

## DESCRIPTION

The ESDFBP05CL ESD protection diode 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.

## APPLICATIONS

- ✧ Cellular phones handsets and Accessories.
- ✧ PDA's.
- ✧ MP3 players.
- ✧ Digital cameras.
- ✧ Portable applications.
- ✧ mobile telephone.

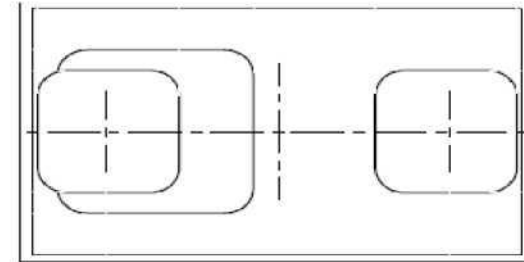
## FEATURES

- ✧ Equivalent to 0402 package.
- ✧ 120W peak pulse power.
- ✧ Small package for use in portable electronics.
- ✧ Standoff voltage : 5V.
- ✧ Low leakage current.
- ✧ These are Pb-Free Devices.

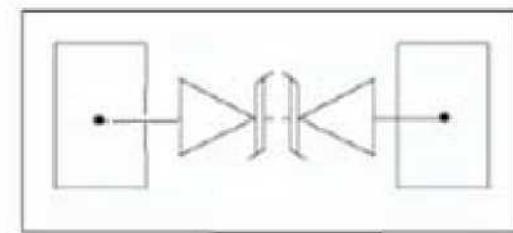
## COMPLIES WITH THE FOLLOWING STANDARDS

- ✧ 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).

