Technical Data
Data Sheet N1649, Rev. A

FFM107 SUFACE MOUNT FAST RECOVERY RECTIFIER

SOD-123SL

Features

- Glass passivated device
- Ideal for surface mouted applications
- Low reverse leakage
- Metallurgically bonded construction
- High temperature soldering guaranteed: 260 C/10 seconds,0.375” (9.5mm) lead length, 5 lbs. (2.3kg) tension
- Glass passivated chip junction
- 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: JEDEC SOD-123SL molded plastic
- Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight:0.0007 ounce, 0.02 grams

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

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

Characteristic	Symbol	FFM107	Units
Maximum repetitive peak reverse voltage Maximum DC blocking voltage	V_{RRM} V_{DC}	1000	V
Maximum RMS voltage	V_{RMS}	700	V
Maximum average forward rectified current 0.375”(9.5mm) lead length at @T_A = 65°C	$I_{(AV)}$	1.2	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	50	A
Maximum instantaneous forward voltage at 1.2A	V_F	1.3	V
Maximum DC reverse current @T_A = 25°C At Rated DC Blocking Voltage @T_A = 125°C	I_R	5.0 50.0	μA
Maximum reverse recovery time (Note 2)	t_{rr}	250	ns
Typical Junction Capacitance (Note 3)	C_J	15	pF
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	50	°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150	°C

Note: 1. Averaged over any 20ms period.
2. Measured with IF=0.5A, IR=1A, Irr=0.25A.
3. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

