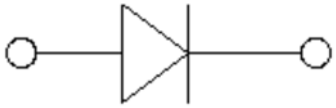
B5817W THRU B5819W

Schottky Barrier Rectifier



Features

- Moisture sensitivity level 1
- Reverse voltage: 20V/30V/40V
- Average forward current : 1A

Application

- High frequency and low voltage rectifier

Mechanical data

- **Package**: SOD-123
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102

■ **Maximum Ratings** (T_a=25℃ Unless otherwise specified)

Parameter	Symbol	Unit	Value	
Device marking code			B5817W	SJ
			B5818W	SK
			B5819W	SL
Repetitive peak reverse voltage	V_{RRM}	V	B5817W	20
			B5818W	30
			B5819W	40
Forward current	I_F	A	1	
Non-repetitive surge peak forward current @ t=8.3ms half-sine wave	I_{FSM}	A	10	
Non-repetitive surge peak forward current @ t=1ms square wave			25	
Power dissipation	P_D	mW	200	
Junction temperature	T_J	℃	-65 to +125	
Storage temperature	T_{STG}	℃	-65 to +150	

■ Electrical Characteristics (Ta=25℃ Unless otherwise specified)

Parameter	Symbol	Unit	Conditions		Min	Typ	Max
Reverse voltage	V_R	V	B5817W	I_R=1mA	20		
			B5818W		30		
			B5819W		40		
Forward voltage	V_{F1}	V	B5817W	I_F=1A			0.45
			B5818W				0.55
			B5819W				0.60
	V_{F2}	V	B5817W	I_F=3A			0.75
			B5818W				0.875
			B5819W				0.90
Reverse leakage current	I_R	uA	B5817W	V_R=20V			200
			B5818W	V_R=30V			40
			B5819W	V_R=40V			40
Junction capacitance	Cj	pF	V_R=4V, f =1MHZ				120

■ Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	$R_{\theta J-A}$(1)	℃/W	500
Thermal resistance, junction-to-case	$R_{\theta J-C}$(1)	℃/W	400

Note:

（1）Thermal resistance from junction to ambient and from junction to case mounted on P.C.B. with 8mm*9mm copper pad areas

