

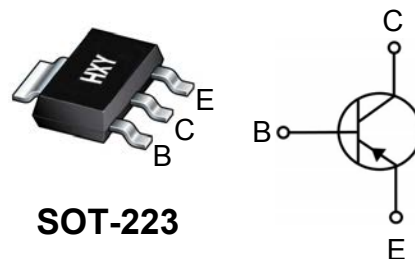


Features

- Collector Current: $I_C = -1A$
- Power Dissipation of 1.5w

Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
BSP31	SOT-223	BCP53	1000



Maximum Ratings (Ta=255°C unless otherwise noted)

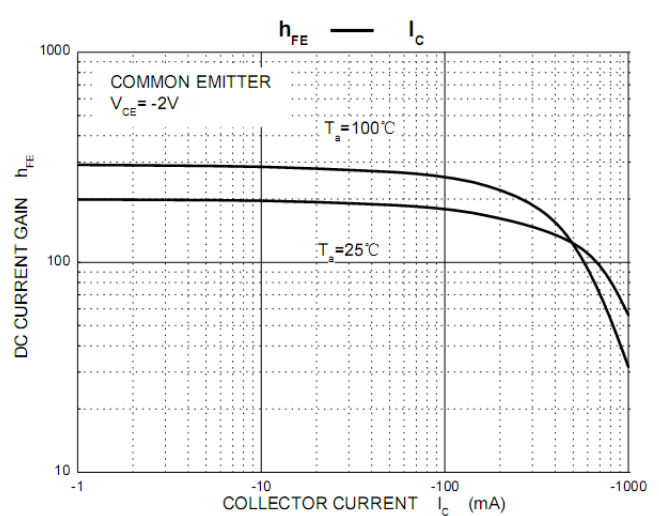
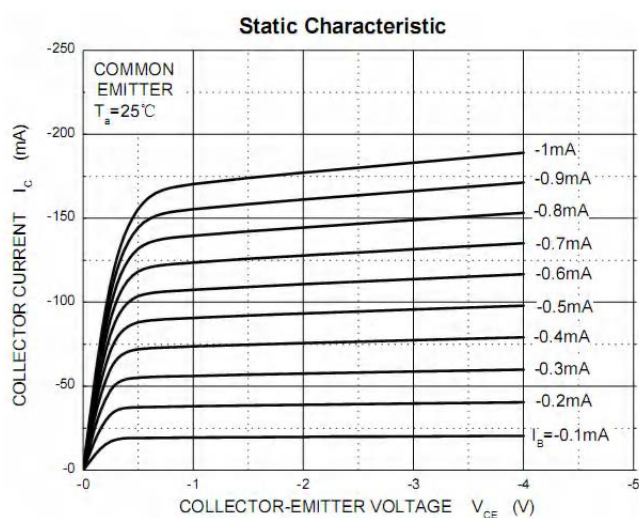
Parameter	Symbol	Limit	Unit
Collector-Base Voltage	V_{CBO}	-100	V
Collector-Emitter Voltage	V_{CEO}	-80	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-1	A
Collector Power Dissipation	P_C	1.5	W
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	94	°C/W
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55~+150	°C

