

# BAS19~BAS21

Rev.E Mar.-2016

## 描述 / Descriptions

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

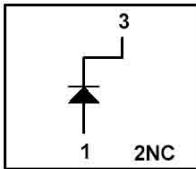
## 特征 / Features

小信号二极管。  
Small signal diode.

## 用途 / Applications

高导电率的超快速二极管。  
High Conductance Ultra Fast Diode.

## 内部等效电路 / Equivalent Circuit



## 引脚排列 / Pinning



PIN: See Equivalent Circuit.

## 放大及印章代码 / $h_{FE}$ Classifications & Marking

Type	BAS19	BAS20	BAS21
Marking	HT1	HT2	T3H

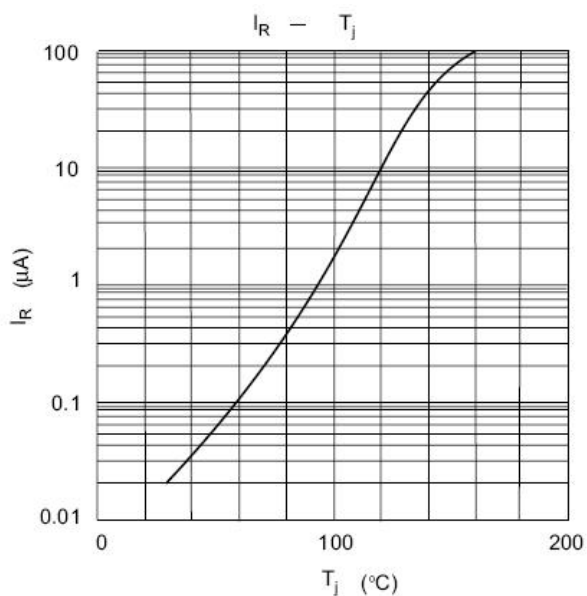
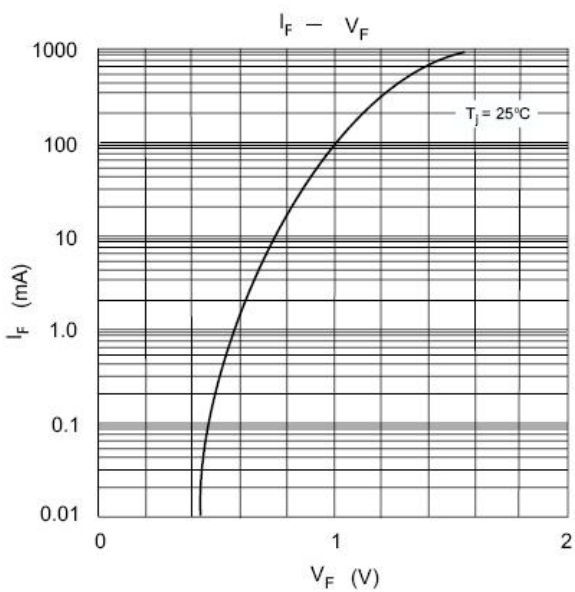
**极限参数 / Absolute Maximum Ratings(Ta=25°C)**

参数 Parameter	符号 Symbol	数值 Rating			单位 Unit
		BAS19	BAS20	BAS21	
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			°C/W
Junction and Storage Temperature Range	$T_j T_{stg}$	-65~150			°C

**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
			BAS19	BAS20	BAS21	
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	$t_{rr}$	$I_F=1_R=30mA$ $I_{RR}=0.1 \times I_R$ $R_L=100\Omega$	50			ns

