Transient Voltage Suppressor

Marking Code	
ESD1610D7V0	07*

Features

- 2400Watts peak pulse power (tp = 8/20μs)
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Protection one data/power line
- IEC 61000-4-2 ±30kV contact ±30kV air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning)120A(8/20μs)

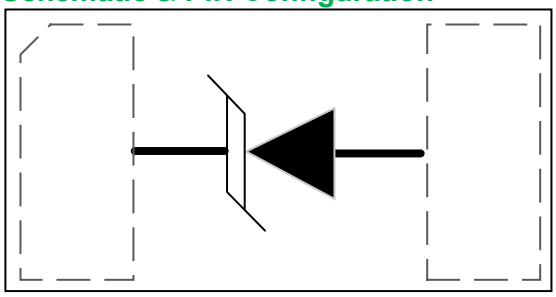
Applications

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

Mechanical Data

- DFN1610-2L package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

Schematic & PIN Configuration

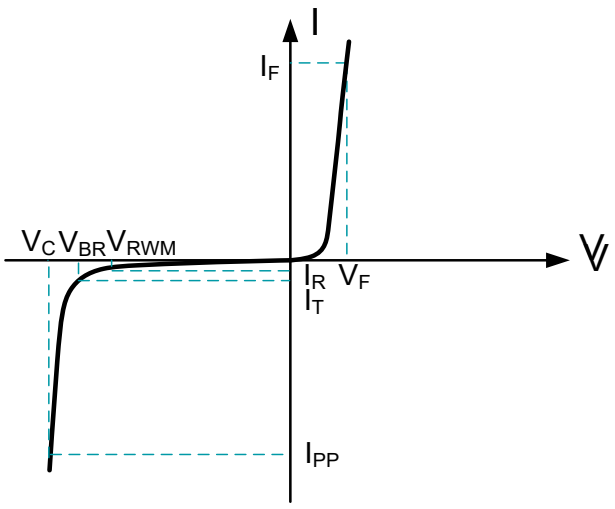


Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power (t_p =8/20μs)	P_{PP}	2400	Watts
Peak Pulse Current (t_p =8/20μs) (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)	℃
Junction Temperature	T_J	-55 to + 125	℃
Storage Temperature	T_{stg}	-55 to + 125	℃

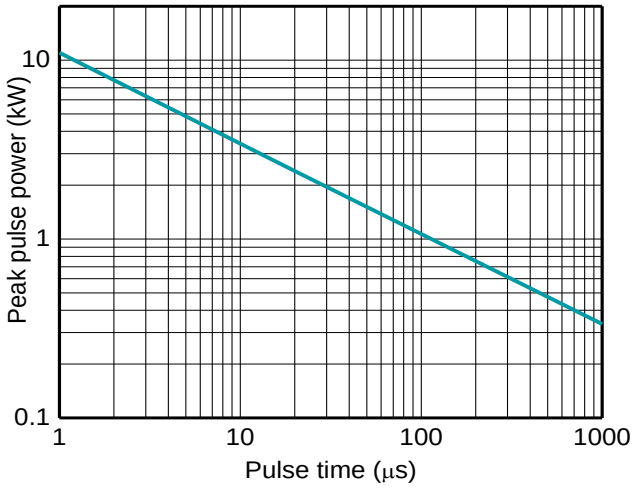
Electrical Parameters (T=25℃)

Symbol	Parameter
I_{PP}	Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Reverse Stand-Off Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_F	Forward Current
V_F	Forward Voltage @ I_F

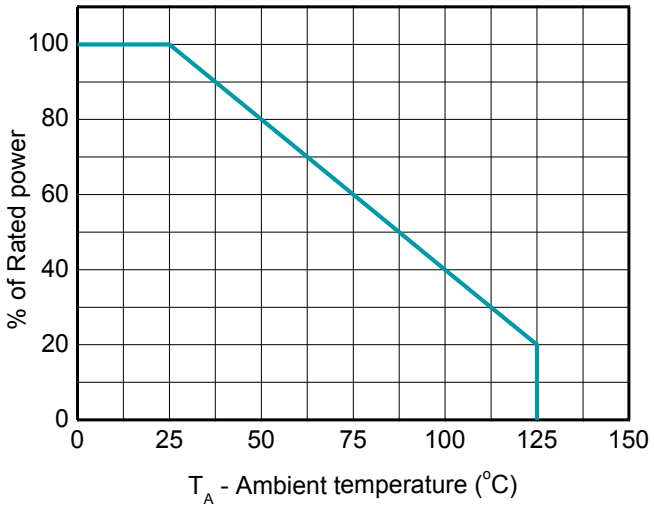


Electrical Characteristics

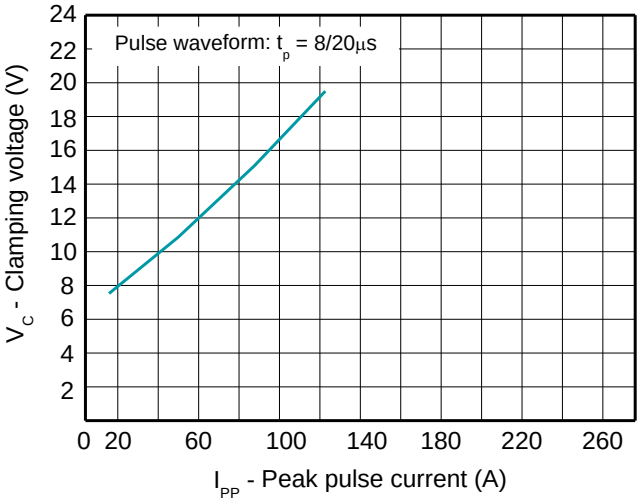
Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				7.0	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	7.6			V
Reverse Leakage Current	I_R	V_{RWM}=7.0V,T=25℃		0.1	0.5	μA
Peak Pulse Current	I_{PP}	tp =8/20μs		120		A
Clamping Voltage	V_C	I_{PP}=120A,t_p=8/20μs		20		V
Junction Capacitance	C_j	V_R = 0V, f = 1MHz		600		pF



