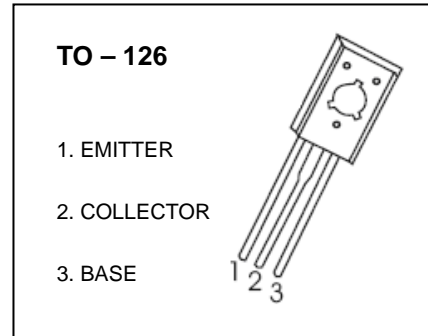
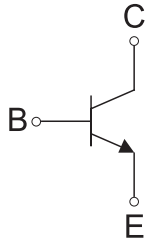


2SC2314 TRANSISTOR (NPN)

FEATURES

- Transceiver Driver Applications

Equivalent Circuit



MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

| Symbol | Parameter | Value | Unit |
|-----------------|--|----------|----------------------|
| V_{CBO} | Collector-Base Voltage | 75 | V |
| V_{CEO} | Collector-Emitter Voltage | 45 | V |
| V_{EBO} | Emitter-Base Voltage | 5 | V |
| I_C | Collector Current | 1 | A |
| P_C | Collector Power Dissipation | 0.75 | W |
| $R_{\theta JA}$ | Thermal Resistance From Junction To Ambient | 167 | $^{\circ}\text{C/W}$ |
| T_J, T_{stg} | Operation Junction and Storage Temperature Range | -55~+150 | $^{\circ}\text{C}$ |

$T_a=25\text{ }^\circ\text{C}$ unless otherwise specified

| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|--------------------------------------|---------------|---|-----|-----|-----|---------------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C=10\mu\text{A}, I_E=0$ | 75 | | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C=1\text{mA}, I_B=0$ | 45 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E=10\mu\text{A}, I_C=0$ | 5 | | | V |
| Collector cut-off current | I_{CBO} | $V_{CB}=40\text{V}, I_E=0$ | | | 1 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB}=4\text{V}, I_C=0$ | | | 1 | μA |
| DC current gain | h_{FE} | $V_{CE}=5\text{V}, I_C=500\text{mA}$ | 60 | | 320 | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=500\text{mA}, I_B=50\text{mA}$ | | | 0.6 | V |
| Base-emitter saturation voltage | $V_{BE(sat)}$ | $I_C=500\text{mA}, I_B=50\text{mA}$ | | | 1.2 | V |
| Collector output capacitance | C_{ob} | $V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$ | | | 25 | pF |
| Transition frequency | f_T | $V_{CE}=10\text{V}, I_C=50\text{mA}$ | 180 | | | MHz |

CLASSIFICATION OF h_{FE}

| RANK | D | E | F |
|-------|--------|---------|---------|
| RANGE | 60-120 | 100-200 | 160-320 |

