

## Transient Voltage Suppressors for ESD Protection

### ESDXXV88D-C Series

#### Description

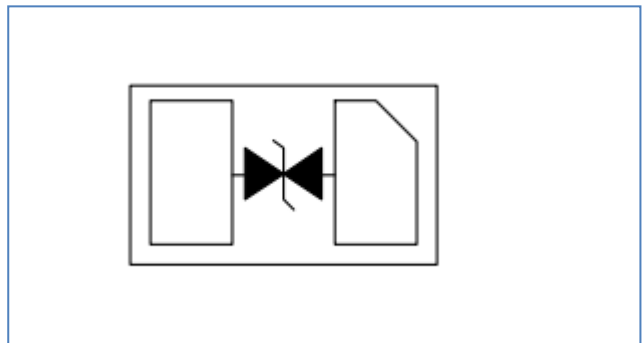
The ESDXXV88D-C series is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium. Because of its small size, it is suited for use in cellular phones, MP3 players, digital cameras and many other portable applications where board space is at a premium.



#### Feature

- ◆ 150~190 Watts Peak Pulse Power per Line (tp=8/20µs)
- ◆ Protects One Bidirectional I/O Line
- ◆ Low clamping voltage
- ◆ Working voltages : 3.3V , 5V , 8V , 12V
- ◆ Low leakage current
- ◆ IEC61000-4-4 (EFT) 40A (5/50ns)
- ◆ IEC61000-4-2(ESD):±20kV(air),±15kV(contact):3.3V, 5V, 8V and 12V

#### Functional Diagram



#### Applications

- ◆ Cellular Handsets & Accessories
- ◆ Microprocessor based equipment
- ◆ Personal Digital Assistants (PDA' s)
- ◆ Notebooks, Desktops, and Servers
- ◆ Peripherals
- ◆ Portable Instrumentation
- ◆ Pagers

#### Mechanical Data

- ◆ SOD-882/DFN1006 (1.0x0.6x0.5mm) Package
- ◆ Molding Compound Flammability Rating : UL 94V-O
- ◆ Weight 0.5 Milligrams (Approximate)
- ◆ Reel Size : 7 inch
- ◆ Lead Finish : Lead Free

#### Mechanical Characteristics

Symbol	Parameter	Value	Units
Ppp	Peak Pulse Power (tp=8/20µs waveform)	150-190	Watts
TL	Lead Soldering Temperature	260 (10 sec.)	°C
T <sub>STG</sub>	Storage Temperature Range	-55 to +150	°C
T <sub>J</sub>	Operating Junction Temperature Range	-55 to +150	°C

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#### 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-C	T	3.3	3.5	1.0	6.5	15.0	10.0	1.0	10.0
ESD05V88D-C	M	5.0	6.0	1.0	7.5	20.0	9.5	1.0	10.0
ESD8V88D-C	NF	8.0	9.3	1.0	16.0	25.0	6.0	1.0	7.0
ESD12V88D-C	AF	12.0	13.0	1.0	17.0	22.0	8.0	1.0	10.0