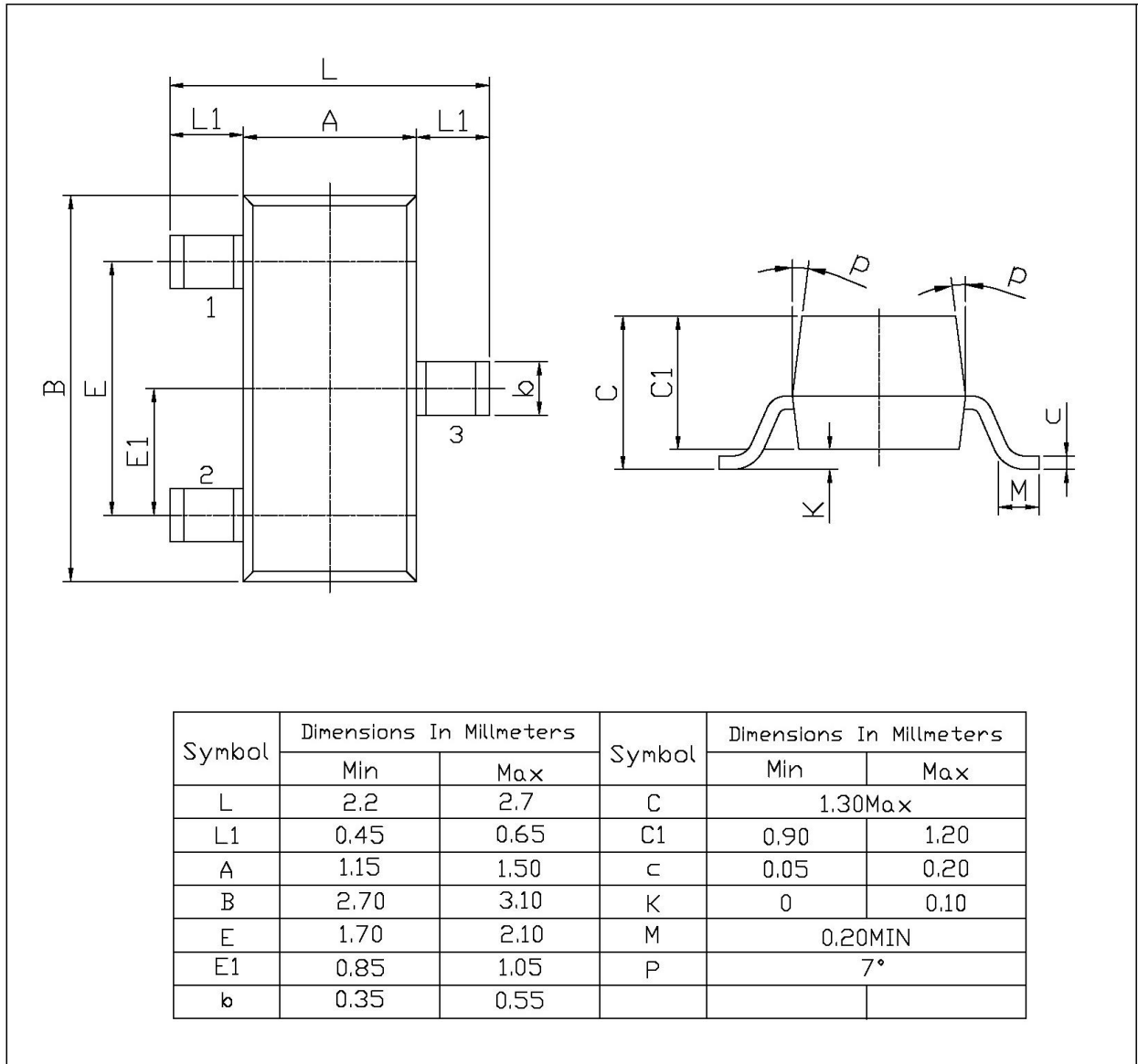
## 电参数曲线图 / Electrical Characteristic Curve



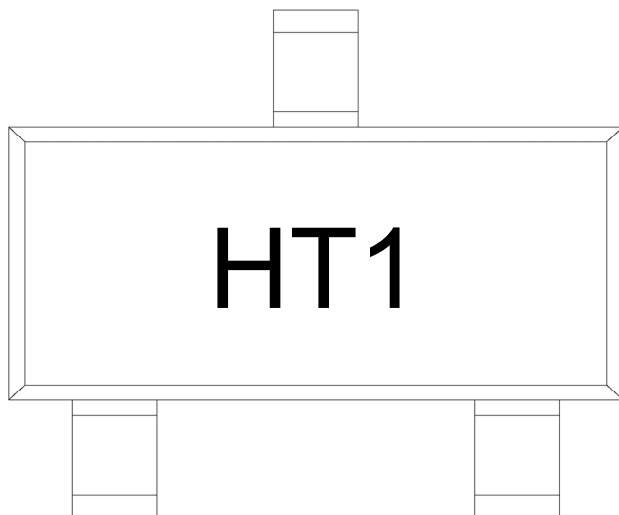
外形尺寸图 / Package Dimensions

SOT-23

单位: mm



**印章说明 / Marking Instructions**



说明：

H： 为公司代码

T1： 为型号代码

Note:

H: Company 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 25~150°C，时间 60~90sec;
- 2、峰值温度 245±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:25~150°C, Time:60~90sec.
- 2.Peak Temp.:245±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 <sup>3</sup> )		
	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	8	240,000	7" ×8	180×120×180	385×257×392

**使用说明 / Notices**