

ESDFN05CU

Single Line ESD Protection Diode

Description

The ESDFN05CU is designed to replace multilayer varistors (MLVs) in portable applications such as cell phones, notebook computers, and PDA's. They feature large cross-sectional area junctions for conducting high transient currents, offer desirable electrical characteristics for board level protection, such as fast response time, lower operating voltage, lower clamping voltage and no device degradation when compared to MLVs.

Features

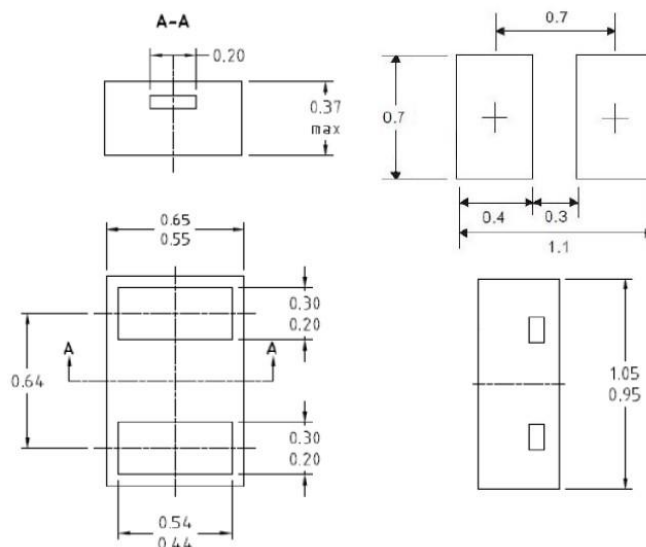
- Equivalent to 0402 package
- 75W peak pulse power
- Small package for use in portable electronics
- Stand-off Voltage: 5 V
- Low Leakage current
- These are Pb-Free Devices
- RoHS Compliant Package

Complies with the following standards

- IEC61000-4-2
- Level 4 15 kV (air discharge)
8 kV (contact discharge)
- MIL STD 883E - Method 3015-7 Class 3
- 25 kV HBM (Human Body Model)

Packing & Order Information

3,000/Reel



Graphic symbol



RoHS
COMPLIANT

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MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Absolute Ratings (Tamb=25°C)

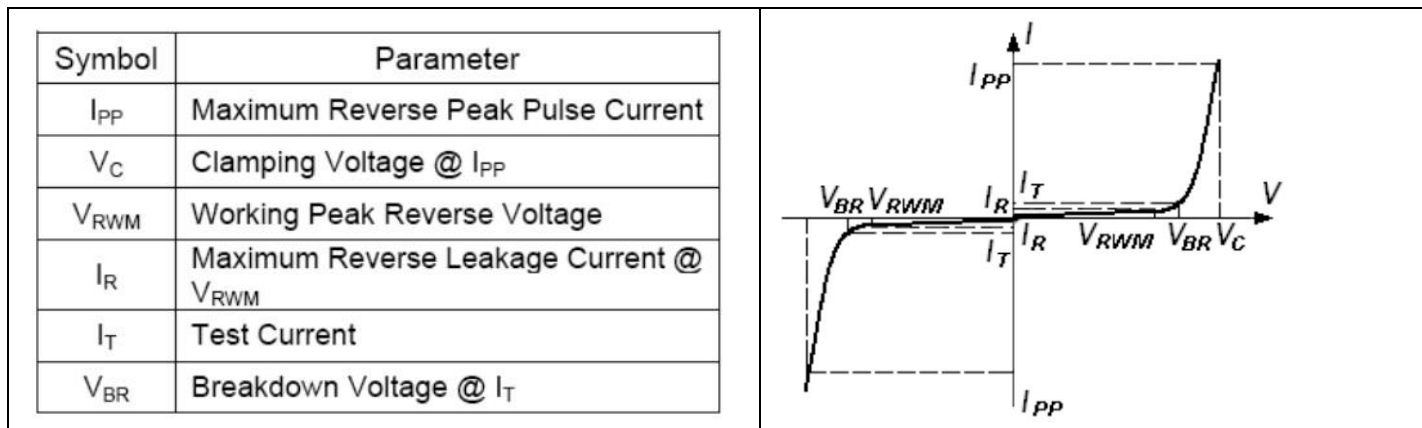
Symbol	Parameter	Value	Unit
	IEC 61000-4-2 (ESD) Contact	8	kV
P _{PP}	Peak Pulse Power (tp= 8/20μs)	75	W
I _{PP}	Peak Pulse Power (tp= 8/20μs)	5	A
TJ	Maximum junction temperature	-55 to +155	°C
TSTG	Storage Temperature Range	-55 to +155	°C
TL	Maximum lead temperature for soldering during 10s	260	°C

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.VF = 0.9V at IF = 10mA

Part Numbers	V _{BR}			I _T	V _{RWM}	IR	VF	IF	Cj
	Min.	Typ.	Max.				Max.	Typ.	Typ. 0v bias
	V			mA	V	V	V	mA	PF
ESDFN05CU	5.4	6.6	7.8	1	5.0	1	-	-	0.5

*Surge current waveform per Figure 1.

