

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

Mechanical Data

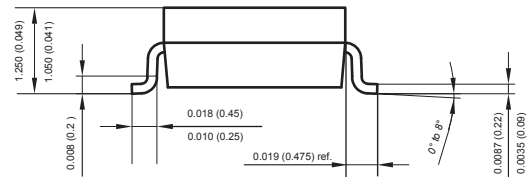
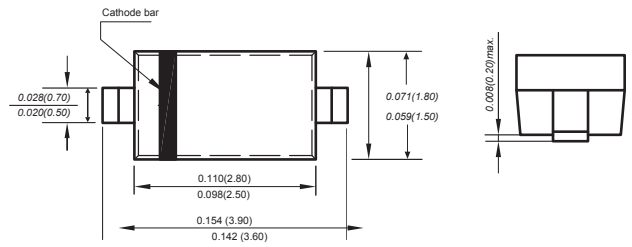
Case : JEDEC SOD-123 molded plastic body
Terminals : Plated leads solderable per MIL-STD-750,
Method 2026

Polarity : Polarity symbols marked on case

Weight : 0.00056 ounce, 0.016grams

Marking: B5817W:SJ, B5818W:SK, B5819W:SL

SOD-123



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 ⁽¹⁾	$R_{\theta JA}$	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 $T_a = 25^\circ\text{C}$

Parameter	Symbols	B5817W	B5818W	B5819W	Units
Reverse Breakdown Voltage at $I_R = 1\text{mA}$	$V_{(BR)R}$	20	30	40	V
Maximum Forward Voltage at 1A at 3A	V_F	0.45 0.75	0.55 0.875	0.60 0.90	V
Peak Reverse Current at $V_R = 20\text{V}$ $T_j = 25^\circ\text{C}$ $T_j = 100^\circ\text{C}$	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

