

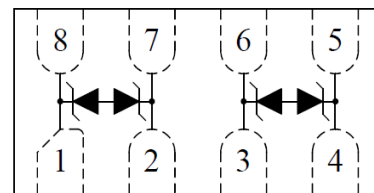
Description

The RL20108Q0332LC is a low capacitance high power TVS, utilizing leading monolithic silicon technology to provide fast response time and low ESD clamping voltage, making this device an ideal solution for protecting voltage sensitive high-speed data lines. The RL20108Q0332LC complies with the IEC 61000-4-2 (ESD) with ±20kV air and ±12kV contact discharge. It is assembled into a 8-pin DFN2010-8 lead-free package. Each device will protect two line pairs high-speed lines. The combination of small size, low capacitance, and high surge capability makes them ideal for use in applications such as Gigabit Ethernet, telecommunication lines, and LVDS interfaces.

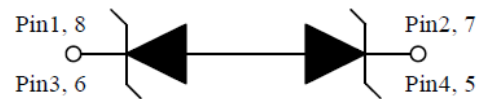
Features

- I Stand-off voltage: 3.3V Max.
- I Ultra low leakage: nA level
- I Operating voltage: 3.3V
- I Ultra low clamping voltage
- I Protects up to eight lines
- I Complies with following standards:
IEC 61000-4-2 (ESD) immunity test
Air discharge: ±20kV
Contact discharge: ±12kV
IEC61000-4-5 (Lightning) 12A (8/20µs)
- I RoHS Compliant

Pin Configuration



Circuit Diagram



Applications

- I HDBaseT Protector
- I LVDS Interfaces
- I 10/100/1000 Ethernet
- I Notebooks, Desktops, Servers
- I Networking Equipment
- I Switching Systems
- I Audio/Video Inputs

Absolute Maximum Rating

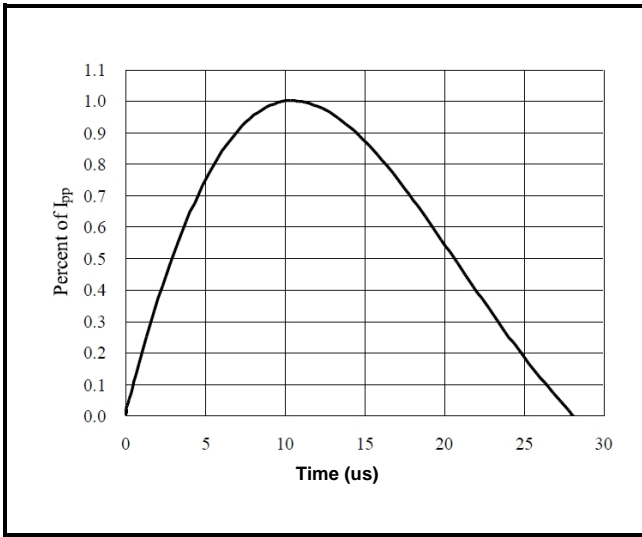
Rating	Symbol	Value	Units
Peak Pulse Power (tp =8/20µs)	P _{PP}	180	W
ESD Voltage (Air) ESD Voltage (Contact)	V _{ESD}	±20 ±12	kV
Operating Temperature	T _{OPT}	-45 to +85	°C
Storage Temperature	T _{STG}	-55 to +150	°C

Electrical Characteristics (@ 25°C Unless Otherwise Specified)

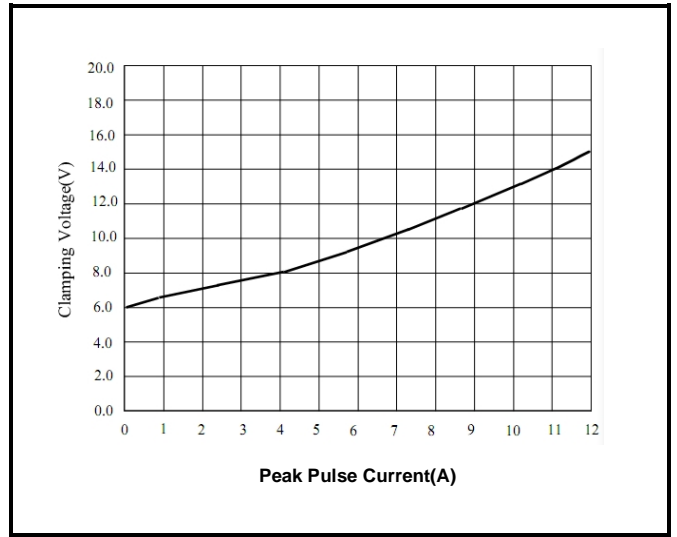
Type Number	Reverse Stand-Off Voltage	Minimum Breakdown Voltage	Peak Pulse Voltage @8/20µS	V _C @8/20µs		Reverse Leakage @V _{RWM}	Typ. Capacitance
	V _{RWM}	V _{BR} @1mA	V _C @1A	(max.)	@I _{PP}	I _R @V _{RWM}	C _J @ V _R =0V, f=1MHz
	V	V	V	V	A	µA	pF
RL20108Q0332LC	3.3	4.0	7.5	15	12	0.05	0.8

