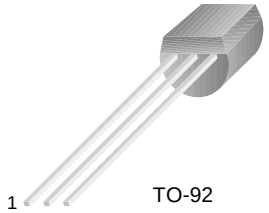
FAIRCHILD
SEMICONDUCTOR®

KSC1009

High Voltage Amplifier

- High Collector-Base Voltage : V_{CBO}=160V
- Collector Current : I_C=700mA
- Collector Power Dissipation : P_C=800mW
- Complement to KSA709
- Suffix “-C” means Center Collector (1. Emitter 2. Collector 3. Base)



TO-92

1. Emitter 2. Base 3. Collector

NPN 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	140	V
V_{EBO}	Emitter-Base Voltage	8	V
I_C	Collector Current	700	mA
P_C	Collector Power 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	140			V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E=10μA, I_C=0	8			V
I_{CBO}	Collector Cut-off Current	V_{CB}=60V, 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		0.2	0.7	V
V_{BE} (sat)	Base-Emitter Saturation Voltage	I_C=200mA, I_B=20mA		0.86	1.0	V
f_T	Current Gain Bandwidth Product	V_{CE}=10V, I_C=50mA	30	50		MHz
C_{ob}	Output Capacitance	V_{CB}=10V, I_E=0, f=1MHz		8		pF

h_{FE} Classification

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

Typical Characteristics

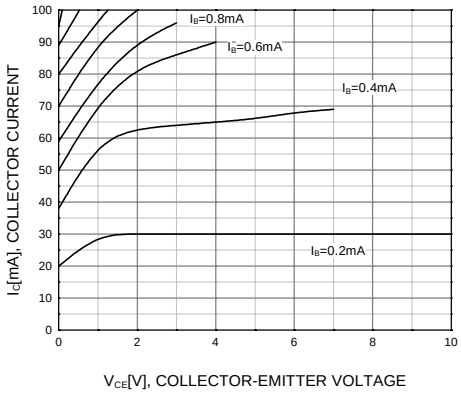


Figure 1. Static Characteristic

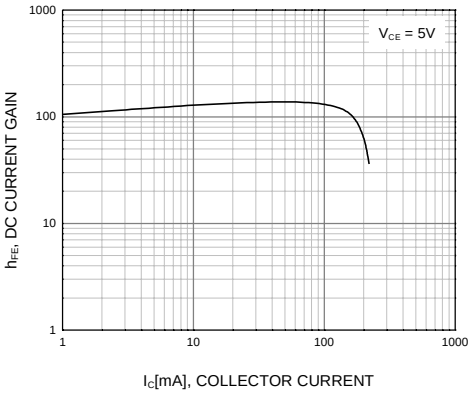


Figure 2. DC current Gain

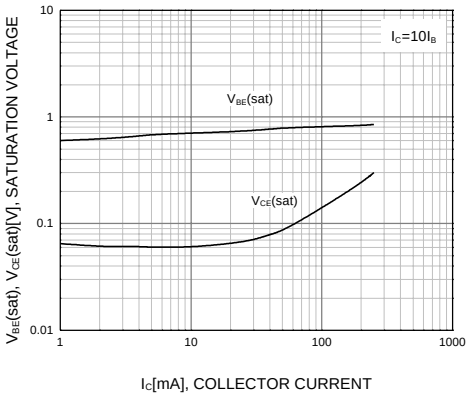


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

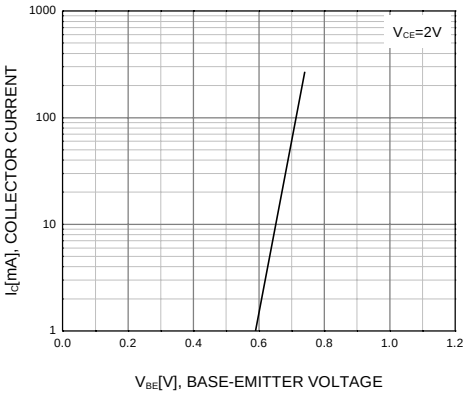


Figure 4. Base-Emitter On Voltage

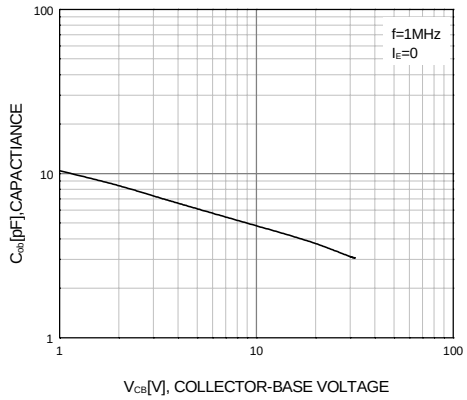


Figure 5. Collector Output Capacitance

Package Demensions

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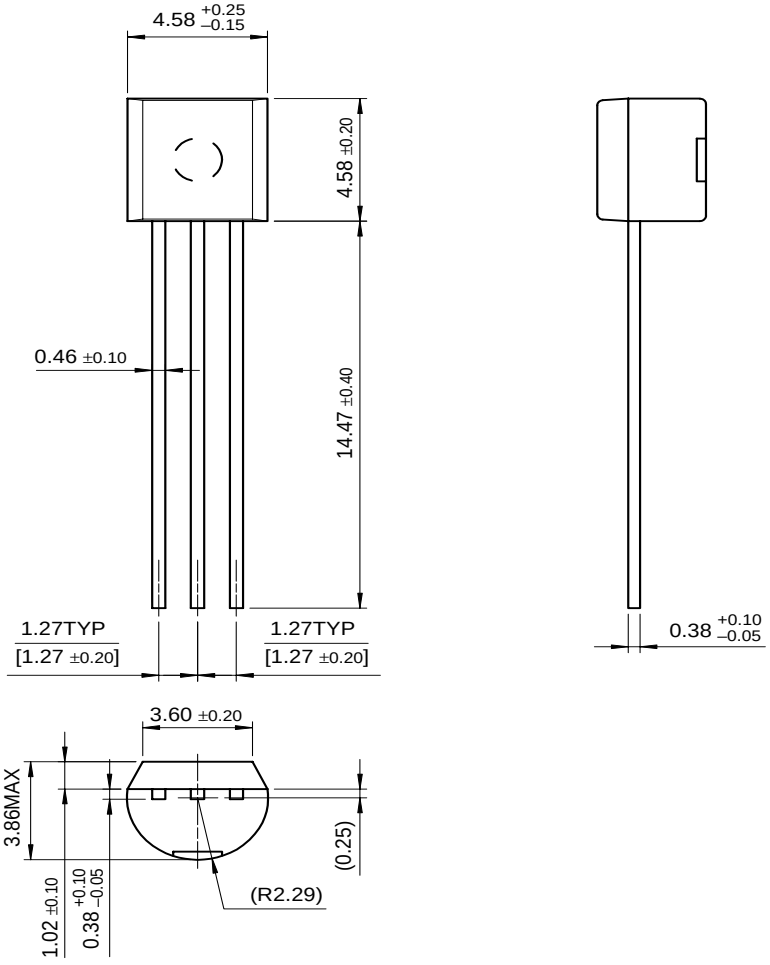

Dimensions in Millimeters

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