BRSC06650ZC

Rev.A Jun.-2024

DATA SHEET

/ Descriptions

PDFN5Ö6 ṂṂ Ł VIF ⸗ ɡ⁀ ‖ ˥

SiC Schottky Barrier Diode in a PDFN5×6 Plastic Package.

/ Features

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Low power loss, high efficiency, HF Product.

[redacted]

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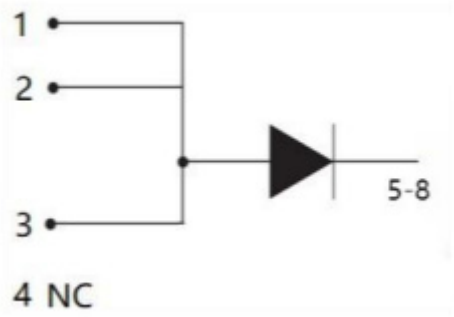
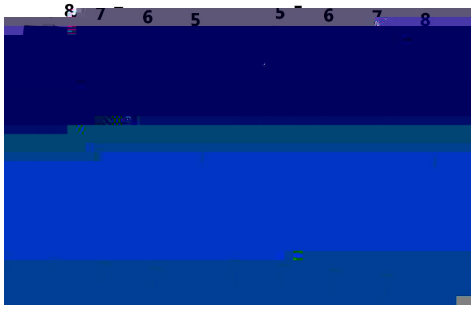
For high frequency, high voltage, high current rectifier diode, freewheeling diode





PIN 1,2,3 χ Anode PIN5-8 χ Cathode PIN 4 χ NC

/ Marking

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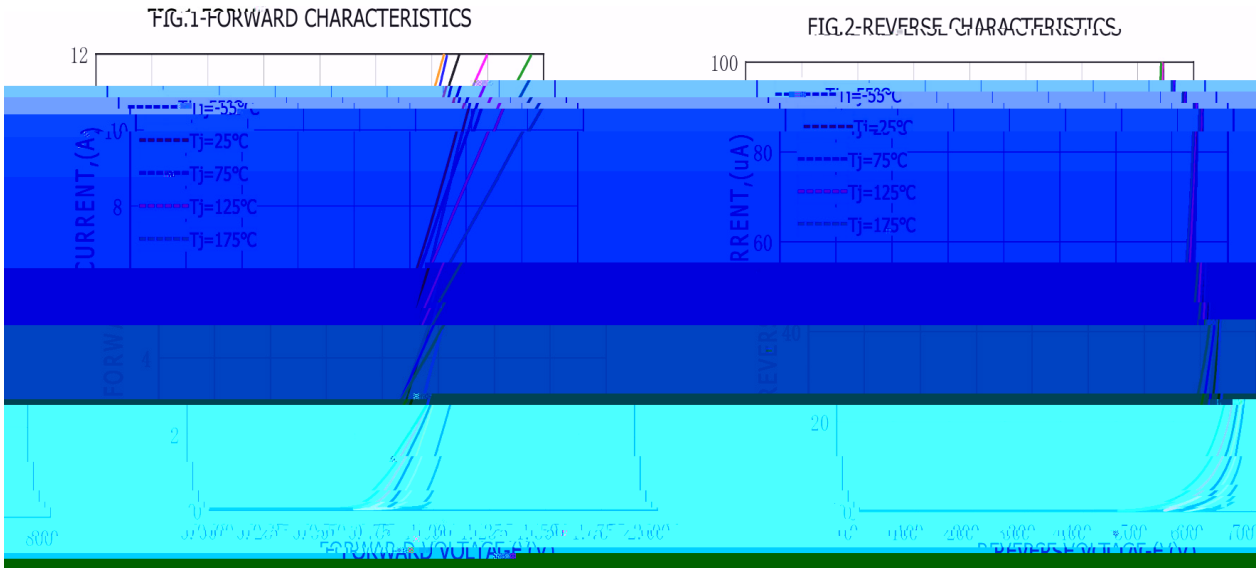
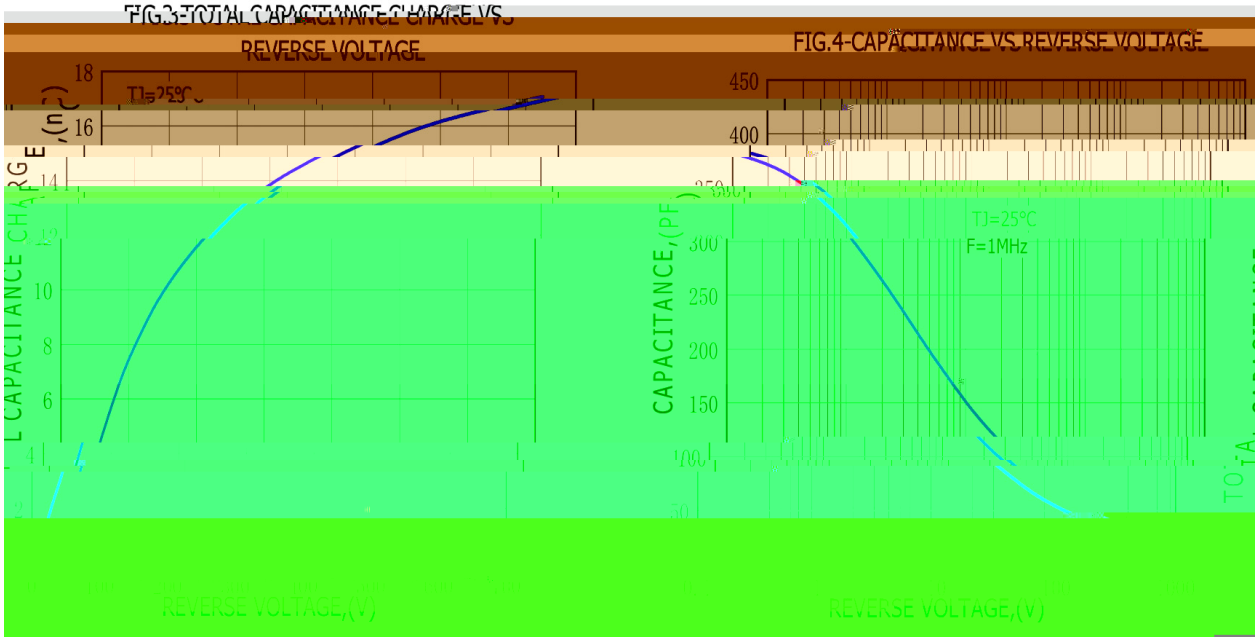
See Marking Instructions.

v ̈Ω̣ Parameter	ɿ N Symbol	̈Ω̣ Ö Rating	D Ɉ Unit
Peak Repetitive Reverse Voltage	V_{RRM}	650	V
Maximum RMS Voltage	V_{RMS}	455	V
Maximum DC blocking Voltage	V_{DC}	650	V
Continuous Forward Current,T_C=150	I_F	6	A
Peak forward surge current,tp=8.3ms	I_{FSM}	52	A
Total power disspation	P_D	53	W
Typical Thermal Resistance Junction to Case	R θ JC	2.8	/W
Operation Junction Temperature and Storage Temperature	T_J, T_{STG}	-55~+175	

v ̈Ω̣ Parameter	ɿ N Symbol	⅃ ⁝ ̸ Ţ Test Conditions		ω̣ ṇ Ö Min	Ɛ ʒ Ö Typ	ω̣ ᶻ Ö Max	D Ɉ Unit
Reverse Voltage	V_R			650	-	-	V
Forward Voltage	V_F	I_F=6A	T_C=25	-	1.27	1.5	V
		I_F=6A	T_C=175	-	1.38	1.6	V
Instantaneous Reverse Current	I_R Note 1	V_R=650V	T_a=25	-	4	50	μA
		V_R=650V	T_a=175	-	200	200	μA
Total capacitive charge	Q_C	VR =650V,IF =6A di/dt = 200A/μs		-	17	-	nC

