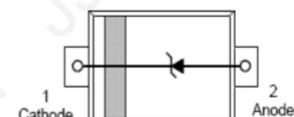


Description

The PMEG2020AEA,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

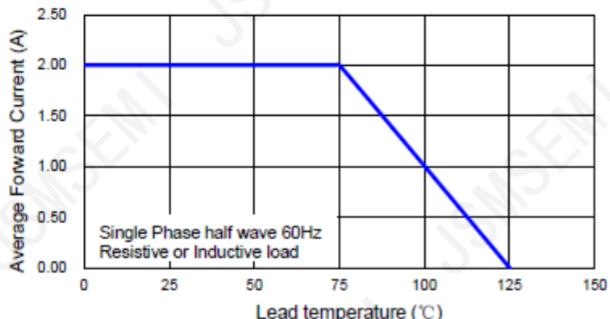


Fig 2 Total Capacitance vs. Reverse Voltage

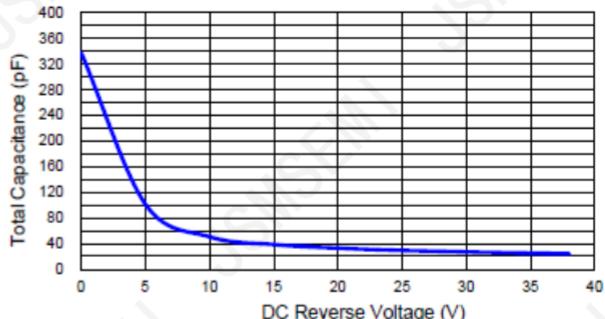


Fig 3 Typical Instantaneous Forward Characteristics

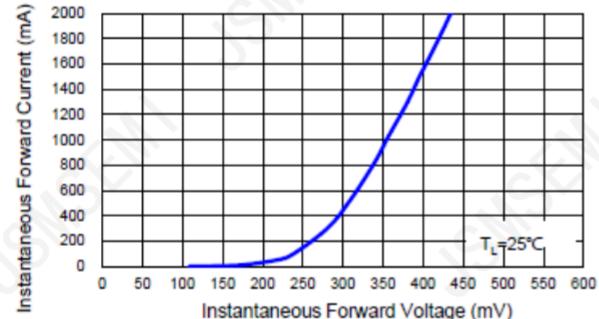


Fig 4 Typical Reverse Characteristics

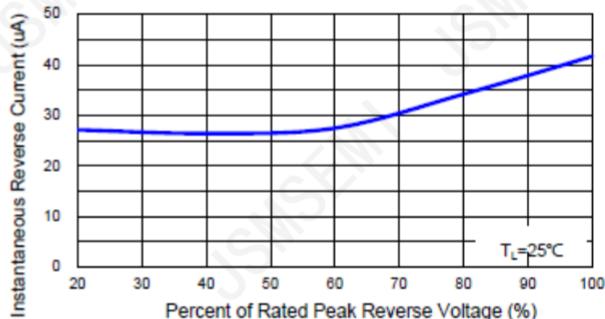
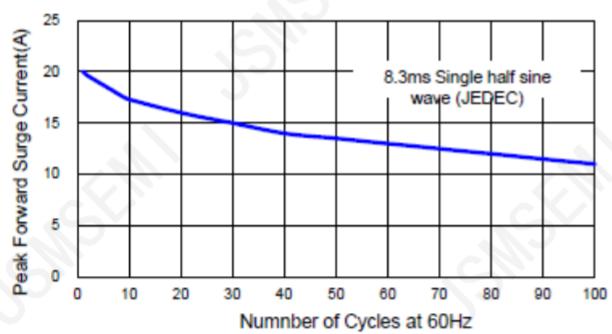
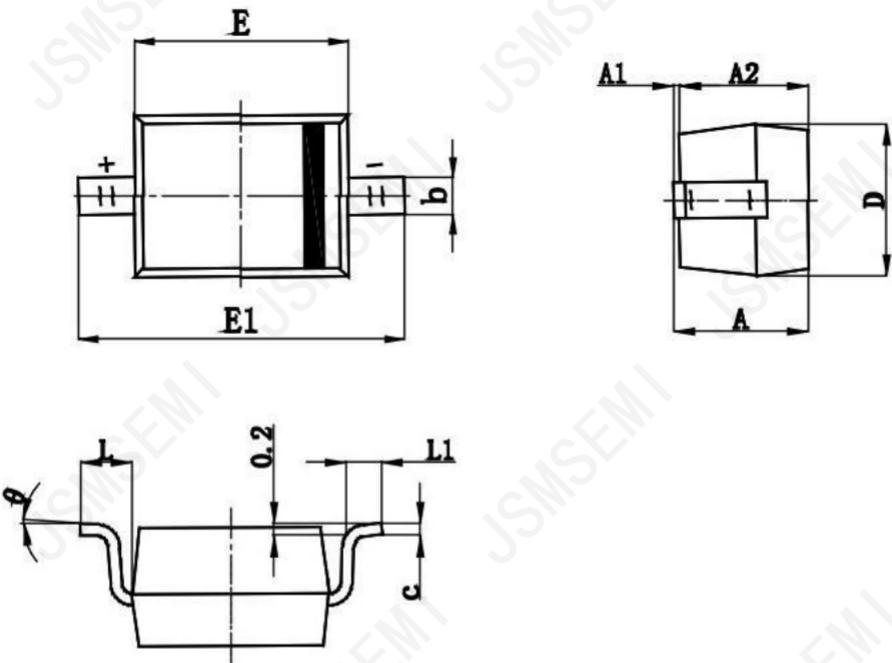


Fig 5 Max. Non-repetitive Forward Surge Current

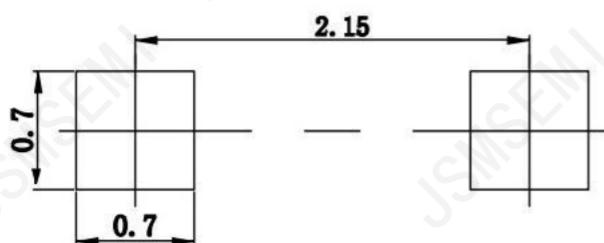


SOD-323 Package Qutline Dimensions



| 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 |
| | | |

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