

SL42-SL44 SCHOTTKY RECTIFIER

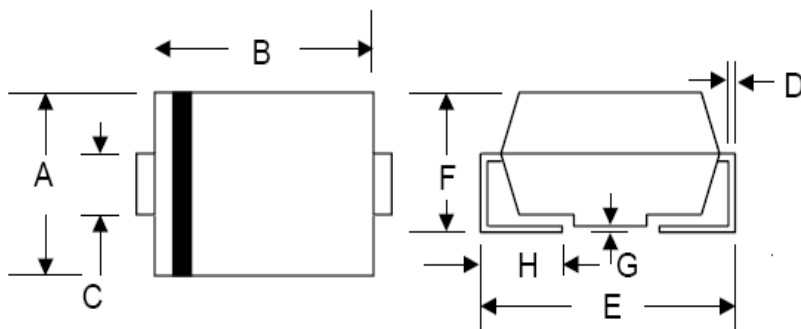
Applications:

- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

Features:

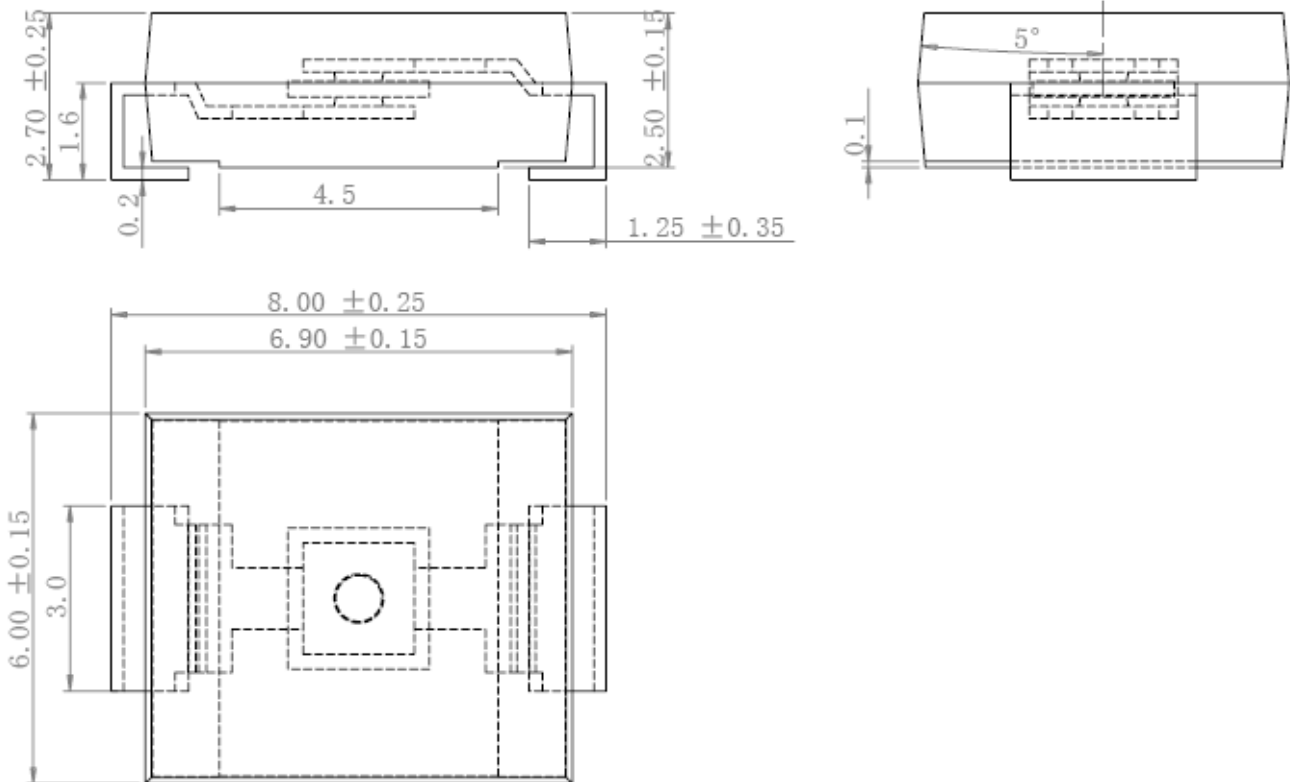
- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- High Current Capability
- Low Power Loss, High Efficiency
- High Surge Current Capability
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Mechanical Dimensions (In mm / Inches)



SMC/DO-214AB				
Dim	Min	Max	Min	Max
A	5.59	6.22	0.220	0.245
B	6.60	7.11	0.260	0.280
C	2.75	3.25	0.108	0.128
D	0.152	0.305	0.006	0.012
E	7.75	8.13	0.305	0.320
F	2.00	2.62	0.079	0.103
G	0.051	0.203	0.002	0.008
H	0.76	1.27	0.030	0.05
	In mm		In inch	

OPTION 1



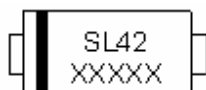
OPTION 2(JK)

SMC



Marking Diagram:

Where XXXXX is YYWWL



SL42 = Package type
YY = Year
WW = Week
L = Lot Number

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

Ordering Information

Device	Package	Shipping
SL42-SL44	SMC (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.



