

TOSHIBA SOLID STATE AC RELAY

TSZ1J2A45-NOPTICALLY ISOLATED, NORMALLY OPEN DUAL IN ONE PACKAGE TYPE
SSR

Unit in mm

COMPUTER PERIPHERALS

MACHINE TOOL CONTROLS

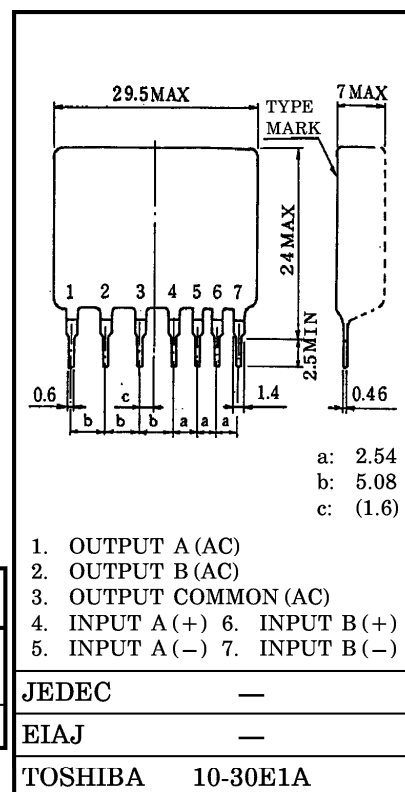
PROCESS CONTROL SYSTEMS

TRAFFIC CONTROL SYSTEMS

- R.M.S On-State Current : $I_T(\text{RMS})=1\text{A}$
- Non-Repetitive Peak Off-State Voltage : $V_{\text{DSM}}=600\text{V}$
- TTL Compatible
- Isolation Voltage : 2000V AC ($t=1\text{min.}$)

MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$, EACH CIRCUIT)
INPUT (CONTROL)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Control Input Current (DC) (Note 1)	$I_F(\text{IN})$	30	mA
Input Reverse Voltage (DC)	$I_R(\text{IN})$	5	V



OUTPUT (LOAD)

Non-Repetitive Peak Off-State Voltage	V_{DSM}	600	V
Nominal AC Line Voltage	V_{AC}	240	V
R.M.S On-State Current	$I_T(\text{RMS})$	1	A
Peak One Cycle Surge On-State Current (Non-Repetitive)	I_{TSM}	40 (50Hz) 44 (60Hz)	A
Operating Frequency Range	f	45~65	Hz
Isolation Voltage ($t=1\text{min.}$, Input to Output)	BV_S/AC	2000	V
Operating Temperature Range	T_{opr}	-20~80	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-30~100	$^\circ\text{C}$

Note 1 : Not Including Input Resistance : Used Insert an external resistance into SSR.
Reverse voltage should not be applied to input.

2 : Sunbber network (C-R) is necessary to protect from surge voltage and dv/dt fire.
Sunbber network is to be connected between #1, #2, and #3 terminal.

3 : Mounting : Soldering of printed wiring board should be used under 260°C and 10 second.

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ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$, EACH CIRCUIT)
INPUT (CONTROL)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Pick Up Current	I_{FT}	$V_{AC} = 100V_{rms}$, Resistive Load	—	—	12	mA
Drop Out Voltage	V_{FD}		0.5	—	—	V
Input Resistance	$R_{(IN)}$	—	—	0	—	Ω

OUTPUT (LOAD)

Off-State Leakage Current	I_{OL}	$V_{AC} = 200V_{rms}$, $f = 50\text{Hz}$	—	—	1.0	mA
Peak On-State Voltage	V_{TM}	$I_T (RMS) = 1A$	—	—	1.5	V
dv/dt (Off-State)	dv/dt	$V_{DSM} = 0.7 \times \text{Rated}$	50	—	—	$V/\mu s$
Turn-On Time	t_{on}	$V_{AC} = 100V_{rms}$, Resistive Load (Fig. 1)	—	—	1	ms
Turn-Off Time	t_{off}		—	—	1/2	Cycle
Isolation Resistance	R_s	$V = 500V$, $R_H = 40 \sim 60\%$	10^{10}	10^{11}	—	Ω

EQUIVALENT CIRCUIT

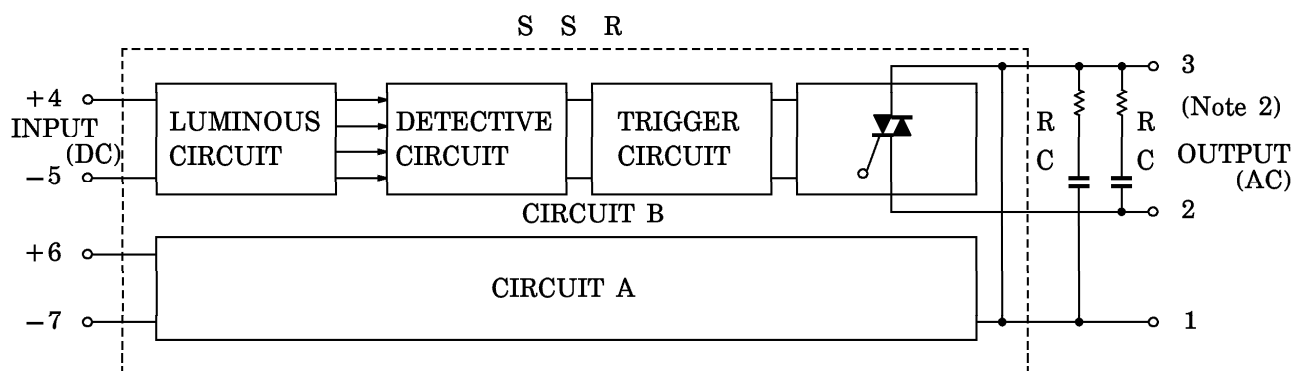
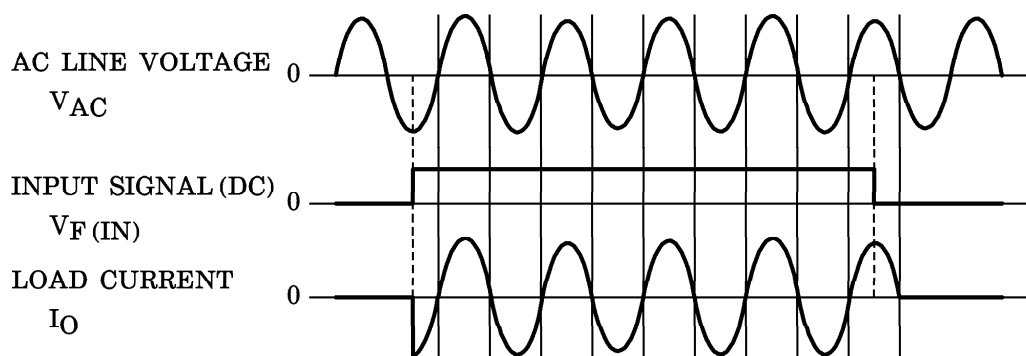


Fig. 1. SWITCHING WAVEFORM



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