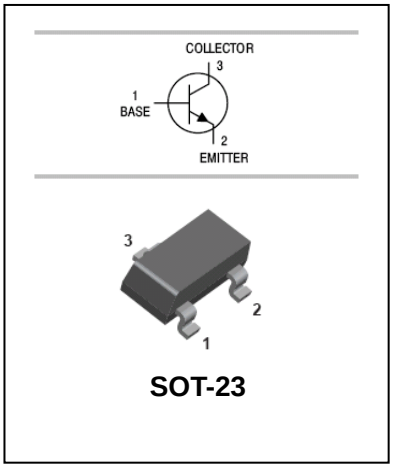
# Silicon Epitaxial Planar Transistor 2SC3052

## FEATURES

- Low collector to emitter saturation voltage.
- Excellent linearity of DC forward current gain.
- Super mini package for easy mounting.

Lead-free




**SOT-23**

## APPLICATIONS

- For hybrid IC,small type machine low frequency voltage amplify application.

## ORDERING INFORMATION

| Type No. | Marking | Package Code |
|---|---|---|
| 2SC3052 | LE/LF/LG | SOT-23 |

## MAXIMUM RATING @ Ta=25℃ unless otherwise specified

| Symbol | Parameter | Value | Units |
|---|---|---|---|
| $V_{CBO}$ | Collector-Base Voltage | 50 | V |
| $V_{CEO}$ | Collector-Emitter Voltage | 50 | V |
| $V_{EBO}$ | Emitter-Base Voltage | 6 | V |
| $I_C$ | Collector Current -Continuous | 200 | mA |
| $P_C$ | Collector Dissipation | 125 | mW |
| $T_j$,$T_{stg}$ | Junction and Storage Temperature | -55 to +150 | ℃ |

# Silicon Epitaxial Planar Transistor **2SC3052**

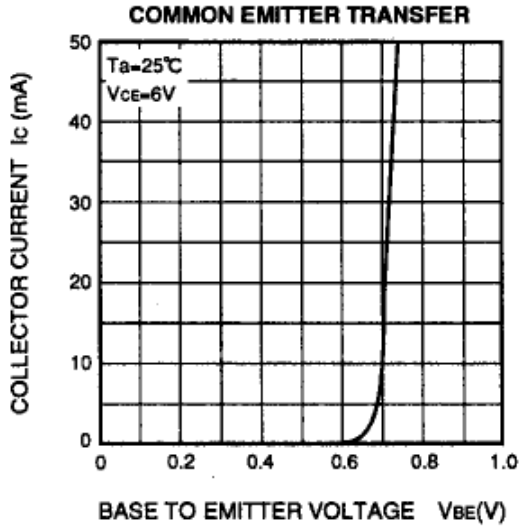
## ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

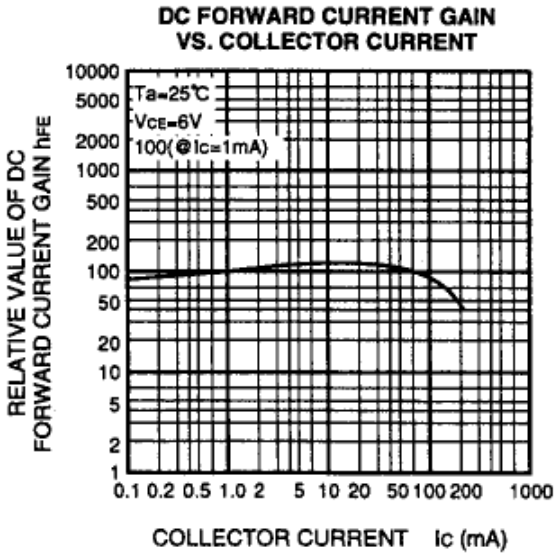
| Parameter | Symbol | Test conditions | MIN | TYP | MAX | UNIT |
|---|---|---|---|---|---|---|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C$=100μA,$I_E$=0 | 50 | | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C$=0.1mA,$I_B$=0 | 50 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E$=100μA,$I_C$=0 | 6 | | | V |
| Collector cut-off current | $I_{CBO}$ | $V_{CB}$=50V,$I_E$=0 | | | 0.1 | μA |
| Emitter cut-off current | $I_{EBO}$ | $V_{EB}$=6V,$I_C$=0 | | | 0.1 | μA |
| DC current gain | $h_{FE}$ | $V_{CE}$=6V,$I_C$=1mA<br>$V_{CE}$=6V,$I_C$=0.1mA | 150<br>90 | | 800 | |
| Collector to Emitter saturation voltage | $V_{CE(sat)}$ | $I_C$=100mA, $I_B$=10mA | | | 0.3 | V |
| Collector output capacitance | $C_{ob}$ | $V_{CB}$=6V,$I_E$=0,f=1MHz | | 2.5 | | pF |
| Transition frequency | $f_T$ | $V_{CE}$=6V, $I_C$= 10mA | | 200 | | MHz |
| Noise Figure | NF | $V_{CE}$=6V,$I_E$=0.1mA,<br>f=1kHz,$R_G$=2kΩ | | | 20 | dB |

## CLASSIFICATION OF $h_{FE}$

| Rank | E | F | G |
|---|---|---|---|
| Range | 150-300 | 250-500 | 400-800 |
| Marking | LE | LF | LG |

