

BC817

Rev.F Apr.-2017

/ Descriptions

SOT-23 NPN Silicon NPN transistor in a SOT-23 Plastic Package.

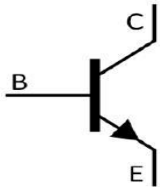
/ Features

I_C BC807
High I_C ,complementary pair with BC807.

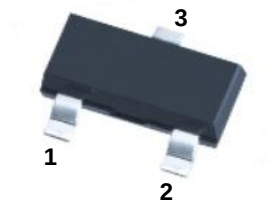
/ Applications

Purpose: General power amplifier and switching application.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Emitter PIN 3 Collector

/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	16	25	40
h_{FE} Range	100 250	160 400	250 600
Marking	H6A	H6B	H6C

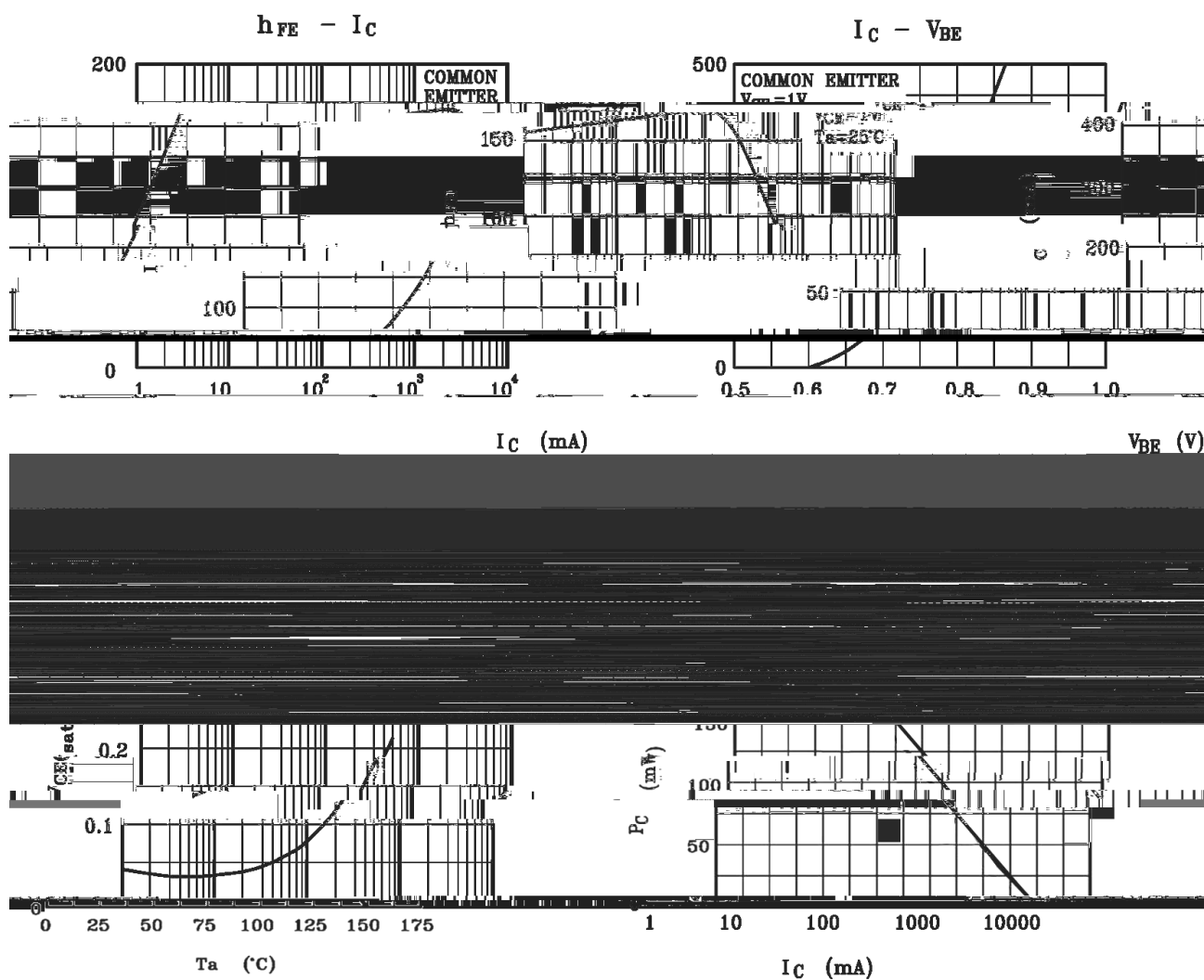
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	50	V
Collector to Emitter Voltage	V_{CEO}	45	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current - Continuous	I_C	500	mA
Collector Current - peak collector current	I_{CM}	1.0	A
Collector Power Dissipation	P_C	250	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 to Base Breakdown Voltage	V_{CBO}	$I_C=10\mu A$ $I_E=0$	50			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=10mA$ $I_B=0$	45			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=10\mu A$ $I_C=0$	5.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=20V$ $I_E=0$			0.1	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=5.0V$ $I_E=0$			0.1	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=1.0V$ $I_C=100mA$	100		600	
	$h_{FE(2)}$	$V_{CE}=1.0V$ $I_C=500mA$	40			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=500mA$ $I_B=50mA$			0.7	V
Base to Emitter Voltage	V_{BE}	$V_{CE}=1.0V$ $I_C=500mA$			1.2	V
Transition Frequency	f_T	$V_{CE}=5.0V$ $I_C=10mA$	100			MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10V$ $f=1.0MHz$ $I_E=0$		5.0		pF

