

BRMURS120Q~BRMURS160Q

Rev.A May.-2023

描述 / Descriptions

超快恢复二极管，反向电压：200V~600V，正向电流：1.0A，SMA 封装。

Surface Mount Superfast Recovery Rectifier, Reverse Voltage: 200V~600V, 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

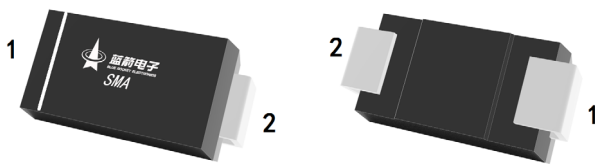
一般用途,满足汽车应用的严格要求。

General purpose, Meet the stringent requirements of automotive applications.

内部等效电路 / Equivalent Circuit

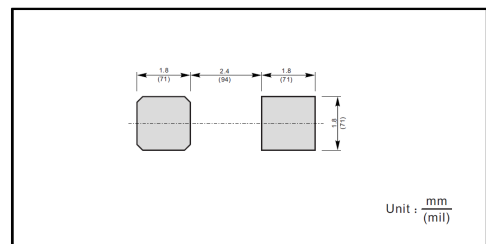


引脚排列 / Pinning



PIN	DESCRIPTION
1	Cathode
2	Anode

The recommended mounting pad size



印章代码 / Marking

见印章说明。See Marking Instructions.

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DATA SHEET

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

参数 Parameter	符号 Symbol	数值 Rating			单位 Unit
		BRMURS120Q	BRMURS140Q	BRMURS160Q	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	200	400	600	V
Maximum RMS Voltage	V_{RMS}	140	280	420	V
Maximum DC Blocking Voltage	V_{DC}	200	400	600	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	1.0			A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	40	35		A
Typical Peak Reverse Recovery Current, $I_F=1.0A$, $di/dt=-100A/us$	I_{RM}	2.7			A
Typical junction capacitance at 4.0 V, 1 MHz	C_j	7			pF
Typical Thermal Resistance ¹⁾	$R_{\theta JA}$	90			°C/W
	$R_{\theta JC}$	20			°C/W
	$R_{\theta JL}$	25			°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55~+150			°C

Notes 1): The thermal resistance from junction to lead and ambient, Mounted on P.C.B with 5*5mm copper pad area.

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
			BRMURS120Q	BRMURS140Q	BRMURS160Q	
Maximum Instantaneous Forward Voltage	V_F	$I_F=1.0A$, $T_a=25^\circ C$	0.875	1.3		V
		$I_F=1.0A$, $T_a=150^\circ C$	0.75	1.1		V
Maximum DC Reverse Current at Maximum DC Blocking Voltage	I_R	$T_a=25^\circ C$	2.0			μA
		$T_a=150^\circ C$	50	100		μA
Maximum reverse recovery time	t_{rr}	$I_F=0.5A$, $I_R=1.0A$, $I_{rr}=0.25A$	25	50		nS
		$I_F=1.0A$, $di/dt=-100A/us$	50	75		nS

