Technical Data
Data Sheet N1756, Rev. A

1N5817W THRU 1N5819W
SCHOTTKY BARRIER DIODE

SOD-123FL

Features

- **The plastic package carries Underwriters Laboratory Flammability Classification 94V-0**
- **Metal silicon junction, majority carrier conduction**
- **Low power loss, high efficiency**
- **High temperature soldering guaranteed: 260/10° C seconds,0.375"(9.5mm) lead length, 5 lbs. (2.3kg) tension**
- **This is a Pb − Free Device**
- **All SMC parts are traceable to the wafer lot**
- **Additional testing can be offered upon request**

Circuit Diagram

Mechanical Data

- **Case: SOD-123FL, molded plastic**
- **Terminals: Plated leads, solderable per MIL-STD-750, Method 2026**
- **Polarity: Color band dentes cathode end**
- **Mounting Position: Any**

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

Parameter Marking code	Symbol	1N5817W 12A	1N5818W 13A	1N5819W 14A	Units
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	V
Maximum DC blocking voltage	V_R				
Maximum RMS voltage	$V_{R(RMS)}$	14	21	28	V
Maximum average forward rectified current 0.375” (9.5mm) lead length at T_L=90℃	$I_{F(AV)}$	1.0			A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	40.0			A
Forward Voltage per element @I_F =1A, T_A=25°C	V_F	0.50			V
Maximum DC reverse current T_A=25°C At rated DC blocking voltage T_A=100°C	I_R	0.1 10.0			mA
Typical junction capacitance (Note 1)	C_J	110			pF
Typical thermal resistance (Note 2)	$R_{\Theta JA}$	85			°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150			°C

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Mounted on 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

Technical Data
Data Sheet N1756, Rev. A

RoHS

Ratings and Characteristics Curves

FIG. 1- FORWARD CURRENT DERATING CURVE

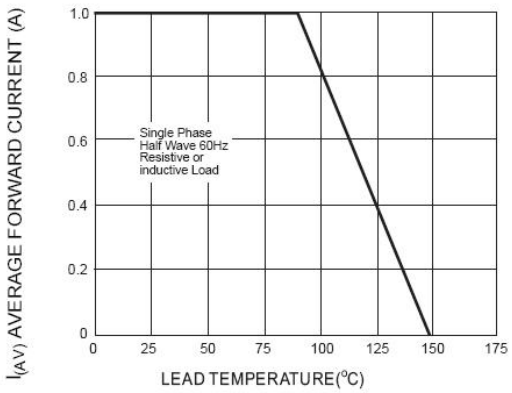


FIG. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

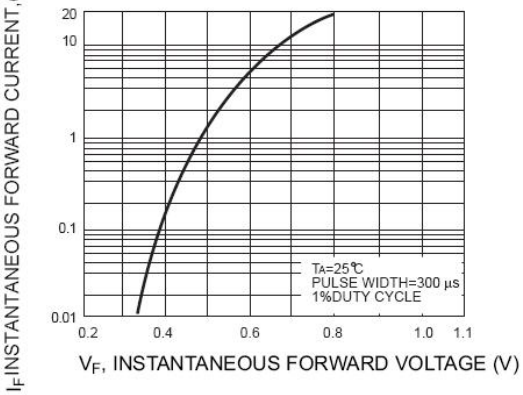


FIG. 3-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

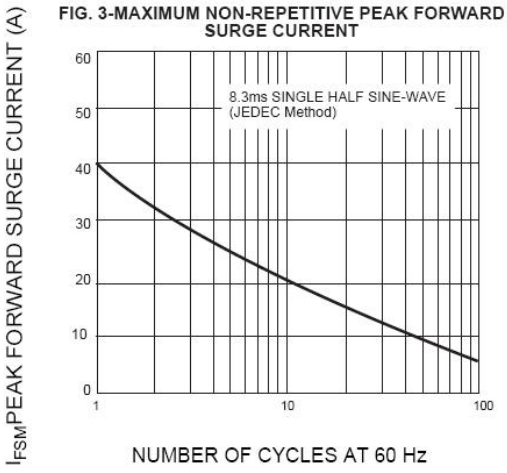


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

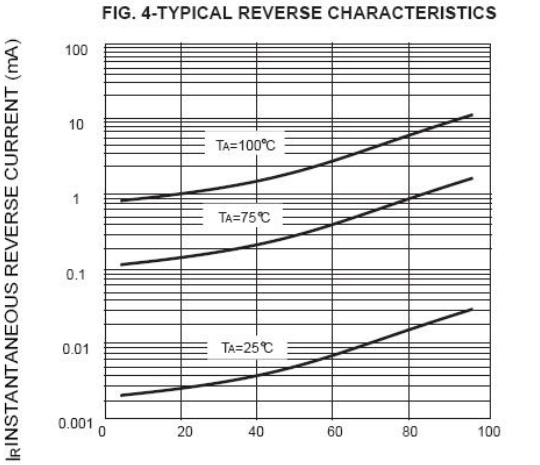
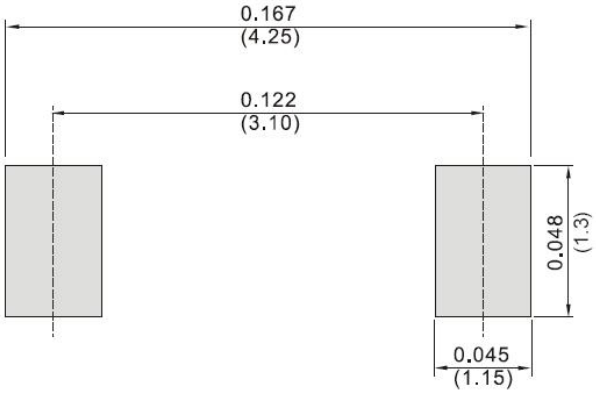


