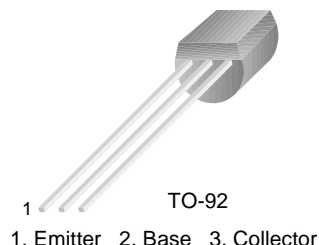


KSA642

KSA642

Low Frequency Power Amplifier

- Complement to KSD227
- Collector Power Dissipation : $P_C = 400\text{mW}$
- Suffix “-C” means Center Collector (1. Emitter 2. Collector 3. Base)



PNP Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Ratings	Units
V_{CBO}	Collector-Base Voltage	-30	V
V_{CEO}	Collector-Emitter Voltage	-25	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current (DC)	-300	mA
I_{CP}	* Collector Current (Pulse)	-500	mA
P_C	Collector Power Dissipation	400	mW
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	-55 ~ 150	$^\circ\text{C}$

* $PW \leq 10\text{ms}$, Duty cycle $\leq 50\%$

Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	$I_C = -100\mu\text{A}$, $I_E = 0$	-30			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C = -10\text{mA}$, $I_B = 0$	-25			V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E = -10\mu\text{A}$, $I_C = 0$	- 5			V
I_{CBO}	Collector Cut-off Current	$V_{CB} = -25\text{V}$, $I_E = 0$			-100	nA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = -3\text{V}$, $I_C = 0$			-100	nA
h_{FE}	* DC Current Gain	$V_{CE} = -1\text{V}$, $I_C = -50\text{mA}$	70		400	
$V_{CE}(\text{sat})$	* Collector-Emitter Saturation Voltage	$I_C = -300\text{mA}$, $I_B = -30\text{mA}$		-0.35	-0.6	V

* Pulse Test: $PW \leq 350\mu\text{s}$, Duty cycle $\leq 2\%$

h_{FE} Classification

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

Typical Characteristics

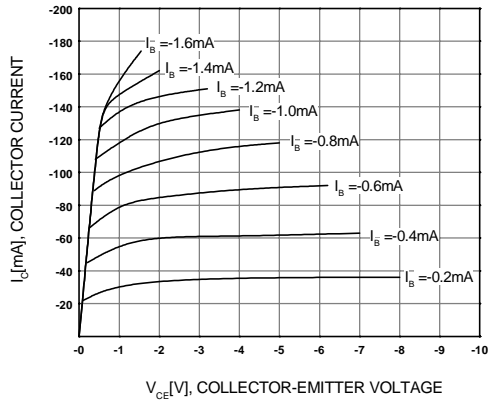


Figure 1. Static Characteristic

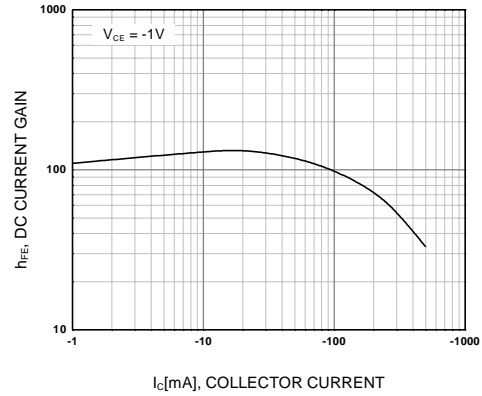


Figure 2. DC current Gain

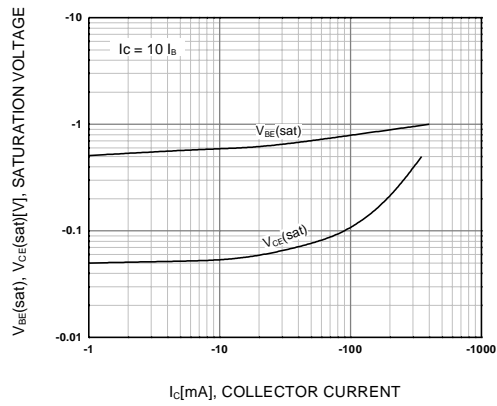


Figure 3. Base-Emitter Saturation Voltages
Collector-Emitter Saturation Voltage

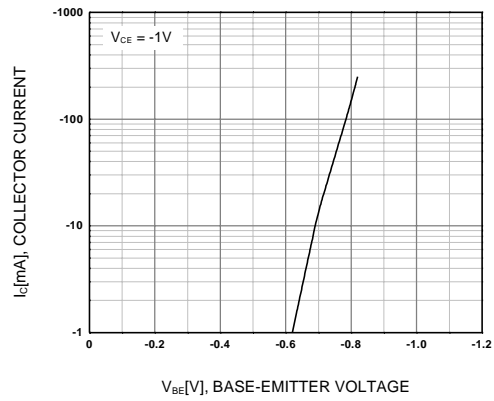


Figure 4. Base-Emitter On Voltage

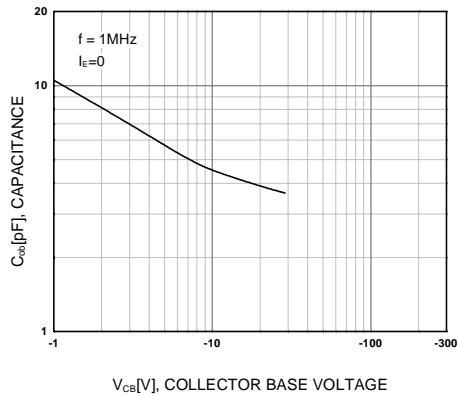
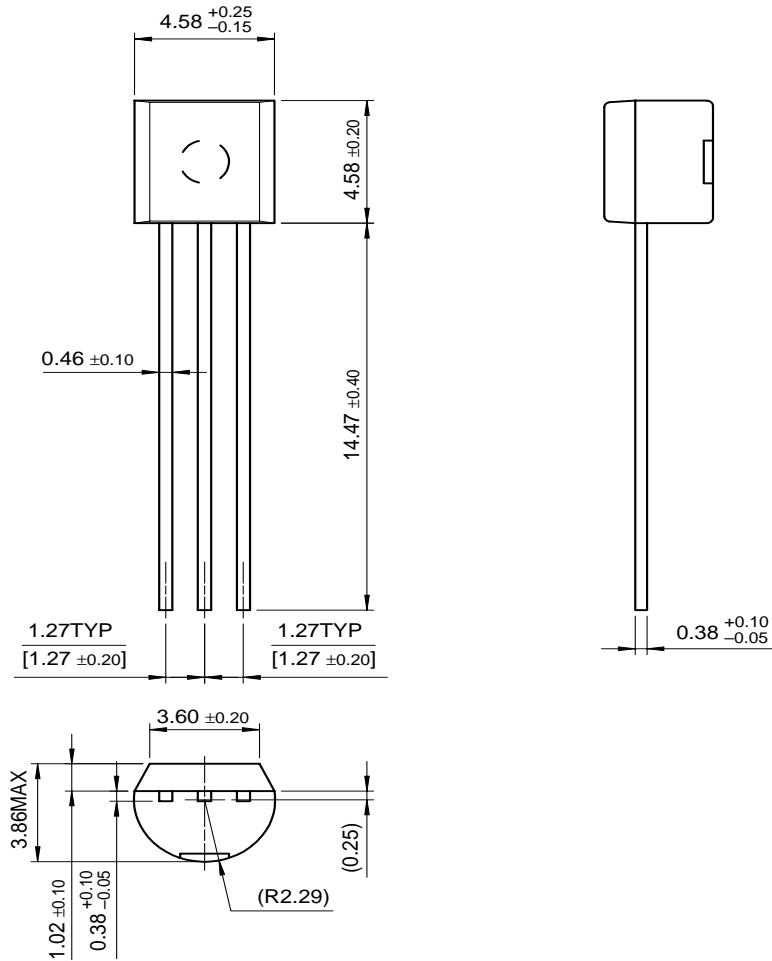


Figure 5. Collector Output Capacitance

Package Dimensions

TO-92



Dimensions in Millimeters

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