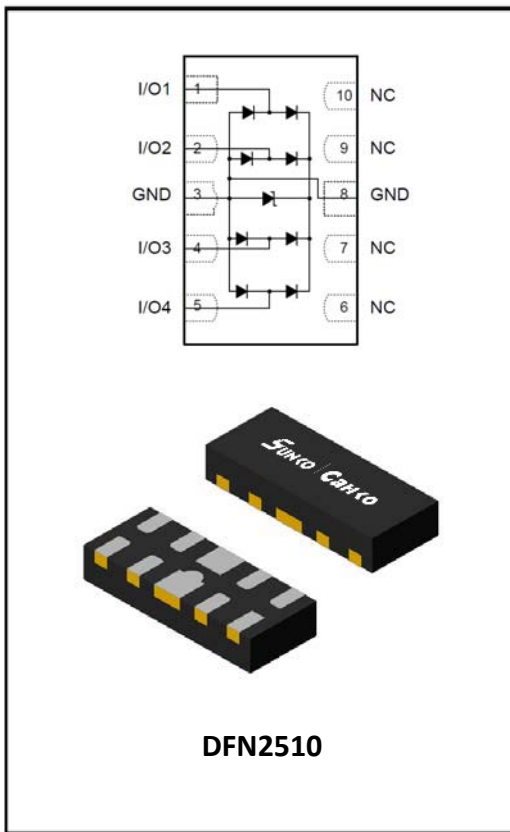


4-Line, Uni-directional, Ultra-low Capacitance, Transient Voltage Suppressor



Features

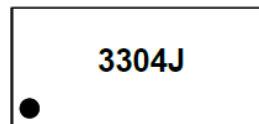
- Operating voltage: 3.3V
- Transient protection for each line according to
IEC61000-4-2(ESD): $\pm 20\text{kV}$ (contact)
IEC61000-4-5(surge): 6A (8/20 μs)
- Ultra low leakage
- Low clamping voltage
- Up to 4 lines protects
- Compliant

Applications

- HDMI1.3 /1.4, USB 2.0/3.0 Type C
- Monitors and flat panel displays
- Set-top box and Digital TV
- MDDI ports
- Video graphics cards
- Digital Video Interface (DVI)
- Notebook Computers
- PCI Express and Serial SATA Ports

Mechanical Data

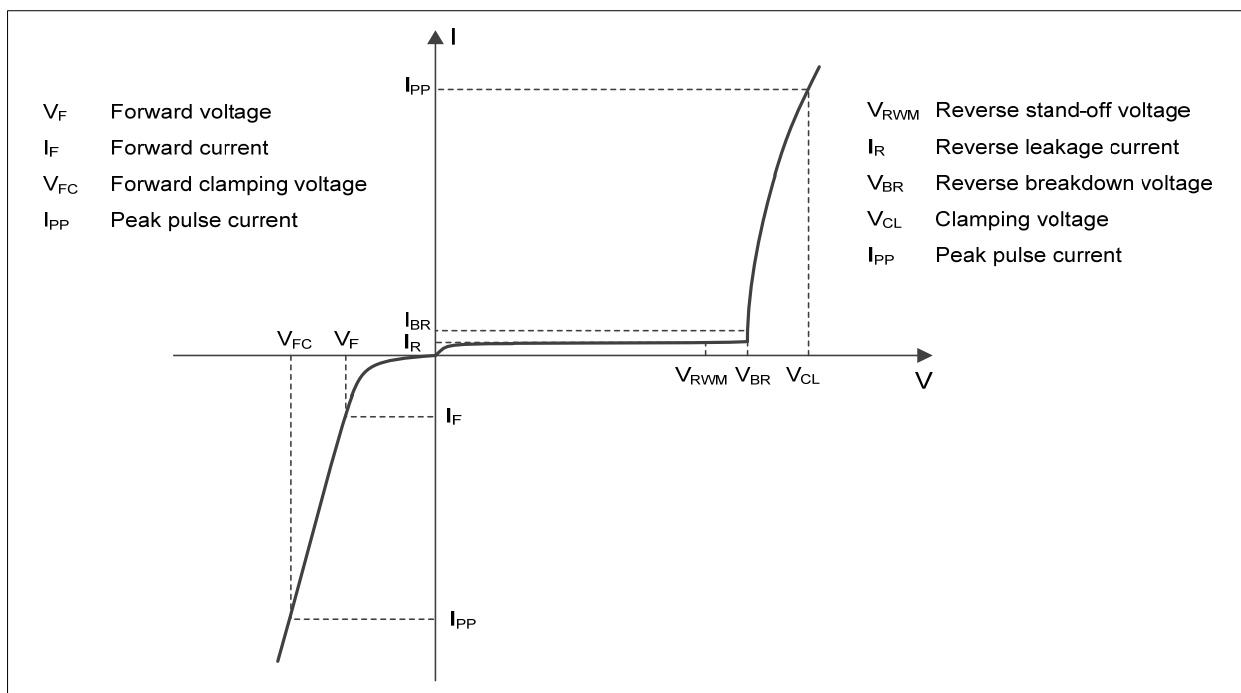
- Package: DFN2510-10 (2.5 $\times$ 1.0 $\times$ 0.5mm)
- Terminals: Tin plated leads, solderabl per
J-STD-002 and JESD22-B102
- Polarity: Cathode line denotes the cathode end
- Marking:



