/ Descriptions

SOT-223 PNP Silicon PNP transistor in a SOT-223 Plastic Package.

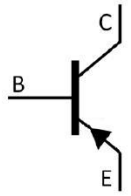
/ Features

High current,Low voltage.

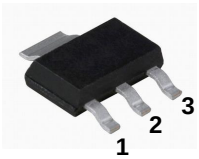
/ Applications

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)

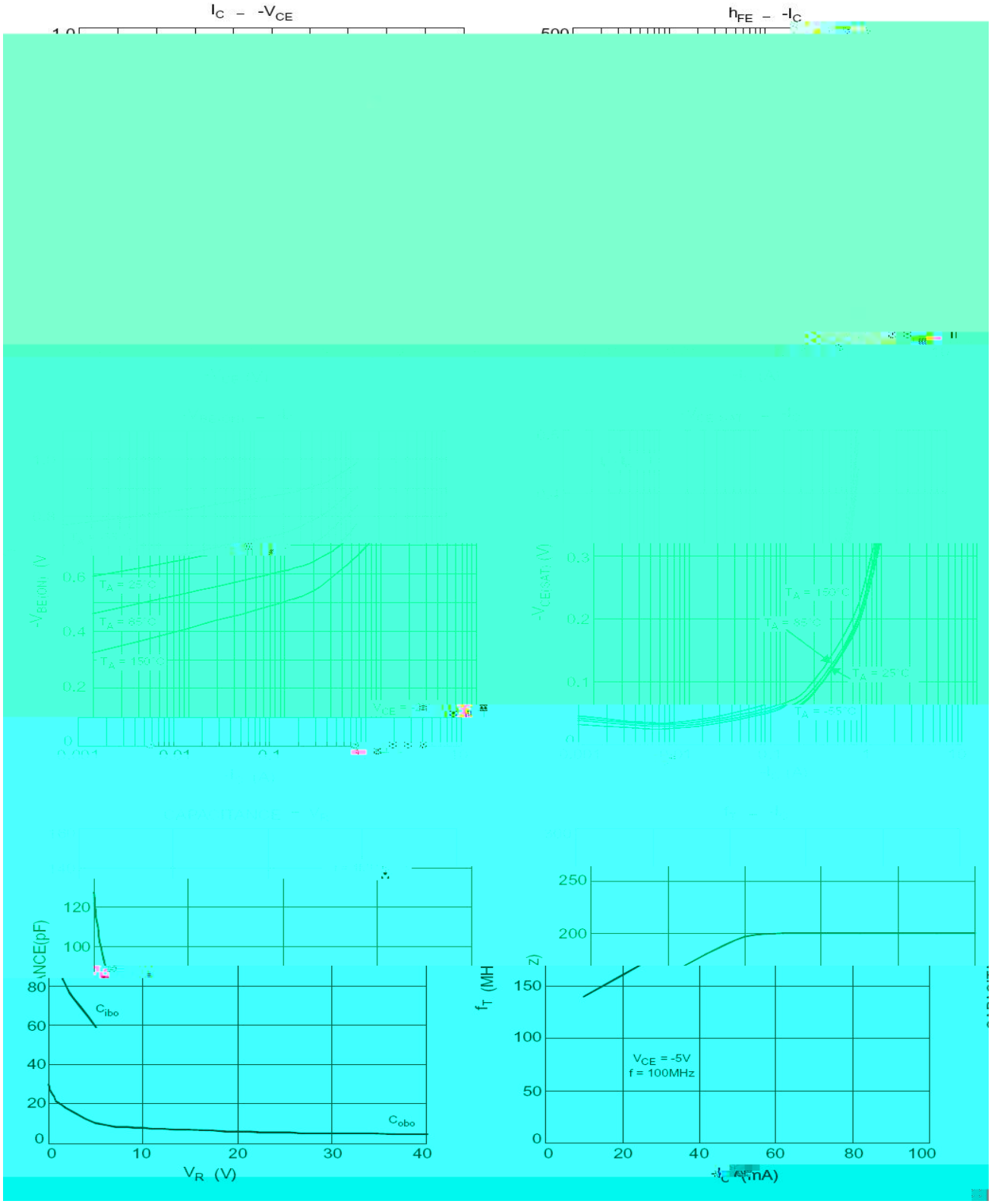
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-100	V
Collector to Emitter Voltage	V_{CEO}	-80	V
Emitter to Base Voltage	V_{EBO}	-5.0	V
Collector Current - Continuous	I_C	-1.0	A
Peak Pulse Collector Current	I_{CM}	-2.0	A
Continuous Base Current	I_B	-100	mA
Peak Pulse Base Current	I_{BM}	-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	℃

