

TOSHIBA SOLID STATE AC RELAY

TSZ16G48S, TSZ16J48S

Unit in mm

○ OPTICALLY ISOLATED, NORMALLY OPEN SSR.

COMPUTOR PERIPHERALS  
MACHINE TOOL CONTROLS  
PROCESS CONTROL SYSTEMS  
TRAFFIC CONTROL SYSTEMS

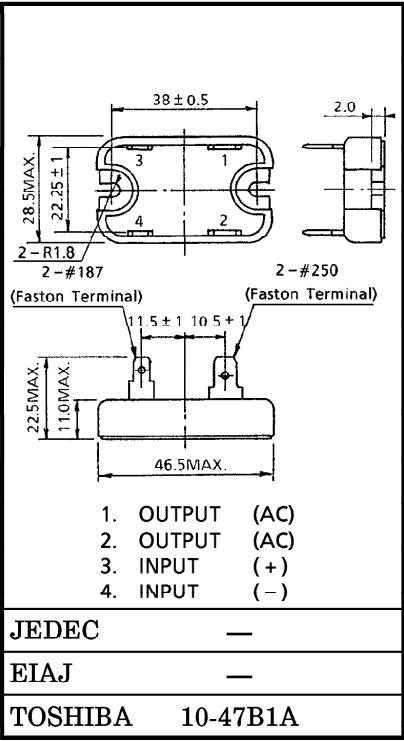
- R. M. S On-State Current :  $I_T(RMS) = 16A$
- Non-Repetitive Peak Off-State Voltage :  $V_{DSM} = 400, 600V$
- TTL Compatible
- Including Snubber Network
- Isolation Voltage (t=1min.) : 2500V AC (Input to Output)  
: 1500V AC (Input/Output to Base)

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	TSZ16G48S	$V_{DSM}$	400	V
	TSZ16J48S		600	
Nominal AC Line Voltage	TSZ16G48S	$V_{AC}$	120	V
	TSZ16J48S		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	$V_{FT}$	$V_{AC}=100V_{rms}$	—	—	4.0	V
Drop Out Voltage	$V_{FD}$	Resistive Load	0.5	—	—	V
Input Resistance	$R_{(IN)}$		—	160	—	$\Omega$

INPUT (CONTROL)

Off-State Leakage Current	TSZ16G48S TSZ16J48S	$I_{OL}$	$V_{AC}=100V_{rms}, f=50Hz$ $V_{AC}=200V_{rms}, f=50Hz$	— —	— —	3.0 6.0	mA
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		$t_{on}$	$V_{AC}=100V_{rms}$	—	—	1	ms
Turn-Off Time		$t_{off}$	Resistive Load (Fig. 1)	—	—	1 / 2	Cycle
Isolation Resistance		$R_S$	V = 500V, RH = 40~60%	$10^{10}$	—	—	$\Omega$
Thermal Resistance		$R_{th(j-c)}$	AC	—	—	3.5	°C / W

EQUIVALENT CIRCUIT

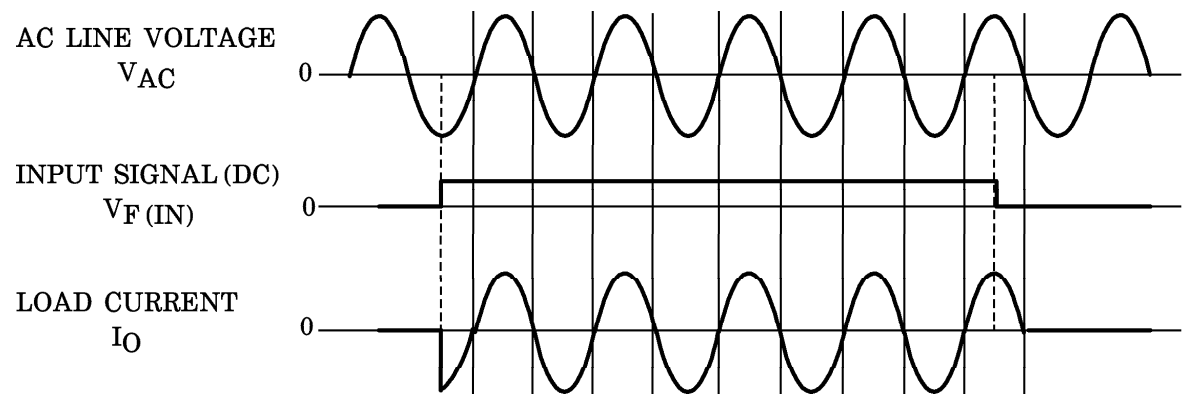
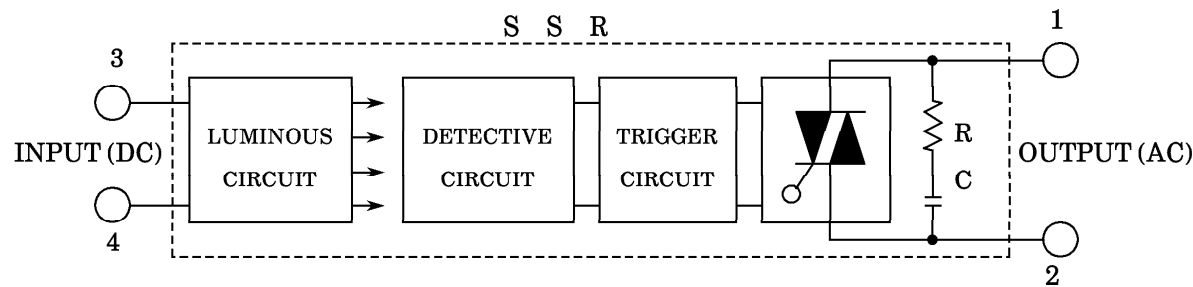


Fig. 1. SWITCHING WAVEFORM

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