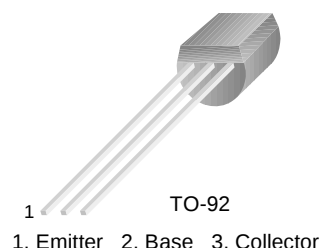


KSC900

KSC900

Low Frequency & Low Noise Amplifier

- Collector-Base Voltage : $V_{CBO}=30V$
- Low Noise Level : $NL=50mV$ (MAX.)
- Suffix "-C" means Center Collector (1. Emitter 2. Collector 3. Base)



NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_a=25^{\circ}C$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	30	V
V_{CEO}	Collector-Emitter Voltage	25	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	50	mA
P_C	Collector Power Dissipation	250	mW
T_J	Junction Temperature	150	$^{\circ}C$
T_{STG}	Storage Temperature	-55 ~ 150	$^{\circ}C$

Electrical Characteristics $T_a=25^{\circ}C$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	$I_C=100\mu A, I_E=0$	30			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C=10mA, I_B=0$	25			V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E=10\mu A, I_C=0$	5			V
I_{CBO}	Collector Cut-off Current	$V_{CB}=25V, I_E=0$			50	nA
I_{EBO}	Emitter Cut-off Current	$V_{EB}=3V, I_C=0$			100	nA
h_{FE}	DC Current Gain	$V_{CE}=3V, I_C=0.5mA$	120		1000	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=20mA, I_B=2mA$		0.1	0.2	V
$V_{BE(on)}$	Base-Emitter On Voltage	$V_{CE}=3V, I_C=0.5mA$		0.62	0.7	V
f_T	Current Gain Bandwidth Product	$V_{CE}=3V, I_C=1mA$		100		MHz
NL	Noise Level	$V_{CC}=12V, I_C=0.1mA$ $R_S=25k\Omega$ $A_V=80dB, f=1KHz$		30	50	mV

h_{FE} Classification

Classification	Y	G	L	V
h_{FE}	120 ~ 240	200 ~ 400	350 ~ 700	600 ~ 1000

Typical Characteristics

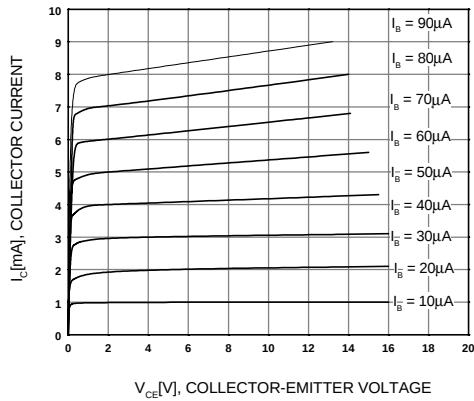


Figure 1. Static Characteristic

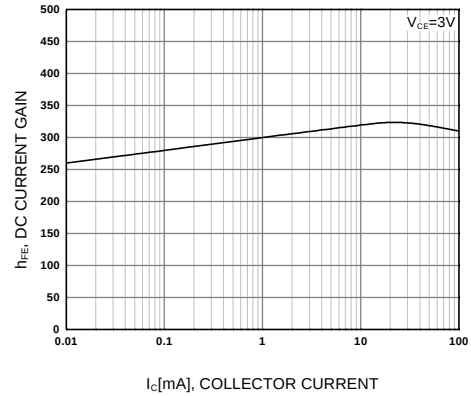


Figure 2. DC current Gain

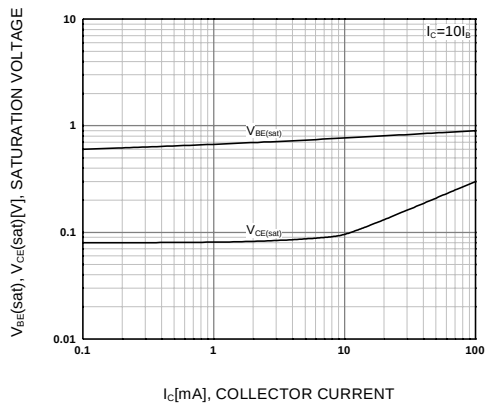


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

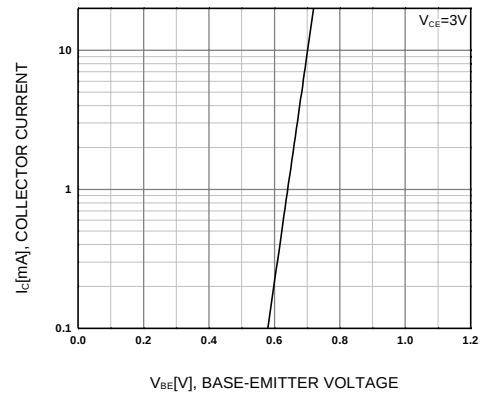


Figure 4. Base-Emitter On Voltage

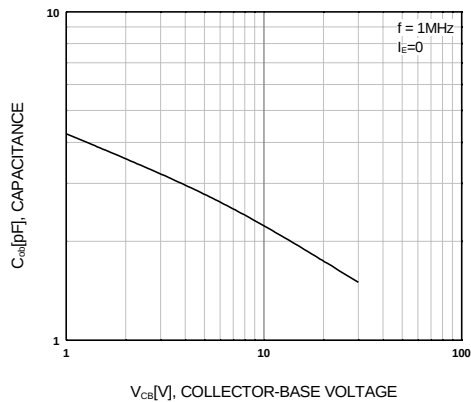


Figure 5. Collector Output Capacitance

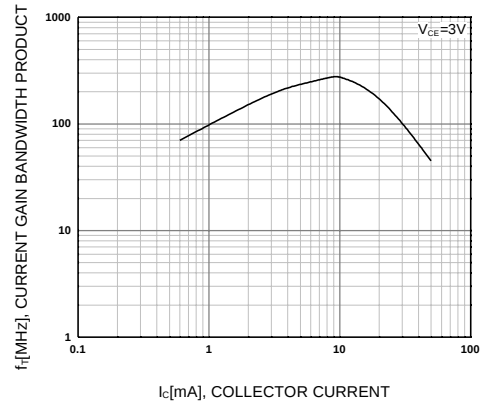


Figure 6. Current Gain Bandwidth Product

Typical Characteristics (Continued)

