

Transient Voltage Suppressor

FEATURES

- ◆ 3150Watts peak pulse power($p=8/20\mu s$)
- ◆ Solid-state silicon-avalanche technology
- ◆ Low clamping voltage
- ◆ Low leakage current
- ◆ Protection one data/power line
- ◆ IEC 61000-4-2 $\pm 30kV$ contact $\pm 30kV$ air
- ◆ IEC 61000-4-4 (EFT) 40A (5/50ns)
- ◆ IEC 61000-4-5 (Lightning) 90A (8/20 μs)

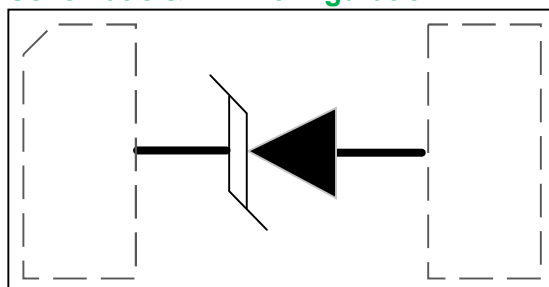
APPLICATIONS

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

MECHANICAL DATA

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

Schematic & PIN Configuration



Absolute Maximum Rating

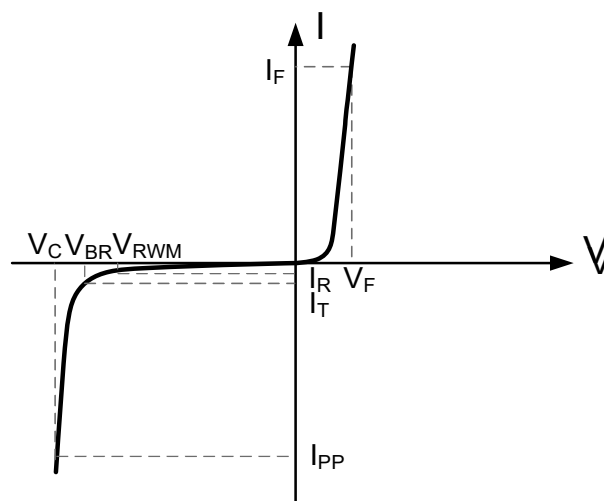
Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{PP}	3150	W
Peak Pulse Current ($t_p = 8/20\mu s$) (note1)	I_{PP}	90	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	30 30	kV
Lead Soldering Temperature	T_L	260(10seconds)	°C
Operating Temperature	T_j	-55 to + 125	°C
Storage Temperature	T_{stg}	-55 to +125	°C



Marking Code	
ESD1610D24	24*

Electrical Parameters (T=25°C)

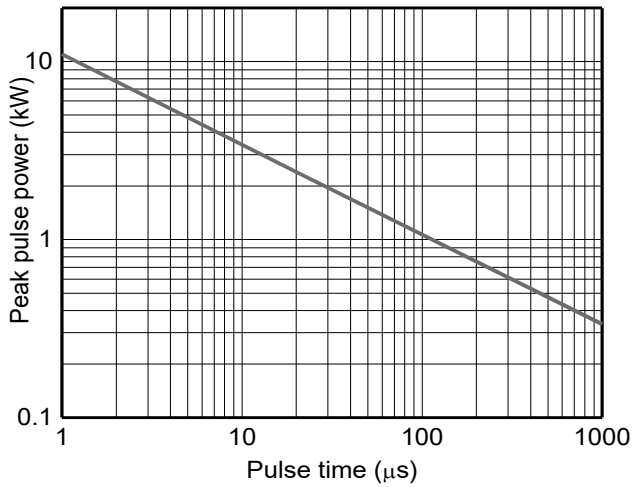
Symbol	Parameter
I_{PP}	Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Reverse Stand-Off Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_F	Forward Current
V_F	Forward Voltage @ I_F



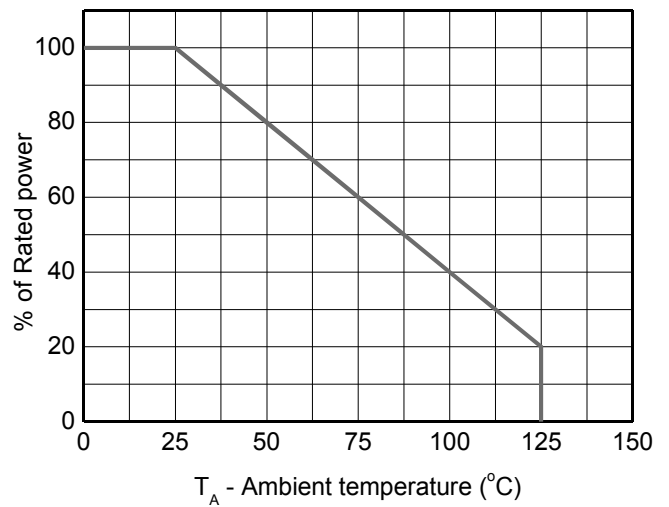
Electrical Characteristics

Parameter	Conditions	Symbol	Min	Typ	Max	Units
Reverse Stand-Off Voltage		V_{RWM}			24	V
Reverse Breakdown Voltage	$I_T=1mA$	V_{BR}	26			V
Reverse Leakage Current	$V_{RWM}=24V, T=25^{\circ}C$	I_R			0.1	μA
Peak Pulse Current	$t_p=8/20\mu s$	I_{PP}			90	A
Clamping Voltage	$I_{PP}=90A, t_p=8/20\mu s$	V_C		35		V
Junction Capacitance	$V_R=0V, f=1MHz$	C_j		200		pF

