

SMALL SIGNAL SWITCHING DIODE

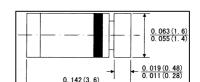
FEATURES

- . Silicon epitaxial planar diode
- . Fast swithching diodes
- . 500mW power dissipation
- . The diode is also available in the DO-35 case with the type designation 1N4448

MECHANICAL DATA

. Case: MinMelf glass case(SOD-80)

. Weight: Approx. 0.05gram



Mini-MELF

Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Ratings at 25°C ambient temperature unless otherwise specified)

| Symbol | Value | Units |
|--------|-------------------------|---|
| VR | 75 | Volts |
| VRM | 100 | Volts |
| lav | 1501) | mA |
| | | |
| IFSM | 500 | mW |
| Ptot | 5001) | mW |
| TJ | 175 | ${\mathbb C}$ |
| Tstg | -65 to + 175 | $^{\circ}$ |
| | VR VRM IAV IFSM Ptot TJ | VR 75 VRM 100 IAV 1501) IFSM 500 Ptot 5001) TJ 175 |

ELECTRICAL CHARACTERISTICS

(Ratings at 25°C ambient temperature unless otherwise specified)

| | Symbol | Min. | Тур. | Max. | Units |
|---|--------|-------|------|-------|-------|
| Forward voltage at IF=5mA | VF | 0.62 | | 0.72 | V |
| at IF=10mA | VF | | | 1 | V |
| Leakage current at VR=20V | lR | | | 25 | nA |
| at VR=75V | lR | | | 5 | μΑ |
| at VR=20V, TJ=150℃ | lR | | | 50 | μΑ |
| Junction capacitance at VR=VF=0V | Сл | | | 4 | pF |
| Reverse breakdown voltage tested with 100µA pluse | V(BR)R | 100 | | | V |
| Reverse recovery time from IF=10 \(\mu \)A to IR=1mA, | trr | ter | | 4 | ns |
| VR=6V, RL=100 Ω | | ui ui | | | |
| Thermal resistance junction to ambient | Rθ JA | | | 3501) | K/W |
| Rectification efficience at f=100MHz,VRF=2V | η | 0.45 | | | |
| 1)Valid provided that leads at a distance of 8mm from case are kept at ambient temperature(DO-35) | | | | | |



RATINGS AND CHATACTERISTIC CURVES LL4448

FLG.1-FORWARD CHARACTERISTICS

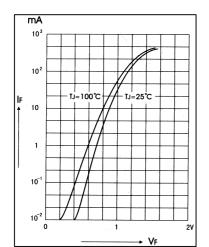


FIG.3-ADMISSIBLE POWER DISSIPATION VERSUS AMBIENT TEMPERATURE

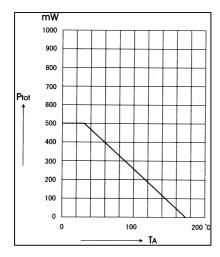


FIG.2-DYNAMIC FORWARD RESISTANCE VERSUS FORWARD CURRENT

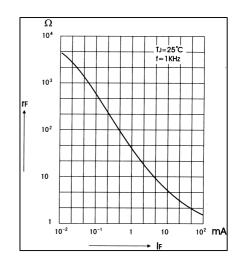
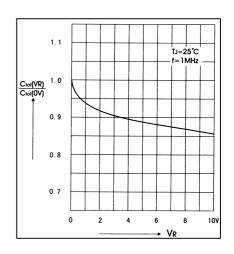


FIG.4-RELATIVE CAPACITANCE VERSUS VOLTAGE





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FIG.5-RECTIFICATION EFFICIENCY MEASUREMENT CIRCUIT

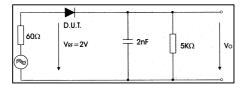


FIG.6-LEAKAGE CURRENT VERSUS JUNCTION TEMPERATURE

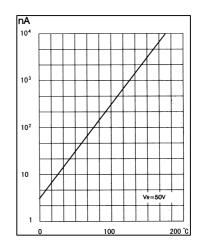


FIG.7-ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION

