

ESDXXV88D-2A Series

ROHS

Transient Voltage Suppressors for ESD Protection

Description

The ESDXXV88D-2A 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 signal port and board space speed transmission is very small places, such as Ethernet, mobile phones, MP3 players, digital cameras and other portable.

Features

- ◆ 24 ~ 38 Watts Peak Pulse Power per Line ($t_p=8/20\mu s$)
- ◆ Protects two I/O line (Unidirectional)
- ◆ Low clamping voltage
- ◆ Working voltages: 3.3V, 5V and 12V
- ◆ Low leakage current
- ◆ IEC61000-4-2 (ESD) $\pm 15kV$ (air), $\pm 8kV$ (contact)
- ◆ IEC61000-4-4 (EFT) 40A (5/50ns)

Applications

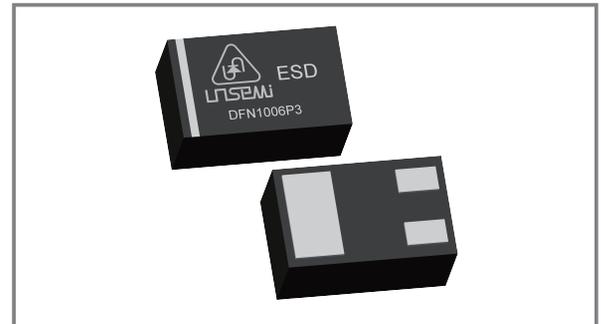
- ◆ Cellular Handsets & Accessories
- ◆ Microprocessor based equipment
- ◆ Notebooks & Handhelds
- ◆ Notebooks, Desktops, and Servers
- ◆ Peripherals
- ◆ Portable Instrumentation
- ◆ USB Interface

Mechanical Characteristics

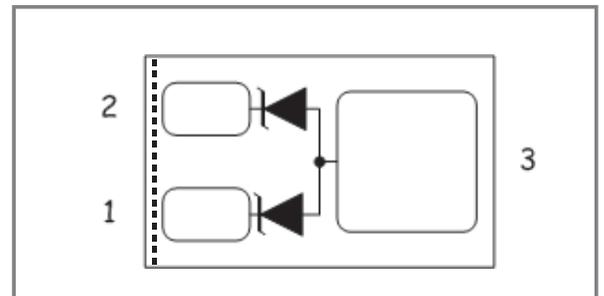
Parameter	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20\mu s$ waveform)	PPP	24 ~ 38	Watts
Lead Soldering Temperature	TL	260 (10 sec.)	$^{\circ}C$
Storage Temperature Range	T_{STG}	-55 to +150	$^{\circ}C$
Operating Junction Temperature Range	T_J	-40 to +125	$^{\circ}C$



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Functional Diagram



Mechanical Data

- ◆ DFN1006P3 (1.0x0.6mm) Package
- ◆ Molding Compound Flammability Rating : UL 94V-0
- ◆ Weight 0.6 Milligrams (Approximate)
- ◆ Lead Finish : Lead Free

Electrical Characteristics @ 25°C Unless Otherwise Specified)

Part Number	Device Marking Code	Stand-Off Voltage V_{RWM} (V)	Breakdown Voltage $V_{BR}(Min.)$ (V)	Test Current I_T (mA)	V_c @1A (V)Max.	V_c		Maximum Reverse Leakage I_R @ V_{RWM} (μ A)	Typ Junction Capacitance (pF)
						(Max.)	(@A)		
ESD3.3V88D-2A	PA	3.3	4.5	1.0	8.5	12	2.0	5.0	9
ESD05V88D-2A	PB	5.0	6.0	1.0	10	15	2.0	0.5	8
ESD12V88D-2A	PC	12.0	13.3	1.0	17	19	2.0	0.5	6

Characteristic Curves

Fig1. 8/20 μ s Pulse Waveform

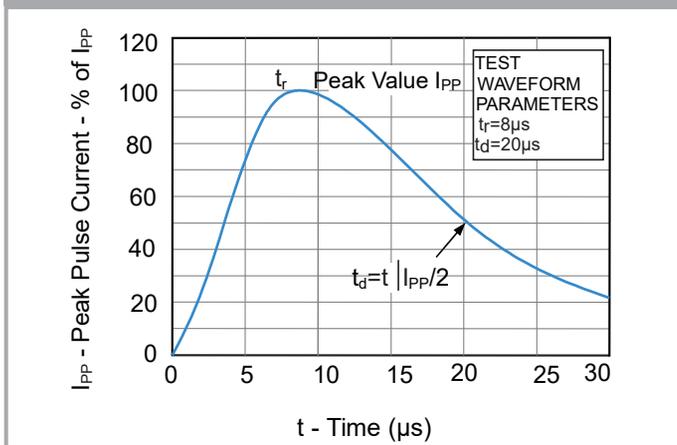


Fig2. Power Rating Derating Curve

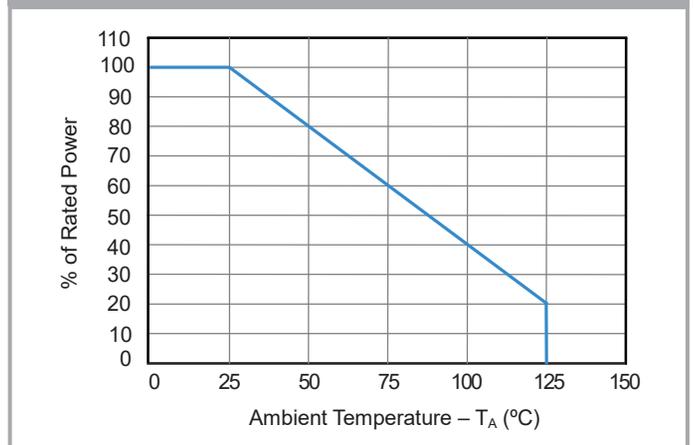
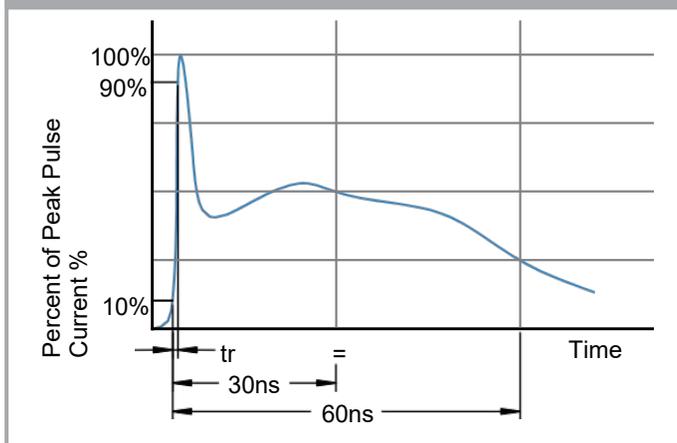


Fig3. ESD Pulse Waveform (according to IEC61000-4-2)



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