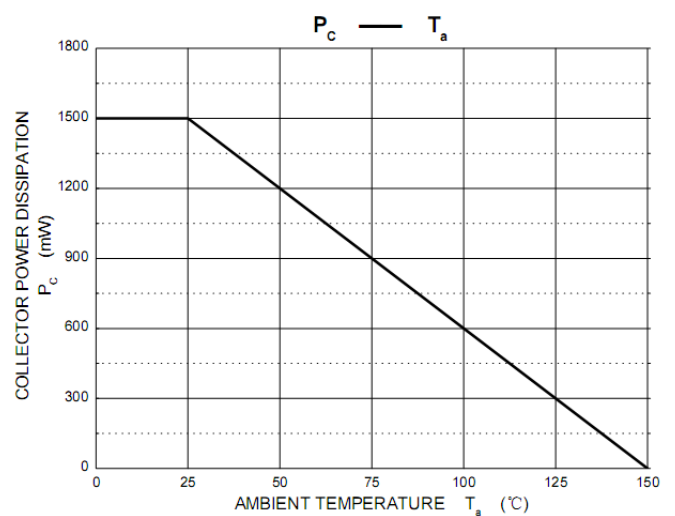
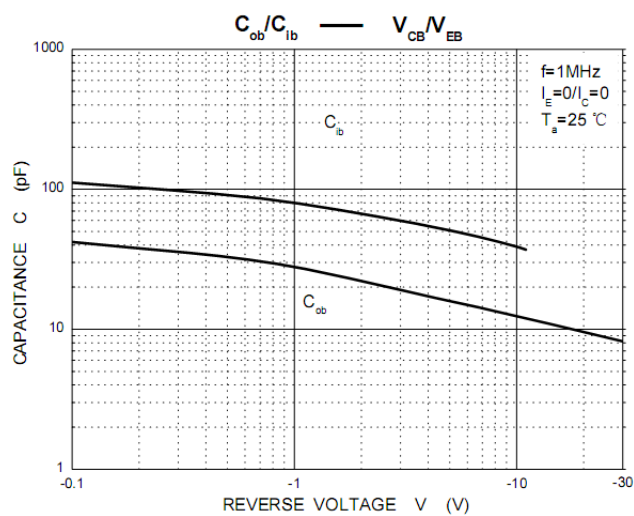
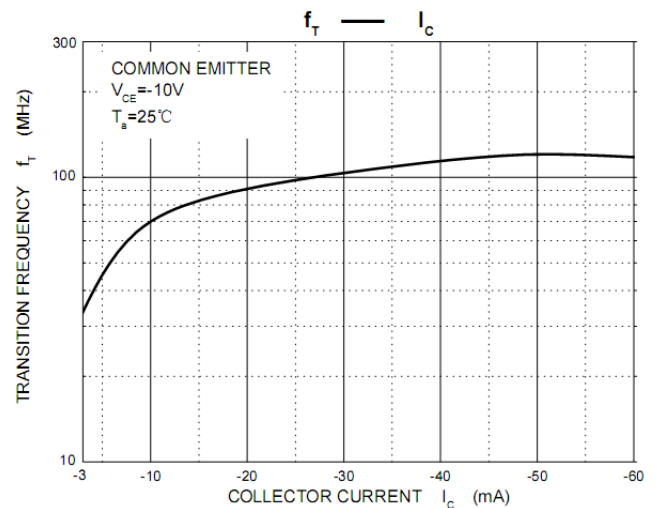
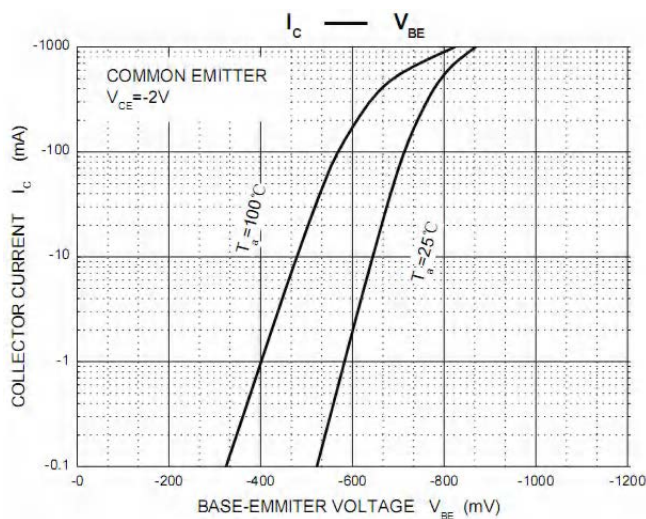
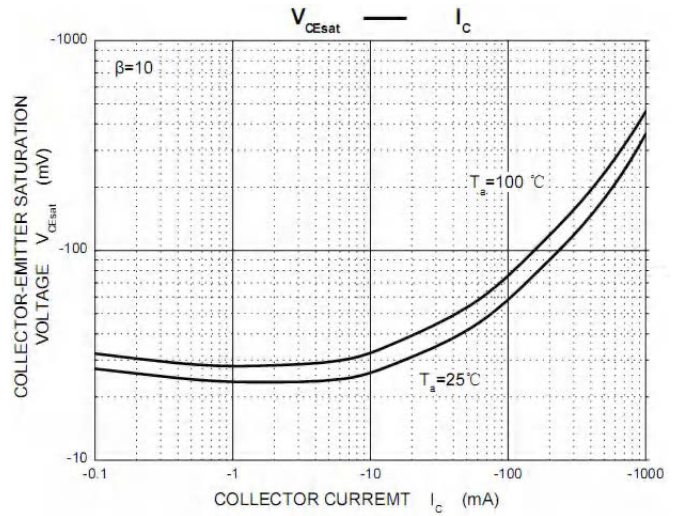
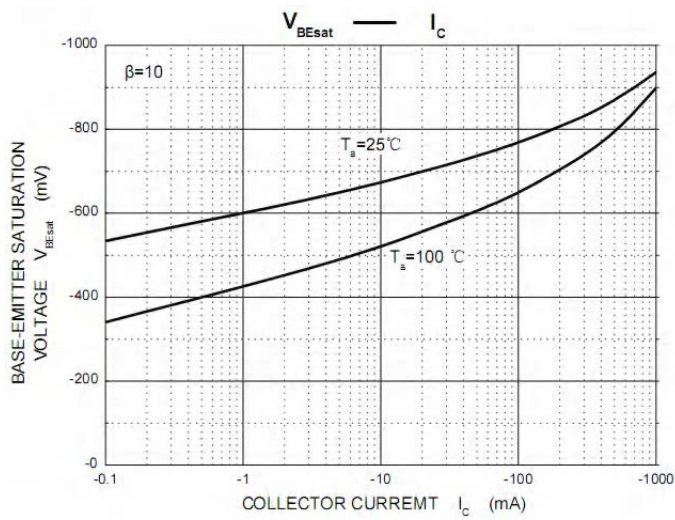


