Technical Data
Data Sheet N1752, Rev.A

RoHS HF

B5817W THRU B5819W
SCHOTTKY BARRIER DIODE

SOD-123

Features

- For use in low voltage, high frequency inverters
- Free wheeling, and polarity protection applications.
- This is a Halogen Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram

Mechanical Data

- Case: SOD-123, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.01 grams(approx)

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Parameter	Symbol	B5817W	B5818W	B5819W	Units
Non-Repetitive Peak Reverse Voltage	V_{RM}	20	30	40	
Peak Repetitive Reverse Voltage	V_{RRM}	20	30	40	V
Working Peak Reverse Voltage	V_{RWM}				
DC Blocking Voltage	V_R				
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	V
Average Rectified Output Current	I_O	1			A
Non-repetitive Peak Forward Surge Current @t=8.3ms	I_{FSM}	9			A
Repetitive Peak Forward Current	I_{FRM}	1.5			A
Power Dissipation	P_D	500			mW
Thermal Resistance from Junction to Ambient	$R_{\Theta JA}$	200			°C/W
Junction Temperature	T_j	125			°C
Storage Temperature	T_{stg}	-55~+150			°C

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Technical Data
Data Sheet N1752, Rev.A

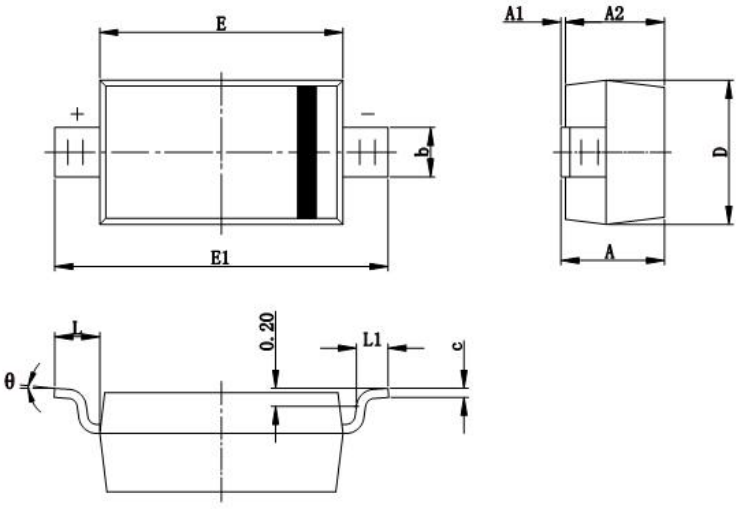
RoHS HF

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Parameter	Symbol	Test conditions	Min	Max	Units
Reverse breakdown voltage*	$V_{(BR)}$	I_R=1mA B5817W B5818W B5819W	 20 30 40	 - - -	V
Reverse voltage leakage current*	I_R	V_R=20V B5817W V_R=30V B5818W V_R=40V B5819W	-	1	mA
Forward voltage*	V_F	B5817W I_F=1A I_F=3A	-	0.45 0.75	V
		B5818W I_F=1A I_F=3A	-	0.55 0.875	
		B5819W I_F=1A I_F=3A	-	0.60 0.90	
Diode capacitance	C_D	V_R=4V, f=1MHz	-	120	pF

* Pulse width < 300 μs, duty cycle < 2%

Mechanical Dimensions SOD-123



SYMBOL	Millimeters		Inches	
	MIN.	MAX.	MIN.	MAX.
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500 REF.		0.020 REF.	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°

Ordering Information

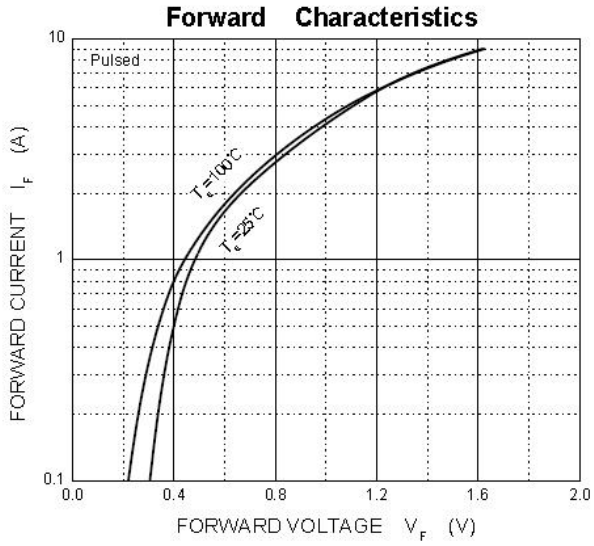
Device	Package	Shipping
B5817W THRU B5819W	SOD-123	3000pcs / reel

