

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

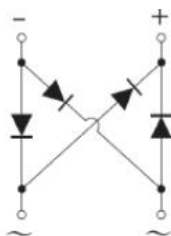


**MB-S**

### Features

- Schottky Brrier 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<sub>A</sub>=25°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 <sub>RRM</sub> V <sub>DC</sub>	20	30	40	45	50	60	80	100	150	200	V
RMS Voltage	V <sub>RMS</sub>	14	21	28	31	35	42	56	70	105	140	V
Average Rectified Output Current (Note1)@T <sub>A</sub> =90°C	I <sub>O</sub>	1.0										A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	30										A
I <sup>2</sup> t Rating for fusing (t <8.3ms)	I <sup>2</sup> t	5										A <sup>2</sup> s

**Electrical Characteristics: @T<sub>A</sub>=25°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 <sub>F</sub> =1 A, T <sub>A</sub> = 25°C	V <sub>F</sub>	0.55				0.70		0.85		0.90		V
Peak Reverse Current * @T <sub>A</sub> = 25°C At Rated DC Blocking Voltage* @T <sub>A</sub> = 100°C	I <sub>RM</sub>	0.1						0.05				mA
		10						5				
Typical Junction Capacitance (per leg) (Note 2)	C <sub>J</sub>	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 <sub>θJA</sub>	75										°C/W
Operating junction temperature range	T <sub>J</sub>	-55 to +150										°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150										°C

Note: 1. Mounted on glass epoxy PC board with 1.3mm<sup>2</sup> 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

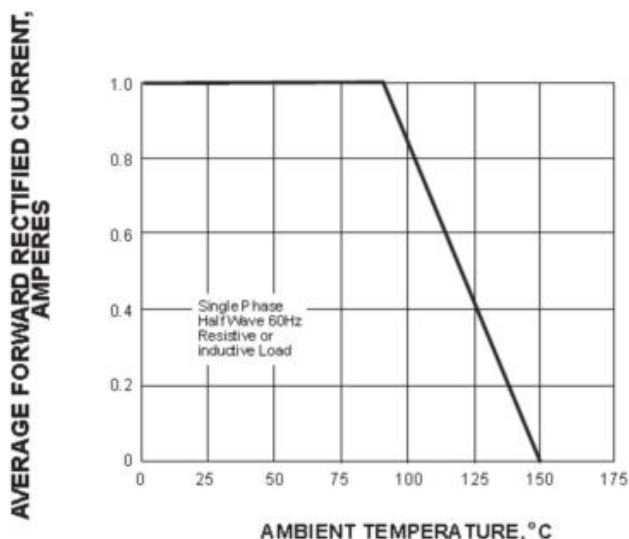
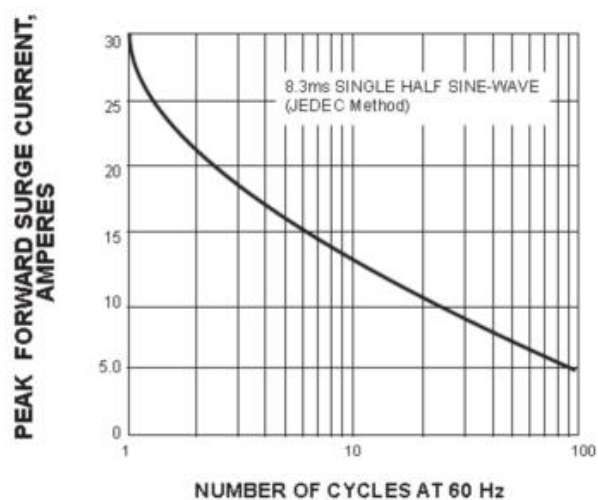
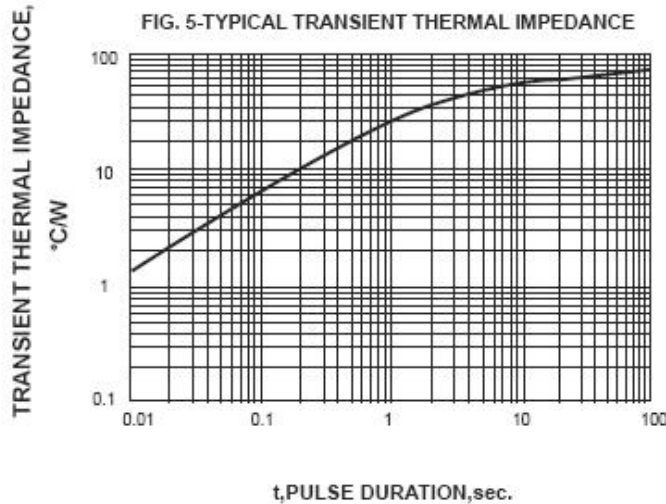
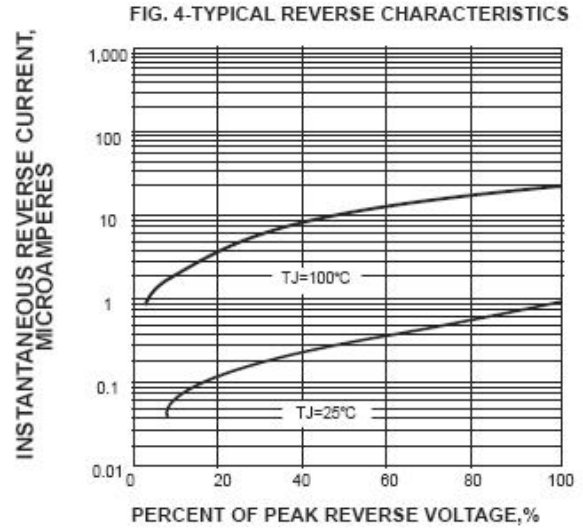
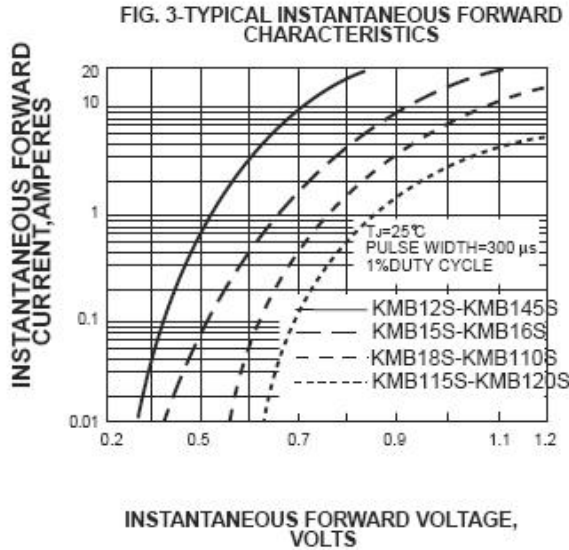
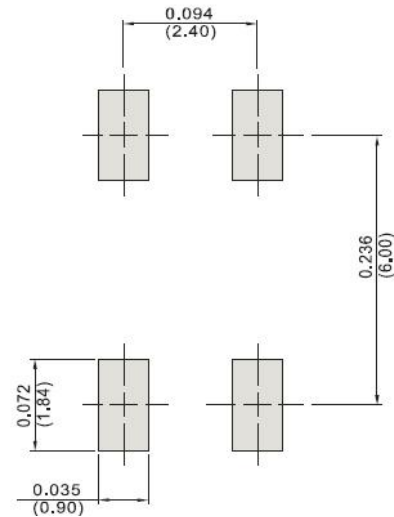


