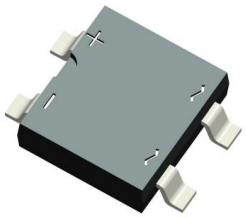
Technical Data
Data Sheet N1777, Rev. B

KMB12F THRU KMB120F

SINGLE PHASE 1.0 AMP SURFACE MOUNT SCHOTTKY BRIDGE RECTIFIER

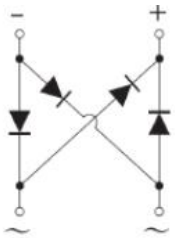


MBF

Features

- Schottky Brrier Chip
- Low Power Loss,High Efficiency
- Ideally Suited for Automatic Assembly
- Surge Overload Rating to 30A 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: MBF, Molded plastic
- Terminals: Plated leads solderable per MIL-STD-202, Method 208
- Polarity: as marked on case
- Mounting Position: Any
- Marking: Type Number
- Lead Free: For RoHS / Lead Free Version

Maximum Ratings: @T_A=25°C unless otherwise specified

Type Number	Symbol	KMB 12F	KMB 13F	KMB 14F	KMB 145F	KMB 15F	KMB 16F	KMB 18F	KMB 110F	KMB 115F	KMB 120F	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 12F	KMB 13F	KMB 14F	KMB 145F	KMB 15F	KMB 16F	KMB 18F	KMB 110F	KMB 115F	KMB 120F	Unit
Forward Voltage (per element) @I_F =1A	V_F	0.55				0.70		0.85		0.90		V
Peak Reverse Current @T_A = 25°C At Rated DC Blocking Voltage @T_A = 100°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 12F	KMB 13F	KMB 14F	KMB 145F	KMB 15F	KMB 16F	KMB 18F	KMB 110F	KMB 115F	KMB 120F	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
Case Style		MB-F										

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

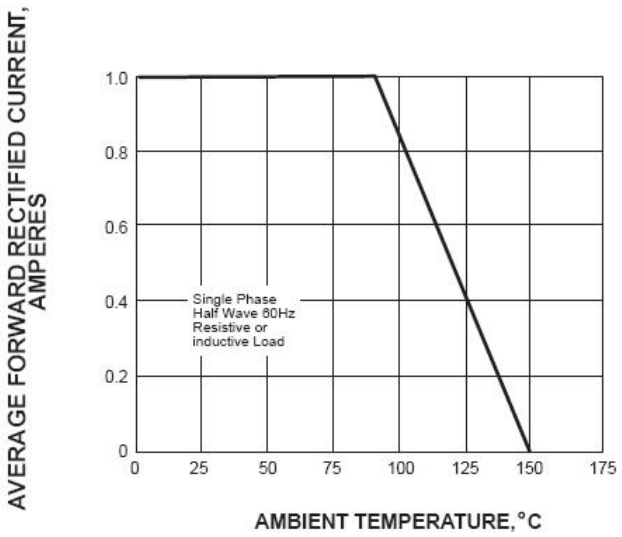

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

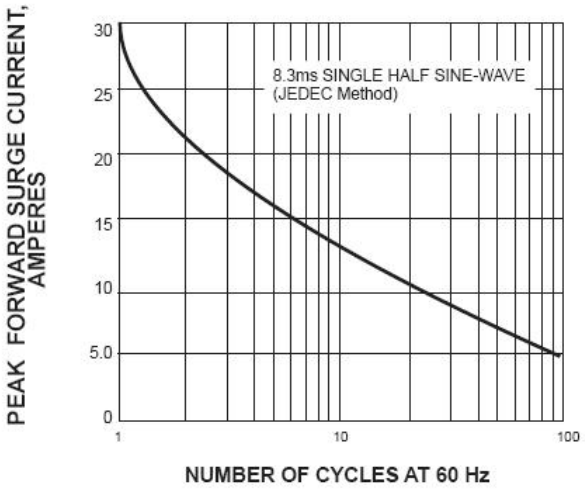

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FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

