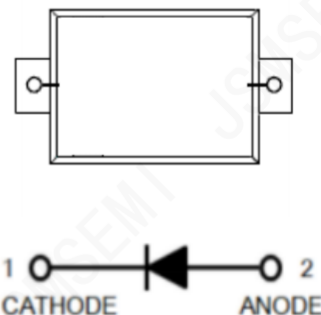


Description

The PMEG3020EP,115-JSM are surface mount Schottky barrier rectifiers designed to offer reliable performance in various electronic applications. These rectifiers feature a metal silicon junction with majority carrier conduction, enabling low power loss and high efficiency. With reverse voltage ranging from 20V to 200V and a forward current of 3.0A, they are well suited for use in low voltage, high frequency scenarios. Their surface mount design (SOD-128 package) makes them convenient for integration into modern circuit layouts, while their high forward surge current capability ensures robustness in demanding operating conditions.



Features

- ◆ Metal silicon junction with majority carrier conduction
- ◆ Suitable for surface mounted applications
- ◆ Low power loss and high efficiency
- ◆ High forward surge current capability
- ◆ RoHS compliant
- ◆ SOD-128 package with 2 leads

Applications

- ◆ Low voltage, high frequency inverters
- ◆ Free wheeling circuits
- ◆ Polarity protection applications
- ◆ Power supplies
- ◆ DC-DC converters
- ◆ Battery charging systems

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 current derate by 20%.

Parameter	Symbols	PMEG3020EP,115-JSM	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	V
Maximum RMS voltage	V_{RMS}	14	V
Maximum DC Blocking Voltage	V_{DC}	20	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	3.0	A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	80	A
Max Instantaneous Forward Voltage at 3 A	V_F	0.55	V
Maximum DC Reverse Current $T_a = 25^{\circ}C$ at Rated DC Reverse Voltage $T_a = 100^{\circ}C$	I_R	0.5 10	mA
Typical Junction Capacitance ¹⁾	C_j	250	pF
Typical Thermal Resistance ²⁾	$R_{\theta JA}$	40	°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.

