

BRSC06650ZC

Rev.A Jun.-2024

描述 / Descriptions

PDFN5×6 塑封封装 SiC 肖特基二极管。
SiC Schottky Barrier Diode in a PDFN5×6 Plastic Package.

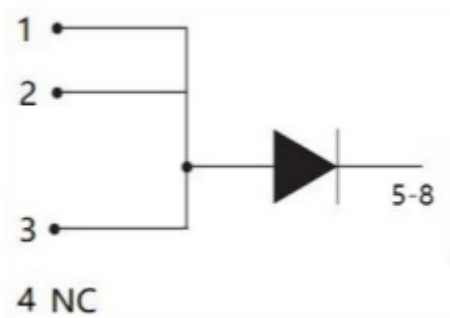
特征 / Features

损耗低，效率高，无卤产品。
Low power loss, high efficiency, HF Product.

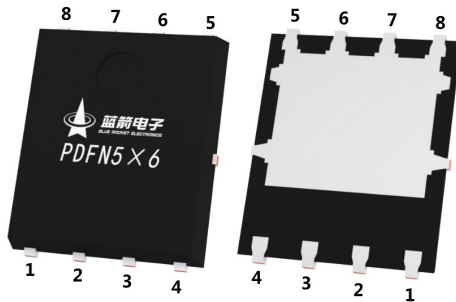
用途 / Applications

用于高频、高压、大电流整流二极管，续流二极管。
For high frequency, high voltage, high current rectifier diode, freewheeling diode.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



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

印章代码 / Marking

见印章说明。
See Marking Instructions.

极限参数 / Absolute Maximum Ratings(Ta=25°C)

参数 Parameter	符号 Symbol	数值 Rating	单位 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°C	I _F	6	A
Peak forward surge current, tp=8.3ms	I _{FSM}	52	A
Total power dissipation	P _D	53	W
Typical Thermal Resistance Junction to Case	R _{θJC}	2.8	°C/W
Operation Junction Temperature and Storage Temperature	T _J , T _{STG}	-55~+175	°C

电性能参数 / Electrical Characteristics(Ta=25°C)

参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Reverse Voltage	V _R		650	-	-	V
Forward Voltage	V _F	I _F =6A T _C =25°C	-	1.27	1.5	
		I _F =6A T _C =175°C	-	1.38	1.6	
Instantaneous Reverse Current	I _R (Note 1)	V _R =650V T _a =25°C	-	4	50	μA
		V _R =650V T _a =175°C	-	200	200	
Total capacitive charge	Q _C	V _R =650V, I _F =6A di/dt = 200A/μs	-	17	-	nC
Total capacitance	C	V _R =0V, T _J =25°C, f=1MHZ	-	230	-	pF
		V _R =200V, T _J =25, f=1MHZ	-	39	-	
		V _R =400V, T _J =25, f=1MHZ	-	28	-	
Capacitance Stored Energy	E _C	V _R =400V	-	4.8	-	uJ

电参数曲线图 / Electrical Characteristic Curve

FIG.1-FORWARD CHARACTERISTICS

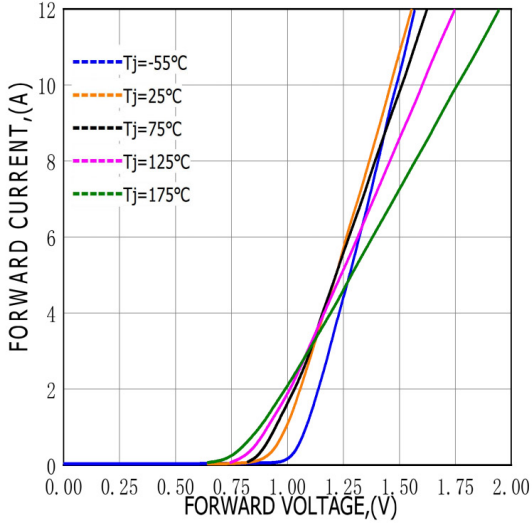


FIG.2-REVERSE CHARACTERISTICS

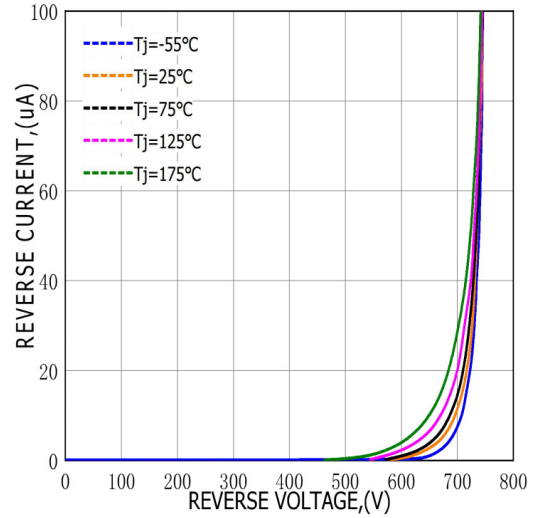


FIG.3-TOTAL CAPACITANCE CHARGE VS REVERSE VOLTAGE

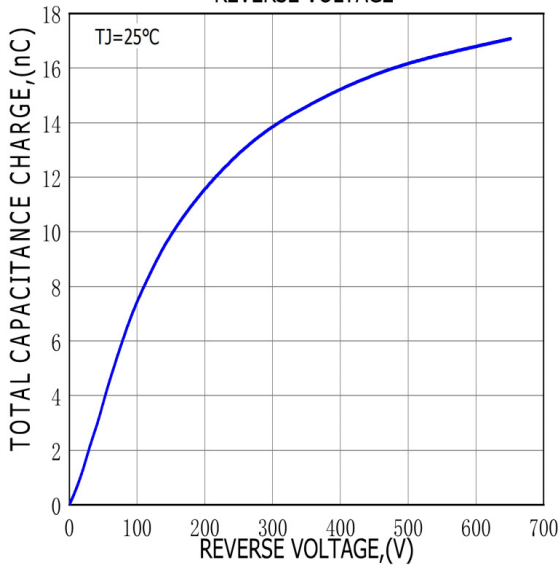
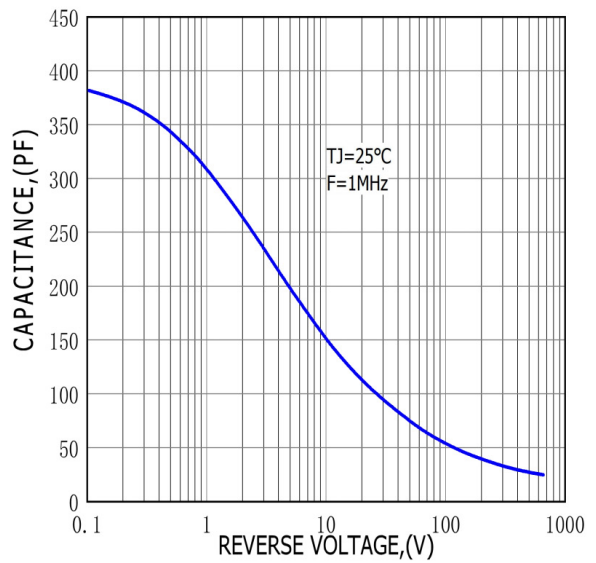


