



KSP8598/8599

Amplifier Transistor

- Collector-Emitter Voltage: V_{CEO} = KSP8598: 60V
KSP8599: 80V
- Collector Power Dissipation: P_C (max) = 625mW
- 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 | Value | Units |
|-----------|---|------------|------------------|
| V_{CBO} | Collector-Base Voltage : KSP8598 : KSP8599 | -60 -80 | V |
| V_{CEO} | Collector-Emitter Voltage : KSP8598 : KSP8599 | -60 -80 | V |
| V_{EBO} | Emitter-Base Voltage | -5 | V |
| I_C | Collector Current | -500 | mA |
| P_C | Collector Power Dissipation | 625 | mW |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{STG} | Storage Temperature | -55 ~ 150 | $^\circ\text{C}$ |

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

| Symbol | Parameter | Test Condition | Min. | Max. | Units |
|----------------------|---|--|------------------|--------------|----------|
| BV_{CBO} | Collector-Base Breakdown Voltage : KSP8598 : KSP8599 | $I_C = -100\mu\text{A}$, $I_E = 0$ | -60 -80 | | V |
| BV_{CEO} | * Collector-Emitter Breakdown Voltage : KSP8598 : KSP8599 | $I_C = -10\text{mA}$, $I_B = 0$ | -60 -80 | | V |
| BV_{EBO} | Emitter-Base Breakdown Voltage | $I_E = -10\mu\text{A}$, $I_C = 0$ | -5 | | V |
| I_{CBO} | Collector Cut-off Current : KSP8598 : KSP8599 | $V_{CB} = -60\text{V}$, $I_E = 0$ $V_{CB} = -80\text{V}$, $I_E = 0$ | | -100 -100 | nA nA |
| I_{CEO} | Collector Cut-off Current | $V_{CE} = -60\text{V}$, $I_B = 0$ | | -100 | nA |
| I_{EBO} | Emitter Cut-off Current | $V_{EB} = -4\text{V}$, $I_C = 0$ | | -100 | nA |
| h_{FE} | * DC Current Gain | $V_{CE} = -5\text{V}$, $I_C = -1\text{mA}$ $V_{CE} = -5\text{V}$, $I_C = -10\text{mA}$ $V_{CE} = -5\text{V}$, $I_C = -100\text{mA}$ | 100 100 75 | 300 | |
| $V_{CE}(\text{sat})$ | * Collector-Emitter Saturation Voltage | $I_C = -100\text{mA}$, $I_B = -5\text{mA}$ $I_C = -100\text{mA}$, $I_B = -10\text{mA}$ | | -0.4 -0.3 | V |
| $V_{BE}(\text{on})$ | * Base-Emitter On Voltage : KSP8598 : KSP8599 | $V_{CE} = -5\text{V}$, $I_C = -1\text{mA}$ $V_{CE} = -5\text{V}$, $I_C = -10\text{mA}$ | -0.5 -0.6 | -0.7 -0.8 | V |
| f_T | Current Gain Bandwidth Product | $V_{CE} = -5\text{V}$, $I_C = -10\text{mA}$ $f = 100\text{MHz}$ | 150 | | MHz |
| C_{ob} | Output Capacitance | $V_{CB} = -5\text{V}$, $I_E = 0$ $f = 1\text{MHz}$ | | 8 | pF |

* Pulse Test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycles $\leq 2\%$

