

## Schottky Barrier Rectifier

### Features

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

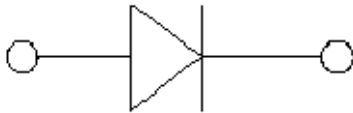


### Typical Applications

- Extreme fast switches

### Mechanical Data

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



	Marking
B5817WS	SJ
B5818WS	SK
B5819WS	SL

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

PARAMETER	SYMBOL	UNIT	Conditions	VALUE	
Repetitive peak reverse voltage	$V_{RRM}$	V		B5817WS	20
				B5818WS	30
				B5819WS	40
Reverse voltage	$V_R$	V	$I_R=1\text{mA}$	B5817WS	20
				B5818WS	30
				B5819WS	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	$R_{\theta JA}$	$^\circ\text{C/W}$		500	

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

PARAMETER	SYMBOL	UNIT	Conditions	VALUE	
Maximum Forward voltage	$V_F$	V	$I_F=1\text{A}$ , $T_J=25^\circ\text{C}$	B5817WS	0.45
				B5818WS	0.55
				B5819WS	0.60
	$V_F$	V	$I_F=3\text{A}$ , $T_J=25^\circ\text{C}$	B5817WS	0.75
				B5818WS	0.875
				B5819WS	0.90
Maximum Reverse current	$I_R$	$\mu\text{A}$	B5817WS	$V_R=20\text{V}$ , $T_A=25^\circ\text{C}$	200
			B5818WS	$V_R=30\text{V}$ , $T_A=25^\circ\text{C}$	40
			B5819WS	$V_R=40\text{V}$ , $T_A=25^\circ\text{C}$	40
Minimum Breakdown voltage	$V_{(BR)}$	V	$I_R=1\text{mA}$	B5817WS	20
				B5818WS	30
				B5819WS	40
Maximum Diode capacitance	$C_D$	pF	$V_R=4\text{V}$ , $f=1\text{MHz}$	120	



# B5817WS THRU B5819WS

## ■ Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
B5817WS Thru B5819WS	F2	Approximate 0.004	3000	30000	120000	7" reel