Typical Performance Characteristics (T_A=25°C unless otherwise Specified)

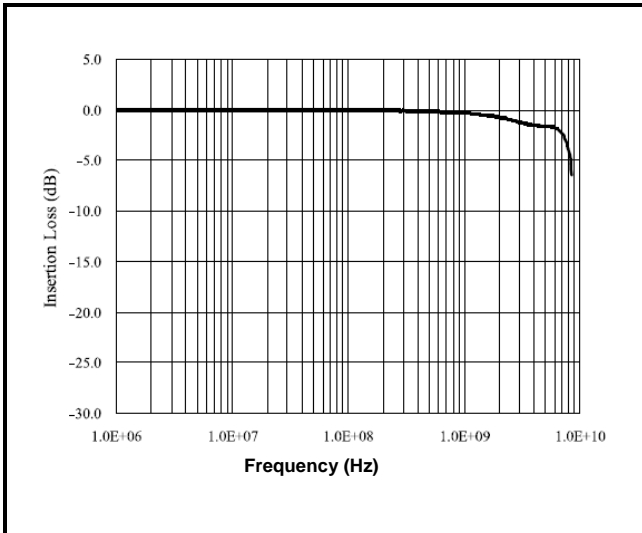
8/20 s Pulse Waveform



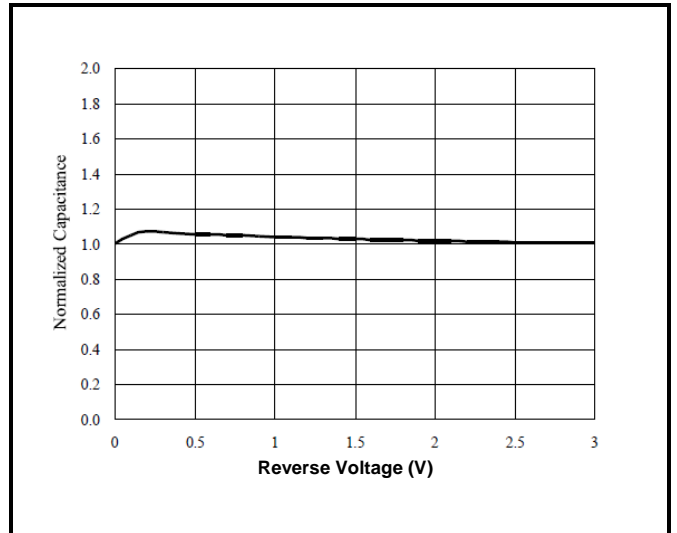
Clamping Voltage V_C vs. Current I_{pp}



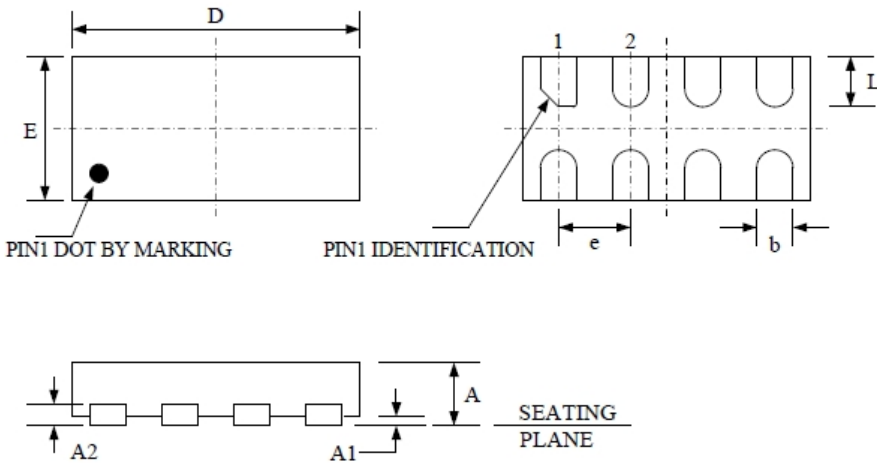
Insertion Loss S21



Normalized Capacitance vs. Voltage

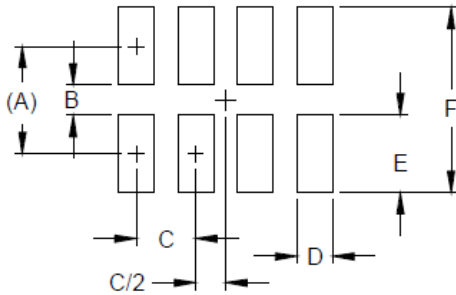


Dimensions



DIM	Millimeters		
	Min	Typ	Max
A	0.37	0.40	0.43
A1	0.000	0.02	0.05
A2	0.13		
b	0.20	0.25	0.30
D	1.90	2.00	2.10
E	0.90	1.00	1.10
e	0.50BSC		
L	0.30	0.35	0.40
R	0.05	0.10	0.15

Footprint



DIM	Millimeters
A	0.90
B	0.25
C	0.50
D	0.30
E	0.65
F	1.55