



*DC COMPONENTS CO., LTD.*

RECTIFIER SPECIALISTS

**MBK12F  
THRU  
MBK120F**

**TECHNICAL SPECIFICATIONS OF SURFACE MOUNT SCHOTTKY BRIDGE RECTIFIER**

**VOLTAGE RANGE - 20 to 200 Volts**

**CURRENT - 1.0 Ampere**

**FEATURES**

- \*High surge current capability
- \* Ideal for printed circuit board

**MECHANICAL DATA**

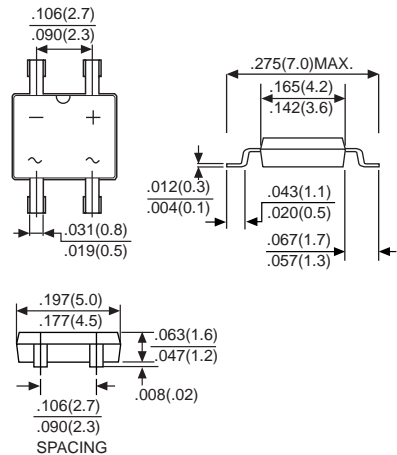
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: MIL-STD-202E, Method 208 guaranteed
- \* Polarity: Symbols molded or marked on body
- \* Mounting position: Any
- \* Weight: 0.075 gram

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.  
Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.



**MBF**



	SYMBOL	MBK12F	MBK14F	MBK16F	MBK18F	MBK110F	MBK115F	MBK120F	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	20	40	60	80	100	150	200	Volts
Maximum RMS Bridge Input Voltage	VRMS	14	28	42	56	70	105	140	Volts
Maximum DC Blocking Voltage	VDC	20	40	60	80	100	150	200	Volts
Maximum Average Forward Output Current at TA=75°C (Note 1)	Io	1.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	40			30				Amps
Maximum DC Forward Voltage Drop per Bridge Element at 1.0A DC	VF	0.55		0.70	0.85		0.90		Volts
Maximum Reverse Current at rated DC Blocking Voltage per element	IR	@ TA = 25°C			0.2		0.1		mAmps
		@ TA = 125°C			10				
Typical Junction Capacitance ( Note 2)	Cj	110				pF			
Typical Thermal Resistance (Note 3)	RθJA	115				°C/W			
Operating and Storage Temperature Range	TJ,TSTG	-50 to + 150				°C			

NOTES: 1. Mounted on P.C. board with 4x(5x5mm<sup>2</sup>) copper pad.  
2. Measured at 1.0 MHZ and applied reverse voltage of 4.0V DC.  
3. Thermal resistance junction to ambient.

# RATING AND CHARACTERISTIC CURVES ( MBK12F THRU MBK120F )

FIG. 1  
MAXIMUM NON-REPETITIVE SURGE CURRENT

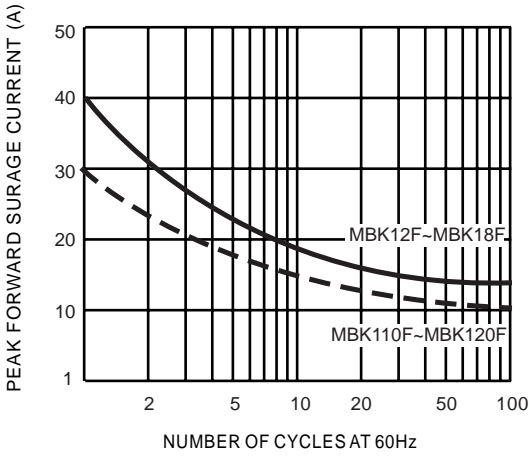


FIG. 2  
DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

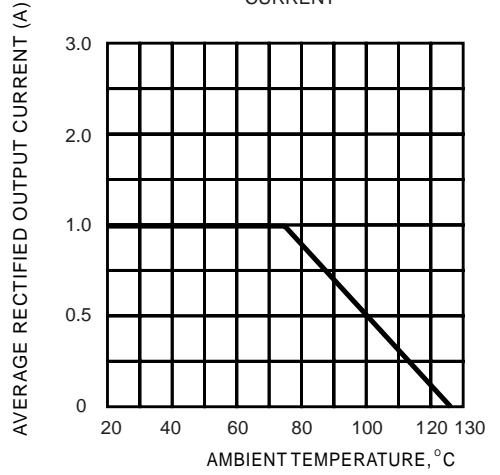


FIG. 3  
TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

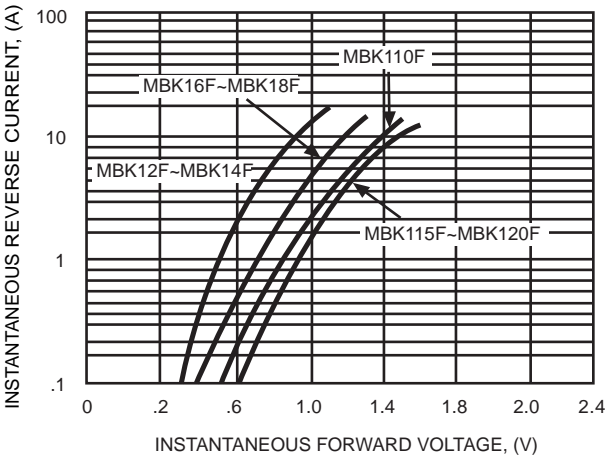
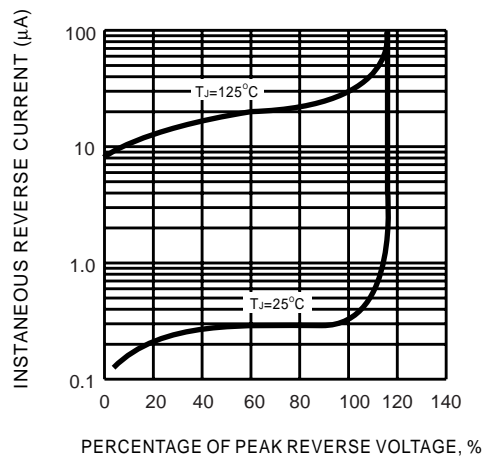


FIG. 4  
TYPICAL REVERSE CHARACTERISTICS



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