3304J = Device Marking Code

Dot denotes Pin1

■Definitions of electrical characteristics



■Maximum Ratings

PARAMETER	SYMBOL	LIMITS	UNIT
Peak pulse power ($t_p = 8/20\mu s$)	P_{pk}	60	W
Peak pulse current ($t_p = 8/20\mu s$)	I_{PP}	6	A
ESD according to IEC61000-4-2 air discharge	V_{ESD}	± 25	KV
ESD according to IEC61000-4-2 contact discharge		± 20	
Junction temperature	T_J	125	$^{\circ}C$
Storage temperature	T_{STG}	-55~150	$^{\circ}C$

■Electrical Characteristics ($T_a=25^{\circ}C$ Unless otherwise specified)

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse maximum working voltage	V_{RWM}	V	Any I/O pin to ground			3.3
Reverse leakage current	I_R	nA	$V_{RWM} = 3.3V$, any I/O pin to ground			200
Reverse breakdown voltage	$V_{(BR)}$	V	$I_T = 1mA$, any I/O pin to ground	3.5		
Clamping voltage	V_{CL}	V	$I_{PP} = 1A$, $t_p = 8/20\mu s$			7
		V	$I_{PP} = 6A$, $t_p = 8/20\mu s$			10
Junction capacitance	CJ	pF	$V_R = 0V$, $f = 1MHz$ Any I/O pin to GND		0.6	1.0
			$V_R = 0V$, $f = 1MHz$ Between I/O pins		0.4	

■Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
3304J	F1	Approximate 3.48	3000	30000	120000	7 reel

■ Characteristics (Typical)