电参数曲线图 / Electrical Characteristic Curve

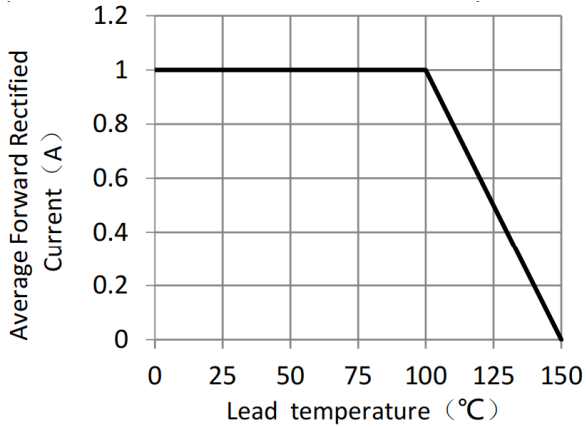


Figure 1. Forward Current Derating Curve

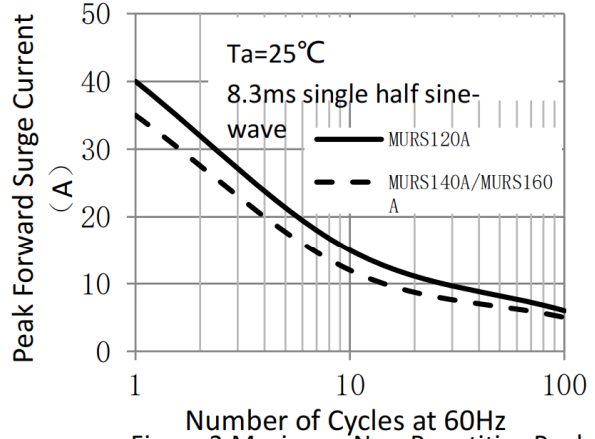


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

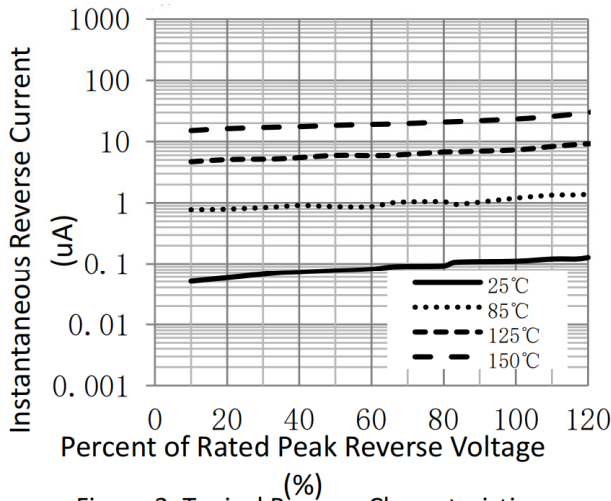


