

**CURRENT** 0.8 Ampere  
**VOLTAGE RANG** 20 to 40 Volts

## B5817W/S2 THRU B5819W/S4

### Features:

- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- Fast switching for high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters

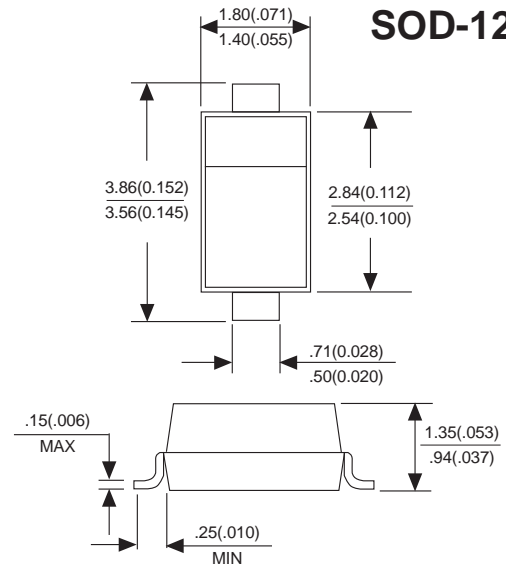
### MECHANICAL DATA

**Case:** Molded plastic body

**Terminals:** Plated leads solderable per MIL-STD-750, Method 2026

**Polarity:** Polarity symbols marked on case

**Marking:** B5817W:S2, B5818W:S3, B5819W:S4



Dimensions in millimeters and (inches)

Maximum ratings and electrical characteristics, Single diode @ $T_A=25^{\circ}\text{C}$

PARAMETER	SYMBOLS	B5817W/S2	B5818W/S3	B5819W/S4	UNITS
Peak repetitive peak reverse voltage	$V_{RRM}$				
Working peak reverse voltage	$V_{RWM}$	20	30	40	V
DC Blocking voltage	$V_R$				
RMS Reverse voltage	$V_{R(RMS)}$	14	21	28	V
Average rectified output current	$I_o$		0.8		A
Peak forward surge current @=8.3ms	$I_{FSM}$		7		A
Repetitive peak forward current	$I_{FRM}$		1.0		A
Power dissipation	$P_d$		250		mW
Thermal resistance junction to ambient	$R_{\theta JA}$		500		K/W
Storage temperature	$T_{STG}$		-65 to +150		$^{\circ}\text{C}$
Non-Repetitive peak reverse voltage	$V_{RM}$	20	30	40	V

Electrical ratings @ $T_A=25^{\circ}\text{C}$

PARAMETER	SYMBOLS	Min.	Max.	Unit	Test conditions	
Reverse breakdown voltage	$V_{(BR)}$	20		V	$I_R=1\text{mA}$	B5817W
		30		V		B5818W
		40		V		B5819W
Reverse voltage leakage current	$I_R$		1	mA	$V_R=20\text{V}$	B5817W
					$V_R=30\text{V}$	B5818W
					$V_R=40\text{V}$	B5819W
Forward voltage	$V_F$		0.45	V	$I_F=1\text{A}$ $I_F=3\text{A}$	B5817W
			0.75	V		B5818W
			0.55	V		B5819W
		0.875	V			
Diode capacitance	$C_D$		120	pF	$V_R=4\text{V}, f=1.0\text{MHz}$	