■Characteristics

B5817W

Fig 1：P_D-Ta Curve

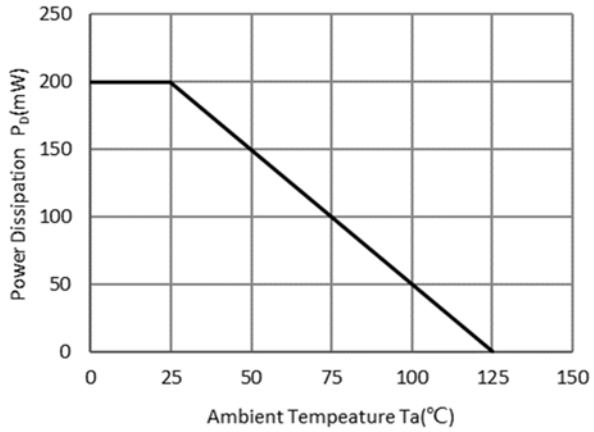


Fig 2：Capacitance Capability

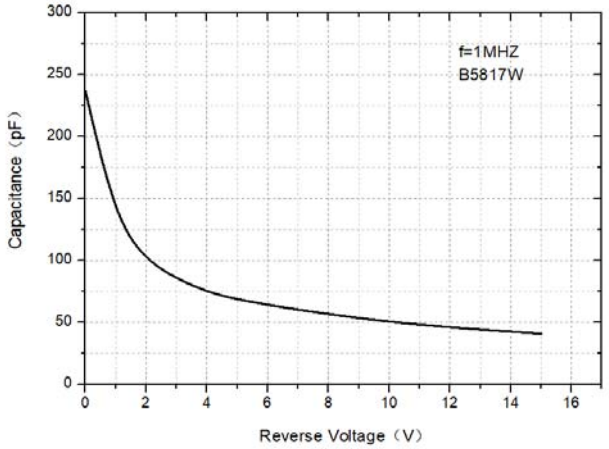


Fig 3：Typical Forward Characteristics

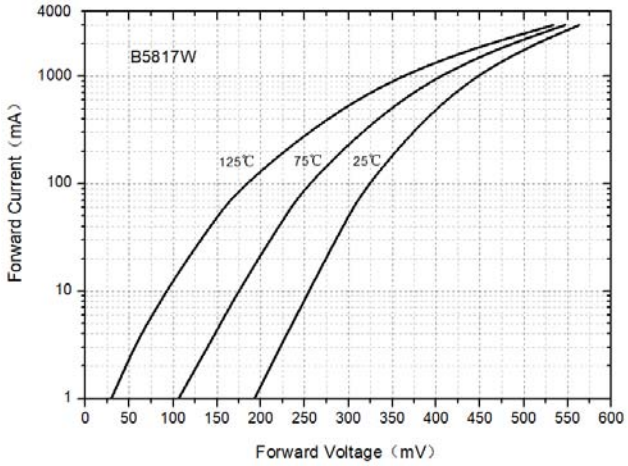
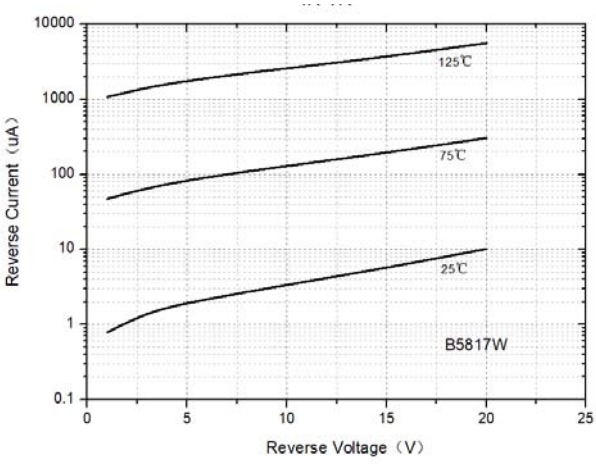


