

描述 / Descriptions

SOT-23 塑封封装硅半导体二极管。Silicon Diode in a SOT-23 Plastic Package.

特征 / Features

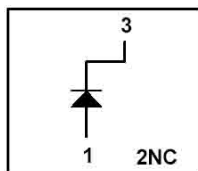
小信号二极管，符合 AEC-Q101 标准高可靠性要求，无卤产品。

Small signal diode, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

用途 / Applications

高导电率的超快速二极管，满足汽车应用的严格要求。

High Conductance Ultra Fast Diode, Meet the stringent requirements of automotive applications.

内部等效电路 / Equivalent Circuit**引脚排列 / Pinning**

PIN: See Equivalent Circuit.

印章代码 / Marking

Type	BRBAS19Q	BRBAS20Q	BRBAS21Q
Marking	QT1	QT2	T3Q


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

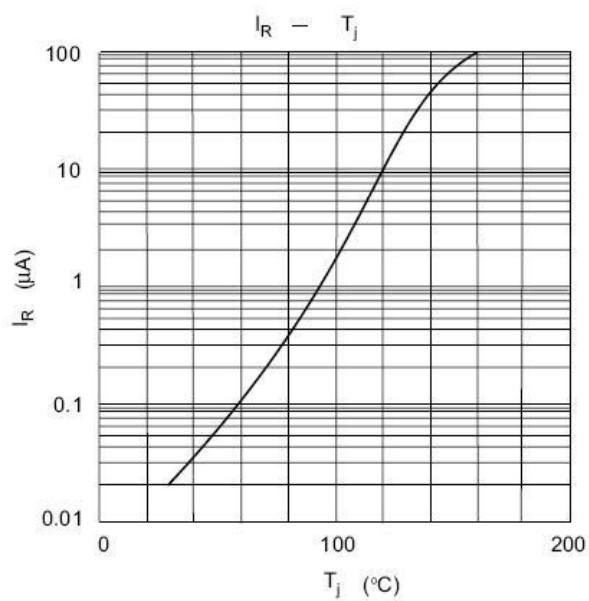
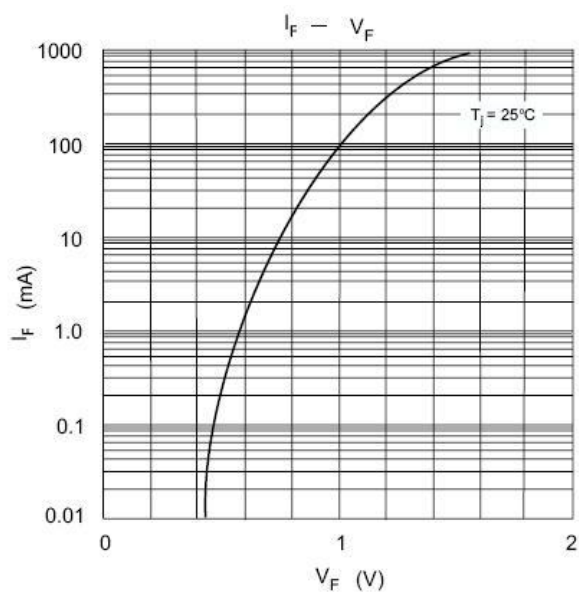
参数 Parameter	符号 Symbol	数值 Rating			单位 Unit
		BRBAS19Q	BRBAS20Q	BRBAS21Q	
Repetitive Reverse Voltage	V _{RRM}	120	200	250	V
Working Peak Reverse Voltage	V _{RWM}	100	150	200	V
RMS Reverse Voltage	V _{R(RMS)}	70	106	141	V
Forward Continuous Current	I _{FM}	400			mA
Average Rectified Output Current	I _O	200			mA
Non-repetitive Peak Forward Surge Current	I _{FSM} (t=1.0μs)	2.0			A
	I _{FSM} (t=1.0s)	0.5			
Repetitive Peak Forward Surge Current	I _{FRM}	625			mA
Power Dissipation	P _d	250			mW
Thermal Resistance, Junction to Ambient	R _{θJA}	500			℃/W
Junction and Storage Temperature Range	T _j T _{stg}	-65~150			℃

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
			BRBAS19Q	BRBAS20Q	BRBAS21Q	
Breakdown Voltage	V_R	$I_R=100\mu A$	120	200	250	V
Forward Voltage	V_{FM}	$I_F=100mA$	1.0			V
		$I_F=200mA$	1.25			V
Instantaneous Reverse Current	I_{RM}	$T_J=25^\circ C$	100			nA
		$T_J=100^\circ C$	15			μA
Total Capacitance	C_T	$V_R=0$ $f=1.0MHz$	5.0			pF
Reverse Recovery Time	t_{rr}	$I_F=I_R=30mA$ $I_{RR}=0.1 \times I_R$ $R_L=100\Omega$	50			ns



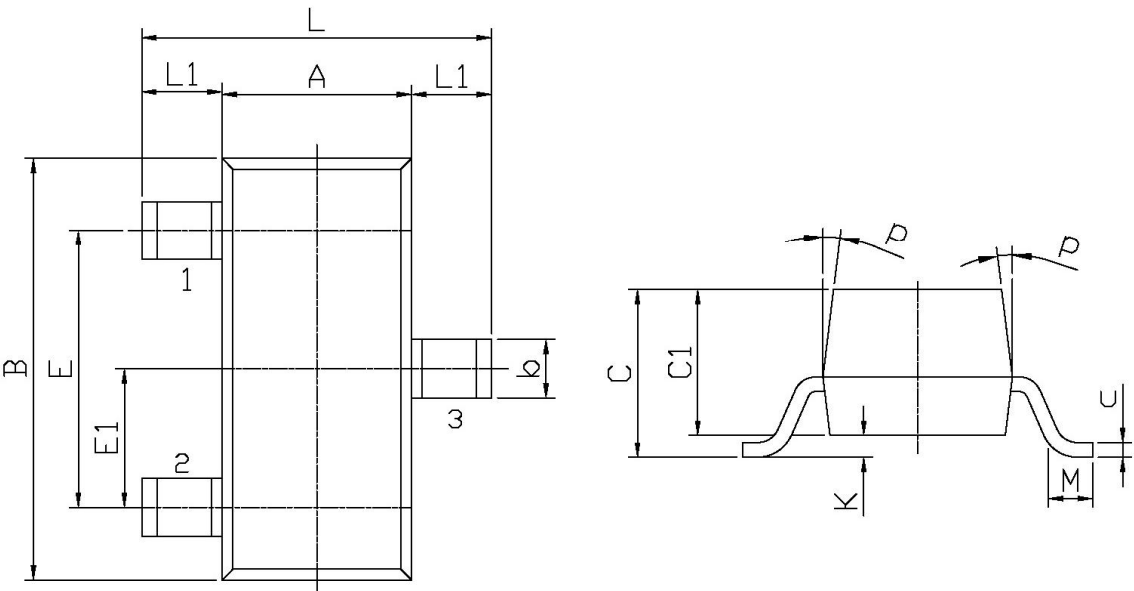
电参数曲线图 / Electrical Characteristic Curve



外形尺寸图 / Package Dimensions

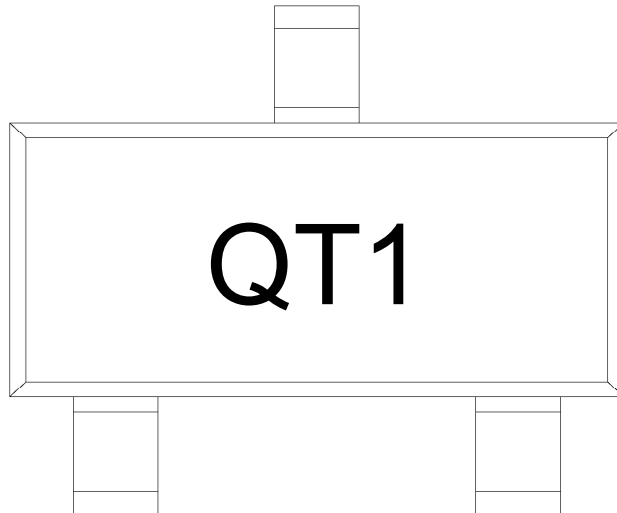
SOT-23

单位：mm



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
L	2.2	2.7	C	1.30Max	
L1	0.45	0.65	C1	0.90	1.20
A	1.15	1.50	c	0.05	0.20
B	2.70	3.10	K	0	0.10
E	1.70	2.10	M	0.20MIN	
E1	0.85	1.05	P	7°	
b	0.35	0.55			

印章说明 / Marking Instructions



说明：

Q： 为汽车无卤产品标识

T1： 为型号代码

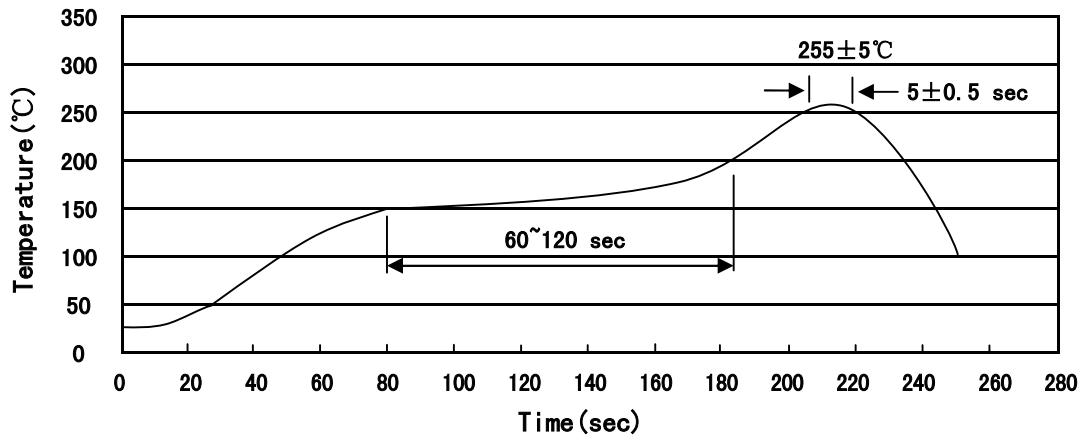
Note:

Q: Automobile halogen-free product Code

T1: Product Type



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
SOT-23	3,000	10	30,000	6	180,000	7" ×8	180×120×180	390×385×205

使用说明 / Notices