

## Transient Voltage Suppressors for ESD Protection

### ESD3.3V88D-LC

#### Description

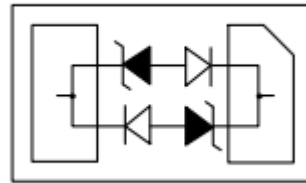
The ESD3.3V88D-LC is low capacitance TVS arrays designed to protect high speed data interfaces. This series has been specifically designed to protect sensitive components which are connected to high-speed data and transmission lines from over-voltage caused by ESD (electrostatic discharge), CDE (Cable Discharge Events), and EFT (electrical fast transients)



#### Feature

- ◆ 182 Watts Peak Pulse Power per Line ( $t_p=8/20\mu s$ )
- ◆ Protects One Bidirectional I/O Line
- ◆ Low clamping voltage
- ◆ Working voltages : 3.3V
- ◆ Low leakage current
- ◆ IEC61000-4-4 (EFT) 40A (5/50ns)
- ◆ IEC61000-4-5 (LIGHTING) 13A (8/20 $\mu s$ )
- ◆ IEC61000-4-2 (ESD) +30kV (air discharge)

#### Functional Diagram



#### Applications

- ◆ 10/1000 Gigabit interface
- ◆ Cell Phone Handsets and Accessories
- ◆ Microprocessor based equipment
- ◆ 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
P <sub>pp</sub>	Peak Pulse Power ( $t_p=8/20\mu s$ waveform)	182	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	-40 to +125	°C

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#### Electrical Characteristics(@25°C Unless Otherwise Specified)

Characteristics	Symbol	Test Conditions	Min.	Type	Max.	Unit
Reverse Working Voltage	VRWM		--	-	3.3	V
Reverse Breakdown Voltage	VBR	IT=1mA;	4	-	-	V
Reverse Leakage Current	IR	VRWM =3.3V, T=25°C;	--	--	1	μA
Positive Clamping Voltage	VC	IPP =1A, TP =8/20μs;	--	--	8.5	V
Junction Capacitance	CJ	VR = 0V, f = 1MHz;	--	12	--	pF

#### Characteristics Curves

Fig1: 8/20μs Pulse Waveform

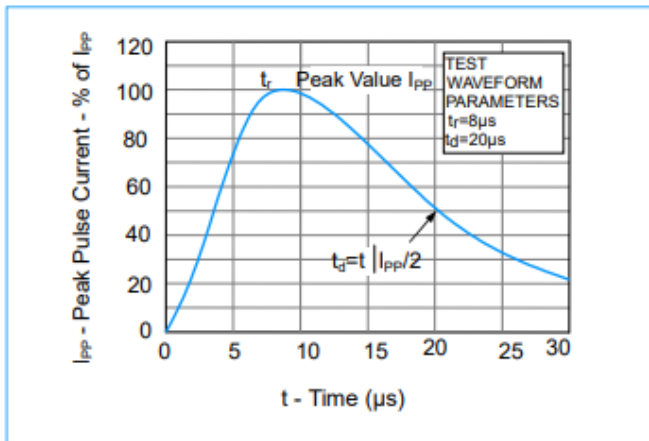


Fig2. Power Rating Derating Curve

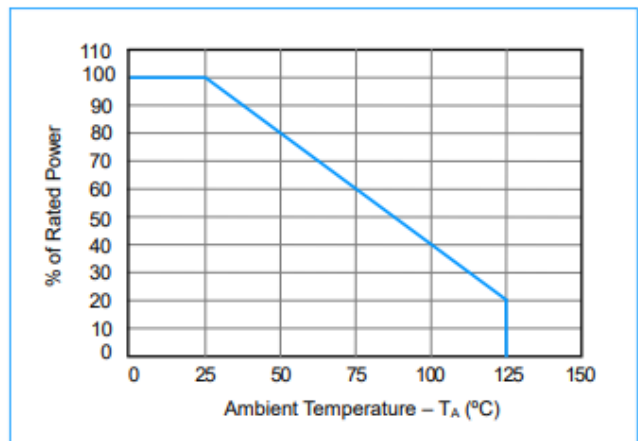
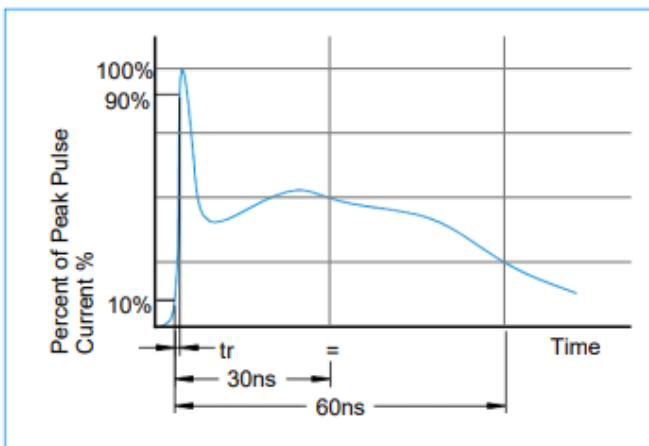


