Elektronische Bauelemente

BCP55

1A , 60V

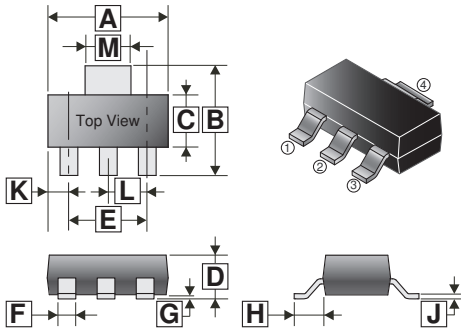
NPN Silicon Medium Power Transistor

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

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

SOT-223

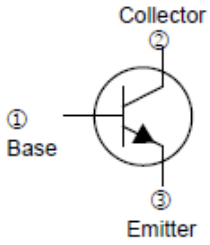


CLASSIFICATION OF h_{FE}

Product-Rank	BCP55-16
Range	100~250

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-223	2.5K	13' inch



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	6.20	6.70	G	-	0.10
B	6.70	7.30	H	-	-
C	3.30	3.70	J	0.25	0.35
D	1.42	1.90	K	-	-
E	4.50	4.70	L	2.30 REF.	
F	0.60	0.82	M	2.90	3.10

ABSOLUTE MAXIMUM RATINGS (T_A = 25℃ unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	60	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current -Continuous	I_C	1	A
Collector Power Dissipation	P_D	1.5	W
Typical Thermal Resistance	$R_{\theta JA}$	83.3	℃ /W
Storage Temperature	T_{STG}	-65~+150	℃

ELECTRICAL CHARACTERISTICS (T_A = 25℃ unless otherwise specified)

Parameter	Symbol	Min.	Max.	Unit	Test Conditions
Collector-base breakdown voltage	$V_{(BR)CBO}$	60	-	V	I_C=0.1mA , I_E=0
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	60	-	V	I_C= 10mA, I_B=0
Emitter-base breakdown voltage	$V_{(BR)EBO}$	5	-	V	I_E= 10μA, I_C=0
Collector cut-off current	I_{CBO}	-	100	nA	V_{CB}= 30V, I_E=0
DC current gain	h_{FE}	25	-		V_{CE}= 2V, I_C= 5mA
		100	250		V_{CE}= 2V, I_C= 150mA
		25	-		V_{CE}= 2V, I_C= 500mA
Collector-emitter saturation voltage[1]	$V_{CE(sat)}$	-	0.5	V	I_C=500mA, I_B= 50mA
Base-emitter voltage[1]	$V_{BE(on)}$	-	1	V	V_{CE}= 2V, I_C= 500mA
Transition frequency	f_T	100	-	MHz	V_{CE}=10V, I_C=50mA, f=100MHz

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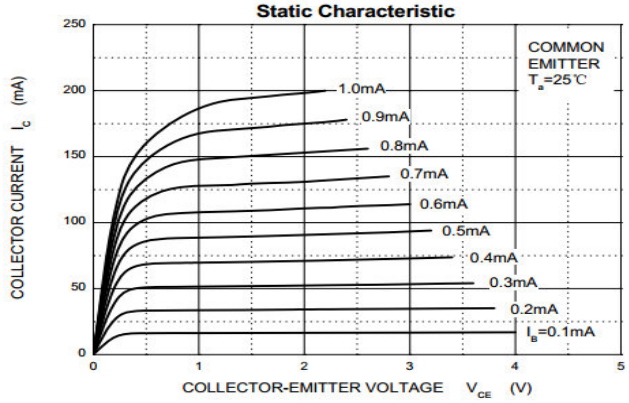
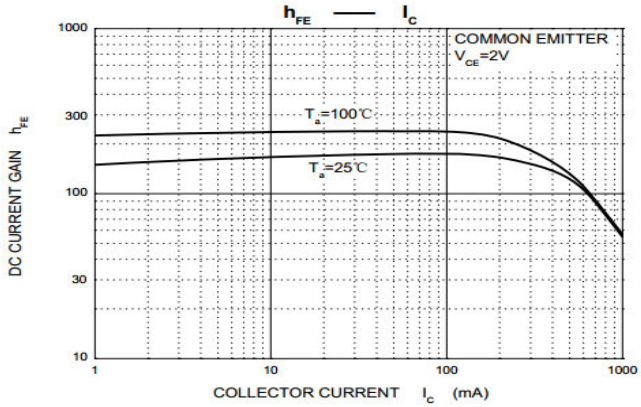
CHARACTERISTIC CURVES

