

## Small Signal Switching Diodes

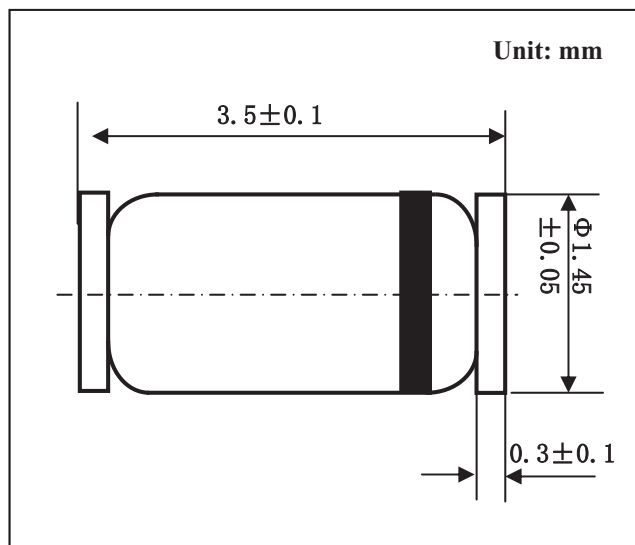
VOLTAGE RANGE: 75V PEAK PULSE POWER:500mW

### Features

- Fast switching diode
- Silicon epitaxial planar diode

### MECHANICAL DATA

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



### MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

		LL4148	UNITS
Reverse voltage	$V_R$	75.0	V
Peak reverse voltage	$V_{RM}$	100.0	V
Average forward rectified current Half wave rectification with resistive load at $t_{amb}=25^{\circ}C$ and $f \geq 50Hz$	$I_o$	150.0	mA
Forward surge current at $t < 1S$ and $T_J=25^{\circ}C$	$I_{FSM}$	500.00	mA
Power dissipation at $t_{amb}=25^{\circ}C$	$P_{tot}$	500.0 <sup>1)</sup>	mW
Junction temperature	$T_J$	175.0	°C
Storage temperature range	$T_{STG}$	-55--- +175	°C

### Electrical Specification (TA=25°C unless otherwise specified)

		MIN	TYP	MAX	UNITS
Forward voltage @ $I_F=10mA$	$V_F$	-	-	1.0	V
Leakage current at $V_R=20V$ at $V_R=75V$ at $V_R=20V$ $T_J=150^{\circ}C$	$I_R$	-	-	25.0	n A
	$I_R$	-	-	5.0	$\mu A$
	$I_R$	-	-	50.0	$\mu A$
Capacitance at $V_F=V_R=0V$	$C_{tot}$	-	-	4.0	pF
Voltage rise when switching on tested with 50mA pulses $tp=0,1 \mu S$ , rise time $< 30ns$ , $fp=5$ to 100KHz	$V_{fr}$	-	-	2.5	V
Reverse recovery time from $I_F=10mA$ $V_R=6V, R_L=100 \Omega$ , at $I_R=1mA$	$t_{rr}$	-	-	4.0	ns
Thermal resistance junction to ambient	$R_{\theta JA}$			350.0 <sup>1)</sup>	K/W
Rectification efficiency at 100MHz, $V_{RF}=2V$	$\eta V$	0.45	-	-	-

## RATINGS AND CHARACTERISTIC CURVES

FIG1:-FORWARD Characteristics mA

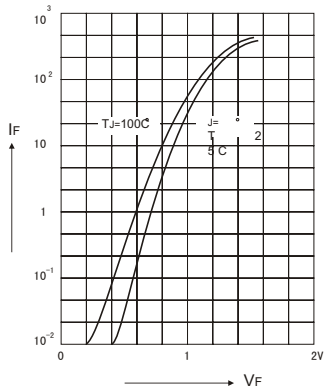


FIG 2:-DYNAMIC FORWARD RESISTANCEVERSUS FORWARD CURRENT

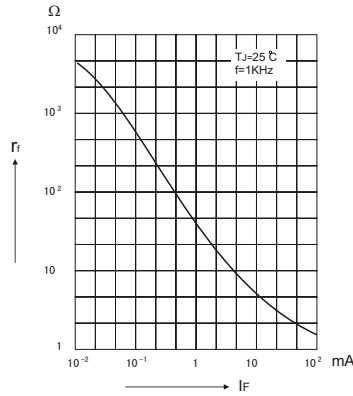


FIG.3: ADMISSIBLE POWER DISSIPATION VERSUS AMBIENT TEMPERATURE

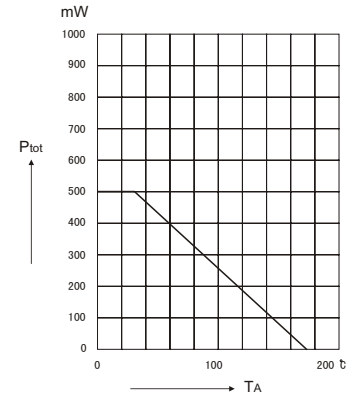


FIG.4-Reverse Capacitance versus voltage

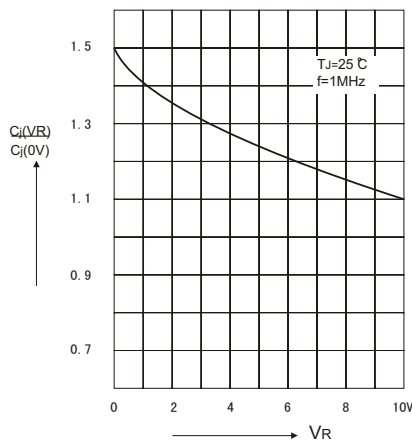


FIG.5 RECTIFICATION EFFICIENCY MEASUREMENT CIRCUIT

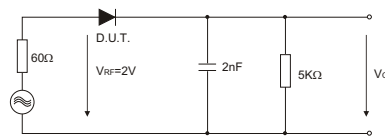


FIG 6: LEAKAGE CURRENT VERSU S JUNCTION TEMPERATURE

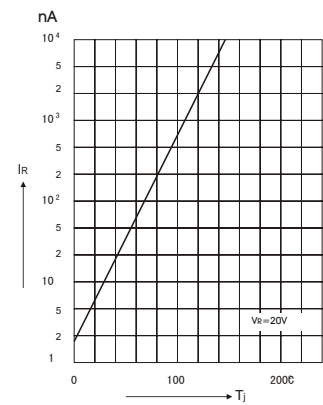


FIG 7: ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION

