

## Low Capacitance TVS/ESD Protection Diode

### DESCRIPTION

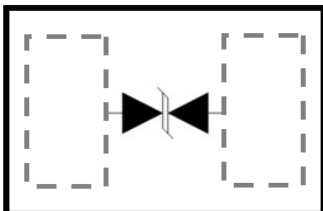
WE07DF-B is a low-capacitance Transient Voltage Suppressor (TVS) designed to provide electrostatic discharge (ESD) protection for data, control or power lines. With maximum capacitance of 30pF only, WE07DF-B is designed to protect parasitic-sensitive systems against over-voltage and over-current transient events. It complies with IEC 61000-4-2 (ESD), Level 4 ( $\pm 15\text{kV}$  air,  $\pm 8\text{kV}$  contact discharge), very fast charged device model (CDM) ESD and cable discharge event (CDE), etc.

WE07DF-B uses ultra-small DFN1006 package. Each WE07DF-B device can protect one data line. It offers system designers flexibility to protect single data line where space is a premium concern..

### ORDERING INFORMATION

- ✧ Device: WE07DF-B
- ✧ Package: DFN1006
- ✧ Marking: .T2
- ✧ Material: Halogen free
- ✧ Packing: Tape & Reel
- ✧ Quantity per reel: 10,000pcs

### PIN CONFIGURATION



### FEATURES

- ✧ Peak Power Dissipation 150 W (8/20 $\mu\text{s}$ )
- ✧ Stand-off voltage: 7V
- ✧ Low capacitance 15pF (Maximum)
- ✧ Replacement for MLV(0402)
- ✧ Protects I/O Port
- ✧ Low Clamping Voltage
- ✧ Low Leakage
- ✧ Low Capacitance
- ✧ Response Time is <1ns
- ✧ Meets MSL 1 Requirements
- ✧ ROHS compliant

### MACHANICAL DATA

- ✧ DFN1006 package
- ✧ Flammability Rating: UL 94V-0
- ✧ Packaging: Tape and Reel
- ✧ Reel size: 7 inch

### APPLICATIONS

- ✧ Serial and Parallel Ports
- ✧ Notebooks, Desktops, Servers
- ✧ Projection TV
- ✧ Cellular handsets and accessories
- ✧ Portable instrumentation
- ✧ Peripherals
- ✧ MP3 Players

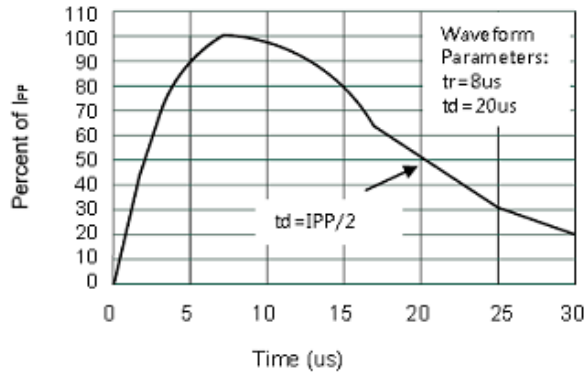
### PACKAGE OUTLINE



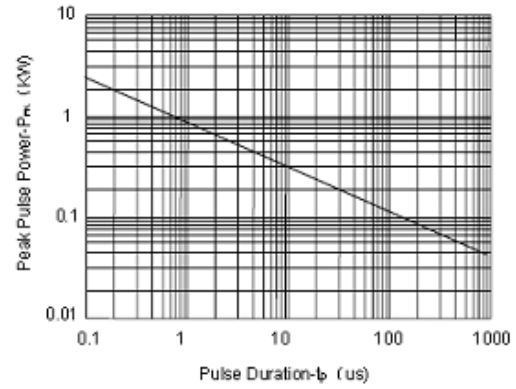
ABSOLUTE MAXIMUM RATING(Tamb=25°C)			
Symbol	Parameter	Value	Unit
V <sub>ESD</sub>	ESD per IEC 61000-4-2 (Air)	±25	kV
	ESD per IEC 61000-4-2 (Contact)	±25	
P <sub>PPP</sub>	Peak Pulse Power(tp=8/20us waveform)	150	watts
T <sub>L</sub>	Lead Soldering Temperature	260(10sec.)	°C
T <sub>J</sub>	Operating Temperature Range	-55~125	°C
T <sub>STG</sub>	Storage Temperature Range	-55~150	°C
T <sub>L</sub>	Lead Solder Temperature-Maximum (10 Second Duration)	260	°C

ELECTRICAL CHARACTERISTICS (Tamb=25°C)						
Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V <sub>RWM</sub>	Reverse Working Voltage				7.0	V
V <sub>BR</sub>	Reverse Breakdown Voltage	I <sub>T</sub> = 1mA	7.5			V
I <sub>R</sub>	Reverse Leakage Current	V <sub>RWM</sub> = 7V			0.2	μA
V <sub>C</sub>	Clamping Voltage	I <sub>PP</sub> = 1A, t <sub>p</sub> = 8/20μs			12	V
		I <sub>PP</sub> = 8A, t <sub>p</sub> = 8/20μs			19	V
C <sub>J</sub>	Junction Capacitance	V <sub>R</sub> = 0V, f = 1MHz			15	pF

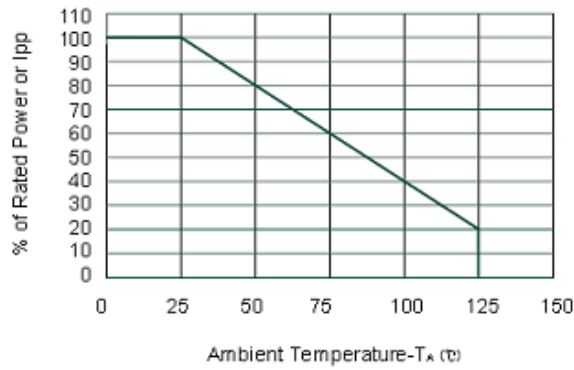
## ELECTRICAL CHARACTERISTICS CURVE



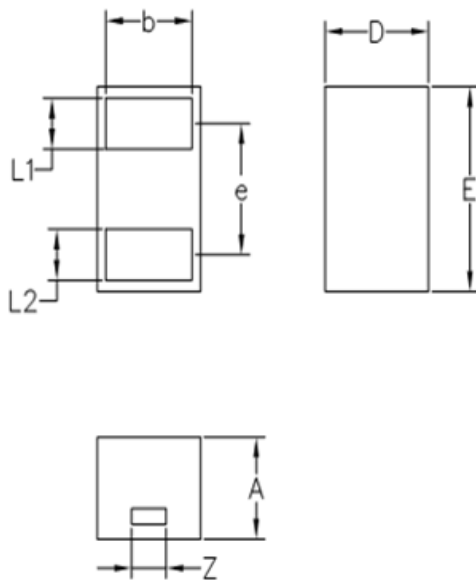
Pulse Waveform



Non- Repetitive Peak Pulse Power vs. Pulse Time



## DFN1006 PACKAGE OUTLINE DIMENSIONS



NOTE: ALL DIMENSIONS IN MM

	MIN	NOM	MAX
<b>D</b>	0.55	0.60	0.65
<b>E</b>	0.95	1.00	1.05
<b>L1</b>	0.20	0.25	0.30
<b>L2</b>	0.20	0.25	0.30
<b>A</b>	0.45	0.50	0.55
<b>Z</b>	0.15	0.20	0.25
<b>b</b>	0.45	0.50	0.55
<b>e</b>		0.64BSC	

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