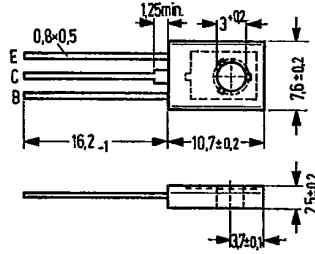


BF 470 and BF 472 are epitaxial PNP silicon planar transistors in TO 126 plastic package (12 A 3 DIN 41 869, sheet 4). The collector is conductively connected to the metallic mounting area of the transistor. With the complementary types BF 469 and BF 471 these transistors are particularly suitable for use in video B output stages of TV receivers.

| Type | Ordering code |
|------------------------------|---------------|
| BF 470 | Q62702-F498 |
| BF 472 | Q62702-F506 |
| Spring washer A 3 DIN 137 | Q62902-B63 |
| Mica washer | Q62902-B62 |



Approx. weight 0.5 g Dimensions in mm

Maximum ratings

| | BF 470 | BF 472 | |
|--|------------------------------|-------------|----|
| Collector-base voltage | -V _{CBO} 250 | 300 | V |
| Collector-emitter voltage | -V _{CEO} 250 | - | V |
| Collector-emitter voltage | -V _{CER} - | 300 | V |
| Emitter-base voltage | -V _{EBO} 5 | 5 | V |
| Collector current | -I _C 30 | 30 | mA |
| Collector peak current | -I _{CM} 100 | 100 | mA |
| Junction temperature | T _j 150 | 150 | °C |
| Storage temperature range | T _{stg} -65 to +150 | -65 to +150 | °C |
| Total power dissipation (T _{case} ≤ 110°C) | P _{tot} 2 | 2 | W |

Thermal resistance

| | | | |
|---------------------------------------|-------------------------|-------|-----|
| Junction to ambient air ¹⁾ | R _{thJA} ≤ 100 | ≤ 100 | K/W |
| Junction to case | R _{thJC} ≤ 20 | ≤ 20 | K/W |

1) For fixing the transistors with max. 4 mm long leads on PCBs with a 10 mm² large copper area for the collector terminal.

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Static characteristics ($T_{amb} = 25^{\circ}\text{C}$)

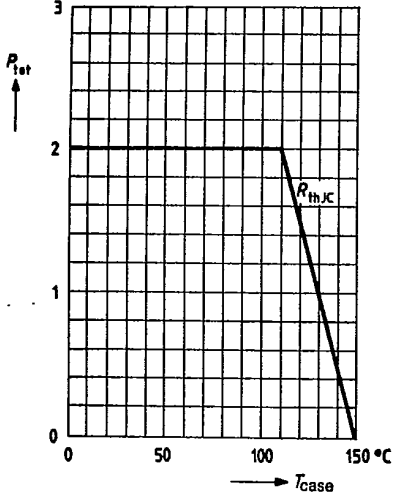
| | | BF 470 | BF 472 | |
|--|-----------------|-----------|-----------|---------------|
| Collector-base breakdown voltage ($-I_C = 10 \mu\text{A}$) | $-V_{(BR)CBO}$ | >250 | >300 | V |
| Collector-emitter breakdown voltage ($-I_C = 1 \mu\text{A}$) | $-V_{(BR)CEO}$ | >250 | - | V |
| Collector-emitter breakdown voltage ($R_{BE} = 2.7 \text{ k}\Omega$) | $-V_{(BR)CER}$ | - | >300 | V |
| Emitter-base breakdown voltage ($I_E = 10 \mu\text{A}$) | $-V_{(BR)EBO}$ | >5 | >5 | V |
| Collector cutoff current ($-V_{CE} = 200 \text{ V}; R_{BE} = 2.7 \text{ k}\Omega; T_{amb} = 150^{\circ}\text{C}$) | $-I_{CER}$ | ≤ 10 | ≤ 10 | μA |
| Collector cutoff current ($-V_{CB} = 200 \text{ V}$) | $-I_{CBO}$ | ≤ 10 | ≤ 10 | nA |
| Emitter cutoff current ($-V_{EB} = 5 \text{ V}$) | $-I_{EBO}$ | ≤ 10 | ≤ 10 | μA |
| Collector-emitter saturation voltage ($-I_C = 25 \text{ mA}; T_J = 150^{\circ}\text{C}$) | $-V_{CEsat RF}$ | 20 | - | V |
| ($-I_C = 25 \text{ mA}; T_{amb} = 150^{\circ}\text{C}$) | | - | 20 | V |
| DC current gain ($-I_C = 25 \text{ mA}; -V_{CE} = 20 \text{ V}$) | h_{FE} | ≥ 50 | ≥ 40 | - |

Dynamic characteristics ($T_{amb} = 25^{\circ}\text{C}$)

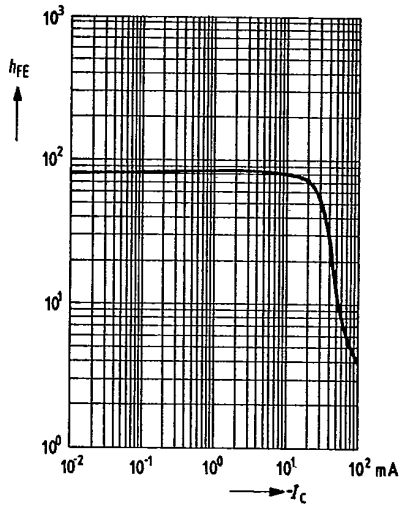
| | | | | |
|---|-------------------|------------|------------|-----|
| Transition frequency ($V_{CE} = 10 \text{ V}; -I_C = 10 \text{ mA}$) | f_T | ≥ 60 | ≥ 60 | MHz |
| Reverse transfer capacitance ($-V_{CB} = 30 \text{ V}$) | $-C_{12e}$ | ≤ 1.8 | ≤ 1.8 | pF |
| Feedback time constant ($-V_{CB} = 20 \text{ V}; I_E = 10 \text{ mA}; f = 10.7 \text{ MHz}$) | $r_{bb'} C_{b'c}$ | ≤ 90 | ≤ 90 | ps |

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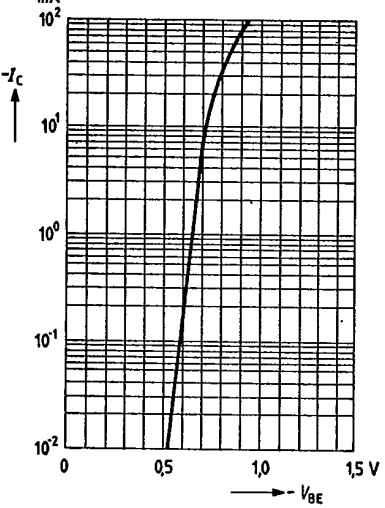
Total perm. power dissipation versus temperature
 $P_{tot} = f(T_{case})$



DC current gain $h_{FE} = f(I_C)$
 $-V_{CE} = 10\text{ V}; T_{case} = 25^\circ\text{C}$



Collector current $I_C = f(V_{BE})$
 $-V_{CE} = 10\text{ V}; T_{case} = 25^\circ\text{C}$



Transition frequency $f_T = f(I_C)$
 $-V_{CE} = 10\text{ V}; T_{case} = 25^\circ\text{C}$