Figure 3. Typical Reverse Characteristics

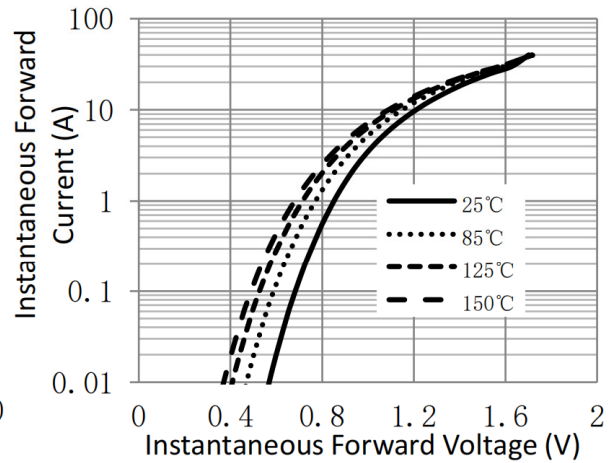


Figure 4. Typical Instantaneous Forward Characteristics

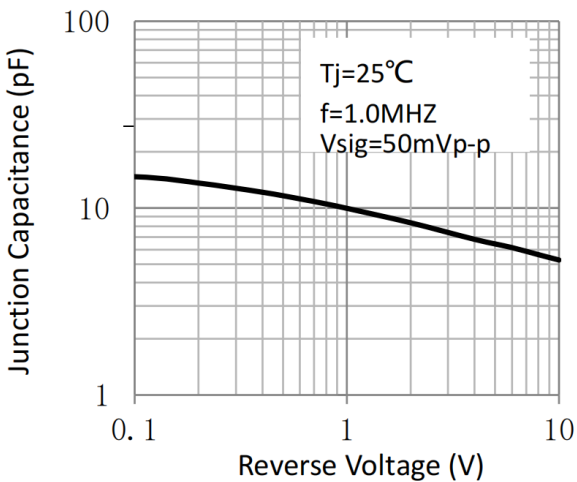


Figure 5. Typical Junction Capacitance

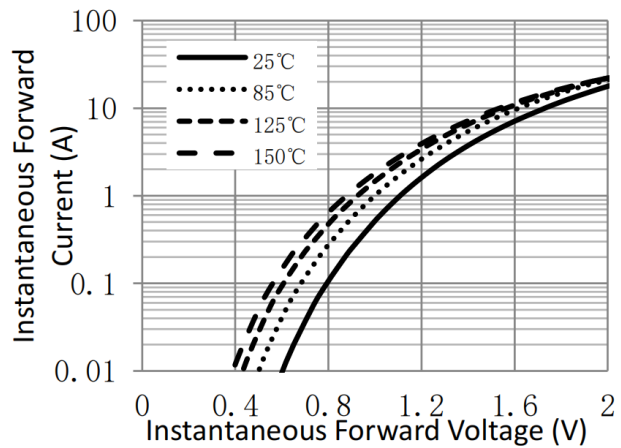
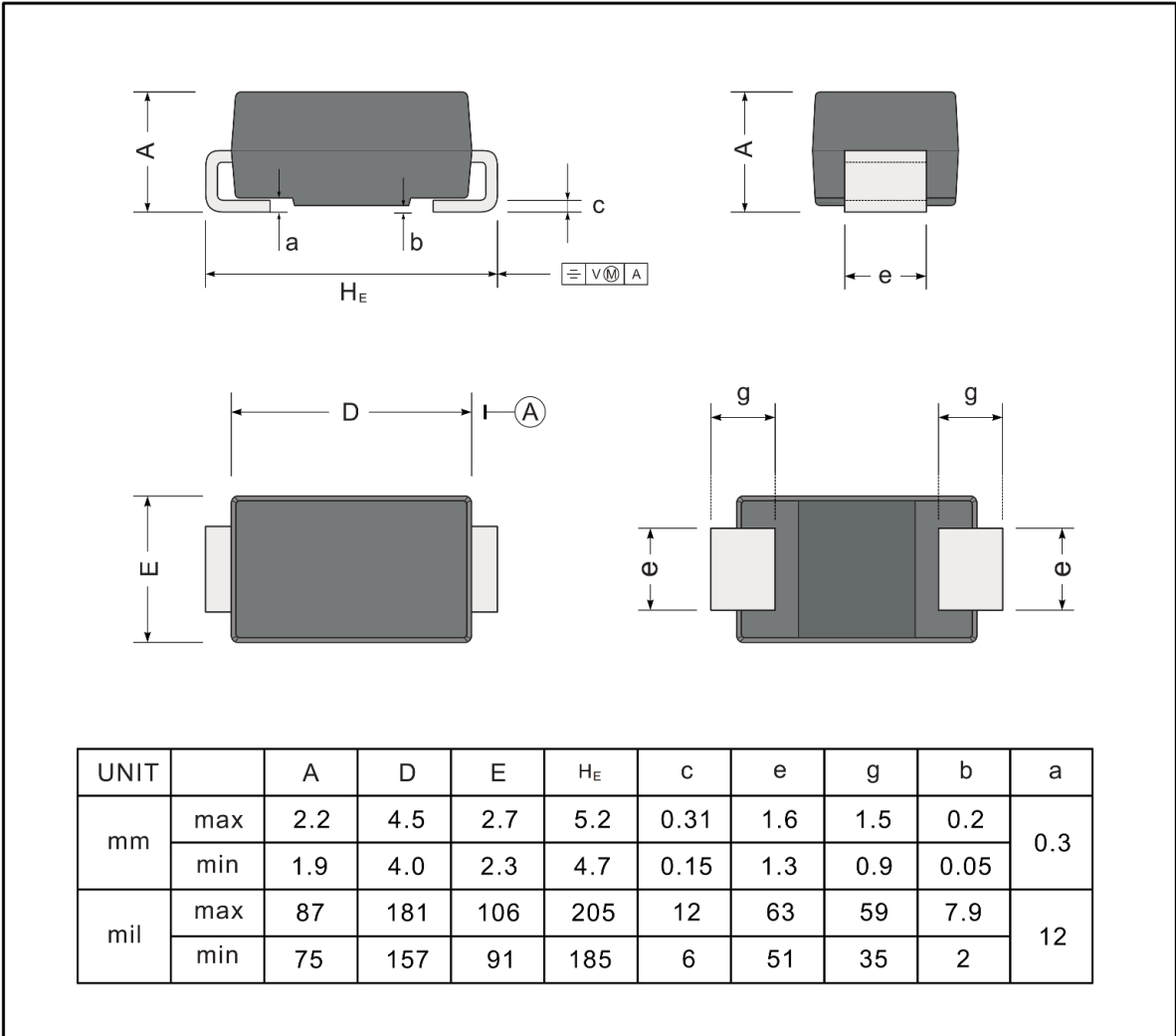


