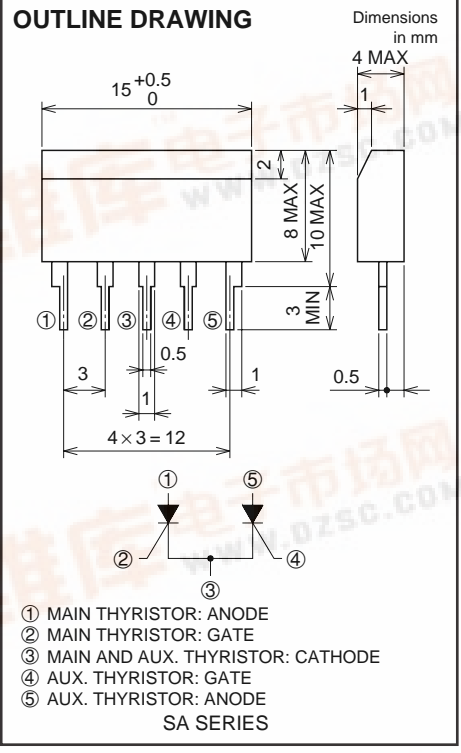
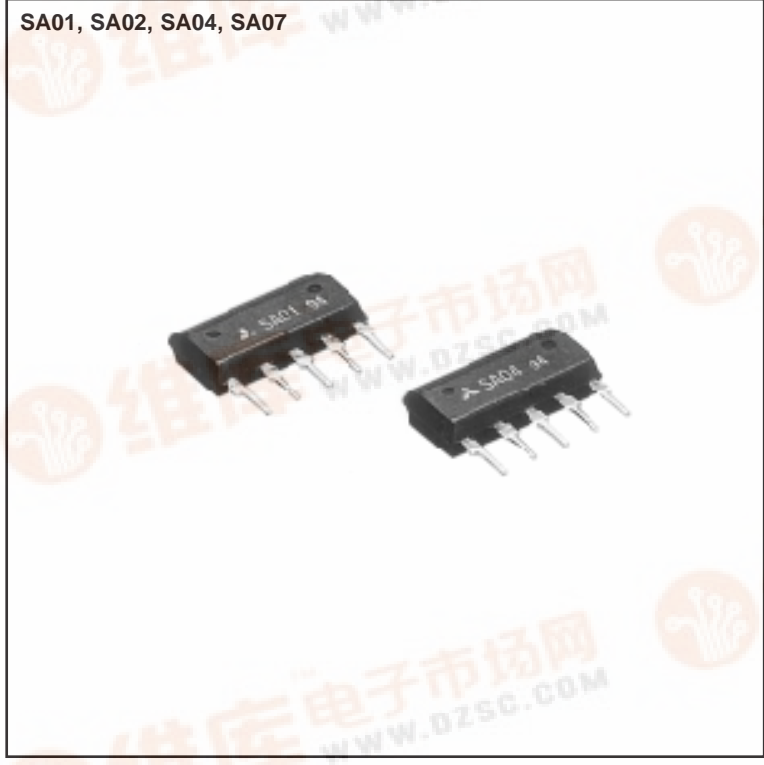


MITSUBISHI SEMICONDUCTOR (HIGH-SPEED SWITCHING THYRISTOR ARRAY)

# SA01, SA02, SA04, SA07

THYRISTOR ARRAY  
SA SERIES FOR STROBE FLASHER



## APPLICATION

Automatic strobe flasher

## FAMILY CONSTITUTION

Guide No. (ASA100)	Type	Commutating characteristics	Aux thyristor	Application
25	SA01	CM=700μF, ITM=200A,	High sensitive IGT ≤ 250μA	Compact strobe
	SA02	CC=2.2μF	High holding current IH ≥ 25mA	
32	SA04	CM=1000μF, ITM=230A, CC=2.5μF	High holding current IH ≥ 25mA	Middle class strobe
25	SA07	CM=700μF, ITM=200A, CC=1.4μF	High sensitive IGT ≤ 250μA	Built-in strobe

## MAXIMUM RATINGS (Ta= -20 ~ +60°C, unless otherwise noted)

Symbol	Parameter	SA01		SA02		SA04		SA07		Unit
		Main	Aux	Main	Aux	Main	Aux	Main	Aux	
VDRM *1	Repetitive peak off-state voltage	400								V
VDSM *1	Non-repetitive peak off-state voltage	480	600	480	600	480	600	450	600	V
VRRM	Repetitive peak reverse voltage	400								V
-	Pulse current ability	See electrical characteristics								A
IFGM	Peak gate forward current	0.5	0.3	0.5	1.0	1.0	1.0	0.5	0.3	A
Topr	Operating ambient temperature	-20 ~ +60								°C
Tstg	Storage temperature	-40 ~ +125								°C

