

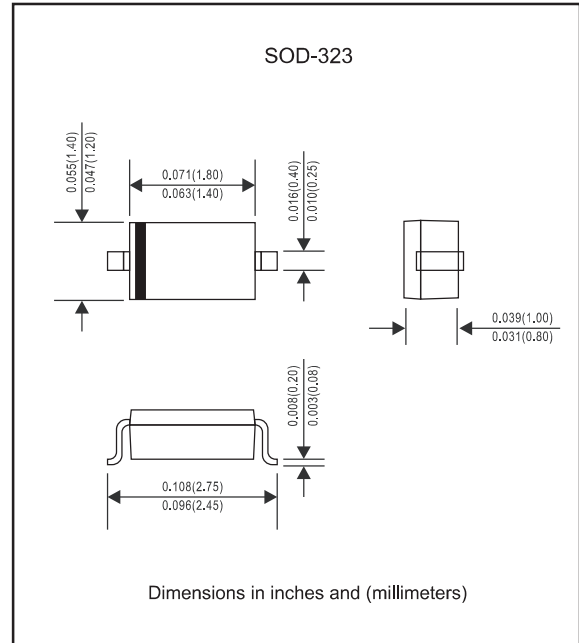
Features

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

Mechanical data

- Case:** JEDEC SOD-323 molded plastic body
- Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity:** Color band denotes cathode end
- Mounting Position:** Any
- Marking:**
 - B5817WS: SJ
 - B5818WS: SK
 - B5819WS: SL

Package outline



Maximum ratings and Electrical Characteristics (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

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

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		
			0.6 0.9		
Diode capacitance	C_D		120	pF	$V_R=4\text{V}, f=1.0\text{MHz}$

