

描述 / Descriptions

SOT-323 塑封封装 NPN 半导体三极管。Silicon NPN transistor in a SOT-323 Plastic Package.

特征 / Features

大电流，低电压，与 BC856W 互补。

High current, low voltage complementary pair with BC856W.

用途 / Applications

用于一般放大及开关电路。

General purpose switching and amplification.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN1 : Emitter

PIN 2 : Base

PIN 3 : Collector

印章代码 / Marking

h_{FE} Classifications Symbol	A	B
h_{FE} Range	110~220	200~450
Marking	H1A	H1B

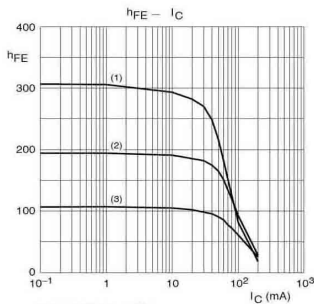
极限参数 / Absolute Maximum Ratings(Ta=25°C)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Collector to Base Voltage	V_{CBO}	80	V
Collector to Emitter Voltage	V_{CEO}	65	V
Emitter to Base Voltage	V_{EBO}	6.0	V
Collector Current - Continuous	I_C	100	mA
Peak Collector Current - Continuous	I_{CM}	200	mA
Peak Collector Base - Continuous	I_{BM}	200	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55~150	°C

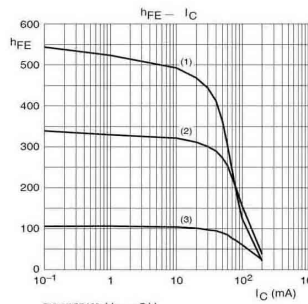
电性能参数 / Electrical Characteristics(Ta=25°C)

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
Collector Cut-Off Current	I_{CBO}	$V_{CB}=30V$ $I_E=0$			0.015	μA
Emitter Base Cut-Off Current	I_{EBO}	$V_{EB}=5.0V$ $I_C=0$			0.1	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=5.0V$ $I_C=2.0mA$	110		450	
	$h_{FE(2)}$	$V_{CE}=5.0V$ $I_C=10\mu A$		90		
Collector to Emitter Saturation Voltage	$V_{CE(sat)(1)}$	$I_C=10mA$ $I_B=0.5mA$		0.09	0.25	V
	$V_{CE(sat)(2)}$	$I_C=100mA$ $I_B=5.0mA$		0.2	0.6	V
Base to Emitter Saturation Voltage	$V_{BE(sat)(1)}$	$I_C=10mA$ $I_B=0.5mA$		0.7		V
	$V_{BE(sat)(2)}$	$I_C=100mA$ $I_B=5.0mA$		0.9		V
Base to Emitter Voltage	$V_{BE(1)}$	$V_{CE}=5.0V$ $I_C=2.0mA$	0.58	0.66	0.7	V
	$V_{BE(2)}$	$V_{CE}=5.0V$ $I_C=10mA$			0.77	V
Transition Frequency	f_T	$V_{CE}=5.0V$ $f=100MHz$ $I_C=10mA$	100			MHz
Collector Capacitance	C_C	$V_{CB}=10V$ $f=1.0MHz$ $I_E=I_E=0$			3.0	pF
Noise Figure	NF	$I_C=200\mu A$ $R_S=2K\Omega$ $B=200Hz$ $V_{CE}=5.0V$ $f=1.0KHz$			10	dB

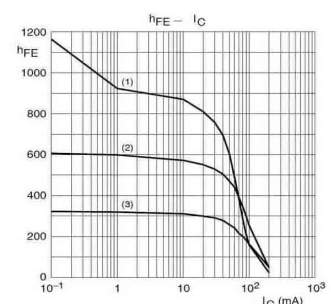
电参数曲线图 / Electrical Characteristic Curve



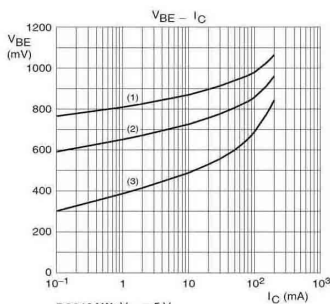
BC846AW; $V_{CE} = 5V$.
(1) $T_{amb} = 150^{\circ}C$.
(2) $T_{amb} = 25^{\circ}C$.
(3) $T_{amb} = -55^{\circ}C$.



