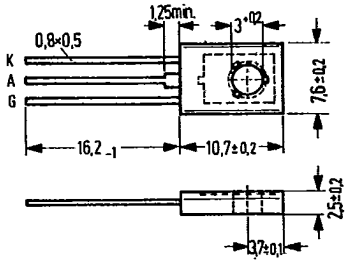
BR 303 is a silicon planar thyristor in a TO-126 plastic package (12 A 3 DIN 41869, sheet 4). The thyristor is especially suitable for use in switching power supplies as well as for universal applications at low and medium performance.

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

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