

- 1N4153 and 1N4153-1 AVAILABLE IN JAN, JANTX, AND JANTXV  
PER MIL-PRF-19500/337
- SWITCHING DIODES
- HERMETICALLY SEALED
- METALLURGICALLY BONDED
- DOUBLE PLUG CONSTRUCTION

## 1N4153 and 1N4153-1

### MAXIMUM RATINGS

Junction Temperature: -85°C to +175°C  
 Storage Temperature: -65°C to +175°C  
 Operating Current: 150 mA @  $T_A = +25^\circ\text{C}$   
 Derating: 1.0 mA  $^\circ\text{C}$  Above  $T_A = +25^\circ\text{C}$   
 Forward Surge Current: 2A (pk), (tp = 1μs); 0.25A (pk), (tp = 1s)

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

| Type     | $V_{BR}$<br><br>$I_R = 5 \mu\text{A}$<br><br>V dc | $V_{RWM}$<br><br>V (pk) | $I_{R1}$<br>$V_R = 50 \text{ V dc}$<br>$T_A = 25^\circ\text{C}$<br><br>nA dc | $I_{R2}$<br>$V_R = 50 \text{ V dc}$<br>$T_A = 150^\circ\text{C}$<br><br>μA dc | C<br>$V_R = 0$ ; f = 1 Mhz;<br><br>pF | $t_{\pi}$<br>$I_F = I_R = 10 \text{ mA dc}$<br>$R_L = 100 \text{ ohms}$<br><br>ns |
|----------|---------------------------------------------------|-------------------------|------------------------------------------------------------------------------|-------------------------------------------------------------------------------|---------------------------------------|-----------------------------------------------------------------------------------|
| 1N4153-1 | 75                                                | 50                      | 50                                                                           | 50                                                                            | 2.0                                   | 4                                                                                 |

### FORWARD VOLTAGE LIMITS – ALL TYPES

| Limits  | $V_{F1}$<br>$I_F = 100 \mu\text{A dc}$<br><br>V dc | $V_{F2}$<br>$I_F = 250 \mu\text{A dc}$<br><br>V dc | $V_{F3}$<br>$I_F = 1 \text{ mA dc}$<br><br>V dc | $V_{F4}$<br>$I_F = 2 \text{ mA dc}$<br><br>V dc | $V_{F5}$<br>$I_F = 10 \text{ mA dc}$<br><br>V dc | $V_{F6}$<br>$I_F = 20 \text{ mA dc}$<br><br>V dc |
|---------|----------------------------------------------------|----------------------------------------------------|-------------------------------------------------|-------------------------------------------------|--------------------------------------------------|--------------------------------------------------|
| minimum | 0.49                                               | 0.53                                               | 0.59                                            | 0.62                                            | 0.70                                             | 0.74                                             |
| maximum | 0.55                                               | 0.59                                               | 0.67                                            | 0.70                                            | 0.81                                             | 0.88                                             |

