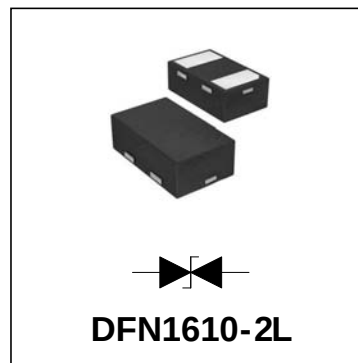


Transient Voltage Suppressor

Features

- 2280Watts peak pulse power ($t_p = 8/20\mu s$)
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Protection one data/power line to:
 - IEC 61000-4-2 $\pm 30kV$ contact $\pm 30kV$ air
 - IEC 61000-4-4 (EFT) 40A (5/50ns)
 - IEC 61000-4-5 (Lightning) 120A (8/20 μs)



Applications

- Cell Phone Handsets and Accessories Microprocessor
- based equipment Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers Portable Instrumentation

Mechanical Data

- DFN1610 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

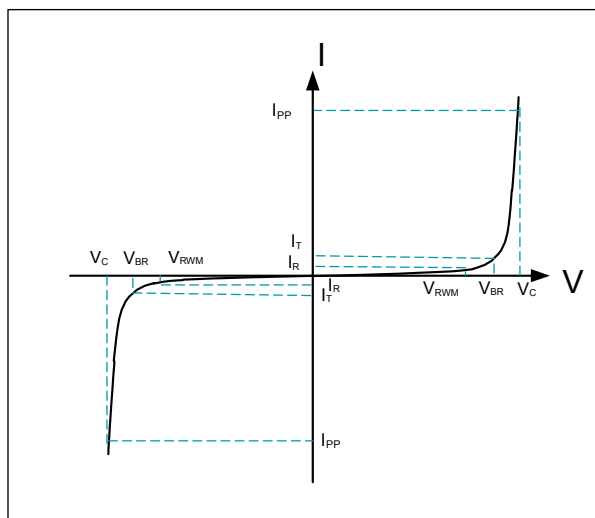
Marking Code	
ESD1610B5V0C	5H*

Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{PP}	2280	Watts
Peak Pulse Current ($t_p = 8/20\mu s$)(note1)	I_{PP}	120	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	30 30	kV
Lead Soldering Temperature	T_L	260(10seconds)	°C
Junction Temperature	T_J	-55 to + 125	°C
Storage Temperature	T_{stg}	-55 to + 125	°C

Electrical Parameters (TA = 25°C unless otherwise noted)

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current

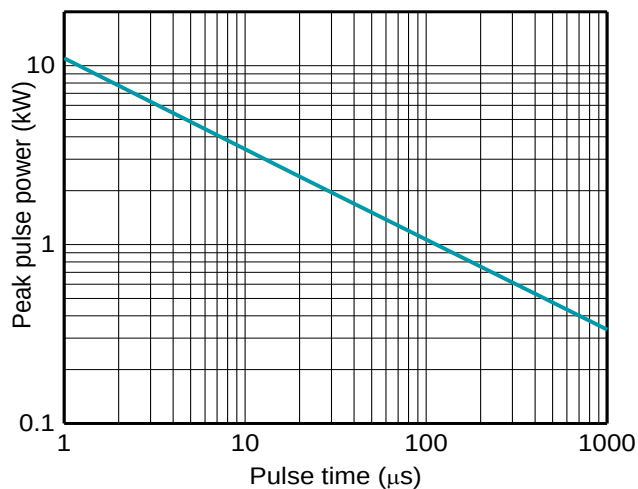


Note: 8/20μs pulse waveform.

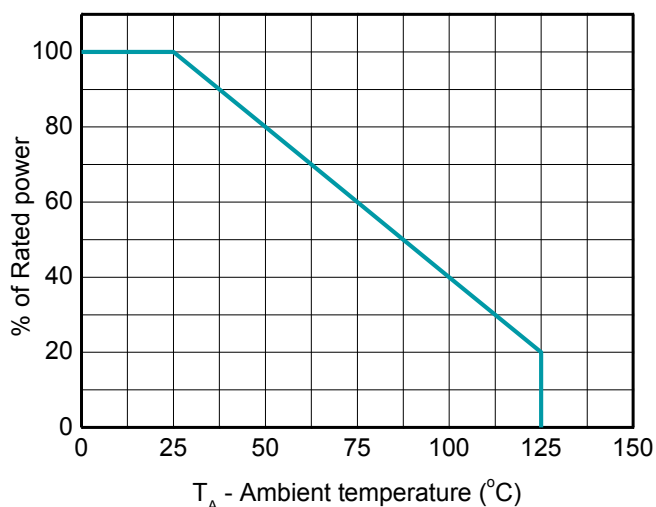
Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1mA$	5.6		8	V
Reverse Leakage Current	I_R	$V_{RWM} = 4.5V, T = 25^\circ C$		0.1	0.5	μA
Peak Pulse Current	I_{PP}	$t_p = 8/20\mu s$		120		A
Clamping Voltage	V_C	$I_{PP} = 120A, t_p = 8/20\mu s$		19		V
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$		550		pF