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



# SA01, SA02, SA04, SA07

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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
IRRM	Repetitive peak reverse current	100	20	100	100	100	100	100	20	μA
IGT	Gate trigger current	30	0.25	30	30	50	30	80	0.25	mA
VGT	Gate trigger voltage	1.5	1.0	1.5	1.5	2.0	1.5	1.5	1.0	V
IH	Holding current *2	—	1.0	—	25	—	25	—	1.0	mA

\*1. Connect 1kΩ resistor between gate to cathode.  
\*2. Minimum value

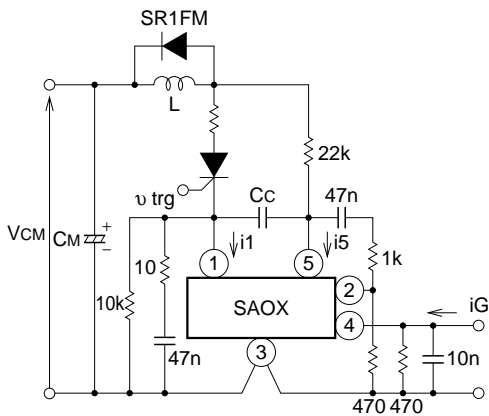


Fig. 1 Test circuit

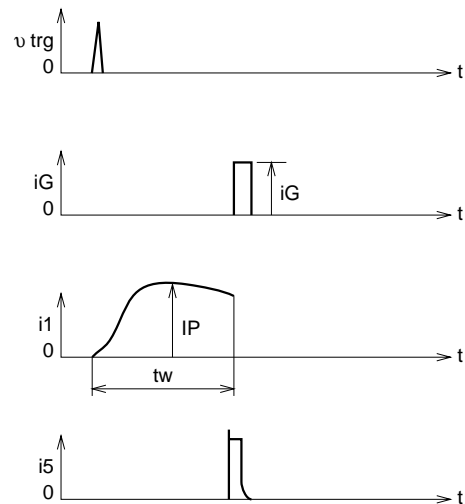


Fig. 2 The voltage and current waveforms

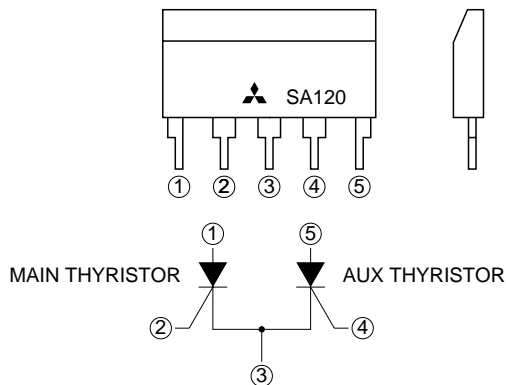


Fig. 3 Pin position and Equivalent circuit

# SA01, SA02, SA04, SA07

THYRISTOR ARRAY  
SA SERIES FOR STROBE FLASHER

## 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)

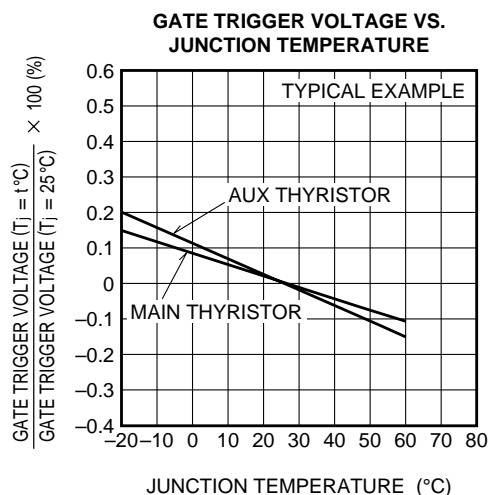
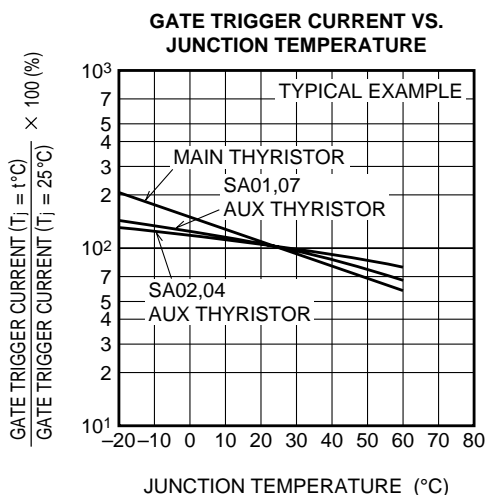
### COMMUTATING CHARACTERISTICS ( $T_a=25^\circ\text{C}$ , Single pulse operation)

Symbol	Parameter	SA01	SA02	SA04	SA07	Unit
V <sub>CM</sub>	Main capacitor charging voltage	350				V
C <sub>M</sub>	Main capacitor	700		1000	700	μF
I <sub>TM</sub>	Peak on-state current	200		230	200	A
L	Anode reactor	25				μH
C <sub>c</sub>	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



# SA01, SA02, SA04, SA07

THYRISTOR ARRAY  
SA SERIES FOR STROBE FLASHER

