

# BAW56

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.

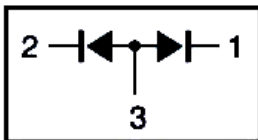
## 特征 / Features

封装小，双二极管，开关速度快，反向峰值电压高，正向电流高达 450mA。  
Small package, double diode, high switching speed, high repetitive peak reverse voltage, repetitive peak forward current up to 450mA.

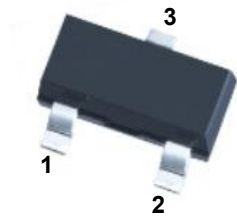
## 用途 / Applications

主要用于高速开关电路。  
High-speed switching in thick and thin-film circuits..

## 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

Marking	HA1
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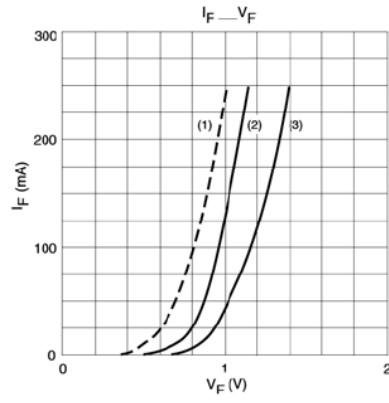
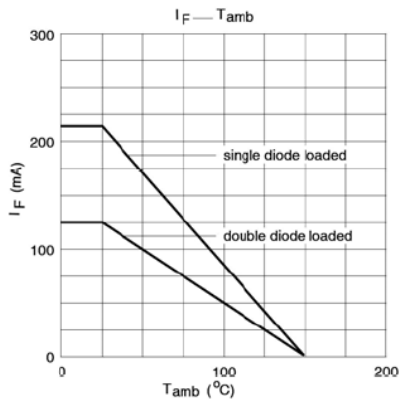
**极限参数 / Absolute Maximum Ratings(Ta=25°C)**

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Repetitive Reverse Voltage	$V_{RRM}$	85	V
Continuous Reverse Voltage	$V_R$	75	V
Average Rectified Forward Current	$I_{F(\text{single diode loaded})}$	215	mA
	$I_{F(\text{double diode loaded})}$	125	mA
Repetitive Peak Forward Current	$I_{FRM}$	450	mA
Non-repetitive Peak Forward Surge Current	$I_{FSM(1)(t=1\mu S)}$	4.0	A
	$I_{FSM(2)(t=1mS)}$	1.0	A
	$I_{FSM(3)(t=1S)}$	0.5	A
Power Dissipation	$P_{tot}$	250	mW
Junction Temperature	$T_j$	150	°C
Storage Temperature Range	$T_{stg}$	-55~150	°C

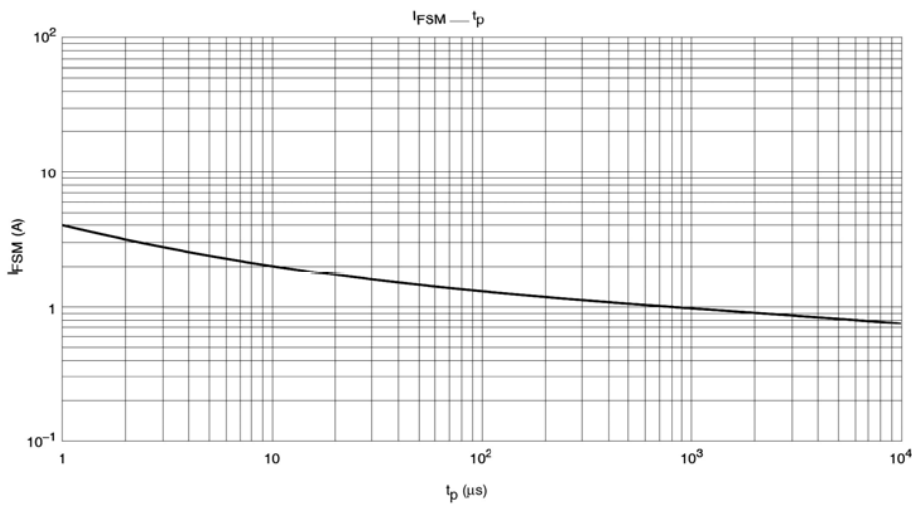
**电性能参数 / Electrical Characteristics(Ta=25°C)**

