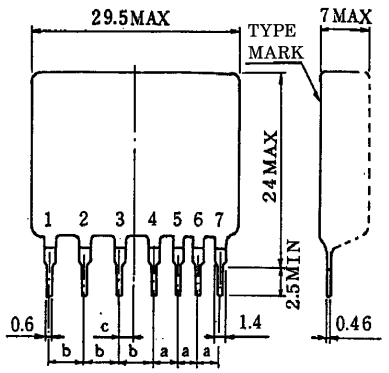
TOSHIBA SOLID DTATE AC RELAY

TSZ1J2A45-N

OPTICALLY ISOLATED, NORMALLY OPEN DUAL IN ONE PACKAGE TYPE SSR

Unit in mm



a: 2.54
b: 5.08
c: (1.6)

1. OUTPUT A (AC)
2. OUTPUT B (AC)
3. OUTPUT COMMON (AC)
4. INPUT A (+) 6. INPUT B (+)
5. INPUT A (−) 7. INPUT B (−)

JEDEC	—
EIAJ	—
TOSHIBA	10-30E1A

COMPUTER PERIPHERALS

MACHINE TOOL CONTROLS

PROCESS CONTROL SYSTEMS

TRAFFIC CONTROL SYSTEMS

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

MAXIMUM RATINGS (Ta = 25°C, EACH CIRCUIT)

INPUT (CONTROL)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Control Input Current (DC) (Note 1)	$I_{F\,(IN)}$	30	mA
Input Reverse Voltage (DC)	$I_{R(IN)}$	5	V

OUTPUT (LOAD)

Non-Repetitive Peak Off-State Voltage	V_{DSM}	600	V
Nominal AC Line Voltage	V_{AC}	240	V
R.M.S On-State Current	$I_{T\,(RMS)}$	1	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}	−30~100	°C

Note 1 : Not Including Input Resistance : Used Insert an external resistance into SSR. Reverse voltage should not be applied to input.

2 : Sunbber network (C-R) is necessary to protect from surge voltage and dv / dt fire. Sunbber network is to be connected between #1, #2, and #3 terminal.

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

ELECTRICAL CHARACTERISTICS (Ta = 25°C, EACH CIRCUIT)
INPUT (CONTROL)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Pick Up Current	I_{FT}	V_{AC}=100V_{rms}, Resistive Load	—	—	12	mA
Drop Out Voltage	V_{FD}		0.5	—	—	V
Input Resistance	$R_{(IN)}$	—	—	0	—	Ω

OUTPUT (LOAD)

Off-State Leakage Current	I_{OL}	V_{AC}=200V_{rms}, f=50Hz	—	—	1.0	mA
Peak On-State Voltage	V_{TM}	$I_{T(RMS)}$ =1A	—	—	1.5	V
dv / dt (Off-State)	dv / dt	V_{DSM}=0.7×Rated	50	—	—	V / μs
Turn-On Time	t_{on}	V_{AC}=100Vrms, Resistive Load (Fig. 1)	—	—	1	ms
Turn-Off Time	t_{off}		—	—	1 / 2	Cycle
Isolation Resistance	R_S	V=500V, R_H=40~60%	10^{10}	10^{11}	—	Ω

EQUIVALENT CIRCUIT

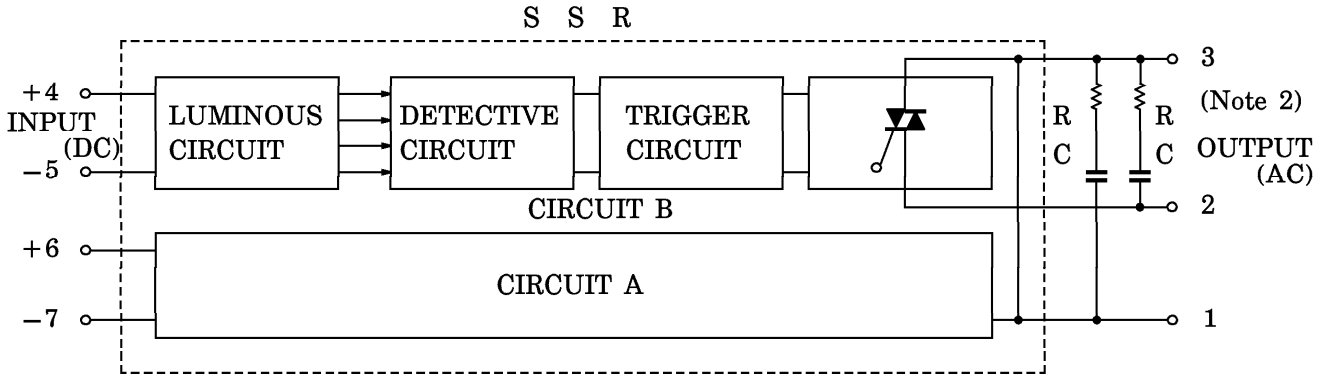
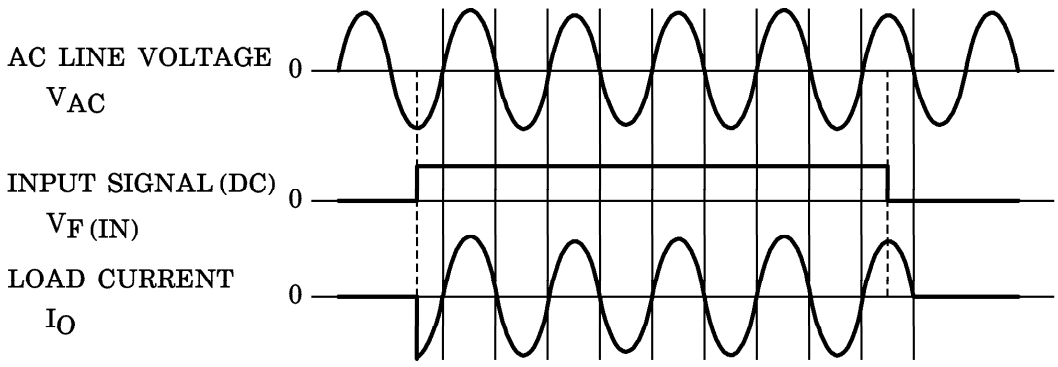
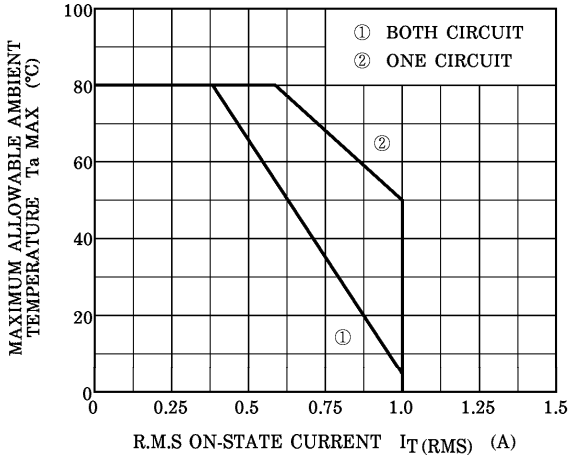


