



B5817WS THRU B5819WS

Reverse Voltage 20-40 Volts Forward Current - 1.0 Ampere

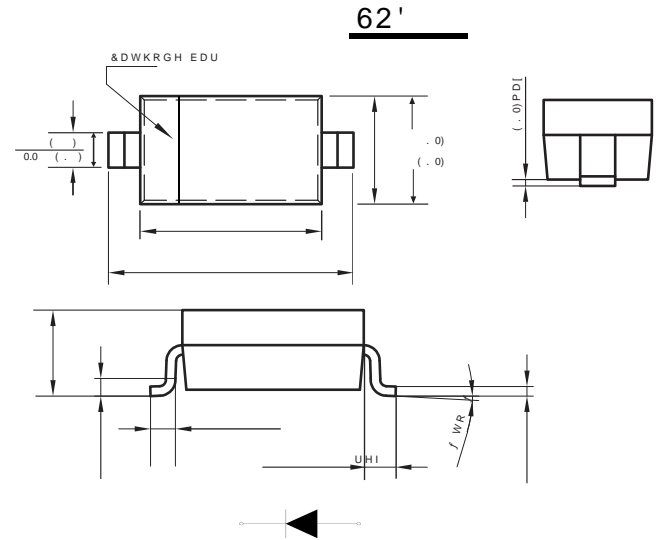
SCHOTTKY BARRIER

Features

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

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 : 0.0007 ounce, 0.02 grams Marking:
 B5817WS:SJ, B5818WS:SK, B5819WS:SL



Dimensions in inches and (millimeters)

Absolute Maximum Ratings at 25 °C

PARAMETER	SYMBOLS	B5817WS	B5818WS	B5819WS	UNITS
Peak repetitive peak reverse voltage	V_{RRM}				V
Working peak	V_{RWM}	20	30	40	
DC Blocking 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 at 8.3ms	I_{FSM}		25		A
Repetitive peak forward current	I_{FRM}		625		mA
Power dissipation	P_d		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		V	$I_R=1mA$ B5817WS	
		30		V	$I_R=10mA$ B5818WS	
		40		V	B5819WS	
Reverse voltage leakage current	I_R		1	mA	$V_R=20V$ B5817WS	
					$V_R=30V$ B5818WS	
					$V_R=40V$ B5819WS	
Forward voltage	V_F		0.45	V	$I_F=1A$	
			0.75	V		B5817WS
			0.55	V		B5818WS
		0.875	V	B5819WS		
Diode capacitance	C_D		120	pF	$V_R=4V, f=1.0MHz$	



