

Features

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

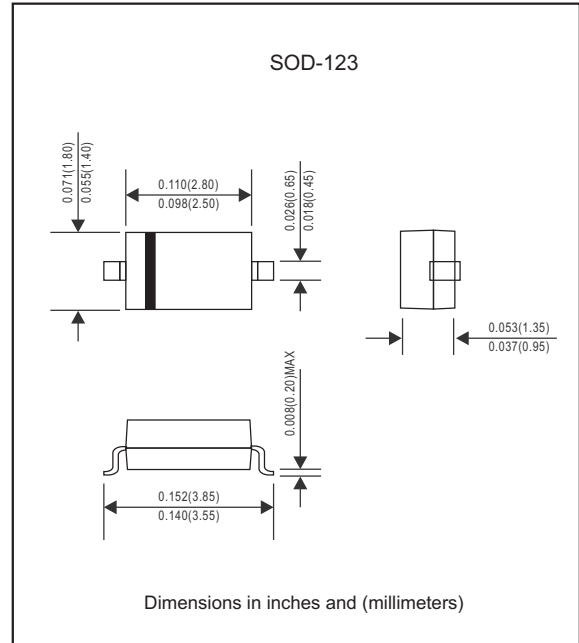
Mechanical data

- **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 : 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	$I_R=1\text{mA}$	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 0.75	V	$I_F=1\text{A}$ $I_F=3\text{A}$	B5817W
			0.55 0.875	V		B5818W
			0.6 0.9	V		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

