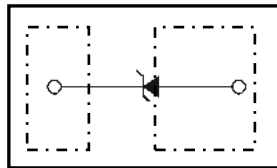


Features

- Provides ESD Protection per IEC 61000-4-2 Standard:
Air ±30kV, Contact ±30kV
- One Channel of ESD Protection
- Low Channel Input Capacitance
- **Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**
- **For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q100/101/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please [contact us](https://www.diodes.com/quality/product-definitions/) or your local Diodes representative. <https://www.diodes.com/quality/product-definitions/>**

Mechanical Data

- Package: U-DFN1608-2
- Package Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: NiPdAu. Solderable per MIL-STD-202, Method 208 ^(e4)
- Weight: 0.003 grams (Approximate)



Top view

U-DFN1608-2 (Type C)



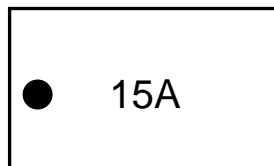
Device Schematic

Ordering Information (Note 4)

| Part Number | Compliance | Package | Marking | Reel Size (inches) | Tape Width (mm) | Packing | |
|--------------------|------------|----------------------|---------|--------------------|-----------------|---------|-------------|
| | | | | | | Qty. | Carrier |
| D15V0S1U2LP1608A-7 | Commercial | U-DFN1608-2 (Type C) | 15A | 7 | 8 | 10,000 | Tape & Reel |

- Notes:
1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant.
 2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
 3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
 4. For packaging details, go to our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>.

Marking Information



15A = Product Type Marking Code
Dot Denotes Cathode Side

Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

| Characteristic | Symbol | Value | Unit | Conditions |
|------------------------------------|--------------------------|-------|------|------------------------|
| ESD Protection – Contact Discharge | V _{ESD_CONTACT} | ±30 | kV | Standard IEC 61000-4-2 |
| ESD Protection – Air Discharge | V _{ESD_AIR} | ±30 | kV | Standard IEC 61000-4-2 |

Thermal Characteristics

| Characteristic | Symbol | Value | Unit |
|---|-----------------------------------|-------------|------|
| Power Dissipation (Note 5) | P _D | 300 | mW |
| Thermal Resistance, Junction to Ambient T _A = +25°C | R _{θJA} | 417 | °C/W |
| Operating and Storage Temperature Range | T _J , T _{STG} | -55 to +150 | °C |

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

| Part Number | Reverse Standoff Voltage | Breakdown Voltage | | Test Current | Maximum Reverse Leakage Current @ V _{RWM} (Note 6) | Maximum Clamping Voltage @ I _{PP} (Note 7) | Maximum Peak Pulse Current | Channel Input Capacitance (Note 8) V _R = 0V, f = 1MHz, Any I/O to GND | Marking Code |
|--------------------|--------------------------|----------------------------------|---------|--------------|---|---|----------------------------|---|--------------|
| | | V _{BR} @ I _T | | | | | | | |
| | | V _{RWM} (V) | Min (V) | | | | | | |
| D15V0S1U2LP1608A-7 | 15 | 17 | 23 | 1 | 0.1 | 35 | 40 | 264 | 15A |

- Notes:
5. Device mounted on FR-4 PCB pad layout (2oz copper) as shown on Diodes Incorporated's suggested pad layout, which can be found on our website at <http://www.diodes.com/package-outlines.html>.
 6. Short duration pulse test used to minimize self-heating effect.
 7. Clamping voltage value is based on an 8x20μs peak pulse current (I_{PP}) waveform.
 8. Measured from any I/O to GND.