参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Forward Voltage	$V_F$	$I_F=1.0mA$			715	mV
		$I_F=10mA$			855	mV
		$I_F=50mA$			1.0	V
		$I_F=150mA$			1.25	V
Instantaneous Reverse Current	$I_R$	$V_R=25V$			30	nA
		$V_R=75V$			1.0	$\mu A$
		$V_R=25V \quad T_A=150^\circ C$			30	$\mu A$
		$V_R=75V \quad T_A=150^\circ C$			50	$\mu A$
Total Capacitance	$C_T$	$V_R=0 \quad f=1.0MHz$			2.0	pF
Reverse Recovery Time	$t_{rr}$	$I_F=I_R=10mA$ $I_{RR}=1.0mA \quad R_L=100\Omega$			4.0	ns
Forward recovery voltage	$V_{ft}$	$I_F=10mA \quad t_r=20ns$			1.75	V

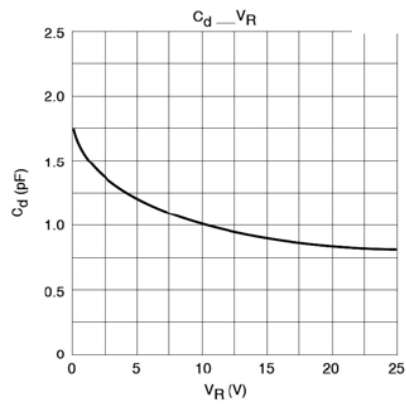
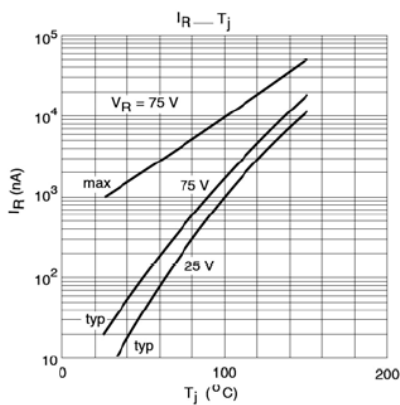
**电参数曲线图 / Electrical Characteristic Curve**



- (1)  $T_j = 150\text{ }^\circ\text{C}$ ; typical values.
- (2)  $T_j = 25\text{ }^\circ\text{C}$ ; typical values.
- (3)  $T_j = 25\text{ }^\circ\text{C}$ ; maximum value.



