

# TUSD05CB

## Bidirectional TVS Diode

### APPLICATIONS

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

### IEC COMPATIBILITY

- ◆ IEC61000-4-2 (ESD)  $\pm 15\text{kV}$  (air),  $\pm 8\text{kV}$  (contact)
- ◆ IEC61000-4-4 (EFT) 40A (5/50  $\eta$  s)

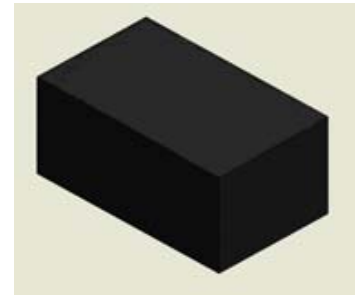
### FEATURES

- ◆ 120 Watts Peak Pulse Power per Line ( $t_p=8/20\mu\text{s}$ )
- ◆ Protects one bidirectional I/O line
- ◆ Low clamping voltage
- ◆ Working voltages : 5V
- ◆ Low leakage current

### MECHANICAL CHARACTERISTICS

- ◆ DFN1006(0402) Package
- ◆ Molding Compound Flammability Rating : UL 94V-0
- ◆ Weight 0.5 Milligrams (Approximate)
- ◆ Quantity Per Reel : 5,000pcs
- ◆ Reel Size : 7 inch
- ◆ Lead Finish : Lead Free

DFN1006(0402)



PIN CONFIGURATION



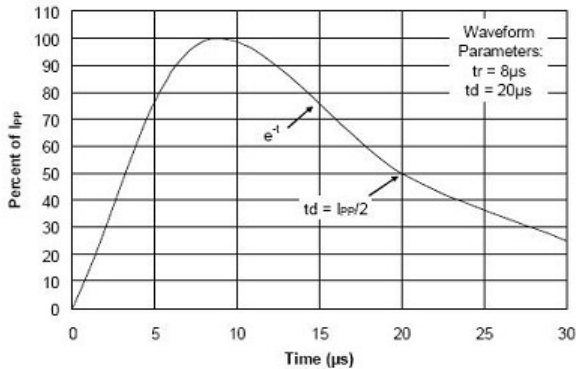
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## DEVICE CHARACTERISTICS

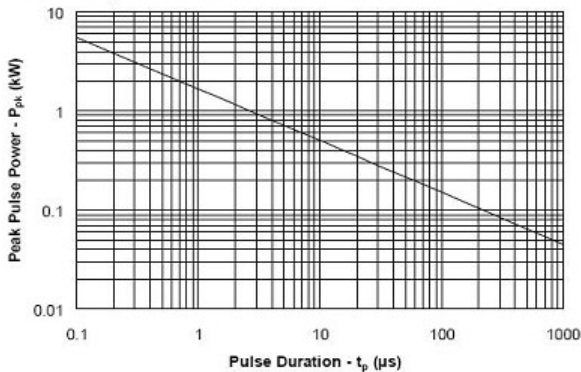
MAXIMUM RATINGS (@ 25°C Unless Otherwise Specified)			
PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power (tp=8/20µs waveform)	P <sub>PP</sub>	120	Watts
Lead Soldering Temperature	T <sub>L</sub>	260 (10 sec.)	°C
Operating Temperature Range	T <sub>J</sub>	-55 ~ 150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 ~ 150	°C

ELECTRICAL CHARACTERISTICS PER LINE (@ 25°C Unless Otherwise Specified)									
PART NUMBER	DEVICE MARKING	V <sub>RWM</sub>	V <sub>B</sub>	I <sub>T</sub>	V <sub>C</sub>	V <sub>C</sub>		I <sub>R</sub>	C <sub>T</sub>
		(V) (max.)	(V) (min.)	(mA)	@1A (max.)	(max.)	(@A)	(µA) (max.)	(pF) (typ.)
TUSD05CB	S	5	6	1	12	14	2	1	0.5

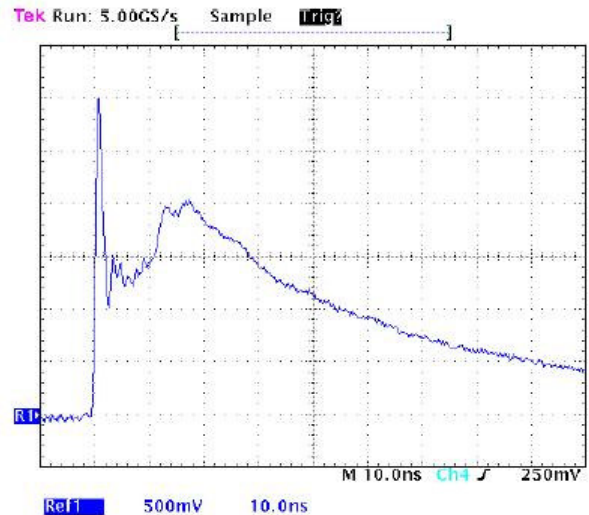
Pulse Waveform



Non-Repetitive Peak Pulse Power vs. Pulse Time

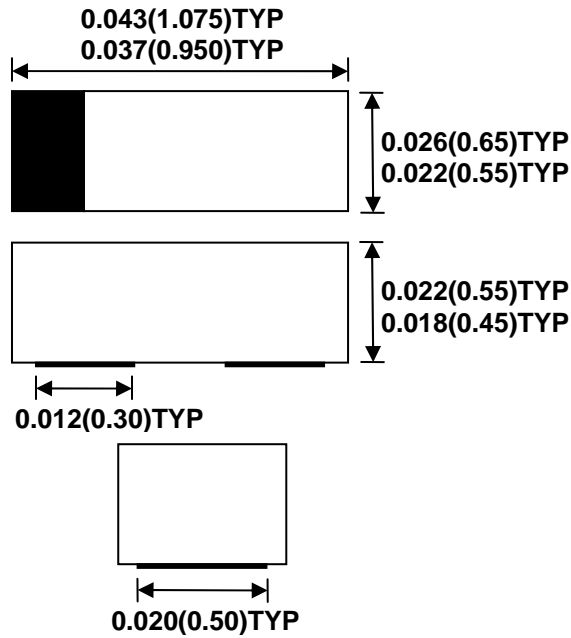


ESD Pulse Waveform (Per IEC 61000-4-2)



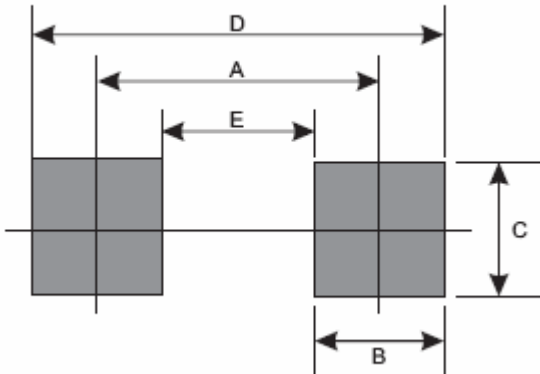
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## DFN1006(0402) PACKAGE OUTLINE & DIMENSIONS



Dimensions in inches and (millimeter)

## RECOMMENDED SOLDERING FOOTPRINT



## Reflow Soldering

Product Size	Dimension/ mm				
	A	B	C	D	E
0402	0.6402	0.2492	0.4896	0.8912	0.3904
	0.0253"	0.0098"	0.0193"	0.0351"	0.0154"