

Features

- 200 Watts Peak Pulse Power per Line (tp=8/20µs)
- Protects Up To Two Bidirectional I/O Lines
- Low Capacitance (0.4pF) For High-Speed Interfaces
- Working Voltages : 3.3V
- Ultra-small Package Requires Less Than 2.0x1.0mm of PCB area
- IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- IEC61000-4-5 (LIGHTNING) 13A (8/20µs)

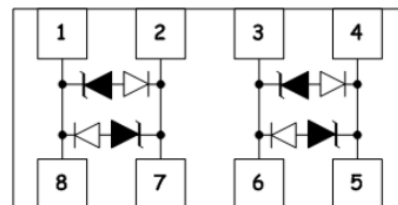
Dimensions DFN2010



Applications

- 10/100/1000 Ethernet
- Integrated magnetics/RJ-45 connectors
- LAN/WAN Equipment
- Security Cameras
- Industrial Controls
- Peripherals
- Notebooks & Desktop Computers

Pin Configuration



Mechanical Characteristics

- DFN 2.0x1.0mm Package
- Molding Compound Flammability Rating : UL 94V-O
- Weight 1 Milligrams (Approximate)
- Quantity Per Reel : 3,000pcs
- Reel Size : 7 inch
- Lead Finish : Lead Free

Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

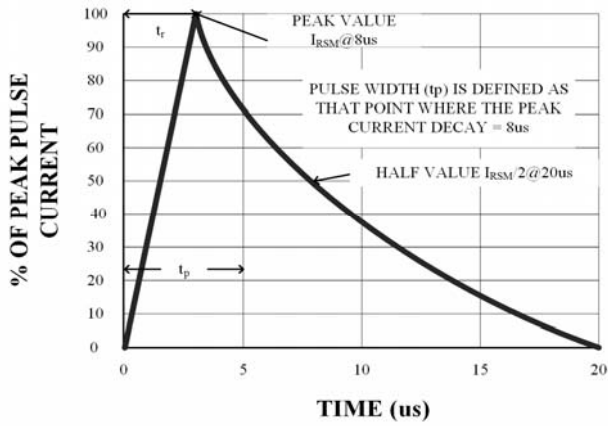
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20µs)	Ppp	200	W
ESD per IEC 61000-4-2 (Air)	VESD	±30	Kv
ESD per IEC 61000-4-2 (Contact)		±30	
Operating Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	TSTJ	-55 to +150	°C

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

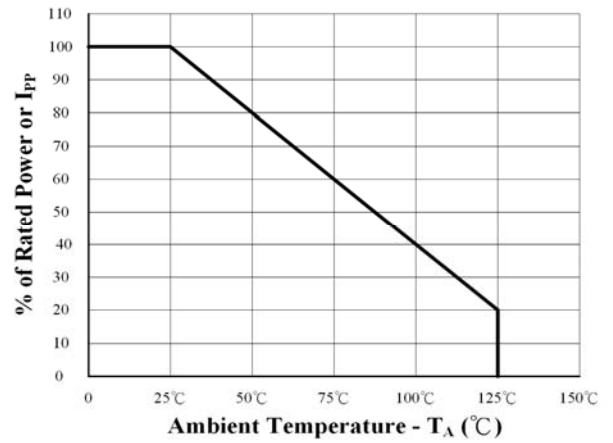
Part Number	Device Marking	V _{RWM} (V)	V _{BR} (V)	I _T (mA)	V _C @1A	V _C		I _R μA (Max)	C (Pf) (Typ.)
						(Max)	(@A)		
ULC33CP8	U33	3	3.5	1	7	17	13	0.1	0.4

