



THE DATASHEET OF B5819WS



SCHOTTKY BARRIER DIODE

SOD-323

FEATURES

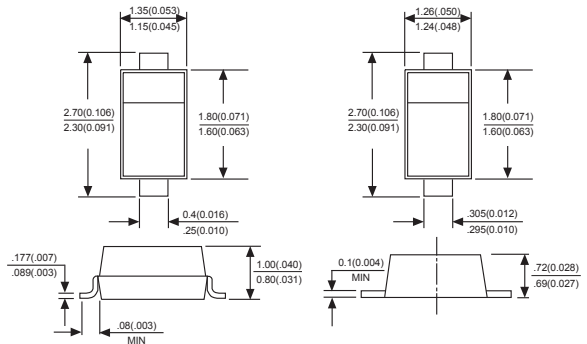
- ◆ For use in low voltage, high frequency inverters
- ◆ Free wheeling, and polarity protection applications

MECHANICAL DATA

Case: Molded plastic body

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

Polarity: Polarity symbols marked on case



Dimensions in millimeters and (inches)

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}		25		A
Repetitive peak forward current	I_{FRM}		625		mA
Power dissipation	P_d		200		mW
Thermal resistance junction to ambient	$R_{\theta JA}$		625		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	$I_R=1\text{mA}$ B5817WS B5818WS B5819WS
		30		V	
		40		V	
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 0.75	V	$I_F=1\text{A}$ $I_F=3\text{A}$ B5817WS B5818WS B5819WS
			0.55 0.875	V	
			0.6 0.9	V	
Diode capacitance	C_D		120	pF	$V_R=4\text{V}, f=1.0\text{MHz}$

RATINGS AND CHARACTERISTIC CURVES

FIG. 1- FORWARD CURRENT DERATING CURVE

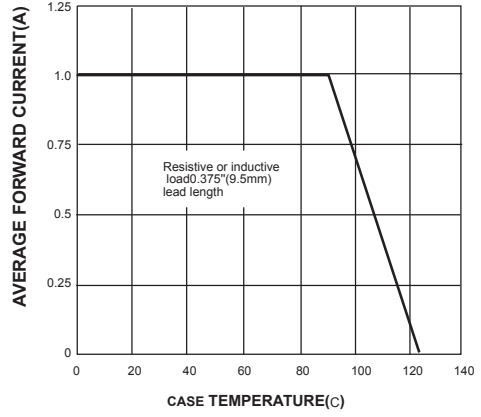


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

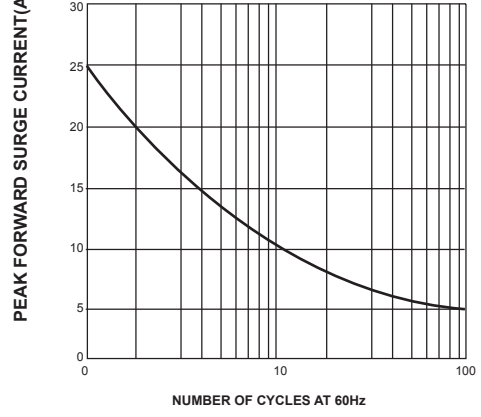


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

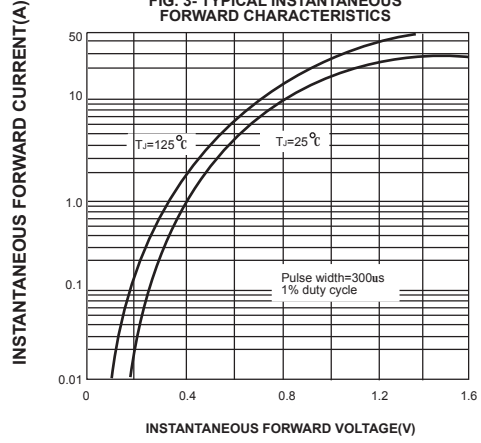


FIG. 4- TYPICAL REVERSE CHARACTERISTICS

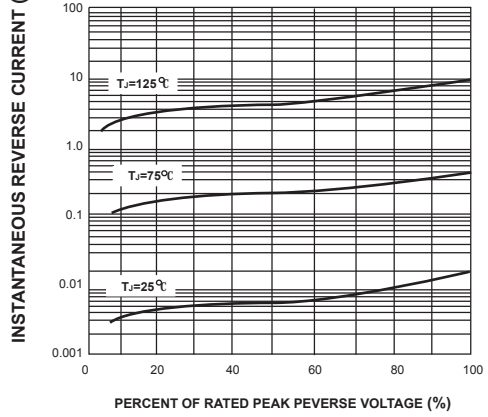


FIG. 5- TYPICAL JUNCTION CAPACITANCE

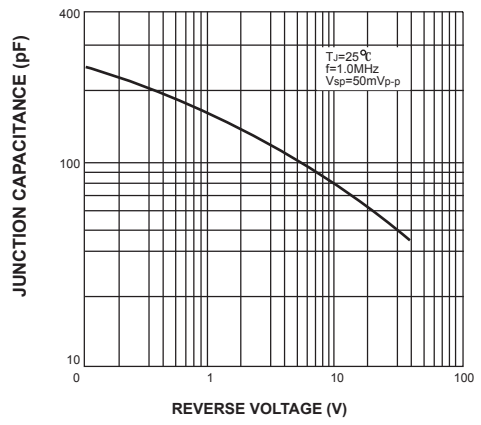
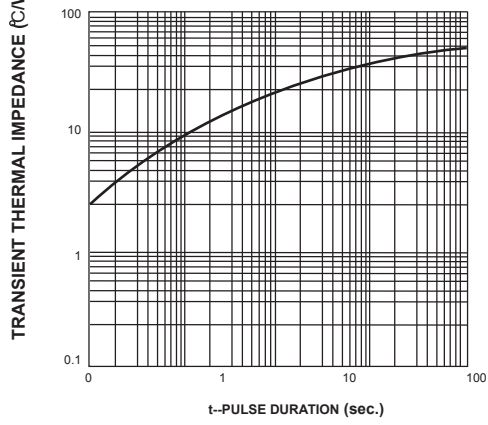




FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE









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