**WBFBP-02L**



**PIN CONFIGURATION**

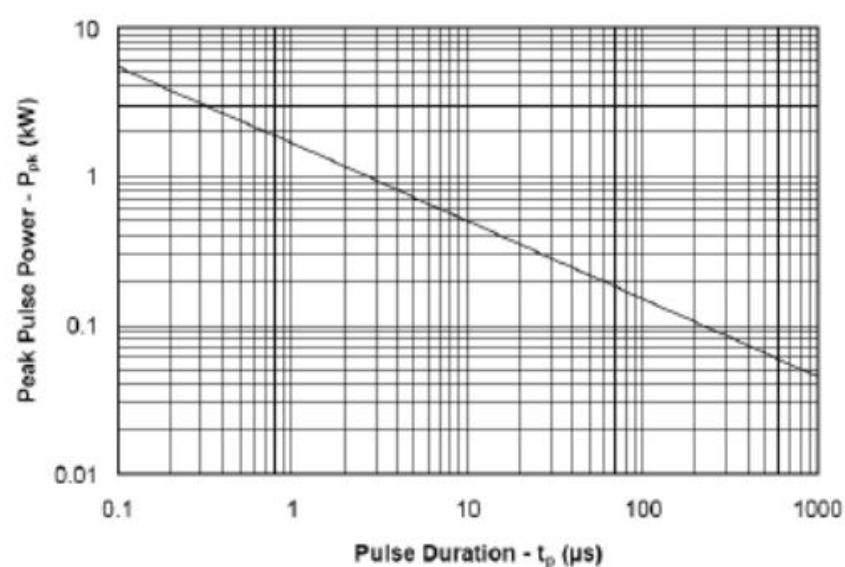


**DEVICE CHARACTERISTICS**

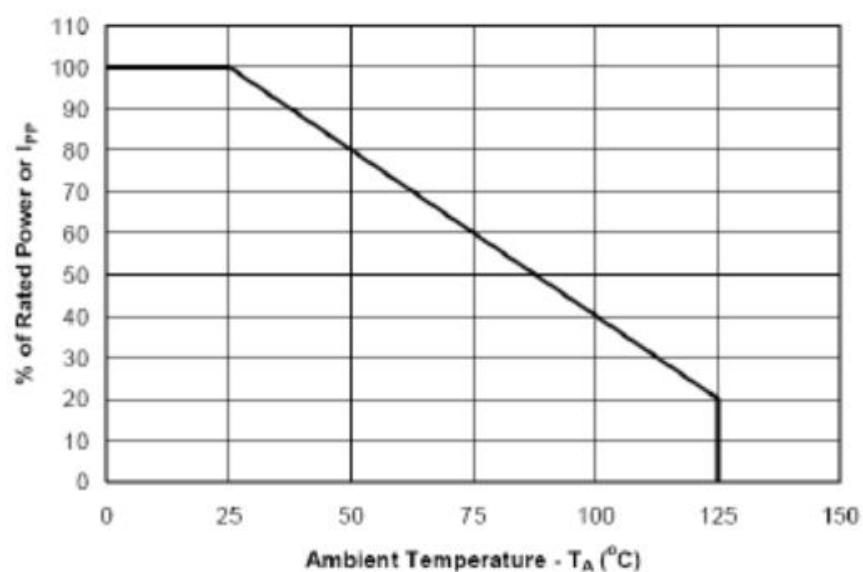
MAXIMUM RATINGS (@ 25°C Unless Otherwise Specified)			
Symbol	Parameter	Value	Unit
	EC 61000-4-2 (ESD) Contact	8	kV
PpK	Peak Pulse Power	120	W
IpP	Peak Pulse Power	12	A
T <sub>J</sub> , T <sub>STG</sub>	Junction and Storage Temperature Range	-55 to 150	°C
T <sub>L</sub>	Lead Solder Temperature - Maximum (10 Second Duration)	260	°C

**ELECTRICAL CHARACTERISTICS** (T<sub>A</sub>=25°C unless otherwise noted, V<sub>F</sub>=0.9V Max. © I<sub>F</sub>=10mA for all types)

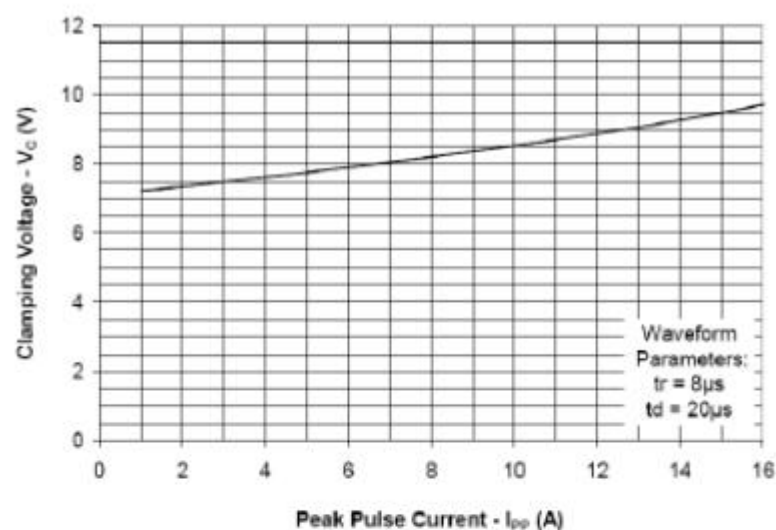
Part Numbers	V <sub>BR</sub>			I <sub>T</sub>	V <sub>RWM</sub>	I <sub>R</sub>	C
	Min.	Typ.	Max.				
	V	V	V	mA	V	μA	Typ. 2v bias pF
ESDFBP05CL	6.1	6.6	7.2	1	5.0	1	3

**TYPICAL CHARACTERISTICS**


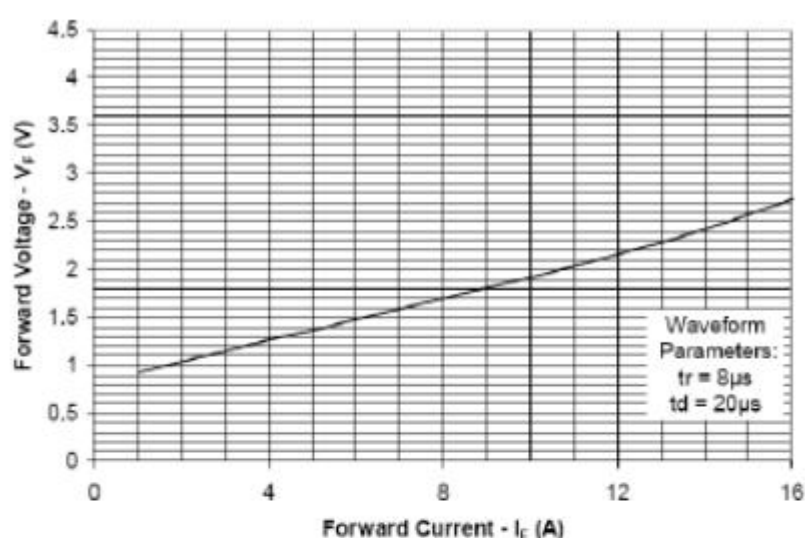
**Figure 1. Non-Repetitive Peak Pulse Power  
versus Pulse Time**



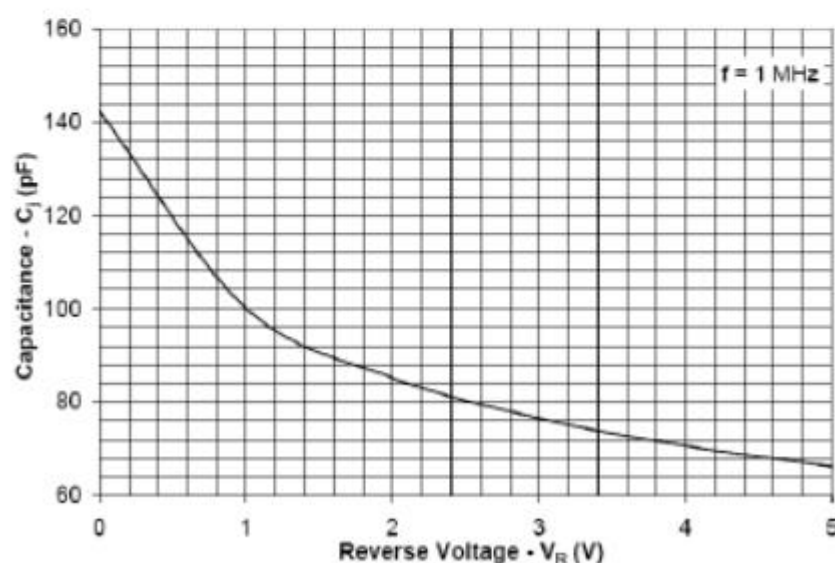
**Fig 2. Power Derating Curve**



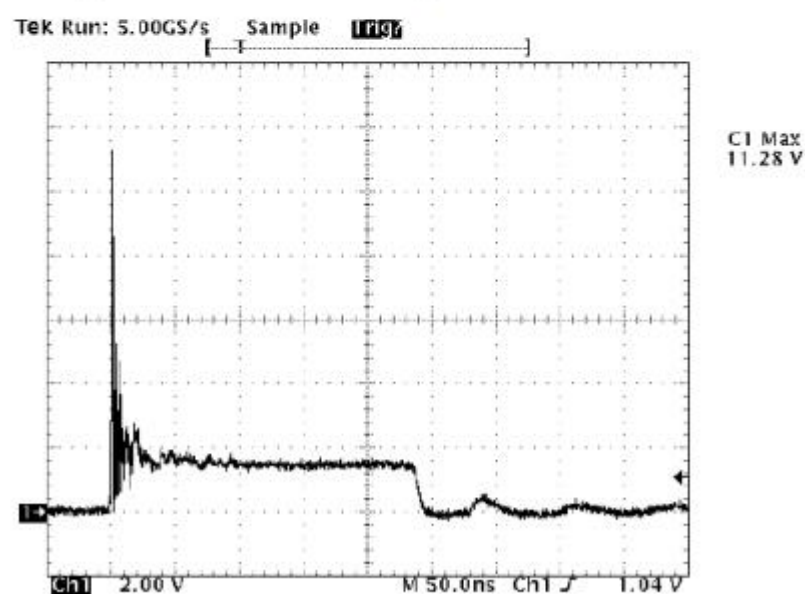
**Figure 3. Clamping Voltage vs. Peak Pulse Current**



**Figure 4. Forward Voltage vs. Forward Current**



**Figure 5. Junction Capacitance vs. Reverse Voltage**

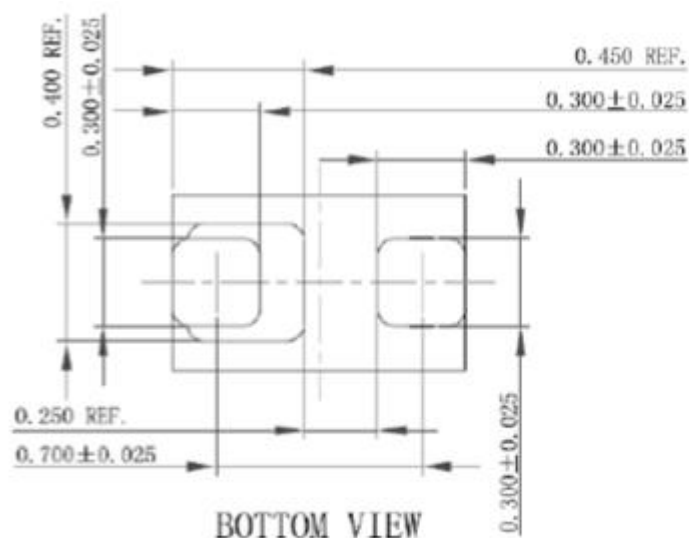


**Fig 6. ESD Clamping (8kV Contact per IEC 61000-4-2)**

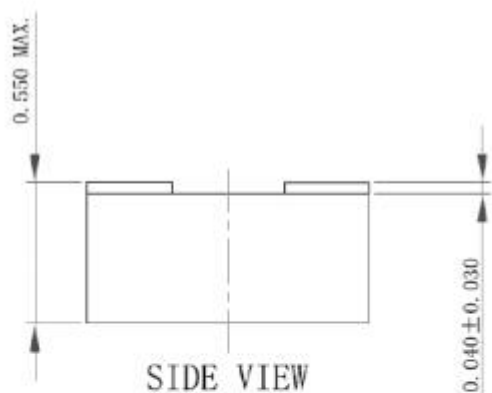
**WBFBP-02L MECHANICAL DATA**



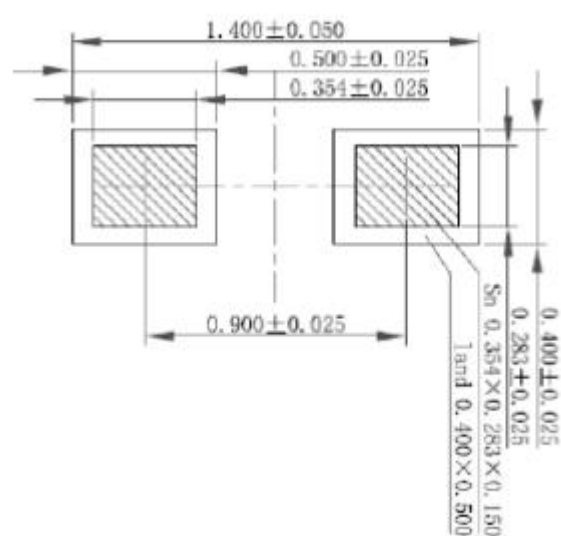
TOP VIEW



BOTTOM VIEW



SIDE VIEW



LAND PATTERN RECOMMENDATION

Website: <http://www.jksemi.com> For additional information, please  
contact your local Sales Representative.

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