

Transient Voltage Suppressors Array for ESD Protection

SE04N9W11GJ

Features

- ◆ Working voltage: 4.8V
- ◆ Protects one data or power line
- ◆ Low clamping voltage
- ◆ 2-pin leadless package
- ◆ RoHS compliant

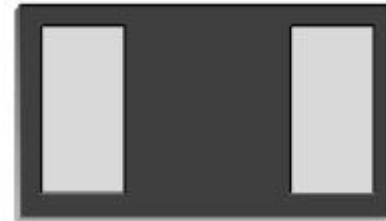
Applications

- ◆ Mobile Phones
- ◆ Battery Protection
- ◆ Power Line Protection
- ◆ Vbat pin for Mobile Devices
- ◆ Hand Held Portable Applications

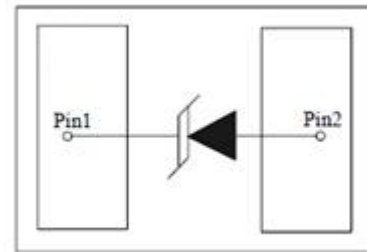
Mechanical Characteristics

- ◆ DFN1610-2L package
- ◆ Case Material: “Green” Molding Compound
- ◆ Moisture Sensitivity: Level 1 per J-STD-020
- ◆ Quantity per reel: 3,000pcs
- ◆ Lead finish: lead free

DFN1610-2L



PIN Configuration



Protection Solution To Meet

- ◆ Complies with following standards:
- ◆ –IEC 61000-4-2 (ESD) immunity test
 - Air discharge: ±30kV
 - Contact discharge: ±30kV

Absolute Maximum Rating ($T_A=25^{\circ}\text{C}$, RH=45%-75%, unless otherwise noted)

Symbol	Parameter	Value	Units
I_{PP}	Peak Pulse Current (8/20 μ s)	160	A
t_{STG}	Storage Temperature Range	-55 to +150	$^{\circ}\text{C}$
T_J	Operating Temperature Range	-55 to +125	$^{\circ}\text{C}$
V_{ESD}	ESD per IEC 61000-4-2(Air)	±30	KV
	ESD per IEC 61000-4-2 (Contact)	±30	

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Electrical Characteristics (@ $T_A=25^\circ\text{C}$ Unless Otherwise Specified)

Parameter	Symbol	Test Condition	Minimum	Typical	Maximum	Unit
Reverse working voltage	V_{RWM}	--	--	--	4.8	V
breakdown voltage	V_{BR}	$I_T = 1\text{mA}$	5.0	5.4	--	V
Reverse leakage current	I_R	$V_{RWM}=4.8\text{V}$	--	--	15	μA
Clamping voltage	V_C	$I_{PP}=1\text{A}, t_p=8/20\mu\text{s}$	--	6.5	--	V
		$I_{PP}=160\text{A}, t_p=8/20\mu\text{s}$	--	28	--	
Junction capacitance	C_J	$V_{RWM}=0\text{V}, f=1\text{MHz}$	--	460	--	pF

Ratings and V-I Characteristics Curves ($T_A=25^\circ\text{C}$, unless otherwise noted)

Fig1. Peak Pulse Power vs. Pulse Time

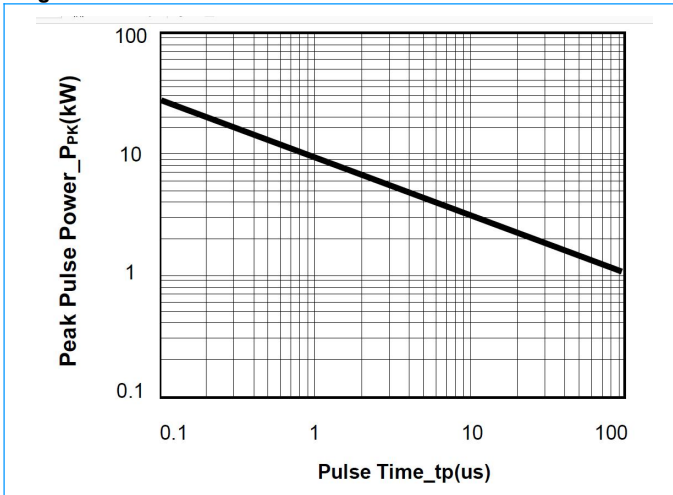


Fig2. Power Derating Curve

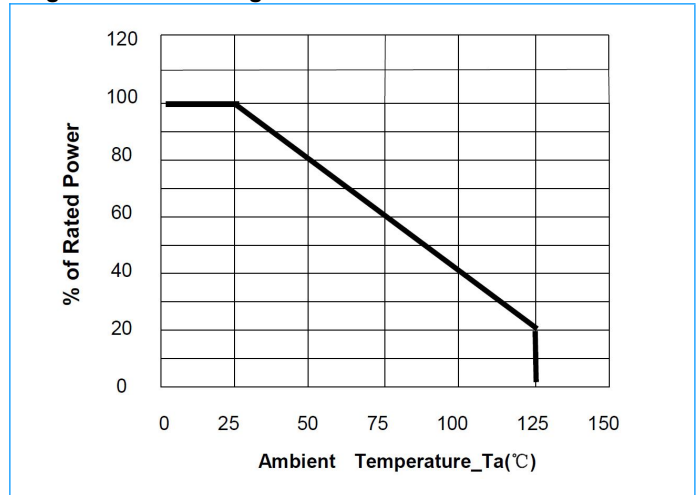
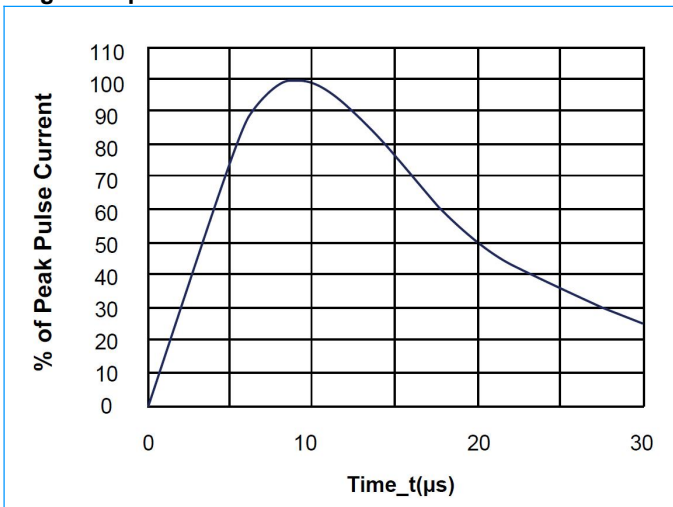


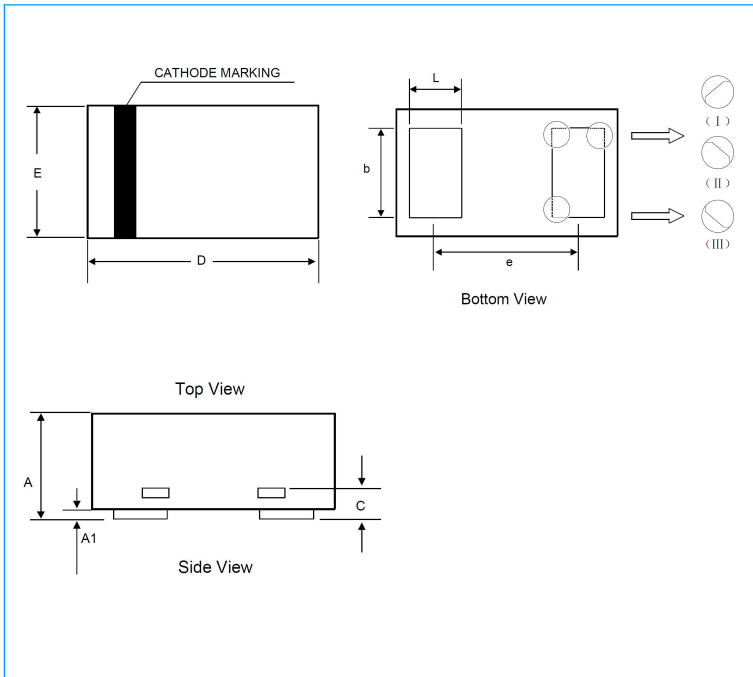
Fig3. 8/20 μs Pulse Waveform



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DFN1610-2L Package Outline Drawing



Symbol	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	0.45	0.50	0.60	0.018	0.020	0.024
A1	0.00	0.02	0.05	0.000	0.001	0.002
b	0.75	0.80	0.85	0.030	0.032	0.034
c	0.10	0.15	0.20	0.004	0.006	0.008
D	1.55	1.60	1.65	0.062	0.064	0.066
e	1.10BSC			0.044BSC		
E	0.95	1.00	1.05	0.038	0.040	0.042
L	0.35	0.40	0.45	0.014	0.016	0.018

Packaging Quantity

Part Number	Packaging Option	Quantity
SE04N9W11GJ	Tape & Reel	3000 PCS