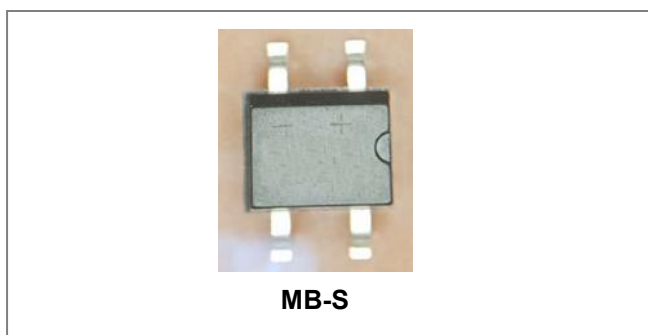




THE DATASHEET OF KMB220STR



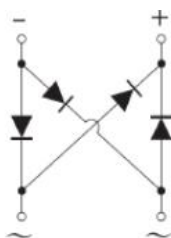
KMB22S THRU KMB225S SINGLE PHASE 2.0 AMP SURFACE MOUNT SCHOTTKY BRIDGE RECTIFIER



Features

- Schottky Barrier Chip
- Low Power Loss, High Efficiency
- Ideally Suited for Automatic Assembly
- Surge Overload Rating to 50A Peak
- Plastic Case Material has UL Flammability Classification 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: MB-S, Molded plastic
- Terminals: Plated leads solderable per MIL-STD-202, Method 208
- Polarity: as marked on case
- Mounting Position: Any
- Lead Free: For RoHS / Lead Free Version

Maximum Ratings:

Type Number	Symbol	KMB 22S	KMB 23S	KMB 24S	KMB 245S	KMB 25S	KMB 26S	KMB 28S	KMB 210S	KMB 215S	KMB 220S	KMB 225S	Unit
Peak Repetitive Reverse Voltage DC Blocking Voltage	V_{RRM} V_{DC}	20	30	40	45	50	60	80	100	150	200	250	V
RMS Voltage	V_{RMS}	14	21	28	31	35	42	56	70	105	140	175	V
Average Rectified Output Current (Note1)@ $T_C=100^{\circ}C$	I_o	2.0											A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	50											A
I^2t Rating for fusing ($t < 8.3ms$)	I^2t	10.375											A ² s

Note: KMB225S not recommend to new design.

- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - sales@smc-diodes.com •

Electrical Characteristics:

Type Number	Symbol	KMB 22S	KMB 23S	KMB 24S	KMB 245S	KMB 25S	KMB 26S	KMB 28S	KMB 210S	KMB 215S	KMB 220S	KMB 225S	Unit	
Forward Voltage (per element) @ $I_F = 2A$, $T_A = 25^\circ C$	V_F	0.55			0.70		0.85		0.90		0.92		V	
Peak Reverse Current @ $T_A = 25^\circ C$ At Rated DC Blocking Voltage @ $T_A = 100^\circ C$	I_{RM}	0.1						0.05						mA
		10						5						
Typical Junction Capacitance (per leg) (Note 2)	C_J	28											pF	

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

Thermal-Mechanical Specifications:

Type Number	Symbol	KMB 22S	KMB 23S	KMB 24S	KMB 245S	KMB 25S	KMB 26S	KMB 28S	KMB 210S	KMB 215S	KMB 220S	KMB 225S	Unit
Typical Thermal Resistance (per leg) (Note 3)	$R_{\theta JL}$	16											$^\circ C/W$
Operating junction temperature range	T_J	-55 to +150											$^\circ C$
Storage Temperature Range	T_{STG}	-55 to +150											$^\circ C$

Note: 1. Mounted on glass epoxy PC board with 1.3mm² solder pad.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.
3. Thermal REsistance From Junction to Lead.

Ratings and Characteristics Curves

FIG. 1- FORWARD CURRENT DERATING CURVE

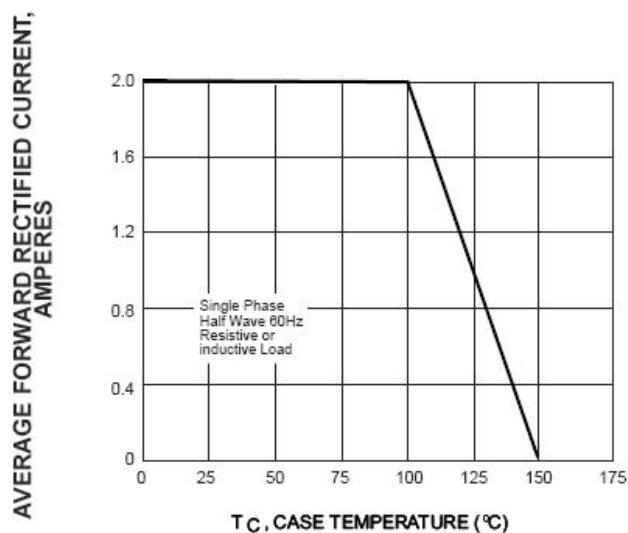
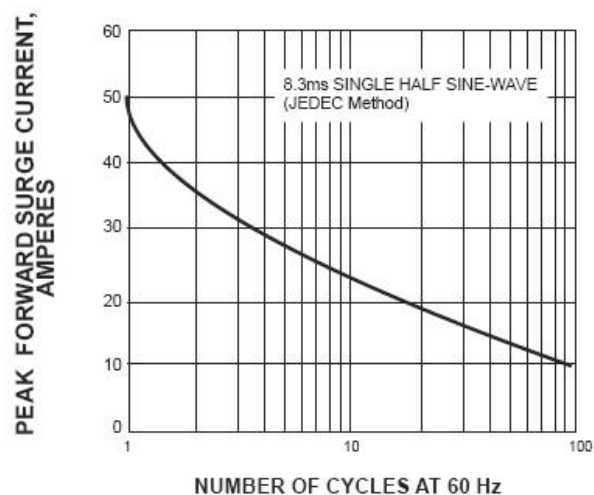


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - sales@smc-diodes.com •

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

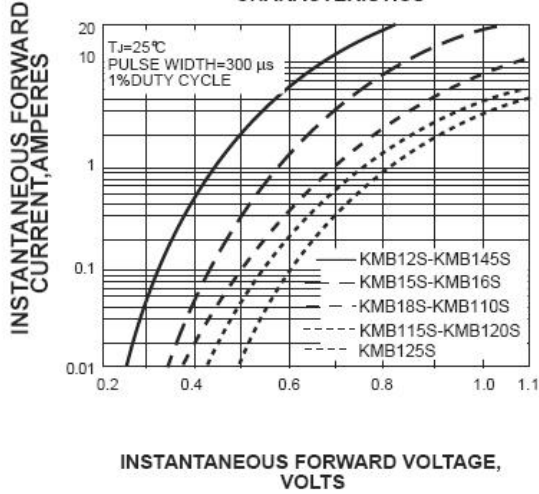
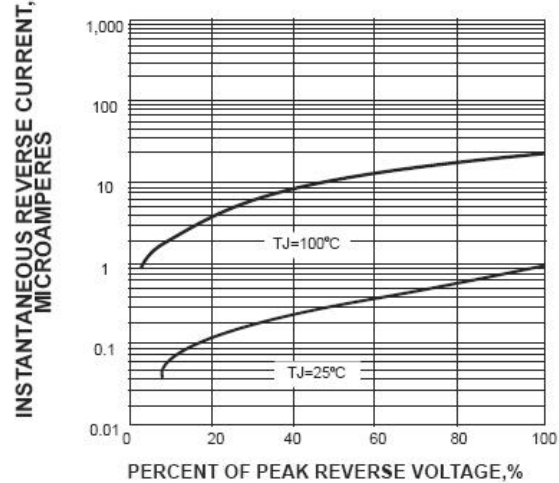


FIG. 4-TYPICAL REVERSE CHARACTERISTICS



INSTANTANEOUS FORWARD VOLTAGE, VOLTS

FIG.6 MOUNTING PAD LAYOUT(mm/Inches)

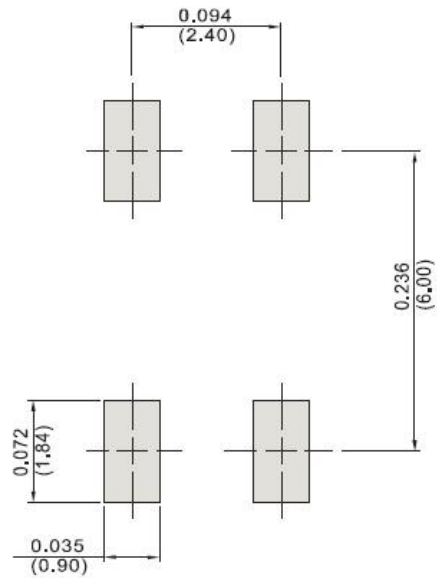
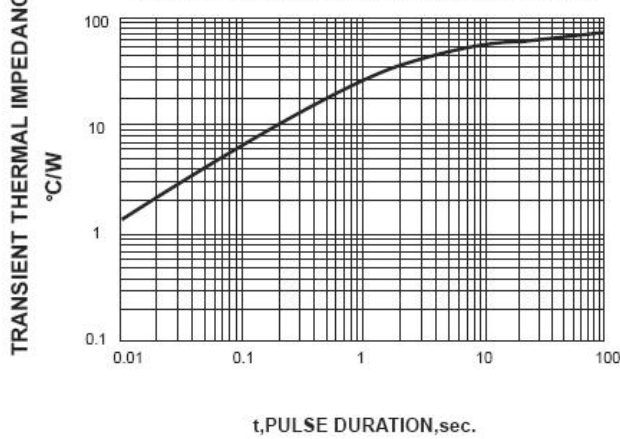


