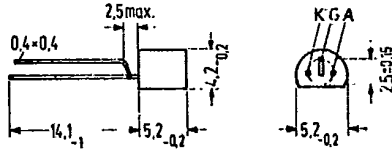


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BR 103 is a silicon planar thyristor in a TO-92 plastic package (10 A 3 DIN 41868). This thyristor is suitable for various applications within low power ranges, e.g. controls and regulations, counters, switches, etc.

Type	Ordering code
BR 103	Q68000-A729



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

Dimensions in mm

Maximum ratings ($T_j = -40^\circ\text{C}$ to $+125^\circ\text{C}$; $R_{GK} = 1000 \Omega$)

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 ($t_p < 10$ ms)	I_{TSM}	6	A
Repetitive surge on-state current at $t_p = 6 \mu\text{s}$ and $f = 40$ kHz sine	I_T	2	A
Peak gate forward current	I_{GFP}	0.5	A
Repetitive reverse gate voltage	$V_{(KG)R}$	6	V
Storage temperature range	T_{stg}	-40 to +125	$^\circ\text{C}$
Junction temperature range	T_j	-40 to +125	$^\circ\text{C}$
Average gate power dissipation	$P_{G(AV)}$	0.01	W
Peak gate power dissipation	P_{GP}	0.1	W

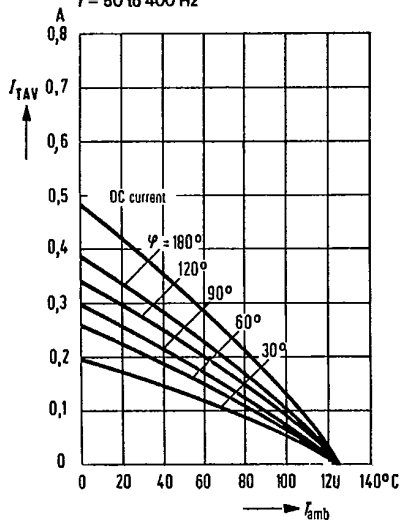
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Static characteristics ($T_{case} = 25^{\circ}C$)

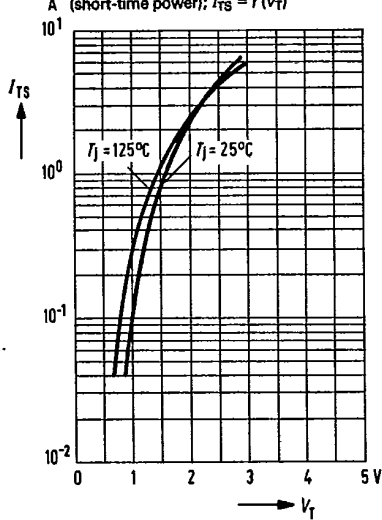
Continuous reverse blocking and off-state current ($R_{GK} = 1\text{ k}\Omega$) ($T_j = 125^{\circ}C$)	I_R/I_D	<2	μA
Holding current ($R_{GK} = 1\text{ k}\Omega$) ($T_j = -40^{\circ}C$)	I_H	<3	mA
On-state voltage ($I_{TS} = 1\text{ A}$; $t_p = 1\text{ ms}$)	V_T	<1.5	V
Gate trigger current ($V_{AK} = 6\text{ V}$; $R_L = 100\ \Omega$) ($T_j = 0^{\circ}C$)	I_{GT}	<200	μA
Gate trigger voltage ($V_{AK} = 6\text{ V}$, $R_L = 100\ \Omega$, $R_{GT} = 1\text{ k}\Omega$, $T_j = 0^{\circ}C$)	V_{GT}	<0.8	V
Gate non-trigger forward voltage ($V_D = V_{DR}$; $R_{GK} = 1\text{ k}\Omega$; $T_j = 125^{\circ}C$)	V_{GF}	>0.1	V
Critical rate of voltage rise ($R_{GK} = 1\text{ k}\Omega$; $T_j = 125^{\circ}C$; $V_{AK} = 10\text{ V}$)	dv/dt	10	V/ μs
Turn-off time $I_{TS(\text{rectangular})} = 1\text{ A}$; $t_p = 50\ \mu s$; ($V_R = 20\text{ V}$; $V_{AK} = V_{DR}$; $T_{dv/dt} = 5\ \mu s$)	t_q	<6	μs
Turn-on time ($V_D = V_{DR}$; $R_L = 100\ \Omega$; $R_{GK} = 1\text{ k}\Omega$; $I_{GTS} = 1.4\text{ mA}$, $t_p = 5\ \mu s$; $t_r = 40\text{ ns}$)	t_{on}	1.2	μs

Max. mean on-state current

(sine) $I_{TAV} = f(T_{amb})$
 $f = 50$ to 400 Hz

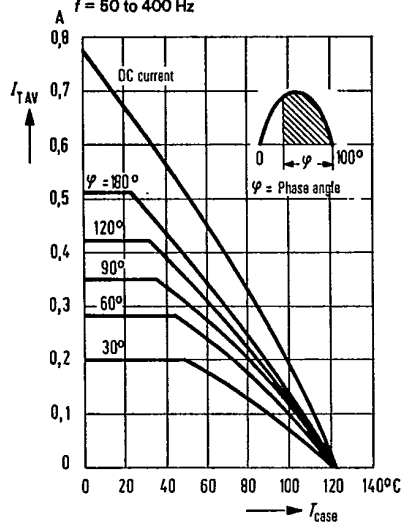


On-state characteristic
 (short-time power); $I_{TS} = f(V_T)$

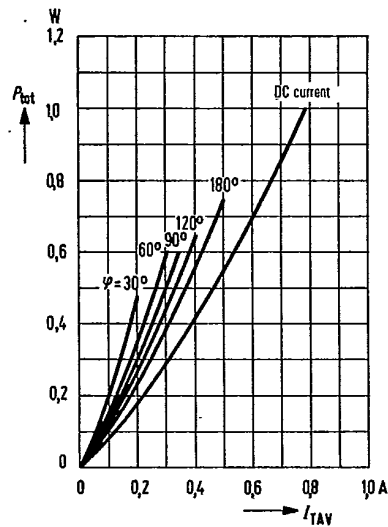


Max. mean on-state current

(sine) $I_{TAV} = f(T_{case})$
 $f = 50$ to 400 Hz



Power dissipation (sine) $P_{tot} = f(I_{TAV})$
 $f = 50$ to 400 Hz; $T = 125$ °C



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Surge on-state current
 $I_{TS} = f$ (overloads at 50 Hz)