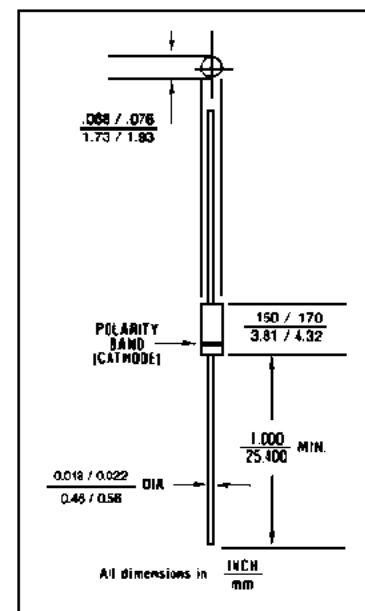


FIGURE 1

### DESIGN DATA

**CASE:** Hermetically sealed  
 glass case per MIL-S-19500/337  
 D0-35 outline

**LEAD MATERIAL:** Copper clad steel.

**LEAD FINISH:** Tin / Lead

**THERMAL RESISTANCE:** ( $R_{\theta JL}$ ):  
 250  $^\circ\text{C/W}$  maximum at L = .375

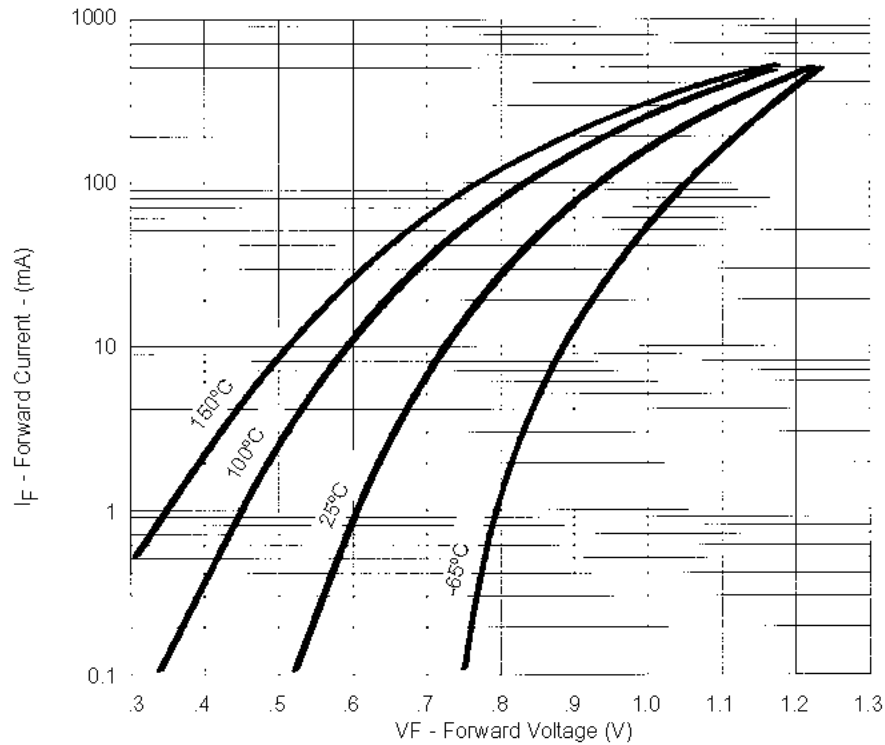
**THERMAL IMPEDANCE:** ( $Z_{\theta JX}$ ): 70  
 $^\circ\text{C/W}$  maximum

**POLARITY:** Cathode end is banded.

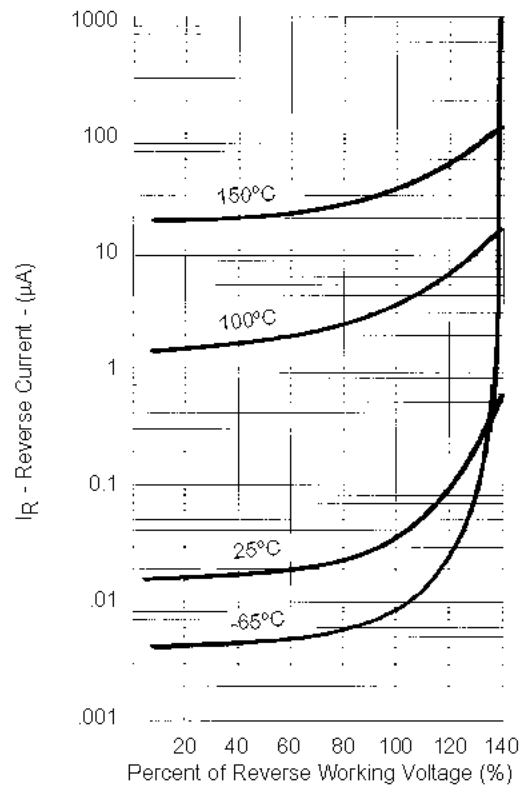
**MOUNTING POSITION:** Any.



# IN4153 and IN4153-1



**FIGURE 2**  
Typical Forward Current  
vs Forward Voltage



**FIGURE 3**  
Typical Reverse Current  
vs Reverse Voltage

**NOTE :** All temperatures shown on graphs are junction temperatures