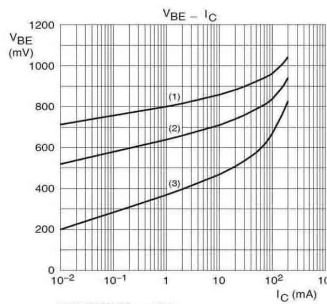
BC846BW; $V_{CE} = 5V$.
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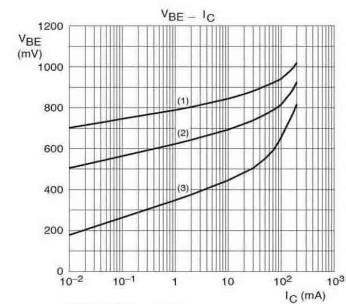
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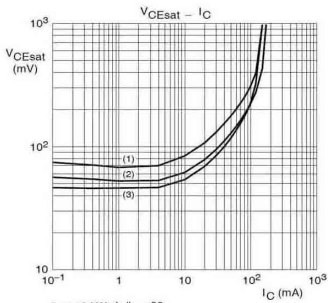
BC846AW; $V_{CE} = 5V$.
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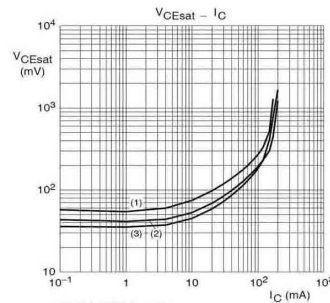
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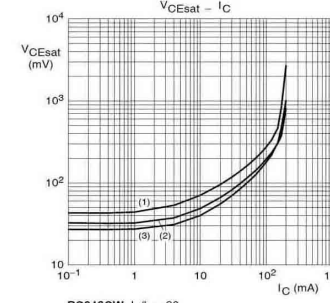
BC846CW; $V_{CE} = 5V$.
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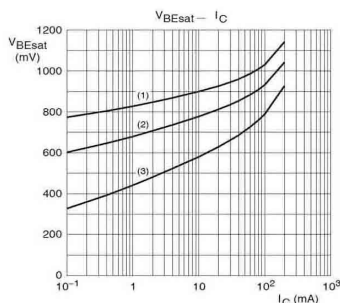
BC846AW; $I_C/I_B = 20$.
(1) $T_{amb} = 150^{\circ}C$.
(2) $T_{amb} = 25^{\circ}C$.
(3) $T_{amb} = -55^{\circ}C$.



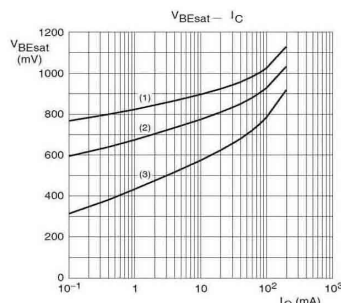
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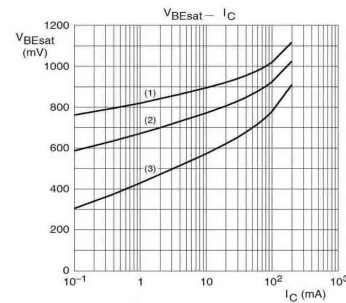
BC846CW; $I_C/I_B = 20$.
(1) $T_{amb} = 150^{\circ}C$.
(2) $T_{amb} = 25^{\circ}C$.
(3) $T_{amb} = -55^{\circ}C$.



BC847AW; $I_C/I_B = 10$.
(1) $T_{amb} = -55^{\circ}C$.
(2) $T_{amb} = 25^{\circ}C$.
(3) $T_{amb} = 150^{\circ}C$.



BC847BW; $I_C/I_B = 10$.
(1) $T_{amb} = -55^{\circ}C$.
(2) $T_{amb} = 25^{\circ}C$.
(3) $T_{amb} = 150^{\circ}C$.

