

TOSHIBA SOLID STATE AC RELAY

# TSS2G48S, TSS2J48S

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

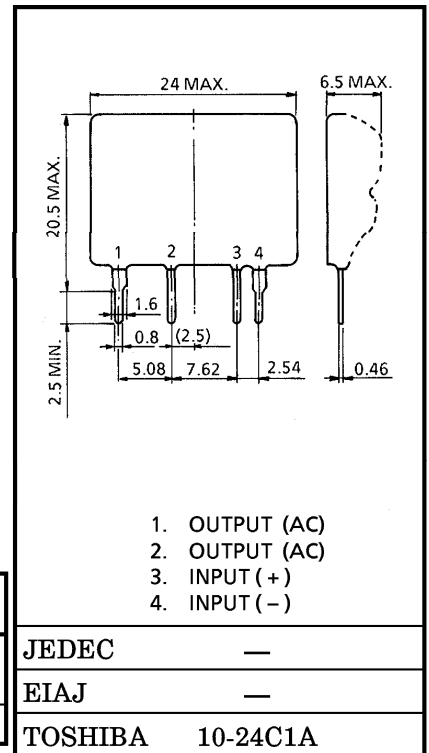
Unit in mm

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



Weight : 5g

OUTPUT (LOAD)

Non-Repetitive Peak Off-State Voltage	TSS2G48S	$V_{DSM}$	400	V
	TSS2J48S		600	
Nominal AC Line Voltage	TSS2G48S	$V_{AC}$	120	V
	TSS2J48S		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	$T_{stg}$	-20~80	°C	

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

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

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	—	$\Omega$

OUTPUT (LOAD)

Off-State Leakage Current	TSS2G48S	$I_{OL}$	$V_{AC} = 100V_{rms}, f = 50Hz$	—	—	1	mA
	TSS2J48S					$V_{AC} = 200V_{rms}, f = 50Hz$	
Peak On-State Voltage	$V_{TM}$	$I_T (RMS) = 2A$	—	—	1.5	V	
dv / dt (Off-State)	dv / dt	$V_{DSM} = 0.7 \times \text{Rated}$	50	—	—	V / $\mu s$	
Minimum Load Current	—		100	—	—	mA	
Turn-On Time	$t_{on}$	$V_{AC} = 100V_{rms}$ Resistive Load (Fig.1)	—	—	1 / 2	Cycle	
Turn-Off Time	$t_{off}$		—	—	1 / 2		
Isolation Resistance	$R_S$	$V = 500V, R.H = 40 \sim 60\%$	$10^{10}$	—	—	$\Omega$	

