Technical Data
Data Sheet N2259, Rev. -

50HQ035/50HQ040/50HQ045
SCHOTTKY RECTIFIER

DO-5

Features

- 150 °C T_J operation
- Low forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- This is a Pb − Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	-	35(50HQ035) 40(50HQ040) 45(50HQ045)	V
Average Rectified Forward Current	$I_{F\ (AV)}$	50% duty cycle @Tc=101°C, rectangular wave form	60	A
Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	10 ms, Half Sine pulse, T_C = 25 °C	1150	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V_{F1}	@ 60A, Pulse, T_J = 25 °C @ 120A, Pulse, T_J = 25 °C	- -	0.60 0.78	V
	V_{F2}	@ 60A, Pulse, T_J = 125 °C @ 120A, Pulse, T_J = 125 °C	- -	0.53 0.69	V
Reverse Current*	I_{R1}	@V_R = rated V_R T_J = 25 °C	-	5	mA
	I_{R2}	@V_R = rated V_R T_J = 125 °C	-	200	mA
Junction Capacitance	C_T	@V_R = 5V, T_C = 25 °C f_{SIG} = 1MHz	-	2600	pF
Voltage Rate of Change	dv/dt	-	-	10,000	V/µs

* Pulse width < 300 µs, duty cycle < 2%

Technical Data
Data Sheet N2259, Rev. -

RoHS

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +150	°C
Storage Temperature	T_{stg}	-	-55 to +150	°C
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	0.83	°C/W
Typical Thermal Resistance, case to Heat Sink	$R_{\theta cs}$	Mounting surface, smooth and greased	0.25	°C/W
Mounting Torque Min. Max.	T_M	Non-lubricated threads	23 46	Kg-cm
Approximate Weight	wt	-	15	g

Ratings and Characteristics Curves

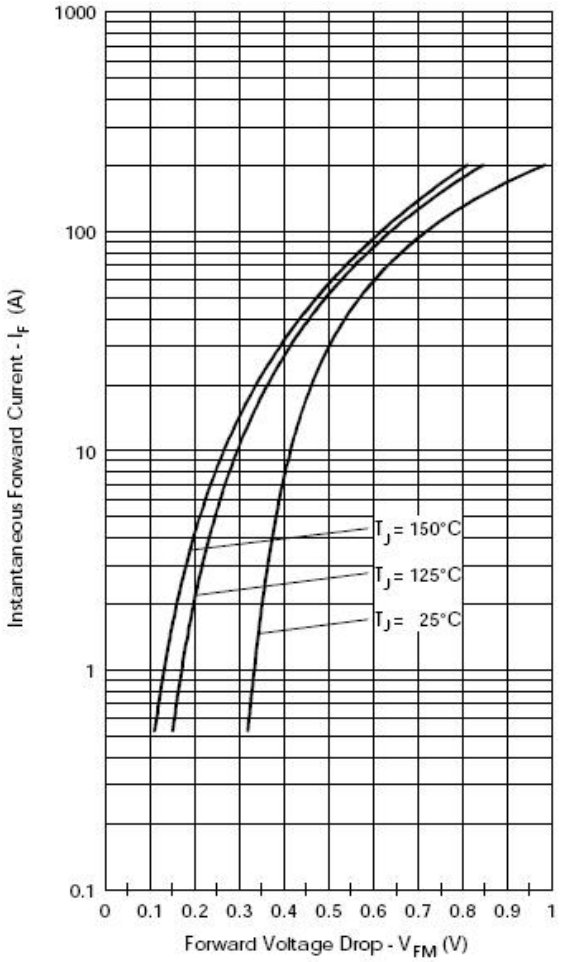


Fig. 1 - Maximum Forward Voltage Drop Characteristics

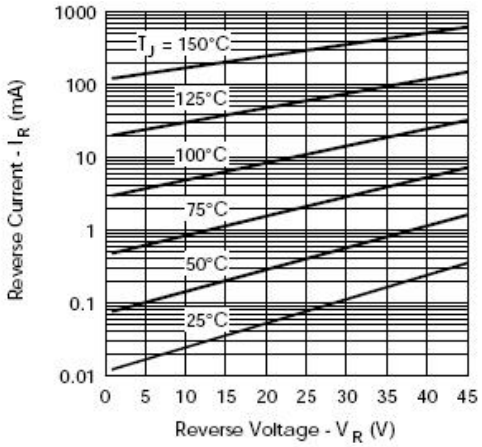


Fig. 2 - Typical Values of Reverse Current Vs. Reverse Voltage

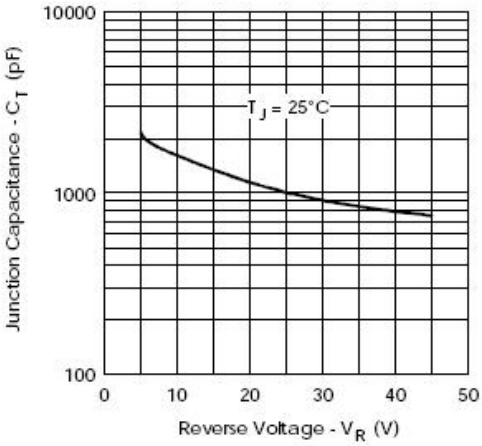
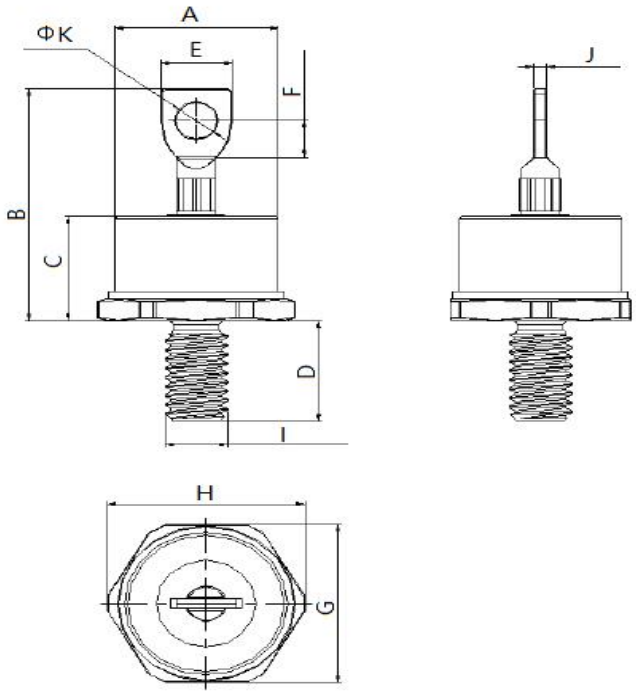


Fig. 3 - Typical Junction Capacitance Vs. Reverse Voltage

50HQ035
50HQ040
50HQ045

Technical Data
Data Sheet N2259, Rev. -

Mechanical Dimensions DO-5



SYMBOL	Millimeters	
	Min.	Max.
ΦA	15.0	
B	-	25.4
C	9.4	10.2
D	11.0	
E	6.1	6.7
F	3.0	-
G	17.3	
H	19.0	
I	M6	
J	0.9	1.5
ΦK	-	-

Ordering Information:

Device	Package	Shipping
50HQ035(040)(045)	DO-5(Pb-Free)	100pcs / box

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

50HQ035 = Part name
YY = Year
WW = Week
L = Lot Number

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

Technical Data
Data Sheet N2259, Rev. -

RoHS

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.