



BD135 - BD136 BD139 - BD140

Complementary low voltage transistor

Features

- Products are pre-selected in DC current gain

Application

- General purpose

Description

These epitaxial planar transistors are mounted in the SOT-32 plastic package. They are designed for audio amplifiers and drivers utilizing complementary or quasi-complementary circuits. The NPN types are the BD135 and BD139, and the complementary PNP types are the BD136 and BD140.

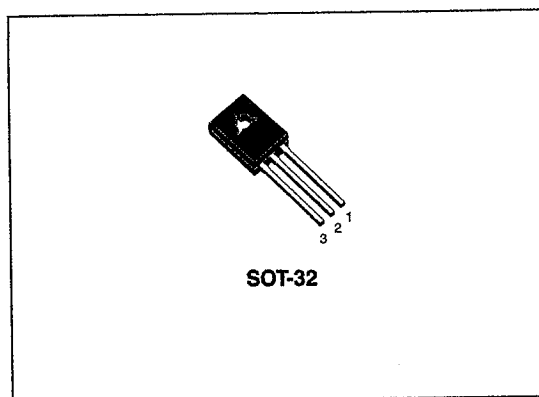


Figure 1. Internal schematic diagram

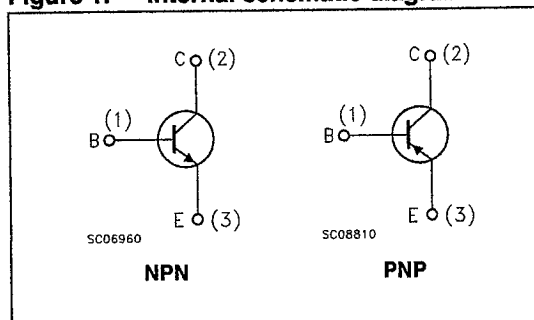


Table 1. Device summary

| Order codes | Marking | Package | Packaging |
|-------------|----------|---------|-----------|
| BD135 | BD135 | SOT-32 | Tube |
| BD135-16 | BD135-16 | | |
| BD136 | BD136 | | |
| BD136-16 | BD136-16 | | |
| BD139 | BD139 | | |
| BD139-10 | BD139-10 | | |
| BD139-16 | BD139-16 | | |
| BD140 | BD140 | | |
| BD140-10 | BD140-10 | | |
| BD140-16 | BD140-16 | | |

PNP Silicon Transistors

BC 556 - BC 560

SIEMENS AKTIENGESSELLSCHAFT

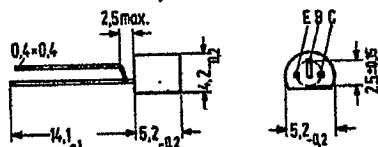
T-29-21

for AF Input and driver stages

BC 556, BC 557, BC 558, BC 559, and BC 560 are epitaxial PNP silicon planar transistors in TO 92 plastic package 10 A 3 DIN 41868. They are intended for use in AF input and driver stages (BC 559, BC 560 for low-noise input stages) and as complementary transistors to BC 546, BC 547, BC 548, BC 549, and BC 550.

| Type | Ordering code |
|----------------------|----------------|
| BC 556 ¹⁾ | Q62702-C692 |
| BC 556 VI | Q62702-C692-V3 |
| BC 556 A | Q62702-C692-V1 |
| BC 556 B | Q62702-C692-V2 |
| BC 557 ¹⁾ | Q62702-C693 |
| BC 557 VI | Q62702-C693-V3 |
| BC 557 A | Q62702-C693-V1 |
| BC 557 B | Q62702-C693-V2 |
| BC 558 ¹⁾ | Q62702-C694 |
| BC 558 VI | Q62702-C694-V4 |
| BC 558 A | Q62702-C694-V1 |
| BC 558 B | Q62702-C694-V2 |
| BC 558 C | Q62702-C694-V3 |

| Type | Ordering code |
|----------------------|----------------|
| BC 559 ¹⁾ | Q62702-C695 |
| BC 559 A | Q62702-C695-V1 |
| BC 559 B | Q62702-C695-V2 |
| BC 559 C | Q62702-C695-V3 |
| BC 560 ¹⁾ | Q62702-C696 |
| BC 560 A | Q62702-C696-V1 |
| BC 560 B | Q62702-C696-V2 |
| BC 560 C | Q62702-C696-V3 |



Mounting instruction: Fixing hole dia 0.6
Approx. weight 0.25 g Dimensions in mm

Maximum ratings

| | BC 556 | BC 557 | BC 558 | BC 559 | BC 560 | |
|---------------------------|-------------------|-------------|--------|--------|--------|--------|
| Collector-base voltage | -V _{CBO} | 80 | 50 | 30 | 30 | 50 V |
| Collector-emitter voltage | -V _{CES} | 80 | 50 | 30 | 30 | 50 V |
| Collector-emitter voltage | -V _{CEO} | 65 | 45 | 30 | 30 | 45 V |
| Emitter-base voltage | -V _{EBO} | 5 | 5 | 5 | 5 | 5 V |
| Collector current | -I _C | 100 | 100 | 100 | 100 | 100 mA |
| Collector peak current | -I _{CM} | 200 | 200 | 200 | 200 | 200 mA |
| Base peak current | -I _{BM} | 200 | 200 | 200 | 200 | 200 mA |
| Emitter-peak current | -I _{EM} | 200 | 200 | 200 | 200 | 200 mA |
| Junction temperature | T _J | 150 | 150 | 150 | 150 | 150 °C |
| Storage temperature range | T _{stg} | -65 to +150 | | | | °C |
| Total power dissipation | P _{tot} | 500 | 500 | 500 | 500 | 500 mW |

Thermal resistance

| | | | | | | | |
|-------------------------|-------------------|------|------|------|------|------|-----|
| Junction to ambient air | R _{thJA} | ≤250 | ≤250 | ≤250 | ≤250 | ≤250 | K/W |
| Junction to case | R _{thJC} | ≤150 | ≤150 | ≤150 | ≤150 | ≤150 | K/W |

1) If the order does not include any exact indication of the current amplification group desired, a transistor of a current amplification group just available from stock will be delivered.