

为您的产品保驾护航

PRODUCT DATASHEET

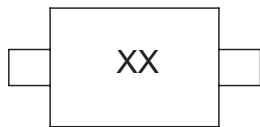
Electro-Static Discharge

JED523-5V-C ESD

Features

- Package: SOD-523
- Protects one data or power line
- Ultra low leakage: nA level
- Operating voltage: 5V
- Low clamping voltage
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
Air discharge: $\pm 30\text{kV}$
Contact discharge: $\pm 30\text{kV}$
 - IEC61000-4-5 (Lightning) 8A (8/20 μs)
- RoHS compliant

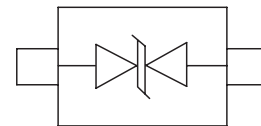
Pin Description



Applications

- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation
- Digital Cameras
- Peripherals
- Audio Players
- Keypads, Side Keys, LCD Displays

Schematic Diagram



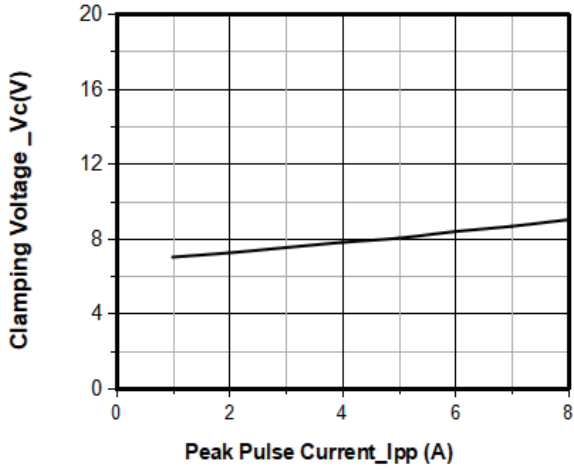
Limiting Values ($T_A = 25^\circ\text{C}$, unless otherwise specified)

| Symbol | Parameter | Conditions | Value | Unit |
|------------------|---------------------------------|----------------------------------|-------------|------------------|
| V _{ESD} | Electrostatic Discharge Voltage | IEC 61000-4-2; Contact Discharge | ± 30 | kV |
| | | IEC 61000-4-2; Air Discharge | ± 30 | kV |
| P _{PP} | Peak Pulse Power | $t_P=8/20\mu\text{s}$ | 80 | W |
| I _{PP} | Peak Pulse Current | $t_P=8/20\mu\text{s}$ | 8 | A |
| T _J | Operating Temperature Range | - | -55 to +125 | $^\circ\text{C}$ |
| T _{stg} | Storage Temperature Range | - | -55 to +150 | $^\circ\text{C}$ |

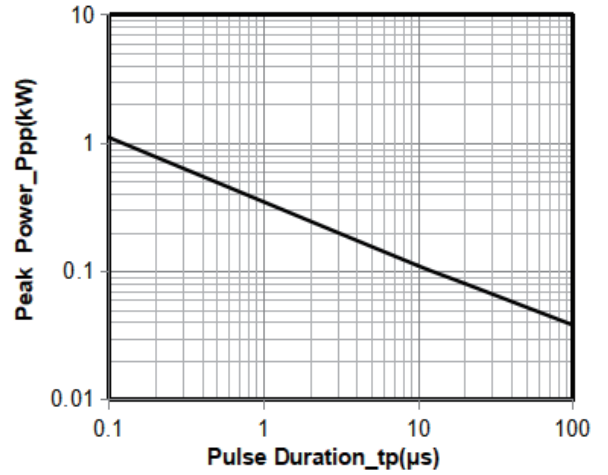
Electrical Characteristics ($T_A = 25^\circ\text{C}$, unless otherwise specified)

| Symbol | Parameter | Conditions | Min | Typ. | Max | Unit |
|------------------|-------------------------|---|-----|------|-----|---------------|
| V _{RWM} | Reverse Working Voltage | $T_A=25^\circ\text{C}$ | - | - | 5 | V |
| V _{BR} | Breakdown Voltage | $I_T=1\text{mA}$ | 6 | - | 8 | V |
| I _R | Reverse Leakage Current | $V_{RWM}=5\text{V}; T_A=25^\circ\text{C}$ | - | - | 0.2 | μA |
| V _C | Clamping Voltage | $I_{PP}=1\text{A}$ | - | - | 8 | V |
| V _C | Clamping Voltage | $I_{PP}=8\text{A}$ | - | - | 10 | V |
| C _J | Junction Capacitance | $V_R=0\text{V}, f=1\text{MHz}$ | - | - | 20 | pF |

