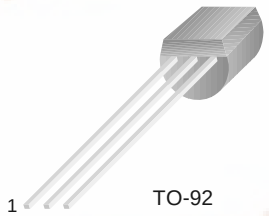
FAIRCHILD SEMICONDUCTOR®

KSA1015

LOW FREQUENCY AMPLIFIER

- Collector-Base Voltage : V_{CBO}= -50V
- Complement to KSC1815



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1. Emitter 2. Collector 3. Base

PNP Epitaxial Silicon Transistor

Absolute Maximum Ratings T_a=25°C unless otherwise noted

Symbol	Parameter	Ratings	Units
V_{CBO}	Collector-Base Voltage	-50	V
V_{CEO}	Collector-Emitter Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-150	mA
I_B	Base Current	-50	mA
P_C	Collector Power Dissipation	400	mW
T_J	Junction Temperature	125	°C
T_{ST9}	Storage Temperature	-65 ~ 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	-50			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}= -50V, I_E=0			-0.1	μA
I_{EBO}	Emitter Cut-off Current	V_{EB}= -5V, I_C=0			-0.1	μA
h_{FE1} h_{FE2}	DC Current Gain	V_{CE}= -6V, I_C= -2mA V_{CE}= -6V, I_C= -150mA	70 25		400	
V_{CE} (sat)	Collector-Emitter Saturation Voltage	I_C= -100mA, I_B= -10mA		-0.1	-0.3	V
V_{BE} (sat)	Base-Emitter Saturation Voltage	I_C= -100mA, I_B= -10mA			-1.1	V
f_T	Current Gain Bandwidth Product	V_{CE}= -10V, I_C=-1mA	80			MHz
C_{ob}	Output Capacitance	V_{CB}= -10V, I_E=0, f=1MHz		4	7	pF
NF	Noise Figure	V_{CE}= -6V, I_C= -0.1mA f=100Hz, R_G=10kΩ		0.5	6	dB

