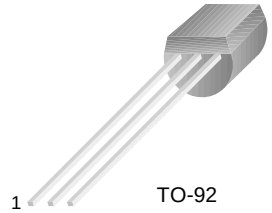
FAIRCHILD
SEMICONDUCTOR®

KSC1815

Audio Frequency Amplifier & High Frequency OSC

- Complement to KSA1015
- Collector-Base Voltage : V_{CBO}= 50V



TO-92

1. Emitter 2. Collector 3. Base

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings T_a=25°C unless otherwise noted

Symbol	Parameter	Value	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
I_B	Base Current	50	mA
P_C	Collector Power Dissipation	400	mW
T_J	Junction Temperature	125	°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
I_{CBO}	Collector Cut-off Current	V_{CB}=60V, 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		700	
V_{CE} (sat)	Collector-Emitter Saturation Voltage	I_C=100mA, I_B=10mA		0.1	0.25	V
V_{BE} (sat)	Base-Emitter Saturation Voltage	I_C=100mA, I_B=10mA			1.0	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		2.0	3.0	pF
NF	Noise Figure	V_{CE}=6V, I_C=0.1mA R_S=10kΩ, f=1Hz		1.0	1.0	dB

h_{FE} Classification

Classification	O	Y	GR	L
h_{FE1}	70 ~ 140	120 ~ 240	200 ~ 400	350 ~ 700

Typical Characteristics

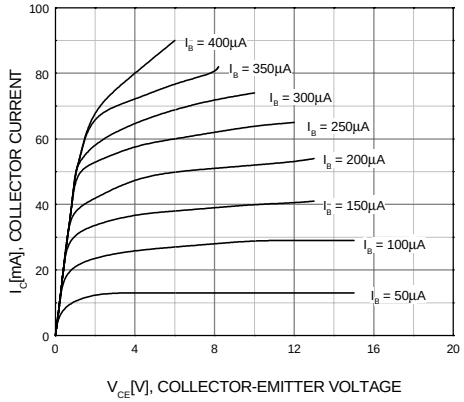


Figure 1. Static Characteristic

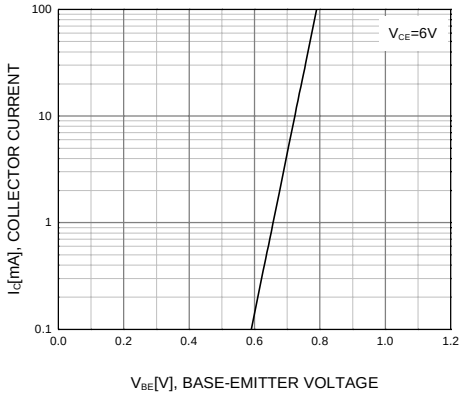


Figure 2. Transfer Characteristic

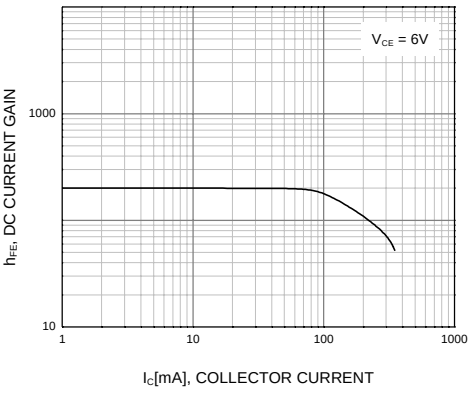


Figure 3. DC current Gain

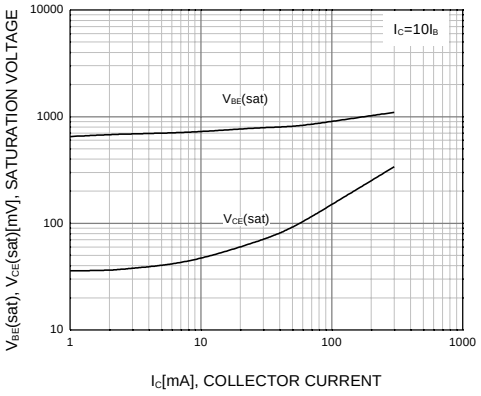


Figure 4. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

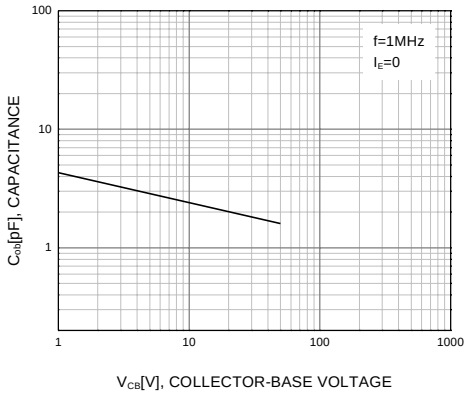


Figure 5. Output Capacitance

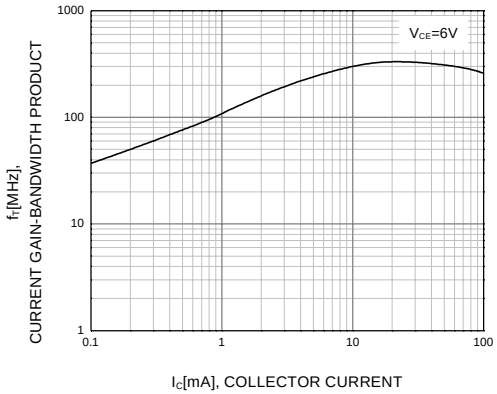


Figure 6. Current Gain Bandwidth Product

Package Dimensions

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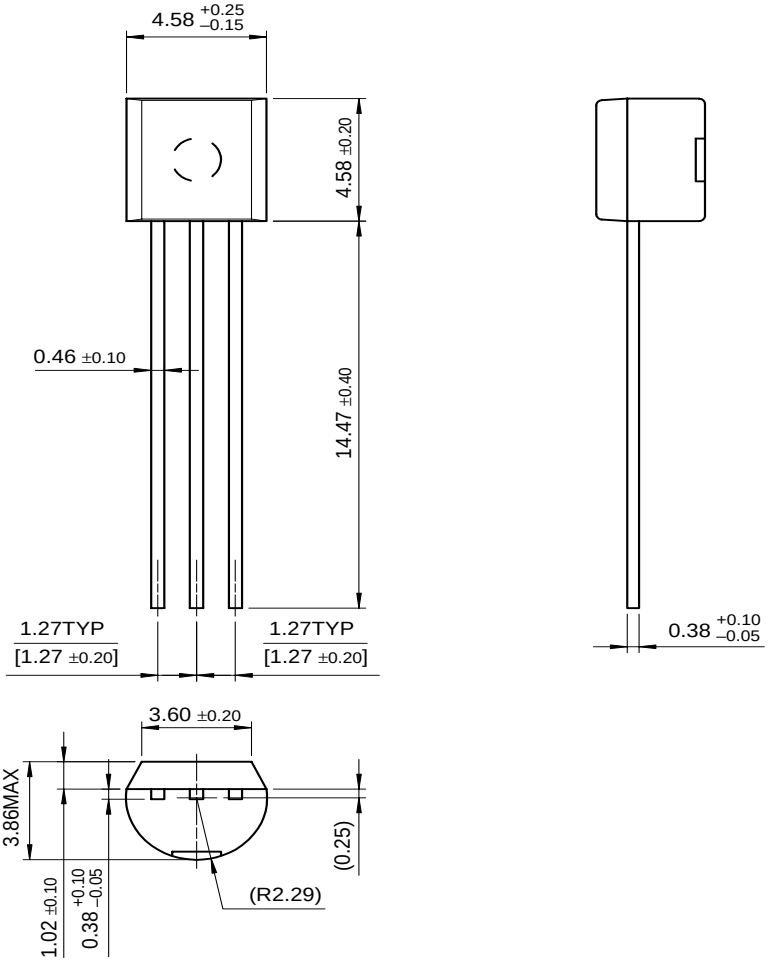

Dimensions in Millimeters

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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™
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The Power Franchise™		OPTOLOGIC®	SILENT SWITCHER®	VCX™
Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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