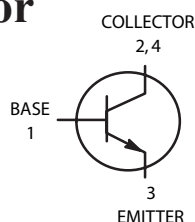
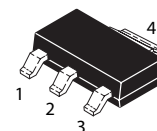


NPN Silicon Planar Epitaxial Transistor

(Pb) Lead(Pb)-Free



1.BASE
2.COLLECTOR
3.EMITTER
4.COLLECTOR



SOT-223

ABSOLUTE MAXIMUM RATINGS (T_A=25°C)

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V _{CEO}	80	V
Collector-Base Voltage	V _{CB0}	100	V
Emitter-Base Voltage	V _{EBO}	5	V
Collector Current (DC)	I _{C(DC)}	1	A
Total Device Dissipation T _A =25°C	P _D	2	W
Junction Temperature	T _j	150	°C
Storage, Temperature	T _{stg}	-55 to +150	°C

Device Marking

BCP56=BCP56

ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min	Typ	Max	Unit
Collector-Emitter Breakdown Voltage (I _C =1mA, I _B =0)	V _{(BR)CEO}	80	-	-	V
Collector-Base Breakdown Voltage (I _C =100μA, I _E =0)	V _{(BR)CBO}	100	-	-	V
Emitter-Base Breakdown Voltage (I _E =10 μA, I _C =0)	V _{(BR)EBO}	5	-	-	V
Collector-Emitter Cutoff Current (V _{CB} =30V, I _E =0) (V _{CB} =30V, I _E =0, T _j =125°C)	I _{CBO}	-	-	100 10	nA uA
Emitter-Base Cutoff Current (V _{EB} =5V, I _C =0)	I _{EBO}	-	-	100	nA

ON CHARACTERISTICS

DC Current Gain ($V_{CE} = 2V, I_C = 5mA$) ($V_{CE} = 2V, I_C = 150mA$) ($V_{CE} = 2V, I_C = 500mA$)	h_{FE1} h_{FE2} h_{FE3}	63 63 40	- - -	- 250 -	- - -
Collector-Emitter Saturation Voltages ($I_C = 0.5mA, I_B = 50mA$)	$V_{CE(sat)}$	-	-	500	mV
Base-Emitter ON Voltages ($V_{CE} = 5V, I_C = 0.5A, f=100MHz$)	$V_{BE(ON)}$	-	-	1	V

DYNAMIC CHARACTERISTICS

Transition frequency ($V_{CE} = 2V, I_C = 150mA$)	ft	-	130	-	MHz
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CLASSIFICATION OF h_{FE2}

