

TOSHIBA SOLID STATE AC RELAY

TSS16G48S, TSS16J48S

Unit in mm

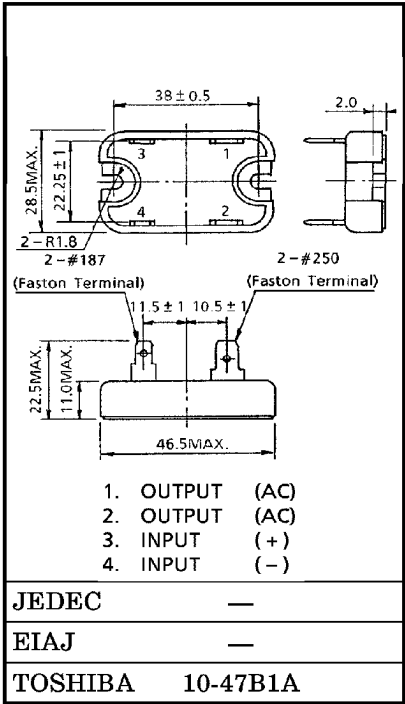
○ OPTICALLY ISOLATED, ZERO VOLTAGE TURN-ON,  
ZERO CURRENT TURN-OFF, NORMALLY OPEN SSR.

COMPUTOR PERIPHERALS  
MACHINE TOOL CONTROLS  
PROCESS CONTROL SYSTEMS  
TRAFFIC CONTROL SYSTEMS

- R. M. S On-State Current :  $I_T(RMS)=16A$
- Non-Repetitive Peak Off-State Voltage :  $V_{DSM}=400, 600V$
- TTL Compatible
- Including Snubber Network
- Isolation Voltage (t=1min.) : 2500V AC (Input to Output)  
: 1500V AC (Input/Output to Base)

MAXIMUM RATINGS (Ta = 25°C)  
INPUT (CONTROL)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Control Input Voltage (DC) (Note 1)	$V_F(IN)$	5.5	V
Control Input Current (DC)	$I_F(IN)$	30	mA



OUTPUT (LOAD)

Non-Repetitive Peak Off-State Voltage	TSS16G48S	$V_{DSM}$	400	V
	TSS16J48S		600	
Nominal AC Line Voltage	TSS16G48S	$V_{AC}$	120	V
	TSS16J48S		240	
R. M. S On-State Current		$I_T(RMS)$	16	A
Peak One Cycle Surge On-State Current (Non-Repetitive)		$I_{TSM}$	150 (50Hz)	A
			165 (60Hz)	
Operating Frequency Range		f	45~65	Hz
Isolation Voltage (t=1min.)	Input to Output	$BV_S/AC$	2500	V
	Input/Output to Base		1500	
Operating Temperature Range		$T_{opr}$	-20~80	°C
Storage Temperature Range		$T_{stg}$	-30~80	°C
Screw Torque (M3)			0.6	N · m

- Note 1 : Driving input rating : Insert an external resistance into SSR when the power supply over 5.5V is used.
- 2 : Don't dip the SSR body into the organic solvent like Trichloroethylene, when washing the flux on the terminal.
- 3 : For installation of SSR, use spring-washers, etc. , to prevent screws from loosening.

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ELECTRICAL CHARACTERISTICS (Ta = 25°C)  
INPUT (CONTROL)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Pick Up Voltage	$V_{FT}$	$V_{AC}=100V_{rms}$ Resistive Load	—	—	4.0	V
Drop Out Voltage	$V_{FD}$		0.5	—	—	V
Input Resistance	$R_{(IN)}$		—	160	—	$\Omega$

INPUT (CONTROL)

Off-State Leakage Current	TSS16G48S	$I_{OL}$	$V_{AC}=100V_{rms}, f=50Hz$	—	—	3.0	mA
	TSS16J48S		$V_{AC}=200V_{rms}, f=50Hz$	—	—	6.0	
Peak On-State Voltage	$V_{TM}$	$I_T(RMS)=16A$		—	—	1.5	V
dv / dt (Off-State)	dv / dt	$V_{DSM}=0.7\times Rated$		50	—	—	V / $\mu s$
Turn-On Time	$t_{on}$	$V_{AC}=100V_{rms}$ Resistive Load (Fig. 1)		—	—	1 / 2	Cycle
Turn-Off Time	$t_{off}$			—	—	1 / 2	Cycle
Isolation Resistance	$R_S$	$V=500V, RH=40\sim60\%$		$10^{10}$	—	—	$\Omega$
Thermal Resistance	$R_{th(j-e)}$	AC		—	—	3.5	$^{\circ}C / W$

EQUIVALENT CIRCUIT

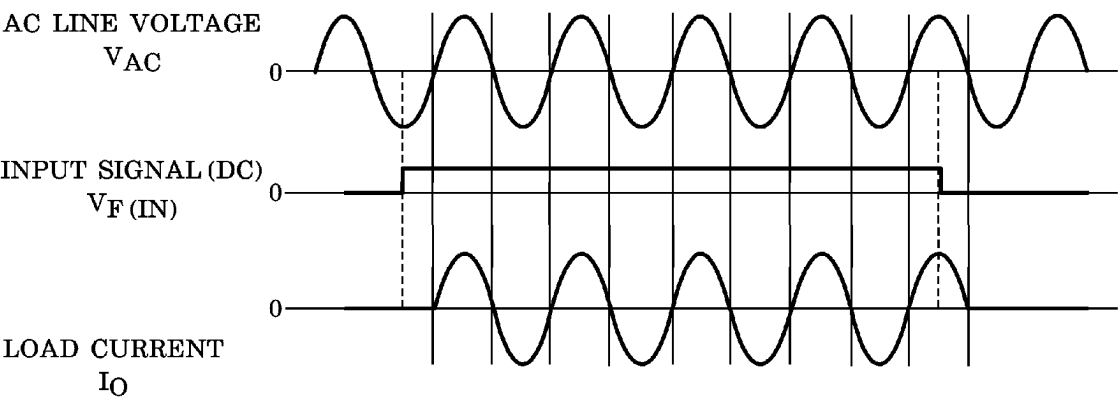
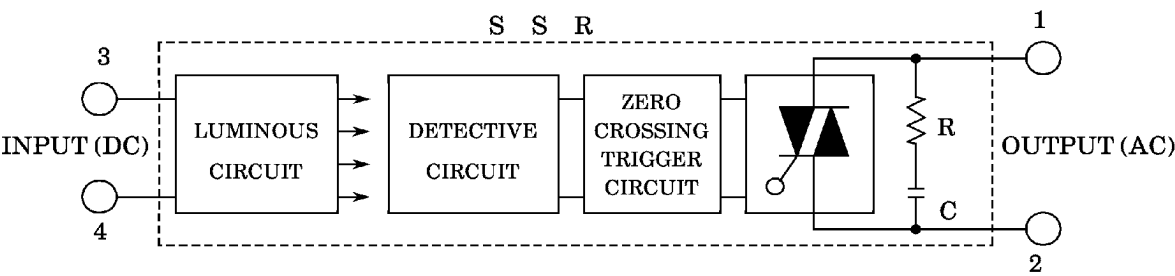


Fig. 1. ZERO VOLTAGE SWITCHING WAVEFORM

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