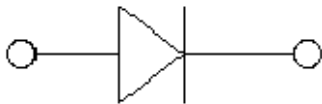


## Schottky Barrier Rectifier

### Features

- $V_R$  20V/30V/40V
- $I_{FAV}$  1A



### Typical Applications

- Extreme fast switches

### Mechanical Data

- **Package:** SOD123
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

	Marking
B5817W	SJ
B5818W	SK
B5819W	SL

### ■ Maximum Ratings ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	Conditions	VALUE	
Repetitive peak reverse voltage	$V_{RRM}$	V		B5817W	20
				B5818W	30
				B5819W	40
Reverse voltage	$V_R$	V	$I_R=1\text{mA}$	B5817W	20
				B5818W	30
				B5819W	40
Peak forward surge current	$I_{FSM}$	A	$t_p=8.3\text{ms}$ , half sine	10	
Average forward current	$I_{FAV}$	A	$T_c=90^\circ\text{C}$	1	
Maximum junction temperature	$T_j$	$^\circ\text{C}$		-65 to +125	
Storage temperature range	$T_{stg}$	$^\circ\text{C}$		-65 to +150	
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	$^\circ\text{C}/\text{W}$		500	

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

PARAMETER	SYMBOL	UNIT	Conditions	VALUE	
Maximum Forward voltage	$V_F$	V	$I_F=1\text{A}$ , $T_J=25^\circ\text{C}$	B5817W	0.45
				B5818W	0.55
				B5819W	0.60
	$V_F$	V	$I_F=3\text{A}$ , $T_J=25^\circ\text{C}$	B5817W	0.75
				B5818W	0.875
Maximum Reverse current	$I_R$	$\mu\text{A}$	B5817W	$V_R=20\text{V}$ , $T_A=25^\circ\text{C}$	200
			B5818W	$V_R=30\text{V}$ , $T_A=25^\circ\text{C}$	40
			B5819W	$V_R=40\text{V}$ , $T_A=25^\circ\text{C}$	40
Minimum Breakdown voltage	$V_{(BR)}$	V	$I_R=1\text{mA}$	B5817W	20
				B5818W	30
				B5819W	40
Maximum Diode capacitance	$C_D$	pF	$V_R=4\text{V}$ , $f=1\text{MHz}$	120	