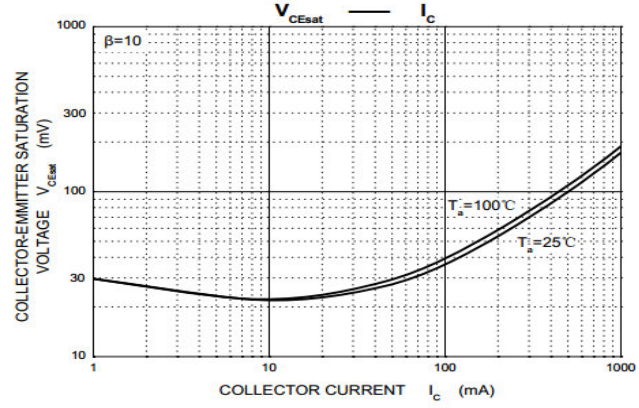
Static Characteristic



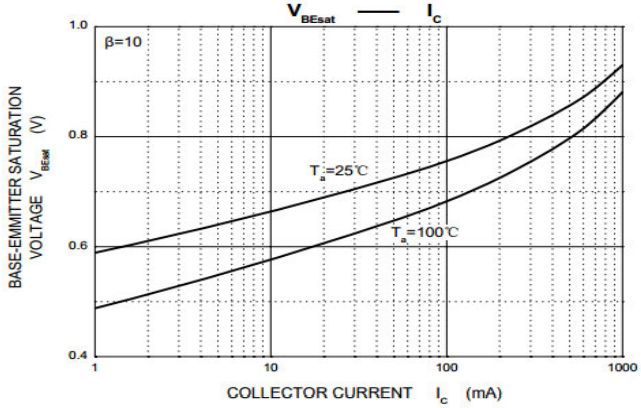
h_{FE} — I_C



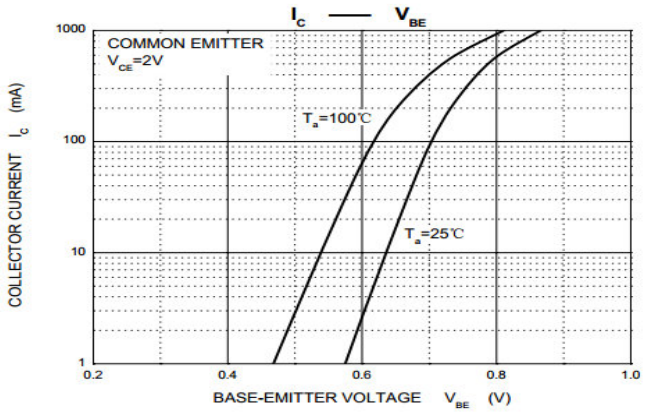
V_{CEsat} — I_C



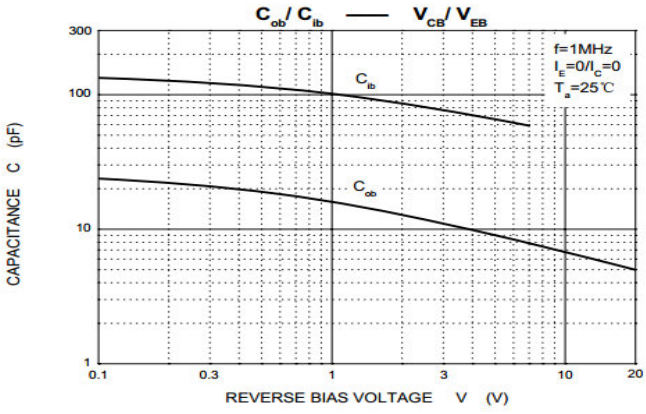
V_{BEsat} — I_C



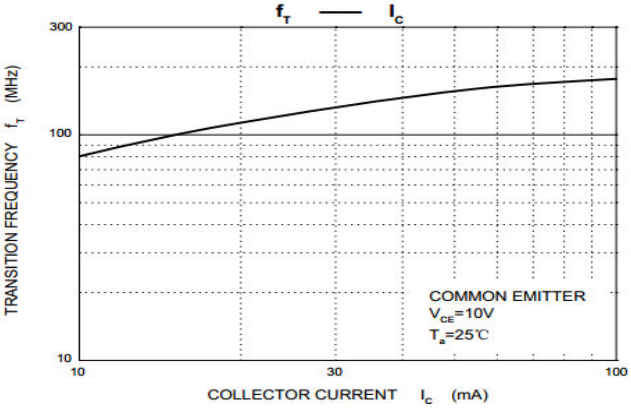
I_C — V_{BE}



C_{ob} / C_{ib} — V_{CB} / V_{EB}



f_T — I_C



P_C — T_a