

**FEATURES**

- For AF driver and output stages
- High collector current
- Low collector-emitter saturation voltage
- Complementary types: BCP51 ... BCP53 (PNP)


**SOT-223**

1. BASE
2. COLLECTOR
3. EMITTER

**MAXIMUM RATINGS (T<sub>a</sub>=25°C unless otherwise noted)**

Symbol	Parameter	BCP54	BCP55	BCP56	Unit
V <sub>CB0</sub>	Collector-Base Voltage	45	60	100	V
V <sub>CEO</sub>	Collector-Emitter Voltage	45	60	80	V
V <sub>EBO</sub>	Emitter-Base Voltage	5			V
I <sub>C</sub>	Collector Current -Continuous	1			A
P <sub>C</sub>	Collector Power Dissipation	1.5			W
R <sub>θJA</sub>	Thermal Resistance Junction to Ambient	83.3			°C/W
T <sub>stg</sub>	Storage Temperature Range	-65~+150			°C

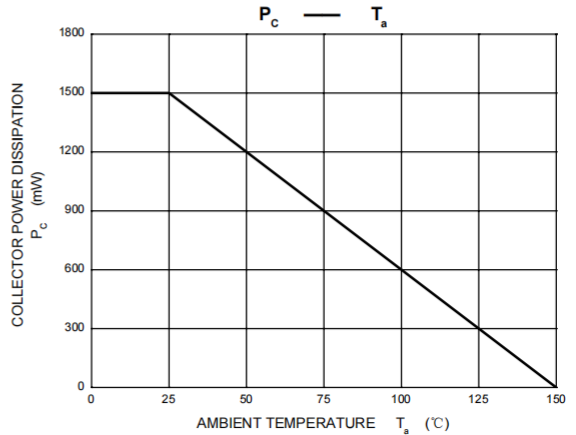
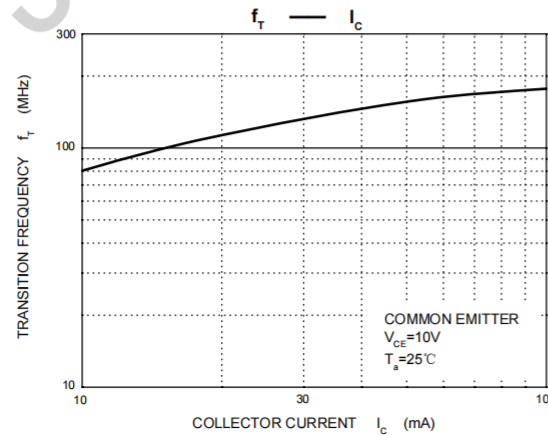
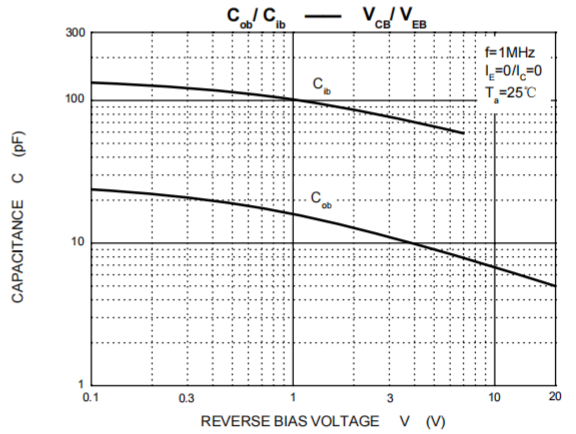
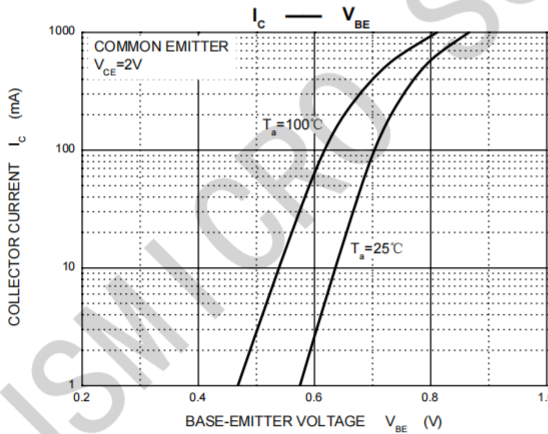
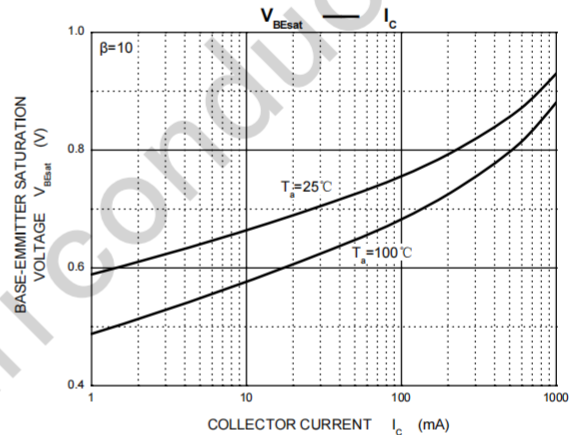
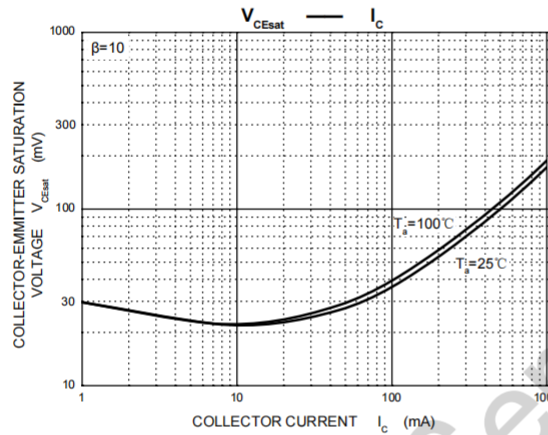
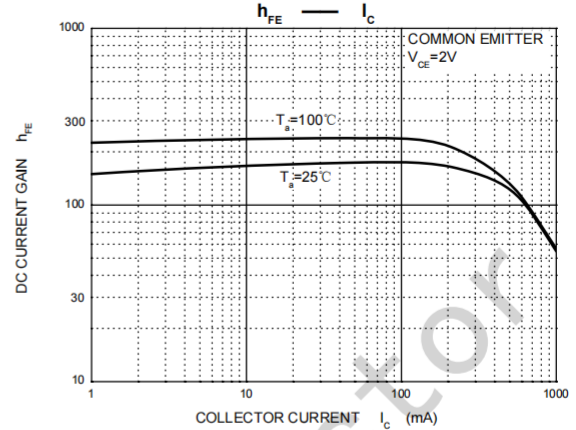
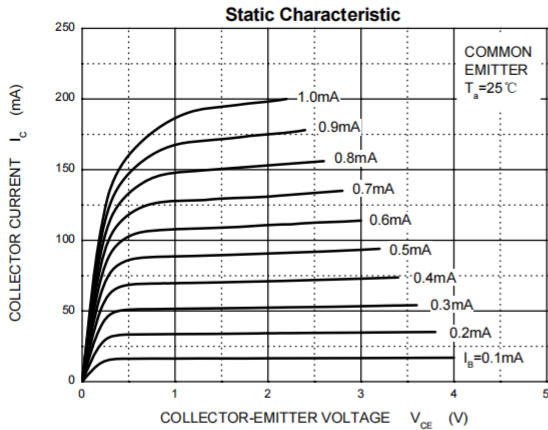
**ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless otherwise specified)**

