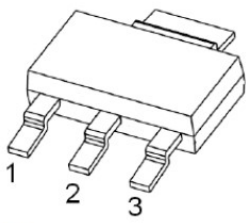
SOT-223



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℃ ambient temperature unless otherwise specified.)

Parameters	Symbol	BCP56-16TX-CN	Unit
Collector-Base Voltage	VCBO	100	V
Collector-Emitter Voltage	VCEO	80	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	℃/W
Storage Temperature Range	Tstg	-65~+150	℃

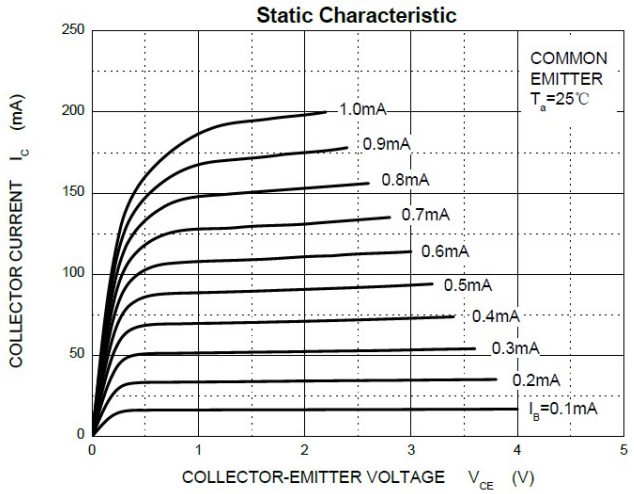
RECOMMENDED OPERATING CONDITIONS

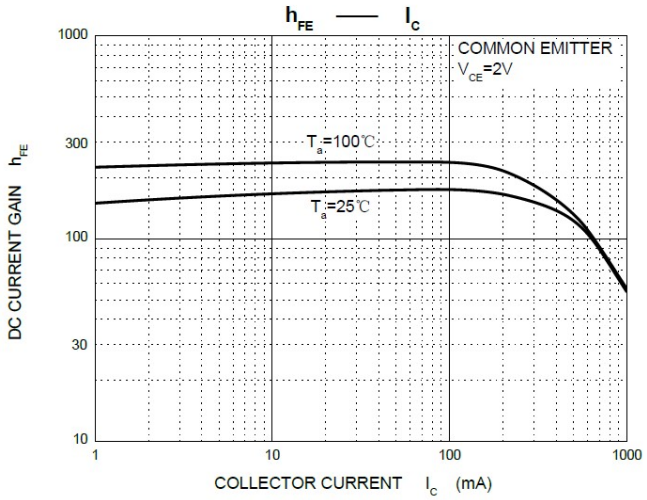
Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C= 0.1mA,I_E=0	100		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C= 10mA,I_B=0	80		V
Base-emitter breakdown voltage	$V_{(BR)EBO}$	I_E= 10μA,I_C=0	5		V
Collector cut-off current	I_{CBO}	V_{CB}= 30 V, 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=150m A	63	580	
	$h_{FE(3)}$	V_{CE}= 2V, I_C=500m A	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=500m A		1	V
Transition frequency	f_T	V_{CE}=10V,I_C=50mA,f=100MHz	100		MHz

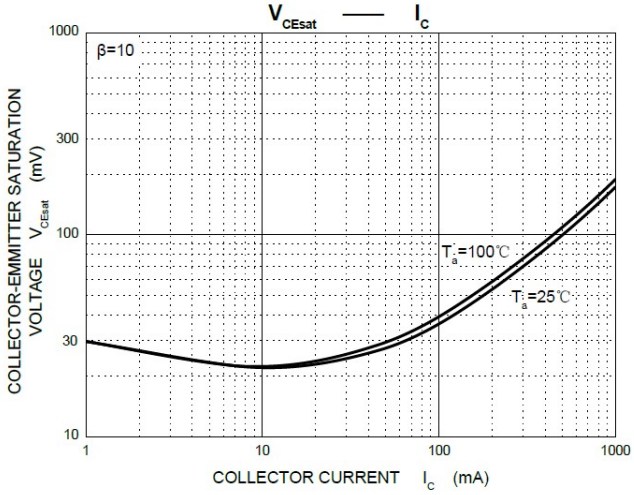
CLASSIFICATION OF $h_{FE(2)}$

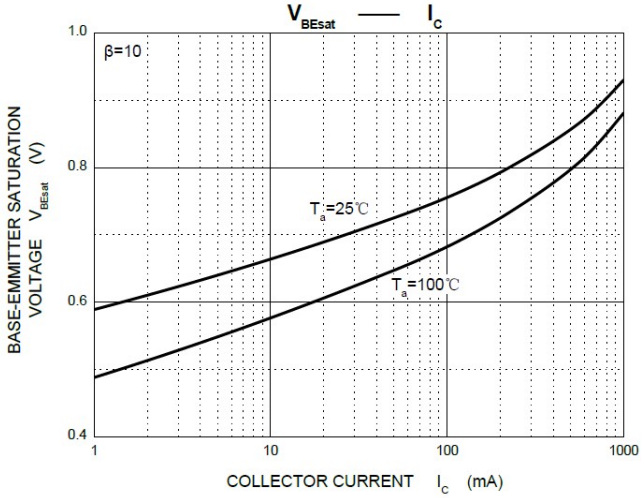
RANK	BCP56-16TX-CN
RANGE	100-250
MARKING	BCP56-16

