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

| Characteristic | Symbol | Value | Unit | Conditions |
|---|---|---|---|---|
| Peak Pulse Current | $I_{PP}$ | 3.0 | A | 8/20µs, Figure 3 |
| ESD Protection – Contact Discharge | $V_{ESD\_Contact}$ | ±8 | kV | Standard IEC 61000-4-2 |
| ESD Protection – Air Discharge | $V_{ESD\_Air}$ | ±15 | kV | Standard IEC 61000-4-2 |

## Thermal Characteristics

| Characteristic | Symbol | Value | Unit |
|---|---|---|---|
| Power Dissipation (Note 5) | $P_D$ | 380 | mW |
| Thermal Resistance, Junction to Ambient $T_A$ = +25°C | $R_{\theta JA}$ | 327 | °C/W |
| Operating and Storage Temperature Range | $T_J$, $T_{STG}$ | -55 to +150 | °C |

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

| Characteristic | Symbol | Min | Typ | Max | Unit | Test Conditions |
|---|---|---|---|---|---|---|
| Reverse Working Voltage | $V_{RWM}$ | — | — | 5.5 | V | — |
| Reverse Current (Note 6) | $I_R$ | — | — | 200 | nA | $V_R$ = 5.5V |
| Reverse Breakdown Voltage | $V_{BR}$ | 6.0 | — | — | V | $I_R$ = 1mA |
| Reverse Clamping Voltage, Positive Transients (Note 7) | $V_{CL}$ | — | 10 | 12 | V | $I_{PP}$ = 1A, $t_p$ = 8/20µs |
| Dynamic Resistance | $R_{DYN}$ | — | 1.0 | — | Ω | $I_R$ = 1A, $t_p$ = 8/20µs |
| Capacitance (Note 8) | $C_T$ | — | 0.4 | 0.65 | pF | $V_R$ = 2.5V, f = 1MHz |
| | | — | 0.5 | — | pF | $V_R$ = 0V, f = 1MHz |

Notes:
5. Device mounted on FR-4 PCB pad layout (2oz copper) as shown on Diodes, Inc. suggested pad layout AP02001, which can be found on our website at http://www.diodes.com.
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 pin to GND.
9. For information on the impact of Diodes' USB 2.0 compatible ESD protectors on signal integrity including eye diagram plots, please refer to AN77 at the following URL: http://www.diodes.com/destools/appnote_dnote.html.

