



# PJSD03LCTM

## BI-DIRECTIONAL ESD PROTECTION DIODE

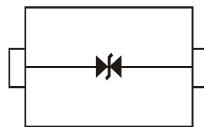
This bi-directional TVS has been designed to protect sensitive equipment against ESD and to prevent Latch-Up events in CMOS circuitry operating at 3.3Vdc and below. This offers an integrated solution to protect a single data line where the board space is a premium.

### SPECIFICATION FEATURES

- 50W Power Dissipation (8/20µs Waveform)
- Low Leakage Current, Maximum of 2.5µA@3.3Vdc
- Very low Clamping voltage
- IEC 61000-4-2 ESD ± 15kV air, ± 8kV Contact Compliance
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.00002 ounces, 0.0005grams
- Case : SOD-923, Plastic
- Marking : O

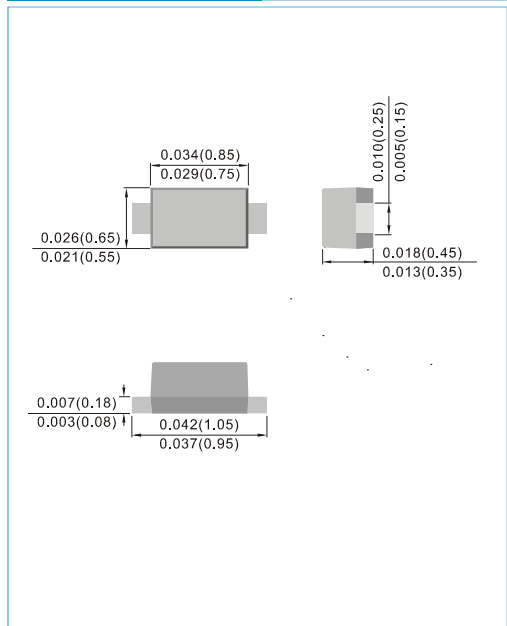
### APPLICATIONS

- Video I/O ports protection
- Set Top Boxes
- Portable Instrumentation



### SOD-923

Unit : inch(mm)



### MAXIMUM RATINGS (TA=25°C unless otherwise noted)

| RATING   | SYMBOL                            | VALUE       | UNITS |
|--|-----------------------------------|-------------|-------|
| Peak Pulse Power (8/20 µs Waveform)              | PP <sub>P</sub>                   | 50          | W     |
| Peak Pulse Current (8/20 µs Waveform)            | I <sub>PPM</sub>                  | 3           | A     |
| IEC61000-4-2 Contact                             | V <sub>ESD</sub>                  | ±8          | kV    |
| IEC61000-4-2 Air                                 | V <sub>ESD</sub>                  | ±15         | kV    |
| Operating Junction and Storage Temperature Range | T <sub>J</sub> , T <sub>STG</sub> | -55 to +150 | °C    |

### ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

| PARAMETER                      | SYMBOL           | CONDITION            | MIN. | TYP. | MAX. | UNITS |
|--------------------------------|------------------|----------------------|------|------|------|-------|
| Reverse Stand-Off Voltage      | V <sub>RWM</sub> |                      | -    | -    | 3.3  | V     |
| Reverse Breakdown Voltage      | V <sub>BR</sub>  | I <sub>BR</sub> =1mA | 5.4  | -    | 7.0  | V     |
| Reverse Leakage Current        | I <sub>R</sub>   | V <sub>R</sub> =3.3V | -    | -    | 2.5  | µA    |
| Clamping Voltage (8/20ms)      | V <sub>C</sub>   | I <sub>PP</sub> =3A  | -    | 14   | 16.6 | V     |
| Off State Junction Capacitance | C <sub>J</sub>   | 0 Vdc Bias f=1MHz    | -    | 13   | -    | pF    |



