Technical Data
Data Sheet N0529, Rev. C

MB05S THRU MB10S

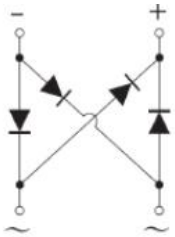
Single-Phase 0.8A Surface Mount Glass Passivated Bridge Rectifier

MBS

Features

- Glass passivated die construction
- Low leakage
- Ideal for printed circuit board
- Surge overload rating-30A peak
- Designed for Surface Mount Application
- Plastic Material-UL Flammability 94V-0
- This is a Pb − Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



Mechanical Data

- Case: Reliable low cost construction utilizing molded plastic technique
- Terminals: Plated Leads Solderable per MIL STD-202,Method208
- Polarity: As Marked on Case
- Mounting Position: Any

Maximum Ratings @T_A=25°C unless otherwise specified

Type Number	Symbol	MB05S	MB1S	MB2S	MB4S	MB6S	MB8S	MB10S	Units
Peak Repetitive Reverse Voltage DC Blocking Voltage	V_{RRM} V_{DC}	50	100	200	400	600	800	1000	V
RMS Voltage	V_{RMS}	35	70	140	280	420	480	700	V
Average Rectified Output Current (Note1)@T_A=40℃ (Note 2)@T_A=40℃	I_O	0.5 0.8							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30							A

MB05S
THRU
MB10S

Technical Data
Data Sheet N0529, Rev. C

Electrical Characteristics: @T_A=25°C unless otherwise specified

Type Number	Symbol	MB05S	MB1S	MB2S	MB4S	MB6S	MB8S	MB10S	Units
Forward Voltage per element @I_F =0.8A	V_{FM}	1.1							V
Peak Reverse Current @T_A = 25°C At Rated DC Blocking Voltage @T_A = 125°C	I_R	5 500							μA
Typical Junction Capacitance (Note 3)	Cj	13							pF

* Pulse width < 300 μs, duty cycle < 2%

Thermal-Mechanical Specifications: @T_A=25°C unless otherwise specified

Type Number	Symbol	MB05S	MB1S	MB2S	MB4S	MB6S	MB8S	MB10S	Units
Typical Thermal Resistance per leg	$R_{\theta JA}$	70							°C/W
	$R_{\theta JL}$	20							
Operating Junction and Storage Temperature Range	T_J ,T_{STG}	-55+150							°C

Note: 1. Mounted on glass epoxy PC board with 1.3mm² solder pad.
2. Mounted on aluminum substrate PC board with 1.3mm² solder pad.
. 3. Measured at 1.0 MHZ and applied reverse voltage of 4.0 VDC

Ratings and Characteristics Curves

Fig. 1 Output Current Derating Curve

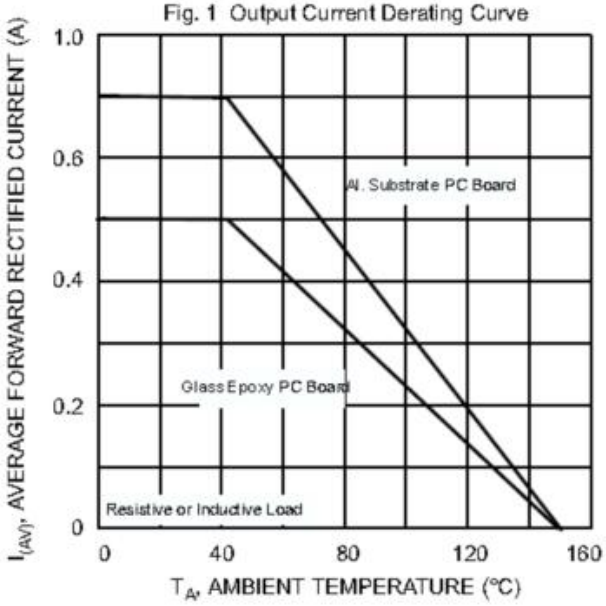
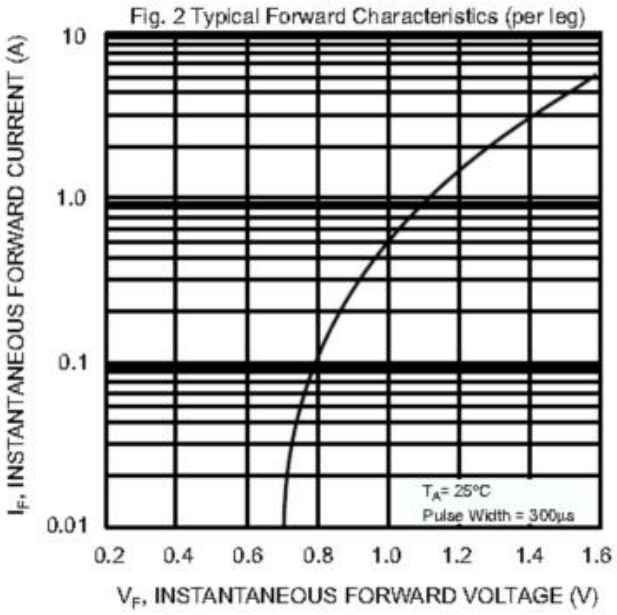


