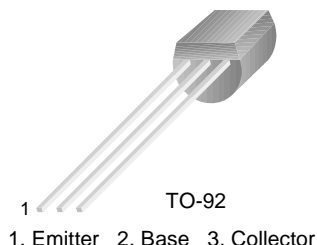


KSA733

Low Frequency Amplifier

- Collector-Base Voltage : $V_{CBO} = -60V$
- Complement to KSC945
- Suffix “-C” means Center Collector (1. Emitter 2. Collector 3. Base)



PNP Epitaxial Silicon Transistor

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

| Symbol | Parameter | Ratings | 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 |
| P_C | Collector Power Dissipation | 250 | mW |
| T_J | Junction Temperature | 150 | $^\circ C$ |
| T_{STG} | Storage Temperature | -55 ~ 150 | $^\circ C$ |

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

| Symbol | Parameter | Test Condition | Min. | Typ. | Max. | Units |
|---------------|--------------------------------------|---|-------|-------|-------|-------|
| BV_{CBO} | Collector-Base Breakdown Voltage | $I_C = -100\mu A, I_E = 0$ | -60 | | | V |
| BV_{CEO} | Collector-Emitter Breakdown Voltage | $I_C = -10mA, I_B = 0$ | -50 | | | V |
| BV_{EBO} | Emitter-Base Breakdown Voltage | $I_E = -10\mu A, I_C = 0$ | -5 | | | V |
| I_{CBO} | Collector Cut-off Current | $V_{CB} = -60V, I_E = 0$ | | | -100 | nA |
| I_{EBO} | Emitter Cut-off Current | $V_{EB} = -5V, I_C = 0$ | | | -100 | nA |
| h_{FE} | DC Current Gain | $V_{CE} = -6V, I_C = -1mA$ | 40 | | 700 | |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C = -100mA, I_B = -10mA$ | | -0.18 | -0.3 | V |
| $V_{BE(on)}$ | Base-Emitter On Voltage | $V_{CE} = -6V, I_C = -1mA$ | -0.50 | -0.62 | -0.80 | V |
| f_T | Current Gain Bandwidth Product | $V_{CE} = -6V, I_C = -10mA$ | 50 | 180 | | MHz |
| C_{ob} | Output Capacitance | $V_{CB} = -10V, I_E = 0, f = 1MHz$ | | 2.8 | | pF |
| NF | Noise Figure | $V_{CE} = -6V, I_C = -0.3mA, f = 1MHz, R_s = 10k\Omega$ | | 6.0 | 20 | dB |

h_{FE} Classification

| Classification | R | O | Y | G | L |
|----------------|---------|----------|-----------|-----------|-----------|
| h_{FE} | 40 ~ 80 | 70 ~ 140 | 120 ~ 240 | 200 ~ 400 | 350 ~ 700 |

Typical Characteristics

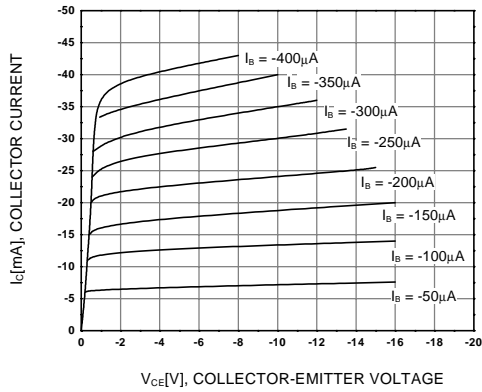


Figure 1. Static Characteristic

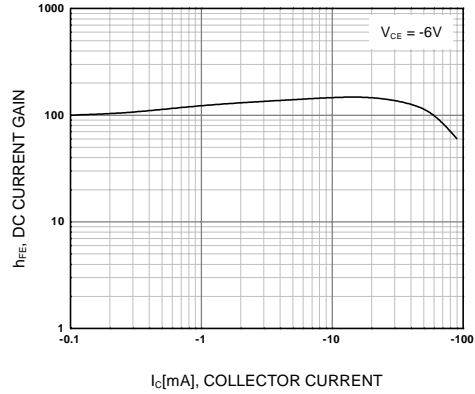


Figure 2. DC current Gain

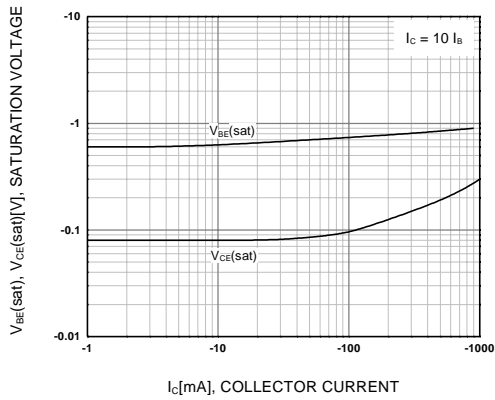


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

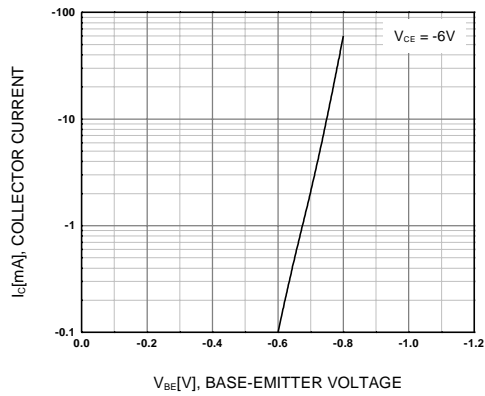


Figure 4. Base-Emitter On Voltage

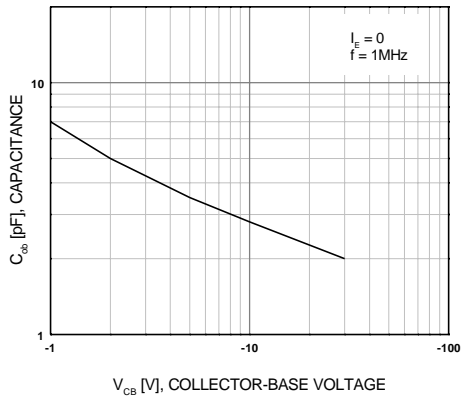


Figure 5. Collector Output Capacitance

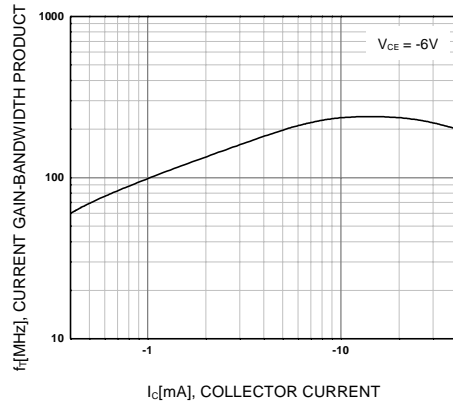


Figure 6. Current Gain Bandwidth Product

Package Dimensions

TO-92



Dimensions in Millimeters

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