## PJSD12LCFN2

## 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 12 Vdc and below. This offers an integrated solution to protect a single data line where the board space is a premium.

## SPECIFICATION FEATURES

- 115W Power Dissipation ( $8 / 20 \mu \mathrm{~s}$ Waveform)
- Low Leakage Current, Maximum of $0.1 \mu \mathrm{~A} @ 12 \mathrm{Vdc}$
- Very low Clamping voltage
- IEC 61000-4-2 ESD $\pm 30 k V$ air, $\pm 30 k V$ Contact Compliance
- Lead free in compliance with EU RoHS2.0
(2011/65/EU \& 2015/865/EU directive)
- Green molding compound as per IEC61249 Std. . (Halogen Free)


## MECHANICAL DATA

- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.00004 ounces , 0.001 grams
- Case : DFN 2L, Plastic
- Marking : BX


## APPLICATIONS

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


Fig.156(TOP VIEW)

MAXIMUM RATINGS ( $\mathrm{T}_{\mathrm{A}}=25^{\circ} \mathrm{C}$ unless otherwise noted)

| RATING | SYMBOL | VALUE | UNITS |
| :--- | :---: | :---: | :---: |
| Peak Pulse Power (8/20 $\mu \mathrm{s}$ Waveform) | PPP | 115 | W |
| Peak Pulse Current ( $8 / 20 \mu \mathrm{~s}$ Waveform) | I PPM | 5 | A |
| ESD Voltage per IEC61000-4-2 (Contact) | VESD | $\pm 30$ | kV |
| ESD Voltage per IEC61000-4-2 (Air) | VESD | $\pm 30$ | kV |
| ESD Voltage (HBM) | VESD | $\pm 8$ | kV |
| Operating Junction and Storage Temperature Range | TJ,TsTG | -55 to +150 | ${ }^{\circ} \mathrm{C}$ |

## PJSD12LCFN2

ELECTRICAL CHARACTERISTICS ( $\mathrm{T}_{\mathrm{A}}=\mathbf{2 5}{ }^{\circ} \mathrm{C}$ unless otherwise noted)

| PARAMETER | SYMBOL | CONDITIONS | MIN. | TYP. | MAX. | UNITS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Reverse Stand-Off Voltage | VRWM |  | - | - | 12 | V |
| Reverse Breakdown Voltage | Vbr | $\\|_{\text {BR }}=1 \mathrm{~mA}$ | 13 | - | - | V |
| Reverse Leakage Current | IR | $V_{R}=12 \mathrm{~V}$ | - | - | 0.1 | $\mu \mathrm{A}$ |
| Clamping Voltage ( $8 / 20 \mu \mathrm{~s}$ ) | Vc | $\begin{aligned} & I_{\mathrm{PP}}=1 \mathrm{~A} \\ & \mathrm{I}_{\mathrm{Pp}}=5 \mathrm{~A} \end{aligned}$ |  | - | $\begin{aligned} & 20 \\ & 23 \end{aligned}$ | V |
| Off State Junction Capacitance | CJ | 0 Vdc Bias $\mathrm{f}=1 \mathrm{MHz}$ | - | 15 | - | pF |

## TYPICAL CHARACTERISTIC CURVES



Fig. 1 Typical peak clamping voltage( $8 / 20 \mu \mathrm{~S}$ )


Fig. 3 Typical Junction Capacitance



Fig. 4 Typical Reverse Characteristics

## PJSD12LCFN2

Part No Packing Code Version

| Part No Packing Code | Package Type | Packing Type | Marking | Version |
| :---: | :---: | :---: | :---: | :---: |
| PJSD12LCFN2_R1_00001 | DFN 2L | 8 K pcs / 7" reel | BX | Halogen free |

MOUNTING PAD LAYOUT

DFN 2L


## PJSD12LCFN2

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