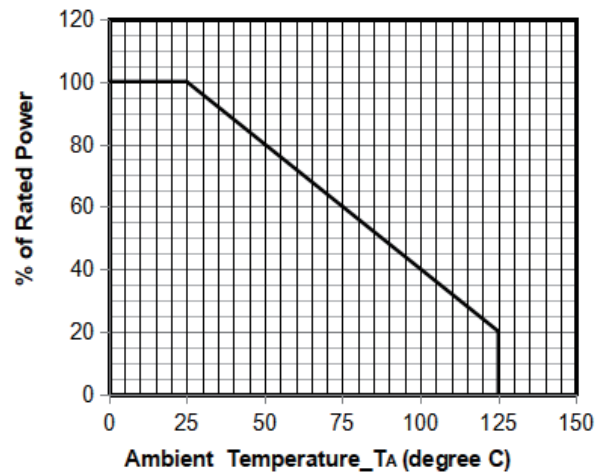
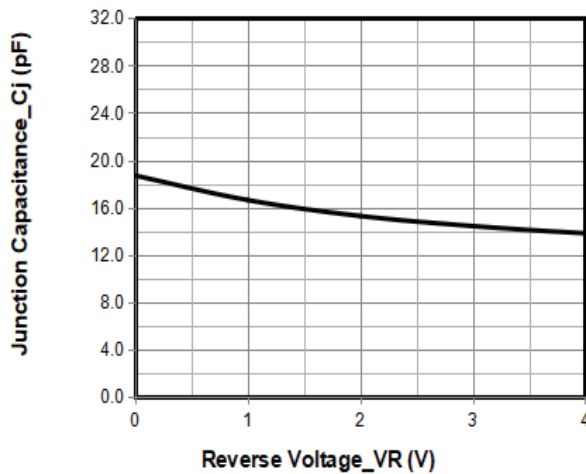
Typical Characteristics



Junction Capacitance vs. Reverse Voltage

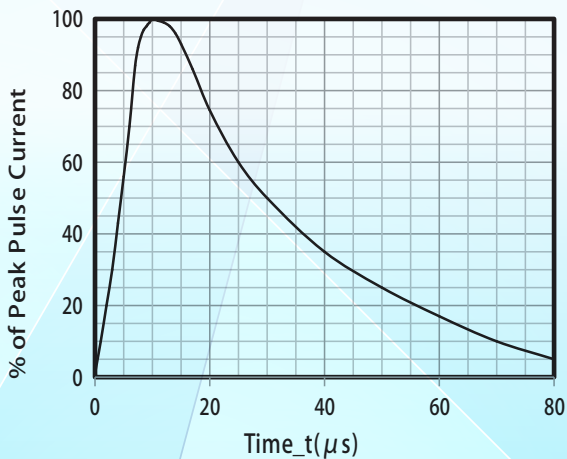


Peak Pulse Power vs. Pulse Time

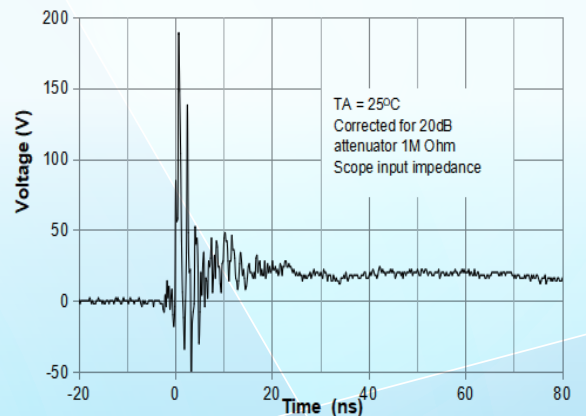


Clamping Voltage vs. Peak Pulse Current (tp = 8/20us)

