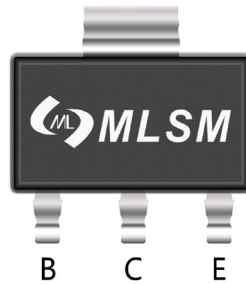
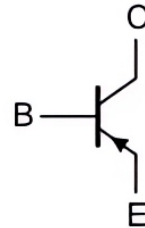


Features

- For AF driver and output stages
- High collector current
- Low collector-emitter saturation voltage
- Complementary types:
BCP54/BCP55/BCP56 (NPN)



SOT-223 top view



Schematic diagram



Halogen-Free

Maximum Ratings(Ta=25°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
I_{CM}	Peak Pulse Collector Current	-2			A
I_B	Base Current-Continuous	-100			mA
I_{BM}	Peak Pulse Base Current	-200			mA
P_C	Collector Power Dissipation	1.5			W
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	94			°C/W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150			°C

Electrical Characteristics (T_J=25°C unless otherwise noted)

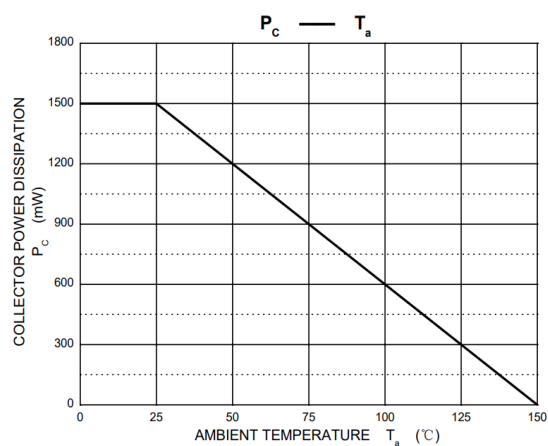
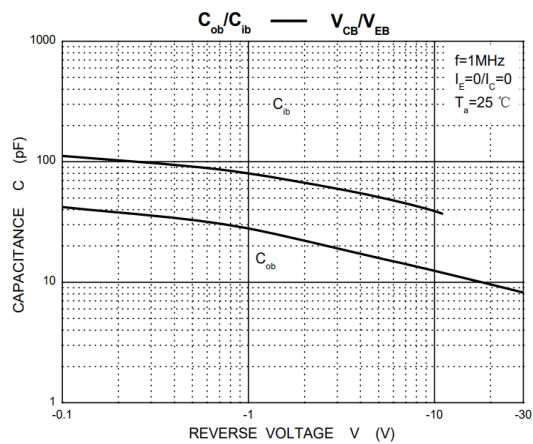
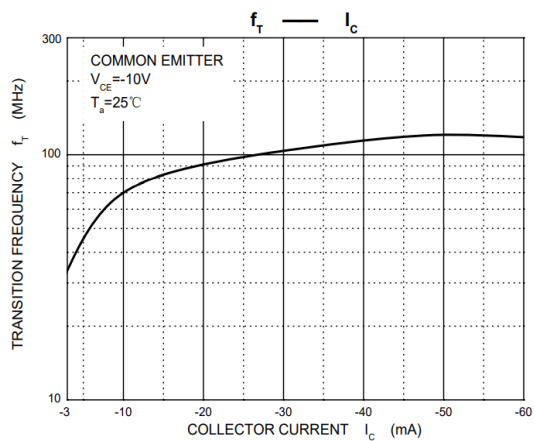
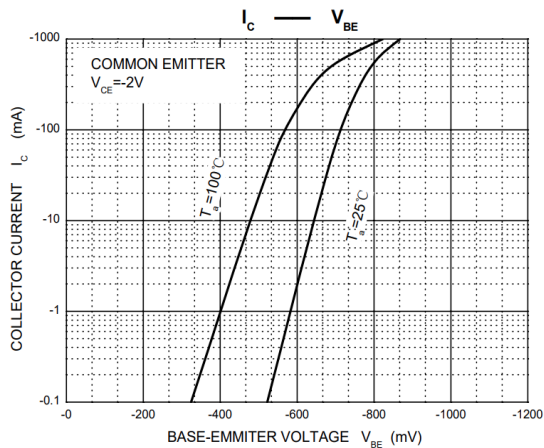
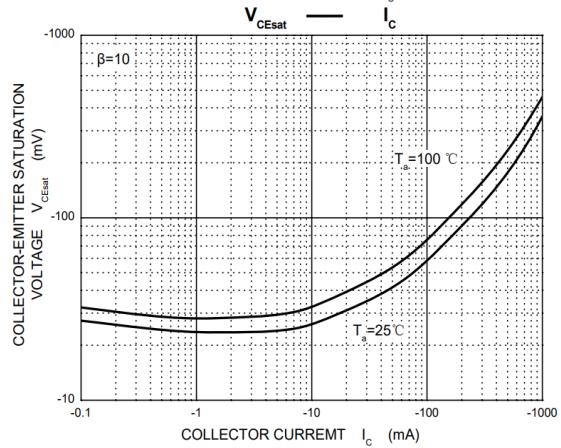
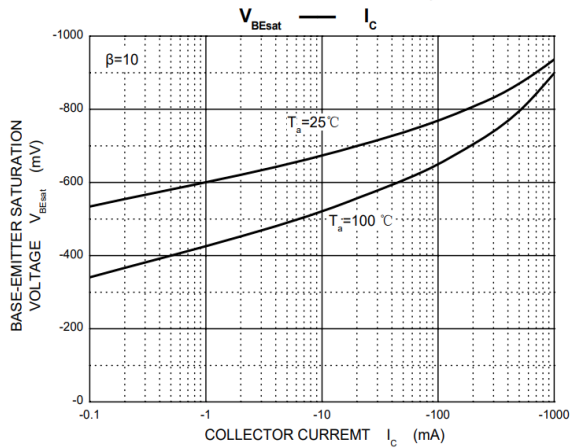
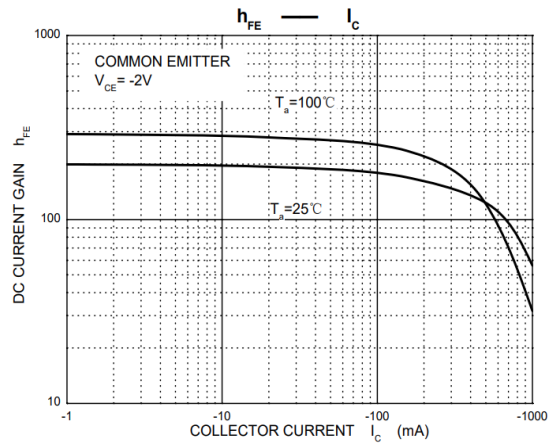
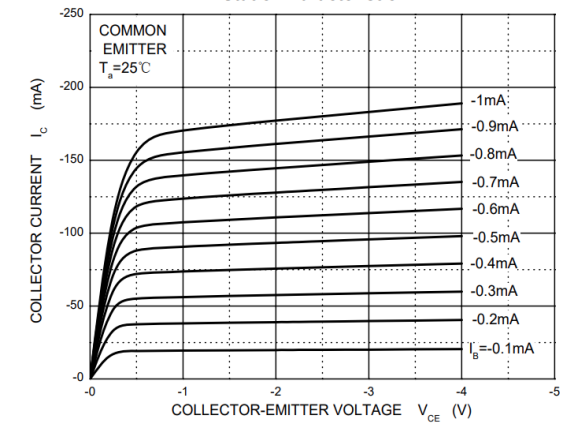
Symbol	Parameter	Condition	Min	Typ	Max	Unit
V _{(BR)CBO}	Collector-base breakdown voltage	BCP51	-45	--	--	V
		BCP52	-60	--	--	
		BCP53	-100	--	--	
V _{(BR)CEO}	Collector-emitter breakdown voltage	BCP51	-45	--	--	V
		BCP52	-60	--	--	
		BCP53	-80	--	--	
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =-10μA, I _C =0	-5	--	--	V
I _{CBO}	Collector cut-off current	V _{CB} =-30V, I _E =0	--	--	-100	nA
h _{FE1}	DC current gain	V _{CE} =-2V, I _C = -5mA	25	--	--	--
h _{FE2}		V _{CE} =-2V, I _C = -150mA	63	--	250	
h _{FE3}		V _{CE} =-2V, I _C = -500mA	25	--	--	
V _{CE(sat)}	Collector-emitter saturation voltage	I _C =-500 mA, I _B = -50mA	--	--	-0.5	V
f _T	Transition frequency	V _{CE} =-10V, I _C = -50mA, f=100MHz	100	--	--	MHz
V _{BE}	Base-emitter voltage	V _{CE} =-2V, I _C = -500mA	--	--	-1	V

