

FEATURES

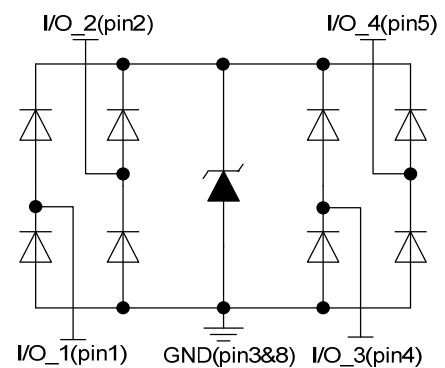
- ✧ Solid-state silicon-avalanche technology
- ✧ Up to four I/O lines of protection
- ✧ Low operating voltage
- ✧ Ultra low capacitance
- ✧ Low operating and clamping voltage
- ✧ Low leakage current
- ✧ RoHS compliant



DFN2510

MAIN APPLICATIONS

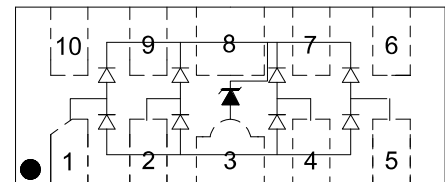
- ✧ Digital visual interface(DVI)
- ✧ Display port TM interface
- ✧ MDDI ports
- ✧ PCI express
- ✧ SATA interfaces
- ✧ High definition multi-media interface(HDMI)



Pin configuration

PROTECTION SOLUTION TO MEET

- ✧ IEC61000-4-2 (ESD) $\pm 25\text{kV}$ (air), $\pm 20\text{kV}$ (contact)
- ✧ IEC61000-4-4 (EFT) 40A (5/50ns)
- ✧ IEC61000-4-5 (Lightning) 5A (8/20 μs)



Top view

MECHANICAL CHARACTERISTICS

- ✧ DFN2510 package
- ✧ Molding compound flammability rating: UL 94V-0
- ✧ Quantity per reel: 3,000pcs
- ✧ Lead finish: lead free
- ✧ Marking code: 0524P

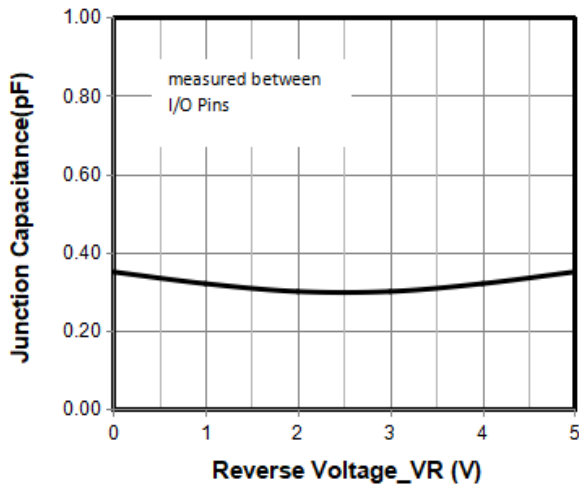
Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power ($t_p=8/20\mu\text{s}$)	P_{PP}	80	W
Peak Pulse Current ($t_p=8/20\mu\text{s}$)	I_{PP}	5	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	± 25 ± 20	kV
Operating Temperature Range	T_J	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^{\circ}\text{C}$

