

Features

- Halogen Free. "Green" Device (Note 1)
- AEC-Q101 Qualified
- Low Forward Voltage Drop
- High Surge Current Capability
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +125°C
- Storage Temperature Range: -55°C to +150°C
- Maximum Thermal Resistance: 500°C/W Junction to Ambient(Note2)

MCC Part Number	Repetitive Peak Reverse Voltage V_{RRM}	RMS Reverse Voltage $V_{R(RMS)}$	DC Blocking Voltage V_R
B5817WSHE3	20V	14V	20V
B5818WSHE3	30V	21V	30V
B5819WSHE3	40V	28V	40V

Electrical Characteristics @ 25°C Unless Otherwise Specified

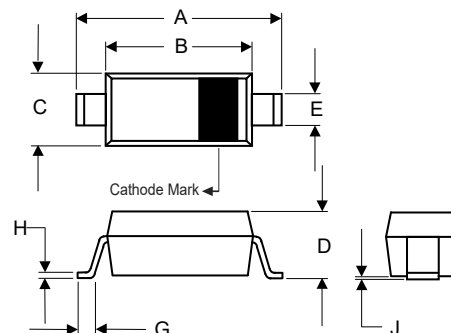
Average Forward Current	$I_{F(AV)}$	1A	$T_c = 90^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	10A	8.3ms Half Sine
Power Dissipation	P_d	200mW	

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

2. Part mounted on FR-4 board with recommended pad layout.

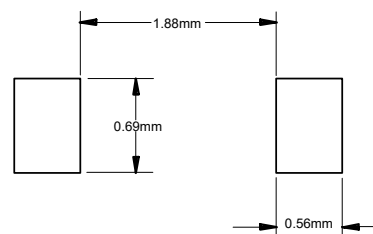
1 Amp Schottky Barrier Rectifier 20 - 40 Volts

SOD-323

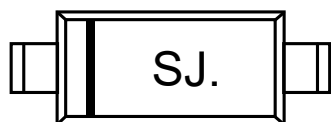


DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.090	0.107	2.30	2.70	
B	0.063	0.071	1.60	1.80	
C	0.045	0.053	1.15	1.35	
D	0.031	0.045	0.80	1.15	
E	0.010	0.016	0.25	0.40	
G	0.004	0.018	0.10	0.45	
H	0.004	0.010	0.10	0.25	
J	-----	0.006	-----	0.15	

Suggested Solder Pad Layout



Internal Structure and Marking Code



B5817WSHE3



B5818WSHE3



B5819WSHE3

Electrical Characteristics @ 25° C Unless Otherwise Specified

B5817WSHE3

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Breakdown Voltage	V_{BR}	$I_R=100\mu A$	20			V
Forward Voltage	V_F	$I_F=1A$			0.45	V
		$I_F=3A$			0.75	V
Reverse Current	I_R	$V_R=20V$			200	μA
Junction Capacitance	C_J	$V_R = 4V, f = 1MHz$			120	pF
Reverse Recovery Time	t_{rr}	$I_F=I_R=10mA,$ $I_{rr}=1mA, R_L=100\Omega$			40	ns

B5818WSHE3

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Breakdown Voltage	V_{BR}	$I_R=100\mu A$	30			V
Forward Voltage	V_F	$I_F=1A$			0.55	V
		$I_F=3A$			0.875	V
Reverse Current	I_R	$V_R=30V$			40	μA
Junction Capacitance	C_J	$V_R = 4V, f = 1MHz$			120	pF
Reverse Recovery Time	t_{rr}	$I_F=I_R=10mA,$ $I_{rr}=1mA, R_L=100\Omega$			30	ns

B5819WSHE3

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Breakdown Voltage	V_{BR}	$I_R=100\mu A$	40			V
Forward Voltage	V_F	$I_F=1A$			0.60	V
		$I_F=3A$			0.90	V
Reverse Current	I_R	$V_R=40V$			40	μA
Junction Capacitance	C_J	$V_R = 4V, f = 1MHz$			120	pF
Reverse Recovery Time	t_{rr}	$I_F=I_R=10mA,$ $I_{rr}=1mA, R_L=100\Omega$			30	ns

