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°C

Parameter	Symbol	B5817W	B5818W	B5819W	Unit
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	1.0			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			°C
Non-Repetitive Peak Reverse Voltage	V_{RM}	20	30	40	V

ELECTRICAL RATINGS

@ T_A=25°C

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

TYPICAL CHARACTERISTICS

Figure. 1 Forward Current Derating Curve

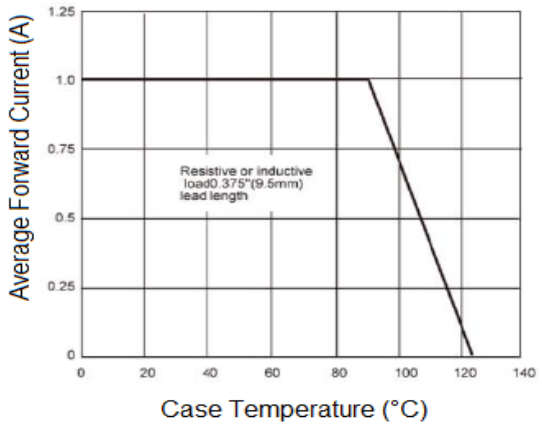


Figure. 2 Maximum Non-Repetitive Peak Forward Surge Current

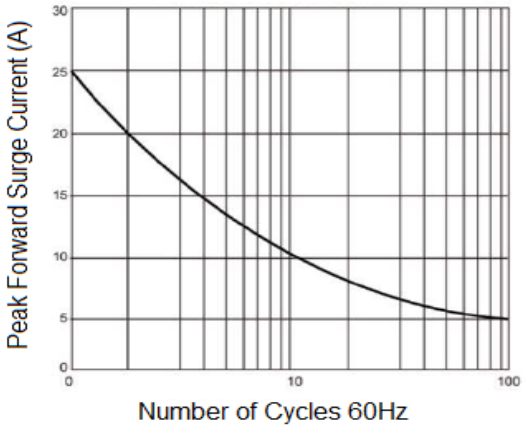


Figure. 3 Typical Instantaneous Forward Characteristic

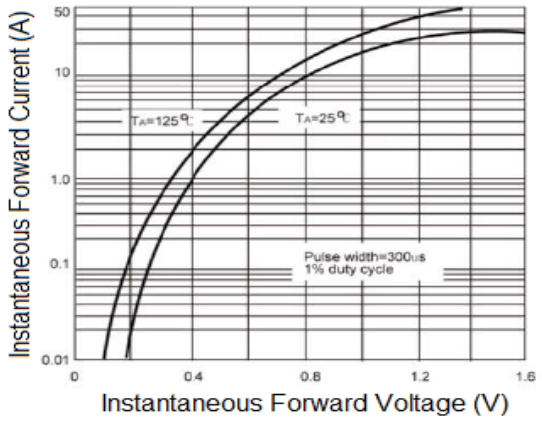


Figure. 4 Typical Reverse Characteristics

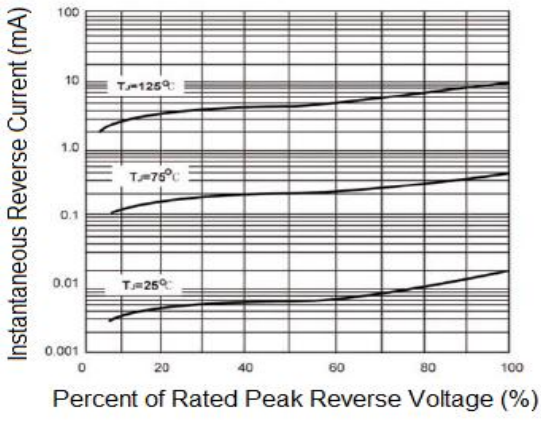


Figure. 5 Typical Junction Capacitance

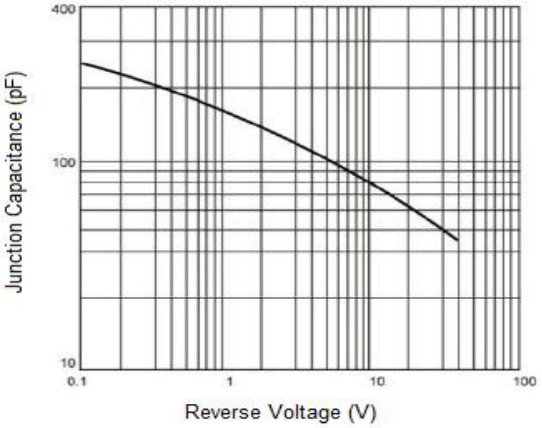
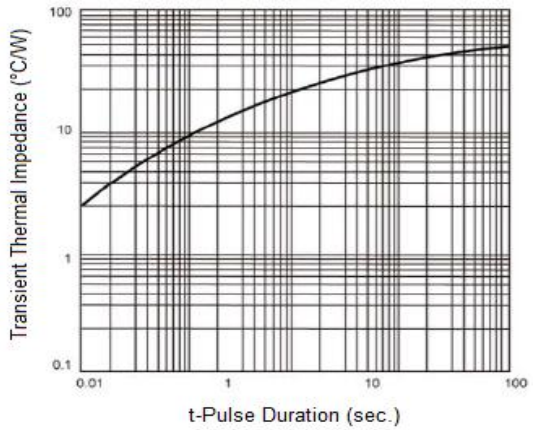
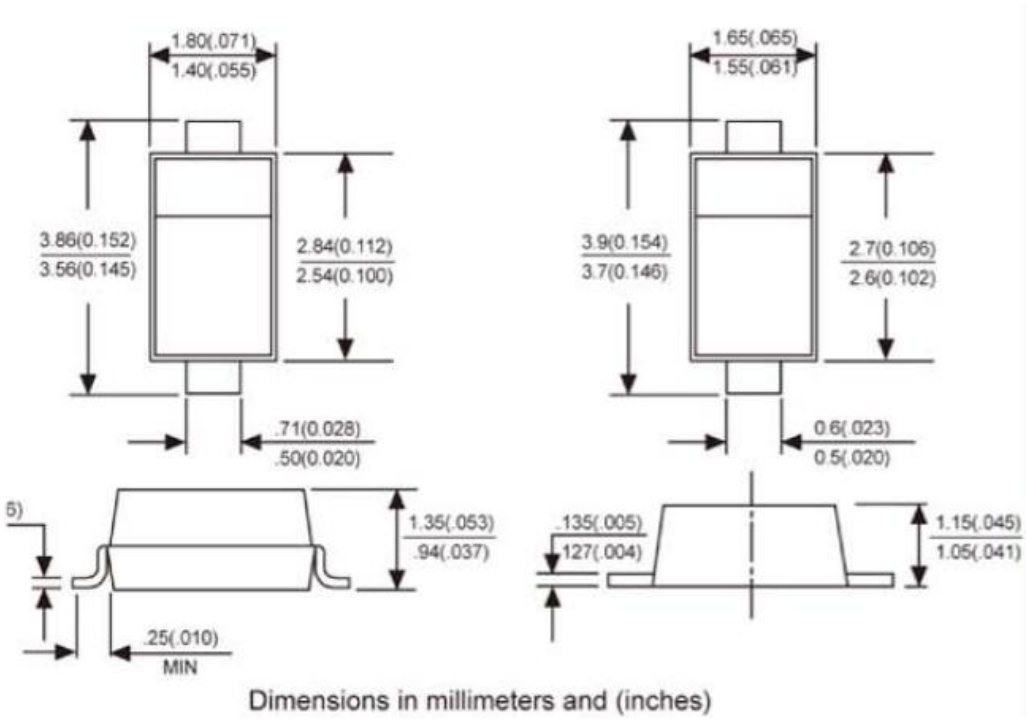


Figure. 6 Typical Transient Thermal Impedance



PACKAGE INFORMATION

Dimension in SOD-123 (Unit: mm)



Dimensions in millimeters and (inches)

IMPORTANT NOTICE

AiT Components (AiT) reserves the right to make changes to any its product, specifications, to discontinue any integrated circuit product or service without notice, and advises its customers to obtain the latest version of relevant information to verify, before placing orders, that the information being relied on is current.

AiT Components' integrated circuit products are not designed, intended, authorized, or warranted to be suitable for use in life support applications, devices or systems or other critical applications. Use of AiT products in such applications is understood to be fully at the risk of the customer. As used herein may involve potential risks of death, personal injury, or servere property, or environmental damage. In order to minimize risks associated with the customer's applications, the customer should provide adequate design and operating safeguards.

AiT Components assumes to no liability to customer product design or application support. AiT warrants the performance of its products of the specifications applicable at the time of sale.