

Transient Voltage Suppressors Array for ESD Protection

ESDXXV08S-6L Series

Description

The ESDXXV08S-6L is in an SO-08 package and may be used to protect two high-speed line pairs. The “flow-thru” design minimizes trace inductance and reduces voltage overshoot associated with ESD events. The low clamping voltage of the ESDXXV08S-6L minimizes the stress on the protected IC.

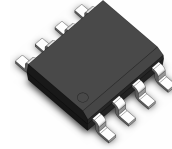
Feature

- u 300 Watts Peak Pulse Power per Line (tp=8/20μs)
- u Protects Four Six I/O Lines
- u Low Operating Voltage
- u Low Clamping Voltage
- u RoHS Compliant
- u IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- u IEC61000-4-4 (EFT) 40A (5/50ns)

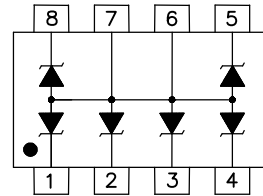
Applications

- u Communication Lines
- u LAN/WAN Equipment
- u T3/E3 secondary IC Side Protection
- u HDSL, SDSL secondary IC Side Protection
- u Servers
- u Microcontroller Input Protection
- u Base Stations
- u Instrumentation

SO-08



Functional Diagram



Mechanical Characteristics

- u JEDEC SO-08 Package
- u Molding Compound Flammability Rating : UL 94V-0
- u Weight 70 Milligrams (Approximate)
- u Quantity Per Reel : 500pcs
- u Reel Size : 7 inch
- u Lead Finish : Lead Free

Mechanical Characteristics

Symbol	Parameter	Value	Units
P_{PP}	Peak Pulse Power (tp=8/20μs waveform)	300	W
T_L	Lead Soldering Temperature	260 (10sec)	°C
T_{STG}	Storage Temperature Range	-55 to +150	°C
T_J	Operating Temperature Range	-55 to +150	°C
	IEC61000-4-2 (ESD)		
	Air Discharge	±15	KV
	Contact Discharge	±8	
	IEC61000-4-4 (EFT)	40	A

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Electrical Characteristics (@ 25°C Unless Otherwise Specified)

Part Number	Device Marking	V _{RWM} (V) (Max.)	V _B (V) (Min.)	I _T (mA)	V _C @5A (Max.)	V _C		I _R (μA) (Max.)	C (pF) (Typ.)
						(Max.)	(@A)		
ESD05V08S-6L	SMDA 05-6	5	6	1	9.8	20	25	5	350
ESD12V08S-6L	SMDA 12-6	12	13.3	1	19	30	21	1	120
ESD15V08S-6L	SMDA 15-6	15	16.7	1	24	32	17	1	75
ESD24V08S-6L	SMDA 24-6	24	26.7	1	43	48	12	1	50

