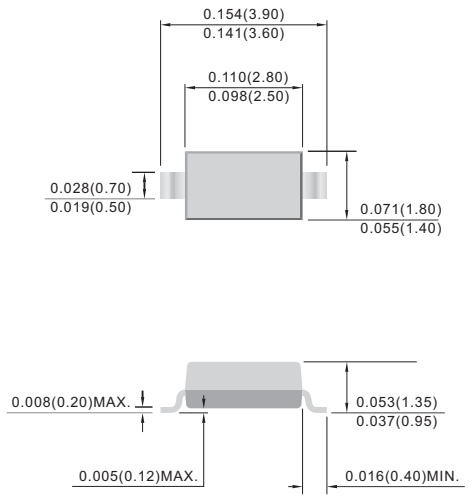
B5817W THRU B5819W

SCHOTTKY BARRIER RECTIFIER

VOLTAGE	20 THRU 200Volts	CURRENT	1.0 Ampers

SOD-123 Unit:(mm)



FEATURES

- High Current Capability
- Low Forward Voltage Drop

MECHANICAL DATA

- SOD-123 Small Outline Plastic Package
- Polarity: Color band denotes cathode end
- Epoxy UL: 94V-0
- Mounting Position: Any

Marking: B5817W: SJ
B5818W: SK
B5819W: SL

Maximum Ratings (Ratings at 25℃ ambient temperature unless otherwise specified)

Parameters	Symbol	B5817W	B5818W	B5819W	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	V
Maximum RMS voltage	V_{RMS}	14	21	28	V
Maximum DC blocking voltage	V_{DC}	20	30	40	V
Maximum average forward rectified current	I_{FM}	1.0			A
Peak forward surge current 8.3 ms single half sine-wave	I_{FSM}	9			A
Power Dissipation	PD	500			mW
Storage temperature range	T_{STG}	-50-+150			℃

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Pb-Free

RoHS COMPLIANT

Electrical Characteristcs (Ratings at 25℃ ambient temperature unless otherwise specified)

Parameters	Symbol	Test conditions	B5817W	B5818W	B5819W	Unit
Maximum forward voltage	V_F	IF = 1.0A IF = 3.0A	0.450 0.750	0.550 0.875	0.600 0.900	V
Maximum reverse breakdown voltage	VR	IR=1mA	20	30	40	V
Maximum reverse current	I_R	VR=20V B5817W VR=30V B5818W VR=40V B5819W	1.0			mA
Type junction capacitance	Cj	VR = 4.0V, f = 1MHz	120			pF