FIG. 5-TYPICAL TRANSIENT THERMAL IMPEDANCE

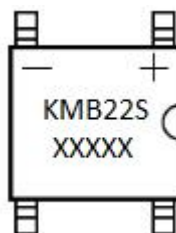


Ordering Information

Device	Package	Plating	Shipping
KMB22S THRU KMB225S	MB-S (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

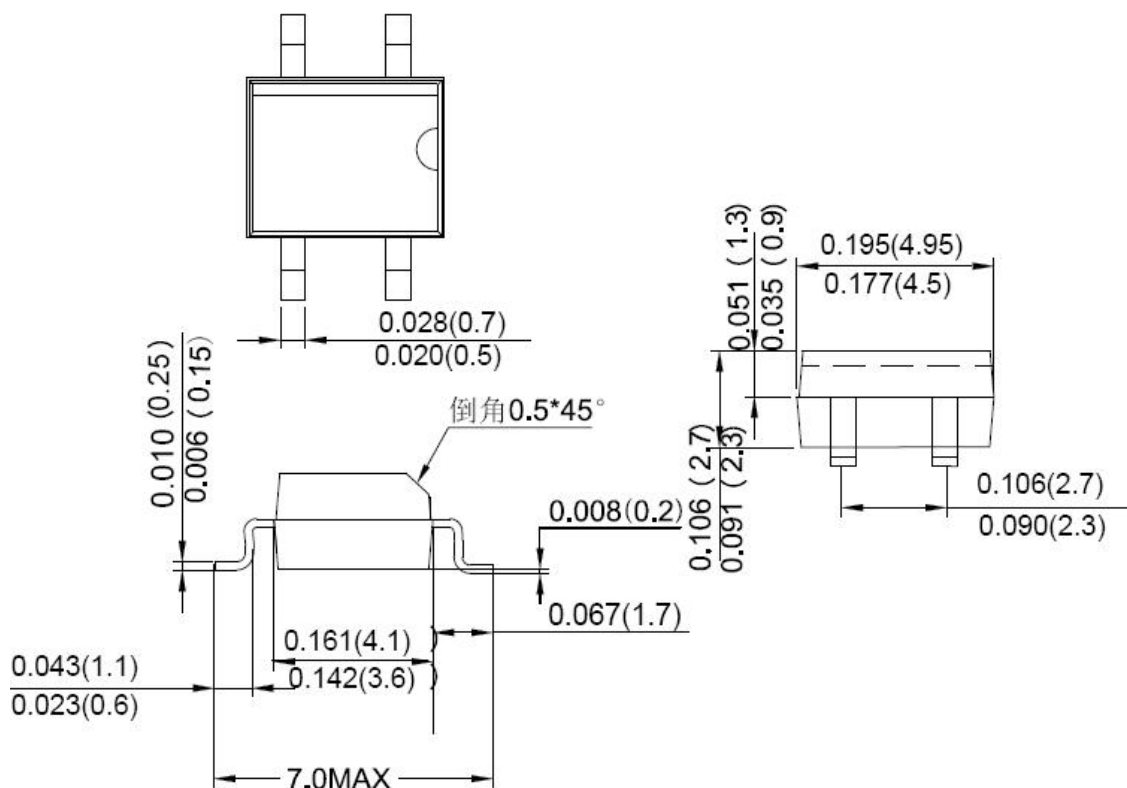


Where XXXXX is YYWWL

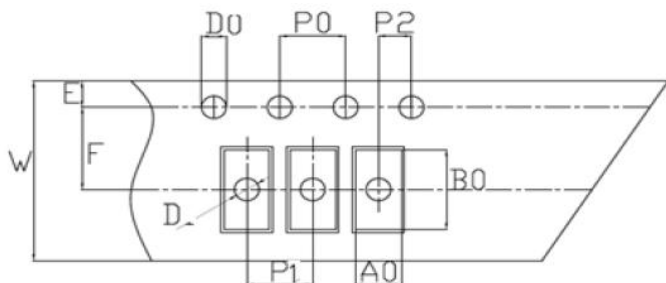
KMB22S = Type Number
YY = Year
WW = Week
L = Lot Number

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

Mechanical Dimensions MB-S(Inches/Millimeters)



Carrier Tape Specification MB-S





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	

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.

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

-  [View KMB220STR on WIN SOURCE](#)
-  [SMC Diode Solutions](#) Information

Optimize Your Supply Chain with WIN SOURCE Solutions

-  Global Sourcing Solution
-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management