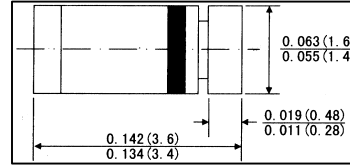


FEATURES

- . 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

Mini-MELF



MECHANICAL DATA

- . **Case:** MinMelf glass case(SOD- 80)
- . **Weight:** Approx. 0.05gram

Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	Symbol	Value	Units
Reverse voltage	V_R	75	Volts
Peak reverse voltage	V_{RM}	100	Volts
Average rectified current, Half wave rectification with Resistive load at $T_A=25^\circ\text{C}$ and $F \geq 50\text{Hz}$	I_{AV}	150 ¹⁾	mA
Surge forward current at $t < 1\text{S}$ and $T_J=25^\circ\text{C}$	I_{FSM}	500	mW
Power dissipation at $T_A=25^\circ\text{C}$	P_{tot}	500 ¹⁾	mW
Junction temperature	T_J	175	°C
Storage temperature range	T_{STG}	-65 to + 175	°C

1)Valid provided that at a distance of 8mm from case are kept at ambient temperature(DO-35)

ELECTRICAL CHARACTERISTICS

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

	Symbol	Min.	Typ.	Max.	Units
Forward voltage at $I_F=5\text{mA}$	V_F	0.62		0.72	V
at $I_F=10\text{mA}$	V_F			1	V
Leakage current at $V_R=20\text{V}$	I_R			25	nA
at $V_R=75\text{V}$	I_R			5	μA
at $V_R=20\text{V}, T_J=150^\circ\text{C}$	I_R			50	μA
Junction capacitance at $V_R=V_F=0\text{V}$	C_J			4	pF
Reverse breakdown voltage tested with $100\mu\text{A}$ pluse	$V_{(BR)R}$	100			V
Reverse recovery time from $I_F=10\mu\text{A}$ to $I_R=1\text{mA}$, $V_R=6\text{V}, R_L=100\ \Omega$	t_{rr}			4	ns
Thermal resistance junction to ambient	$R_{\theta JA}$			350 ¹⁾	K/W
Rectification effience at $f=100\text{MHz}, V_{RF}=2\text{V}$	η	0.45			

1)Valid provided that leads at a distance of 8mm from case are kept at ambient temperature(DO-35)

RATINGS AND CHARACTERISTIC CURVES LL4448

FIG.1-FORWARD CHARACTERISTICS

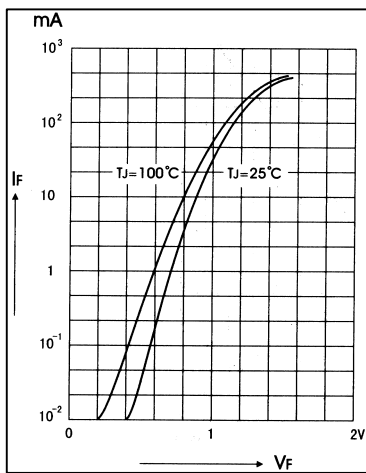


FIG.2-DYNAMIC FORWARD RESISTANCE VERSUS FORWARD CURRENT

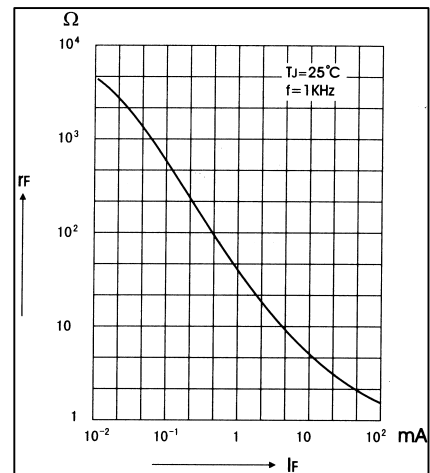


FIG.3-ADMISSIBLE POWER DISSIPATION VERSUS AMBIENT TEMPERATURE

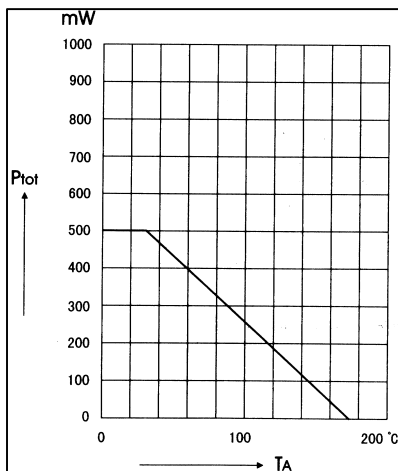


FIG.4-RELATIVE CAPACITANCE VERSUS VOLTAGE

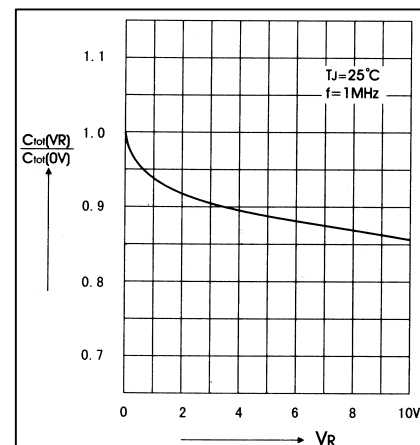


FIG.5-RECTIFICATION EFFICIENCY MEASUREMENT CIRCUIT

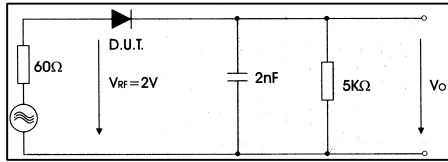


FIG.6-LEAKAGE CURRENT VERSUS JUNCTION TEMPERATURE

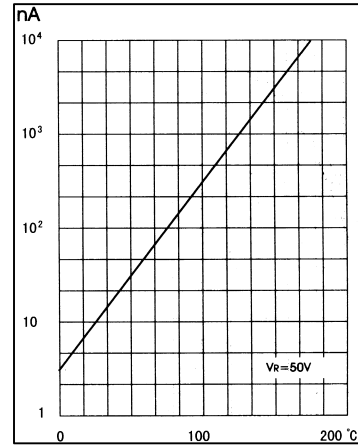


FIG.7-ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION