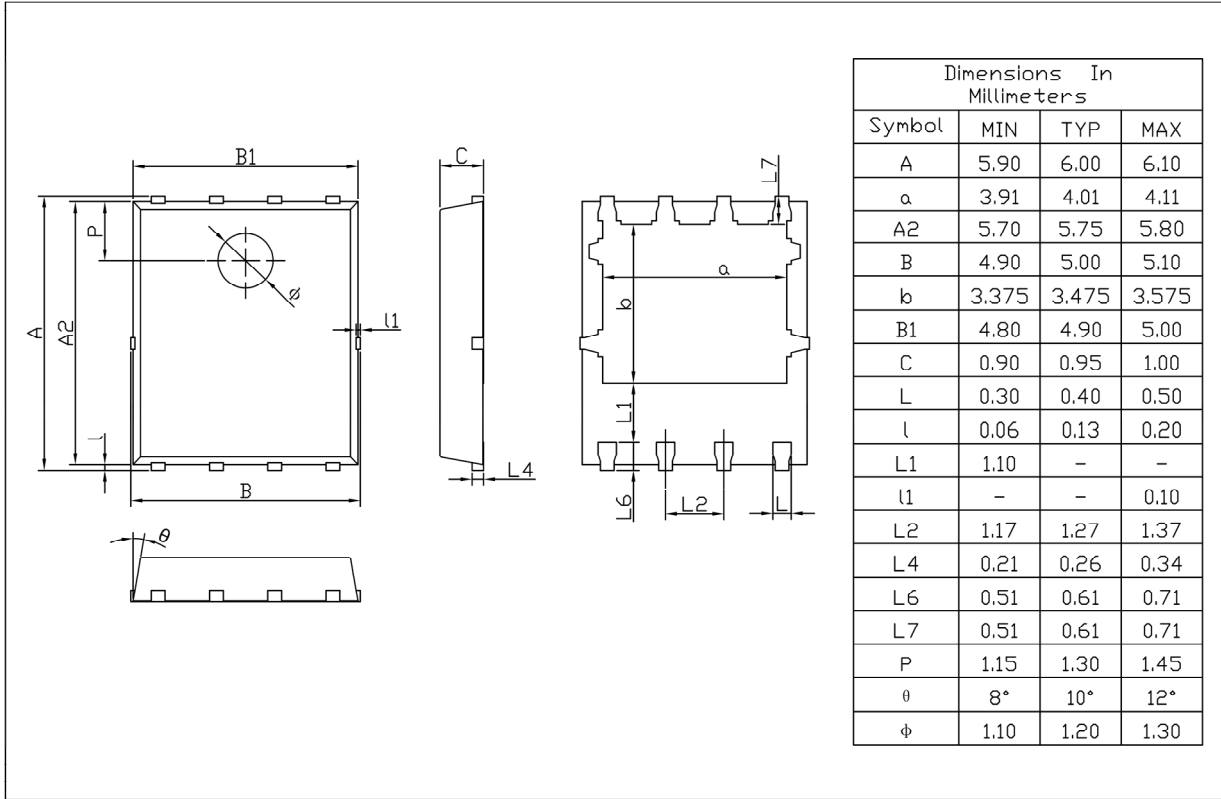
FIG.4-CAPACITANCE VS REVERSE VOLTAGE



外形尺寸图 / Package Dimensions

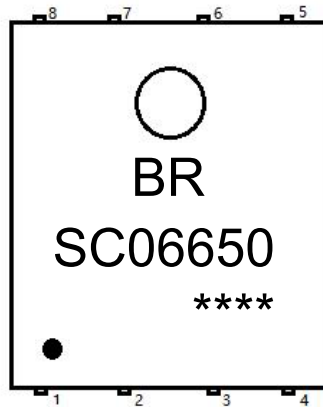
PDFN5×6

Unit:mm



Rev.01 202209

印章说明 / Marking Instructions



说明：

BR： 为公司代码

SC06650： 为型号代码

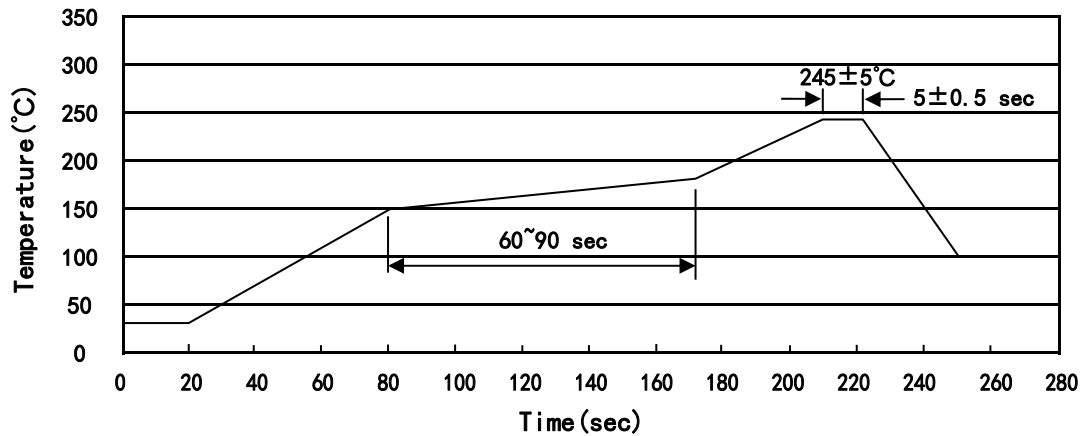
****： 为生产批号代码，随生产批号变化

Note：

BR： Company Code

SC06650： Product Type Code

****： Lot No. Code, code change with Lot No

回流焊温度曲线图(无铅) / Temperature Profile for IR Reflow Soldering(Pb-Free)


说明：

- 1、预热温度 150~180°C，时间 60~90sec;
- 2、峰值温度 245±5°C，时间持续为 5±0.5sec;
- 3、焊接制程冷却速度为 2~10°C/sec.

Note:

- 1.Preheating:150~180°C, Time:60~90sec.
- 2.Peak Temp.:245±5°C, Duration:5±0.5sec.
3. Cooling Speed: 2~10°C/sec.

耐焊接热试验条件 / Resistance to Soldering Heat Test Conditions

温度：260±5°C

时间：10±1 sec.

Temp.:260±5°C

Time:10±1 sec

包装规格 / Packaging SPEC.

卷盘包装 / REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
PDFN5×6	5,000	2	10,000	6	60,000	13"×12	360×360×50	380×335×366

使用说明 / Notices