# SRFA Subminiature Power Relay

IMO

*Technical Datasheet*

## Key Features

- 1 Form C configuration
- Standard PCB layout
- Plastic sealed and flux proofed construction types
- Class B insulation as standard (Class F available)
- UL approved
- RoHS compliant


## Options & Ordering Codes

| SRFA | S | - | 1C | - | S | L | F | - | 12VDC |
|---|---|---|---|---|---|---|---|---|---|

**Series**

| | |
|---|---|
| Subminiature Signal Relay | SRFA |

**Coil Power**

| | |
|---|---|
| 200mW | |
| 360mW | S |
| 450mW | L |

**Contact Arrangement**

| | |
|---|---|
| 1 Form C | 1C |

**Sealing Type**

| | |
|---|---|
| F | Flux-tight |
| S | Sealed |

| | |
|---|---|
| L | RoHS Compliant |

**Insulation Class**

| | |
|---|---|
| | Class B |
| F | Class F |

**Coil Voltage**

## Contact Data

| | |
|---|---|
| Contact Arrangement | 1C |
| Contact Resistance | 100mΩ max. (at 1A 6VDC) |
| Contact Material | AgNi |
| Contact Rating (Res. load) | 1A 30VDC<br>2A 120VAC |
| Max. Switching Current | 2A |
| Max. Switching Voltage | 240VAC / 30VDC |
| Max. Switching Power | 240VA / 30W |
| Mechanical Endurance | 1 x $10^7$ OPS |
| Electrical Endurance | 9.9 x $10^4$ OPS<br>(1A 30VDC Resistive load, Room Temp., 1s on 9s off) |

## Characteristics

| | | |
|---|---|---|
| Insulation Resistance | | 100MΩ (at 500VDC) |
| Dielectric Strength | Between Coil & Contacts | 1000VAC 1min |
| | Between Open Contacts | 500VAC 1min |
| Operate Time (at nomi. voltage) | | 10ms max. |
| Release Time (at nomi. voltage) | | 5ms max. |
| Ambient Temperature | | -25°C to 70°C |
| Humidity | | 5% to 85% RH |
| Vibration Resistance | | 10Hz to 55Hz 1.5mm DA |
| Shock Resistance | Functional | 98m/s² |
| | Destructive | 980m/s² |
| Termination | | PCB (DIP) |
| Unit Weight | | Approx. 5g |
| Contruction | | Plastic Sealed, Flux Proofed |

**Note:** 1) The data shown above are initial values
2) Coil temperature curves are found in the characteristic curves overleaf
3) UL insulation system: Class F, CLass B

## Coil

| | |
|---|---|
| Coil Power | L Type: Approx. 450mW<br>S Type: Approx. 360mW<br>NIL Type: Approx. 200mW |

## Coil Data at 23°C

| Nominal Voltage VDC | Pick-up Voltage VDC Max. | Drop-out Voltage VDC Min. | Max. Voltage VDC | Coil Resistance x (1±10%) Ω | | |
|---|---|---|---|---|---|---|
| | | | | H | N | B |
| 3 | 2.3 | 0.3 | 3.9 | 45 | 25 | 20 |
| 5 | 3.8 | 0.5 | 6.5 | 120 | 70 | 56 |
| 6 | 4.5 | 0.6 | 7.8 | 180 | 100 | 80 |
| 9 | 6.8 | 0.9 | 11.7 | 400 | 220 | 180 |
| 12 | 9.0 | 1.2 | 15.6 | 700 | 400 | 320 |
| 24 | 18.0 | 2.4 | 31.2 | 2800 | 1600 | 1280 |

## Safety Approval Ratings

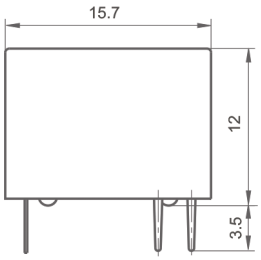
| | |
|---|---|
| UL/cUL | 1A 120VAC, 1A 240VAC/30VDC<br>2A 120VAC |

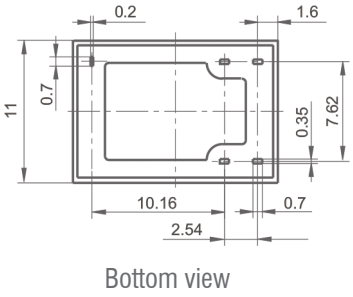
**Note:** 1) All values unspecified are at room temperature
2) Only typical loads are listed above. Other specifications can be available upon request

# SRFA Subminiature Power Relay

Technical Datasheet

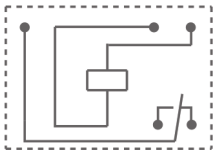
## Outline Dimensions, Wiring Diagrams & PCB Layout (mm)



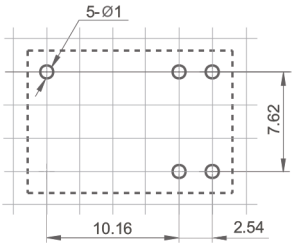




Bottom view

Wiring Diagram
(bottom view)



PCB Layout
(bottom view)



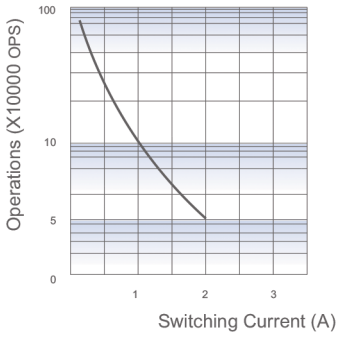

**Note:** 1) In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm; outline dimension > 1mm and ≤5mm, tolerance should be ±0.3mm; outline dimension >5mm, tolerance should be ±0.4mm

2) The tolerance without indicating for PCB layout is always ±0.1mm

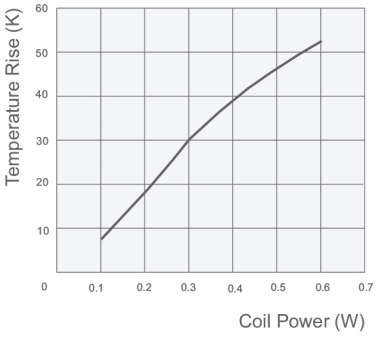
3) The width of the gridding is 2.54mm

## Characteristic Curves

ENDURANCE CURVE




COIL TEMPERATURE RISE




OPERATE TIME