

TOSHIBA SOLID STATE AC RELAY

TSZ2G48, TSZ2J48

OPTICALLY ISOLATED, NORMALLY OPEN SSR

COMPUTER PERIPHERALS
 MACHINE TOOL CONTROLS
 PROCESS CONTROL SYSTEMS
 TRAFFIC CONTROL SYSTEMS

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

MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

INPUT (CONTROL)

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

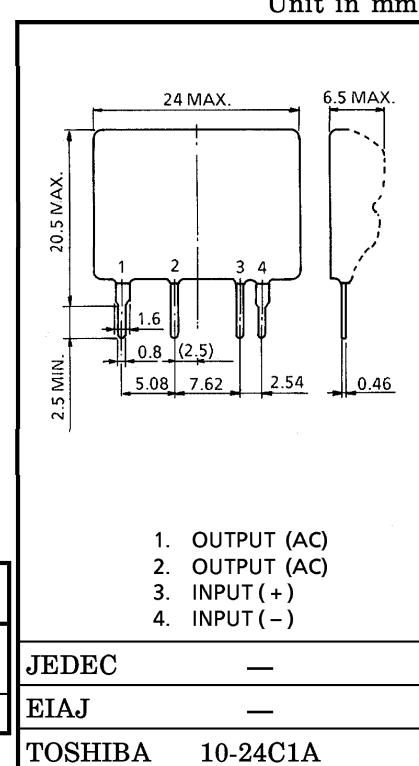
OUTPUT (LOAD)

Non-Repetitive Peak Off-State Voltage	TSZ2G48	V_{DSM}	400	V
	TSZ2J48		600	
Nominal AC Line Voltage	TSZ2G48	V_{AC}	120	V
	TSZ2J48		240	
R.M.S On-State Current		$I_T(\text{RMS})$	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 ($t=1\text{min.}$, Input to Output)		$B_{\text{VS}} / \text{AC}$	2000	V
Operating Temperature Range		T_{opr}	-20~80	°C
Storage Temperature Range		T_{stg}	-30~80	°C

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

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

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



Weight : 5g

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	TSZ2G48	I _{OL}	V _{AC} = 100V _{rms} , f = 50Hz	—	—	0.1	mA
	TSZ2J48		V _{AC} = 200V _{rms} , f = 50Hz	—	—	0.2	
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	Cycle
Turn-Off Time		t _{off}	Resistive Load (Fig.1)	—	—	1 / 2	
Isolation Resistance		R _S	V = 500V, R.H = 40~60%	10 ¹⁰	—	—	Ω

