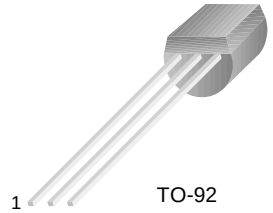
FAIRCHILD
SEMICONDUCTOR®

KSA992

Audio Frequency Low Noise Amplifier

- Complement to KSC1845



TO-92

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	-120	V
V_{CEO}	Collector-Emitter Voltage	-120	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-50	mA
I_B	Base Current	-10	mA
P_C	Collector Power Dissipation	500	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
I_{CBO}	Collector Cut-off Current	V_{CB}= -120V, I_E=0			-50	nA
I_{CEO}	Collector Cur-off Current	V_{CE}= -100V, I_B=0			-1	µA
I_{EBO}	Emitter Cut-off Current	V_{EB}= -5mA, I_C=0			-50	nA
h_{FE1} h_{FE2}	DC Current Gain	V_{CE}= -6V, I_C= -0.1mA V_{CE}= -6V, I_C= -1mA	150 200	500 500	 800	
V_{BE} (on)	Base-Emitter On Voltage	V_{CE}= -6V, I_C= -1mA	-0.55	-0.61	-0.65	V
V_{CE} (sat)	Collector-Emitter Saturation Voltage	I_C= -10mA, I_B= -1mA		-0.09	-0.3	V
f_T	Current Gain Bandwidth Product	V_{CE}= -6V, I_C= -1mA	50	100		MHz
C_{ob}	Output Capacitance	V_{CB}= -30V, I_E=0, f=1MHz		2	3	pF
NV	Noise Voltage	V_{CE} = -5.0V, I_C = -1.0mA, R_G =100KW, G_V = 80dB, f = 10Hz to 1.0KHz		25	40	mV

h_{FE2} Classification

Classification	P	F	E
h_{FE2}	200 ~ 400	300 ~ 600	400 ~ 800

Typical Characteristics

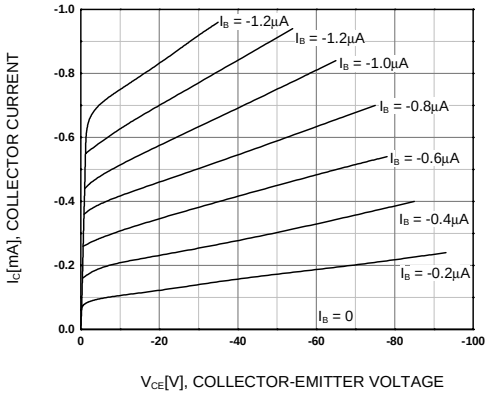


Figure 1. Static Characteristic

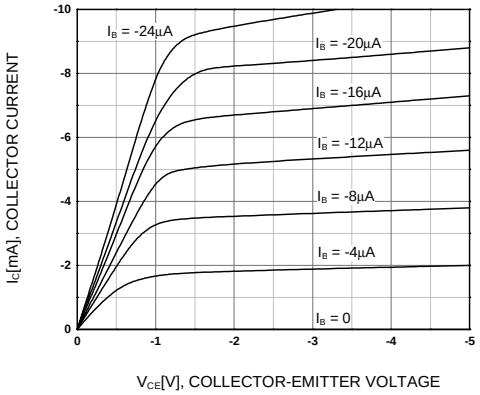


Figure 2. Static Characteristic

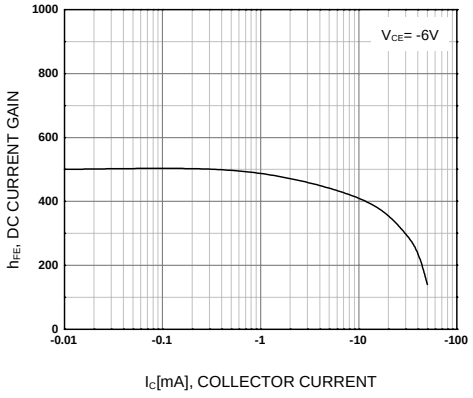


Figure 3. DC current Gain

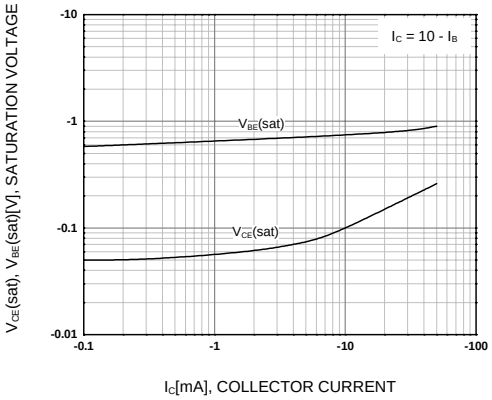


Figure 4. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

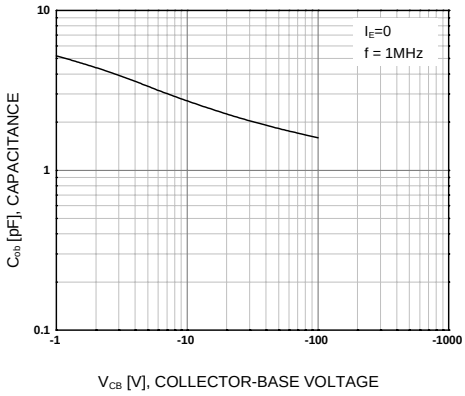


Figure 5. Collector Output Capacitance

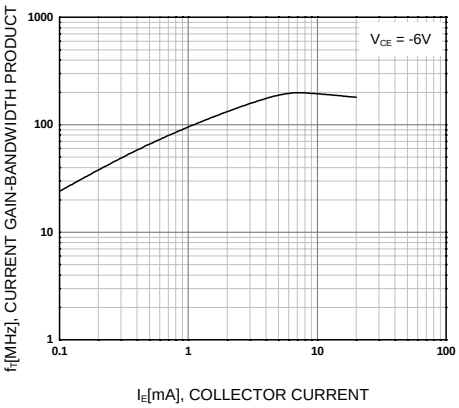


Figure 6. Current Gain Bandwidth Product

Typical Characteristics (Continued)

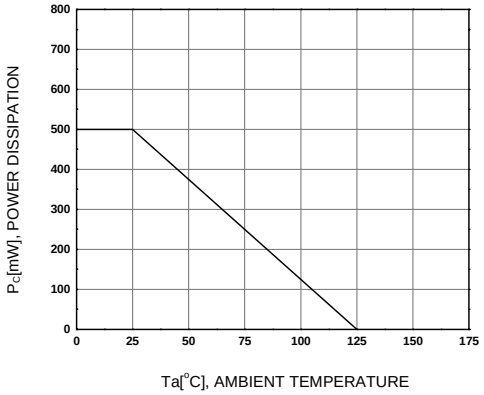


Figure 7. Power Derating

Package Dimensions

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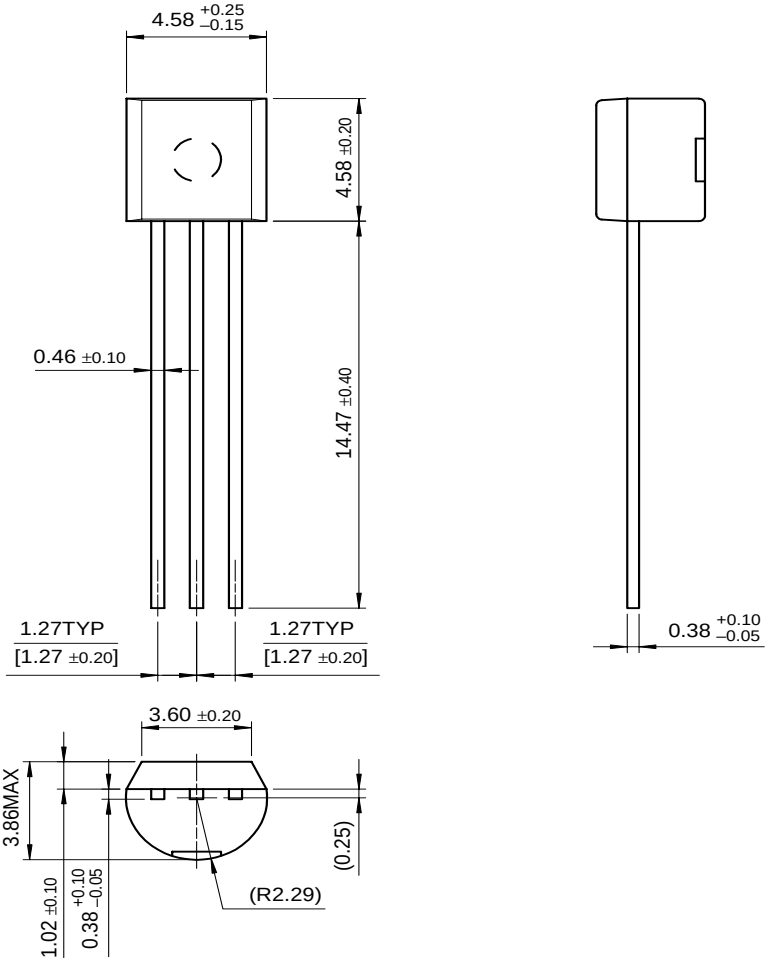

Dimensions in Millimeters

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CROSSVOLT™	GlobalOptoisolator™	MicroPak™	QS™	SyncFET™
DOME™	GTO™	MICROWIRE™	QT Optoelectronics™	TinyLogic®
EcoSPARK™	HiSeC™	MSX™	Quiet Series™	TINYOPTO™
E^2CMOS™	I^2C™	MSXPro™	RapidConfigure™	TruTranslation™
EnSigna™	*i-Lo*™	OCX™	RapidConnect™	UHC™
FACT™	ImpliedDisconnect™	OCXPro™	µSerDes™	UltraFET®
FACT Quiet Series™		OPTOLOGIC®	SILENT SWITCHER®	VCX™
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