Fig 4：Typical Reverse Characteristics



B5818W & B5819W

Fig 1：P_D-Ta Curve

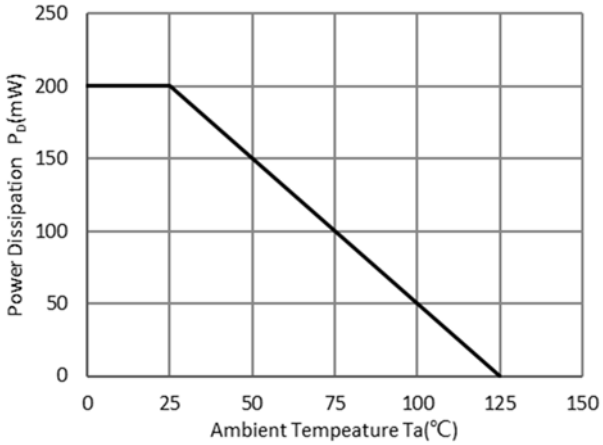


Fig 2：Capacitance Capability

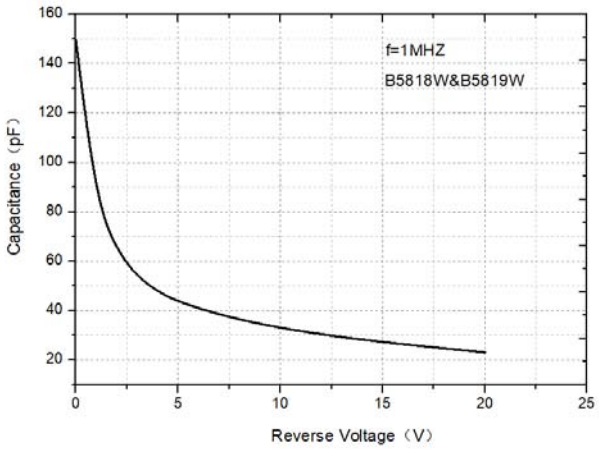


Fig 3：Typical Forward Characteristics

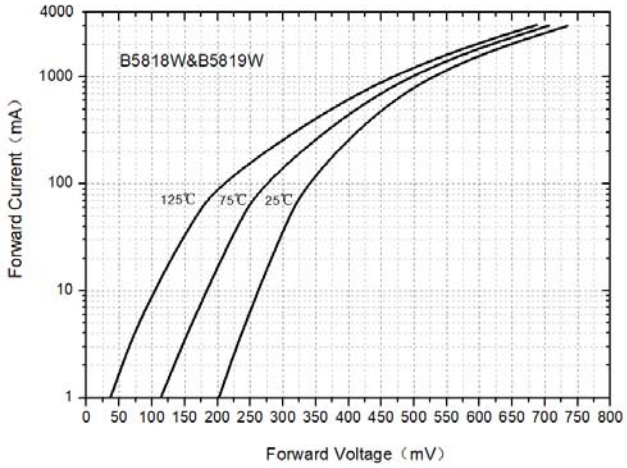
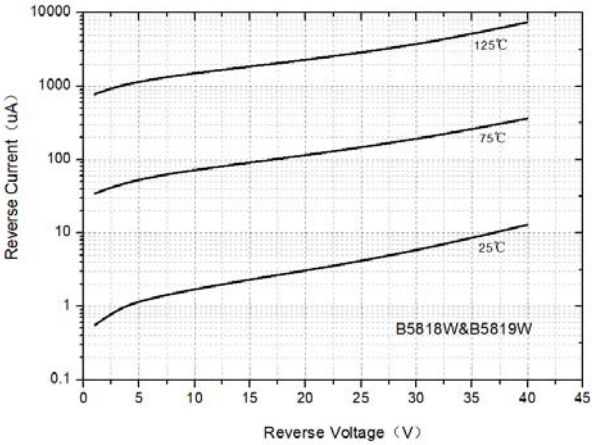


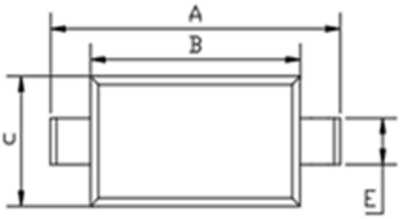
Fig 4：Typical Reverse Characteristics



■Ordering Information

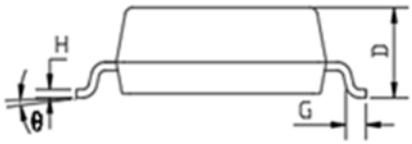
Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
B5817W THRU B5819W	F2	Approximate 0.011	3000	30000	120000	7” reel
B5817W THRU B5819W	F3	Approximate 0.011	10000	/	210000	13” reel

■ Outline Dimensions



TOP VIEW

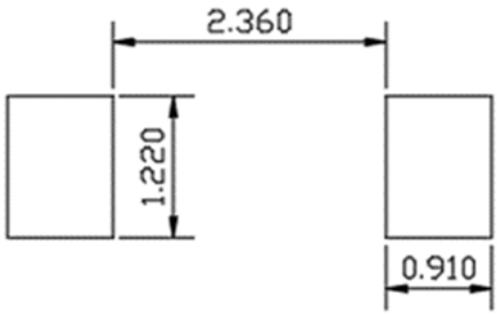
SIDE VIEW



SIDE VIEW

DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MN	MAX
A	0.140	0.152	3.550	3.850
B	0.100	0.112	2.550	2.850
C	0.055	0.071	1.400	1.800
D	0.037	0.053	0.950	1.350
E	0.020	0.028	0.510	0.710
G	0.006	0.018	0.150	0.450
H	0.003	0.010	0.080	0.250
J	0.000	0.006	0.000	0.150
θ	0	8°	0	8°

■ Suggested Pad Layout



UNIT: mm

Note:
1. All dimensions are in millimeters (mm) unless otherwise specified.
[所有尺寸均以毫米为单位，除非另有说明]
2. General tolerances: ±0.10mm unless otherwise specified.
[通用公差为±0.10mm，除非另有说明]
3. Dimensions and tolerances per ASME Y14.5M-2018.
[尺寸和公差遵循 ASME Y14.5M-2018 标准]
4.All dimensions shown are exclusive of burrs and gate residues.
Burrs and gate vestiges shall not exceed 0.15 mm in maximum.
[所有尺寸均不包括毛刺和浇口残留，毛刺与浇口残留的尺寸最大不得超过 0.15mm]
5.Dimension b does not include dambar protrusion of max 0.100 mm per side.
[尺寸b不包括单边最大0.100 MM的中筋凸出部分]
6.Dimensions B and C are the overall extreme outer dimensions of the mold compound. These dimensions exclude mold flash, lead flash, protrusions and burrs but include the maximum allowable mold mismatch.
[B和C是塑封体的外部极限尺寸，不包括包封溢料、内引线溢料、凸出部分以及胶体毛刺，但是包含了包封错位的最大尺寸]
7.Formed leads shall be planar with respect to one another within a maximum of 0.076 mm relative to the seating plane.
[成型的管脚应为同一平面，共面性最大为0.1mm]

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