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT





**FIG. 6 MOUNTING PAD LAYOUT (mm/Inches)**

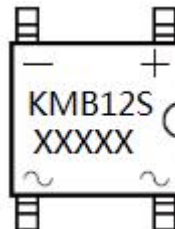


## Ordering Information

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

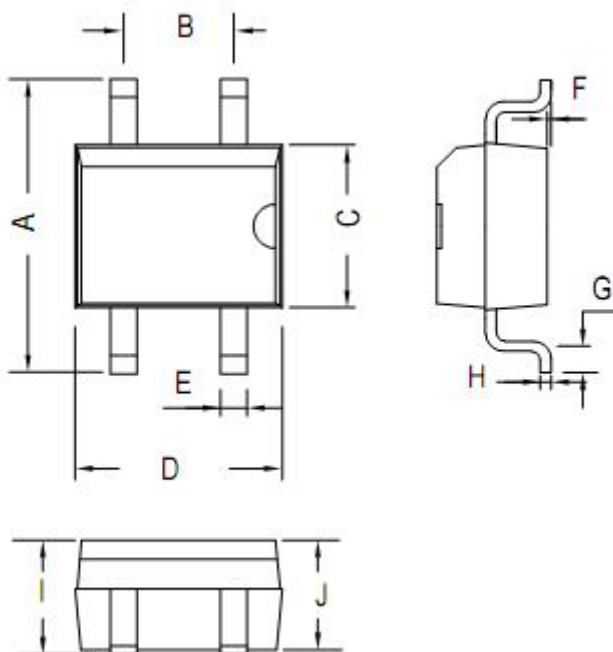


Where XXXXX is YYWWL

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

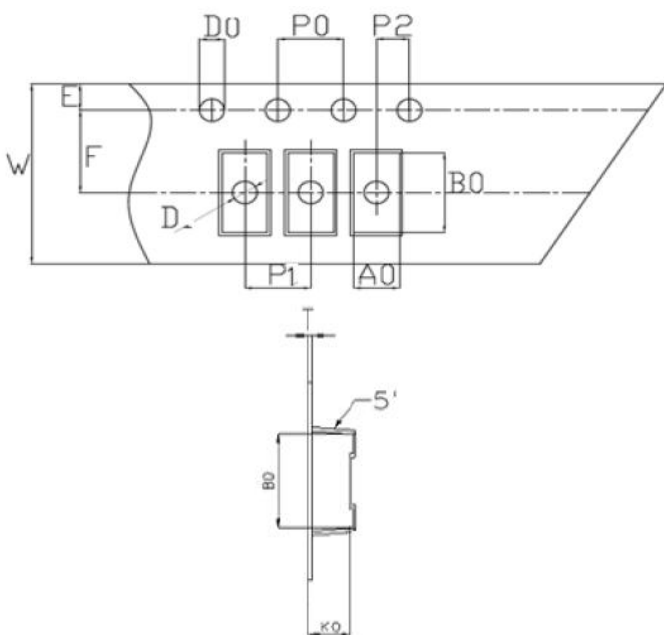
**Cautions:** Molding resin  
 Epoxy resin UL94V-0

## 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	≥3KC	

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