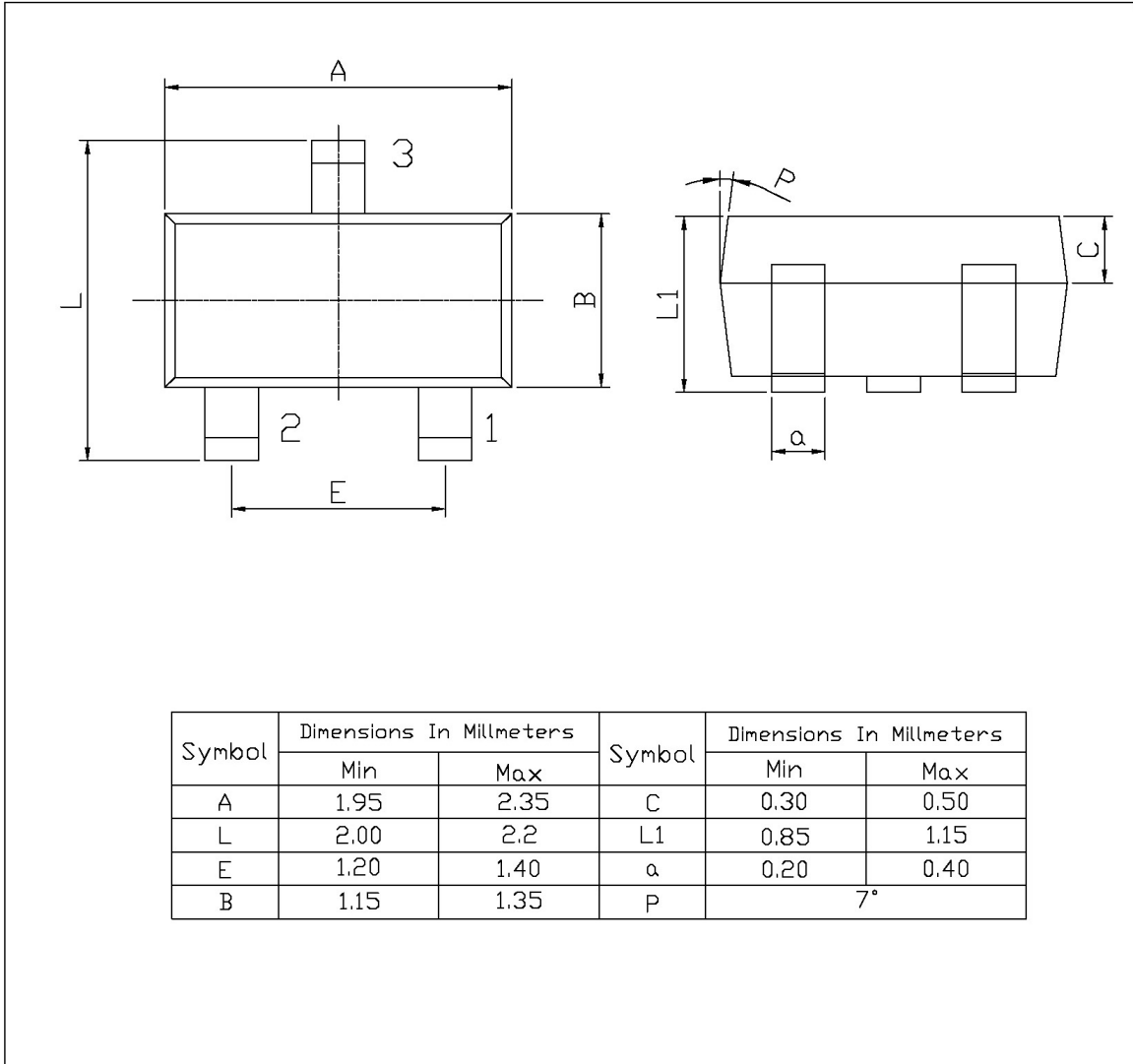


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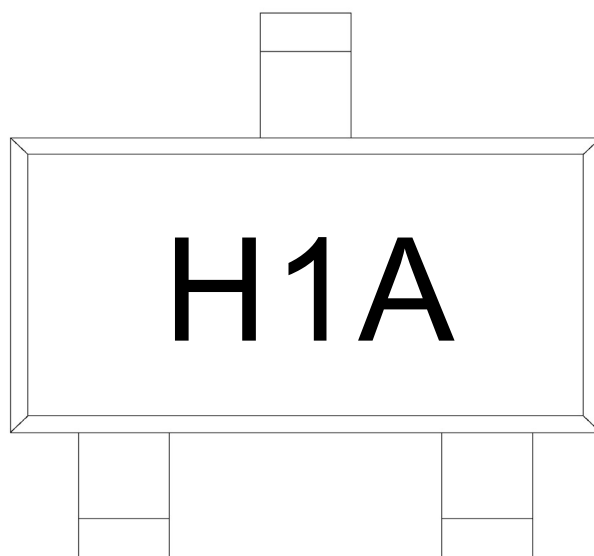
外形尺寸图 / Package Dimensions

SOT-323

单位: mm



印章说明 / Marking Instructions



说明：

H： 为公司代码
1： 为型号代码
A： 为 h_{FE} 分档代码

Note:

H: Company Code.
1: Product Type.
A: h_{FE} Classifications Symbol

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 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-323	3,000	10	30,000	6	180,000	7" x8	180×120×180	390×385×205

使用说明 / Notices