EQUIVALEN CIRCUIT

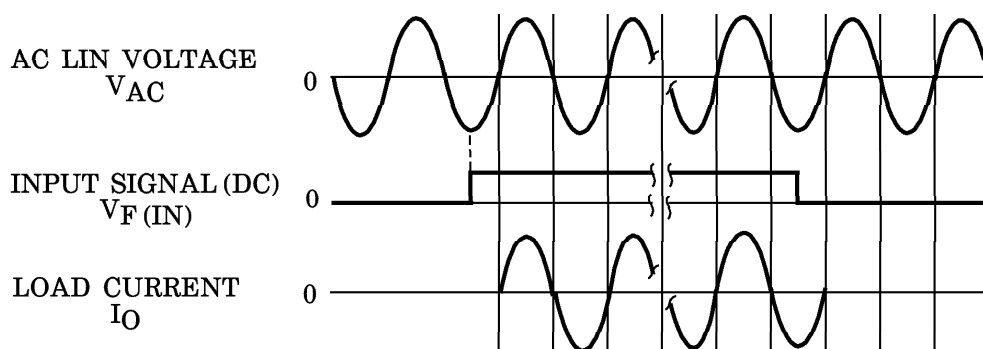
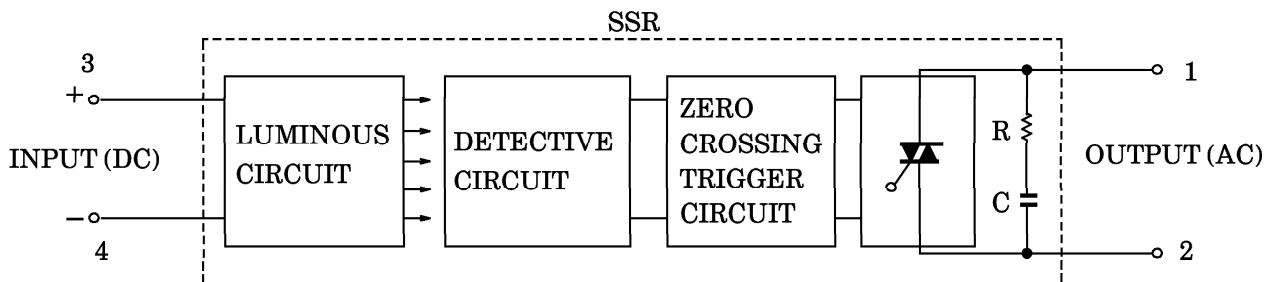
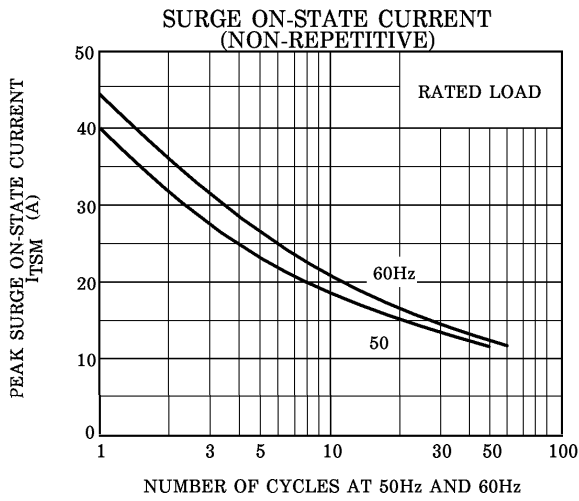
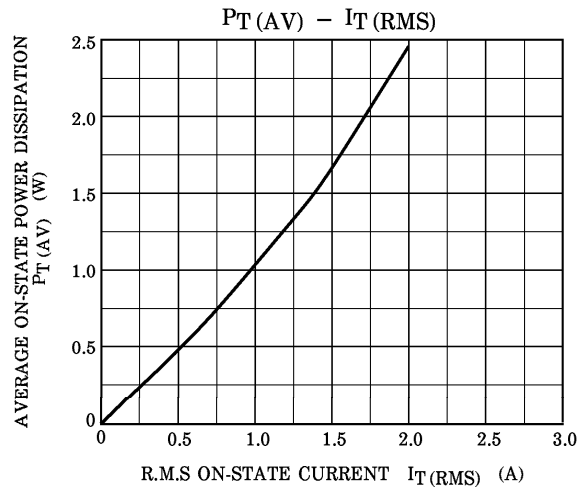
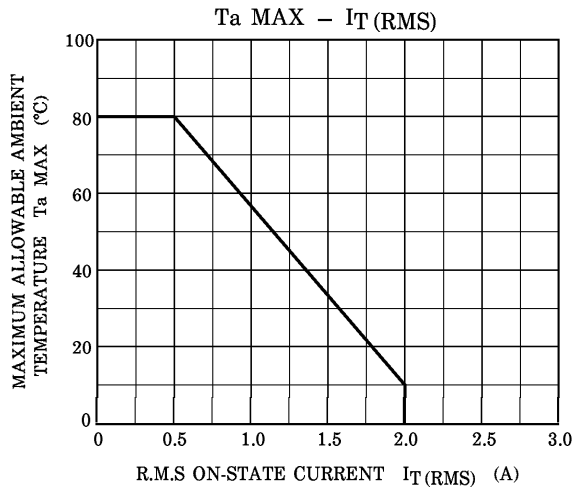


Fig.1 ZERO VOLTAGE SWITCHING WAVEFORM



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