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Pb Pb-Free RoHS COMPLIANT

RATINGANDCHARACTERISTICCURVES

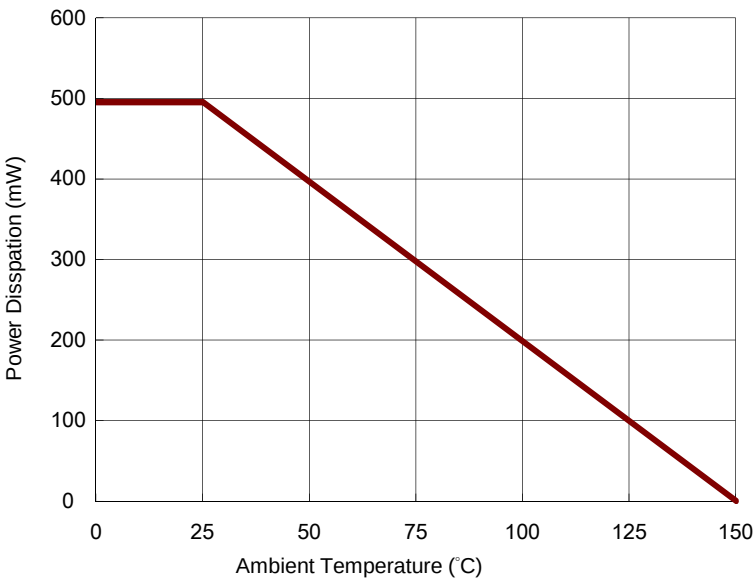

Fig.1-POWER DRATING CURVE

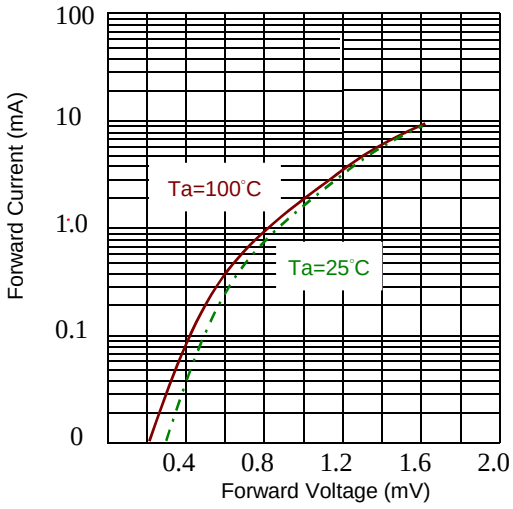

Fig.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

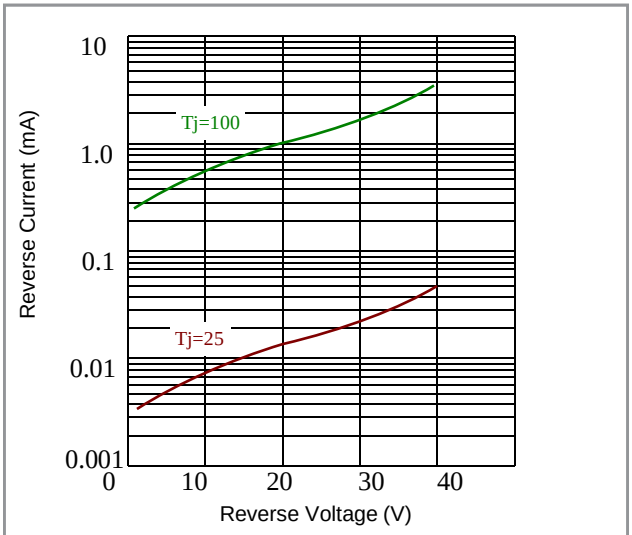

Fig.3- TYPICAL REVERSE CHARACTERISTICS

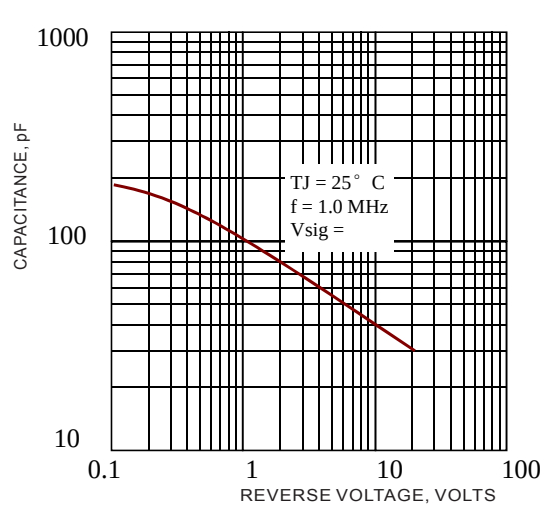

Fig.4- TYPICAL JUNCTION CAPACITANCE

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SCHOTTKY BARRIER RECTIFIER

Pb-Free ROHS COMPLIANT

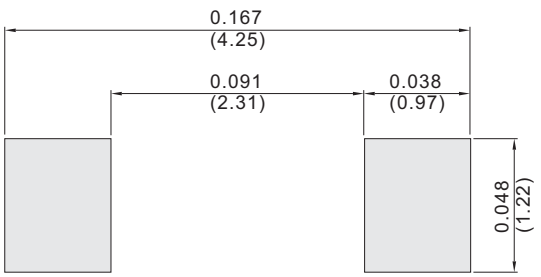
Thermal Characteristcs (Ratings at 25℃ ambient temperature unless otherwise specified)

Parameter	Symbol	SOD-123	Unit
Typical thermal resistance 3)	$R_{\theta JA}$	250.0	℃/W

3.PCB Mounted with The Suggested PAD Size

MOUNTING PAD LAYOUT

SOD-123 Unit : inch(mm)



ORDER INFORMATION

• Packing information

Product code	Pack	Reel Size (mm)	Quantity (pcs/reel)	Box Size L×W×H (mm)	Quantity (reel/box)	Carton Size L×W×H (mm)	Quantity (box/carton)
SOD-123	T/R	Φ180	3000	180×70×185	5	370×190×425	12

