

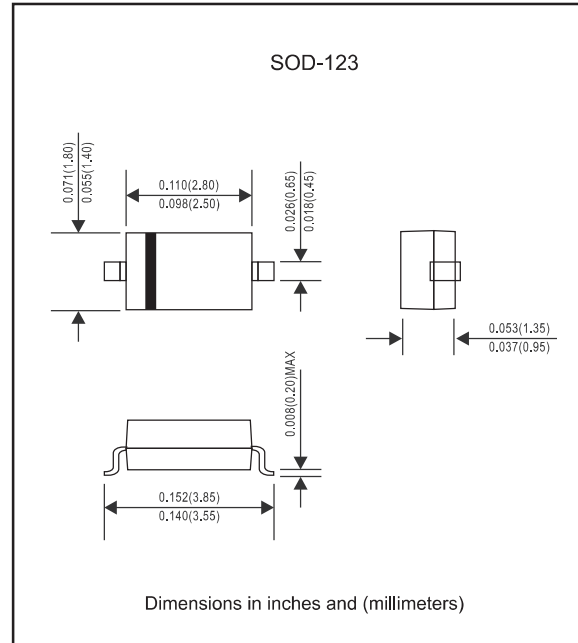
Features

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

Mechanical data

- Case:** JEDEC SOD-123 molded plastic body
- Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity:** Color band denotes cathode end
- Mounting Position:** Any
- Marking:**
 - B5817W: SJ
 - B5818W: SK
 - B5819W: SL

Package outline



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

PARAMETER	SYMBOLS	B5817W	B5818W	B5819W	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 +125		$^{\circ}\text{C}$
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	$I_R=1\text{mA}$	
		30		V		B5817W
		40		V		B5818W B5819W
Reverse voltage leakage current	I_R		1	mA	$V_R=20\text{V}$	
					$V_R=30\text{V}$	
					$V_R=40\text{V}$	
Forward voltage	V_F		0.45	V	$I_F=1\text{A}$ $I_F=3\text{A}$	
			0.75			B5817W
			0.55			B5818W
		0.875		B5819W		
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

