

## KMB12S THRU KMB125S SINGLE PHASE 1.0 AMP SURFACE MOUNT SCHOTTKY BRIDGE RECTIFIER

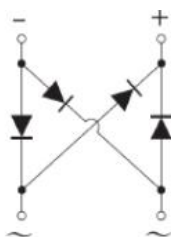


MB-S

### 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 and 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	KMB 125S	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)@ $T_A=90^{\circ}\text{C}$	$I_o$	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											$\text{A}^2\text{s}$

**Electrical Characteristics:**

Type Number	Symbol	KMB 12S	KMB 13S	KMB 14S	KMB 145S	KMB 15S	KMB 16S	KMB 18S	KMB 110S	KMB 115S	KMB 120S	KMB 125S	Unit	
Forward Voltage (per element) * @ $I_F = 1A$ , $T_A = 25^\circ C$	$V_F$	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  $\mu s$ , 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	KMB 125S	Unit
Typical Thermal Resistance (per leg) (Note 3)	$R_{\theta JA}$	75											$^\circ C/W$
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 1.3mm<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

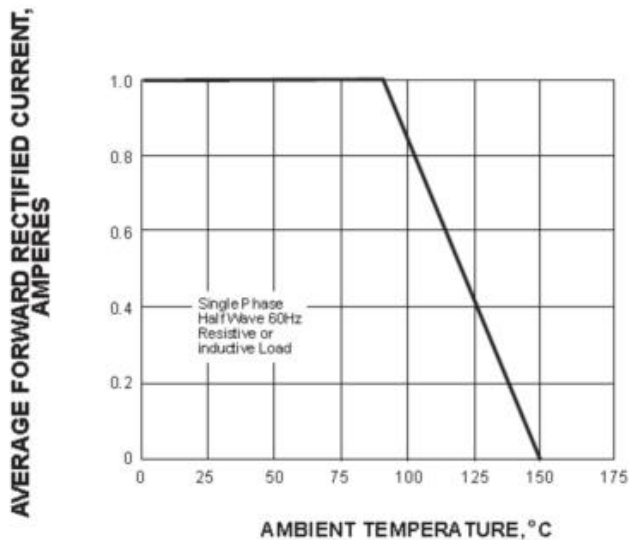
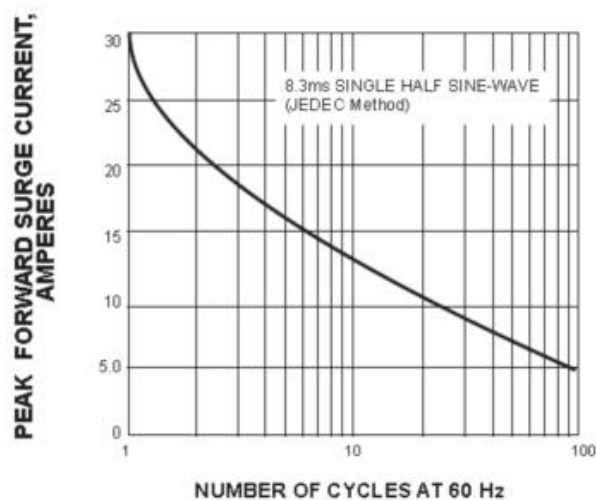
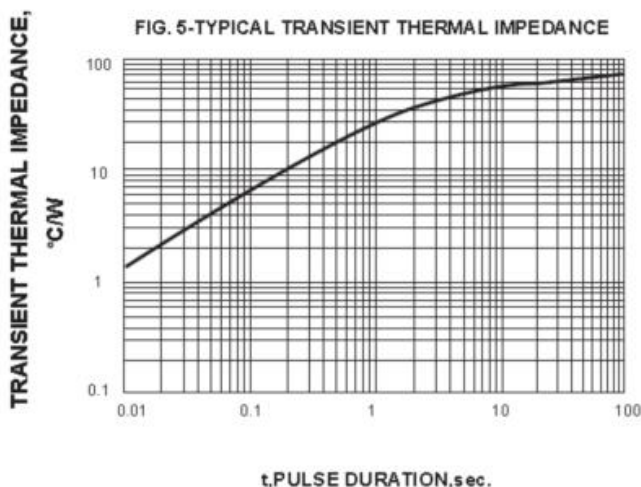
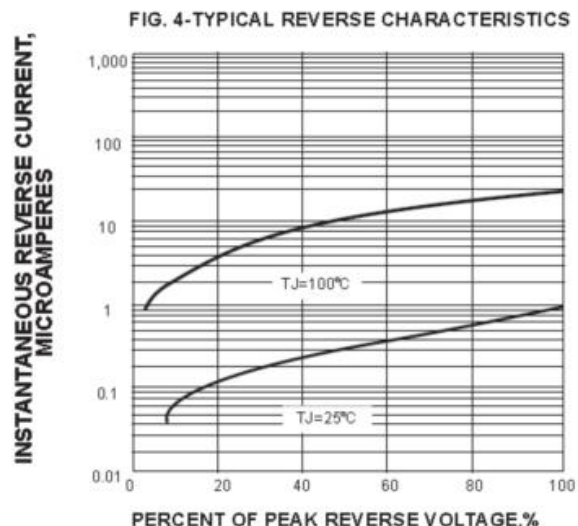
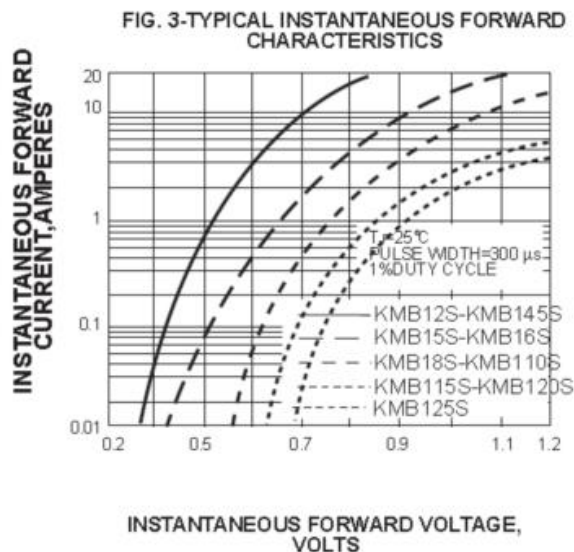


