

Product data sheet

www.msksemi.com

Downloaded From Oneyac.com





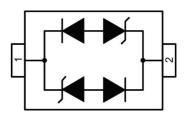
Features

- ♦ 350W peak pulse power (8/20µs)
- Ultra low capacitance : 1.0pF typical
- Ultra low leakage: nA level
- ◆ Low Operating: 3.3V,5V,8V,12V,15V,24V
- Low clamping voltage
- Protects one power line or data line
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 Air discharge: ±30kV
 Contact discharge: ±30kV
 - IEC61000-4-4 (EFT) 40A (5/50ns)
- RoHS Compliant

Mechanical Characteristics

- Package: SOD-323
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below
- Marking Information: See Below





Circuit and Pin Schematic

SOD-323

Applications

- USB Ports
- Smart Phones
- Wireless Systems
- Ethernet 10/100/1000 Base T

Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit	
ESD per IEC 61000-4-2 (Air)	VESD	±30	kV	
ESD per IEC 61000-4-2 (Contact)	VESD	±30	ΝV	
Operating Temperature Range	TJ	−40 to +85	°C	
Storage Temperature Range	Tstg	−55 to +150	°C	





Electrical Characteristics (T $_{\Delta}$ =25°C unless otherwise specified)

BV03C-MS							
Parameter	Symbol	Min	Тур	Max	Unit	Test Condition	
Reverse Working Voltage	VRWM			3.3	V		
Breakdown Voltage	VBR	4			V	IT = 1mA	
Reverse Leakage Current	I _R		1	100	nA	VRWM = 3.3V	
Clamping Voltage	Vc			7	V	IPP = 1A (8 x 20µs pulse)	
Clamping Voltage	Vc			16	V	IPP = 20A (8 x 20µs pulse)	
Peak Pulse Current	IPP			20	А	tp=8/20µs	
Junction Capacitance	Сл		1		pF	VR = 0V, f = 1MHz	

BV05C-MS

			1	1		
Parameter	Symbol	Min	Тур	Мах	Unit	Test Condition
Reverse Working Voltage	VRWM			5	V	
Breakdown Voltage	VBR	6			V	IT = 1mA
Reverse Leakage Current	IR		1	100	nA	VRWM = 5V
Clamping Voltage	Vc			10	V	IPP = 1A (8 x 20µs pulse)
Clamping Voltage	Vc			18	V	IPP = 18A (8 x 20µs pulse)
Peak Pulse Current	IPP			18	А	tp=8/20µs
Junction Capacitance	Сл		1		pF	VR = 0V, f = 1MHz



BV08C-MS								
Parameter	Symbol	Min	Тур	Max	Unit	Test Condition		
Reverse Working Voltage	VRWM			8	V			
Breakdown Voltage	VBR	8.5			V	IT = 1mA		
Reverse Leakage Current	I _R		1	100	nA	VRWM = 8V		
Clamping Voltage	Vc			14	V	IPP = 1A (8 x 20µs pulse)		
Clamping Voltage	Vc			19	V	IPP = 13A (8 x 20µs pulse)		
Peak Pulse Current	IPP			13	А	tp=8/20µs		
Junction Capacitance	CJ		1		pF	VR = 0V, f = 1MHz		

BV12C-MS

						1
Parameter	Symbol	Min	Тур	Max	Unit	Test Condition
Reverse Working Voltage	VRWM			12	V	
Breakdown Voltage	VBR	13.3			V	IT = 1mA
Reverse Leakage Current	IR		1	100	nA	VRWM = 12V
Clamping Voltage	Vc			19	V	IPP = 1A (8 x 20µs pulse)
Clamping Voltage	Vc			25	V	IPP = 10A (8 x 20µs pulse)
Peak Pulse Current	IPP			10	A	tp=8/20µs
Junction Capacitance	CJ		1		pF	VR = 0V, f = 1MHz

