



Micro Commercial Components

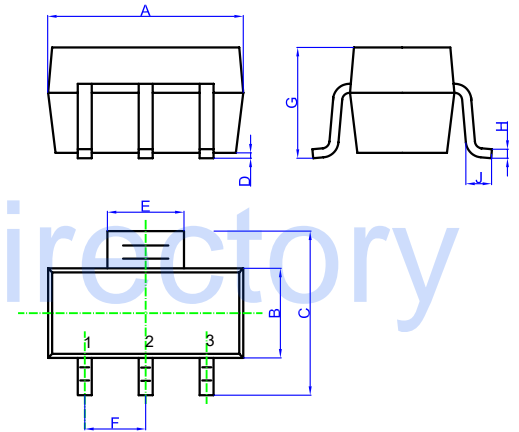


Micro Commercial Components
20736 Marilla Street Chatsworth
CA 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

BCP51-10/16 BCP52-10/16 BCP53-10/16

PNP Plastic-Encapsulate Transistors

SOT-223



1.BASE
2.COLLECTOR
3.EMITTER

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.248	.264	6.30	6.70	
B	.130	.146	3.30	3.70	
C	.264	.287	6.70	7.30	
D	.001	.004	0.02	0.10	
E	.114	.122	2.90	3.10	
F		.091		2.30	
G	---	.071	---	1.80	
H	.009	.014	0.23	0.35	
J	.030	---	0.75	---	

Features

- For AF driver and output stages
- High collector current
- Low collector-emitter saturation voltage
- Complementary types: BCP54 ... BCP56 (NPN)
- Lead Free Finish/Rohs Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"

Maximum Ratings @ 25°C Unless Otherwise Specified

Charateristic	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	-45	V
		-60	
		-100	
Collector-Emitter Voltage	V_{CEO}	-45	V
		-60	
		-80	
Emitter-Base Voltage	V_{EBO}	-5.0	V
Collector Current-Continuous	I_C	-1.0	A
Thermal Resistance Junction to Ambient	R_{thJA}	94	°C/W
Collector Power Dissipation	P_C	1.5	W
Operating & Storage Temperature	T_j, T_{STG}	-55~150	°C