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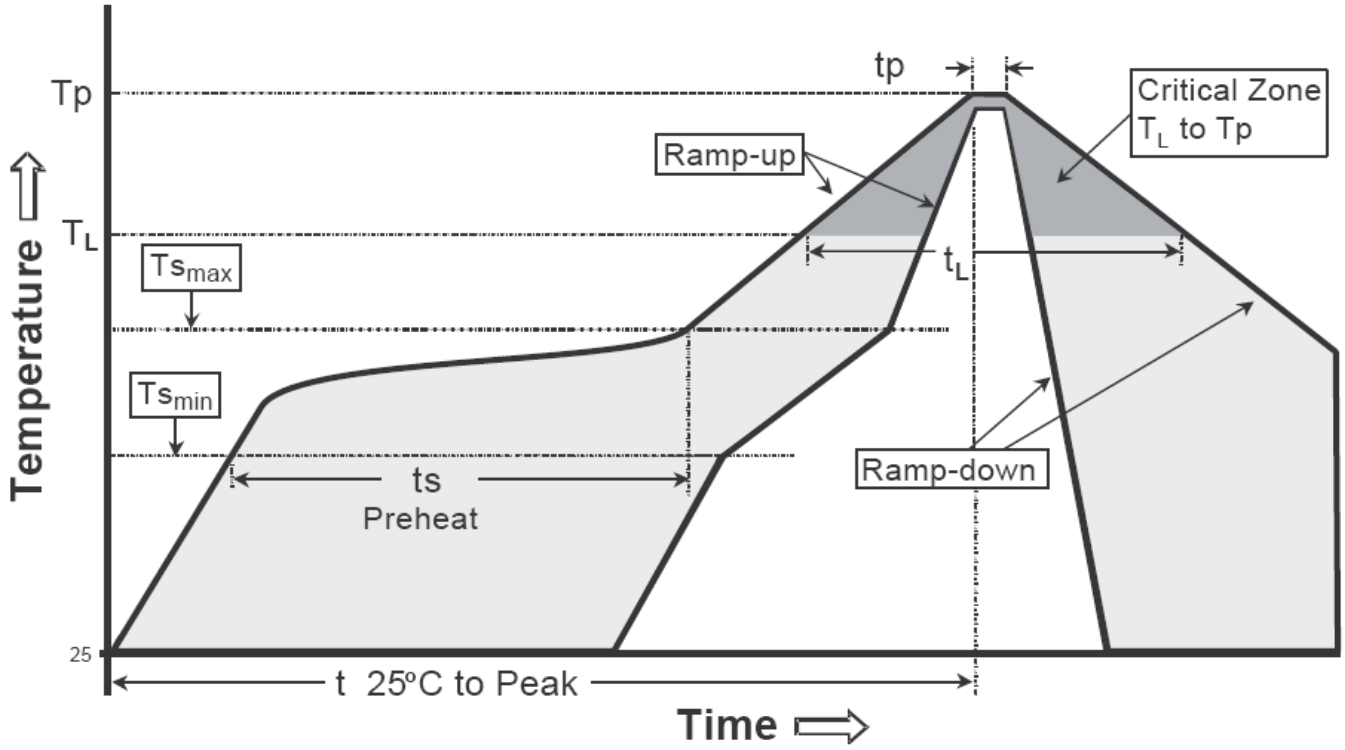
Pb Pb-Free ROHS COMPLIANT

Recommended wave soldering condition

Product	Peak Temperature	Soldering Time
Pb-free devices	260 +0/-5 °C	5 +1/-1 seconds

Recommended temperature profile for IR reflow



Profile feature	Sn-Pb eutectic Assembly	Pb-free Assembly
Average ramp-up rate (Tsmax to Tp)	3°C/second max.	3°C/second max.
Preheat −Temperature Min(Ts min) −Temperature Max(Ts max) −Time(ts min to ts max)	 100°C 150°C 60-120 seconds	 150°C 200°C 60-180 seconds
Time maintained above: −Temperature (TL) − Time (tL)	 183°C 60-150 seconds	 217°C 60-150 seconds
Peak Temperature(TP)	240 +0/-5 °C	260 +0/-5 °C
Time within 5°C of actual peak temperature(tp)	10-30 seconds	20-40 seconds
Ramp down rate	6°C/second max.	6°C/second max.
Time 25 °C to peak temperature	6 minutes max.	8 minutes max.

Note : All temperatures refer to topside of the package, measured on the package body surface.

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