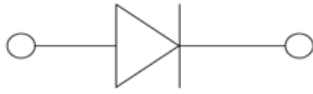


## Small Signal Schottky Rectifier



**SOD323**

### Features

- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- $V_{RRM}$  30V/40V
- $I_{FAV}$  1A
- Part no. with suffix "Q" means AEC-Q101 qualified

### Applications

- Use as rectifiers in low-voltage, high-frequency inverters
- Automotive

### Mechanical Data

- **Case:** SOD323
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

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

PARAMETER	SYMBOL	UNIT	CONDITIONS	VALUE	
Repetitive peak reverse voltage	$V_{RRM}$	V		B5818WSQ	30
				B5819WSQ	40
Reverse voltage	$V_R$	V	$I_R=1\text{mA}$	B5818WSQ	30
				B5819WSQ	40
Average Forward Current	$I_{FAV}$	A		1	
Peak Forward Surge Current	$I_{FSM}$	A	8.3ms, half sine	20	
Power Dissipation	$P_{tot}$	mW		250	
Thermal Resistance Junction to Ambient	$R_{thJA}$	K/W		400	
Junction Temperature	$T_J$	$^\circ\text{C}$		-55 to +125	
Storage Temperature Range	$T_{stg}$	$^\circ\text{C}$		-55 to +150	



## B5818WSQ THRU B5819WSQ

### ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	CONDITIONS	PART	MIN	MAX
Forward Voltage	V <sub>F</sub>	V	I <sub>F</sub> =1A	B5818WSQ		0.55
				B5819WSQ		0.6
			I <sub>F</sub> =3A	B5818WSQ		0.875
				B5819WSQ		0.9
Reverse Leakage Current	I <sub>R</sub>	uA	V <sub>R</sub> =30V	B5818WSQ		40
			V <sub>R</sub> =40V	B5819WSQ		40
Reverse Breakdown Voltage	V <sub>BR</sub>	V	I <sub>R</sub> =1mA	B5818WSQ	30	
				B5819WSQ	40	
Junction Capacitance	C <sub>J</sub>	pF	V <sub>R</sub> =4V, f =1MHz			120
Reverse Recovery Time	t <sub>rr</sub>	ns	I <sub>F</sub> =I <sub>R</sub> =10mA, I <sub>rr</sub> =1mA, R <sub>L</sub> =100Ω			40

### ■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
B5818WSQ THRU B5819WSQ	F2	Approximate 0.0045	3000	30000	120000	7" reel



