



Micro Commercial Components

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2SC1959

Power Silicon NPN Transistor

Features

- Audio frequency low power amplifier applications, driver stage amplifier applications, switching applications
- Excellent h_{FE} Linearity: $h_{FE(2)} = 25(\text{Min.})$; $V_{CE} = 6.0V$, $I_C = 400mA$
- 1 Watt Amplifier applications
- Complementary to 2SA562TM.
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Marking: C1959

Maximum Ratings

| Symbol | Rating | Rating | Unit |
|-----------|----------------------------------|-------------|-------------|
| V_{CEO} | Collector-Emitter Voltage | 30 | V |
| V_{CBO} | Collector-Base Breakdown Voltage | 35 | V |
| V_{EBO} | Emitter-Base Voltage | 5.0 | V |
| I_C | Collector Current | 500 | mA |
| I_B | Base Current | 100 | mA |
| P_C | Collector Power Dissipation | 500 | mW |
| T_J | Operating Junction Temperature | -55 to +150 | $^{\circ}C$ |
| T_{STG} | Storage Temperature | -55 to +150 | $^{\circ}C$ |

Electrical Characteristics @ 25°C Unless Otherwise Specified

| Symbol | Parameter | Min | Typ | Max | Units |
|--------|-----------|-----|-----|-----|-------|
|--------|-----------|-----|-----|-----|-------|

OFF CHARACTERISTICS

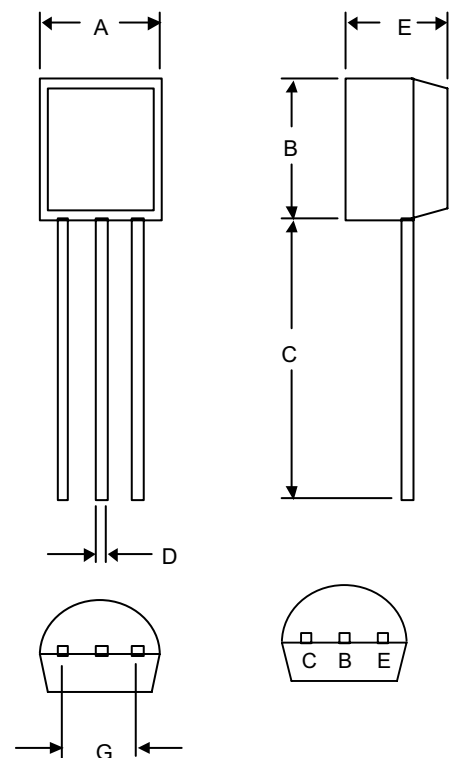
| | | | | | |
|-----------|--|-----|-----|-----|--------------|
| I_{CBO} | Collector-Base Cutoff Current ($V_{CB} = 35V_{dc}$, $I_E = 0$) | --- | --- | 0.1 | μA_{dc} |
| I_{EBO} | Emitter-Base Cutoff Current ($V_{EB} = 5.0V_{dc}$, $I_C = 0$) | --- | --- | 0.1 | μA_{dc} |

ON CHARACTERISTICS

| | | | | | |
|---------------|---|-----|-----|------|-----|
| h_{FE-1} | DC Current Gain* ($I_C = 100mA_{dc}$, $V_{CE} = 1.0V_{dc}$) | 70 | --- | 400 | --- |
| h_{FE-2} | DC Current Gain* ($I_C = 400mA_{dc}$, $V_{CE} = 6.0V_{dc}$) | 25 | --- | --- | --- |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage ($I_C = 100mA_{dc}$, $I_B = 10mA_{dc}$) | --- | 0.1 | 0.25 | Vdc |
| V_{BE} | Base-Emitter Voltage ($I_C = 100mA_{dc}$, $V_{CE} = 1.0V_{dc}$) | --- | 0.8 | 1.0 | Vdc |
| f_T | Transition Frequency ($V_{CE} = 6.0V_{dc}$, $I_C = 20mA_{dc}$) | 200 | 300 | --- | MHz |
| C_{OBO} | Collector Output Capacitance ($V_{CB} = 6.0V_{dc}$, $I_C = 0$, $f = 1.0MHz$) | --- | 7.0 | --- | pF |