## ■ Characteristics (Typical)

Fig.1 Forward Current Derating Curve

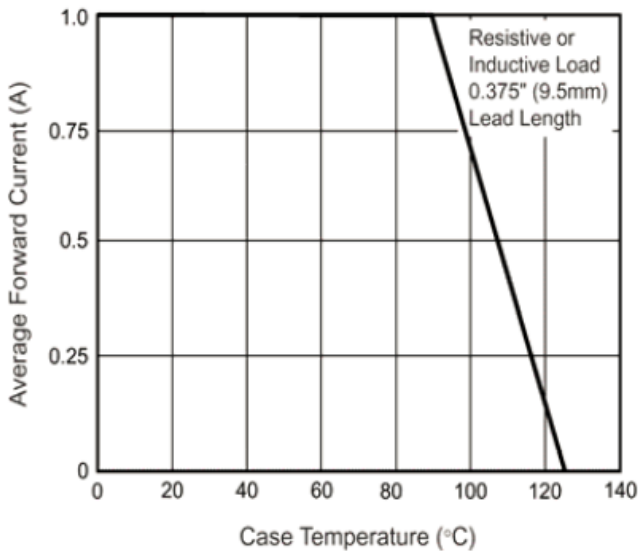


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

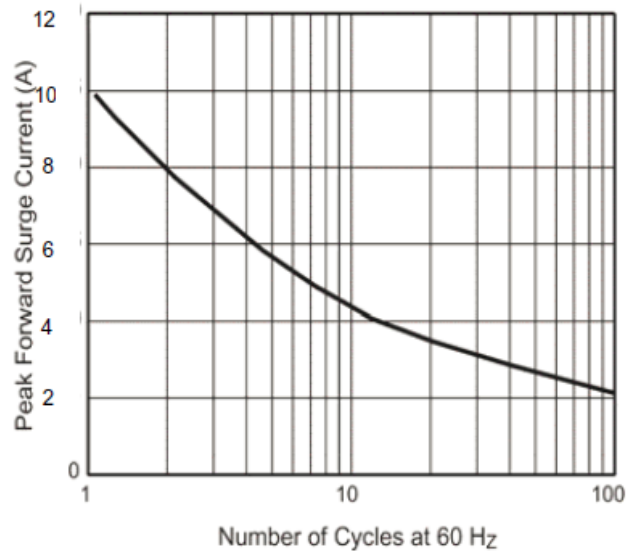


Fig.3 Typical Instantaneous Forward Characteristics

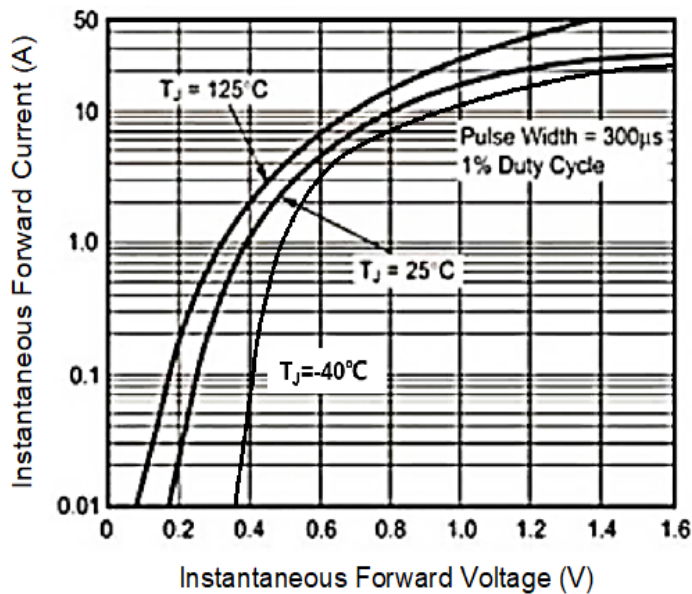
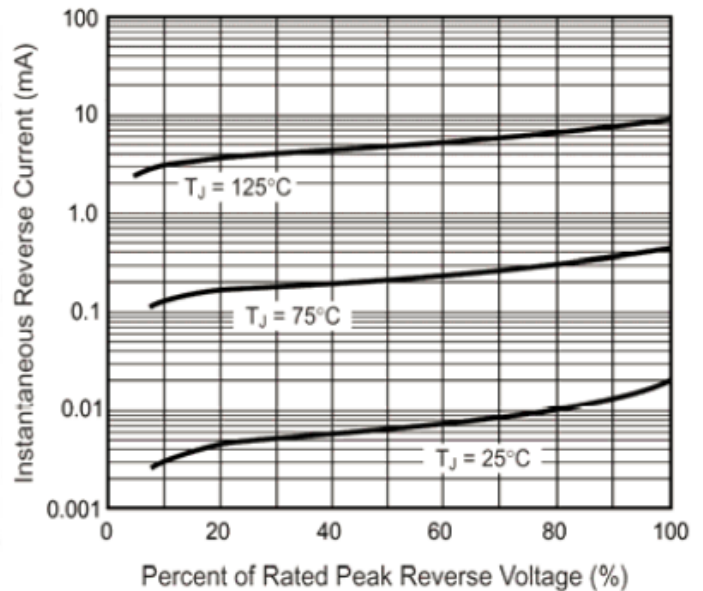


Fig.4 Typical Reverse Characteristics





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Fig.5 Typical Junction Capacitance

