



# WSRSIC006065NPC

## SILICON CARBIDE SCHOTTKY DIODE

### Features

- 6A Silicon Carbide Schottky Diode
- Excellent high temperature stability
- Low forward voltage
- High forward surge capability
- 150°C Operating Junction Temperature
- Reduced temperature dependence



### Mechanical Data

- Case: TO220-2L



### Absolute Maximum Ratings (T<sub>c</sub>=25°C Unless otherwise specified)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	650	V
Surge Peak Reverse Voltage	V <sub>RSM</sub>	650	V
DC Blocking Voltage	V <sub>R</sub>	650	V
Maximum Average Forward Rectified Current T <sub>c</sub> =135°C	I <sub>F</sub>	6	A
Surge(Non-Repetitive)Forward Current @ T <sub>p</sub> =10ms Half Sine Wave T <sub>c</sub> =25°C	I <sub>FSM</sub>	40	A
Power Dissipation T <sub>c</sub> =25°C	P <sub>tot</sub>	78.1	W
Thermal Resistance(between Junction and Case)	R <sub>θ(J-C)</sub>	1.6 (Typ.)	°C/W
Junction and Storage Temperature	T <sub>J</sub> T <sub>STG</sub>	-40 ~ +150	°C

Electronics Characteristics (T<sub>c</sub>=25°C Unless otherwise specified)

Parameter	Symbol	Typ.	Max.	Unit
Maximum Instantaneous Forward Voltage @I <sub>F</sub> =6A T <sub>J</sub> =25°C	V <sub>F</sub>	1.43	1.75	V
Maximum Instantaneous Forward Voltage @I <sub>F</sub> =6A T <sub>J</sub> =150°C		1.9	/	
Total Capacitance @ f=1MHZ T <sub>J</sub> =25°C V <sub>R</sub> =0V	C	273	/	pF
Total Capacitance @ f=1MHZ T <sub>J</sub> =25°C V <sub>R</sub> =200V		26		
Total Capacitance @ f=1MHZ T <sub>J</sub> =25°C V <sub>R</sub> =400V		24		
Total Capacitive Charge @ V <sub>R</sub> =400V	Q <sub>C</sub>	13.02	/	nC
Reverse leakage current @V <sub>R</sub> =V <sub>RWM</sub> T <sub>J</sub> =25°C	I <sub>R</sub>	1	40	μA
Reverse leakage current @V <sub>R</sub> =V <sub>RWM</sub> T <sub>J</sub> =150°C		8	/	

Typical Characteristics

Fig.1-Forward Characteristics

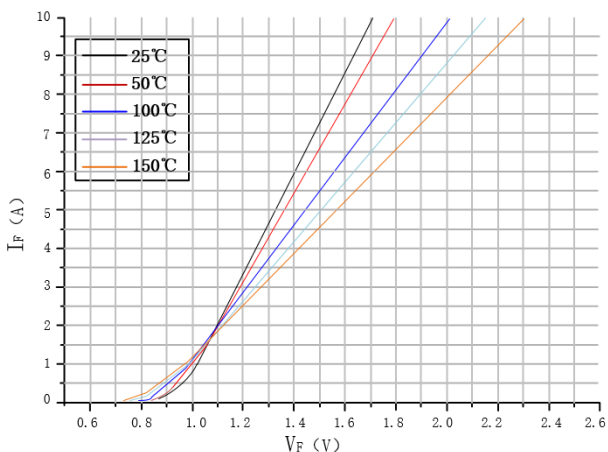
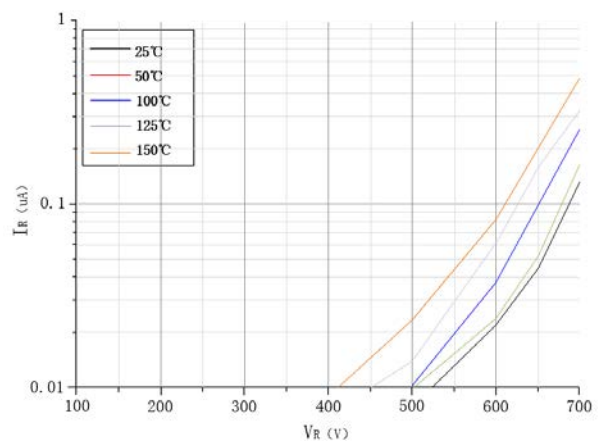


