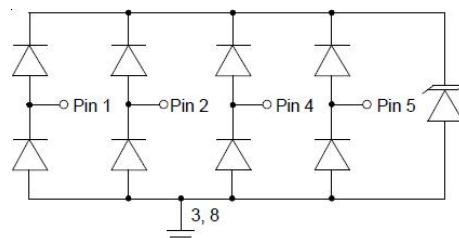


Ultra LowCapacitance ESD Protection Array

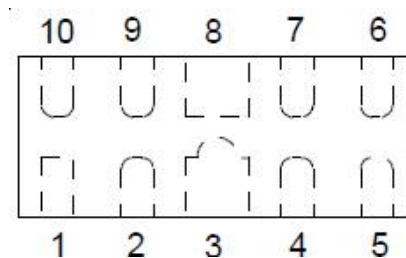
Features

- ◇ 60W (8/20 μ s) Peak Pulse Power
- ◇ Low Capacitance ESD Protection
- ◇ Flow Through DFN2.5x1.0–10L Package
- ◇ RoHS Compliant
- ◇ Matte Tin Lead finish (Pb–Free)
- ◇ Protect Four High Speed Data Lines
- ◇ Meet IEC61000–4–2 Level 4:
 - Contact Discharge > 20kV
 - Air Discharge > 25kV

Circuit Diagram



PIN Diagram



Applications

- ◇ PCI Express
- ◇ MDDI Ports
- ◇ eSATA Interfaces
- ◇ Display Port Interface
- ◇ Digital Visual Interface (DVI)
- ◇ High Definition Multi–Media Interface (HDMI)

Ordering information

Device	Package	Reel Size	Qty / Reel
TPD4E05U06DQAR	DFN2510-10L	7 inch	3000

Maximum Ratings (Ta = 25 °C)

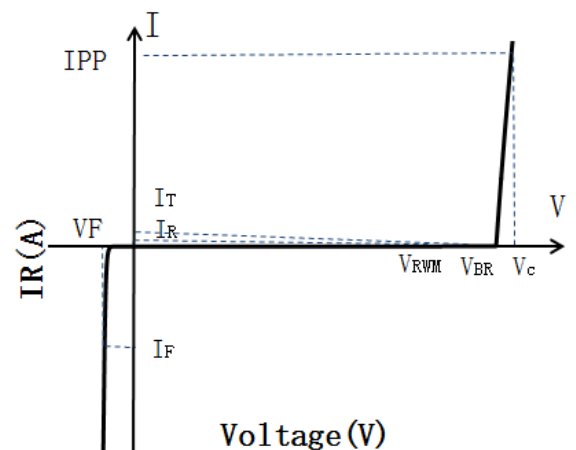
Symbol	Parameter	Value	Unit
PPK	Peak Pulse Power	60	W
IPP	Peak Pulse Current	4.5	A
VESD (Contact)	Contact ESD Voltage per IEC61000–4–2	20	kV
VESD (Air)	Air ESD Voltage per IEC61000–4–2	25	kV
TJ	Junction Temperature	–55 to +125	°C
TSTG	Storage Temperature	–55 to +150	°C

Electrical Characteristics (Ta = 25℃)

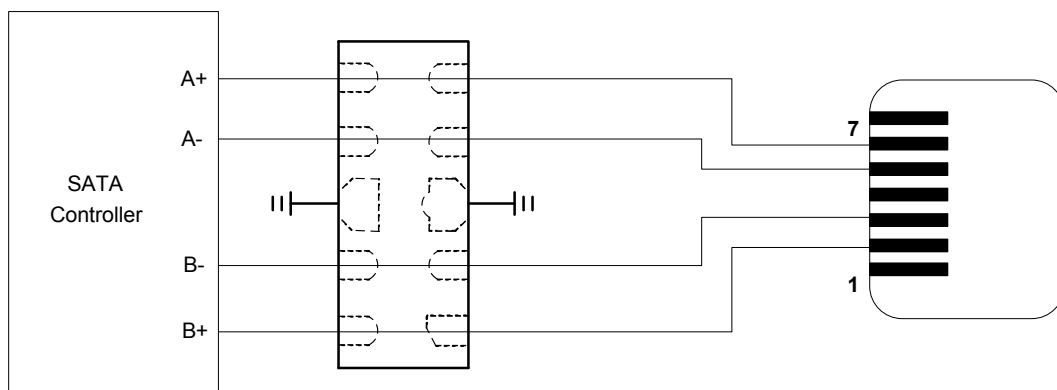
Symbol	Parameter	Conditions	Min	Typ	Max	Unit
VRWM	Reverse Working Peak Voltage				5	V
VBR	Reverse Breakdown Voltage	IT = 1mA	6	8	9	V
IR	Reverse Leakage Current	VRWM = 5V			1	μA
VC	Clamping Voltage	IPP = 4.5A (8/20μs)			15	V
CJ	Capacitance	VR = 0V, f = 1MHz Between I/O pins		0.3	0.4	pF
CJ	Capacitance	VR = 0V, f = 1MHz Any I/O pin to ground		0.6	0.7	pF