Fig. 2 Typical Forward Characteristics (per leg)



Technical Data
Data Sheet N0529, Rev. C

RoHS

Fig. 3 Maximum Peak Forward Surge Current (per leg)

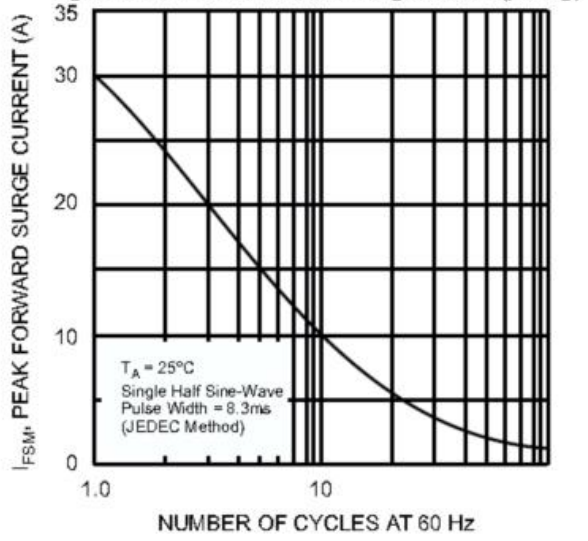


Fig. 4 Typical Junction Capacitance

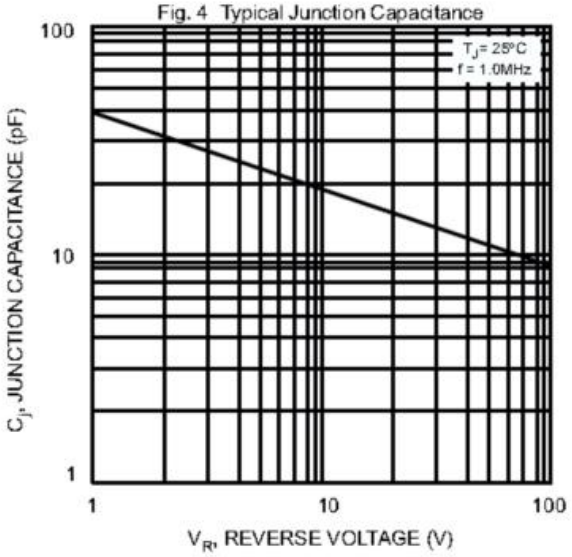
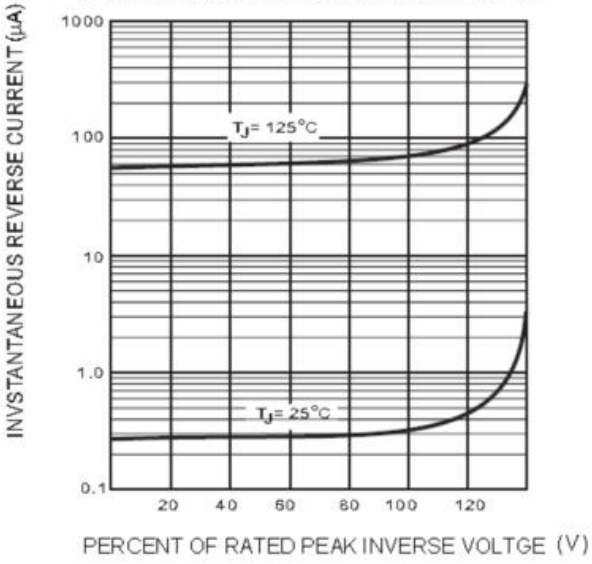


FIG.5 TYPICAL REVERSE CHRACTERISTICS



Ordering Information

Device	Package	Plating	Shipping
MB05S THRU MB10S	MBS (Pb-Free)	Pure Sn	3000pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram

Where XXXXX is YYWWL

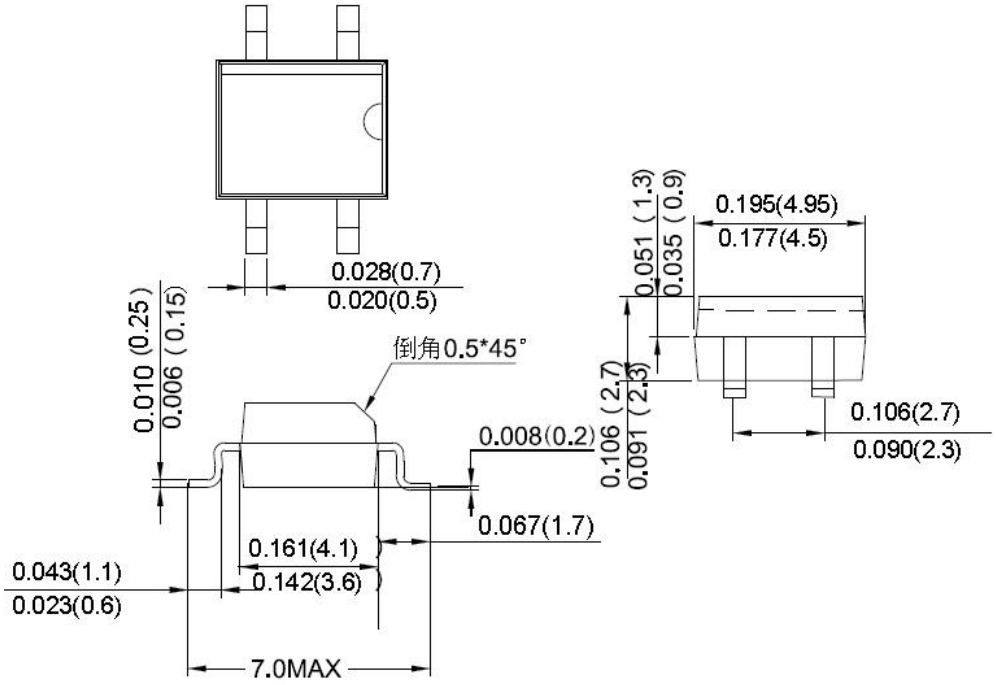
MB05S = Type Number
YY = Year
WW = Week
L = Lot Number

Cautions: Molding resin
Epoxy resin UL:94V-0

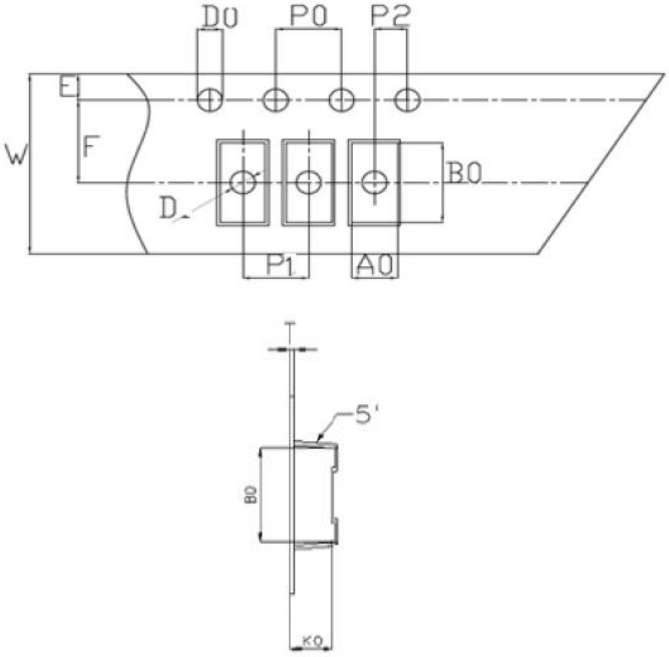
Technical Data
Data Sheet N0529, Rev. C

RoHS

Mechanical Dimensions MBS(Inches/Millimeters)



Carrier Tape Specification MBS



SYMBOL	Millimeters	
	Min.	Max.
A0	4.92	5.12
B0	7.12	7.32
D0	1.50	1.60
D1	1.40	1.60
P0	3.90	4.10
P1	7.90	8.10
P2	1.95	2.05
E	1.65	1.85
K0	2.78	2.98
F	5.45	5.55
W	11.90	12.10
T	0.24	0.30
10P0	39.80	40.20
抗拉拉力	≥3KG	

Technical Data
Data Sheet N0529, Rev. C

DISCLAIMER:
1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the SMC Diode Solutions sales department for the latest version of the datasheet(s).
2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment , and safety equipment) , safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement .
3- In no event shall SMC Diode Solutions be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). SMC Diode Solution assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.
4- In no event shall SMC Diode Solutions be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.
5- No license is granted by the datasheet(s) under any patents or other rights of any third party or SMC Diode Solutions.
6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of SMC Diode Solutions.
7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations.