

## Small Signal Switching Diodes

**VOLTAGE RANGE: 75V**  
**PEAK PULSE POWER: 500mW**

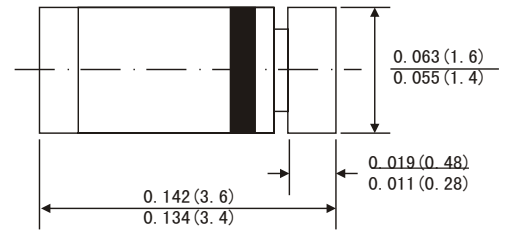
### Features

- 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 <sup>1)</sup>	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 <sup>1)</sup>	mW
Storage temperature range	$T_J$	175	°C
<sup>1)</sup> 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	$\mu\text{A}$
	$I_R$			50	$\mu\text{A}$
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 <sup>1)</sup>	K/W
Rectification efficiency at $f=100\text{MHz}$ , $V_{RF}=2\text{V}$	$\eta$	0.45			

<sup>1)</sup>Valid provided that electrodes are kept at ambient temperature.

# RATINGS AND CHARACTERISTIC CURVES

FIG1:-FORWARD Characteristics mA

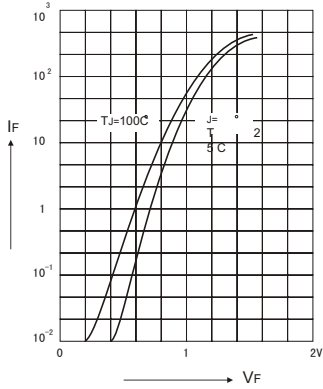


FIG 2:-DYNAMIC FORWARD RESISTANCEVERSUS FORWARD CURRENT

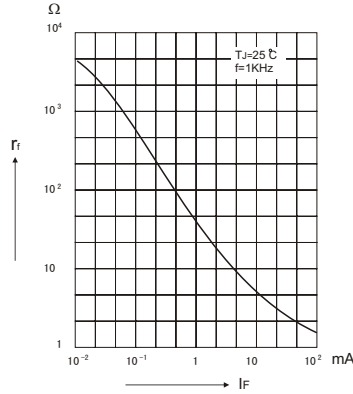


FIG.3: ADMISSIBLE POWER DISSIPATION VERSUS AMBIENT TEMPERATURE

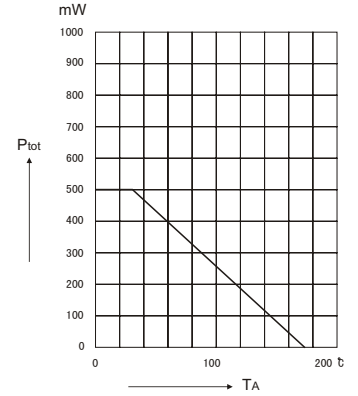


FIG.4-Reverse Capacitance versus voltage

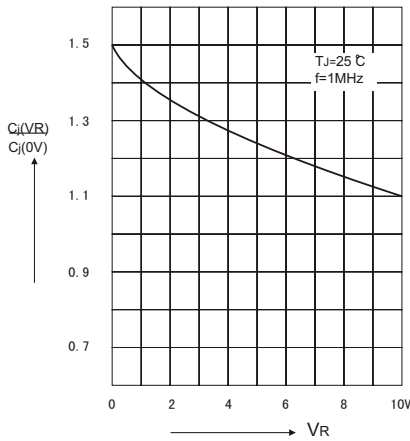


FIG.5 RECTIFICATION EFFICIENCY MEASUREMENT CIRCUIT

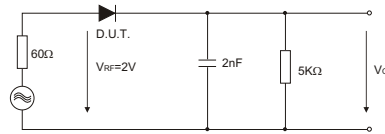


FIG 6: LEAKAGE CURRENT VERSU S JUNCTION TEMPERATURE

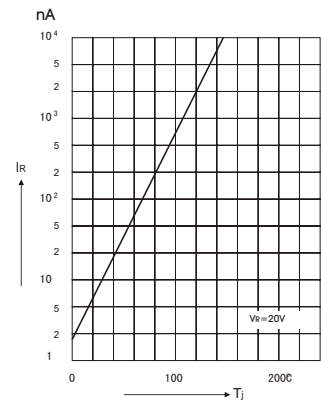


FIG 7: ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION