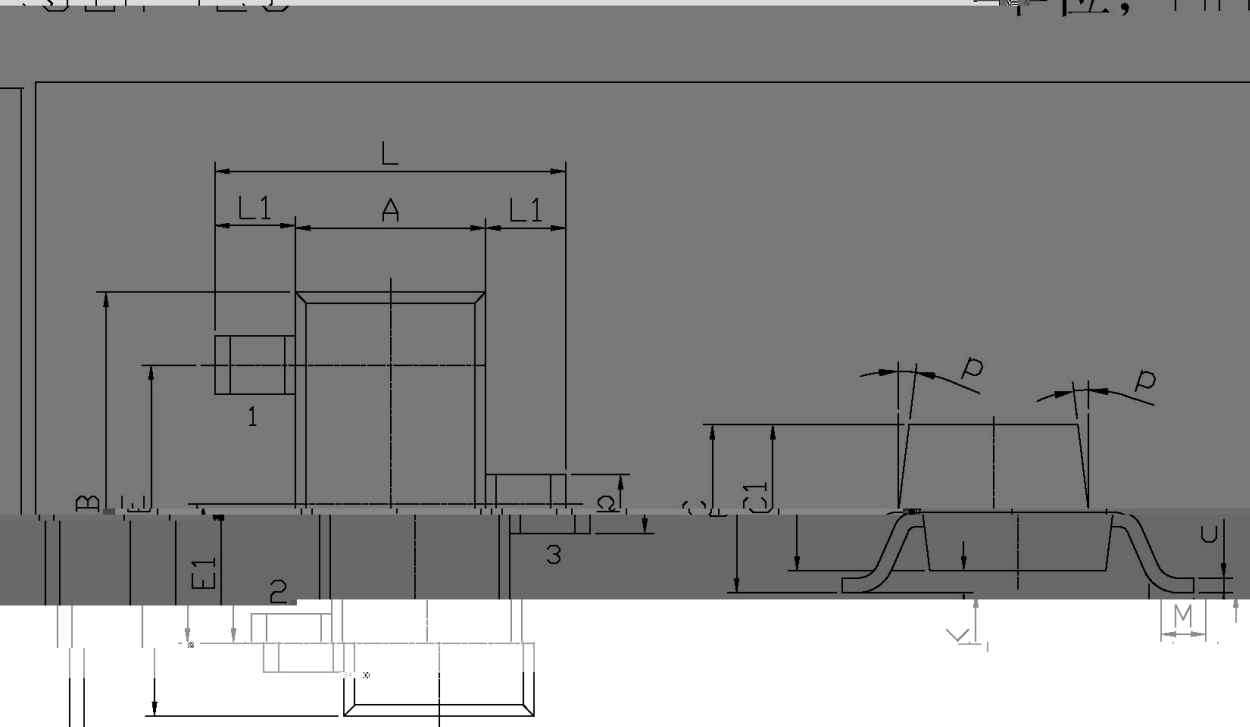
/ Electrical Characteristic Curve



/ Package Dimensions

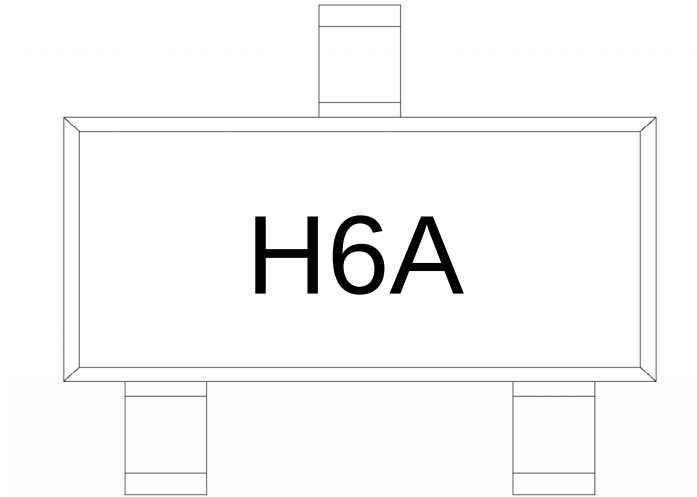
SOT-23

单位: mm



Dimensions in Millimeters			Dimensions in Millimeters		
Symbol	Min	Max	Symbol	Min	Max
L	2.2	2.7	C	1.30	Max

/ Marking Instructions



