

Features

- Size Design 40.8 × 38 × 18.8 (±0.5) mm
- High Current Handling Capability 20kA @ 8/20μs
- Fast Response and Long Service Life
- Reliable to Protect Surge Voltage
- Possess SPD Disconnection
- Status indicator contacts
- Impulse Test Classification: class II tests

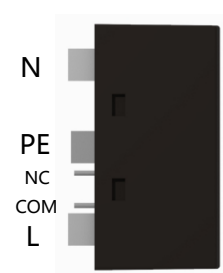
Application information

- Single-phase AC Power


Exterior



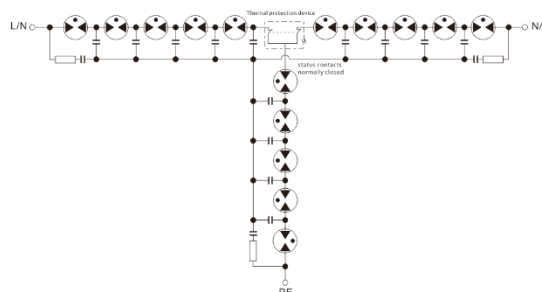
Package (Top View)



Agency Approvals

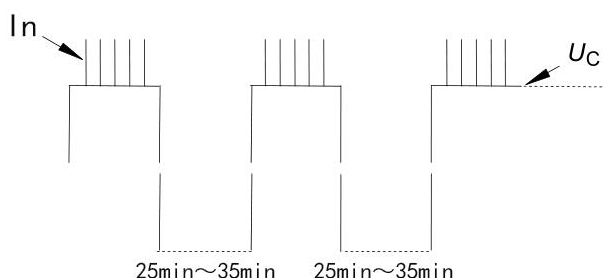
| Icon | Description |
|---|------------------------------------|
| RoHS | Compliance with 2011/65/EU |
| HF | Compliance with IEC61249-2-21:2003 |
|  | Mean lead free |

Schematics



Test Method

1. Test Ability Executive standard: IEC 61643-11: 2011, GB 18802.1-2011.
2. Test Port: L-N, L-PE, N-PE.
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 | 230 | V |
| Maximum continuous operating voltage $U_c^{(1)(2)}$ | 320 | V |
| Nominal discharge current (8/20 μ s) ³⁾ | 20 | kA |
| Front of wave spark-over voltage (1.2/50 μ s,6kV) ³⁾ | 2.0 | kV |
| Follow current extinguishing capability ³⁾ | 320/500 | V/A |
| Operating and storage Temperature | -40 ~ +85 | °C |
| Modes of protection | L-N、L-PE、N-PE | / |
| 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 230 C 20 P F - 01
(1) (2) (3) (4) (5) (6) (7) (8)

(1) Bencent

(2) SPD Surge Protective Device

(3) Nominal Voltage: 230VAC

(4) SPD Classification: C

(5) Nominal Discharge Current: 20kA

(6) P Surge Protective Device Installed on PCB

(7) F Full mode protection

(8) “01” means the special structure of this type

Product Characteristics

| | |
|-------------------|---|
| Body Material | Ceramics Iron-nickelelectrode Epoxy |
| Terminal Material | Tinned Copper Wire |

Environmental Reliability Characteristics

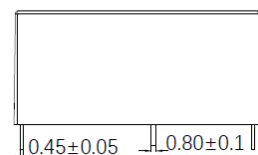
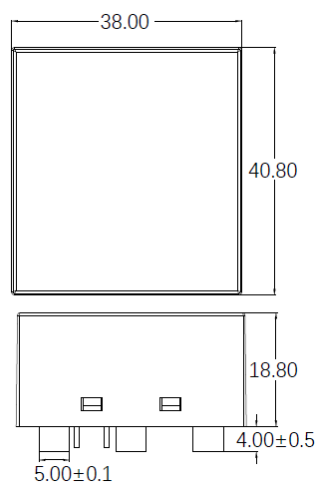
| Testing items | Technical standards |
|-------------------------------|---|
| High Temperature Storage Test | Temperature: 85°C Time:2H |
| Low Temperature Storage Test | Temperature: -40°C Time:2H |
| Thermal Shock | Temperature:-40~85°C Cycle:5 |
| Vibration | Frequency: 10Hz~55Hz Acceleration: 20m/s 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

