



DESCRIPTION

The B5817WS-B5819WS are available in SOD-323 Package

ORDERING INFORMATION

Package Type	Part Number
SOD-323	B5817WS
	B5818WS
	B5819WS
Note	SPQ: 3,000pcs/Reel
AiT provides all RoHS Compliant Products	

FEATURES

- Extremely low V_F
- Low stored charge, majority carrier conduction
- Low power loss/high efficient
- Available in SOD-323 Package

APPLICATION

- For Use in Low Voltage, High Frequency Inverters. Free Wheeling, And Polarity Protection Applications.

PIN DESCRIPTION





ABSOLUTE MAXIMUM RATINGS

@ T_A=25°C, unless otherwise specified.

Parameter	Symbol	B5817WS	B5818WS	B5819WS	Unit
Non-Repetitive Peak Reverse Voltage	V _{RM}	20	30	40	V
Peak Repetitive Peak Reverse Voltage	V _{RRM}				
Working Peak Reverse Voltage	V _{RWM}	20	30	40	V
DC Reverse 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}	20			A
Power Dissipation	P _D	250			mW
Thermal Resistance Junction to Ambient	R _{θJA}	500			°C/W
Storage Temperature	T _{STG}	-65 ~+150			°C

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

ELECTRICAL CHARACTERISTICS

@ T_A=25°C, unless otherwise specified.

Parameter	Symbol	Condition	Min	Max	Unit
Reverse Breakdown Voltage	V _(BR)	I _R =1mA	B5817WS	20	V
			B5818WS	30	
			B5819WS	40	
Reverse Voltage Leakage Current	I _R	V _R =20V	B5817WS	-	mA
		V _R =30V	B5818WS		
		V _R =40V	B5819WS		
Forward Voltage	V _F	I _F =1A I _F =3A	B5817WS	-	0.45 0.75
			B5818WS	-	0.55 0.875
			B5819WS	-	0.6 0.9
Diode Capacitance	C _D	V _R =4V, f=1MHz		-	120 pF



TYPICAL CHARACTERISTICS

@ $T_A=25^{\circ}\text{C}$, unless otherwise specified.