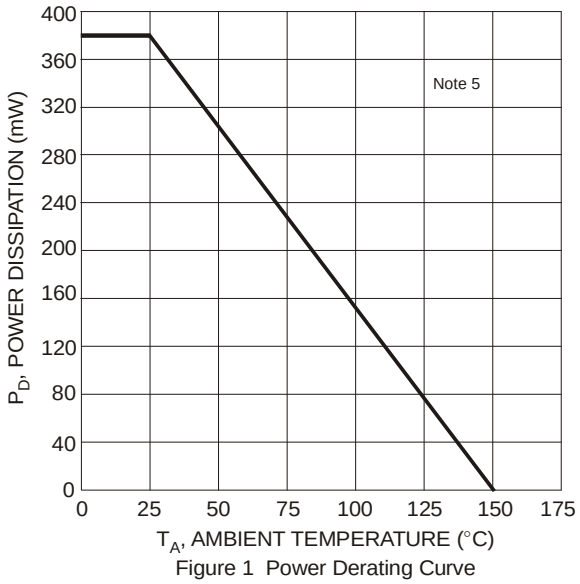


Figure 1 Power Derating Curve

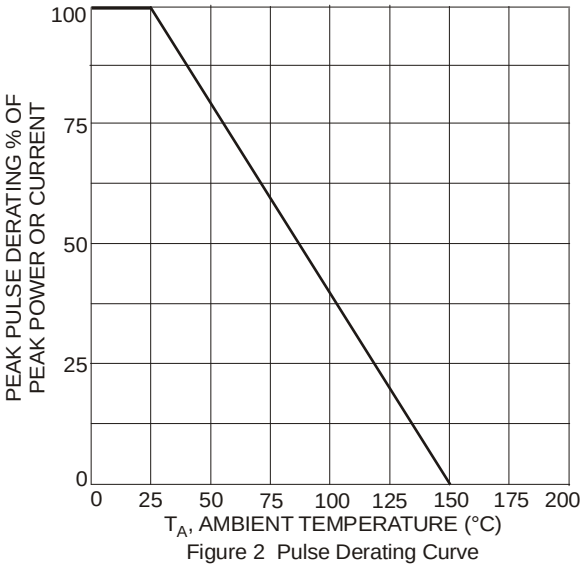


Figure 2 Pulse Derating Curve

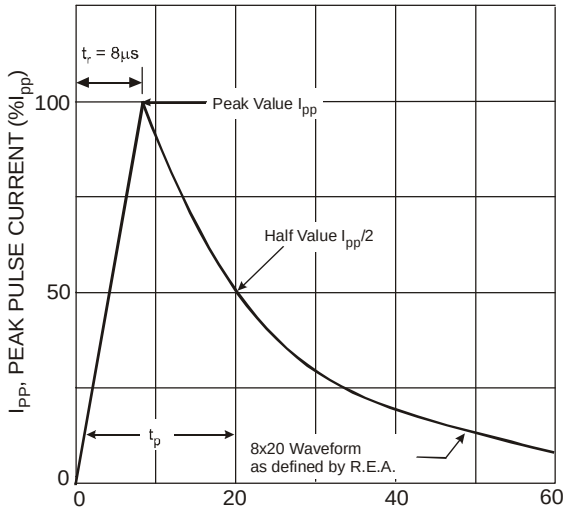



Figure 3 Pulse Waveform

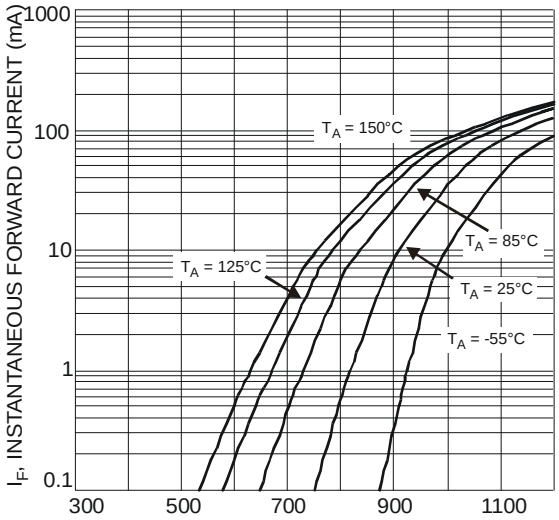



Figure 4 Typical Forward Characteristics

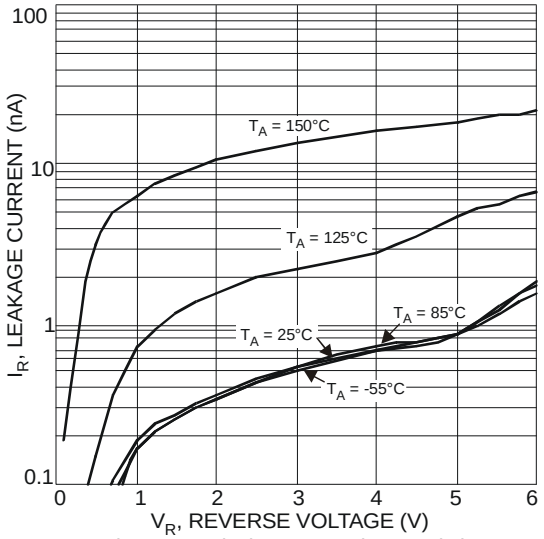



Figure 5 Typical Reverse Characteristics

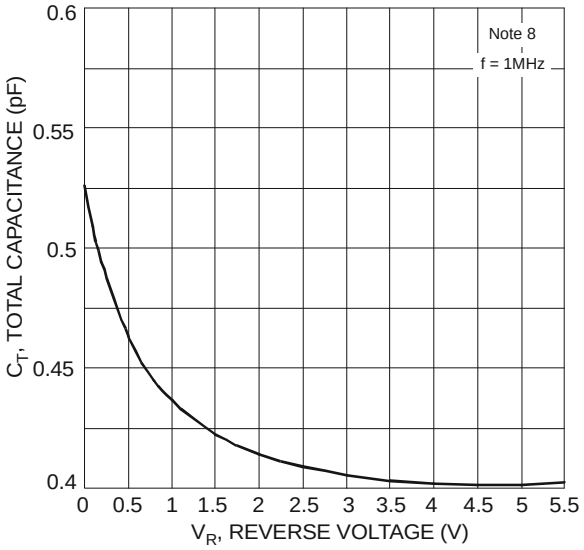
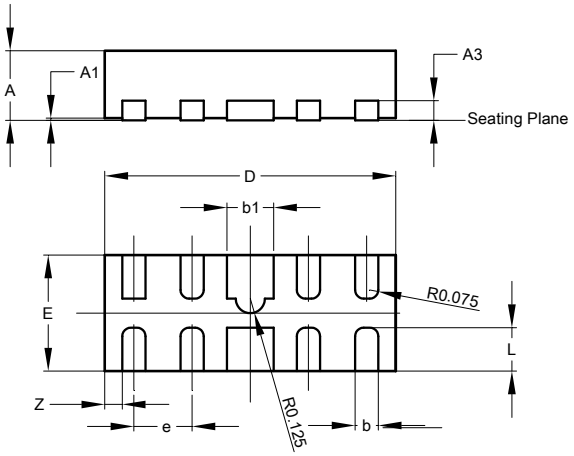



Figure 6 Total Capacitance vs. Reverse Voltage

## Package Outline Dimensions

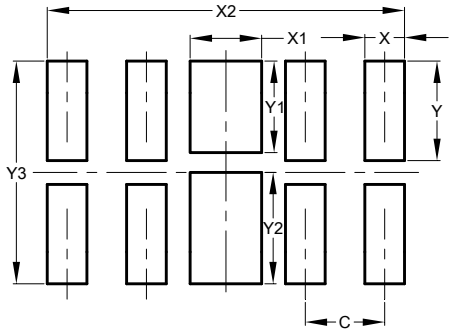
Please see AP02002 at http://www.diodes.com/datasheets/ap02002.pdf for latest version.




| U-DFN2510-10 | | | |
|---|---|---|---|
| **Dim** | **Min** | **Max** | **Typ** |
| **A** | 0.545 | 0.605 | 0.575 |
| **A1** | 0 | 0.05 | 0.03 |
| **A3** | - | - | 0.13 |
| **b** | 0.15 | 0.25 | 0.20 |
| **b1** | 035 | 0.45 | 0.40 |
| **D** | 2.450 | 2.575 | 2.500 |
| **e** | - | - | 0.50 |
| **E** | 0.950 | 1.075 | 1.000 |
| **L** | 0.325 | 0.425 | 0.375 |
| **Z** | - | - | 0.150 |
| **All Dimensions in mm** | | | |

## Suggested Pad Layout

Please see AP02001 at http://www.diodes.com/datasheets/ap02001.pdf for the latest version.




| Dimensions | Value (in mm) |
|---|---|
| C | 0.500 |
| X | 0.250 |
| X1 | 0.450 |
| X2 | 2.250 |
| Y | 0.625 |
| Y1 | 0.575 |
| Y2 | 0.700 |
| Y3 | 1.400 |