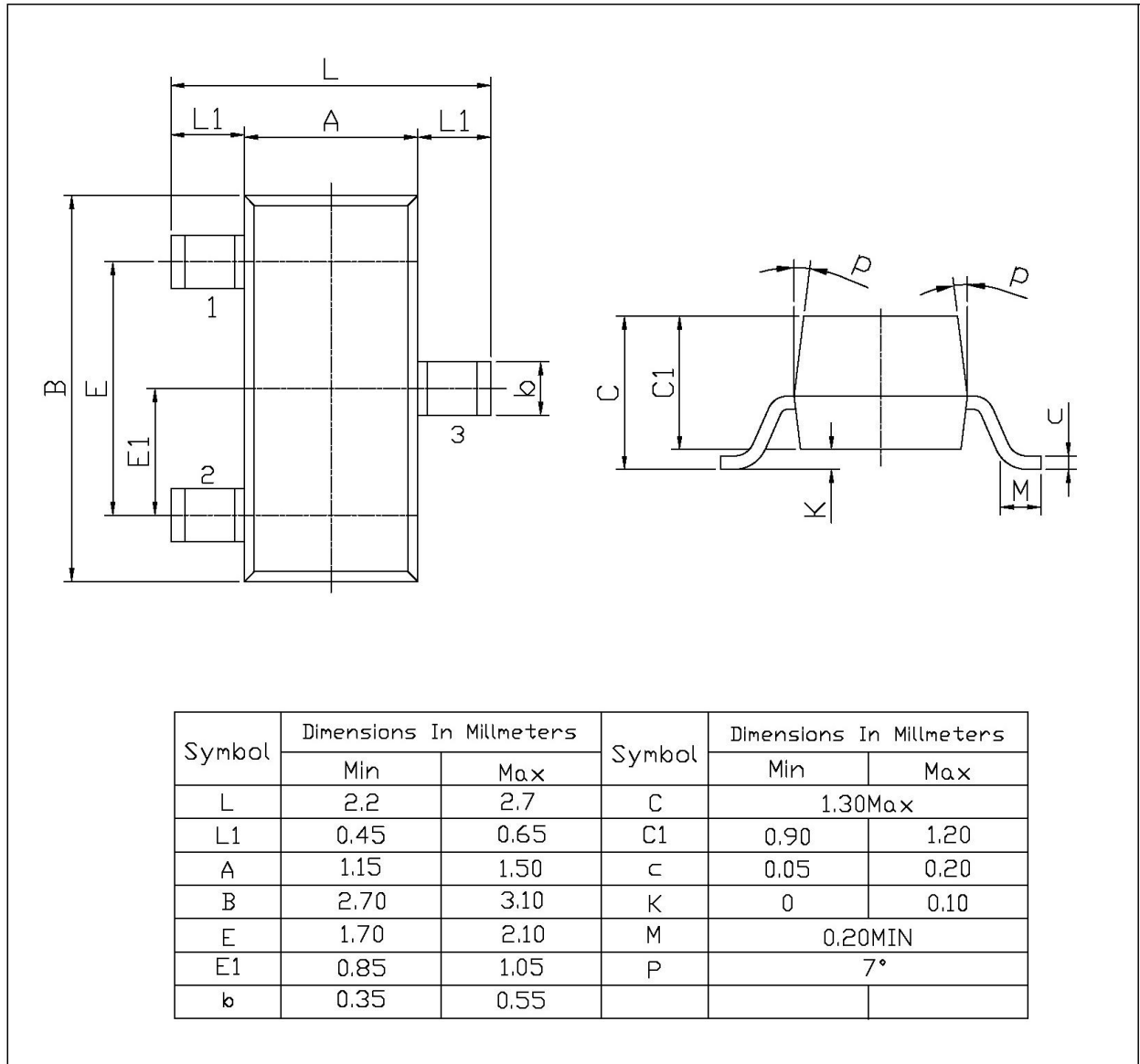
Based on square wave currents.  
 $T_j = 25\text{ }^\circ\text{C}$  prior to surge.



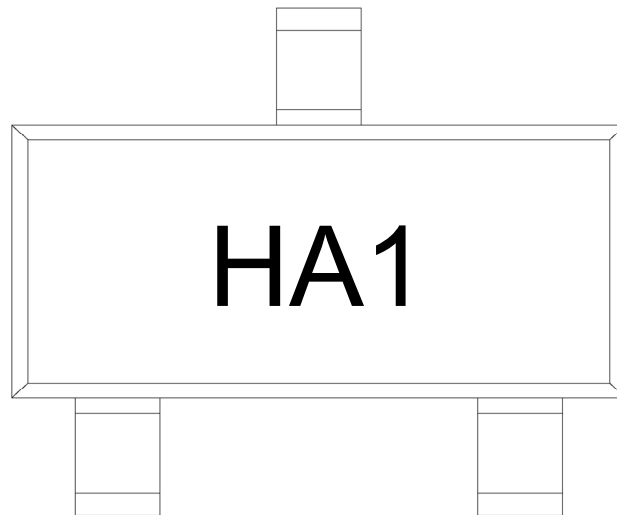
外形尺寸图 / Package Dimensions

SOT-23

单位: mm



**印章说明 / Marking Instructions**



说明：

H： 为公司代码

A1： 为型号代码

Note:

H: Company Code.

A1: 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" x8	180×120×180	385×257×392

**使用说明 / Notices**