B5817W THRU B5819W

Reverse Voltage 20-40 Volts Forward Current - 1.0 Ampere

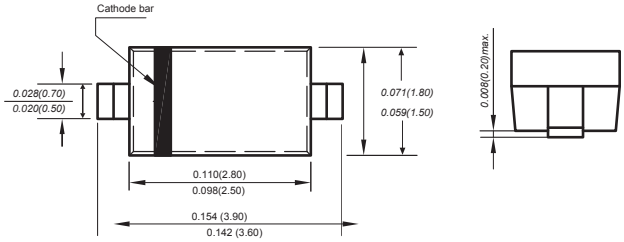
SCHOTTKY DIODES

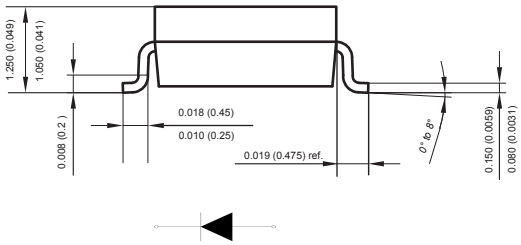
Features

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

SOD-123

RoHS COMPLIANT





Dimensions in inches and (millimeters)

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 : 0.0007 ounce, 0.02 grams
Marking: B5817W:SJ, B5818W:SK, B5819W:SL

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			mA
Continuous Forward Current	I_F	500			mA
Non-reptitive Peak Forward Surge Current at 8.3ms	I_{FSM}	9			A
Total Power Dissipation	P_{tot}	500			mW
Typical Thermal Resistance (1)	$R_{\theta JA}$	200			°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150			°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 BreakdownVoltage 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 2A	V_F	0.75	0.875	0.90	V
Peak Reverse Current at V_R=20V T_j=25°C	I_R	1.0			mA
Typical Junction Capacitance	C_j	120			pF
Non-Repetitive peak reverse voltage	V_{RM}	20	30	40	V