Figure. 1 Forward Current Derating Curve

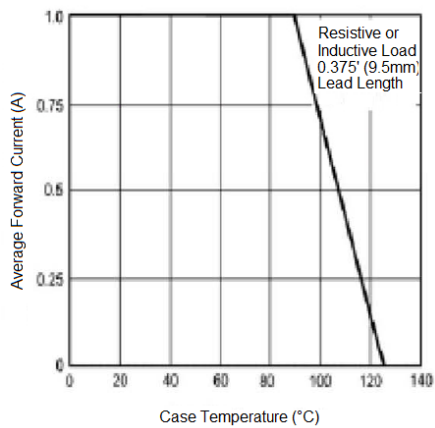


Figure. 3 Typical Instantaneous Forward Characteristics

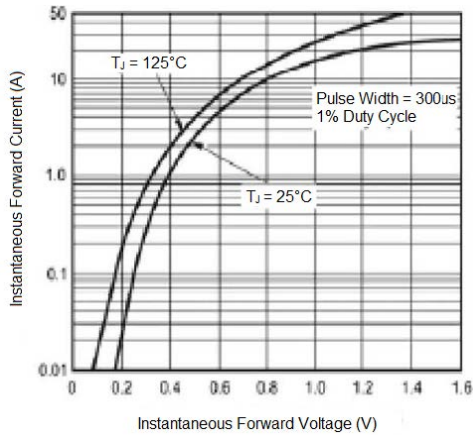


Figure. 5 Typical Junction Capacitance

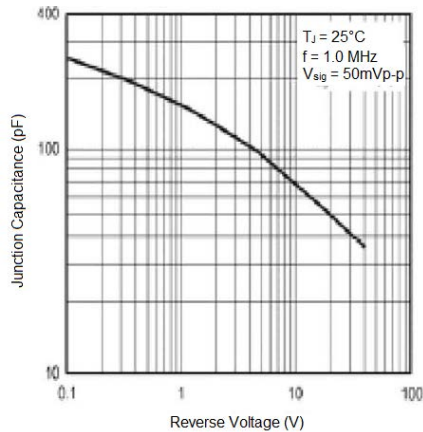


Figure. 2 Maximum Non-Repetitive Peak Forward Surge Current

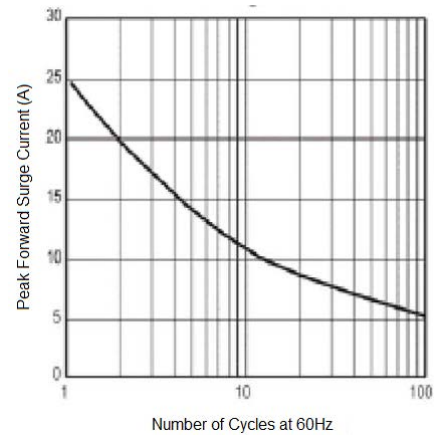


Figure. 4 Typical Reverse Characteristics

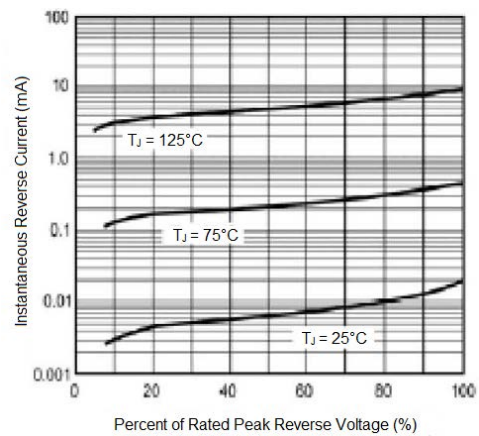
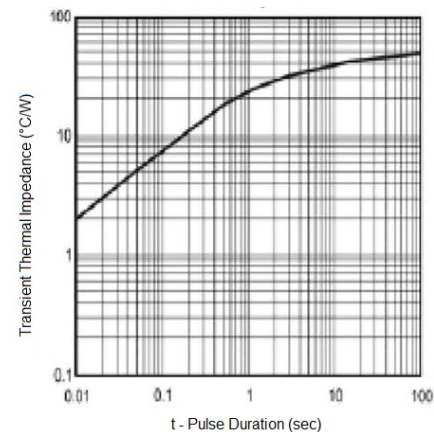


Figure. 6 Typical Transient Thermal Impedance

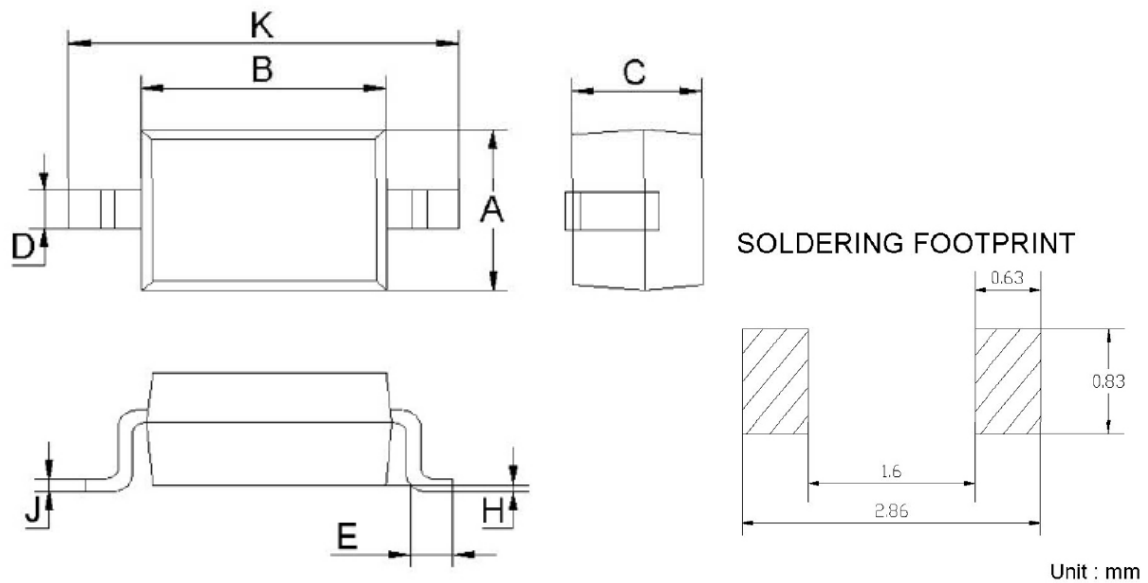




PACKAGE INFORMATION

Dimension in SOD-323 (Unit: mm)

Plastic surface mounted package



DIM	MIN	MAX
A	1.275	1.325
B	1.675	1.725
C	0.9 Typ.	
D	0.25	0.35
E	0.27	0.37
H	0.02	0.1
J	0.1 Typ.	
K	2.6	2.7



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