

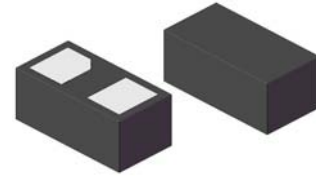
Ultra Low Capacitance ESD/Transient Protection Diode

Features

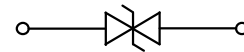
- 100Watts peak pulse power (tp = 8/20us)
- Tiny DFN0603 package
- Bidirectional configurations
- R2R + Zener technology
- Low clamping voltage
- Low leakage current
- Ultra low capacitance (Cj=0.2pF typ.)
- Protection one data/power line to:
 - IEC 61000-4-2 ±15kV contact ±15kV air
 - IEC 61000-4-4 (EFT) 40A (5/50ns)
 - IEC 61000-4-5 (Lighting) 5A (8/20us)
- RoHS compliant

Applications

- USB3.0, Firewire, DVI, HDMI, S-ATA
- Thunderbolt, Display Port
- Mobile HDMI Link, MDDI, MIPI, SWP / NFC



DFN0603



Schematic Diagram

Absolute Maximum Ratings

(T_A=25°C, Unless otherwise specified.)

Parameter	Symbol	Value	Unit
Peak Pulse Power (Tp=8/20uS)	P _{PP}	100	W
ESD contact/air discharge (IEC-61000-4-2)	V _{ESD}	15/15	kV
Peak Pulse Current (tp = 8/20uS)	I _{PP}	5	A
Junction Temperature	T _J	-55 to +125	°C
Storage temperature	T _{STG}	-55 to +150	°C
Maximum Lead Solder Temperature(10 second duration)	T _L	260	°C

Electrical Characteristics

(T_A=25°C, Unless otherwise specified.)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse stand-off Voltage	V _{RWM}				5.0	V
Reverse Breakdown Voltage	V _{BR}	I _T =1mA	6.5	8.5		V
Reverse Leakage Current	I _R	V _R =5.0V		5	100	nA
Clamping Voltage (IEC 61000-4-5)	V _C	I _{PP} =5A			20.5	V
Trigger Voltage (IEC 61000-4-2)	V _T	V _{ESD} =8kV		135		V
Clamping Voltage (IEC 61000-4-2)	V _C	V _{ESD} =8kV		20		V
Junction Capacitance	C _J	V _R =0V , f=1MHz		0.2	0.3	pF

Typical Characteristic Curves

Fig.1 Peak Pulse Power Rating Curve

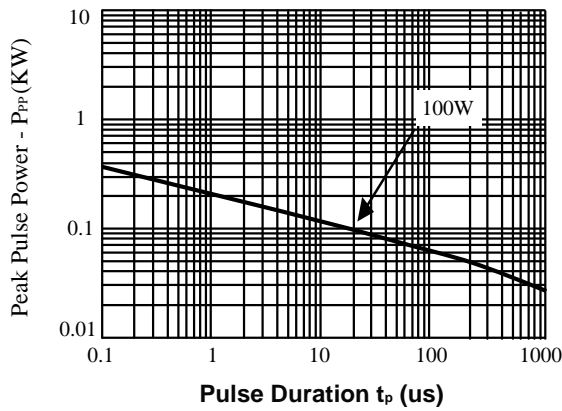


Fig.2 Pulse Derating Curve

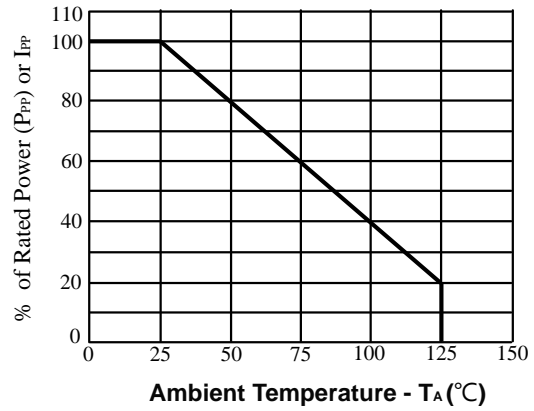


Fig.3 Pulse Waveform-8/20us

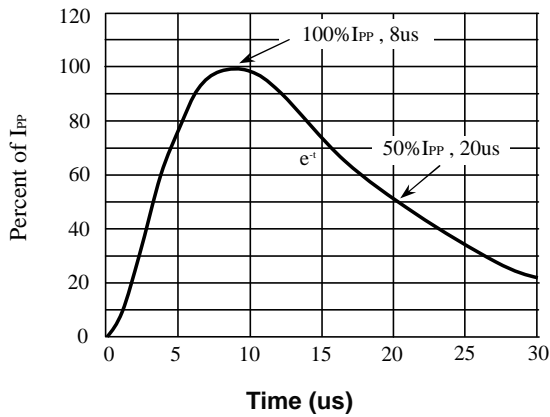


Fig.4 Pulse Waveform-ESD(IEC61000-4-2)

