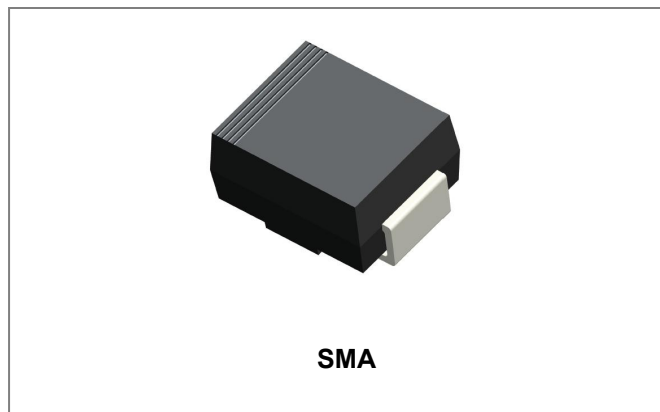


SL12 THRU SL14 LOW VF SURFACE MOUNTSCHOTTKY RECTIFIER



Features

- Schottky Barrier Chip
- Very low forward voltage drop
- Guard Ring Die Construction for Transient Protection
- High Current Capability
- Low Power Loss, High Efficiency
- High Surge Current Capability
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
- Terminals finish: Tin Lead-free plated
- 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: Low Profile Molded plastic
- Terminals: Plated leads solderable per MIL-STD-750, Method 2026
- Polarity: Color band or cathode Notch
- Mounting Position: Any
- Weight: 0.06grams(approx)

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

Characteristic	Symbol	SL12	SL13	SL14	Units
Peak Repetitive Reverse Voltage	V _{RRM}				
Working Peak Reverse Voltage	V _{RWM}	20	30	40	V
DC Blocking Voltage	V _R				
Maximum RMS voltage	V _{RMS}	14	21	28	V
Average Rectified Output Current @T _L = 75°C	I _O	1.0			A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	30			A
Forward Voltage @ I _O = 1.0 A	V _F	0.38		0.40	V
Peak Reverse Current @T _A = 25°C At Rated DC Blocking Voltage @T _A = 100°C	I _{RM}	0.5 20			mA
Typical Thermal Resistance Junction to Ambient (Note 1)	R _{θJA}	75			K/W
Operating Temperature Range	T _J	-65 to +125			°C
Storage Temperature Range	T _{STG}	-65 to +150			°C

Note: 1. mounted on P.C. Board with 5.0mm² copper pad areas.

