

## 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

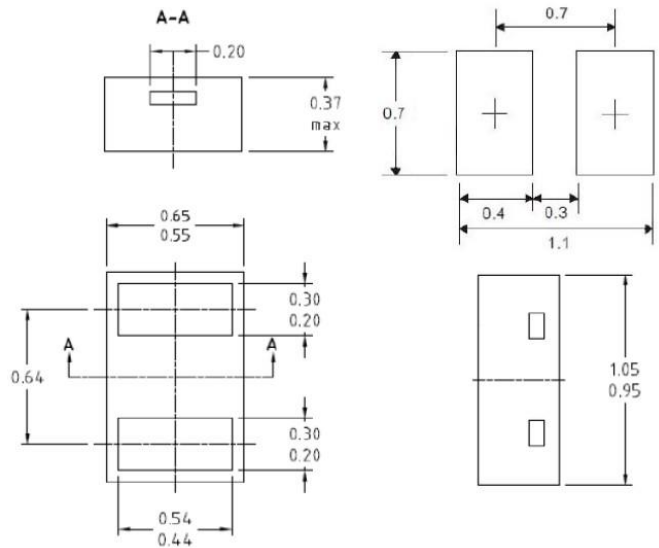
- IEC61000-4-2
- Level 4 15 kV (air discharge)  
8 kV (contact discharge)
- MIL STD 883E - Method 3015-7 Class 3
- 25 kV HBM (Human Body Model)

#### Packing & Order Information

3,000/Reel



**RoHS**  
COMPLIANT



#### Graphic symbol



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#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

##### Absolute Ratings (Tamb=25°C)

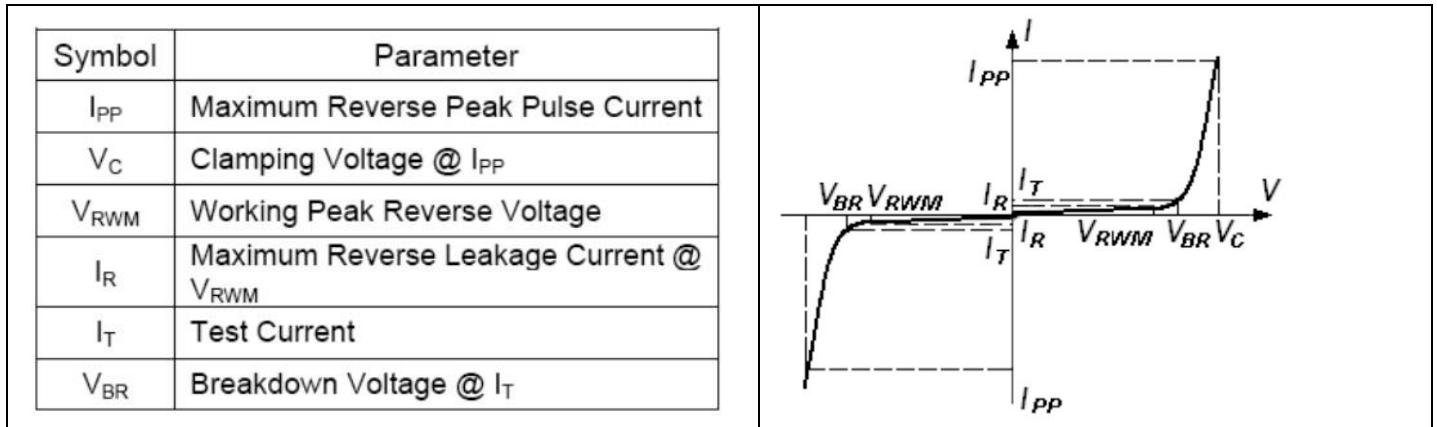
Symbol	Parameter	Value	Unit
	IEC 61000-4-2 (ESD) Contact	8	kV
P <sub>PP</sub>	Peak Pulse Power (tp= 8/20µs)	75	W
I <sub>PP</sub>	Peak Pulse Power (tp= 8/20µs)	5	A
T <sub>J</sub>	Maximum junction temperature	-55 to +155	°C
TSTG	Storage Temperature Range	-55 to +155	°C
TL	Maximum lead temperature for soldering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

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

Part Numbers	V <sub>BR</sub>			I <sub>T</sub>	V <sub>RWM</sub>	I <sub>R</sub>	VF	IF	Cj
	Min.	Typ.	Max.						
	V								
ESDFN05CU	5.4	6.6	7.8	1	5.0	1	-	-	0.5

\*Surge current waveform per Figure 1.

