

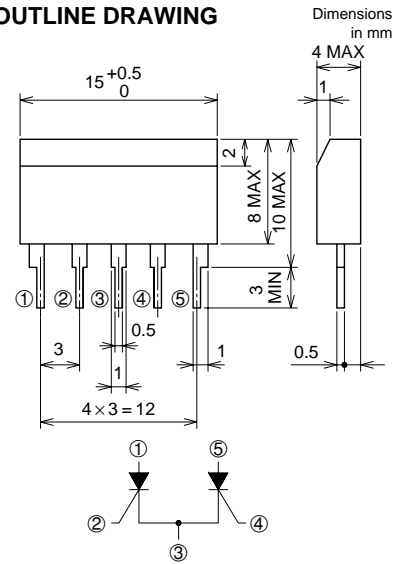
# SA01, SA02, SA04, SA07

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	$C_M=700\mu F$ , $I_{TM}=200A$ ,	High sensitive IGT $\leq 250\mu A$	Compact strobe
	SA02	$C_C=2.2\mu F$	High holding current $I_H \geq 25mA$	
32	SA04	$C_M=1000\mu F$ , $I_{TM}=230A$ , $C_C=2.5\mu F$	High holding current $I_H \geq 25mA$	Middle class strobe
25	SA07	$C_M=700\mu F$ , $I_{TM}=200A$ , $C_C=1.4\mu F$	High sensitive IGT $\leq 250\mu A$	Built-in strobe

## MAXIMUM RATINGS (T<sub>a</sub> = -20 ~ +60°C, unless otherwise noted)

Symbol	Parameter	SA01		SA02		SA04		SA07		Unit
		Main	Aux	Main	Aux	Main	Aux	Main	Aux	
V <sub>DRM</sub> *1	Repetitive peak off-state voltage	400								V
V <sub>DSM</sub> *1	Non-repetitive peak off-state voltage	480	600	480	600	480	600	450	600	V
V <sub>RRM</sub>	Repetitive peak reverse voltage	400								V
-	Pulse current ability	See electrical characteristics								A
I <sub>FGM</sub>	Peak gate forward current	0.5	0.3	0.5	1.0	1.0	1.0	0.5	0.3	A
T <sub>opr</sub>	Operating ambient temperature	-20 ~ +60								°C
T <sub>stg</sub>	Storage temperature	-40 ~ +125								°C

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

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## ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C, unless otherwise noted)

Symbol	Parameter	SA01		SA02		SA04		SA07		Unit
		Main	Aux	Main	Aux	Main	Aux	Main	Aux	
I <sub>DRM</sub>	Repetitive peak off-state current*1	100	20	100	100	100	100	100	20	μA
I <sub>RRM</sub>	Repetitive peak reverse current	100	20	100	100	100	100	100	20	μA
I <sub>GT</sub>	Gate trigger current	30	0.25	30	30	50	30	80	0.25	mA
V <sub>GT</sub>	Gate trigger voltage	1.5	1.0	1.5	1.5	2.0	1.5	1.5	1.0	V
I <sub>H</sub>	Holding current*2	—	1.0	—	25	—	25	—	1.0	mA

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

\*2. Minimum value

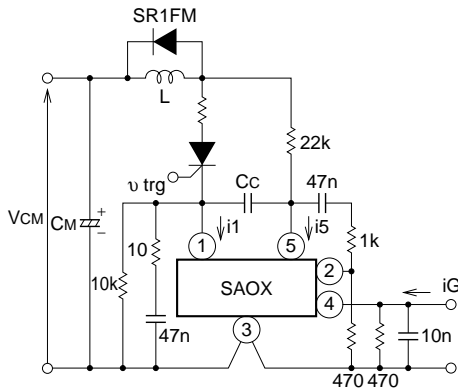


Fig. 1 Test circuit

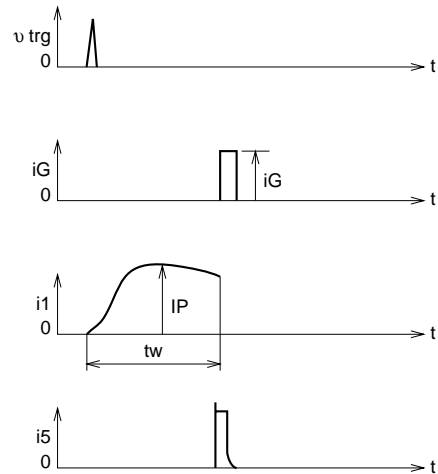


Fig. 2 The voltage and current waveforms

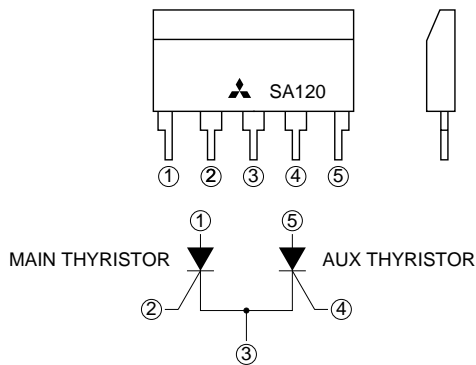


Fig. 3 Pin position and Equivalent circuit

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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)

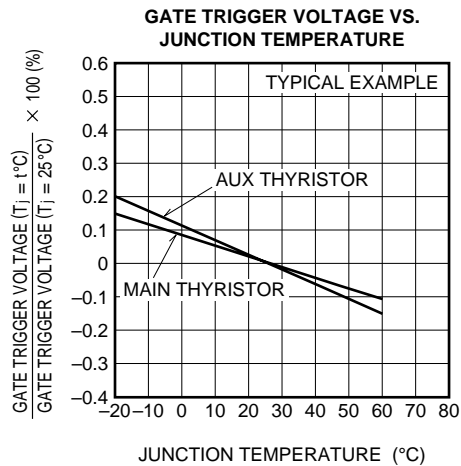
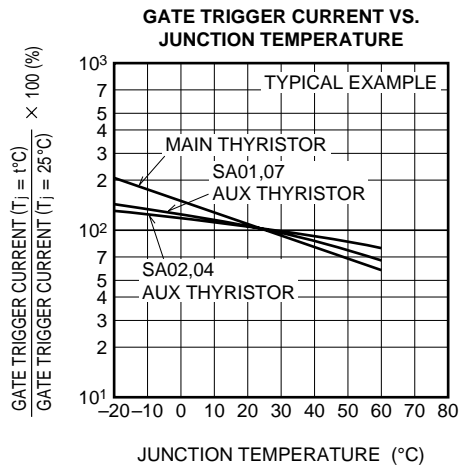
### COMMUTATING CHARACTERISTICS ( $T_a=25^\circ\text{C}$ , Single pulse operation)

Symbol	Parameter	SA01	SA02	SA04	SA07	Unit
$V_{CM}$	Main capacitor charging voltage	350				V
$C_M$	Main capacitor	700		1000	700	$\mu\text{F}$
$I_{TM}$	Peak on-state current	200		230	200	A
L	Anode reactor	25				$\mu\text{H}$
$C_c$	Commutating capacitor	2.2		2.5	1.4	$\mu\text{F}$

### 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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