

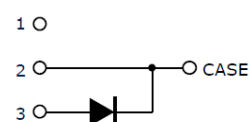


WSRSIC050065NPS

SILICON CARBIDE SCHOTTKY DIODE

Features

- 50A Silicon Carbide Schottky Diode
- Excellent high temperature stability
- Low forward voltage
- High forward surge capability
- 175°C Operating Junction Temperature
- Reduced temperature dependence
- RoHS Compliant & HF



Mechanical Data

- Case: TO-247-3L

Absolute Maximum Ratings (T_c=25°C Unless otherwise specified)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V _{RRM}	650	V
Surge Peak Reverse Voltage	V _{RSM}	650	V
DC Blocking Voltage	V _R	650	V
Maximum Average Forward Rectified Current at T _C =141°C	I _F	50	A
Surge(Non-Repetitive)Forward Current @ T _p =10ms Half Sine Wave T _C =25°C	I _{FSM}	340	A
Power Dissipation T _C =25°C	P _{tot}	348	W
Thermal Resistance(between Junction and Case)	R _{θ(J-C)}	0.43 (Typ.)	°C/W
Junction and Storage Temperature	T _J T _{STG}	-55~ +175	°C

Electronics Characteristics (T_c=25°C Unless otherwise specified)

Parameter	Symbol	Typ.	Max.	Unit
Maximum Instantaneous Forward Voltage @I _F =50A T _J =25°C	V _F	1.30	1.50	V
Maximum Instantaneous Forward Voltage @I _F =50A T _J =175°C		1.40	/	
Total Capacitance @ f=1MHZ T _J =25°C V _R =0V	C	3000	/	pF
Total Capacitance @ f=1MHZ T _J =25°C V _R =200V		300		
Total Capacitance @ f=1MHZ T _J =25°C V _R =400V		220		
Total Capacitive Charge @ V _R =400V	Q _C	110	/	nC
Reverse leakage current @V _R =650V T _J =25°C	I _R	15	100	μA
Reverse leakage current @V _R =650V T _J =175°C		100	/	

Note: The above typical parameters or typical characteristics are only indicative and do not make specific guarantees. If detailed values are required, additional communication and provision are required.

