

## Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- High temperature soldering guaranteed:  
260 °C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension



SOD-123FL

## Mechanical Data

- Case: SOD-123FL, molded plastic
- Terminals: plated leads solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting position: Any



## Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified. Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

TYPE NUMBER	SYMBOL	PMEG4010ER,115-JSM	UNITS
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$	40	V
	$V_{RWM}$		
	$V_{DC}$		
RMS Reverse Voltage	$V_{RMS}$	28	V
Average Rectified Output Current @ $T_L = 90^\circ C$	$I_{F(AV)}$	1.0	A
Non-Repetitive Peak Forward Surge @ $T_j = 25^\circ C$ Current 8.3ms Single half sine-wave @ $T_j = 125^\circ C$ Superimposed On Rated Load (JEDEC Method)	$I_{FSM}$	30 24	A
Non-Repetitive Peak Forward Surge @ $T_j = 25^\circ C$ Current 1.0ms Single half sine-wave @ $T_j = 125^\circ C$ Superimposed On Rated Load (JEDEC Method)	$I_{FSM}$	60 48	A
10000 times of the wave surge current (time width 1ms, time interval 3s)	$I_{FSM}$	22.5	A
$I^2t$ Rating for Fusing ( $t < 8.3ms$ )	$I^2t$	3.735	A <sup>2</sup> s
Forward Voltage per element @ $I_F = 1.0A$	$V_{FM}$	0.55	V
	$T_{yp}$	0.50	
Peak Reverse Current @ $T_A = 25^\circ C$ At Rated DC Blocking Voltage @ $T_A = 100^\circ C$	$I_R$	0.1	mA
		10	
Typical Junction Capacitance (Note 1)	$C_J$	35	pF
Typical Thermal Resistance	$R_{\theta JA}$	65	°C/W
Operating junction temperature range	$T_J, T_{STG}$	-55 to +150	°C