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	I_C=-100μA 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=-10μA 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℃			-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 ≤ 300μs, Duty cycle ≤ 2%.
* ≤300 ≤2%μS

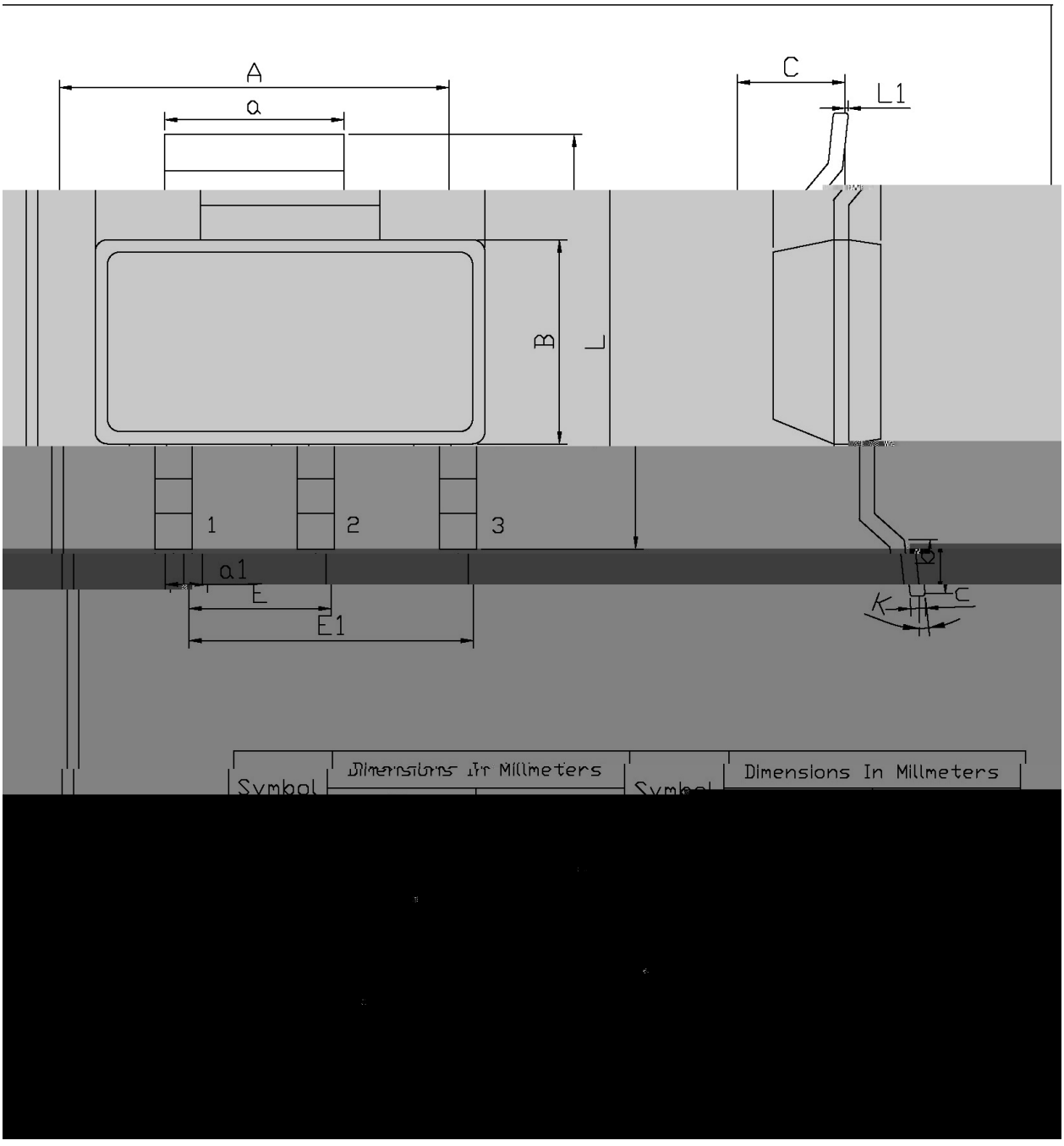
