



SMB12F THRU SMB120F

SURFACE MOUNT SCHOTTKY BRIDGE RECTIFIERS

Reverse Voltage - 20 to 200 Volts Forward Current - 1.0 Ampere

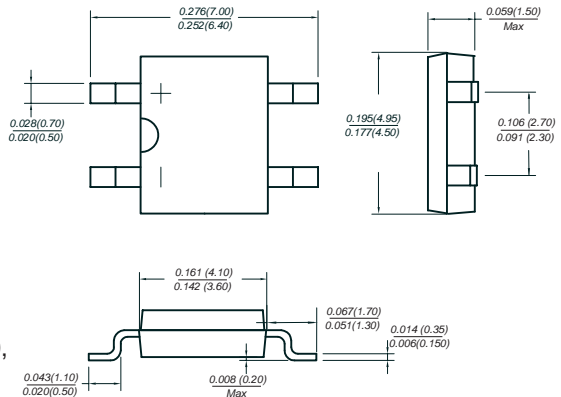
FEATURES

The plastic package carries Underwriters Laboratory Flammability Classification 94V-0 Schottky technology
 Ideal for automated placement
 High surge current capability
 Built-in strain relief, ideal for automated placement
 High forward surge current capability
 High temperature soldering guaranteed: 260°C/10 seconds at terminals
 Green compound (halogen & Sb₂O₃ free)

MECHANICAL DATA

Case: Molded plastic body
Terminals: Plated leads solderable per MIL-STD-750, Method 2026
Polarity: Polarity symbols marked on case
Mounting Position: Any

MBF



Dimensions in inches and (millimeters)

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 current derate by 20%.

	SYMBOLS	SMB12F	SMB13F	SMB14F	SMB15F	SMB16F	SMB18F	SMB110F	SMB115F	SMB120F	UNITS	
Maximum repetitive peak reverse voltage	V _{RRM}	20	30	40	50	60	80	100	150	200	V	
Maximum RMS voltage	V _{RMS}	14	21	28	35	42	56	70	105	140	V	
Maximum DC blocking voltage	V _{DC}	20	30	40	50	60	80	100	150	200	V	
Maximum average forward rectified current at T _L (see fig. 1)	I <sub(av)< sub=""></sub(av)<>	1.0									A	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	30.0									A	
Maximum instantaneous forward voltage at 1.0A	V _F	0.55		0.70		0.85		0.95			V	
Maximum DC reverse current at rated DC blocking voltage	I _R			0.5				0.2			mA	
TA=25°C TA=100°C				10.0		5.0		2.0				
Typical junction capacitance (NOTE 1)	C _J	110			90					pF		
Typical thermal resistance (NOTE 2)	R _{θJA}	88.0										°C/W
Operating junction temperature range	T _J	-55 to +125					-55 to +150					°C
Storage temperature range	T _{STG}	-55 to +150										°C

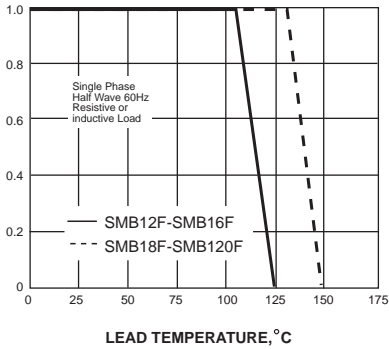
Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
 2. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas



RATINGS AND CHARACTERISTIC CURVES SMB12F THRU SMB120F

AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT, AMPERES

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

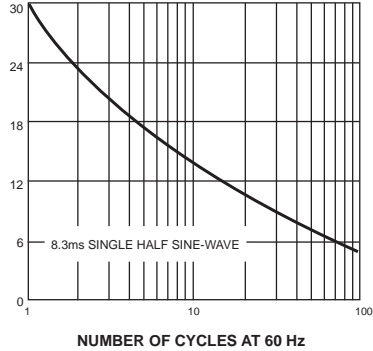
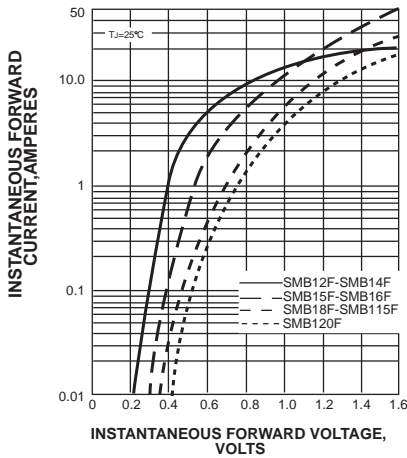


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

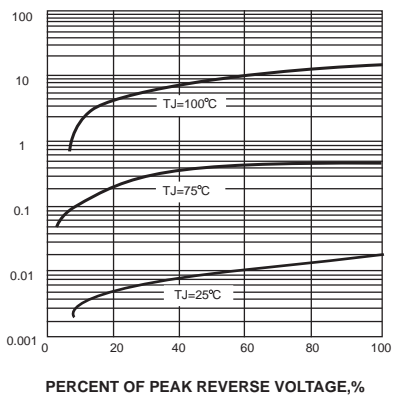
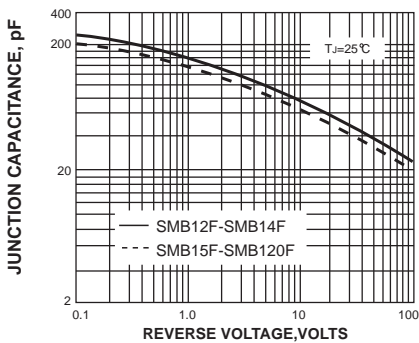


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