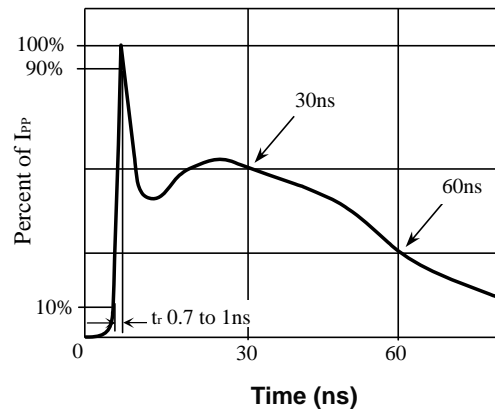


Fig.5 IEC61000-4-2 +8kV Contact Discharge

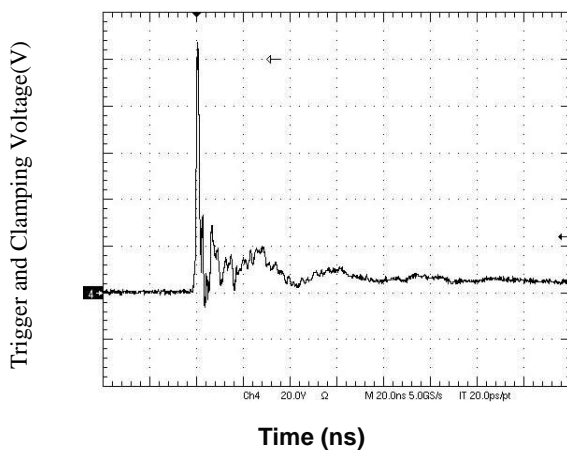
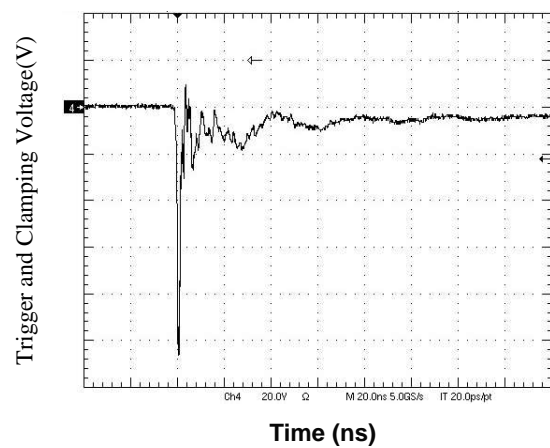
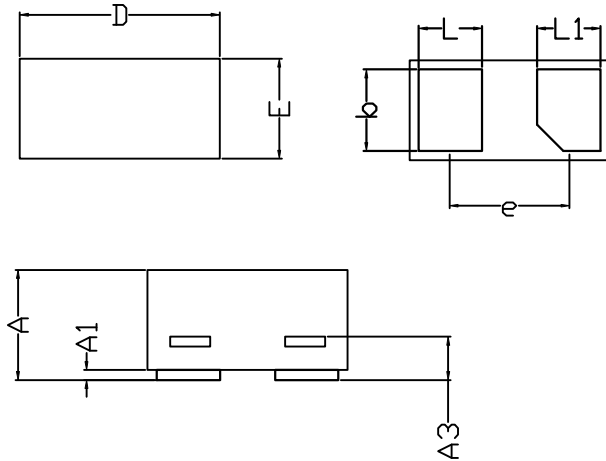


Fig.6 IEC61000-4-2 -8kV Contact Discharge

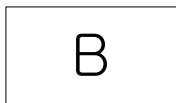


Product Dimensions



Symbol	Dimensions in millimeters		
	Min	Nom	Max
A	0.23	-	0.33
A1	0.00	-	0.05
A3	0.102 REF		
D	0.55	0.60	0.65
E	0.25	0.30	0.35
b	0.215	0.245	0.275
L	0.160	0.190	0.220
L1	0.160	0.190	0.220
e	0.355 BSC		

Marking



Order Information

Device	Package	Carrier	Quantity	HSF Status
PE05B-DFN0603	DFN0603	Tape & Reel	15000pcs / Reel	RoHS compliant