



# SMB22F THRU SMB220F

## SURFACE MOUNT SCHOTTKY BRIDGE RECTIFIERS

Reverse Voltage - 20 to 200 Volts Forward Current - 2.0 Ampere

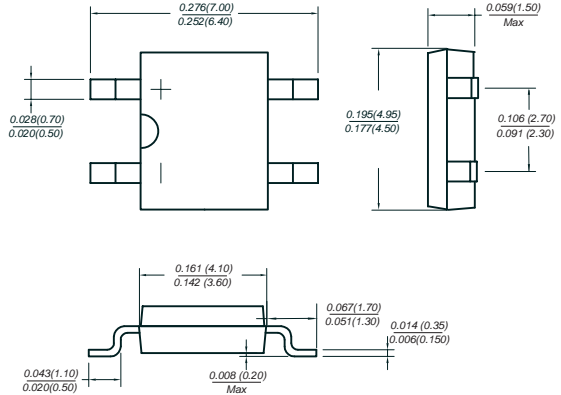
### FEATURES

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 & Sb<sub>2</sub>O<sub>3</sub> 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	SMB22F	SMB23F	SMB24F	SMB25F	SMB26F	SMB28F	SMB210F	SMB215F	SMB220F	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)	$I_{(AV)}$	2.0									A	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	50.0									A	
Maximum instantaneous forward voltage at 2.0A	$V_F$	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		
					10.0			5.0		2.0		
Typical junction capacitance (NOTE 1)	$C_J$	120			90						pF	
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	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	

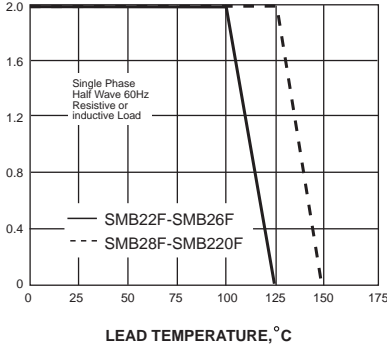
**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
 2. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas



# RATINGS AND CHARACTERISTIC CURVES SMB22F THRU SMB220F

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

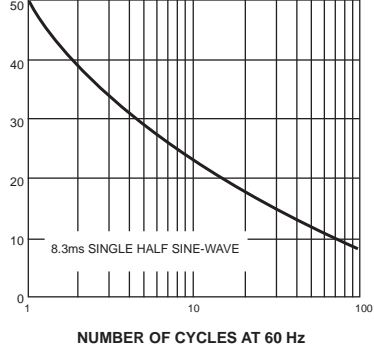


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

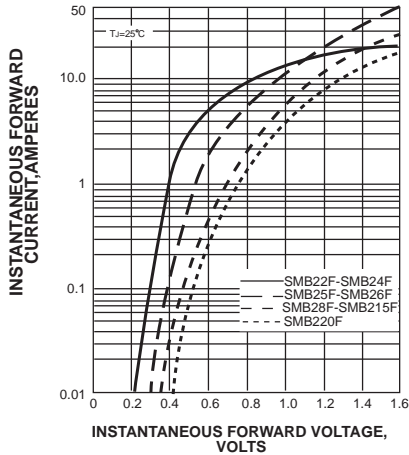


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

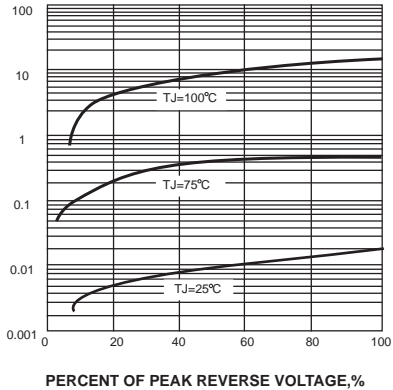
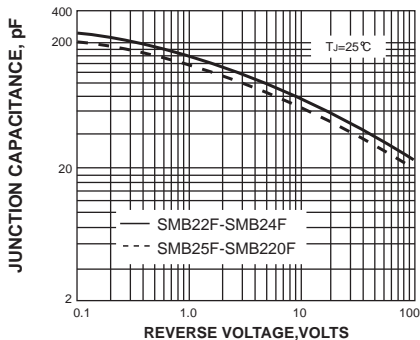


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

