

BRM1Q~BRM7Q

Rev.A Nov.-2024

/ Descriptions

50V ~ 1000V 1.0A SMA

Surface Mount General Purpose Silicon Rectifiers, Reverse Voltage 50 to1000V,Forward Current:1.0A ,SMA package.

/ Features

RoHS 2011/65/EU AEC-Q101

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.

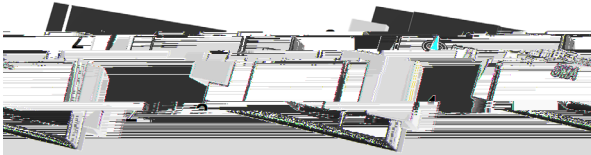
/ Applications

General purpose, Meet the stringent requirements of automotive applications.

/ Equivalent Circuit



/ Pinning



PIN	DESCRIPTION
1	Cathode
2	Anode

The recommended mounting position is



/ Marking

See Marking Instructions.

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/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating							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^2t Rating for fusing (3ms t 8.3ms)	I^2t	3.7							A ² S
Typical Junction Capacitance ⁽¹⁾	C_j	7							pF
Typical Thermal Resistance ⁽²⁾	R_{JA} R_{JC} R_{JL}	100 20 25							/W
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.

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Rating							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	$T_a=25$	5							μA
		$T_a=125$	100							μA

