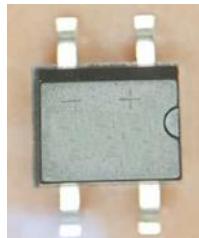


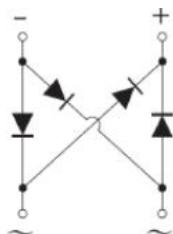
KMB12S THRU KMB120S SINGLE PHASE 1.0 AMP SURFACE MOUNT SCHOTTKY BRIDGE RECTIFIER



Features

- Schottky Brier 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
- Weight: 0.115 grams

Maximum Ratings@ $T_A=25^\circ\text{C}$ unless otherwise specified

Type Number	Symbol	KMB 12S	KMB 13S	KMB 14S	KMB 145S	KMB 15S	KMB 16S	KMB 18S	KMB 110S	KMB 115S	KMB 120S	Unit
Peak Repetitive Reverse Voltage DC Blocking Voltage	V_{RRM} V_{DC}	20	30	40	45	50	60	80	100	150	200	V
RMS Voltage	V_{RMS}	14	21	28	31	35	42	56	70	105	140	V
Average Rectified Output Current (Note1)@ $T_A=90^\circ\text{C}$	I_o							1.0				A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}							30				A
I^2t Rating for fusing ($t < 8.3\text{ms}$)	I^2t							5				A^2s

Electrical Characteristics:@ $T_A=25^\circ\text{C}$ unless otherwise specified

Type Number	Symbol	KMB 12S	KMB 13S	KMB 14S	KMB 145S	KMB 15S	KMB 16S	KMB 18S	KMB 110S	KMB 115S	KMB 120S	Unit
Forward Voltage (per element)* @ $I_F = 1\text{A}$, $T_A = 25^\circ\text{C}$	V_F	0.55		0.70		0.85		0.90				V
Peak Reverse Current * @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage* @ $T_A = 100^\circ\text{C}$	I_{RM}	0.1				0.05						mA
		10				5						
Typical Junction Capacitance (per leg) (Note 2)	C_J	83		68		51						pF

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

Thermal-Mechanical Specifications:

Type Number	Symbol	KMB 12S	KMB 13S	KMB 14S	KMB 145S	KMB 15S	KMB 16S	KMB 18S	KMB 110S	KMB 115S	KMB 120S	Unit
Typical Thermal Resistance (per leg) (Note 3)	$R_{\theta JA}$					75						°C/W
Operating junction temperature range	T_J					-55 to +150						°C
Storage Temperature Range	T_{STG}					-55 to +150						°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 Ambient

