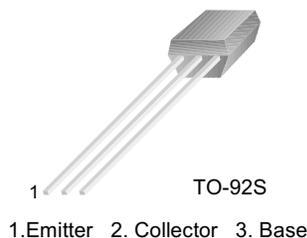


KSC2787

KSC2787

FM/AM RF AMP, MIX, CONV, OSC, IF

- Collector-Emitter Voltage : $V_{CE0}=30V$
- High Current Gain Bandwidth Product : $f_T=300MHz$ (TYP.)
- Low Output Capacitance : $C_{OB}=2.0pF$ (TYP.)



NPN Epitaxial Silicon Transistor

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

| Symbol | Parameter | Value | Units |
|-----------|---------------------------|-----------|------------|
| V_{CBO} | Collector-Base Voltage | 50 | V |
| V_{CEO} | Collector-Emitter Voltage | 30 | V |
| V_{EBO} | Emitter-Base Voltage | 5 | V |
| I_C | Collector Current | 50 | mA |
| P_C | Collector 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 | $I_C=10\mu A, I_E=0$ | 50 | | | V |
| BV_{CEO} | Collector-Emitter Breakdown Voltage | $I_C=5mA, I_B=0$ | 30 | | | V |
| BV_{EBO} | Emitter-Base Breakdown Voltage | $I_E=10\mu A, I_C=0$ | 5 | | | V |
| I_{CBO} | Collector Cut-off Current | $V_{CB}=50V, I_E=0$ | | | 0.1 | μA |
| I_{EBO} | Emitter Cut-off Current | $V_{EB}=5V, I_C=0$ | | | 0.1 | μA |
| h_{FE} | DC Current Gain | $V_{CE}=6V, I_C=1mA$ | 40 | | 240 | |
| V_{BE} (on) | Base-Emitter On Voltage | $V_{CE}=6V, I_C=1mA$ | | 0.67 | 0.75 | V |
| V_{CE} (sat) | Collector-Emitter Saturation Voltage | $I_C=10mA, I_B=1mA$ | | 0.08 | 0.3 | V |
| f_T | Current Gain Bandwidth Product | $V_{CE}=6V, I_C=1mA$ | 150 | 300 | | MHz |
| C_{ob} | Output Capacitance | $V_{CB}=6V, I_E=0, f=1MHz$ | | 2.0 | 2.5 | pF |

h_{FE} Classification

| Classification | R | O | Y |
|----------------|---------|----------|-----------|
| h_{FE} | 40 ~ 80 | 70 ~ 140 | 120 ~ 240 |

Typical Characteristics

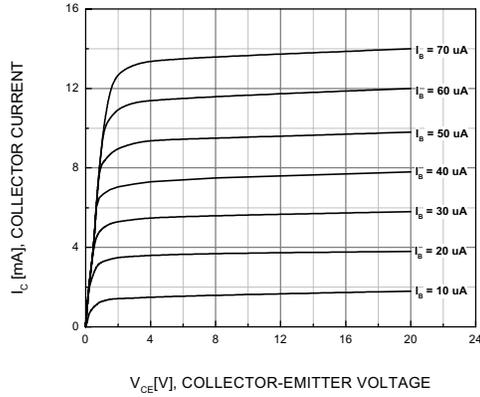


Figure 1. Static Characteristics

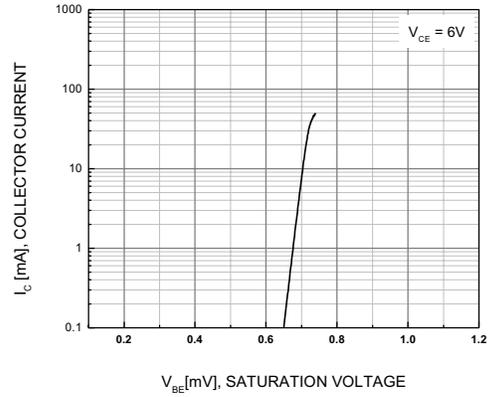


Figure 2. Base-Emitter On Voltage

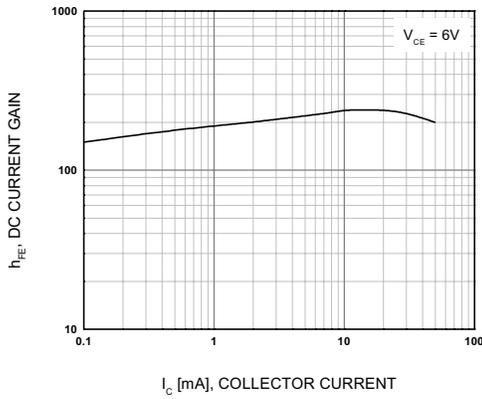


Figure 3. DC Current Gain

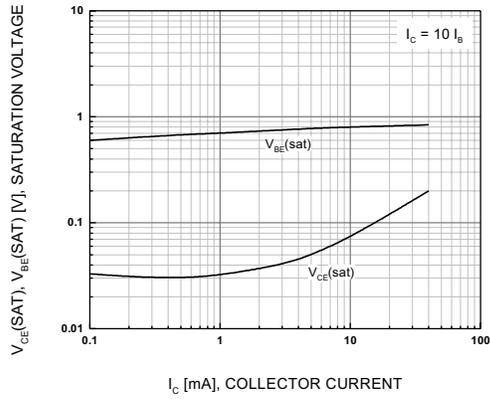


Figure 4. Saturation Voltage

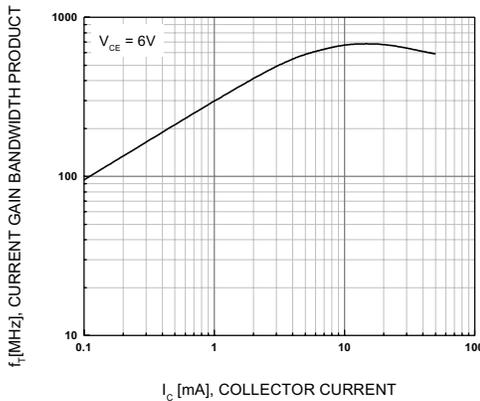


Figure 5. $f_T - I_C$

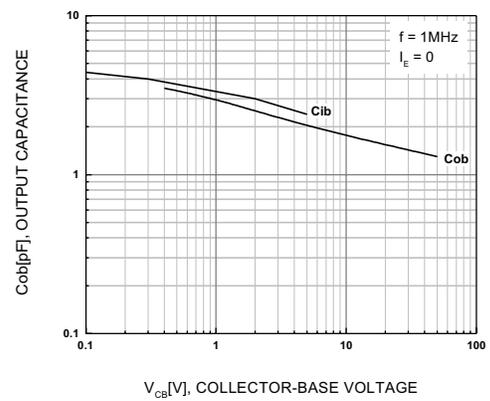
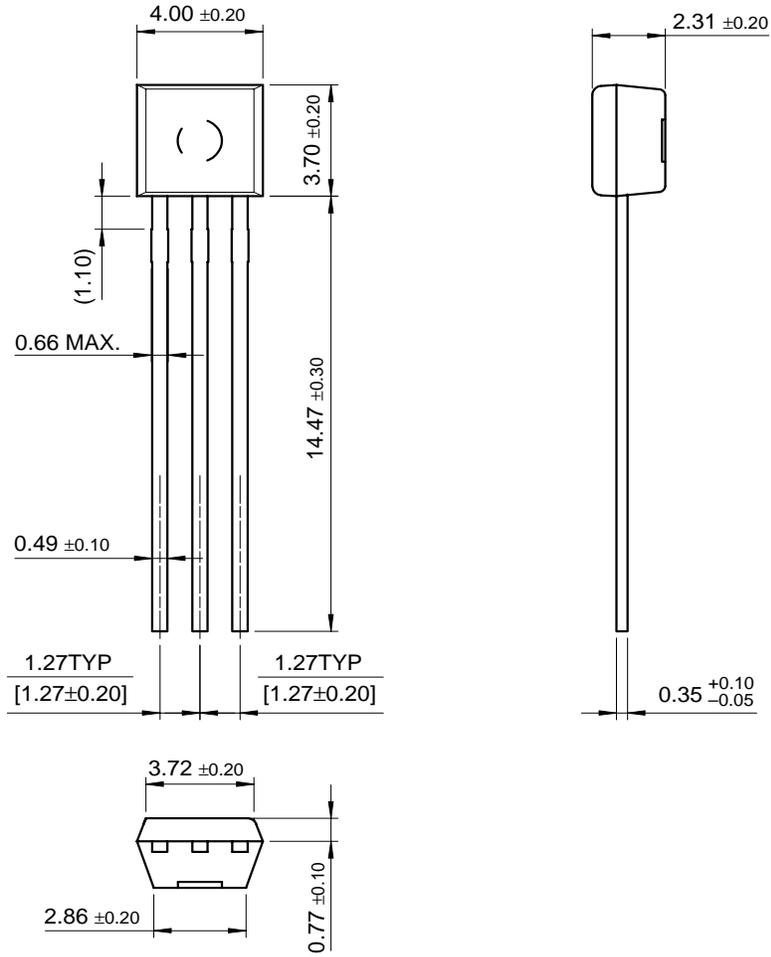


Figure 6. Output Capacitance

Package Dimensions

TO-92S



Dimensions in Millimeters

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|----------------------|---------------|-------------|
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| CROSSVOLT™ | POP™ | UHC™ |
| E ² CMOS™ | PowerTrench® | VCX™ |
| FACT™ | QFET™ | |
| FACT Quiet Series™ | QS™ | |
| FAST® | Quiet Series™ | |
| FASTr™ | SuperSOT™-3 | |
| GTO™ | SuperSOT™-6 | |

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