



## 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

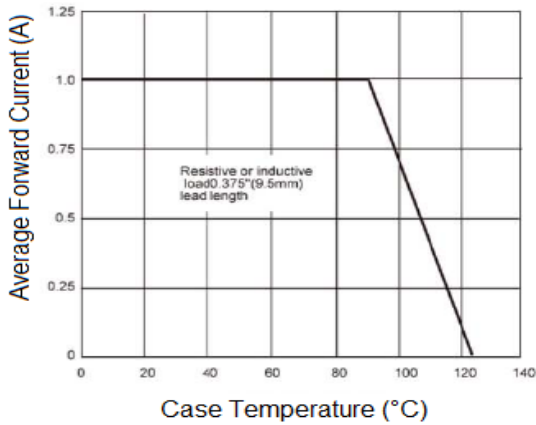


Figure. 3 Typical Instantaneous Forward Characteristic

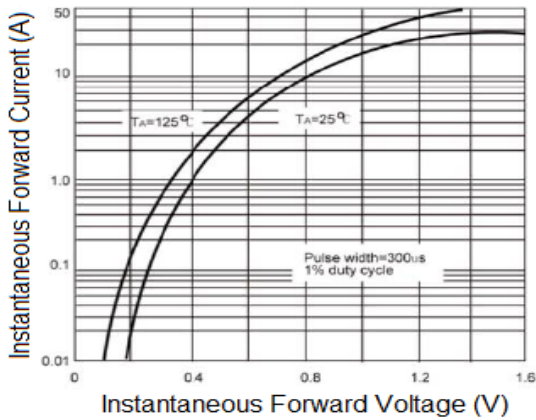


Figure. 5 Typical Junction Capacitance

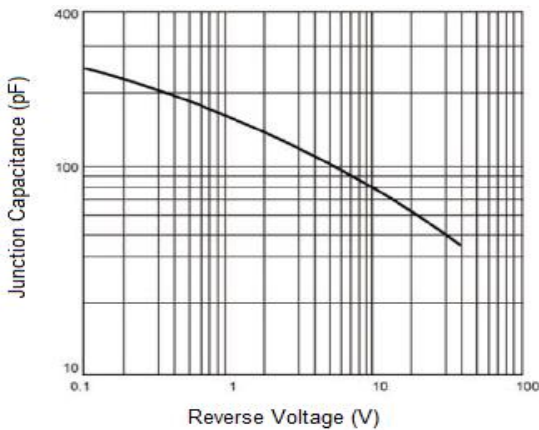


Figure. 2 Maximum Non-Repetitive Peak Forward Surge Current

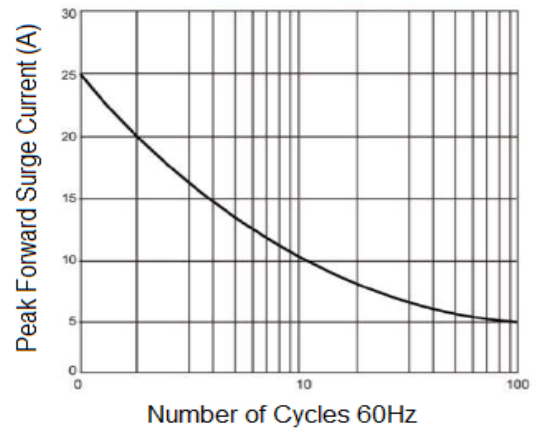


Figure. 4 Typical Reverse Characteristics

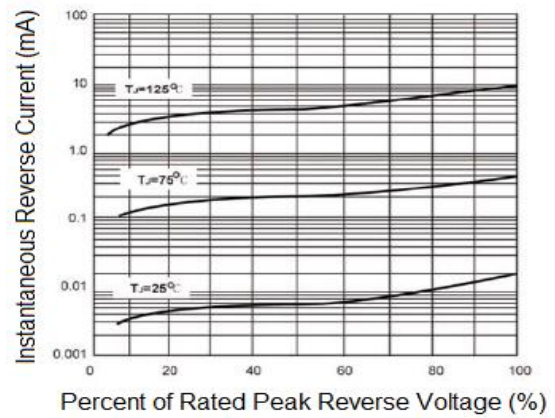
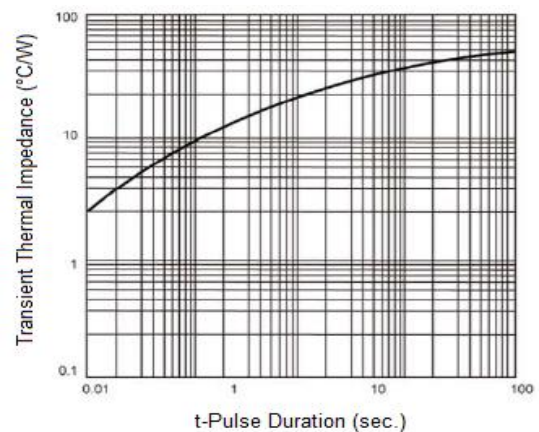


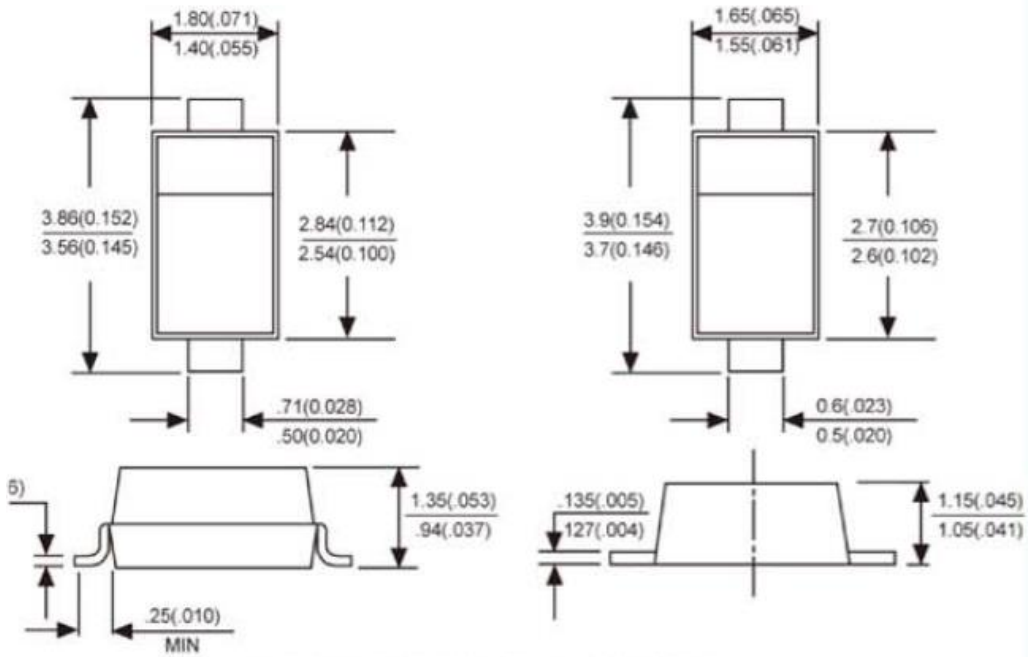
Figure. 6 Typical Transient Thermal Impedance





## PACKAGE INFORMATION

Dimension in SOD-123 (Unit: mm)



Dimensions in millimeters and (inches)



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