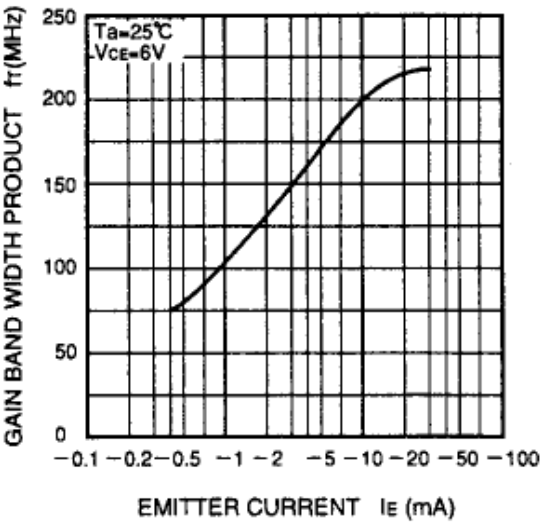
## TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified



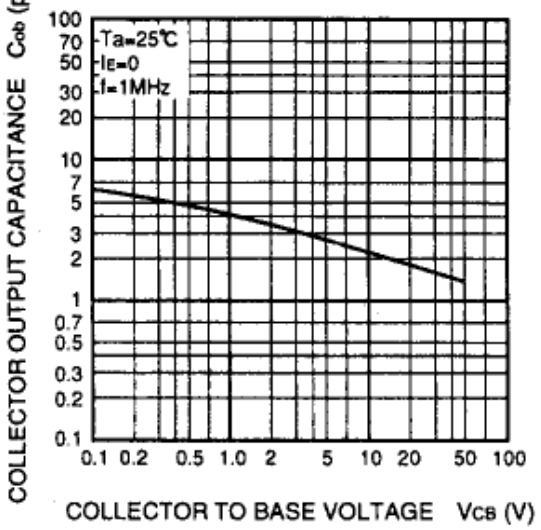



# Silicon Epitaxial Planar Transistor **2SC3052**

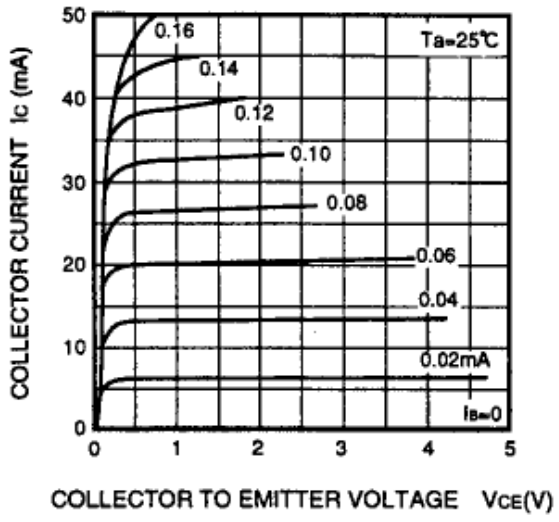
**GAIN BAND WIDTH PRODUCT VS. EMITTER CURRENT**




**COLLECTOR OUTPUT CAPACITANCE VS. COLLECTOR TO BASE VOLTAGE**



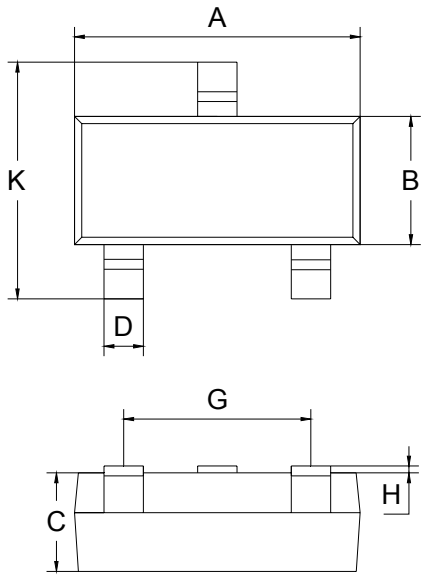

**COMMON EMITTER OUTPUT**



# Silicon Epitaxial Planar Transistor **2SC3052**

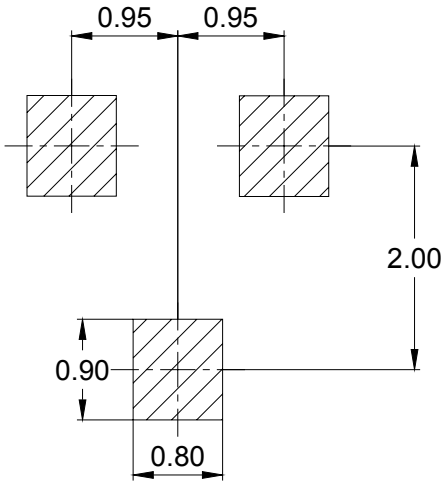
## PACKAGE OUTLINE

Plastic surface mounted package SOT-23




| SOT-23 | | |
|---|---|---|
| Dim | Min | Max |
| A | 2.70 | 3.10 |
| B | 1.10 | 1.50 |
| C | 1.0 Typical | |
| D | 0.4 Typical | |
| E | 0.35 | 0.48 |
| G | 1.80 | 2.00 |
| H | 0.02 | 0.1 |
| J | 0.1 Typical | |
| K | 2.20 | 2.60 |
| All Dimensions in mm | | |

## SOLDERING FOOTPRINT




Unit : mm

## PACKAGE INFORMATION

| Device | Package | Shipping |
|---|---|---|
| 2SC3052 | SOT-23 | 3000/Tape&Reel |