

»Features

- 100Watts peak pulse power ($t_p = 8/20\mu s$)
- Tiny DFN2010P8 package
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Protection two data/power line
- IEC 61000-4-2 $\pm 25kV$ contact $\pm 25kV$ air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 10A (8/20 μs)



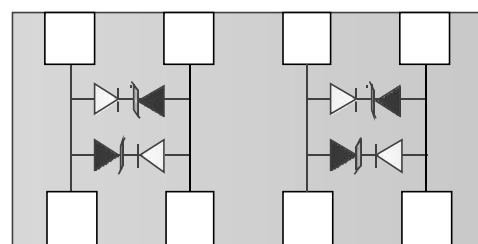
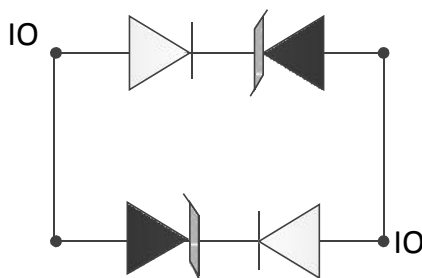
»Applications

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

»Mechanical Data

- DFN2010P8 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

»Schematic & PIN Configuration



»Absolute Maximum Rating

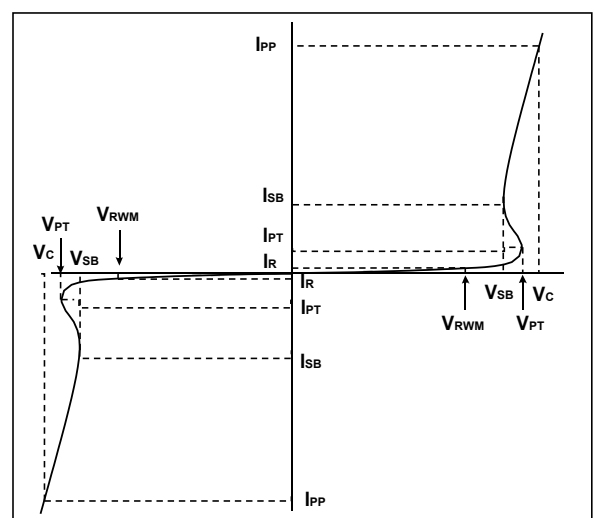
Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{PP}	100	Watts
Peak Pulse Current ($t_p = 8/20\mu s$)(note1)	I_{pp}	10	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	25 25	kV
Lead Soldering Temperature	T_L	260(10seconds)	°C
Junction Temperature	T_J	-55 to + 125	°C
Storage Temperature	T_{stg}	-55 to + 125	°C

»Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				3.3	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1mA$	3.5	4.2		V
Reverse Leakage Current	I_R	$V_{RWM} = 5V, T = 25^\circ C$		50	500	nA
Clamping Voltage	V_C	$I_{PP} = 10A, t_p = 8/20\mu s$		13	14	V
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$ IO to IO		1.2	1.4	pF

»Electrical Parameters (TA = 25°C unless otherwise noted)

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current



Note: 8/20 μs pulse waveform.

»Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

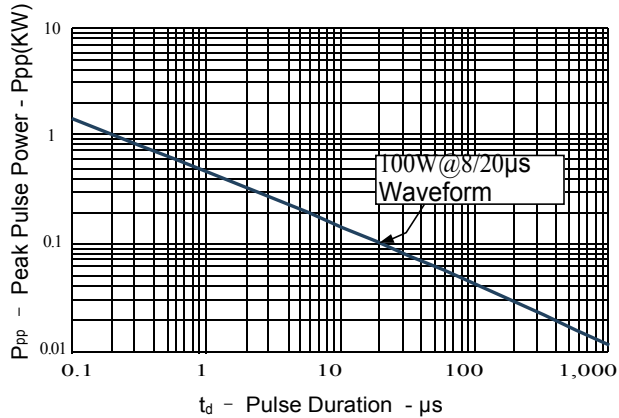


Figure 2: Power Derating Curve

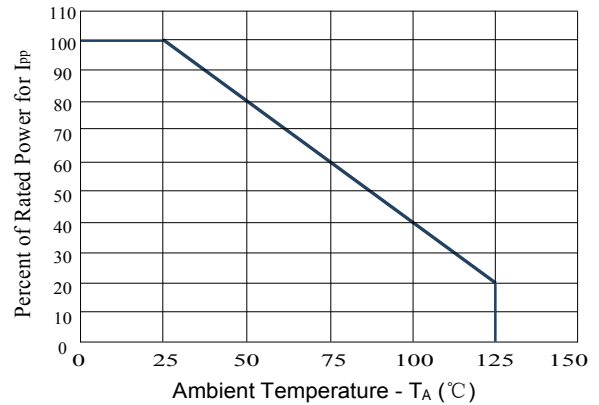


Figure3: Pulse Waveform

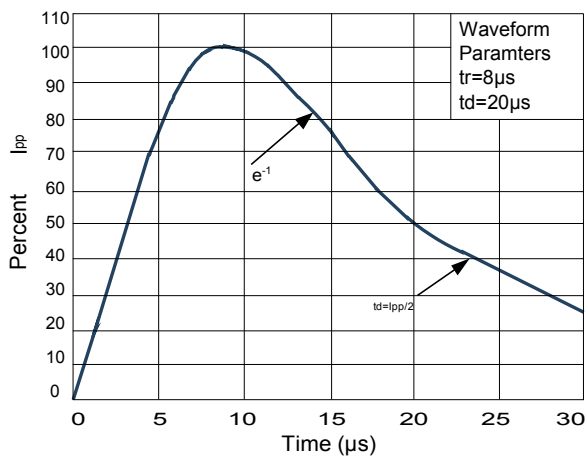


Figure 4: Clamping Voltage vs. Ipp

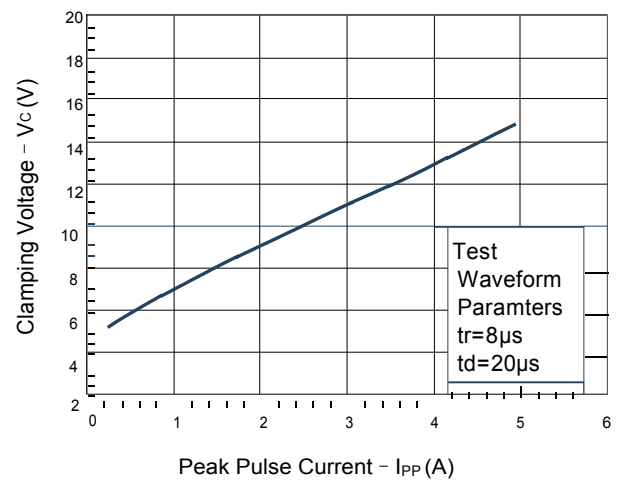


Figure 5: Normalized Junction Capacitance vs. Reverse Voltage

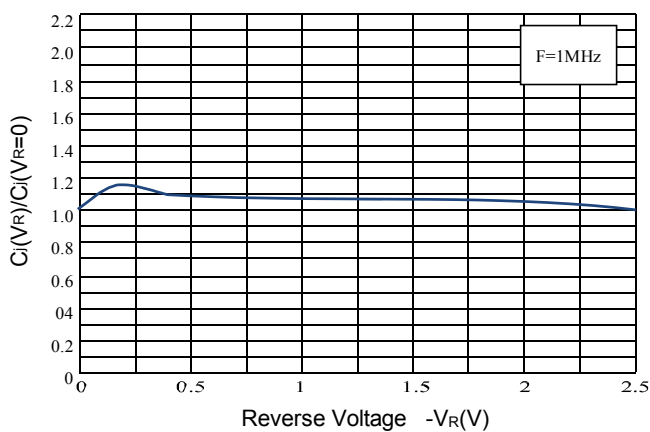
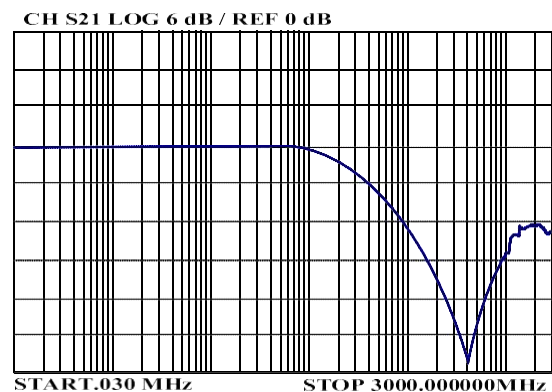
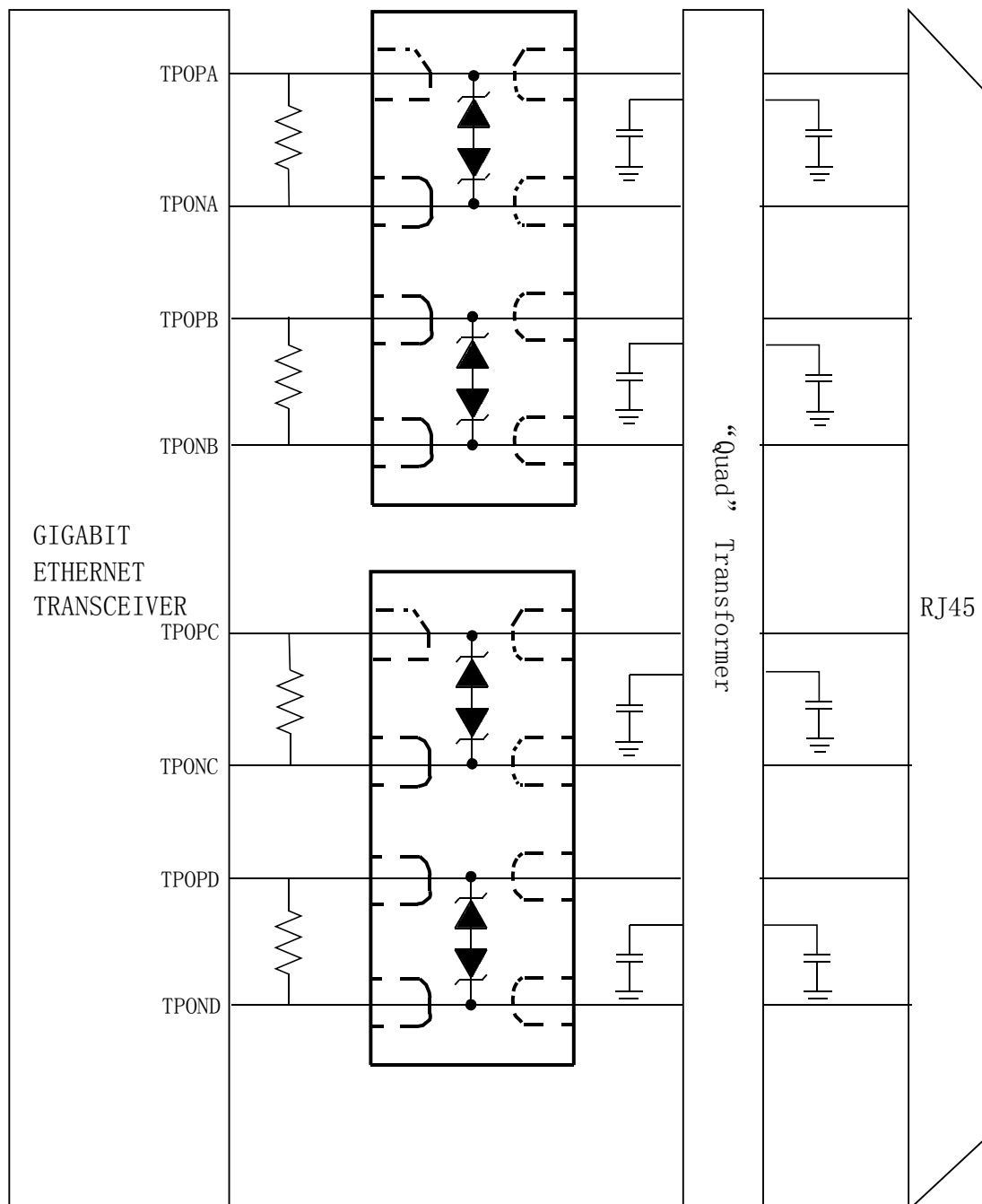


Figure 6: Insertion Loss



»Application Information

Electronic equipment is susceptible to damage caused by a variety of sources, including Electrostatic Discharge (ESD), Electrical Fast Transients (EFT) and Lightning strikes. The BCS2203-25 was designed to protect the sensitive equipment from damage which may be induced by such transient events. This product can be configured in a connection to meet the requirement of differential line pairs as follows:



Schematic Diagram for Gigabit Ethernet ESD/ Surge Protection

»Outline Drawing – DFN2010P8

PACKAGE OUTLINE

PIN 1 DOT BY MARKING

PIN 1 IDENTIFICATION

SEATING PLANE

DFN-8L

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	

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

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

»Marking



»Ordering information

Order code	Package	Base qty	Delivery mode
BCS2203-25	DFN2010P8	3k	Tape and reel