

## FEATURES

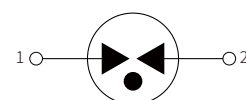
- | Size Design  $\Phi 18 \times 6.7\text{mm}$
- | Extremely fast response time
- | Stable performance over life
- | High insulation resistance



$\Phi 18 \times 6.7\text{mm}$

## APPLICATION INFORMATION

- | AC-POWER Line devices & Class I and Class II



Schematic Symbol

## AGENCY APPROVALS

| Icon                                                                                | Solderability                      |
|-------------------------------------------------------------------------------------|------------------------------------|
| RoHS                                                                                | Compliance with 2011/65/EU         |
| HF                                                                                  | Compliance with IEC61249-2-21:2003 |
|  | Mean lead free                     |

## PRODUCT CHARACTERISTICS

| Lead Material         | Body Material | Terminal Finish       |
|-----------------------|---------------|-----------------------|
| Copper or Fe-Ni alloy | Ceramics      | 100% Matte-Tin Plated |

## ELECTRICAL PARAMETER

| Parameter                                                               | Symbol                | Limit                                | Unit |
|-------------------------------------------------------------------------|-----------------------|--------------------------------------|------|
| DC Blocking Voltage                                                     | 100V/s                | 480-720                              | V    |
| Impulse Spark-over Voltage                                              | At 1kV/μs             | for 99 % of measured values ≤ 1000   | V    |
|                                                                         | At 1kV/μs             | Typical values of distribution ≤ 950 | V    |
| Class I <sup>2)</sup> Nominal discharge current 8/20us                  | In                    | 15                                   | KA   |
| Class I <sup>2)</sup> Impulse discharge current 10/350us                | Iimp                  | 15                                   | KA   |
| Class I <sup>2)</sup> Max.continuous operating voltage at 50/60 Hz      | Uc                    | 255                                  | Vrms |
| Class I <sup>2)</sup> If(Follow current cut-off ability )AC50~60HZ 255V | If                    | 100                                  | Arms |
| Class II <sup>2)</sup> Nominal discharge current 8/20us                 | In                    | 30                                   | KA   |
| Class II <sup>2)</sup> Maximum discharge current 8/20us                 | Iimp                  | 60                                   | KA   |
| Class II <sup>2)</sup> Max.continuous operating voltage at 50/60 Hz     | Uc                    | 255                                  | Vrms |
| Class II <sup>2)</sup> (Follow current cut-off ability )AC50~60HZ 255V  | If                    | 100                                  | Arms |
| Operating and Storage Temperature                                       |                       | -40~+90                              | °C   |
| Insulation Resistance                                                   | DC=100V               | ≥ 1                                  | GΩ   |
| Capacitance at 1MHz                                                     | V <sub>DC</sub> =0.5V | ≤ 8                                  | pF   |

1) 1) At delivery AQL 0.65 level II ,DIN ISO2859

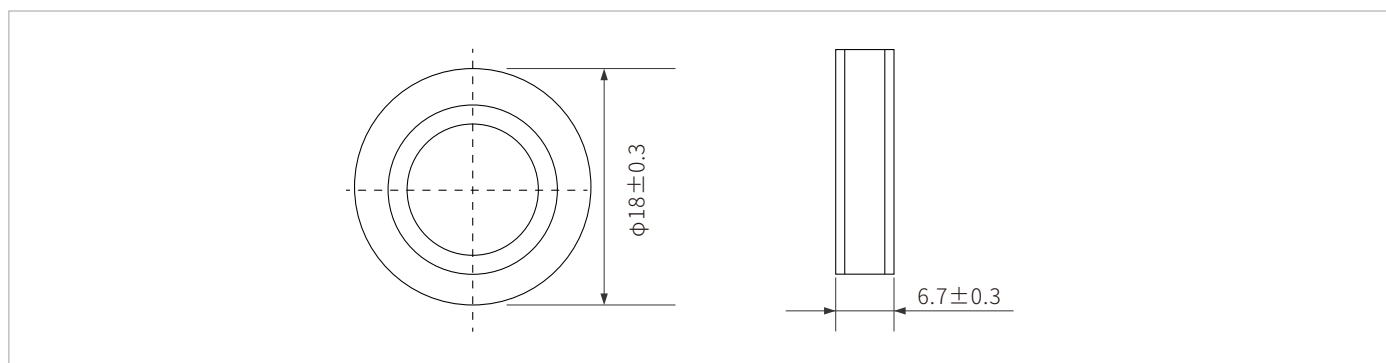
2) DC spark-over voltage 450V~1000V,Impulse spark-over voltage ≤1500V after load