Maximum Ratings and Electrical Characteristics @ $T_A=25^{\circ}\text{C}$ unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	SL42	SL43	SL44	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	20	30	40	V
Maximum RMS Voltage	V_{RMS}	14	21	28	V
Average Rectified Output Current (Note 1) @ $T_A = 90^{\circ}\text{C}$	$I_{F(AV)}$	4.0			A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150			A
Forward Voltage @ $I_F = 4.0\text{A}, T_A = 25^{\circ}\text{C}$ @ $I_F = 4.0\text{A}, T_A = 125^{\circ}\text{C}$	V_{FM}	0.42 0.31		0.44 0.35	V
Peak Reverse Current At Rated DC Blocking Voltage @ $T_A = 25^{\circ}\text{C}$ @ $T_A = 100^{\circ}\text{C}$	I_{RM}		0.5 35		mA
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	50			$^{\circ}\text{C}/\text{W}$
Operating Temperature Range	T_J	-55 to +125			$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150			$^{\circ}\text{C}$
Approximate Weight	wt	0.24			g
Case Style		SMC			

Note: 1. Leads maintained at ambient temperature at a distance of 9.5mm from the case.

Technical Data
Data Sheet N1538, Rev. -

Green Products

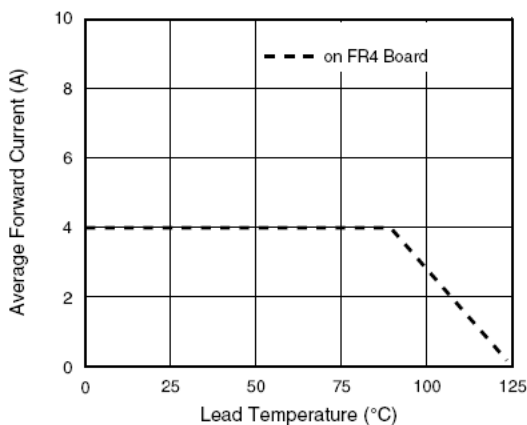


Fig. 1 - Forward Current Derating Curve

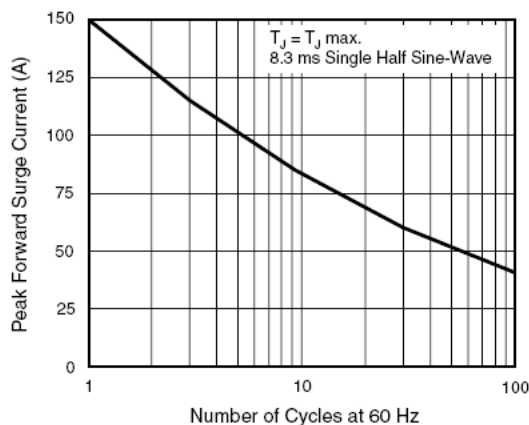


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

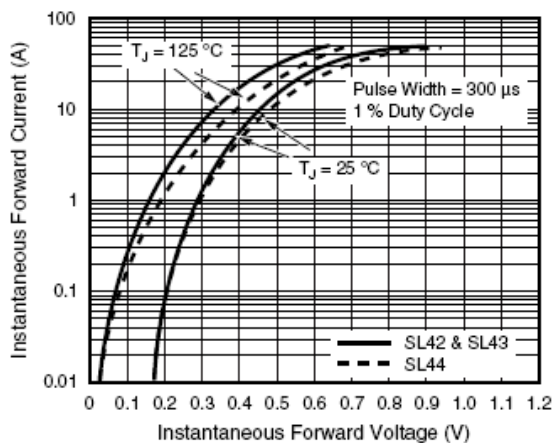


Fig. 3 - Typical Instantaneous Forward Characteristics

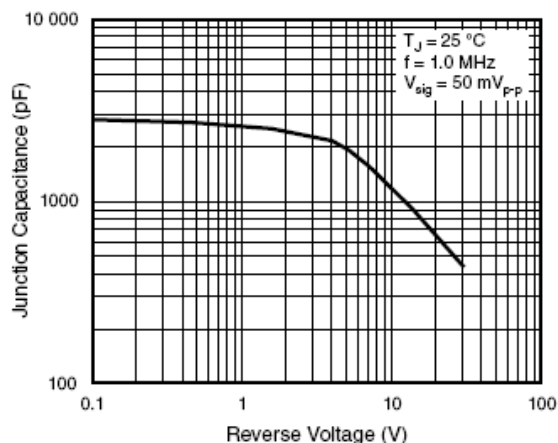


Fig. 5 - Typical Junction Capacitance

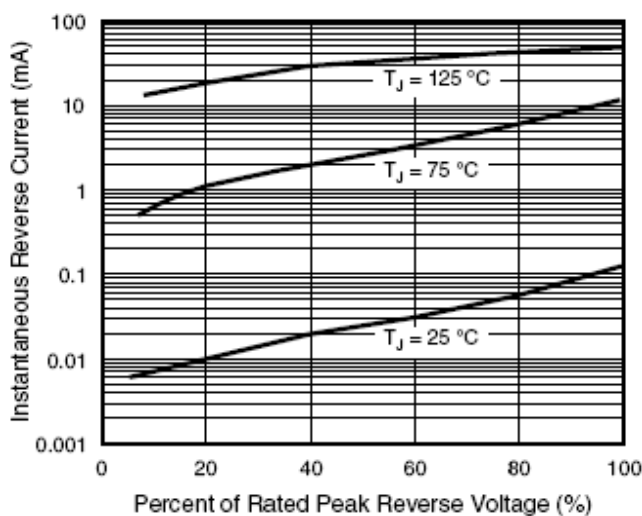


Fig. 4 - Typical Reverse Characteristics

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..