SEMICONDUCTOR

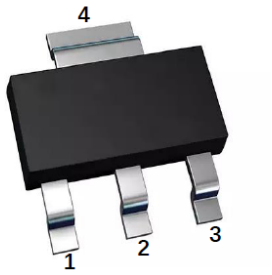
BCP53

PNP Plastic-Encapsulate Transistors

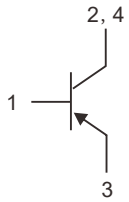
Features

- Switching and amplification in high voltage Applications such as telephony
- Low current
- High voltage

SOT-223



1-Base
2-Collector
3-Emitter
4-Collector



Mechanical Data

- Case:SOT-223
- Terminals:Plated solderable per MIL-STD-750,method 2026
- Mounting Position: Any

Maximum Ratings(T_A=25°C Unless otherwise specified)

Parameter	Symbol	Unit	Value
Collector-Emitter Voltage	V_{CEO}	V	−80
Collector-Base Voltage	V_{CBO}	V	−100
Emitter-Base Voltage	V_{EBO}	V	−5.0
Collector Current, Continuous	I_C	A	−1
Power Dissipation	P_D	W	1
Operation Junction Temperature	T_J	℃	-55 to +150
Storage Temperature	T_{STG}	℃	-55 to +150

Electrical Characteristics(T_A=25°C Unless otherwise specified)

Parameter	Symbol	Unit	Conditions	Min	Max
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	V	I_C=-10mA,I_B=0	-80	---
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	V	I_C=-100μA,I_E=0	-100	---
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	V	I_E=-100μA,I_C=0	-5.0	---
Collector cut-off Current	I_{CBO}	nA	V_{CB}=-30V,I_E=0	---	-100
Emitter cut-off Current	I_{EBO}	nA	V_{EB}=-5V,I_C=0	---	-100
DC Current Gain	$h_{FE(1)}$		I_C=-5mA,V_{CE}=-2V	63	---
	$h_{FE(2)}$		I_C=-150mA,V_{CE}=-2V	63	250
	$h_{FE(3)}$		I_C=-500mA,V_{CE}=-2V	40	---
Collector-Emitter Saturation Voltage	VCE(sat)	V	I_C=-500mA,I_B=-50mA	---	-0.50
Base-Emitter Voltage	VBE	V	I_C=-500mA,V_{CE}=-2V	---	-1.00
Current Gain-Bandwidth Product	f_T	MHz	I_C=-50mA,V_{CE}=-10V f=30MHz	100	---
Output Capacitance	Cob	pF	V_{CB}=-10V,f=1.0MHz,I_E=0	---	15(typ)

CLASSIFICATION OF $h_{FE(2)}$

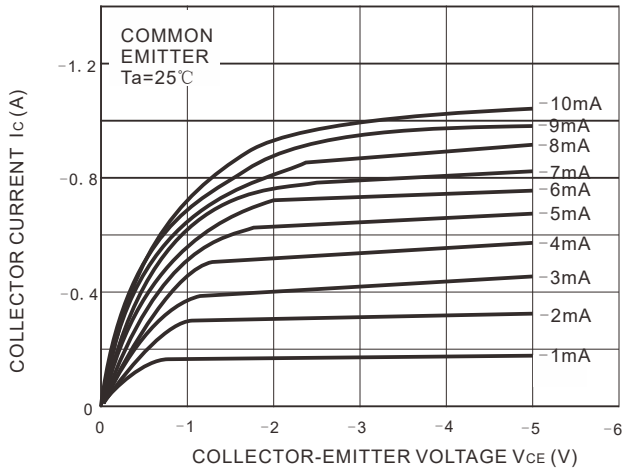
Rank	BCP53-10	BCP53-16
Range	63-160	100-250

AVAILABALE PACK INFORMATION

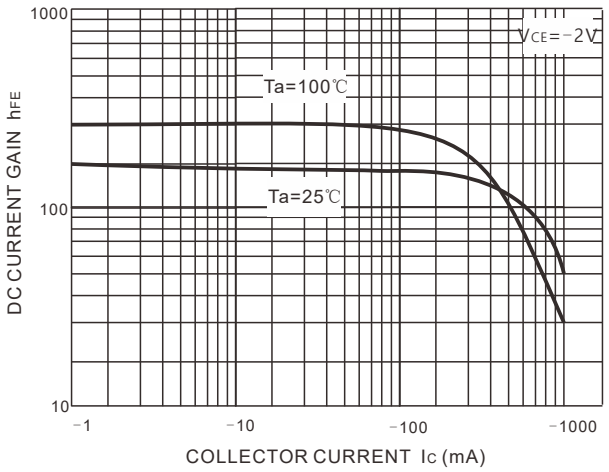
Product code	Pack	Reel Size (mm)	Quantity (Pcs/reel)	Quantity (pcs/box)	Quantity (pcs/carton)
BCP53	T/R	Φ180	2.5K	5K	25K

