

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°C 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	

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Parameter	Symbol	Unit	Value
Power dissipation	P_D	mW	200
Junction temperature	T_J	°C	-65 to +125
Storage temperature	T_{STG}	°C	-65 to +150

■ Electrical Characteristics ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)

Parameter	Symbol	Unit	Conditions	Min	Typ	Max
Reverse voltage	V_R	V	B5817W	20		
			B5818W	30		
			B5819W	40		
Forward voltage	V_{F1}	V	B5817W			0.45
			B5818W			0.55
			B5819W			0.60
	V_{F2}	V	B5817W			0.75
			B5818W			0.875
			B5819W			0.90
Reverse leakage current	I_R	μA	B5817W	$V_R=20\text{V}$		200
			B5818W	$V_R=30\text{V}$		40
			B5819W	$V_R=40\text{V}$		40
Junction capacitance	C_j	pF	$V_R=4\text{V}, f=1\text{MHz}$			120

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■ Thermal Characteristics

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

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Fig 1: P_D - T_a Curve

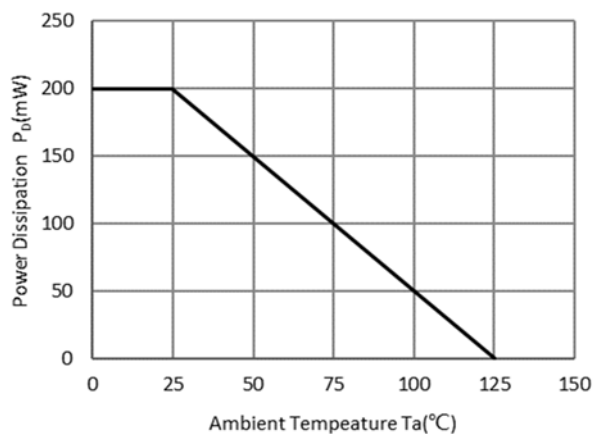


Fig 2: Capacitance Capability

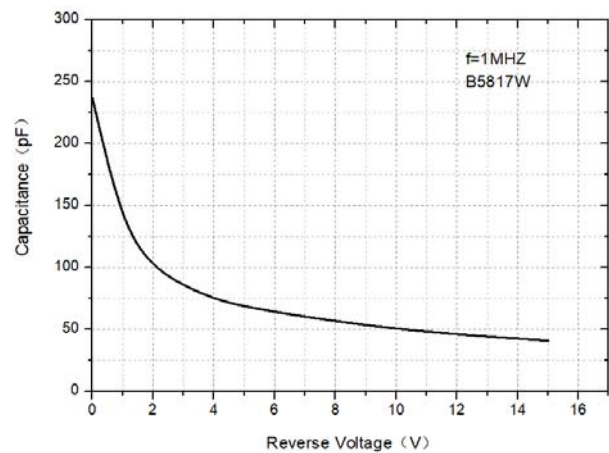


Fig 3: Typical Forward Characteristics

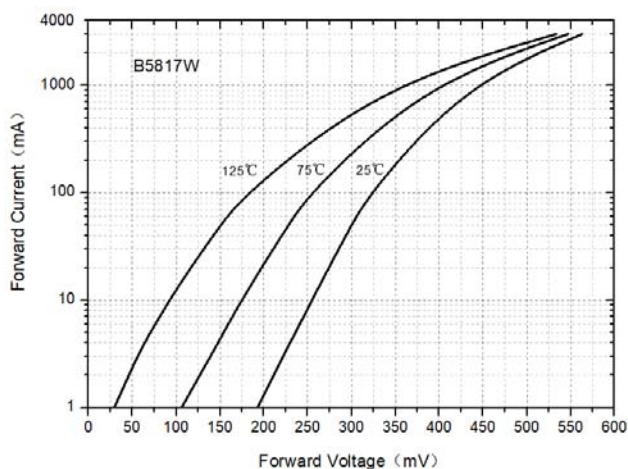
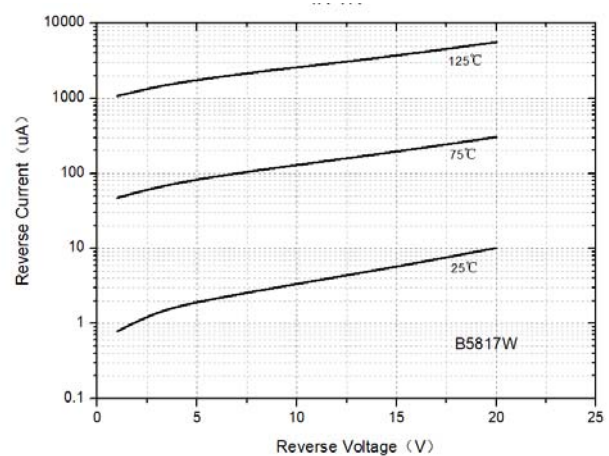