Electrical Characteristics(Ta=25°C unless otherwise specified)

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

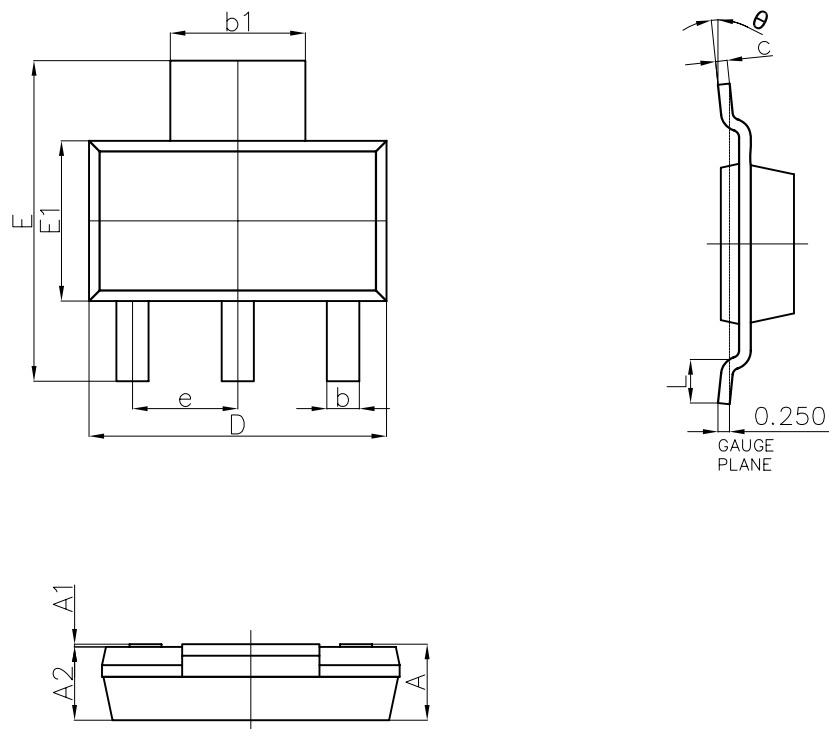
Typical Characteristics







SOT-223 Package Outline Dimensions



Symbol	Dimensions In Millimeters		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	6.700	7.300	0.264	0.287
E1	3.300	3.700	0.130	0.146
e	2.300(BSC)		0.091(BSC)	
L	0.750	—	0.030	—
θ	0°	10°	0°	10°



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