

Transient Voltage Suppressors for ESD Protection

ESDXXV88D-CDN Series

Description

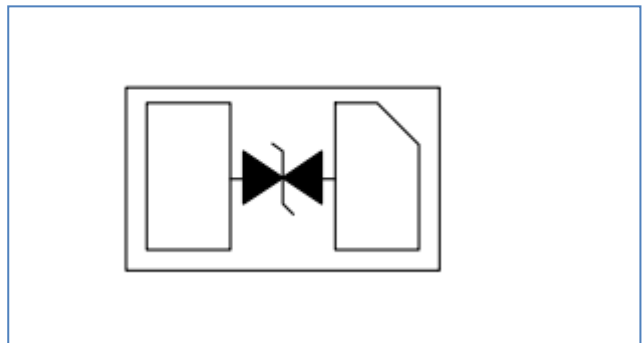
The ESDXXV88D-CDN series is designed to protect sensitive components which are connected to high-speed data and transmission lines from over-voltage caused by ESD (electrostatic discharge), CDE (Cable Discharge Events), and EFT (electrical fast transients).



Feature

- ◆ 210 ~ 285Watts Peak Pulse Power per Line ($t_p=8/20\mu s$)
- ◆ Protects one Bidirectional I/O line
- ◆ Low clamping voltage
- ◆ Working voltages: 3.3V ~ 36V
- ◆ Low leakage current
- ◆ IEC61000-4-2 (ESD) $\pm 30kV$ (air), $\pm 30kV$ (contact):3.3V-15V
- ◆ IEC61000-4-2 (ESD) $\pm 25kV$ (air), $\pm 15kV$ (contact):18V-36V
- ◆ IEC61000-4-4 (EFT) 40A (5/50ns)

Functional Diagram



Applications

- ◆ Cell Phone Handsets and Accessories
- ◆ Notebooks & Handhelds
- ◆ Notebooks, Desktops, and Servers
- ◆ Portable Instrumentation
- ◆ Peripherals
- ◆ Pagers

Mechanical Data

- ◆ SOD-882/DFN1006 (1.0x0.6x0.5mm) Package
- ◆ Molding Compound Flammability Rating : UL 94V-0
- ◆ Weight 0.5 Milligrams (Approximate)
- ◆ Lead Finish : Lead Free

Mechanical Characteristics

Symbol	Parameter	Value	Units
Ppp	Peak Pulse Power ($t_p=8/20\mu s$ waveform)	210-285	Watts
TL	Lead Soldering Temperature	260 (10 sec.)	°C
T _{STG}	Storage Temperature Range	-55 to +150	°C
T _J	Operating Junction Temperature Range	-55 to +150	°C

Transient Voltage Suppressors for ESD Protection

ESDXXV88D-CDN Series

Electrical Characteristics(@25°C Unless Otherwise Specified)

Part Number	Device Marking Code	Stand-Off Voltage VRMW (V)	Breakdown Voltage VBR(Min)	Test Current IT (mA)	V C@1A (V) Max	Vc		Maximum Reverse Leakage I R @V RWM (uA)	Typ Junction Capacitance (pF)
						(Max.)	(@A)		
ESD3.3V88D-CDN	D3	3.3	3.5	1.0	6.0	14.0	15.0	1.0	20.0
ESD05V88D-CDN	D5	5.0	6.0	1.0	9.8	18.0	15.0	1.0	60.0
ESD8V88D-CDN	D8	8.0	8.5	1.0	12.0	22.0	10.0	1.0	45.0
ESD12V88D-CDN	DD	12.0	13.3	1.0	17.0	28.0	8.0	1.0	27.0
ESD15V88D-CDN	DE	15.0	16.7	1.0	22.0	35.0	6.5	1.0	25.0
ESD18V88D-CDN	DF	18.0	19.5	1.0	25.0	40.0	6.0	1.0	45.0
ESD24V88D-CDN	DH	24.0	26.7	1.0	36.0	55.0	4.5	1.0	24.0
ESD36V88D-CDN	DN	36.0	40.0	1.0	50.0	70.0	3.0	1.0	20.0

