UN2E8 / UN2H8 Series

ROHS

High Voltage Single Gas Discharge Tube

Description

The high voltage (1.0 - 4.5KV) gas discharge tubes are designed for surge protection and high isolation applications, and for applications for which bias voltages or signal levels of several hundred volts are normally present.

Features

- Non-Radioactive
- ROHS compliant
- Ultra low capacitance
- Low insertion loss
- Excellent response to fast rising transients
- 5KA surge capability tested with 8/20μs pulse as defined by IEC 61000-4-5

Applications

- CRT terminals
- CATV equipment
- Antennas
- Power suplies
- Medical electronics

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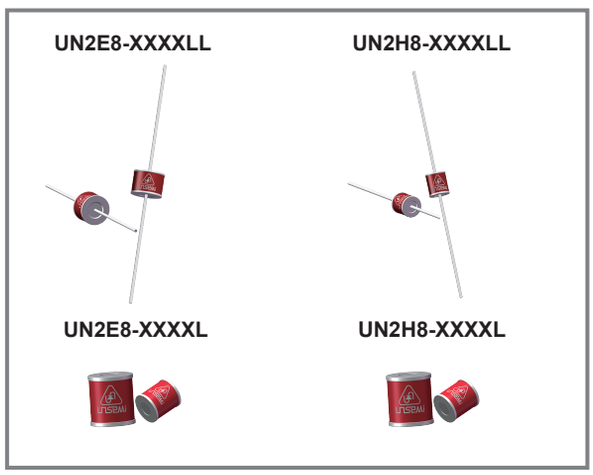
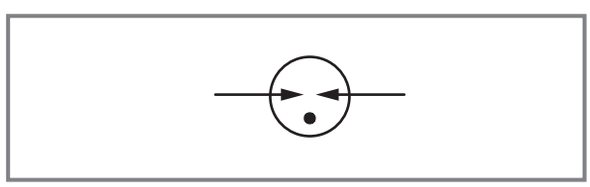


Schematic Symbol



Product Characteristics

Materials	Nickel-plated with Tinplated wires	
Product Marking	XXXX -Nominal voltage L -5KA	
Glow to Arc Transition Current	< 0.5 Amps	
Glow Voltage	~180 Volts	
Storage and Operational Temperature	-40 to +90°C	
Weight	UN2E8-XXXXLL	~1.5g
	UN2E8-XXXXL	~1.35g
	UN2H8-XXXXLL	~1.6g
	UN2H8-XXXXL	~1.45g

Dimensions (Unit: mm)

Figure 1

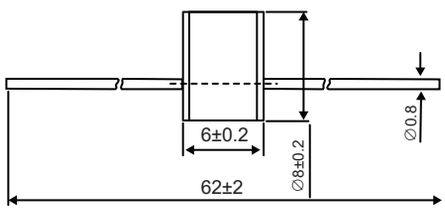
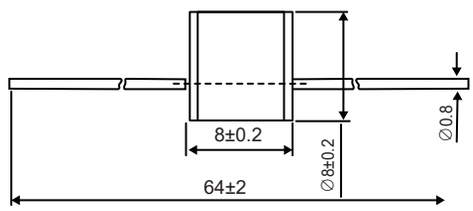


Figure 2



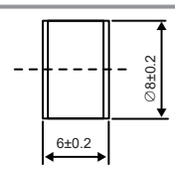


Figure 3

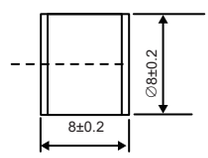


Figure 4

Electrical Characteristics

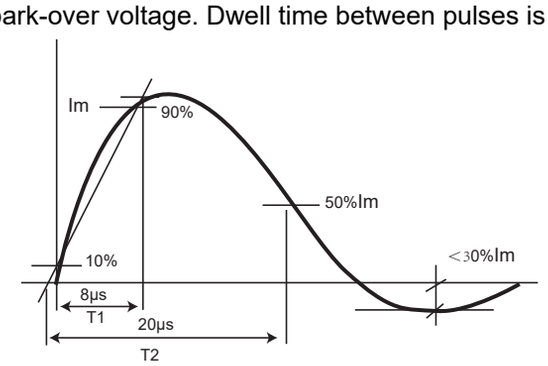
Part Number	Figure	Marking	DC Spark-over Voltage	Typical Impulse Spark- over Voltage		Minimum Insulation Resistance	Maximum Capacitance	Arc Voltage	Service Life	
									Nominal Impulse Dis charge Current	Max Impulse Discharge Current
			@100V/S	@100V/μS	@1KV/μS		@1MHz	@1A	@8/20μS ±5times	@8/20μs 1 time
UN2E8-1000LL	1	1000L	1000V±20%	1500V	1600V	1GΩ (at 100V)	1.5pF	~25V	5KA	10KA
UN2E8-1000L	3									
UN2E8-1600LL	1	1600L	1600V±20%	2200V	2400V	1GΩ (at 100V)	1.5pF	~ 25V	5KA	10KA
UN2E8-1600L	3									
UN2E8-2000LL	1	2000L	2000V±20%	3000V	3500V	1GΩ (at 100V)	1.5pF	~25V	5KA	10KA
UN2E8-2000L	3									
UN2E8-2500LL	1	2500L	2500V±20%	3800V	4000V	1GΩ (at 100V)	1.5pF	~25V	5KA	10KA
UN2E8-2500L	3									
UN2E8-2700LL	1	2700L	2700V±20%	3800V	4000V	1GΩ (at 100V)	1.5pF	~25V	5KA	10KA
UN2E8-2700L	3									
UN2E8-3000LL	1	3000L	3000V±20%	4300V	4500V	1GΩ (at 100V)	1.5pF	~25V	5KA	10KA
UN2E8-3000L	3									
UN2E8-3500LL	1	3500L	3500V±20%	4800V	5000V	1GΩ (at 100V)	1.5pF	~25V	5KA	10KA
UN2E8-3500L	3									
UN2H8-4000LL	2	4000L	4000V±20%	5400V	5600V	1GΩ (at 100V)	1.0pF	~25V	5KA	10KA
UN2H8-4000L	4									
UN2H8-4500LL	2	4500L	4500V±20%	5800V	6000V	1GΩ (at 100V)	1.0pF	~25V	5KA	10KA
UN2H8-4500L	4									

Notes:

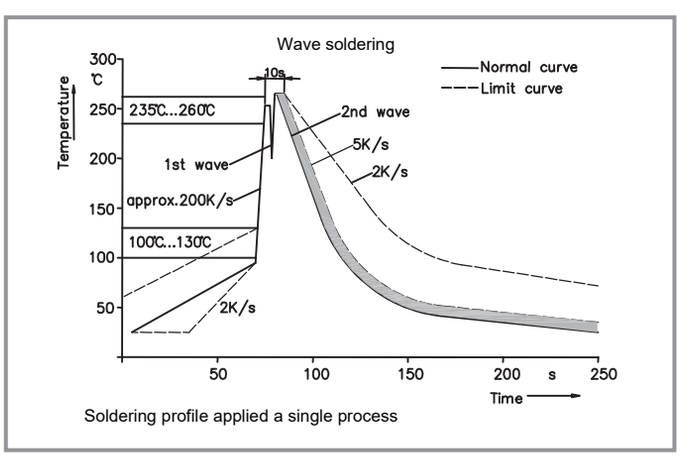
1). Terms in accordance with ITU-T K.12 and GB/T 9043-2008

