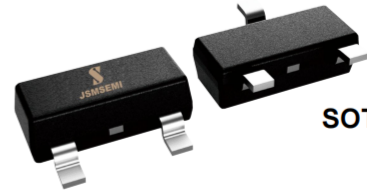


**■ Features**

- For AF driver and output stages
- High collector current
- Low collector-emitter saturation voltage
- Complementary to BCP51,BCP52,BCP53


**SOT-223**

1. BASE
2. COLLECTOR
3. EMITTER

**■ Absolute Maximum Ratings Ta = 25°C**

Parameter	Symbol	BCP51	BCP52	BCP53	Unit
Collector - Base Voltage	V <sub>CB0</sub>	45	60	100	V
Collector - Emitter Voltage	V <sub>CEO</sub>	45	60	80	
Emitter - Base Voltage	V <sub>EBO</sub>	5			A
Collector Current - Continuous	I <sub>c</sub>	1			
Collector Power Dissipation	P <sub>c</sub>	1.5			W
Thermal Resistance Junction to Ambient	R <sub>θJA</sub>	83.3			°C/W
Junction Temperature	T <sub>J</sub>	150			°C
Storage Temperature Range	T <sub>stg</sub>	-65 to 150			

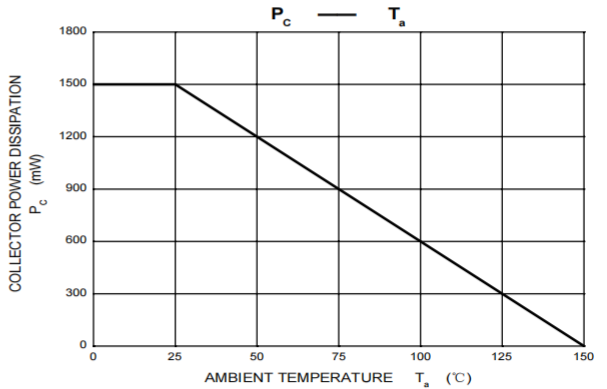
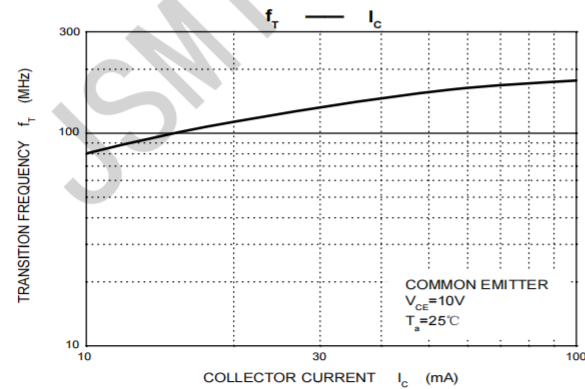
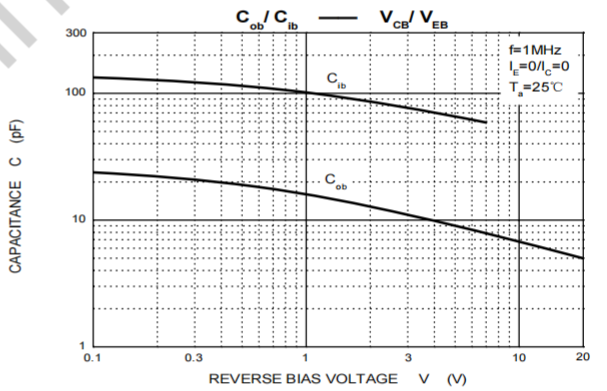
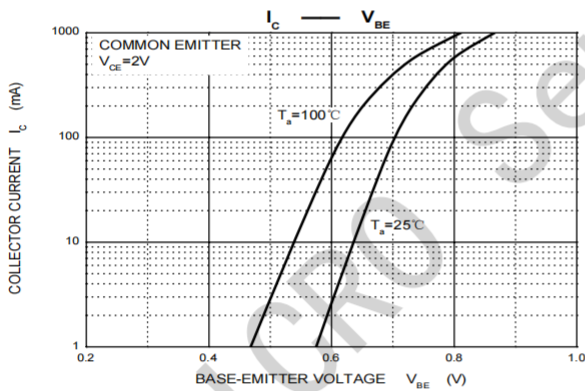
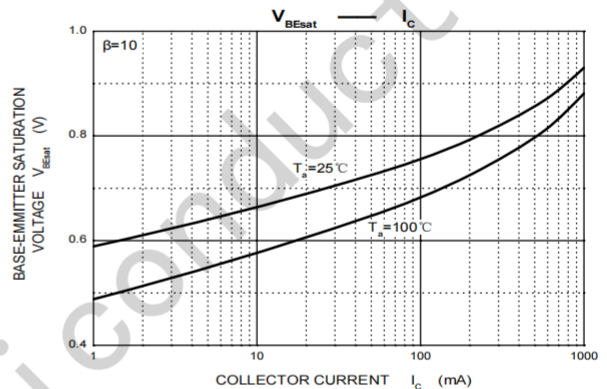
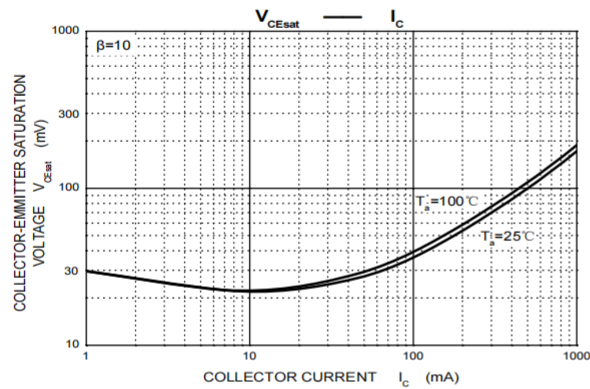
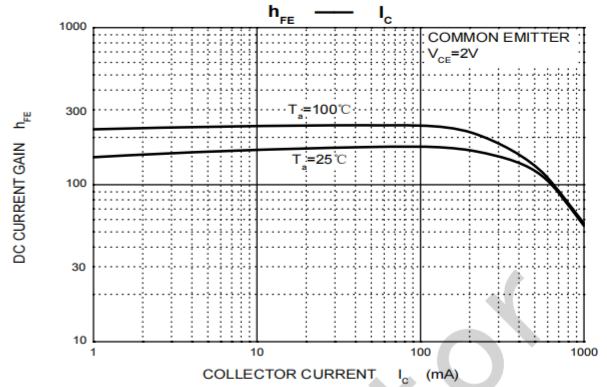
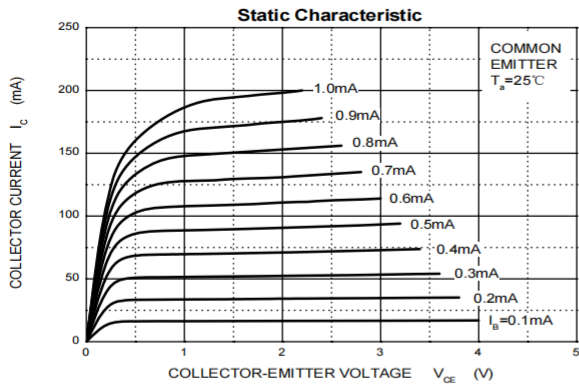
**■ Electrical Characteristics Ta = 25°C**

