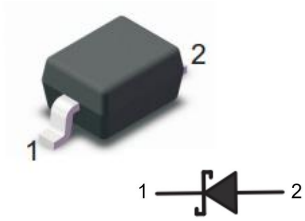
B5817WS-B5819WS Series

Surface Mount Schottky Barrier Rectifier

Features

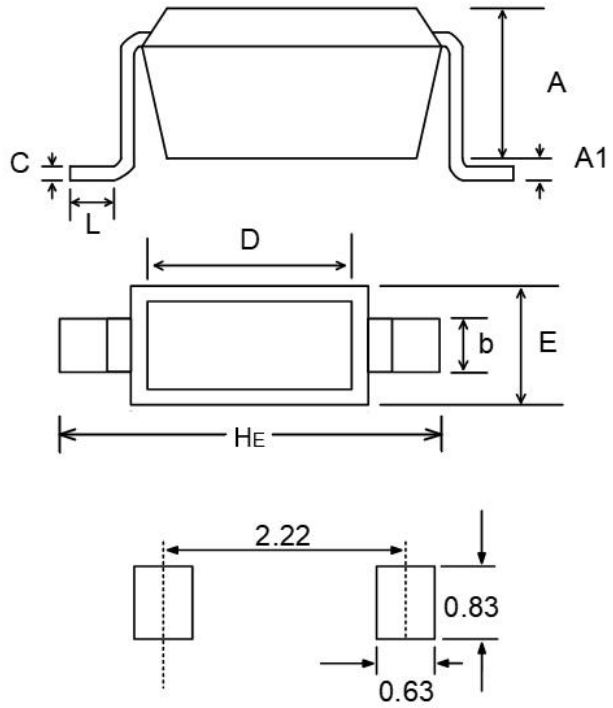


- For surface mounted applications
- Low Forward Voltage Drop
- Built-in strain relief, ideal for automated placement
- High forward surge current capability
- Plastic package has underwriters laboratory flammability 94V-0

Applications

- Low voltage,high frequency inverters
- Freewheeling
- Polarity protection applications

Dimensions (SOD-323)



Symbol	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.80	1.00	0.031	0.040
A1	0.00	0.10	0.000	0.004
b	0.25	0.4	0.012	0.016
C	0.089	0.177	0.005	0.007
D	1.60	1.80	0.066	0.070
E	1.15	1.35	0.049	0.053
HE	2.30	2.70	0.098	0.105
L	0.08	--	0.003	--

Electrical Characteristics (T_A=25℃ unless otherwise specified）

Parameter		Symbol	Value	Unit
Maximum repetitive peak reverse voltage	B5817WS	V_{RRM}	20	V
	B5818WS		30	
	B5819WS		40	
Maximum RMS voltage	B5817WS	V_{RMS}	14	V
	B5818WS		21	
	B5819WS		28	
Maximum DC blocking voltage	B5817WS	V_{DC}	20	V
	B5818WS		30	
	B5819WS		40	
Maximum average forward rectified current		$I_{F(AV)}$	1.0	A
Maximum instantaneous forward voltage at 1A	B5817WS	V_F	0.45	V
	B5818WS		0.55	
	B5819WS		0.60	
Reverse Leakage Current		I_R@25℃	1	mA
		I_R@100℃	10	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)		I_{FSM}	25	A
Typical junction capacitance at 4V, 1MHz		C_J	110	pF
Operating junction temperature range		T_J	-55 to +125	℃
Storage temperature range		T_{STG}	-55 to +150	℃

Ratings and Characteristic Curves (T_A=25℃ unless otherwise noted)

