

/ Descriptions

SOT-223

PNP

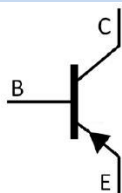
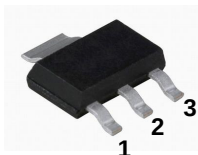
Silicon PNP transistor in a SOT-223 Plastic Package.

/ Features

High current, Low voltage.

/ Applications

Medium Power Switching or Amplification Applications .

/ Equivalent Circuit**/ Pinning**

PIN1 Base

PIN 2 Collector

PIN 3 Emitter

/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	10	16
h_{FE} Range	63~160	100~250

/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-100	V
Collector to Emitter Voltage	V_{CEO}	-80	V
Emitter to Base Voltage	V_{EBO}	-5.0	V
Collector Current - Continuous	I_C	-1.0	A
Peak Pulse Collector Current	I_{CM}	-2.0	A
Continuous Base Current	I_B	-100	mA
Peak Pulse Base Current	I_{BM}	-200	mA
Power Dissipation	P_D	2.0	W
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	62	W
Thermal Resistance, Junction to Leads	$R_{\theta JL}$	19.4	W
Operating and Storage Temperature Range	$T_j T_{stg}$	-65~150	°C

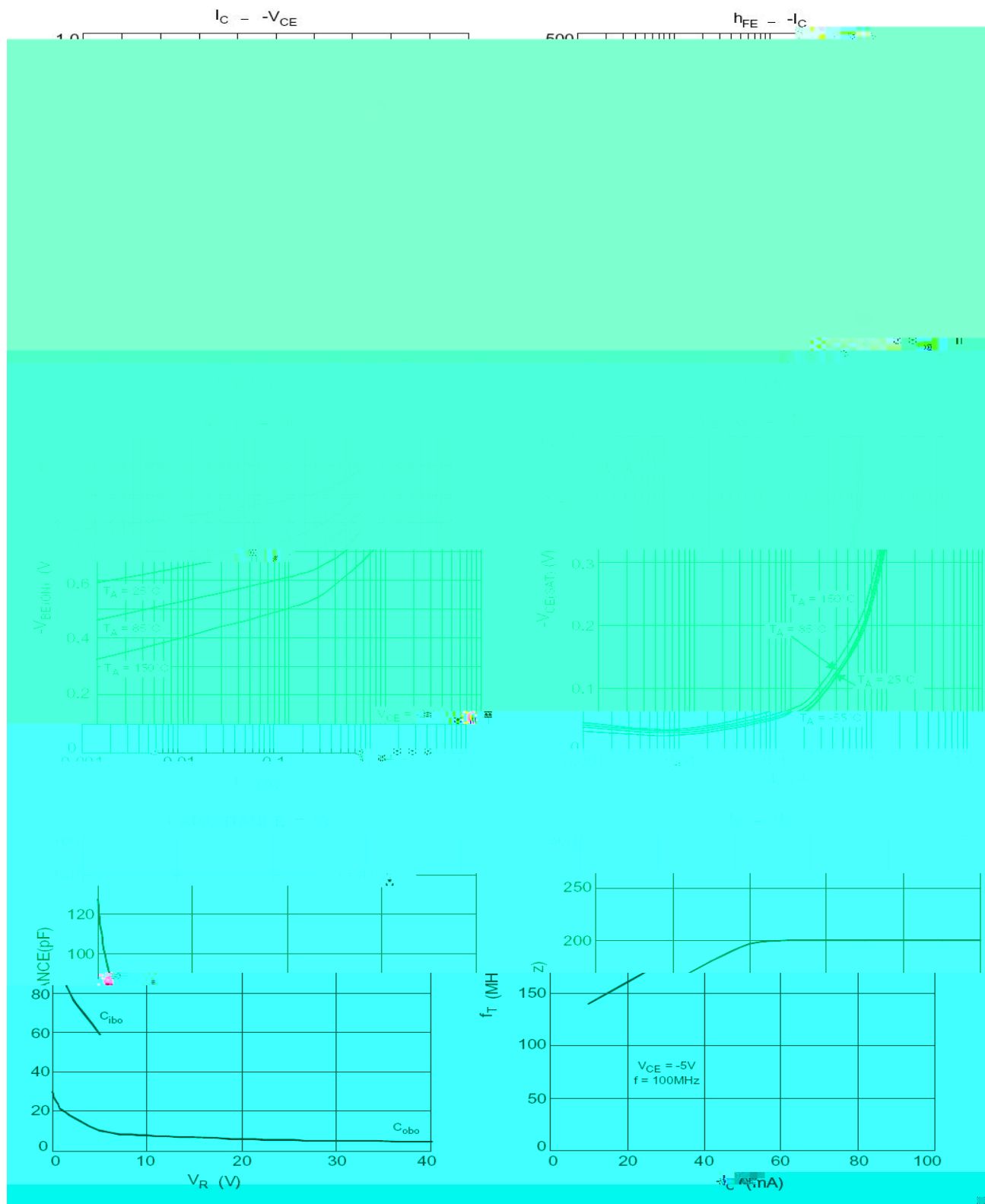
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C = -100\mu A$ $I_E = 0$	-100			V
Collector to Emitter Breakdown Voltage	$*V_{CEO}$	$I_C = -10mA$ $I_B = 0$	-80			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}	$V_{CB} = -100V$ $I_E = 0$			-0.1	μA
		$V_{CB} = -100V$ $T_A = 150^\circ C$			-20	μA
Emitter Base Cut-Off Current	I_{EBO}	$V_{EB} = -5.0V$ $I_C = 0$			-20	nA
DC Current Gain	$h_{FE(1)}$	$V_{CE} = -2.0V$ $I_C = -5mA$	25			
	$h_{FE(2)}$	$V_{CE} = -2.0V$ $I_C = -150mA$	40		250	
	$h_{FE(3)}$	$V_{CE} = -2.0V$ $I_C = -500mA$	25			
Collector to Emitter Saturation Voltage*	$*V_{CE(sat)}$	$I_C = -500mA$ $I_B = -50mA$			-0.5	V
Base to Emitter Saturation Voltage*	$*V_{BE(sat)}$	$I_C = -500mA$ $V_{CE} = -2.0V$			-1.0	V
Transition Frequency	f_T	$V_{CE} = -10V$ $I_C = -50mA$ $f = 1.0MHz$	150			MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10V$ $f = 1.0MHz$			25	pF