Curve Characteristics

B5817WSHE3

Fig. 1 - Typical Instantaneous Forward Characteristics

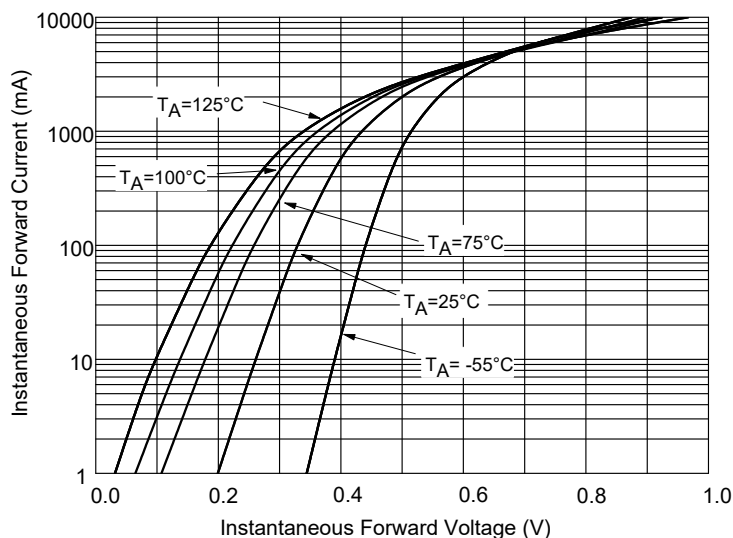


Fig. 2 - Typical Reverse Leakage Characteristics

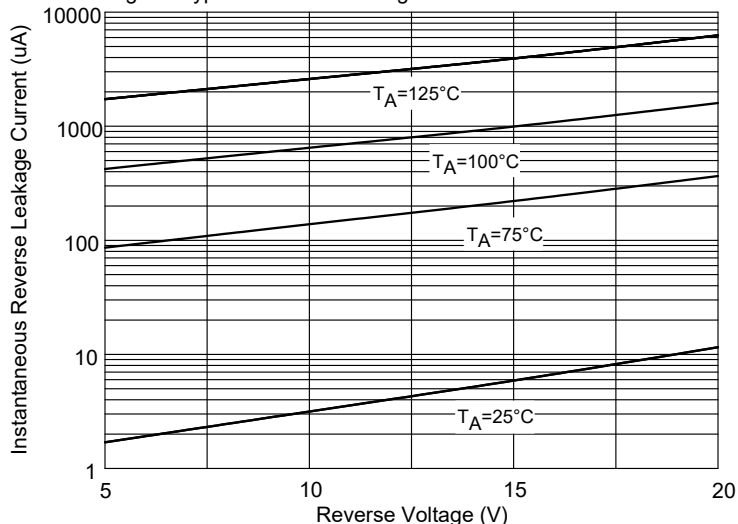


Fig. 3 - Capacitance Characteristics

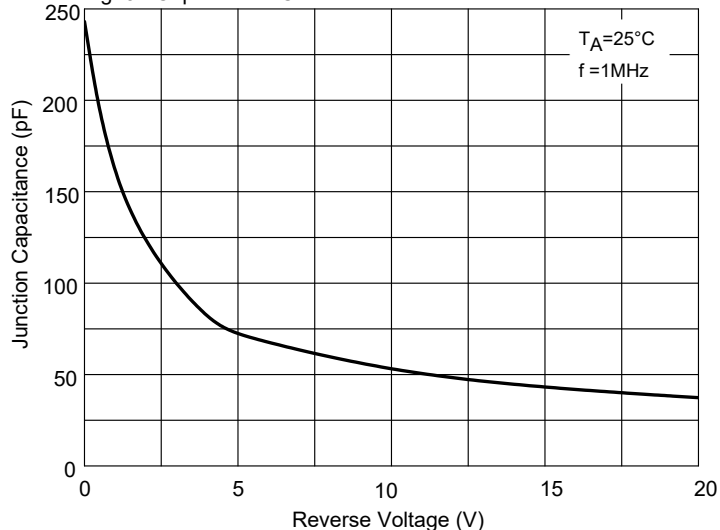
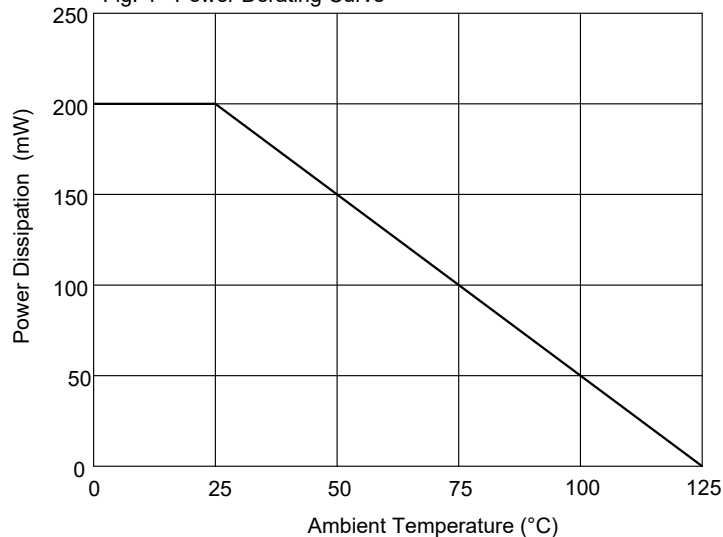