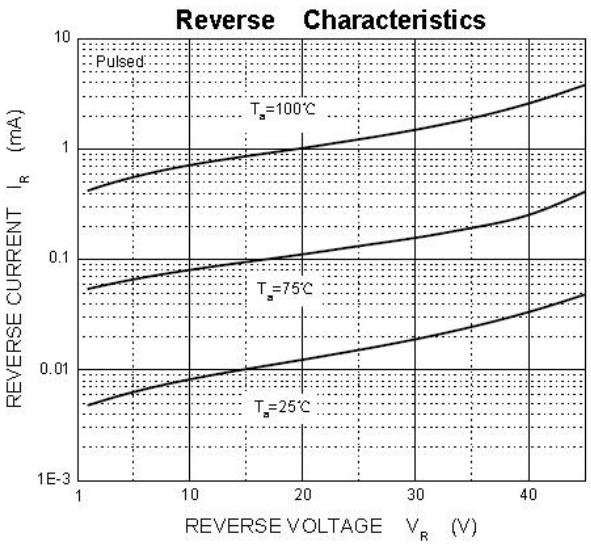
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

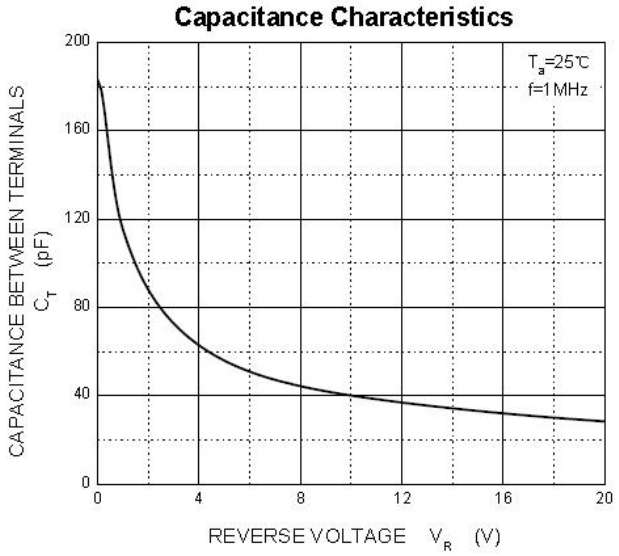
Technical Data
Data Sheet N1752, Rev.A

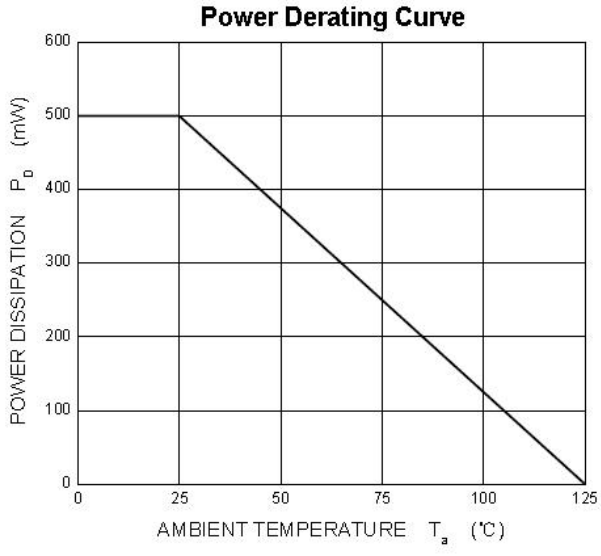
RoHS HF

Ratings and Characteristics Curves





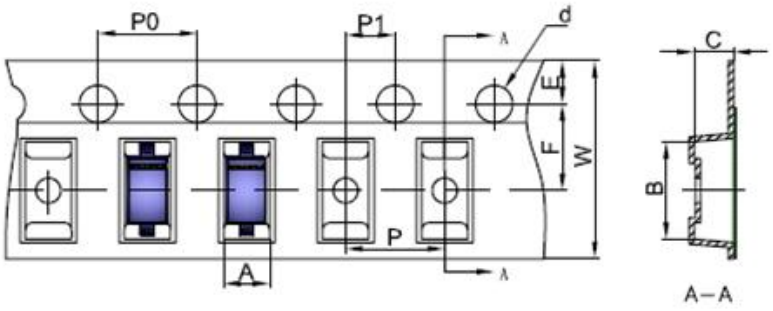




Technical Data
Data Sheet N1752, Rev.A

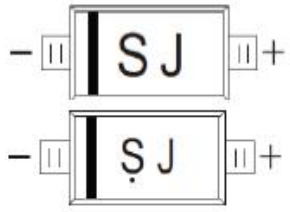
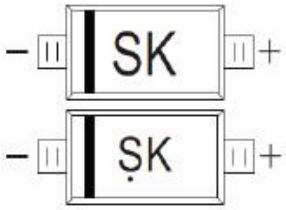
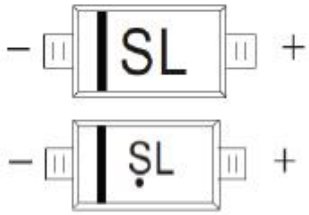
RoHS HF

Carrier Tape Specification SOD-123



SYMBOL	Millimeters	
	Min.	Max.
A	1.80	1.90
B	3.89	3.99
C	1.52	1.62
d	1.45	1.65
E	1.65	1.85
F	3.40	3.60
P	3.90	4.10
P0	3.90	4.10
P1	1.90	2.10
W	7.90	8.30

Marking Diagram

B5817W:SJ	B5818W:SK	B5819W:SL
		

The marking bar indicates the cathode
Solid dot = Green molding compound device, if none, the normal device.

Technical Data
Data Sheet N1752, Rev.A

RoHS HF

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