

Transient Voltage Suppressors for ESD Protection

ESD05V88D-2C

Description

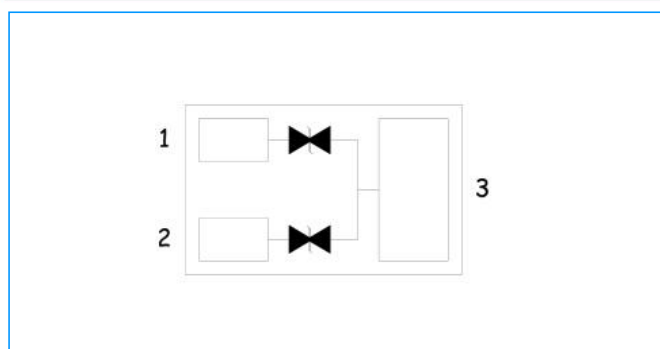
The ESD05V88D-2C is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium.



Feature

- ◆ 90 Watts Peak Pulse Power per Line (tp=8/20μs)
- ◆ Protects two Bidirectional I/O lines
- ◆ Low clamping voltage
- ◆ Working voltages : 5.0V
- ◆ Low leakage current
- ◆ IEC61000-4-2(ESD):±15kV (air discharge)
±8kV (contact discharge)

Functional Diagram



Applications

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

Mechanical Data

- ◆ DFN1006P3 (1.0x0.6x0.5mm) Package
- ◆ Molding Compound Flammability Rating : UL 94V-O
- ◆ Weight 0.5 Milligrams (Approximate)
- ◆ Lead Finish : Lead Free

Mechanical Characteristics

Symbol	Parameter	Value	Units
P _{PP}	Peak Pulse Power (tp=8/20μs waveform)	90	Watts
T _L	Lead Soldering Temperature	260 (10 sec.)	°C
T _{STG}	Storage Temperature Range	-55 to +150	°C
T _J	Operating Junction Temperature Range	-40 to +125	°C

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Electrical Characteristics (@ 25°C Unless Otherwise Specified)

Characteristics	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Reverse Working Voltage	V_{RWM}	--	--	--	5.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$;	6.0	--	--	V
Reverse Leakage Current	I_R	$V_{RWM}=5.0V, T=25^{\circ}C$;	--	--	1.0	μA
Positive Clamping Voltage	V_C	$I_{PP}=3A, T_P=8/20\mu s$;	--	--	30.0	V
Junction capacitance	C_J	$V_R=0V, f=1MHz$;	--	10	--	pF

