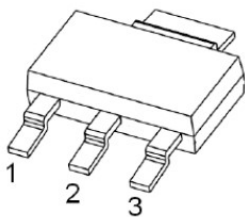


SOT-223


1. BASE
2. COLLECTOR
3. EMITTER

Features

- For AF driver and output stages
- High collector current
- Low collector-emitter saturation voltage

Mechanical Data

- SOT-223 Small Outline Plastic Package
- Polarity: Color band denotes cathode end
- Epoxy UL: 94V-0
- Mounting Position: Any

Maximum Ratings & Thermal Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

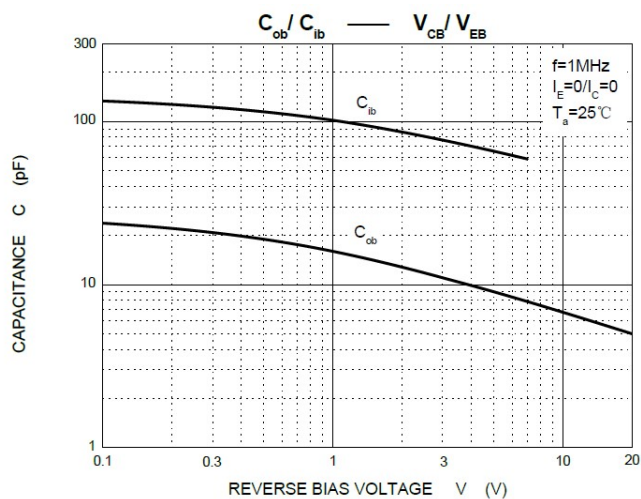
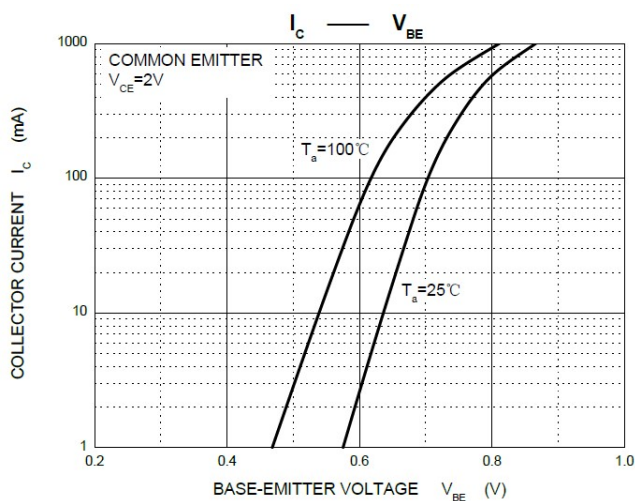
