

(TSZ3G44S)

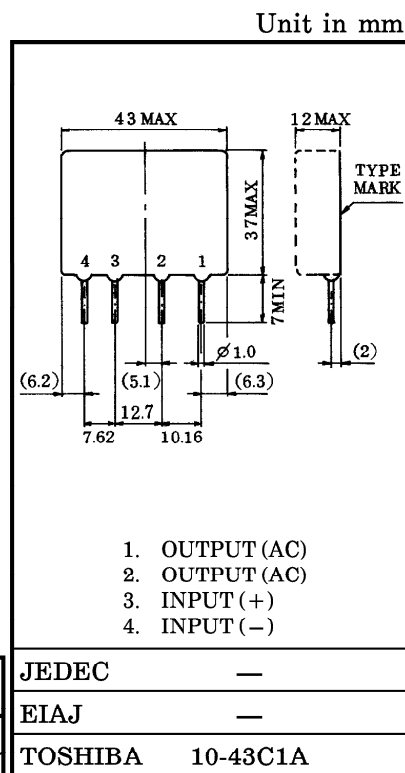
OPTICALLY ISOLATED, NORMALLY OPEN SSR.

COMPUTER PERIPHERALS  
 MACHINE TOOL CONTROLS  
 PROCESS CONTROL SYSTEMS  
 TRAFFIC CONTROL SYSTEMS

- R.M.S On-State Current :  $I_{T(RMS)} = 3A$
- 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)	$I_{F(IN)}$	20	mA



Weight : 16g

**OUTPUT (LOAD)**

Repetitive Peak Off-State Voltage	TSZ3G44S	$V_{DRM}$	400	V
	TSZ3J44S		600	
Nominal AC Line Voltage	TSZ3G44S	$V_{W(RMS)}$	120	V
	TSZ3J44S		240	
R.M.S On-State Current (with air velocity 5m/s)	$I_{T(RMS)}$	3	A	
Peak One Cycle Surge On-State Current (Non-Repetitive)	$I_{TSM}$	70 (50Hz)	A	
		77 (60Hz)		
Operating Frequency Range	f	45~65	Hz	
Isolation Voltage (t=1min, Input to Output)	$BV_S / AC$	2060	V	
Operating Temperature Range	$T_{opr}$	-30~80	°C	
Storage Temperature Range	$T_{stg}$	-30~80	°C	

Note 1 : Driving input rating : Insert an external resistance into SSR when the power supply over 6V is used.

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

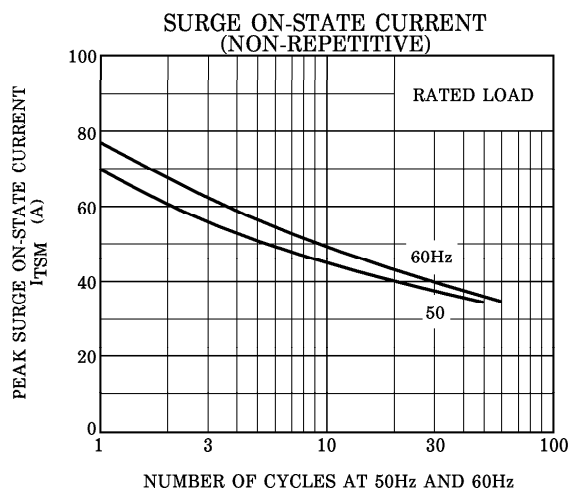
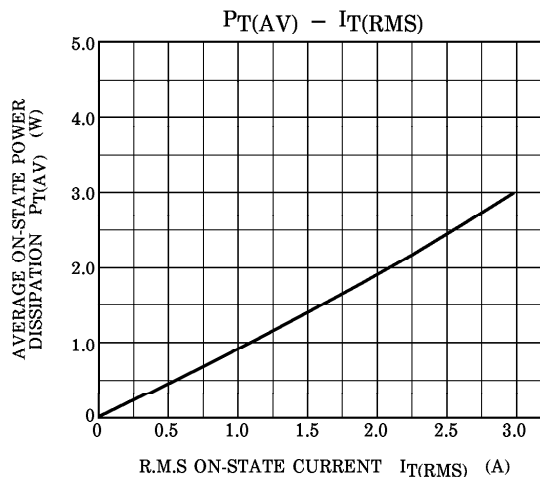
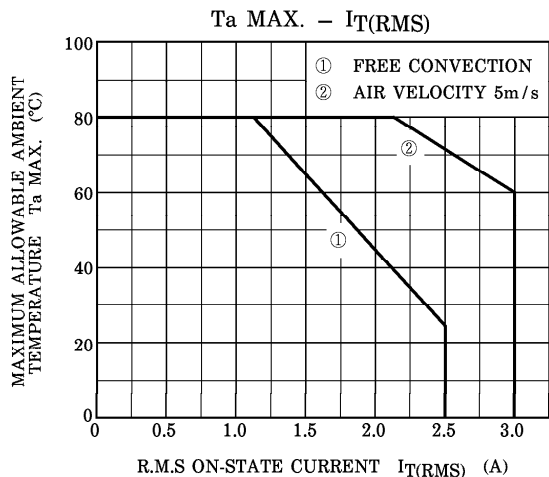
© The information contained herein is presented only as a guide for the applications of our products. No responsibility is assumed by TOSHIBA CORPORATION for any infringements of intellectual property or other rights of the third parties which may result from its use. No license is granted by implication or otherwise under any intellectual property or other rights of TOSHIBA CORPORATION or others.