Note: 1. Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C

Fig. 1 Typical Forward Current Derating Curve

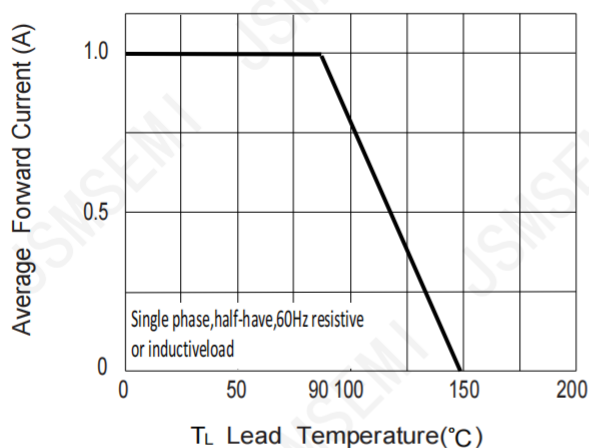


Fig. 2 Typical Instantaneous Forward Characteristics

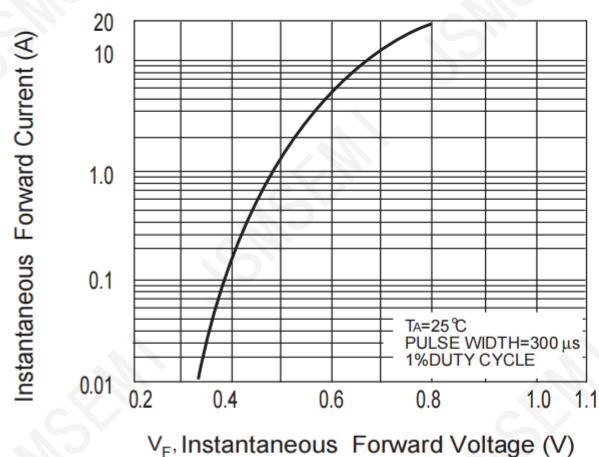


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

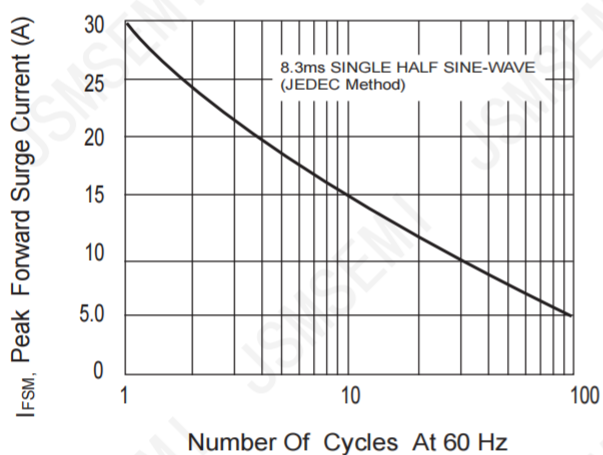


Fig.4 Typical Reverse Characteristics

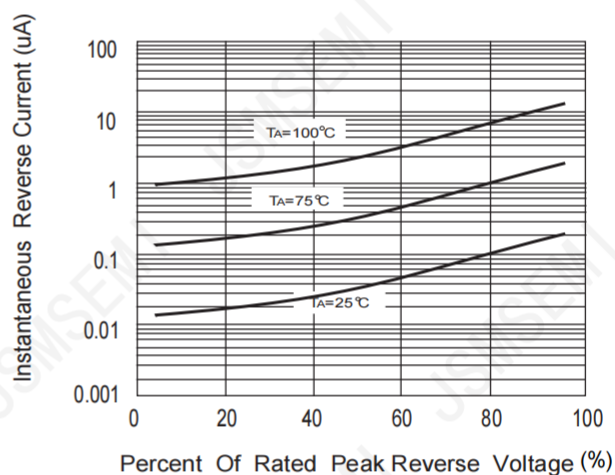
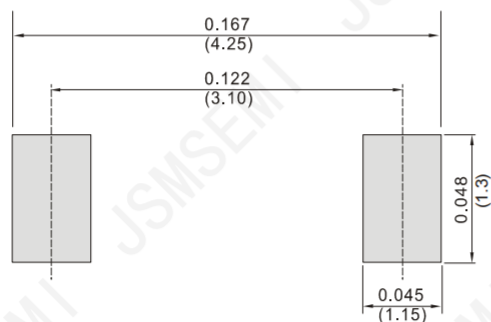
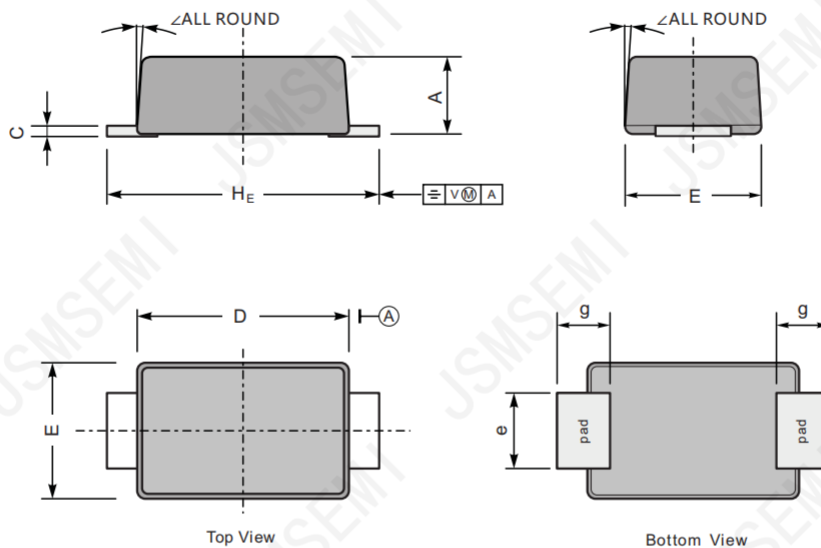


Fig.5 Typical Capacitance



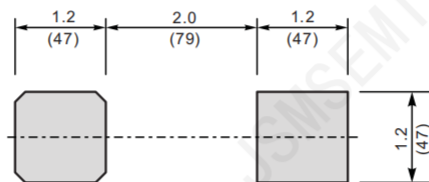
## Package Information

SOD-123FL



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	
	min	35	4.7	102	67	31	28	138	

The recommended mounting pad size



Unit:  $\frac{\text{mm}}{(\text{mil})}$

## Revision History

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

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