Ratings and Characteristics Curves

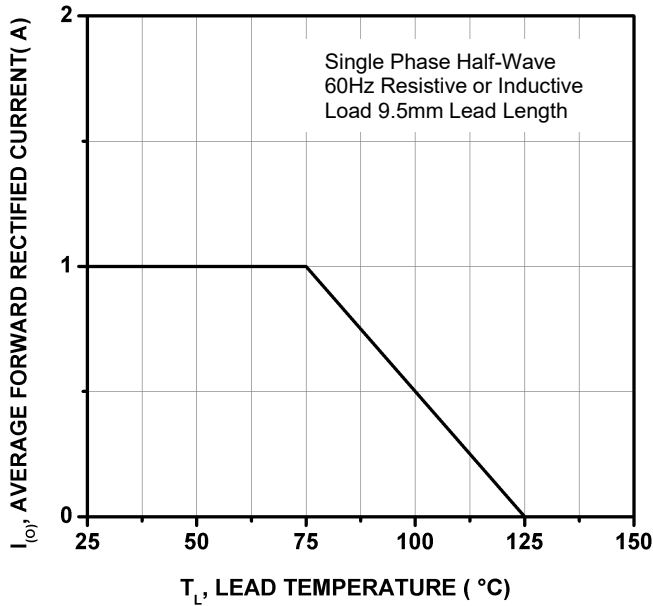


Fig.1 Forward Current Derating Curve

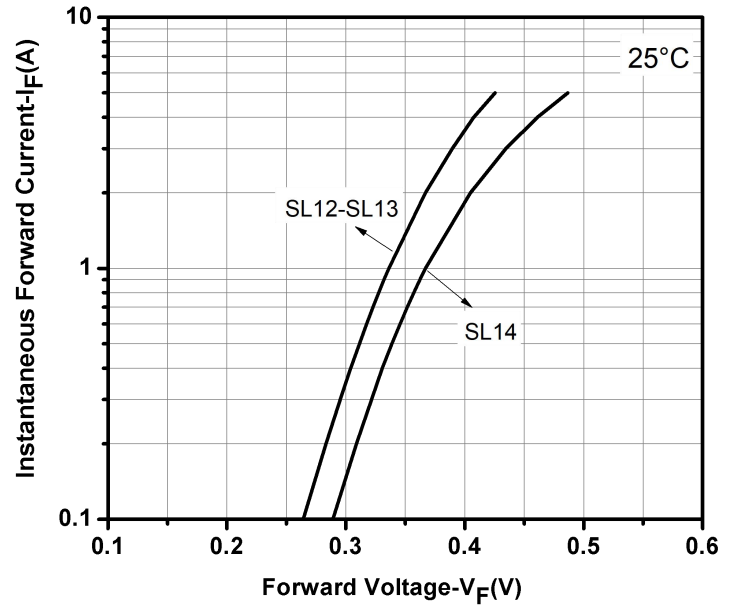


Fig.2 Typical Forward Characteristics

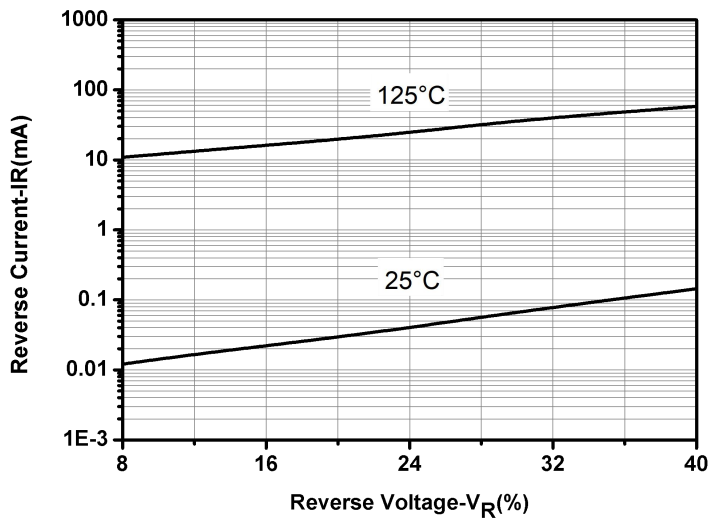


Fig.3 Typical Reverse Characteristics

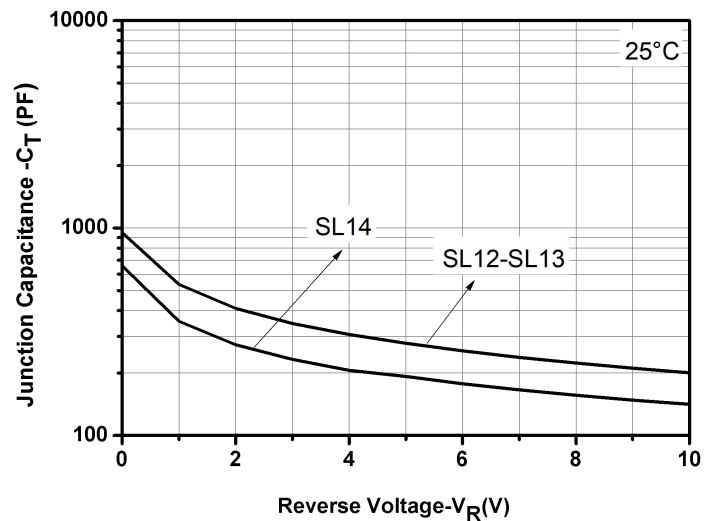
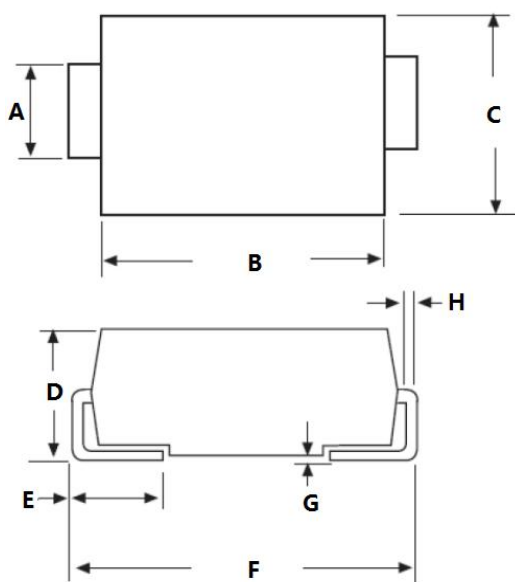


Fig.4 Typical Junction Capacitance

Mechanical Dimensions SMA



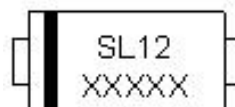
SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.25	1.65	0.049	0.065
B	3.95	4.6	0.156	0.181
C	2.25	2.95	0.089	0.116
D	1.95	2.9	0.077	0.114
E	0.75	1.6	0.03	0.063
F	4.8	5.6	0.189	0.22
G	0.05	0.2	0.002	0.008
H	0.15	0.41	0.006	0.016

Ordering Information

Device	Package	Shipping
SL12 - SL14	SMA (Pb-Free)	5000pcs / reel
SL12TR - SL14TR	SMA (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

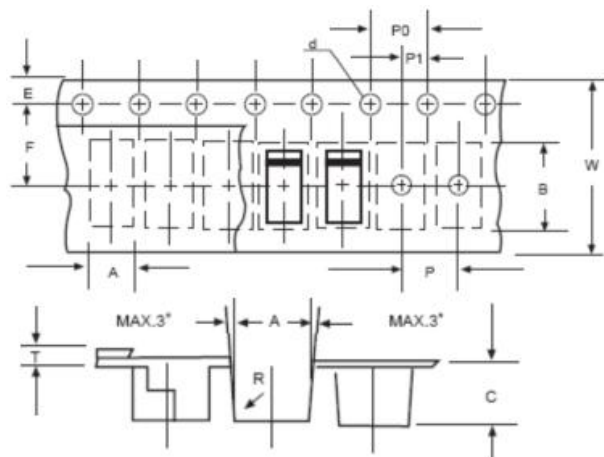


Where XXXXX is YYWWL

SL12 = Part Name
YY = Year
WW = Week
L = Lot Number

Cautions: Molding resin
Epoxy resin UL:94V-0

Carrier Tape Specification SMA



SYMBOL	Millimeters	
	Min.	Max.
A	2.97	3.17
B	5.70	5.90
C	2.32	2.52
d	1.40	1.60
E	1.40	1.60
F	5.60	5.70
P	3.90	4.10
P0	3.90	4.10
P1	1.90	2.10
T	0.25	0.35
W	11.80	12.20

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..