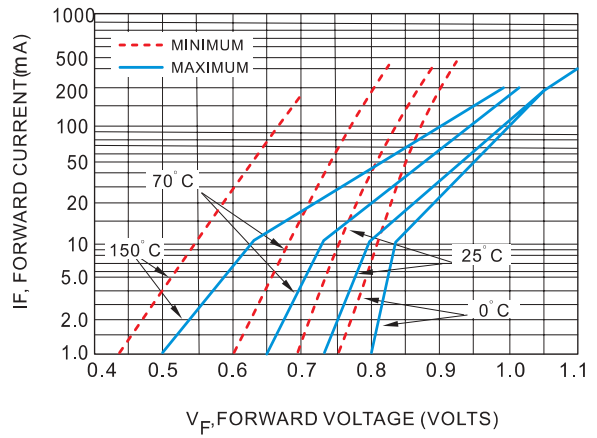




**FIGURE.8 TYPICAL LEAKAGE CURRENT**



**FIGURE.9 TYPICAL CAPACITANCE versus  $V_Z$**



**FIGURE.10 TYPICAL FORWARD CHARACTERISTICS**