*Pulse width $\leq 300\mu s$, Duty cycle $\leq 2\%$.

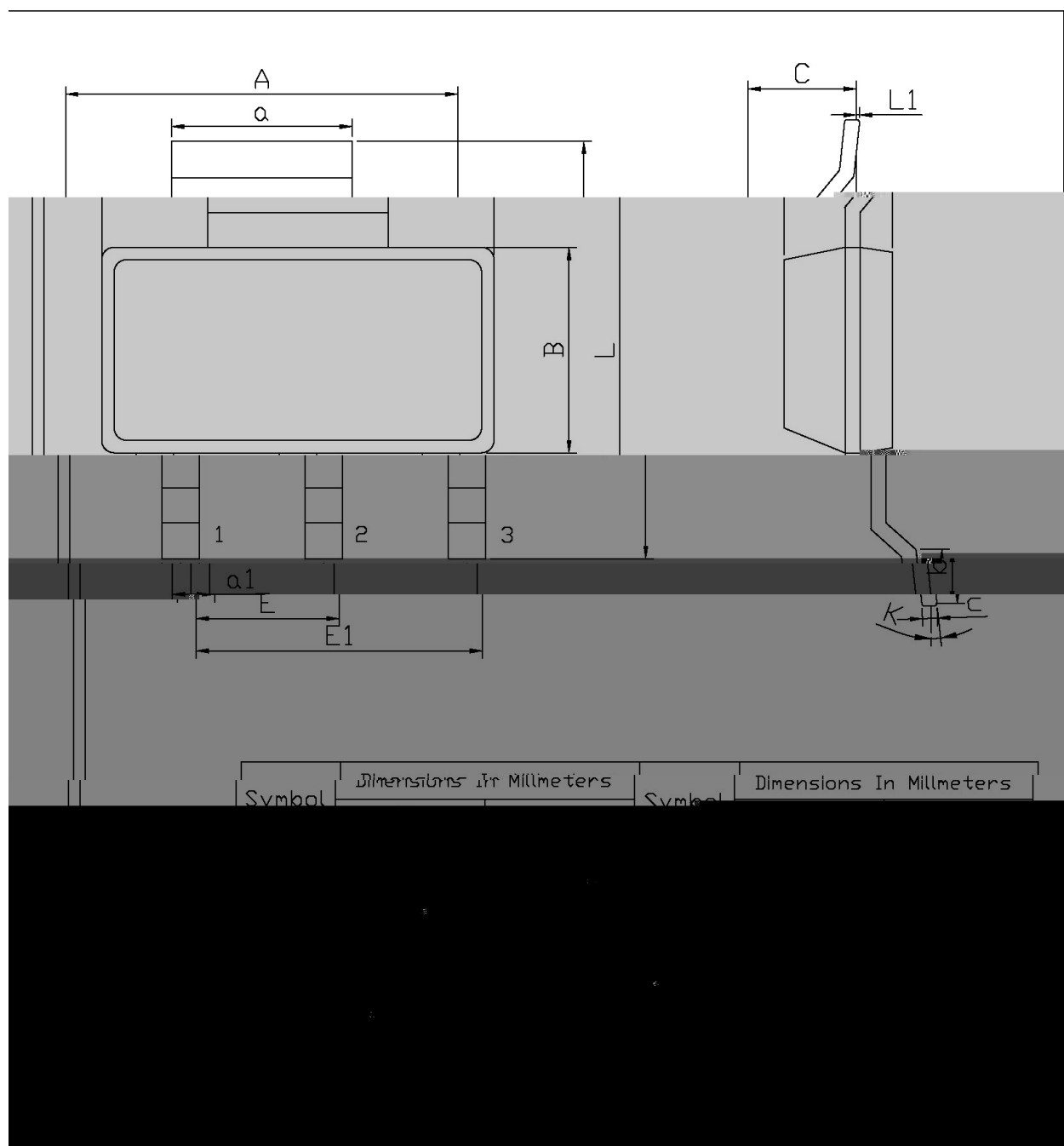
* ≤ 300 $\leq 2\mu s$

/ Electrical Characteristic Curve

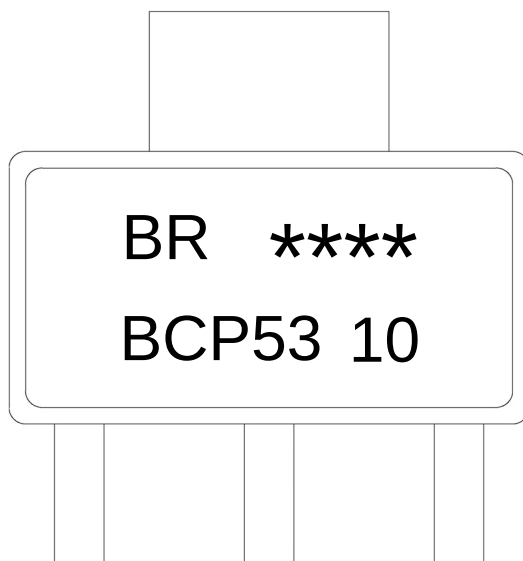


SUT-223

单位; 



/ Marking Instructions



BR

BCP53

10

h_{FE} 分

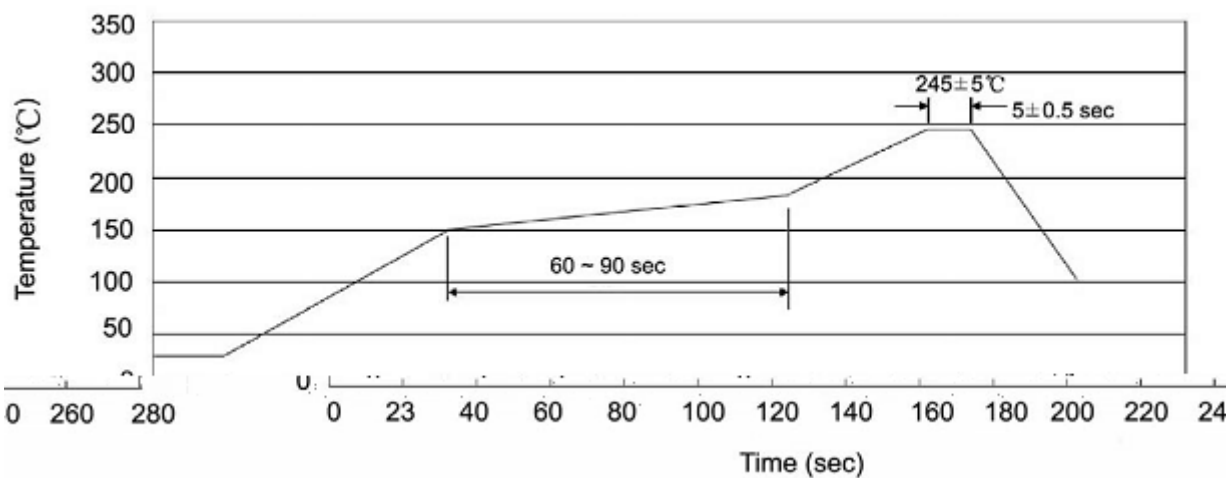
Note:

BR: Company Code.

BCP53: Product Type.

10: h_{FE} Classifications Symbol

****: Lot No. Code, code change with Lot No.


() / 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°C

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-223	2,500	2	5000	5	25,000	13" ×12	340×340×50	385×257×392

/ Notices