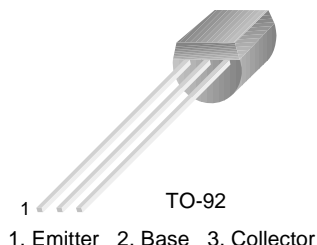


KSC900

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

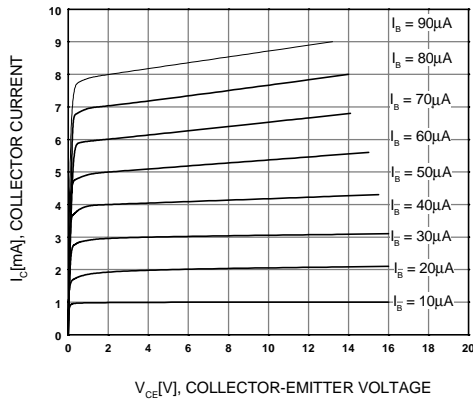


Figure 1. Static Characteristic

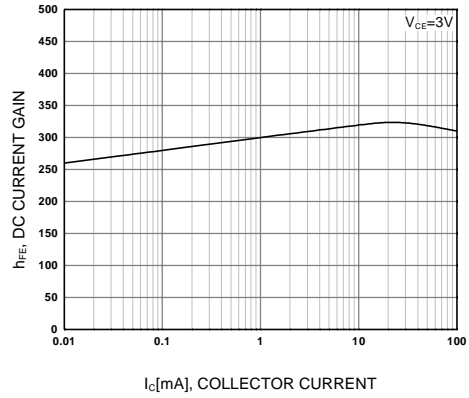


Figure 2. DC current Gain

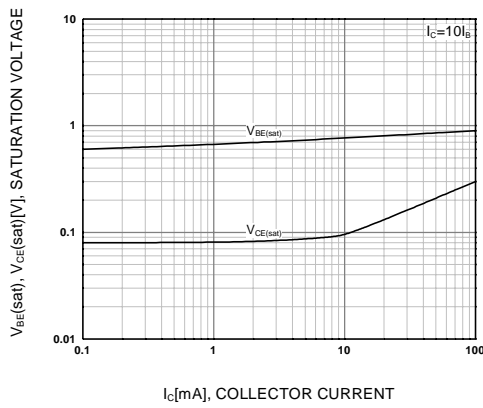


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

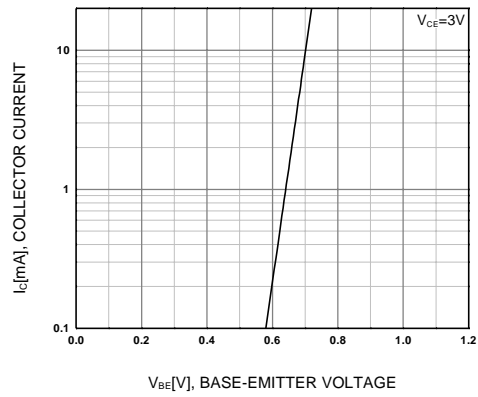


Figure 4. Base-Emitter On Voltage

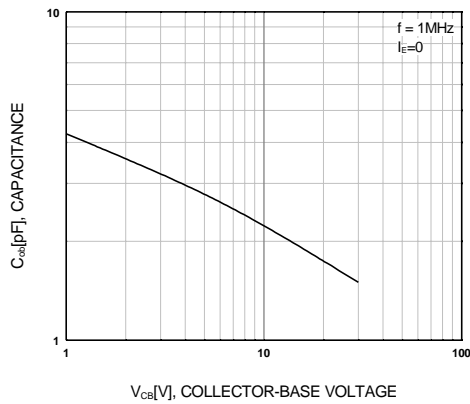


Figure 5. Collector Output Capacitance

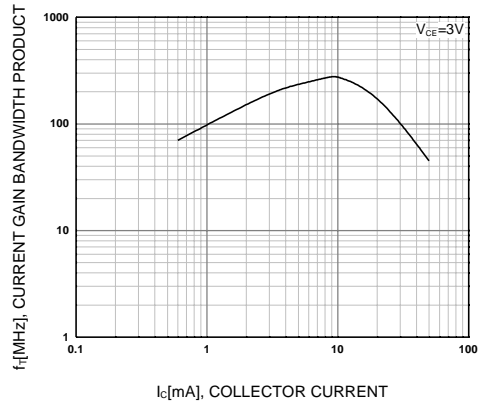
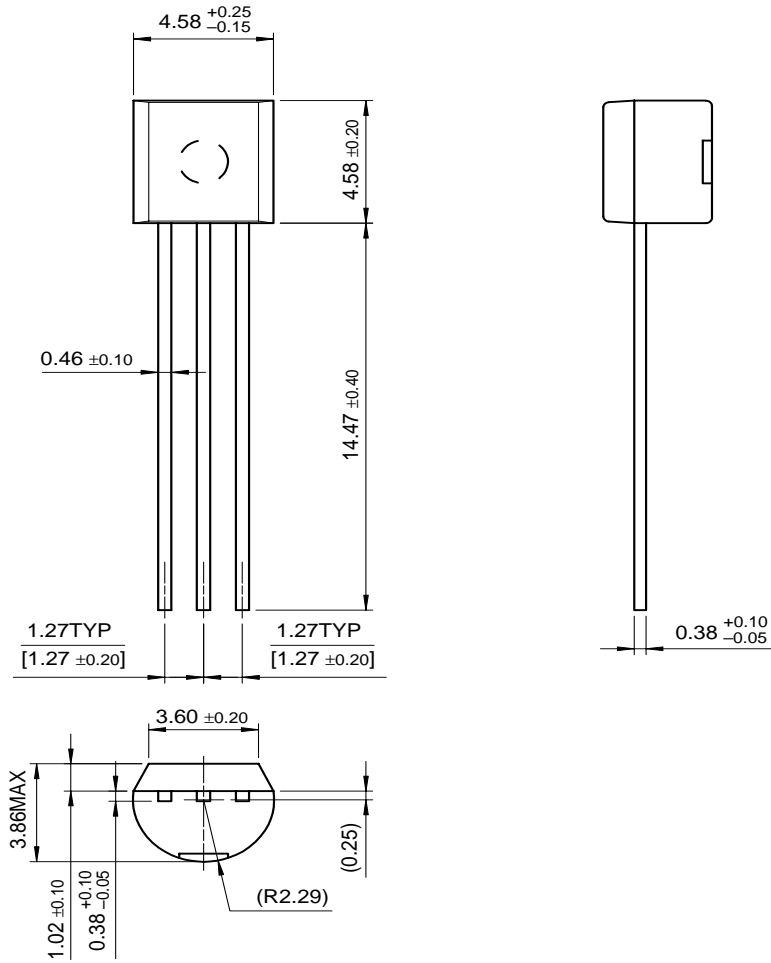


Figure 6. Current Gain Bandwidth Product

Package Dimensions

KSC900

TO-92



Dimensions in Millimeters

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