

### SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE: 60 - 40 V

POWER DISSIPATION: 400 mW

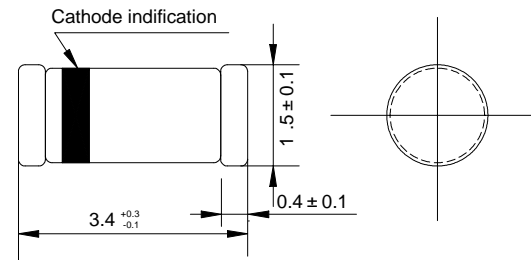
#### FEATURES

For general purpose applications  
 The low forward voltage drop and fast switching marking it ideal for protection of MOS devices, steering, biasing and coupling 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 $\mu$ s square wave	$I_{FSM}$	2.0			A
Power dissipation	$P_{tot}$	400			mW
Thermal resistance junction to ambient	$R_{\theta JA}$	320 <sup>1)</sup>			K/W
Junction temperature	$T_j$	125			
Storage temperature range	$T_{STG}$	- 55 --- + 150			

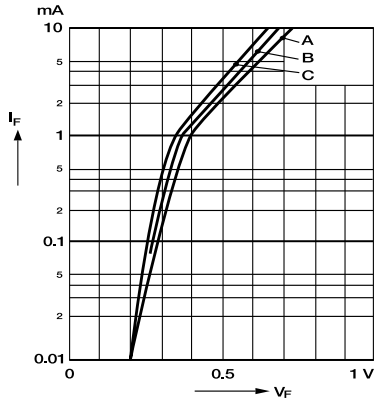
<sup>1)</sup> Device mounted on PC board 50mm×50mm×1.6mm .

## ELECTRICAL CHARACTERISTICS

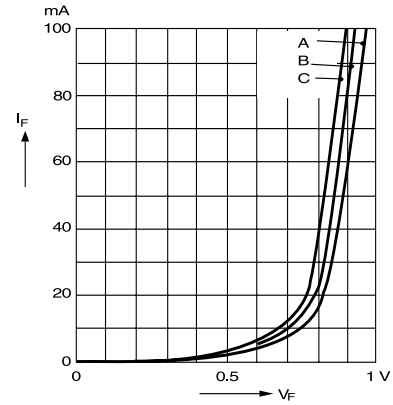
Parameter	Test Conditions		Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F=1\text{mA}$	LL101A	$V_F$	-	-	0.41	V
	$I_F=1\text{mA}$	LL101B		-	-	0.40	
	$I_F=1\text{mA}$	LL101C		-	-	0.39	
	$I_F=15\text{mA}$	LL101A		-	-	1.00	
	$I_F=15\text{mA}$	LL101B		-	-	0.95	
	$I_F=15\text{mA}$	LL101C		-	-	0.90	
Reverse current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

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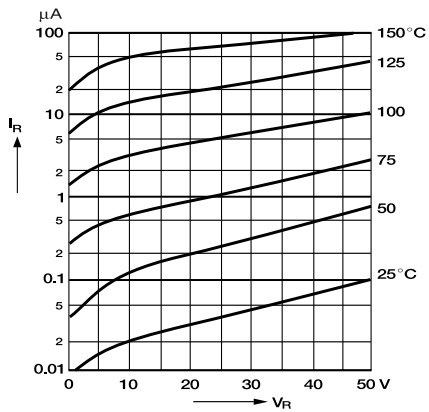
**FIG.1 – TYP.  $I_F$  VS  $V_F$  FOR PRIMARY CONDUCTION THROUGH THE SCHOTTKY BARRIERS**



**FIG.2 – TYP.  $I_F$  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**