Technical Data
Data Sheet N1649, Rev. A

Ratings and Characteristics Curves

FIG. 1- FORWARD CURRENT DERATING CURVE

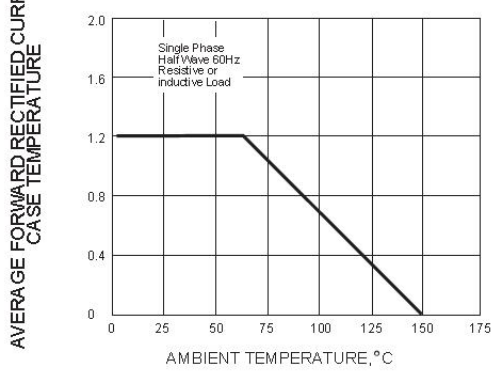


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

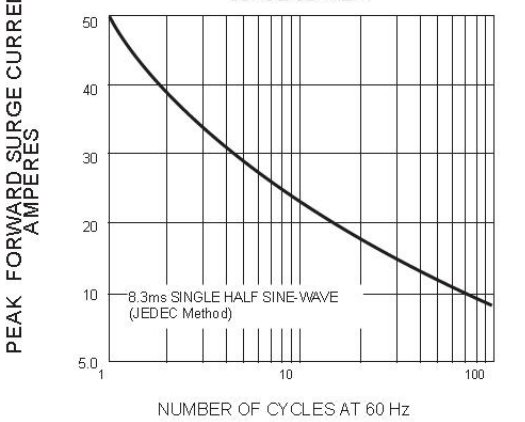


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

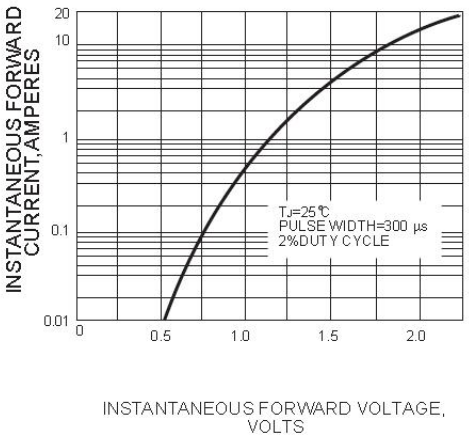


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

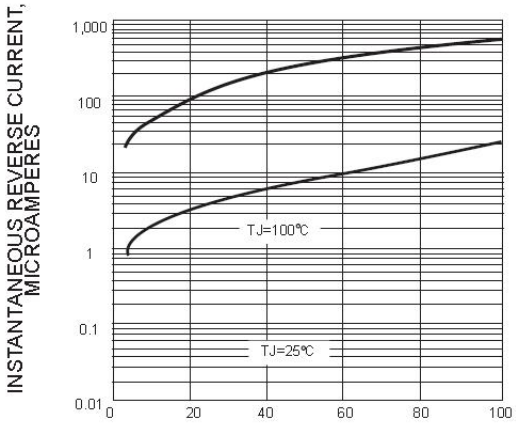


FIG. 5-TYPICAL JUNCTION CAPACITANCE

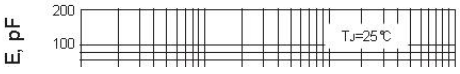


Fig.5 TYPICAL CAPACITANCE

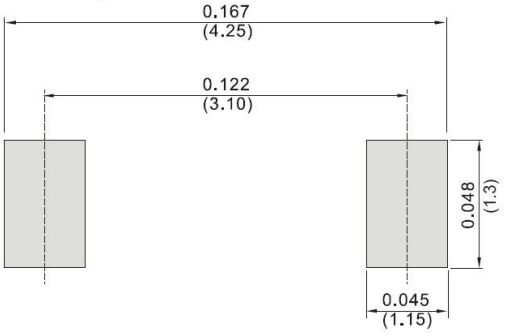
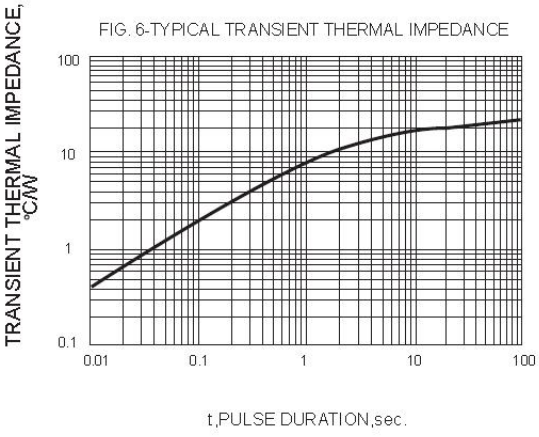
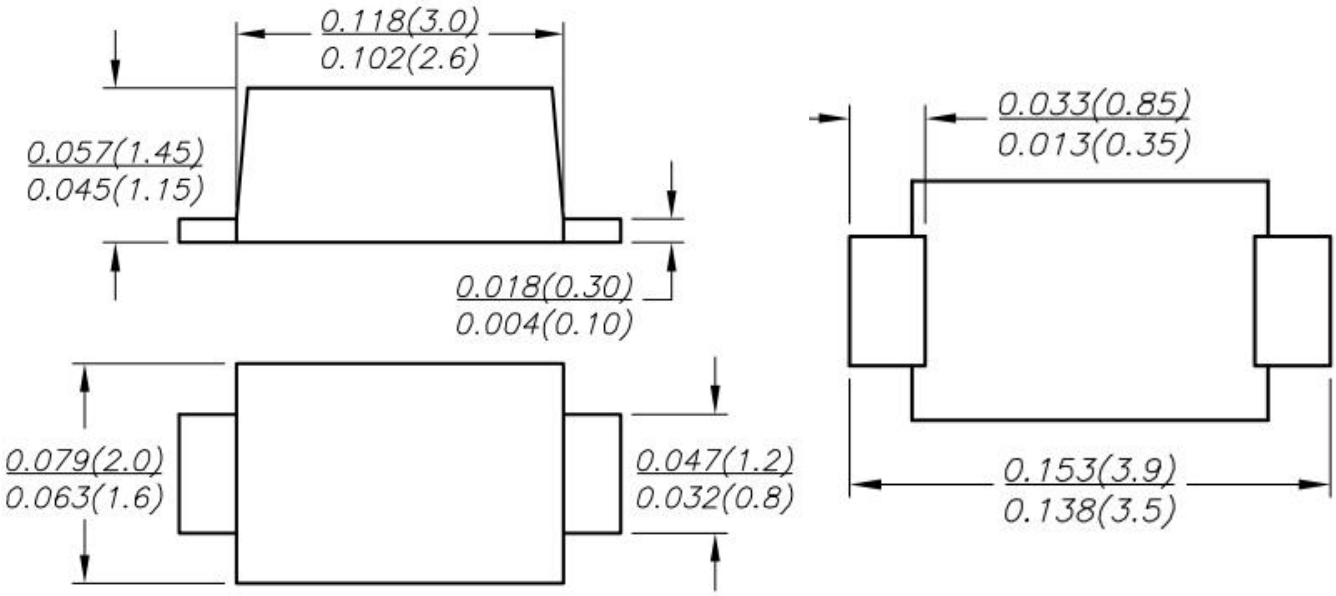


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



Technical Data
Data Sheet N1649, Rev. A

Mechanical Dimensions SOD-123SL(Inches/Millimeters)

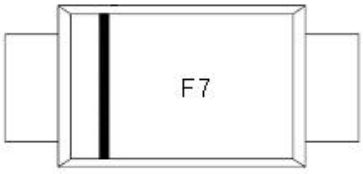


Ordering Information

Device	Package	Shipping
FFM107	SOD-123SL (Pb-Free)	3000pcs / reel

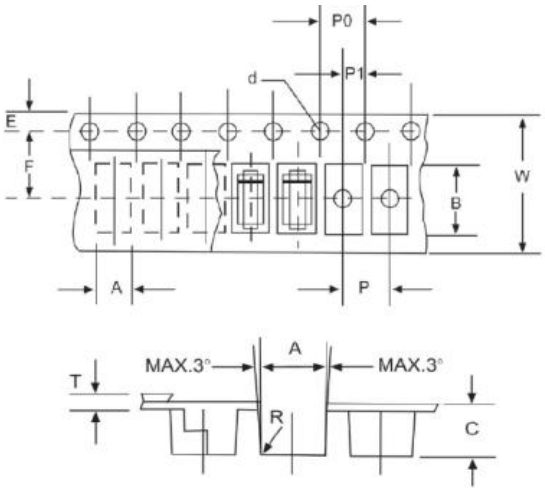
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram



F7 = Part Number

Carrier Tape Specification SOD-123SL



SYMBOL	Millimeters	
	Min.	Max.
A	2.05	2.25
B	3.85	4.05
C	1.25	1.45
d	1.45	1.65
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

Technical Data
Data Sheet N1649, 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 Diode Solutions 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 Diode Solutions 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 Diode Solution 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 Diode Solutions 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 Diode Solutions.
6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of SMC Diode Solutions.
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..