

# SSRT series

## “Hockey Puck” Solid State Relay With Snubberless Triac Output

us 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 ensure the product meets the requirements for a given application.

### Features

- Standard “hockey puck” package.
- Enhanced noise immunity (designed to meet level 3 requirements of European EMC Directive).
- LED indicator.
- Floating terminal design.
- Low cost snubberless triac outputs.
- 10A & 25A rms versions.
- AC & DC input versions.
- 4000V rms isolation.

### Engineering Data

- Form:** 1 Form A (SPST-NO).  
**Duty:** Continuous.  
**Isolation:** 4000V rms minimum, input - output.  
**Capacitance:** 8.0 pf typical (input to output).  
**Temperature Range:**  
**Storage:** -40°C to +100°C  
**Operating Temperature:** -20°C to + 80°C  
**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).

### Ordering Information

Sample Part Number ► **SSRT -240 D 10**

**1. Basic Series:** SSRT = “hockey puck” triac output solid state relay

**2. Line Voltage:** 240 = 24 - 280 VAC

**3. Input Type & Voltage:** A = 90 - 280 VAC linear  
 D = 3 - 32 VDC constant current

**4. Maximum Switching Rating:** 10 = .1 - 10A rms, mounted to heatsink  
 25 = .1 - 25A rms, mounted to heatsink

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

SSRT-240A10 SSRT-240D10  
 SSRT-240A25 SSRT-240D25

### Input Specifications

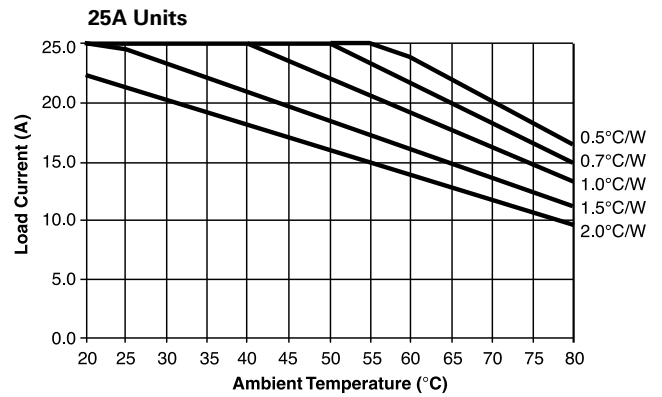
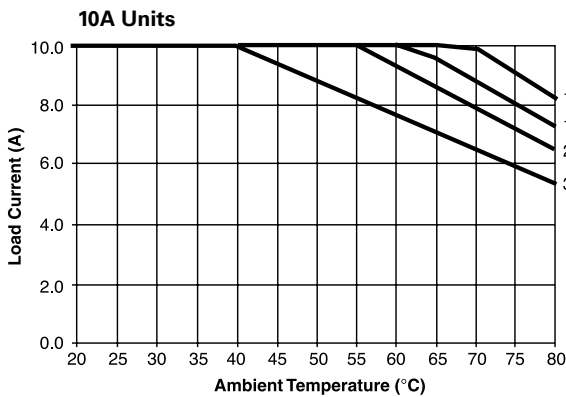
Parameter	AC Input/AC Output	DC Input/AC Output
Control Voltage Range $V_{IN}$	90 - 280VAC	3 - 32VDC
Must Operate Voltage $V_{IN(OP)}$ (Max.)	90VAC	3VDC
Must Release Voltage $V_{IN(REL)}$ (Min.)	10VAC	1VDC
Input Current (Max.)	8.5mA	14mA

**Output Specification (@ 25°C, unless otherwise specified)**

Parameter	Conditions	Units	SSRT-240A10 & SSRT-240D10	SSRT-240A25 & SSRT-240D25
Load Voltage Range $V_L$		V rms	24 - 280	
Repetitive Blocking Voltage (Min.)		V peak	±600	
Load Current Range $I_L^*$	Resistive	A rms	.1 - 10	.1 - 25
Single Cycle Surge Current (Min.)		A peak	100	250
Leakage Current (Off-State) (Max.)	f = 60 Hz. $V_L$ = Nom. (120 or 240 V rms)	mA rms	.1	
On-State Voltage Drop (Max.)	$I_L$ = Max.	V peak	1.5	1.3
Static dv/dt (Off-State) (Min.)		V/μs	500	
Thermal Resistance, Junction to Case ( $R_{\theta(j-c)}$ ) (Max.)		°C/W	2.2	1.7
Turn-On Time (Max.)	f = 60 Hz.	ms	8.3 for DC input types, 20 for AC input types	
Turn-Off Time (Max.)	f = 60 Hz.	ms	8.3 for DC input types, 30 for AC input types	
$I^2 t$ Rating	t = 8.3 ms	A <sup>2</sup> Sec.	41	240
Load Power Factor Rating	$I_L$ = Max.		0.5 - 1.0	

\*See Derating Curves

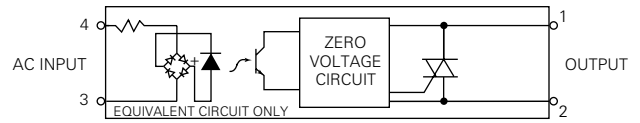
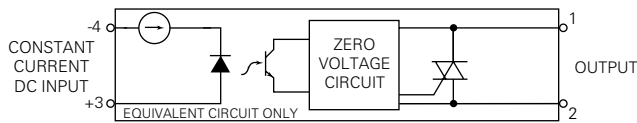
**Electrical Characteristics (Thermal Derating Curves)**



**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.

**Operating Diagrams**



**Outline Dimensions**

