

/ Descriptions

Silicon NPN transistor in a SOT-323 Plastic Package.

/ Features

High current, low voltage complementary pair with BC858W.

/ Applications

General purpose switching and amplification.

/ Equivalent Circuit



/ Pinning



PIN1 Emitter PIN 2 Base PIN 3 Collector

/ Marking

h_{FE} Classifications Symbol	A	B	C
h_{FE} Range	110 220	200 450	420 800
Marking	H1J	H1K	H1L

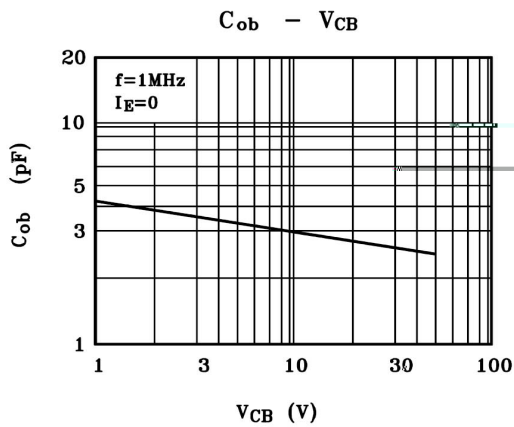
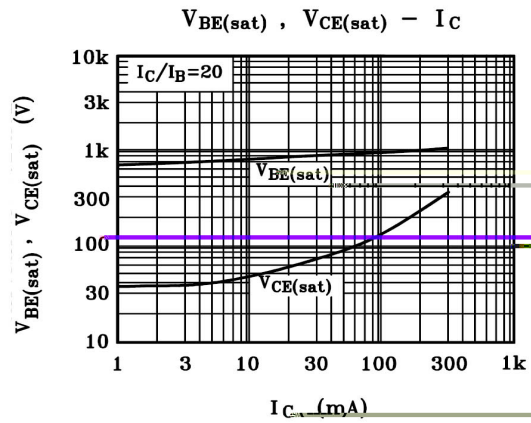
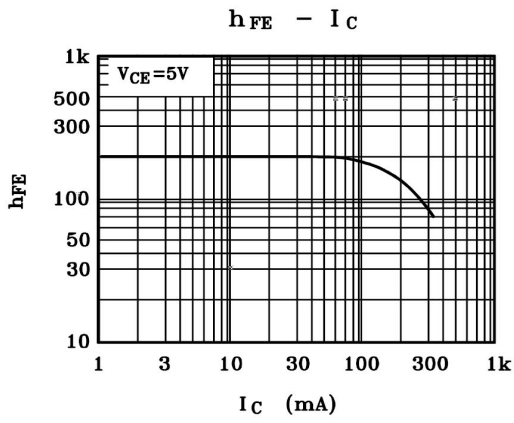
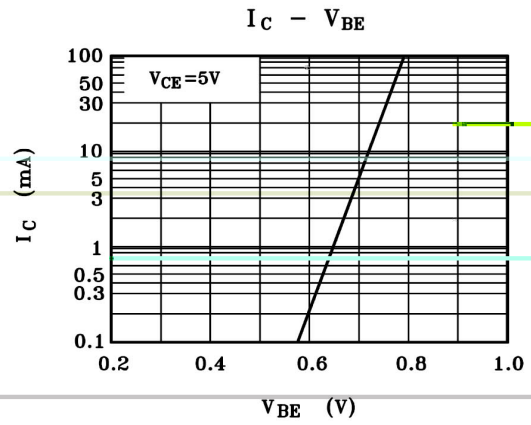
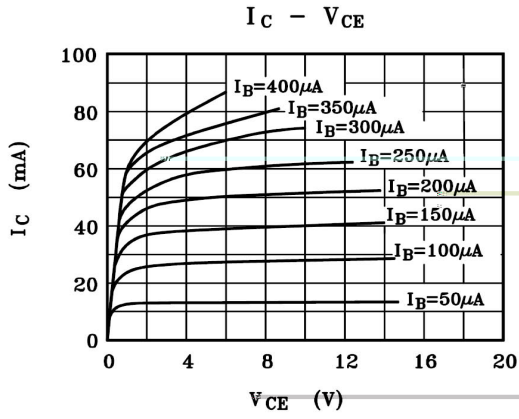
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	30	V
Collector to Emitter Voltage	V_{CEO}	30	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current- Continuous	I_C	100	mA
Peak Collector Current - Continuous	I_{CM}	200	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	I_{CBO}	$V_{CB}=30V$ $I_E=0$			0.015	μA
Emitter to Base 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		800	
	$h_{FE(2)}$	$V_{CE}=5.0V$ $I_C=10\mu A$		150		
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	$I_C=200\mu A$ $R_S=2K$ $B=200Hz$ $V_{CE}=5.0V$ $f=1.0KHz$			10	dB