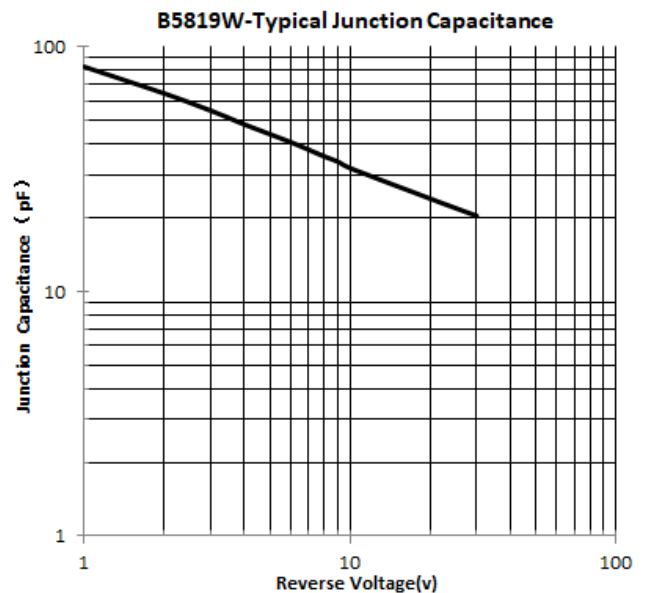
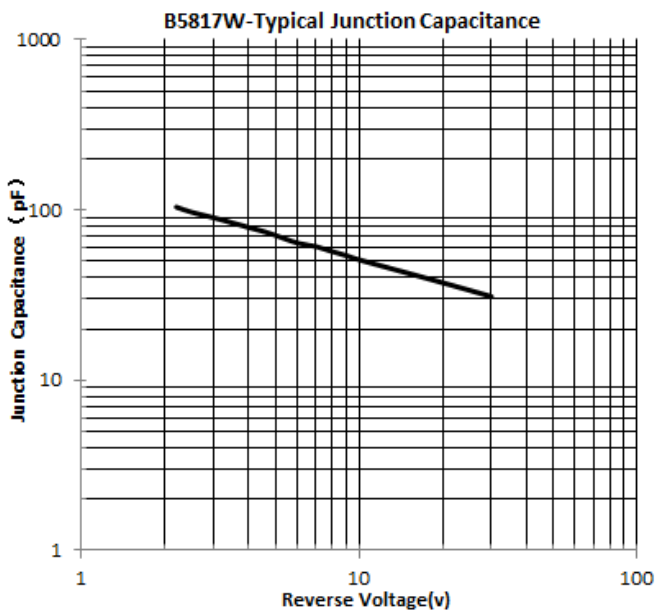
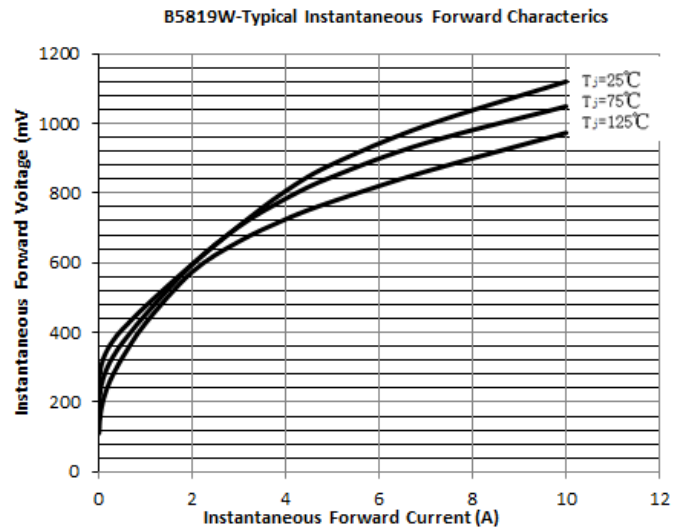
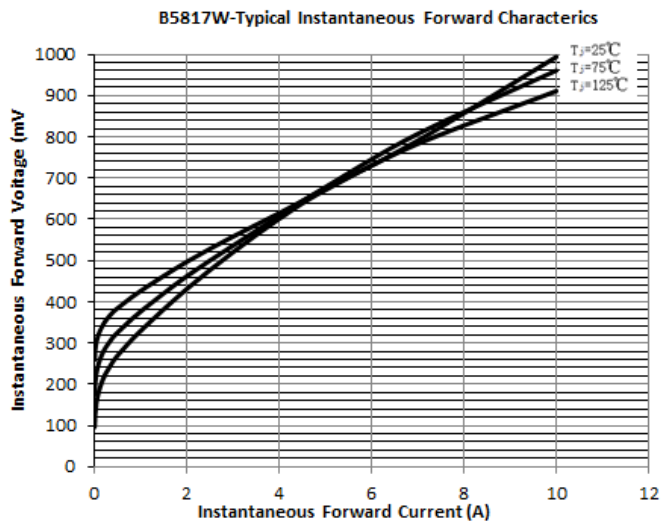


