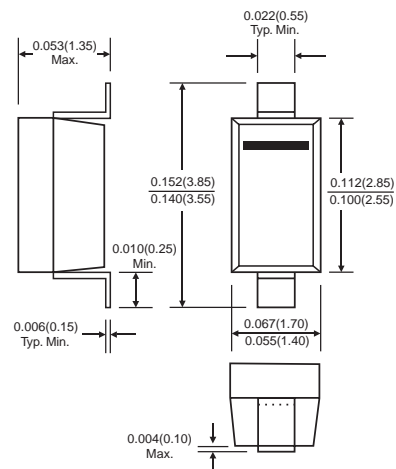




SOD-123



Dimensions in inches and (millimeters)

Features

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

MARKING: B5817W: SJ
B5818W:SK
B5819W: SL

Maximum Ratings and Electrical Characteristics, Single Diode @ $T_A=25^{\circ}\text{C}$

Parameter	Symbol	B5817W	B5818W	B5819W	Unit
Non-Repetitive Peak reverse voltage	V_{RM}	20	30	40	V
Peak repetitive Peak reverse voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	20	30	40	V
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	250			mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	500			K/W
Storage temperature	T_{STG}	-65~+150			$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Reverse breakdown voltage	$V_{(BR)}$	$I_R=1\text{mA}$ B5817W B5818W B5819W	20 30 40		V
Reverse voltage leakage current	I_R	$V_R=20\text{V}$ B5817W $V_R=30\text{V}$ B5818W $V_R=40\text{V}$ B5819W		1	mA
Forward voltage	V_F	B5817W $I_F=1\text{A}$		0.45	V
		B5817W $I_F=3\text{A}$		0.75	V
		B5818W $I_F=1\text{A}$		0.55	V
		B5818W $I_F=3\text{A}$		0.875	V
		B5819W $I_F=1\text{A}$		0.6	V
		B5819W $I_F=3\text{A}$		0.9	V
Diode capacitance	C_D	$V_R=4\text{V}$, $f=1\text{MHz}$		120	pF

Typical Characteristics

Fig. 1 - Forward Current Derating Curve

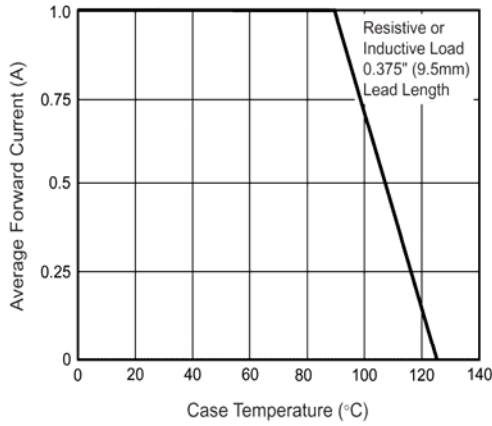


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

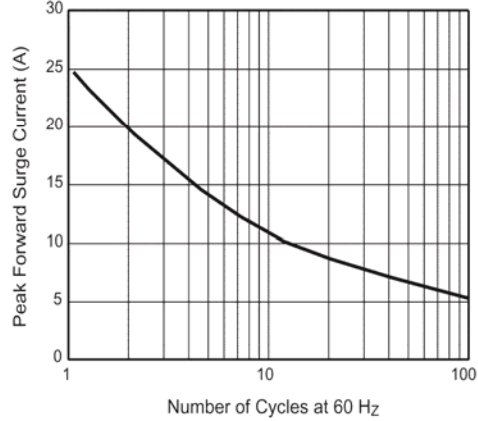


Fig. 3 - Typical Instantaneous Forward Characteristics

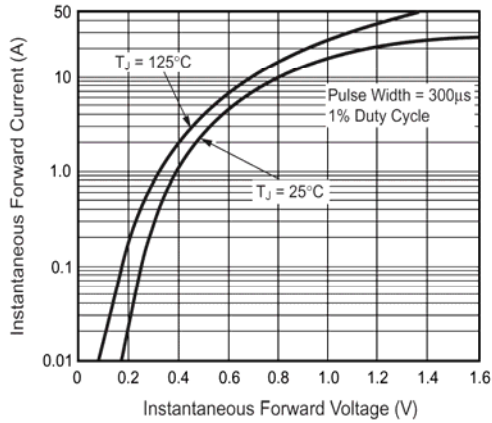


Fig. 4 - Typical Reverse Characteristics

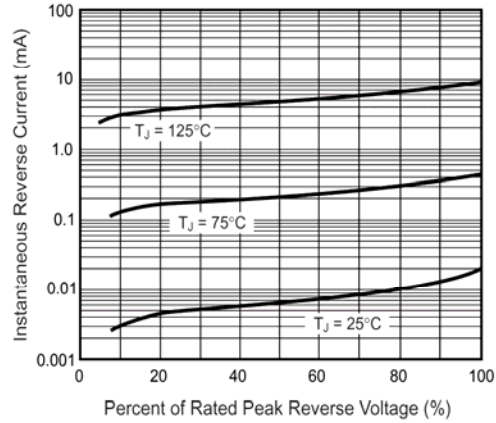


Fig. 5 - Typical Junction Capacitance

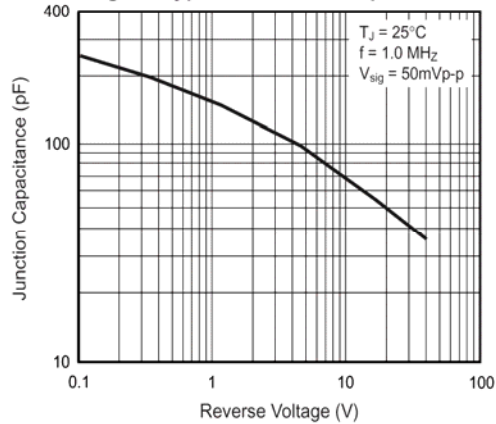


Fig. 6 - Typical Transient Thermal Impedance