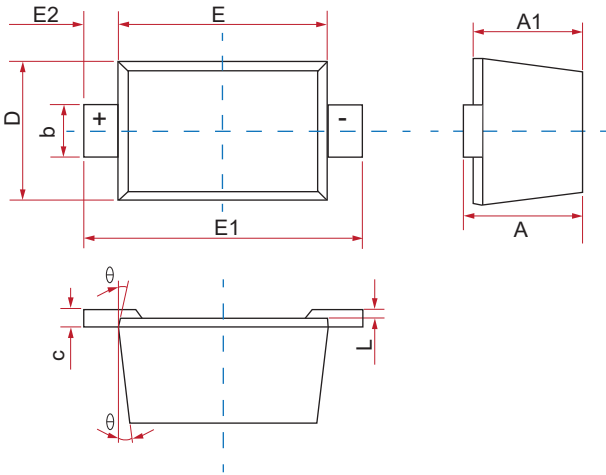
Power Derating Curve



8 X 20 μs Pulse Waveform



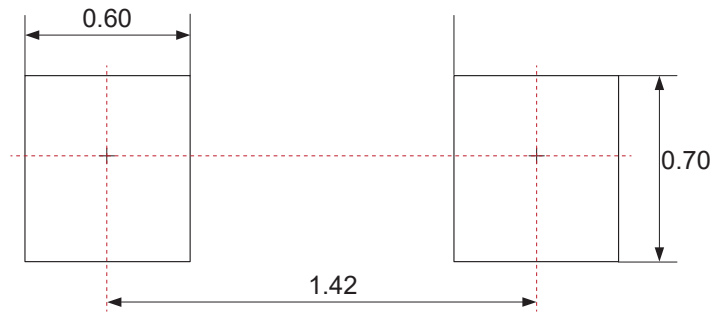
ESD Clamping Voltage
8 kV Contact per IEC61000-4-2

Physical Dimensions(mm.)


| Symbol | Dimensions In Millimeters | | | Dimensions In Inches | | |
|--------|---------------------------|-----|------|----------------------|-----|-------|
| | Min | Nom | Max | Min | Nom | Max |
| A | 0.51 | -- | 0.77 | 0.020 | -- | 0.031 |
| A1 | 0.50 | -- | 0.70 | 0.020 | -- | 0.028 |
| b | 0.25 | -- | 0.35 | 0.010 | -- | 0.014 |
| c | 0.08 | -- | 0.15 | 0.003 | -- | 0.006 |
| D | 0.75 | -- | 0.85 | 0.030 | -- | 0.033 |
| E | 1.10 | -- | 1.30 | 0.043 | -- | 0.051 |
| E1 | 1.50 | -- | 1.70 | 0.059 | -- | 0.067 |
| E2 | 0.20REF | | | 0.008REF | | |
| L | 0.01 | -- | 0.07 | 0.001 | -- | 0.003 |
| θ | 7°REF | | | 7°REF | | |

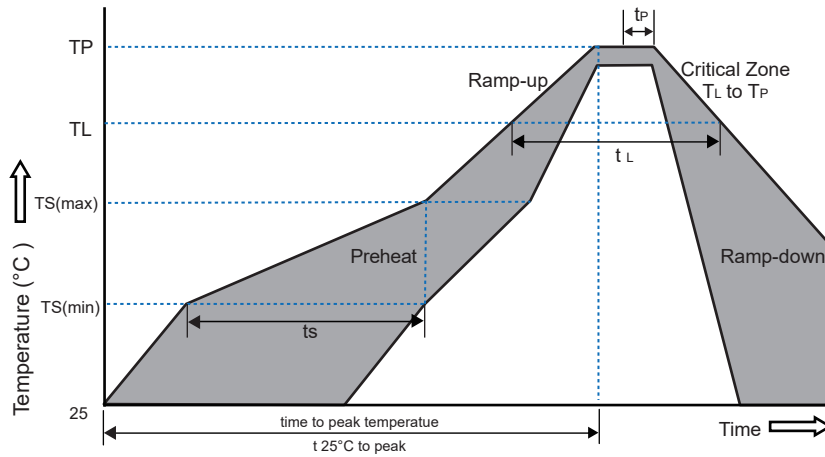
Suggested Land Pattern

Unit:mm


Packaging Quantity

| Part Number | Delivery Form | Delivery Quantity |
|-------------|---------------|-------------------|
| JED523-5V-C | 7"T&R | 3,000 |