Figure 1. Forward Current Derating Curve

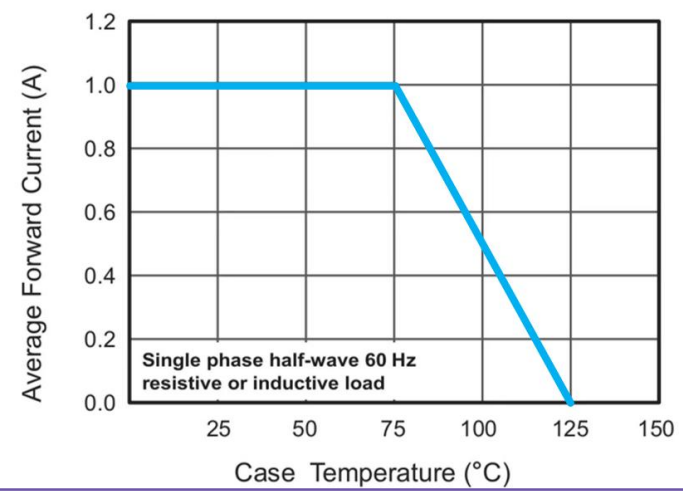


Figure 2. Typical Reverse Characteristics

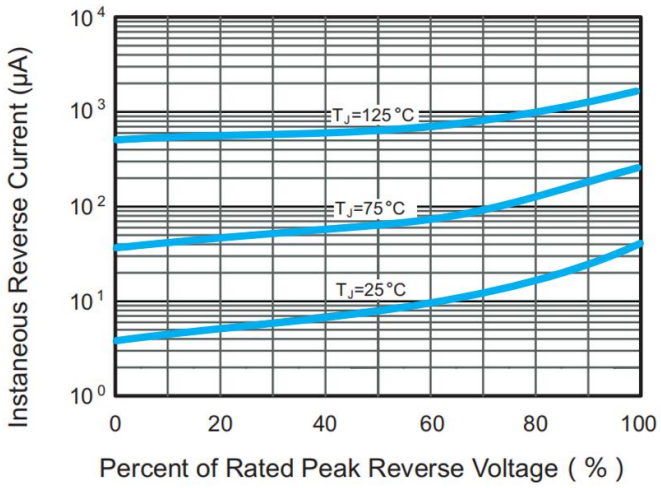


Figure 3. Typical Forward Characteristics

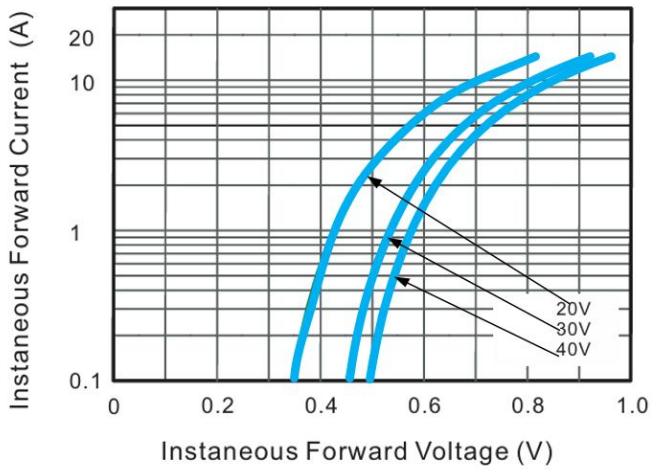


Figure 4. Typical Junction Capacitance

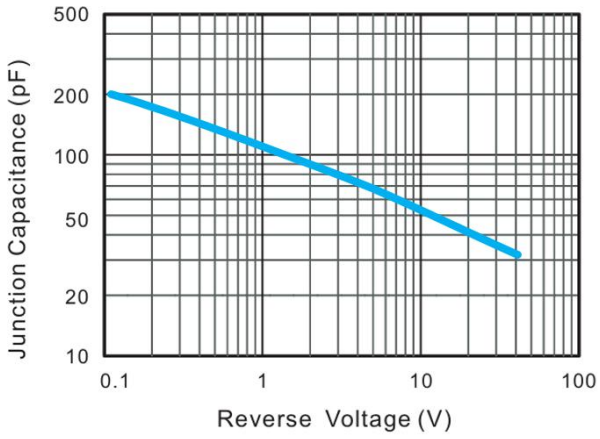
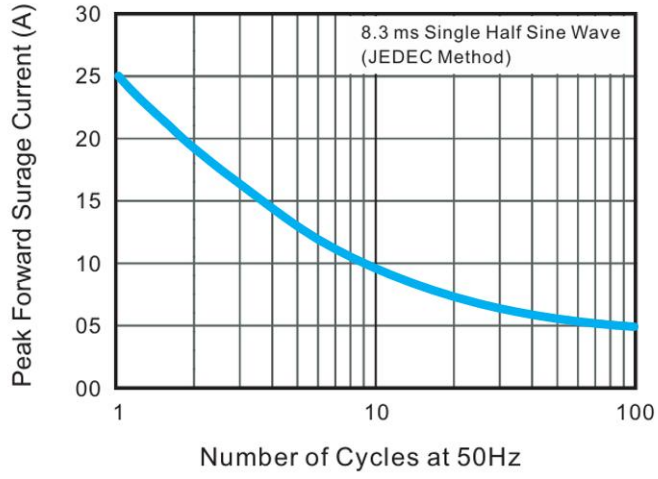
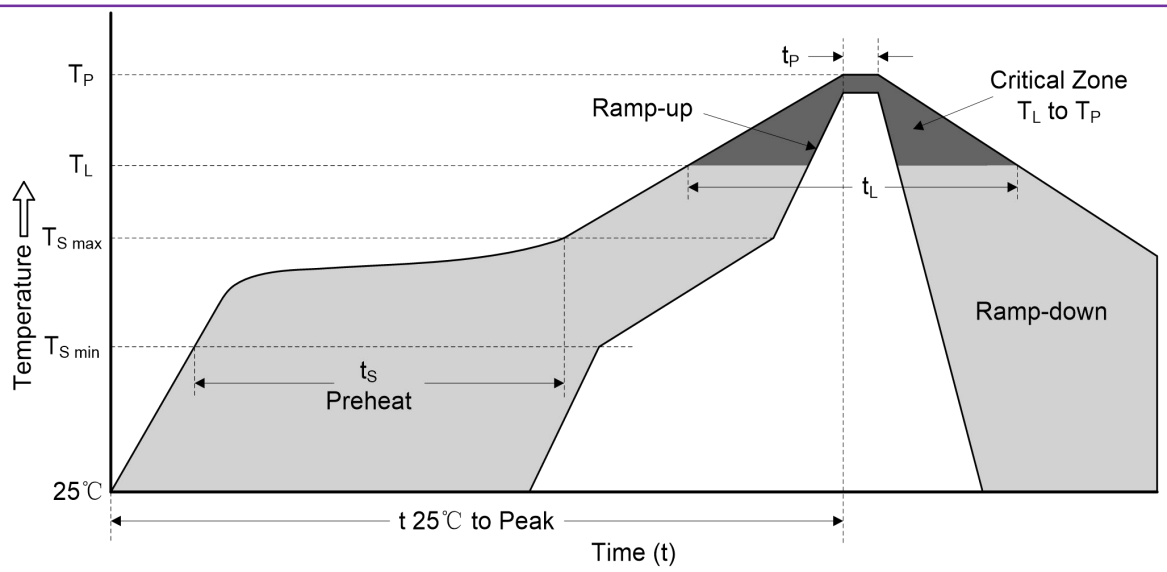


Figure 5. Maximum Non-Repetitive Peak Forward Surge Current



Reflow Soldering Parameters



Reflow Condition		Lead-free Assembly
Pre heat	-Temperature Min ($T_{S\ min}$)	150℃
	-Temperature Max ($T_{S\ max}$)	200℃
	-Time (min to max) (t_S)	60-180 seconds
Average ramp-up rate (T_L to T_P)		3℃/second max.
$T_{S\ max}$ to T_L -Ramp-up Rate		3℃/second max.
Reflow	-Temperature (T_L) (Liquidus)	217℃
	-Time (min to max) (t_S)	60-150 seconds
Peak Temperature (T_P)		260(+0/-5)℃
Time within 5℃ of actual Peak Temperature (t_P)		20-40 seconds
Ramp-down Rate		6℃/second max.
Time 25℃ to Peak Temperature(T_P)		8 minutes max.
Do not exceed		260℃