Elektronische Bauelemente

2SB709A

-0.2A , -45V

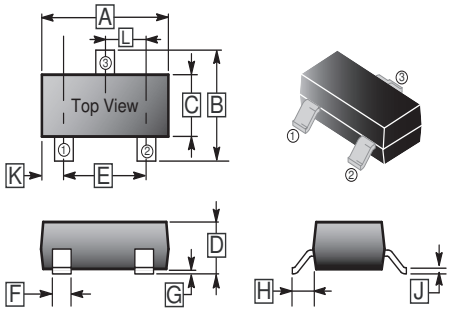
PNP Silicon General Purpose Transistor

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

FEATURES

- For general amplification
- Complementary of the 2SD601A

SOT-23



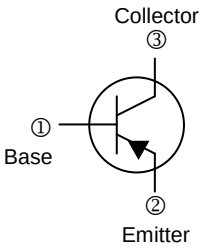
REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.80	3.04	G	0.09	0.18
B	2.10	2.55	H	0.45	0.60
C	1.20	1.40	J	0.08	0.177
D	0.89	1.15	K	0.6 REF.	
E	1.78	2.04	L	0.89	1.02
F	0.30	0.50			

CLASSIFICATION OF h_{FE}

Product-Rank	2SB709A-Q	2SB709A-R	2SB709A-S
Range	160~260	210~340	290~460
Marking	BQ1	BR1	BS1

PACKAGE INFORMATION

Package	MPQ	LeaderSize
SOT-23	3K	7' inch



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

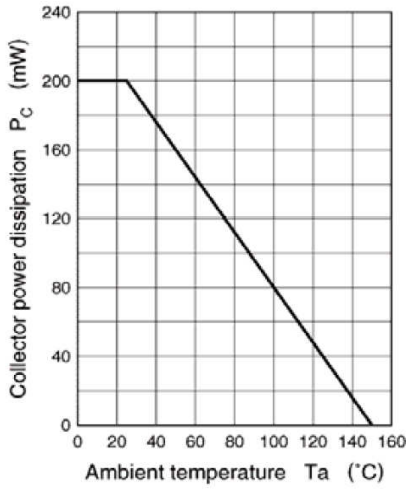
Parameter	Symbol	Ratings	Unit
Collector to Base Voltage	V_{CBO}	-45	V
Collector to Emitter Voltage	V_{CEO}	-45	V
Emitter to Base Voltage	V_{EBO}	-7	V
Collector Currrent	I_C	-100	mA
Collector Power Dissipation	P_C	200	mW
Junction & Storage Temperature	T_J, T_{STG}	150, -55 ~ 150	℃

ELECTRICAL CHARACTERISTICS (T_A = 25℃ unless otherwise specified)

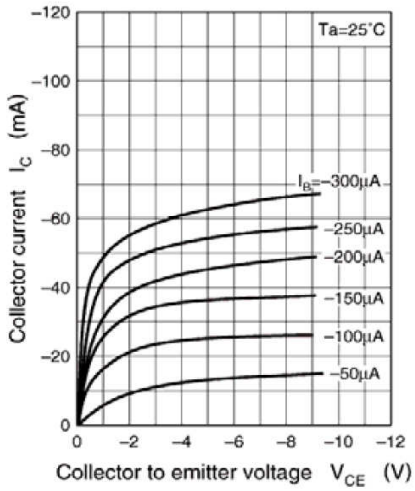
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-base breakdown voltage	$V_{(BR)CBO}$	-45	-	-	V	I_C= -10μA, I_E=0
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	-45	-	-	V	I_C= -2mA, I_B=0
Emitter-base breakdown voltage	$V_{(BR)EBO}$	-7	-	-	V	I_E= -10μA, I_C=0
Collector cut-off current	I_{CBO}	-	-	-0.1	μA	V_{CB}= -20V, I_E=0
Emitter cut-off current	I_{CEO}	-	-	-100	μA	V_{CE}= -10V, I_B=0
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-	-0.5	V	I_C= -100mA, I_B= -10mA
DC current gain	h_{FE}	160	-	460		V_{CE}= -10V, I_C= -2mA
Transition frequency	f_T	60	-	-	MHz	V_{CE}= -10V, I_C= -1mA, f=200MHz
Collector output capacitance	C_{ob}	-	-	2.7	pF	V_{CB}= -10V, I_E=0, f=1MHz

