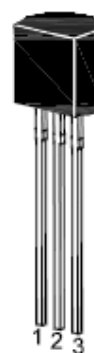


Small Signal Product

NPN Transistor
FEATURES

- For switching and AF amplifier applications
- These types are subdivided into three groups A, B and C according to their current gain
- Moisture sensitivity level 1
- Driver transistor
- Pb free and RoHS compliant
- Green compound (Halogen free) with suffix "G" on packing code and prefix "G" on date code


 1. Collector 2. Base 3. Emitter
TO-92 Plastic Package

MECHANICAL DATA

- Case: TO-92 small outline plastic package
- Terminal: Matte tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- High temperature soldering guaranteed: 260°C/10s
- Weight: 190 mg (approximately)

TO-92

| MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted) | | | |
|--|-----------------------------------|--------------|------|
| PARAMETER | SYMBOL | VALUE | UNIT |
| Total Power dissipation | P _{TOT} | 500 | mW |
| Collector-Base Voltage | V _{CBO} | BC546 | 80 |
| | | BC547, BC550 | 50 |
| | | BC548, BC549 | 30 |
| Collector-Emitter Voltage | V _{CEO} | BC546 | 65 |
| | | BC547, BC550 | 45 |
| | | BC548, BC549 | 30 |
| Emitter-Base Voltage | V _{EBO} | BC546 | 6 |
| | | BC547, BC550 | 6 |
| | | BC548, BC549 | 6 |
| Collector Current | I _C | 100 | mA |
| Peak Collector Current | I _{CM} | 200 | mA |
| Junction and Storage Temperature Range | T _J , T _{STG} | -65 to + 150 | °C |

| PARAMETER | SYMBOL | MIN | MAX | UNIT | |
|-------------------------------------|----------------------|--|-----|------|---|
| Collector-Base Breakdown Voltage | V _{(BR)CBO} | BC546 | 80 | - | |
| | | BC547, BC550 | 50 | | |
| | | BC548, BC549 | 30 | | |
| Collector-Emitter Breakdown Voltage | V _{(BR)CEO} | BC546 | 65 | - | |
| | | BC547, BC550 | 45 | | |
| | | BC548, BC549 | 30 | | |
| Emitter-Base Breakdown Voltage | V _{(BR)EBO} | BC546 | 6 | - | |
| | | BC547, BC550 | 6 | | |
| | | BC548, BC549 | 6 | | |
| Collector Base Cutoff Current | I _{CBO} | - | 15 | nA | |
| Emitter Base Cutoff Current | I _{EBO} | - | 100 | nA | |
| DC Current Gain | h _{FE} | Current Gain Group: A B C V _{CE} = 5V, I _C = 2mA | 110 | 220 | V |
| | | | 200 | 450 | |
| | | | 420 | 800 | |