Characteristics(Typical)

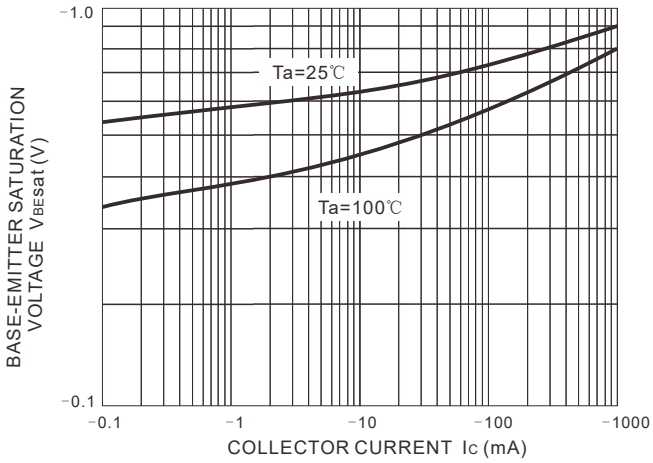
Static Characteristic



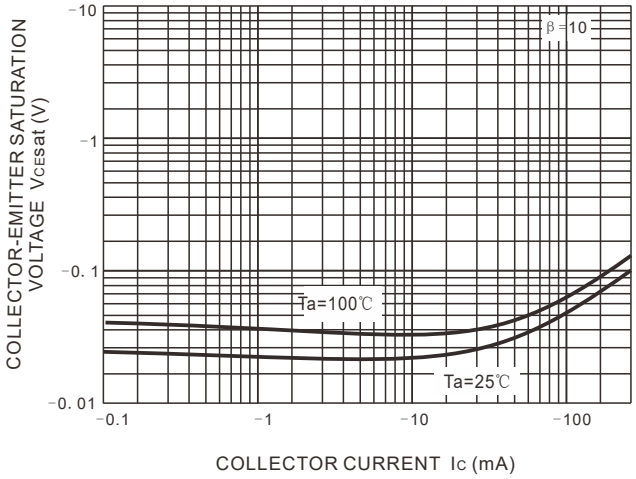
DC Current Gain



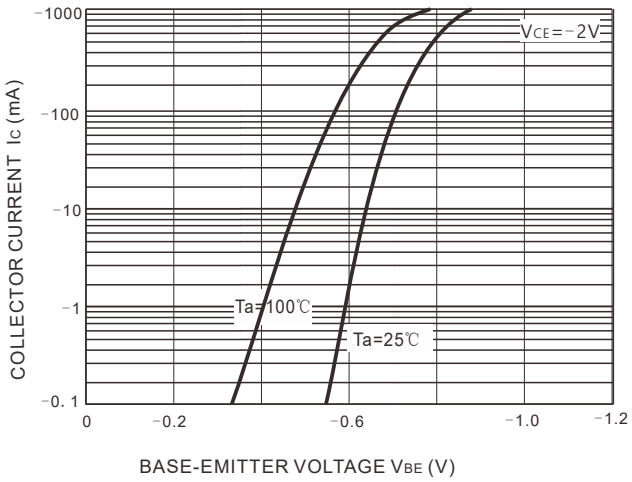
VBE —IC



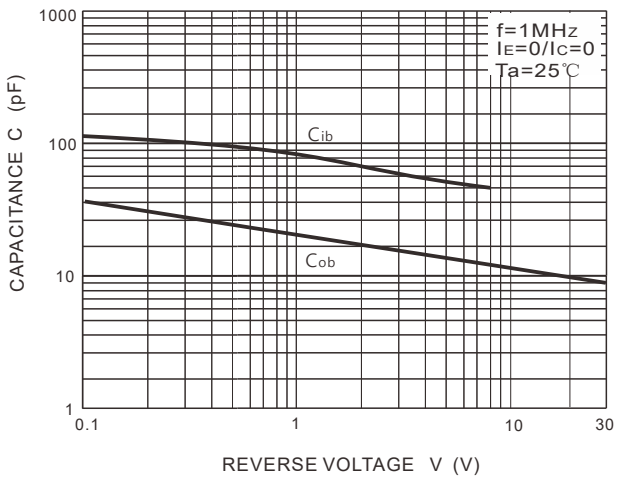
VCEsat —IC

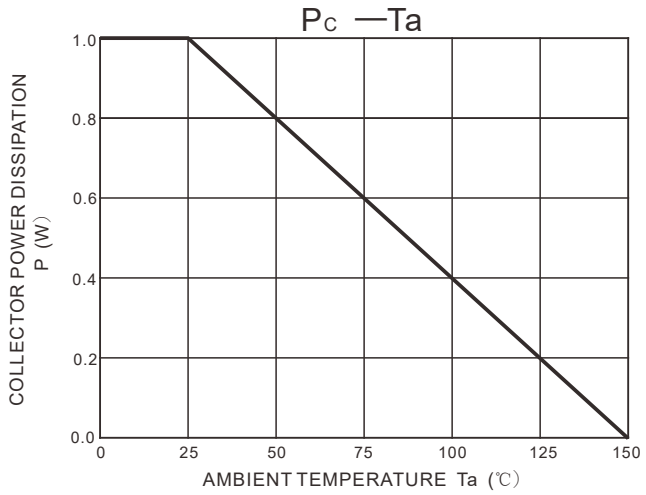


IC —VBE

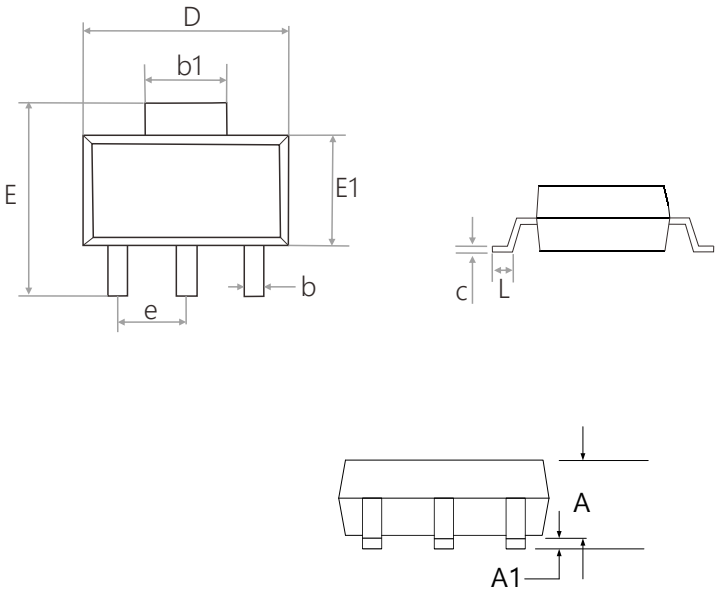


Cob/Cib —VCB /VEB





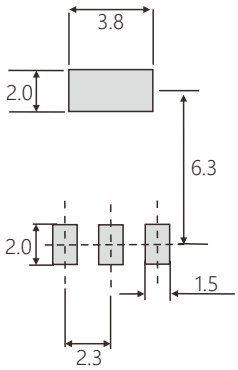
Outline Dimensions



SOT-223		
Dim	Min	Max
A	1.50	1.70
A1	0.02	0.10
b	0.66	0.84
b1	2.90	3.10
c	0.23	0.35
D	6.30	6.70
E	6.70	7.30
E1	3.30	3.70
e	2.20	2.40
L	0.75	1.25

Dimensions in millimetrers

Suggested pad layout



Dimensions in millimetrers

Friendship Reminder

■ JiNan JingHeng（hereinafter referred to as JH） reserves the right to make changes to this document and its products and specifications at anytime without notice.

■ Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.

■ JH makes no warranty, representation or guarantee regarding the suitability ofi ts products for any particular purpose, nor does JH assume any liability for application assistance or customer product design.

■ JH does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.

■ No license is granted by implication or otherwise under any intellectual property rights of JH.

■ JH's products are not authorized for use as critical components in life support devices or systems without express written approval of JH.