BRM7Q

Rev.A Apr.-2023

DATA SHEET

描述 / Descriptions

表面贴装整流二极管，反向电压：1000V，正向电流：1.0A，SMA 封装。

Surface Mount General Purpose Silicon Rectifiers，Reverse Voltage：1000V，Forward Current：1.0A，SMA package.

特征 / Features

玻璃钝化芯片,适用于自动放置 ,铅符合欧盟 RoHS 指令 2011/65/EU ,适用于表面贴装。符合 AEC-Q101 标准高可靠性要求，无卤产品。

Glass Passivated Chip Junction，Ideal for automated placement，Lead free in comply with EU RoHS 2011/65/EU directives，For surface mounted applications.Qualified to AEC-Q101 Standards for High Reliability, HF product.

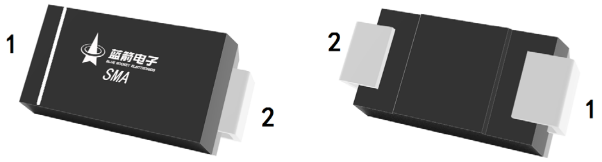
用途 / Applications

一般用途，满足汽车应用的严格要求。

General purpose, Meet the stringent requirements of automotive applications.

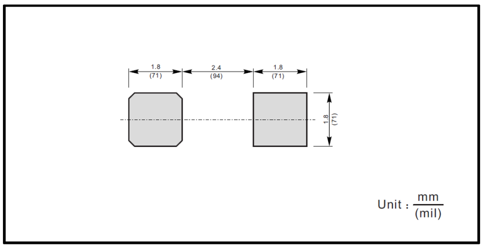
内部等效电路 / Equivalent Circuit

引脚排列 / Pinning



PIN	DESCRIPTION
1	Cathode
2	Anode

The recommended mounting pad size



印章代码 / Marking

见印章说明。See Marking Instructions.

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

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
		BRM7Q	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	1000	V
Maximum RMS Voltage	V_{RMS}	700	V
Maximum DC Blocking Voltage	V_{DC}	1000	V
Maximum Average Forward Rectified Current at T_a= 65℃	$I_{F（AV）}$	1.0	A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	40	A
Typical Junction Capacitance 1）	C_j	6	pF
Typical Thermal Resistance2)	$R_{θJA}$	68	℃/W
	$R_{θJL}$	10	
Operating and Storage Temperature Range	T_j,T_{stg}	-55~+150	℃

Note:

1)Measured at 1 MHz and applied reverse voltage of 4 V D.C

2)P.C.B with 5×5mm copper pads,2 OZ,FR4 PCB

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

参数 Parameter	符号 Symbol	测试条件 Test Conditions	数值 Rating	单位 Unit
			BRM7Q	
Maximum Instantaneous Forward Voltage	V_F	I_F=1.0A	0.99	V
Maximum DC Reverse Current at Maximum DC Blocking Voltage	I_R	T_a=25℃	5.0	μA
		T_a=125℃	50	μA
Typical reverse recovery time	t_{rr}	I_F=0.5A I_R=1.0A I_{rr}=0.25A	1.8	μS

电参数曲线图 / Electrical Characteristic Curve

(TA = 25℃ unless otherwise noted)

