

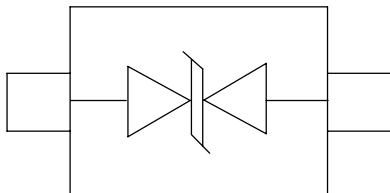
Description

The AU2881D3 is a 2.8V bi-directional TVS diode, utilizing leading monolithic silicon technology to provide fast response time and low ESD clamping voltage, making this device an ideal solution for protecting voltage sensitive data and power line. The AU2881D3 complies with the IEC 61000-4-2 (ESD) with ± 30 kV air and ± 30 kV contact discharge. It is assembled into a SOD-323 leadfree package. The small size and high ESD surge protection make AU2881D3 an ideal choice to protect cell phone, digital cameras, audio players and many other portable applications.

Features

- Protects one data or power line
- Ultra low leakage: nA level
- Operating voltage: 2.8V
- Low clamping voltage
- 2-Pin leadless package
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: ± 30 kV
 - Contact discharge: ± 30 kV
 - IEC61000-4-5 (Lightning) 150A (8/20 μ s)
- RoHS Compliant

Dimensions and Pin Configuration



Circuit and Pin Schematic

Mechanical Characteristics

- Package: SOD-323
- Case Material: “Green” Molding Compound.
- Terminal Connections: See Diagram Below
- Marking Information: See Below

Applications

- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation
- Digital Cameras
- Peripherals
- Audio Players

Marking Information



28D = Device Marking Code

Ordering Information

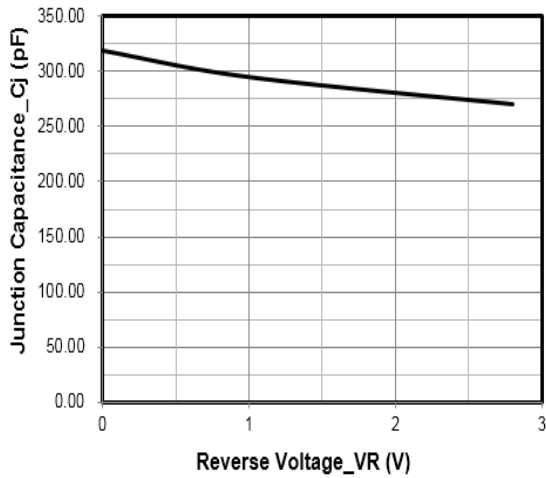
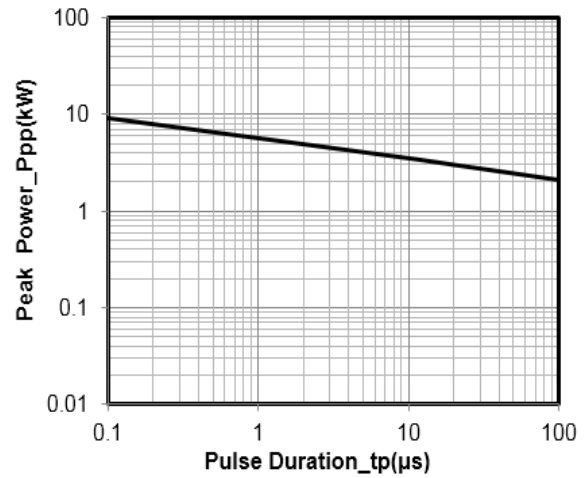
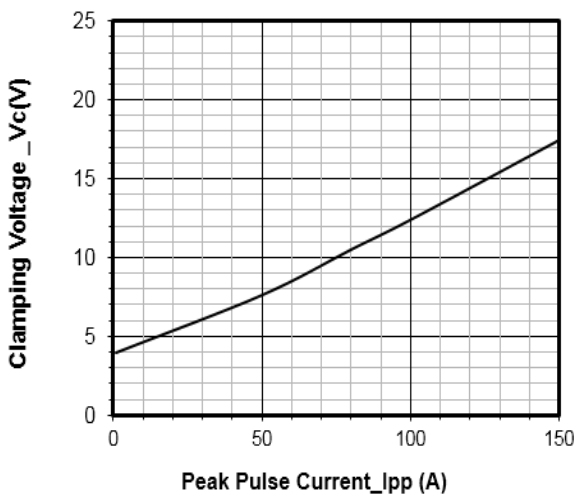
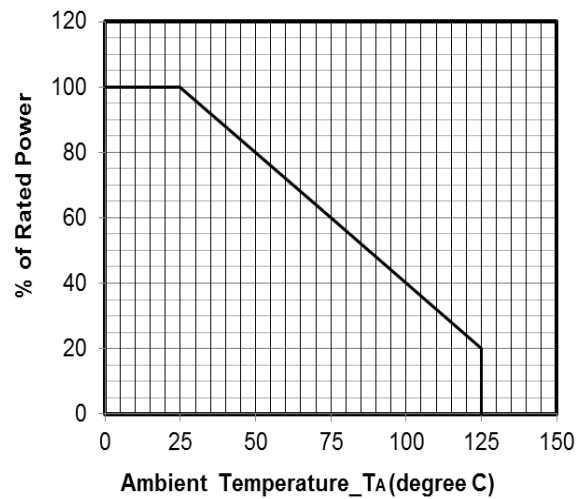
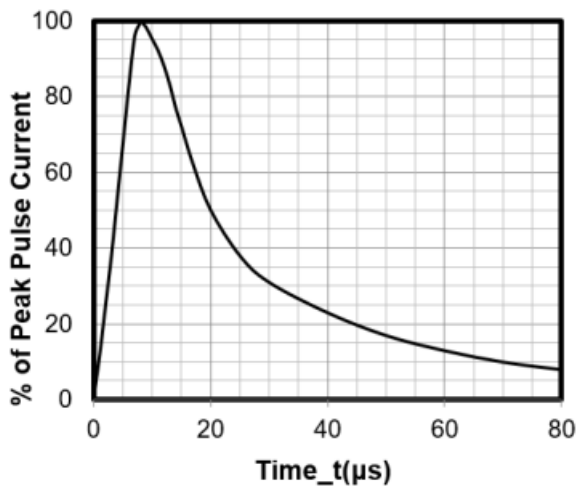
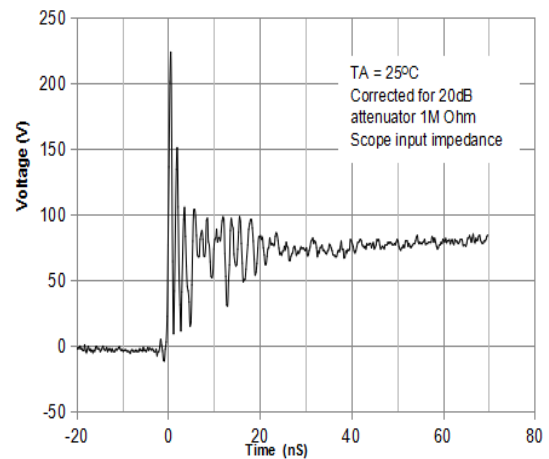
| Part Number | Packaging | Reel Size |
|-------------|-------------------|-----------|
| AU2881D3 | 3,000/Tape & Reel | 7 inch |

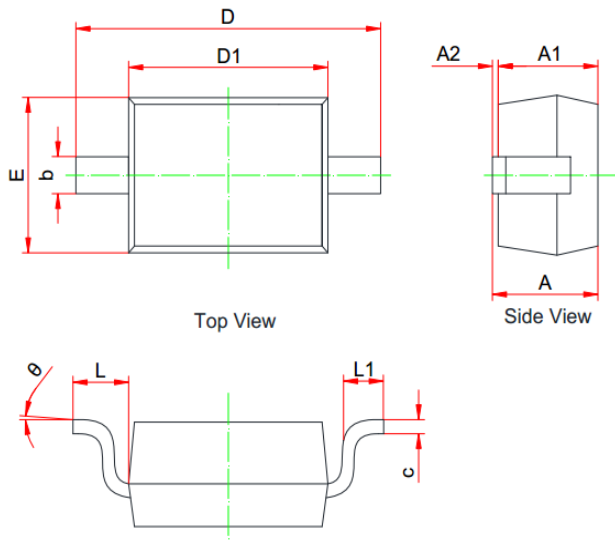
Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

| Parameter | Symbol | Value | Unit |
|--|------------------|-------------|------|
| Peak Pulse Power (8/20 μs) | P _{pk} | 3000 | W |
| Peak Pulse Current (8/20 μs) | I _{pp} | 150 | A |
| ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact) | V _{ESD} | ±30 ±30 | kV |
| Operating Temperature Range | T _J | -55 to +125 | °C |
| Storage Temperature Range | T _{stg} | -55 to +150 | °C |

Electrical Characteristics (T_A=25°C unless otherwise specified)

| Parameter | Symbol | Min | Typ | Max | Unit | Test Condition |
|-------------------------|------------------|-----|------|-----|------|---|
| Reverse Working Voltage | V _{RWM} | | | 2.8 | V | |
| Breakdown Voltage | V _{BR} | 3.0 | 3.75 | | V | I _T = 1mA |
| Reverse Leakage Current | I _R | | | 0.2 | μA | V _T =V _{RWM} |
| Clamping Voltage | V _C | | 18 | 20 | V | I _{PP} = 150A (8 x 20μs pulse) |
| Junction Capacitance | C _J | | 320 | | pF | V _R = 0V, f = 1MHz |

Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise Specified)

Junction Capacitance vs. Reverse Voltage

Peak Pulse Power vs. Pulse Time

Clamping Voltage vs. Peak Pulse Current

Power Derating Curve

8 X 20 μs Pulse Waveform

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

SOD-323 Package Outline Drawing


| SYM | MILLIMETERS | | |
|-----|-------------|-------|-------|
| | MIN | NOM | MAX |
| A | 0.800 | -- | 1.100 |
| A1 | 0.800 | -- | 0.900 |
| A2 | 0.000 | -- | 0.100 |
| b | 0.250 | -- | 0.400 |
| c | 0.080 | -- | 0.177 |
| D1 | 1.600 | 1.700 | 1.800 |
| D | 2.300 | -- | 2.800 |
| E | 1.150 | -- | 1.400 |
| L | 0.475REF | | |
| L1 | 0.100 | -- | 0.500 |
| Θ | 0° | -- | 8° |

Suggested Land Pattern

Unit: mm
Contact Information

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