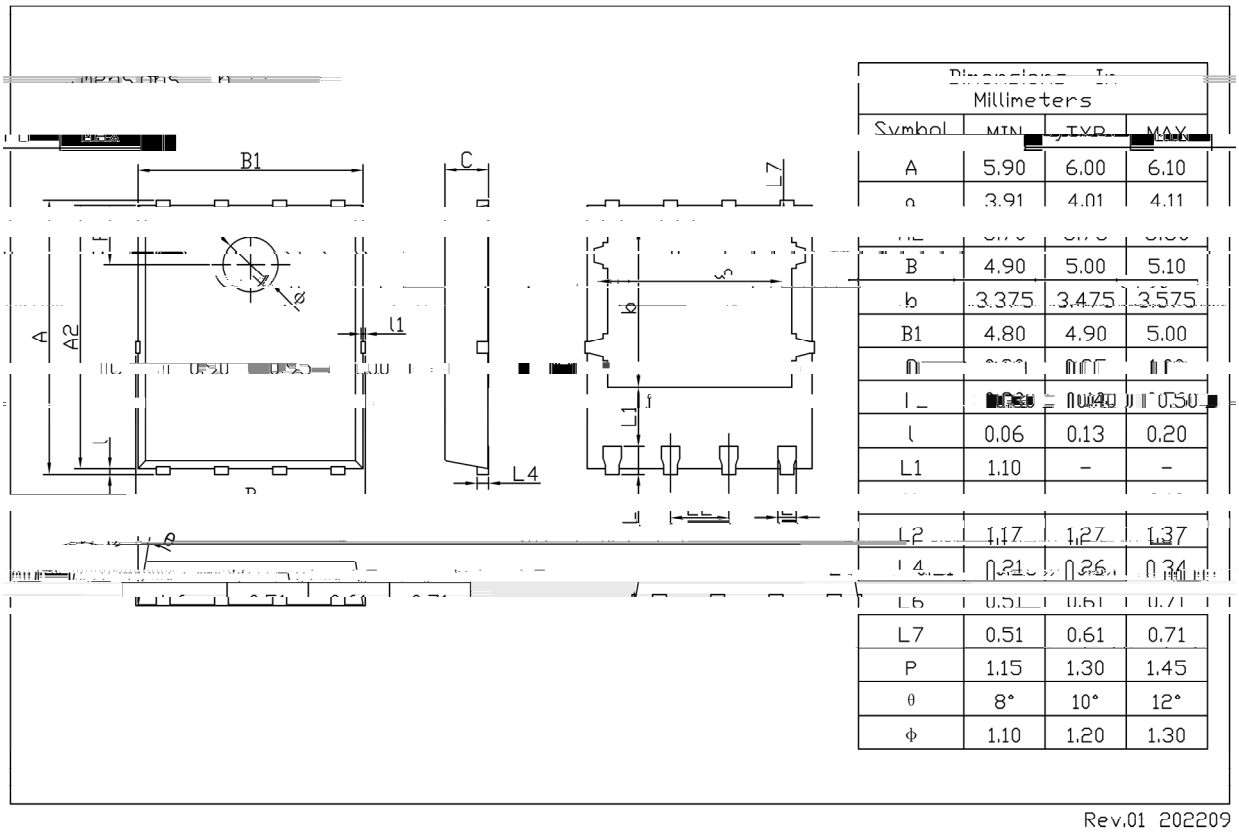
/ Electrical Characteristic Curve





/ Package Dimensions

PDFN5×6 Unit:mm



Symbol	Millimeters MIN	TYP.	MAX
A	5.90	6.00	6.10
B	4.90	5.00	5.10
b	3.375	3.475	3.575
B1	4.80	4.90	5.00
l	0.06	0.13	0.20
L1	1.10	–	–
L7	0.51	0.61	0.71
P	1.15	1.30	1.45
θ	8°	10°	12°
Φ	1.10	1.20	1.30

