B5817WS THRU B5819WS

Reverse Voltage 20-40 Volts Forward Current - 1.0 Ampere

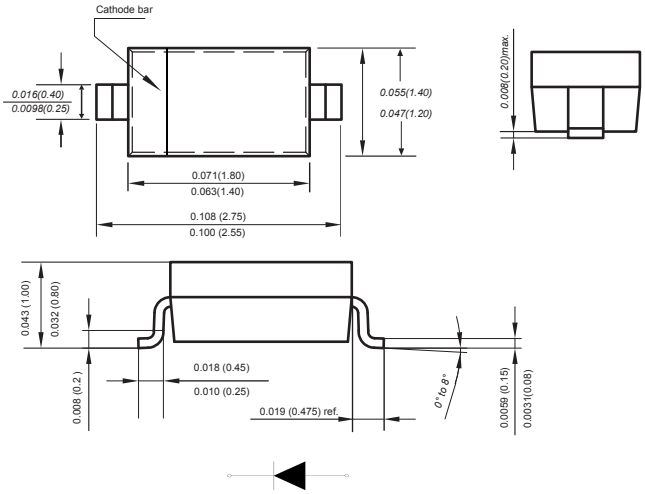
SCHOTTKY BARRIER

RoHS COMPLIANT

Features

- For use in low voltage, high frequency inverters
- Free wheeling, and polanty protection applications

SOD-323



Dimensions in inches and (millimeters)

Mechanical Data

Case : JEDEC SOD-323 molded plastic body Terminals : Plated leads solderable per MIL-STD-750, Method 2026
Polarity : Polarity symbols marked on case
Weight : 0.00019ounce, 0.00548grams
Marking: B5817WS:SJ, B5818WS:SK, B5819WS:SL

Absolute Maximum Ratings at 25 °C

PARAMETER	SYMBOLS	B5817WS	B5818WS	B5819WS	UNITS
Peak repetitive peak reverse voltage Working peak 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			A
Peak forward surge current at 8.3ms	I_{FSM}	25			A
Repetitive peak forward current	I_{FRM}	625			mA
Power dissipation	Pd	500			mW
Thermal resistance junction to ambient	$R_{\Theta JA}$	200			°C/W
Storage temperature	T_{STG}	-55 to +125			°C
Non-Repetitive peak reverse voltage	V_{RM}	20	30	40	V

Characteristics at Ta= 25 °C

PARAMETER		SYMBOLS	Min.	Max.	Unit	Test conditions	
Reverse breakdown voltage		$V_{(BR)}$	20 30 40		V V V	I_R=1mA I_R=10mA	B5817WS B5818WS B5819WS
Reverse voltage leakage current	TA = 25°C TA = 100°C	I_R		1 10	mA	V_R=20V V_R=30V V_R=40V	B5817WS B5818WS B5819WS
Forward voltage		V_F		0.45 0.75	V	I_F=1A I_F=3A	B5817WS
				0.55 0.875	V		B5818WS
				0.6 0.9	V		B5819WS
Diode capacitance		C_D		110	pF	V_R=4V,f=1.0MHz	

