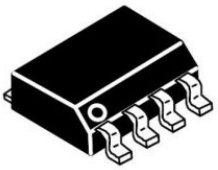
Transient Voltage Suppressors for ESD Protection

LC03-3.3

Description

The LC03-3.3 is High power/ultra low capacitance TVS arrays designed to protect high speed data interfaces. This series has been specifically designed to protect sensitive components which are connected to high-speed data and transmission lines from over-voltage caused by ESD (electrostatic discharge), CDE (Cable Discharge Events), and EFT (electrical fast transients).

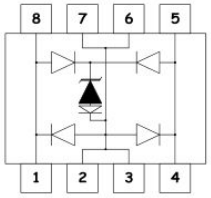
SOP-08



Feature

- 2000 Watts Peak Pulse Power per Line (tp=8/20μs)
- Protects Two Lines or One Line
- Low Capacitance
- RoHS Compliant
- IEC61000-4-2(ESD):±30kV (air discharge)
  ±30kV (contact discharge);
- IEC61000-4-4 (EFT) 40A (5/50 η s)
- IEC61000-4-5 (LIGHTING) 100A (8/20 μ s)

Functional Diagram



Applications

- 10/100 Ethernet
- WAN/LAN Equipment
- Test & Measurement Equipment
- Switching Systems
- Instrumentation
- Audio/Video Inputs

Mechanical Data

- JEDEC SOP-08 Package
- Molding Compound Flammability Rating : UL 94V-O
- Weight 70 Millgrams (Approximate)
- Quantity Per Reel : 500pcs
- Reel Size : 7 inch
- Lead Finish : Lead Free
- Device Marking:LC03-3.3

Mechanical Characteristics

Symbol	Parameter	Value	Units
Ppp	**Peak Pulse Power (tp=8/20μs waveform)**	2000	Watts
T_J	**Operating Junction Temperature Range**	-55 to +150	ºC
T_{STG}	**Storage Temperature Range**	-55 to +150	ºC
T_L	**Soldering Temperature, T max = 10s**	260	ºC

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Electrical Characteristics (@ 25℃ Unless Otherwise Specified)

Part Number	Device Marking Code		Stand-Off Voltage V_{RMW} (V)	Breakdown Voltage V_{BR}	Test Current I_T (mA)	V_C @1A (Max.)	V_C (Max.)	V_C (@A)	Maximum Reverse Leakage I_R @V_{RWM} (uA)	Maximum Junction Capacitance @0 V (pF)
LC03-3.3	LC03 -3.3	Pin 1, 8, 4, 5 to Pin 2, 3, 6, 7	3.3	3.5	1.0	5.8	23	100	0.1	25
		Pin 1, 8 to Pin 4, 5, Pin 4, 5 to Pin 1, 8	3.3	3.5	1.0	6.8	33	100	0.1	15

Characteristic Curves

Fig1. 8/20μs Pulse Waveform

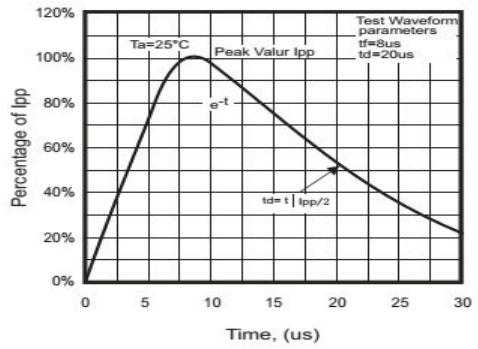


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

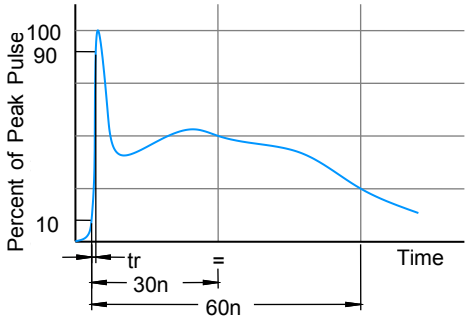


Fig3. ESD Clamping Volatge & Peak Pulse Curerent

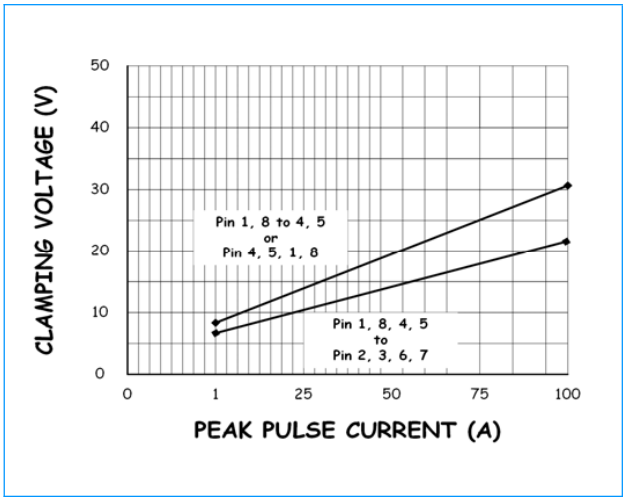
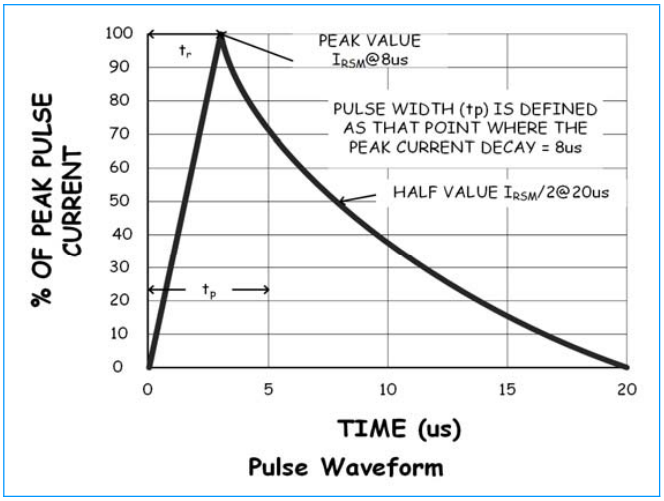


Fig4. Pulse Waveform



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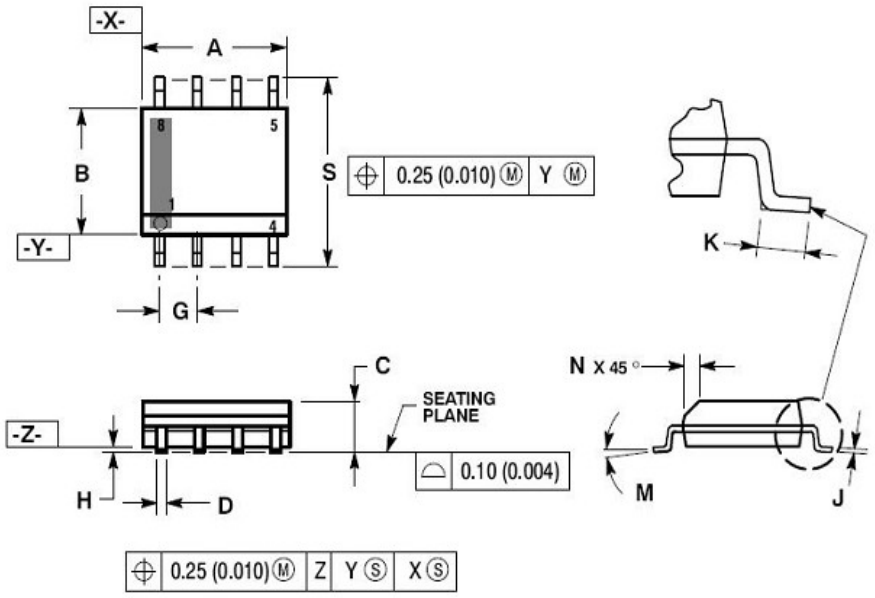
SOP-08 Package Outline & Dimensions



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	4.80	5.00	0.189	0.197
B	3.80	4.00	0.150	0.157
C	1.35	1.75	0.053	0.069
D	0.33	0.51	0.013	0.020
G	1.27 BSC		0.050 BSC	
H	0.10	0.25	0.004	0.010
J	0.19	0.25	0.007	0.010
K	0.40	1.27	0.016	0.050
M	0°	8°	0°	8°
N	0.25	0.50	0.010	0.020
S	5.80	6.20	0.228	0.244

* SOLDERING FOOTPRINT