DN:T20519A0

Typical Characterisitics

FIG. 1- FORWARD CURRENT DERATING CURVE

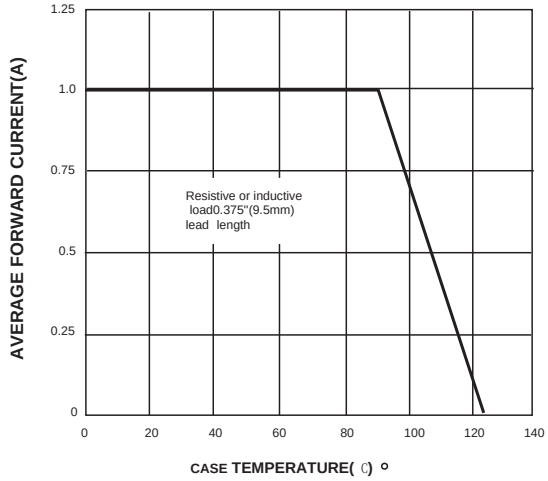


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

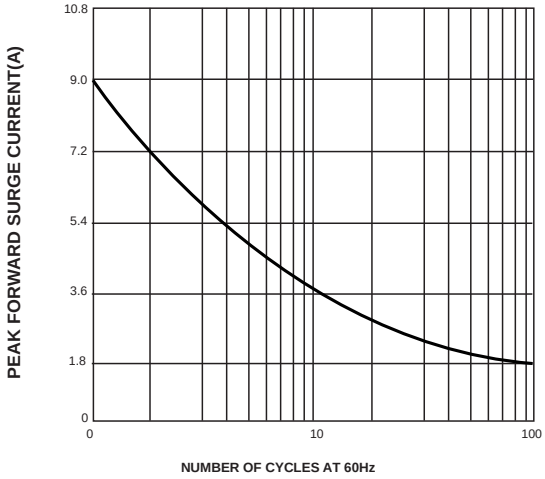


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

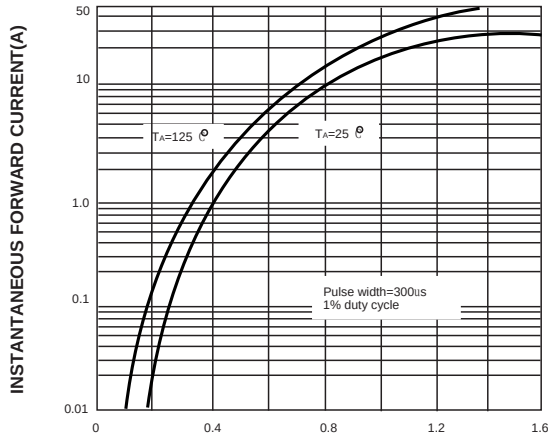
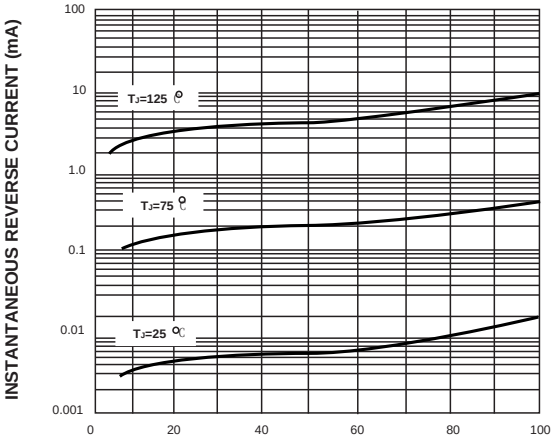
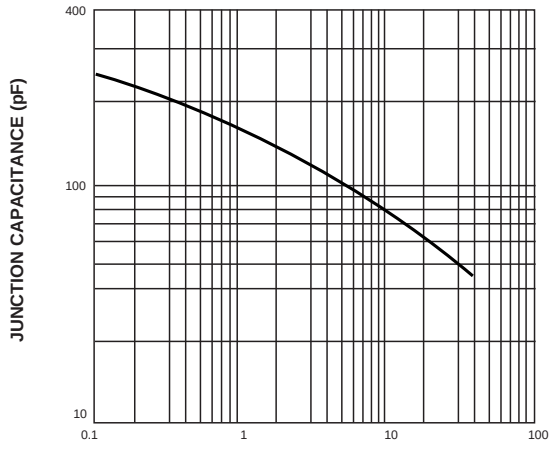


FIG. 5-

FIG. 4- TYPICAL REVERSE CHARACTERISTICS

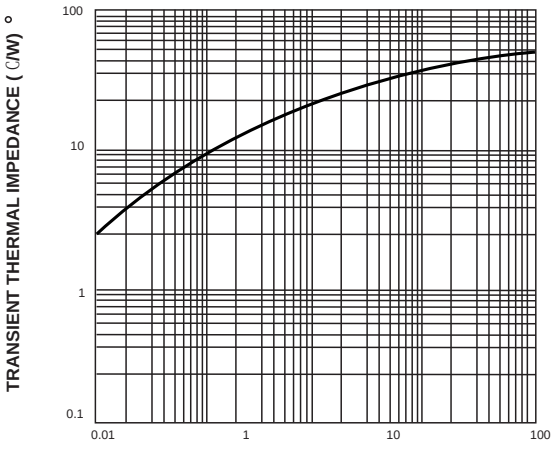


TYPICAL JUNCTION CAPACITANCE



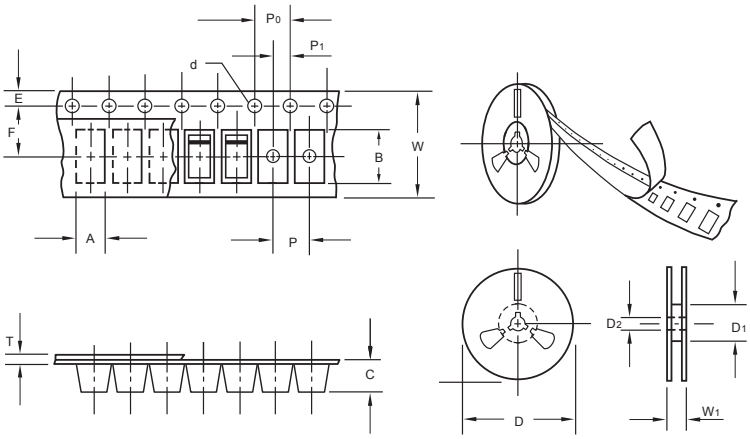
VR,REVERSE VOLTAGE (V)

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The curve above is for reference only.

Packing information



unit:mm

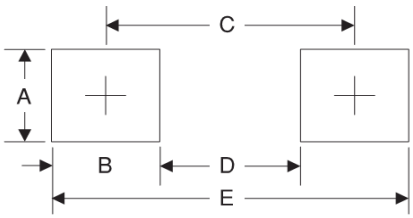
Item	Symbol	Tolerance	SOD-123
Carrier width	A	0.1	2.1
Carrier length	B	0.1	4.0
Carrier depth	C	0.1	1.60
Sprocket hole	d	0.05	1.55
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D_1	min	50.0
Feed hole diameter	D_2	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
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 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-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

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