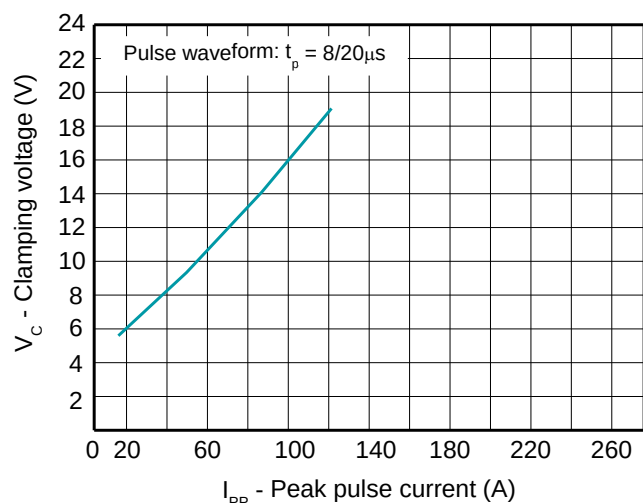
Typical Characteristics



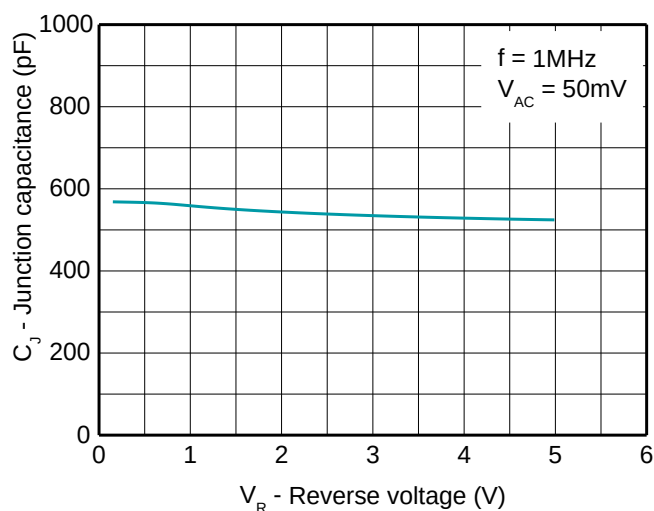
Non-repetitive peak pulse power vs. Pulse time



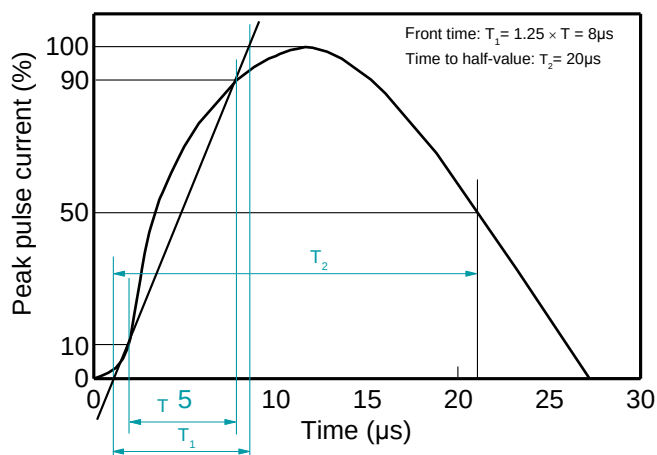
Power derating vs. Ambient temperature



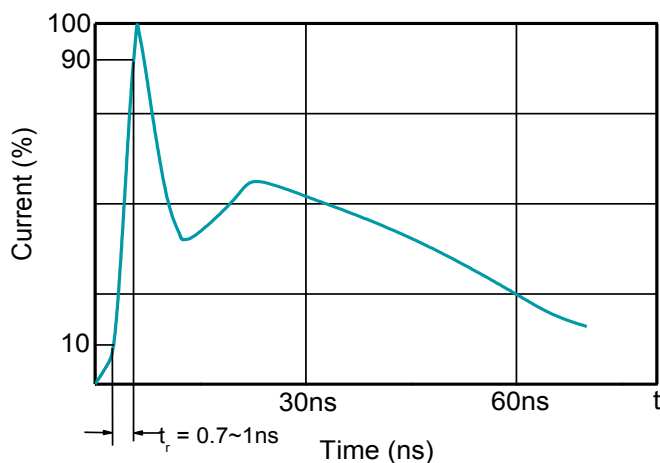
Clamping voltage vs. Peak pulse current



Capacitance vs. Reverse voltage



8/20μs waveform per IEC61000-4-5



Contact discharge current waveform per IEC61000-4-2

Ordering information

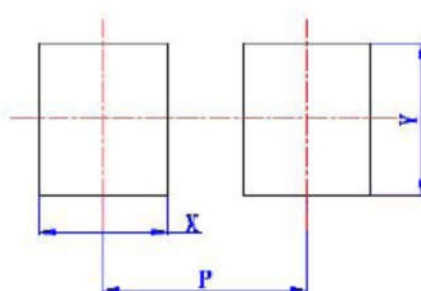
Package	Packing Description	Packing Quantity
DFN1610-2L	Tape/Reel, 7" reel	3000PCS/Reel 120000PCS/Carton

Package Dimensions

DFN1610-2L

Dim.	Millimeter(mm)		Inches	
	Min.	Max.	Min.	Max.
A	0.50	0.60	0.020	0.024
A1	-	0.05	-	0.002
D	1.50	1.70	0.060	0.067
E	0.90	1.10	0.035	0.043
e	Typ1.05		Typ0.041	
b	0.35	0.45	0.014	0.018
L	0.75	0.95	0.030	0.037

The recommended mounting pad size



Dim.	Millimeter(mm)
	TYP
X	0.62
Y	1.00
P	1.20

Disclaimer

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