



SOT-23 Plastic-Encapsulate Transistors

2SB709A TRANSISTOR (PNP)**FEATURES**

- For general amplification
- Complementary to 2SD601A

MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	DUUmeter	JaluY	Units
V_{CB0}	Collector-Base Voltage	-45 V	
V_{CEO}	Collector-Emitter Voltage	-45 V	
V_{EBO}	Emitter-Base Voltage	-7 V	
I_C	Collector Current -Continuous	-100 mA	
P_C	Collector Power Dissipation	200	mW
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55-150	$^{\circ}\text{C}$

SOT-23

1. BASE
2. EMITTER
3. COLLECTOR

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

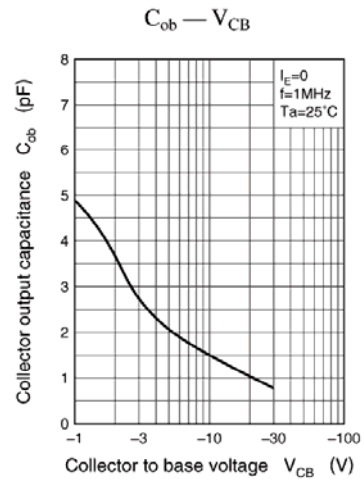
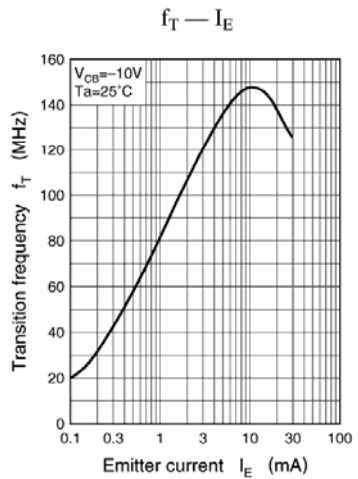
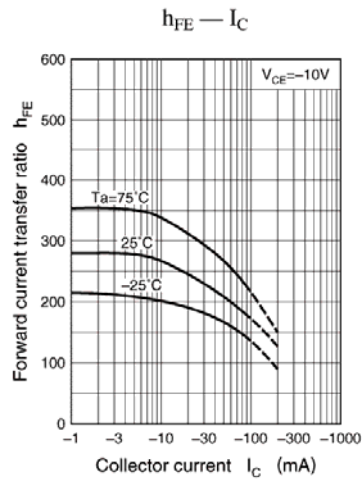
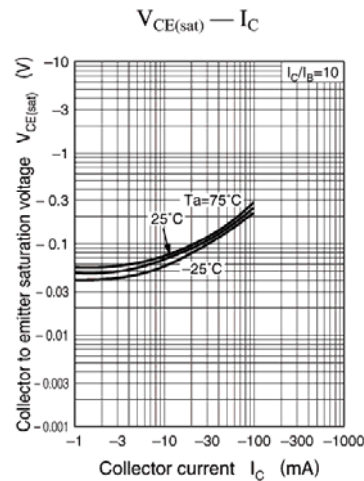
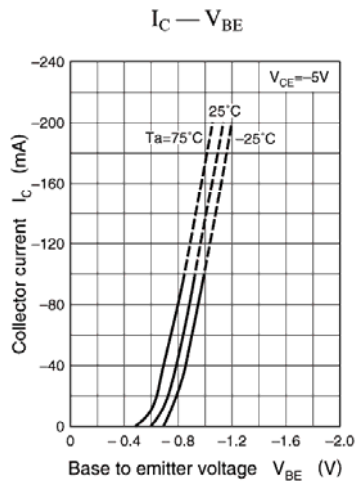
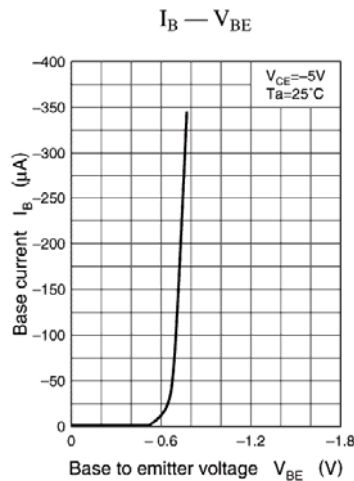
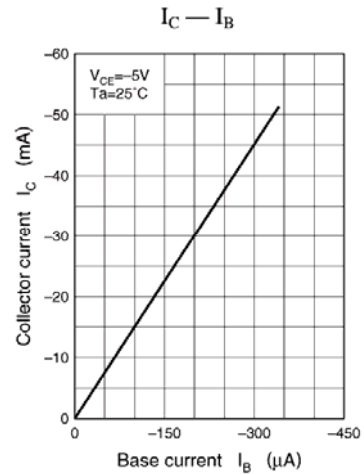
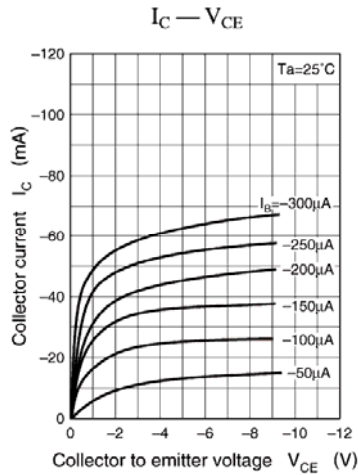
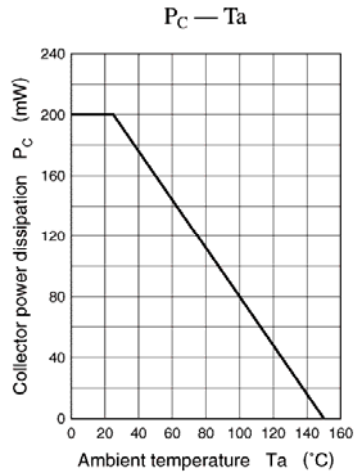
Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -10 \mu\text{A}$, $I_E = 0$	-45		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -2\text{mA}$, $I_B = 0$	-45		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -10 \mu\text{A}$, $I_C = 0$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

CLASSIFICATION OF h_{FE}

Rank	Q	R S	
Range	160-260	210-340 290-	460

Typical Characteristics

2SB709A



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