Technical Data
Data Sheet N1798, Rev. D

KMB12S THRU KMB120S

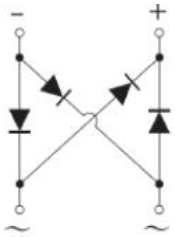
SINGLE PHASE 1.0 AMP SURFACE MOUNT SCHOTTKY BRIDGE RECTIFIER

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_A=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_{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℃	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 <8.3ms)	I^2t	5										A^2s

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Electrical Characteristics: @T_A=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_F =1A, T_A = 25°C	V_F	0.55				0.70		0.85		0.90		V
Peak Reverse Current * @T_A = 25°C	I_{RM}	0.1						0.05				mA
At Rated DC Blocking Voltage* @T_A = 100°C		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 1.3mm^2 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

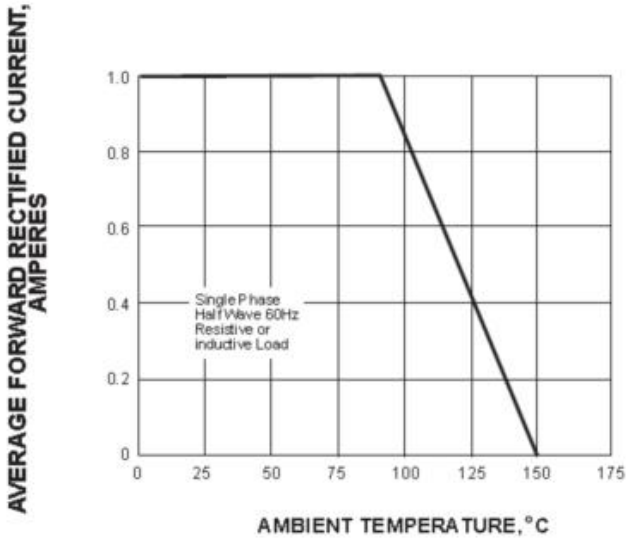

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

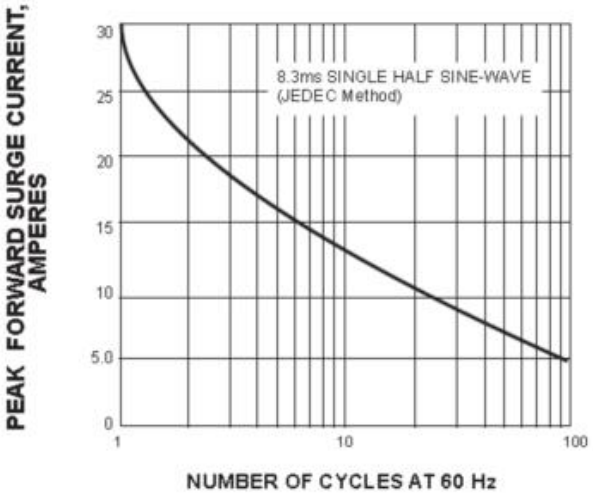

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FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