Fig 4: Typical Reverse Characteristics



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Fig 1: P_D -Ta Curve

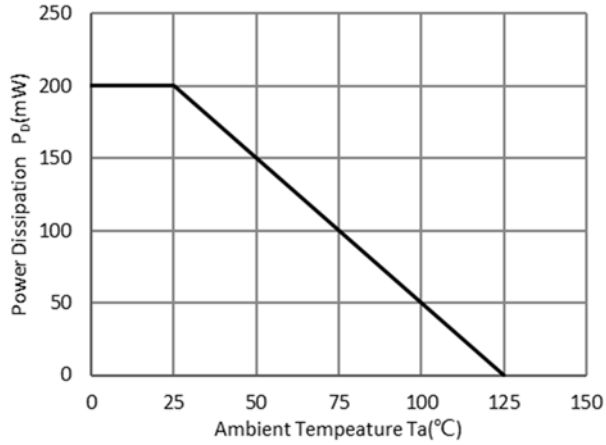


Fig 2: Capacitance Capability

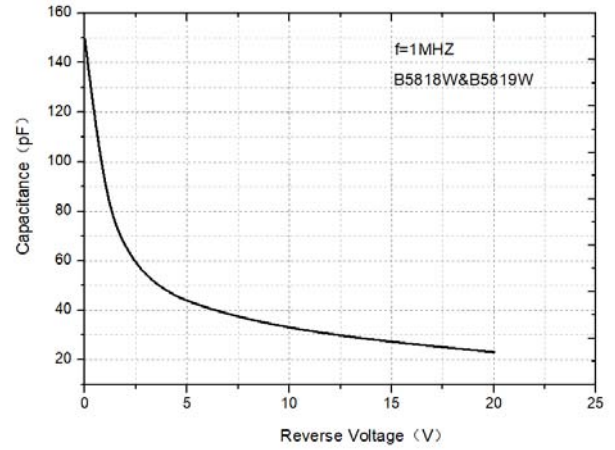


Fig 3: Typical Forward Characteristics

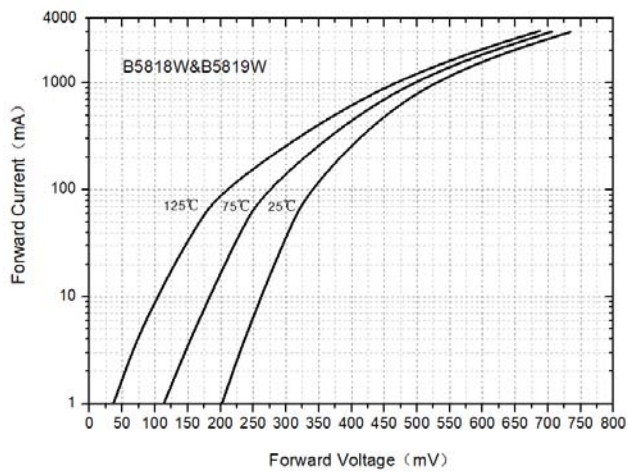
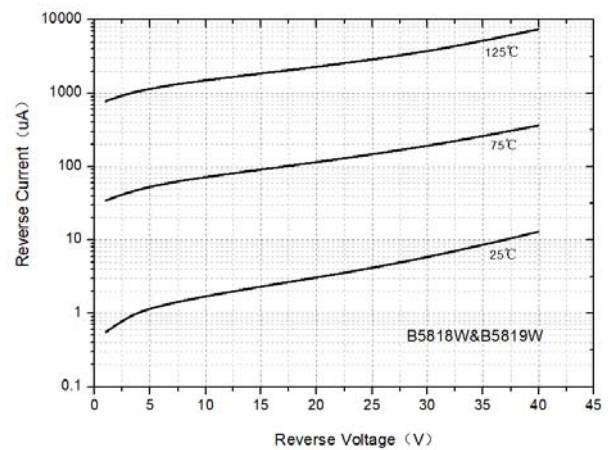


Fig 4: Typical Reverse Characteristics

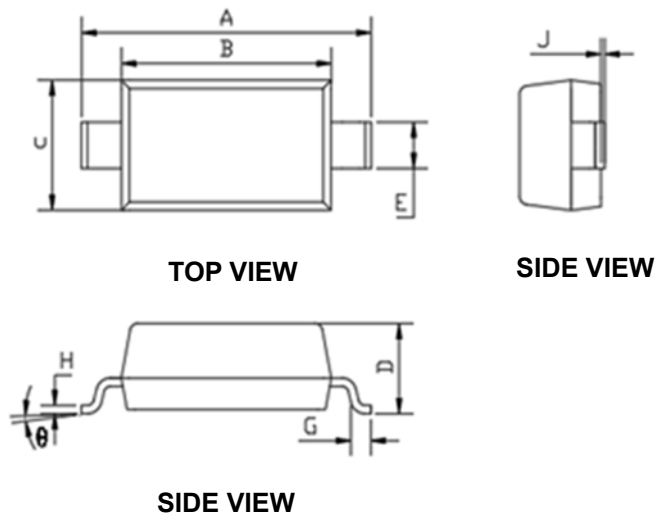


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■ Ordering Information

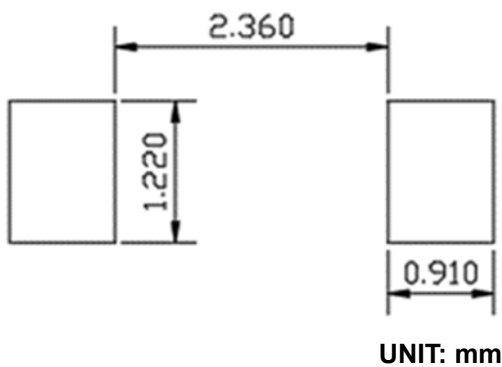
Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
B5817W THRU B5819W	F2	Approximate 0.011	3000	30000	120000	7" reel
B5817W THRU B5819W	F3	Approximate 0.011	10000	/	210000	13" reel

■ Outline Dimensions



DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MM	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



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