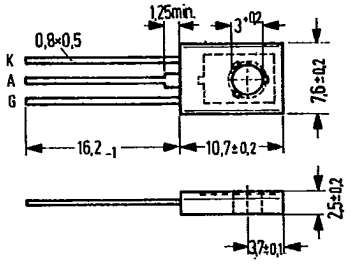
BR 303 is a silicon planar thyristor in a TO-126 plastic package (12 A 3 DIN 41869, sheet 4). The thyristor is especially suitable for use in switching power supplies as well as for universal applications at low and medium performance.

| Type | Ordering code |
|---|---|
| BR 303 | Q68000-A3436 |




Approx. weight 1.5 g Dimensions in mm

**Maximum ratings** ($T_j$ = −40 °C to +125 °C, $R_{GK}$ = 1000 Ω)

| | | | |
|---|---|---|---|
| Neg. and pos. repetitive peak off-state voltage | $V_{RR}/V_{DR}$ | 30 | V |
| Max. rms on-state current | $I_{T(rms)}$ | 0.8 | A |
| Surge on-state current (sinusoidal pulse $t_r$ < 1 ms in accordance with DIN 41787) | $I_{TSM}$ | 6 | A |
| Repetitive peak current ($t_p$ = 5 µs, $\nu \leq 0.1$) | $I_{TRM}$ | 4 | A |
| Repetitive gate voltage | $V_{(KG)rep}$ | 8 | V |
| Storage temperature range | $T_{stg}$ | −55 to +125 | °C |
| Junction temperature | $T_j$ | 125 | °C |
| Average gate power dissipation | $P_{G(AV)}$ | 0.1 | W |
| Peak gate power dissipation | $P_{GP}$ | 2 | W |

**Thermal resistance**

| | | | |
|---|---|---|---|
| Junction to ambient air | $R_{thJA}$ | ≤ 125 | K/W |
| Junction to case | $R_{thJC}$ | ≤ 25 | K/W |

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**Static characteristics** ($T_{case}$ = 25 °C)

| | | | |
|---|---|---|---|
| Continuous reverse blocking and off-state current | | | |
| ($R_{GK}$ = 1 kΩ) | $I_R/I_D$ | ≤2 | µA |
| ($R_{GK}$ = 1 kΩ; $T_j$ = 125 °C) | $I_R/I_D$ | ≤50 | µA |
| Holding current ($R_{GK}$ = 1 kΩ) | $I_H$ | <5 | mA |
| Neg. gate current ($t_p$ = 10 µs) | $-I_G$ | 0.05 | mA |
| On-state voltage, pulsed ($I_T$ = 3 A; $t_p$ = 5 µs) | $V_T$ | ≤2.0 | V |
| Gate trigger current | | | |
| ($V_{AK}$ = 6 V; $R_L$ = 100 Ω) | $I_{GT}$ | ≤200 | µA |
| Gate trigger voltage | | | |
| ($V_{AK}$ = 6 V; $R_L$ = 100 Ω; $R_{GK}$ = 1 Ω) | $V_{GT}$ | ≤0.8 | V |
| Gate non-trigger forward voltage | $V_{GF}$ | ≥0.1 | V |
| ($V_D$ = $V_{DR}$, $R_{GK}$ = 1 kΩ) | | | |
| Critical rate of voltage rise | | | |
| ($R_{GK}$ = 1 kΩ; $V_{AK}$ = 20 V). | dv/dt | 20 | V/µs |
| Turn-off time | | | |
| ($I_{TS(rectangular)}$ = 0.8 A, $t_p$ = 50 µs: | | | |
| $V_R$ = 20 V; $V_{AK}$ = $V_{DR}$; dv/dt = 20 V/µs) | $t_q$ | ≤13 | µs |
| Turn-on time | | | |
| ($V_D$ = $V_{DR}$; $R_L$ = 100 Ω; $R_{GK}$ = 1 kΩ | | | |
| $I_{GTS}$ = 1.4 mA; $t_p$ = 5 µs; $t_r$ = 40 ns) | $t_{cn}$ | 1.2 | µs |