

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

Characteristic	Symbol	Value	Unit	Conditions
Peak Pulse Current	I _{PP}	50	A	8/20μs (Note 7)
Peak Pulse Power Dissipation	P _{PP}	1,000	W	8/20μs (Note 7)
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.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Reverse Standoff Voltage	V _{RWM}	—	—	12	V	—
Channel Leakage Current (Note 6)	I _R	—	—	0.1	μA	V _R = 12.0V
Reverse Breakdown Voltage	V _{BR}	13	—	—	V	I _R = 1mA
Clamping Voltage, Positive Transients (Note 7)	V _C	—	—	15.5	V	I _{PP} = 1A, t _p = 8/20μs
		—	—	16.5	V	I _{PP} = 10A, t _p = 8/20μs
		—	—	20.0	V	I _{PP} = 50A, t _p = 8/20μs
Channel Input Capacitance (Note 8)	C _T	—	350	—	pF	V _R = 0V, f = 1MHz, Any I/O to GND
Dynamic Resistance	R _{DYN}	—	0.05	—	Ω	TLP, 10A, t _p = 100ns

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

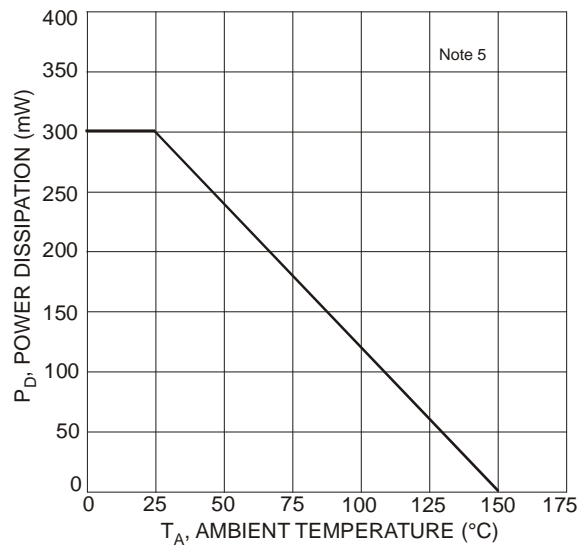


Figure 1 Power Derating Curve

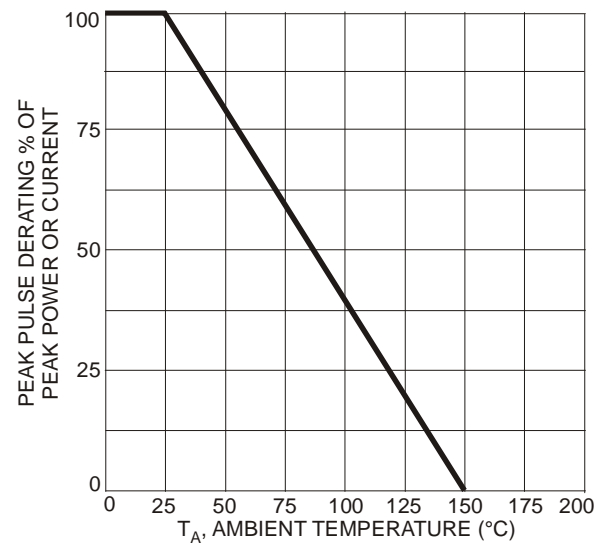


Figure 2 Pulse Derating Curve

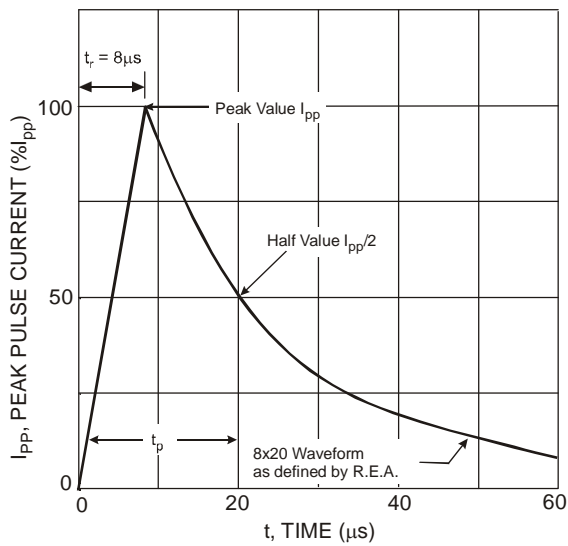
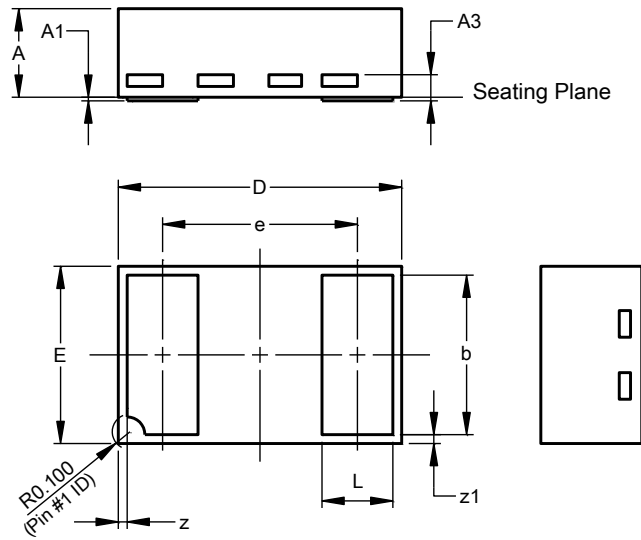


Figure 3 Pulse Waveform

Package Outline Dimensions

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

U-DFN1610-2 (Type B)

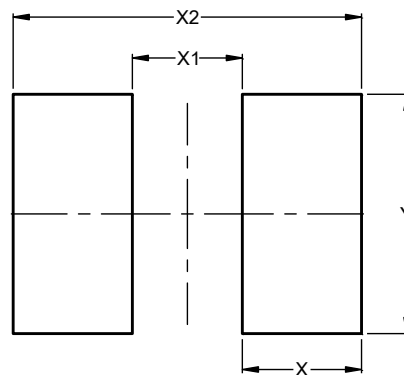


U-DFN1610-2 (Type B)			
Dim	Min	Max	Typ
A	0.45	0.55	0.50
A1	0.00	0.05	0.015
A3	—	—	0.127
b	0.85	0.95	0.90
D	1.55	1.65	1.60
E	0.95	1.05	1.00
e	—	—	1.10
L	0.35	0.45	0.40
z	0.050 REF		
z1	0.050 REF		
All Dimensions in mm			

Suggested Pad Layout

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

U-DFN1610-2 (Type B)



Dimensions	Value (in mm)
X	0.650
X1	0.600
X2	1.900
Y	1.300

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