

TOSHIBA

TSZ2G48S, TSZ2J48S

TOSHIBA SOLID STATE AC RELAY

TSZ2G48S, TSZ2J48S

OPTICALLY ISOLATED, NORMALLY OPEN SSR

Unit in mm

- COMPUTER PERIPHERALS
- MACHINE TOOL CONTROLS
- PROCESS CONTROL SYSTEMS
- TRAFFIC CONTROL SYSTEMS

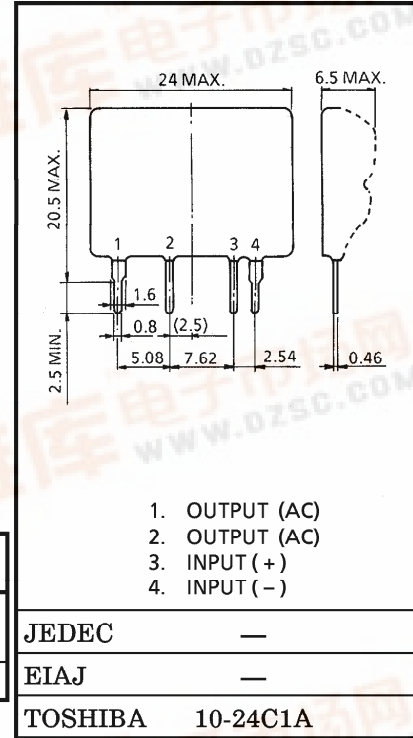
- R.M.S On-State Current : $I_T(RMS) = 2A$
- Non-Repetitive Peak Off-State Voltage : $V_{DSM} = 400, 600V$
- TTL Compatible
- Isolation Voltage : 2000V AC (t=1min.)
- Including Snubber Network

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	TSZ2G48S	V_{DSM}	400	V
	TSZ2J48S		600	
Nominal AC Line Voltage	TSZ2G48S	V_{AC}	120	V
	TSZ2J48S		240	
R.M.S On-State Current	$I_T(RMS)$	2	A	
Peak One Cycle Surge On-State Current (Non-Repetitive)	I_{TSM}	40 (50Hz)	A	
		44 (60Hz)		
Operating Frequency Range	f	45~65	Hz	
Isolation Voltage (t=1min., Input to Output)	BV_S/AC	2000	V	
Operating Temperature Range	T_{opr}	-20~80	°C	
Storage Temperature Range	T_{stg}	-30~80	°C	



Weight : 5g

Note 1 : Driving input rating : Insert an external resistance into SSR when the power supply over 5.5V is used.

Note 2 : Mounting : Soldering of printed wiring board should be used under 260°C and 10 second.

961001EBA2

TOSHIBA is continually working to improve the quality and the reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to observe standards of safety, and to avoid situations in which a malfunction or failure of a TOSHIBA product could cause loss of human life, bodily injury or damage to property. In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent products specifications. Also, please keep in mind the precautions and conditions set forth in the TOSHIBA Semiconductor Reliability Handbook.

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	—	Ω

OUTPUT (LOAD)

Off-State Leakage Current	TSZ2G48S	I _{OL}	V _{AC} = 100V _{rms} , f = 50Hz	—	—	1	mA
	TSZ2J48S		V _{AC} = 200V _{rms} , f = 50Hz	—	—	2	
Peak On-State Voltage	V _{TM}	I _T (RMS) = 2A	—	—	1.5	V	
dv / dt (Off-State)	dv / dt	V _{DSM} = 0.7 × Rated	10	—	—	V / μs	
Minimum Load Current	—		100	—	—	mA	
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, R.H = 40~60%	10 ¹⁰	—	—	Ω	

EQUIVALEN CIRCUIT

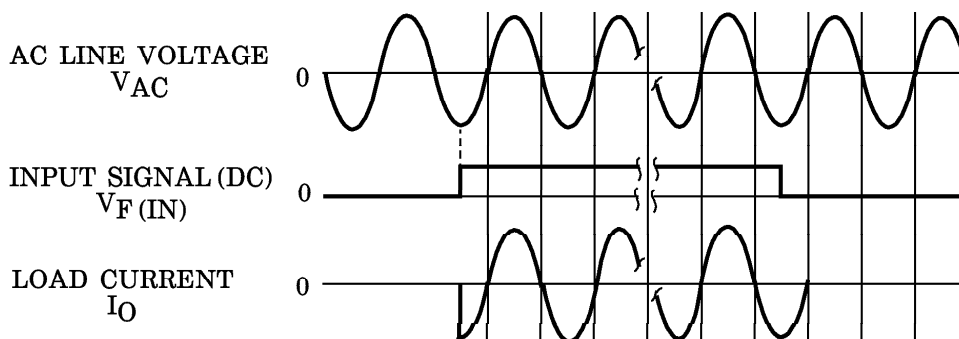
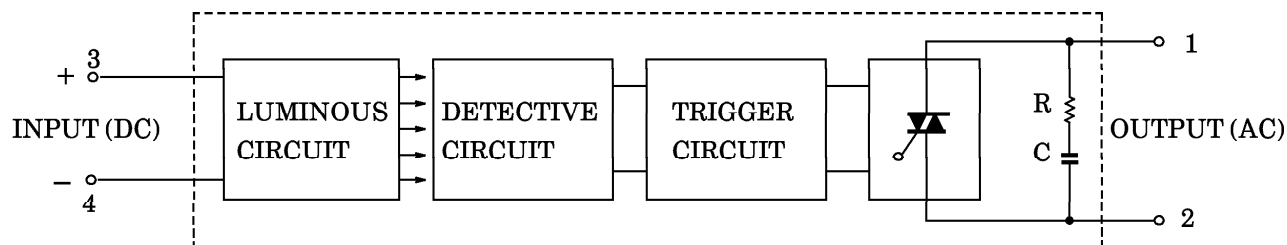


Fig.1 SWITCHING WAVEFORM

