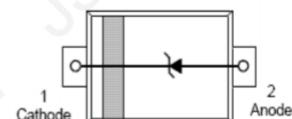


Description

The PMEG3020EJ,115-JSM is a Schottky Barrier Diode featuring a low forward voltage drop, which makes it highly suitable for applications requiring low power consumption. It comes in an extremely small SOD-323 package, enabling surface mounting, and is RoHS compliant with Green EMC. With a maximum repetitive reverse voltage of 40V and an average forward current of 2A, it can effectively perform in low voltage rectification, reverse polarity protection, and other low power consumption scenarios.



SOD-323



Features

- ◆ Low Forward Voltage Drop
- ◆ Extremely Small SOD-323 Package
- ◆ Surface Device Type Mounting
- ◆ RoHS Compliant
- ◆ Green EMC
- ◆ Band Indicates Cathode

Applications

- ◆ Low voltage rectification
- ◆ Reverse polarity protection
- ◆ Low power consumption applications

Maximum Ratings(TA=25°C)

Symbol	Parameter	Value	Units
V _{RRM}	Maximum repetitive reverse voltage	40	V
V _R	Maximum DC blocking reverse voltage	40	V
I _{F(AV)}	Average Forward Current	2	A
I _{FSM}	Peak Forward Surge Current (At 8.3ms single half sine-wave)	20	A
T _J	Operating Junction Temperature	-50 to +125	°C
T _{STG}	Storage Temperature Range	-50 to +150	°C

These ratings are limiting values above which the serviceability of the diode may be impaired.

Electrical Characteristics(TA=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Breakdown Voltage at I _R =0.1mA	V _{BR}	40			V
Reverse Leakage Current at V _R =40V	I _R			80	μA
Forward Voltage at I _F =1A	V _F		0.37	0.42	V
Forward Voltage at I _F =2A	V _F			0.50	V
Junction Capacitance V _R = 0V, f = 1MHz	C _J		340	400	pF

Typical Performance Characteristics (TA=25°C unless otherwise Specified)

