



# B5817W THRU B5819W

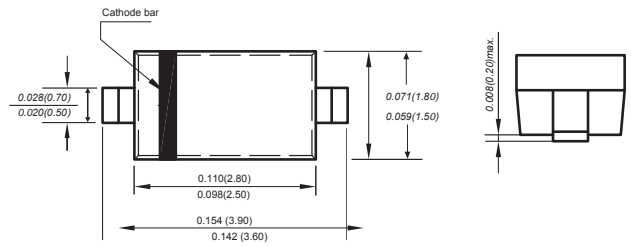
Reverse Voltage 20-40 Volts Forward Current - 1.0 Ampere

## SCHOTTKY DIODES

### Features

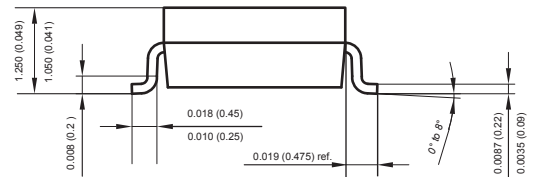
- ◆ Fast switching speed
- ◆ Surface mount package ideally suited
- ◆ for automatic insertion
- ◆ For general purpose switching applications High
- ◆ conductance

SOD-123



### Mechanical Data

Case: JEDEC SOD-123 molded plastic body  
 Terminals: Plated leads solderable per MIL-STD-750, Method 2026  
 Polarity: Polarity symbols marked on case  
 Weight: 0.00056 ounce, 0.016grams  
 Marking: B5817W:SJ, B5818W:SK, B5819W:SL



Dimensions in inches and (millimeters)

### Absolute Maximum Ratings at 25 °C

Parameter	Symbols	B5817W	B5818W	B5819W	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	20	30	40	V
Maximum RMS voltage	$V_{RMS}$	14	21	28	V
Average rectified output current	$I_0$		1		A
Continuous Forward Current	$I_{FRM}$		1.5		A
Non-repetitive Peak Forward Surge Current at 8.3ms	$I_{FSM}$		25		A
Power Dissipation	$P_D$		500		mW
Typical Thermal Resistance <sup>(1)</sup>	$R_{\theta JA}$		160		°C/W
Operating Temperature Range	$T_j$		-55 ~ +125		°C
Storage Temperature Range	$T_{stg}$		-55 ~ +125		°C

(1) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

### Characteristics at Ta= 25 °C

Parameter	Symbols	B5817W	B5818W	B5819W	Units
Reverse Breakdown Voltage at $I_R=1mA$	$V_{(BR)R}$	20	30	40	V
Maximum Forward Voltage at 1A	$V_F$	0.45	0.55	0.60	V
Maximum Forward Voltage at 3A		0.75	0.875	0.90	
Peak Reverse Current at $V_R=20V$ $T_j=25^\circ C$ $T_j=100^\circ C$	$I_R$		1.0 10.0		mA
Typical Junction Capacitance	$C_j$		110		pF
Non-Repetitive peak reverse voltage	$V_{RM}$	20	30	40	V