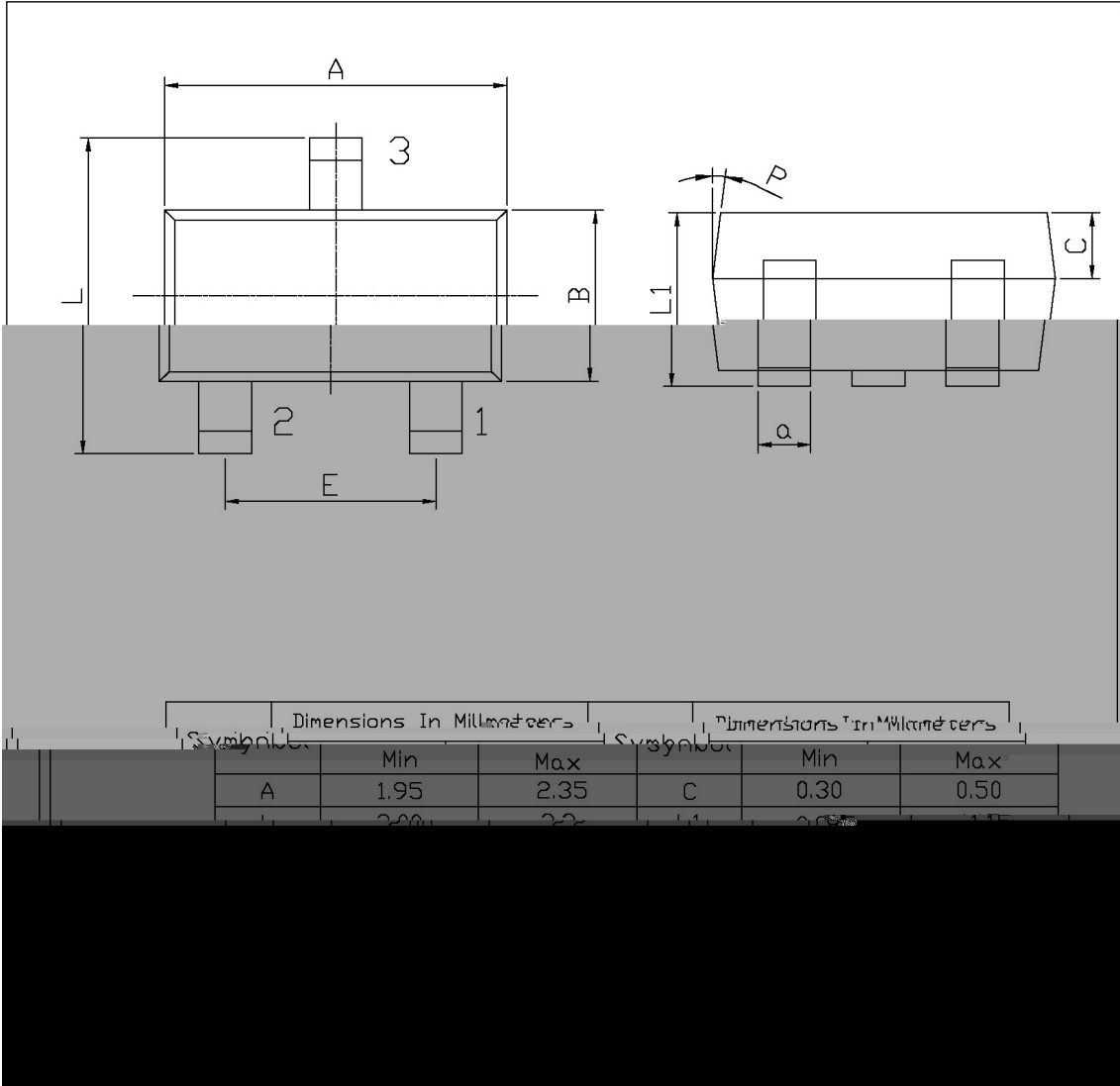
/ Electrical Characteristic Curve



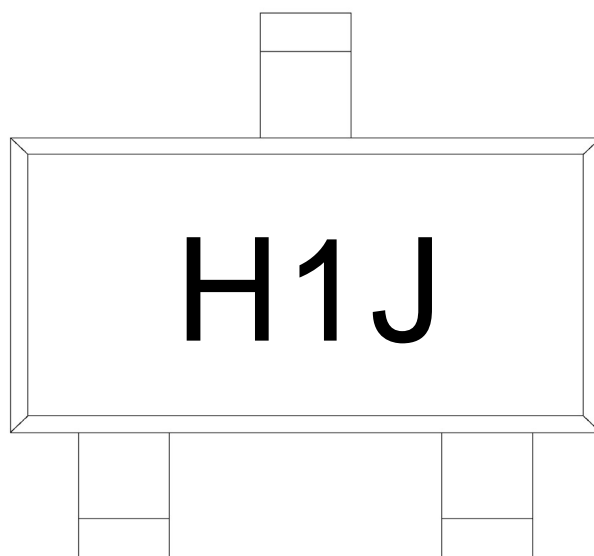
/ Package Dimensions

SOT-323

单位: mm



/ Marking Instructions



H

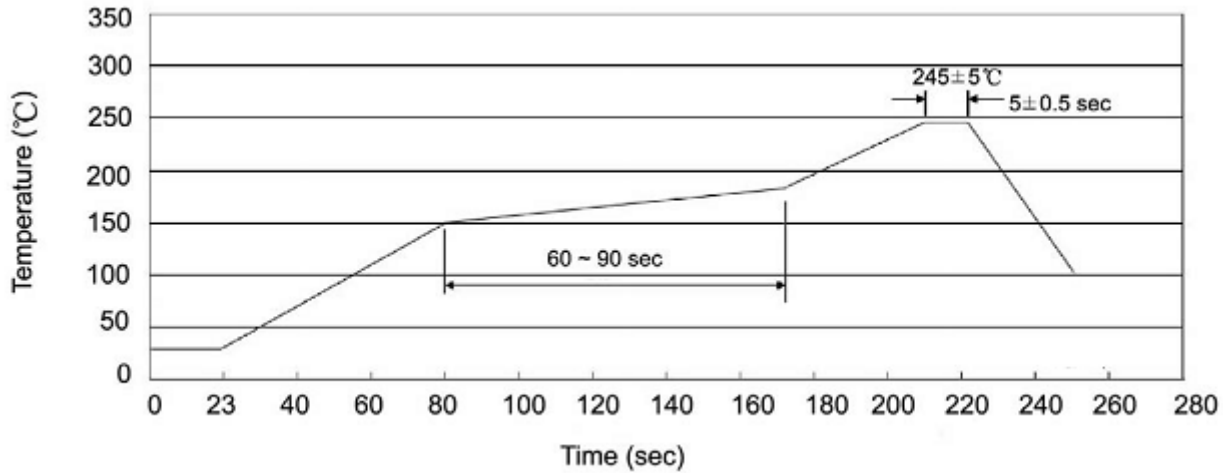
1J

Note:

H: Company Code.

1J: Product Type.

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Note:

- | | | | | | |
|---|-----|-----|----|----------|---|
| 1 | 25 | 150 | 60 | 90sec; | 1.Preheating:25~150 , Time:60~90sec. |
| 2 | 245 | 5 | 5 | 0.5sec; | 2.Peak Temp.:245 5 , Duration:5 0.5sec. |
| 3 | | | 2 | 10 /sec. | 3. Cooling Speed: 2~10 /sec. |

/ Resistance to Soldering Heat Test Conditions

260 5 10 1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

/ 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 ×8	180×120×180	390×385×205

/ Notices