/ Electrical Characteristic Curve



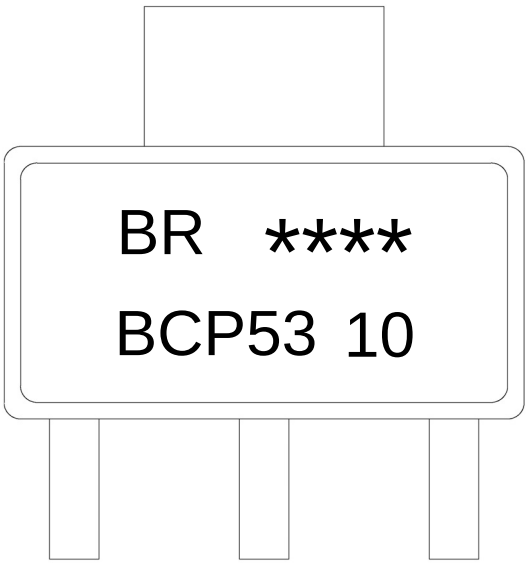
/ Package Dimensions

SOT-223

单位：mm



/ Marking Instructions



BR

BCP53

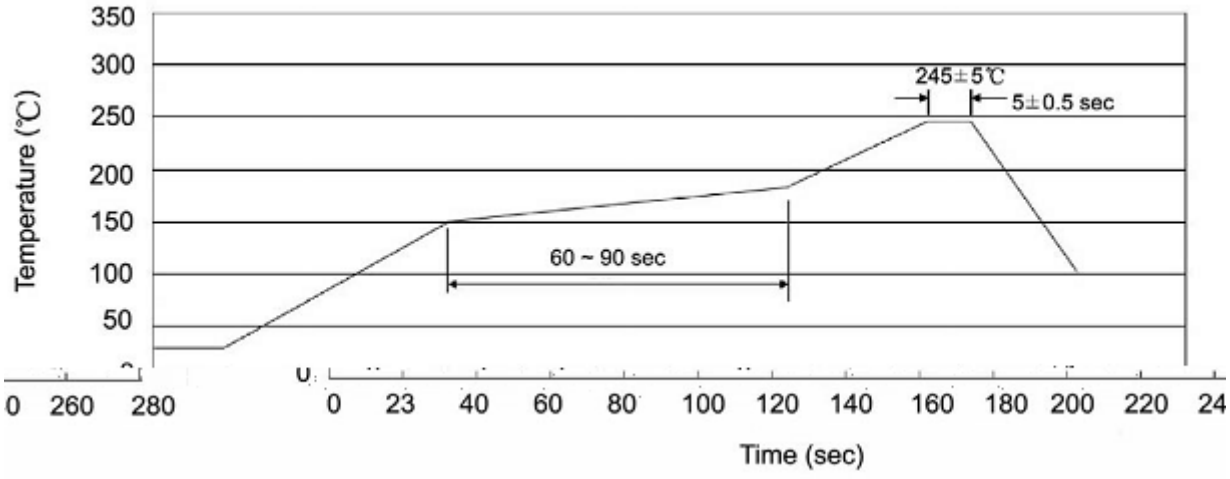
10 h_{FE} 分

****

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℃ 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