

Features

- Size Design 41.6 × 31 × 38.2 (±0.5) mm
- High Current Handling Capability 20kA @ 8/20μs
- Fast Response and Long Service Life
- Reliable to Protect Surge Voltage
- Possess SPD Disconnection
- Possess SPD deterioration monitoring
- Impulse Test Classification: class II tests

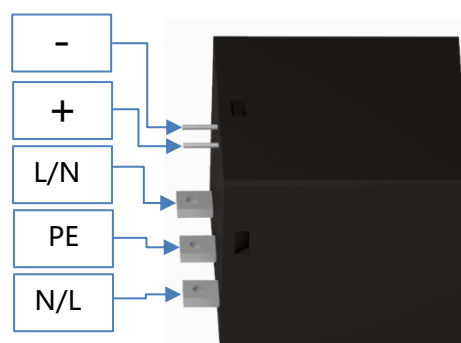
Application information

- Single-phase AC Power


Exterior



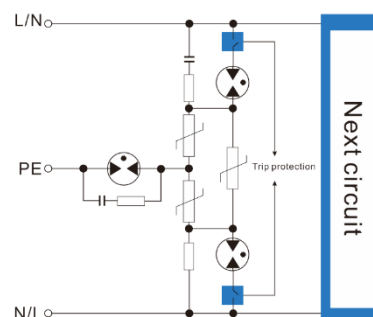
Package (Top View)



Agency Approvals

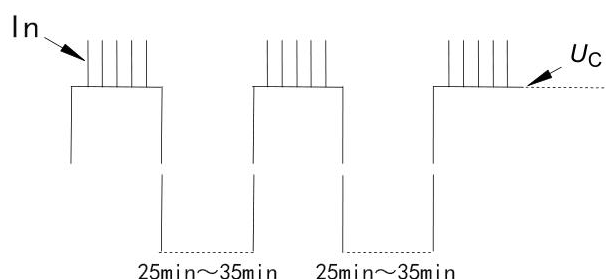
| Icon | Description |
|---|------------------------------------|
| RoHS | Compliance with 2011/65/EU |
| HF | Compliance with IEC61249-2-21:2003 |
|  | Mean lead free |

Schematics



Test Method

1. Test Ability Executive standard: IEC 61643-11: 2011, GB 18802.1-2011.
2. Test Port: L-PE, N-PE and L-N.
3. Three groups of five impulses of 8/20 current impulses with positive polarity shall be applied, Each impulse shall be synchronized to the power frequency. The test samples are connected to U_c , Starting from 0° the synchronization angle shall be increased in steps of 30° with a tolerance of ± 5° for each synchronization angle, The tests are described in Figure.
4. The interval between the impulses is 50 s – 60 s, the interval between the groups is 25 min – 35 min.



Electrical Parameter

| | | |
|---|---------------|-----|
| Rated operating voltage U_n | 220 | V |
| Maximum continuous operating voltage $U_c^{1)2)}$ | 300 | VAC |
| Nominal discharge current I_n (8/20 μ s) ³⁾ | 20 | kA |
| (L-N/L-PE/N-PE) Voltage protection level U_p (8/20 μ s) ³⁾ | 1.5 | kV |
| Operating and storage Temperature | -40 ~ +85 | °C |
| Modes of protection | L-PE/N-PE/L-N | / |
| IP Code | IP20 | / |
| Housing material ³⁾ | UL94 V0 | / |

1) At delivery AQL 0.65 level II GB/T 2828.1-2003

2) In ionized mode

3) Terms and current waveforms in accordance with GB18802.1-2011, IEC 61643-11: 2011.

Part Numbering System

B SPD 220 C 20 P -6
(1) (2) (3) (4) (5) (6) (7)

(1) Bencent

(2) SPD Surge Protective Device

(3) Nominal Voltage: 220VAC

(4) SPD Classification: C

(5) Nominal Discharge Current: 20kA

(6) P Surge Protective Device Installed on PCB

(7)“-6” means the special structure of this type

Product Characteristics

| | |
|-----------------|-------------------------|
| Lead Material | PCB |
| Body Material | PC、Ceramics、Epoxy、Metal |
| Terminal Finish | Copper Tin Plated |

