

## Small Signal Switching Diodes

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

### Features

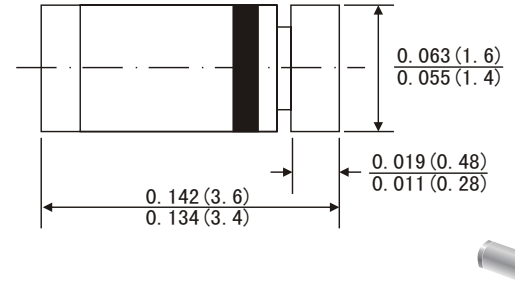
- Fast switching diode
- Silicon epitaxial planar diode

### 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	$\mu\text{A}$
	at $V_R=20\text{V}$ , $T_J=150^\circ\text{C}$			50	$\mu\text{A}$
Junction capacitance at $V_R=V_F=0\text{V}$	$C_J$			4	pF
Reverse breakdown voltage tested with 100 $\mu\text{A}$ 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 $f=100\text{MHz}$ , $V_{RF}=2\text{V}$	$\eta$	0.45			

# RATINGS AND CHARACTERISTIC CURVES

FIG 1-FORWARD CHARACTERISTICS

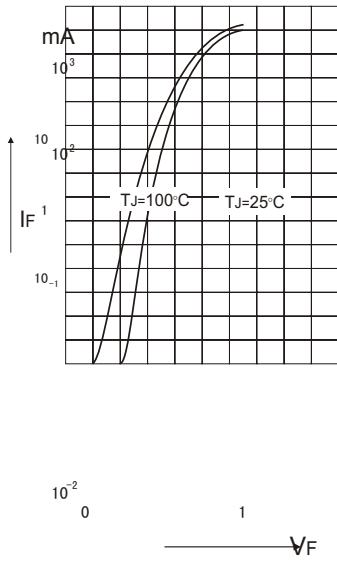


FIG 2: DYNAMIC FORWARD RESISTANCE VERSUS FORWARD CURRENT

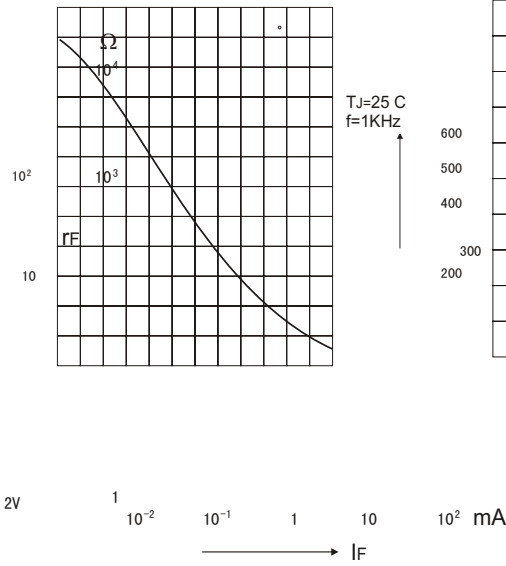


FIG 3-ADMISSIBLE POWER DISSIPATION VERSUS AMBIENT TEMPERATURE

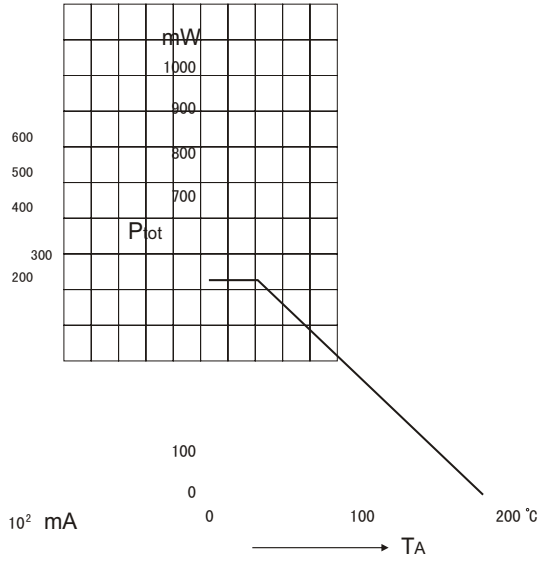


FIG. 4-RELATIVE CAPACITANCE VERSUS VOLTAGE

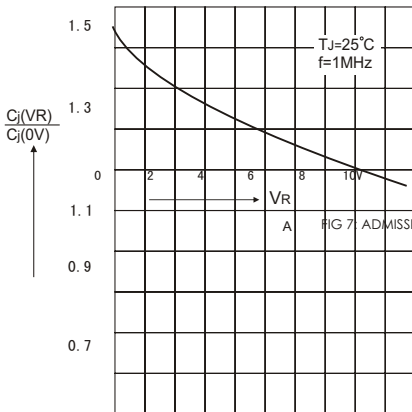


FIG.5 RECTIFICATION EFFICIENCY MEASUREMENT CIRCUIT

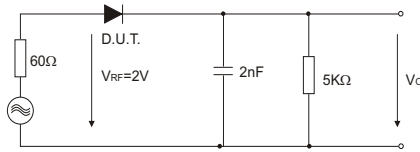


FIG 6: LEAKAGE CURRENT VERSUS JUNCTION TEMPERATURE

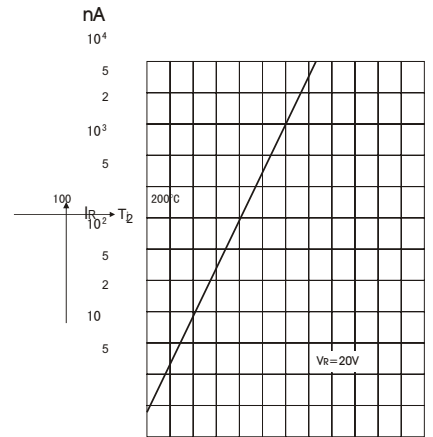


FIG 7: ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION

