

Bidirectional TVS Diodes

DESCRIPTION

The BVxxC Series are ultra low capacitance transient voltage suppressor arrays, designed to protect applications such as portable electronics and SMART phones. This series is available in both unidirectional and bidirectional configurations and is rated at 350 Watts for an 8/20us wave shape.

The BVxxC Series meets IEC 61000-4-2(ESD) and IEC 6100-4-4(EFT) requirements. At higher operating frequencies or faster edge rates, insertion loss and signal integrity are a major concern. This series offers a ultra low capacitance and low leakage current in a miniature SOD-323 package.

FEATURES

- ♦IEC61000-4-2(ESD) $\pm 15\text{kV}$ (air), $\pm 8\text{kV}$ (contact)
- ♦IEC61000-4-4(EFT) 40A(5/50ns)
- ♦IEC61000-4-5(Lightning) 12A(8/20us)
- ♦Protects one I/O line(unidirectional)
- ♦Low clamping voltage
- ♦Working voltages: 3.3V, 5V, 8V, 12V, 15V, 24V
- ♦Low leakage current
- ♦Response Time is $<1\text{ns}$

MECHANICAL DATA

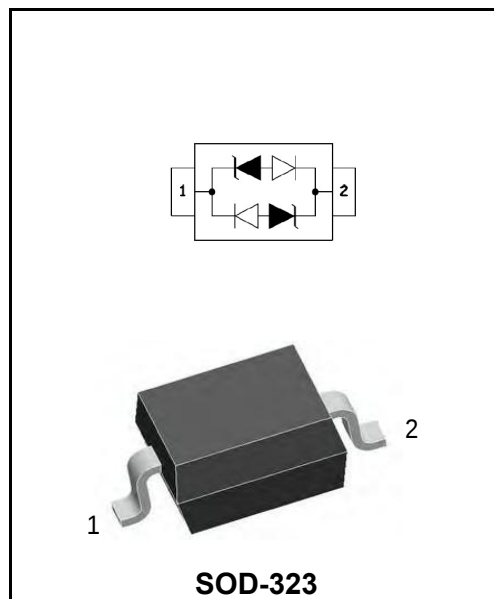
- ♦SOD-323 Package
- ♦Flammability Rating: UL 94V-0
- ♦High temperature soldering guaranteed: $260^{\circ}\text{C}/10\text{s}$

APPLICATIONS

- ♦Cell Phone Handsets and Accessories
- ♦Microprocessor based equipment
- ♦Personal Digital Assistants(PDA's)
- ♦Notebooks, Desktops, and Servers
- ♦Portable Instrumentation
- ♦Networking and Telecom
- ♦USB Interface
- ♦Peripherals

ABSOLUTE MAXIMUM RATING

Parameters	Symbol	Value	Unit
ESD per IEC61000-4-2(Air)	V_{ESD}	± 15	kV
ESD per IEC61000-4-2(Contact)		± 8	
Peak Pulse Power (8/20us)	P_{PP}	350	W
Operating temperature	T_{OPT}	-55-+150	$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-55-+150	$^{\circ}\text{C}$
Lead Soldering temperature	T_{L}	260(10 sec.)	$^{\circ}\text{C}$

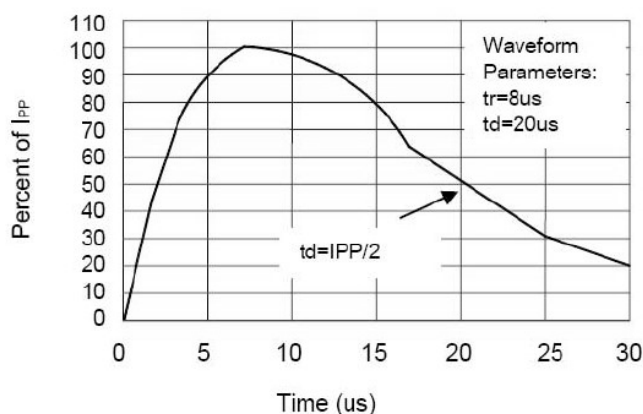


Electrical Characteristics

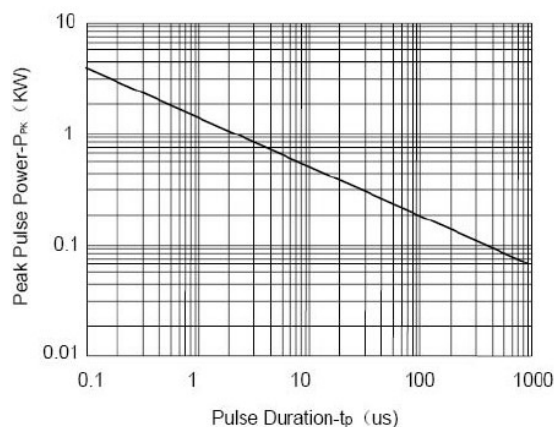
Ratings at 25°C ambient temperature unless otherwise specified

PART NUMBER	DEVICE MARKING	VRWM (V) (max.)	VB (V) (min.)	IT (mA)	Vc@1A (V) (max.)	Vc (V) (max.) (@A)		IR (uA) (max.)	CT (pF) (max.)
BV03C	CC	3.3	4	1	7.5	13.9	8	20	0.8
BV05C	AC	5	6	1	9.8	18.3	8	5	0.8
BV08C	BC	8	8.5	1	13.4	18.5	8	2	0.8
BV12C	DC	12	13.3	1	19	28.6	6	1	0.8
BV15C	EC	15	16.7	1	24	31.8	5	1	0.8
BV18C	FC	18	20	1	35	45.0	5	1	0.8
BV20C	GC	20	22	1	38	45.0	4	1	0.8
BV24C	HC	24	26.7	1	43	56	3	1	0.8

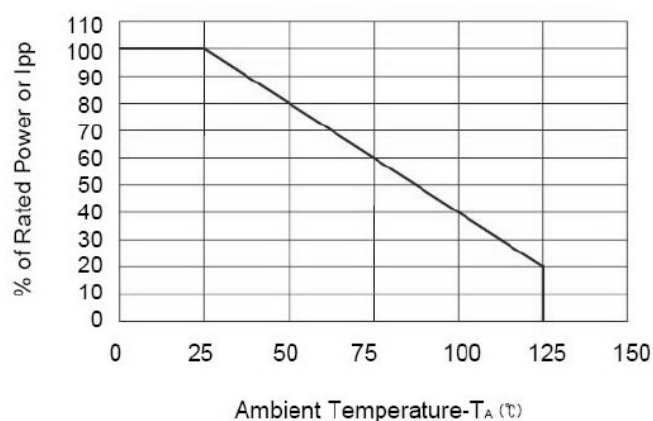
ELECTRICAL CHARACTERISTICS CURVE



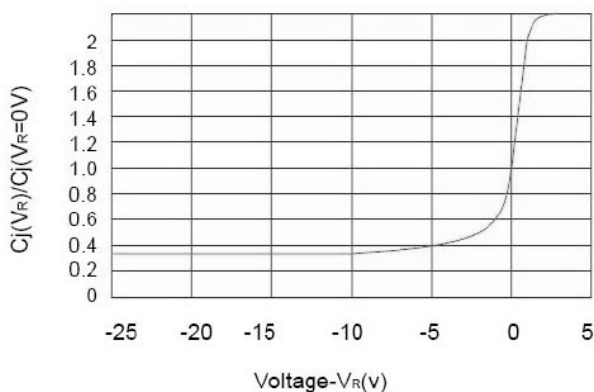
Pulse Waveform



Non-Repetitive Peak Pulse Power vs. Pulse Time



Power Derating Curve



Junction Capacitance vs. Reverse Voltage

Ordering information

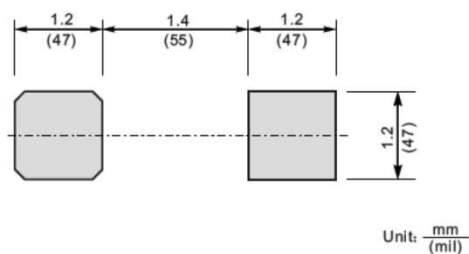
Package	Packing Description	Packing Quantity
SOD-323	Tape/Reel, 7" reel	3000PCS/Reel 120000PCS/Carton

Package Dimensions

SOD-323

Dim.	Millimeter(mm)		mil	
	Min.	Max.	Min.	Max.
A	0.8	1.1	32	43
C	0.08	0.15	3.1	5.9
D	1.2	1.4	47	55
E	1.4	1.8	63	70
E1	2.55	2.75	100	108
b	0.25	0.4	9.8	16
L1	0.2	0.45	7.9	16
A1	-	0.2	-	8
∠	9°			

The recommended mounting pad size



Disclaimer

The information presented in this document is for reference only. Guangdong Youfeng Microelectronics Co.,Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise. The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), YFW or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale. This publication supersedes & replaces all information previously supplied. For additional information, please visit our website <https://www.yfwdiode.com>, or consult YFW sales office for further assistance.