

SSRA Series

2A Miniature, SIP Solid State Relay With Paired SCR Output



cULus File E29244

Users should thoroughly review the technical data before selecting a product part number. It is recommended that users also seek out the pertinent approvals files of the agencies/laboratories and review them to confirm the product meets the requirements for a given application.

Features

- Miniature SIP package permits high density population of PC board.
- 2A rms inverse-parallel connected SCR output.
- 4 - 10 VDC input control.
- Zero voltage and random voltage turn-on versions.
- 2500V rms optical isolation.

Engineering Data

Form: 1 Form A (SPST-NO).

Duty: Continuous.

Isolation: 2500V rms input-to-output-to-ground.

Insulation Resistance: 10^9 Ohms, minimum, at 500VDC.

Capacitance: 8.0 pF maximum (input to output).

Temperature Range:

Storage: -30°C to $+125^{\circ}\text{C}$

Operating: -30°C to $+80^{\circ}\text{C}$

Case Material: Thermally conductive epoxy encapsulation.

Case and Mounting: Refer to outline dimension drawing.

Termination: Printed circuit terminals. Refer to outline dimension drawing.

Approximate Weight: .15 oz. (4.3g).

Ordering Information

Typical Part Number	SSRA	-240	D	2	R
1. Basic Series: SSRA = Miniature SIP Solid State Relay					
2. Line Voltage: 240 = 24 - 280 VAC					
3. Input Type & Voltage: D = 4 - 10 VDC					
4. Maximum Switching Rating/Output: 2 = 2.0A rms					
5. Options: Blank = Zero voltage turn-on R = Random voltage turn-on					

Our authorized distributors are more likely to maintain the following items in stock for immediate delivery.

SSRA-240D2
SSRA-240D2R

Input Specifications

Parameter	Conditions	Units	Zero V or Random V Turn-on Units
Control Voltage Range V_{IN}	@ 25°C	VDC	4-10
Must Operate Voltage $V_{IN(OP)}$ (Min.)	@ 25°C	VDC	4
Must Release Voltage $V_{IN(REL)}$ (Min.)	@ 25°C	VDC	1
Input Current @ 5 VDC (Typ.)	@ 25°C	mA DC	15
Input Impedance (Nom.)	@ 25°C	ohms	300

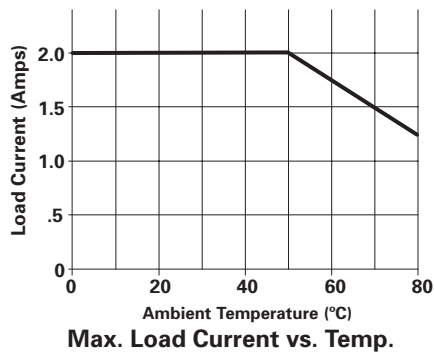
SSRA Series (Continued)

Output Specifications (@ 25° C, unless otherwise specified)

Parameter	Conditions	Units	240V Output Units, Zero V or random V Turn-on Units
Load Voltage Range V_L	$f = 47 - 63 \text{ Hz.}$	V rms	12 - 280
Repetitive Blocking Voltage (Min.)		V peak	± 600
Load Current Range I_L *		A rms	.06 - 2.0
Single Cycle Surge Current (Min.)		A peak	120
Leakage Current (Off-State) (Max.)	$f = 60 \text{ Hz. } V_L = 280\text{Vrms}$	mA rms	0.1
On-State Voltage Drop (Max.)	$I_L = \text{Max.}$	V peak	1.5
Static dv/dt (Off-State) (Min.)	$V_L = \text{Max.}$	V/ μs	500
Turn-On Time (Max.)	$f = 60 \text{ Hz.}$	ms	8.3 for Zero Voltage Turn-On Models 0.1 for Random Voltage Turn-On Models
Turn-Off Time (Max.)	$f = 60 \text{ Hz.}$	ms	8.3
Load Power Factor Rating (Min.)	$I_L = \text{Max.}$		0.5

*see Thermal Derating Curves

Electrical Characteristics (Thermal Derating Curves)



Outline Dimensions

