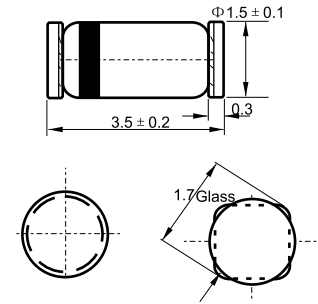




Features

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

MINI MELF



Dimension in millimeters

Mechanical Data

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

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 @ $t_p=1\mu s$	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
@ $V_R=25V, T_J=150^\circ C$	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.



Ratings AND Characteristic Curves

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

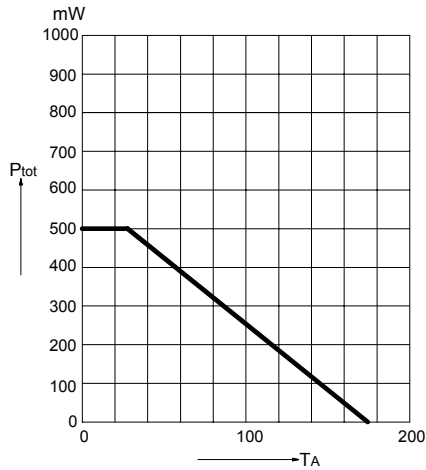


FIG.2 – FORWARD CHARACTERISTICS

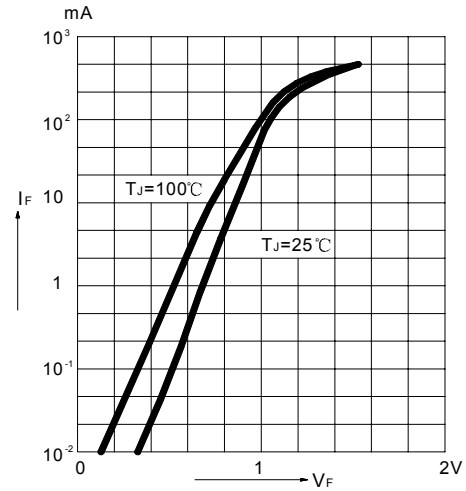
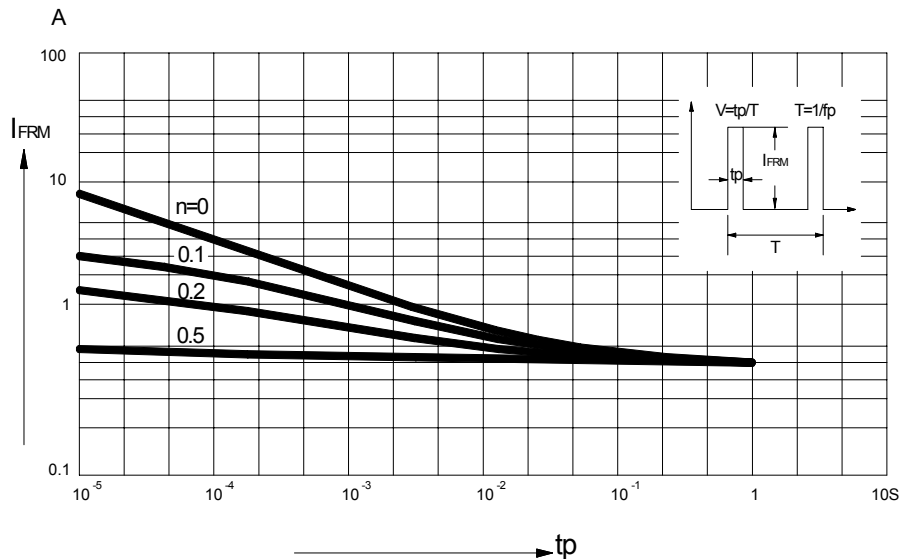


FIG.3 – ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION





Ratings AND Characteristic Curves

FIG.4 – RECTIFICATION EFFICIENCY MEASUREMENT CIRCUIT

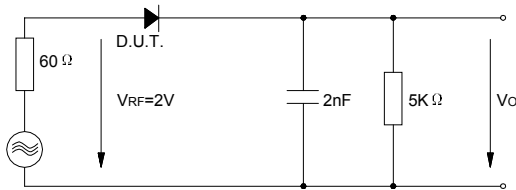


FIG.5 – RELATIVE CAPACITANCE VERSUS VOLTAGE

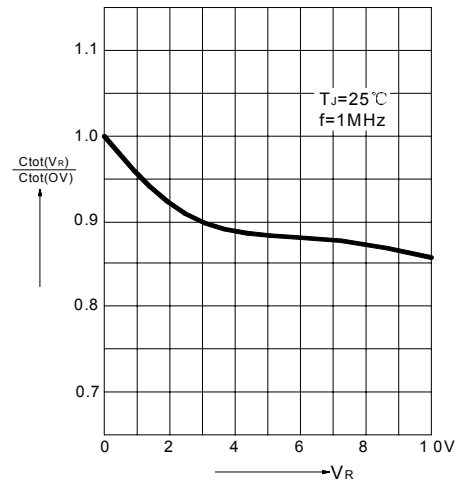


FIG.6 – LEAKAGE CURRENT VERSUS JUNCTION TEMPERATURE

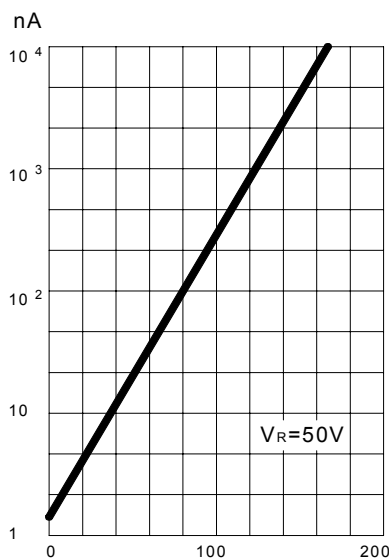
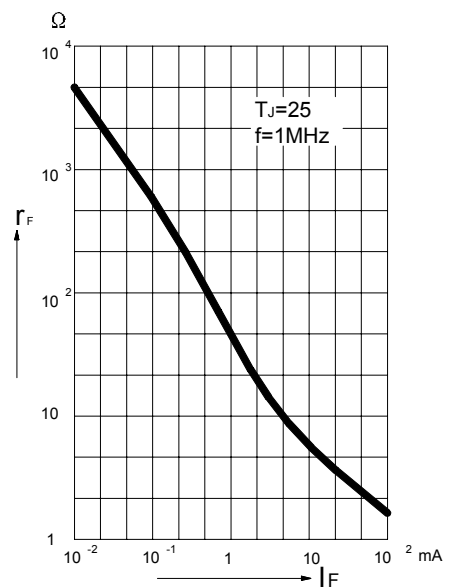


FIG.7 – DYNAMIC FORWARD RESISTANCE VERSUS FORWARD CURRENT



Package	Reel	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)
minimelf	2500pcs	7inch	20000pcs	186×186×105	120,000pcs	443×215×305