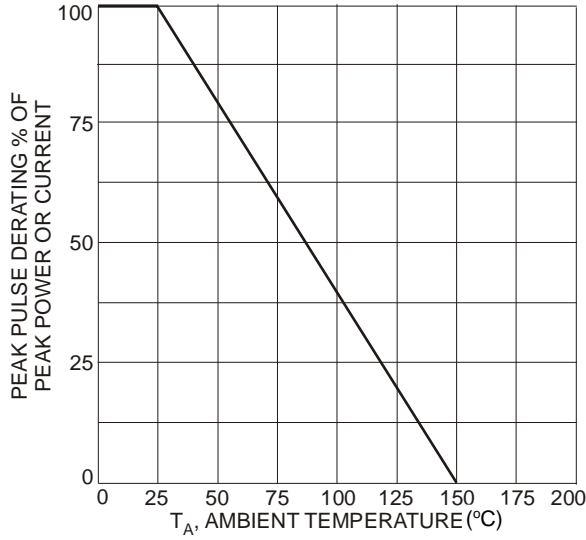


Figure 1. Pulse Derating Curve

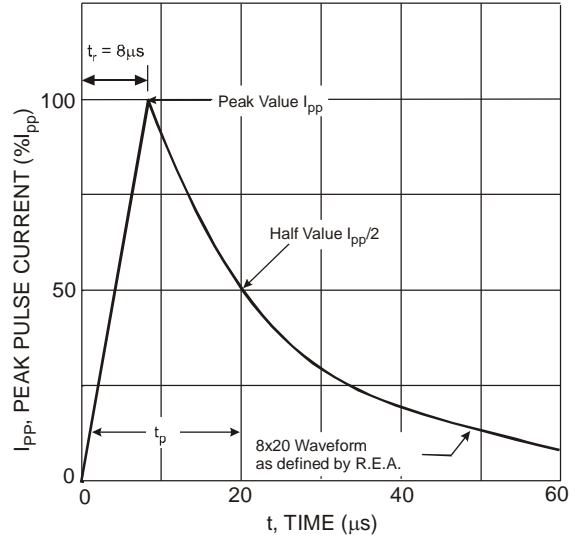


Figure 2. Pulse Waveform

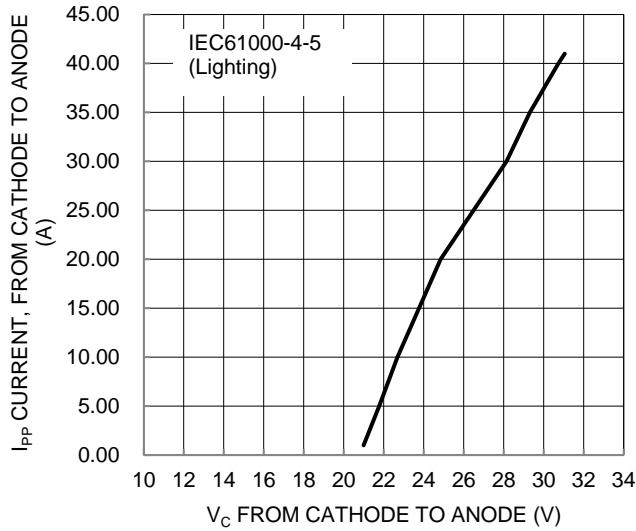


Figure 3. Clamping Voltage Characteristic

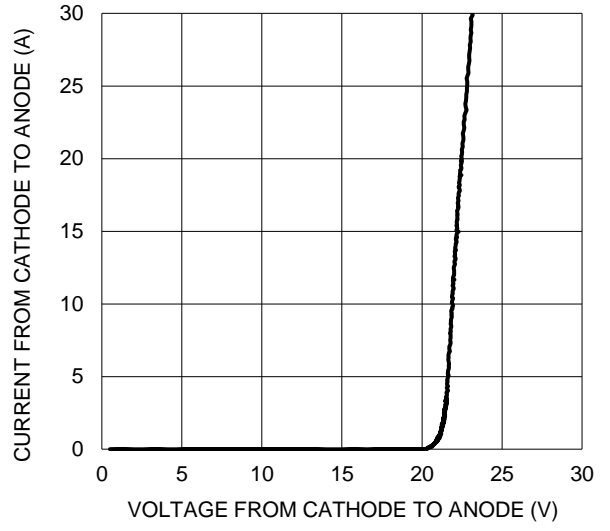


Figure 4. Current vs Voltage (TLP, $t_p=100\text{ns}$)

