

## KMB22S THRU KMB220S

### SINGLE PHASE 2.0 AMP SURFACE MOUNT SCHOTTKY BRIDGE RECTIFIER

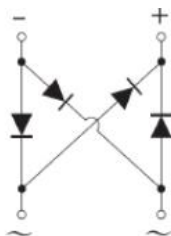


**MB-S**

#### 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: @T<sub>A</sub>=25°C unless otherwise specified

Type Number	Symbol	KMB 22S	KMB 23S	KMB 24S	KMB 245S	KMB 25S	KMB 26S	KMB 28S	KMB 210S	KMB 215S	KMB 220S	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>C</sub> =100°C	I <sub>O</sub>	2.0										A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	50										A
I <sup>2</sup> t Rating for fusing (t < 8.3ms)	I <sup>2</sup> t	10.375										A <sup>2</sup> s

**Electrical Characteristics: @T<sub>A</sub>=25°C unless otherwise specified**

Type Number	Symbol	KMB 22S	KMB 23S	KMB 24S	KMB 245S	KMB 25S	KMB 26S	KMB 28S	KMB 210S	KMB 215S	KMB 220S	Unit
Forward Voltage (per element) @I <sub>F</sub> =2A, 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>	50										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	Unit
Typical Thermal Resistance (per leg) (Note 3)	R <sub>θJL</sub>	16										°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 Lead.

**Ratings and Characteristics Curves**

FIG. 1- FORWARD CURRENT DERATING CURVE

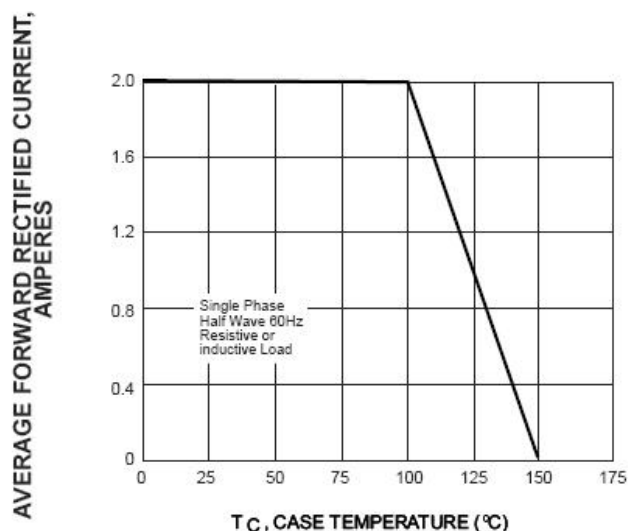
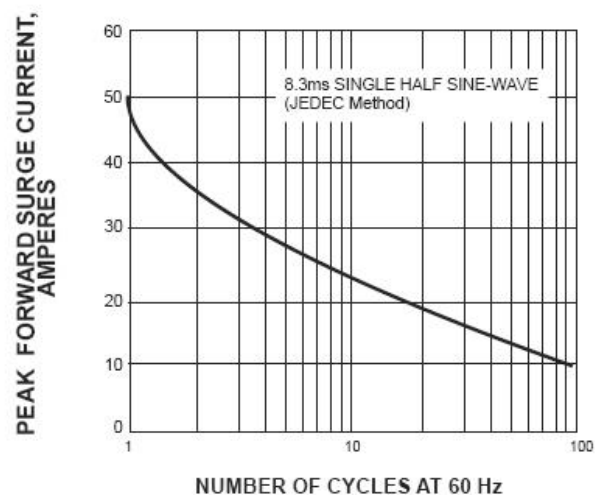
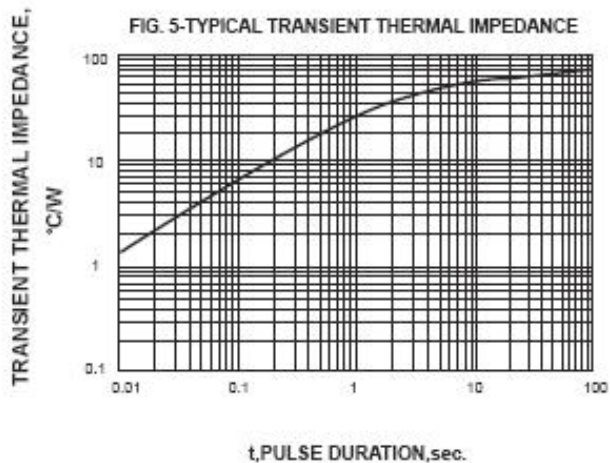
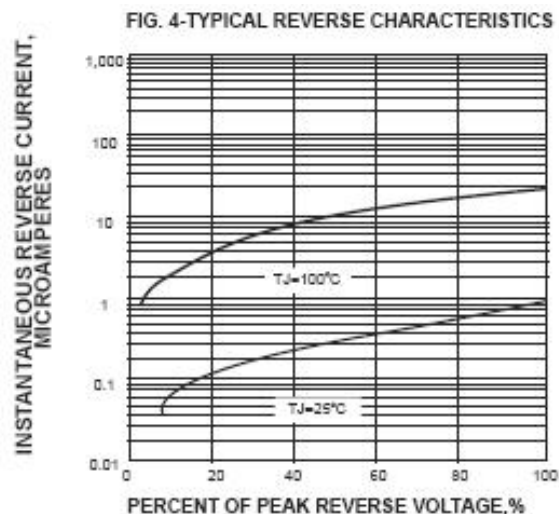
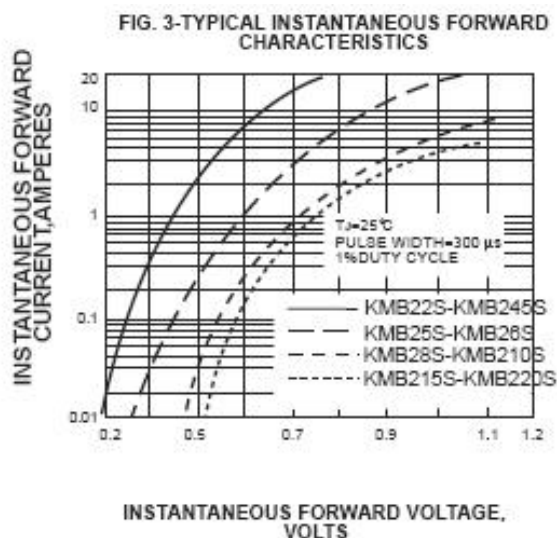