Rank	10	16
Range	63-160	100-250

CHARACTERISTICS CURVE

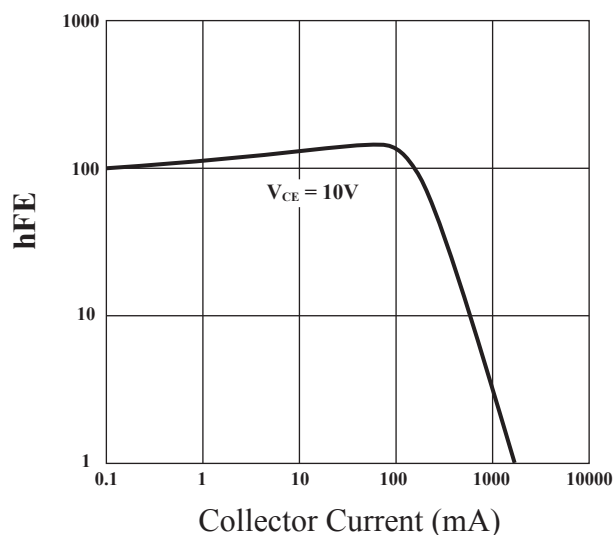


Fig.1 Current Gain & Collector Current

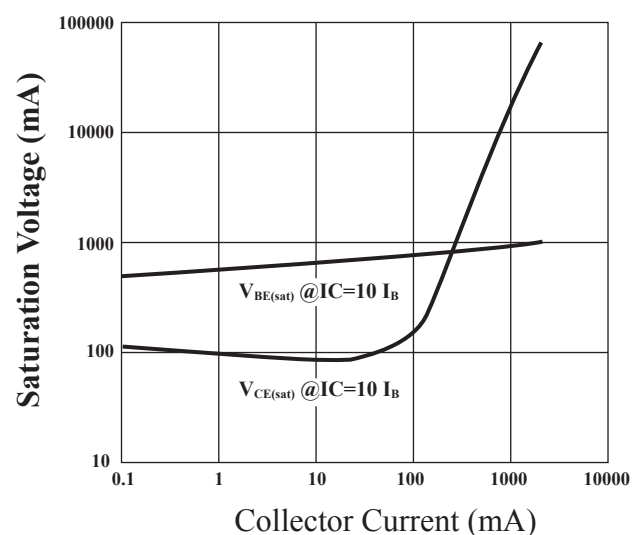


Fig.2 Saturation Voltage & Collector Current

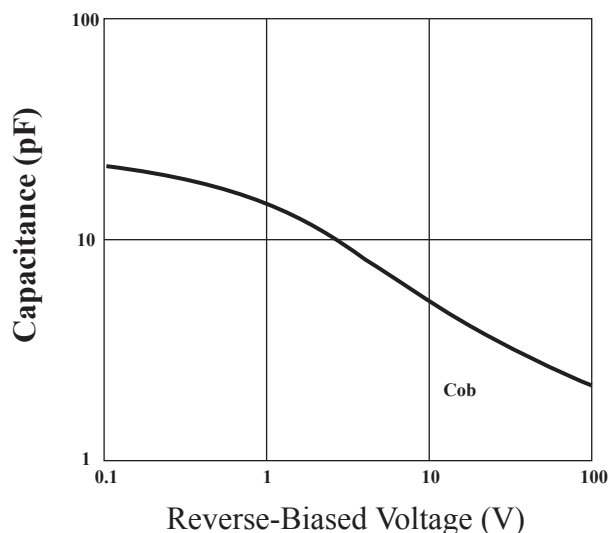


Fig.3 Capacitance & Reverse-Biased Voltage

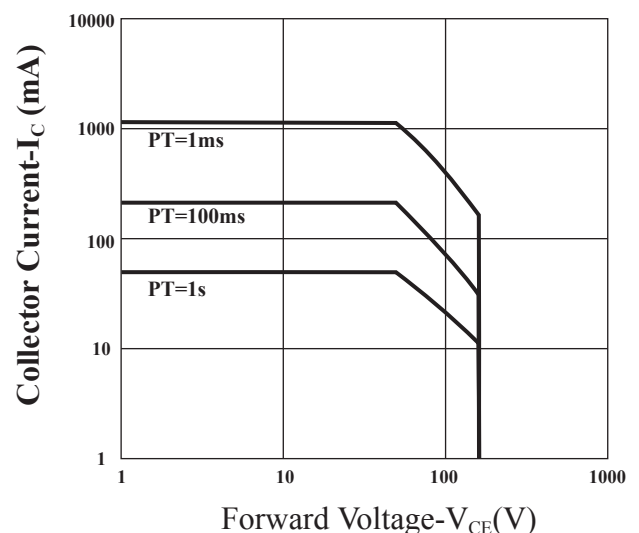
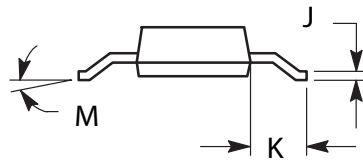
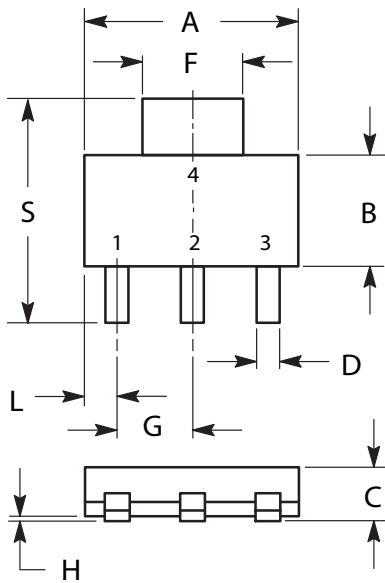


Fig.4 Safe Operation Area

SOT-223 Outline Dimensions

unit:mm



DIM	MILLIMETERS	
	MIN	MAX
A	6.30	6.70
B	3.30	3.70
C	1.50	1.75
D	0.60	0.89
F	2.90	3.20
G	2.20	2.40
H	0.020	0.100
J	0.24	0.35
K	1.50	2.00
L	0.85	1.05
M	0°	10°
S	6.70	7.30