CHARACTERISTIC CURVES

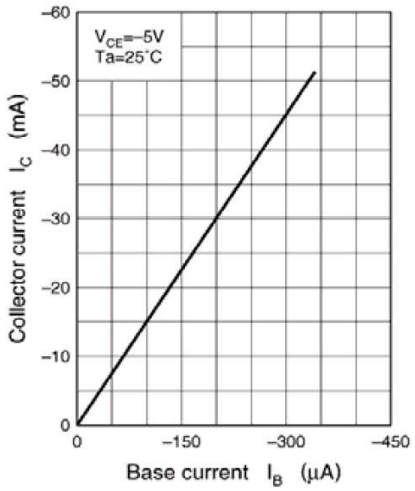
P_C — Ta



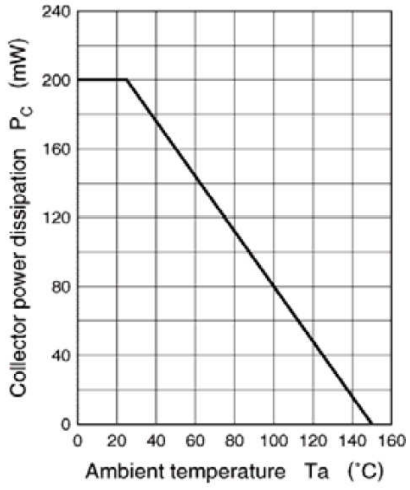
I_C — V_{CE}



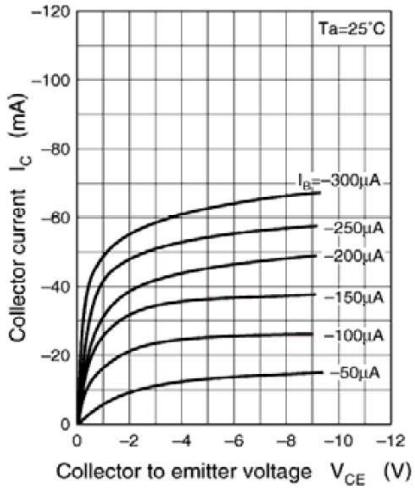
I_C — I_B



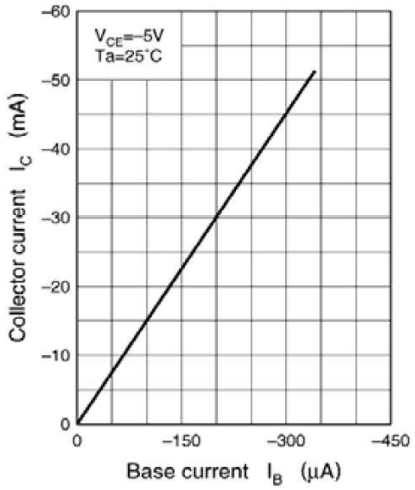
P_C — Ta



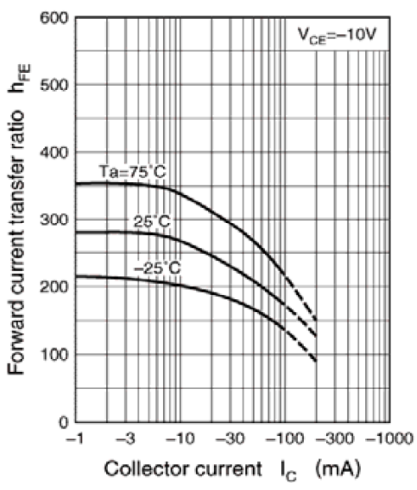
I_C — V_{CE}



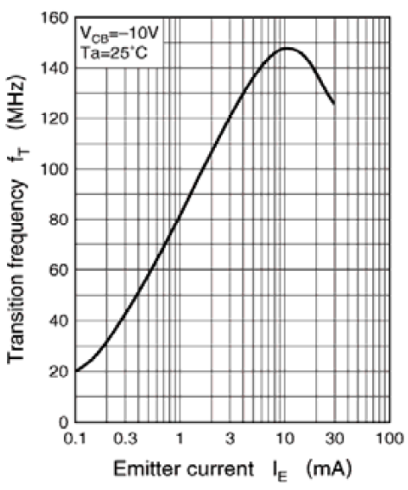