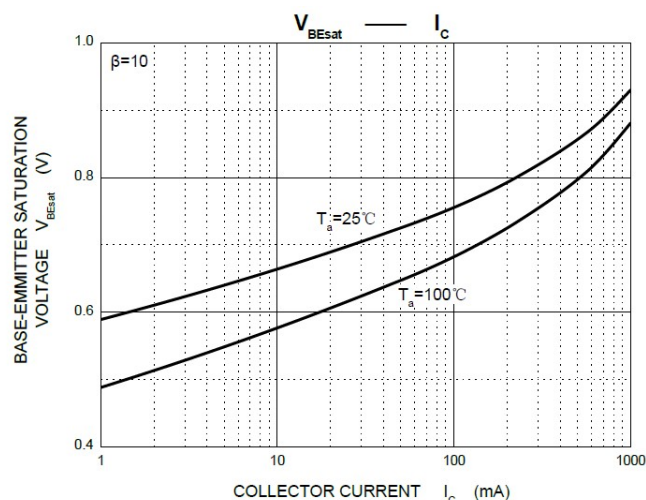
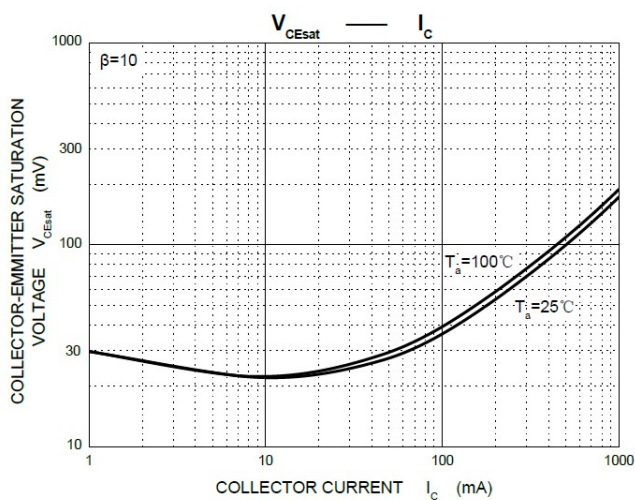
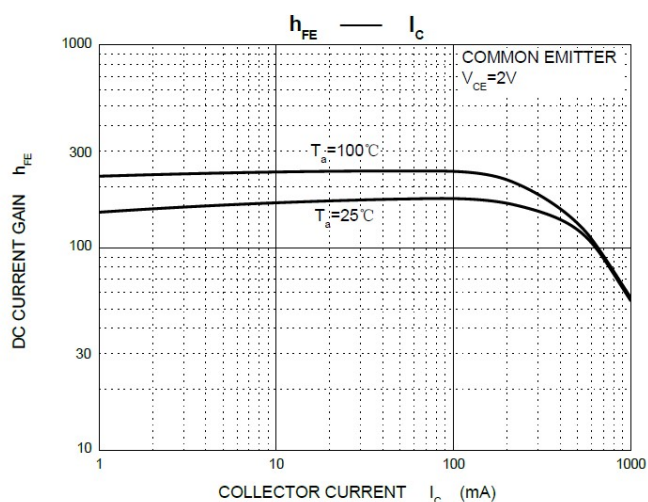
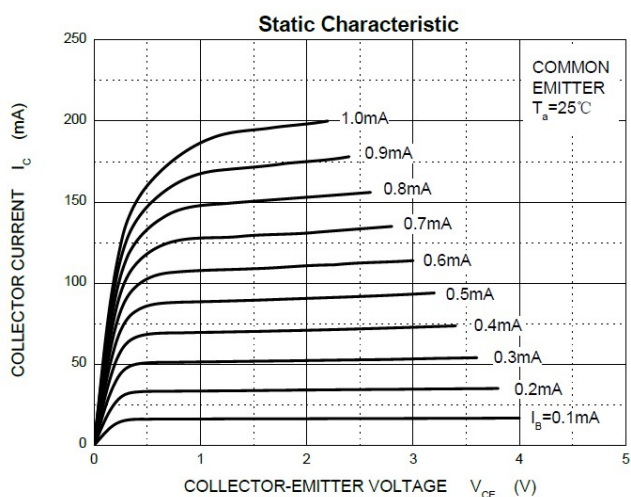
Parameters	Symbol	BCP55-16,115-CN	Unit
Collector-Base Voltage	VCBO	60	V
Collector-Emitter Voltage	VCEO	60	V
Emitter-Base Voltage	VEBO	5	V
Collector Current -Continuous	IC	1	A
Collector Power Dissipation	PC	1.5	W
Thermal Resistance Junction to Ambient	RθJA	83.3	°C/W
Storage Temperature Range	Tstg	-65~+150	°C

