

TOSHIBA SOLID STATE AC RELAY

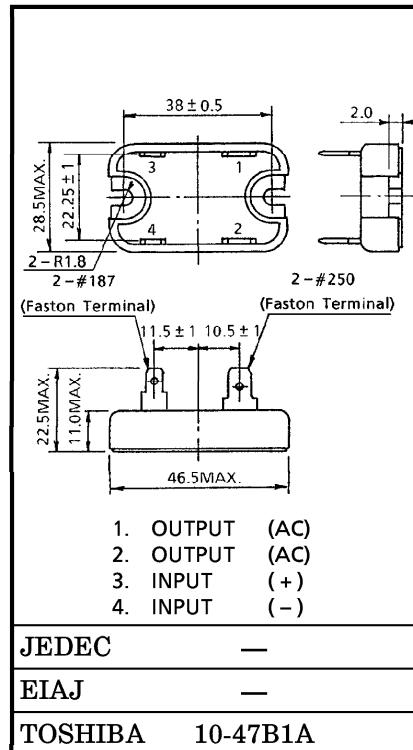
TSZ16G48S, TSZ16J48S

- OPTICALLY ISOLATED, NORMALLY OPEN SSR.

COMPUTOR PERIPHERALS
MACHINE TOOL CONTROLS
PROCESS CONTROL SYSTEMS
TRAFFIC CONTROL SYSTEMS

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

Unit in mm



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	TSZ16G48S TSZ16J48S	V_{DSM}	400 600	V
Nominal AC Line Voltage	TSZ16G48S TSZ16J48S	V_{AC}	120 240	V
R. M. S On-State Current		$I_T(\text{RMS})$	16	A
Peak One Cycle Surge On-State Current (Non-Repetitive)		I_{TSM}	150 (50Hz) 165 (60Hz)	A
Operating Frequency Range		f	45~65	Hz
Isolation Voltage ($t=1\text{min.}$)	Input to Output Input / Output to Base	BV_S / AC	2500 1500	V
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.

ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)
INPUT (CONTROL)

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

INPUT (CONTROL)

Off-State Leakage Current	TSZ16G48S TSZ16J48S	I_{OL}	$V_{AC} = 100\text{Vrms}, f = 50\text{Hz}$ $V_{AC} = 200\text{Vrms}, f = 50\text{Hz}$	—	—	3.0 6.0	mA
Peak On-State Voltage		V_{TM}	$I_T(\text{RMS}) = 16\text{A}$	—	—	1.5	V
dv/dt (Off-State)		dv/dt	$V_{DSM} = 0.7 \times \text{Rated}$	50	—	—	$\text{V}/\mu\text{s}$
Turn-On Time		t_{on}	$V_{AC} = 100\text{Vrms}$	—	—	1	ms
Turn-Off Time		t_{off}	Resistive Load (Fig. 1)	—	—	1/2	Cycle
Isolation Resistance		R_s	$V = 500\text{V}, RH = 40\sim 60\%$	10^{10}	—	—	Ω
Thermal Resistance		$R_{th(j-c)}$	AC	—	—	3.5	$^\circ\text{C}/\text{W}$