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Typical Characteristics

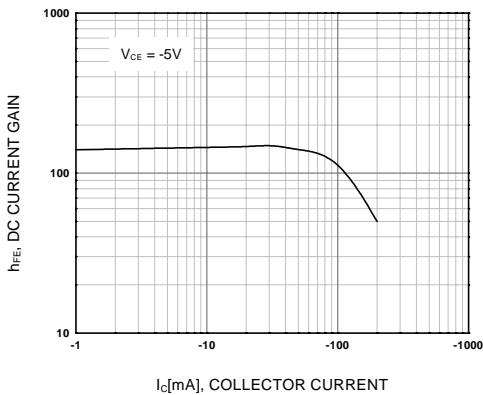


Figure 1. DC current Gain

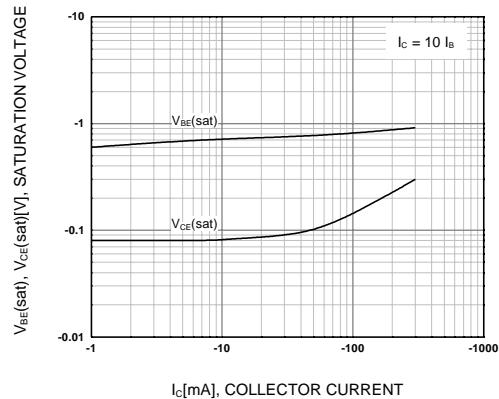


Figure 2. Collector-Emitter Saturation Voltage
Base-Emitter Saturation Voltage

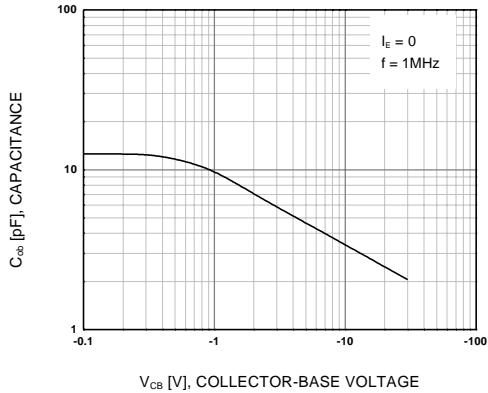


Figure 3. Output Capacitance

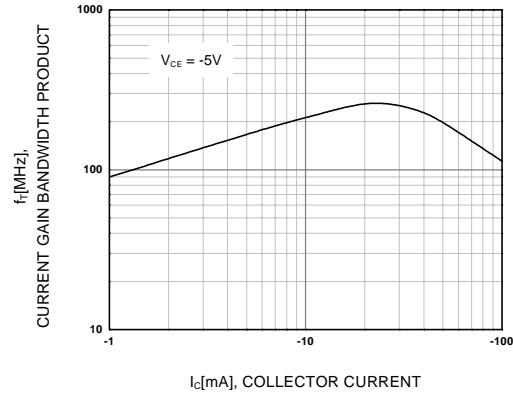
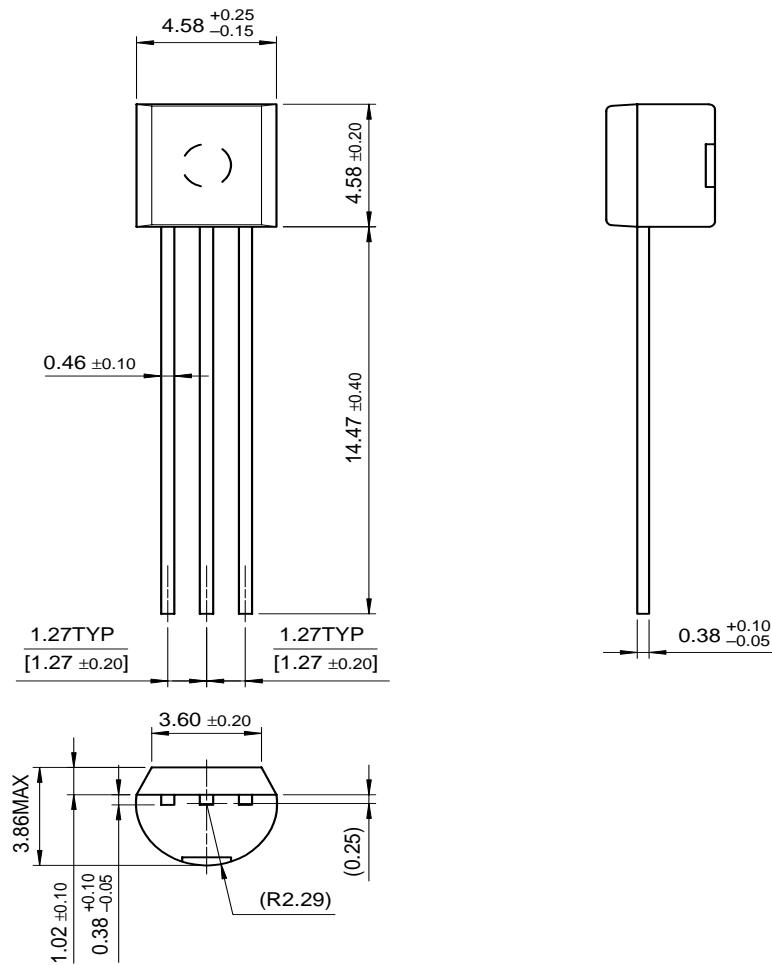


Figure 4. Current Gain Bandwidth Product

Package Demensions

TO-92



Dimensions in Millimeters

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