

Small Signal Switching Diodes

VOLTAGE RANGE: 75V
PEAK PULSE POWER: 500mW

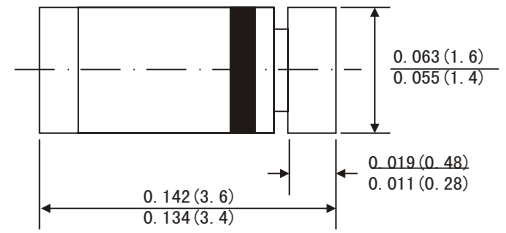
Features

- Fast switching diode
- Silicon epitaxial planar diode

MECHANICAL DATA

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

MELF(LL34)



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

	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 $f = 50\text{Hz}$	I_{AV}	150 ¹⁾	mA
Non-Repetitive Peak Forward Surge Current @ $t=1.0\text{s}$ Power dissipation at $T_A=25^\circ\text{C}$	I_{FSM}	500	mA
Junction temperature	P_{tot}	500 ¹⁾	mW
Storage temperature range	T_J	175	°C
¹⁾ Valid provided that electrodes are kept at ambient temperature.	T_{STG}	-65 to +175	°C

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

	Symbol	Min.	Typ.	Max	Units
Forward voltage at $I_F=10\text{mA}$	V_F			1	Volts
Leakage current at $V_R=20\text{V}$ at $V_R=75\text{V}$ at $V_R=20\text{V}$, $T_J=150^\circ\text{C}$	I_R			25	nA
	I_R			5	μA
	I_R			50	μA
Junction capacitance at $V_R=V_F=0\text{V}$	C_J			4	pF
Voltage rise when switching on tested with 50mA pulse $t_P=0.1\mu\text{s}$ Rise time $<30\mu\text{s}$ $f_P=5$ to 100kHz	V_{fr}			2.5	Volts
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 ¹⁾	K/W
Rectification efficiency at $f=100\text{MHz}$, $V_{RF}=2\text{V}$	η	0.45			

¹⁾Valid provided that electrodes are kept at ambient temperature.

RATINGS AND CHARACTERISTIC CURVES

FIG1:-FORWARD Characteristics mA

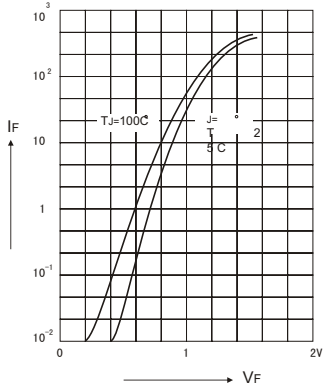


FIG 2:-DYNAMIC FORWARD RESISTANCEVERSUS FORWARD CURRENT

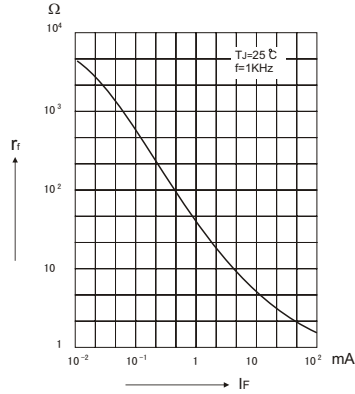


FIG.3: ADMISSIBLE POWER DISSIPATION VERSUS AMBIENT TEMPERATURE

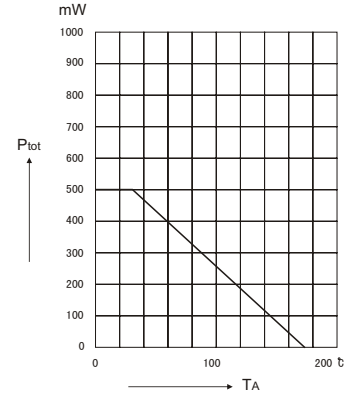


FIG.4-Reverse Capacitance versus voltage

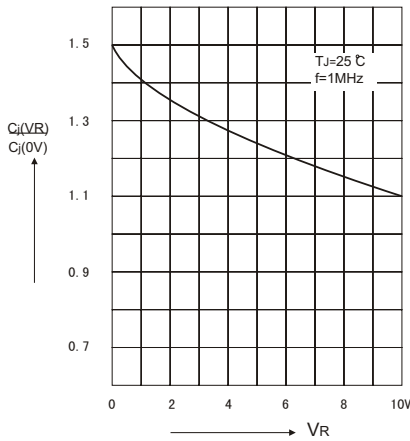


FIG.5 RECTIFICATION EFFICIENCY MEASUREMENT CIRCUIT

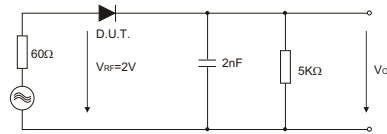


FIG 6: LEAKAGE CURRENT VERSU S JUNCTION TEMPERATURE

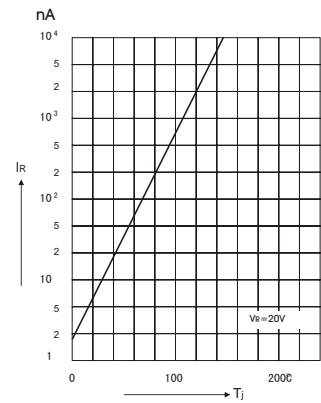


FIG 7: ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION

