

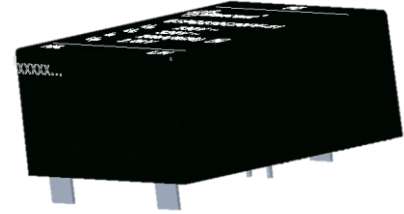
Bencent PCB SPD Features

- 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

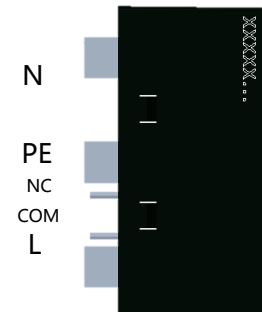
Application information

- Single-phase AC Power



Exterior



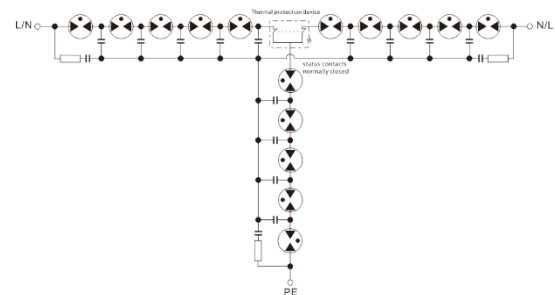
Package (Top View)



Agency Approvals

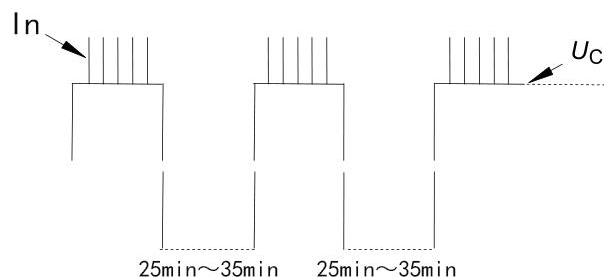
Icon	Description
RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003
	Mean lead free
	Tested according to: EN 61643-11:2012+A11、IEC 61643-11:2011, Certificate No.: R 50621634 0001

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 Un	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	A
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	

(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

(9) "A" means the same series of optimised products as "01"

Product Characteristics

Body Material	Ceramics Iron-nickel electrode 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 Cycle test	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

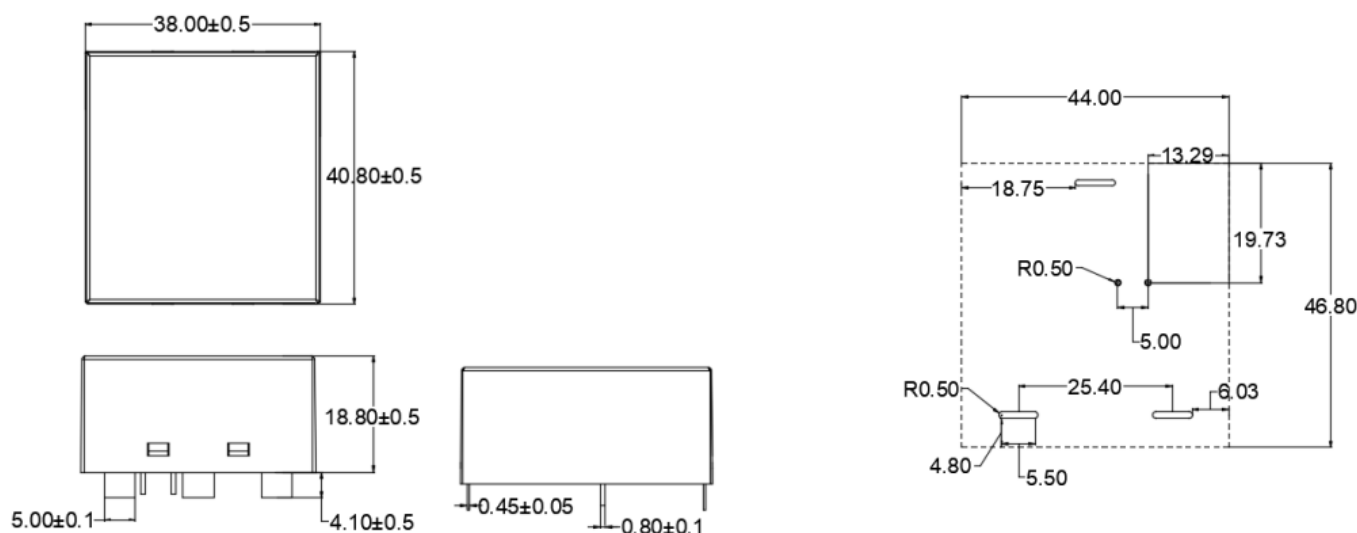
Note: Up-screen program can be specified by customer's request via contacting Bencent service

Solderability test

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

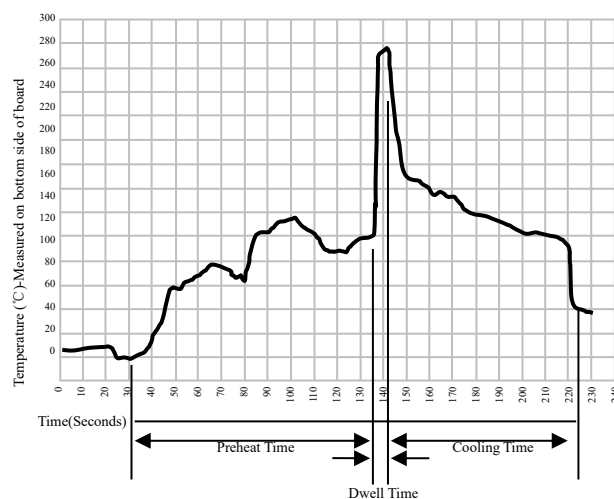
Product Dimensions

PCB Top Drilling Layer

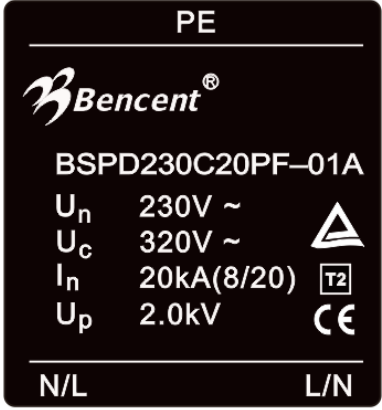



Wave Soldering profile

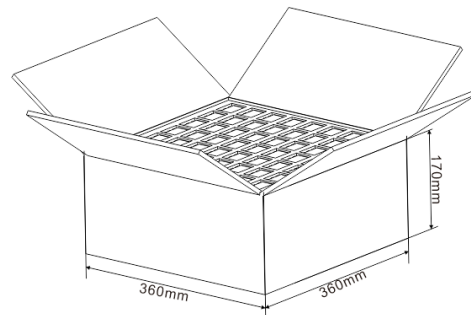
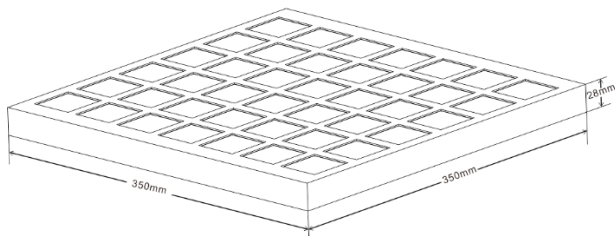
Wave Soldering Condition		Pb-Free assembly
Pre Heat	Temperature Min	100°C
	Temperature Max	150°C
	Time (min to max)	60 – 180 secs
Solder Pot Temperature		270°C Max
Solder Dwell Time		2-5 seconds



Marking on Product

Main marking	Remote signaling marking
	 <p>Remark: xxxxx... A variable-length numeric code that represents the batch code of a product and is used only for information product tracking within the company.</p>

Package Information



Outline	Per Dish (PCS)	Per Carton (PCS)	Carton Size(mm)		
			L	W	H
Skin packing	42	210	360	360	170