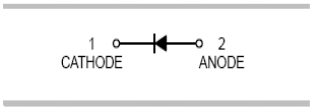
B5817WH

Small Signal Schottky Barrier Diode

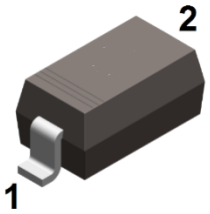
Features

- Extremely low V_F
- Low stored change, majority carrier conduction
- Low power loss/high efficient



Application

- For use in low voltage, high frequency inverters
- Free-wheeling, and polarity protection applications



SOD-123

Mechanical Data

- Case: SOD-123
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
B5817WH	SOD-123	3000 pcs / Tape & Reel	SJH

Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	V_{RSM}	24	V
Peak Repetitive Reverse Voltage	V_{RRM}	20	V
Working Peak Reverse Voltage	V_{RWM}	20	V
DC Reverse Voltage	V_R	20	V
RMS Reverse Voltage	$V_{R(RMS)}$	14	V
Forward Continuous Current	I_F	1	A
Peak Forward Surge Current (t_p = 8.3ms)	I_{FSM}	10	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	500	mW
Thermal Resistance (Junction-to-Ambient) *1	$R_{\Theta JA}$	240	°C/W
Thermal Resistance (Junction-to-Case) *1	$R_{\Theta JC}$	125	°C/W
Thermal Resistance (Junction-to-Lead) *1	$R_{\Theta JL}$	180	°C/W
Operating junction Temperature	T_J	-55 ~ +150	°C
Storage Temperature Range	T_{STG}	-55 ~ +150	°C

Electrical Characteristics (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	I_R = 1mA	20	-	-	V
Forward Voltage	V_{F1}	I_F = 1A	-	-	0.50	V
	V_{F2}	I_F = 3A	-	-	0.75	V
Maximum Peak Reverse Current	I_R	V_R = 20V	-	-	1	mA
Typical Junction Capacitance	C_J	V_R = 4V, f = 1MHZ	-	-	120	pF

Note 1: The data tested by surface mounted on a 1 inch^2 FR-4 board with 2OZ copper

Ratings and Characteristic Curves (@ T_A = 25°C unless otherwise specified)

