



ESD5I5V0C

Bi-directional ESD Protection Diode in DFN1006 Package Datasheet

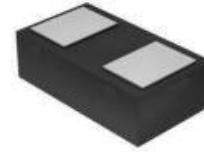
Features

- Capacitance: 0.3pF(typ.)
- Reverse Working Voltage: 5V
- IEC 61000-4-2 (ESD Air): $\pm 20\text{KV}$
- IEC 61000-4-2 (ESD Contact): $\pm 20\text{KV}$
- IEC 61000-4-4 (EFT 5/50ns): 40A
- IEC 61000-4-5 (Lightning 8/20 μs): 4A

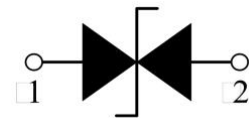
Applications

- DVI & HDMI Port Protection
- USB 2.0 and USB 3.0
- SATA and eSATA
- Notebooks, Desktops, Servers

Pin Description



Schematic Diagram



Order Information

Type	Package	Size(mm)	Delivery Form	Delivery Quantity
ESD5I5V0C	DFN1006	1.00x0.60x0.40	7" T&R	10000

Limiting Values(TA = 25 °C, unless otherwise specified)

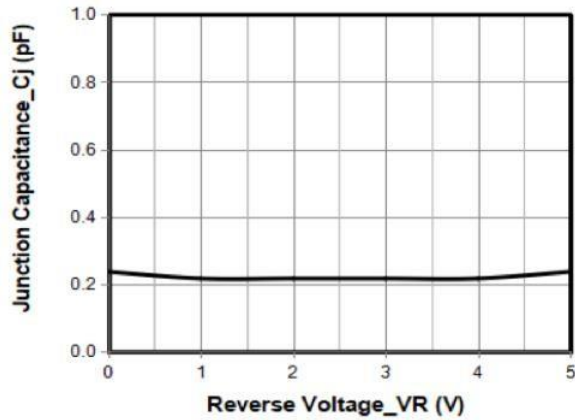
Symbol	Parameter	Conditions	Min	Max	Unit
V _{ESD}	Electrostatic Discharge Voltage	IEC 61000-4-2; Contact Discharge	-	± 20	kV
		IEC 61000-4-2; Air Discharge	-	± 20	kV
P _{PP}	Peak Pulse Power	t _P = 8/20 μs	-	72	W
I _{PPM}	Rated Peak Pulse Current	t _P = 8/20 μs	-	4	A
T _A	Ambient Temperature Range	-	-55	125	°C
T _{stg}	Storage Temperature Range	-	-55	150	°C

Electrical Characteristics (TA = 25 °C, unless otherwise specified)

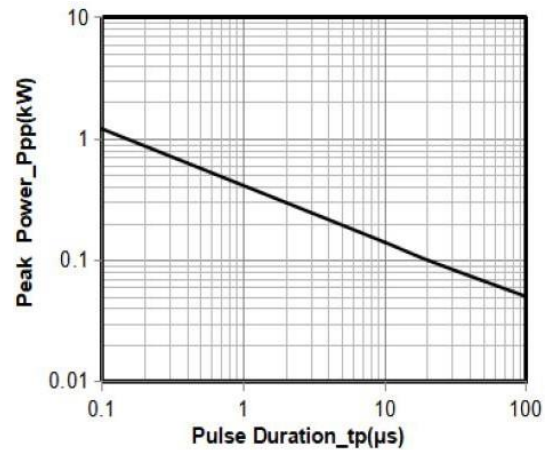
Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V _{RWM}	Reverse Working Voltage	T _A = 25 °C	-	-	5.0	V
V _{BR}	Breakdown Voltage	I _R = 1mA; T _A = 25 °C	6.0	-	10	V
I _R	Reverse Leakage Current	V _{RWM} = 5V; T _A = 25 °C	-	-	0.1	μA
		I _{PP} = 1A, t _P = 8/20 μs	-	10	12	V
V _C	Clamping Voltage	I _{PP} = 4A, t _P = 8/20 μs	-	18	22	V
C _J	Junction Capacitance	V _R = 0V, f = 1 MHz	-	0.3	0.5	pF

