

**FEATURES**

- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications



SOD-123FL

**MECHANICAL DATA**

- Case: SOD-123FL
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 15mg 0.00048oz

**PINNING**

PIN	DESCRIPTION
1	Cathode
2	Anode

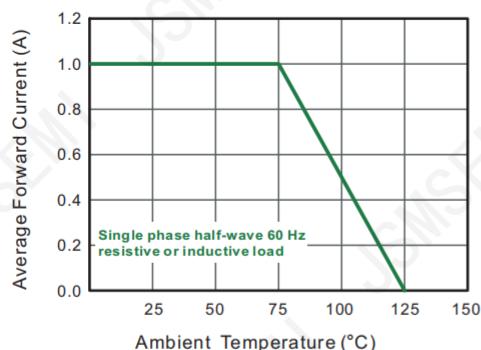
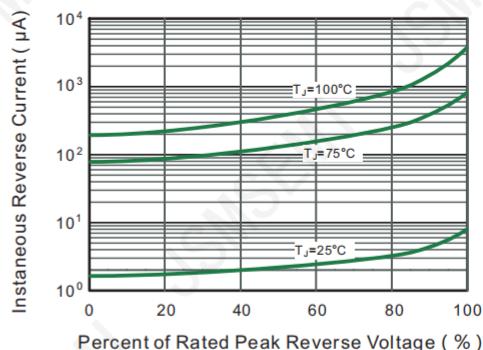
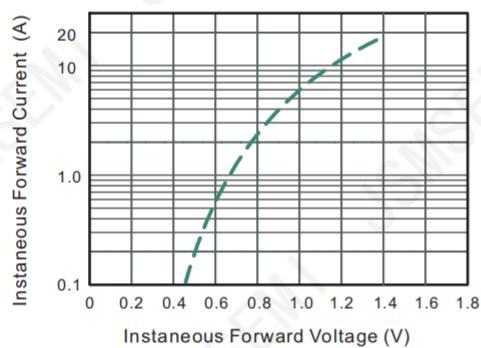
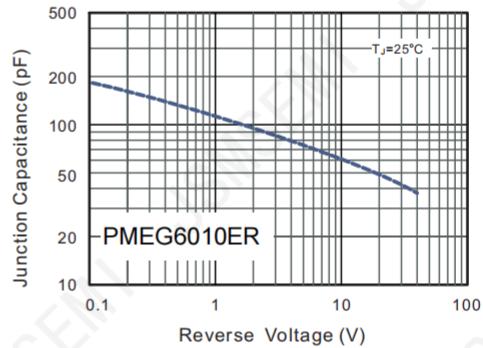
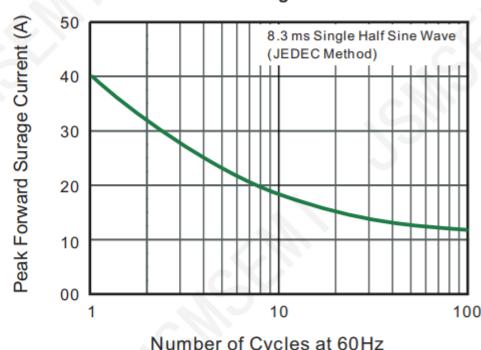
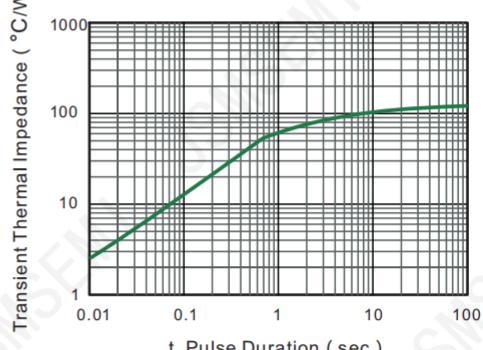
**Absolute Maximum Ratings and Electrical characteristics**

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz resistive or inductive load, for capacitive load, derate by 20 %