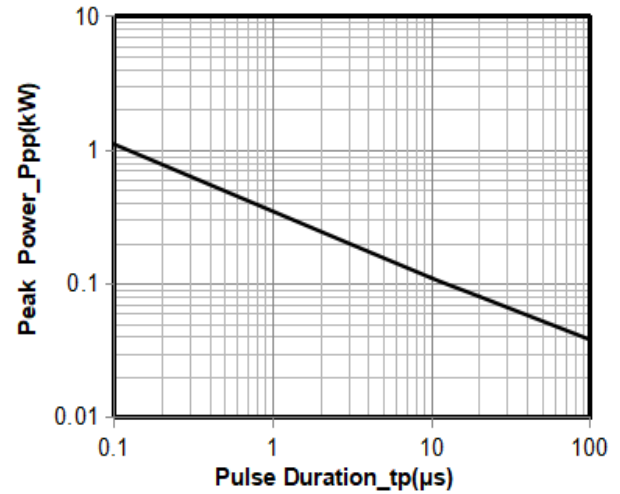
Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V_{RWM}			5	V	Any I/O pin to ground
Breakdown Voltage	V_{BR}	6			V	$I_T = 1\text{mA}$, any I/O pin to ground
Reverse Leakage Current	I_R		0.01	0.5	μA	$V_{RWM} = 5\text{V}$, any I/O pin to ground
Clamping Voltage	V_C			9	V	$I_{PP} = 1\text{A}$ (8 x 20 μs pulse), any I/O pin to ground
Clamping Voltage	V_C			16	V	$I_{PP} = 5\text{A}$ (8 x 20 μs pulse), any I/O pin to ground
Junction Capacitance	C_J		0.3	0.4	pF	$V_R = 0\text{V}$, $f = 1\text{MHz}$, between I/O pins
Junction Capacitance	C_J			0.8	pF	$V_R = 0\text{V}$, $f = 1\text{MHz}$, any I/O pin to ground

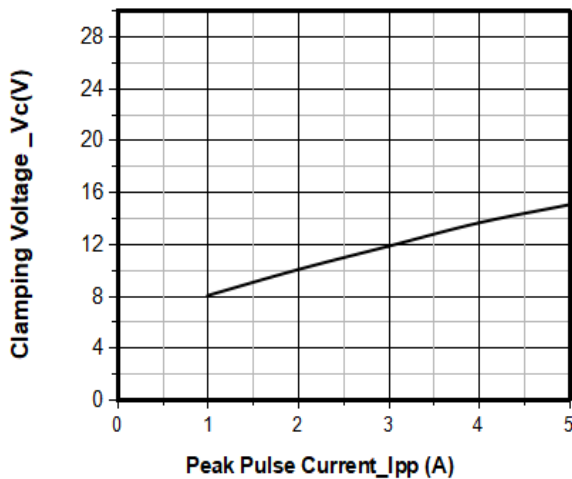
Typical Performance Characteristics (TA=25°C unless otherwise Specified)



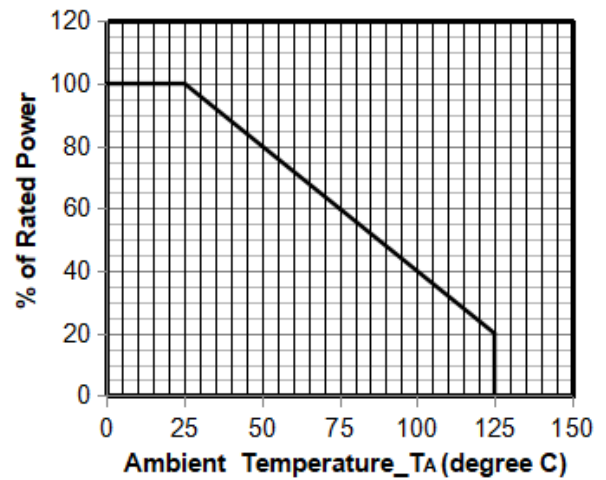
Junction Capacitance vs. Reverse Voltage