Fig 1 Typical Forward Current Derating Curve

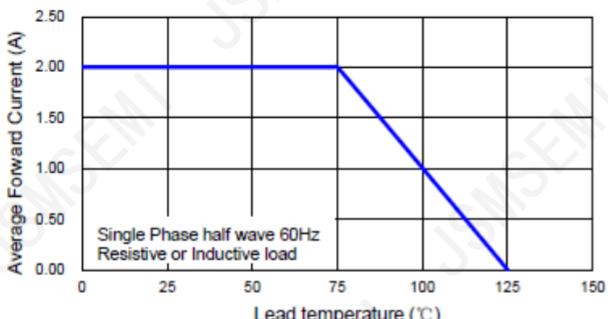


Fig 2 Total Capacitance vs. Reverse Voltage

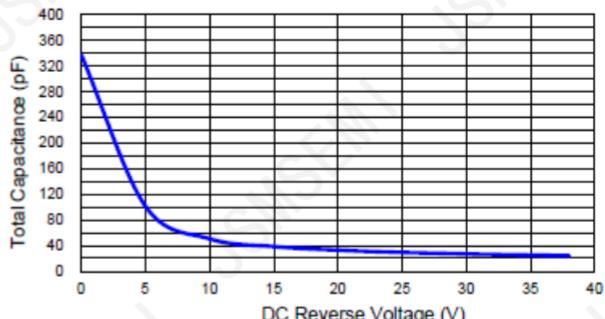


Fig 3 Typical Instantaneous Forward Characteristics

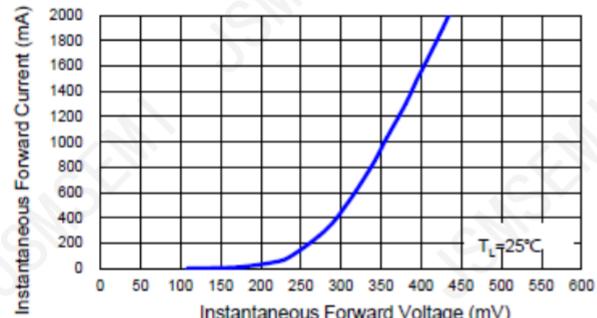


Fig 4 Typical Reverse Characteristics

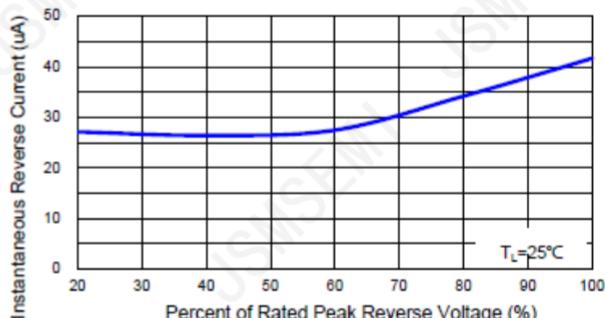
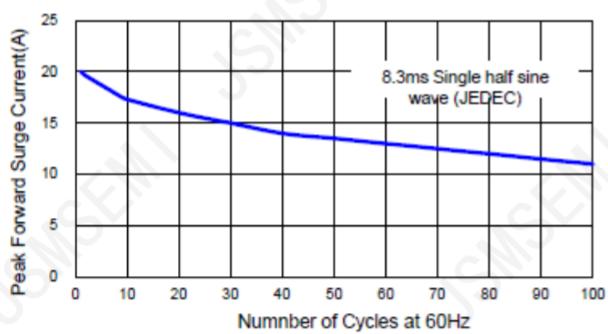
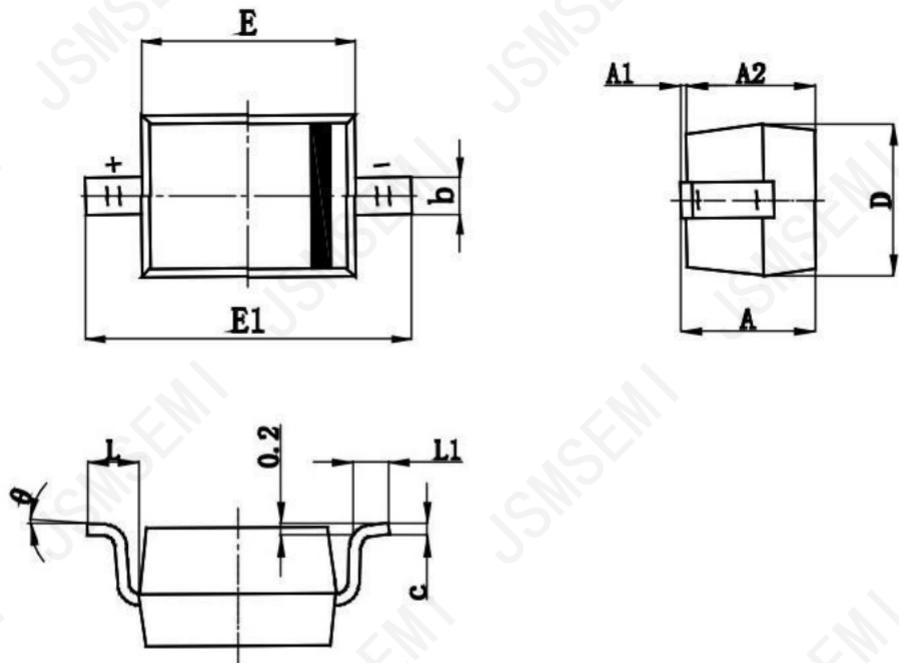


Fig 5 Max. Non-repetitive Forward Surge Current

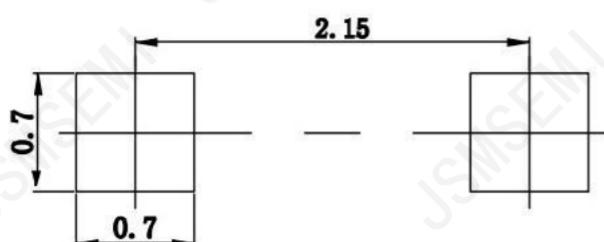


SOD-323 Package Qutline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A		1.000		0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.900	0.031	0.035
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.550	2.750	0.100	0.108
L	0.475REF.		0.019REF.	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

SOD-323 Suggested Pad Layout


Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.

Revision History

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

Important Notice

JSMSEMI Semiconductor (JSMSEMI) PRODUCTS ARE NEITHER DESIGNED NOR INTENDED FOR USE IN MILITARY AND/OR AEROSPACE, AUTOMOTIVE OR MEDICAL DEVICES OR SYSTEMS UNLESS THE SPECIFIC JSMSEMI PRODUCTS ARE SPECIFICALLY DESIGNATED BY JSMSEMI FOR SUCH USE. BUYERS ACKNOWLEDGE AND AGREE THAT ANY SUCH USE OF JSMSEMI PRODUCTS WHICH JSMSEMI HAS NOT DESIGNATED FOR USE IN MILITARY AND/OR AEROSPACE, AUTOMOTIVE OR MEDICAL DEVICES OR SYSTEMS IS SOLELY AT THE BUYER'S RISK.

JSMSEMI assumes no liability for application assistance or customer product design. Customers are responsible for their products and applications using JSMSEMI products.

Resale of JSMSEMI products or services with statements different from or beyond the parameters stated by JSMSEMI for that product or service voids all express and any implied warranties for the associated JSMSEMI product or service. JSMSEMI is not responsible or liable for any such statements.

JSMSEMI All Rights Reserved. Information and data in this document are owned by JSMSEMI wholly and may not be edited, reproduced, or redistributed in any way without the express written consent from JSMSEMI.

Any and all information described or contained herein are subject to change without notice due to product/technology improvement, etc. When designing equipment, refer to the "Delivery Specification" for the JSMSEMI product that you intend to use.

For additional information please contact Kevin@jsmsemi.com or visit www.jsmsemi.com