



DESCRIPTION

The B5817W~B5819W are available in SOD-123 package

FEATURES

- For use in low voltage, high frequency inverters
- Freewheeling, and polarity protection applications
- Available in SOD-123 package

ORDERING INFORMATION

Package Type	Part Number
SOD-123	B5817W
	B5818W
	B5819W
Note	SPQ: 3,000pcs/Reel
AiT provides all RoHS Compliant Products	

MECHANICAL DATA

Case: Molded plastic body

Terminals: Plated leads solderable per
MIL-STD-750, Method 2026

Polarity: Polarity symbols marked on case



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Single diode @ $T_A=25^\circ\text{C}$

Parameter	Symbol	B5817W	B5818W	B5819W	Unit
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	1.0			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			$^\circ\text{C}$
Non-Repetitive Peak Reverse Voltage	V_{RM}	20	30	40	V

ELECTRICAL RATINGS

@ $T_A=25^\circ\text{C}$

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R=1\text{mA}$	B5817W	20		V
			B5818W	30		
			B5819W	40		
Reverse Voltage Leakage Current	I_R	$V_R=20\text{V}$	B5817W		1	mA
		$V_R=30\text{V}$	B5818W			
		$V_R=40\text{V}$	B5819W			
Forward Voltage	V_F	$I_F=1\text{A}$ $I_F=3\text{A}$	B5817W		0.45 0.75	V
			B5818W		0.55 0.875	
			B5819W		0.6 0.9	
Diode Capacitance	C_D	$V_R=4\text{V}, f=1.0\text{MHz}$			120	pF