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	BCP54	I <sub>c</sub> = 100 μA, I <sub>E</sub> = 0	45			V
	BCP55		60			
	BCP56		100			
Collector- emitter breakdown voltage	BCP54	I <sub>c</sub> = 10 mA, I <sub>B</sub> = 0	45			V
	BCP55		60			
	BCP56		80			
Emitter - base breakdown voltage	V <sub>EBO</sub>	I <sub>E</sub> = 100 μA, I <sub>c</sub> = 0	5			
Collector-base cut-off current	BCP54	I <sub>cBO</sub>	V <sub>CB</sub> = 45 V, I <sub>E</sub> = 0			μA
	BCP55		V <sub>CB</sub> = 60 V, I <sub>E</sub> = 0		0.1	
	BCP56		V <sub>CB</sub> = 100 V, I <sub>E</sub> = 0			
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = 5V, I <sub>c</sub> =0			0.1	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>c</sub> =500 mA, I <sub>B</sub> =50mA			0.5	
Base - emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>c</sub> =500 mA, I <sub>B</sub> =50mA			1.2	V
Base-emitter voltage	V <sub>BE</sub>	V <sub>CE</sub> = 2V, I <sub>c</sub> = 500mA			1	
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> = 150mA	63		250	
	h <sub>FE(3)</sub>	V <sub>CE</sub> = 2V, I <sub>c</sub> = 500mA	25			
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>**

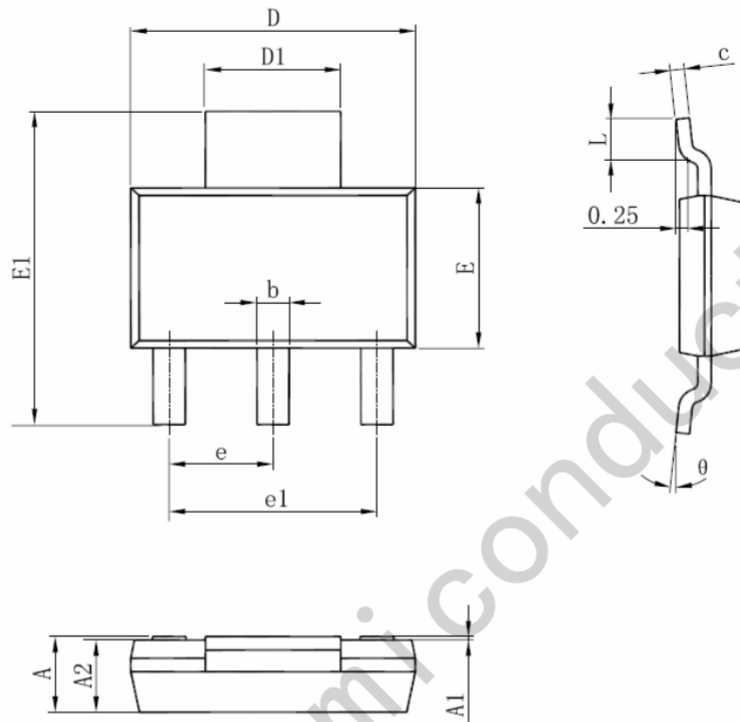
TypE	BCP54-10,BCP55-10,BCP56-10	BCP54-16,BCP55-16,BCP56-16
Range	63-160	100-250

■ 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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