

BRM1Q~BRM7Q

Rev.A Nov.-2024

描述 / Descriptions

表面贴装整流二极管，反向电压：50V~1000V，正向电流：1.0A，SMA 封装。

Surface Mount General Purpose Silicon Rectifiers, Reverse Voltage : 50 to 1000V, Forward Current: 1.0A ,SMA package.

特征 / Features

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

Glass Passivated Chip Junction, 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

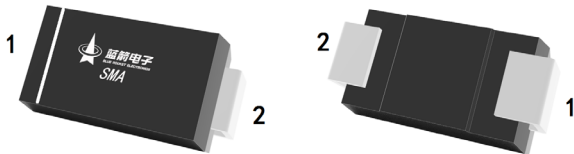
一般用途，满足汽车应用的严格要求。

General purpose, Meet the stringent requirements of automotive applications.

内部等效电路 / Equivalent Circuit

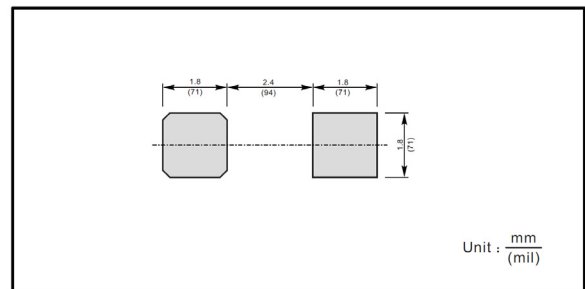


引脚排列 / Pinning



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°C)

参数 Parameter	符号 Symbol	数值 Rating							单位 Unit
		BRM1Q	BRM2Q	BRM3Q	BRM4Q	BRM5Q	BRM6Q	BRM7Q	
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @ Fig.1	I _{F (AV)}	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I _{FSM}	30							A
Peak Forward Surge Current 1.0 ms Single Half Sine Wave Superimposed on Rated Load	I _{FSM}	60							A
I ² t Rating for fusing (3ms≤t ≤8.3ms)	I ² t	3.7							A ² S
Typical Junction Capacitance ⁽¹⁾	C _j	7							pF
Typical Thermal Resistance ⁽²⁾	R _{θJA}	100							℃/W
	R _{θJC}	20							
	R _{θJL}	25							
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. mounted with 0.2" X 0.2" (5 X 5 mm) copper pad areas.

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

参数 Parameter	符号 Symbol	测试条件 Test Conditions	数值 Rating							单位 Unit
			BRM1Q	BRM2Q	BRM3Q	BRM4Q	BRM5Q	BRM6Q	BRM7Q	
Maximum Instantaneous Forward Voltage	V_F	$I_F=1.0A$	1.1							V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	$T_a=25^\circ C$	5							μA
		$T_a=125^\circ C$	100							μA

电参数曲线图 / Electrical Characteristic Curve

Fig.1 Forward Current Derating Curve

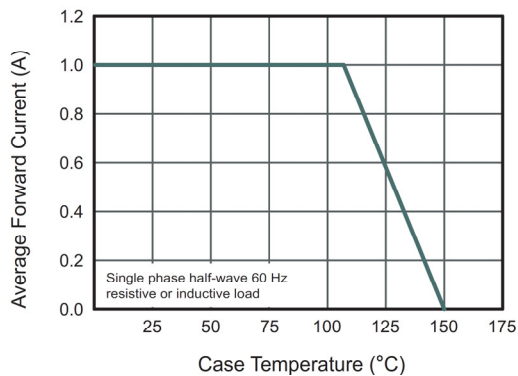


Fig.2 Typical Reverse Characteristics

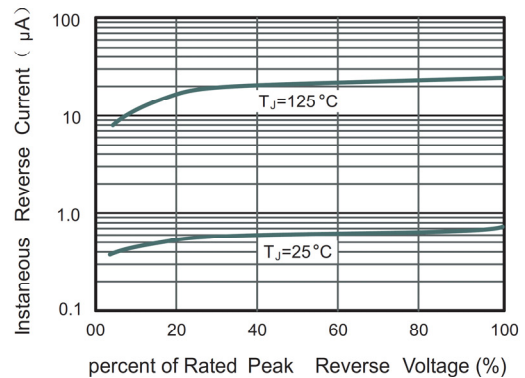


Fig.3 Typical Forward Characteristic

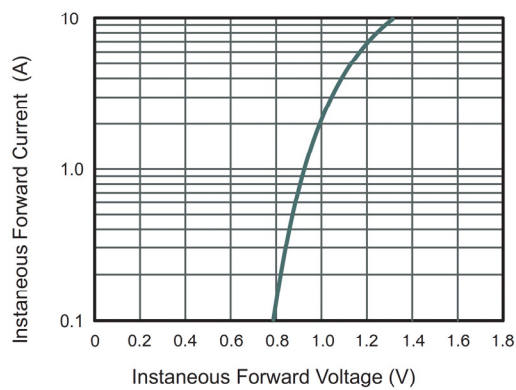


Fig.4 Typical Junction Capacitance

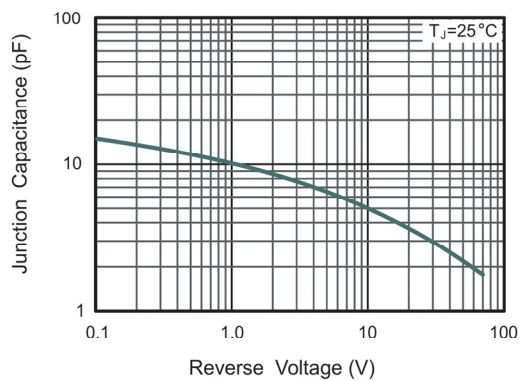
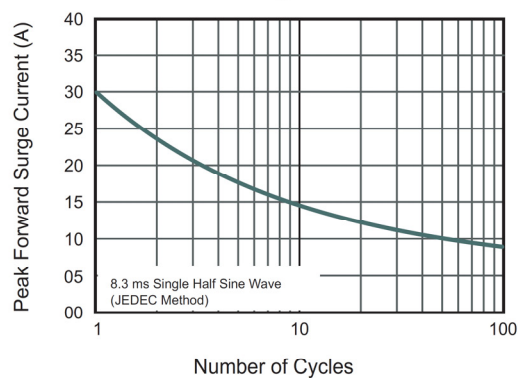
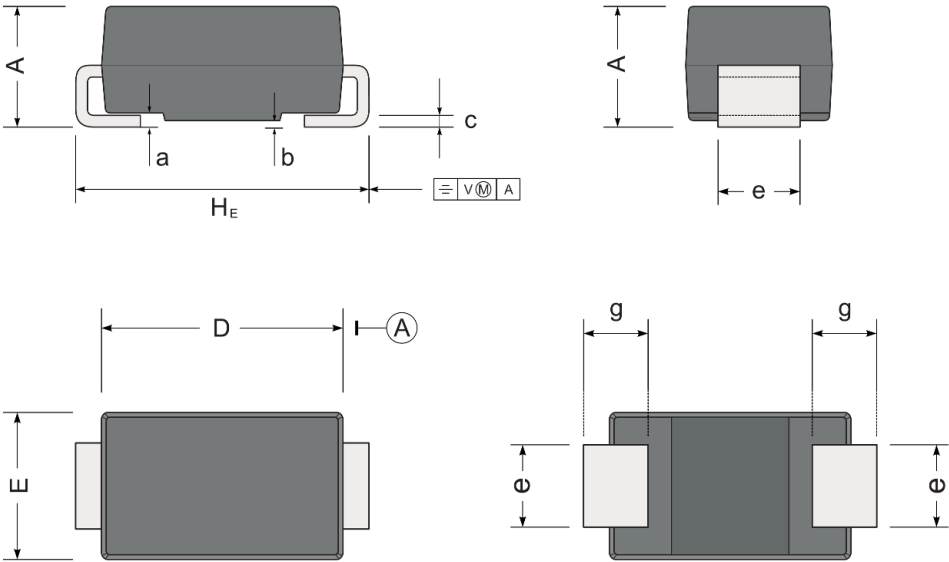


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



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：

M7： 为型号代码

Q： 为汽车无卤产品标识

****： 为生产批号代码，随生产批号变化

Note:

M7： Product Type Code

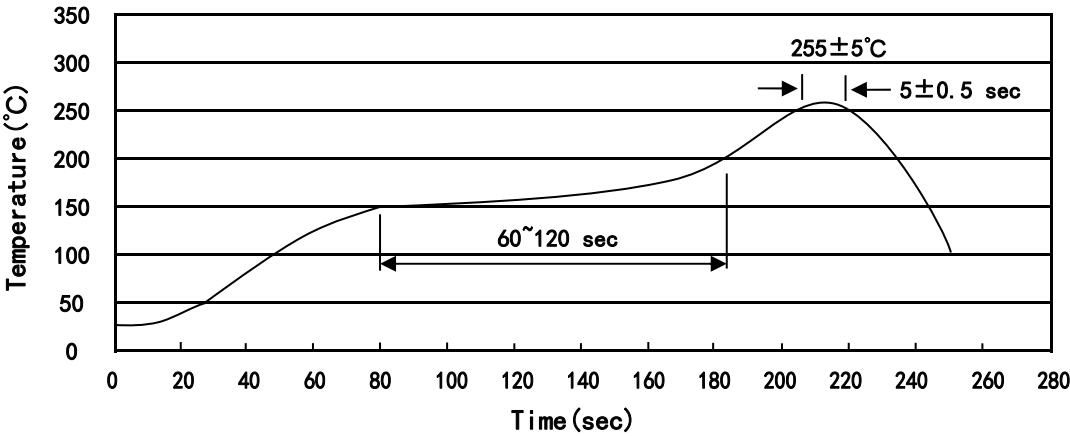
Q: Automobile halogen-free product Code

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

Marking

Type number	Marking code
BRM1Q	M1Q
BRM2Q	M2Q
BRM3Q	M3Q
BRM4Q	M4Q
BRM5Q	M5Q
BRM6Q	M6Q
BRM7Q	M7Q

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	5,000	2	10,000	7	70,000	13" ×12	336×336×40	380×335×366

使用说明 / Notices