Fig3. ESD Pulse Waveform (according to IEC61000-4-2)

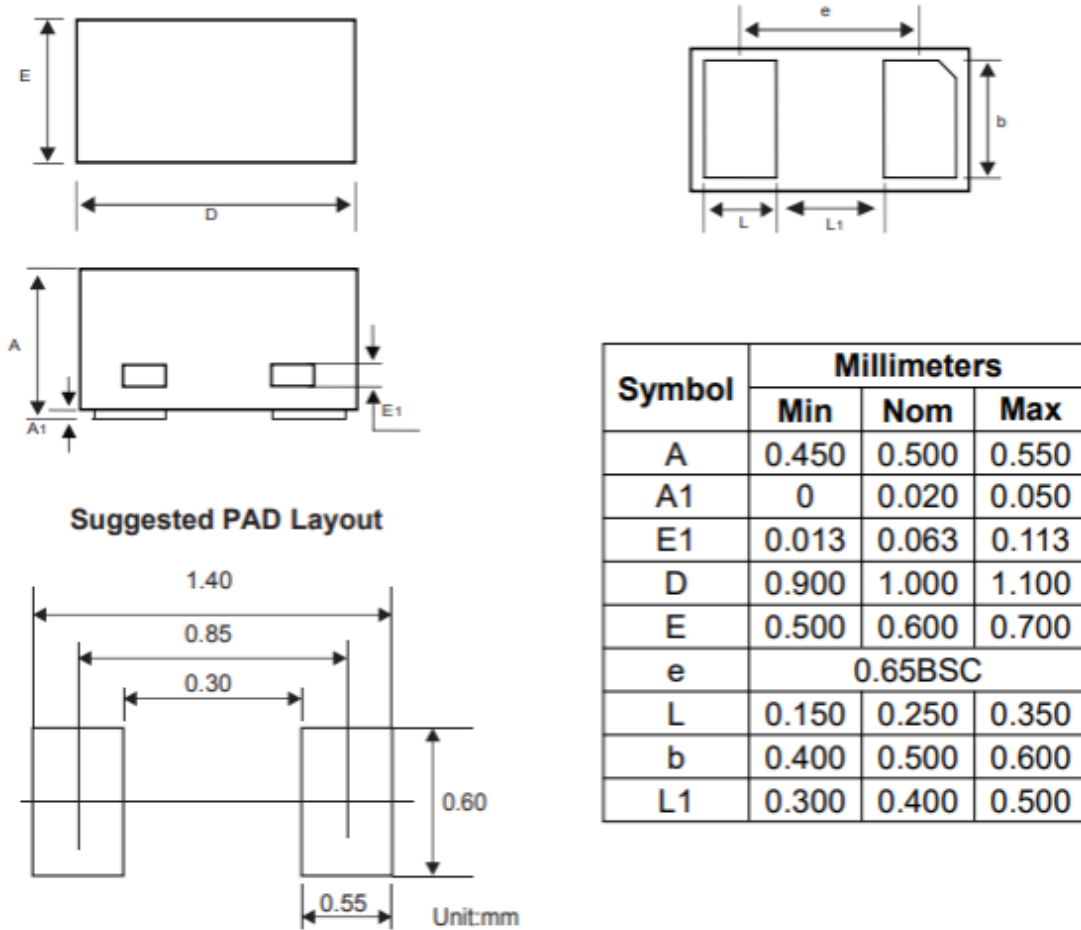


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### ESD3.3V88D-LC

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

#### SOD-882/DFN1006



### Ordering Information

Device	Marking	Package	Quantity	Reel Size
ESD3.3V88D-LC	LL	SOD-882/DFN1006	10,000pcs/Reel	7 inch