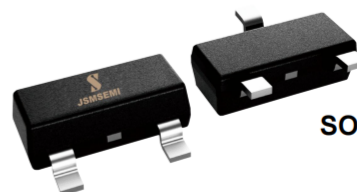


■ Features

- 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 $T_a = 25^\circ\text{C}$

Parameter	Symbol	BCP51	BCP52	BCP53	Unit
Collector - Base Voltage	V _{CB0}	45	60	100	V
Collector - Emitter Voltage	V _{CEO}	45	60	80	
Emitter - Base Voltage	V _{EB0}	5			
Collector Current - Continuous	I _C	1			A
Collector Power Dissipation	P _C	1.5			W
Thermal Resistance Junction to Ambient	R _{θJA}	83.3			°C/W
Junction Temperature	T _J	150			°C
Storage Temperature Range	T _{stg}	-65 to 150			

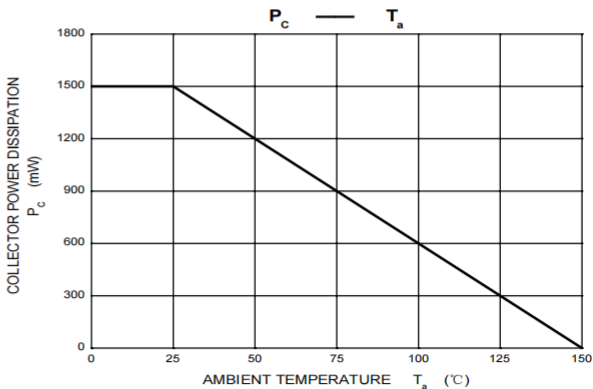
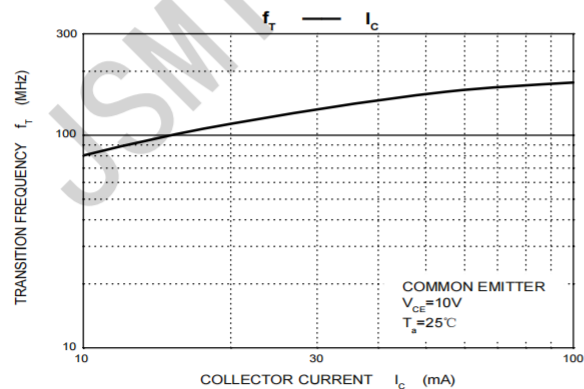
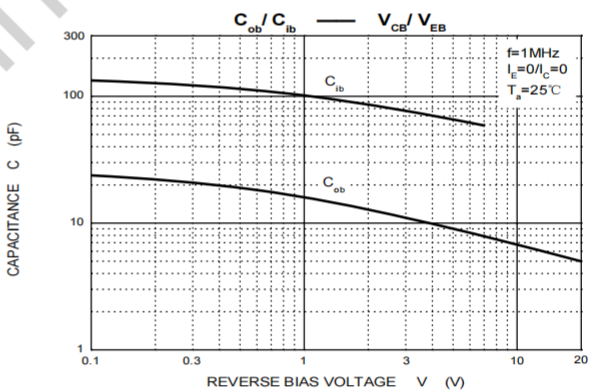
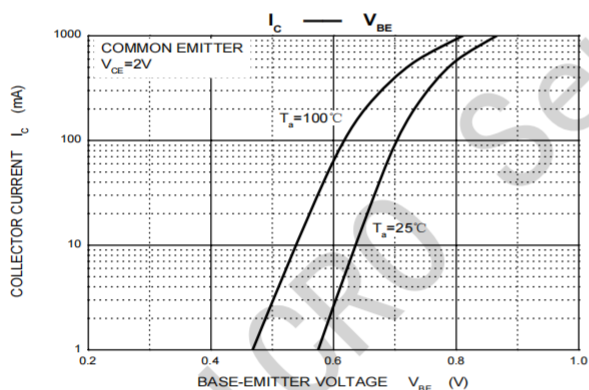
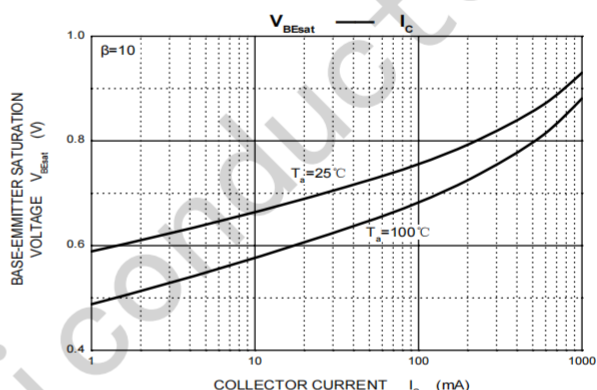
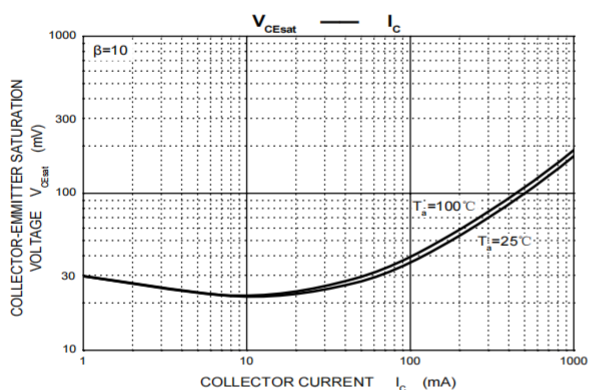
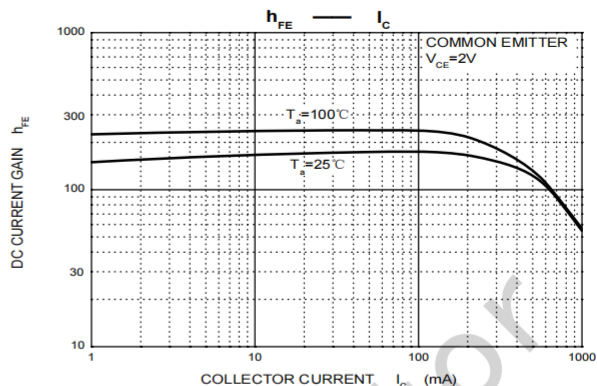
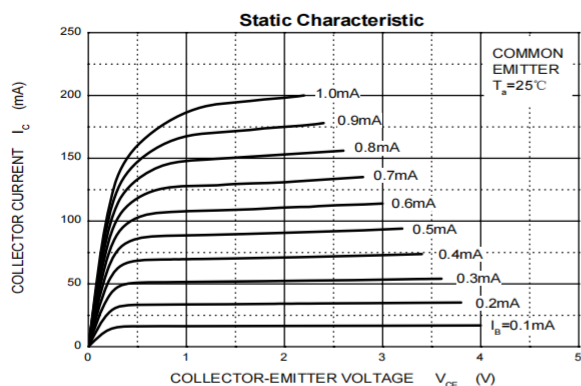
■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter		Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	BCP54	V_{CB0}	$I_c = 100\ \mu\text{A}, I_E = 0$	45			V
	BCP55			60			
	BCP56			100			
Collector- emitter breakdown voltage	BCP54	V_{CE0}	$I_c = 10\ \text{mA}, I_B = 0$	45			
	BCP55			60			
	BCP56			80			
Emitter - base breakdown voltage		V_{EB0}	$I_E = 100\ \mu\text{A}, I_c = 0$	5			
Collector-base cut-off current	BCP54	I_{CBO}	$V_{CB} = 45\ \text{V}, I_E = 0$			0.1	μA
	BCP55		$V_{CB} = 60\ \text{V}, I_E = 0$				
	BCP56		$V_{CB} = 100\ \text{V}, I_E = 0$				
Emitter cut-off current		I_{EBO}	$V_{EB} = 5\ \text{V}, I_c = 0$			0.1	
Collector-emitter saturation voltage		$V_{CE(sat)}$	$I_c = 500\ \text{mA}, I_B = 50\ \text{mA}$			0.5	V
Base - emitter saturation voltage		$V_{BE(sat)}$	$I_c = 500\ \text{mA}, I_B = 50\ \text{mA}$			1.2	
Base-emitter voltage		V_{BE}	$V_{CE} = 2\ \text{V}, I_c = 500\ \text{mA}$			1	
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			
Transition frequency		f_T	$V_{CE} = 10\ \text{V}, I_c = 50\ \text{mA}, f = 100\ \text{MHz}$	100			MHz