/ Electrical Characteristic Curve

Fig.1. Forward Current Derating Curve

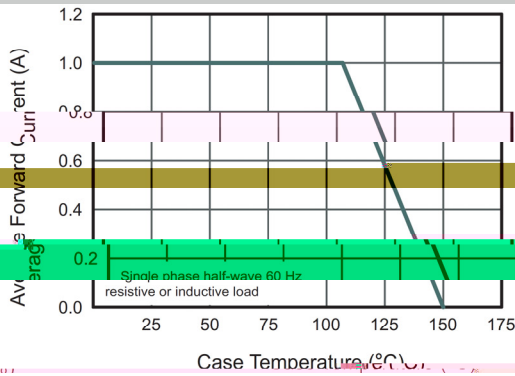


Fig.2. Typical Reverse Characteristics

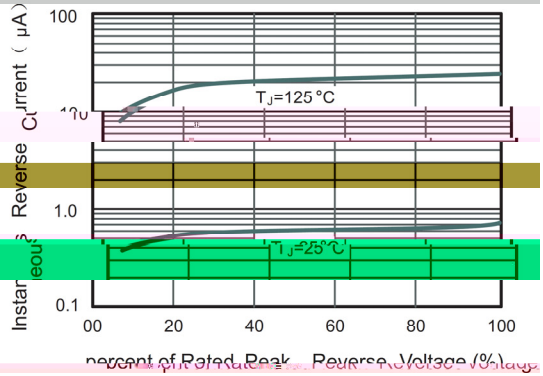


Fig.3. Typical Forward Characteristic

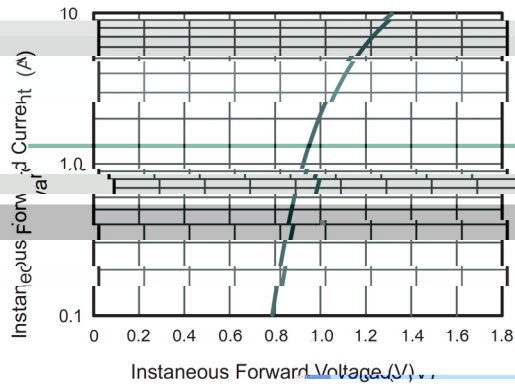


Fig.4. Typical Junction Capacitance

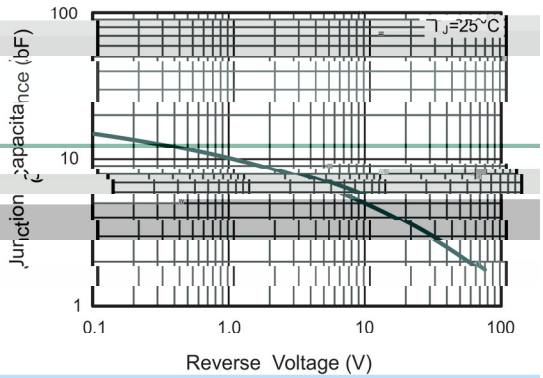
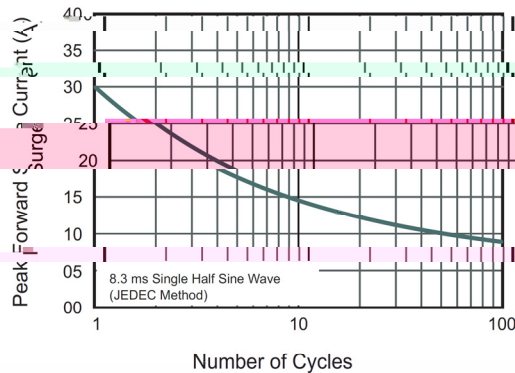
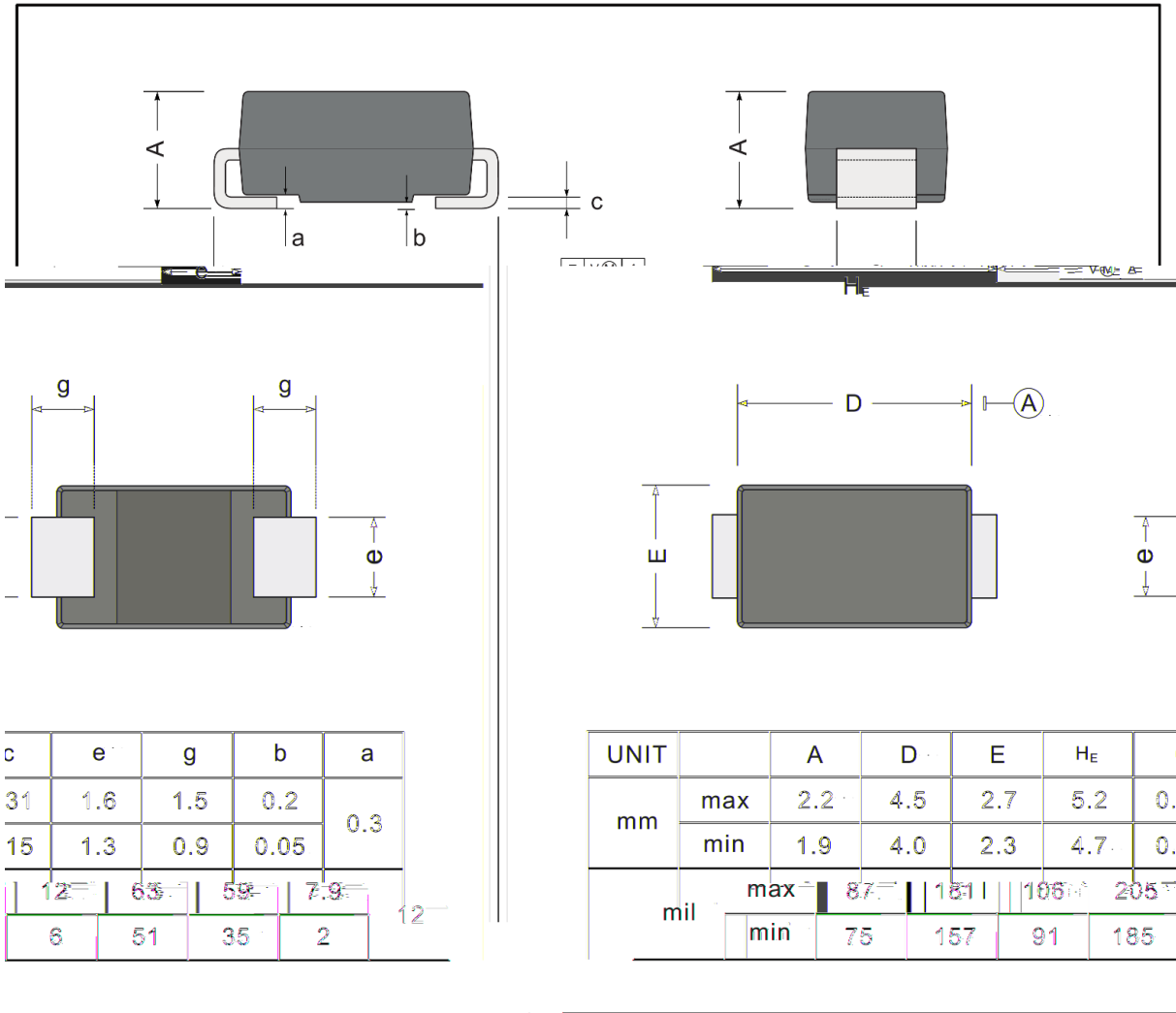


