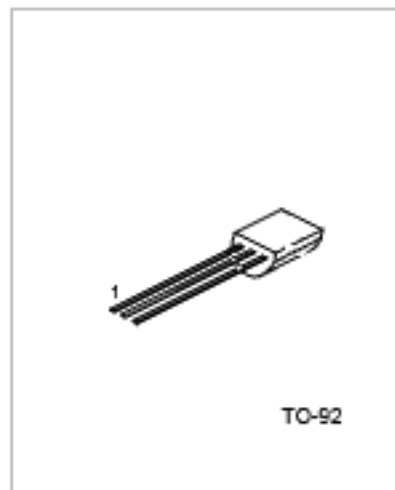


AM/FM AMPLIFIER, LOCAL  
OSCILLATOR OF FM/VHF  
TUNER

#### FEATURES

\*High Current Gain Bandwidth Product

$f_T=1.1\text{GHz}$  (Typ)



1:EMITTER 2:BASE 3:COLLECTOR

#### ABSOLUTE MAXIMUM RATINGS (Ta=25°C, unless otherwise noted)

| PARAMETER                   | SYMBOL    | VALUE      | UNIT |
|-----------------------------|-----------|------------|------|
| Collector-Base Voltage      | $V_{CB0}$ | 30         | V    |
| Collector-Emitter Voltage   | $V_{CE0}$ | 15         | V    |
| Emitter-Base Voltage        | $V_{EB0}$ | 5          | V    |
| Collector Current           | $I_C$     | 50         | mA   |
| Collector Power Dissipation | $P_C$     | 400        | mW   |
| Storage Temperature         | $T_{STG}$ | -55 ~ +150 | °C   |
| Junction Temperature        | $T_J$     | 150        | °C   |

#### ELECTRICAL CHARACTERISTICS (Ta=25°C)

| PARAMETER                            | SYMBOL        | TEST CONDITIONS                           | MIN | TYP  | MAX | UNIT |
|--------------------------------------|---------------|---|-----|------|-----|------|
| Collector-Base Breakdown Voltage     | $BV_{CBO}$    | $I_C=100\mu\text{A}, I_E=0$               | 30  |      |     | V    |
| Collector-Emitter Breakdown Voltage  | $BV_{CEO}$    | $I_C=1\text{mA}, I_E=0$                   | 15  |      |     | V    |
| Emitter-Base Breakdown Voltage       | $BV_{EBO}$    | $I_C=100\mu\text{A}, I_C=0$               | 5   |      |     | V    |
| Collector Cut-Off Current            | $I_{CBO}$     | $V_{CE}=12\text{V}, I_E=0$                |     |      | 50  | nA   |
| Collector-Emitter Saturation Voltage | $V_{CE(SAT)}$ | $I_C=10\text{mA}, I_E=1\text{mA}$         |     |      | 0.5 | V    |
| DC Current Gain                      | $\beta_{DC}$  | $V_{CE}=5\text{V}, I_C=1\text{mA}$        | 28  | 100  | 198 |      |
| Current Gain Bandwidth Product       | $f_T$         | $V_{CE}=5\text{V}, I_C=5\text{mA}$        | 700 | 1100 |     | MHz  |
| Output Capacitance                   | $C_{ob}$      | $V_{CE}=10\text{V}, I_C=0, f=1\text{MHz}$ |     | 1.3  | 1.7 | pF   |

#### CLASSIFICATION of $h_{FE}$

| RANK  | D     | E     | F     | G      | H      | I       |
|-------|-------|-------|-------|--------|--------|---------|
| RANGE | 28-45 | 39-60 | 54-80 | 72-108 | 97-146 | 132-198 |

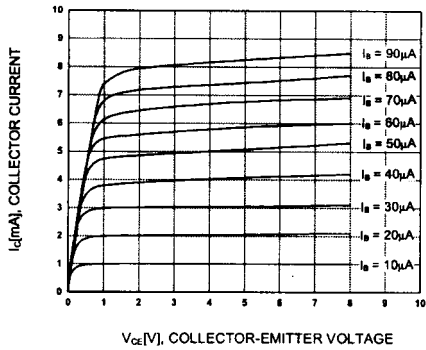


Figure 1. Static Characteristic

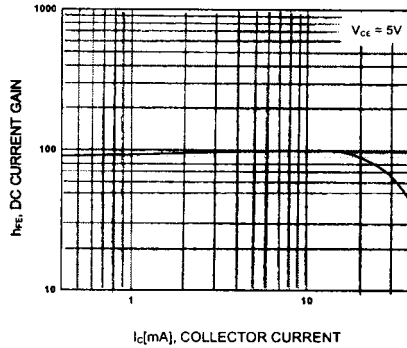


Figure 2. DC current Gain

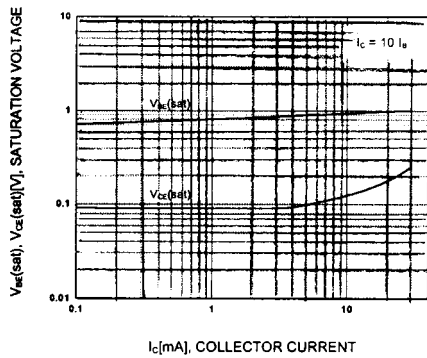


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

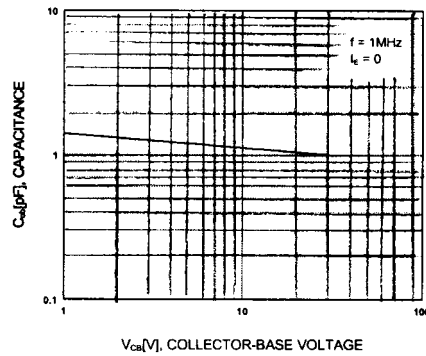


Figure 4. Output Capacitance

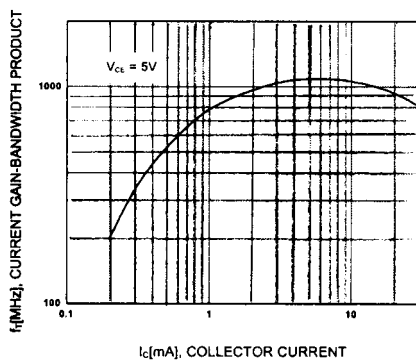


Figure 5. Current Gain Bandwidth Product

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