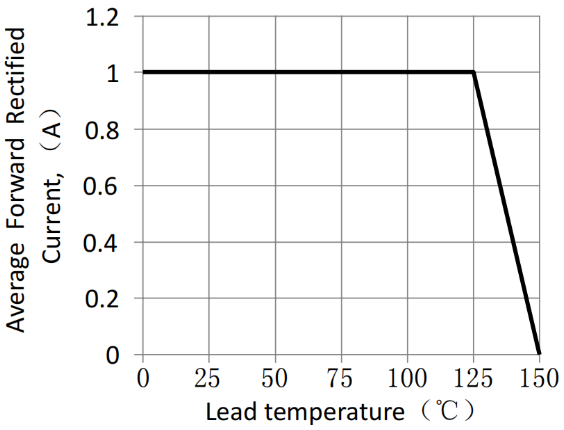


Figure 1.Forward Current Derating Curve

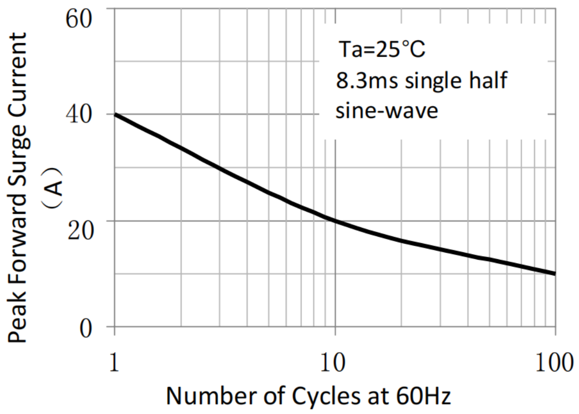


Figure 2.Maximum Non-Repetitive Peak Forward Surge Current

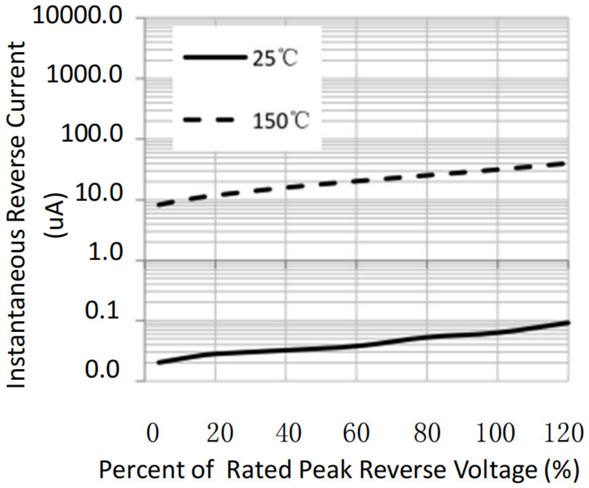


Figure 3. Typical Reverse Characteristics

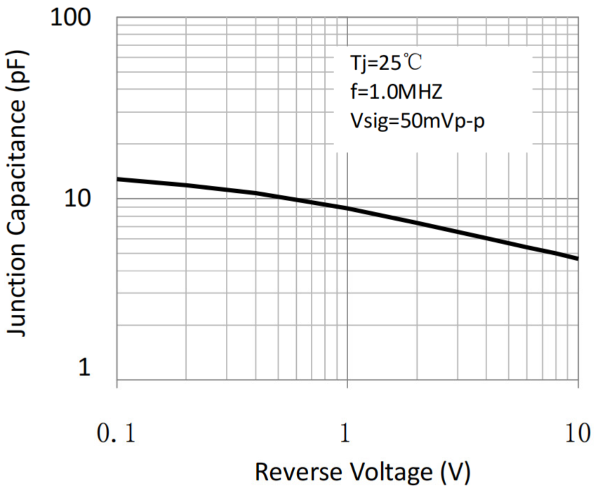


Figure 4. Typical Junction Capacitance

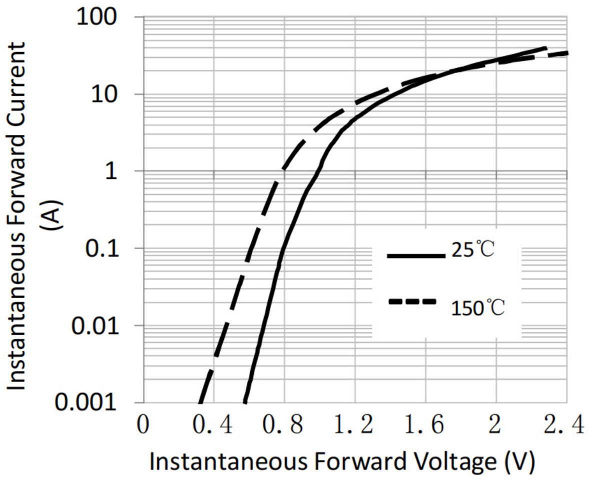
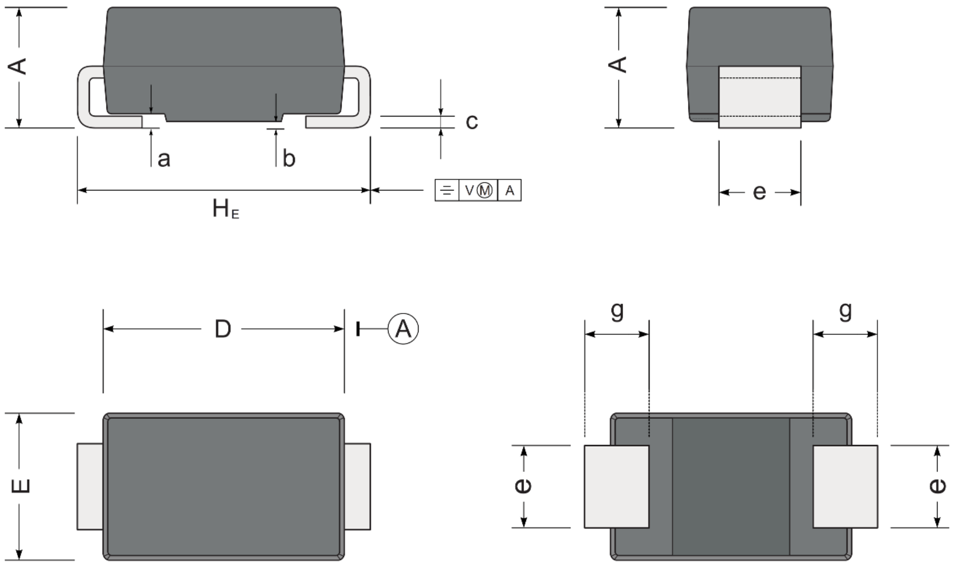


