

1N4450

SWITCHING RECTIFIER

High-reliability discrete products and engineering services since 1977

FEATURES

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding "-PBF" suffix.

MAXIMUM RATINGS

| Rating | Symbol | Value | Unit |
|--|--------------------|-------------|------|
| Maximum peak reverse voltage | V _{RM} | 40 | V |
| Maximum reverse voltage | V _R | 30 | V |
| Maximum forward DC current | IF | 250 | mA |
| Maximum average forward current | I _{F(AV)} | 200 | mA |
| Maximum surge forward current @ $t_p = 1\mu s$ | I _{FSM} | 4 | А |
| Power dissipation | P _D | 500 | mW |
| Maximum junction temperature | Tj | 200 | °C |
| Storage temperature range | T _{stg} | -65 to +200 | °C |

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

| Parameter | Symbol | Test Condition | Min | Max | Unit |
|---------------------------|--------------------|---|------|------|------|
| Reverse current | | V _R = 30V | - | 50 | nA |
| | I _R | V _R = 30V, T _J = 150°C | - | 50 | μA |
| Forward voltage | | I _F = 0.1mA | 0.42 | 0.54 | |
| | | I _F = 1.0mA | 0.52 | 0.64 | |
| | V _F | I _F = 10mA | 0.64 | 0.72 | V |
| | | I _F = 50mA | 0.80 | 0.92 | |
| | | I _F = 200mA | - | 1.00 | |
| Reverse breakdown voltage | V _{(BR)R} | $I_R = 5\mu A$ (pulsed) | 40 | - | V |
| Diode capacitance | C _d | $f = 1MHz, V_R = 0$ | - | 4 | pF |
| Reverse recovery | t _{rr} | $I_F = 10 mA$, $V_R = 6V$, $R_L = 100 \Omega$ | - | 4 | ns |



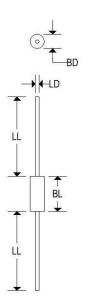
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MECHANICAL CHARACTERISTICS

| Case: | DO-35 | |
|-----------|-----------------------------|--|
| Marking: | Body painted, alpha-numeric | |
| Polarity: | Cathode band | |



| DO-35 | | | | | |
|--------|--------------------------------|---|--|--|--|
| Inches | | Millim | neters | | |
| Min | Max | Min | Max | | |
| 0.055 | 0.090 | 1.400 | 2.290 | | |
| 0.120 | 0.200 | 3.050 | 5.080 | | |
| 0.018 | 0.022 | 0.460 | 0.560 | | |
| 1.000 | 1.500 | 25.400 | 38,100 | | |
| | Min 0.055 0.120 0.018 | Inclusion Max 0.055 0.090 0.120 0.200 0.018 0.022 | Image: | | |



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FIG1. - FORWARD CURRENT VS. FORWARD VOLTAGE

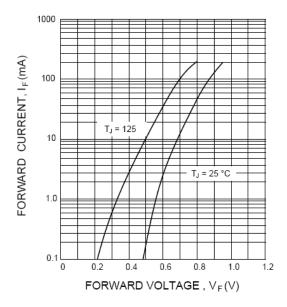


FIG.2 - REVERSE CURRENT VS. JUNCTION TEMPERATURE

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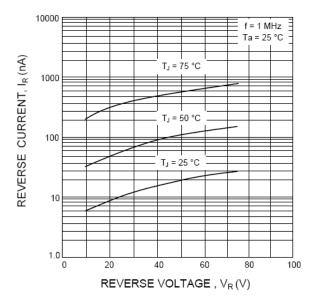


FIG3. - CAPACITANCE BETWEEN TERMINALS VS. REVERSE VOLTAGE

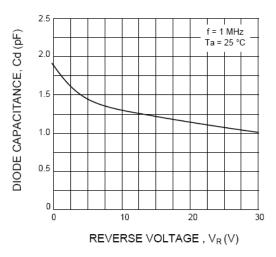


FIG. 4 - REVERSE RECOVERY TIME VS. FORWARD CURRENT

