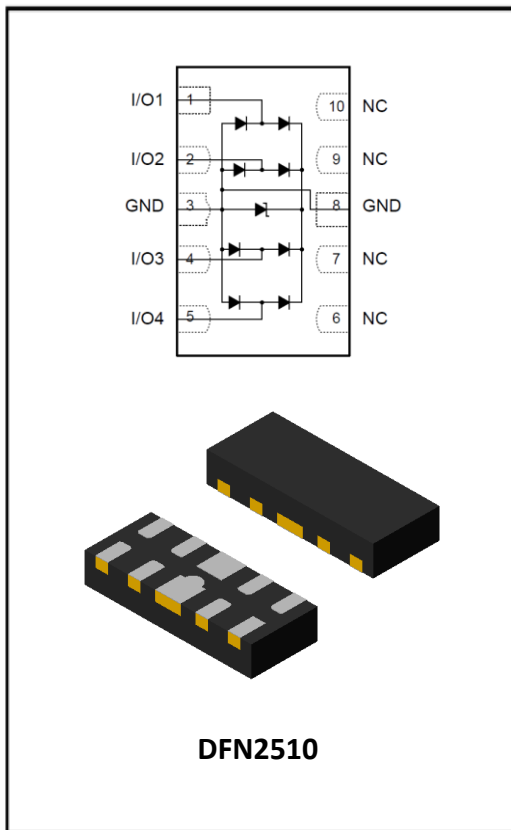


4-Line, Uni-directional, Ultra-low Capacitance, Transient Voltage Suppressor



Features

- 150W peak pulse power (8/20 μ s)
- Ultra low leakage
- Operating voltage: 5V
- Low clamping voltage
- Up to 4 lines protects
- RoHS Compliant