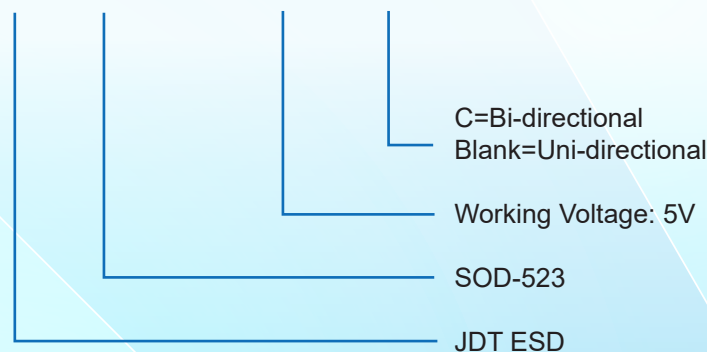
Soldering Parameters



| Reflow Condition | | Pb-Free Assembly |
|--|----------------------------------|------------------|
| Pre-heat | -Temperature Min($T_{s(min)}$) | +150°C |
| | -Temperature Max($T_{s(max)}$) | +200°C |
| | -Time(Min to Max)(t_s) | 60~180 secs. |
| Average ramp up rate (Liquid us Temp(T_L) to peak) | | 3°C/sec. Max |
| Ts(max) to T_L - Ramp-up Rate | | 3°C/sec. Max |
| Reflow | -Temperature(T_L)(Liquid us) | +217°C |
| | -Temperature (t_L) | 60~150 secs. |
| Peak Temp (T_P) | | +260(+0/-5)°C |
| Time within 5°C of actual Peak Temp (t_p) | | 30 secs. Max |
| Ramp-down Rate | | 6°C/sec. Max |
| xTime 25°C to Peak Temp (TP) | | 8 min. Max |
| Do not exceed | | +260°C |

Part Number System

JE D523 - 5V - C



X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [ESD Suppressors / TVS Diodes](#) category:

Click to view products by [JDT](#) manufacturer:

Other Similar products are found below :

[60KS200C](#) [D18V0L1B2LP-7B](#) [D5V0F4U5P5-7](#) [NTE4902](#) [P4KE27CA](#) [P6KE11CA](#) [P6KE39CA-TP](#) [P6KE8.2A](#) [JANTX1N6053A](#)
[SA110CA](#) [SA60CA](#) [SA64CA](#) [SMBJ12CATR](#) [SMBJ33CATR](#) [SMBJ8.0A](#) [ESD105-B1-02EL E6327](#) [ESD112-B1-02EL E6327](#)
[ESD5V0L1B02VH6327XTSA1](#) [ESD7451N2T5G](#) [19180-510](#) [CPDT-5V0USP-HF](#) [3.0SMCJ33CA-F](#) [3.0SMCJ36A-F](#) [HSPC16701B02TP](#)
[JANTX1N6126A](#) [JANTX1N6465](#) [USB50805e3/TR7](#) [D3V3Q1B2DLP3-7](#) [D55V0M1B2WS-7](#) [DRTR5V0U4SL-7](#) [SCM1293A-04SO](#)
[ESD200-B1-CSP0201 E6327](#) [SM12-7](#) [SM1605E3/TR13](#) [SMLJ45CA-TP](#) [CEN955 W/DATA](#) [82350120560](#) [VESD12A1A-HD1-GS08](#)
[CPDUR5V0R-HF](#) [CPDQC5V0U-HF](#) [CPDQC5V0USP-HF](#) [CPDQC5V0-HF](#) [D1213A-01LP4-7B](#) [ESD101-B1-02EL E6327](#) [824500181](#)
[MMAD1108/TR13](#) [5KP100A](#) [5KP15A](#) [5KP18A](#) [5KP48A](#)