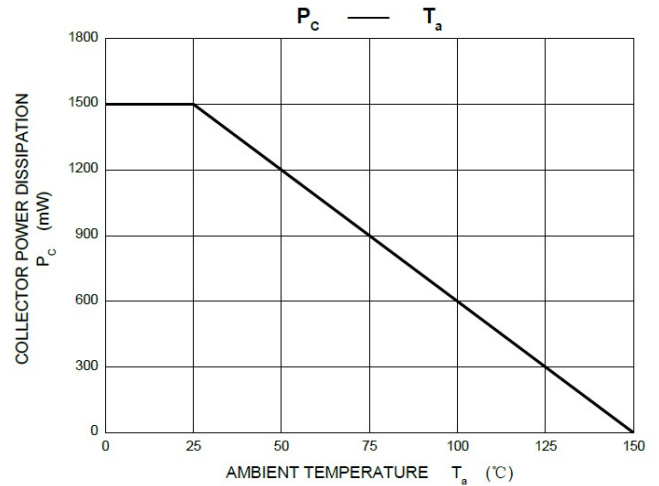
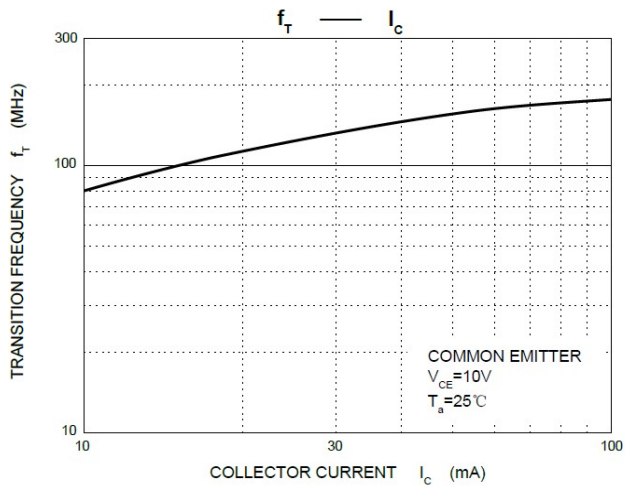
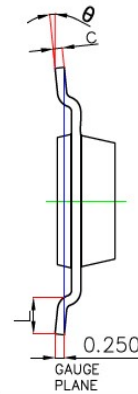
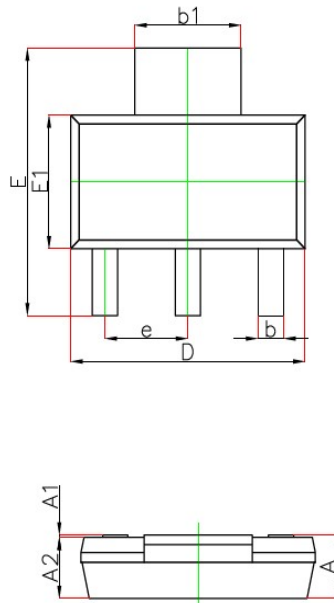
RECOMMENDED OPERATING CONDITIONS

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 0.1mA, I_E = 0$	60		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 10mA, I_B = 0$	60		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	580	
	$h_{FE(3)}$	$V_{CE} = 2V, I_C = 500mA$	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

CLASSIFICATION OF $h_{FE(2)}$

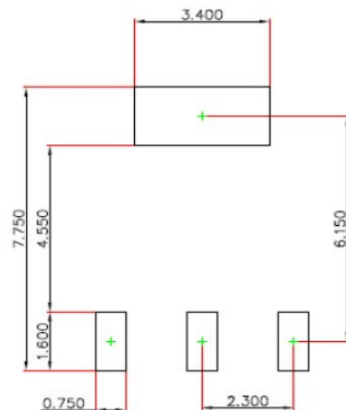
Rank	BCP55-16,115-CN
Range	100-250
Marking	BCP55-16

Typical Characteristics



SOT-223 PACKAGE OUTLINE Plastic surface mounted package


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°

焊盘设计参考 Precautions: PCB Design (Recommended land dimensions for SOD-123 diode. Electrode patterns for PCBs)


Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.050 mm.
3. The pad layout is for reference purposes only.

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