Small Signal Product

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

FIG.1 Static Characteristic

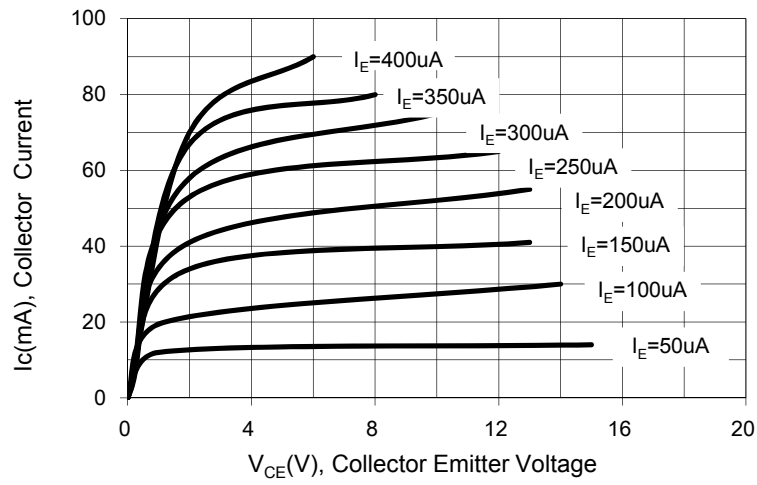


FIG. 2 Transfer Characteristic

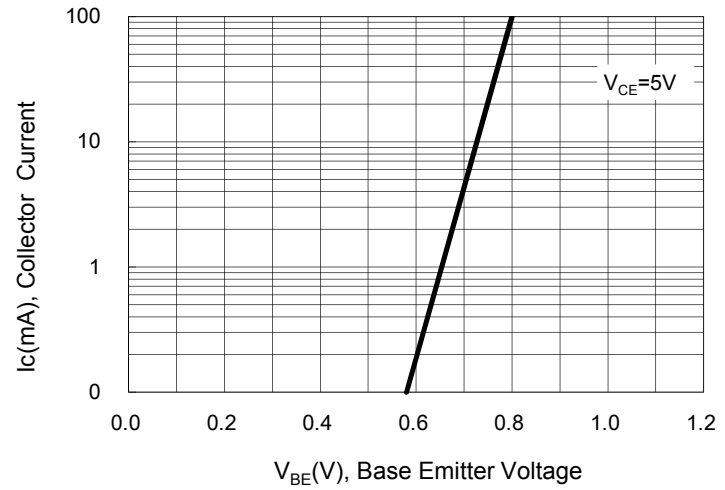


FIG. 3 DC Current Gain

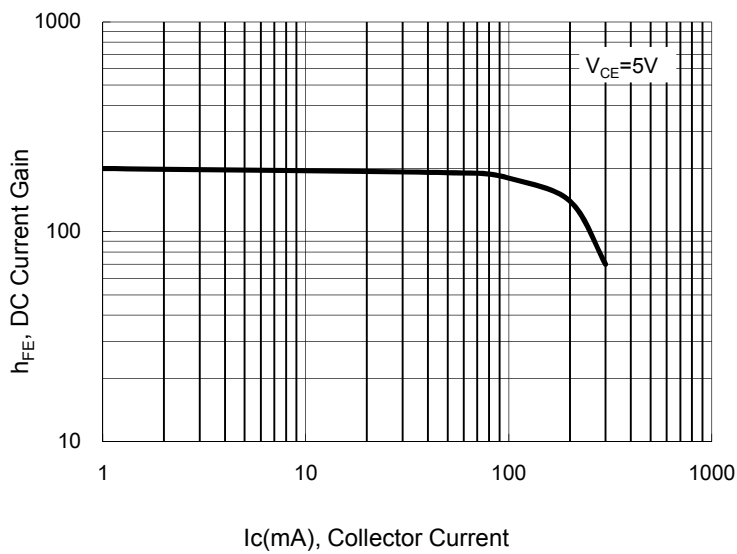
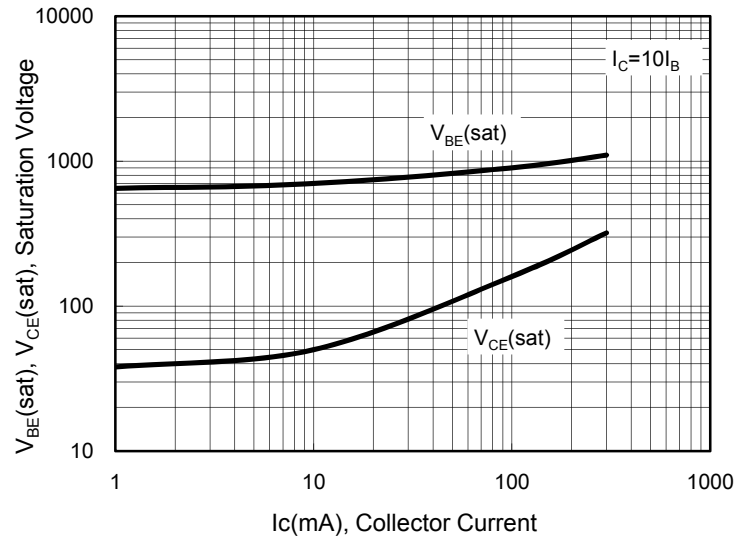


FIG. 4 Base Emitter Saturation Voltage
Collector Emitter Saturation Voltage



Small Signal Product

| ORDERING INFORMATION | | | | | | |
|----------------------|--------------------------|--------------|---------------------|---------|-----------|--------------------|
| PART NO. | MANUFACTURE CODE (Note1) | PACKING CODE | GREEN COMPOUND CODE | PACKAGE | PACKING | MARKING |
| BC5xxA/B/C (Note2) | | A1 | G | TO-92 | 4K / Ammo | BC5xxA/B/C (Note2) |
| BC5xxA/B/C (Note2) | | B1 | G | TO-92 | 5K / Bulk | BC5xxA/B/C (Note2) |

