

Order Code: BA401N+



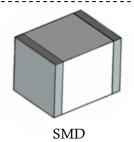
Gas Discharge Tube

Version: A2 2017-08-08

#### **Features**

- Small Size Design EIA 18124.5×3.2×2.7mm
- Current Handling Capability 1,000A @ 8/20µ s
- Low Capacitance and Insertion Loss
- Fast Response and Long Service Life
- Reliable to Protect Electrostatic Surge
- Moisture sensitivity level: Level 1

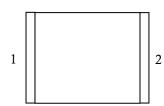
#### Exterior



## **Application Information**

- Ethernet
- **N**XDSL

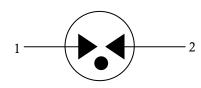
## Package (Top View)



## Agency Approvals

Icon	Description
RoHS	Compliance with 2011/65/EU
HF	Compliance withIEC61249-2-21:2003
<b>⊗</b>	Mean lead free

## Schematic Symbol

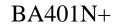


#### **Electrical Parameter**

DC Breakdown Voltage 1)2)	100V/s	340-550	V
Impulse Spark-over Voltage	At 1kV/µs	for 99 % of measured values ≤1050	V
Impulse Spark-over Voltage	At 1kV/µs	Typical values of distribution≤900	V
Impulse Discharge Current 3)	8/20µs	1,000	٨
impuise Discharge Current 3)	10 operations [5x (+) & 5x (-)]	1,000	Α
Arc Voltage	At 1A	~8	V
Insulation Resistance	DC=100V	≥1	GΩ
Capacitance at 1 MHz	VDC=0.5V	≤1.0	pF
Weight		~0.20	g
Operating And Storage Temperature		-40-105	$^{\circ}\mathbb{C}$
Marking		Without	

- 1) At delivery AQL0.65level I I ISO 2859
- 2) In ionized mode
- 3) Terms and waveforms in accordance with ITU-T Rec. K. 12; IEC 61643-21







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## Part Numbering System

BA 401 N+ (1) (2) (3)

- (1) Bencent Gas Discharge Tube
- (2) Series: DC Breakdown Voltage, e.g.: 401=40×101=400V
- (3) Tolerance of DC Breakdown Voltage, M  $\pm$  20%, N=  $\pm$  30%, the Specific tolerance is decided by the table of

## **Product Characteristics**

Lead Material	Copper or iron nickel alloy
Body Material	Ceramics
Terminal Finish	100% Matte-Tin Plated

## **Environmental Reliability Characteristics**

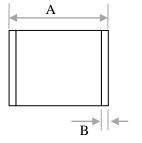
Testing items	Technical standards
High Temperature Storage Test	Temperature: 105 °C Time: 2H
Low Temperature Storage Test	Temperature: -40°C Time: 2H
Vibration	Frequency: 10-500Hz Amplitude: 0.15mm Time: 45mins
Resistance of soldering heat	Temperature: 260±5 °C Time of dip soldering: 10s, 1time

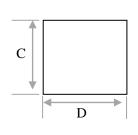
Note: Up-screen program can be specified by customer's request via contacting Bencent service

## Solderability Test

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

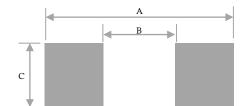
#### **Product Dimensions**





REF	mm	inch
A	4.5±0.3	0.177±0.012
В	0.5±0.2	0.020±0.008
С	2.7±0.2	0.106±0.008
D	3.2±0.2	0.126±0.008

## Recommended Soldering Pad



REF	mm	inch
A	5.5	0.217
В	3.5	0.138
С	3.5	0.138

<sup>&</sup>quot;Electrical Parameter"

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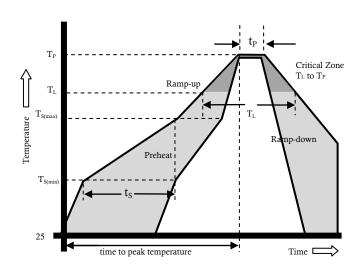




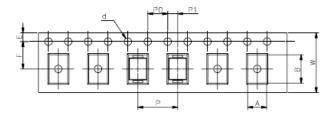
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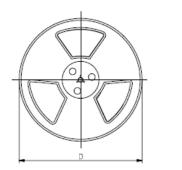
# Reflow Profile

	Reflow Condition	Pb-Free assembly		
D	Temperature Min	150 ℃		
Pre Heat	Temperature Max	200 ℃		
пеаі	Time (min to max)	60 – 180 secs		
Average ramp up rate (Liquidus) Tamp $(T_L)$ to peal		3 °C/sec. max		
T <sub>S</sub> (max) to T <sub>L</sub> - Ramp-up Rate		3 ℃/sec. max		
Reflow	- Temperature (T <sub>L</sub> ) (Liquidus)	217 ℃		
	- Temperature (T <sub>L</sub> )	60 – 150 secs.		
Peak Tem	perature (T <sub>P</sub> )	260+0/-5 ℃		
Time within $5  \mathbb{C}$ of actual peak Temperature (tp)		8 – 20 secs.		
Ramp-down Rate		6 ℃/sec. max		
Time 25 °C to peak Temperature (T <sub>P</sub> )		8 minutes Max.		
Do not exceed		260 ℃		



## Package Reel Information







REF	mm	inch
A	3.7±0.2 0.146±0.008	
В	5.0±0.1	0.197±0.004
d	Ф 1.5±0.1	Ф 0.059±0.004
E	1.75±0.1	0.069±0.004
F	5.5±0.1	0.217±0.002
P	8.0±0.1	0.315±0.004
P0	4.0±0.1	0.157±0.004
P1	2.0±0.1 0.079±0.004	
W	12.0±0.2	0.472±0.008
D	Ф330.0 Ф13.0	
D1	Φ50Min Φ1.97Min	
D2	Φ13±0.5	0.512±0.02
W1	16.8±2.0	0.661±0.079

Outline	Reel Per Carton (PCS) (PCS)	Reel Diameters	Carton Size (mm)			
		(PCS)	(mm)	L	W	Н
TAPING	2,500	40,000	330	360	360	380

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