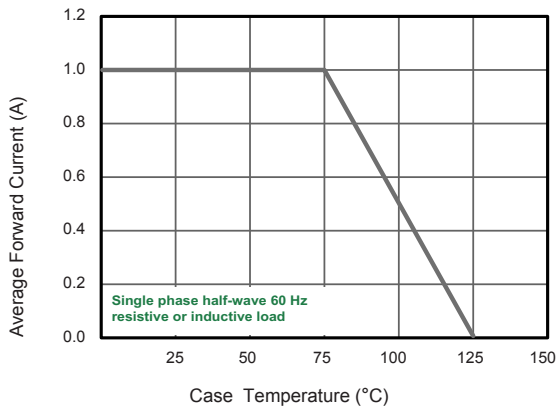


Fig.2 Typical Reverse Characteristics

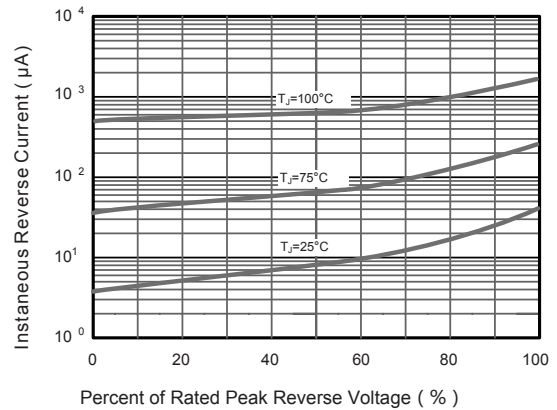


Fig.3 TYPICAL FORWARD VOLTAGE

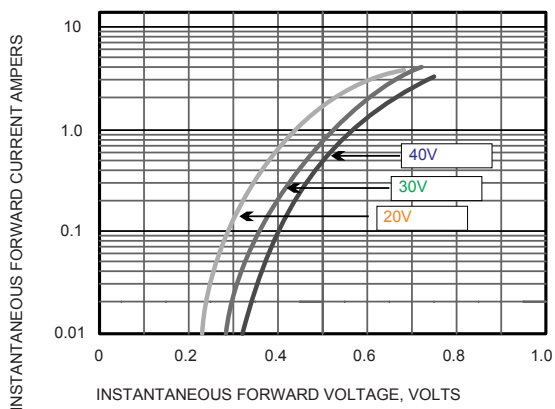


Fig.4 Typical Junction Capacitance

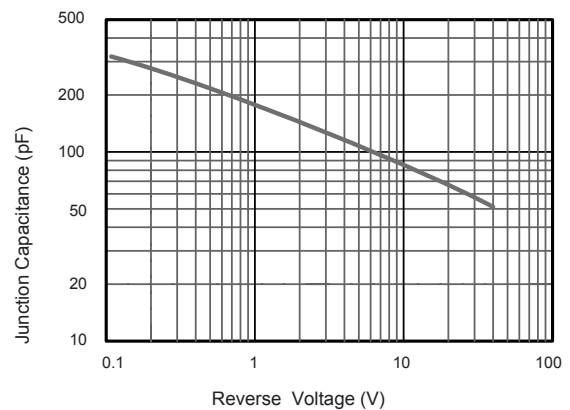


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

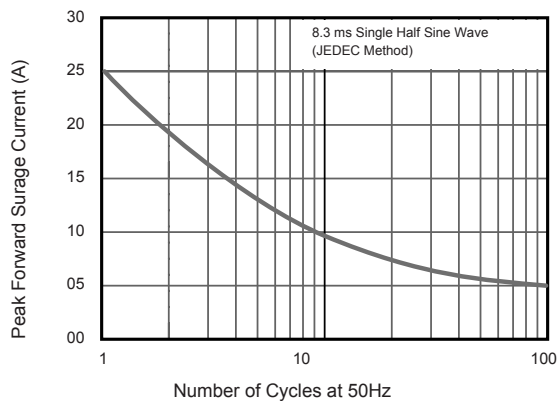
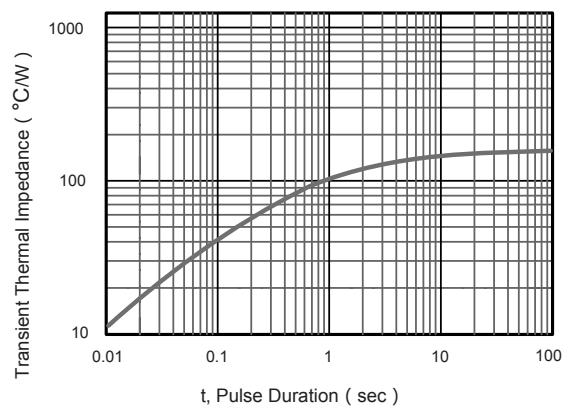


Fig.6 Typical Transient Thermal Impedance

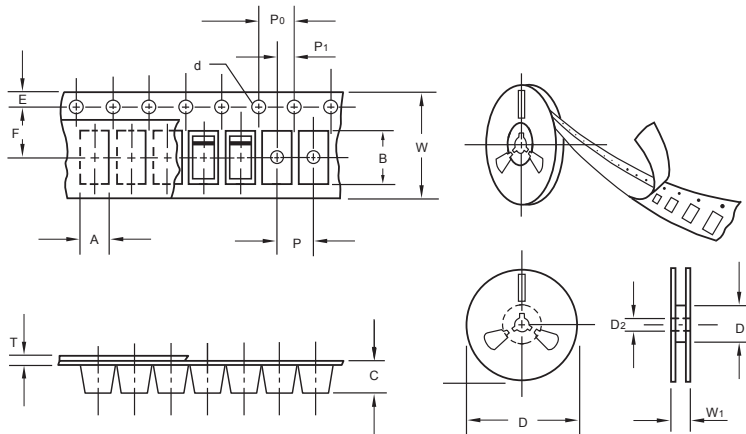


The curve above is for reference only.

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Packing information



unit:mm

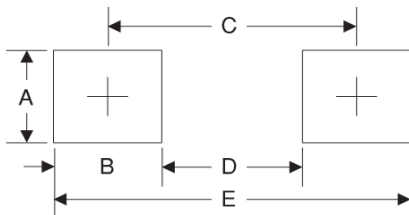
Item	Symbol	Tolerance	SOD-123
Carrier width	A	0.1	2.1
Carrier length	B	0.1	4.0
Carrier depth	C	0.1	1.60
Sprocket hole	d	0.05	1.55
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D ₁	min	50.0
Feed hole diameter	D ₂	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
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-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