H

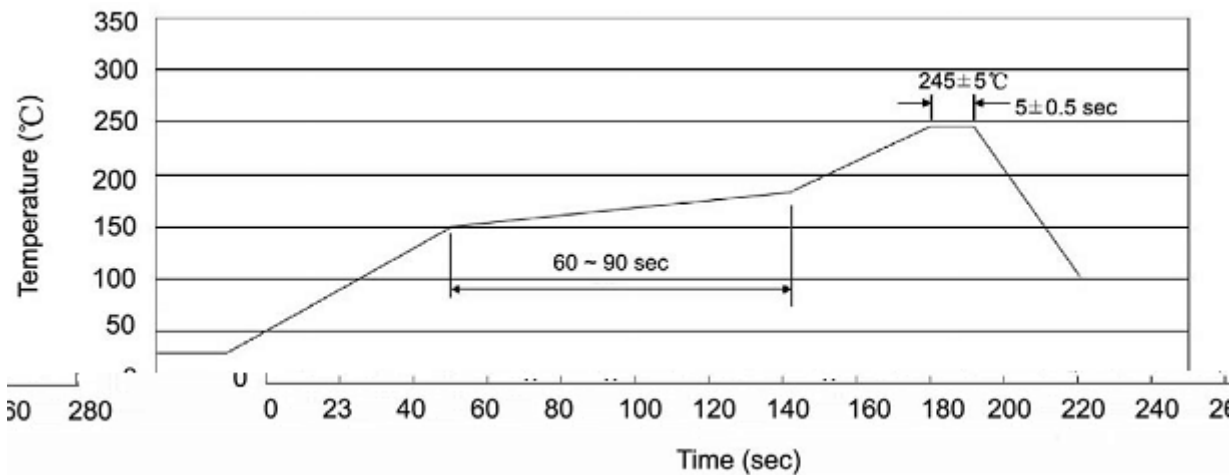
6A

Note:

H: Company Code

6A: Product Type Code

() / Temperature Profile for IR Reflow Soldering(Pb-Free)



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-23	3,000	10	30,000	6	180,000	7 ×8	180×120×180	390×385×205

/ Notices