Applications

- HDMI1.3 /1.4/2.0, 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

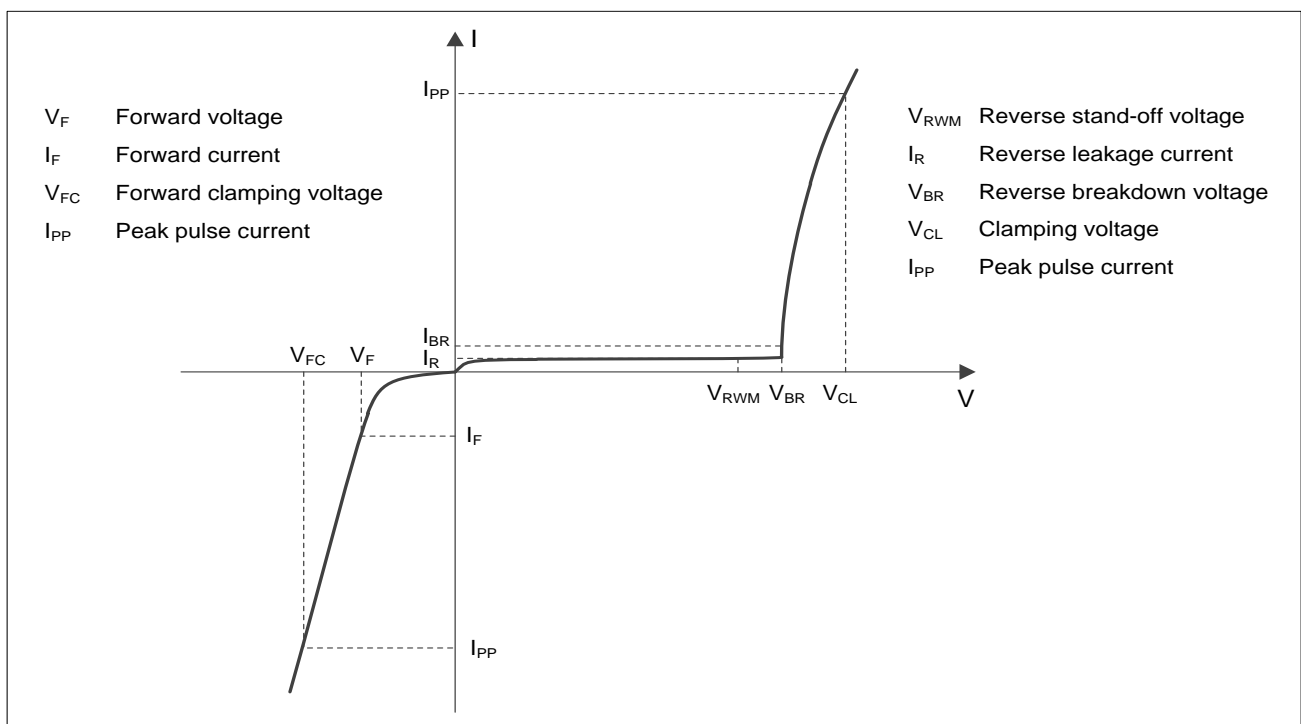
Mechanical Data

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

0524P

Pin1

■Definitions of electrical characteristics





■Maximum Ratings

PARAMETER	SYMBOL	LIMITS	UNIT
Peak pulse power ($t_p = 8/20\mu s$)	P_{pk}	150	W
Peak pulse current ($t_p = 8/20\mu s$)	I_{PP}	5	A
ESD according to IEC61000-4-2 air discharge	V_{ESD}	± 15	KV
ESD according to IEC61000-4-2 contact discharge		± 8	
Junction temperature	T_J	-55~125	$^{\circ}C$
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			5
Reverse leakage current	I_R	μA	$V_{RWM} = 5V$, Any I/O pin to ground			0.1
Reverse breakdown voltage	$V_{(BR)}$	V	$I_T = 1mA$, Any I/O pin to ground	6.1		8.5
Forward Voltage	V_F	V	$I_F=15mA$ GND to any I/O Pin		1.15	
Clamping voltage ¹⁾	V_{CL}	V	$I_{PP} = 1A$, $t_p = 8/20\mu s$		9.5	11
		V	$I_{PP} = 5A$, $t_p = 8/20\mu s$		15	18
Junction capacitance	C_J	pF	$V_R = 0V$, $f = 1MHz$ Any I/O pin to GND			0.8

Notes:

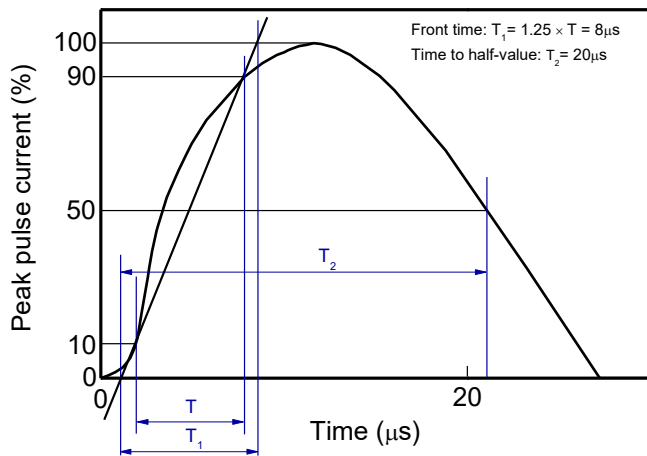
1) Non-repetitive current pulse, according to IEC61000-4-5.

■Ordering Information (Example)

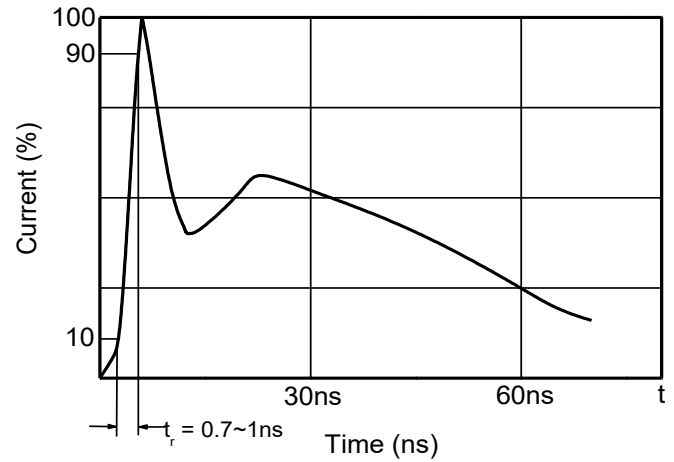
PREFERED P/N	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
0524P	3000	30000	120000	Tape & Reel