Typical Characterisitics

Fig.1 Forward Current Derating Curve

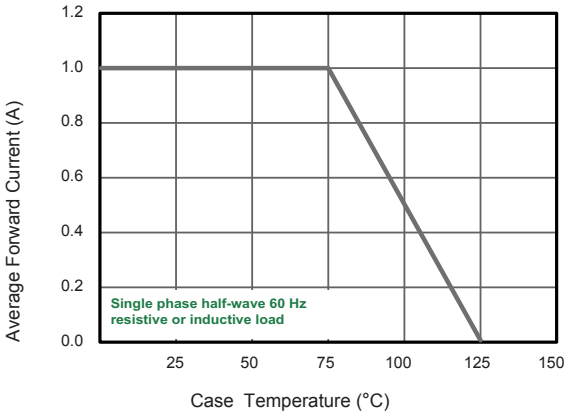


Fig.2 Typical Reverse Characteristics

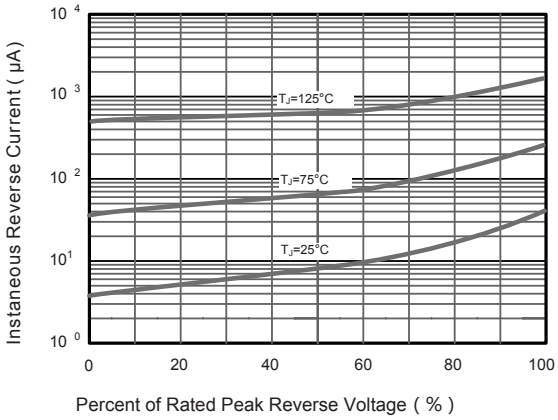


Fig.3 Typical Forward Characteristic

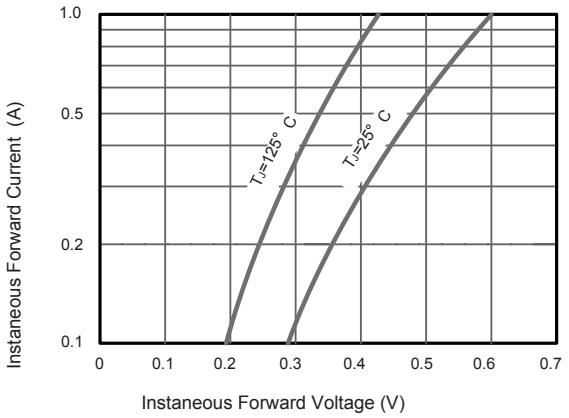


Fig.4 Typical Junction Capacitance

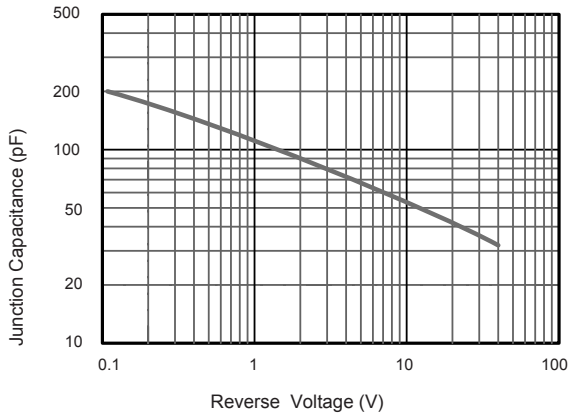
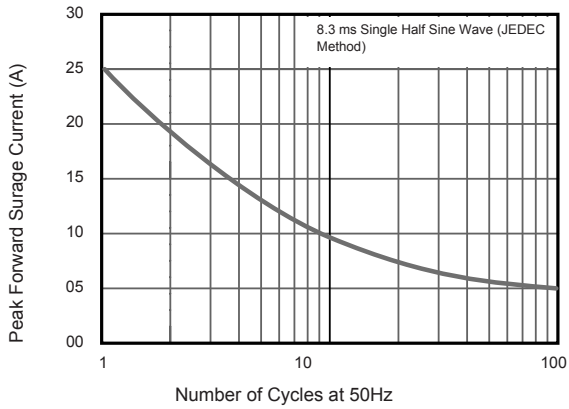
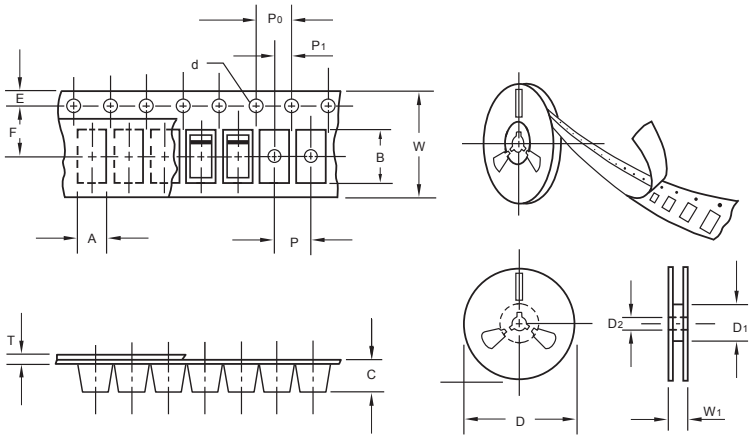


Fig.5 Maximum Non-Repetitive Peak Forward Surage Current



The curve above is for reference only.

Packing information



unit:mm

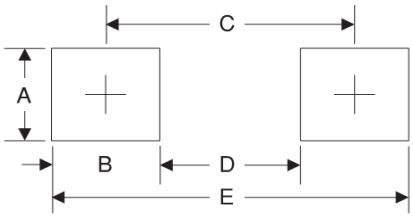
Item	Symbol	Tolerance	SOD-323
Carrier width	A	0.1	2.1
Carrier length	B	0.1	4.0
Carrier depth	C	0.1	1.60
Sprocket hole	d	0.05	1.55
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D_1	min	50.0
Feed hole diameter	D_2	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P_0	0.1	4.00
Embossment center	P_1	0.1	2.00
Overall tape thickness	T	0.1	0.25
Tape width	W	0.3	8.15
Reel width	W_1	1.0	10.5

Note:Devices are packed in accor dance with EIA standar RS-481-A and specifications listed above.

Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA, (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SOD-323	7"	3,000	4.0	45,000	210*208*203	178	430*430*235	180,000	

Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	0.7	0.028
B	0.7	0.028
C	2.15	0.085
D	1.8	0.071
E	2.85	0.112