

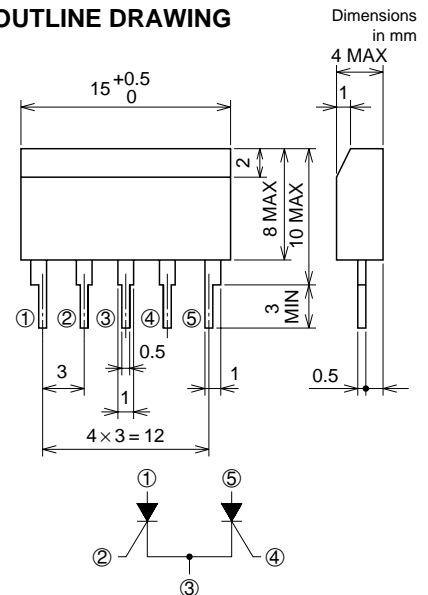
SA01, SA02, SA04, SA07

THYRISTOR ARRAY
SA SERIES FOR STROBE FLASHER

SA01, SA02, SA04, SA07



OUTLINE DRAWING



- ① MAIN THYRISTOR: ANODE
 - ② MAIN THYRISTOR: GATE
 - ③ MAIN AND AUX. THYRISTOR: CATHODE
 - ④ AUX. THYRISTOR: GATE
 - ⑤ AUX. THYRISTOR: ANODE
- SA SERIES

APPLICATION

Automatic strobe flasher

FAMILY CONSTITUTION

Guide No. (ASA100)	Type	Commutating characteristics	Aux thyristor	Application
25	SA01	$C_M=700\mu\text{F}$, $I_{TM}=200\text{A}$,	High sensitive $I_{GT} \leq 250\mu\text{A}$	Compact strobe
	SA02	$C_C=2.2\mu\text{F}$	High holding current $I_H \geq 25\text{mA}$	
32	SA04	$C_M=1000\mu\text{F}$, $I_{TM}=230\text{A}$, $C_C=2.5\mu\text{F}$	High holding current $I_H \geq 25\text{mA}$	Middle class strobe
25	SA07	$C_M=700\mu\text{F}$, $I_{TM}=200\text{A}$, $C_C=1.4\mu\text{F}$	High sensitive $I_{GT} \leq 250\mu\text{A}$	Built-in strobe

MAXIMUM RATINGS ($T_a = -20 \sim +60^\circ\text{C}$, unless otherwise noted)

Symbol	Parameter	SA01		SA02		SA04		SA07		Unit
		Main	Aux	Main	Aux	Main	Aux	Main	Aux	
V_{DRM}^{*1}	Repetitive peak off-state voltage	400								V
V_{DSM}^{*1}	Non-repetitive peak off-state voltage	480	600	480	600	480	600	450	600	V
V_{RRM}	Repetitive peak reverse voltage	400								V
—	Pulse current ability	See electrical characteristics								A
I_{FGM}	Peak gate forward current	0.5	0.3	0.5	1.0	1.0	1.0	0.5	0.3	A
T_{opr}	Operating ambient temperature	-20 ~ +60								$^\circ\text{C}$
T_{stg}	Storage temperature	-40 ~ +125								$^\circ\text{C}$

*1. Connect 1k Ω resistor between gate to cathode.

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ELECTRICAL CHARACTERISTICS (Ta=25°C, unless otherwise noted)

Symbol	Parameter	SA01		SA02		SA04		SA07		Unit
		Main	Aux	Main	Aux	Main	Aux	Main	Aux	
IDRM	Repetitive peak off-state current *1	100	20	100	100	100	100	100	20	μA
I _{RRM}	Repetitive peak reverse current	100	20	100	100	100	100	100	20	μA
I _{GT}	Gate trigger current	30	0.25	30	30	50	30	80	0.25	mA
V _{GT}	Gate trigger voltage	1.5	1.0	1.5	1.5	2.0	1.5	1.5	1.0	V
I _H	Holding current *2	—	1.0	—	25	—	25	—	1.0	mA

*1. Connect 1kΩ resistor between gate to cathode.

