

SMALL SIGNAL SWITCHING DIODE

REVERSE VOLTAGE: 25 V
CURRENT: 0.15 A

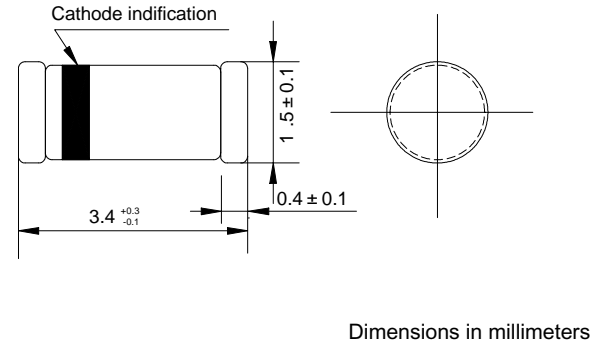
FEATURES

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

MECHANICAL DATA

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

MINI-MELF



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

MAXIMUM RATINGS

		LL4154	UNITS
Reverse voltage	V_R	25	V
Peak reverse voltage	V_{RM}	35	V
Average forward rectified current half wave rectification with resistive load $V_R=0V$	$I_{F(AV)}$	150 ¹⁾	mA
Forward surge current @ $t_F=1\mu s$	I_{FSM}	2.0	A
Power dissipation @ $T_A=25^\circ C$	P_{tot}	500 ¹⁾	mW
Junction temperature	T_J	175	°C
Storage temperature range	T_{STG}	-55 --- +175	°C

1)Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature.

ELECTRICAL CHARACTERISTICS

		MIN	TYP	MAX	UNITS
Forward voltage @ $I_F=30mA$	V_F	-	-	1.0	V
Leakage current @ $V_R=25V$	I_R	-	-	100	nA
	I_R	-	-	100	µA
Capacitance @ $V_R=0V, f=1MHz, V_{HF}=50mV$	C_J	-	-	4.0	pF
Reverse breakdown voltage tested with 5µA pulses	$V_{(BR)R}$	35	-	-	V
Reverse recovery time from $I_F=10mA$ to $I_R=10mA$ to $I_R=1mA$ from $I_F=10mA$ to $I_R=1mA$, $V_R=6V$, $R_L=100\Omega$.	t_{rr}	-	-	4	ns
		-	-	2	ns
Thermal resistance junction to ambient	$R_{\theta JA}$	-	-	500 ¹⁾	K/W
Rectification efficiency @ 100MHz, $V_{RF}=2V$	η_V	0.45	-	-	-

1)Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature.

