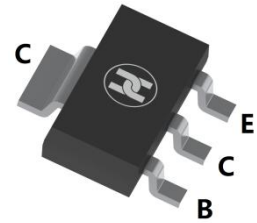
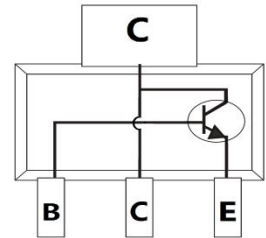


**BIPOLAR TRANSISTOR (NPN)**
**FEATURES**

- Complementary to BCP52
- High collector current
- Low collector-emitter saturation voltage
- For AF driver and output stages
- Surface Mount device


**SOT-223**

**MECHANICAL DATA**

- Case: SOT-223
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Weight: 0.04 grams (approximate)

**MAXIMUM RATINGS (T<sub>A</sub> = 25°C unless otherwise noted)**

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V <sub>CB0</sub>	60	V
Collector-Emitter Voltage	V <sub>CEO</sub>	60	V
Emitter-Base Voltage	V <sub>EBO</sub>	5	V
Collector Current	I <sub>C</sub>	1	A
Collector Power Dissipation	P <sub>C</sub>	1.5	W
Thermal Resistance From Junction To Ambient	R <sub>θJA</sub>	83.3	°C/W
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature	T <sub>STG</sub>	-55 ~+150	°C

**ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C unless otherwise specified)**

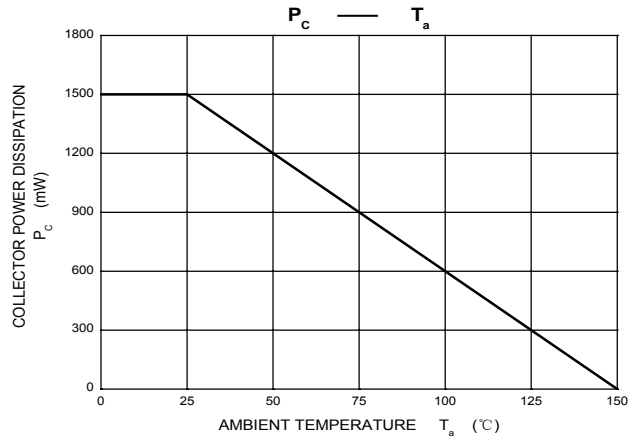
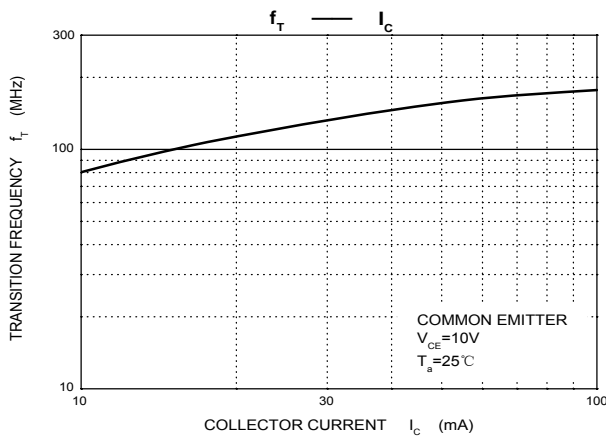
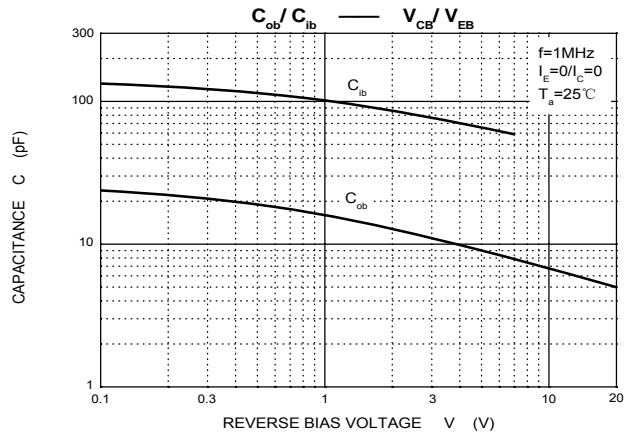
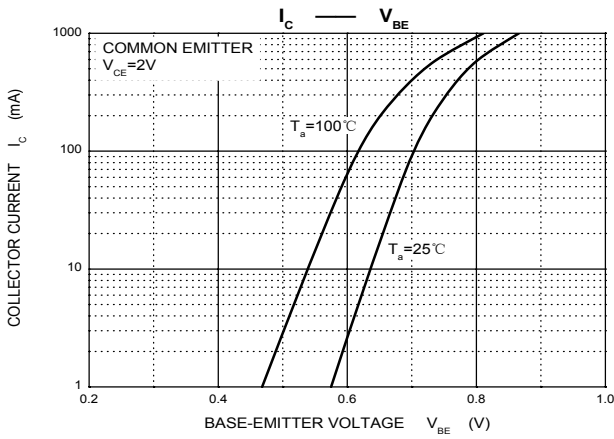
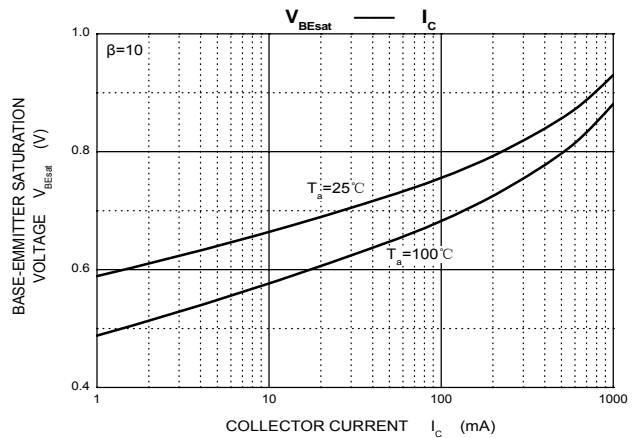
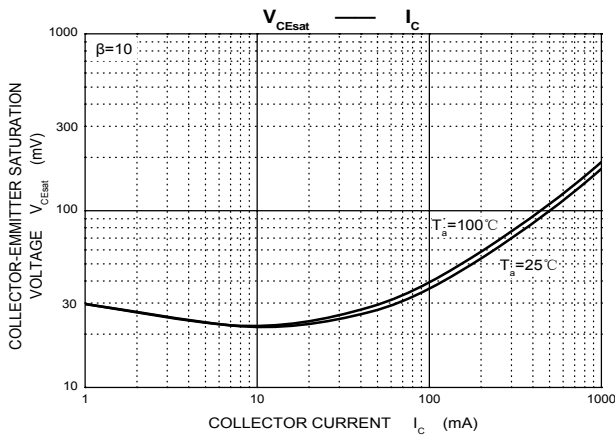
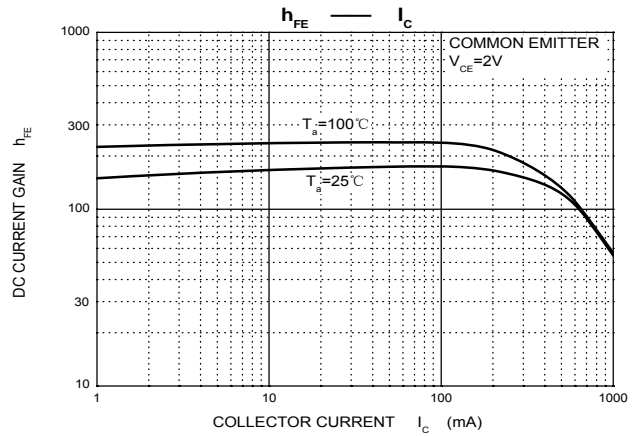
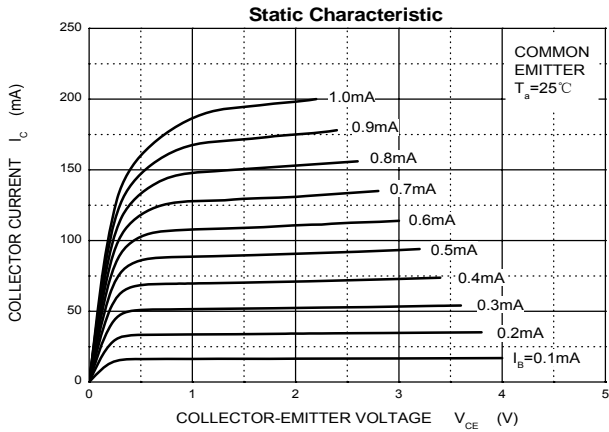
Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	60			V	I <sub>C</sub> =100uA, I <sub>E</sub> =0
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	60			V	I <sub>C</sub> =10mA, I <sub>B</sub> =0
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	5			V	I <sub>E</sub> =10uA, I <sub>C</sub> =0
Collector cut-off current	I <sub>CBO</sub>			0.1	uA	V <sub>CB</sub> =30V, I <sub>E</sub> =0
Emitter cut-off current	I <sub>EBO</sub>			0.1	uA	V <sub>EB</sub> =5V, I <sub>C</sub> =0
DC current gain	h <sub>FE</sub>	25				V <sub>CE</sub> =2V, I <sub>C</sub> =5mA
		63		250		V <sub>CE</sub> =2V, I <sub>C</sub> =150mA
		25				V <sub>CE</sub> =2V, I <sub>C</sub> =500mA
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>			0.5	V	I <sub>C</sub> =500mA, I <sub>B</sub> =50mA
Base-emitter voltage	V <sub>BE</sub>			1	V	V <sub>CE</sub> =2V, I <sub>C</sub> =500mA
Transition frequency	f <sub>T</sub>	100			MHz	V <sub>CE</sub> =10V, I <sub>C</sub> =50mA, f=100MHz

