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Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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SSR series

"Hockey Puck" Solid State Relay With Paired SCR Output

c Sus File E81606

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 ensure the product meets the requirements for a given application.

Engineering Data

Form: 1 Form A (SPST-NO).
Duty: Continuous.
Isolation: 4,000V rms minimum.
Capacitance: 8 pf typical (input to output).
Temperature Range:

Storage: -40°C to +100°C
Operating: -20°C to +80°C.
NOTE: Operation to -40°C is permitted for DC input types at an increased minimum input voltage of 4VDC (240V line voltage models) or 5VDC (480V line voltage models).

Case Material: Plastic, UL rated 94V-0.
Case and Mounting: Refer to outline dimension.
Termination: Refer to outline dimension.
Approximate Weight: 3.5 oz. (98g).

Features

- Standard "hockey puck" package.
- Enhanced noise immunity (designed to meet level 3 requirements of European EMC Directive).
- LED indicator.
- Inverse parallel SCR output.
- 25, 50, & 125A rms versions.
- 120/240VAC & 480VAC output types.
- Zero voltage and random voltage turn-on versions.
- AC & DC input versions.
- 4,000V rms optical isolation.
- Floating terminal design.
- New housing design with anti-rotation barriers

Ordering Information

	Sample Part Number 🕨	SSR	-240	D	25	
1. Basic Series: SSR = "hockey puck" inverse parallel SCR output solid state	relay					
2. Line Voltage: 240 = 24 - 240VAC 480 = 48 - 660VAC			-			
3. Input Type & Voltage: A = 90 - 280VAC D = 3 - 32VDC						
 4. Maximum Switching Rating/Output: 25 = .1 - 25A rms, mounted to heat 50 = .1 - 50A rms, mounted to heat 125 = .1 - 125A rms, mounted to heat 125	tsink					
5. Options: Leave Blank = Zero voltage turn-on R = Random voltage turn-on (phase controllable)						

Our authorized di	stributors are more	e likely to maintain the following items in stock for immediate delivery.
SSR-240A25	SSR-240D25	SSR-240D50
SSR-240A50	SSR-240D25R	SSR-480D125

Input Specifications

Parameter	AC Input	DC Input		
	Zero V Turn-on Units	Zero and Random V Turn-on Units		
Control Voltage Range V _{IN}	90 - 280VAC	3 - 32VDC		
Must Operate Voltage V _{IN(OP)} (Min.)	90VAC	3VDC		
Must Release Voltage V IN(REL) (Min.)	10VAC	1VDC		
Input Current (Max.)	15mA	15mA		

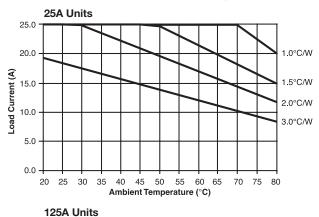


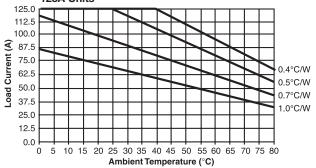
Output Specifications (@ 25° C, unless otherwise specified)

Parameter	Nom. Line Voltage	Conditions	Units	25A Models	50A Models	125A Models	
Land Valtage Denge V	120/240V Model		V rms	24 - 280			
Load Voltage Range V $_{L}$	480V Model		V rms	48 - 660			
Repetitive Blocking Voltage (Min.)	120/240 Model		V peak	600			
	480V Model		V peak		1200		
Load Current Range I _*	120/240 & 480V Models	Resistive	A rms	.05 - 25	.1 - 50	.1 - 125	
Single Cycle Surge Current (Min.)	120/240 & 480V Models		A peak	250	750	1,700	
Leakage Current (Off-State) (Max.)	120/240V Model	$f = 60 \text{ Hz. V}_{L} = 240 \text{V rms}$	mA rms	.1			
	480V Model	$f = 60 \text{ Hz. V}_{L} = 480 \text{V rms}$.25			
On-State Voltage Drop (Max.)	120/240 & 480V Models	I _L = Max.		1.35			
Static dv/dt (Off-State) (Min.)	120/240 & 480V Models		V/s	500			
Thermal Resistance, Junction to Case $(R_{\theta,J-C})$ (Max.)	120/240 & 480V Models		C/W	0.4	0.25	.15	
Turn-On Time (Max.)	120/240 & 480V Models	f = 60 Hz.	ms	8.3 for Zero Voltage Turn-On DC input types, 20 for Zero Voltage Turn-On AC input types, 0.02 for Random Voltage Turn-On Models			
Turn-Off Time (Max.)	120/240 & 480V Models	f = 60 Hz.	ms	8.3 for DC input types, 30 for AC input types			
I ² T Rating	120/240 & 480V Models	t = 8.3 ms	A ² Sec.	937	2,458	12,000	
Load Power Factor Rating	120/240 & 480V Models	I _L = Max.		0.5 - 1.0			

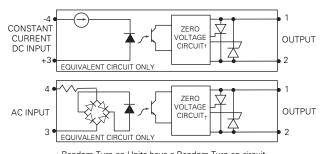
*See Derating Curves

Electrical Characteristics (Thermal Derating Curves)

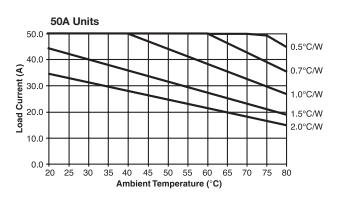




Operating Diagrams



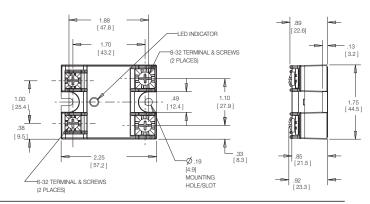
 Random Turn-on Units have a Random Turn-on circuit instead of Zero Voltage Circuit



Heatsink Recommendations

- We recommend that solid state relay modules be mounted to a heatsink sufficient to maintain the module's base temperature at less than 85°C under worst case ambient temperature and load conditions.
- The heatsink mounting surface should be a smooth (30-40 micro-inch finish), flat (30-40 micro-inch flatness across mating area), un-painted surface which is clean and free of oxidation.
- An even coating of thermal compound (Dow Corning DC340 or equivalent) should be applied to both the heatsink and module mounting surfaces and spread to a uniform depth of .002" to eliminate all air pockets.
- The module should be mounted to the heatsink using two #10 screws.

Outline Dimensions



Specifications and availability subject to change.

Dimensions are in inches over (millimeters) unless otherwise specified.