CHARACTERISTICS

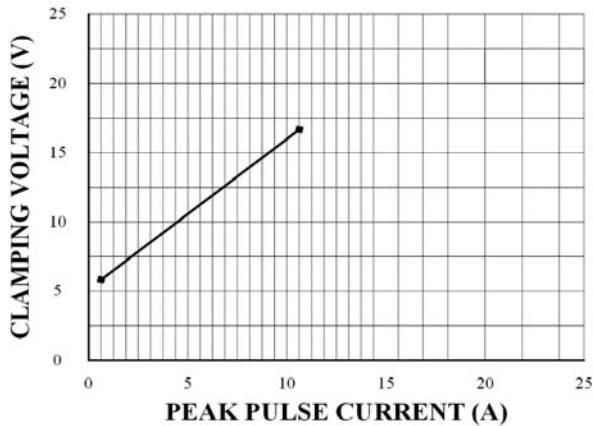
8 x 20 μ s Pulse Waveform



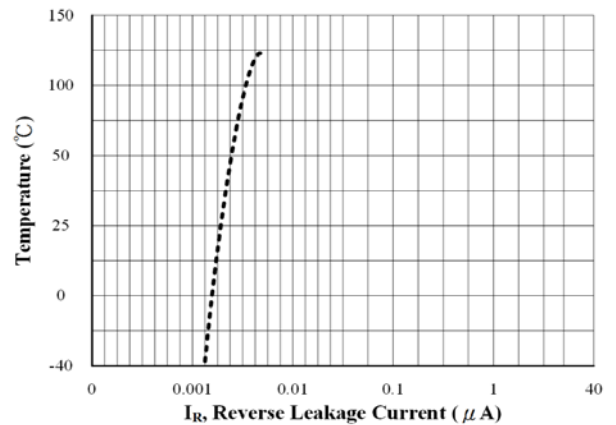
Power Derating Curve

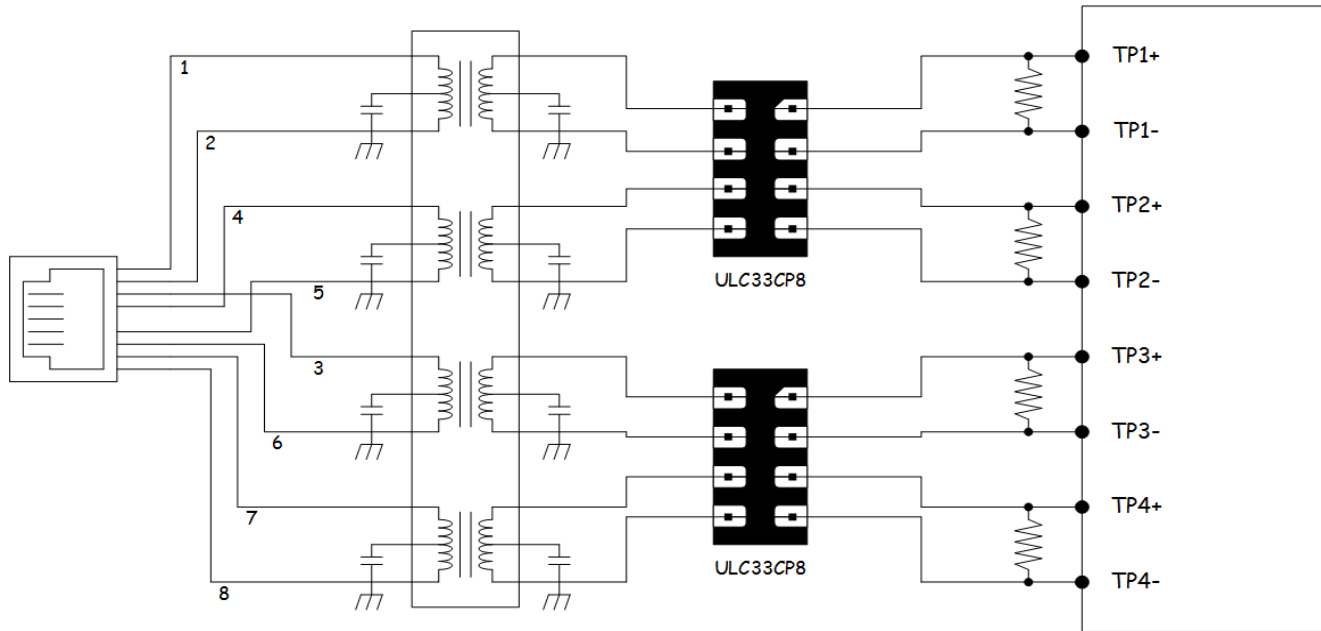


Clamping Voltage vs. Peak Pulse Current (8x20 μ s)



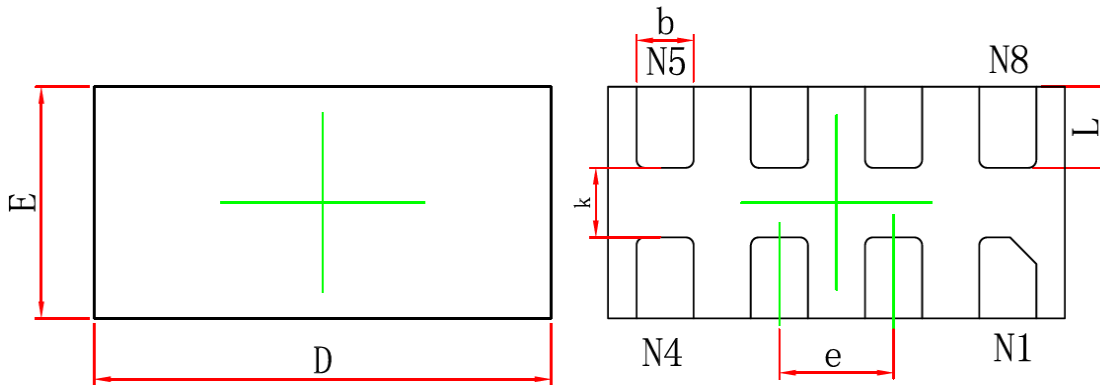
Reverse Leakage Current vs. Temperature





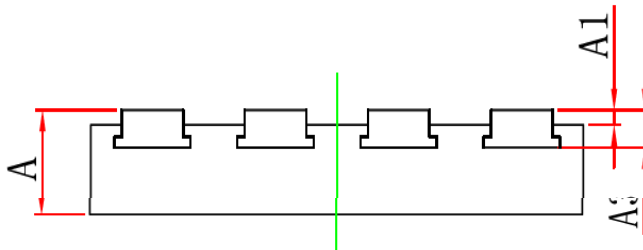
I/O to I/O Schematic Diagram for Gigabit Ethernet Protection

DFN2010 PACKAGE OUTLINE & DIMENSIONS



TOP VIEW

BOTTOM VIEW



SIDE VIEW

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.700	0.800	0.028	0.031
A1	0.000	0.050	0.000	0.002
A3	0.120REF.		0.005REF.	
D	1.924	2.076	0.076	0.082
E	0.924	1.076	0.036	0.042
E1	--	--	--	--
D1	--	--	--	--
k	0.200MIN		0.008MIN	
b	0.180	0.280	0.007	0.011
e	0.500TYP.		0.020TYP.	
L	0.274	0.426	0.011	0.017