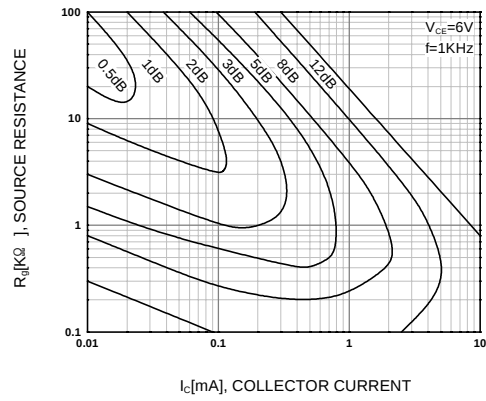


Figure 7. Noise Figure

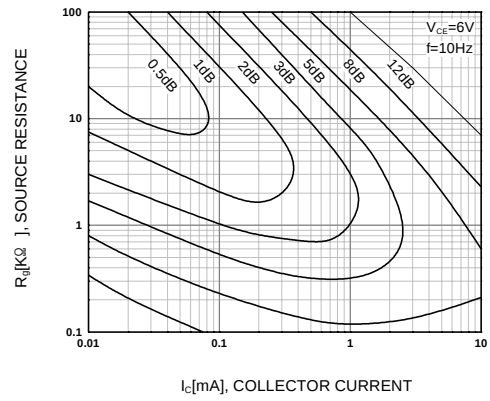


Figure 8. Noise Figure

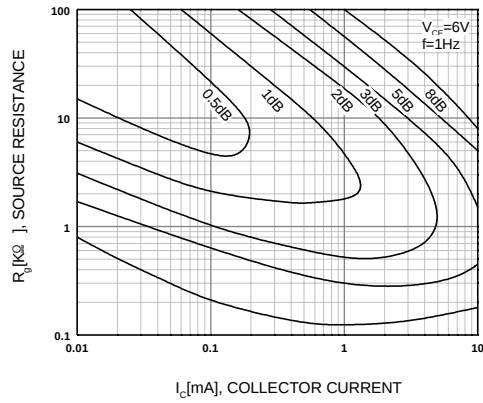
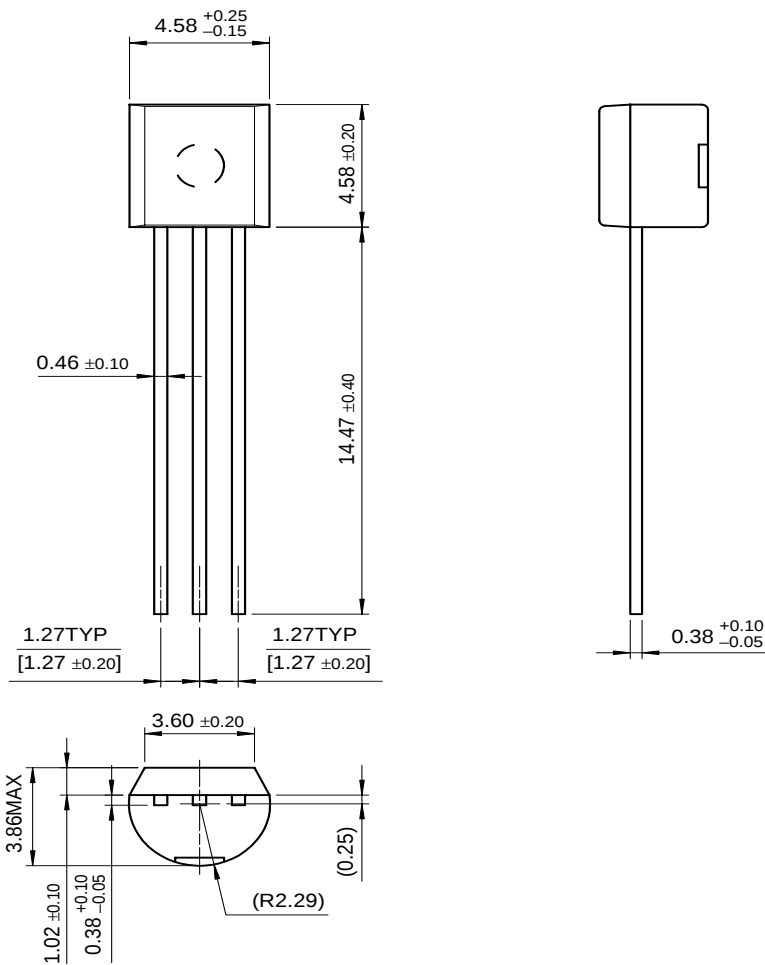


Figure 9. Noise Figure

Package Dimensions

KSC900

TO-92



Dimensions in Millimeters

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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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