Characteristic Curves

Fig1. 8/20μs Pulse Waveform

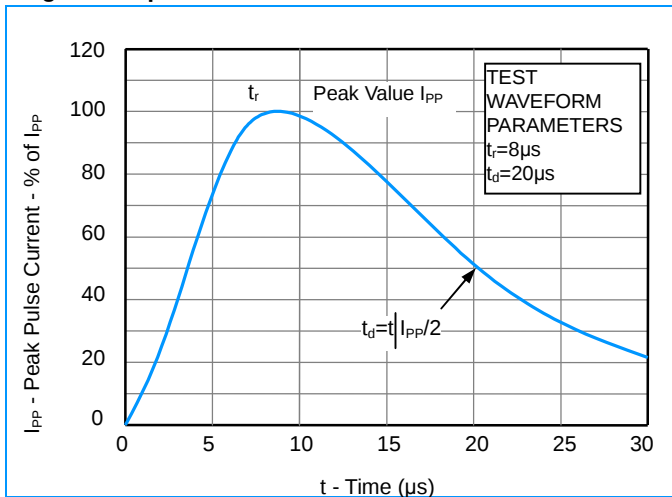


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

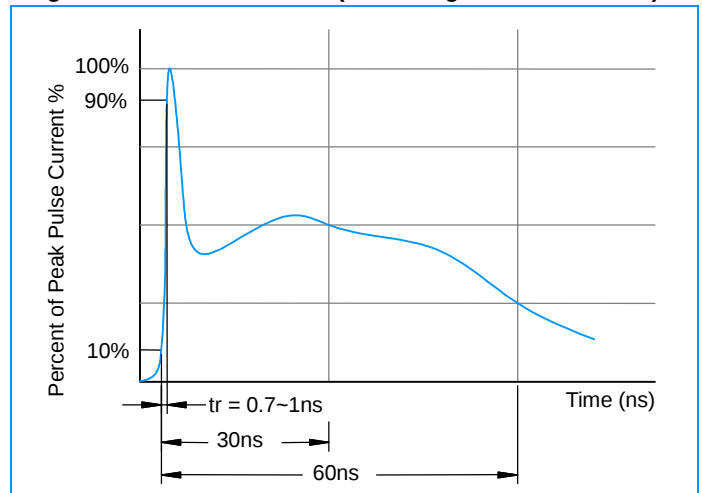
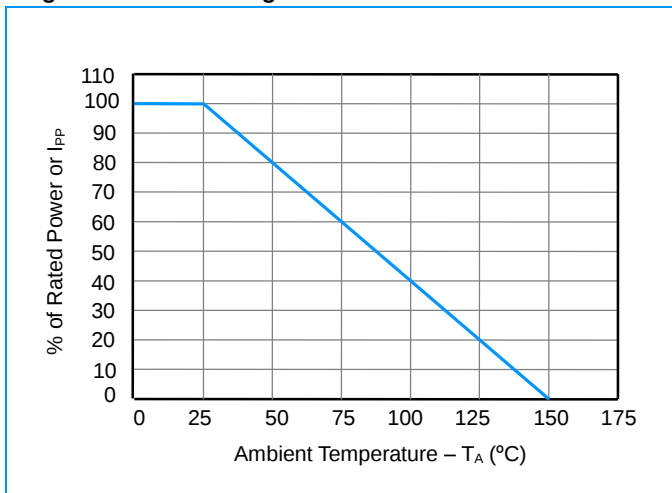


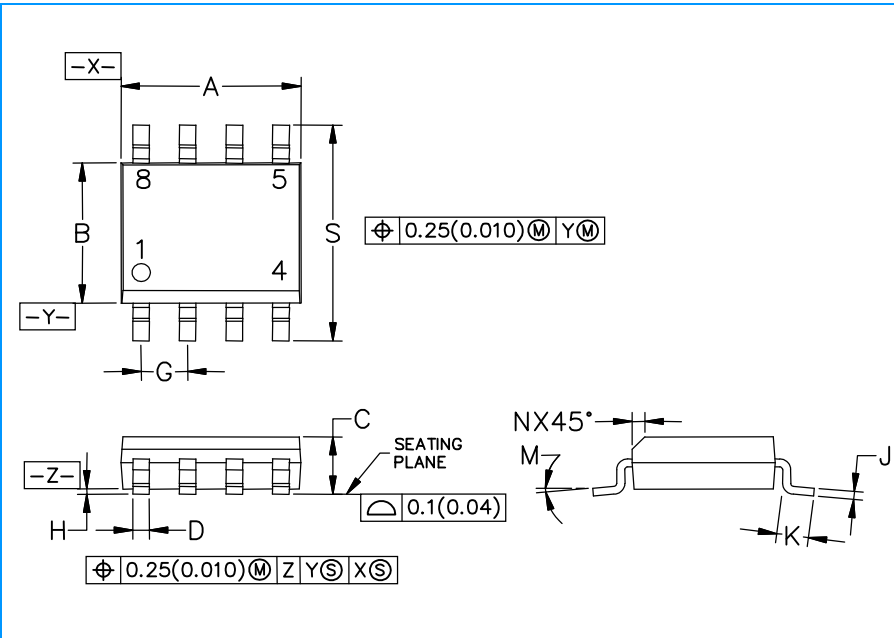
Fig3. Power Derating Curve



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SO-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	1.27BSC		0.050BSC	
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