BCP51-10/16 thru BCP53-10/16

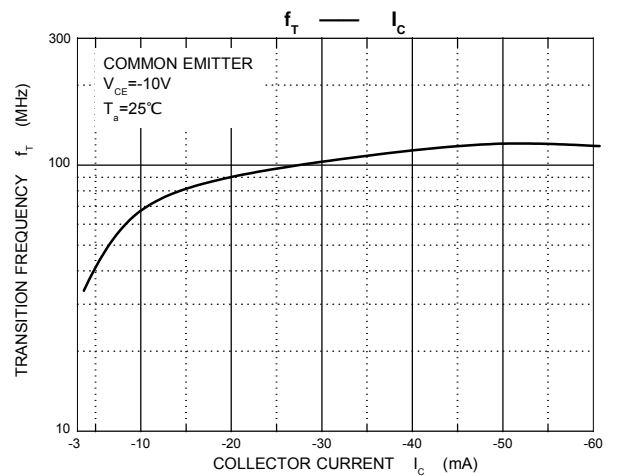
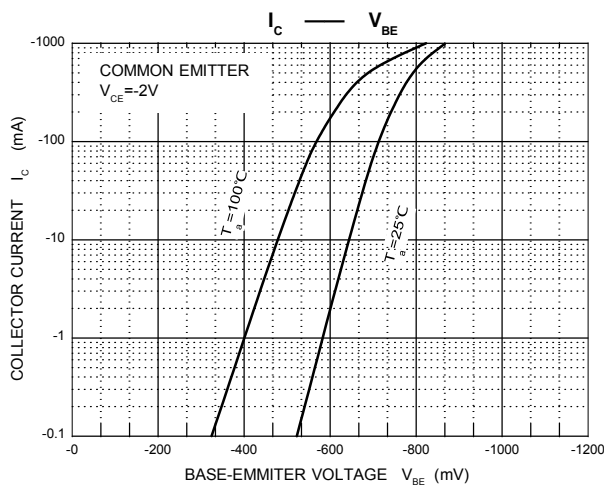
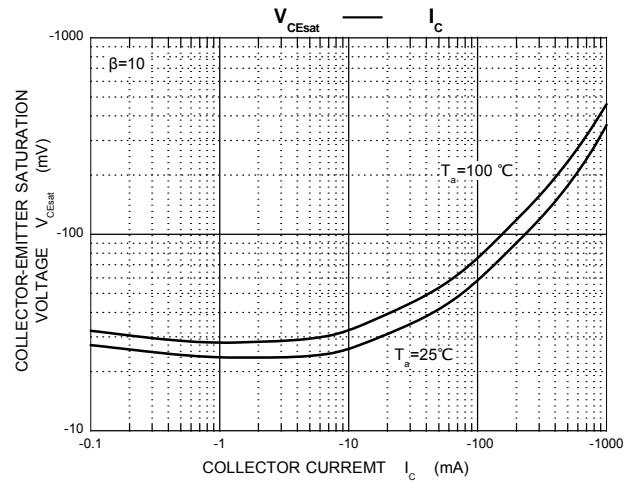
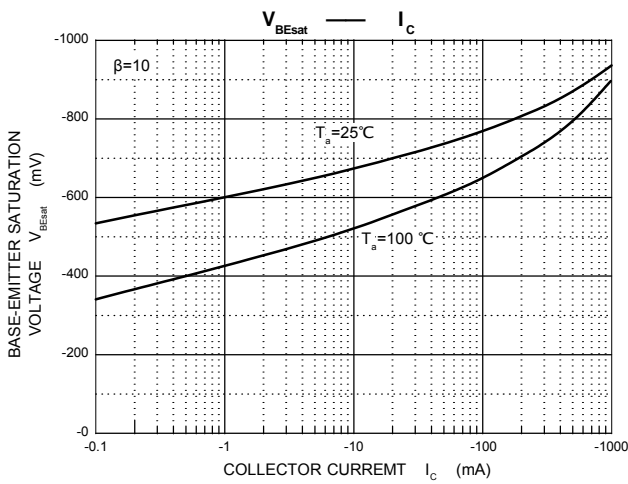
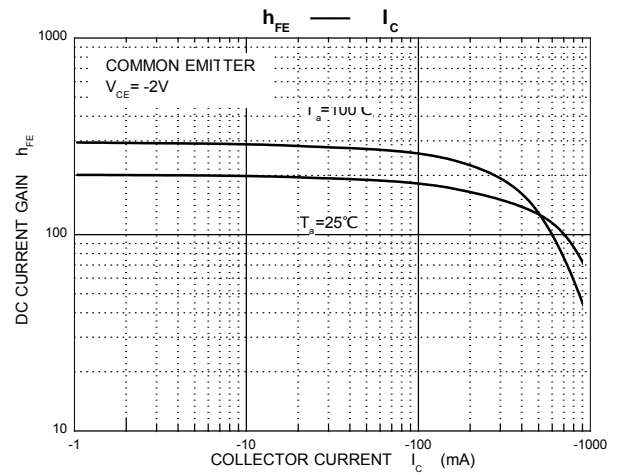
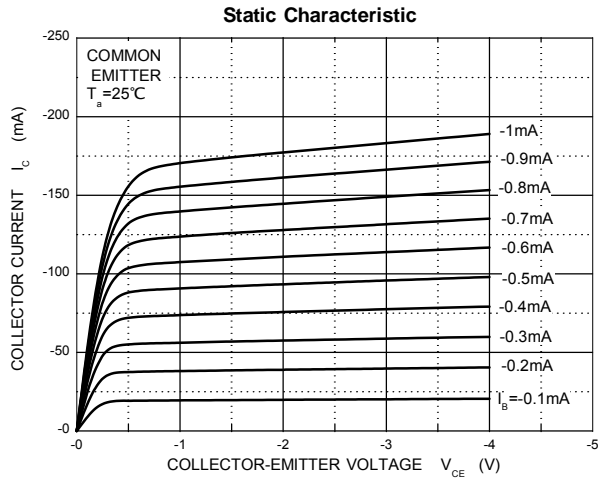
ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	BCP51-10/16 BCP52-10/16 BCP53-10/16	$V_{(BR)CBO}$	$I_C = -0.1\text{mA}, I_E = 0$	-45 -60 -100	V
Collector-emitter breakdown voltage	BCP51-10/16 BCP52-10/16 BCP53-10/16	$V_{(BR)CEO}$	$I_C = -10\text{mA}, I_B = 0$	-45 -60 -80	V
Base-emitter breakdown voltage		$V_{(BR)EBO}$	$I_C = -10\mu\text{A}, I_E = 0$	-5	V
Collector cut-off current		I_{CBO}	$V_{CB} = -30\text{V}, I_E = 0$	-100	nA
DC current gain		$h_{FE(1)}$	$V_{CE} = -2\text{V}, I_C = -5\text{mA}$	25	
		$h_{FE(2)}$	$V_{CE} = -2\text{V}, I_C = -150\text{mA}$	63	250
		$h_{FE(3)}$	$V_{CE} = -2\text{V}, I_C = -500\text{mA}$	25	
Collector-emitter saturation voltage		$V_{CE(sat)}$	$I_C = -500\text{mA}, I_B = -50\text{mA}$	-0.5	V
Base-emitter voltage		V_{BE}	$V_{CE} = -2\text{V}, I_C = -500\text{mA}$	-1	V
Transition frequency		f_T	$V_{CE} = -10\text{V}, I_C = -50\text{mA}, f = 100\text{MHz}$	100	MHz