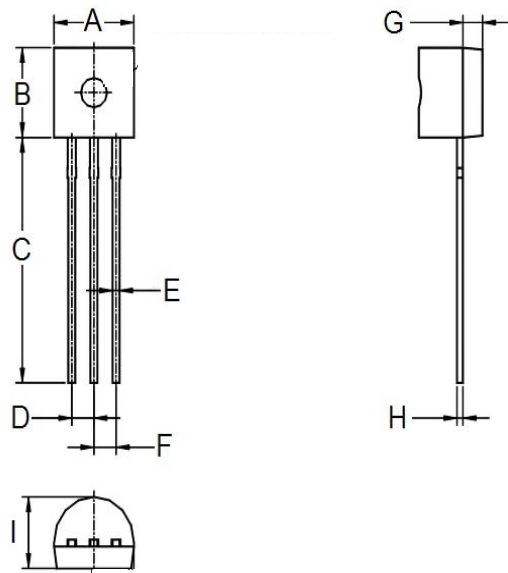
Note1: Manufacture special control, if empty means no special control requirement.

Note2: "xx" is Device Code from "46" thru "50", and "MARKING" should follow the "PART NO."

| EXAMPLE | | | | | |
|---------------|----------|------------------|--------------|---------------------|----------------|
| PREFERRED P/N | PART NO. | MANUFACTURE CODE | PACKING CODE | GREEN COMPOUND CODE | DESCRIPTION |
| BC546A A1G | BC546A | | A1 | G | Green compound |

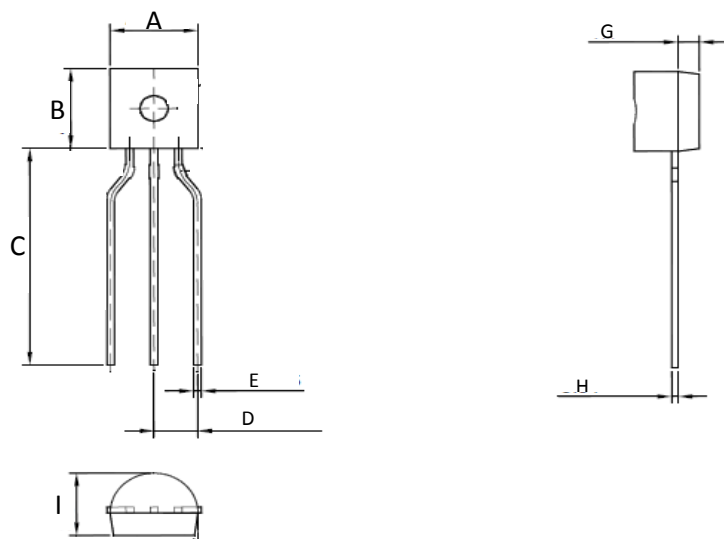
Small Signal Product

DIMENSIONS
TO-92 Bulk



| DIM. | Unit (mm) | | Unit (inch) | |
|------|-----------|-------|-------------|-------|
| | Min | Max | Min | Max |
| A | 4.40 | 5.10 | 0.173 | 0.201 |
| B | 4.30 | 4.70 | 0.169 | 0.185 |
| C | 12.50 | 14.50 | 0.492 | - |
| D | 1.17 | 1.37 | 0.046 | 0.054 |
| E | 0.35 | 0.55 | 0.014 | 0.022 |
| F | 1.17 | 1.37 | 0.046 | 0.054 |
| G | 0.59 | 1.40 | 0.023 | 0.055 |
| H | 0.29 | 0.51 | 0.011 | 0.020 |
| I | 3.300 | 4.100 | 0.130 | 0.161 |

TO-92 Ammo



| DIM. | Unit (mm) | | Unit (inch) | |
|------|-----------|------|-------------|-------|
| | Min | Max | Min | Max |
| A | 4.30 | 4.70 | 0.169 | 0.185 |
| B | 4.30 | 4.70 | 0.169 | 0.185 |
| C | 12.50 | - | 0.492 | - |
| D | 2.20 | 2.80 | 0.087 | 0.110 |
| E | 0.35 | 0.55 | 0.014 | 0.022 |
| G | 1.00 | 1.20 | 0.039 | 0.047 |
| H | 0.29 | 0.51 | 0.011 | 0.020 |
| I | 3.30 | 3.70 | 0.130 | 0.146 |

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