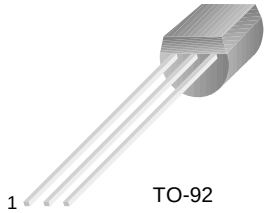
FAIRCHILD
SEMICONDUCTOR TM

KSA709

High Voltage Amplifier

- Collector-Base Voltage : V_{CBO}= -160V
- Collector Dissipation : P_C=800mW
- Complement to KSC1009



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1. Emitter 2. Base 3. Collector

PNP Epitaxial Silicon Transistor

Absolute Maximum Ratings T_a=25°C unless otherwise noted

Symbol	Parameter	Ratings	Units
V_{CBO}	Collector-Base Voltage	-160	V
V_{CEO}	Collector-Emitter Voltage	-150	V
V_{EBO}	Emitter-Base Voltage	-8	V
I_C	Collector Current	-700	mA
P_C	Collector Dissipation	800	mW
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	-55 ~ 150	°C

Electrical Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	I_C= -100μA, I_E=0	-160			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C= -10mA, I_B=0	-150			V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E= -100μA, I_C=0	-8			V
I_{CBO}	Collector Cut-off Current	V_{CB}= -100V, I_E=0			-0.1	μA
I_{EBO}	Emitter Cut-off Current	V_{EB}= -5V, I_C=0			-0.1	μA
h_{FE}	* DC Current Gain	V_{CE}= -2V, I_C= -50mA	40		400	
V_{CE} (sat)	* Collector-Emitter Saturation Voltage	I_C= -200mA, I_B= -20mA		-0.3	-0.4	V
V_{BE} (sat)	* Base-Emitter Saturation Voltage	I_C= -200mA, I_B= -20mA		-0.9	-1.0	V
f_T	Current Gain Bandwidth Product	V_{CE}= -10V, I_C= -50mA		50		MHz
C_{ob}	Output Capacitance	V_{CB}= -10V, I_E=0, f=1MHz			10	pF