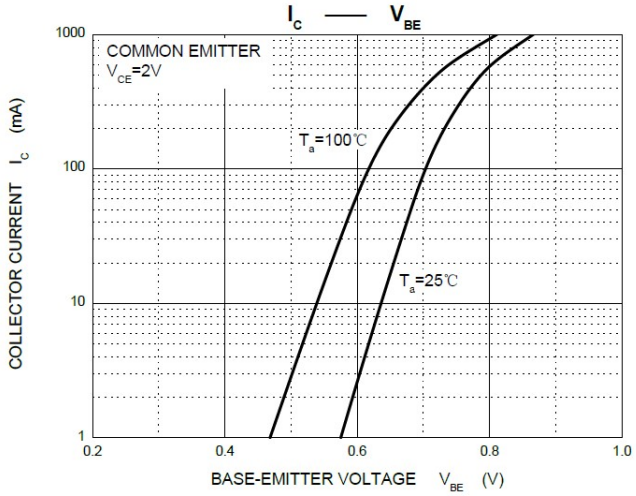
Typical Characteristics

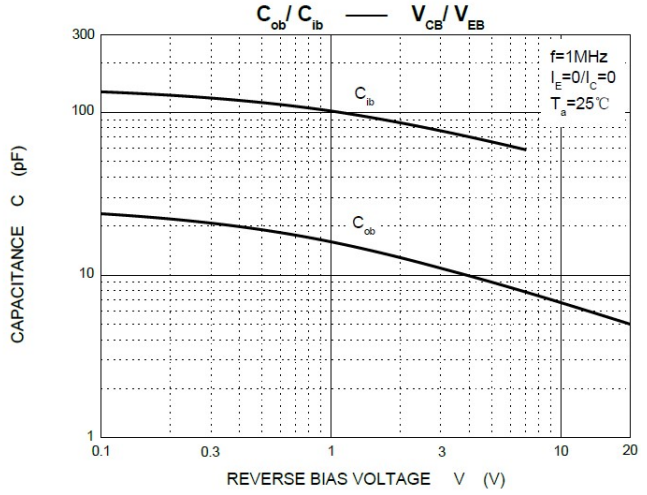


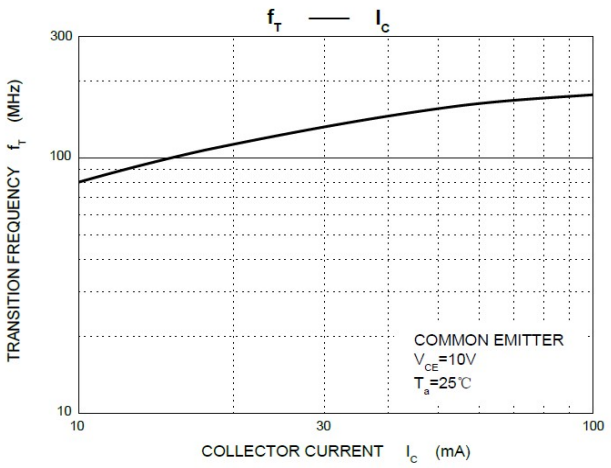


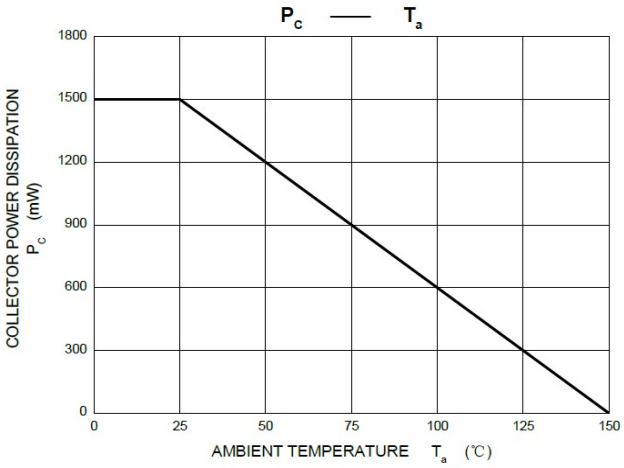




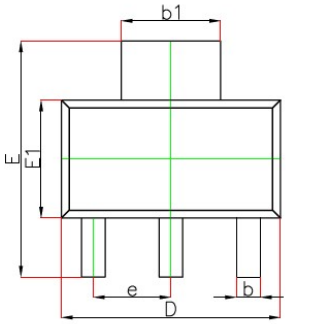


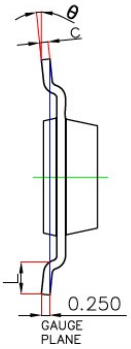


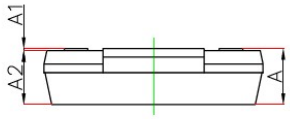




SOT-223 PACKAGE OUTLINE Plastic surface mounted package

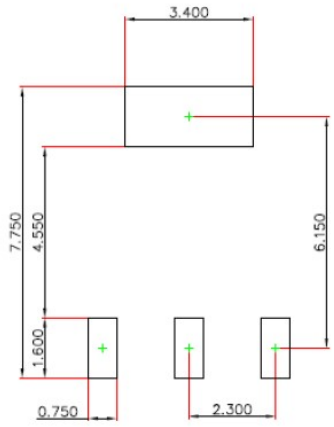






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	——	1.800	——	0.071
A1	0.020	0.100	0.001	0.004
A2	1.500	1.700	0.059	0.067
b	0.660	0.840	0.026	0.033
b1	2.900	3.100	0.114	0.122
c	0.230	0.350	0.009	0.014
D	6.300	6.700	0.248	0.264
E	6.700	7.300	0.264	0.287
E1	3.300	3.700	0.130	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:±0.050mm.
3.The pad layout is for reference purposes only.

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