Ratings and Characteristics Curves

FIG. 1-FORWARD CURRENT DERATING CURVE

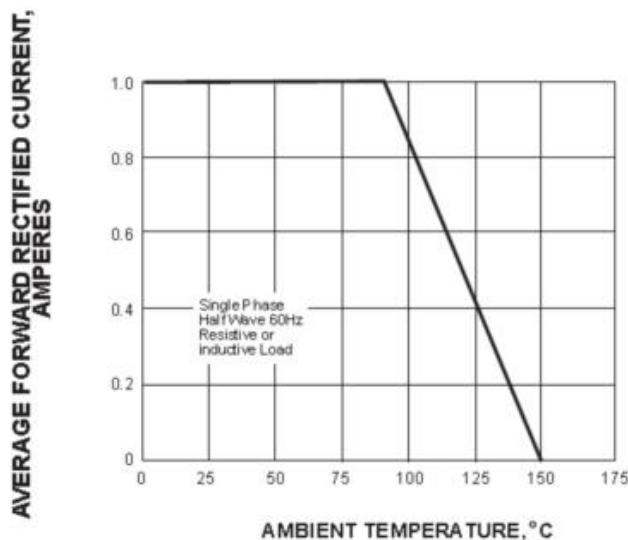
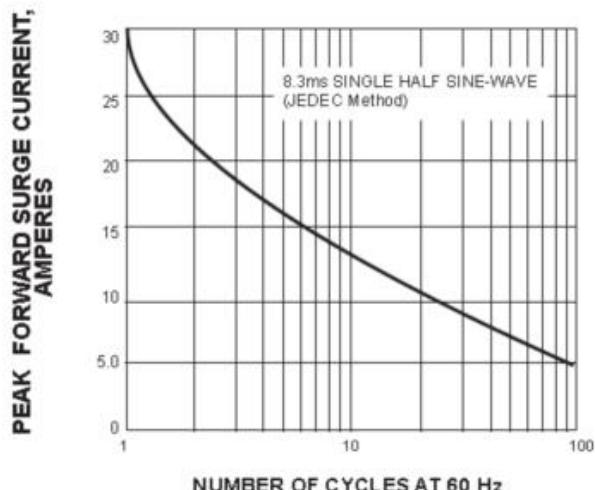
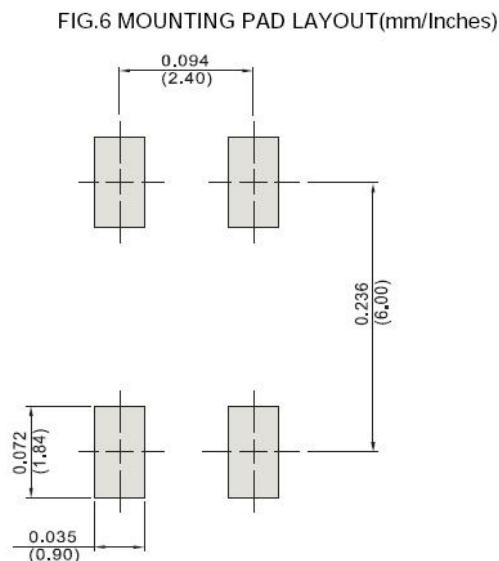
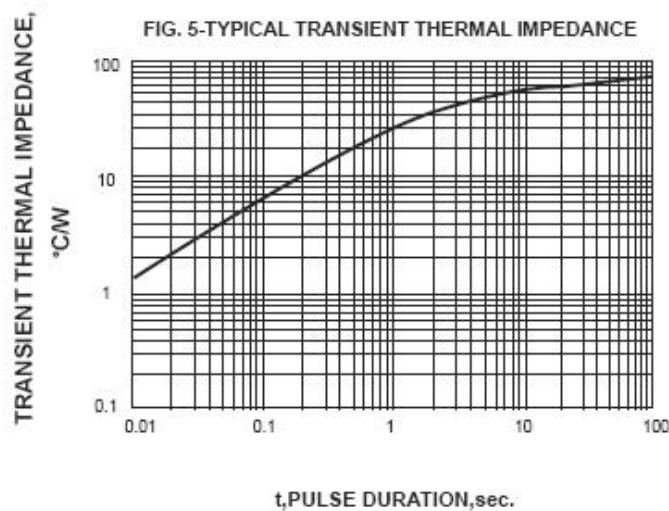
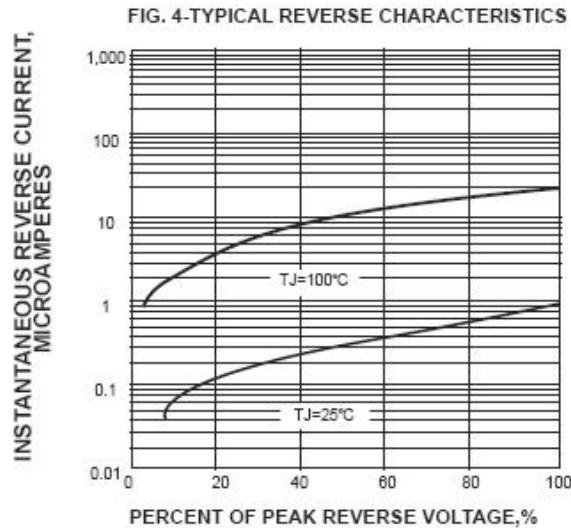
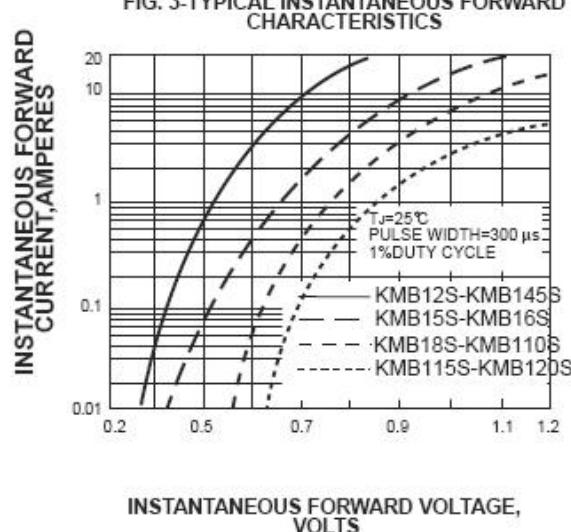


