

# New Jersey Semi-Conductor Products, Inc.

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## IN4500

### SWITCHING DIODE:

#### FEATURES

- SILICON HIGH FORWARD CONDUCTANCE SWITCHING DIODE
- VOIDLESS\* HERMETICALLY SEALED GLASS PACKAGE
- METALLURGICALLY BONDED (-I TYPE)  
TX, TXV TYPES AVAILABLE PER MIL-S-19500/403
- EXCLUDES DO-35 DUMET CONSTRUCTION OPTION.

#### MAXIMUM RATINGS

Operating Temperature:  $-65^{\circ}\text{C}$  to  $+175^{\circ}\text{C}$   
Storage Temperature:  $-65^{\circ}\text{C}$  to  $+200^{\circ}\text{C}$   
Surge Current: 4 Amps ( $t_p = 1\mu\text{s}$ )  
Leakage Current: 100nA @ 75V,  $25^{\circ}\text{C}$ .

#### ELECTRICAL CHARACTERISTICS

at  $25^{\circ}\text{C}$  unless otherwise specified.

| $V_{(BR)}$ | $V_{RWM}$<br>(working) | $I_o$<br>(note 1) | $I_f$ (surge)<br>(1 sec) | $I_f$ (surge)<br>(1 $\mu\text{sec}$ ) | $T_{OP}$           | $T_{STG}$          |
|------------|------------------------|-------------------|--------------------------|---------------------------------------|--------------------|--------------------|
| Vdc        | V(pk)                  | mAdc              | A                        | A                                     | $^{\circ}\text{C}$ | $^{\circ}\text{C}$ |
| 80         | 75                     | 300               | 0.5                      | 4.0                                   | $-65$ to $+175$    | $-65$ to $+200$    |

| CAPACITANCE<br>$V_R = 0$ Volts<br>$V_{sig} = 50$ mVpp<br>$100\text{KHz} \leq f \leq 1$ MHz | $V_{f1}$<br>@ $I_f = 250\mu\text{Adc}$ | $V_{f2}$<br>@ $I_f = 1.0\text{mA}$ | $V_{f3}$<br>@ $I_f = 10\text{mA}$ | $V_{f4}$<br>@ $I_f = 20\text{mA}$ | $V_{f5}$<br>@ $I_f = 300\text{mA}$<br>(pulse) | $I_{rr}$<br>@ $I_f = I_{RT}$<br>10mAdc<br>$R_L = 100$ ohms |
|--------------------------------------------------------------------------------------------|----------------------------------------|------------------------------------|-----------------------------------|-----------------------------------|-----------------------------------------------|------------------------------------------------------------|
| pF                                                                                         | Vdc                                    | Vdc                                | Vdc                               | Vdc                               | Vdc                                           | ns                                                         |
| 4 max.                                                                                     | .47 - .56                              | .52 - .60                          | .64 - .72                         | .67 - .77                         | 1.1 max.                                      | 6.0 max.                                                   |

OTE 1: DERATE 2.0 mAdc/ $^{\circ}\text{C}$  For  $T_A$  Above  $25^{\circ}\text{C}$ .

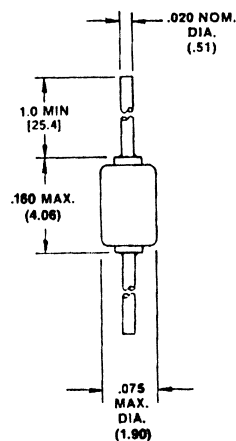
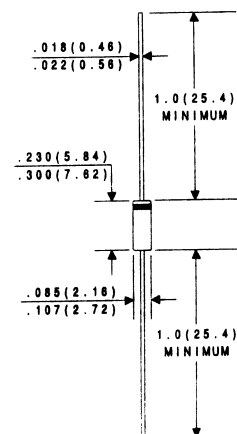


FIGURE 1  
PACKAGE DO-35

DO-35 Package



DO-7 Package