CURRENT 0.8 Ampere  
 VOLTAGE RANG 20 to 40 Volts

**B5817W/S2 THRU B5819W/S4**

Typical Characteristics

FIG. 1- FORWARD CURRENT DERATING CURVE

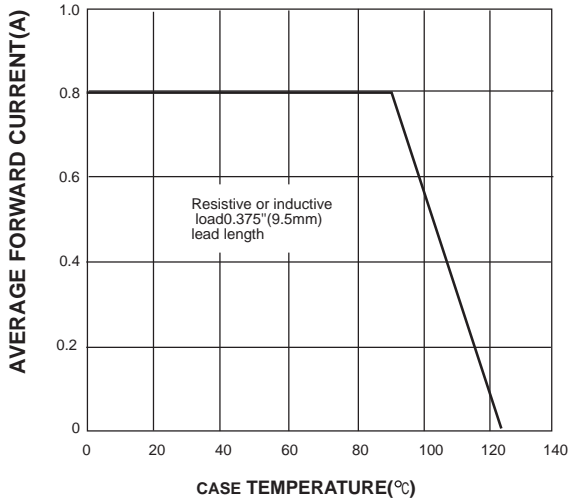


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

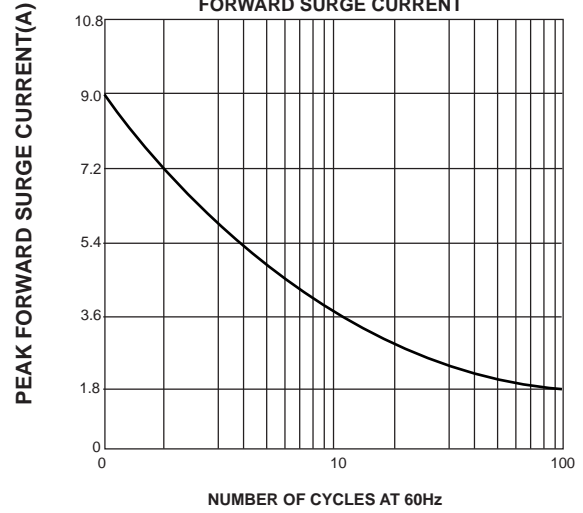


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

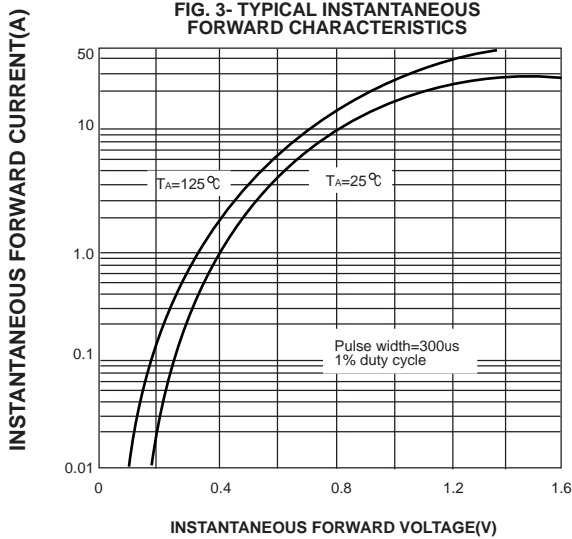


FIG. 4- TYPICAL REVERSE CHARACTERISTICS

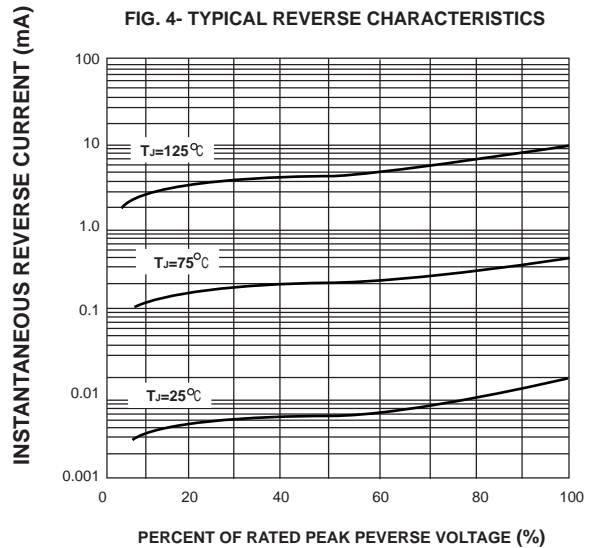


FIG. 5- TYPICAL JUNCTION CAPACITANCE

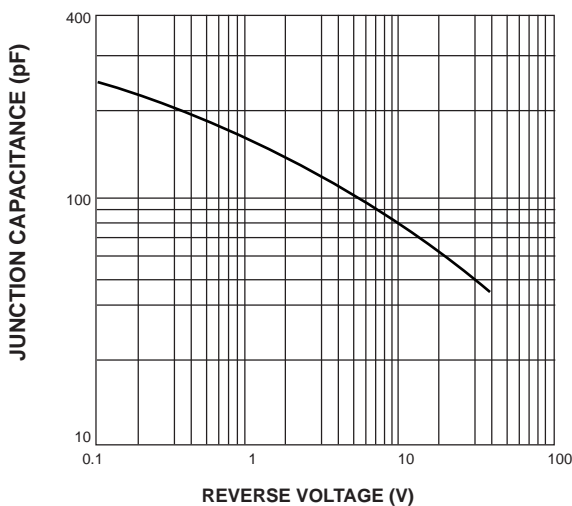


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

