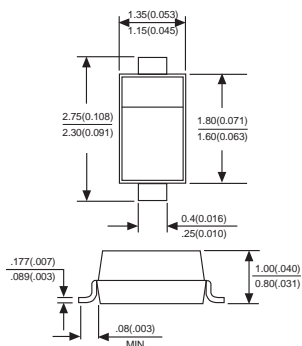


# B5817WS-B5819WS

## SCHOTTKY BARRIER DIODE

### SOD-323



Dimensions in millimeters and (inches)

### FEATURES

- ◆ For use in low voltage, high frequency inverters
- ◆ Free wheeling, and polarity protection applications

### MECHANICAL DATA

**Case:** Molded plastic body

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

**Polarity:** Polarity symbols marked on case

**Marking:** B5817WS:SJ, B5818WS:SK, B5819WS:SL

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

PARAMETER	SYMBOLS	B5817WS	B5818WS	B5819WS	UNITS
Peak repetitive peak reverse voltage	$V_{RRM}$				
Working peak	$V_{RWM}$	20	30	40	V
DC Blocking voltage	$V_R$				
RMS Reverse voltage	$V_{R(RMS)}$	14	21	28	V
Average rectified output current	$I_o$		1		A
Peak forward surge current @=8.3ms	$I_{FSM}$		9		A
Power dissipation	$P_d$		250		mW
Thermal resistance junction to ambient	$R_{\theta JA}$		500		K/W
Operating junction temperature range	$T_J$		-55 to +150		$^\circ\text{C}$
Storage temperature	$T_{STG}$		-55 to +150		
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	$I_R=1\text{mA}$	B5817WS
		30		V		B5818WS
		40		V		B5819WS
Reverse voltage leakage current	$I_R$		1	mA	$V_R=20\text{V}$	B5817WS
					$V_R=30\text{V}$	B5818WS
					$V_R=40\text{V}$	B5819WS
Forward voltage	$V_F$		0.45	V	$I_F=1\text{A}$ $I_F=3\text{A}$	B5817WS
			0.75	V		B5818WS
			0.55	V		B5819WS
		0.875	V			
		0.6	V			
		0.9	V			
Diode capacitance	$C_D$		120	pF	$V_R=4\text{V}, f=1.0\text{MHz}$	

# RATINGS AND CHARACTERISTIC CURVES B5817WS-B5819WS

FIG. 1- FORWARD CURRENT DERATING CURVE

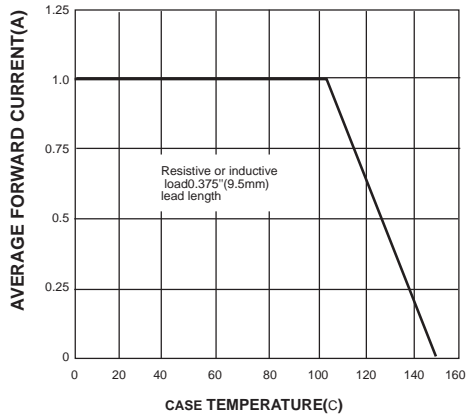


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

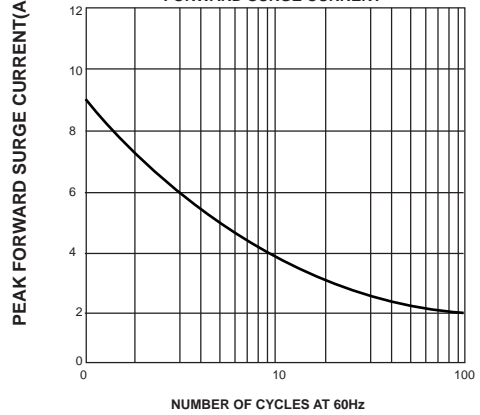


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

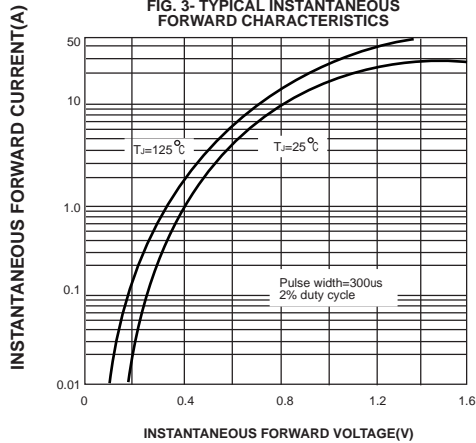


FIG. 4- TYPICAL REVERSE CHARACTERISTICS

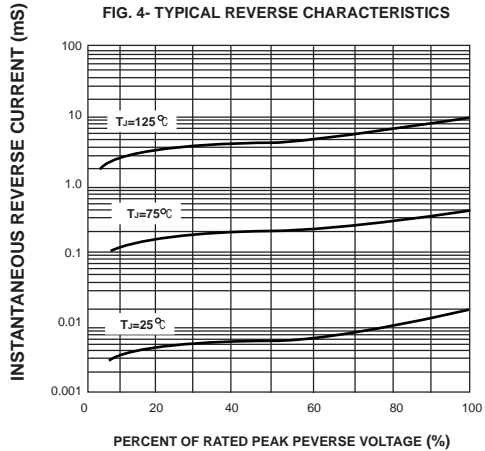


FIG. 5- TYPICAL JUNCTION CAPACITANCE

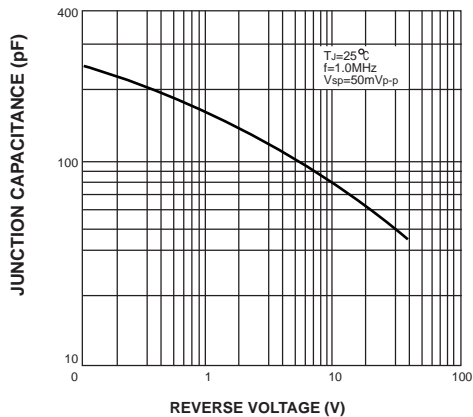


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