Fig.2-Reverse Characteristics



Typical Characteristics

Fig.3-Total Capacitance Charge VS Reverse Voltage

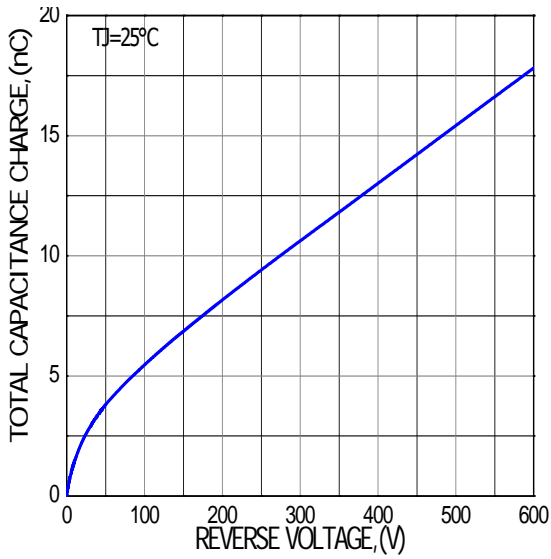
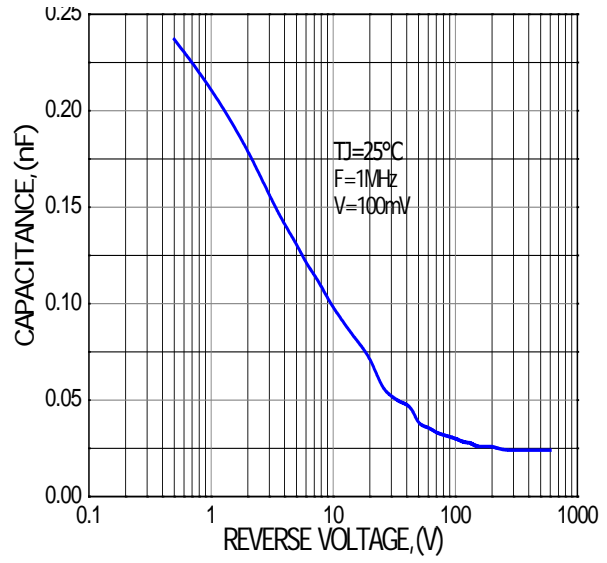
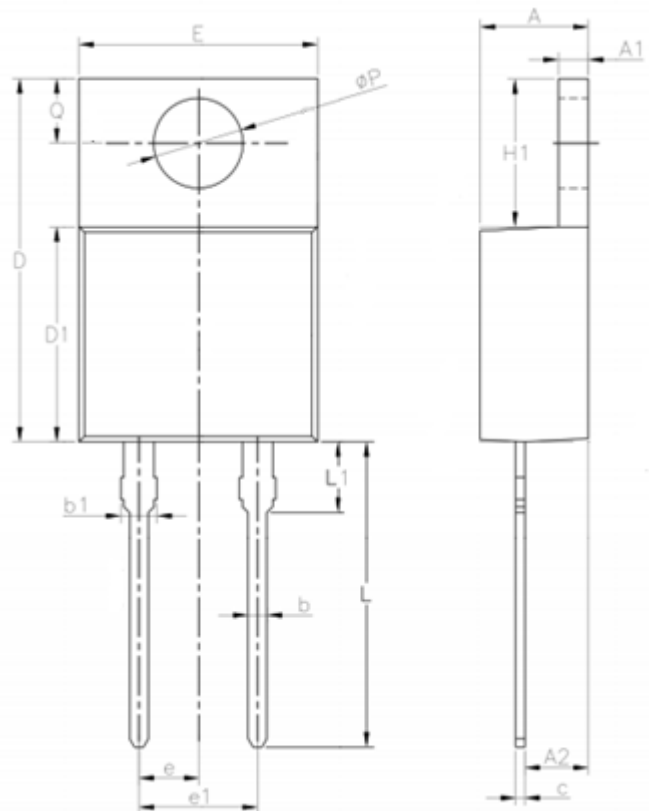


Fig.4-Capacitance VS Reverse Voltage



Outline Drawing

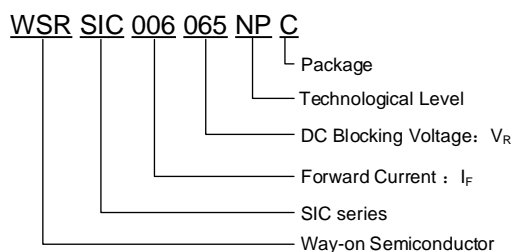
SYMBOL	MM	
	MIN	MAX
A	4.10	4.90
A1	1.00	1.60
A2	2.10	3.10
b	0.70	0.95
b1	-	1.47
c	0.25	0.60
D	14.10	16.30
D1	8.10	9.60
E	8.90	10.70
e	2.54BSC	
e1	5.08BSC	
H1	5.90	6.70
L	12.78	13.98
L1	3.50	4.60
φP	3.50	4.10
Q	2.44	3.10



## Marking Code

Part Number	WSRSIC006065NPC
Marking Code	W006065NPC

## Part Number System



## Package Information

Quantity per tube: 50pcs

## Contact Information

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The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.  
Users should verify actual device performance in their specific applications.*

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