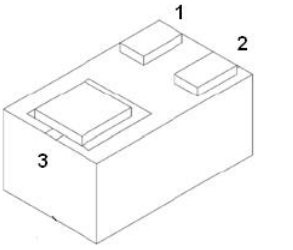
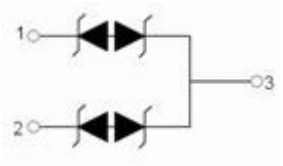
WBFBP-03E Plastic-Encapsulate Diodes

ESDBL5V0F2 ESD PROTECTION DIODE

WBFBP-03E





DESCRIPTION

The ESDBL5V0F2 is a transient voltage suppressors (TVS) which provide a very high level protection for sensitive electronic components that may be subjected to electrostatic discharge (ESD). It is designed to replace multiplayer varistors (MLV) in consumer equipments applications such as mobile phone, notebook, PAD, STB, LCD TV etc.

FEATURES

- Low reverse stand−off voltage: 5 V
- Low leakage current
- Ultra-low clamping voltage
- IEC 61000−4−2 level 4 ESD protection
- This is Pb−free device

APPLICATIONS

- Mobile phone
- PAD
- Notebook
- STB
- LCD TV
- Digital camera
- Other electronics equipments Communication systems

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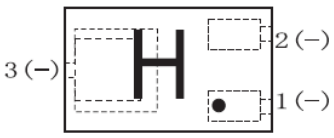


TOP VIEW

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Parameter		Symbol	Limit	Unit
Electrostatic Discharge Voltage(IEC61000−4−2) (Note 1)	Air Model	V_{ESD}	±30	kV
	Contact Model		±30	
	Per Human Body Model		16	
	Machine Model		400	V
Peak Pulse Power (8/20μs Waveform) (Note 2)		P_{PP}	62.5	W
Peak Pulse Current (8/20μs Waveform) (Note 2)		I_{PP}	5	A
Lead Solder Temperature − Maximum (10 Second Duration)		T_L	260	℃
Junction Temperature		T_j	150	℃
Storage Temperature Range		T_{stg}	-55 ~ +150	℃

Note:

(1).Device stressed with ten non-repetitive ESD pulses.

(2).Non-repetitive current pulse 8/20μs exponential decay waveform according to IEC61000-4-5.

Stresses exceeding maximum ratings may damage the device. Maximum ratings are stress ratings only. Functional operation above the recommended. Operating conditions is not implied. Extended exposure to stresses above the recommended operating conditions may affect device reliability.

ELECTRICAL PARAMETER

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current

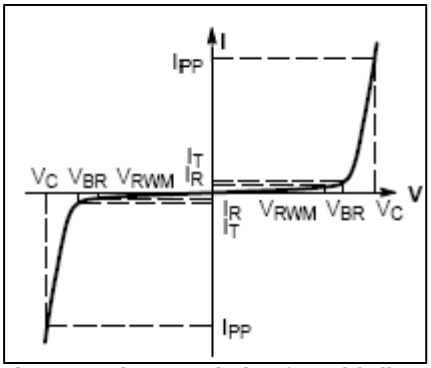


Fig 1. V-I characteristics for a bi-directional TVS

ELECTRICAL CHARACTERISTICS(T_a=25℃ unless otherwise specified)

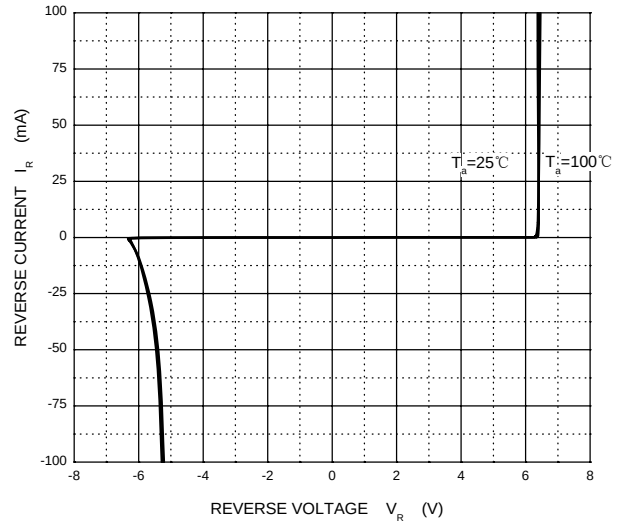
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse stand off voltage	V_{RWM} (1)				5	V
Breakdown voltage	$V_{(BR)}$	I_T=1mA	5.8		8	V
Reverse current	I_R	V_{RWM}=5V			0.1	μA
Clamping voltage	V_C (2)	I_{PP}=5A			12.5	V
Total capacitance	C_{tot}	V_R=0V,f=1MHz		10		pF

(1).Other voltages available upon request.

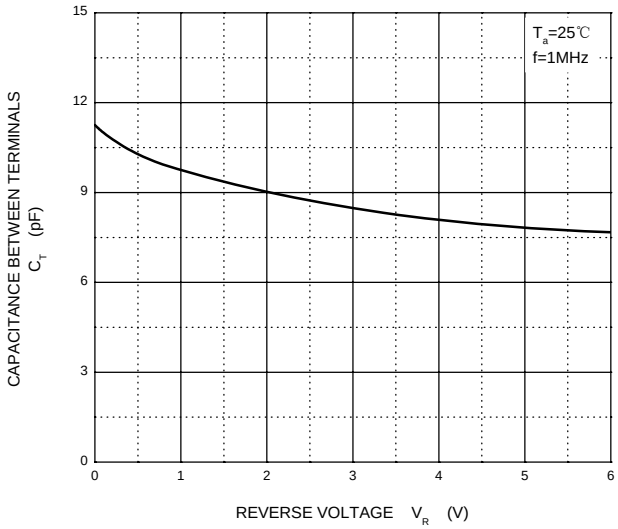
(2).Non-repetitive current pulse 8/20μs exponential decay waveform according to IEC61000-4-5.

ESDBL5V0F2

Reverse Characteristics



Capacitance Characteristics



Power Derating Curve