Parameter	Symbols	PMEG6010ER,115-JSM		Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	60		V
Maximum RMS voltage	$V_{RMS}$	42		V
Maximum DC Blocking Voltage	$V_{DC}$	60		V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	1.0		A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	40		A
Max Instantaneous Forward Voltage at 1 A	$V_F$	0.70		V
Maximum DC Reverse Current at Rated DC Reverse Voltage $T_a = 25^\circ\text{C}$ $T_a = 100^\circ\text{C}$	$I_R$	0.3 10		mA
Typical Junction Capacitance <sup>1)</sup>	$C_j$	80		pF
Typical Thermal Resistance <sup>2)</sup>	$R_{\theta JA}$	115		°C/W
Operating Junction Temperature Range	$T_j$	-55 ~ +125		°C
Storage Temperature Range	$T_{stg}$	-55 ~ +150		°C

1) Measured at 1MHz and applied reverse voltage of 4 V D.C.

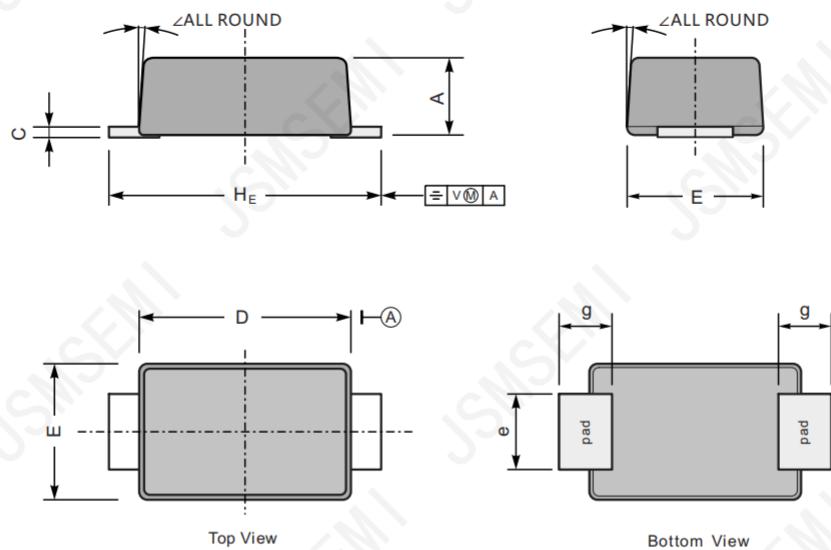
2) P.C.B. mounted with 0.2 X 0.2" (5 X 5 mm) copper pad areas.

**Fig.1 Forward Current Derating Curve**

**Fig.2 Typical Reverse Characteristics**

**Fig.3 Typical Forward Characteristic**

**Fig.4 Typical Junction Capacitance**

**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**

**Fig.6- Typical Transient Thermal Impedance**


## PACKAGE OUTLINE

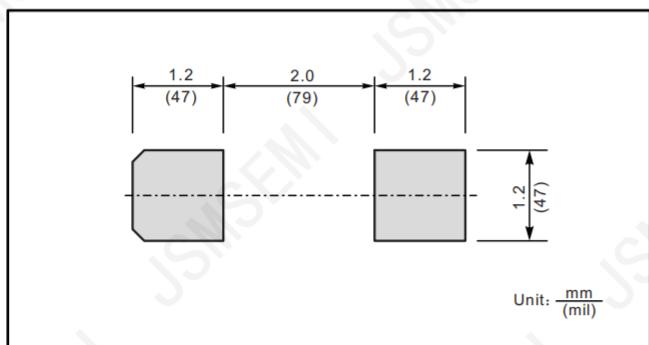
Plastic surface mounted package;2 leads

SOD123-FL



UNIT		A	C	D	E	e	g	H <sub>E</sub>	∠
mm	max	1.1	0.20	2.9	1.9	1.1	0.9	3.8	7°
	min	0.9	0.12	2.6	1.7	0.8	0.7	3.5	
mil	max	43	7.9	114	75	43	35	150	7°
	min	35	4.7	102	67	31	28	138	

The recommended mounting pad size



## Revision History

Rev.	Change	Date
V1.0	Initial version	6/27/2021

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