EQUIVALENT CIRCUIT

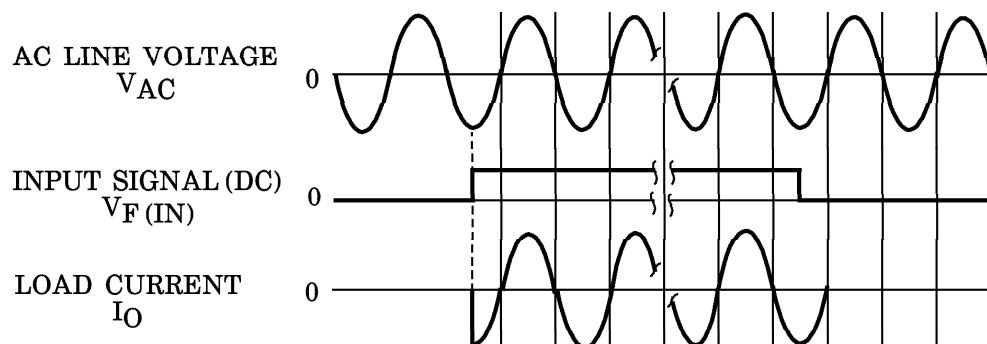
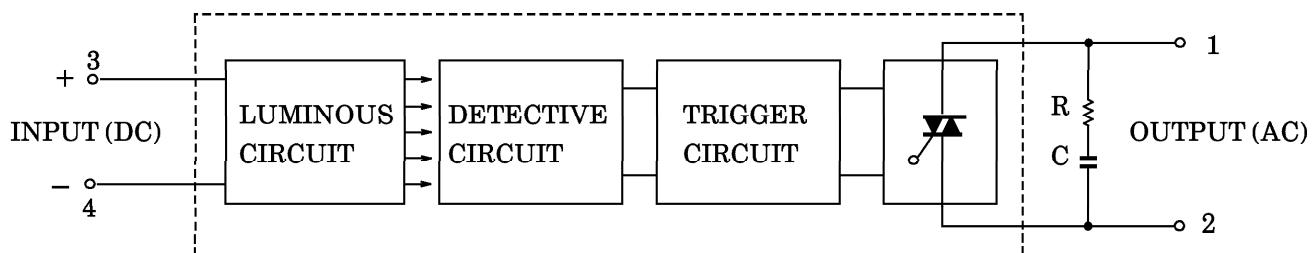
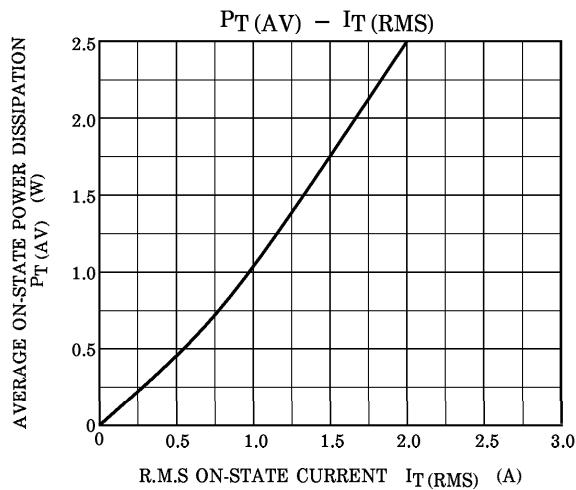
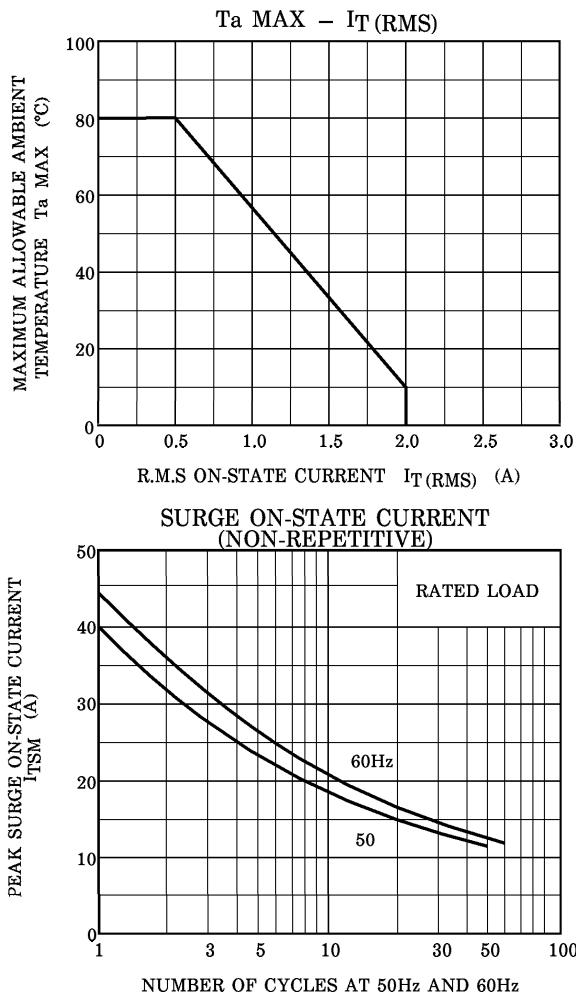


Fig.1 SWITCHING WAVEFORM



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