Typical Characteristics

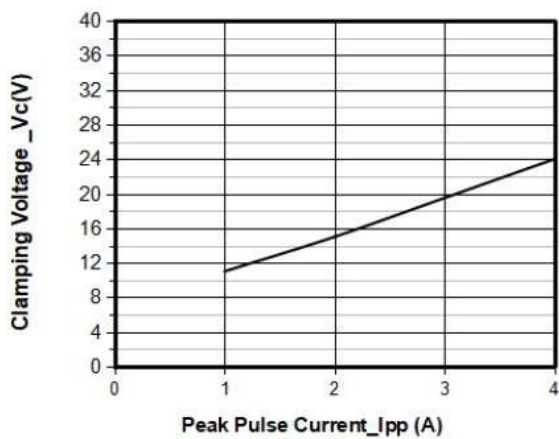
ESD5I5V0C



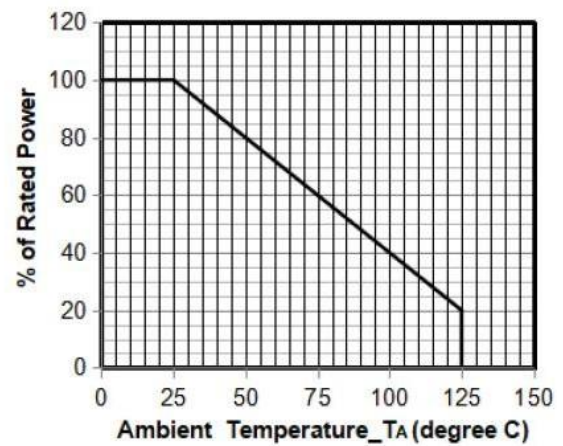
Junction Capacitance vs. Reverse Voltage



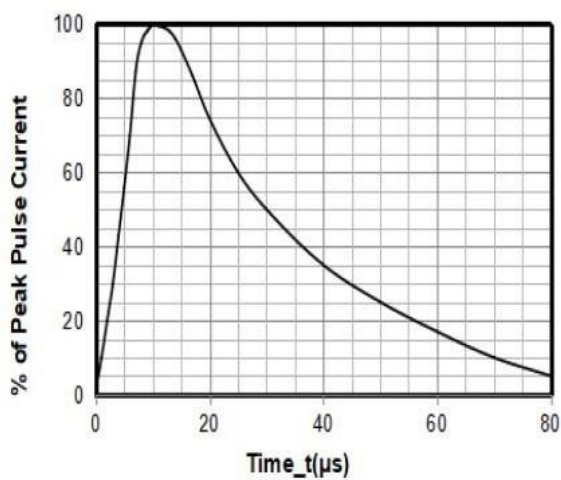
Peak Pulse Power vs. Pulse Time



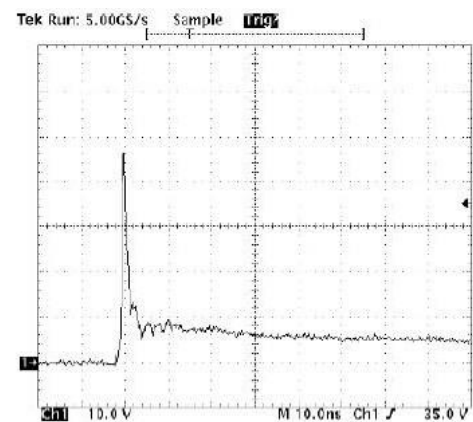
Clamping Voltage vs. Peak Pulse Current



Power Derating Curve



8 X 20 μ s Pulse Waveform

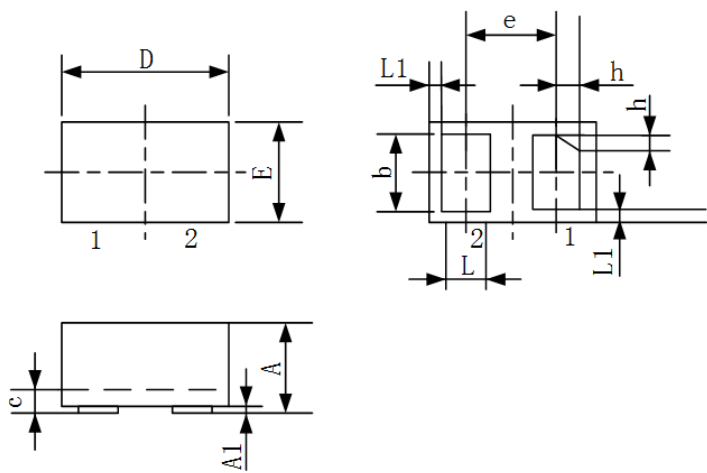


Note: Data is taken with a 10x attenuator

ESD Clamping Voltage

8 kV Contact per IEC61000-4-2

Outline Drawing – DFN1006



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	0.40	0.50	0.55
A1	0	0.02	0.05
b	0.45	0.50	0.55
c	0.12	0.15	0.18
D	0.95	1.00	1.05
e	0.65BSC		
E	0.55	0.60	0.65
L	0.20	0.25	0.30
L1	0.05REF		
h	0.07	0.12	0.17
载体尺寸 (MIL)	20*20		