EQUIVALENT CIRCUIT

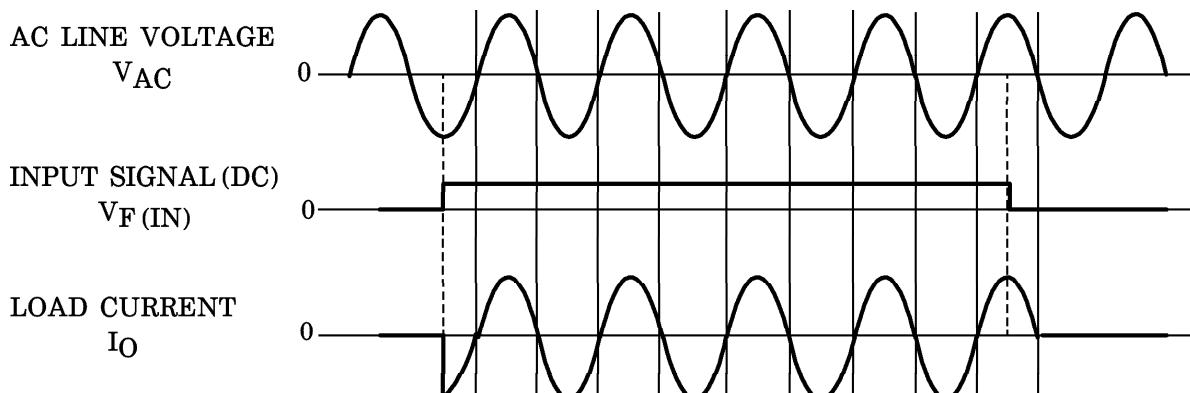
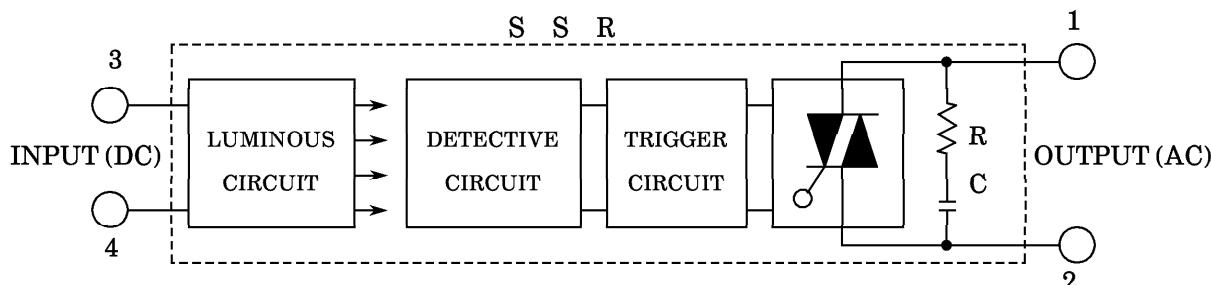
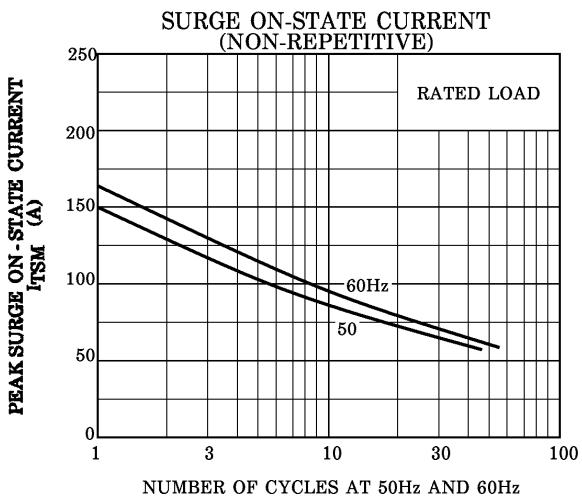
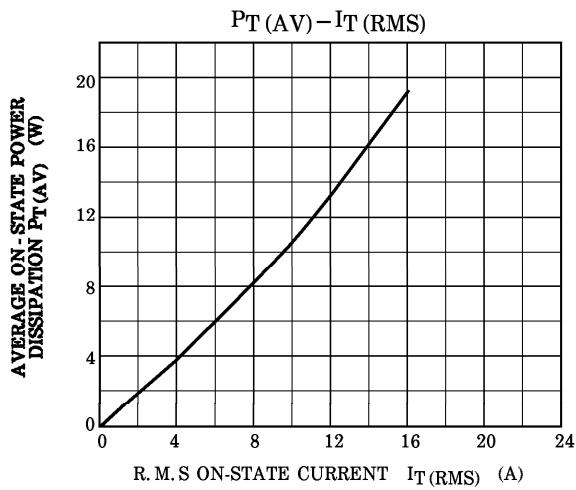
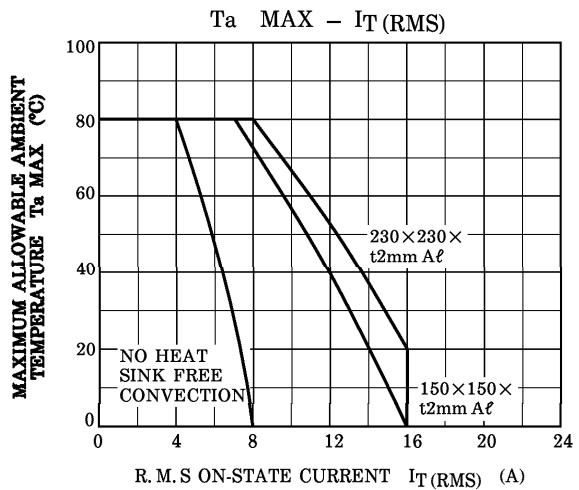


Fig. 1. SWITCHING WAVEFORM



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