Ordering Information (Example)

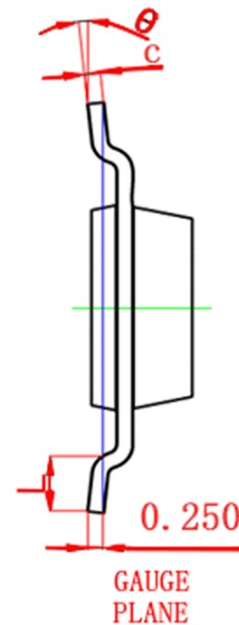
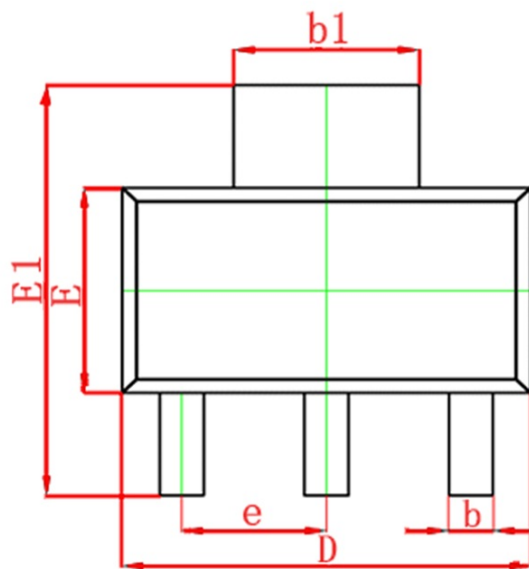
Type	Hfe	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
BCP51	63-160	BCP51-10	2,500	5,000	35,000	13"reel
	100-250	BCP51-16				
BCP52	63-160	BCP52-10	2,500	5,000	35,000	13"reel
	100-250	BCP52-16				
BCP53	63-160	BCP53-10	2,500	5,000	35,000	13"reel
	100-250	BCP53-16				

Typical Operating Characteristics

Static Characteristic



SOT-223 Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	--	1.800	--	0.071
A1	0.020	0.100	0.001	0.004
A2	1.500	1.700	0.059	0.067
b	0.660	0.840	0.026	0.033
b1	2.900	3.100	0.114	0.122
c	0.230	0.350	0.009	0.014
D	6.300	6.700	0.248	0.264
E	3.300	3.700	0.130	0.146
E1	6.700	7.300	0.264	0.287
e	2.300(BSC)		0.091(BSC)	
L	0.750	--	0.030	--
θ	0°	10°	0°	10°