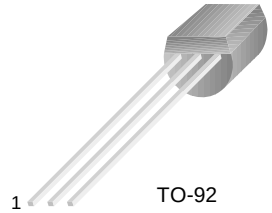
FAIRCHILD
SEMICONDUCTOR®

KSA643

Low Frequency Power Amplifier

- Collector Power Dissipation: P_C =500mW
- Complement to KSD261
- 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	-40	V
V_{CEO}	Collector-Emitter Voltage	-20	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current (DC)	-500	mA
I_{CP}	* Collector Current (pulse)	-700	mA
P_C	Collector Power Dissipation	500	mW
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	-55 ~ 150	°C

* PW≤10ms, Duty cycle≤50%

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	-40			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C= -10mA, I_B=0	-20			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			-200	nA
I_{EBO}	Emitter Cut-off Current	V_{EB}= -3V, I_C=0			-200	nA
h_{FE}	* DC Current Gain	V_{CE}= -1V, I_C= -100mA	40		400	
V_{CE}(sat)	* Collector-Emitter Saturation Voltage	I_C= -500mA, I_B= -50mA		-0.3	- 0.4	V
V_{BE}(sat)	* Base-Emitter Saturation Voltage	I_C= -500mA, I_B= -50mA		-1.0	-1.3	V

* Pulse Test: PW≤350μs, Duty cycle≤2%

h_{FE} Classification

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

Typical Characteristics

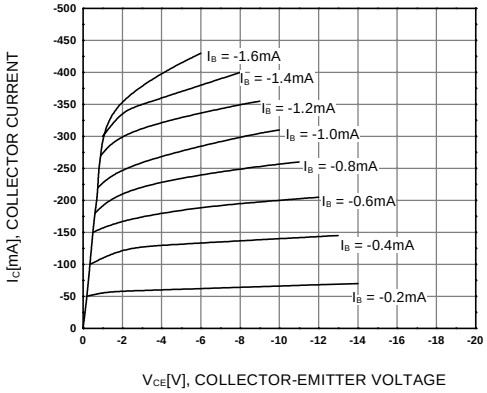


Figure 1. Static Characteristic

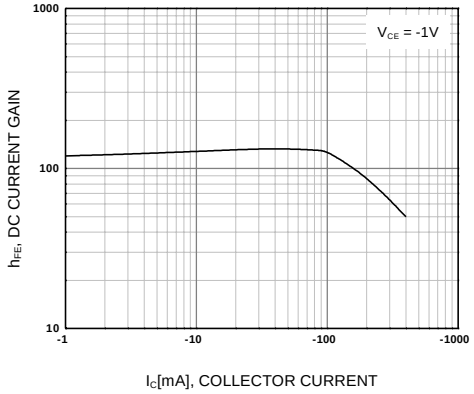


Figure 2. DC current Gain

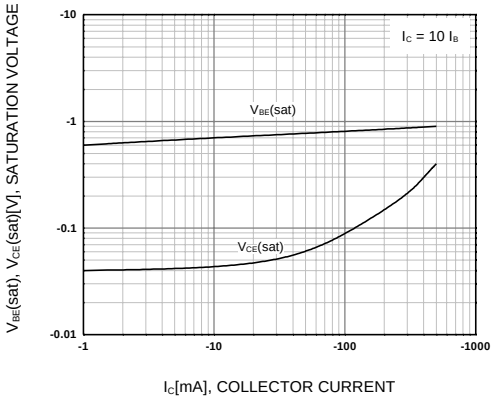


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

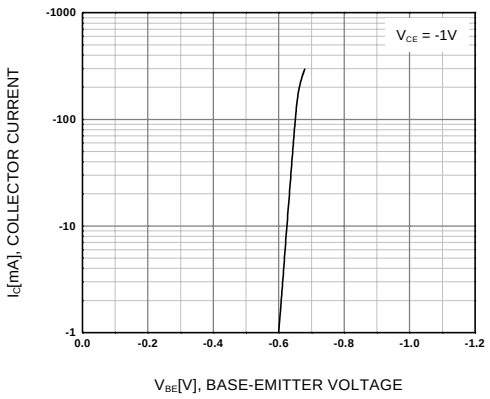


Figure 4. Base-Emitter On Voltage

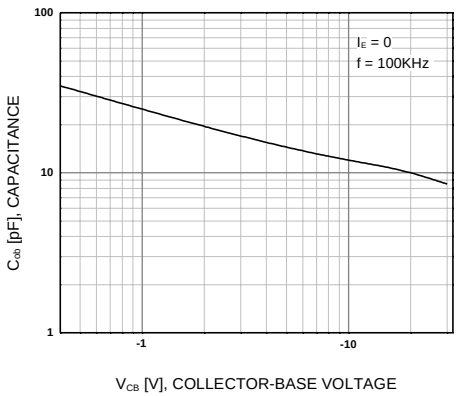
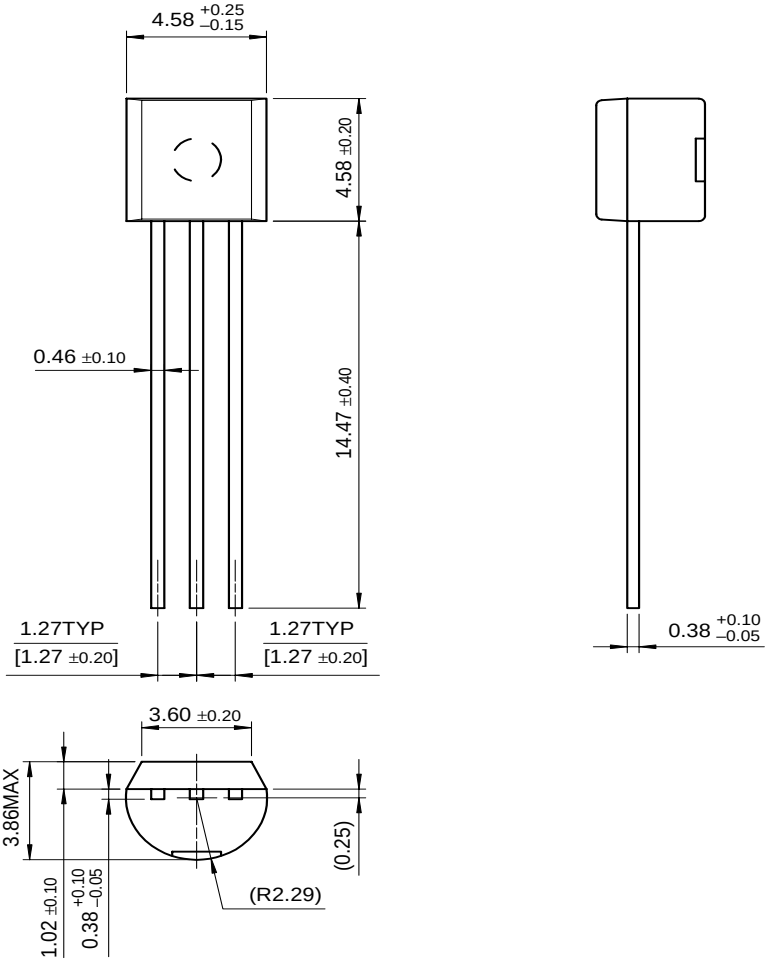


Figure 5. Collector Output Capacitance

Package Demensions

TO-92



Dimensions in Millimeters

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QS™
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