h_{FE} Classification

Classification	O	Y	GR
h_{FE1}	70 ~ 140	120 ~ 240	200 ~ 400

Typical Characteristics

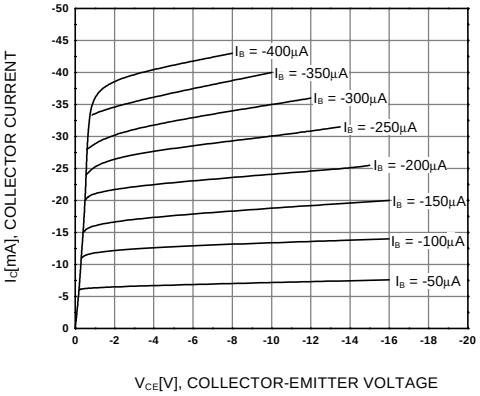


Figure 1. Static Characteristic

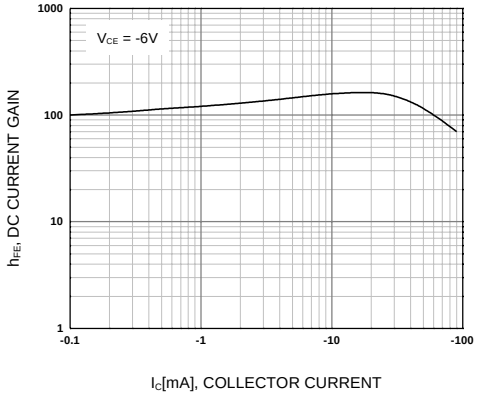


Figure 2. DC current Gain

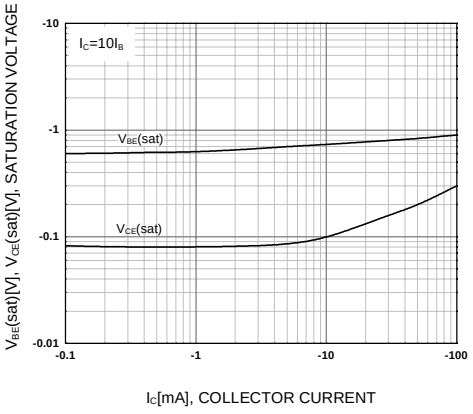


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

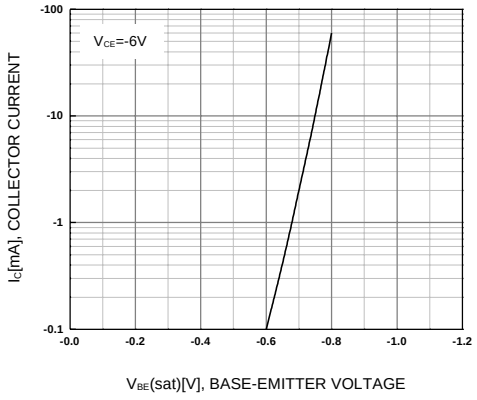


Figure 4. Base-Emitter On Voltage

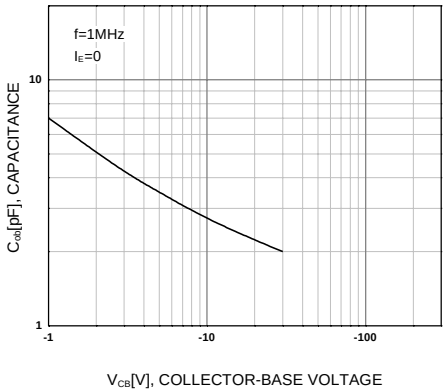


Figure 5. Collector Output Capacitance

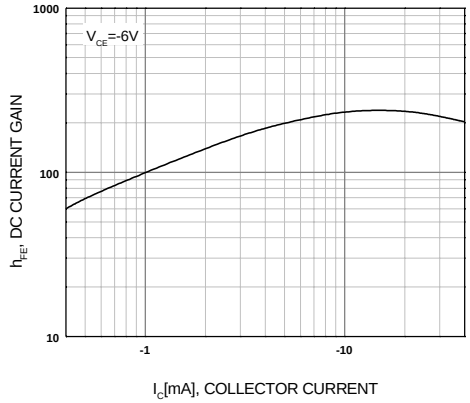
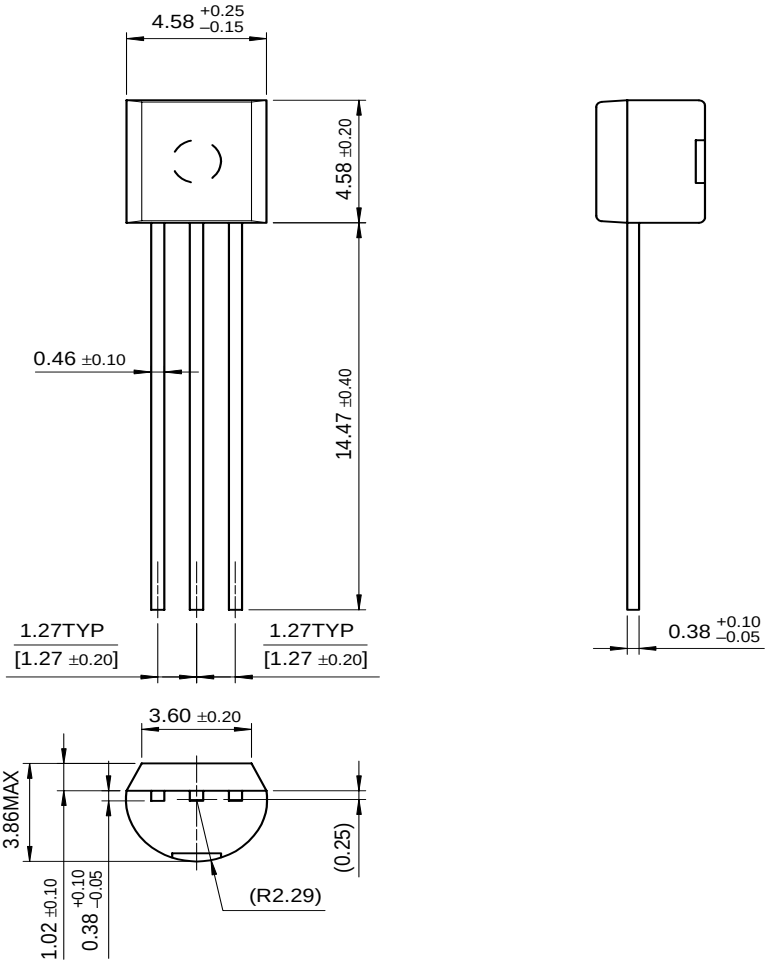


Figure 6. Current Gain Bandwidth Product

Package Dimensions

TO-92



Dimensions in Millimeters

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Bottomless™	FAST®	LittleFET™	Power247™	SuperSOT™-3
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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