# B5818WSQ THRU B5819WSQ

## ■ Characteristics (Typical)

Fig.1:  $P_D-T_A$

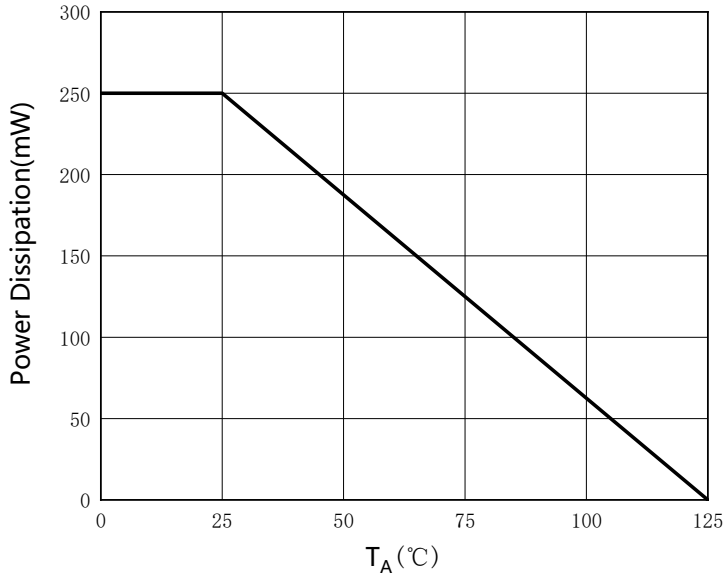


Fig.2: Junction Capacitance

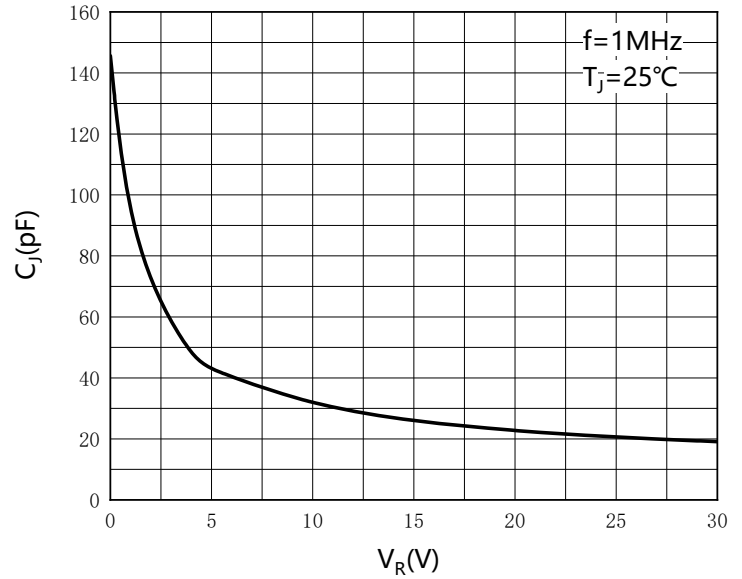


Fig.3: Forward Characteristics

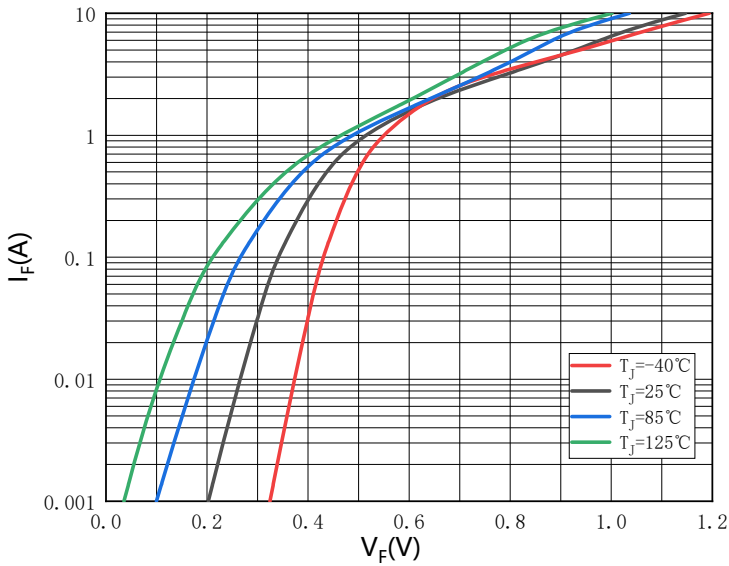
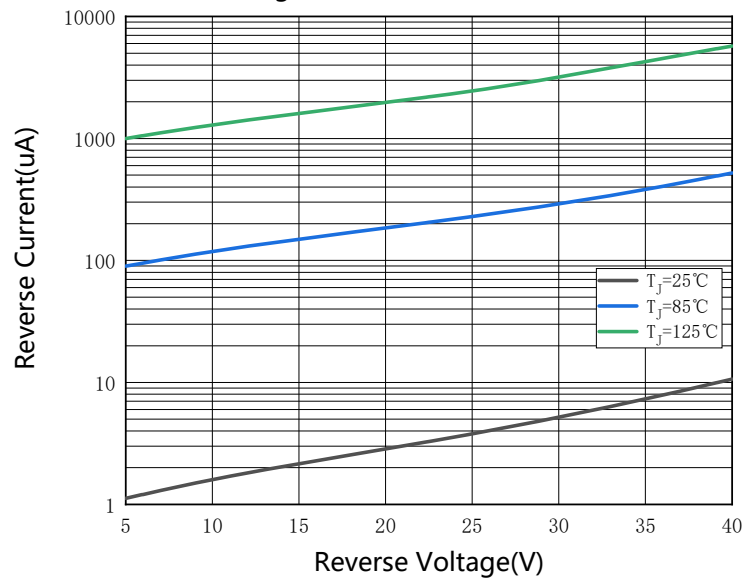


Fig.4: Reverse Characteristics

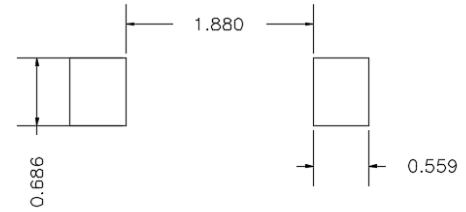
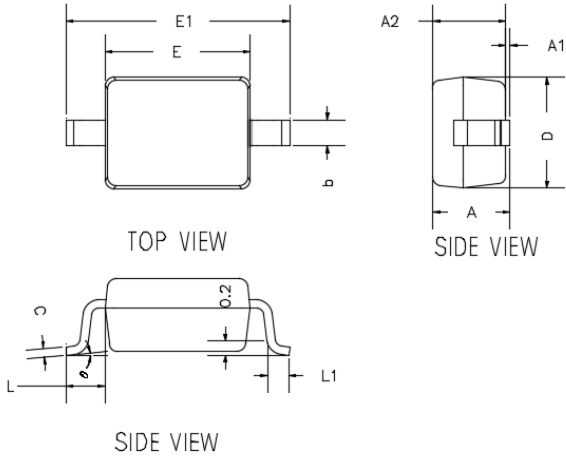




# B5818WSQ THRU B5819WSQ

## ■ Outline Dimensions

SOD-323

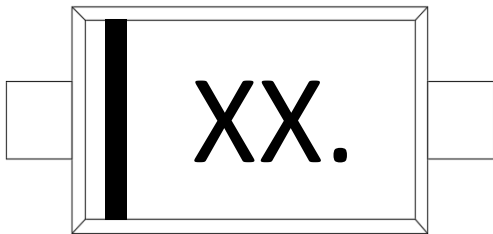


UNIT: mm

SUGGESTED SOLDER PAD LAYOUT

DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MIN	MAX
A	---	0.0393	---	1.0000
A1	0.0000	0.0039	0.0000	0.1000
A2	0.0314	0.0354	0.8000	0.9000
b	0.0098	0.0157	0.2500	0.4000
c	0.0031	0.0059	0.0800	0.1500
D	0.0472	0.0551	1.2000	1.4000
E	0.0629	0.0709	1.6000	1.8000
E1	0.0984	0.1063	2.5000	2.7000
L	0.0187TYP		0.475TYP	
L1	0.0098	0.0157	0.250	0.400
θ	0°	8°	0°	8°

## ■ Marking Information



	Marking
B5818WSQ	SK
B5819WSQ	SL

**Note:**

1. All marking is at middle of the product body
2. All marking is in laser marking
3. Body color: Black



## B5818WSQ THRU B5819WSQ

---

### 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 automotive electronics, are not designed for use in medical, life-saving, life-sustaining, or military, 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.