# B5817W THRU B5819W

## Ordering Information (Example)

PREFERED 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

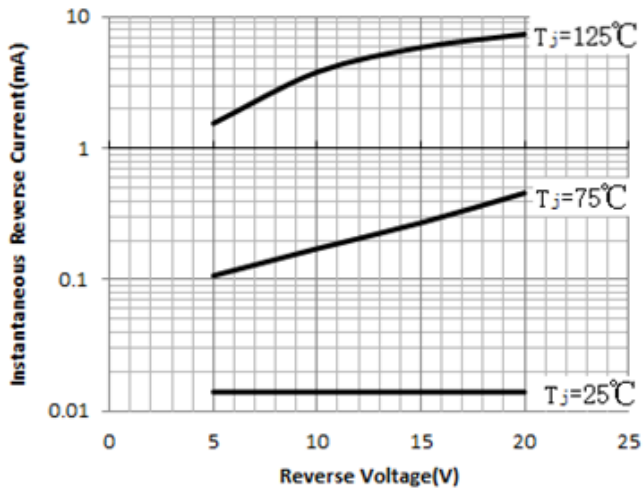
## Characteristics (Typical)



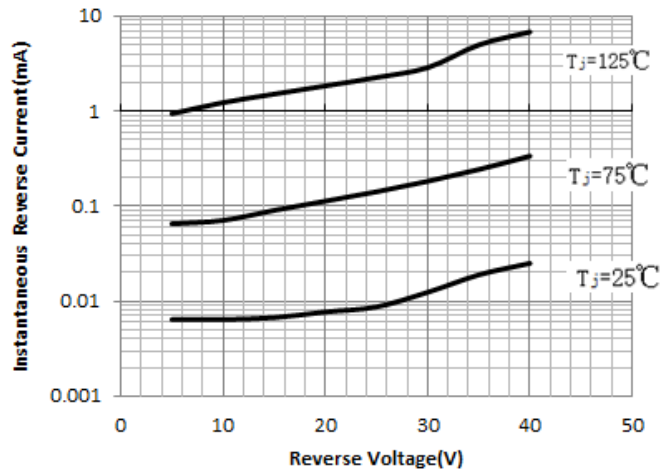


# B5817W THRU B5819W

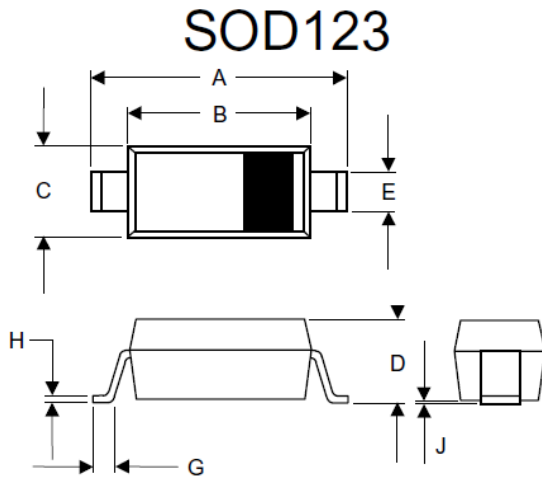
**B5817W-Typical Reverse Characteristics**



**B5819W-Typical Reverse Characteristics**

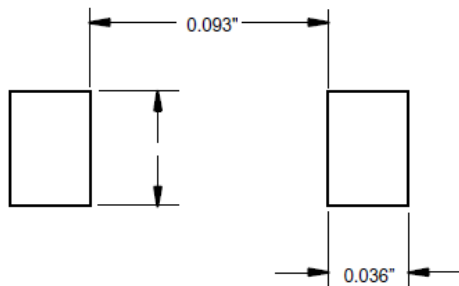


## ■ Outline Dimensions



DIMENSIONS					NOTE
DIM	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	.140	.152	3.55	3.85	
B	.100	.112	2.55	2.85	
C	.055	.071	1.40	1.80	
D	-----	.053	-----	1.35	
E	.012	.031	0.30	.78	
G	.006	-----	0.15	-----	
H	-----	.01	-----	.25	
J	-----	.006	-----	.15	

## ■ Soldering Footprint



Unit: inches



## B5817W THRU B5819W

---

### Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website [http:// www.21yangjie.com](http://www.21yangjie.com) , or consult your nearest Yangjie's sales office for further assistance.