Gas Discharge Tube
3SPH Series

Features

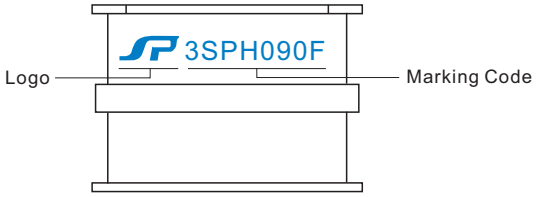
- Electronic stability
- Small volume, easy to placement machine operation
- Large flow capacity, impact resistant ability
- Static electricity capacity, good insulation
- Reaction speed is 50 ns - 150 ns



Applications

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

Marking Code

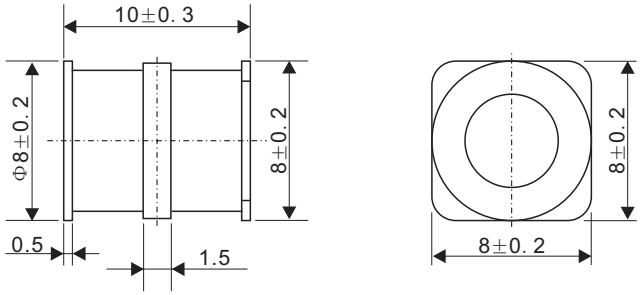


Product Name

3 S P H 0 9 0 F X

- Internal Code(Default)
- F:Two Parties
  A:A Round
- Nom. DC spark-over voltage Vs
  090:90V
  150:150V
  470:470V
- SPX: 2R/0.5KA
  SPA: 2R/2.5KA
  SPB: 2R/5KA
  SPC: 2R/5KA
  SPH: 2R/20KA
  3SPC: 3R/5KA
  3SPH: 3R/20KA

Dimensions



Dimensions in millimeters

Electrical Characteristics

Part Number	DC Spark-over Voltage (@100V/s) (V)	Impulse Spark-over Voltage (@1KV/μs) (V)	Nom.Impulse Discharge Current (@8/20μs) (KA)	Nom. Alternating Discharge Current (@50HZ) (A)	Impulse Discharge Current One Operation (@8/20μs) (KA)	Insulation Resistance		Capacitance (pF)
						(GΩ)	(@DC) (V)	
3SPH075F	75±20%	≦500	20	20	20	>1	25	<1.5
3SPH090F	90±20%	≦600	20	20	20	>1	50	<1.5
3SPH150F	150±20%	≦600	20	20	20	>1	50	<1.5
3SPH230F	230±20%	≦600	20	20	20	>1	100	<1.5
3SPH350F	350±20%	≦650	20	20	20	>1	100	<1.5
3SPH470F	470±20%	≦650	20	20	20	>1	250	<1.5
3SPH600F	600±20%	≦950	20	20	20	>1	250	<1.5

Packaging Speci Cations

- Packaging:500 pieces per reel

Initial Characteristics

Test Item	Test Method	Specification
DC-Spark-Over Voltage Vs	Add and measure the DC Voltage gradually Maxto get the discharge threshold voltage. The measuring current is 1mA/1 second max.（1sec）.(1mA)	It depands on each spec.
Insulation Resistance	Measure the insulation resistance of two end of leadwire under the specified DC voltage.	100MΩ 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 JSE: △Vs/Vs≦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.

Enviromental Characteristics

Test Item	Test Method	Specification
Cold resistance	After -40±3℃ (1000hrs) / room temp.,normal humidity(4 hrs) cycle, measure the properties.	Within standard mentioned in Initial Characteristics.
Heat resistance	After 125±2℃ (1000hrs) / room temp.,normal humidity(4 hrs) cycle, measure the properties.	Within standard mentioned in Initial Characteristics.
Temperature resistance	After 85±2℃ RH85%(1000hrs) / room temp.,normal humidity(4 hrs) cycle, measure the properties.	Within standard mentioned in Initial Characteristics.
Temperature period	25 times repetition of cycle -40±3℃ (30 Min.),roon temp., (4 Min.), 125±2℃(30Min.), 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 theamis 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℃±5℃). 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℃±5℃). Wash the leadwire and check forsoldering adhesion.)	Within standard mentioned in Initial Characteristics.