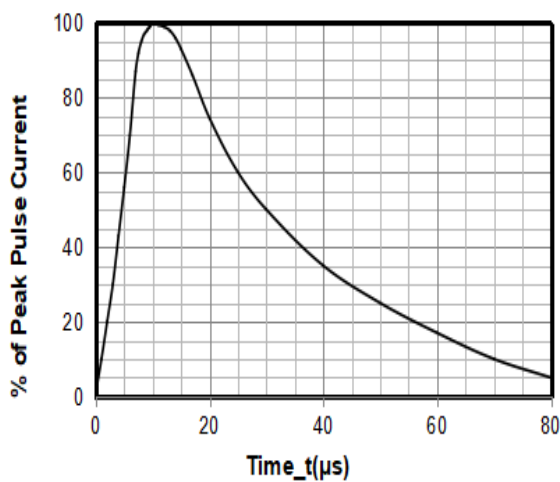
Peak Pulse Power vs. Pulse Time



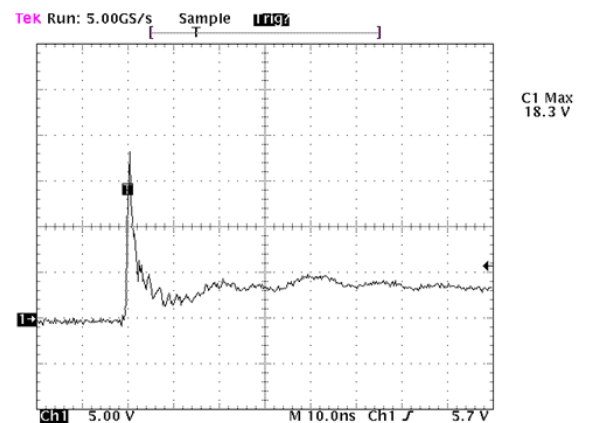
Clamping Voltage vs. Peak Pulse Current



Power Derating Curve



8 X 20μs Pulse Waveform

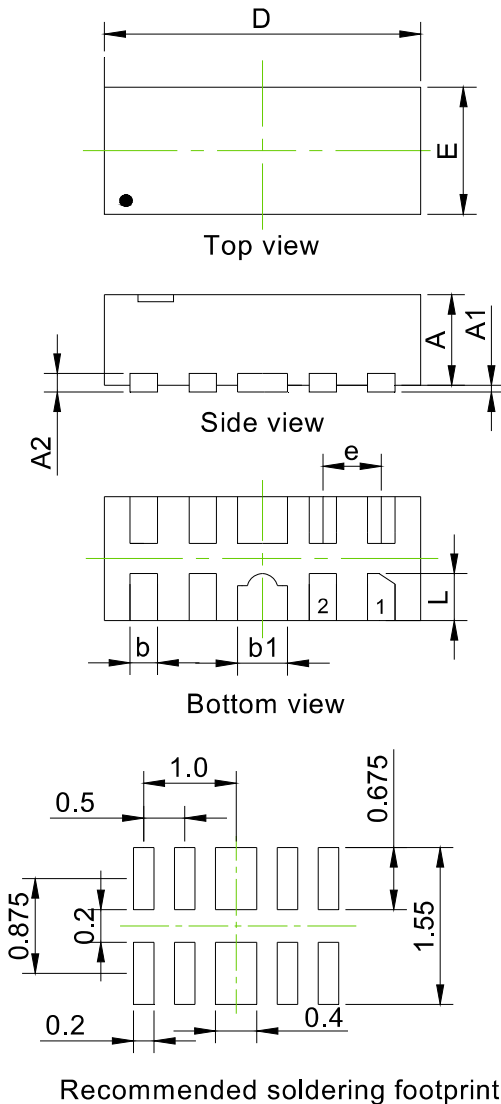


Note: Data is taken with a 10x attenuator

ESD Clamping Voltage

8 kV Contact per IEC61000-4-2

DFN2510 Package Information



Symbol	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	0.50	0.65	0.020	0.026
A1	0.00	0.05	0.000	0.002
A2	0.13REF.		0.005REF.	
b	0.15	0.25	0.006	0.010
b1	0.35	0.45	0.014	0.018
D	2.40	2.60	0.094	0.102
E	0.90	1.10	0.035	0.043
e	0.50BSC		0.020BSC	
L	0.30	0.425	0.012	0.017