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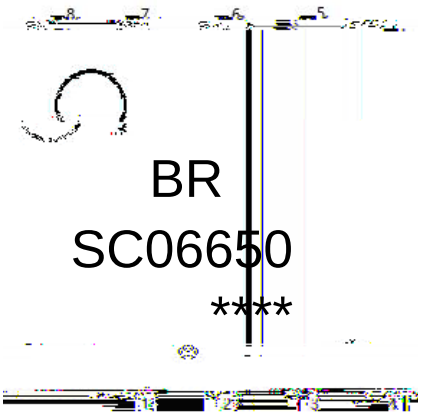
/ Marking Instructions



ᴗ ˝ χ

EU χ	ᴉᴉ ᴝ ᴵ ᴵ ᴵ
SC06650 χ	ᴉᴉ ᴝ ᴺ ᴵ
---- χ	ᴉᴉ ᴵ ᴇ ᴵ ᴺ ᴵ ᴵ ᴇ ᴵ ᴇ ᴵ ᴺ ᴵ ᴺ ᴵ ᴾ

Note χ

BR χ	Company Code
SC06650 χ	Product Type Code
****:	Lot No. Code, code change with Lot No

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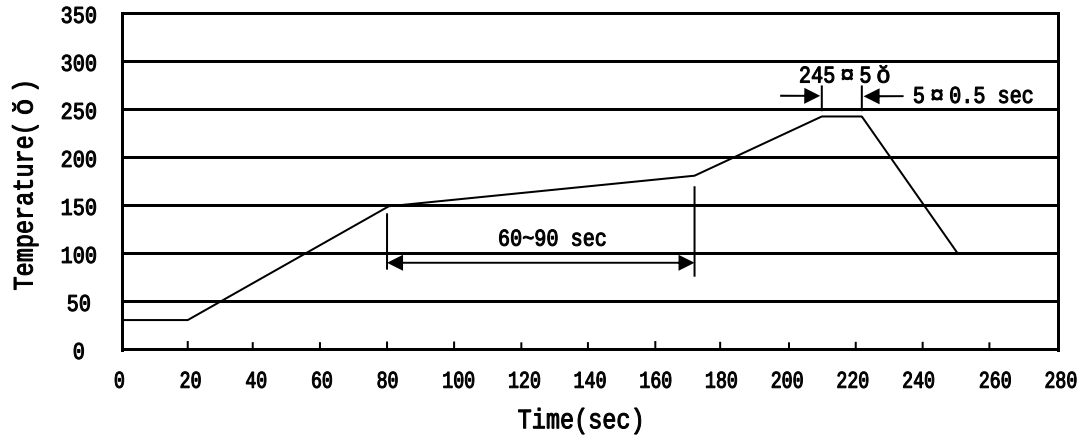

ب ˝ χ

1 ǂ ♬ □ ỷ 150 Ḱ 180 ł ı ˋH ڑ 60 Ḱ 90sec;

2 Š Ö □ ỷ 245°5 ł ı ˋH ڑ ˋY ⺈ ⺾ 5°0.5sec;

3 ì ˙ ⺈ ˛ ɔ ھ ỷ ⺾ 2 Ḱ 10 ł /sec.

Note:

1.Preheating:150~180 ł , Time:60~90sec.

2.Peak Temp.:245°5 ł , Duration:5°0.5sec.

3. Cooling Speed: 2~10 ł /sec.

/ Resistance to Soldering Heat Test Conditions

□ ỷ χ 260°5 ł ˋH ڑ χ 10°1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

ɔ ˋ γ ŁŁ / REEL

Package Type Ṃ Ł ẻ Ẫ	Units					Dimension (unit mm³)		
	Units/Reel ᴱ 2 ɔ ˋ	Reels/Inner Box ɔ ˋ 2 ¨	Units/Inner Box ᴱ 2 ¨	Inner Boxes/Outer Box ¨ 2 ⺈	Units/Outer Box ᴱ 2 ⺈	Reel	Inner Box ¨	Outer Box ⺈
PDFN5×6	5,000	2	10,000	6	60,000	13''×12	360×360×50	380×335×366

/ Notices