

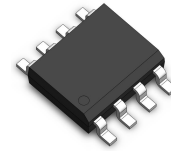
Transient Voltage Suppressors Array for ESD Protection

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.

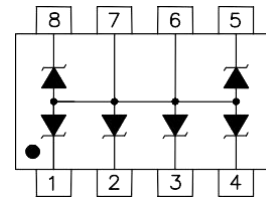
SO-08



Feature

- ◆ 300 Watts Peak Pulse Power per Line (tp=8/20μs)
- ◆ Protects Four Six I/O Lines
- ◆ Low Operating Voltage
- ◆ Low Clamping Voltage
- ◆ RoHS Compliant
- ◆ IEC61000-4-2 (ESD) ±25kV (air), ±15kV (contact)
- ◆ IEC61000-4-4 (EFT) 40A (5/50ns)

Functional Diagram



Applications

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

Mechanical Characteristics

- ◆ JEDEC SO-08 Package
- ◆ Molding Compound Flammability Rating : UL 94V-0
- ◆ Weight 70 Milligrams (Approximate)
- ◆ Quantity Per Reel : 2,500pcs
- ◆ Reel Size : 13 inch
- ◆ 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	-40 to +125	°C	
T _J	Operating Temperature Range	-55 to +150	°C	
	IEC61000-4-2 (ESD)	Air Discharge Contact Discharge	±25 ±15	KV
	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 @1A (Max.)	V _C		I _R (μA) (Max.)	C (pF) (Typ.)
						(Max.)	(@A)		
ESD05V08S-6L	SMDA 05-6	5	6	1	9.8	20	15	5	350
ESD12V08S-6L	SMDA 12-6	12	13.3	1	19	30	10	1	120
ESD15V08S-6L	SMDA 15-6	15	16.5	1	24	38	8	1	75
ESD24V08S-6L	SMDA 24-6	24	26.7	1	43	60	4	1	50

Characteristic Curves

Fig1. 8/20μs Pulse Waveform

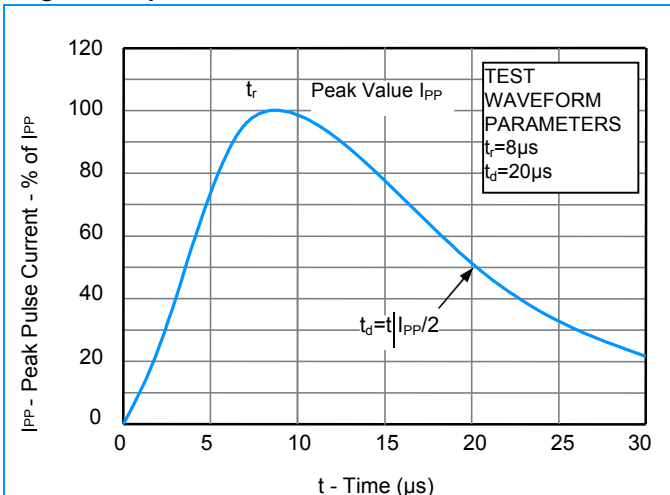


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

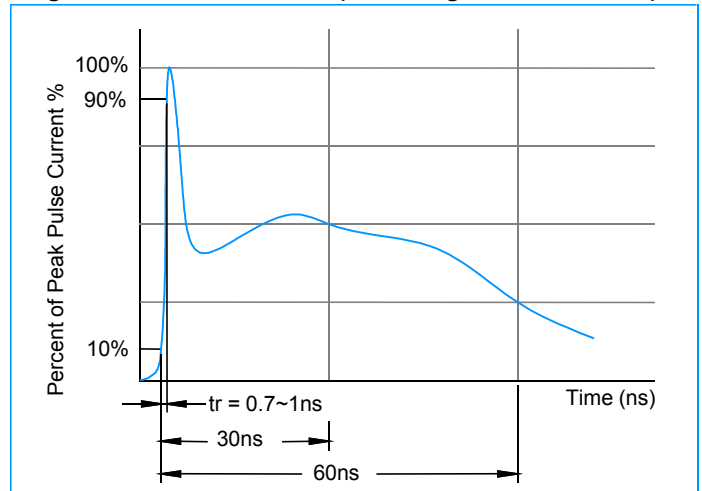
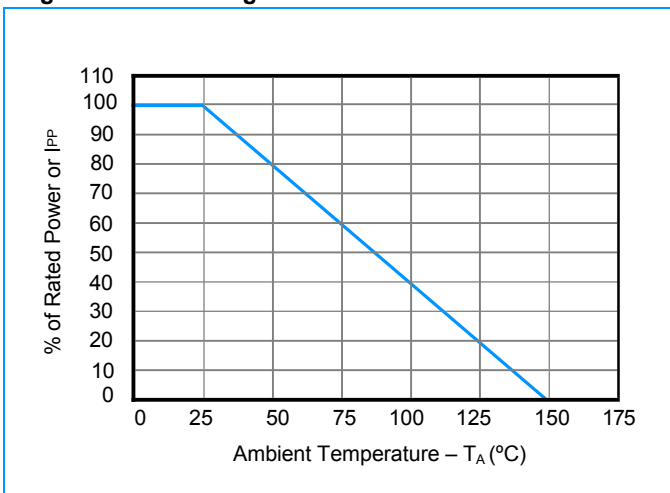


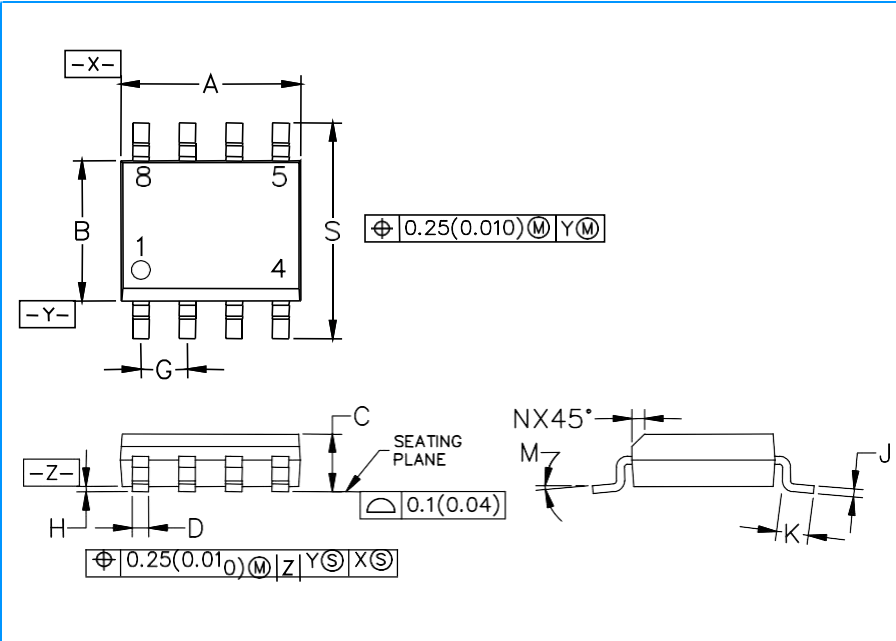
Fig3. Power Derating Curve



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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