Figure 5. Typical Instantaneous Forward Characteristics

外形尺寸图 / Package Dimensions

SMA



UNIT		A	D	E	H_E	c	e	g	b	a
mm	max	2.2	4.5	2.7	5.2	0.31	1.6	1.5	0.2	0.3
	min	1.9	4.0	2.3	4.7	0.15	1.3	0.9	0.05	
mil	max	87	181	106	205	12	63	59	7.9	12
	min	75	157	91	185	6	51	35	2	

印章说明 / Marking Instructions

说明：

AGN1M： 为型号代码

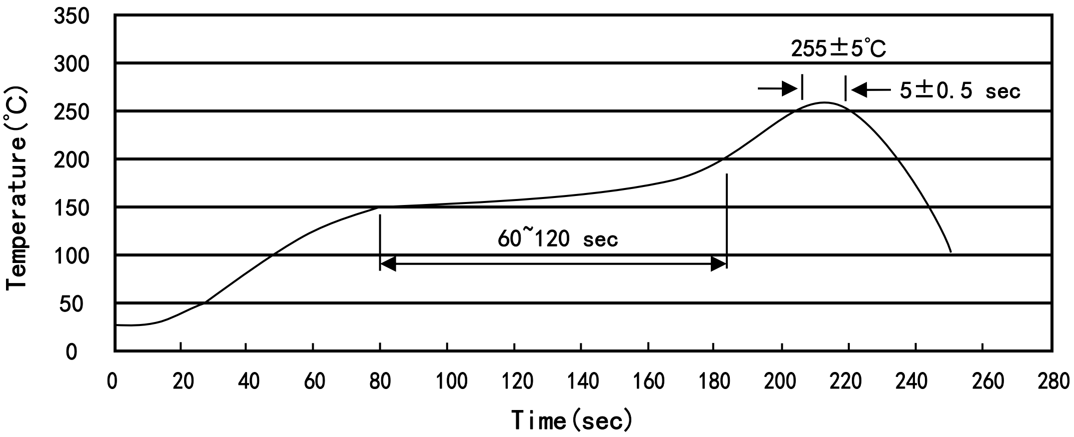
** ： 为生产批号追溯码，第 1 个*为年代码，后面 1 个*为月代码

Note:

AGN1M： Product Type Code

** ： Lot No. Code，The 1st * means:Y Code，The last 1 * means:M Code

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 150～200℃，时间 60～120sec;

2、峰值温度 255±5℃，时间持续为 5±0.5sec;

3、焊接制程冷却速度为 2～10℃/sec.

Note:

1.Preheating:150~200℃, Time:60~120sec.

2.Peak Temp.:255±5℃, Duration:5±0.5sec.

3. Cooling Speed: 2~10℃/sec.

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

温度：260±5℃ 时间：10±1 sec.

Temp.:260±5℃ 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
SMA	5000	2	10000	7	70000	13″ ×12	336X336X40	380X335X366

使用说明 / Notices