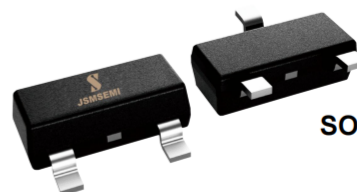


FEATURES

- For AF driver and output stages
- High collector current
- Low collector-emitter saturation voltage
- Complementary types: BCP54...BCP56 (NPN)


SOT-223

1. BASE
2. COLLECTOR
3. EMITTER

MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	BCP51	BCP52	BCP53	Unit
V_{CBO}	Collector-Base Voltage	-45	-60	-100	V
V_{CEO}	Collector-Emitter Voltage	-45	-60	-80	V
V_{EBO}	Emitter-Base Voltage	-5			V
I_{C}	Collector Current -Continuous	-1			A
P_{C}	Collector Power Dissipation	1.5			W
$R_{\theta\text{JA}}$	Thermal Resistance Junction to Ambient	94			$^{\circ}\text{C}/\text{W}$
T_{stg}	Storage Temperature Range	-65~+150			$^{\circ}\text{C}$

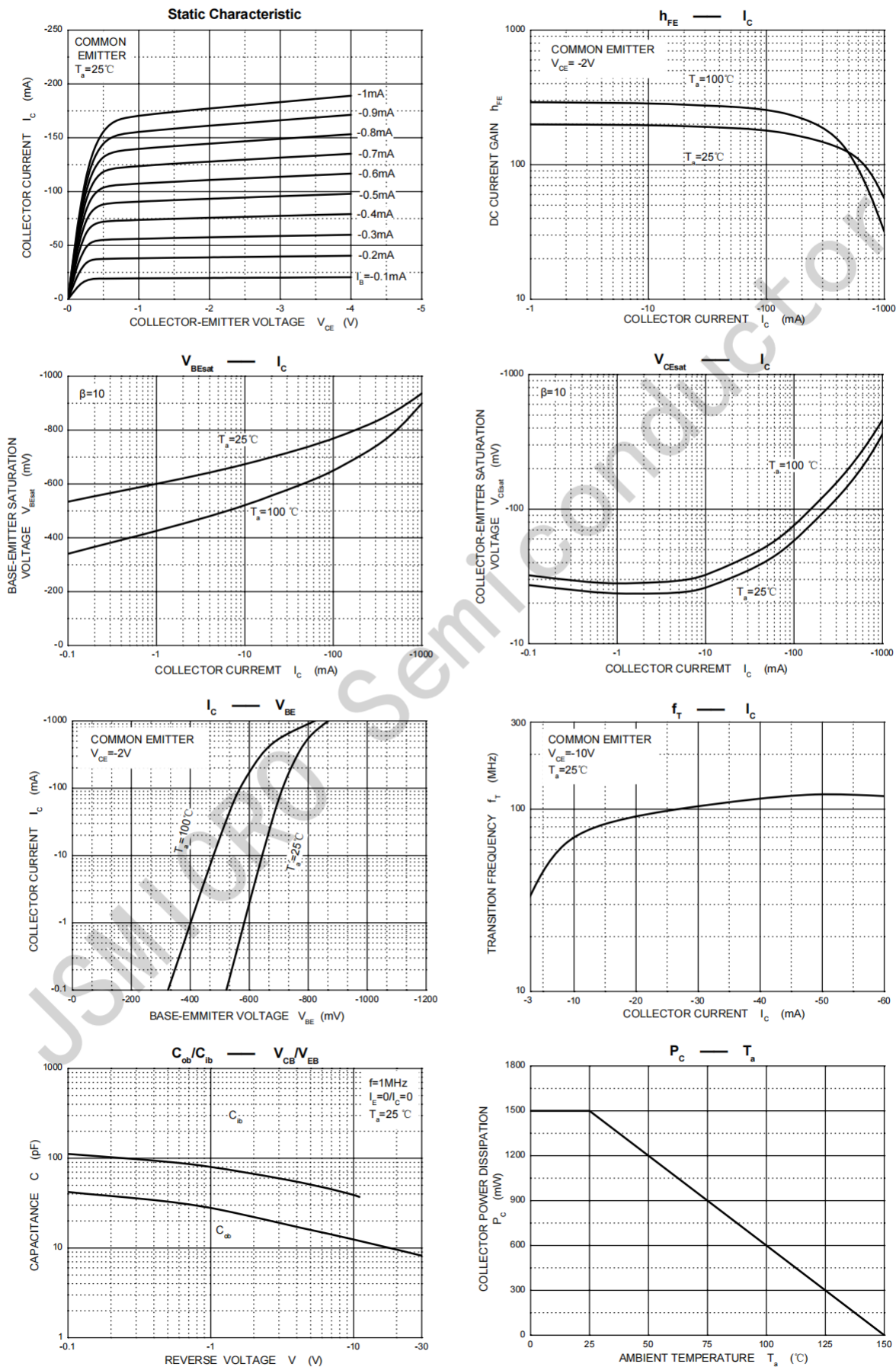
ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

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

CLASSIFICATION OF $h_{\text{FE}(2)}$

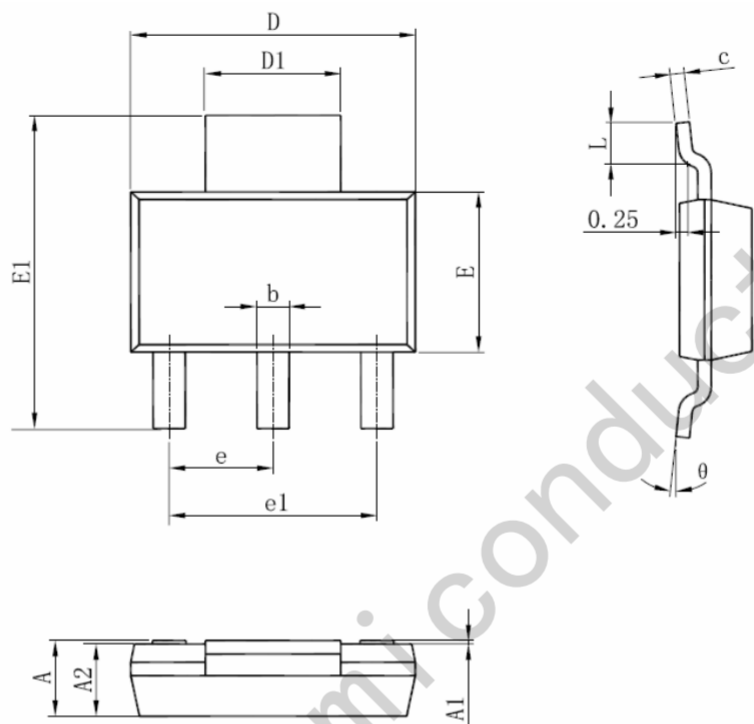
Rank	BCP51-10, BCP52-10, BCP53-10	BCP51-16, BCP52-16, BCP53-16
Range	63-160	100-250

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°