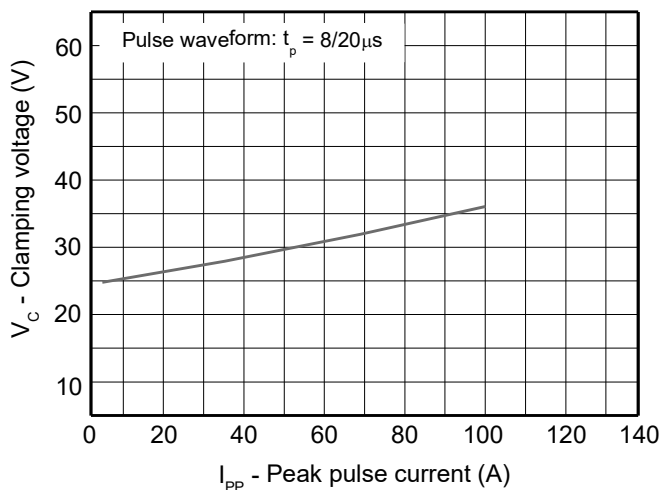
Typical Characteristics



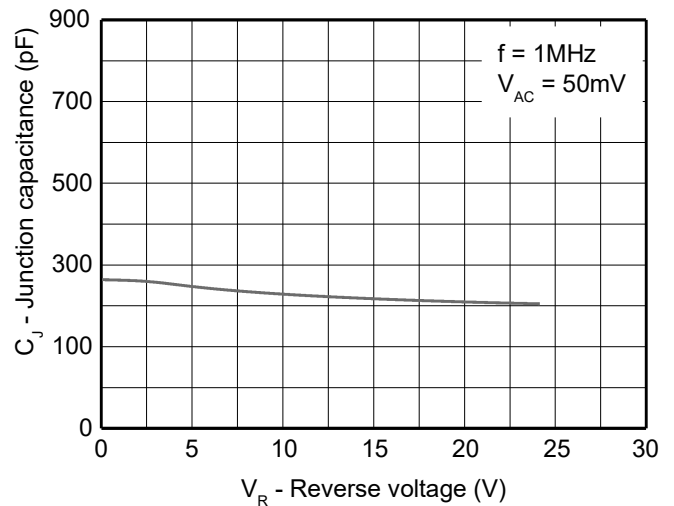
Non-repetitive peak pulse power vs. Pulse time



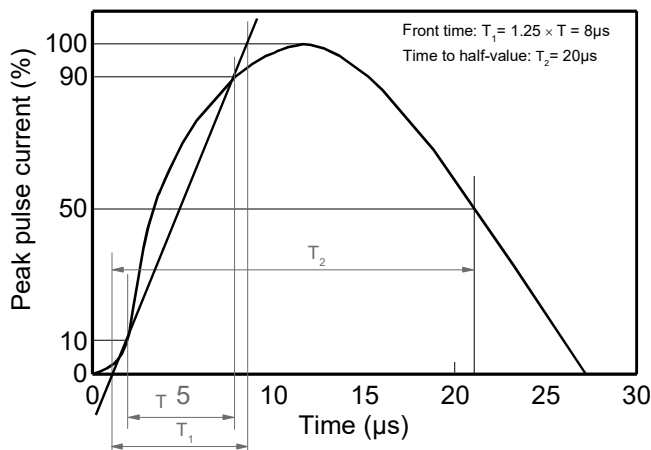
Power derating vs. Ambient temperature



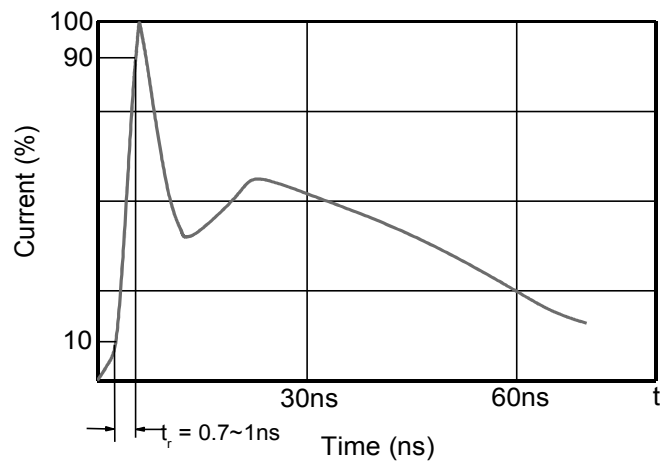
Clamping voltage vs. Peak pulse current



Capacitance vs. Reverse voltage



8/20 μs waveform per IEC61000-4-5



Contact discharge current waveform per IEC61000-4-2

Ordering information

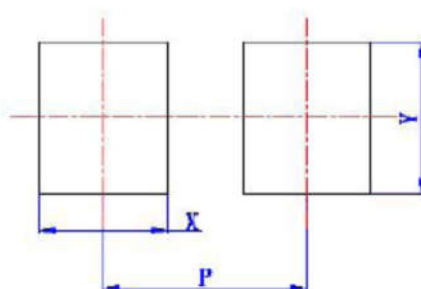
Package	Packing Description	Packing Quantity
DFN1610-2L	Tape/Reel, 7" reel	3000PCS/Reel 120000PCS/Carton

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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