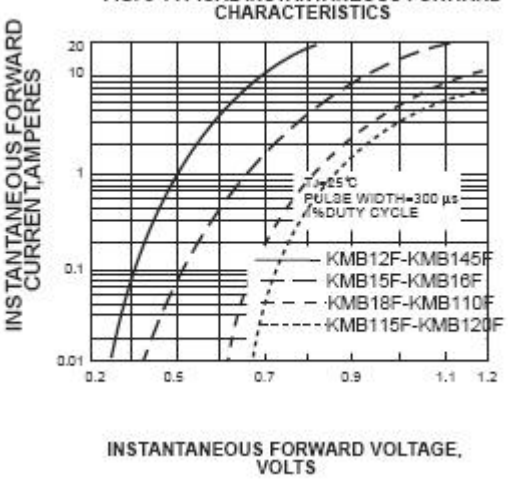


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

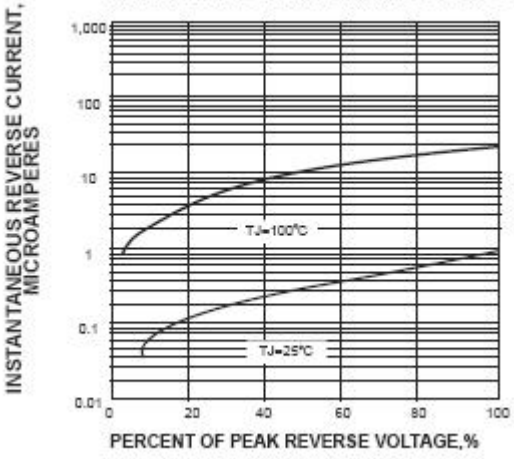
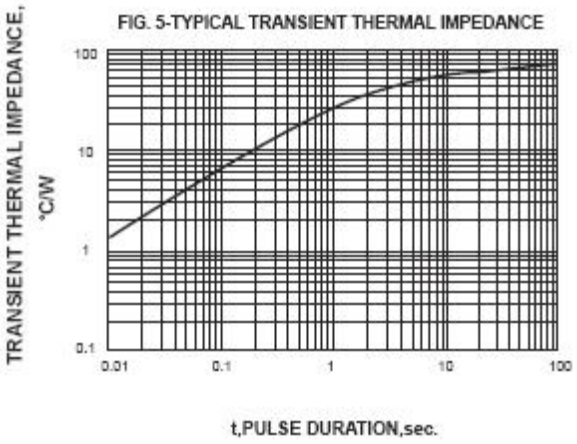
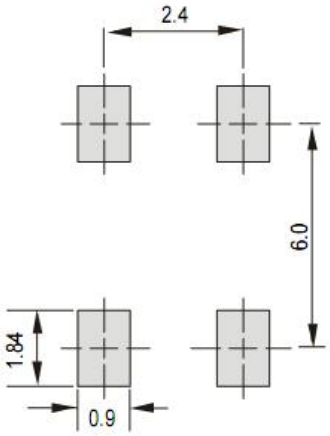


FIG. 5-TYPICAL TRANSIENT THERMAL IMPEDANCE



Mounting PAD Layout(mm)

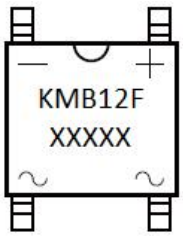


Ordering Information

Device	Package	Plating	Shipping
KMB12F THRU KMB120F	MBF (Pb-Free)	Pure Sn	5000pcs / 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

KMB12F = Type Number
YY = Year
WW = Week
L = Lot Number

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

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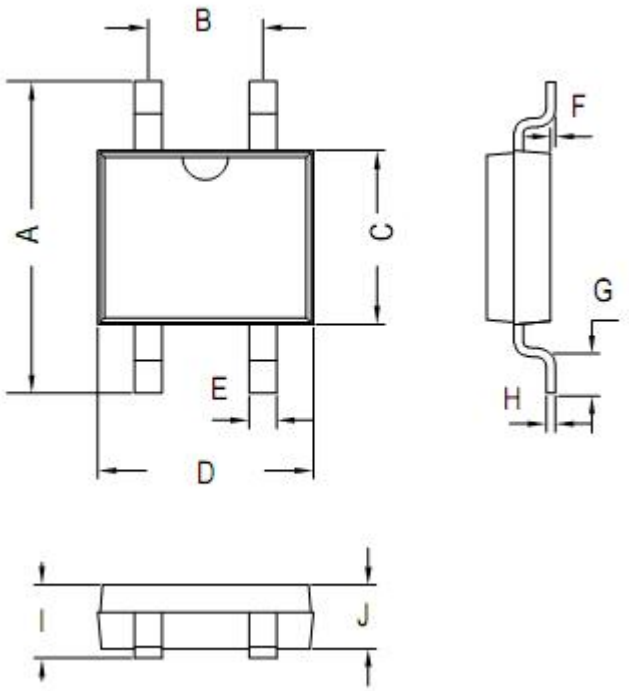
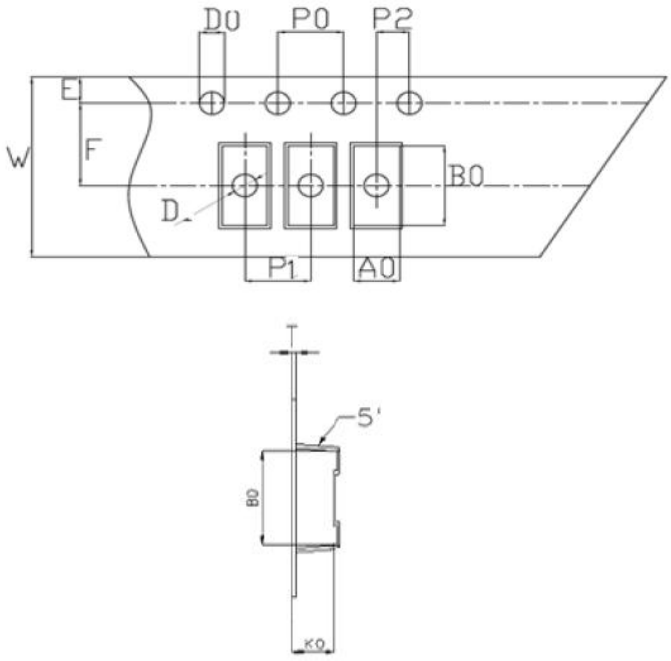
Mechanical Dimensions MBF(Inches/Millimeters)



Dimensions	Millimeters		Inches	
	Min	Max	Min	Max
A	6.4	7.0	0.252	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	0.8	0.020	0.031
F	-	0.2	-	0008
G	0.7	1.1	0.027	0.043
H	0.15	0.35	0.006	0.014
I	1.2	1.8	0.047	0.071
J	1.2	1.6	0.047	0.063

Carrier Tape & Reel Specification MBF



SYMBOL	Millimeters	
	Min.	Max.
A0	5.21	5.41
B0	7.10	7.30
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	1.55	1.75
F	5.45	5.55
W	11.90	12.10
T	0.24	0.30
10P0	39.80	40.20

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