### Characteristics Curves

Fig1: 8/20μs Pulse Waveform

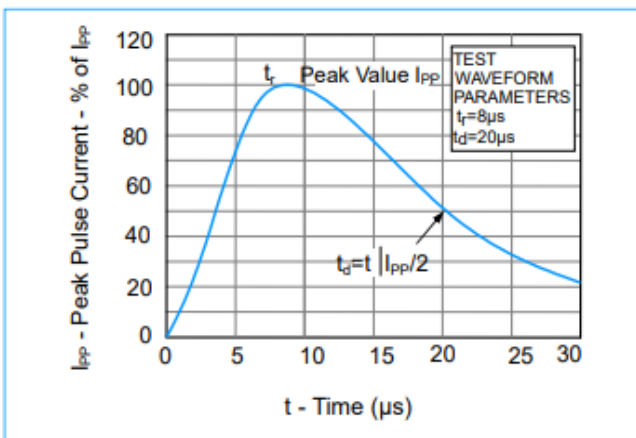


Fig2. Power Rating Derating Curve

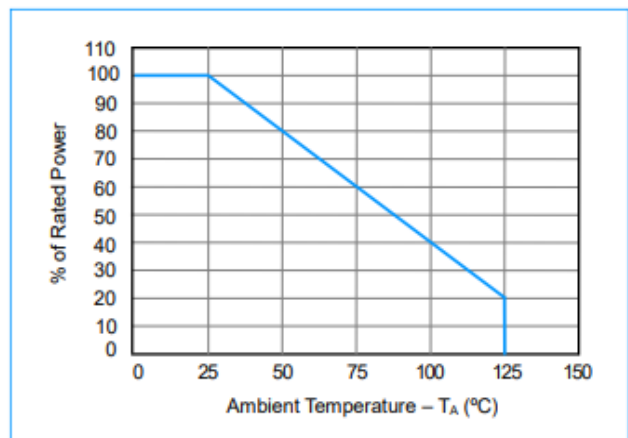
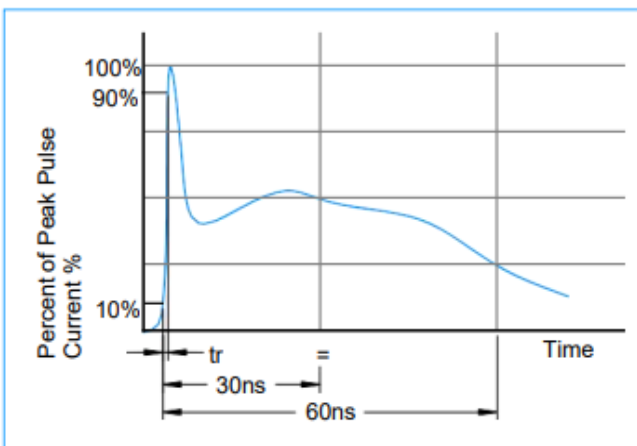


Fig3. ESD Pulse Waveform (according to IEC61000-4-2)

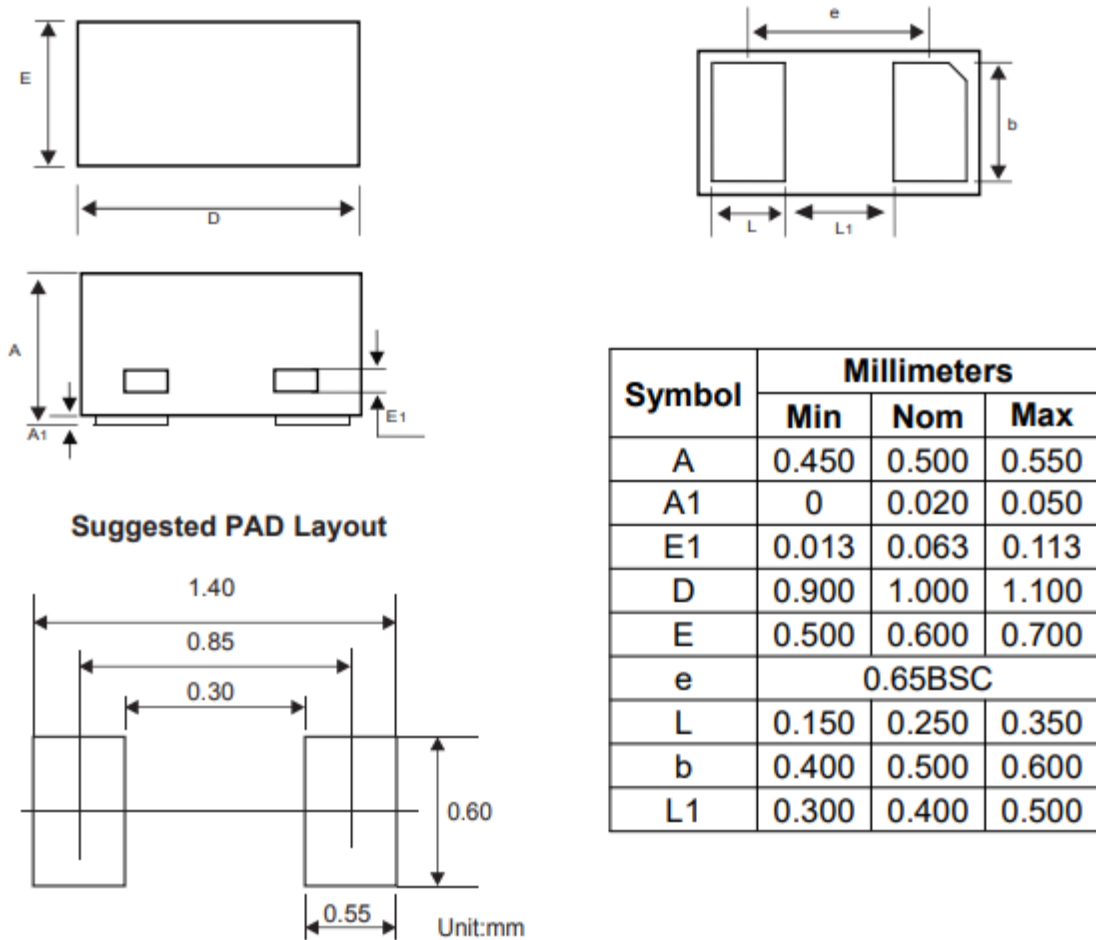


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### ESDXXV88D-C Series

### SOD-882/DFN1006 Package Outline & Dimensions

#### SOD-882/DFN1006



### Ordering Information

Device	Marking	Package	Quantity	Reel Size
ESDXXV88D-C Series	---	SOD-882/DFN1006	10,000pcs/Reel	7 inch