Symbol	Parameter
IT	Test Current
IPP	Maximum Reverse Peak Pulse Current
Vc	Clamping Voltage @Ic

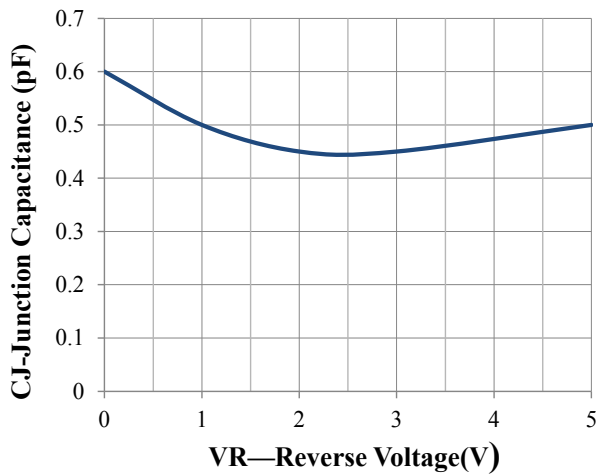
Portion Electronics Parameter



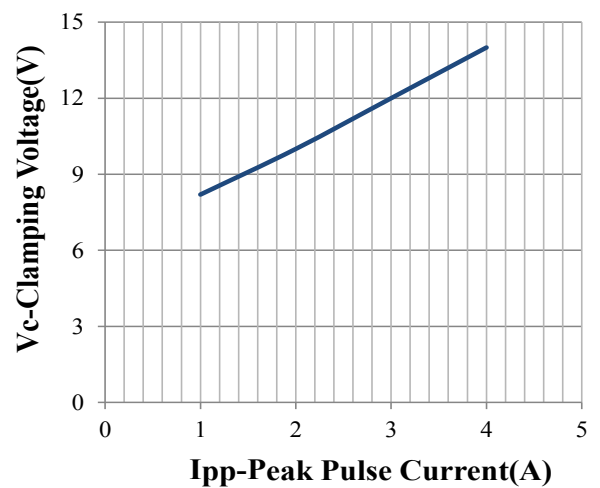
on eSATA Port Application



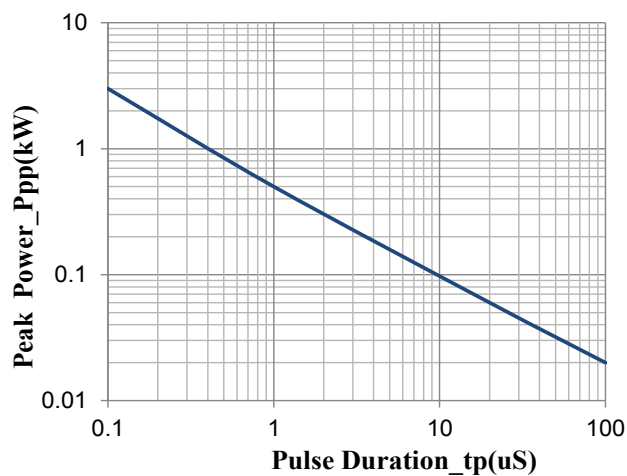
Typical Characteristics



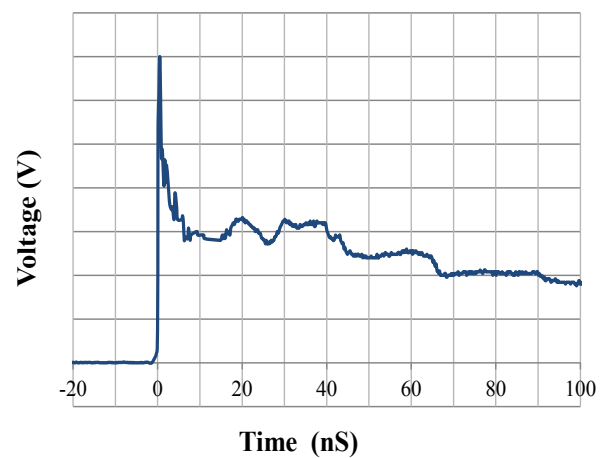
Junction Capacitance vs. Reverse Voltage