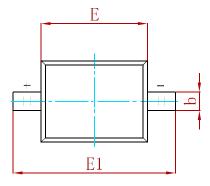


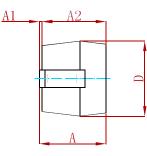
BV15C-MS							
Parameter	Symbol	Min	Тур	Max	Unit	Test Condition	
Reverse Working Voltage	VRWM			15	V		
Breakdown Voltage	VBR	16.7			V	IT = 1mA	
Reverse Leakage Current	I _R		1	100	nA	VRWM = 15V	
Clamping Voltage	Vc			20	V	IPP = 1A (8 x 20µs pulse)	
Clamping Voltage	Vc			31	V	IPP = 8A (8 x 20µs pulse)	
Peak Pulse Current	IPP			8	A	tp=8/20µs	
Junction Capacitance	Сл		1		pF	VR = 0V, f = 1MHz	

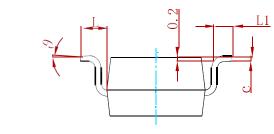
BV24C-MS							
Parameter	Symbol	Min	Тур	Max	Unit	Test Condition	
Reverse Working Voltage	VRWM			24	V		
Breakdown Voltage	VBR	26.7			V	IT = 1mA	
Reverse Leakage Current	I _R		1	100	nA	VRWM = 24V	
Clamping Voltage	Vc			40	V	IPP = 1A (8 x 20µs pulse)	
Clamping Voltage	Vc			71	V	IPP = 3.5A (8 x 20µs pulse)	
Peak Pulse Current	IPP			3.5	A	tp=8/20µs	
Junction Capacitance	CJ		1		pF	VR = 0V, f = 1MHz	



PACKAGE MECHANICAL DATA

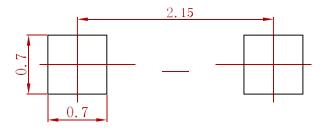






Symbol	Dimensions	In Millimeters	Dimensions In Inches			
Symbol	Min.	Max.	Min.	Max.		
A		1.000		0.039		
A 1	0.000	0.100	0.000	0.004		
A2	0.800	0.900	0.031	0.035		
b	0.250	0.350	0.010	0.014		
с	0.080	0.150	0.003	0.006		
D	1.200	1.400	0.047	0.055		
E	1.600	1.800	0.063	0.071		
E1	2.550	2.750	0.100	0.108		
L	0.475	0.475 REF.		REF.		
L1	0.250	0.400	0.010	0.016		
θ	0°	8°	0°	8°		

Suggested Pad Layout



Note:

1.Controlling dimension:in millimeters.

2.General tolerance:± 0.05mm.

3. The pad layout is for reference purposes only.

REEL SPECIFICATION

P/N	PKG	QTY
BVXXC-MS	SOD-323	3000





Attention

■ Any and all MSKSEMI Semiconductor products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your MSKSEMI Semiconductor representative nearest you before using any MSKSEMI Semiconductor products described or contained herein in such applications.

MSKSEMI Semiconductor assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any andall MSKSEMI Semiconductor products described orcontained herein.

■ Specifications of any and all MSKSEMI Semiconductor products described or contained herein stipulate the performance, characteristics, and functions of the described products in the independent state, and are not guarantees of the performance, characteristics, and functions of the described products as mounted in the customer's products or equipment. To verify symptoms and states that cannot be evaluated in an independent device, the customer should always evaluate and test devices mounted in the customer's products or equipment.

■ MSKSEMI Semiconductor. strives to supply high-quality high-reliability products. However, any and all semiconductor products fail with someprobability. It is possible that these probabilistic failures could give rise to accidents or events that could endanger human lives, that could give rise to smoke or fire, or that could cause damage to other property. When designing equipment, adopt safety measures so that these kinds of accidents or events cannot occur. Such measures include but are not limited to protective circuits anderror prevention circuits for safedesign, redundant design, and structural design.

■ In the event that any or all MSKSEMI Semiconductor products (including technical data, services) described or contained herein are controlled under any of applicable local export control laws and regulations, such products must not be exported without obtaining the export license from theauthorities concerned in accordance with the above law.

■ No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or any information storage or retrieval system, or otherwise, without the prior written permission of MSKSEMI Semiconductor.

■ Information (including circuit diagrams and circuit parameters) herein is for example only ; it is not guaranteed for volume production. MSKSEMI Semiconductor believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.

 Any and all information described or contained herein are subject to change without notice due to product/technology improvement, etc. Whendesigning equipment, refer to the "Delivery Specification" for the MSKSEMI Semiconductor productthat you intend to use. 单击下面可查看定价,库存,交付和生命周期等信息

>>MSKSEMI (美森科)