* Pulse Test: PW≤350μs, Duty cycle≤2%

h_{FE} Classification

Classification	R	O	Y	G
h_{FE}	40 ~ 80	70 ~ 140	120 ~ 240	200 ~ 400

Typical Characteristics

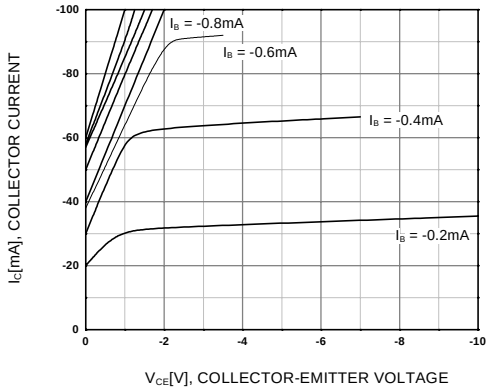

Figure 1. Static Characteristic

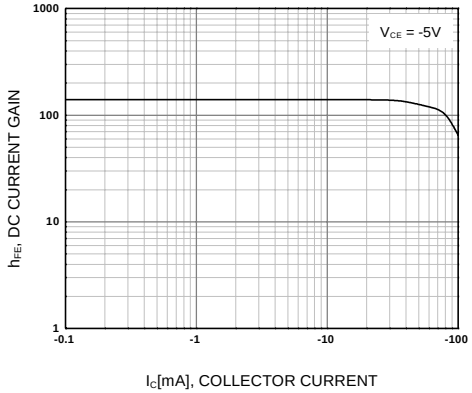

Figure 2. DC current Gain

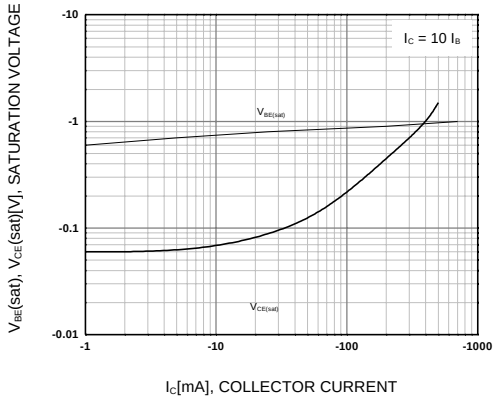

Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

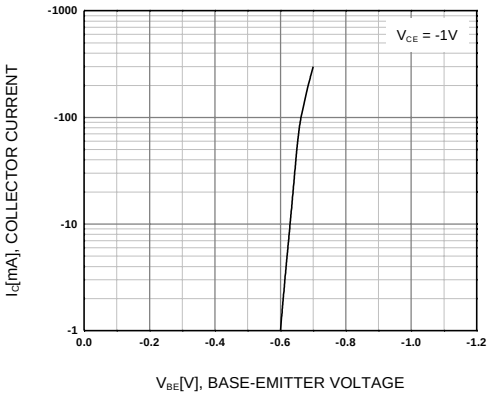

Figure 4. Base-Emitter On Voltage

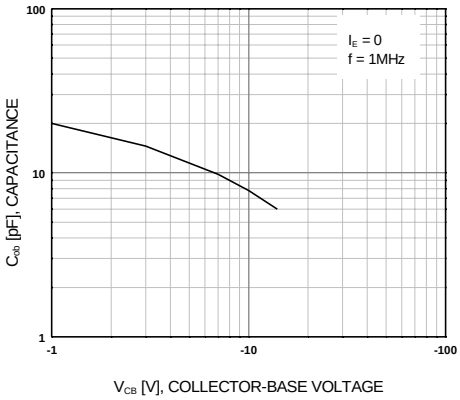

Figure 5. Collector Output Capacitance

Figure 6.

Package Demensions

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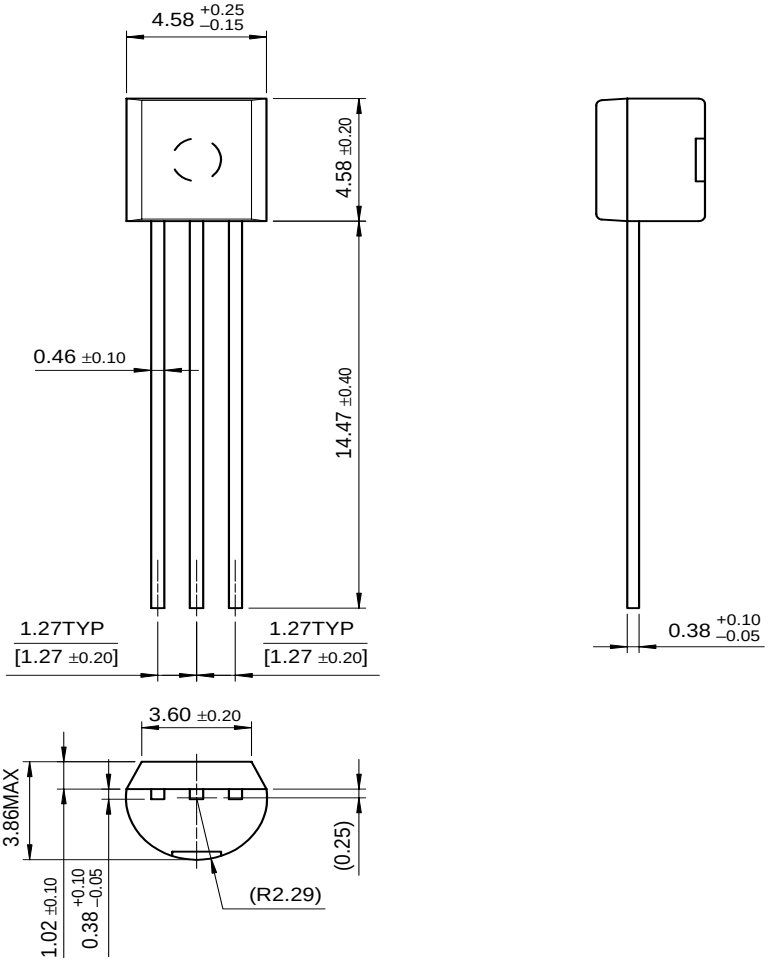

Dimensions in Millimeters

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