

## SMALL SIGNAL SWITCHING DIODE

REVERSE VOLTAGE: 50 V  
CURRENT: 0.15 A

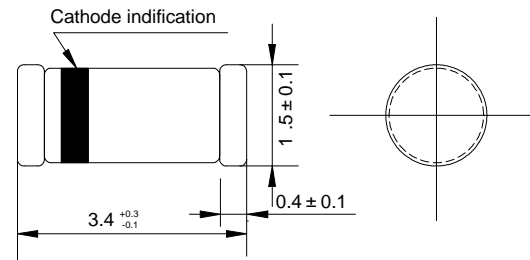
### FEATURES

- ◇ 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

		LL4151	UNITS
Reverse voltage	$V_R$	50	V
Peak reverse voltage	$V_{RM}$	75	V
Average forward rectified current half wave rectification with resistive load $V_R=0V$	$I_{F(AV)}$	150 <sup>1)</sup>	mA
Forward surge current @ $t_F=1\mu s$	$I_{FSM}$	2.0	A
Power dissipation @ $T_A=25^\circ C$	$P_{tot}$	500 <sup>1)</sup>	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.

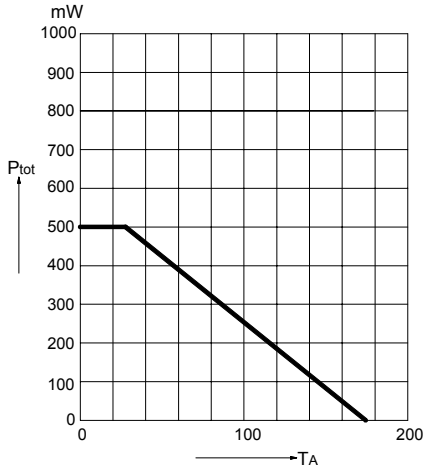
#### ELECTRICAL CHARACTERISTICS

		MIN	TYP	MAX	UNITS
Forward voltage @ $I_F=50mA$	$V_F$	-	0.8	1.0	V
Leakage current @ $V_R=50V$	$I_R$	-	-	50	nA
	$I_R$	-	-	50	μA
Capacitance @ $V_R=0V, f=1MHz, V_{HF}=50mV$	$C_J$	-	-	2.0	pF
Reverse breakdown voltage tested with 5μA pulses	$V_{(BR)R}$	75.0	-	-	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 <sup>1)</sup>	K/W
Rectification efficiency @ 100MHz, $V_{RF}=2V$	$\eta_V$	0.45	-	-	-

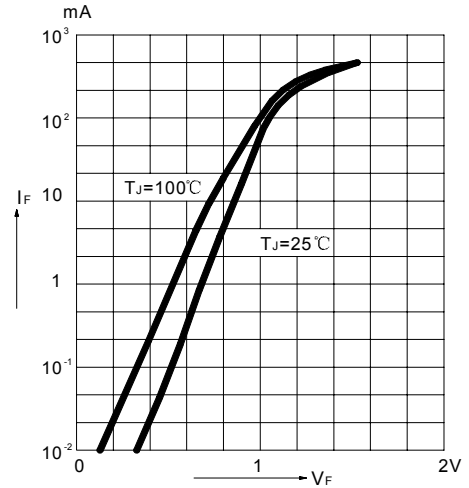
1)Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature.

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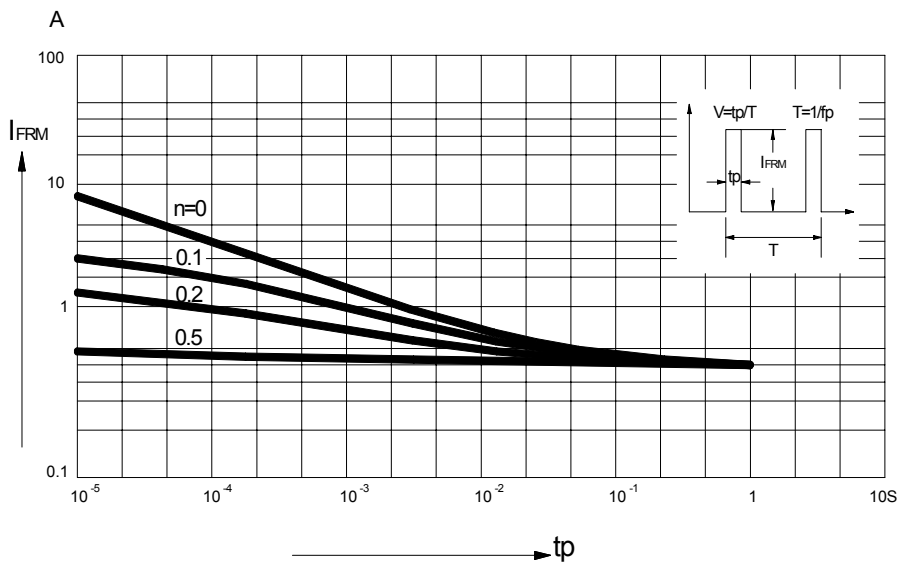
**FIG.1 – ADMISSIBLE POWER DISSIPATION  
VERSUS AMBIENT TEMPERATURE**



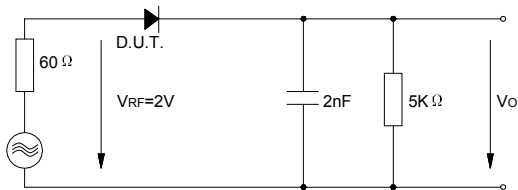
**FIG.2 – FORWARD CHARACTERISTICS**



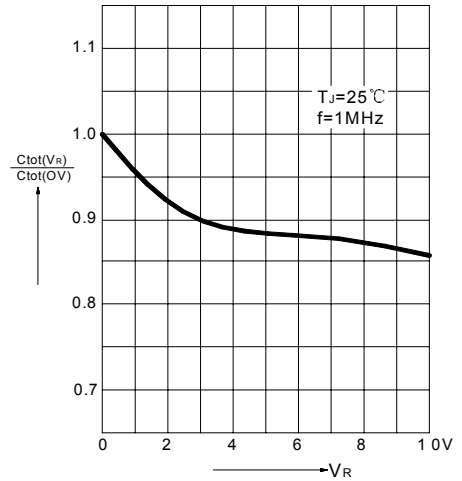
**FIG.3 – ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION**



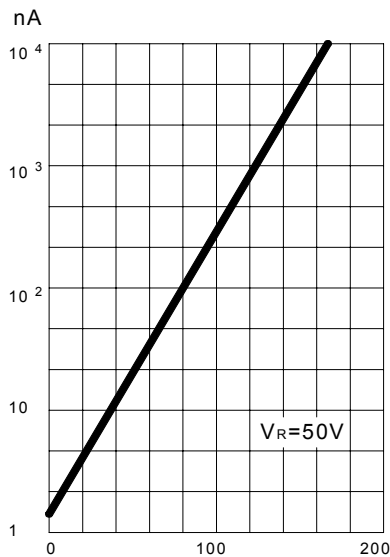
**FIG.4 – RECTIFICATION EFFICIENCY MEASUREMENT CIRCUIT**



**FIG.5 – RELATIVE CAPACITANCE VERSUS VOLTAGE**



**FIG.6 – LEAKAGE CURRENT VERSUS JUNCTION TEMPERATURE**



**FIG.7 – DYNAMIC FORWARD RESISTANCE VERSUS FORWARD CURRENT**