*2. Minimum value

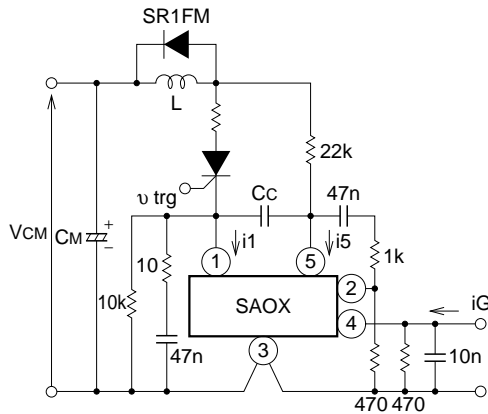


Fig. 1 Test circuit

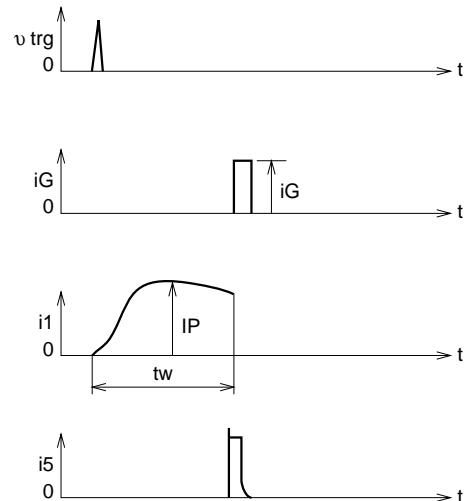


Fig. 2 The voltage and current waveforms

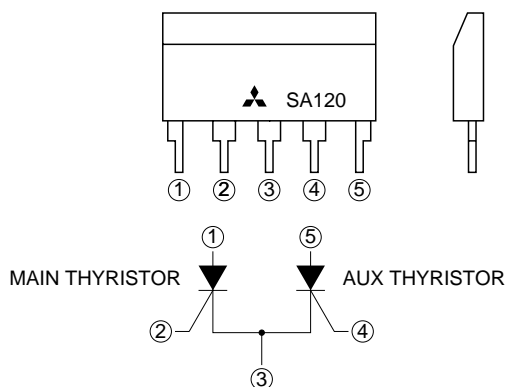


Fig. 3 Pin position and Equivalent circuit

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COMMUTATION CHARACTERISTICS IN STROBE APPLICATION

SA series commutates at arbitrary conducting duration t_w under following condition. (See Fig. 1, 2)

Please confer following sheets in case that C_M or I_{TM} is different from mentioned value. (See shown under)

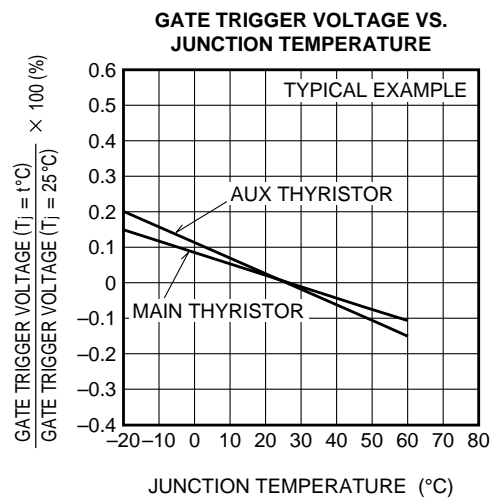
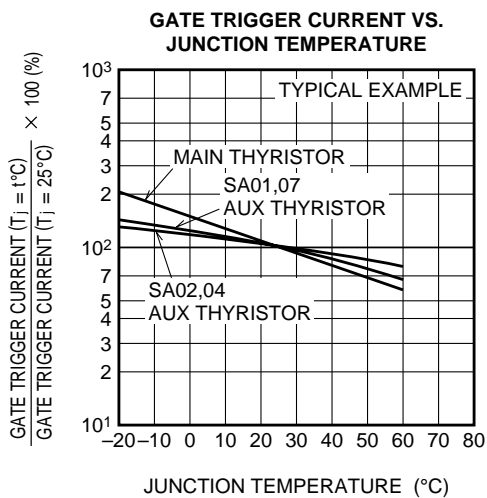
COMMUTATING CHARACTERISTICS ($T_a=25^\circ\text{C}$, Single pulse operation)

Symbol	Parameter	SA01	SA02	SA04	SA07	Unit
V _{CM}	Main capacitor charging voltage	350				V
C _M	Main capacitor	700		1000	700	μF
I _{TM}	Peak on-state current	200		230	200	A
L	Anode reactor	25				μH
C _c	Commutating capacitor	2.2		2.5	1.4	μF

NOTICE

Please consider counterplans against induced noise across common impedance. (between common cathode 3 and the ground point of trigger circuit for the auxiliary thyristor)

PERFORMANCE CURVES



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