I_C — I_B



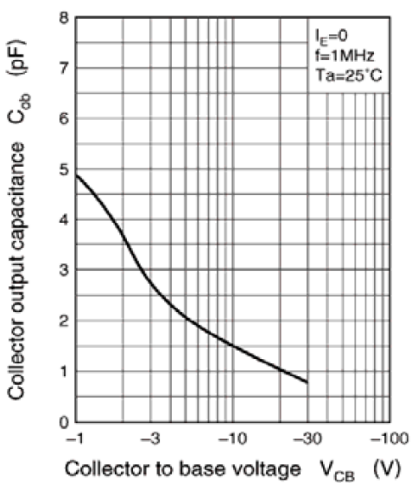
h_{FE} — I_C



f_T — I_E

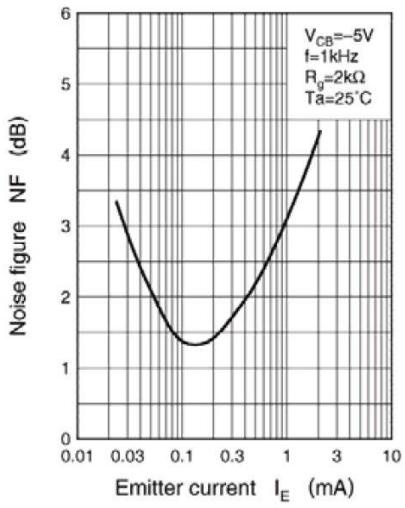


C_{ob} — V_{CB}

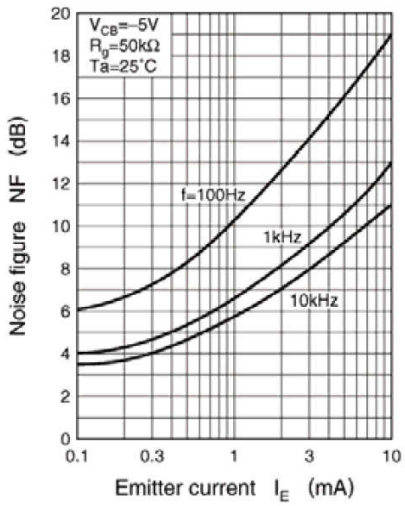


CHARACTERISTIC CURVES

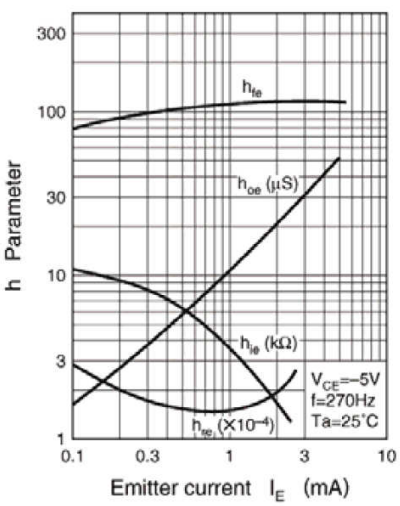
NF — I_E



NF — I_E



h Parameter — I_E



h Parameter — V_{CE}