



# SMB12S THRU SMB120S

## SURFACE MOUNT SCHOTTKY BRIDGE RECTIFIERS

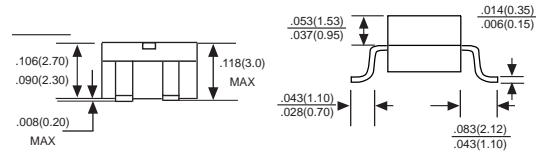
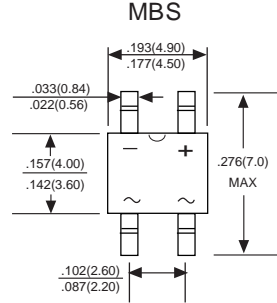
Reverse Voltage - 20 to 200 Volts Forward Current - 1.0 Ampere

### 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 & 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



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%.

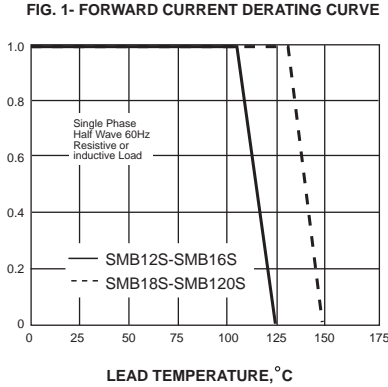
	SYMBOLS	SMB12S	SMB13S	SMB14S	SMB15S	SMB16S	SMB18S	SMB110S	SMB115S	SMB120S	UNITS	
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	50	60	80	100	150	200	V	
Maximum RMS voltage	$V_{RMS}$	14	21	28	35	42	56	70	105	140	V	
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	80	100	150	200	V	
Maximum average forward rectified current at T <sub>L</sub> (see fig. 1)	$I_{(AV)}$	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	
$T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$						10.0		5.0		2.0		
Typical junction capacitance (NOTE 1)	$C_J$	110				90				pF		
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	85.0									°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

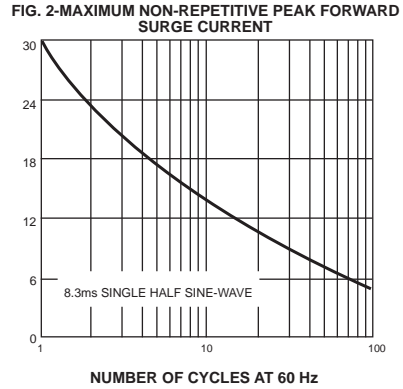


# RATINGS AND CHARACTERISTIC CURVES SMB12S THRU SMB120S

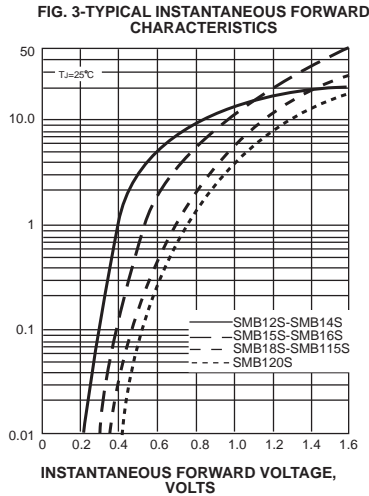
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES



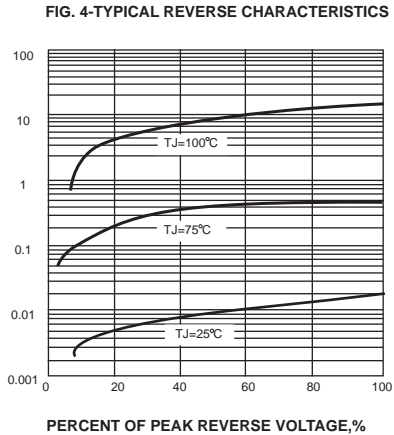
PEAK FORWARD SURGE CURRENT, AMPERES



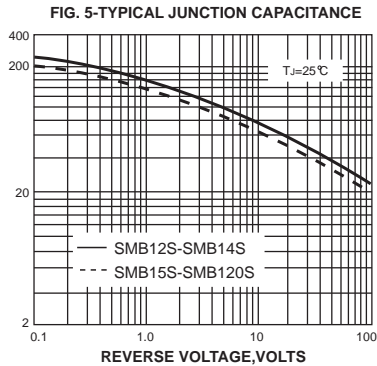
INSTANTANEOUS FORWARD CURRENT, AMPERES



INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES



JUNCTION CAPACITANCE, pF



TRANSIENT THERMAL IMPEDANCE, °C/W

