

FEATURES

- Fast switching speed
- Surface mount package ideally suited for automatic insertion
- Electrical identical standard JEDEC.
- High conductor
- In compliance with EU RoHS 2002/95/EC directives

MECHANICAL DATA

Case : SOD-123FL, Plastic

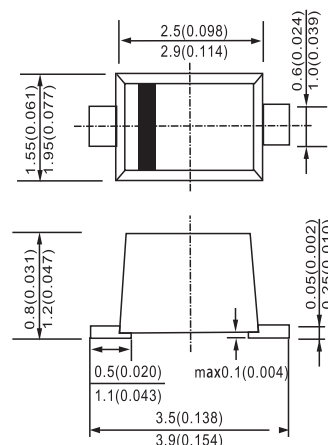
Terminals : Solderable per MIL-STD-750, Method 2026

Approx. Weight: 0.01 gram

Marking : RU

Polarity : Color band cathode

SOD-123FL



Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

ABSOLUTE RATINGS

PARAMETER	Symbol	Value	Units
Reverse Voltage	V_R	40	V
Peak Reverse Voltage	V_{RRM}	40	V
Average Rectified Current	I_O	1.0	A
Non-repetitive Peak Forward Surge Current at $t=8.3ms$	I_{FSM}	40	A

THERMAL CHARACTERISTICS

PARAMETER	Symbol	Value	Units
Thermal Resistance , Junction to Ambient	$R_{\theta JA}$	125	$^{\circ}C/W$
Junction Temperature	T_J	125	$^{\circ}C$
Storage Temperature at Temp= $25^{\circ}C$	T_{STG}	-55 to 125	$^{\circ}C$

Note.1 Mounted with minimum recommended pad size, PC Board FR4.

ELECTRICAL CHARACTERISTICS

PARAMETER	Symbol	Test Condition	MIN.	TYP.	MAX.	Units
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R=500 \mu A$	40	--	--	V
Reverse Current	I_R	$V_R=40 V$	--	--	450	μA
Forward Voltage	V_F	$I_F=0.5A$ $I_F=1.0A$	--	--	0.34 0.36	V
Diode Capacitance	C_T	$V_R=4V, f=1.0MHz$	--	--	150	pF

RATINGS AND CHARACTERISTIC CURVES

MBR1040VL

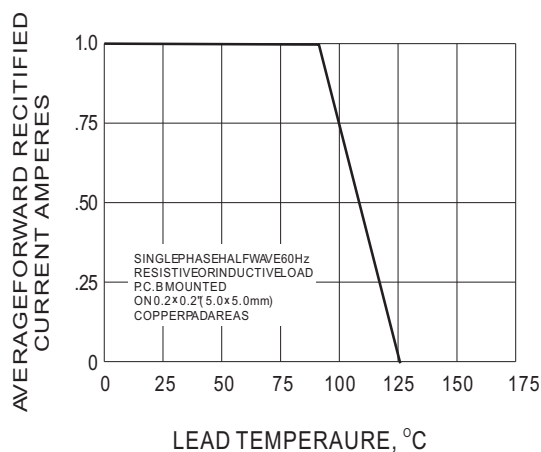


Fig.1- FORWARD CURRENT DERATING CURVE

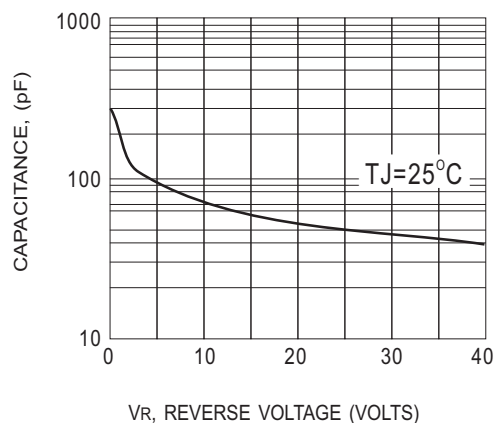


Fig.2- TYPICAL JUNCTION CHARACTERISTIC

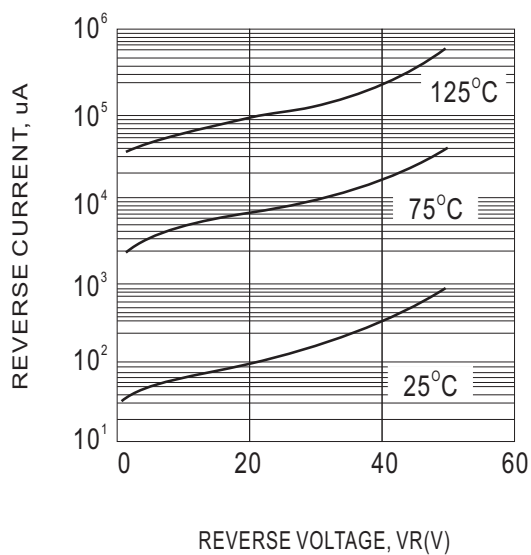


Fig.3- TYPICAL REVERSE CHARACTERISTIC

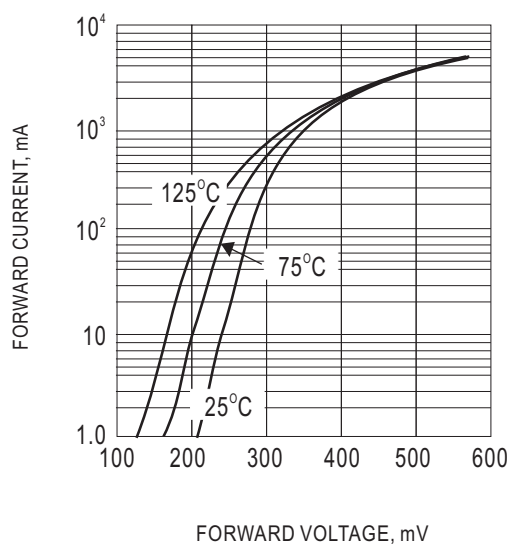


Fig.4- TYPICAL FORWARD CHARACTERISTIC