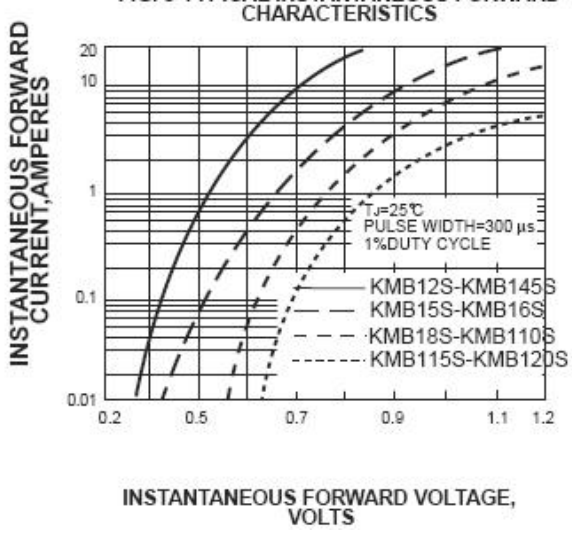


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

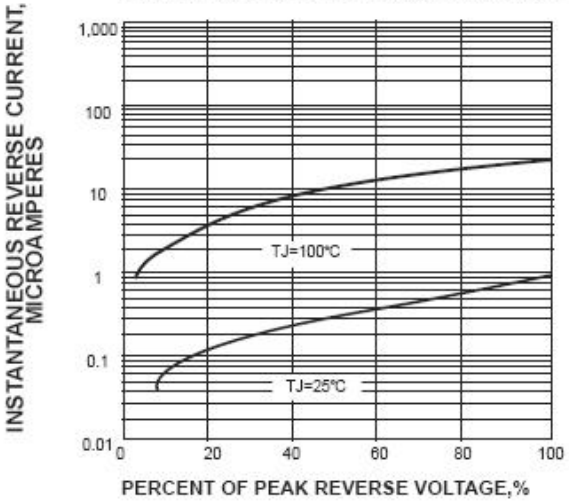


FIG. 5-TYPICAL TRANSIENT THERMAL IMPEDANCE

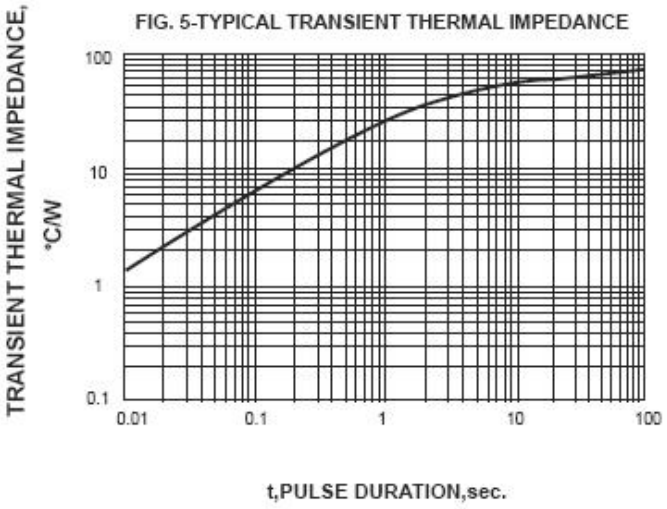
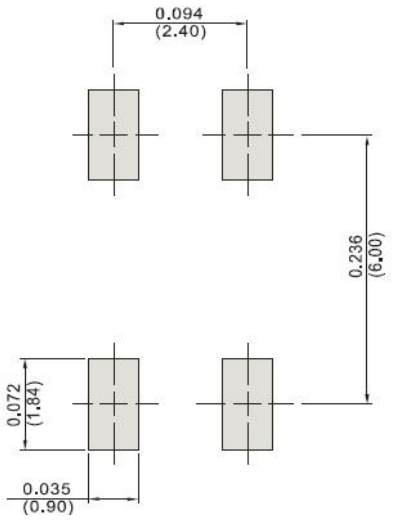


FIG.6 MOUNTING PAD LAYOUT(mm/Inches)

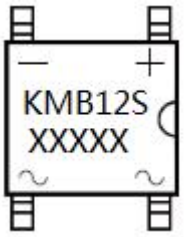


Ordering Information

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 UL:94V-0

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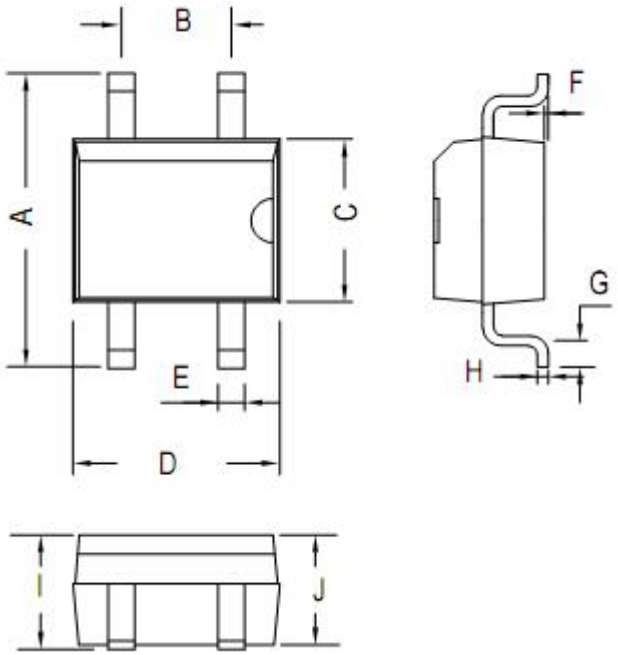
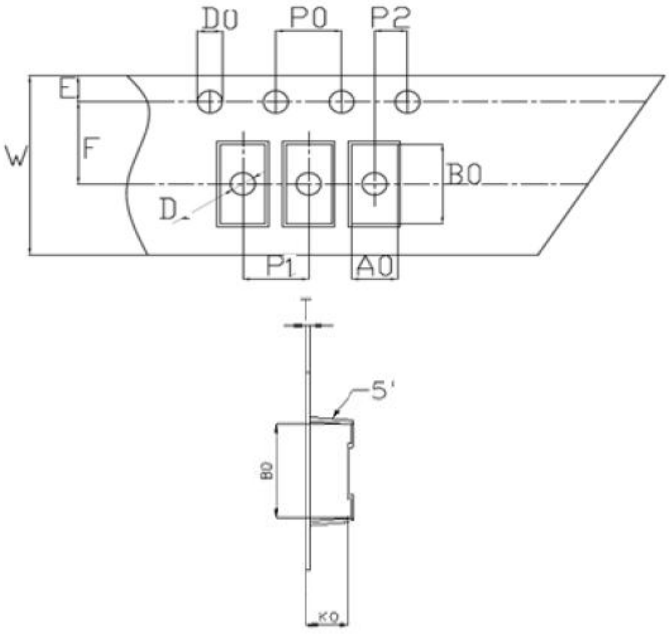
RoHS

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	-	0008
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	≥3KG	

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