

SMALL SIGNAL SCHOTTKY DIODES

VOLTAGE RANGE: 60 - 40 V

POWER DISSIPATION: 400 mW

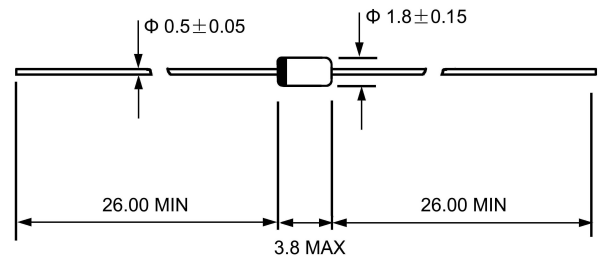
FEATURES

- ◇ 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: DO-35, glass case
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: Approx 0.13 grams

DO-35(GLASS)



Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C, ambient temperature unless otherwise specified.

ABSOLUTE MAXIMUM RATINGS AND THERMAL RESISTANCE

		SD101A	SD101B	SD101C	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 μ s 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

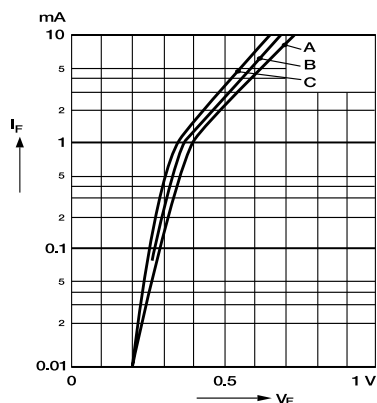
¹⁾ Device mounted on PC board 50mm×50mm×1.6mm .

ELECTRICAL CHARACTERISTICS

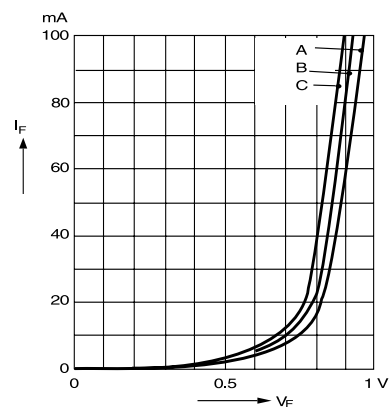
Parameter	Test Conditions		Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F=1\text{mA}$	SD101A	V_F	-	-	0.41	V
	$I_F=1\text{mA}$	SD101B		-	-	0.40	
	$I_F=1\text{mA}$	SD101C		-	-	0.39	
	$I_F=15\text{mA}$	SD101A		-	-	1.00	
	$I_F=15\text{mA}$	SD101B		-	-	0.95	
	$I_F=15\text{mA}$	SD101C		-	-	0.90	
Reverse current	$V_R=50\text{V}$	SD101A	I_R	-	-	200	n A
	$V_R=40\text{V}$	SD101B		-	-	200	
	$V_R=30\text{V}$	SD101C		-	-	200	
Breakdown voltage	$I_R=10\mu\text{A}$	SD101A	$V_{(BR)}$	60	-	-	V
		SD101B		50	-	-	
		SD101C		40	-	-	
Diode capacitance	$V_R=0, f=1\text{MHz}$	SD101A	C_D	-	-	2.0	pF
		SD101B		-	-	2.1	
		SD101C		-	-	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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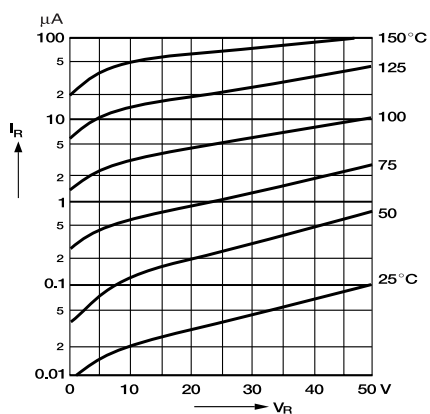
**FIG.1 – TYP. I_F VS V_F FOR PRIMARY CONDUCTION
THROUGH THE SCHOTTKY BARRIERS**



**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**