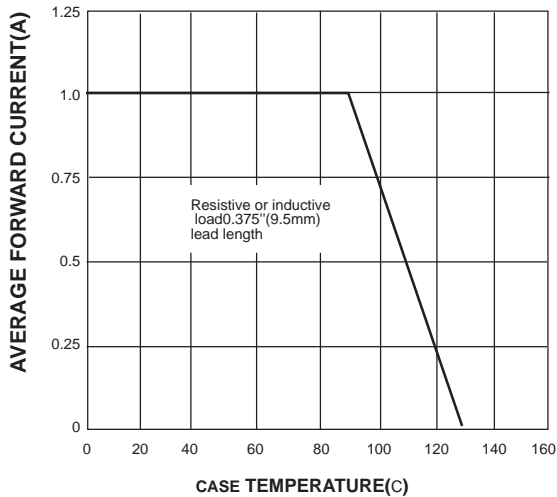


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

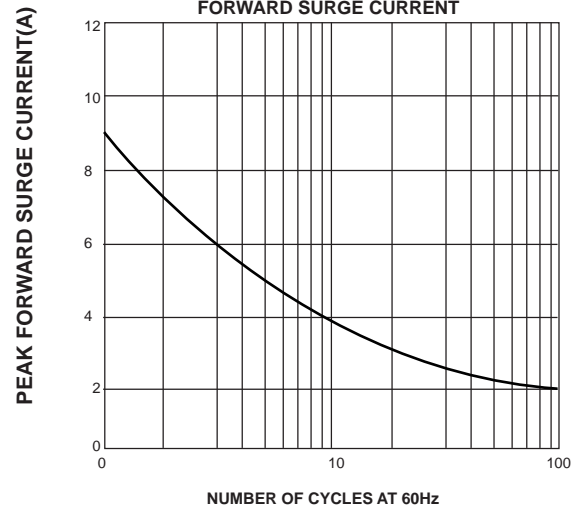


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

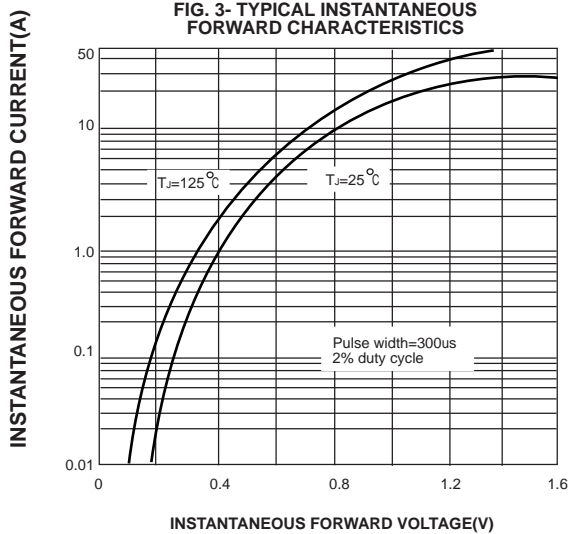


FIG. 4- TYPICAL REVERSE CHARACTERISTICS

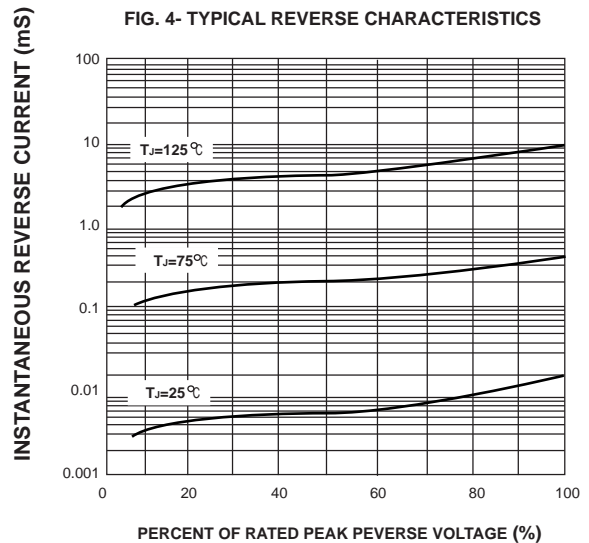


FIG. 5- TYPICAL JUNCTION CAPACITANCE

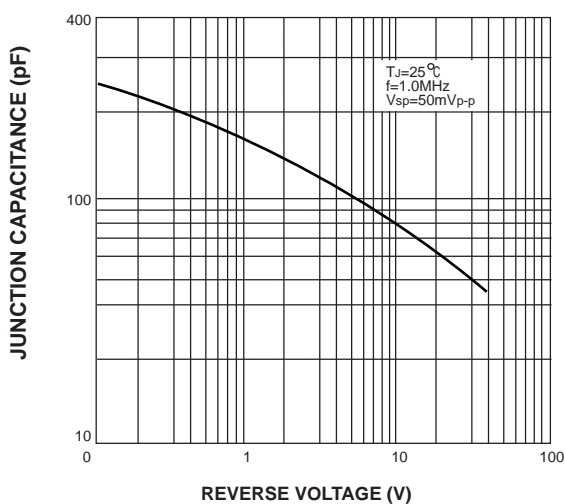
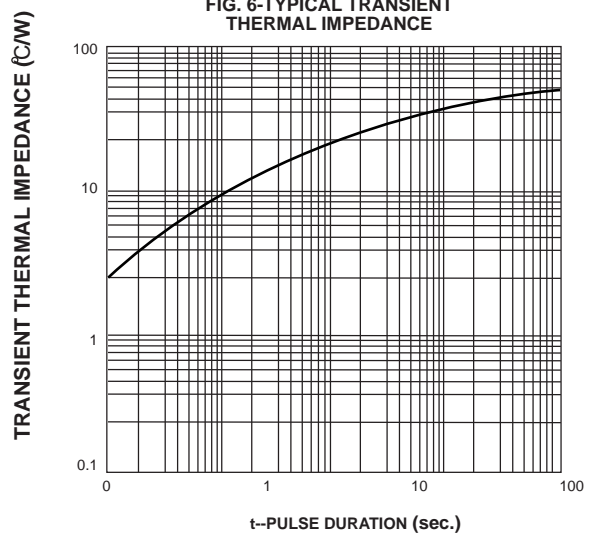


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



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