2). At delivery AQL 0.65 level Ⅱ, DIN ISO 2859

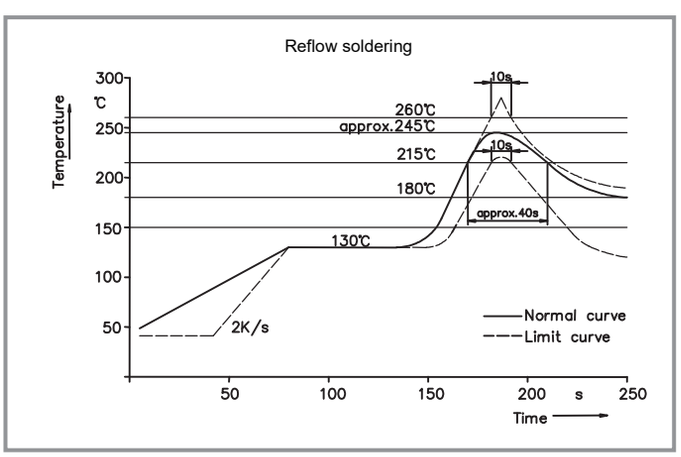
Electrical Rating

Item	Test Condition I Description	Requirement
DC Spark-over Voltage	The voltage is measured with a slowly rate of rise dv / dt=100V/s	To meet the specified value
Impulse Spark-over Voltage	The maximum impulse spark-over voltage is measured with a rise time of dv / dt=100V/μs or 1KV/μs	
Insulation Resistance	The resistance of gas tube shall be measured each terminal each other terminal, please see above spec.	
Capacitance	The capacitance of gas tube shall be measured each terminal to each other terminal. Test frequency :1MHz	
Nominal Impulse Discharge Current	The maximum current applying a waveform of 8/20μs that can be applied across the terminals of the gas tube. One hour after the test is completed, re-testing of the DC spark-over voltage does not exceed ±30% of the nominal DC spark-over voltage. Dwell time between pulses is 3 minutes. 	

Recommended soldering profile



Soldering profile applied a single process



Soldering Parameters - Hand Soldering

Solder Iron Temperature: 350°C +/-5°C
Heating Time: 5 seconds max.

Part Numbering

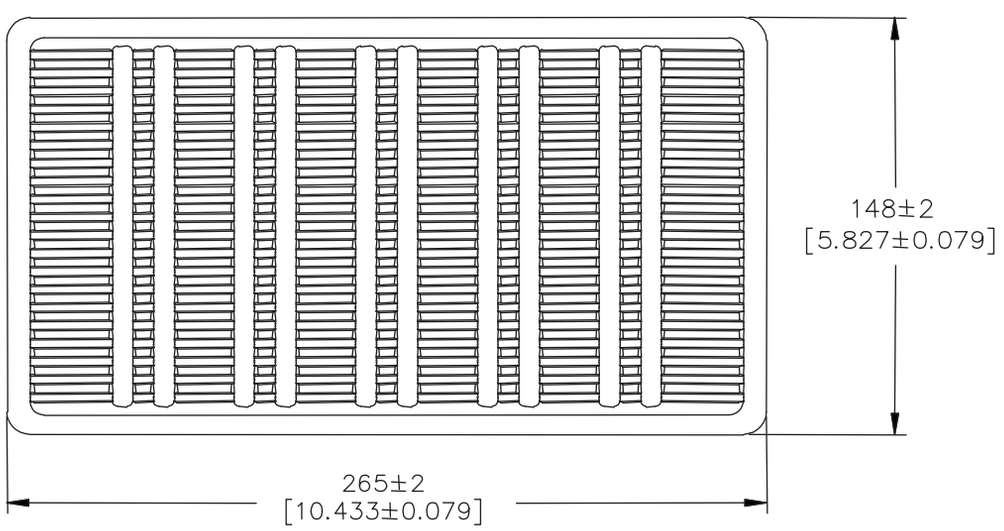
U N 2E8 XXXX L L

- L, with axial wire
  No, without wire
- 8/20μs Level L, 5KA
- Nominal DC Spark-over Voltage
  1000 = 1000V 3000=3000V
  1600 = 1600V 3500=3500V
  2000 = 2000V 4500=4500V
  2500 = 2500V 5500=5500V
- Series