B5817WS THRU B5819WS

Reverse Voltage 20-40 Volts Forward Current - 1.0 Ampere

Typical Characteristics

Fig.1 Forward Current Derating Curve

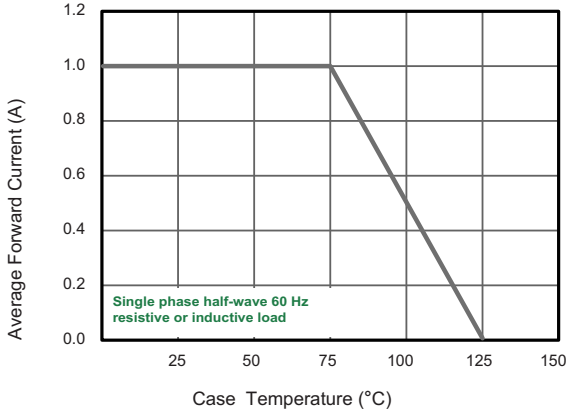


Fig.2 Typical Reverse Characteristics

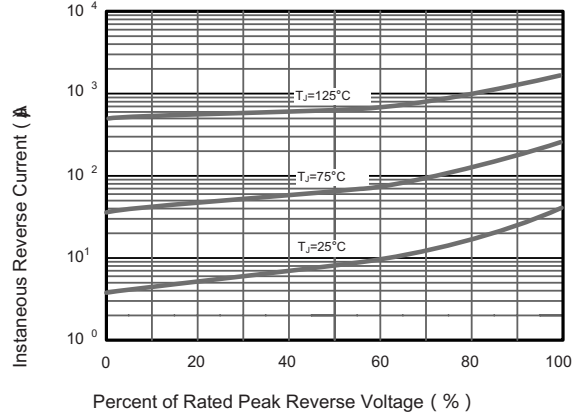


Fig.3 Typical Forward Characteristic

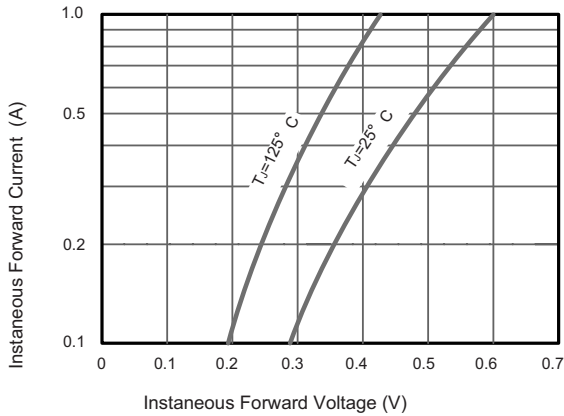


Fig.4 Typical Junction Capacitance

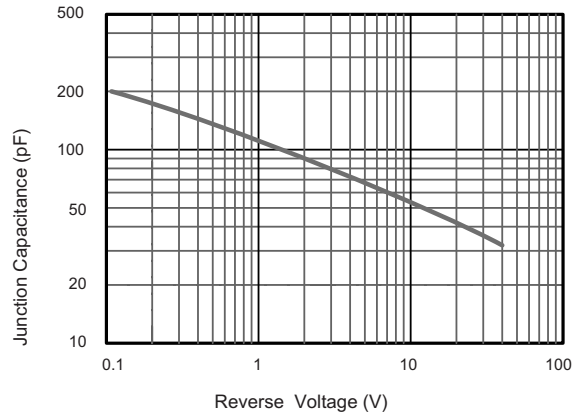
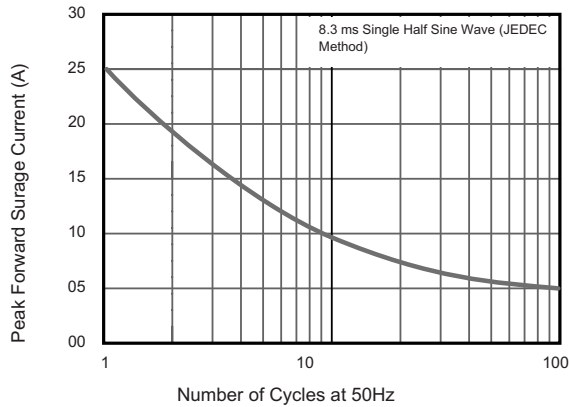


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



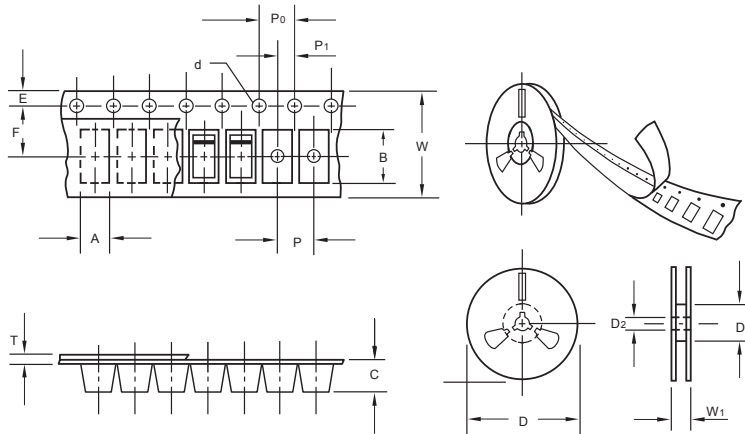
The curve above is for reference only.



B5817WS THRU B5819WS

Reverse Voltage 20-40 Volts Forward Current - 1.0 Ampere

Packing information



unit:mm

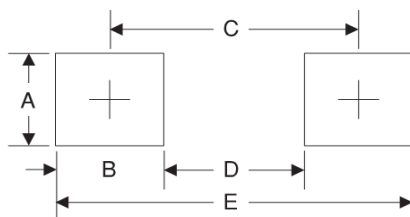
Item	Symbol	Tolerance	SOD-323
Carrier width	A	0.1	2.1
Carrier length	B	0.1	4.0
Carrier depth	C	0.1	1.60
Sprocket hole	d	0.05	1.55
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D ₁	min	50.0
Feed hole diameter	D ₂	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
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 accordance with EIA standard 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

Important Notice and Disclaimer

Microdiode Electronics (Jiangsu) reserves the right to make changes to this document and its products and specifications at any time without notice. Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.

Microdiode Electronics (Jiangsu) makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does Microdiode Electronics (Jiangsu) assume any liability for application assistance or customer product design. Microdiode Electronics (Jiangsu) does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.

No license is granted by implication or otherwise under any intellectual property rights of Microdiode Electronics (Jiangsu).

Microdiode Electronics (Jiangsu) products are not authorized for use as critical components in life support devices or systems without express written approval of Microdiode Electronics (Jiangsu).