



PJEC2415VM1WS-AU

ESD Protection

V_{RWM}

24V/15V

Features

- Bidirectional ESD protection of one line
- IEC61000-4-2(ESD): ±15kV Air, ±8kV Contact Compliance with the capability up to ±30kV
- IEC61000-4-4(EFT): 40A(5/50nS)
- IEC61000-4-5(Lightning): 3A(8/20μS)
- Low leakage current, maximum of 0.05μA at rated voltage
- Acquire quality system certificate : TS16949
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2011/65/EU directive.
- Green molding compound as per IEC61249 Std.
(Halogen Free)

Mechanical Data

- Case: SOD-323, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.00014 ounces, 0.0041 grams
- Marking: VM

Applications

- LIN-bus protection
- Automotive application

SOD-323

Unit : inch(mm)

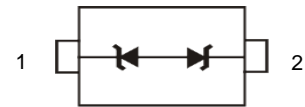
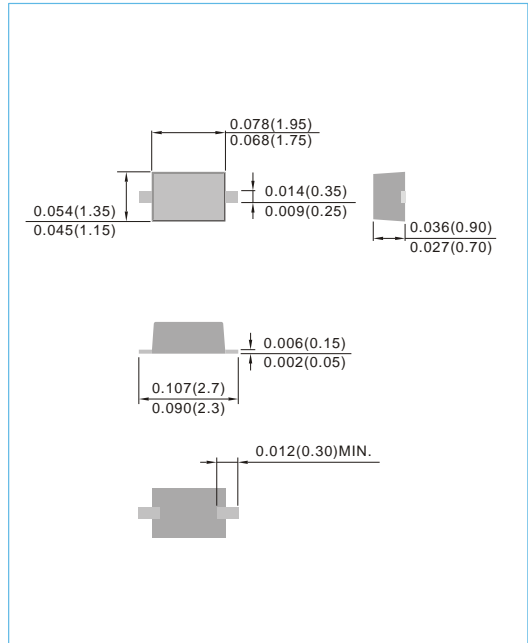


Fig.130(TOP VIEW)



Cathode 1 (15V)
Cathode 2 (24V)

Maximum Ratings (T_A=25°C unless otherwise noted)

| PARAMETER | SYMBOL | LIMIT | UNITS |
|---|------------------|-------------|-------|
| Peak Pulse Power Dissipation(tp=8/20μs) | P _{PP} | 160 | W |
| ESD IEC61000-4-2(Air) | V _{ESD} | ±30 | kV |
| ESD IEC61000-4-2(Contact) | | ±30 | |
| Operating Junction Temperature | T _J | -55 to +150 | °C |
| Storage Temperature Range | T _{STG} | -55 to +150 | °C |



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Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

| PARAMETER | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNITS |
|---------------------------------|-----------|---|------|------|------|-------|
| Reverse Stand-Off Voltage (24V) | V_{RWM} | - | - | - | 24 | V |
| Reverse Stand-Off Voltage (15V) | | - | - | - | 15 | V |
| Reverse Breakdown Voltage (24V) | V_{BR} | $I_{BR}=5\text{mA}$ | 25.4 | - | 30.3 | V |
| Reverse Breakdown Voltage (15V) | | | 17.1 | - | 20.3 | V |
| Reverse Leakage Current (24V) | I_R | $V_R=24\text{V}$ | - | 1 | 50 | nA |
| Reverse Leakage Current (15V) | | $V_R=15\text{V}$ | - | 1 | 50 | |
| Clamping Voltage (24V) | V_{CL} | $I_{PP}=1\text{A}, t_P=8/20\mu\text{s}$ | - | - | 40 | V |
| | | $I_{PP}=3\text{A}, t_P=8/20\mu\text{s}$ | - | - | 50 | |
| Clamping Voltage (15V) | | $I_{PP}=1\text{A}, t_P=8/20\mu\text{s}$ | - | - | 25 | |
| | | $I_{PP}=5\text{A}, t_P=8/20\mu\text{s}$ | - | - | 35 | |
| Off State Junction Capacitance | C_J | 0Vdc Bias $f=1\text{MHz}$ | - | 13 | 17 | pF |



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TYPICAL CHARACTERISTIC CURVES

