TOSHIBA SOLID STATE AC RELAY

TSZ16J48SR

OPTICALLY ISOLATED, NORMALLY OPEN SSR

COMPUTOR PERIPHERALS
MACHINE TOOL CONTROLS
PROCESS CONTROL SYSTEMS
TRAFFIC CONTROL SYSTEMS

• R.M.S On-State Current

 $: I_{T(RMS)} = 16A$

• Non-Repetitive Peak Off-State Voltage: VDSM=600V

• TTL Compatible

Including Snubber Network

• Isolation Voltage (t=1min.): 3750V AC (Input to Output)

: 1500V AC (Input/Output to Base)

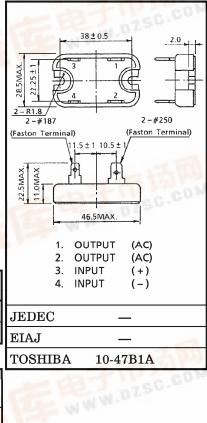
MAXIMUM RATINGS (Ta = 25°C) INPUT (CONTROL)

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 Voltage	Peak Off-State	$V_{ m DSM}$	600	V	
Nominal AC L	ine Voltage	V_{AC}	240	V	
R.M.S On-State Current		IT (RMS)	16	A	
Peak One Cycle Surge On-State		Imon s GO	150 (50Hz)	A	
Current (Non-Repetitive)		ITSM	165 (60Hz)		
Operating Frequency Range		f	45~65	$_{ m Hz}$	
Isolation	Input to Output		3750	V	
Voltage (t=1min.)	Input/Output to Base	BV _S /AC	1500		
Operating Temperature Range		Topr	-20~80	°C	
Storage Temperature Range		$T_{ m stg}$	-30~80	°C	
Screw Torque (M3)		- 17 W	0.6	N∙m	

Unit in mm



- 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.

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TOSHIBA T<u>SZ16J48SR</u>

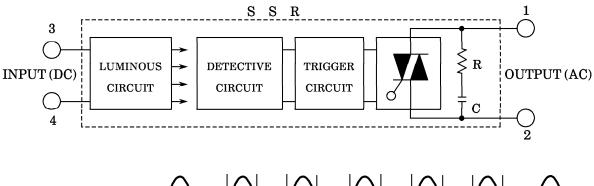
ELECTRICAL CHARACTERISTICS (Ta = 25°C) INPUT (CONTROL)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Pick Up Voltage	$ m V_{FT}$	$V_{ m AC} = 100 m Vrms$		_	4.0	V
Drop Out Voltage	$ m v_{FD}$	Resistive Load	0.5	_	<u> </u>	V
Input Resistance	R _(IN)		_	160	_	Ω

INPUT (CONTROL)

Off-State Leakage Current	$I_{ m OL}$	V _{AC} =200Vrms, f=50Hz	_	_	6.0	mA
Peak On-State Voltage	$ m V_{TM}$	$I_{T (RMS)} = 16A$	_	_	1.5	V
dv/dt (Off-State)	dv / dt	$V_{ m DSM} = 0.7 imes { m Rated}$	50	_	_	$V/\mu s$
Turn-On Time	t_{on}	$V_{ m AC} = 100 m Vrms$	_	_	1	ms
Turn-Off Time	$t_{ ext{off}}$	Resistive Load (Fig.1)	_	_	1/2	Cycle
Isolation Resistance	R_{S}	V=500V, RH=40~60%	10^{10}	_	_	Ω
Thermal Resistance	R _{th (j-c)}	AC	_	_	3.5	°C/W

EQUIVALENT CIRCUIT



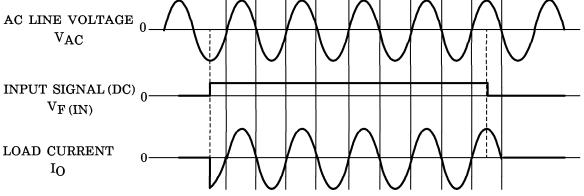


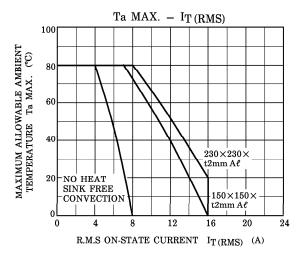
Fig.1 SWITCHING WAVEFORM

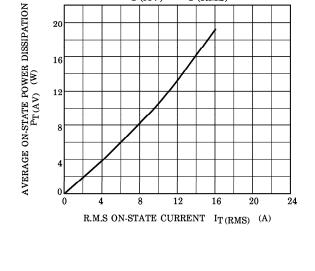
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PT(AV) - IT(RMS)

