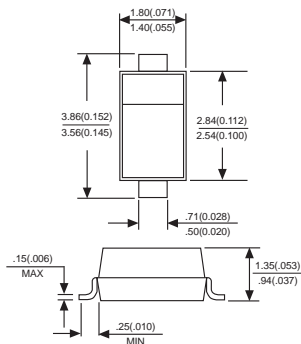




B5817W THRU B5819W

SCHOTTKY DIODE

SOD-123



Dimensions in millimeters and (inches)

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

Marking: B5817W: SJ, B5818W: SK, B5819W: SL

Maximum ratings and electrical characteristics, Single diode @ $T_A=25^\circ\text{C}$

PARAMETER	SYMBOLS	B5817W	B5818W	B5819W	UNITS
Peak repetitive peak reverse voltage	V_{RRM}				
Working peak reverse voltage	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
Repetitive peak forward current	I_{FRM}		1.5		A
Power dissipation	P_d		250		mW
Thermal resistance junction to ambient	$R_{\theta JA}$		500		K/W
Storage temperature	T_{STG}		-50 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	$I_R=1\text{mA}$	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	V	$I_F=1\text{A}$ $I_F=3\text{A}$	B5817W	
			0.75				B5818W
			0.55				
		0.875				B5819W	
		0.6					
		0.9					
Diode capacitance	C_D		120	pF	$V_R=4\text{V}, f=1.0\text{MHz}$		

RATINGS AND CHARACTERISTIC CURVES B5817W THRU B5819W

FIG. 1- FORWARD CURRENT DERATING CURVE

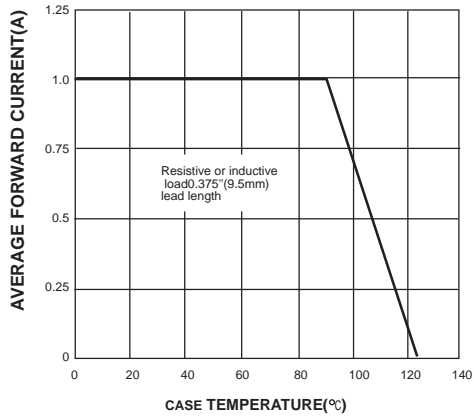


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

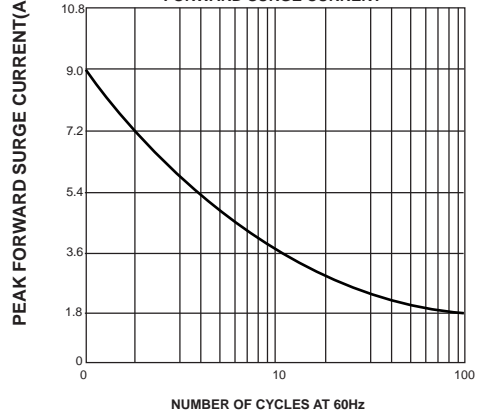


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

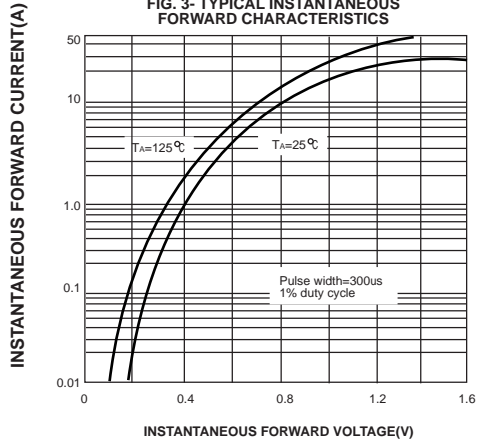


FIG. 4- TYPICAL REVERSE CHARACTERISTICS

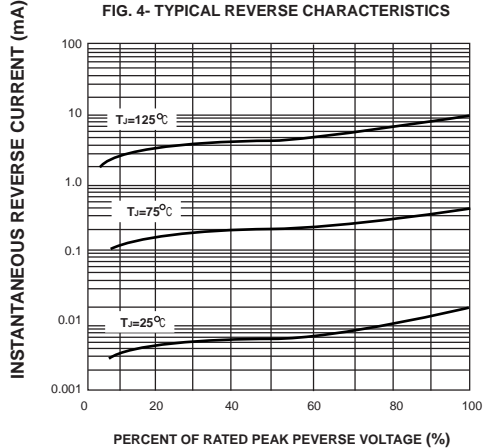


FIG. 5- TYPICAL JUNCTION CAPACITANCE

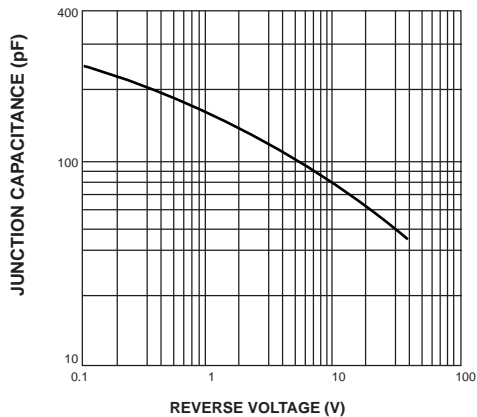


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