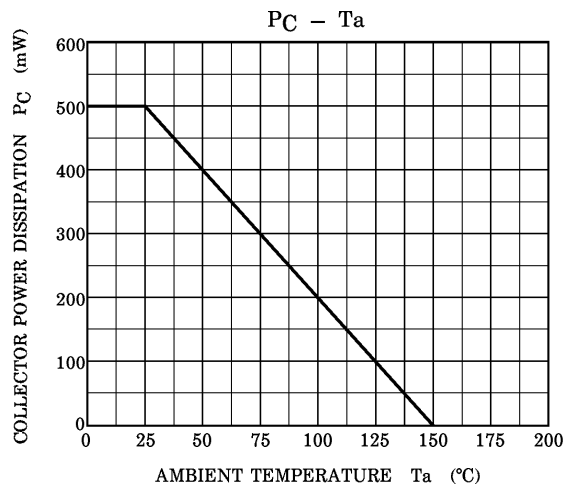
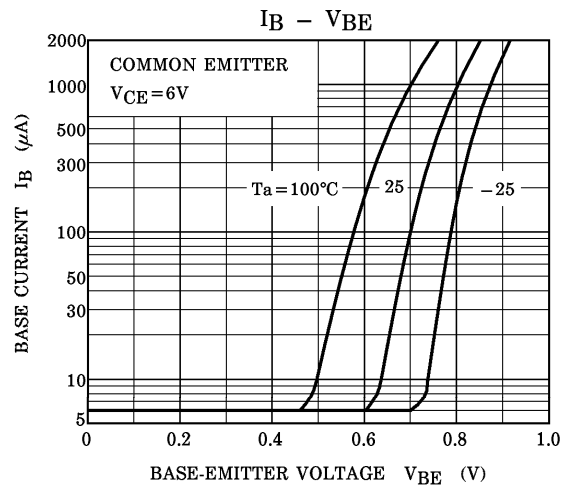
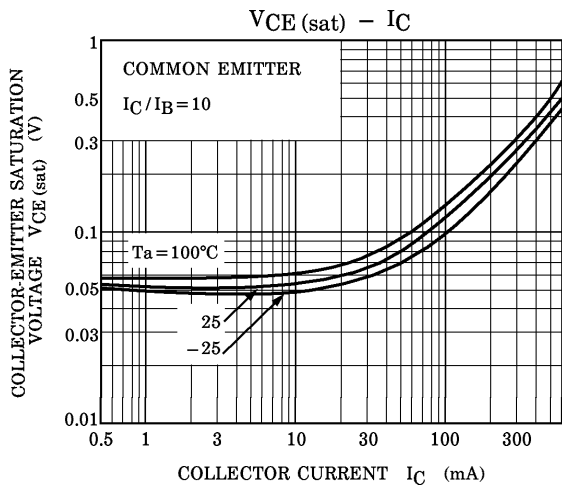
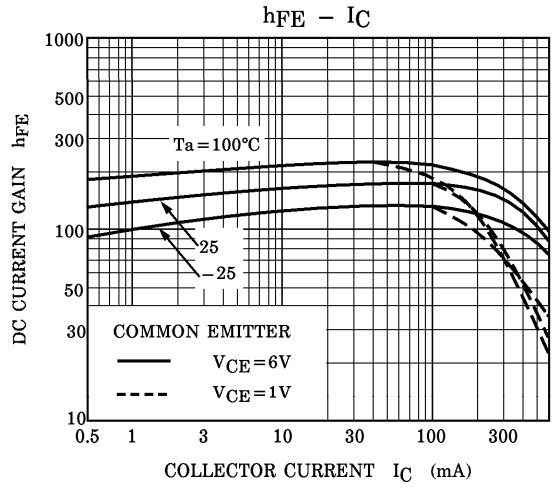
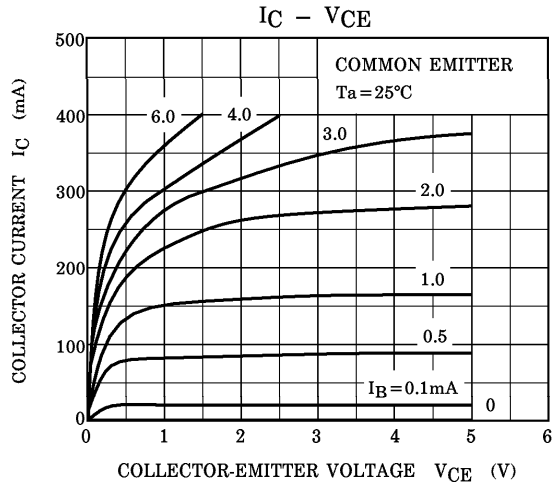
Note: $h_{FE(1)}$ Classification O: 70~140, Y: 120~240, GR: 200~400
 $h_{FE(1)}$ Classification O: 25 (Min.), Y: 40 (Min.)

TO-92



| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|------|-------|-------|------|
| | INCHES | | MM | | |
| A | .170 | .190 | 4.33 | 4.83 | |
| B | .170 | .190 | 4.30 | 4.83 | |
| C | .550 | .590 | 13.97 | 14.97 | |
| D | .010 | .020 | 0.36 | 0.56 | |
| E | .130 | .160 | 3.30 | 3.96 | |
| G | .010 | .104 | 2.44 | 2.64 | |

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TM

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