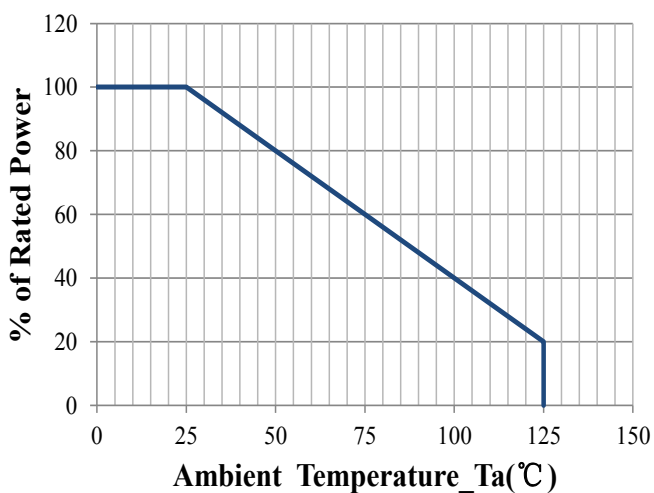
Clamping Voltage vs. Peak Pulse Current



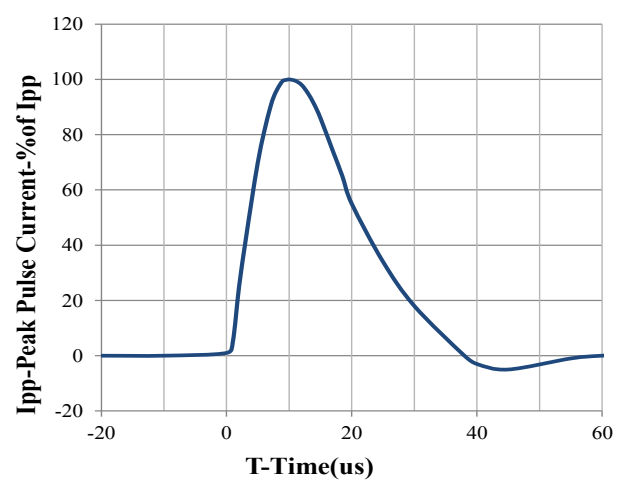
Peak Pulse Power vs. Pulse Time



IEC61000-4-2 Pulse Waveform

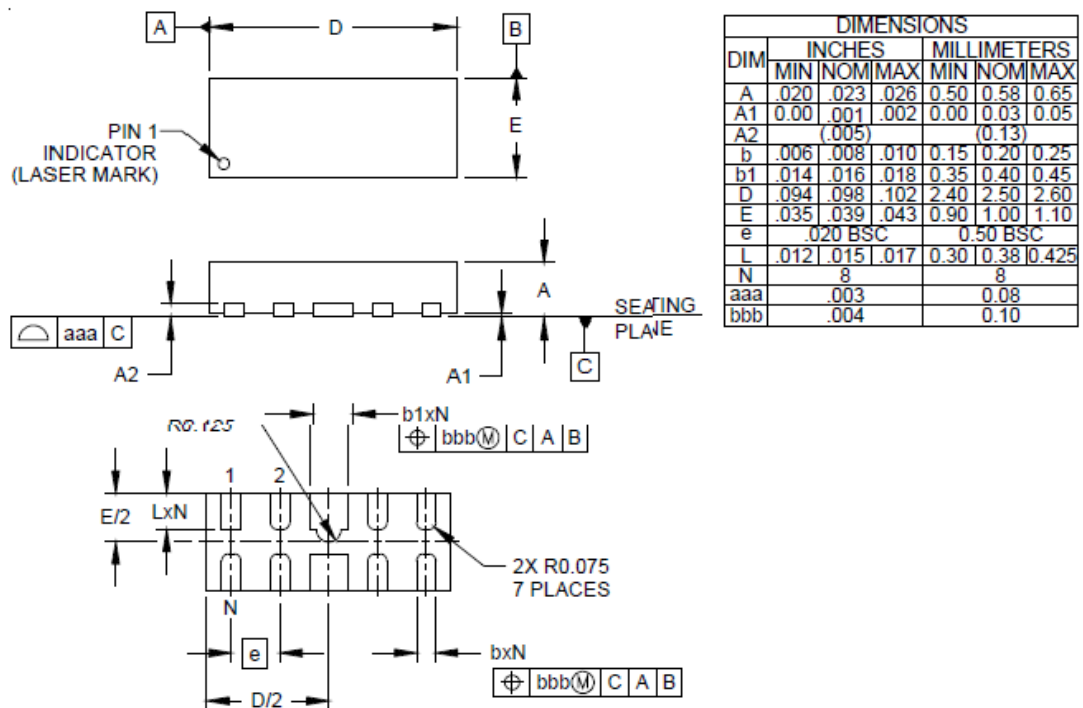


Power Derating Curve



8 X 20 μ s Pulse Waveform

DFN2.5x1.0-10L Dimension



NOTES:

1. CONTROLLING DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).