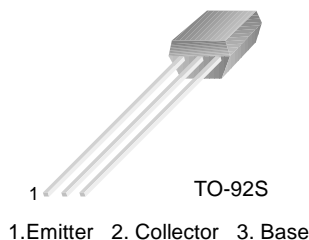


KSC2785

KSC2785

Audio Frequency Amplifier & High Frequency OSC.

- Complement to KSA1175
- Collector-Base Voltage : $V_{CBO}=60V$



NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_a=25^\circ C$ 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 |
| 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 | $V_{CB}=40V, I_E=0$ | | | 0.1 | μA |
| I_{EBO} | Emitter Cut-off Current | $V_{EB}=3V, I_C=0$ | | | 0.1 | μA |
| h_{FE} | DC Current Gain | $V_{CE}=6V, I_C=1.0mA$ | 70 | | 700 | |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C=100mA, I_B=10mA$ | | 0.15 | 0.3 | V |
| f_T | Current Gain Bandwidth Product | $V_{CE}=6V, I_C=10mA$ | | 300 | | MHz |
| C_{ob} | Output Capacitance | $V_{CB}=6V, I_E=0, f=1MHz$ | | 2.5 | | pF |
| NF | Noise Figure | $V_{CE}=6, I_C=0.5mA, f=1KHz, R_S=500\Omega$ | | 4.0 | | dB |

h_{FE} Classification

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

Typical Characteristics

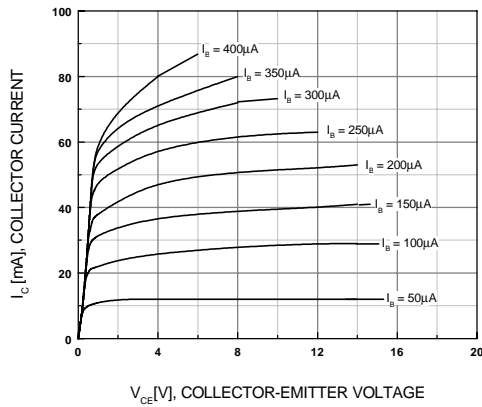


Figure 1. Static Characteristics

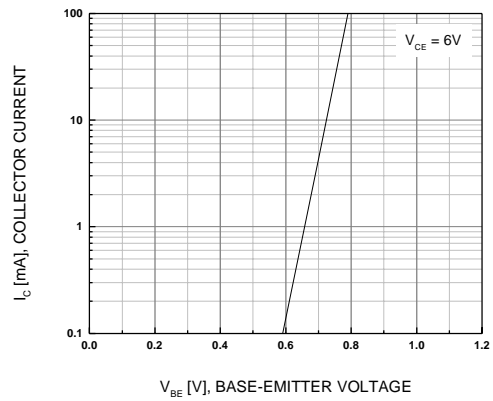


Figure 2. Base-Emitter On Voltage

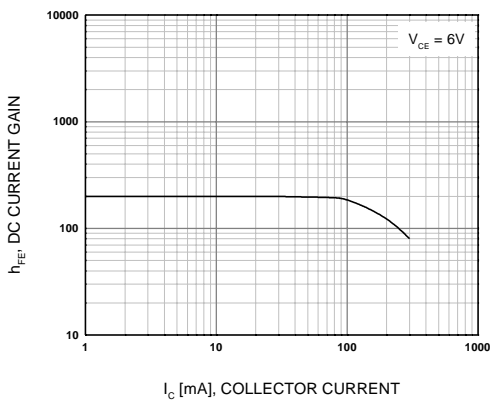


Figure 3. DC Current Gain

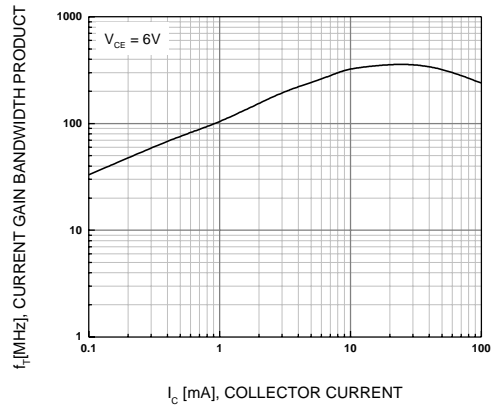


Figure 4. $f_T - I_C$

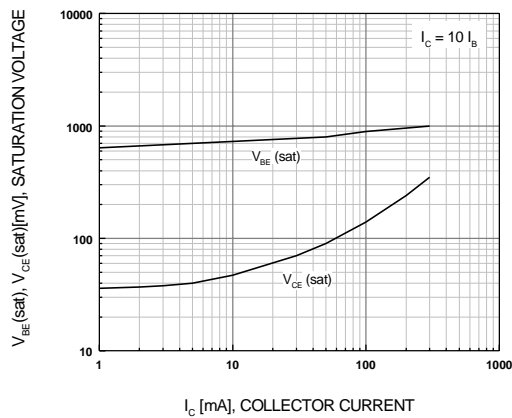


Figure 5. Saturation Voltage

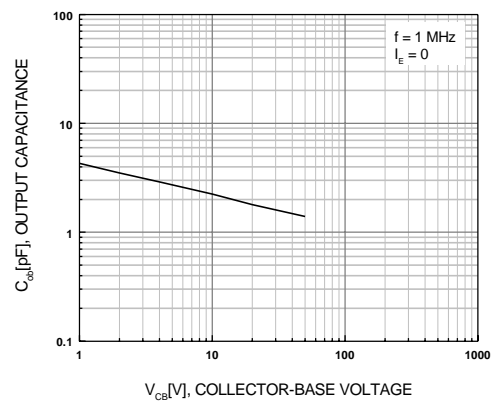
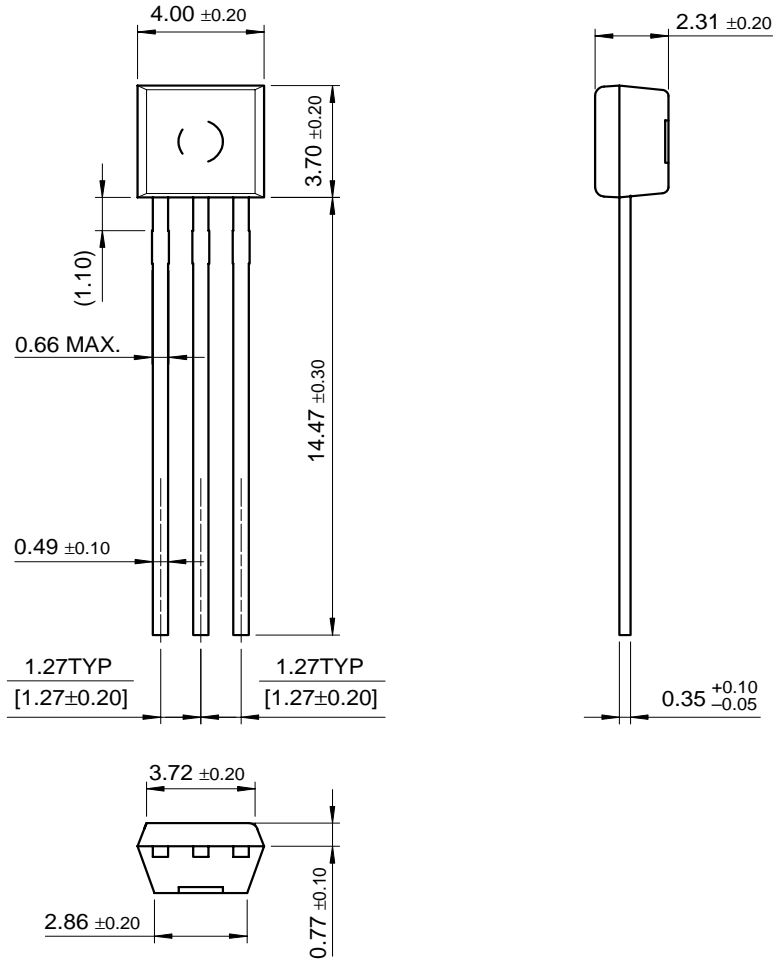


Figure 6. Output Capacitance

Package Dimensions

TO-92S



Dimensions in Millimeters

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