Typical Characteristics

Fig.1-Forward Characteristics

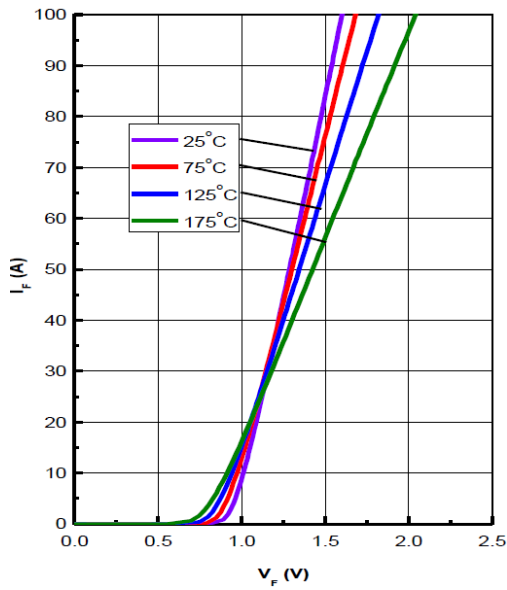


Fig.2-Reverse Characteristics

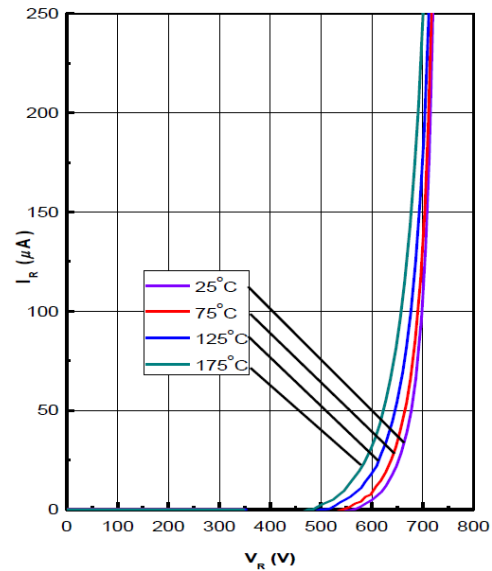


Fig.3-Total Capacitance Charge VS Reverse Voltage

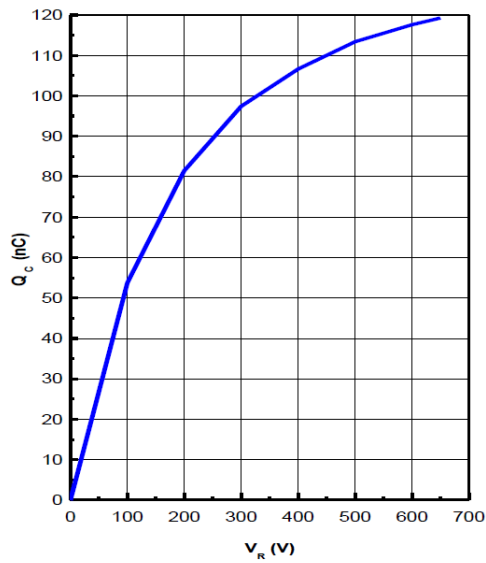
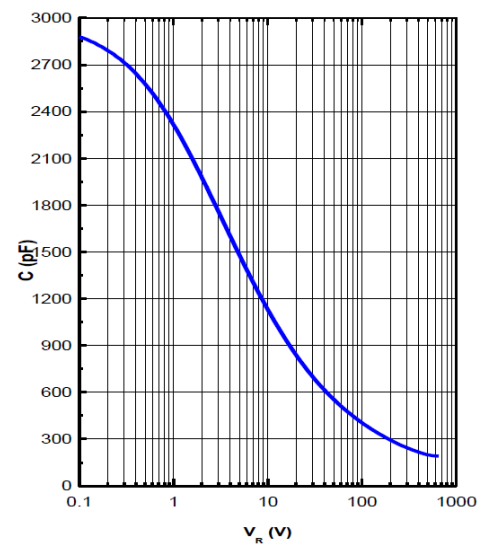
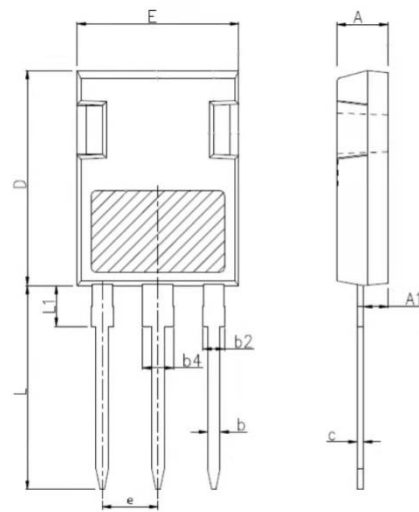


Fig.4-Capacitance VS Reverse Voltage



Outline Drawing

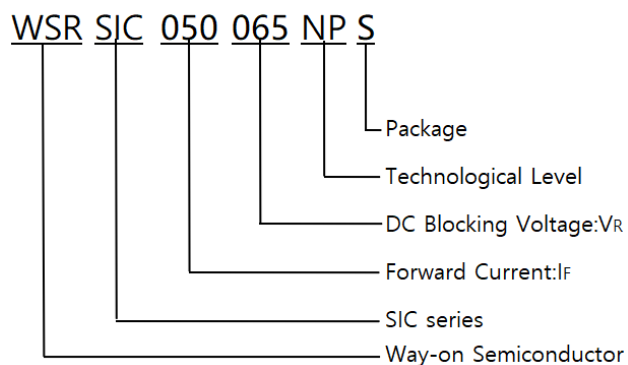
SYMBOL	MM		
	MIN	NOM	MAX
A	4.80	5.00	5.20
A1	2.00	-	3.00
b	1.10	1.20	1.36
b2	1.75	-	2.50
b4	2.50	-	3.50
c	0.50	0.60	0.75
D	20.00	-	21.30
E	15.00	-	16.10
e	5.4BSC		
L	19.62	-	20.22
L1	-	-	5.50



Marking Code

Part Number	WSRSIC050065NPS
Marking Code	W050065NPS

Part Number System



Package Information

Quantity per tube: 30pcs

Contact Information

No.1001, Shiwan(7) Road, Pudong District, Shanghai, P.R.China.201207

Tel: 86-21-50310888 Fax: 86-21-50757680 Email: market@way-on.com

WAYON website: <http://www.way-on.com>

For additional information, please contact your local Sales Representative.

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Product Specification Statement

The product specification aims to provide users with a reference regarding various product parameters, performance, and usage. It presents certain aspects of the product's performance in graphical form and is intended solely for users to select product and make product comparisons, enabling users to better understand and evaluate the characteristics and advantages of the product. It does not constitute any commitment, warranty, or guarantee.

The product parameters described in the product specification are numerical values, characteristics, and functions obtained through actual testing or theoretical calculations of the product in an independent or ideal state. Due to the complexity of product applications and variations in test conditions and equipment, there may be slight fluctuations in parameter test values. WAYON shall not guarantee that the actual performance of the product when installed in the customer's system or equipment will be entirely consistent with the product specification, especially concerning dynamic parameters. It is recommended that users consult with professionals for product selection and system design. Users should also thoroughly validate and assess whether the actual parameters and performance when installed in their respective systems or equipment meet their requirements or expectations. Additionally, users should exercise caution in verifying product compatibility issues, and WAYON assumes no responsibility for the application of the product.

WAYON strives to provide accurate and up-to-date information to the best of our ability. However, due to technical, human, or other reasons, WAYON cannot guarantee that the information provided in the product specification is entirely accurate and error-free. WAYON shall not be held responsible for any losses or damages resulting from the use or reliance on any information in these product specifications. WAYON reserves the right to revise or update the product specification and the products at any time without prior notice, and the user's continued use of the product specification is considered an acceptance of these revisions and updates. Prior to purchasing and using the product, users should verify the above information with WAYON to ensure that the product specification is the most current, effective, and complete. If users are particularly concerned about product parameters, please consult WAYON in detail or request relevant product test reports. Any data not explicitly mentioned in the product specification shall be subject to separate agreement.

Users are advised to pay attention to the parameter limit values specified in the product specification and maintain a certain margin in design or application to ensure that the product does not exceed the parameter limit values defined in the product specification. This precaution should be taken to avoid exceeding one or more of the limit values, which may result in permanent irreversible damage to the product, ultimately affecting the quality and reliability of the system or equipment.

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