Characteristics Curves

Fig1: 8/20μs Pulse Waveform

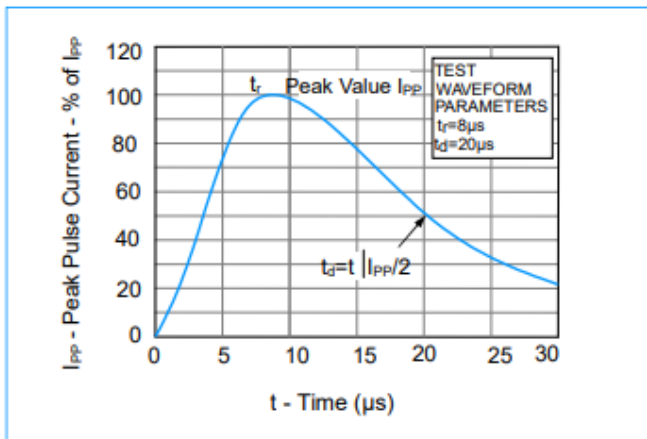


Fig2. Power Rating Derating Curve

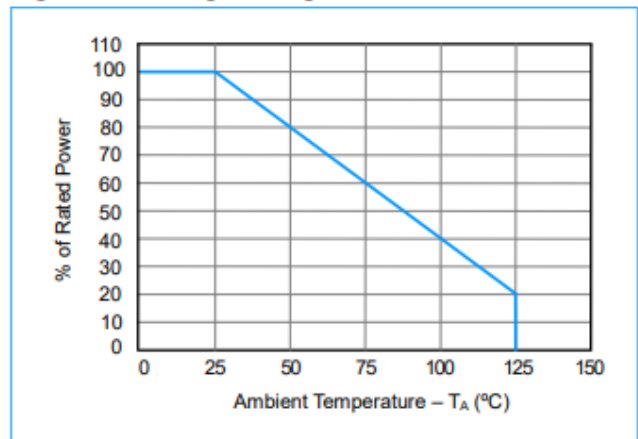
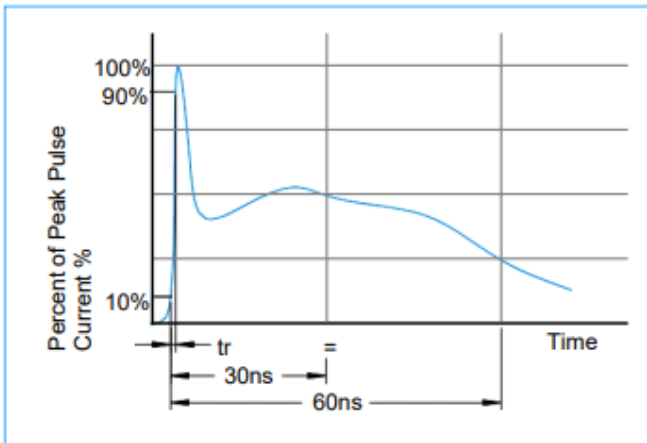


Fig3. ESD Pulse Waveform(according to IEC61000-4-2)

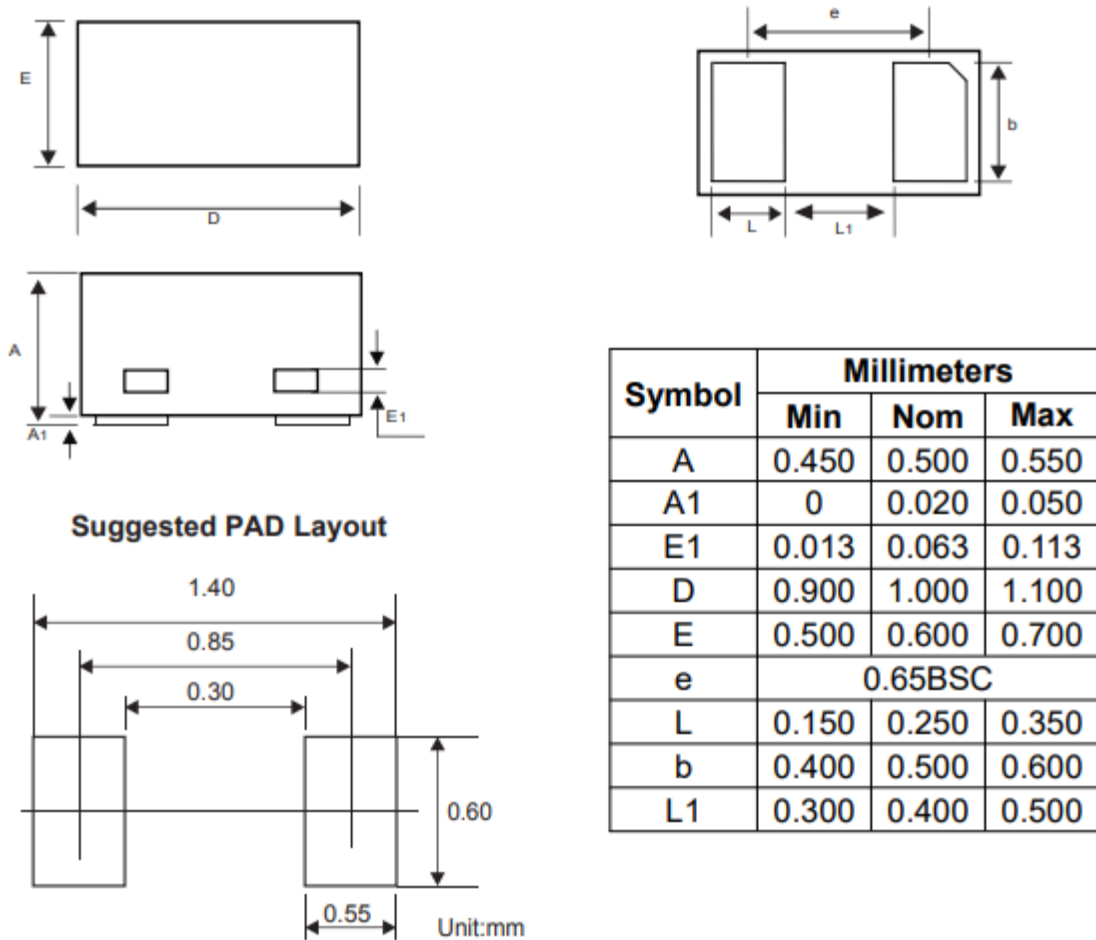


Transient Voltage Suppressors for ESD Protection

ESDXXV88D-CDN Series

SOD-882/DFN1006 Package Outline & Dimensions

SOD-882/DFN1006



Ordering Information

Device	Marking	Package	Quantity	Reel Size
ESXXV88D-CDN Series	---	SOD-882/DFN1006	12,000pcs/Reel	7 inch