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## Typical Characteristics

Fig.1 Forward Current Derating Curve

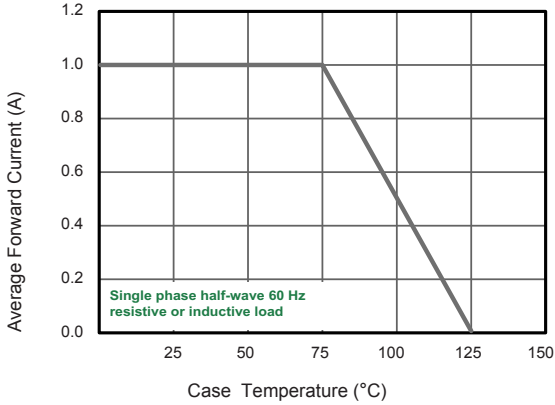


Fig.2 Typical Reverse Characteristics

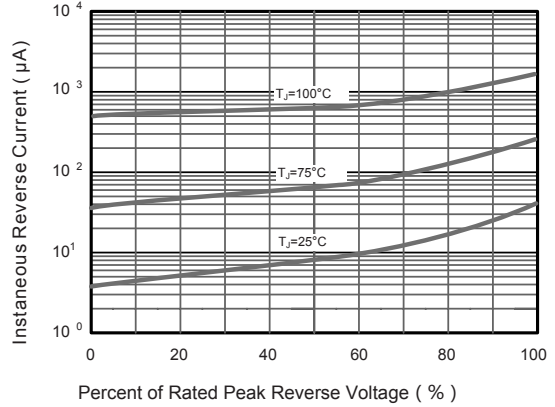


Fig.3 TYPICAL FORWARD VOLTAGE

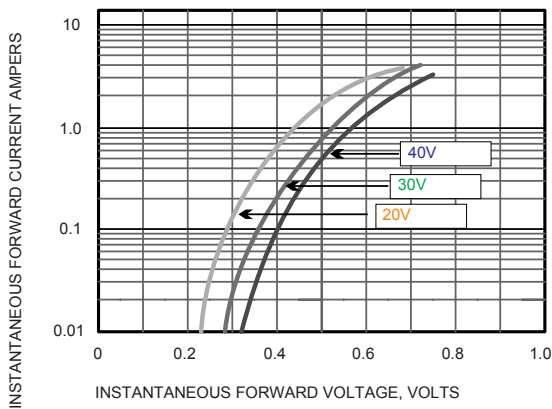


Fig.4 Typical Junction Capacitance

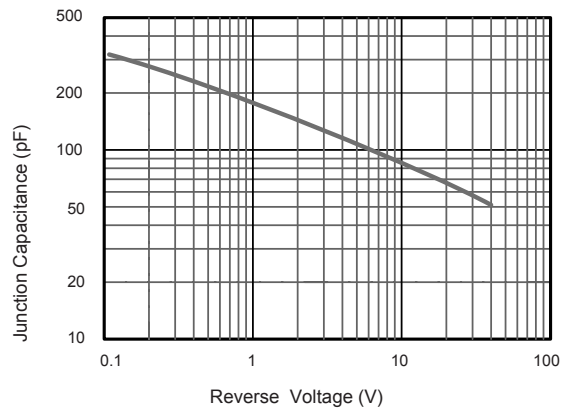


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

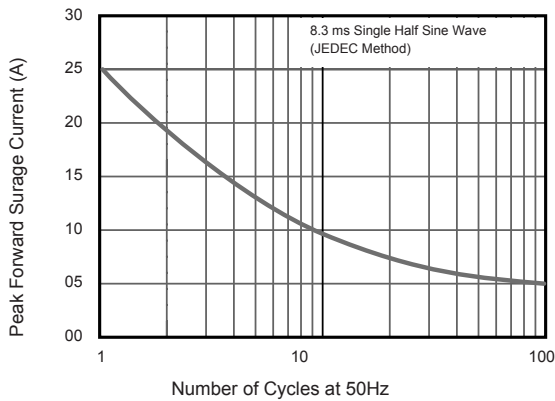
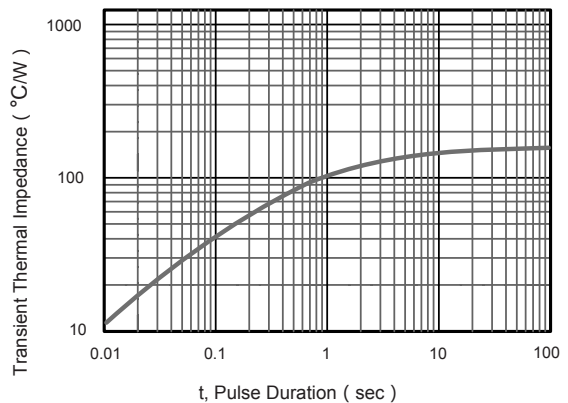


Fig.6 Typical Transient Thermal Impedance



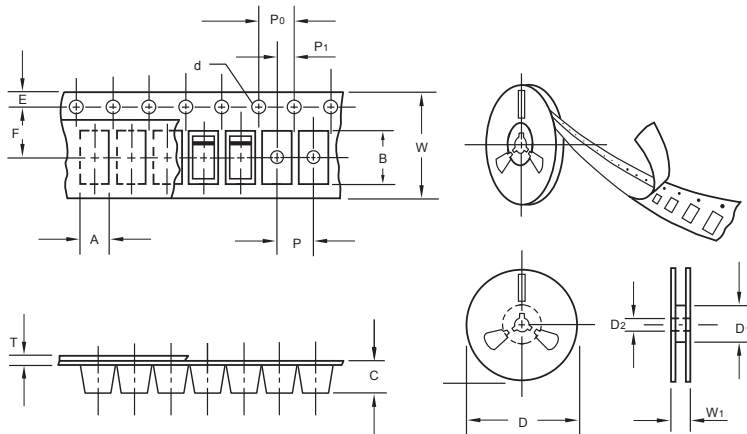
The curve above is for reference only.



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## Packing information



unit:mm

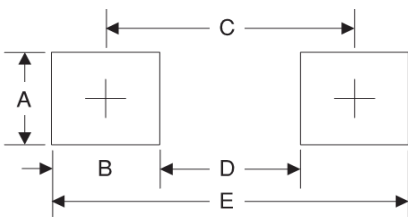
Item	Symbol	Tolerance	SOD-123
Carrier width	A	0.1	2.1
Carrier length	B	0.1	4.0
Carrier depth	C	0.1	1.60
Sprocket hole	d	0.05	1.55
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D <sub>1</sub>	min	50.0
Feed hole diameter	D <sub>2</sub>	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P <sub>0</sub>	0.1	4.00
Embossment center	P <sub>1</sub>	0.1	2.00
Overall tape thickness	T	0.1	0.25
Tape width	W	0.3	8.15
Reel width	W <sub>1</sub>	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-123	7"	3,000	4.0	45,000	210*208*203	178	430*430*235	180,000	9.0

## Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.2	0.047
B	1.2	0.047
C	3.2	0.126
D	2.0	0.079
E	4.4	0.173