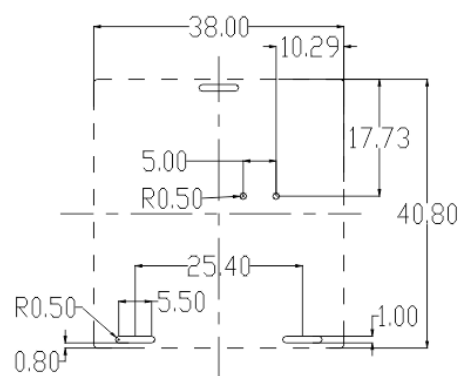
Solderability test

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

Product Dimensions

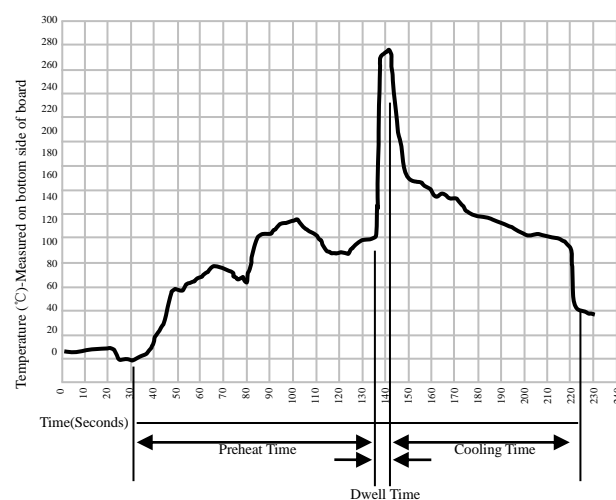


PCB Top Drilling Layer

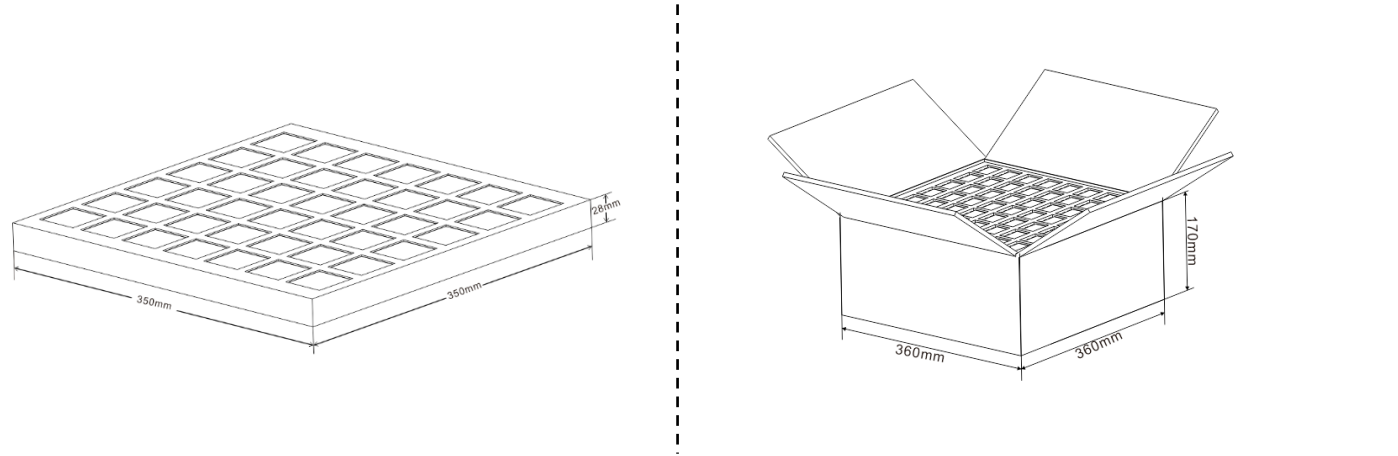


Wave Soldering profile

| 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 | 42 | 210 | 360 | 360 | 170 |