**CLASSIFICATION OF h<sub>FE</sub>**

Rank	BCP55-10	BCP55-16
Range	63-160	100-250
Marking	BCP55-10	BCP55-16

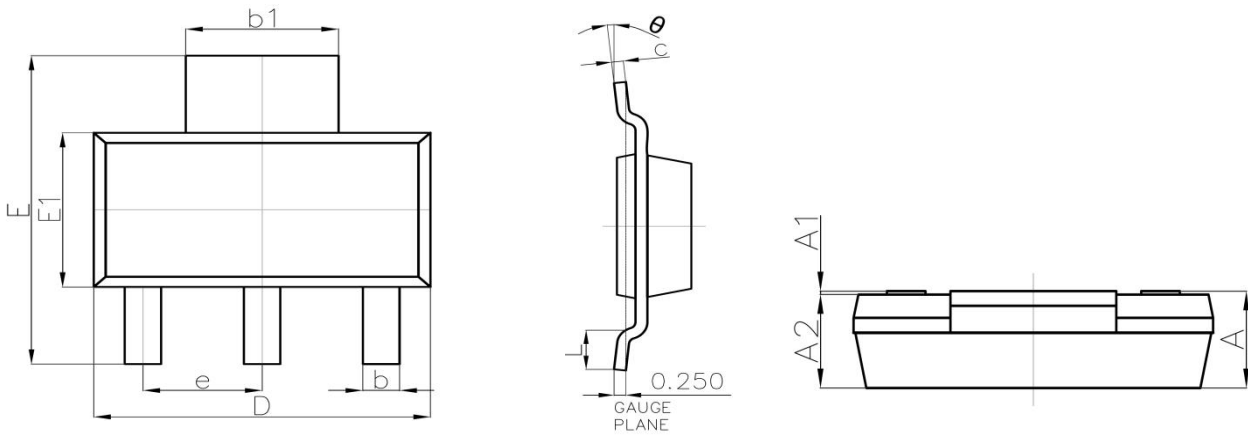
**BIPOLAR TRANSISTOR (NPN)**

**Typical Characteristics**



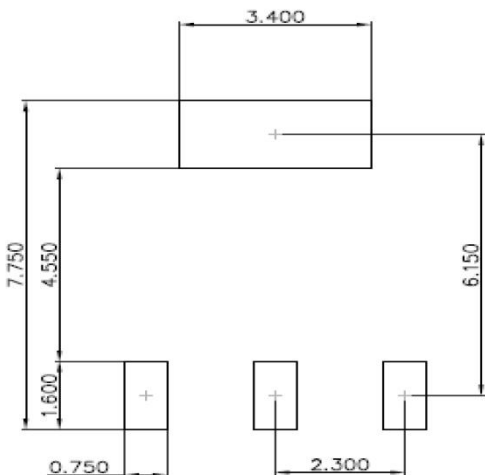
**BIPOLAR TRANSISTOR (NPN)**

**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°

**SOT-223 Suggested Pad Layout**



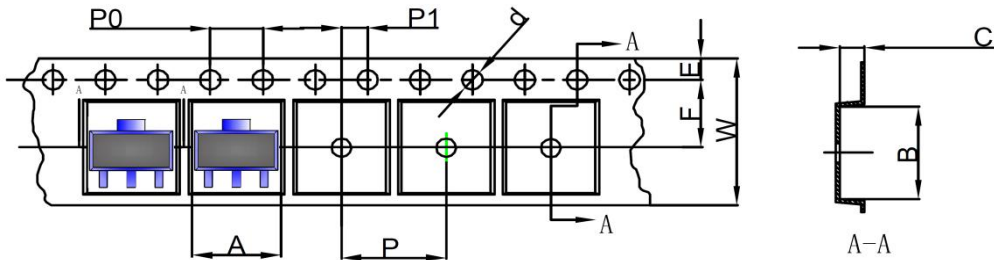
**Note:**

1. Controlling dimension: in millimeters
2. General tolerance: ±0.05mm
3. The pad layout is for reference purposes only

**BIPOLAR TRANSISTOR (NPN)**

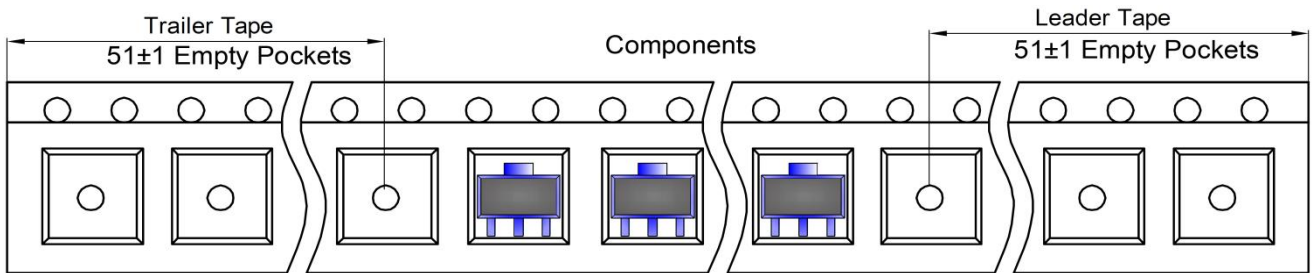
**SOT-223 Tape and Reel**

**SOT-223 Embossed Carrier Tape**

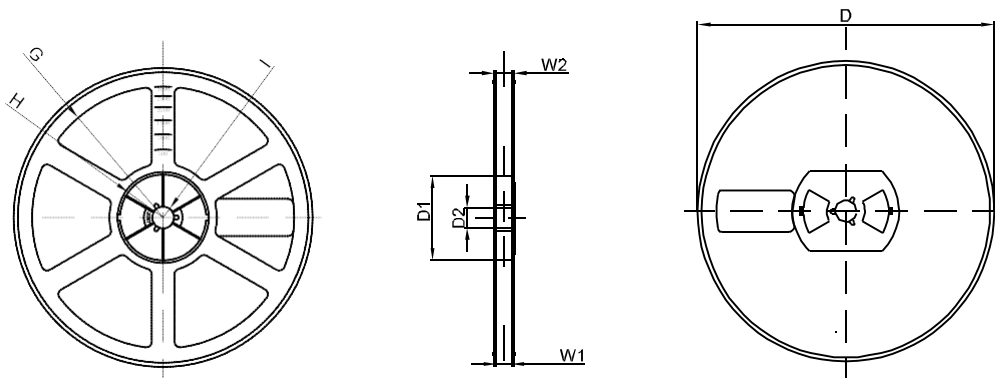


DIMENSIONS ARE IN MILLIMETER										
TYPE	A	B	C	d	E	F	P0	P	P1	W
SOT-223	6.765	7.335	1.88	Ø1.50	1.75	5.50	4.00	4.00	2.00	12.00
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

**SOT-223 Tape Leader and Trailer**



**SOT-223 Reel**



DIMENSIONS ARE IN MILLIMETER								
REEL OPTION	D	D1	D2	G	H	I	W1	W2
13" DIA	Ø330.00	100.00	13.00	R151.00	R56.00	R6.50	12.40	17.60
TOLERANCE	±2	±1	±1	±1	±1	±1	±1	±1