TYPICAL CHARACTERISTICS

Figure. 1 Forward Current Derating Curve

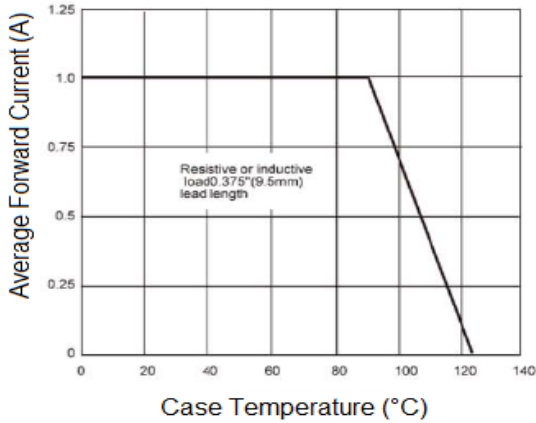


Figure. 3 Typical Instantaneous Forward Characteristic

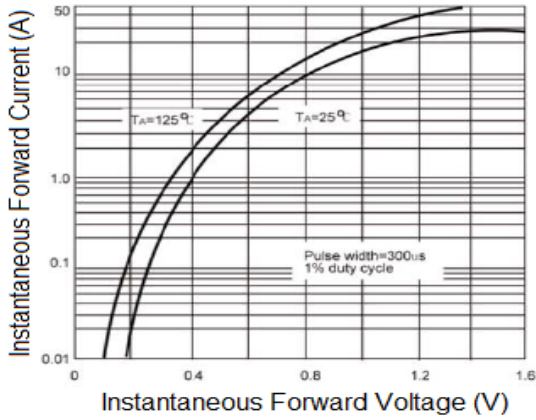


Figure. 5 Typical Junction Capacitance

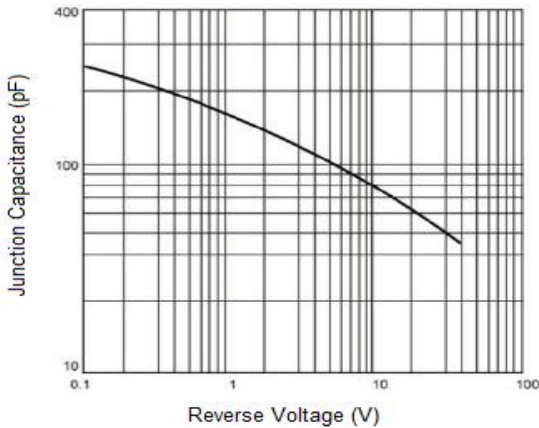


Figure. 2 Maximum Non-Repetitive Peak Forward Surge Current

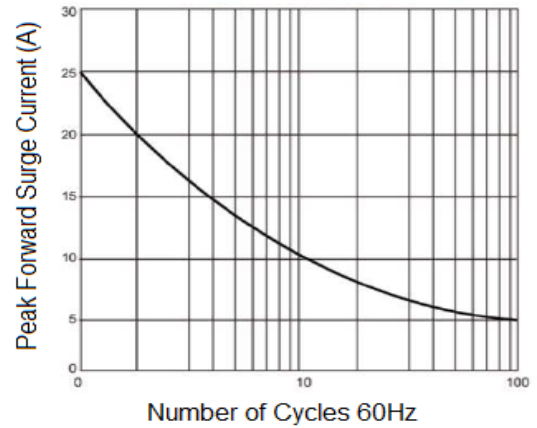


Figure. 4 Typical Reverse Characteristics

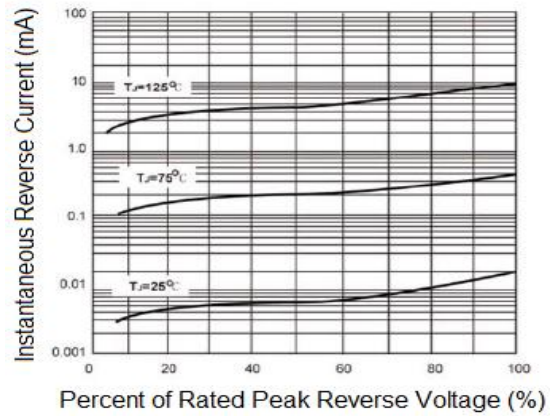
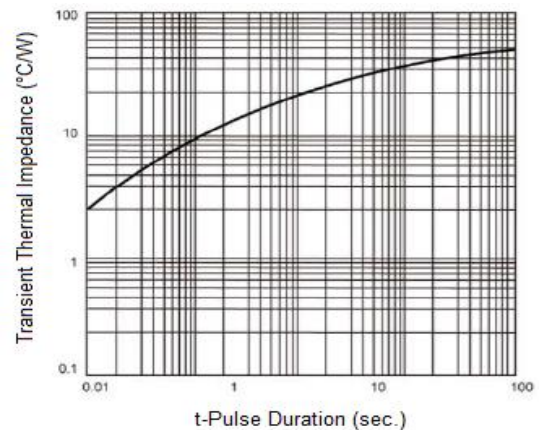


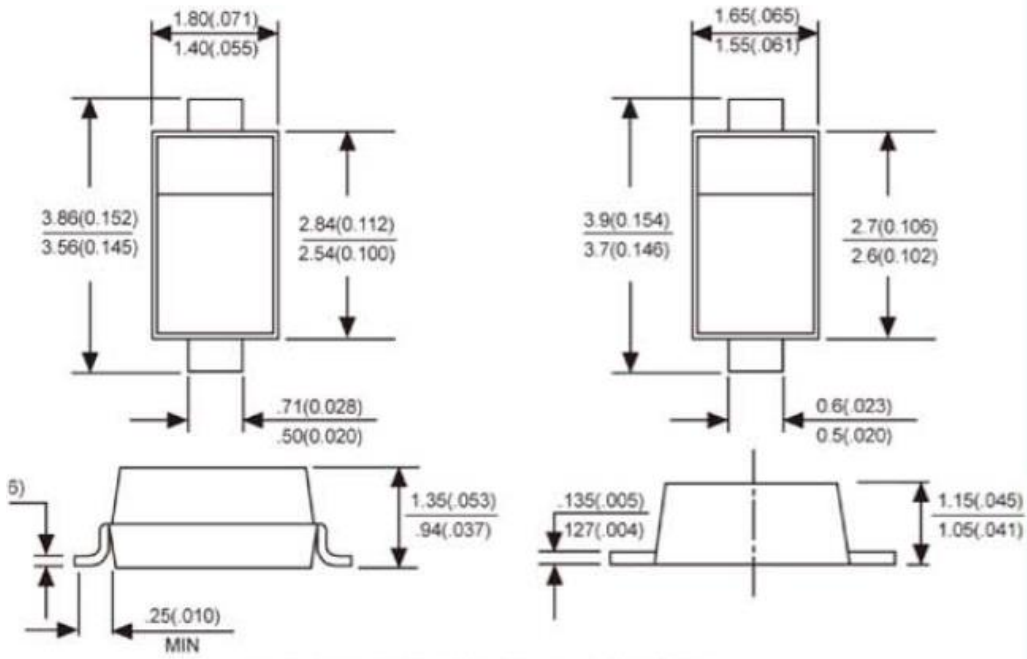
Figure. 6 Typical Transient Thermal Impedance





PACKAGE INFORMATION

Dimension in SOD-123 (Unit: mm)



Dimensions in millimeters and (inches)



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