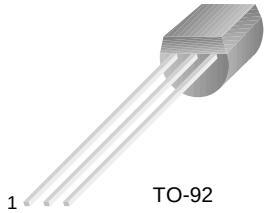
FAIRCHILD
SEMICONDUCTOR®

KSA733

Low Frequency Amplifier

- Collector-Base Voltage : V_{CBO}= -60V
- Complement to KSC945
- Suffix “-C” means Center Collector (1. Emitter 2. Collector 3. Base)



TO-92

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	-60	V
V_{CEO}	Collector-Emitter Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-150	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	-60			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C= -10mA. I_B=0	-50			V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E = -10μA. I_C=0	- 5			V
I_{CBO}	Collector Cut-off Current	V_{CB}= --60V, I_E=0			-100	nA
I_{EBO}	Emitter Cut-off Current	V_{EB}= -5V, I_C=0			-100	nA
h_{FE}	DC Current Gain	V_{CE}= -6V, I_C= -1mA	40		700	
V_{CE} (sat)	Collector-Emitter Saturation Voltage	I_C= -100mA, I_B= -10mA		-0.18	-0.3	V
V_{BE} (on)	Base-Emitter On Voltage	V_{CE}= -6V, I_C= -1mA	-0.50	-0.62	-0.80	V
f_T	Current Gain Bandwidth Product	V_{CE}= -6V, I_C= -10mA	50	180		MHz
C_{ob}	Output Capacitance	V_{CB}= -10V, I_E = 0, f=1MHz		2.8		pF
NF	Noise Figure	V_{CE}= -6V, I_C= -0.3mA f=1MHz, Rs=10kΩ		6.0	20	dB