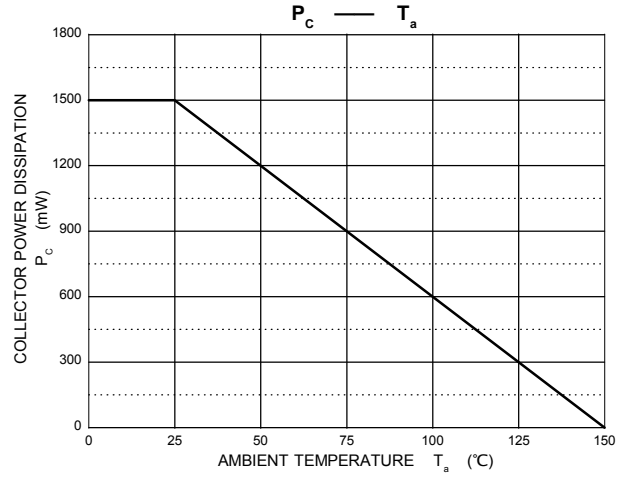
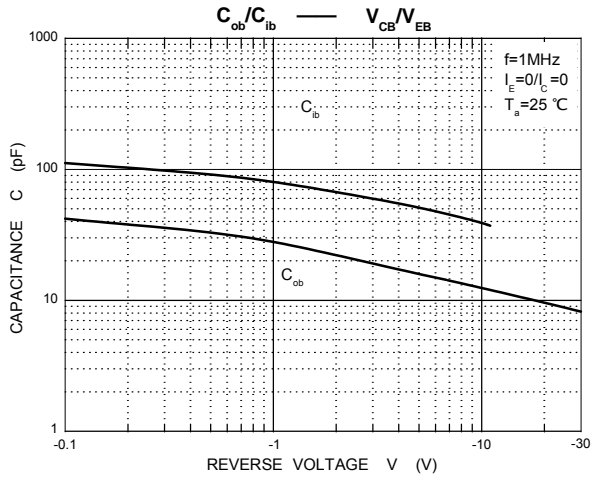
CLASSIFICATION OF $h_{FE(2)}$

Rank	BCP51-10, BCP52-10, BCP53-10	BCP51-16, BCP52-16, BCP53-16
Range	63-160	100-250

BCP51-10/16 thru BCP53-10/16



BCP51-10/16 thru BCP53-10/16





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Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel; 2.5Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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