

## Gas Discharge Tube SPC Series

### Features

- Electronic stability
- Small volume, easy to placement machine operation
- Large flow capacity, impact resistant ability
- Static electricity capacity, good insulation
- Reaction speed is 50 ns - 150 ns



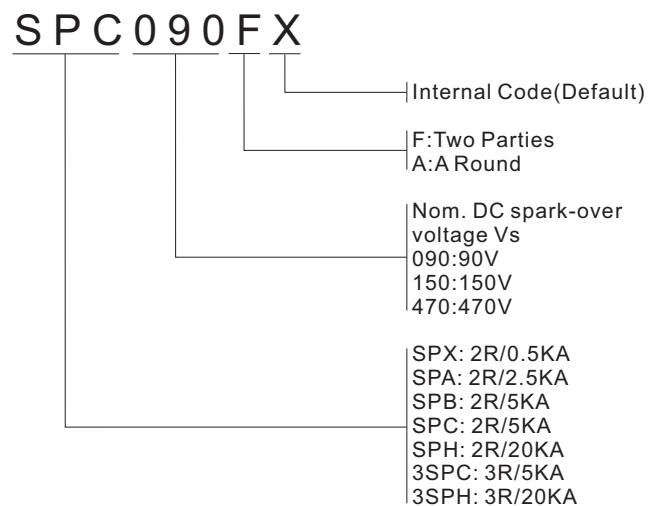
### Applications

- ADSL MODEM、FAX、TELEPHONE
- RS485、RS232、CAN level of protection
- CATV
- Power supply prevents thunder common-mode protection

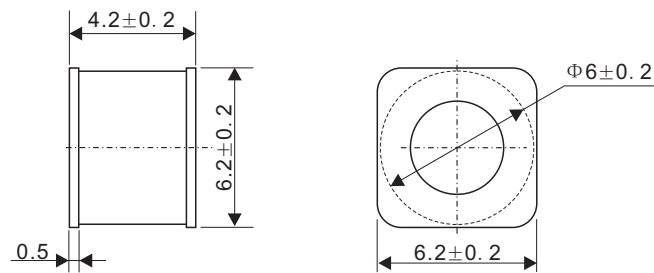
### Marking Code



### Product Name



## Dimensions



Dimensions in millimeters

## Electrical Characteristics

| Part Number | DC Spark-over Voltage (@100V/s) (V) | Impulse Spark-over Voltage (@1KV/ $\mu$ s) (V) | Nom. Impulse Discharge Current (@8/20 $\mu$ s) (KA) | Nom. Alternating Discharge Current (@50HZ) (A) | Impulse Discharge Current One Operation (@8/20 $\mu$ s) (KA) | Insulation Resistance |           | Capacitance (pF) |
|-------------|-------------------------------------|--|---|--|--|-----------------------|-----------|------------------|
|             |                                     |  |   |  |  | (G $\Omega$ )         | (@DC) (V) |                  |
| SPC075F     | $75 \pm 20\%$                       | $\cong 500$                                    | 5   | 5  | 6  | >1                    | 25        | <1               |
| SPC090F     | $90 \pm 20\%$                       | $\cong 500$                                    | 5   | 5  | 6  | >1                    | 50        | <1               |
| SPC150F     | $150 \pm 20\%$                      | $\cong 500$                                    | 5   | 5  | 6  | >1                    | 50        | <1               |
| SPC230F     | $230 \pm 20\%$                      | $\cong 500$                                    | 5   | 5  | 6  | >1                    | 100       | <1               |
| SPC350F     | $350 \pm 20\%$                      | $\cong 600$                                    | 5   | 5  | 6  | >1                    | 100       | <1               |
| SPC470F     | $470 \pm 20\%$                      | $\cong 650$                                    | 5   | 5  | 6  | >1                    | 250       | <1               |
| SPC600F     | $600 \pm 20\%$                      | $\cong 950$                                    | 5   | 5  | 6  | >1                    | 250       | <1               |

## Packaging Specifications

- Packaging: 900 pieces per reel

## Initial Characteristics

| Test Item                | Test Method   | Specification            |
|--------------------------|---|--------------------------|
| DC-Spark-Over Voltage Vs | Add and measure the DC Voltage gradually Max to get the discharge threshold voltage. The measuring current is 1mA/1 second max. (1sec) .(1mA) | It depends on each spec. |
| Insulation Resistance    | Measure the insulation resistance of two end of leadwire under the specified DC voltage.  | 100M $\Omega$ min.       |
| Capacitance C(pF)        | Electrostatic Capacitance under the test condition of 1KHz, DC 6V(max).   | 0.8pF max.               |

## Surge Characteristics

| Test Item                  | Test Method  | Specification  |
|----------------------------|--|--|
| Surge withstand capability | In the glass tube ends in 8/20 us surge tester, applying the model that corresponds to the impact resistance current, time interval for the 60 s of plus or minus the test 5 times. Test the dc voltage, insulation resistance, static capacitance and check the appearance. | DC spark-over voltage<br>JSE: $\Delta V_s/V_s \leq 30\%$ |
| Surge life test            | Apply 10KV voltage charged in 1500pF condenser and apply the current to the specimen, 200 times at 10 seconds of intervals.  | Within standard mentioned in Initial Characteristics.    |

## Environmental Characteristics

| Test Item  | Test Method   | Specification   |
|--|---|---|
| Cold resistance                                    | After $-40 \pm 3^\circ\text{C}$<br>(1000hrs) / room temp., normal humidity(4 hrs)<br>cycle, measure the properties.   | Within standard mentioned in Initial Characteristics. |
| Heat resistance                                    | After $125 \pm 2^\circ\text{C}$<br>(1000hrs) / room temp., normal humidity(4 hrs)<br>cycle, measure the properties.   | Within standard mentioned in Initial Characteristics. |
| Temperature resistance                             | After $85 \pm 2^\circ\text{C}$<br>RH85%(1000hrs) / room temp., normal humidity(4 hrs)<br>cycle, measure the properties.   | Within standard mentioned in Initial Characteristics. |
| Temperature period                                 | 25 times repetition of cycle $-40 \pm 3^\circ\text{C}$<br>(30 Min.), room temp., (4 Min.), $125 \pm 2^\circ\text{C}$ (30Min.),<br>room temp., normal humidity(4hrs) .   | Within standard mentioned in Initial Characteristics. |
| Tensile strength                                   | Apply 2.5kgs load approximately 30 seconds, then check for pull-out and breaking of the lead wire.  | Within standard mentioned in Initial Characteristics. |
| Bending strength                                   | Bend the lead wire, with jig which radius is 0.75~0.8mm, at the point of 2mm from the body, under 0.25 kgs load applied at the right angle the direction of the axis and get the bent lead wire back to its original poing after the procedure was repeated 2times. | Within standard mentioned in Initial Characteristics. |
| Resistance to soldering attachment (by solder dip) | Apply flux and immerse in molten solder, up to the point of 3mm from the body, for 5 sec. ( $235^\circ\text{C} \pm 5^\circ\text{C}$ ). Wash the leadwire and check for soldering adhesion.  | Lead wire is evenly covered by solder over 90%.       |
| Resistance to soldering heat (by solder dip)       | Apply flux and immerse in molten solder, up to the point of 3mm from the body, for 5 sec. ( $235^\circ\text{C} \pm 5^\circ\text{C}$ ). Wash the leadwire and check for soldering adhesion.  | Within standard mentioned in Initial Characteristics. |