Fig.5. Maximum Non-Repetitive Peak Forward Surge Current

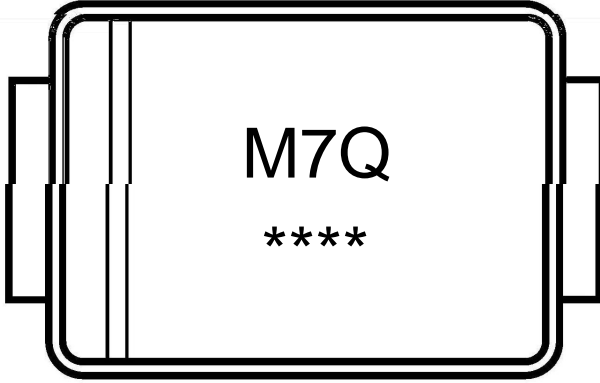


/ Package Dimensions

SMA



/ Marking Instructions



M7
Q

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

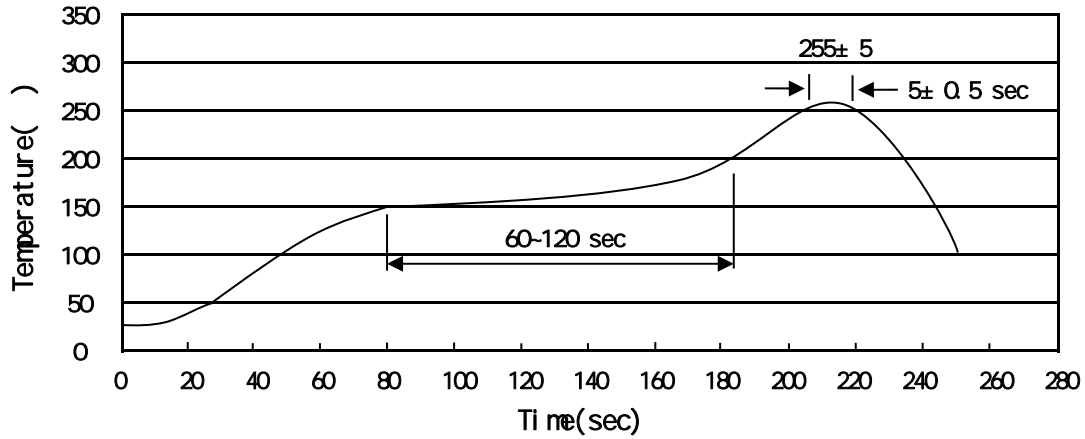
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Note:

- 1 150 200 60 120sec; 1.Preheating:150~200 °C , Time:60~120sec.
- 2 255±5 5±0.5sec; 2.Peak Temp.:255±5 °C , Duration:5±0.5sec.
- 3 2 10 °C/sec. 3. Cooling Speed: 2~10 °C/sec.

/ Resistance to Soldering Heat Test Conditions

260±5 10±1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension (unit mm ³)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
SMA	5,000	2	10,000	7	70,000	13 ×12	336×336×40	380×335×366

/ Notices