


Features

- Surface Mounting Design 7.8×5.0×6.0mm
- High Current Handling Capability 2,000A @ 8/20μs
- Low Capacitance and Insertion Loss
- Quick Response and Long Service Life
- Moisture sensitivity level: Level 1

Application information

- xDSL (NEBS)

Agency Approvals

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

Electrical Parameter

DC Breakdown Voltage 1)2) 4)	100V/s	950-1500	V
Impulse Spark-over Voltage4)	At 1kV/μs	for 99 % of measured values	≤ 1800
	At 1kV/μs	Typical values of distribution	≤ 1700
Impulse Discharge Current 5)	8/20μs	2,000	A
Arc Voltage4)	At 1A	~15	V
Insulation Resistance4)	DC=100V	≥1	GΩ
Capacitance at 1MHz4)	VDC=0.5V	≤1.5	pF
Weight		~1.1	g
Operating And Storage Temperature		-40-90	℃
Marking		Bencent Logo YY MM B3D1000L1-C (YY: year of production, MM: month of production)	

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

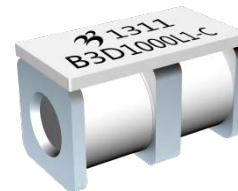
2) In ionized mode

3) Terms and waveforms in accordance with ITU-T Rec. K. 12; IEC 61643-21

4) Tip electrode 1 or 3 to center electrode 2

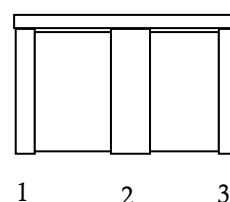
5) Total Currents through center electrode 2, half value through each Tip electrode 1 、 3.

Exterior

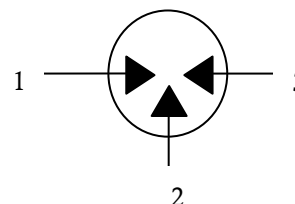


SMD

Package (Top View)



Schematic Symbol



Part Numbering System

B3D 1000 L1 -C
(1) (2) (3) (4)

(1) Bencent 3-Electrode SMD Gas Discharge Tube
7.8×5.0×6.0mm

(2) DC Breakdown Voltage, e.g., 1000=1000V

(3) Surge Rating @8/20μs, L1=2,000A (Total Impulse
Discharge Current 2,000A @ 8/20μs)

(4) “-C” Means it is Suitable for High-Speed SMT

Product Characteristics

Lead Material	Copper
Body Material	Ceramics
Terminal Finish	100% Matte-Tin Plated

Environmental Reliability Characteristics

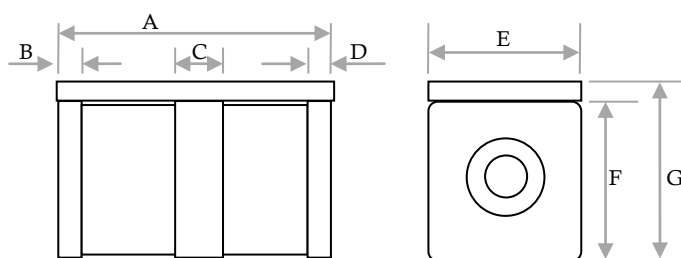
Testing items	Technical standards
High Temperature Storage Test	Temperature: 85 °C Time:2H
Low Temperature Storage Test	Temperature: -40 °C Time:2H
Vibration	Frequency: 10-500Hz Amplitude: 0.15mm Time: 45min
Resistance of soldering heat	Temperature: 260±5 °C Time of dip soldering: 10s, 1time

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

Solderability test

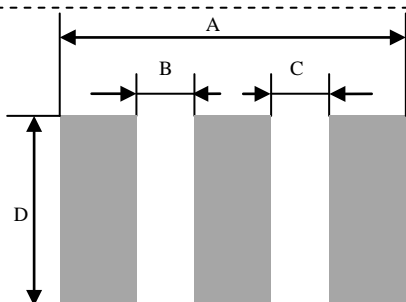
Solderability	Solder Pot Temperature:	245 °C ± 5 °C
	Solder Dwell Time:	4-6 seconds

Product Dimensions



REF	mm	inch
A	7.8±0.3	0.307±0.012
B	0.5±0.2	0.020±0.008
C	1.6±0.2	0.063±0.008
D	0.5±0.2	0.020±0.008
E	5.0±0.2	0.197±0.008
F	5.0±0.2	0.197±0.008
G	6.0±0.3	0.236±0.012

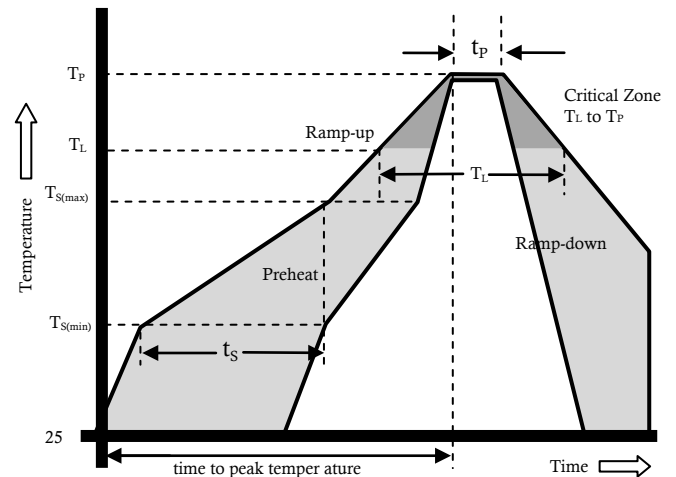
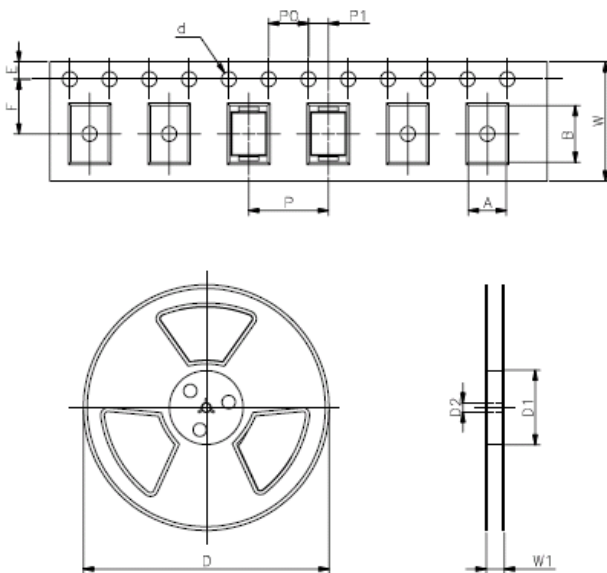
Recommended Soldering Pad



REF	mm	inch
A	9.6	0.378
B	1.5	0.059
C	1.5	0.059
D	5.0	0.197

Reflow Profile

Reflow Condition		Pb-Free assembly
Pre Heat	Temperature Min	150°C
	Temperature Max	200°C
	Time (min to max)	60 – 180 secs
Average ramp up rate (Liquids) T _{amp} (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) (Liquids)	217°C
	- Temperature (T _L)	60 – 150 seconds
Peak Temperature (T _P)		260+0/-5 °C
Time within 5°C of actual peak Temperature (t _p)		~10 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T _P)		8 minutes Max.
Do not exceed		260°C


Package Reel Information


REF	mm	inch
A	5.4±0.1	0.216±0.004
B	8.4±0.1	0.331±0.004
d	Φ 1.5±0.1	Φ 0.059±0.004
P0	4.0±0.1	0.157±0.004
P1	2.0±0.1	0.079±0.004
P	8.0±0.1	0.315±0.004
E	1.75±0.1	0.069±0.004
F	7.5±0.1	0.295±0.004
W	16.0±0.3	0.630± 0.012
D	Φ 330.0	Φ 13.0
D1	Φ 50Min	Φ 1.97Min
D2	Φ 13±0.5	0.512±0.020
W1	16.8±2.0	0.661±0.079

Outline	Reel (PCS)	Per Carton (PCS)	Reel Diameter (mm)	Carton Size(mm)		
				L	W	H
TAPING	1,000	16,000	330	360	360	385