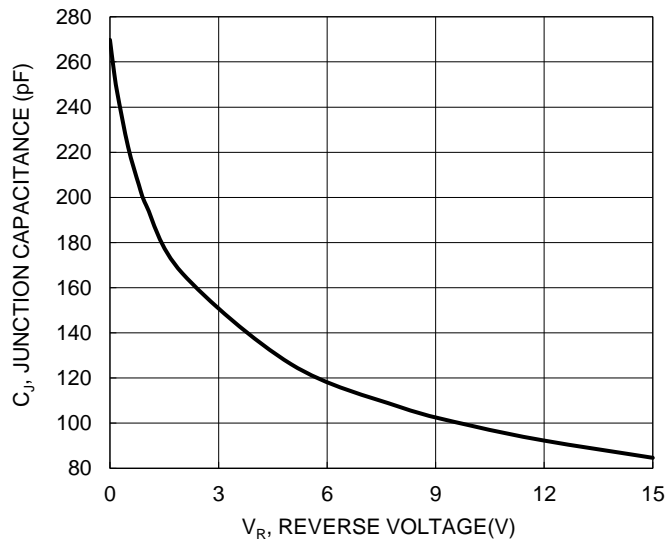
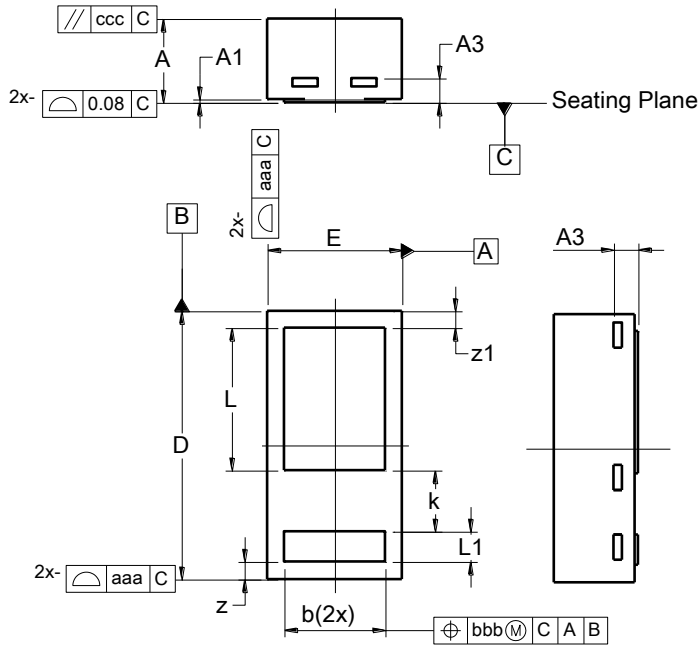


Figure 5. Typical Junction Capacitance

Package Outline Dimensions

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

U-DFN1608-2 (Type C)

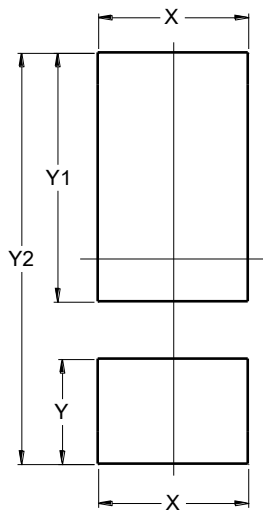


| U-DFN1608-2 (Type C) | | | |
|----------------------|-----------|------|-------|
| Dim | Min | Max | Typ |
| A | 0.47 | 0.53 | 0.50 |
| A1 | 0.00 | 0.05 | 0.02 |
| A3 | -- | -- | 0.127 |
| b | 0.55 | 0.65 | 0.60 |
| D | 1.55 | 1.65 | 1.60 |
| E | 0.75 | 0.85 | 0.80 |
| k | 0.365 REF | | |
| L | 0.80 | 0.90 | 0.85 |
| L1 | 0.13 | 0.23 | 0.18 |
| z | 0.105 REF | | |
| z1 | 0.10 REF | | |
| aaa | 0.15 | | |
| bbb | 0.10 | | |
| ccc | 0.10 | | |
| All Dimensions in mm | | | |

Suggested Pad Layout

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

U-DFN1608-2 (Type C)



| Dimensions | Value (in mm) |
|------------|---------------|
| X | 0.700 |
| Y1 | 0.485 |
| Y2 | 1.150 |
| Y3 | 1.900 |

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