

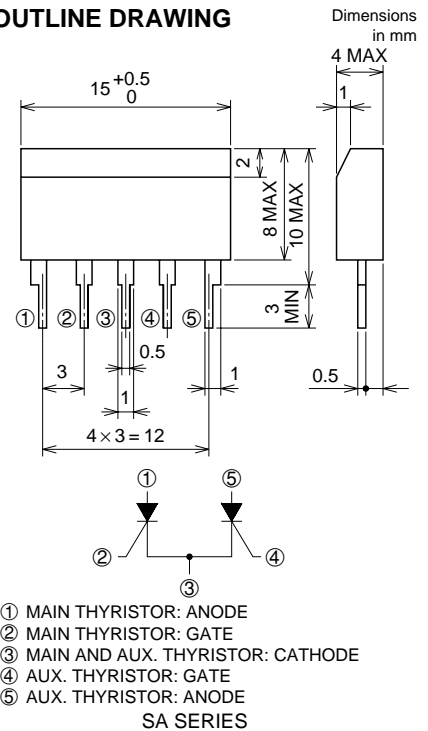
SA01, SA02, SA04, SA07

THYRISTOR ARRAY
SA SERIES FOR STROBE FLASHER

SA01, SA02, SA04, SA07



OUTLINE DRAWING



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

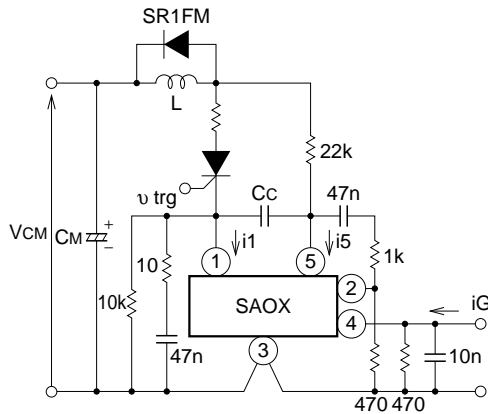


Fig. 1 Test circuit

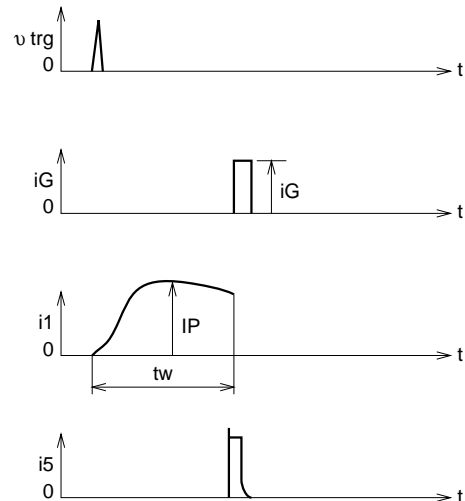


Fig. 2 The voltage and current waveforms

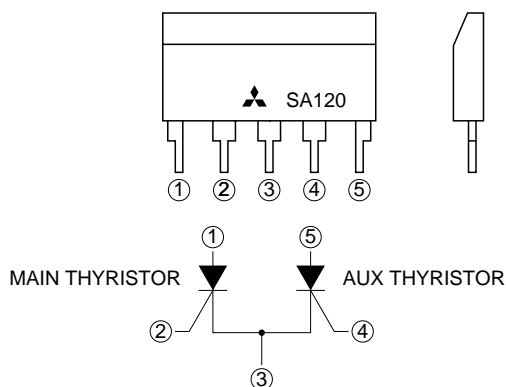


Fig. 3 Pin position and Equivalent circuit

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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)

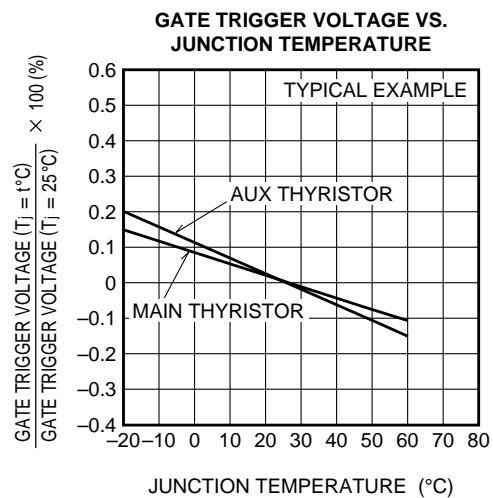
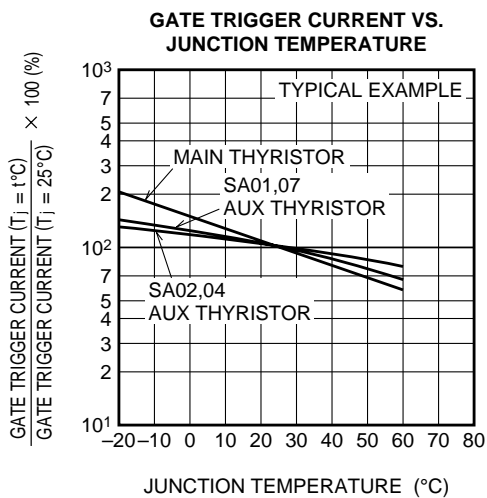
COMMUTATING CHARACTERISTICS ($T_a=25^\circ\text{C}$, Single pulse operation)

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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