

Gas Discharge Tube Features

- 3-Electrode DIP Design
- High Current Handling Capability 10,000A @ 8/20μ s
- Low Capacitance and Insertion Loss
- Quick Response and Long Service Life
- Moisture sensitivity level: Level 1
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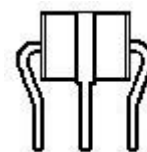
Exterior



Application information

- Telecommunications
- Line protection
- Base station protection

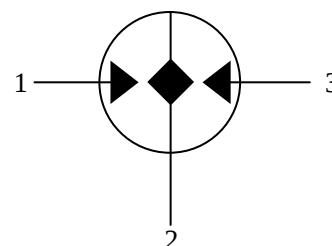
Package (Top View)



Agency Approvals

Schematic Symbol

Icon	Description
RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003
	Mean lead free
	UL497B Certificated E232249



Electrical Parameter

DC Breakdown Voltage ¹⁾²⁾⁴⁾	100V/s	188-272	V
Impulse Spark-over Voltage ⁴⁾	At 1kV/μs	for 99 % of measured values ≤ 800	V
	At 1kV/μs	Typical values of distribution ≤ 700	V
Impulse Discharge Current ³⁾⁵⁾	8/20μs 10 operations [5x (+) & 5x (-)]	10,000	A
AC Discharge Current ⁵⁾	10 operations 50Hz 1S	10	A
Insulation Resistance ⁴⁾	DC=100V	≥1	GΩ
Capacitance at 1MHz ⁴⁾	VDC=0.5V	≤1.5	pF
Weight		~1.9	g
Operating and Storage Temperature		-40-90	°C
Marking		Bencent Logo YY MM B3R230M(YY:year of production, MM:month of production)	

1) At delivery AQL 0.65 level II ISO 2859

2) In ionized mode

3) Terms and waveforms in accordance with ITU-T Rec. K. 12 and 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” .

Gas Discharge Tube Part Numbering System

Version: A0 2019-04-02

Product Characteristics

B3R 230 M
(1) (2) (3)
(1) Bencent 3-Electrode DIP Gas Discharge Tube
(2) Series: DC Breakdown Voltage, e.g.: 230=230V
(3) Surge Rating @8/20μs, L=5KA, M=10KA, H=20KA

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

Environmental Reliability Characteristics

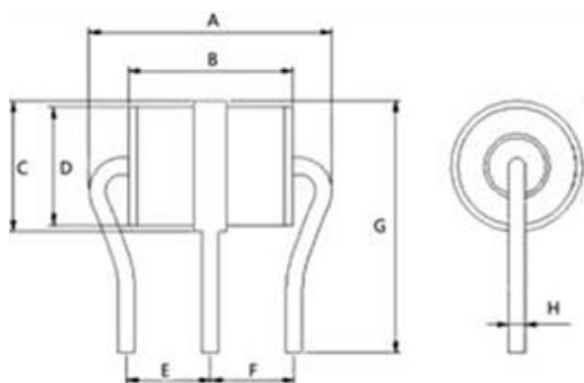
Testing items	Technical standards
High Temperature Storage Test	Temperature: 90℃ Time: 2H
Low Temperature Storage Test	Temperature: -40℃ Time: 2H
Vibration	Frequency: 10-500Hz Amplitude: 0.15mm Time: 45min
Resistance of soldering heat	Temperature: 260±5℃ Time of dip soldering: 10s, 1time

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

Solderability test

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

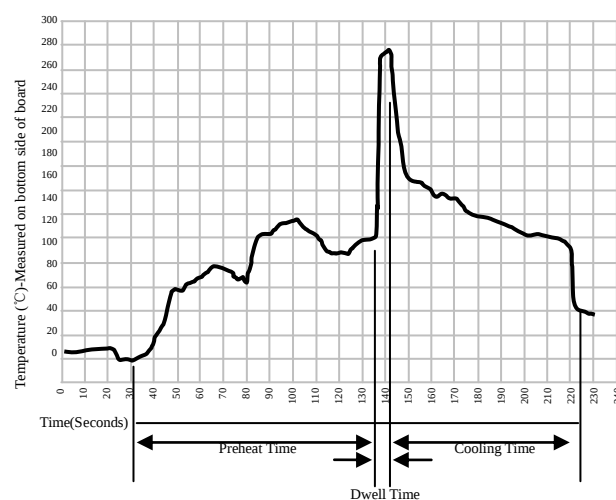
Product Dimensions



REF	mm	inch
A	max 13.4	max 0.528
B	10±0.3	0.394±0.012
C	Φ8±0.2	Φ0.315±0.008
D	Φ7.2±0.2	Φ0.283±0.008
E	4.4±0.3	0.173±0.012
F	4.4±0.3	0.173±0.012
G	15±0.6	0.591±0.024
H	Φ1±0.15	Φ0.039±0.006

Wave Profile

Reflow Condition		Pb-Free assembly
Pre Heat	Temperature Min	100°C
	Temperature Max	150°C
	Time (min to max)	60 – 180 secs
Solder Pot Temperature		280°C Max
Solder Dwell Time		2-5 seconds



Package Box Information

OUTLINE	BOX (PCS)	INSIDE CARTON (PCS)	PER CARTON (PCS)	CARTON SIZE(mm)		
				L	W	H
BOX	100	1,000	6,000	395	370	225