Fig.1 8/20 μ s waveform per IEC61000-4-5

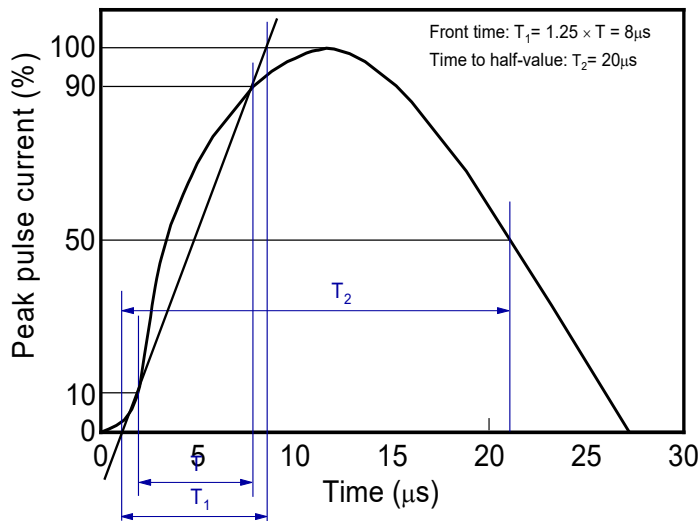


Fig.2 Contact discharge current waveform per IEC61000-4-2

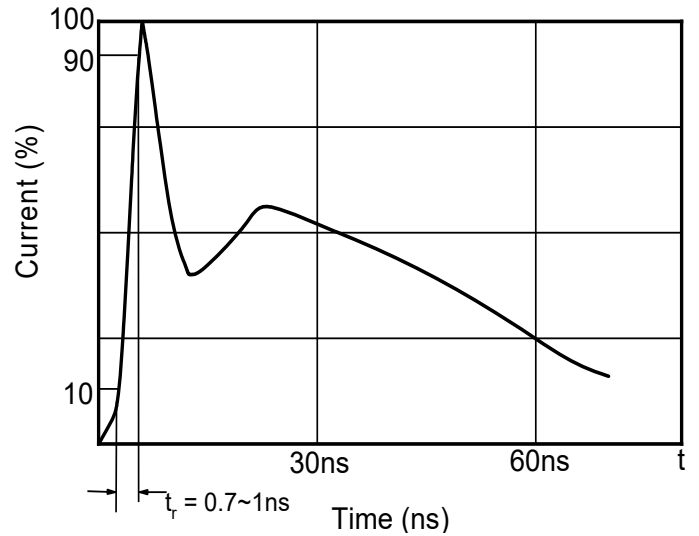


Fig.3 Clamping voltage vs. Peak pulse current

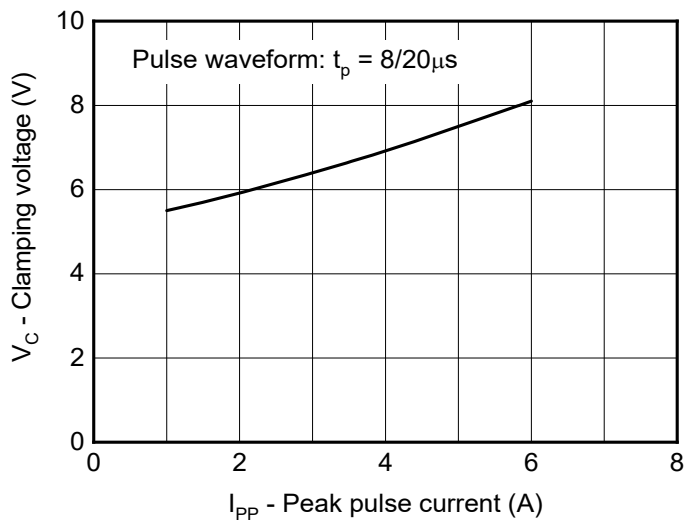


Fig.4 Capacitance vs. Reverse voltage

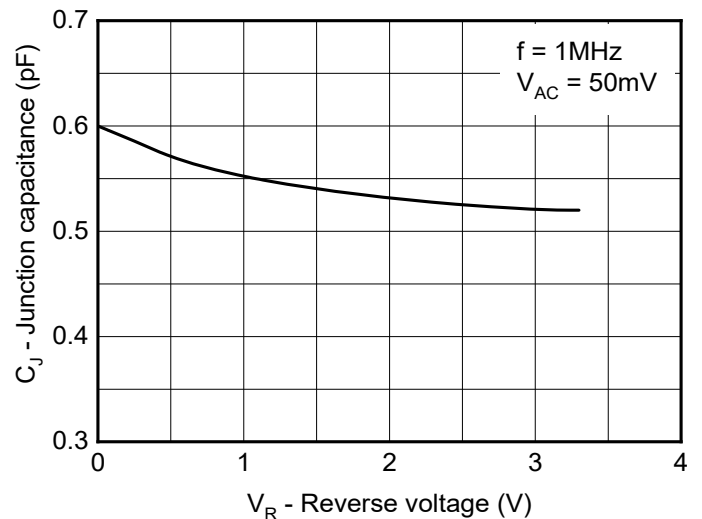


Fig.5 Non-repetitive peak pulse power vs. Pulse time

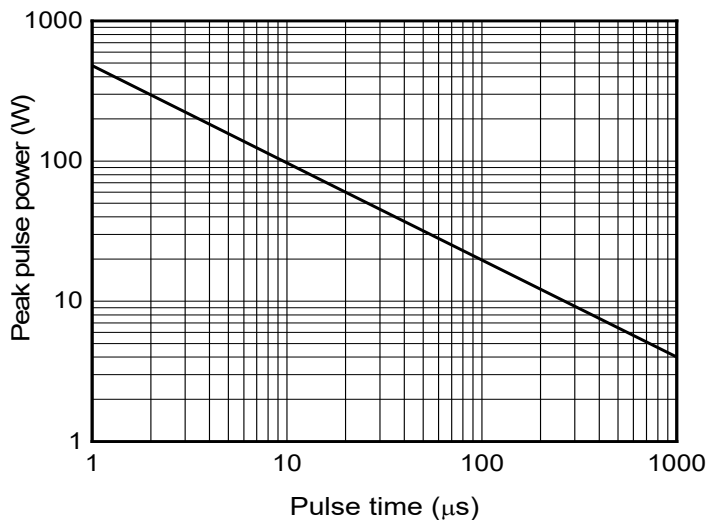