Typical Performance Curves

Fig.1 Forward Current Derating Curve

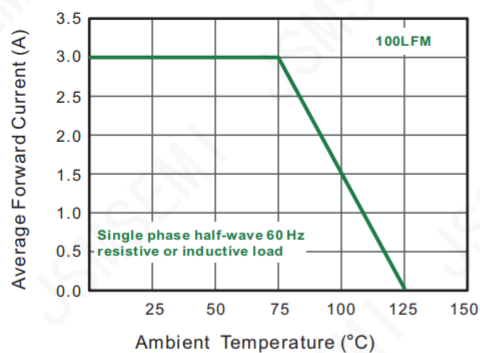


Fig.2 Typical Reverse Characteristics

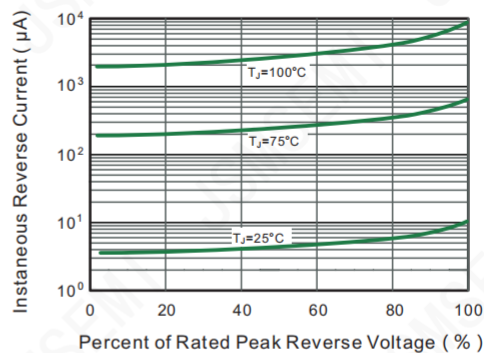


Fig.3 Typical Forward Characteristic

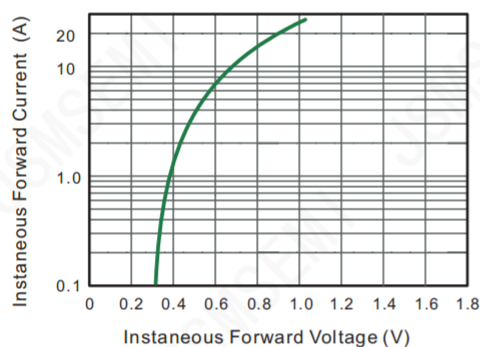


Fig.4 Typical Junction Capacitance

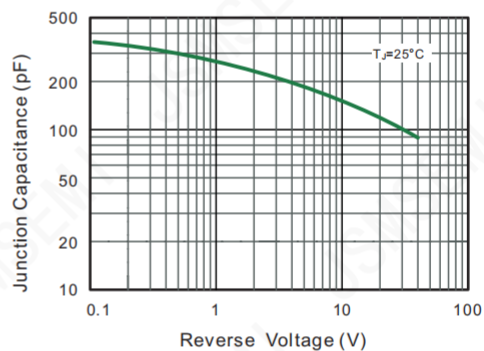


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

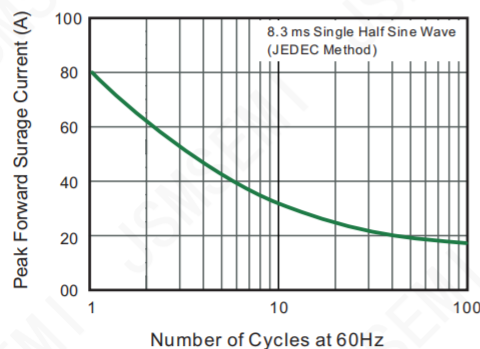
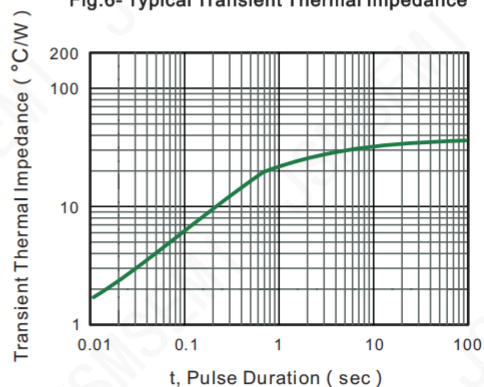
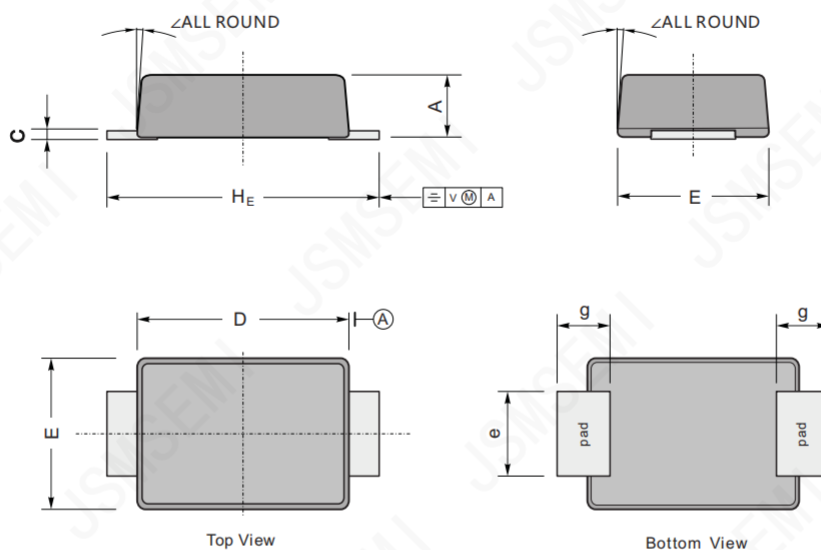


Fig.6- Typical Transient Thermal Impedance



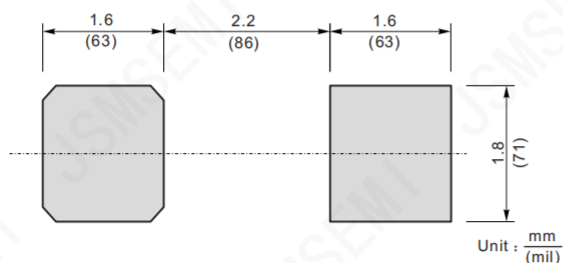
SOD-128 Package Outline Dimensions



Plastic surface mounted package; 2 leads

UNIT		A	C	D	E	e	g	H _E	\angle
mm	max	1.1	0.20	3.7	2.7	1.6	1.2	4.9	7°
	min	0.9	0.12	3.3	2.4	1.3	0.8	4.4	
mil	max	43	7.9	146	106	63	47	193	
	min	35	4.7	130	94	51	31	173	

The recommended mounting pad size



Revision History

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

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