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## CHARACTERISTIC CURVES

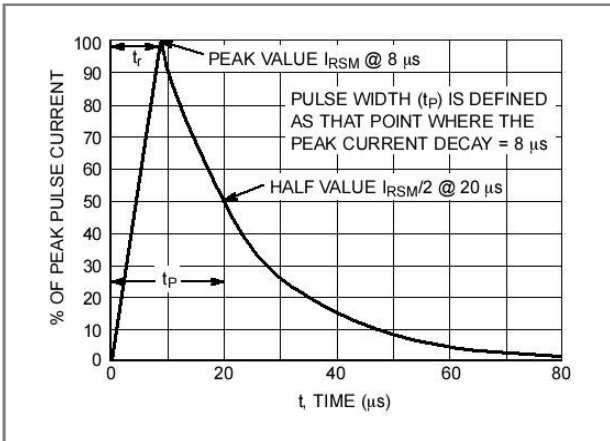


Fig.1 8X20us Pulse Waveform

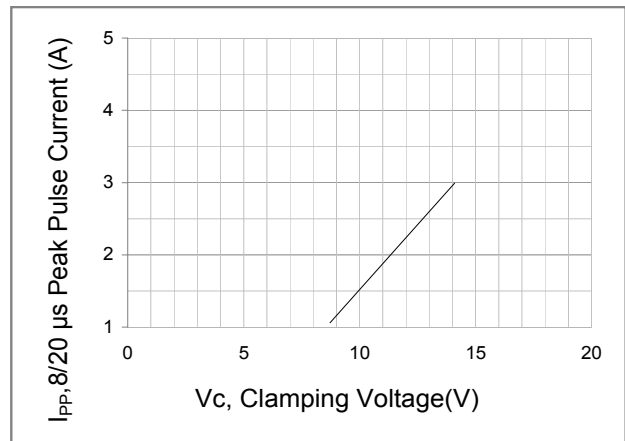


Fig.2 Typical Peak Clamping Voltage

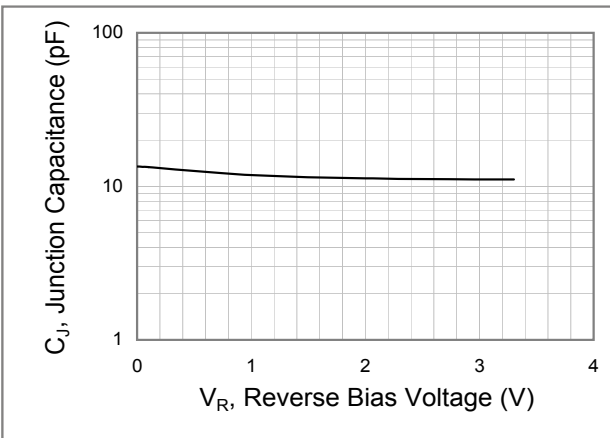


Fig.3 Typical Junction Capacitance

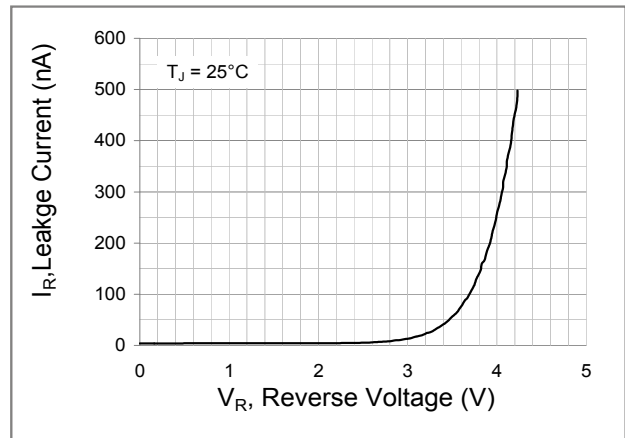


Fig.4 Typical Reverse Characteristics

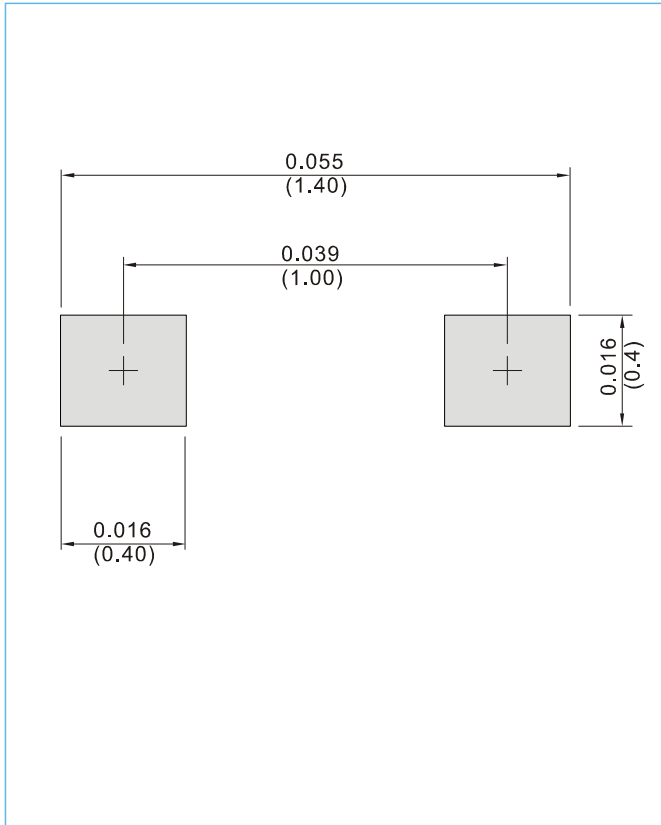


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## MOUNTING PAD LAYOUT

SOD-923

Unit : inch(mm)



## ORDER INFORMATION

- Packing information  
T/R - 8K per 7" plastic Reel



# PJSD03LCTM

Part No\_packing code\_Version

PJSD03LCTM\_R1\_00001

For example :

RB500V-40\_R2\_00001



| Packing Code <b>XX</b>               |                      |                                  |                      | Version Code <b>XXXXX</b> |                      |                                       |
|--------------------------------------|----------------------|----------------------------------|----------------------|---------------------------|----------------------|---------------------------------------|
| Packing type                         | 1 <sup>st</sup> Code | Packing size code                | 2 <sup>nd</sup> Code | HF or RoHS                | 1 <sup>st</sup> Code | 2 <sup>nd</sup> -5 <sup>th</sup> 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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