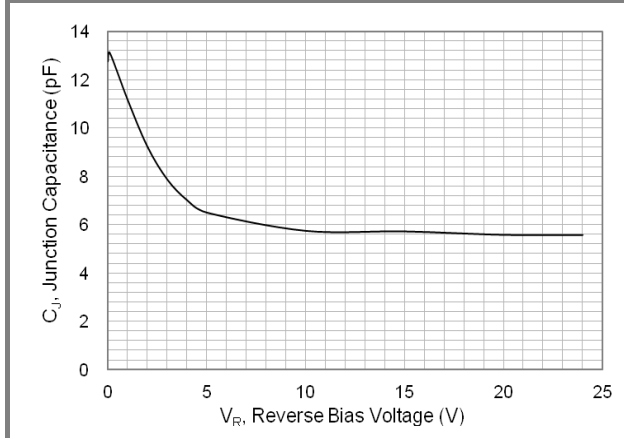


Fig.1 Typical Junction Capacitance(24V)

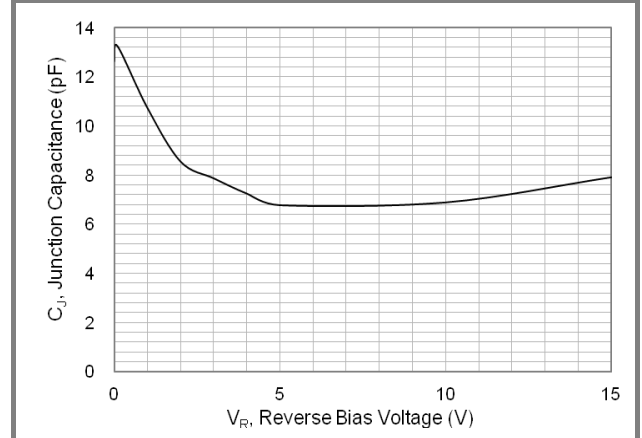


Fig.2 Typical Junction Capacitance(15V)

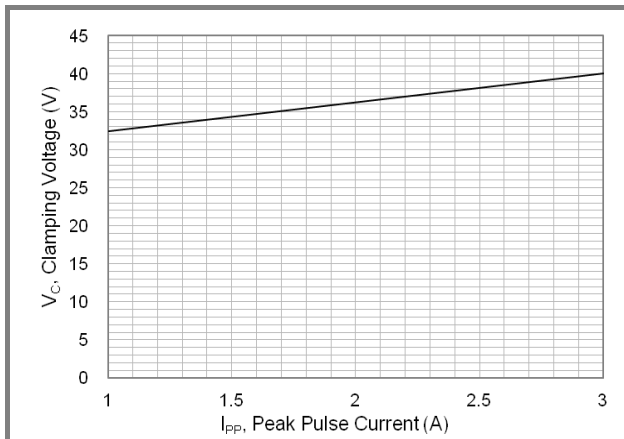


Fig.3 Typical Peak Clamping Voltage(8/20µs)(24V)

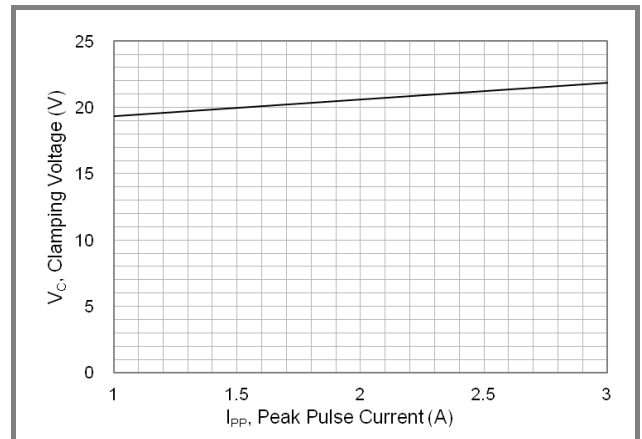


Fig.4 Typical Peak Clamping Voltage(8/20µs)(15V)