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**FIG.1 – ADMISSIBLE POWER DISSIPATION
VERSUS AMBIENT TEMPERATURE**

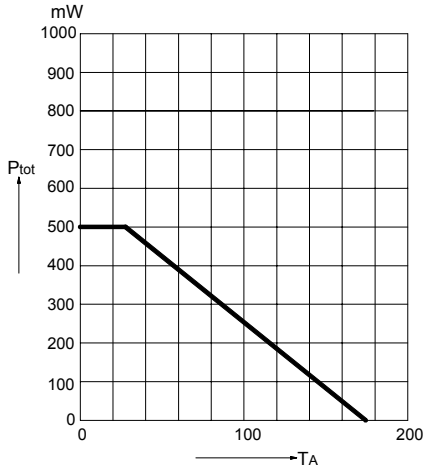


FIG.2 – FORWARD CHARACTERISTICS

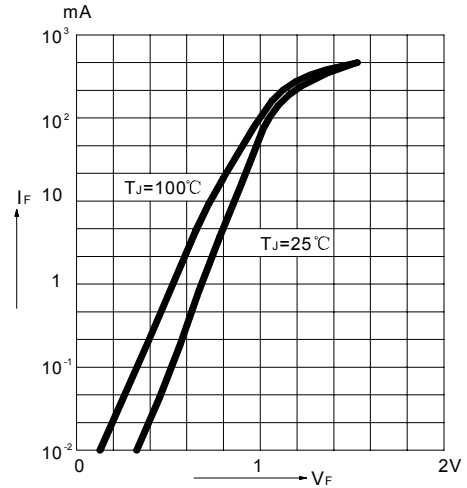


FIG.3 – ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION

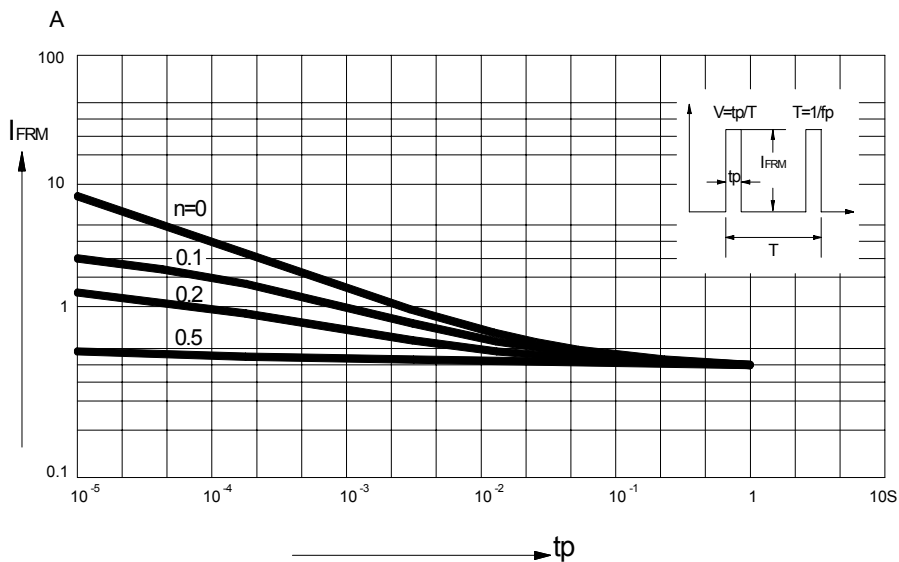


FIG.4 – RECTIFICATION EFFICIENCY MEASUREMENT CIRCUIT

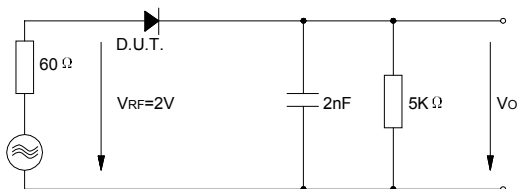


FIG.5 – RELATIVE CAPACITANCE VERSUS VOLTAGE

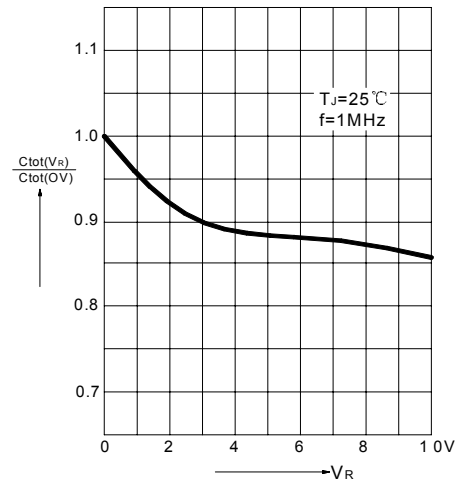


FIG.6 – LEAKAGE CURRENT VERSUS JUNCTION TEMPERATURE

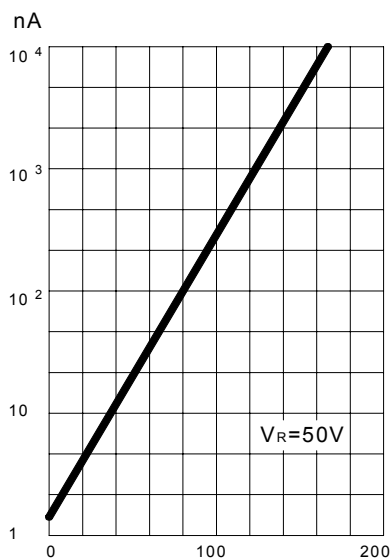


FIG.7 – DYNAMIC FORWARD RESISTANCE VERSUS FORWARD CURRENT

