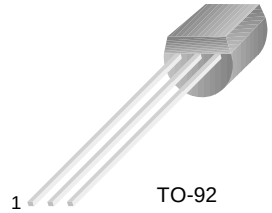
FAIRCHILD
SEMICONDUCTOR®

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)



TO-92

1. Emitter 2. Base 3. Collector

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings T_a=25°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	°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	30			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C=10mA, I_B=0	25			V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E=10μA, 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=25kΩ 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

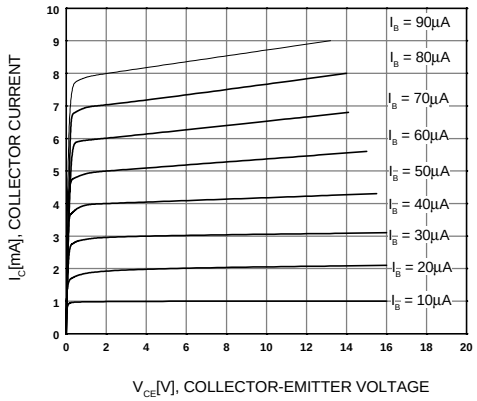


Figure 1. Static Characteristic

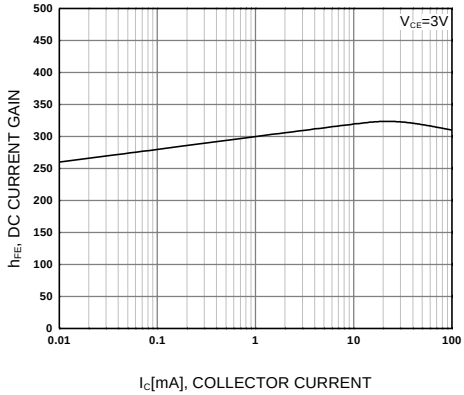


Figure 2. DC current Gain

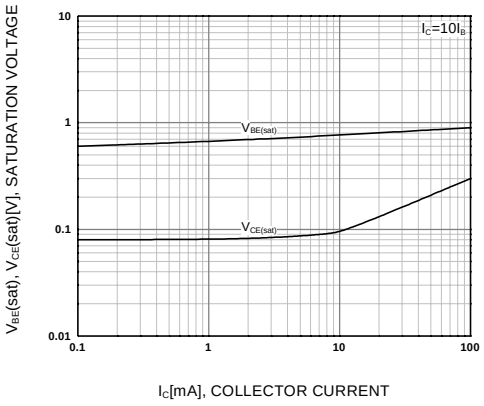


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

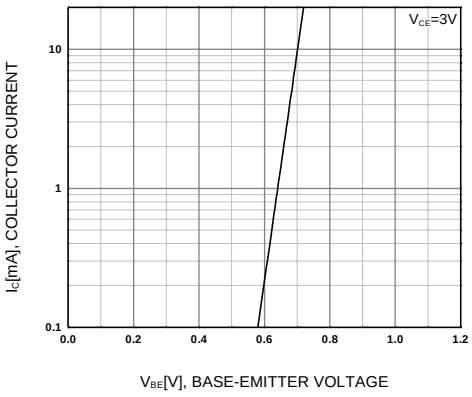


Figure 4. Base-Emitter On Voltage

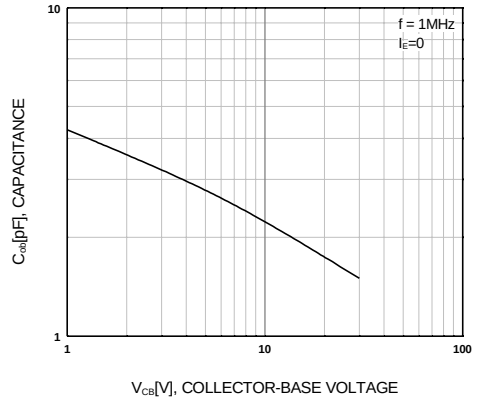


Figure 5. Collector Output Capacitance

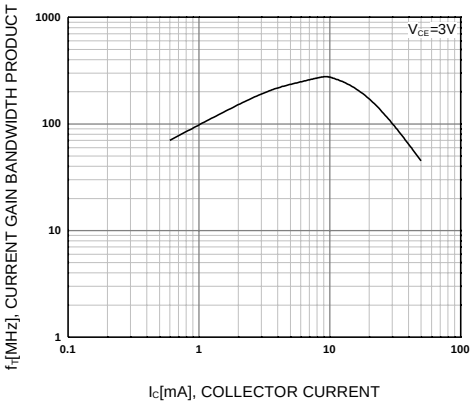
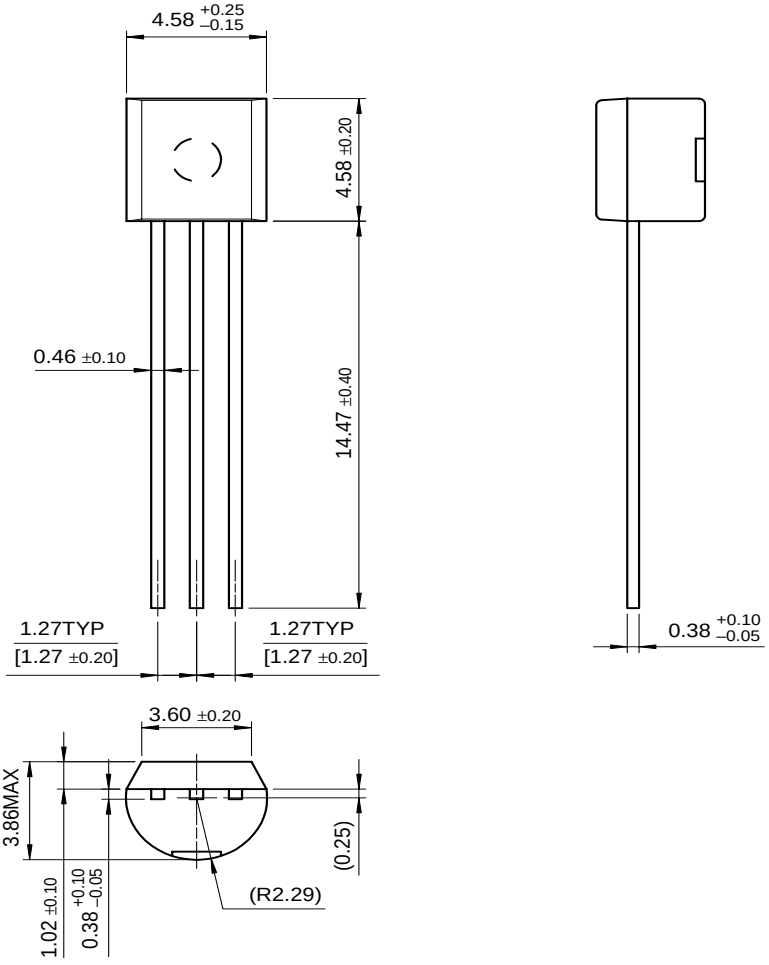


Figure 6. Current Gain Bandwidth Product

Package Dimensions

TO-92



Dimensions in Millimeters

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CoolFET™	FASTr™	MicroFET™	PowerTrench®	SuperSOT™-6
CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
DOME™	GlobalOptoisolator™	MICROWIRE™	QS™	SyncFET™
EcoSPARK™	GTO™	MSX™	QT Optoelectronics™	TinyLogic™
E^2CMOS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
EnSigna™	I^2C™	OCX™	RapidConfigure™	UHC™
Across the board. Around the world.™		OCXPro™	RapidConnect™	UltraFET®
The Power Franchise™		OPTOLOGIC®	SILENT SWITCHER®	VCX™
Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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