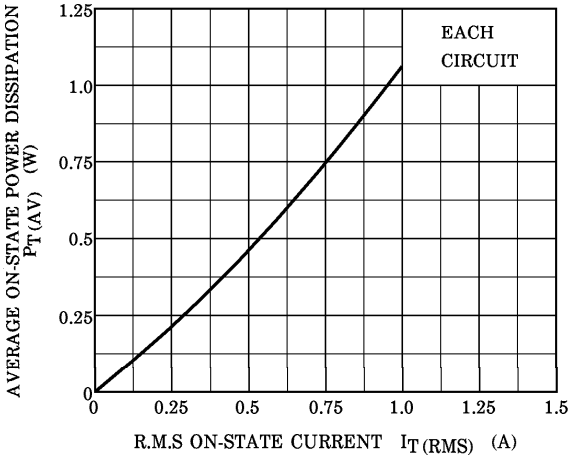
Fig. 1. SWITCHING WAVEFORM



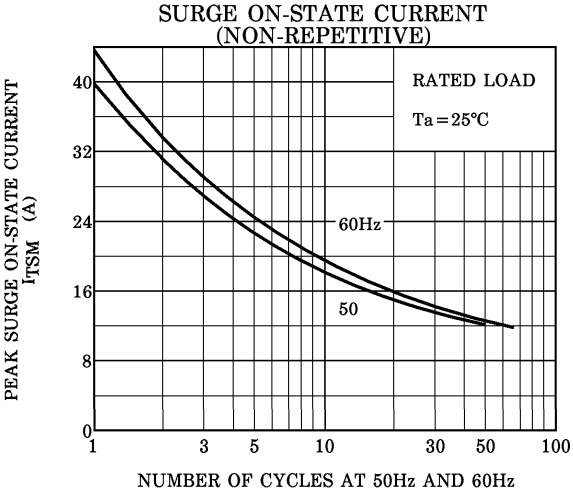
Ta MAX – $I_{T\,(RMS)}$



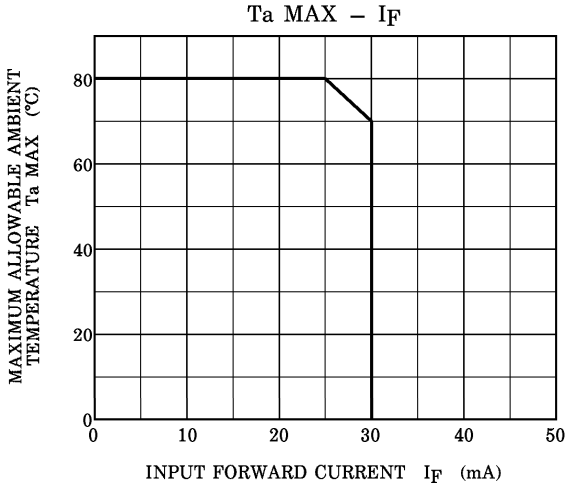
$P_{T\,(AV)}$ – $I_{T\,(RMS)}$



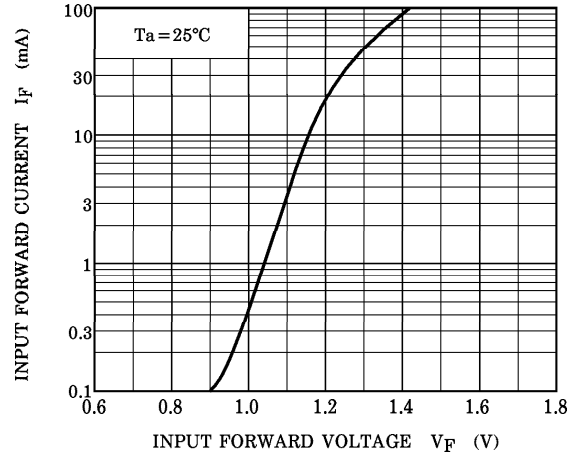
SURGE ON-STATE CURRENT (NON-REPETITIVE)



Ta MAX – I_F



I_F – V_F



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