SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE: 60 - 40 V

POWER DIDDIPATION: 400 mW

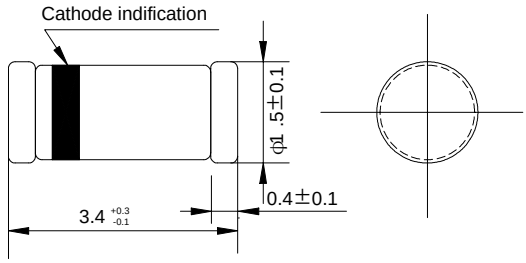
FEATURES

- ◇ For general purpose applications
- ◇ The low forward voltage drop and fast switching marking it ideal for protection of MOS devices,steering, biasing and couping diodes for fast switching and low logic level applications.
- ◇ Integrated protection ring against static discharge
- ◇ Low leakage current

MECHANICAL DATA

- ◇ Case: MINI-MELF
- ◇ 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.

ABSOLUTE MAXIMUM RATINGS AND THERMAL RESISTANCE

		LL101A	LL101B	LL101C	Unit
Reverse voltage	V_R	60	50	40	V
Repetitive peak reverse voltage	V_{RRM}	60	50	40	V
Forward current	$I_{(AV)}$	30			m A
Maximum single cycle surge 10 μs square wave	I_{FSM}	2.0			A
Power dissipation	P_{tot}	400			mW
Thermal resistance junction to ambient	$R_{\theta JA}$	320[1)]			K/W
Junction temperature	T_j	125			°C
Storage temperature range	T_{STG}	- 55 --- + 150			°C

[1)] Device mounted on PC board 50mm×50mm×1.6mm .

ELECTRICAL CHARACTERISTICS

Parameter	Test Conditions		Symbol	Min	Typ	Max	Unit
Forward voltage	I_F=1mA	LL101A	V_F	-	-	0.41	V
	I_F=1mA	LL101B		-	-	0.40	
	I_F=1mA	LL101C		-	-	0.39	
	I_F=15mA	LL101A		-	-	1.00	
	I_F=15mA	LL101B		-	-	0.95	
	I_F=15mA	LL101C		-	-	0.90	
Reverse current	V_R=50V	LL101A	I_R	-	-	200	n A
	V_R=40V	LL101B		-	-	200	
	V_R=30V	LL101C		-	-	200	
Breakdown voltage	I_R=10μA	LL101A	$V_{(BR)}$	60	-	-	V
		LL101B		50	-	-	
		LL101C		40	-	-	
Diode capacitance	V_R=0,f=1MH$_Z$	LL101A	C_D	-	-	2.0	pF
		LL101B		-	-	2.1	
		LL101C		-	-	2.2	
Reverse recovery time	I_F=I_R=5mA,recover to 0.1i_R		t_{rr}	-	-	1.0	ns

FIG.1 – TYP.IF VS FOR PRIMARY CONDUCTION THROUGH THE SCHOTTKY BARRIES

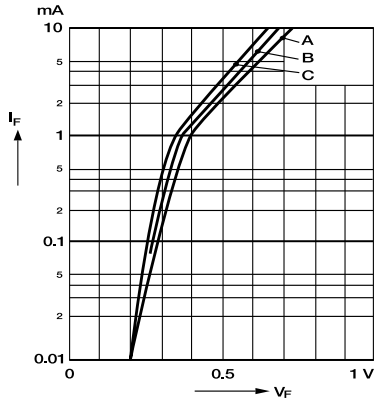


FIG.2 – TYP.IF OF COMBINATION SCHOTTKY BARRIER AND PN JUNCTION GUARD RING

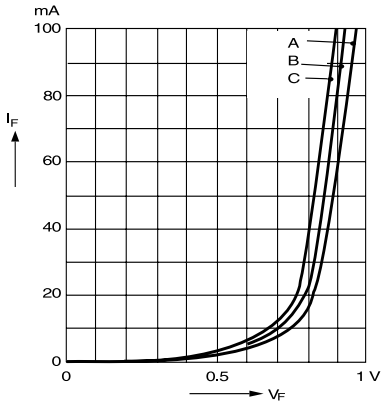


FIG.3 – TYPICAL VARIATION OF REVERSE CURRENT AT VARIOUS TEMPERATURES

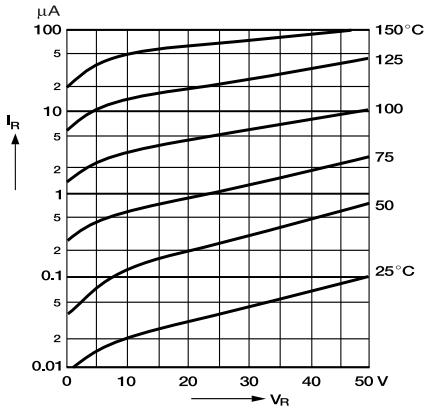


FIG.4 – TYPICAL CAPACITANCE CURVE AS A FUNCTION OF REVERSE VOLTAGE