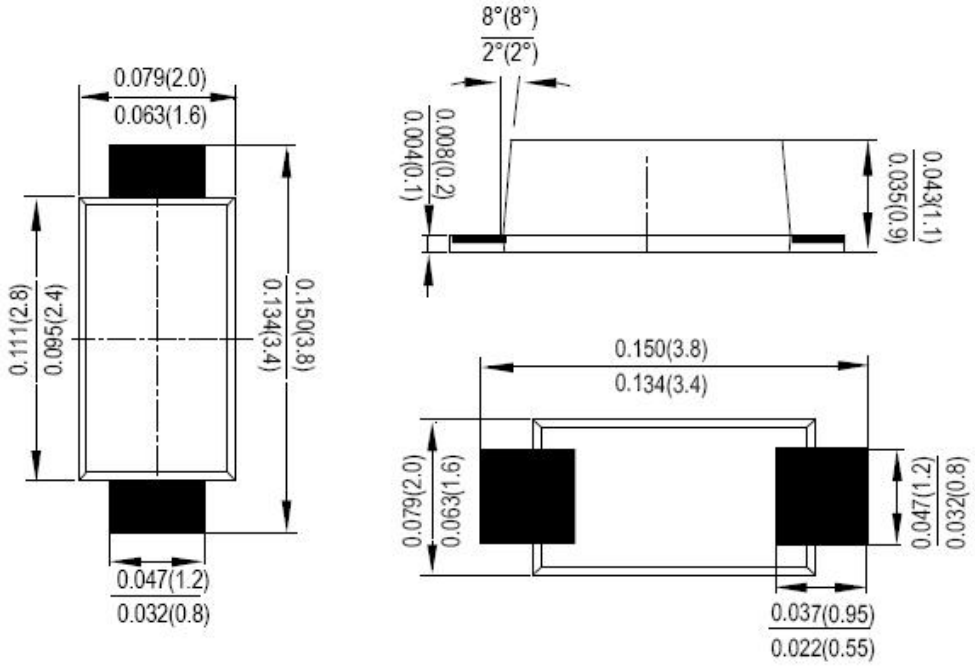
Fig.5 TYPICAL CAPACITANCE



1N5817W
THRU
1N5819W

Technical Data
Data Sheet N1756, Rev. A

Mechanical Dimensions SOD-123FL(Inches/Millimeters)

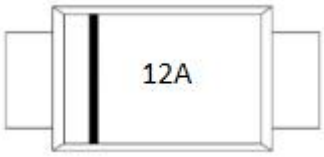


Ordering Information

Device	Package	Shipping
1N5817W THRU 1N5819W	SOD-123FL (Pb-Free)	5000pcs / reel

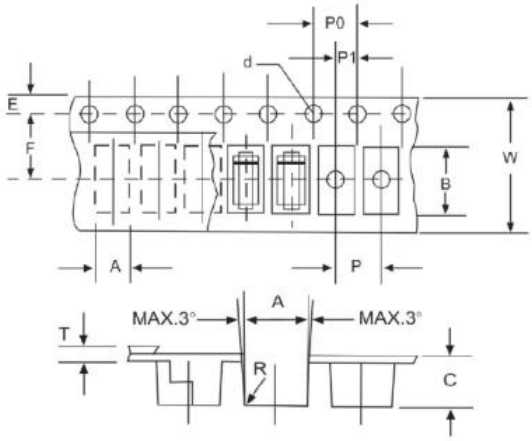
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram



12A = Marking Code

Carrier Tape Specification SOD-123FL



SYMBOL	Millimeters	
	Min.	Max.
A	1.95	2.15
B	3.85	4.05
C	1.35	1.55
d	1.50	1.60
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

1N5817W
THRU
1N5819W

Technical Data
Data Sheet N1756, Rev. A

DISCLAIMER:

1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the SMC - Sangdest Microelectronics (Nanjing) Co., Ltd sales department for the latest version of the datasheet(s).

2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment , and safety equipment) , safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement .

3- In no event shall SMC - Sangdest Microelectronics (Nanjing) Co., Ltd be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). SMC - Sangdest Microelectronics (Nanjing) Co., Ltd assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.

4- In no event shall SMC - Sangdest Microelectronics (Nanjing) Co., Ltd be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.

5- No license is granted by the datasheet(s) under any patents or other rights of any third party or SMC - Sangdest Microelectronics (Nanjing) Co., Ltd.

6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of SMC - Sangdest Microelectronics (Nanjing) Co., Ltd.

7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations..