

Transistors

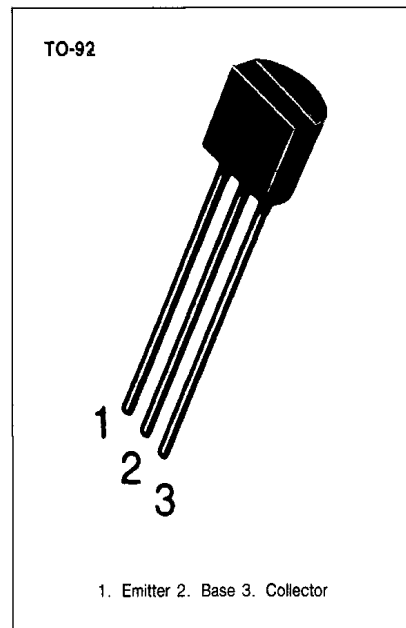
2SC184

AM FREQUENCY CONVERTER IF AMPLIFIER

- Current Gain Bandwidth Product $f_T = 100\text{MHz}$ (Typ)
- Complement to KSA542

ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

| Characteristic | Symbol | Rating | Unit |
|---------------------------|-----------|-----------|------------------|
| Collector-Base Voltage | V_{CB0} | 30 | V |
| Collector-Emitter Voltage | V_{CE0} | 25 | V |
| Emitter-Base Voltage | V_{EB0} | 5 | V |
| Collector Current | I_C | 50 | mA |
| Collector Dissipation | P_C | 250 | mW |
| Junction Temperature | T_J | 150 | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | -55 ~ 150 | $^\circ\text{C}$ |



ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

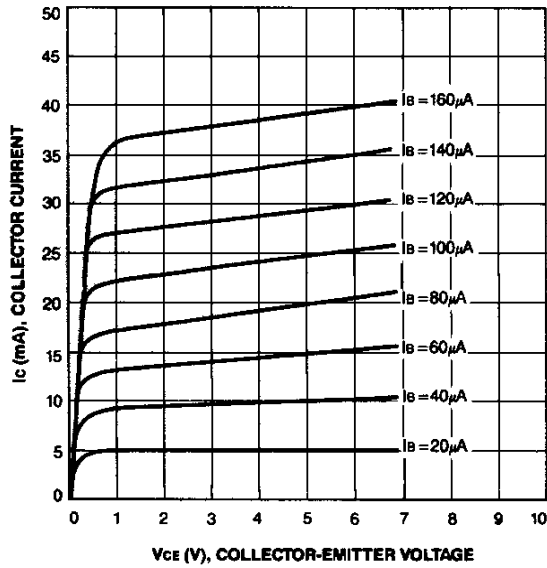
| Characteristic | Symbol | Test Conditions | Min | Typ | Max | Unit |
|--------------------------------------|---------------|--|-----|-----|------|---------------|
| Collector-Base Breakdown Voltage | BV_{CB0} | $I_C = 100\mu\text{A}, I_E = 0$ | 30 | | | V |
| Collector-Emitter Breakdown Voltage | BV_{CE0} | $I_C = 10\text{mA}, I_B = 0$ | 25 | | | V |
| Emitter-Base Breakdown Voltage | BV_{EB0} | $I_E = 10\mu\text{A}, I_C = 0$ | 5 | | | V |
| Collector Cut-off Current | I_{CB0} | $V_{CB} = 25\text{V}, I_E = 0$ | | | 0.1 | μA |
| Emitter Cut-off Current | I_{EB0} | $V_{EB} = 5\text{V}, I_C = 0$ | | | 0.1 | μA |
| DC Current Gain | h_{FE} | $V_{CE} = 6\text{V}, I_C = 1\text{mA}$ | 40 | | 1000 | |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = 10\text{mA}, I_B = 1\text{mA}$ | | 0.1 | 0.2 | V |
| Current Gain-Bandwidth Product | f_T | $V_{CE} = 6\text{V}, I_C = 1\text{mA}$ | | 100 | | MHz |
| Output Capacitance | C_{ob} | $V_{CB} = 6\text{V}, I_E = 0$ $f = 1\text{MHz}$ | | 2.6 | 4.4 | pF |

h_{FE} CLASSIFICATION

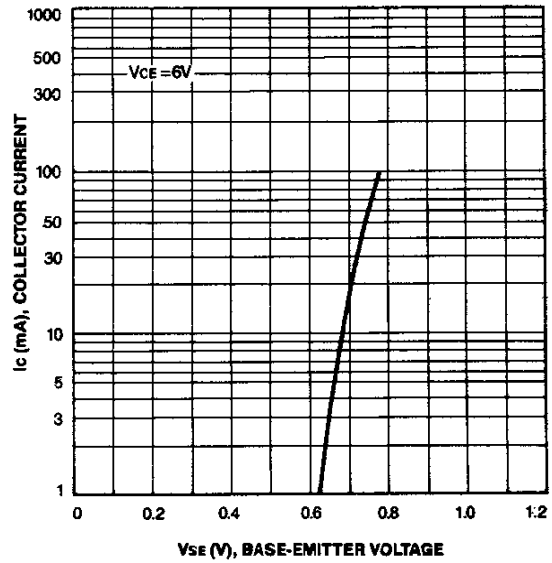
| Classification | R | O | Y | G | L | V |
|----------------|-------|--------|---------|---------|---------|----------|
| h_{FE} | 40-80 | 70-140 | 120-240 | 200-400 | 350-700 | 600-1000 |



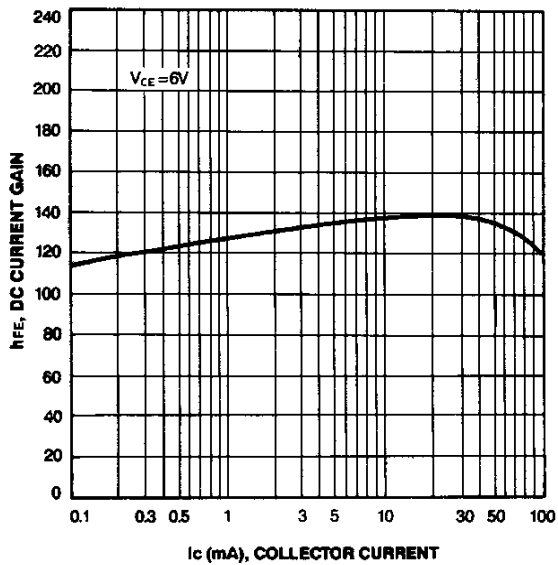
STATIC CHARACTERISTIC



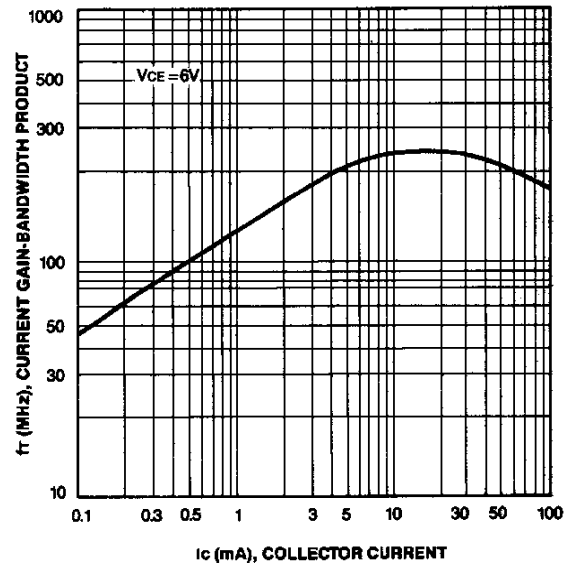
BASE-EMITTER ON VOLTAGE



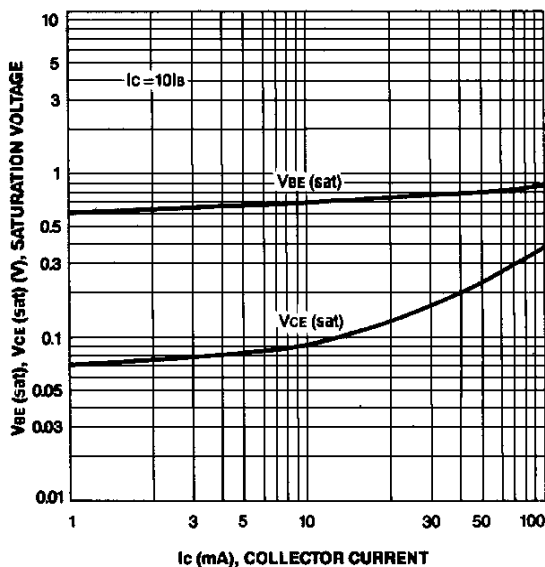
DC CURRENT GAIN



CURRENT GAIN-BANDWIDTH PRODUCT



**BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE**



COLLECTOR OUTPUT CAPACITANCE