■ Characteristics (Typical)

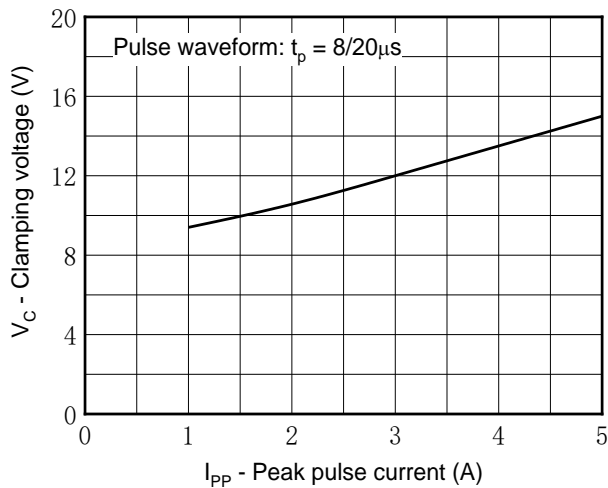
8/20 μ s waveform per IEC61000-4-5



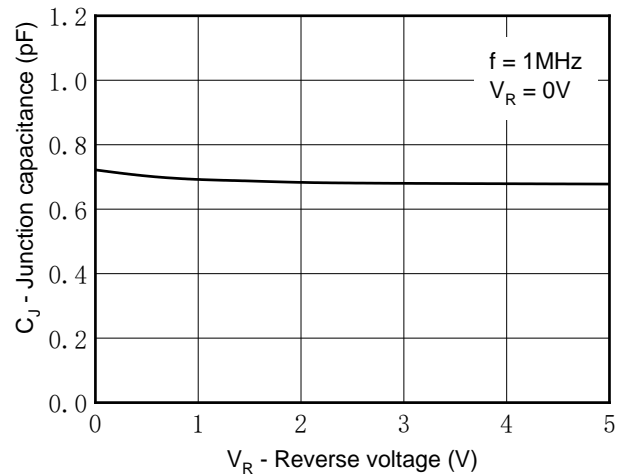
Contact discharge current waveform per IEC61000-4-2



