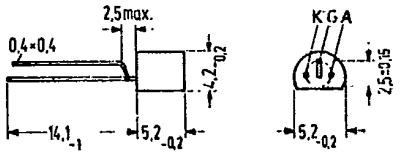
Silicon Miniature Thyristor — BR 103

— SIEMENS AKTIENGESELLSCHAF

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 °C to +125 °C; R_{GK} = 1000 Ω)

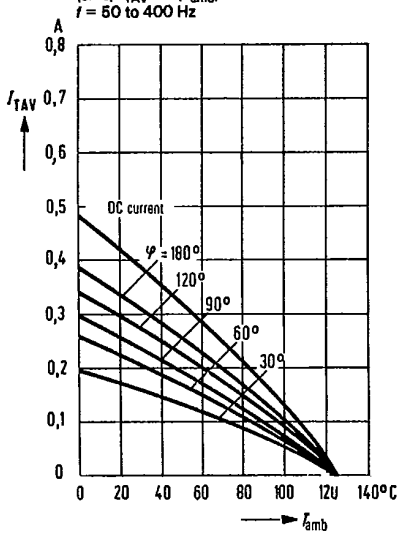
Neg. and pos. repetitive peak off-state voltage	V_{RR}/V_{DR}	30	V
Max. rms on-state current	$I_{T(rms)}$	0.8	A
Surge on-state current, sinusoidal pulse (t_p < 10 ms)	I_{TSM}	6	A
Repetitive surge on-state current at t_p = 6 µs and f = 40 kHz sine	I_T	2	A
Peak gate forward current	I_{GFP}	0.5	A
Repetitive reverse gate voltage	$V_{(KG)R}$	6	V
Storage temperature range	T_{stg}	−40 to +125	°C
Junction temperature range	T_j	−40 to +125	°C
Average gate power dissipation	$P_{G(AV)}$	0.01	W
Peak gate power dissipation	P_{GP}	0.1	W

SIEMENS AKTIENGESELLSCHAF

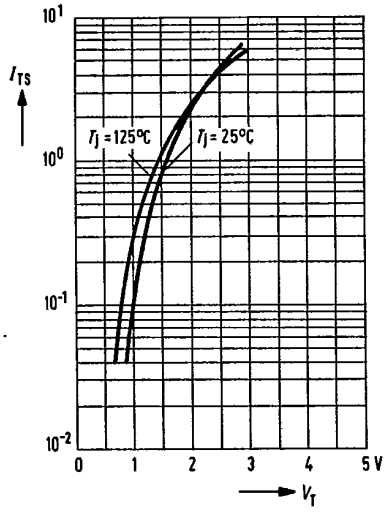
Static characteristics (T_{case} = 25 °C)

Continuous reverse blocking and off-state current	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	<3	mA
(T_j = -40 °C)	I_H	<4	mA
On-state voltage			
(I_{TS} = 1 A; t_p = 1 ms)	V_T	<1.5	V
Gate trigger current			
(V_{AK} = 6V; R_L = 100 Ω)	I_{GT}	<200	µA
(T_j = 0 °C)	I_{GT}	<250	µA
Gate trigger voltage	V_{GT}	<0.8	V
(V_{AK} = 6V, R_L = 100 Ω,			
R_{GT} = 1 kΩ, T_j = 0 °C)	V_{GT}	<0.9	V
Gate non-trigger forward voltage			
(V_D = V_{DR}; R_{GK} = 1 kΩ; T_j = 125 °C)	V_{GF}	>0.1	V
Critical rate of voltage rise			
(R_{GK} = 1 kΩ; T_j = 125 °C; V_{AK} = 10 V)	dv/dt	10	V/µs
Turn-off time			
$I_{TS(rectangular)}$ = 1 A; t_P = 50 µs;	t_q	<6	µs
(V_R = 20 V; V_{AK} = V_{DR}; $T_{dV/dt}$ = 5 µs)			
Turn-on time			
(V_D = V_{DR}; R_L = 100 Ω; R_{GK} = 1 kΩ;	t_{on}	1.2	µs
I_{GTS} = 1.4 mA, t_p = 5 µs; t_r = 40 ns)			

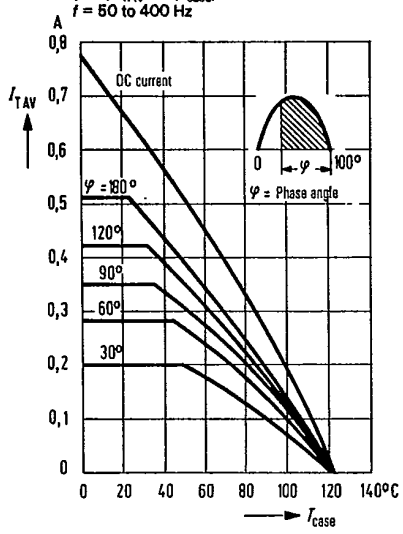
Max. mean on-state current
(sine) $I_{TAV} = f(T_{amb})$
f = 50 to 400 Hz



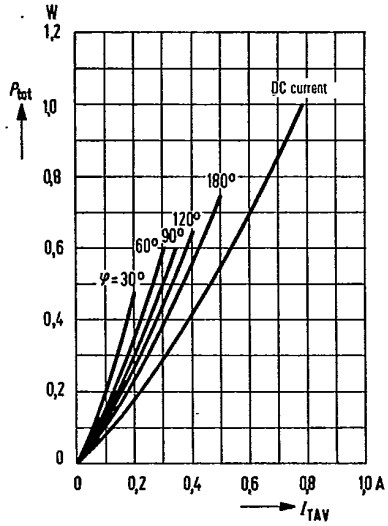
On-state characteristic
A (short-time power); $I_{TS} = f(V_T)$



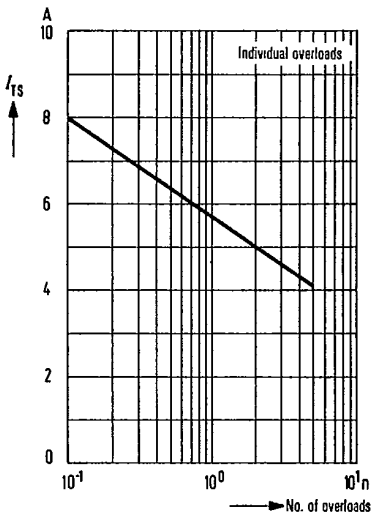
Max. mean on-state current
(sine) $I_{TAV} = f(T_{case})$
f = 50 to 400 Hz



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



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



littlediode
COMPONENTS FOR ALL

Littlediode supplies new, hard to find or obsolete electronic components and semiconductors all over the world.

With over two million different components listed you are sure to find the part you need.

Feel free to visit us today at our online store:

LittleDiode.com

Looking forward to providing you with the best possible service.