h_{FE} Classification

Classification	R	O	Y	G	L
h_{FE}	40 ~ 80	70 ~ 140	120 ~ 240	200 ~ 400	350 ~ 700

Typical Characteristics

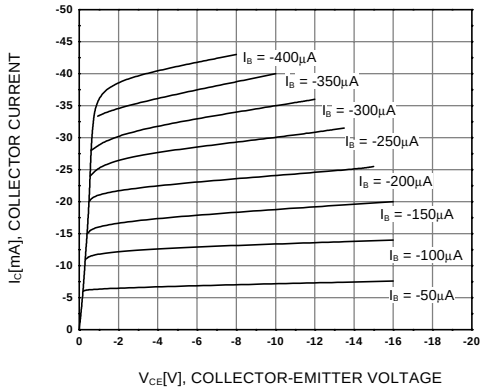


Figure 1. Static Characteristic

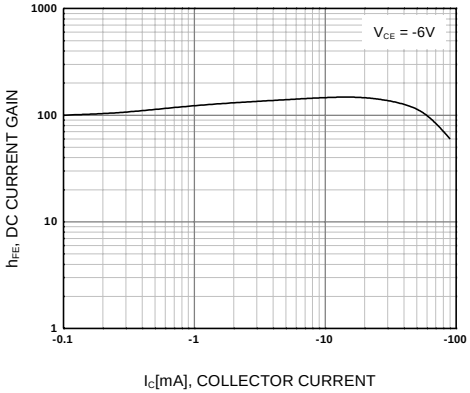


Figure 2. DC current Gain

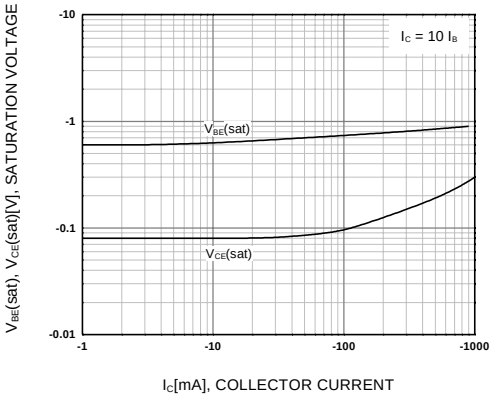


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

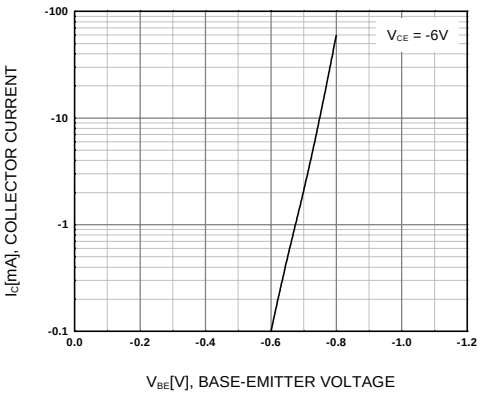


Figure 4. Base-Emitter On Voltage

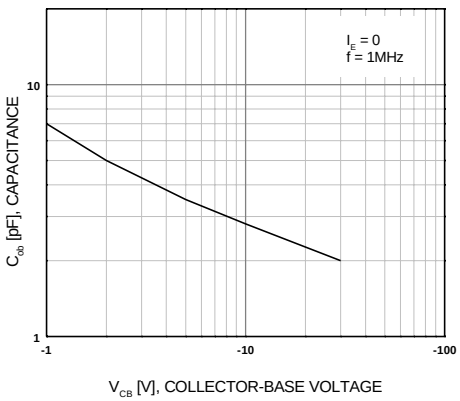


Figure 5. Collector Output Capacitance

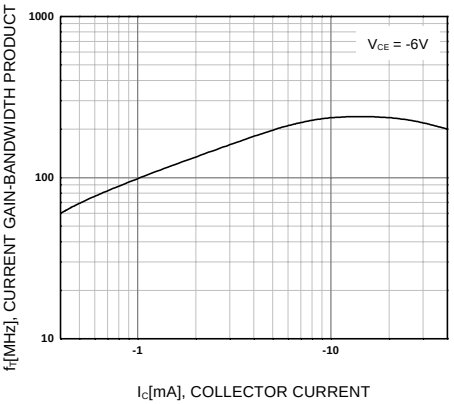


Figure 6. Current Gain Bandwidth Product

Package Demensions

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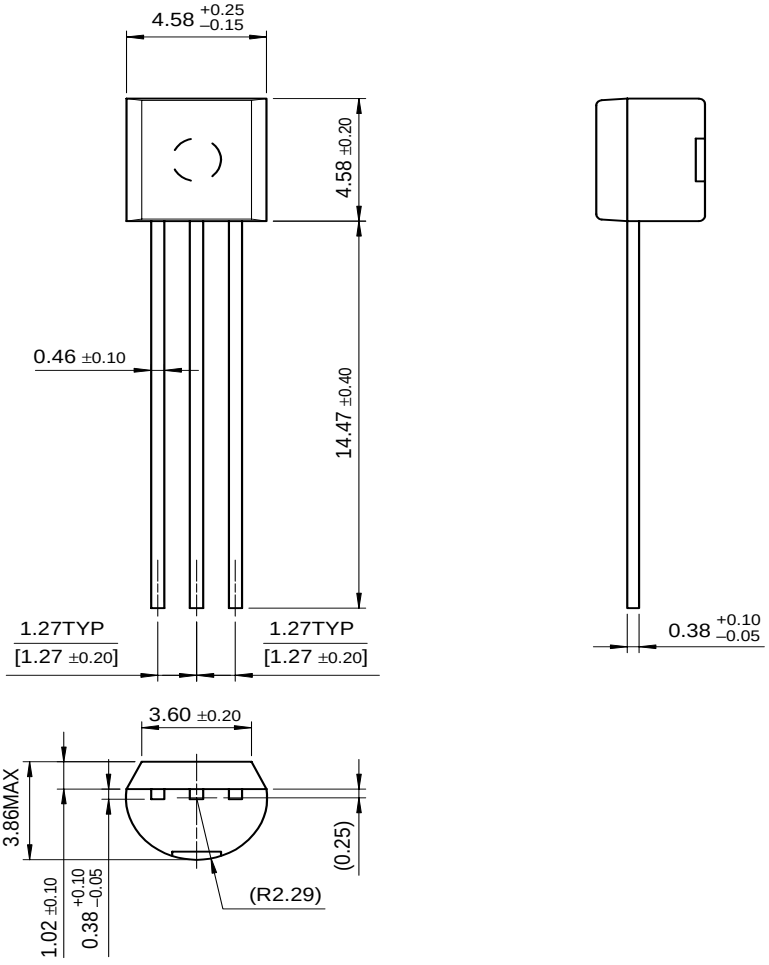

Dimensions in Millimeters

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EnSigna™	MicroFET™	Quiet Series™	UHC™
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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

PRODUCT STATUS DEFINITIONS

Definition of Terms

Datasheet Identification	Product Status	Definition
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
Preliminary	First Production	This datasheet contains preliminary data, and supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild semiconductor. The datasheet is printed for reference information only.

KSA733
PNP Epitaxial Silicon Transistor

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Features

Low Frequency Amplifier

- Collector-Base Voltage : V_{CBO} = -60V
- Complement to KSC945
- Suffix “-C” means Center Collector (1. Emitter 2. Collector 3. Base)

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Product status/pricing/packaging

Product	Product status	Pricing*	Package type	Leads	Packing method
KSA733CYIUBU	Full Production	$0.0425	TO-92	3	BULK
KSA733LBU	Full Production	$0.0425	TO-92	3	BULK
KSA733YBU	Full Production	$0.0425	TO-92	3	BULK
KSA733CGBU	Full Production	$0.0425	TO-92	3	BULK
KSA733CGIUTA	Full Production	$0.0425	TO-92	3	TAPE REEL
KSA733CLBU	Full Production	$0.0425	TO-92	3	BULK
KSA733YIUTA	Full Production	$0.0425	TO-92	3	TAPE REEL
KSA733YTA	Full Production	$0.0425	TO-92	3	TAPE REEL
KSA733CYIUTA	Full Production	$0.0425	TO-92	3	TAPE REEL
KSA733CYBU	Full Production	$0.0425	TO-92	3	BULK
KSA733GGSTA	Full Production	$0.0425	TO-92	3	TAPE REEL
KSA733CGIUBU	Full Production	$0.0425	TO-92	3	BULK
KSA733CYTA	Full Production	$0.0425	TO-92	3	TAPE REEL
KSA733GTA	Full Production	$0.0425	TO-92	3	TAPE REEL
KSA733CGTA	Full Production	$0.0425	TO-92	3	TAPE REEL

KSA733CLTA	Full Production	$0.0425	TO-92	3	TAPE REEL
KSA733GBU	Full Production	$0.0425	TO-92	3	BULK
KSA733OBU	Full Production	$0.0425	TO-92	3	BULK

* 1,000 piece Budgetary Pricing

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Application notes

AN-9013: AN-9013 Reducing Switching Losses with QFET in a Step-up Convert (88 K) Jul 19, 2002

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