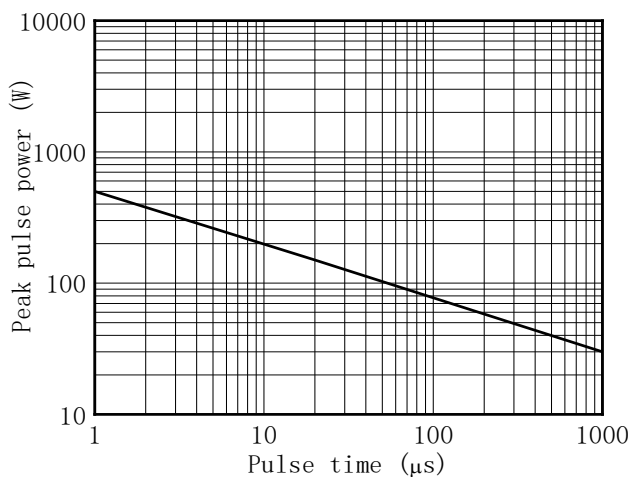
Clamping voltage vs. Peak pulse current



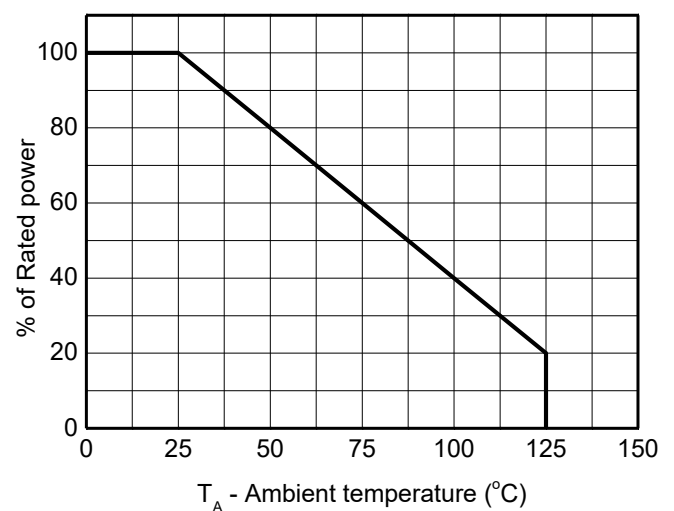
Capacitance vs. Reverse voltage



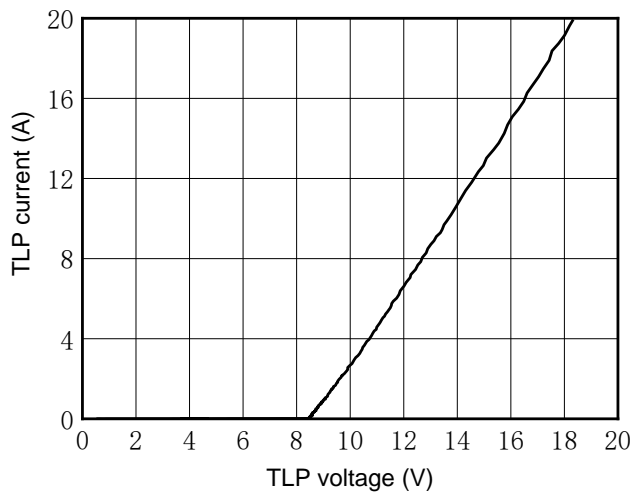
Non-repetitive peak pulse power vs. Pulse time



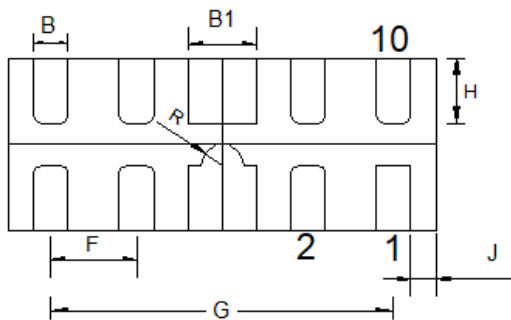
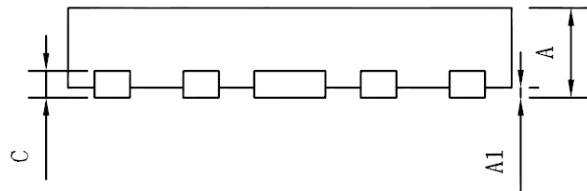
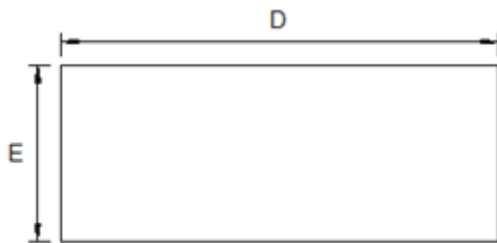
Power derating vs. Ambient temperature



TLP Measuement

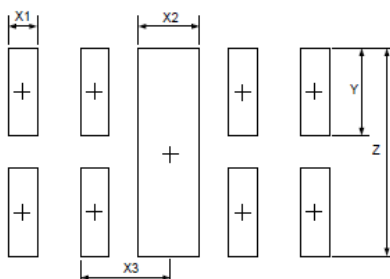


■ Outline Dimensions



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	0.40	0.45	0.50
A1	--	0.02	0.05
B	0.15	0.20	0.25
B1	0.35	0.40	0.45
C	0.10	0.15	0.20
D	2.45	2.50	2.55
E	0.95	1.00	1.05
F	0.50 BSC		
G	2.00 BSC		
H	0.30	0.38	0.46
R	0.125 BSC		
J	0.10	0.15	0.20

■ Soldering Footprint



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
X1	0.200	0.008
X2	0.400	0.016
X3	0.600	0.024
Y	0.600	0.024
Z	1.400	0.056

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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