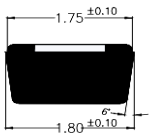
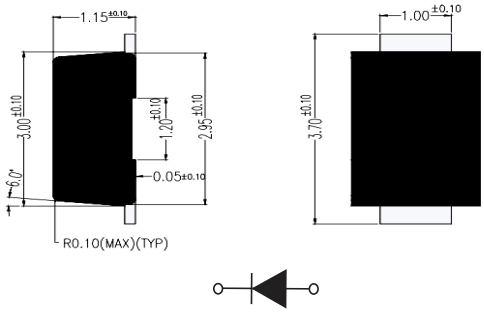
FEATURES

- Low Power Loss, Hgih Efficiency
- High Surge Capability
- High Current Capability and Low Forward Voltage Drop
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

SOD-123FL

Unit : inch(mm)





1 Cathode 2 Anode

MECHANICAL DATA

- Case : SOD-123FL, Plastic
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.0003 ounces, 0.0103 grams
- Polarity : Color band cathode

MAXIMUM RATINGS@T_A=25°C UNLESS OTHERWISE SPECIFIED

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

PARAMETER	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage Working peak Reverse Voltage DC Blocking Voltage @I_R=1.0mA	V_{RRM} V_{RWM} V_R	40	V
RMS Reverse Voltage	$V_{R(RMS)}$	28	V
Average Rectified Output Current	I_O	1	A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	30	A
Power Dissipation (Note 1)	P_D	450	mW
Typical Thermal Resistance Junction to Ambient (Note 1)	$R_{\theta JA}$	222	°C/W
Operating and Storage Temperature Range	T_J , T_{STG}	-65 to + 125	°C

Notes : 1. FR-4 Board = 70 x 60 x 1mm.

ELECTRICAL CHARACTERISTICS (T_A= 25°C unless otherwise noted)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Reverse Breakdown Voltage (Note 2)	$V_{(BR)R}$	I_R=1mA	40	-	-	V
Forward Voltage	V_F	I_F=0.1A I_F=1A I_F=3A	- - -	- - -	0.32 0.45 0.75	V
Reverse Leakage Current (Note 2)	I_R	V_R=40V, T_A=25°C V_R=40V, T_A=100℃ V_R=4V, T_A=25℃ V_R=4V, T_A=100℃ V_R=6V, T_A=25℃ V_R=6V, T_A=100℃	- - - - - -	- 8.5 10 1 15 1.5	220 - 50 - 75 -	µA mA µA mA µA mA
Total Capacitance	C_T	V_R=4V, f=1MHz	-	50	-	pF

Notes : 2. Short duration pulse test used to minmize self-heating effect.
3. Mounted on metal core PCB.

■ Characteristics (Typical)

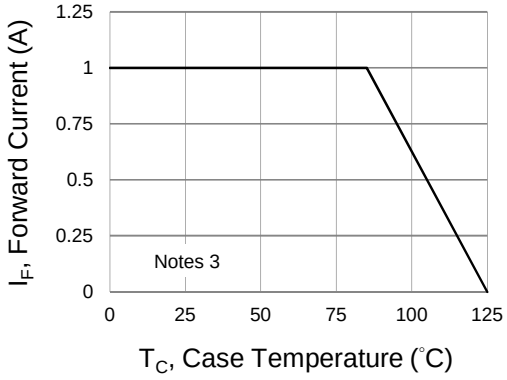


Fig.1 Forward Current Derating Curve

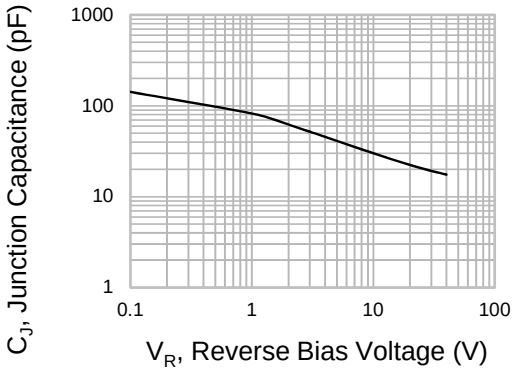


Fig.2 Typical Junction Capacitance

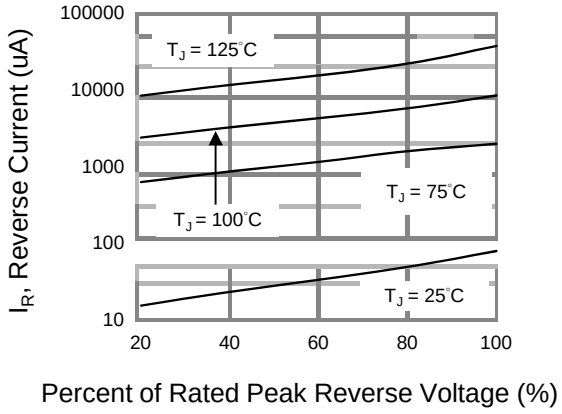


Fig.3 Typical Reverse Characteristics

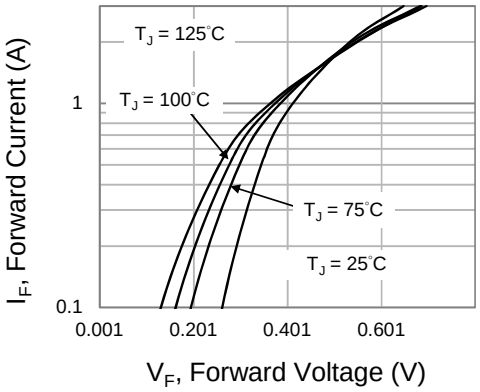


Fig.4 Typical Forward Characteristics

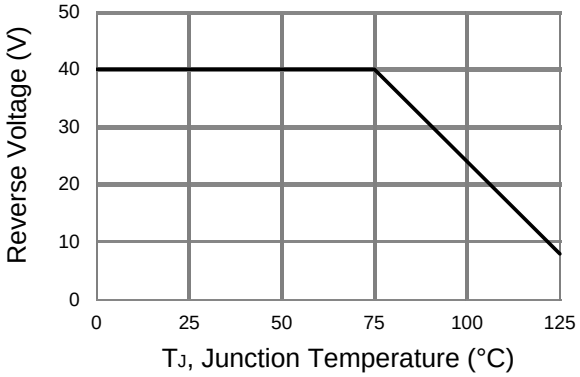


Fig.5 Operating Temperature Derating Curve

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