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



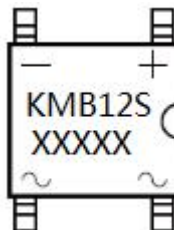


## Ordering Information

Device	Package	Plating	Shipping
KMB12S THRU KMB125S	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

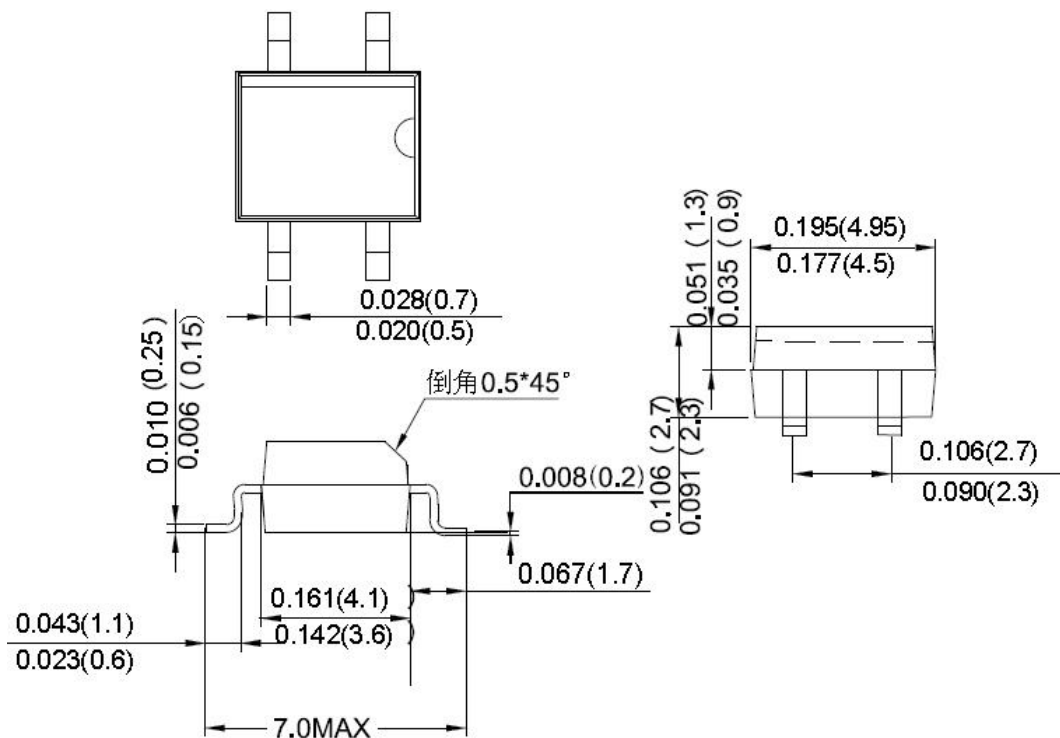


Where XXXXX is YYWWL

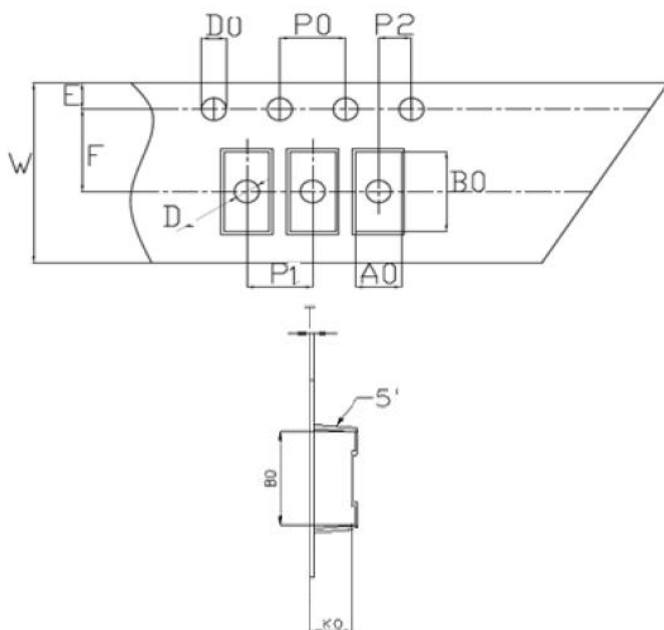
KMB12S = Type Number  
YY = Year  
WW = Week  
L = Lot Number

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

**Mechanical Dimensions MB-S(Inches/Millimeters)**



**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
抗拉力	≥3KG	



**KMB12S  
THRU  
KMB125S**

**Technical Data  
Data Sheet N1798, Rev. A**



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