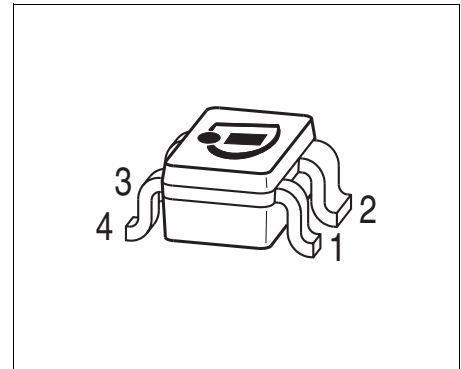


**High Linearity Low Noise TY NPN RF Transistor**

**1 Features**

- Highly linear low noise driver amplifier for all RF frontends up to 2.5 GHz
- Output compression point  $OP_{1dB} = 18.5$  dBm at 90 mA, 3 V, 1.9 GHz, 50  $\Omega$  system
- Output 3rd order intermodulation point  $OIP_3 = 31$  dBm at 90 mA, 3 V, 1.9 GHz, 50  $\Omega$  system
- Maximum available gain  $G_{ma} = 15.5$  dB at 50 mA, 3 V, 1.9 GHz
- Minimum noise figure  $NF_{min} = 1.7$  dB at 50 mA, 3 V, 1.9 GHz
- Based on Infineon’s reliable, high volume 25 GHz SIEGETM line
- Easy to use Pb-free (RoHS compliant) standard package with visible leads
- Qualified according AEC Q101



**Application Examples**

Driver amplifier

- ISM bands 434 and 868 MHz
- 1.9 GHz cordless phones
- CATV LNA

Transmitter driver amplifier

- 2.4 GHz WLAN and Bluetooth

Output stage LNA for active antennas

- TV, GPS, SDARS, 2.4 GHz WLAN, etc

Suitable for 3 - 5.5 GHz oscillators

**Attention: ESD (Electrostatic discharge) sensitive device, observe handling precautions**

| Product Name | Package | Pin Configuration |       |       |       | Marking |
|--------------|---------|-------------------|-------|-------|-------|---------|
| BFP450       | SOT343  | 1 = B             | 2 = E | 3 = C | 4 = E | ANs     |

**Table 1 Maximum Ratings**

| Parameter                             | Symbol    | Values |      | Unit | Note / Test Condition             |
|---------------------------------------|-----------|--------|------|------|-----------------------------------|
|                                       |           | Min.   | Max. |      |                                   |
| Collector emitter voltage             | $V_{CEO}$ | –      | 4.5  | V    | Open base<br>$T_A = 25\text{ °C}$ |
|                                       |           | –      | 4.1  | V    | $T_A = -55\text{ °C}$             |
| Collector emitter voltage             | $V_{CES}$ | –      | 15   | V    | Emitter / base shortened          |
| Collector base voltage                | $V_{CBO}$ | –      | 15   | V    | Open emitter                      |
| Emitter base voltage                  | $V_{EBO}$ | –      | 1.5  | V    | Open collector                    |
| Collector current                     | $I_C$     | –      | 170  | mA   | –                                 |
| Base current                          | $I_B$     | –      | 10   | mA   | –                                 |
| Total power dissipation <sup>1)</sup> | $P_{tot}$ | –      | 500  | mW   | $T_S \leq 90\text{ °C}$           |
| Junction temperature                  | $T_J$     | –      | 150  | °C   | –                                 |
| Storage temperature                   | $T_{Stg}$ | -65    | 150  | °C   | –                                 |

1)  $T_S$  is the soldering point temperature.  $T_S$  measured on the emitter lead at the soldering point of the pcb.

**Attention: Stresses above the max. values listed here may cause permanent damage to the device. Exposure to absolute maximum rating conditions for extended periods may affect device reliability. Maximum ratings are absolute ratings; exceeding only one of these values may cause irreversible damage to the integrated circuit.**