■ Classification of $h_{FE(2)}$

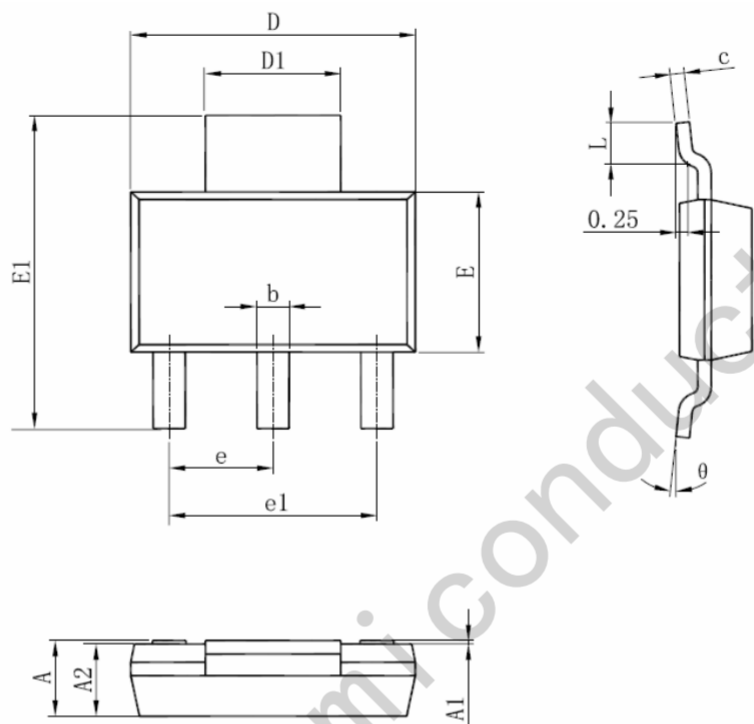
Type	BCP54-10, BCP55-10, BCP56-10	BCP54-16, BCP55-16, BCP56-16
Range	63-160	100-250

■ 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°