

Small Signal Switching Diodes

VOLTAGE RANGE: 75V
PEAK PULSE POWER: 500mW

Features

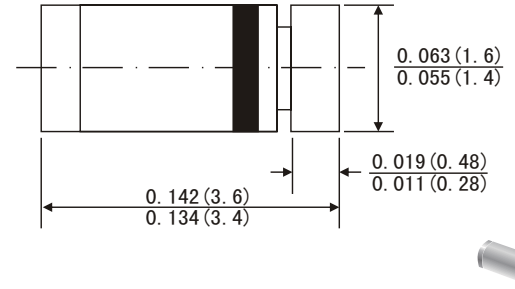
- Fast switching diode
- Silicon epitaxial planar diode

MECHANICAL DATA

- Case: MELF(LL34) Glass Case
- Polarity: Color band denotes cathode end
- Mounting Position: Any

Ratings at 25°C ambient temperature unless otherwise specified

MELF(LL34)



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND CHARACTERISTICS

	Symbol	Value	Units
DC Blocking Voltage	V_R	75	Volts
Non-Repetitive 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	mA
Non-Repetitive Peak Forward Surge Current @ $t=1.0\text{s}$	I_{FSM}	500	mA
Power dissipation at $T_A=25^\circ\text{C}$	P_{tot}	500	mW
Junction temperature	T_J	175	$^\circ\text{C}$
Storage temperature range	T_{STG}	-65 to +175	$^\circ\text{C}$

Electrical Specification ($T_A=25^\circ\text{C}$ unless otherwise specified)

	Symbol	Min.	Typ.	Max	Units
Forward voltage	at $I_F=5\text{mA}$	0.62		0.72	V
	at $I_F=100\text{mA}$			1	V
Leakage current	at $V_R=20\text{V}$			25	nA
	at $V_R=75\text{V}$			5	μA
	at $V_R=20\text{V}$, $T_J=150^\circ\text{C}$			50	μA
Junction capacitance at $V_R=V_F=0\text{V}$	C_J			4	pF
Reverse breakdown voltage tested with 100 μA pulse	$V_{(BR)R}$	100			V
Reverse recovery time from $I_F=10\text{mA}$ to $I_R=1\text{mA}$, $V_R=6\text{V}$, $R_L=100\Omega$	t_{rr}			4	ns
Thermal resistance junction to ambient	$R_{\theta JA}$			500	K/W
Rectification efficiency at $f=100\text{MHz}$, $V_{RF}=2\text{V}$	η	0.45			

RATINGS AND CHARACTERISTIC CURVES

FIG 1-FORWARD CHARACTERISTICS

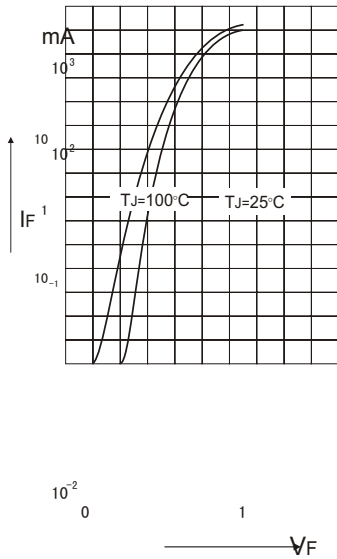


FIG 2: DYNAMIC FORWARD RESISTANCE VERSUS FORWARD CURRENT

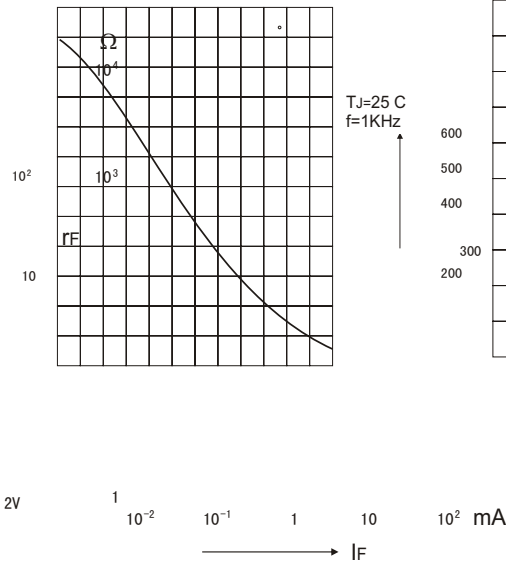


FIG 3-ADMISSIBLE POWER DISSIPATION VERSUS AMBIENT TEMPERATURE

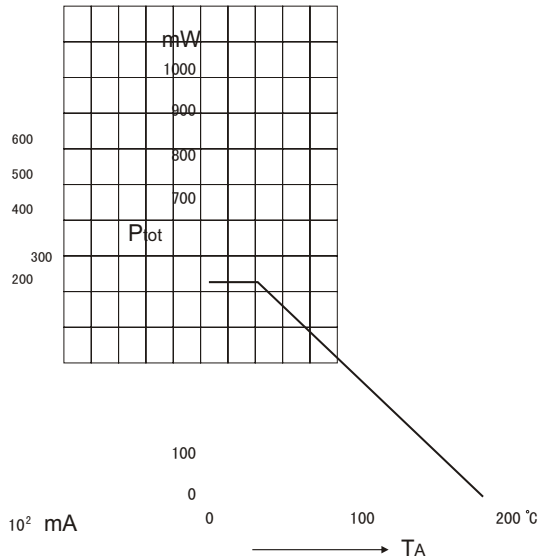


FIG. 4-RELATIVE CAPACITANCE VERSUS VOLTAGE

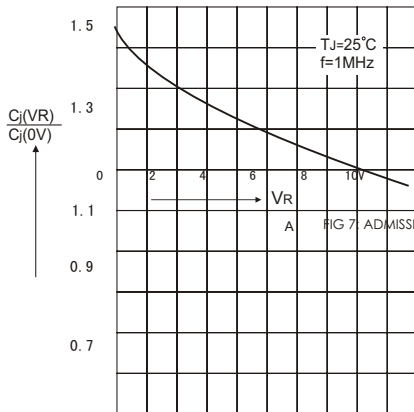


FIG.5 RECTIFICATION EFFICIENCY MEASUREMENT CIRCUIT

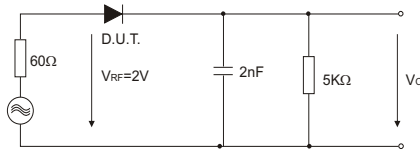


FIG 6: LEAKAGE CURRENT VERSUS JUNCTION TEMPERATURE

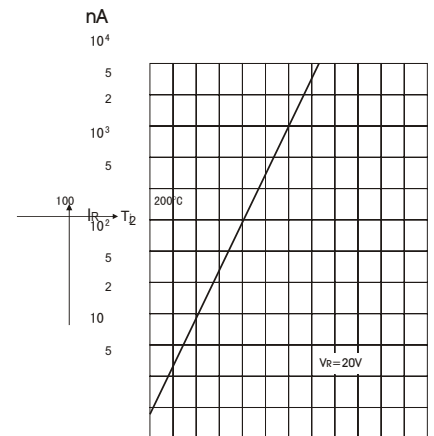


FIG 7: ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION

