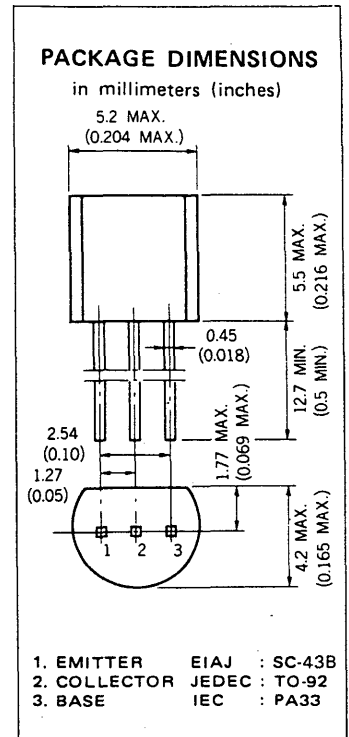


DESCRIPTION The 2SC1841 is designed for use in AF amplifier, driver and low speed switching.

- FEATURES**
- High Voltage V_{CE0} : 120 V
 - High h_{FE} h_{FE} : 600 TYP. ($V_{CE} = 6.0$ V, $I_C = 1.0$ mA)

ABSOLUTE MAXIMUM RATINGS

- Maximum Temperatures
- Storage Temperature -55 to +125 °C
 - Junction Temperature +125 °C Maximum
- Maximum Power Dissipation ($T_a = 25$ °C)
- Total Power Dissipation 500 mW
- Maximum Voltages and Currents ($T_a = 25$ °C)
- V_{CBO} Collector to Base Voltage 120 V
 - V_{CEO} Collector to Emitter Voltage 120 V
 - V_{EBO} Emitter to Base Voltage 5.0 V
 - I_C Collector Current 50 mA
 - I_B Base Current 10 mA



ELECTRICAL CHARACTERISTICS ($T_a = 25$ °C)

| SYMBOL | CHARACTERISTIC | MIN. | TYP. | MAX. | UNIT | TEST CONDITIONS |
|---------------|------------------------------|------|------|------|------|--|
| h_{FE1} | DC Current Gain | 150 | 580 | | | $V_{CE} = 6.0$ V, $I_C = 0.1$ mA |
| h_{FE2} | DC Current Gain | 200 | 600 | 1200 | | $V_{CE} = 6.0$ V, $I_C = 1.0$ mA |
| f_T | Gain Bandwidth Product | 50 | 110 | | MHz | $V_{CE} = 6.0$ V, $I_E = -1.0$ mA |
| C_{ob} | Output Capacitance | | 1.6 | 2.5 | pF | $V_{CB} = 30$ V, $I_E = 0$, $f = 1.0$ MHz |
| I_{CBO} | Collector Cutoff Current | | | 50 | nA | $V_{CB} = 120$ V, $I_E = 0$ |
| I_{EBO} | Emitter Cutoff Current | | | 50 | nA | $V_{EB} = 5.0$ V, $I_C = 0$ |
| V_{BE} | Base to Emitter Voltage | 550 | 590 | 650 | mV | $V_{CE} = 6.0$ V, $I_C = 1.0$ mA |
| $V_{BE(sat)}$ | Base Saturation Voltage | | 0.73 | 1.0 | V | $I_C = 10$ mA, $I_B = 1.0$ mA |
| $V_{CE(sat)}$ | Collector Saturation Voltage | | 70 | 300 | mV | $I_C = 10$ mA, $I_B = 1.0$ mA |

Classification of h_{FE2}

| Rank | P | F | E | U |
|-------|-----------|-----------|-----------|------------|
| Range | 200 - 400 | 300 - 600 | 400 - 800 | 600 - 1200 |

h_{FE} Test Conditions : $V_{CE} = 6.0$ V, $I_C = 1.0$ mA

TYPICAL CHARACTERISTICS (Ta = 25 °C unless otherwise noted)