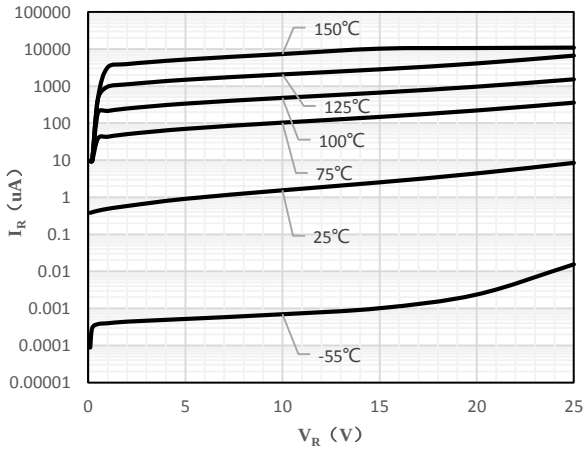


Fig 1 Typical Reverse Characteristic

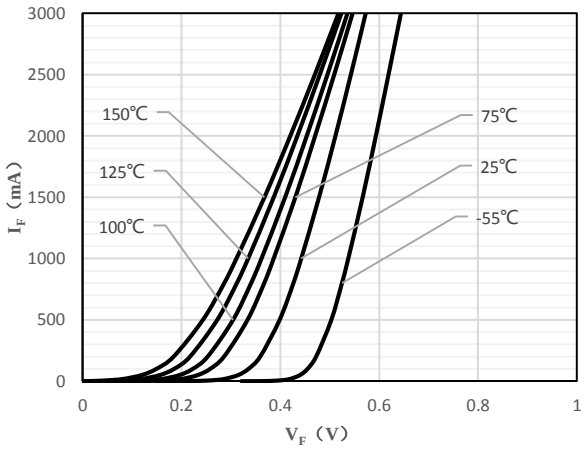


Fig 2 Typical Forward Characteristics

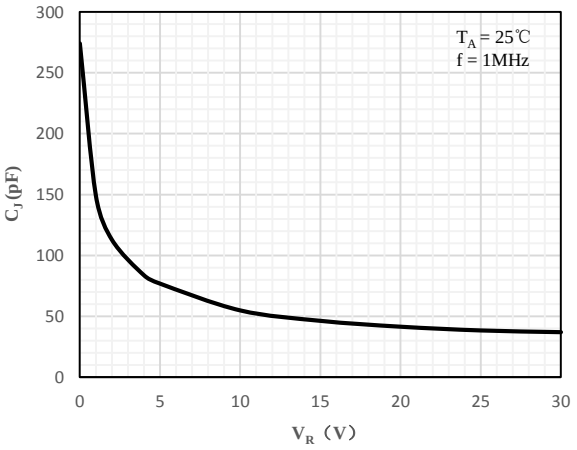


Fig 3 Capacitance Characteristics

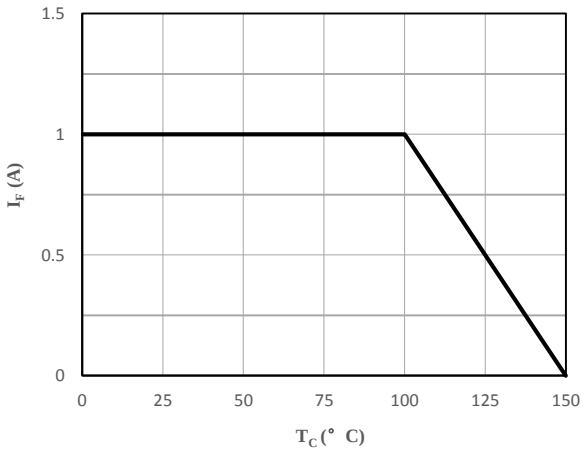


Fig 4 Derating Curve

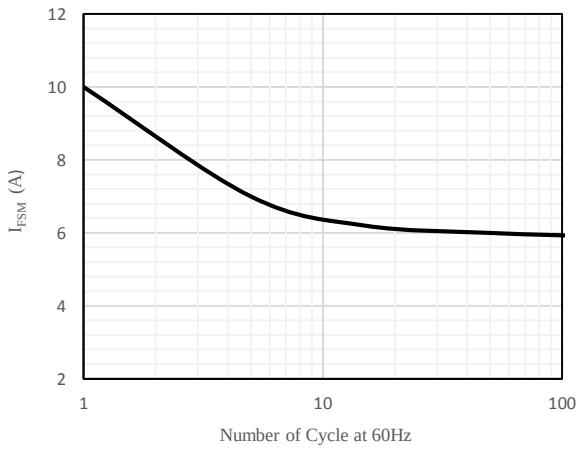
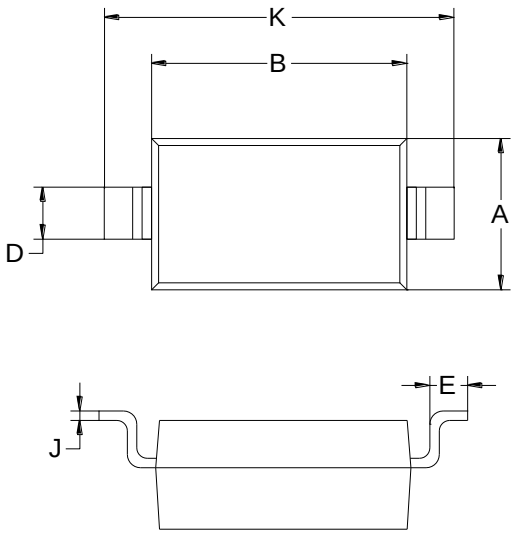


Fig 5 Surge Current Derating Curve

B5817WH

Small Signal Schottky Barrier Diode

Package Outline Dimensions (Unit: mm)



SOD-123		
Dimension	**Min.**	**Max.**
A	1.45	1.75
B	2.55	2.85
C	1.00	1.30
D	0.50	0.60
E	0.25	0.45
H	0.02	0.10
J	0.05	0.15
K	3.55	3.85

Package Outline Dimensions (Unit: mm)

SOD-123