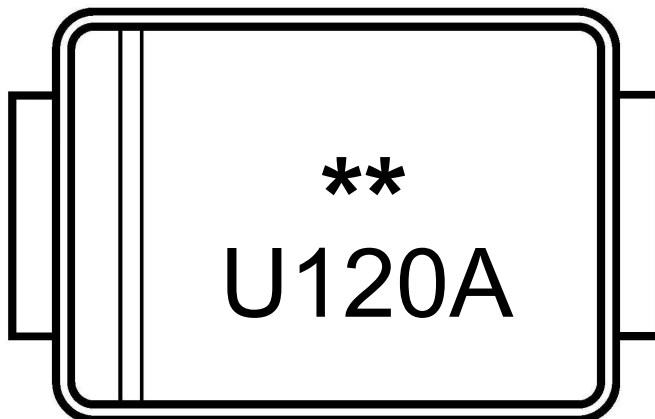
Figure 6. Typical Instantaneous Forward Characteristics

外形尺寸图 / Package Dimensions

SMA



印章说明 / Marking Instructions



说明：

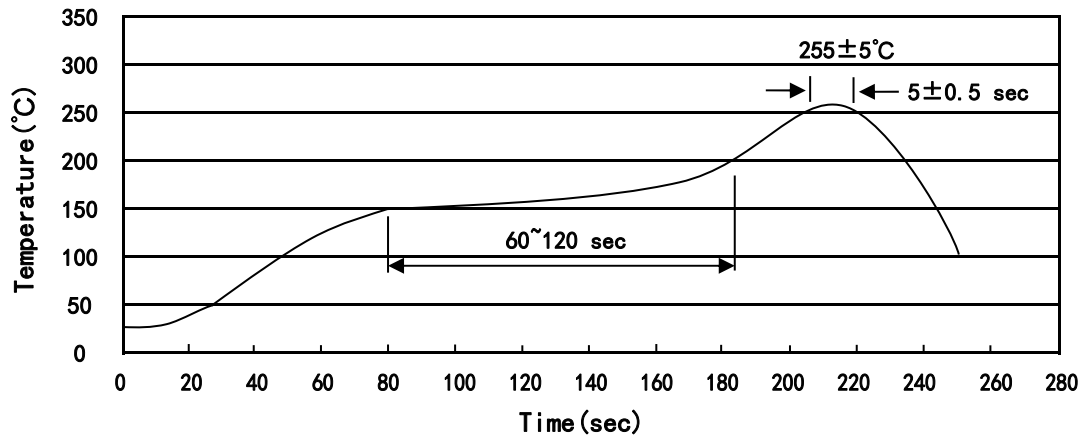
U120A : 为型号代码

** : 为生产批号追溯码，第 1 个*为年代码，后面 1 个*为月代码

Note:

U120A : 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°C，时间 60~120sec;
- 2、峰值温度 255±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:150~200°C, Time:60~120sec.
- 2.Peak Temp.:255±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
SMA	5000	2	10000	7	70000	13" ×12	336X336X40	380X335X366

使用说明 / Notices