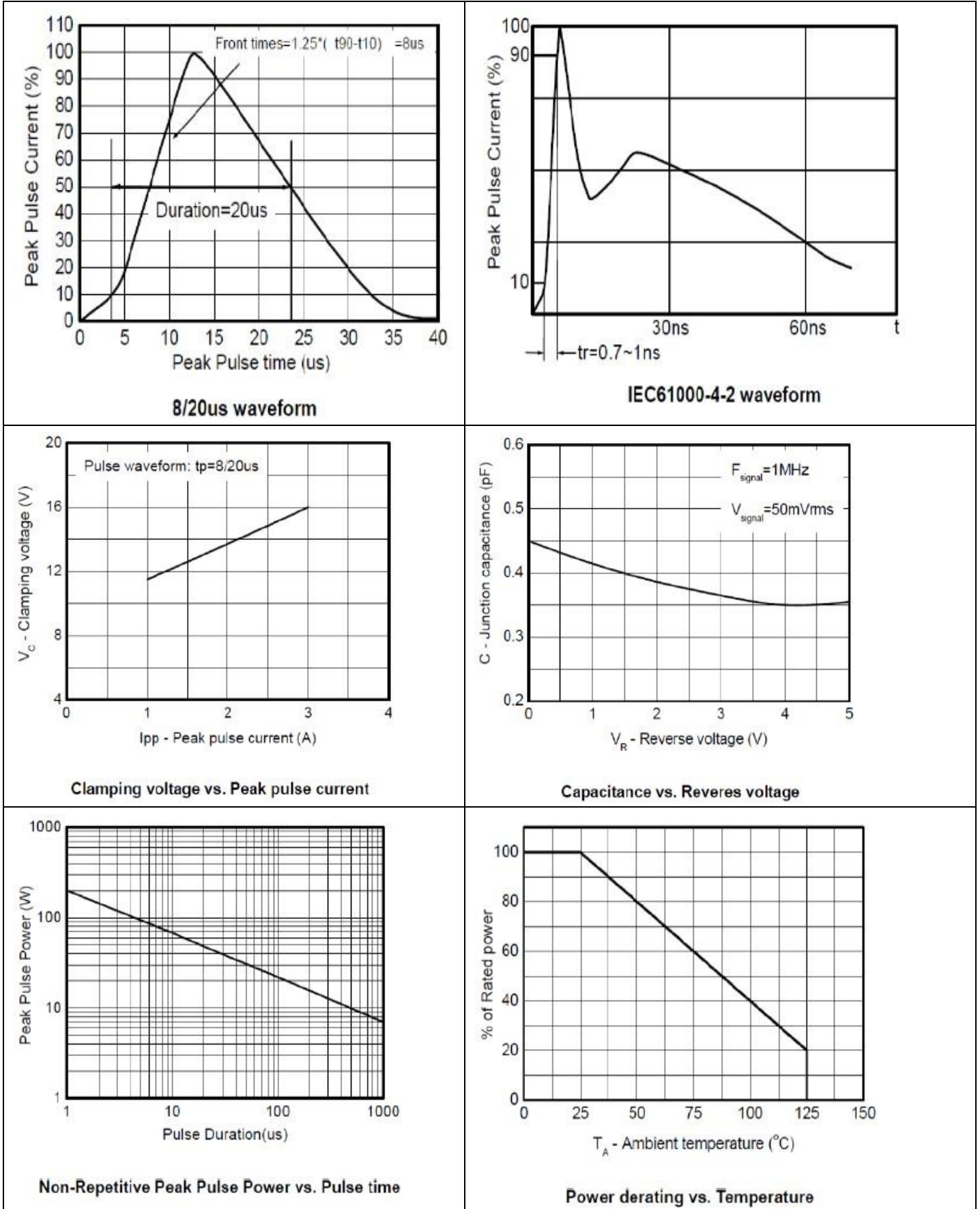
1. VBR is measured with a pulse test current I<sub>T</sub> at an ambient temperature of 25°C.



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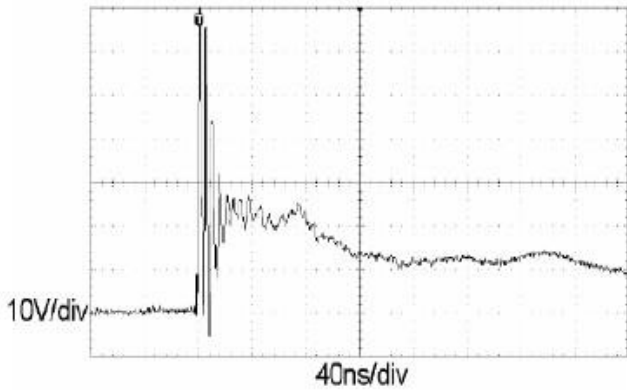
#### Typical Device Characteristics



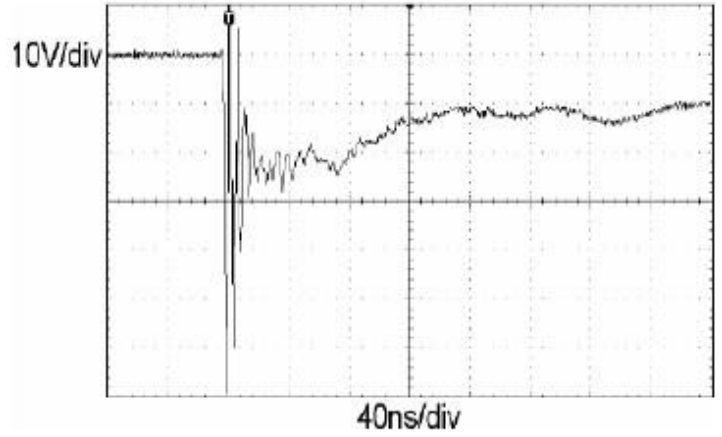
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■ Typical Device Characteristics



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



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

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