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。

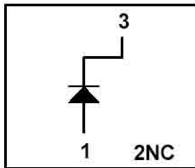
Small signal diode.

用途 / Applications

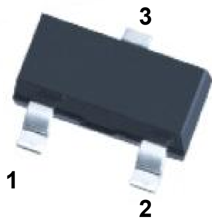
高导电率的超快速二极管。

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

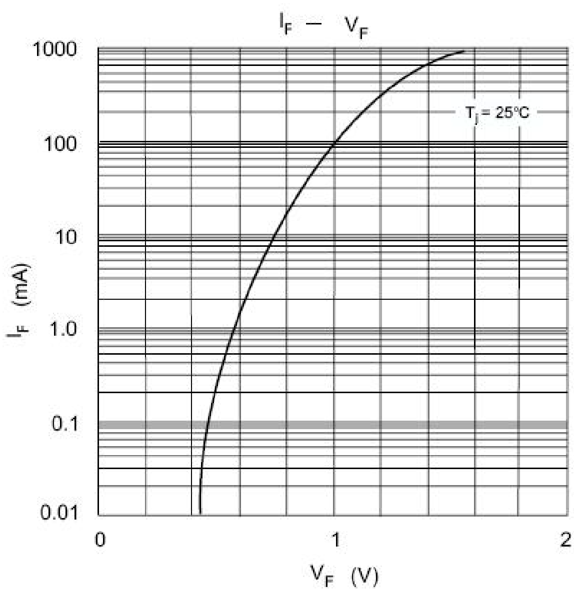
极限参数 / Absolute Maximum Ratings(Ta=25℃)

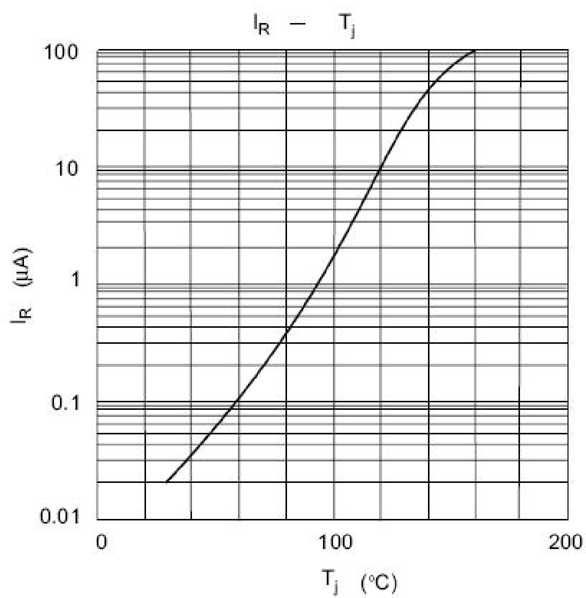
参数 Parameter	符号 Symbol	数值 Rating			单位 Unit
		BAS19	BAS20	BAS21	
Repetitive Reverse Voltage	V_{RRM}	120	200	250	V
Working Peak Reverse Voltage	V_{RWM}	100	150	200	V
RMS Reverse Voltage	$V_{R(RMS)}$	70	106	141	V
Forward Continuous Current	I_{FM}	400			mA
Average Rectified Output Current	I_O	200			mA
Non-repetitive Peak Forward Surge Current	I_{FSM} (t=1.0μs)	2.0			A
	I_{FSM} (t=1.0s)	0.5			A
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℃)

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=100μA	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℃	100			nA
		T_J=100℃	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×I_R R_L=100Ω	50			ns