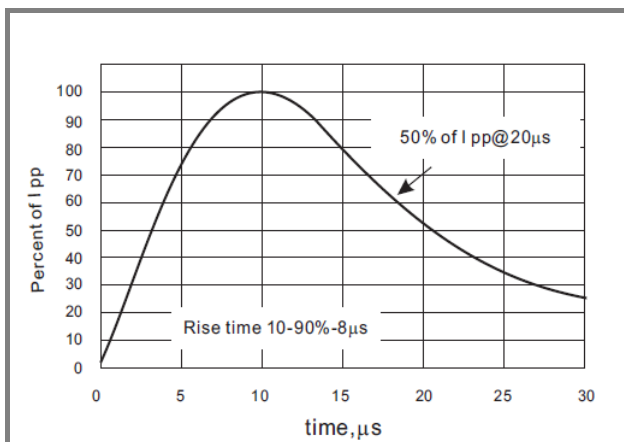


Fig.5 8/20µs Pulse Waveform

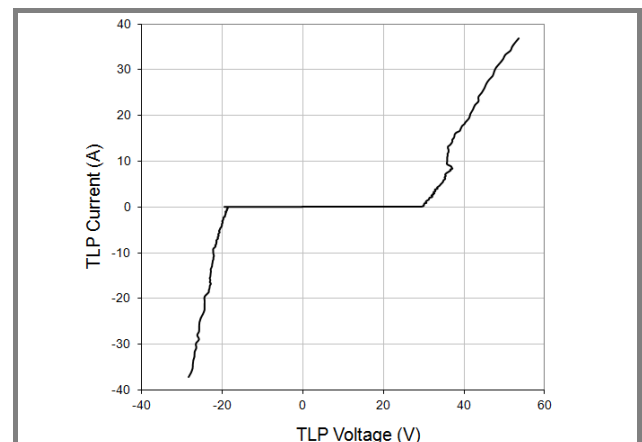


Fig.6 Transmission Line Pulsing (TLP) Measurement

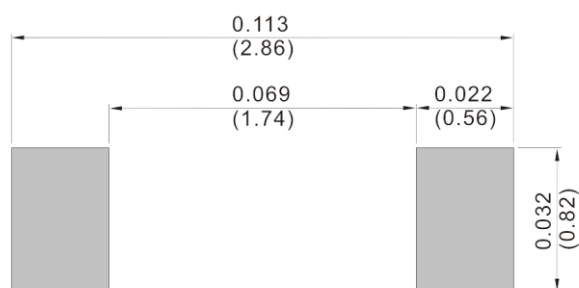


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MOUNTING PAD LAYOUT

SOD-323

Unit : inch(mm)



ORDER INFORMATION

- Packing information
T/R – 12K per 13" plastic Reel
T/R – 5K per 7" plastic Reel



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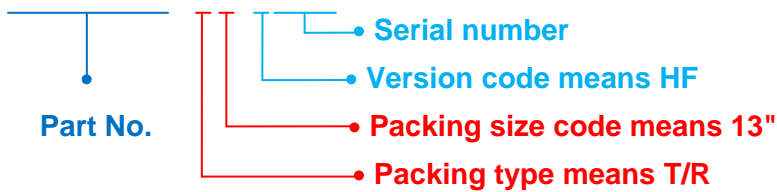
Part No_packing code_Version

PJEC2415VM1WS-AU_R1_000A1

PJEC2415VM1WS-AU_R2_000A1

For example :

RB500V-40_R2_00001



| Packing Code XX | | | | Version Code XXXXX | | |
|--------------------------------------|----------------------|----------------------------------|----------------------|---------------------------|----------------------|---------------------------------------|
| Packing type | 1 st Code | Packing size code | 2 nd Code | HF or RoHS | 1 st Code | 2 nd -5 th Code |
| Tape and Ammunition Box (T/B) | A | N/A | 0 | HF | 0 | serial number |
| Tape and Reel (T/R) | R | 7" | 1 | RoHS | 1 | serial number |
| Bulk Packing (B/P) | B | 13" | 2 | | | |
| Tube Packing (T/P) | T | 26mm | X | | | |
| Tape and Reel (Right Oriented) (TRR) | S | 52mm | Y | | | |
| Tape and Reel (Left Oriented) (TRL) | L | PANASERT T/B CATHODE UP (PBCU) | U | | | |
| FORMING | F | PANASERT T/B CATHODE DOWN (PBCD) | D | | | |



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