

TOSHIBA SOLID STATE AC RELAY

TSS8G47S, TSS8J47S

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

COMPUTER PERIPHERALS  
MACHINE TOOL CONTROLS  
PROCESS CONTROL SYSTEMS  
TRAFFIC CONTROL SYSTEMS

- R.M.S On-State Current :  $I_T$  (RMS)=8A
- Repetitive Peak Off-State Voltage :  $V_{DRM}$ =400, 600V
- TTL Compatible
- Isolation Voltage : 2060V AC (t=1min.)
- Including Snubber Network

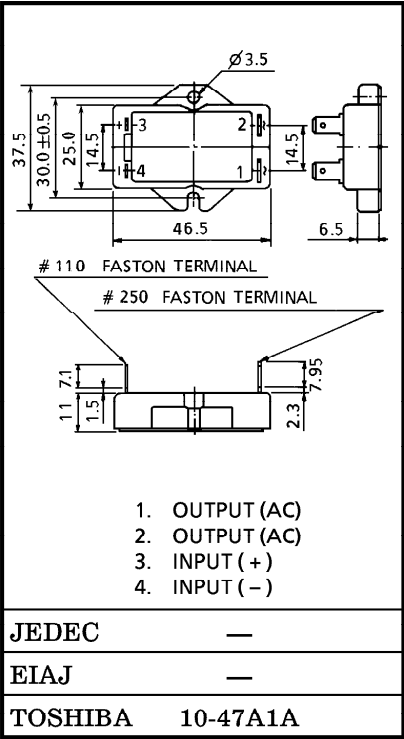
MAXIMUM RATINGS (Ta = 25°C)  
INPUT (CONTROL)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Control Input Voltage (DC) (Note 1)	$V_F$ (IN)	6	V
Control Input Current (DC)	$I_F$ (IN)	25	mA

OUTPUT (LOAD)

Repetitive Peak Off-State Voltage	TSS8G47S	V <sub>DSM</sub>	400	V
	TSS8J47S		600	
Nominal AC Line Voltage	TSS8G47S	V <sub>AC</sub>	120	V
	TSS8J47S		240	
R.M.S On-State Current		I <sub>T</sub> (RMS)	8	A
Peak One Cycle Surge On-State Current (Non-Repetitive)		I <sub>TSM</sub>	70 (50Hz)	A
Operating Frequency Range		f	45~65	Hz
Isolation Voltage (t=1min., Input to Output and Input/ Output to Base)		BV <sub>S</sub> / AC	2060	V
Operating Temperature Range		T <sub>opr</sub>	−30~80	°C
Storage Temperature Range		T <sub>stg</sub>	−30~80	°C
Screw Torque (M3)			6	kg·cm

Unit in mm



Weight : 31g

- Note 1 : Driving input rating : Insert an external resistance into SSR when the power supply over 6V is used.
- Note 2 : Don't dip the SSR body into the organic solvent like Trichloroethylene, when washing the flux on the terminal.
- Note 3 : For installation of SSR, use spring-wahers, etc., to prevent screws from loosening.

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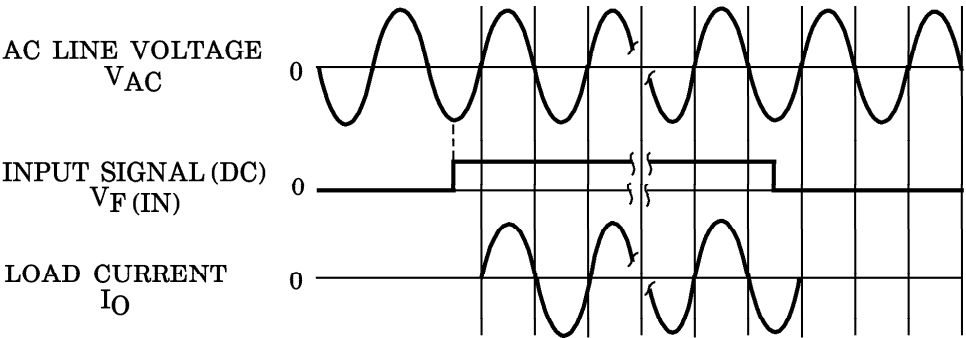
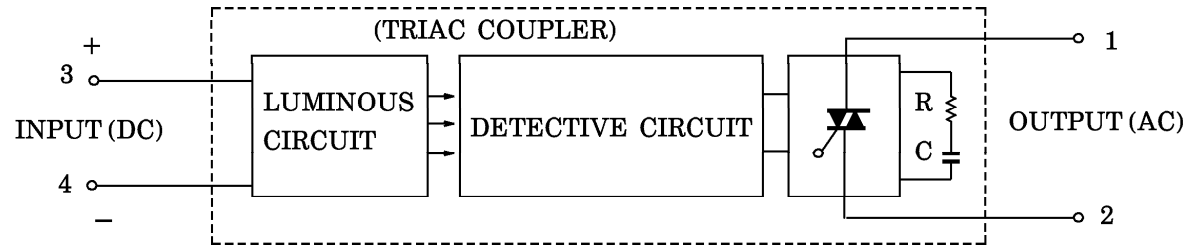
ELECTRICAL CHARACTERISTICS (Ta = 25°C)  
INPUT (CONTROL)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Pick Up Voltage	$V_{FT}$	$V_{AC}=100V_{rms}$ Resistive Load ( $R_L=100\Omega$ )	—	—	4.0	V
Drop Out Voltage	$V_{FD}$		1.0	—	—	V
Input Resistance	$R(IN)$		—	200	—	$\Omega$

OUTPUT (LOAD)

Off-State Leakage Current	TSS8G47S	$I_{OL}$	$V_{AC}=100V_{rms}, f=50Hz$	—	—	3.0	mA
	TSS8J47S		$V_{AC}=200V_{rms}, f=50Hz$	—	—	6.0	
Peak On-State Voltage	$V_{TM}$	$I_{TM}=12A$		—	—	1.8	V
dv / dt (Off-State)	dv / dt	$V_{DRM}=0.7\times\text{Rated}$		50	—	—	V / $\mu s$
dv / dt (Commutaing)	(dv / dt) c	$V_{DRM}=0.7\times\text{Rated}, I_T=8A$		2	—	—	V / $\mu s$
Turn-On Time	$t_{on}$	$V_{AC}=100V_{rms}$ Resistive Load ( $R_L=100\Omega$ )		—	—	1 / 2	Cycle
Turn-Off Time	$t_{off}$			—	—	1 / 2	
Isolation Resistance	$R_S$	$V=1kV, R.H=40\sim60\%$		$10^{10}$	—	—	$\Omega$
Thermal Resistance	$R_{th(j-c)}$	AC		—	—	2.5	$^{\circ}C / W$

EQUIVALEN CIRCUIT



ZERO VOLTAGE SWITCHING WAVEFORM

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