Rating and characteristic curves

FIG. 1- FORWARD CURRENT DERATING CURVE

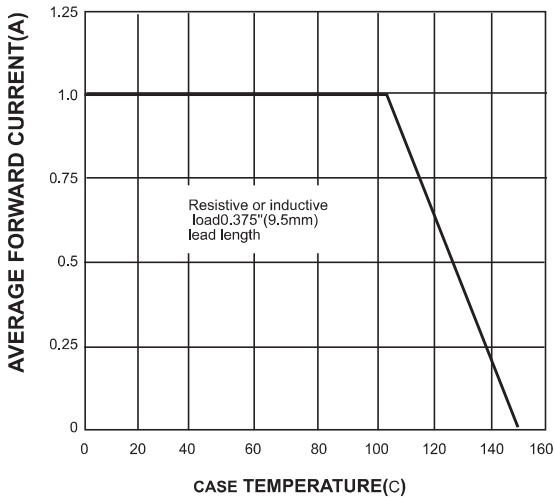


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

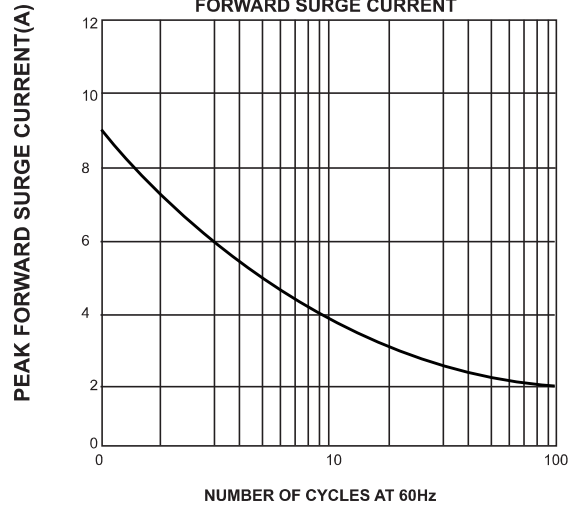


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

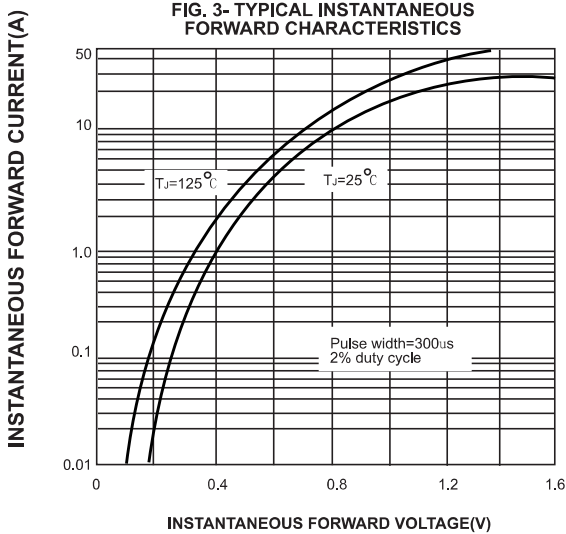


FIG. 4- TYPICAL REVERSE CHARACTERISTICS

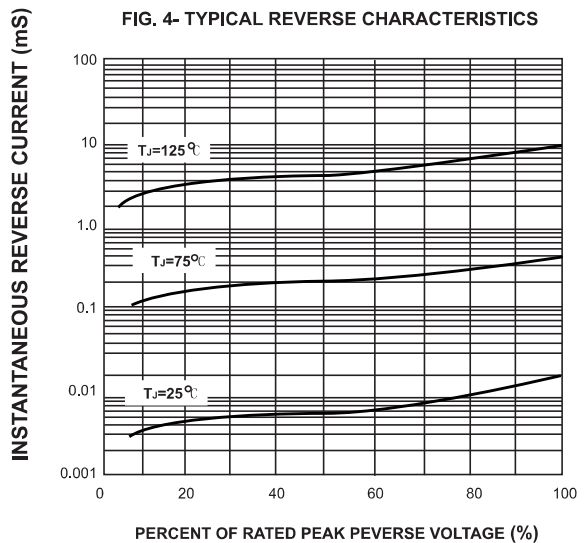


FIG. 5- TYPICAL JUNCTION CAPACITANCE

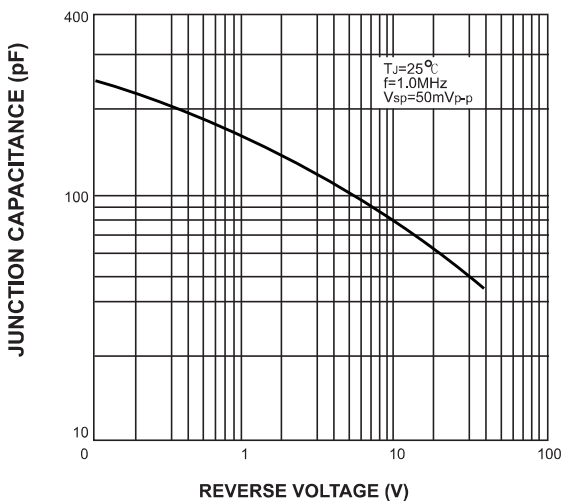
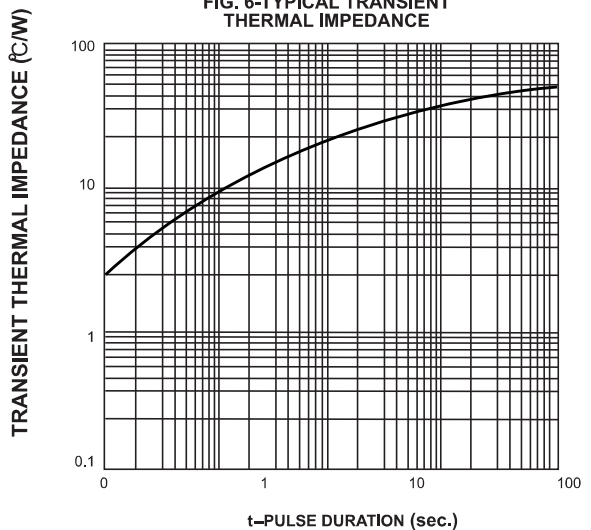


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



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