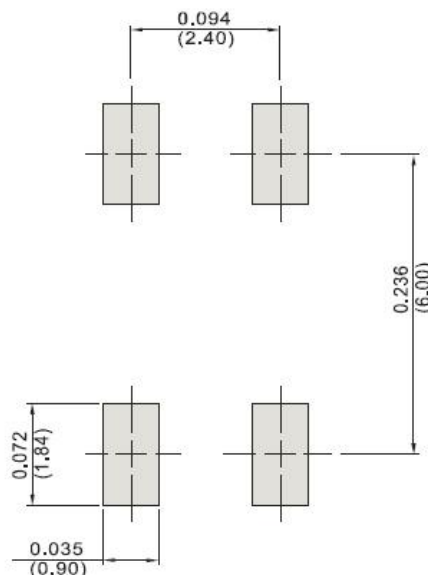
FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



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

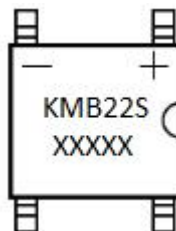


## Ordering Information

Device	Package	Plating	Shipping
KMB22S THRU KMB220S	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

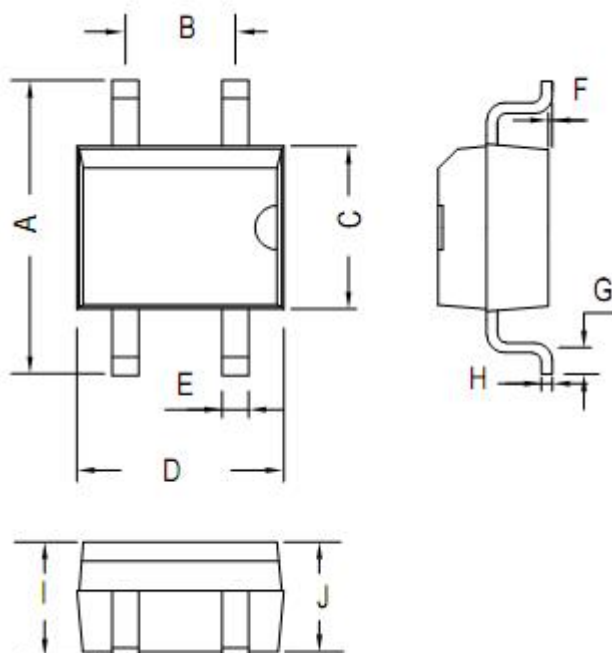


Where XXXXX is YYWWL

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

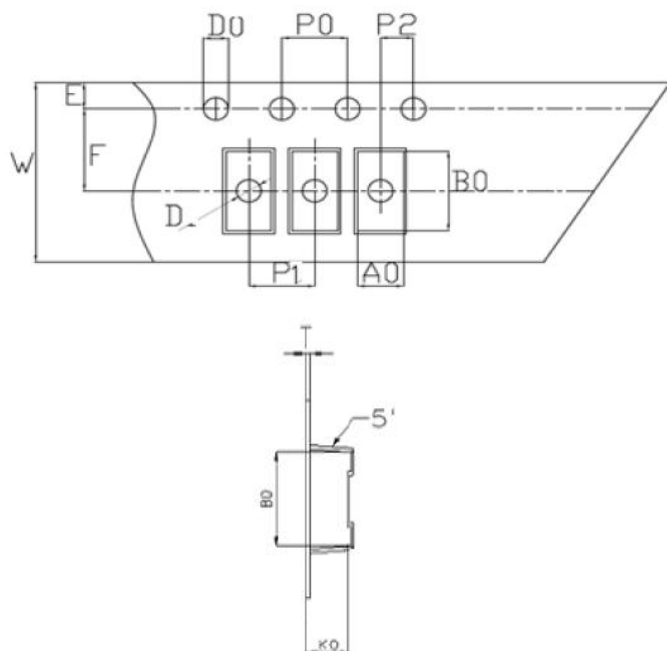
**Cautions:** Molding resin  
Epoxy resin UL:94V-0

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



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
抗拉力	≥3KG	

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