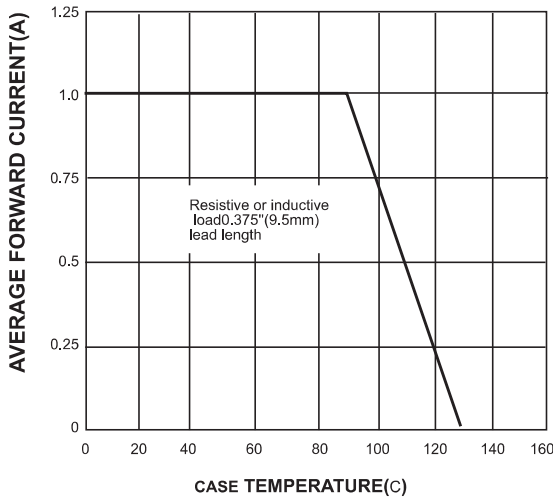


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

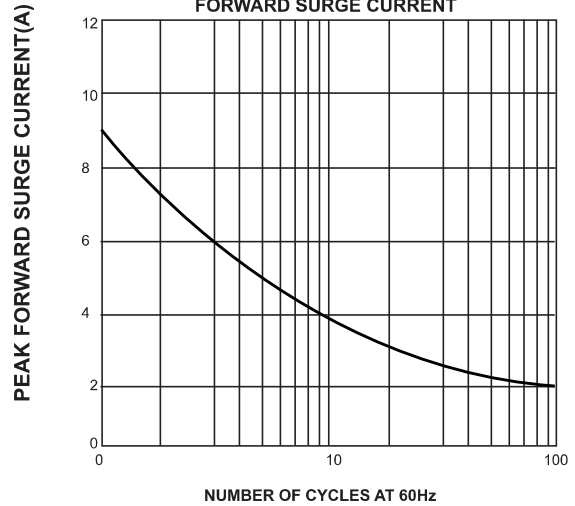


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

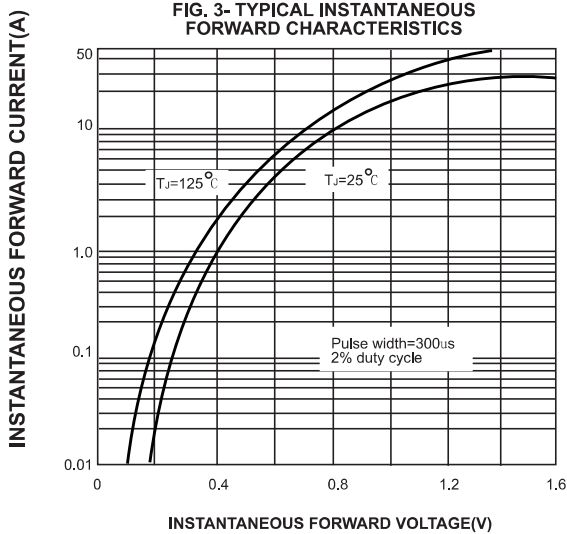


FIG. 4- TYPICAL REVERSE CHARACTERISTICS

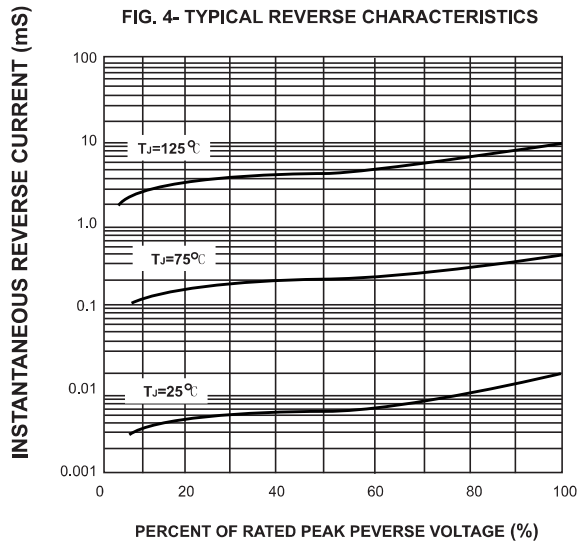


FIG. 5- TYPICAL JUNCTION CAPACITANCE

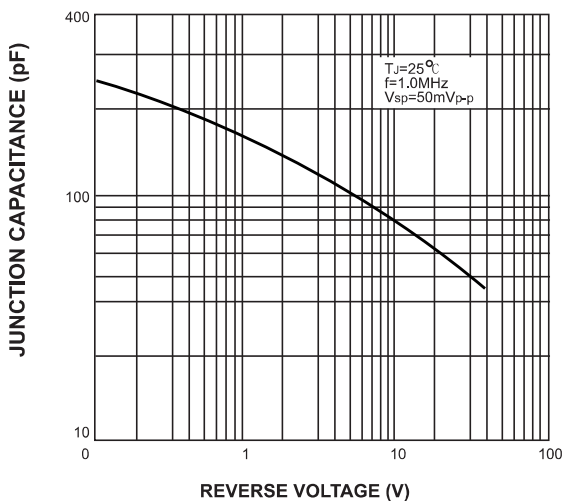
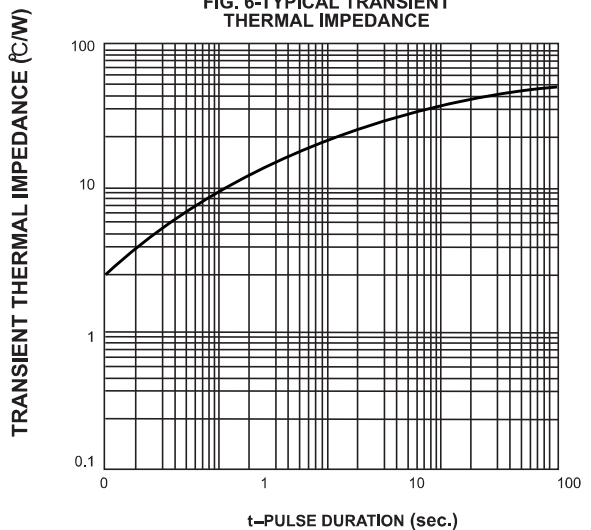


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



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