SGX-41F

SOLID STATE RELAY
4 AMPS
48 TO 400 VRMS

3/29/06W

FEATURES

- Photo isolation
- Up to 800V blocking voltage
- Both zero cross or random turn-on
- High surge capability
- Built-in snubber
- UL, CUR file E43203
- SCR or Triac Output Circuitry
- RoHS compliant

INPUT

Type	1D	2D
Control Voltage Range	3 to 15 VDC	15 to 32 VDC
Turn On Voltage	3 VDC max.	15 VDC max.
Turn Off Voltage	1 VDC min.	1 VDC min.
Max. Input Current	40 mA at 15 VDC	20 mA at 32 VDC
Max. Reverse Voltage	-15 VDC	-32 VDC

OUTPUT

Type	240	380
Output Voltage Range	48 to 264 VAC	48 to 400 VAC
Blocking Voltage	600 Vpk	800 Vpk
Max. Leakage Current (off)	5 mA	5 mA
Max. Voltage Drop (at rated current)	1.7 VRMS	
Min. Load Current	100 mA	
Max. Turn-On Time	Random Turn On (DC input): 1 ms Zero Cross Turn On (DC input): 1/2 cycles + 1 ms AC Input: 20 ms	
Max. Turn-Off Time	DC Input: 1/2 cycle + 1 ms AC Input: 40 ms	
Min. Off-State (dv/dt)	Triac: 200 V/us / SCR: 500 V/us	

GENERAL

Dielectric Strength	4000 Vrms min. (at 50/60 Hz, 1 min.)
Insulation Resistance	1000 Min. (at 500 VDC)
Ambient Temperature	Operating: -30°C (-22°F) to 80°C (176°F)
	Storage: -30°C (122°F) to 100°C (212°F)
Termination	PCB
Weight	15g

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RELAY ORDERING DATA

SGX-41F	1D	240	A	4	Z	S	G
MODEL	INPUT VOLTAGE	OPERATING VOLTAGE RANGE	LOAD TYPE	LOAD CURRENT	ZERO CROSS OR RANDOM	OUTPUT DEVICE	PACKAGE
	1D: 3 TO 15 Vdc **2D**: 15 to 32 Vdc	**240**:48 TO 264 Vac **380**: 48 to 400 Vac	**A:** AC LOAD	**4**: 4A	**Z:** Zero cross turn on **P:** Random turn on	**S:** SCR Nil: Triac	**G**: epoxy

MECHANICAL DATA

Outline Dimensions

PC Board Layout

Wiring Diagram

Dimensions in inches with metric equivalents in parentheses. Tolerance: ± .010"

INSTALLATION

1. When mounting the relays side by side, provide a space equivalent to the width of a single SSR between two adjacent SSRs. Otherwise, reduce the load current flow to 1/2 to 1/3 of the rated current.

PRECAUTIONS

1. Before connecting a load that generates a high surge current, such as a lamp load to the SSR, make sure that the SSR can withstand the surge current of the load.

2. The product data sheet shows the non-repetitive peak value of the surge current that flows through the SSR. Normally, use 1/2 of the non-repetitive peak surge current as the standard value. If a surge current exceeding that value is expected, connect a quick-blowing fuse to protect the SSR.

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CHARACTERISTIC CURVES

Figure 1 Maximum load current
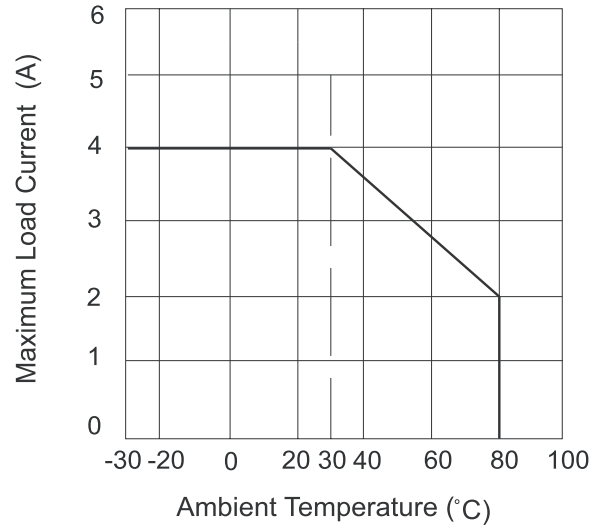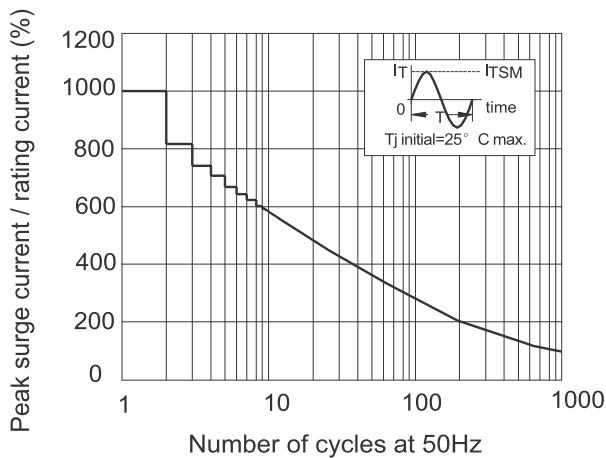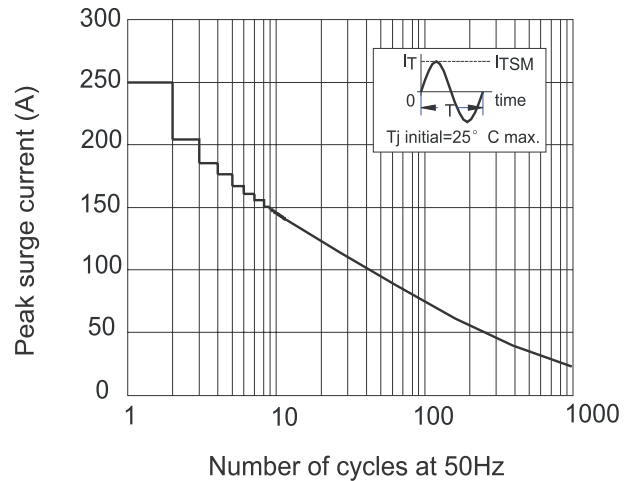vs. ambient temperature

Figure 2 Maximum permissible non-repetitive
          peak surge current vs. Number of cycles

TRIAC AC switch output Maximum permissible non-repetitive
peak surge current vs. Number of cycles

SCR AC switch Output Maximum permissible non-repetitive
peak surge current vs. Number of cycles

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