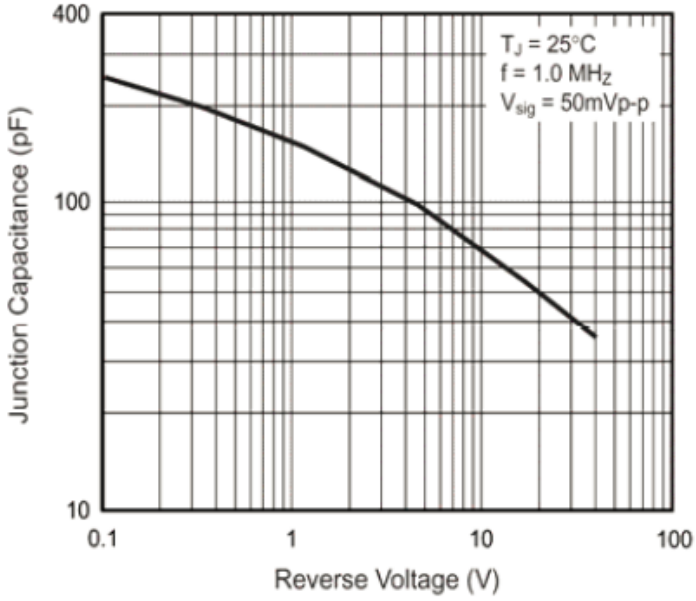


Fig.6 Typical Transient Thermal Impedance

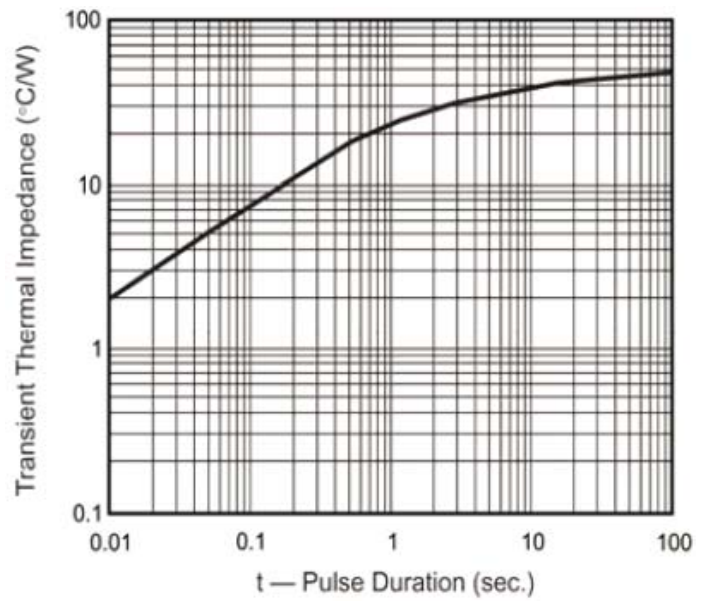
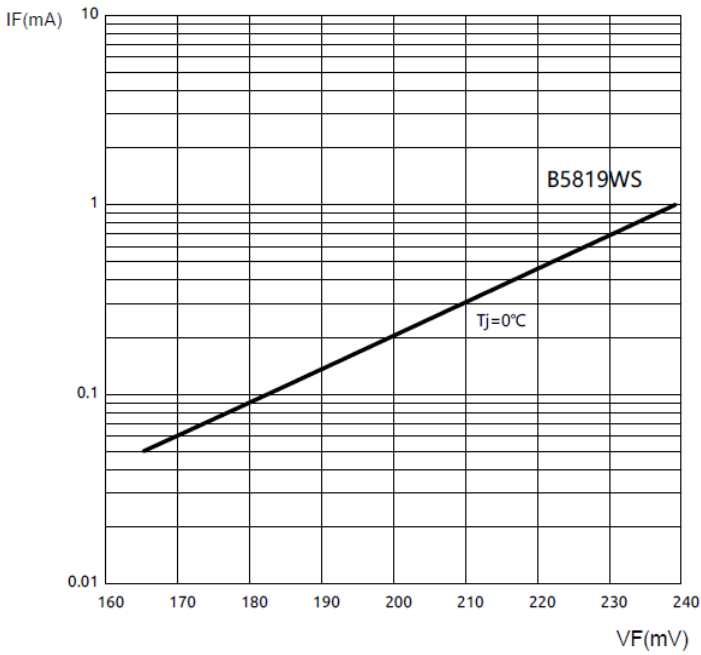


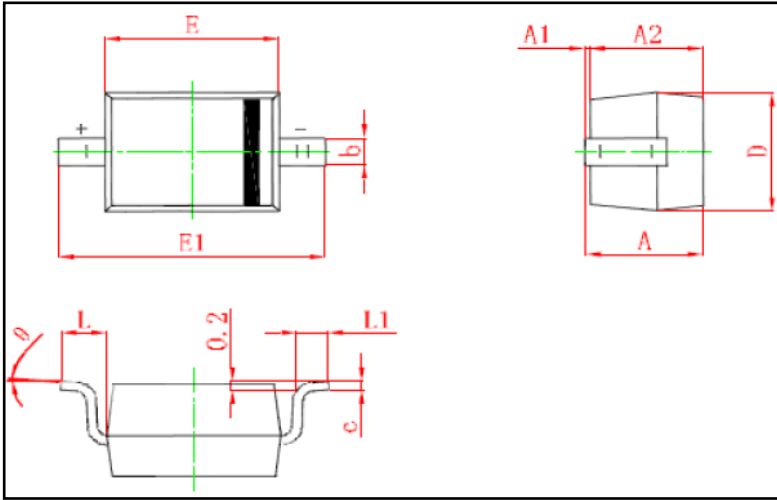
Fig.7 Forward Characteristics





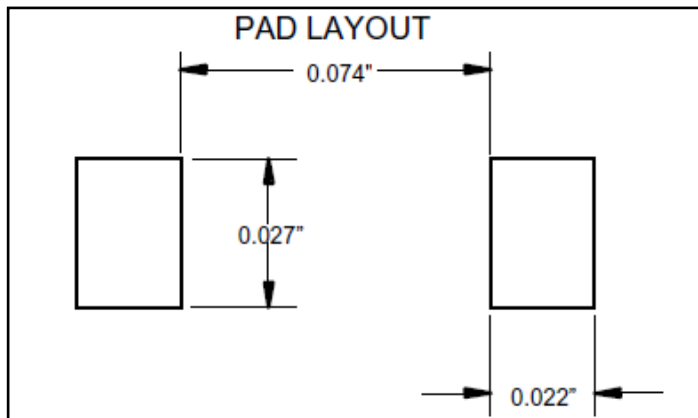
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## ■ Outline Dimensions



Symbol	Min. (mm)	Max. (mm)
A		1.000
A1	0.000	0.100
A2	0.800	0.900
b	0.250	0.400
c	0.080	0.150
D	1.200	1.400
E	1.600	1.800
E1	2.500	2.700
L	0.475REF	
L1	0.250	0.400
$\theta$	0°	8°

## ■ Soldering Footprint



Unit: inches



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