Characteristic Curves

Fig1. 8/20 μs Pulse Waveform

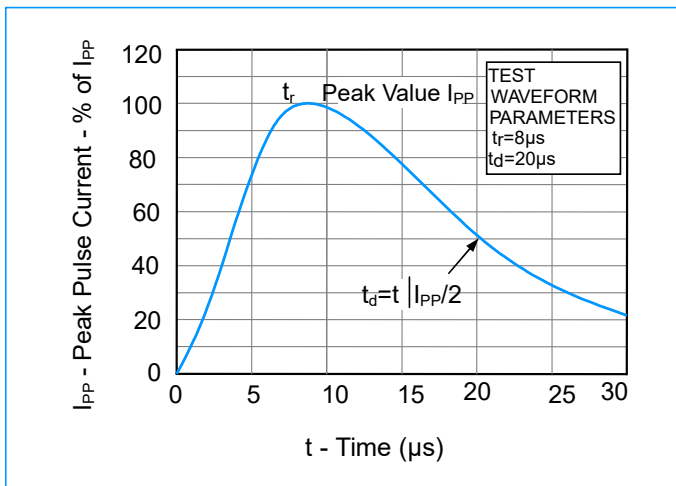


Fig2. Power Derating Curve

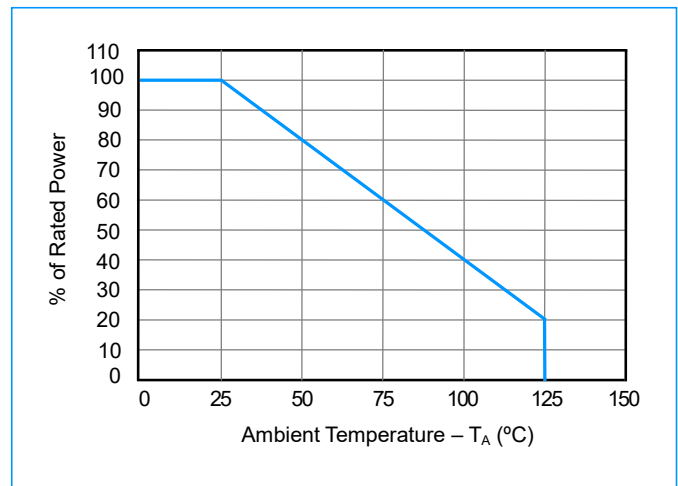


Fig3. Capacitance Characteristics

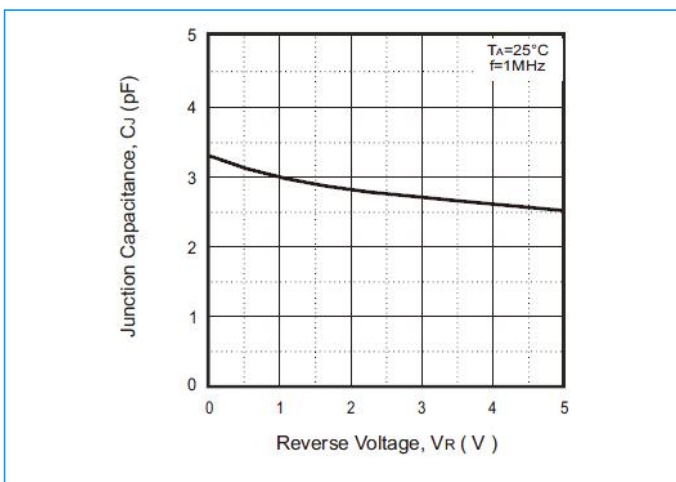
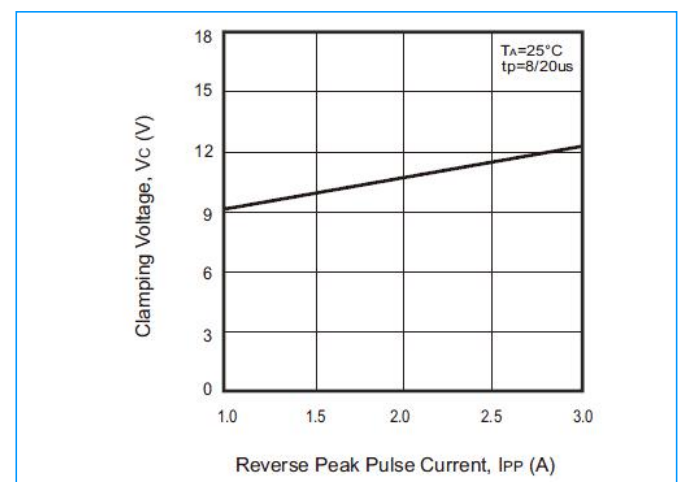


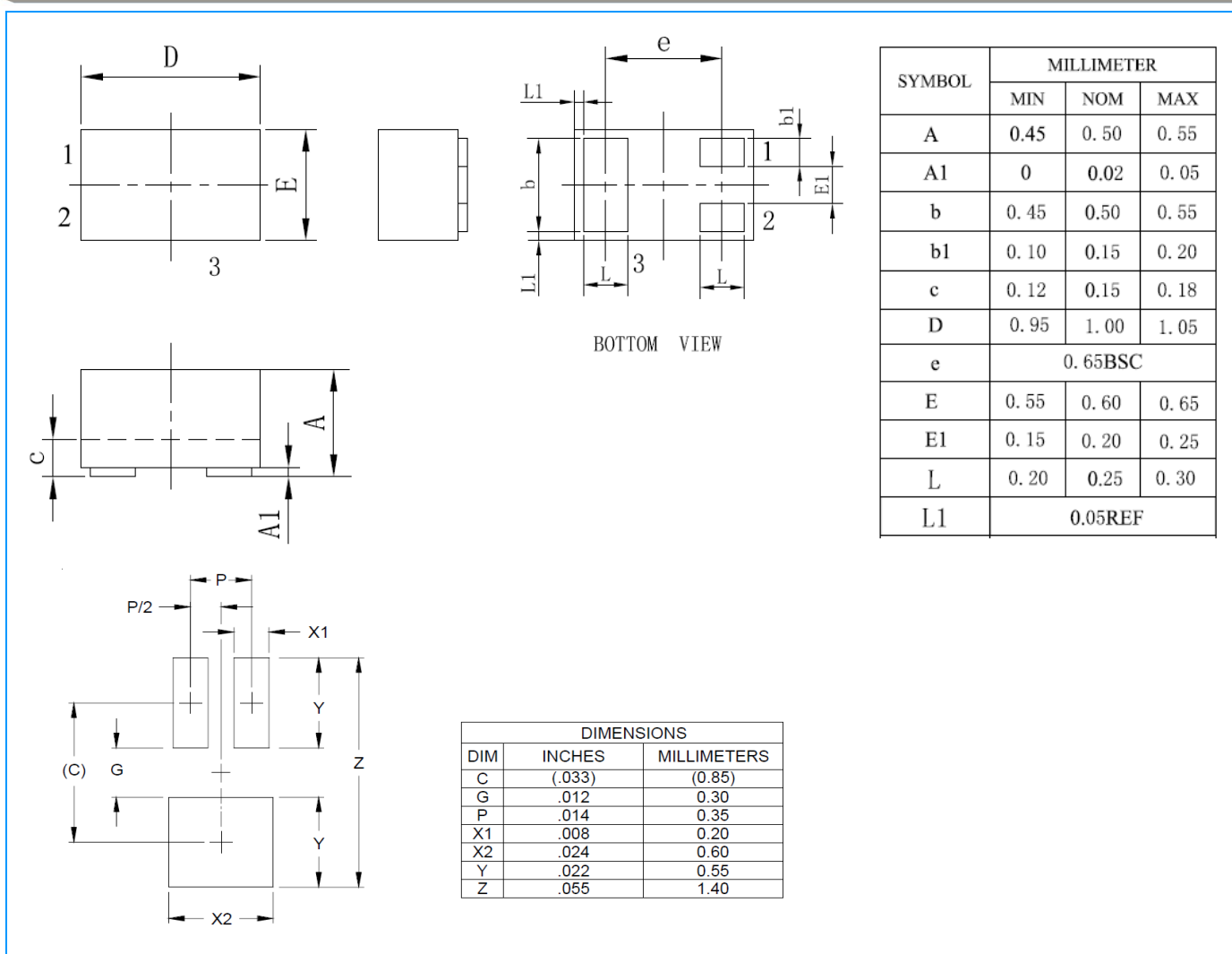
Fig4. V_C — I_{PP}



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DFN1006P3 Package Outline & Dimensions



Ordering Information

Device	Marking	Package	Quantity	Reel Size
ESD05V88D-2C	N5	DFN1006P3	12,000pcs/Reel	7 inch