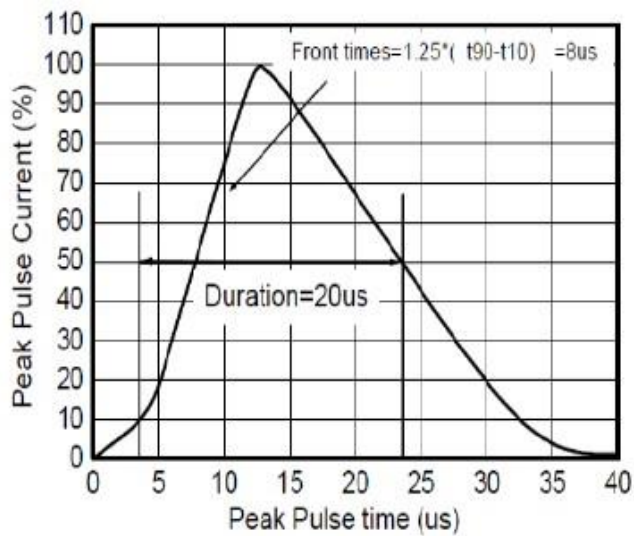
1. VBR is measured with a pulse test current I_T at an ambient temperature of 25°C.



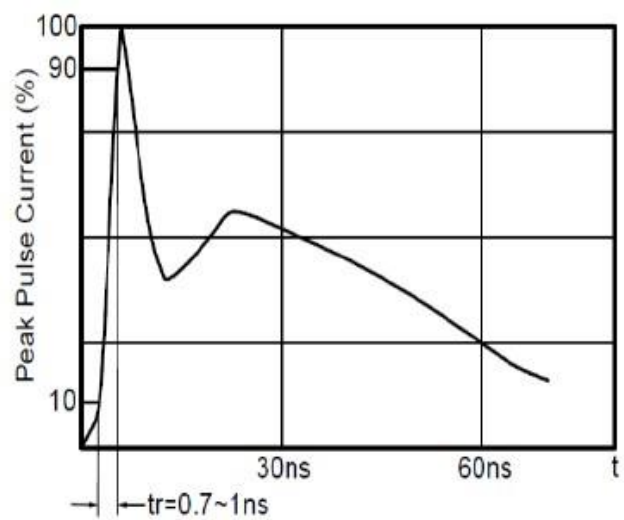
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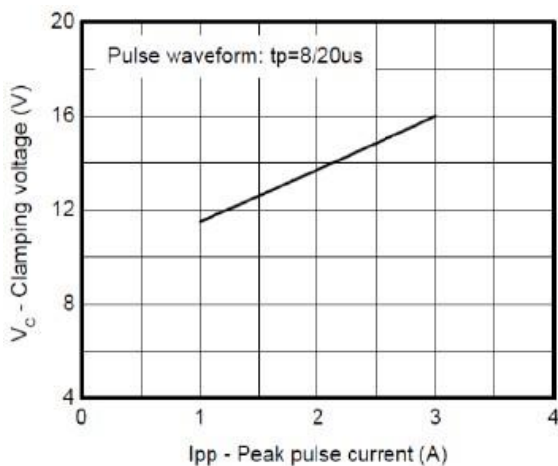
■ Typical Device Characteristics