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



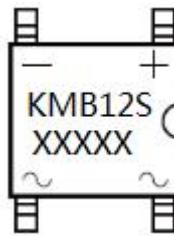


Ordering Information

Device	Package	Plating	Shipping
KMB12S THRU KMB120S	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

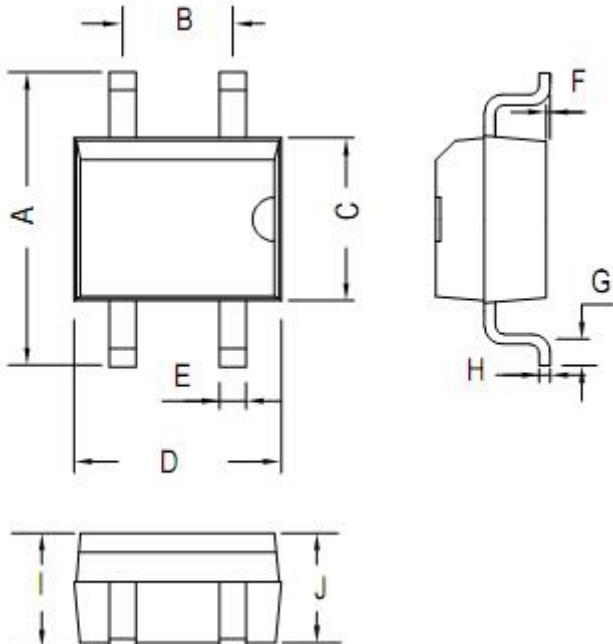


Where XXXXX is YYWWL

KMB12S = Type Number
 YY = Year
 WW = Week
 L = Lot Number

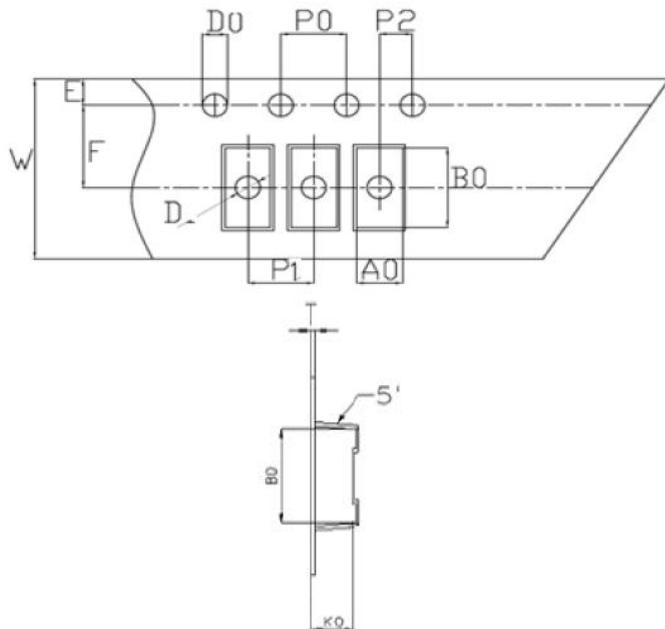
Cautions: Molding resin
 Epoxy resin UL:94V-0

Mechanical Dimensions MB-S(Inches/Millimeters)



Dimensions	Millimeters		Inches	
	Min	Max	Min	Max
A	-	7.0	-	0.276
B	2.3	2.7	0.091	0.106
C	3.6	4.1	0.142	0.161
D	4.5	4.95	0.177	0.195
E	0.5	0.7	0.020	0.028
F	-	0.2	-	0.008
G	0.3	0.75	0.012	0.043
H	0.15	0.25	0.006	0.010
I	2.3	2.8	0.091	0.110
J	2.3	2.7	0.091	0.109

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	$\geq 3\text{KG}$	

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.