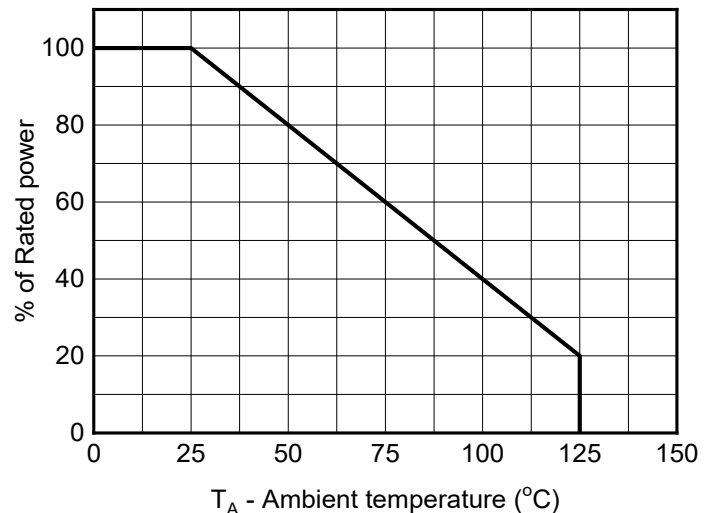
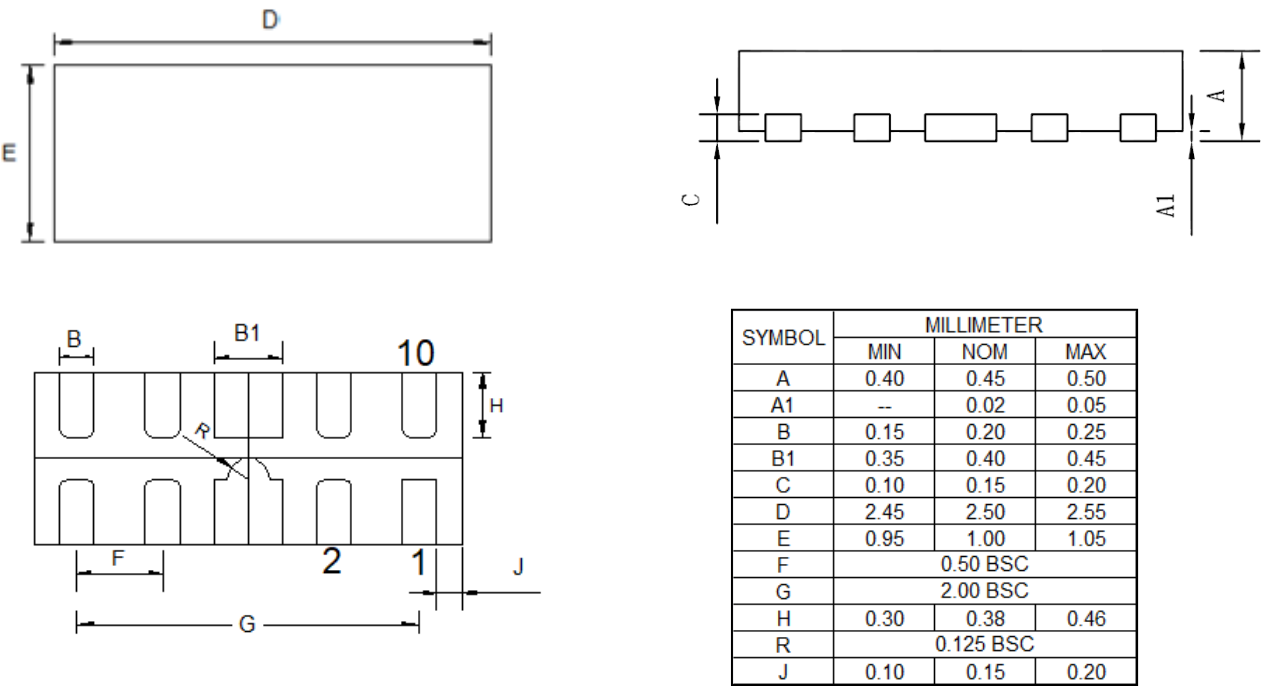


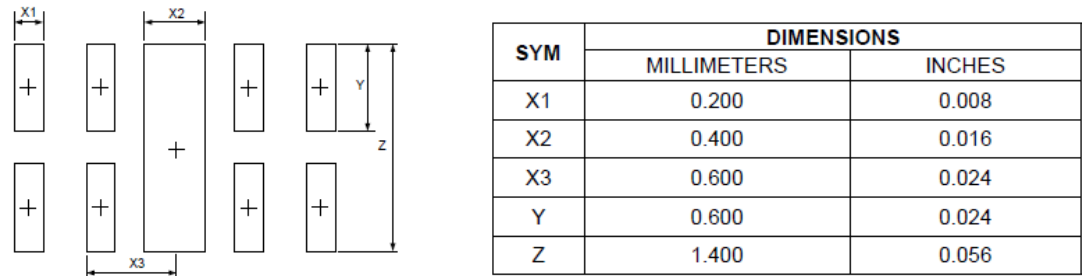
Fig.6 Power derating vs. Ambient temperature



■ Outline Dimensions



■ Soldering Footprint



Notes:
This recommended land pattern is for reference purposes only. Please consult your manufacturing group to ensure your PCB design guidelines are met.

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