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	BCP54	V <sub>(BR)CB0</sub> I <sub>C</sub> = 0.1mA, I <sub>E</sub> =0	45		V
	BCP55		60		
	BCP56		100		
Collector-emitter breakdown voltage	BCP54	V <sub>(BR)CEO</sub> I <sub>C</sub> = 10mA, I <sub>B</sub> =0	45		V
	BCP55		60		
	BCP56		80		
Base-emitter breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = 10μA, I <sub>C</sub> =0	5		V
Collector cut-off current	I <sub>CB0</sub>	V <sub>CB</sub> = 30 V, I <sub>E</sub> =0		100	nA
DC current gain	h <sub>FE(1)</sub>	V <sub>CE</sub> = 2V, I <sub>C</sub> =5mA	25		
	h <sub>FE(2)</sub>	V <sub>CE</sub> = 2V, I <sub>C</sub> =150m A	63	250	
	h <sub>FE(3)</sub>	V <sub>CE</sub> = 2V, I <sub>C</sub> =500m A	25		
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =500mA, I <sub>B</sub> =50mA		0.5	V
Base-emitter voltage	V <sub>BE</sub>	V <sub>CE</sub> =2V, I <sub>C</sub> =500m A		1	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =50mA, f=100MHz	100		MHz

**CLASSIFICATION OF h<sub>FE(2)</sub>**

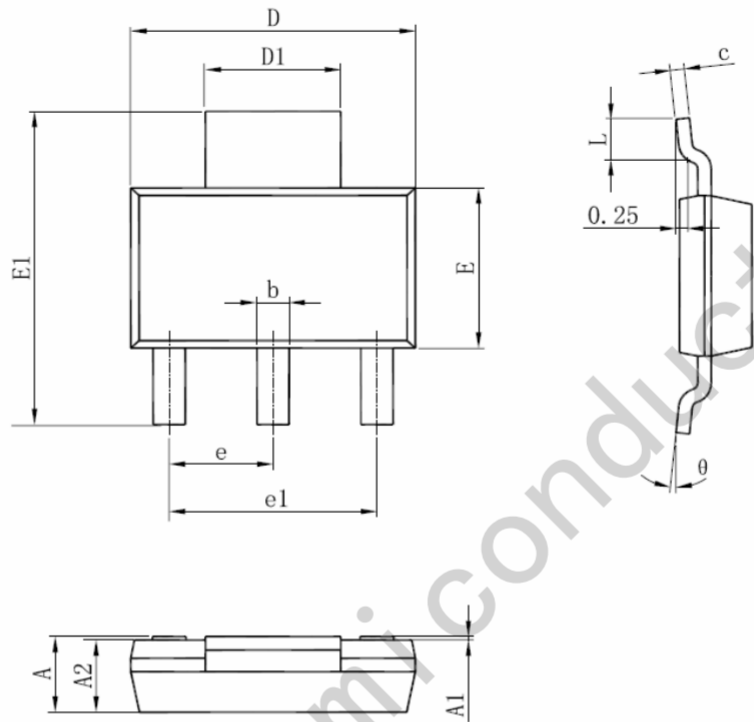
Rank	BCP54-10, BCP55-10, BCP56-10	BCP54-16, BCP55-16, BCP56-16
Range	63-160	100-250
Marking	BCP54-10, BCP55-10, BCP56-10	BCP54-16, BCP55-16, BCP56-16

Typical Characteristics



## Package Information

SOT-223



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.520	1.800	0.060	0.071
A1	0.000	0.100	0.000	0.004
A2	1.500	1.700	0.059	0.067
b	0.660	0.820	0.026	0.032
c	0.250	0.350	0.010	0.014
D	6.200	6.400	0.244	0.252
D1	2.900	3.100	0.114	0.122
E	3.300	3.700	0.130	0.146
E1	6.830	7.070	0.269	0.278
e	2.300(BSC)		0.091(BSC)	
e1	4.500	4.700	0.177	0.185
L	0.900	1.150	0.035	0.045
θ	0°	10°	0°	10°

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