4 CHANNEL LOW CAPACITANCE TVS DIODE ARRAY

Product Summary

$V_{RWM\ (Max)}$	$I_{PP\ (Max)}$	$C_{T\ (Typ)}$
60V	2A	10pF

Description

The D60V0L4B10LP is a high performance device suitable for protecting four high speed I/Os. These devices are assembled in U-DFN2510-10 package. They have high ESD surge capability and low capacitance.

Applications

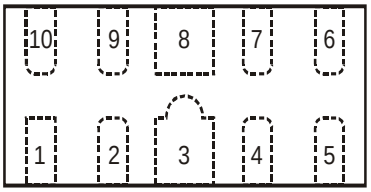
- Typically Used at Chip-On-Glass (COG) Panels, VBus Protection, LCD Televisions, Set Top Box

Features

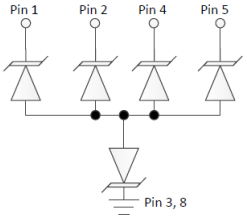
- IEC 61000-4-2 (ESD):±8kV (Contact)
- IEC 61000-4-2 (ESD):±8kV (Air)
- 4 Channel of ESD Protection
- **Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

Mechanical Data

- Case: U-DFN2510-10
- Case Material: Molded Plastic, "Green" Molding Compound UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: NiPdAu over Copper Leadframe (Lead Free Plating) Solderable per MIL-STD-202, Method 208 e4
- Weight: 0.038 grams (Approximate)



Pin Configuration (Top View)



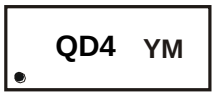
Schematic Diagram

Ordering Information (Note 4)

Product	Compliance	Marking	Reel Size (inches)	Tape Width (mm)	Quantity per Reel
D60V0L4B10LP-7	Standard	QD4	7	8	3,000/Tape & Reel

Notes:
1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant.
2. See http://www.diodes.com/quality/lead_free.html 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



QD4 = Product Type Marking Code
YM = Date Code Marking
Y = Year (ex: E = 2017)
M = Month (ex: 9 = September)

Date Code Key

Year	2013	2014	2015	2016	2017	2018
Code	A	B	C	D	E	F

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

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

Characteristic	Symbol	Value	Unit	Conditions
ESD Contact Discharge	V_{ESD}	8	kV	Standard IEC 61000-4-2
Peak Pulse Current	I_{PP}	2	A	Standard IEC 61000-4-5,8/20µs
Operating Temperature Range	T_{OP}	-40 to +125	°C	—
Storage Temperature Range	T_{STG}	-65 to +150	°C	—

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation Typical (Note 5)	P_D	350	mW
Thermal Resistance, Junction to Ambient Typical (Note 5)	$R_{\theta JA}$	360	°C/W

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Reverse Standoff Voltage	V_{RWM}	—	—	60	V	—
Channel Leakage Current (Note 6)	I_{RM}	—	—	100	nA	V_{RWM} = 60V
Clamping Voltage, Positive Transients	V_{CL}	—	115	125	V	I_{PP} = 2A, tp = 8/20µs
Breakdown Voltage	V_{BR}	65	75	85	V	I_R = 1mA
Channel Input Capacitance	C_T	—	10	12	pF	V_R = 0V, f = 1MHz

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.