© These TOSHIBA products are intended for use in general commercial applications (office equipment, communication equipment, measuring equipment, domestic appliances, etc.). please make sure that you consult with us before you use these TOSHIBA products in equipment which requires extraordinarily high quality and/or reliability, and in equipment which may involve life threatening or critical application, including but not limited to such uses as atomic energy control, airplane or spaceship instrumentation, traffic signals, medical instrumentation, combustion control, all types of safety devices, etc. TOSHIBA cannot accept and hereby disclaims liability for any damage which may occur in case the TOSHIBA products are used in such equipment or applications without prior consultation with TOSHIBA.

①

(TSZ3G44S)

**CHARACTERISTIC CURVES**



(TSZ3G44S)  
 ELECTRICAL CHARACTERISTICS (Ta = 25°C)  
 INPUT (CONTROL)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Pick Up Voltage	$V_{FT}$	$V_W(\text{RMS}) = 100V_{\text{rms}}$ Resistive Load ( $R_L = 100\Omega$ )	—	—	4.5	V
Drop Out Voltage	$V_{FD}$		1.0	—	—	V
Input Resistance	R(IN)		—	300	—	$\Omega$

OUTPUT (LOAD)

Off-State Leakage Current	TSZ3G44S	$I_{OL}$	$V_W(\text{RMS}) = 100V_{\text{rms}}, f = 50\text{Hz}$	—	—	2	mA
	TSZ3J44S						
Peak On-State Voltage	$V_{TM}$	$I_{TM} = 12A$	—	—	1.9	V	
Peak Turn-On Voltage	$V_{ON}$	$V_W(\text{RMS}) = 100V_{\text{rms}}$ , (Fig.2)	—	—	10	V	
dv / dt (Off-State)	dv / dt	$V_{DRM} = 0.7 \times \text{Rated}$	10	—	—	V / $\mu\text{s}$	
dv / dt (Commutating)	(dv / dt) <sub>c</sub>	$V_{DRM} = 0.7 \times \text{Rated}, I_T = 3A$	2	—	—	V / $\mu\text{s}$	
Turn-On Time	$t_{on}$	$V_W(\text{RMS}) = 100V_{\text{rms}}$	—	—	1	ms	
Turn-Off Time	$t_{off}$	Resistive Load ( $R_L = 100\Omega$ )	—	—	1 / 2	Cycle	
Isolation Resistance	$R_S$	$V = 1kV, R.H = 40 \sim 60\%$	—	$10^9$	—	$\Omega$	

EQUIVALENT CIRCUIT

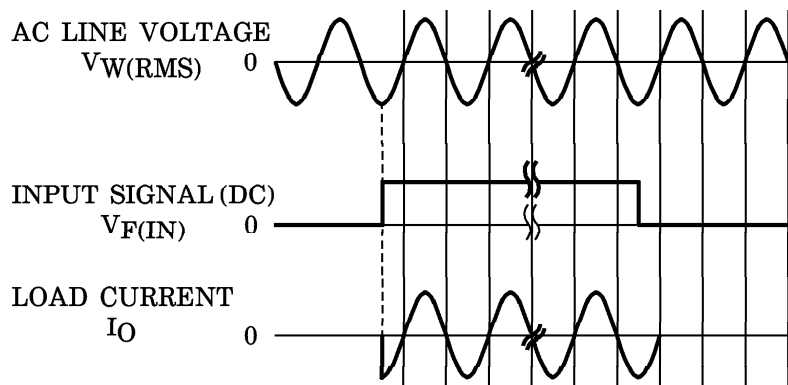
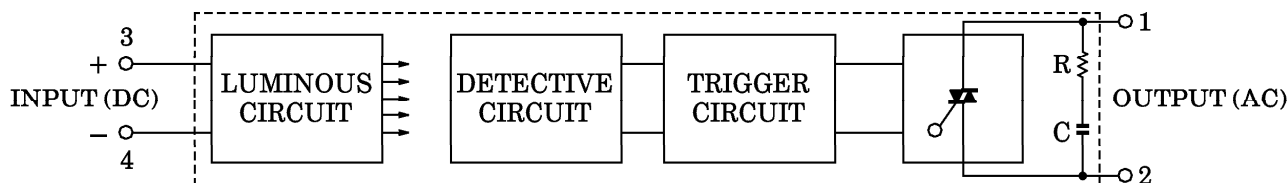


Fig.1 SWITCHING WAVEFORM

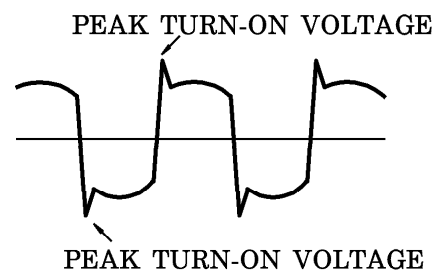


Fig.2 PEAK TURN-ON VOLTAGE WAVEFORM