3) Tests according to ITU-T Rec. K. 12 and IEC61643-311

## ENVIRONMENTAL RELIABILITY CHARACTERISTICS

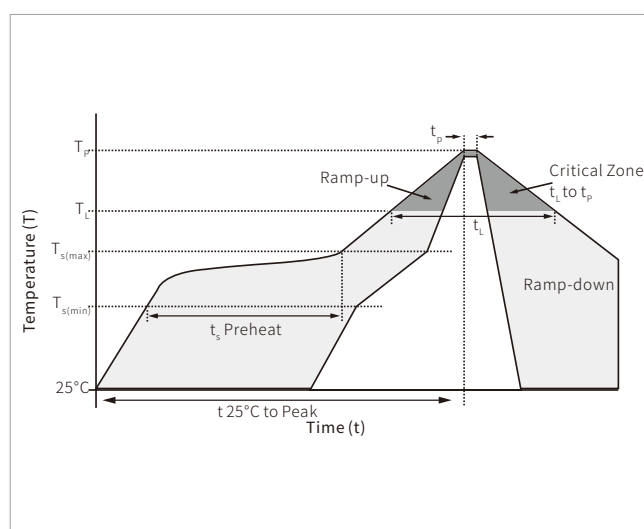
| Testing items                 | Technical standards                                    |
|-------------------------------|--------------------------------------------------------|
| High Temperature Storage Test | Temperature: 125°C ; Time:2H                           |
| Low Temperature Storage Test  | Temperature: -40°C ; Time:2H                           |
| Vibration                     | Frequency: 10-500Hz ; Amplitude:0.15mm ; Time:45min    |
| Resistance of soldering heat  | Temperature: 260±5°C; Time of dip soldering: 10s,1time |

## PRODUCT DIMENSIONS



## SOLDERING PARAMETERS

| Reflow Condition                                      |                                  | Lead-free assembly |
|-------------------------------------------------------|----------------------------------|--------------------|
| Pre Heat                                              | Temperature Max ( $T_{s(min)}$ ) | 150°C              |
|                                                       | Temperature Max ( $T_{s(max)}$ ) | 200°C              |
|                                                       | Time (min to max) ( $t_s$ )      | 60 – 180 secs      |
| Average ramp up rate (Liquidus Temp ( $T_L$ ) to peak |                                  | 3°C/second max     |
| $T_{s(max)}$ to $T_L$ - Ramp-up Rate                  |                                  | 3°C/second max     |
| Reflow                                                | Temperature ( $T_L$ ) (Liquidus) | 217°C              |
|                                                       | Time (min to max) ( $t_L$ )      | 60 – 150 seconds   |
| Peak Temperature ( $T_p$ )                            |                                  | 260°C              |
| Time within 5°C of actual peak Temperature ( $t_p$ )  |                                  | 20 – 40 seconds    |
| Ramp-down Rate                                        |                                  | 6°C/second max     |
| Time 25°C to peak Temperature ( $T_p$ )               |                                  | 8 minutes max.     |
| Do not exceed                                         |                                  | 260°C              |



## ORDERING INFORMATION

| Part Number | Size      | Marking                                                                                      | Qty/pcs   |
|-------------|-----------|----------------------------------------------------------------------------------------------|-----------|
|             |           |                                                                                              | Inner Box |
| SG2R18B600  | Φ18*6.7mm |  SG600 18 | 44        |

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