Fig. 4 - Power Derating Curve



B5818WSHE3&B5819WSHE3

Fig. 1 - Typical Instantaneous Forward Characteristics

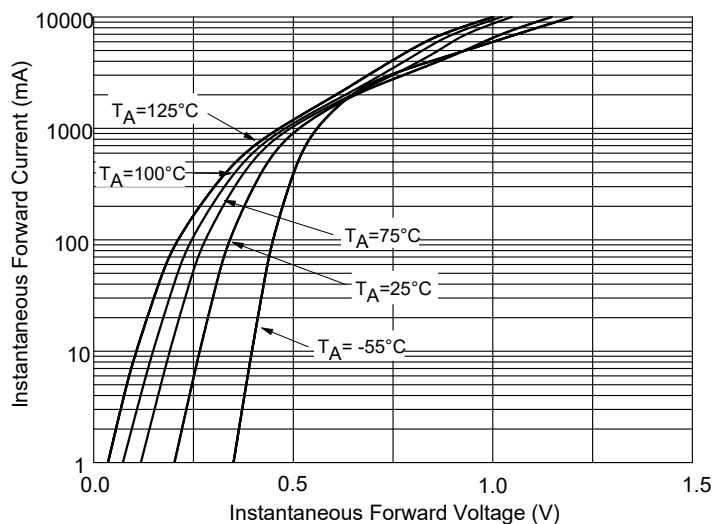


Fig. 2 - Typical Reverse Leakage Characteristics

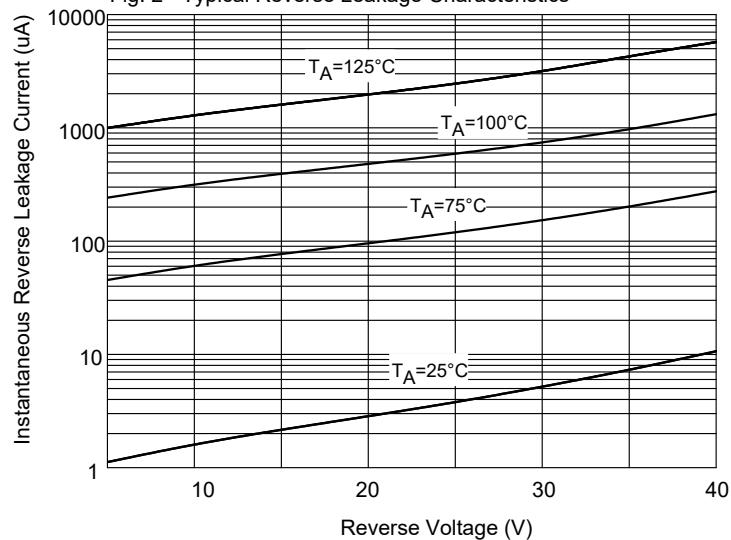


Fig. 3 - Capacitance Characteristics

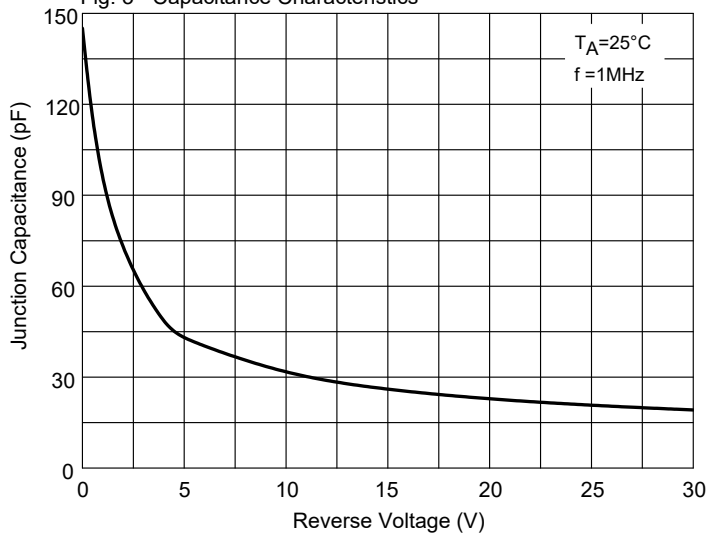
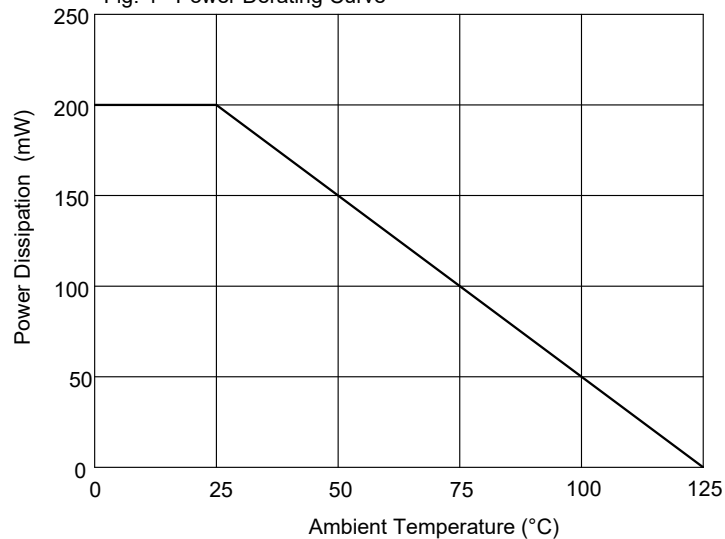


Fig. 4 - Power Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

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