Packaging Information (Unit: mm)

Part Number	Description	Quantty
UN2E8-XXXXLL	800PCS per Tape & Ree	800
UN2H8-XXXXLL	100PCS per Tray, 5 Trays / Inner Carton	500
UN2E8-XXXXL	Tape & Reel -16mm tape/13″Reel	500
UN2H8-XXXXL	Tape & Reel -16mm tape/13″Reel	500

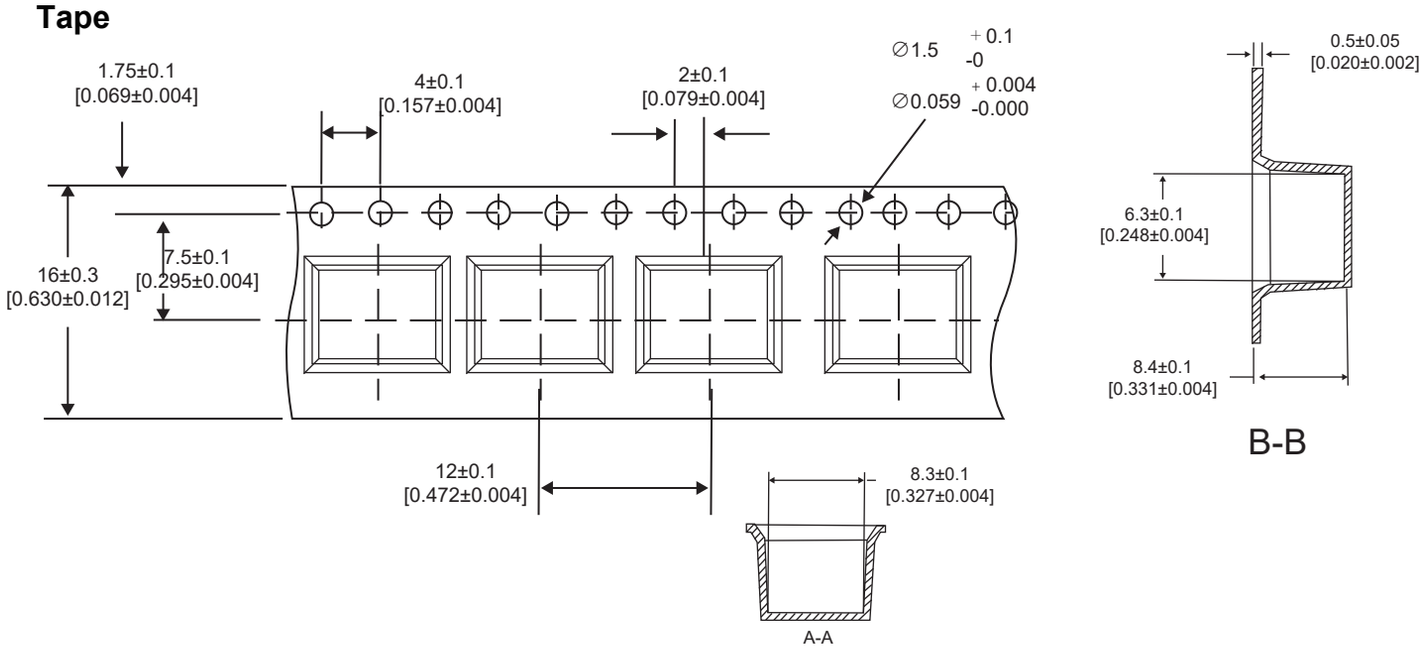
Tray used in UN2H8-XXXXLL



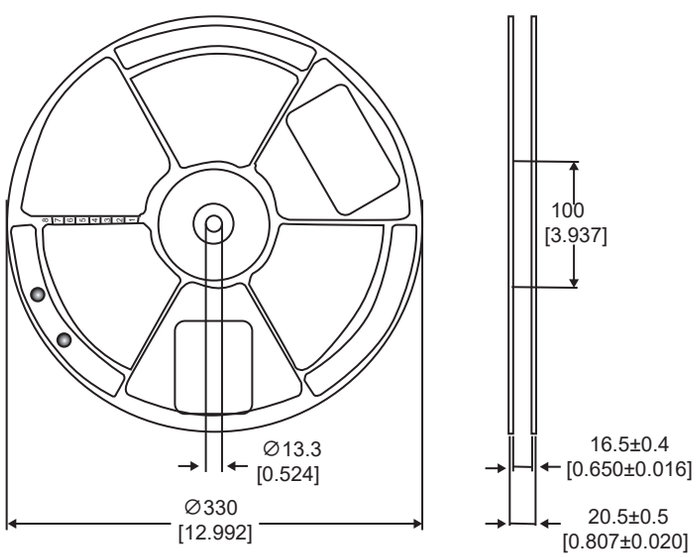
Tape and Reel Dimensions (Unit: mm)

Used in UN2E8-XXXL/UN2H8-XXXL

Tape

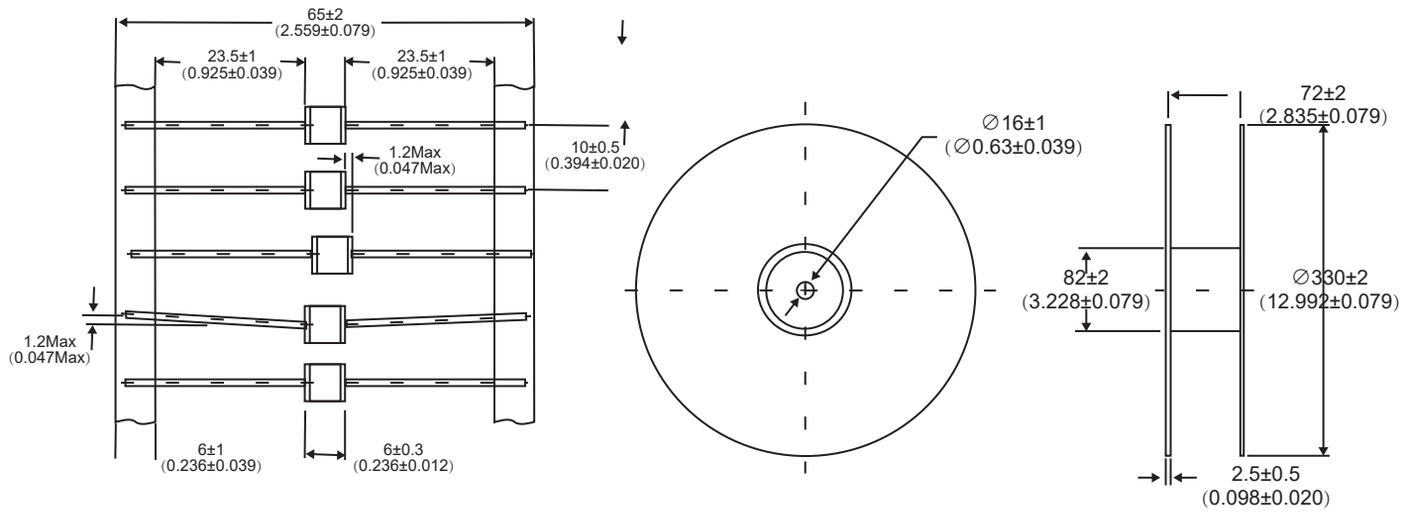


Reel



Tape and Reel Dimensions (Unit: mm)

Used in UN2E8-XXXXLL



- Gas discharge tubes (GDT) must not be operated directly in power supply networks.
- Gas discharge tubes (GDT) may become hot in case of longer periods of current stress (danger of burning).
- Gas discharge tubes (GDT) may be used only within their specified values. In the event of overload, the head contacts may fail or the component may be destroyed.
- Damaged Gas discharge tubes (GDT) must not be re-used.

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ROHS

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