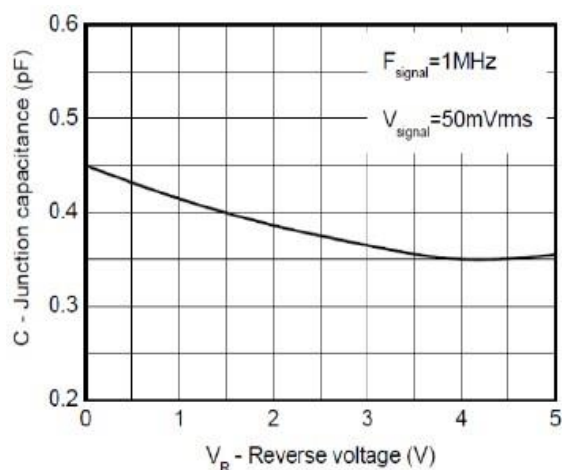
8/20us waveform



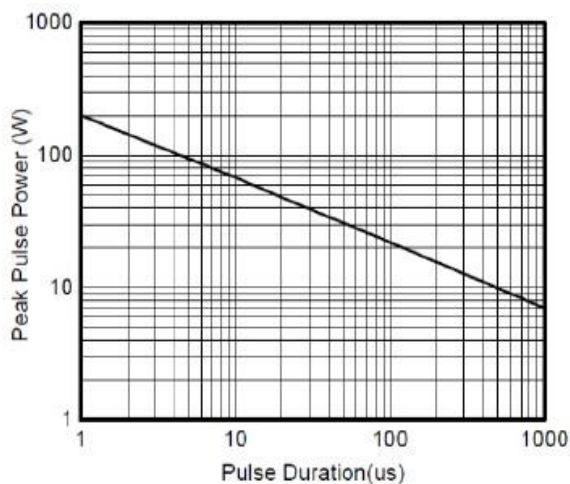
IEC61000-4-2 waveform



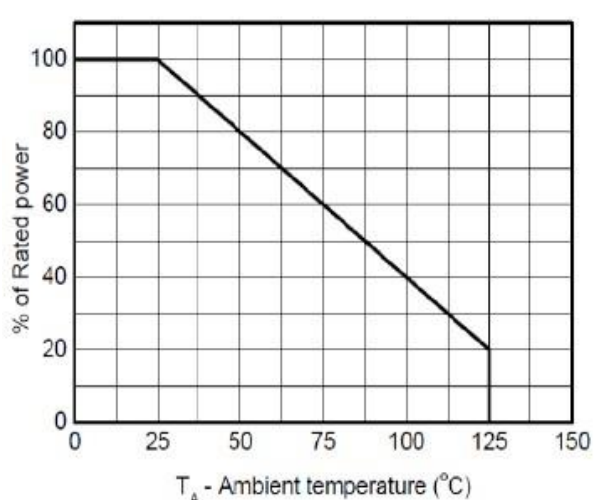
Clamping voltage vs. Peak pulse current



Capacitance vs. Reverse voltage



Non-Repetitive Peak Pulse Power vs. Pulse time

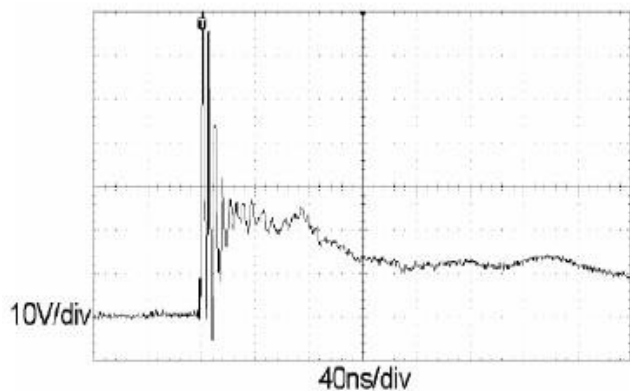


Power derating vs. Temperature

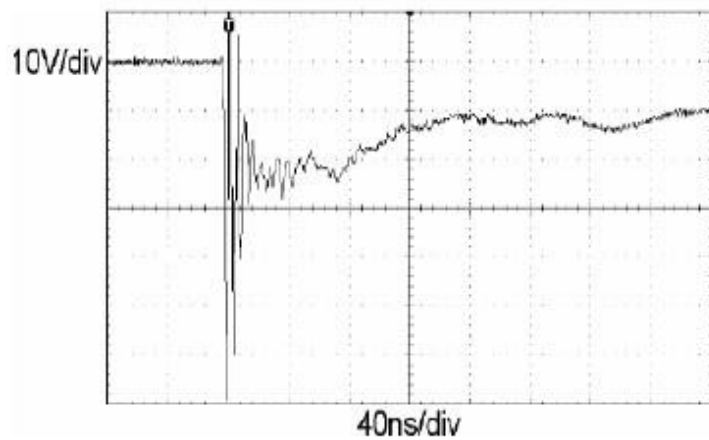
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Single Line ESD Protection Diode

■ Typical Device Characteristics



ESD clamping voltage
(IEC61000-4-2 +8KV contact)



ESD clamping voltage
(IEC61000-4-2 -8KV contact)

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