

SMALL SIGNAL SWITCHING DIODE

REVERSE VOLTAGE: 75 V
CURRENT: 0.15 A

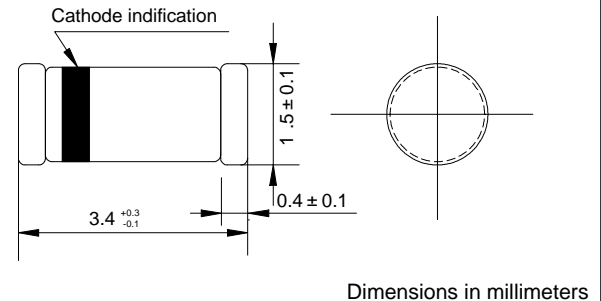
FEATURES

- ◇ Silicon epitaxial diode
- ◇ High speed switching diode
- ◇ 500mW power dissipation

MECHANICAL DATA

- ◇ Case: MINI-MELF glass case
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: Approx 0.031 grams

MINI-MELF



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

MAXIMUM RATINGS

		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 $t_{amb}=25^\circ\text{C}$ and $f \geq 50\text{Hz}$	I_o	150.0	mA
Forward surge current at $t < 1\text{s}$ and $T_J=25^\circ\text{C}$	I_{FSM}	500.00	mA
Power dissipation at $t_{amb}=25^\circ\text{C}$	P_{tot}	500.0 ¹⁾	mW
Junction temperature	T_J	175.0	°C
Storage temperature range	T_{STG}	-55--- +175	°C

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

ELECTRICAL CHARACTERISTICS

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

1) Valid provided that electrodes are kept at ambient temperature

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FIG.1 – ADMISSIBLE POWER DISSIPATION VERSUS AMBIENT TEMPERATURE

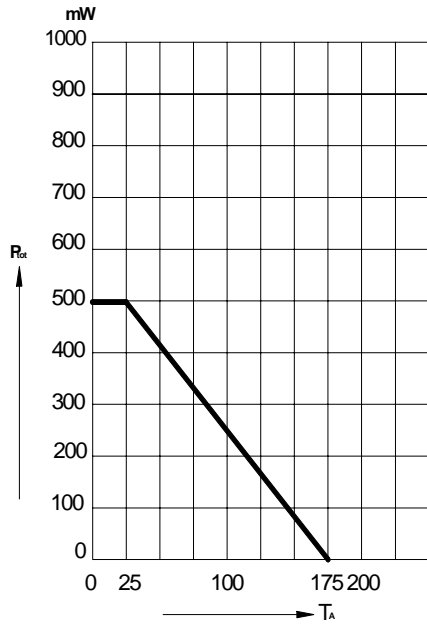


FIG.2- FORWARD CHARACTERISTICS

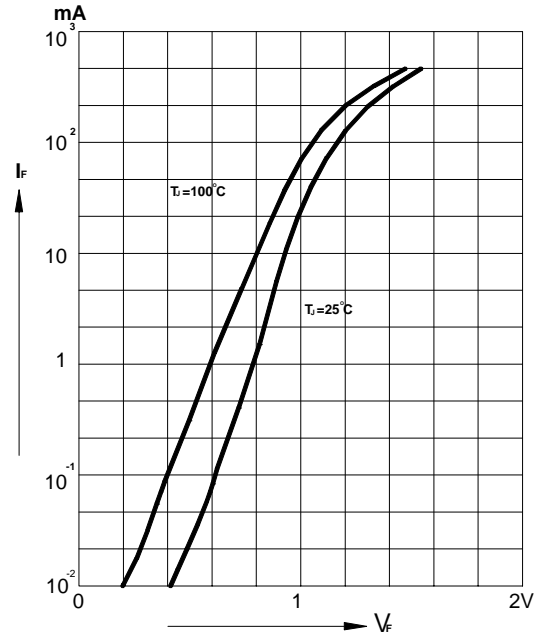


FIG.3-ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION

