





**Gas Discharge Tube  
Features**

- Small Size Design EIA 1206 3.2×1.6×1.6mm
- Current Handling Capability 500A @ 8/20μs
- Low Capacitance and Insertion Loss
- Fast Response and Long Service Life
- Reliable to Protect Electrostatic Surge
- Moisture sensitivity level: Level 1

**Application information**

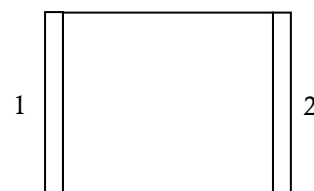
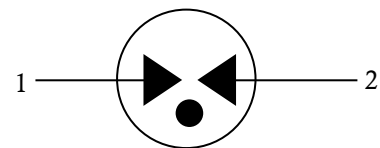
- Ethernet

**Agency Approvals**

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

**Exterior**


SMD

**Package (Top View)**

**Schematic Symbol**

**Electrical Parameter**

DC Breakdown Voltage <sup>1)2)</sup>	100V/s	400±30%	V
Impulse Spark-over Voltage	At 1kV/μs	for 99 % of measured values ≤ 1100	V
	At 1kV/μs	Typical values of distribution : ≤ 950	V
Impulse Discharge Current <sup>3)</sup>	10/700μs ±5times	6,000	V
	8/20μs ±5times	500	A
Arc Voltage	At 1A	~8	V
Insulation Resistance	DC=100V	≥1	GΩ
Capacitance at 1MHz	VDC=0.5V	≤0.6	pF
Weight		~0.04	g
Operating And Storage Temperature		-40-90	°C
Marking		Without	

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

## Gas Discharge Tube

Version: A2 2020-06-17

**Part Numbering System**

BS 401 N

(1) (2) (3)

(1) Bencent Gas Discharge Tube

(2) Series: DC Breakdown Voltage,

 e.g. : 401=40×10<sup>1</sup>=400V

(3) Tolerance of DC Breakdown Voltage, N=+-30%, the Specific tolerance is decided by the table of “Electrical Parameter”

**Product Characteristics**

Lead Material	Fe-Ni Alloy
Body Material	Ceramics
Terminal Finish	100% Matte-Tin Plated

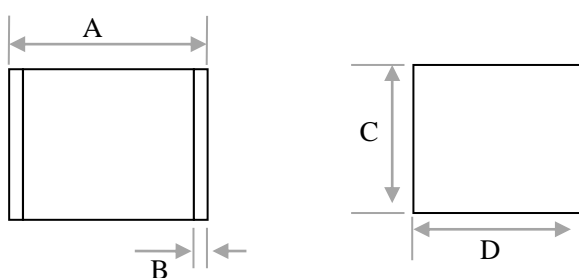
**Environmental Reliability Characteristics**

Testing items	Technical standards
High Temperature Storage Test	Temperature: 90°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

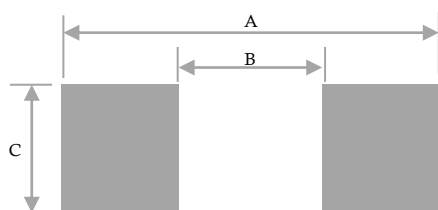
Note: Up-screen program can be specified by customer's request via contacting Bencent service

**Solderability Test**

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

**Product Dimensions**


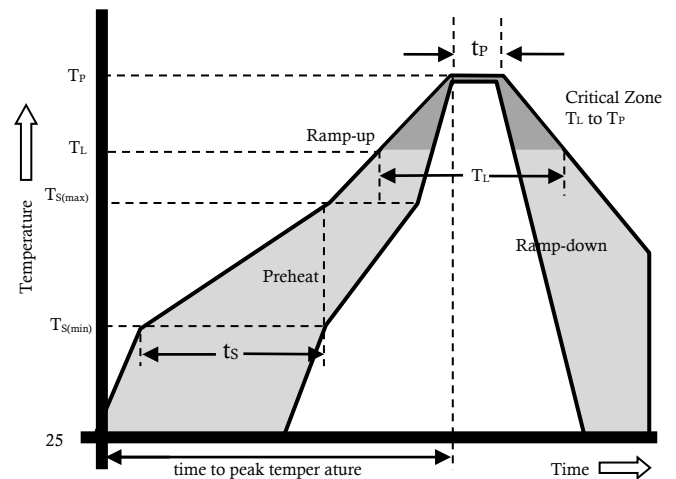
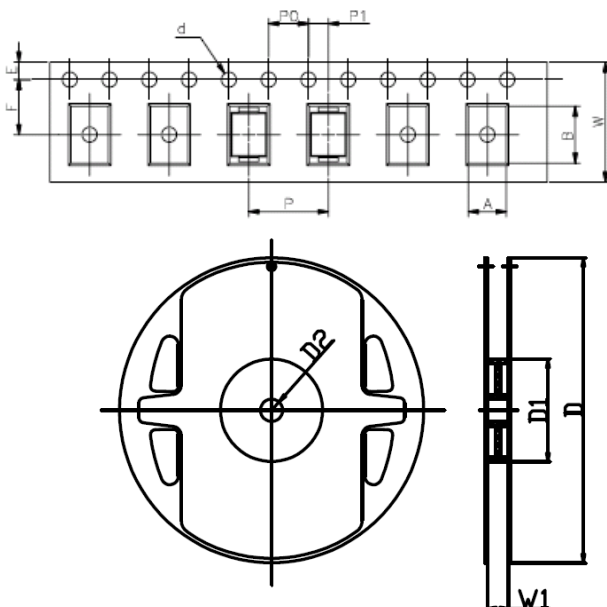
REF	mm	inch
A	3.2±0.3	0.126±0.013
B	0.3±0.1	0.013±0.004
C	1.6±0.2	0.063±0.008
D	1.6±0.2	0.063±0.008

**Recommended Soldering Pad**


REF	mm	inch
A	4.5	0.177
B	2.0	0.079
C	1.8	0.070

**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) Tmp (TL) to peal		3°C/second max
Ts(max) to TL - Ramp-up Rate		3°C/second max
Reflow	- Temperature (TL) (Liquids)	217°C
	- Temperature (TL)	60 – 150 seconds
Peak Temperature (TP)		260+0/-5 °C
Time within 5°C of actual peak Temperature (tp)		~6 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (TP)		8 minutes Max.
Do not exceed		260°C


**Package Reel Information**


REF	mm	inch
A	1.9±0.2	0.074±0.008
B	3.6±0.2	0.141±0.008
d	Φ1.5±0.2	Φ0.059±0.008
P0	4.0±0.2	0.157±0.008
P1	2.0±0.2	0.079±0.008
P	4.0±0.2	0.156±0.008
E	1.75±0.2	0.069±0.008
F	5.5±0.2	0.217±0.008
W	12.0±0.2	0.472±0.008
D	Φ178±2	Φ7.008±0.079
D1	Φ50Min	Φ1.97Min
D2	Φ13±2	0.512±0.079
W1	12.6±2	0.496±0.079

Outline	Reel (PCS)	Per Carton (PCS)	Reel Diameter (mm)	Carton Size(mm)		
				L	W	H
TAPING	2,000	60,000	178	390	370	220