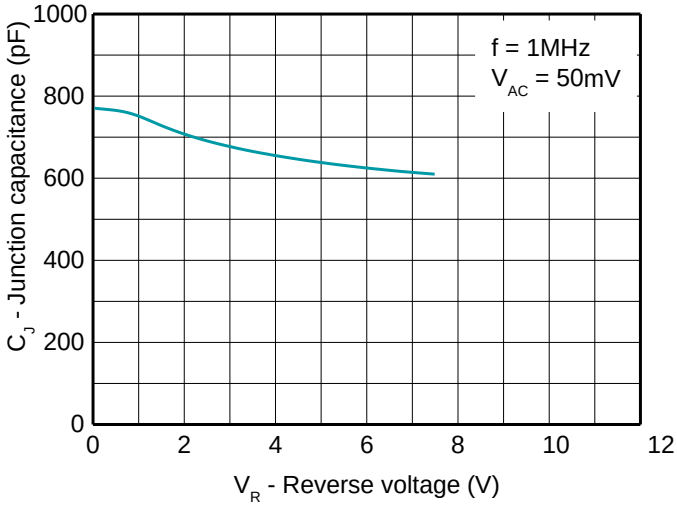
Non-repetitive peak pulse power vs. Pulse time



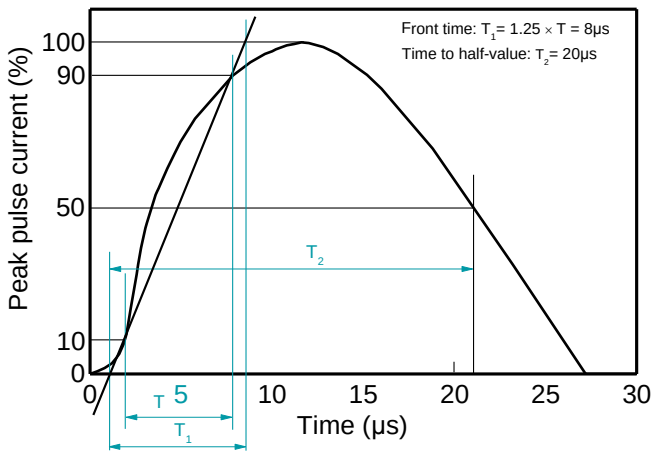
Power derating vs. Ambient temperature



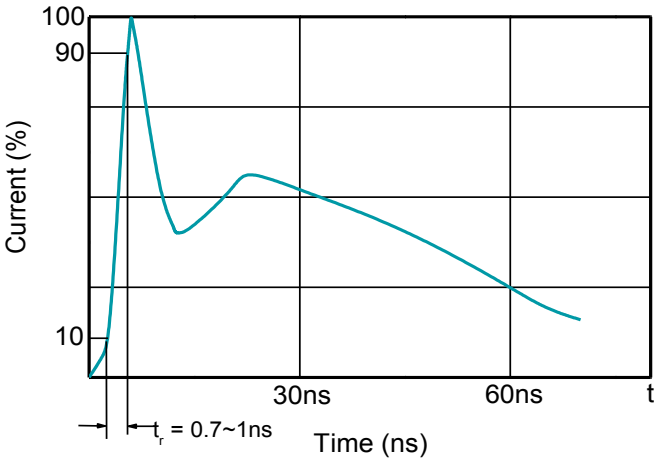
Clamping voltage vs. Peak pulse current



Capacitance vs. Reverse voltage



8/20μs waveform per IEC61000-4-5



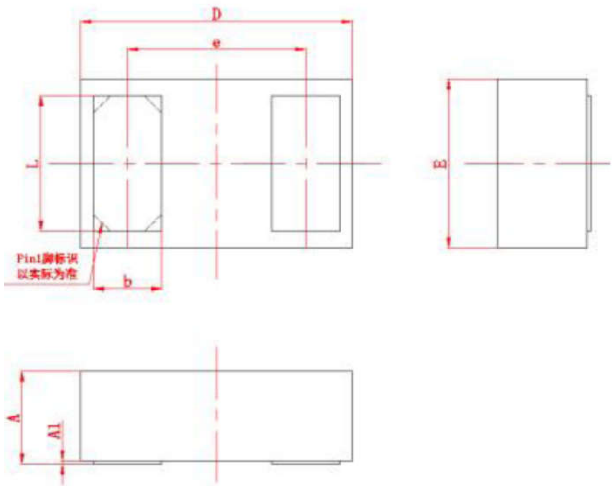
Contact discharge current waveform per IEC61000-4-2

Ordering information

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

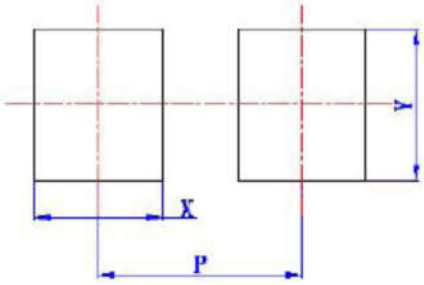
Package Dimensions

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

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