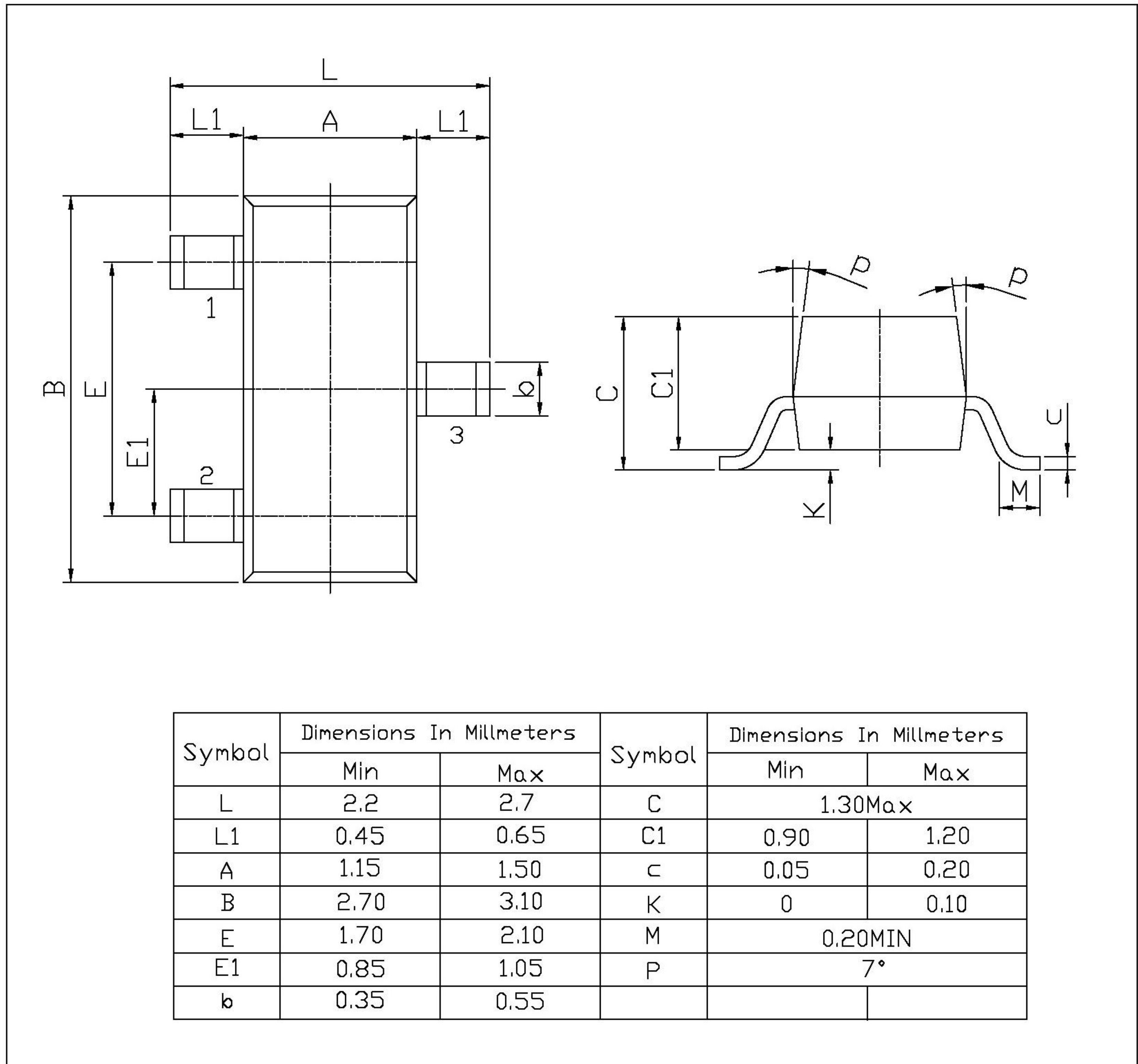
电参数曲线图 / Electrical Characteristic Curve





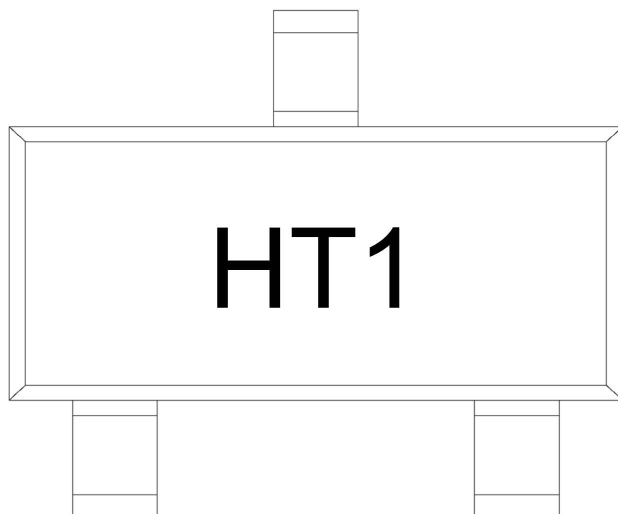
外形尺寸图 / Package Dimensions

SOT-23　　　　单位：mm



Symbol	Dimensions In Millmeters		Symbol	Dimensions In Millmeters	
	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：

H： 为公司代码

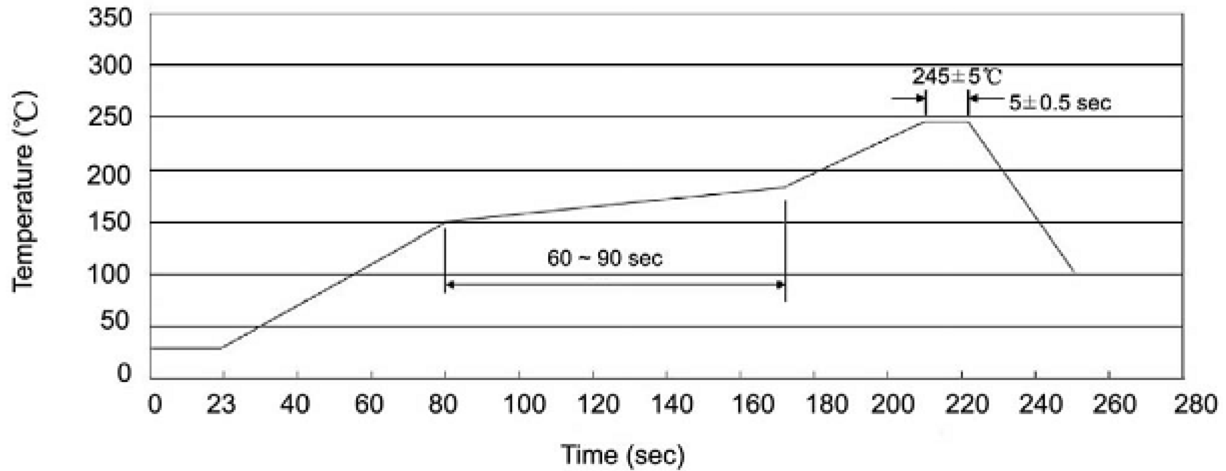
T1： 为型号代码

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℃，时间 60～90sec;
2、峰值温度 245±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:25~150℃, Time:60~90sec.
2.Peak Temp.:245±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
SOT-23	3,000	10	30,000	8	240,000	7″ ×8	180×120×180	385×257×392

使用说明 / Notices