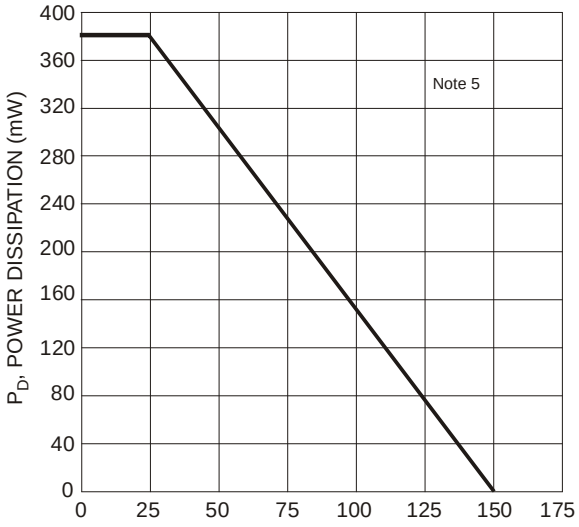


Figure 1 Power Derating Curve

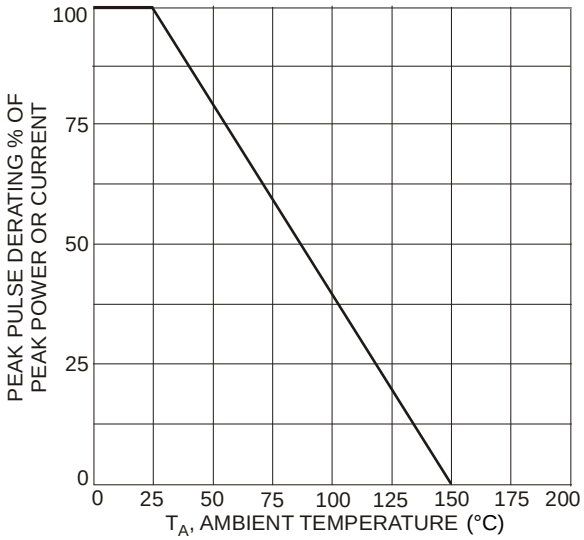


Figure 2 Pulse Derating Curve

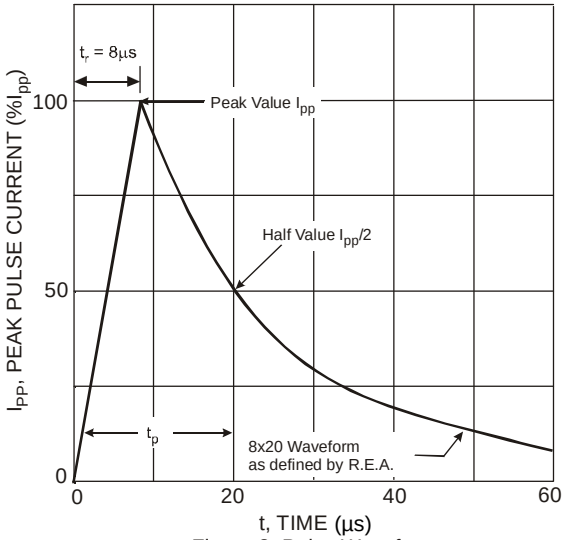


Figure 3 Pulse Waveform

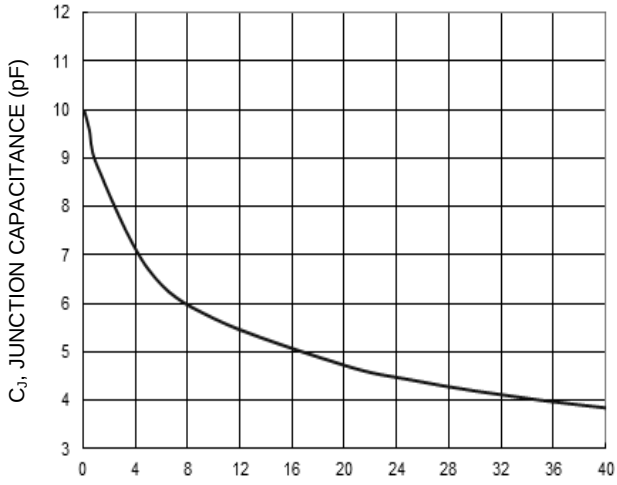
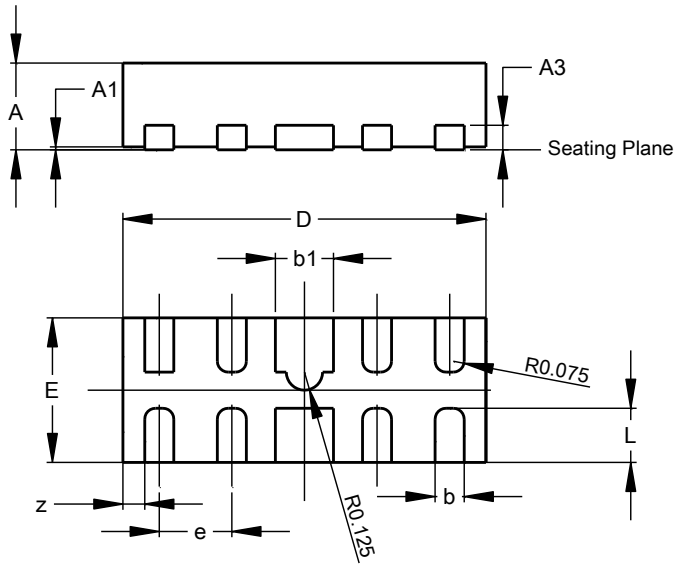


Figure 4 Typical Junction Capacitance

Package Outline Dimensions

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

U-DFN2510-10

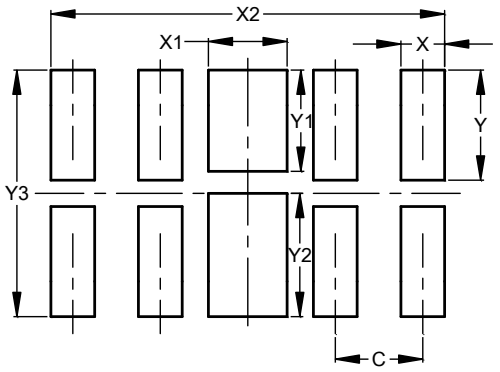


U-DFN2510-10			
Dim	**Min**	**Max**	**Typ**
A	0.545	0.605	0.575
A1	0.00	0.05	0.03
A3	-	-	0.13
b	0.15	0.25	0.20
b1	0.35	0.45	0.40
D	2.450	2.575	2.500
e	-	-	0.50
E	0.950	1.075	1.000
L	0.325	0.425	0.375
z	-	-	0.150
All Dimensions in mm			

Suggested Pad Layout

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

U-DFN2510-10



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

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