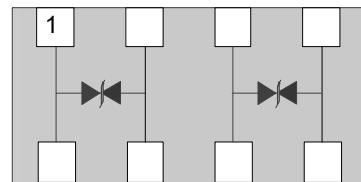


## Ultra Low Capacitance ESD/TVS Array in DFN2010

### Features

- 100Watts peak pulse power ( $T_p = 8/20\mu s$ )
- DFN 2010 Package
- Protects Up To Two Bidirectional I/O Lines
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Low capacitance (0.8pF typical I/O to I/O)
- ESD Protection for high-speed data lines to:  
IEC 61000-4-2 ±25KV contact ±25KV air  
IEC 61000-4-4 (EFT) 40A (5/50ns)  
IEC 61000-4-5 (Lightning) 10A (8/20μs)



### Mechanical Data

- **Case:** DFN2010 (plastic package).  
Lead free; RoHS compliant
- **Molding Compound Flammability Rating:**  
UL 94 V-0
- **Terminals:** High temperature soldering guaranteed:  
260 °C/10 sec. at terminals

### Applications

- 10/100/1000 Ethernet
- Integrated magnetics/RJ-45 connectors
- LAN/WAN Equipment
- Security Cameras
- Industrial Controls
- Security Cameras
- Industrial Controls

### Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

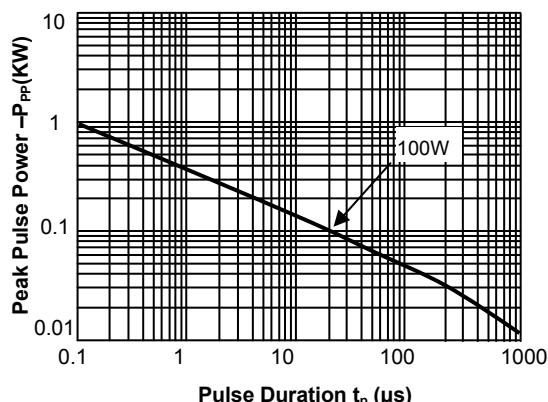
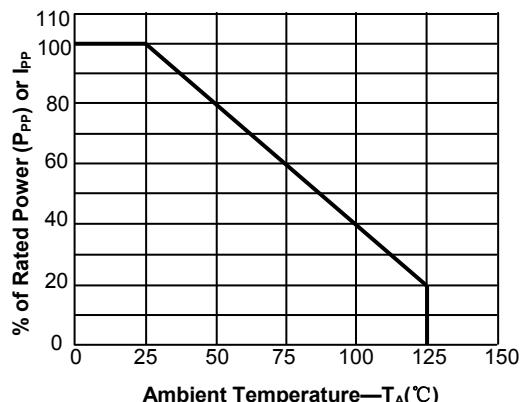
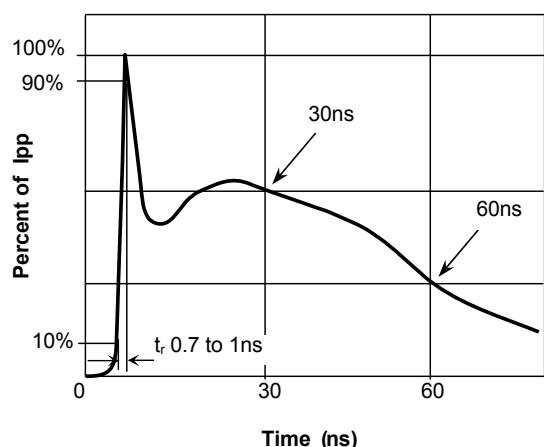
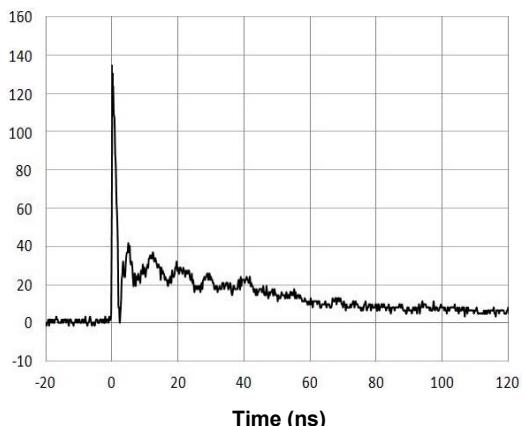
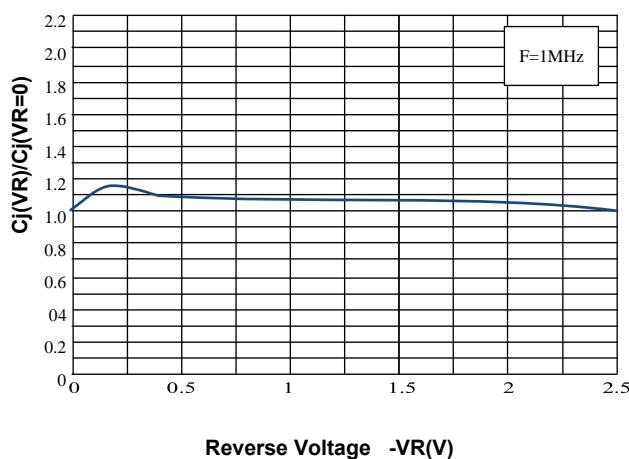
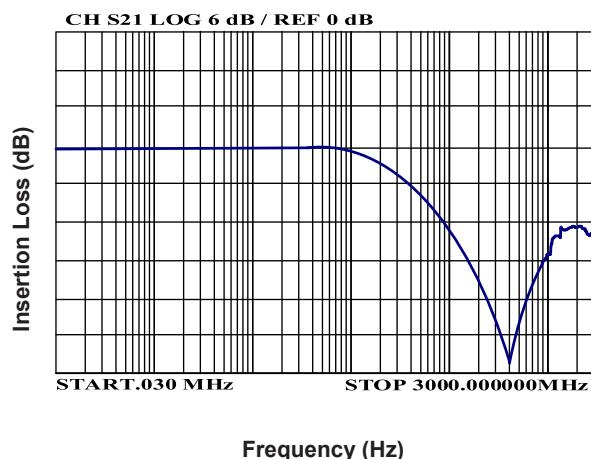
Parameter	Symbol	Value	Unit
Peak Pulse Power ( $T_p=8/20\mu s$ )	$P_{PP}$	100	W
ESD contact/air discharge (IEC-61000-4-2)	$V_{ESD}$	25/25	kV
Peak Pulse Current ( $T_p = 8/20\mu s$ )	$I_{PP}$	10	A
Junction Temperature	$T_J$	-55 to +125	°C
Storage temperature	$T_{STG}$	-55 to +150	°C

### Electrical Characteristics

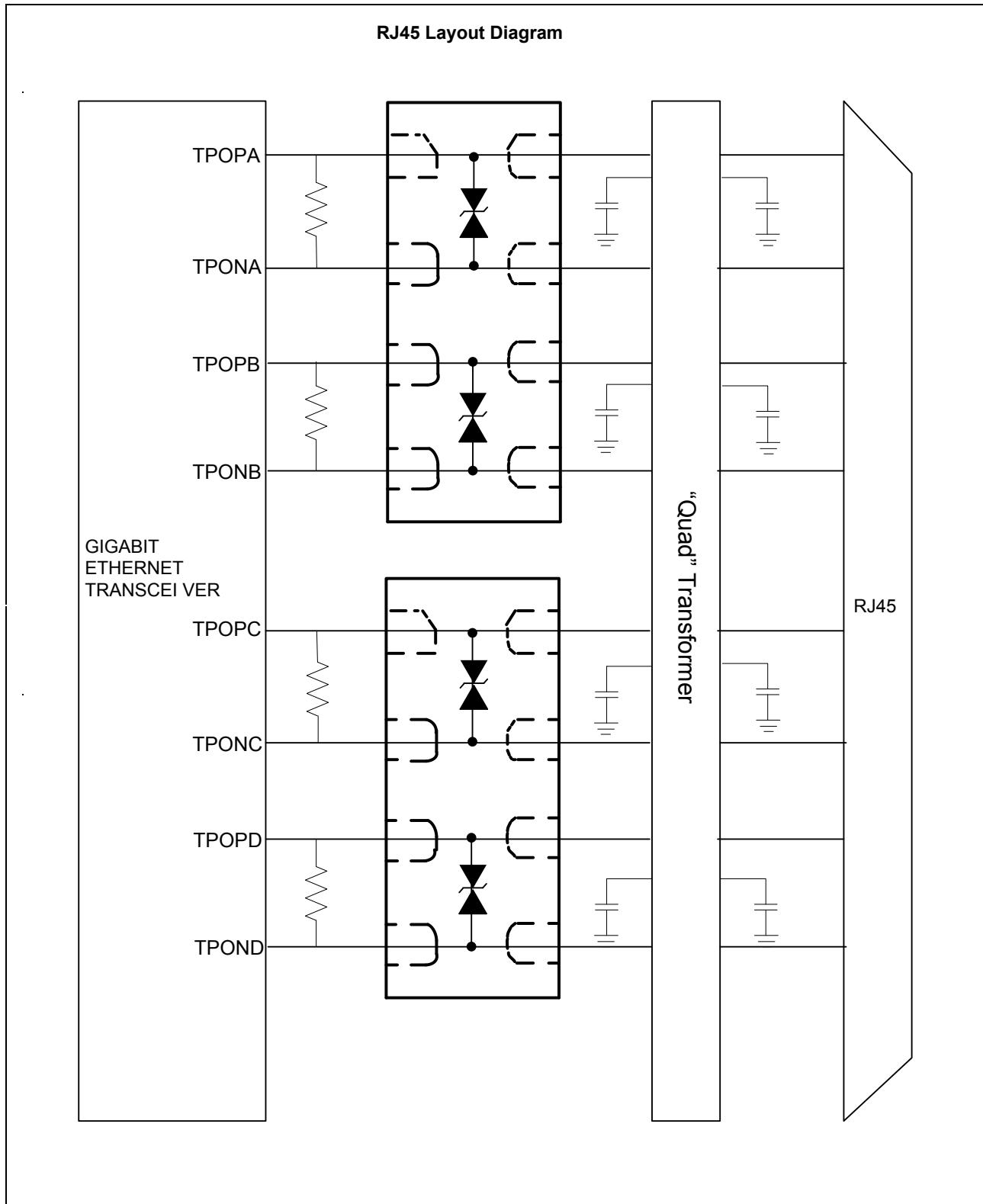
( $T_A = 25$  °C unless otherwise specified)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse stand-off Voltage	$V_{RWM}$				2.5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	3			V
Reverse Leakage Current	$I_R$	$V_R=2.5V$			1	uA
Clamping Voltage(SURGE)	$V_C$	$I_{PP}=10A, T_p=8/20\mu s$		10		V
Junction Capacitance	$C_J$	$V_R=0V, f=1MHz, I/O to I/O$		0.8		pF
	$C_J$	$V_R=0V, f=1MHz, I/O to GND$		1.2		pF

**Typical Characteristics** ( $T_{amb} = 25^{\circ}\text{C}$  unless otherwise specified)

**Fig.1 Peak Pulse Power Rating Curve**

**Fig.2 Pulse Derating Curve**

**Fig.3 IEC61000-4-2 Waveform**

**Fig.4 IEC61000-4-2 +8kV Contact ESD Clamping Waveform**

**Fig.5 Normalized Junction Capacitance vs. Reverse Voltage**

**Fig.6 Insertion Loss**


## Layout Diagrams



## Package Dimensions

DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.45	0.55	0.018	0.022
A1	0.00	0.046	0.000	0.002
A2	0.110REF		0.005REF	
b	0.200	0.300	0.008	0.012
D	1.924	2.076	0.076	0.082
E	0.924	1.076	0.036	0.042
e	0.500TYP		0.020TYP	
L	0.274	0.426	0.011	0.017
K	0.200MIN		0.008MIN	

## PAD Dimensions

DIMENSIONS		
DIM	INCHES	MILLIMETERS
C	0.035	0.875
G	0.008	0.2
P	0.020	0.5BSC
X	0.014	0.35
Y	0.018	0.45
Z	0.043	1.10

**Notes**

1. This Land Pattern Is For Reference Purposes  
Only Consult Your Manufacturing Group To Ensure Your Company's Manufacturing Guidelines Are Met.
2. Reference IPC-SM-782A, RLP NO. 300A.

## Ordering information

Order code	Marking	Package	Packaging option	Base quantity	Packaging specification
TESD2010LC2V5B	U33	DFN2010	Tape and reel	3000pcs / reel	EIA STD RS-481