Environmental Reliability Characteristics

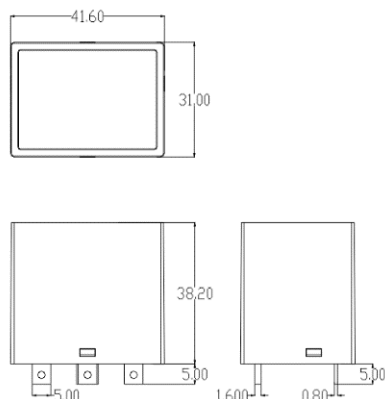
| Testing items | Technical standards |
|-------------------------------|---|
| High Temperature Storage Test | Temperature: 85°C Time: 2H |
| Low Temperature Storage Test | Temperature: -40°C Time: 2H |
| Thermal Shock | Temperature: -40~85°C Cycle: 5 |
| Vibration | Frequency: 10Hz~55Hz Acceleration: 20m/s ² (2g) Direction of vibration: x/y/z Time: 30min |
| Resistance of soldering heat | Temperature: 260±5°C Time of dip soldering: 10s, 1time |

Note: Up-screen program can be specified by customer's request via contacting Bencent service

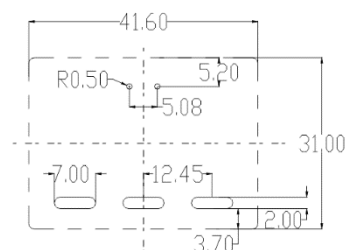
Solderability test

| | | |
|---------------|-------------------------|-------------|
| Solderability | Solder Pot Temperature: | 245°C±5°C |
| | Solder Dwell Time: | 4-6 seconds |

Product Dimensions

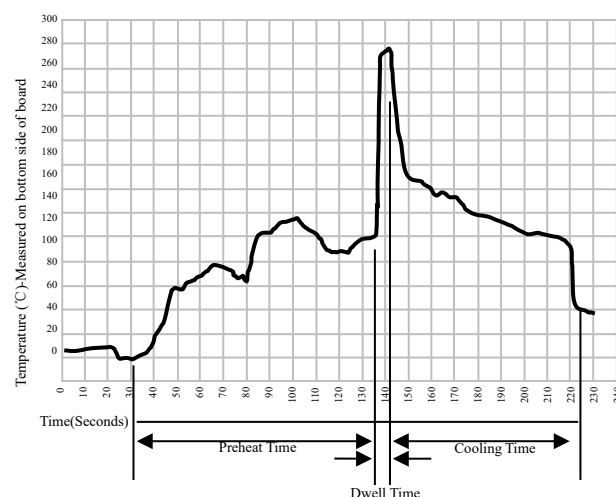


PCB Top Drilling Layer

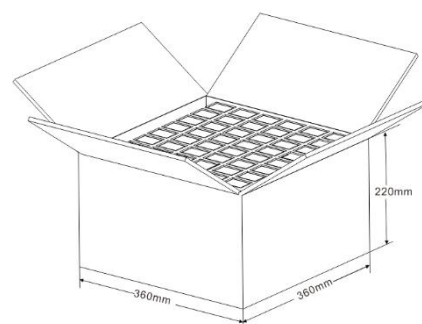
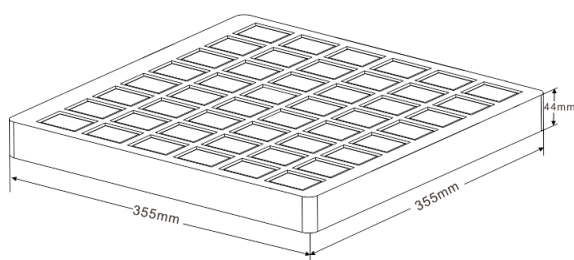


Wave Soldering profile

| Wave Soldering Condition | | Pb-Free assembly |
|--------------------------|-------------------|------------------|
| Pre Heat | Temperature Min | 100°C |
| | Temperature Max | 150°C |
| | Time (min to max) | 60 – 180 secs |
| Solder Pot Temperature | | 270°C Max |
| Solder Dwell Time | | 2-5 seconds |



Package Information



| Outline | Per Dish (PCS) | Per Carton (PCS) | Carton Size(mm) | | |
|--------------|----------------|------------------|-----------------|-----|-----|
| | | | L | W | H |
| Skin packing | 48 | 240 | 360 | 360 | 220 |