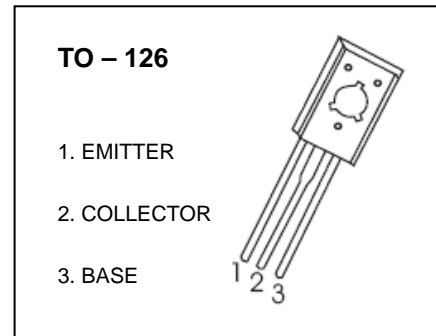


TO-126 Plastic-Encapsulate Transistors

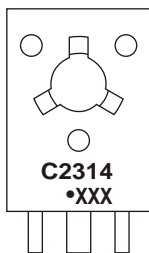
2SC2314 TRANSISTOR (NPN)

FEATURES

- Transceiver Driver Applications

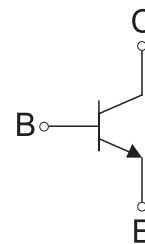


MARKING



C2314=Device code
Solid dot= Green molding compound device, if none, the normal device
XXX=Code

Equivalent Circuit



ORDERING INFORMATION

| Part Number | Package | Packing Method | Pack Quantity |
|-------------|---------|----------------|---------------|
| 2SC2314 | TO-126 | Bulk | 200pcs/Bag |
| 2SC2314-TU | TO-126 | Tube | 60pcs/Tube |

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 | $^{\circ}\text{C}/\text{W}$ |
| T_j | Junction Temperature | 150 | $^{\circ}\text{C}$ |
| T_{stg} | Storage Temperature | -55~+150 | $^{\circ}\text{C}$ |

ELECTRICAL CHARACTERISTICS

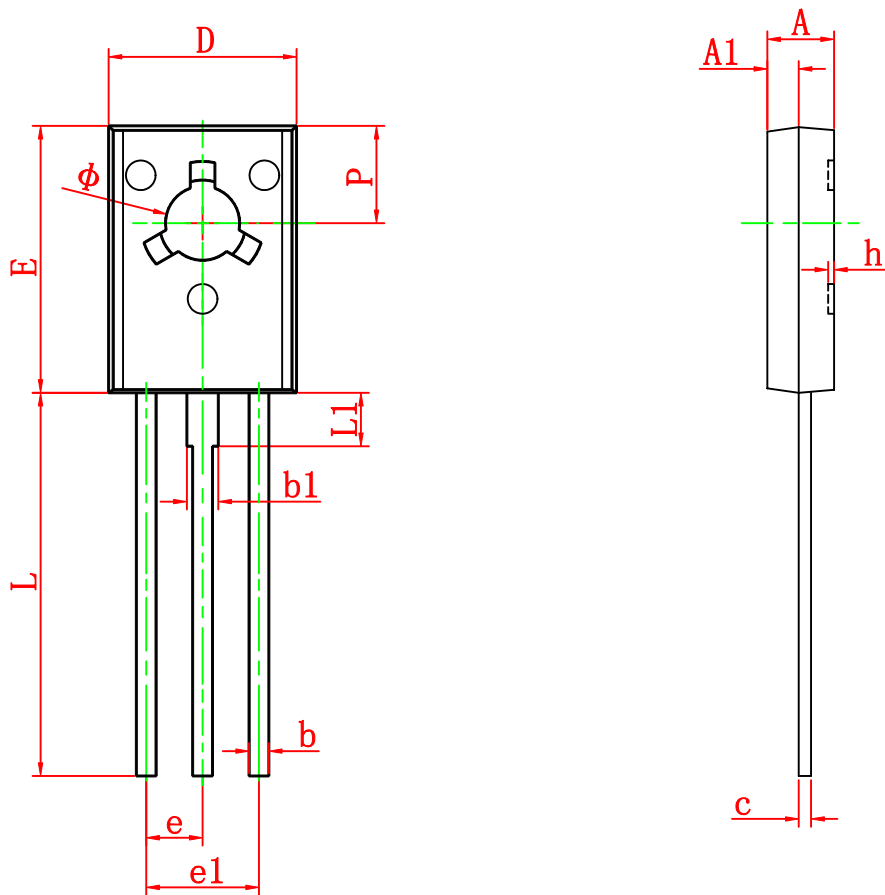
$T_a=25^\circ\text{C}$ unless otherwise specified

| 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 |

TO-126 Package Outline Dimensions



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|--------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 2.500 | 2.900 | 0.098 | 0.114 |
| A1 | 1.100 | 1.500 | 0.043 | 0.059 |
| b | 0.660 | 0.860 | 0.026 | 0.034 |
| b1 | 1.170 | 1.370 | 0.046 | 0.054 |
| c | 0.450 | 0.600 | 0.018 | 0.024 |
| D | 7.400 | 7.800 | 0.291 | 0.307 |
| E | 10.600 | 11.000 | 0.417 | 0.433 |
| e | 2.290 TYP | | 0.090 TYP | |
| e1 | 4.480 | 4.680 | 0.176 | 0.184 |
| h | 0.000 | 0.300 | 0.000 | 0.012 |
| L | 15.300 | 15.700 | 0.602 | 0.618 |
| L1 | 2.100 | 2.300 | 0.083 | 0.091 |
| P | 3.900 | 4.100 | 0.154 | 0.161 |
| Φ | 3.000 | 3.200 | 0.118 | 0.126 |