



Features

- Size: 8 mm diameter, 10 mm length
- High current rating
- Low capacitance and insertion loss
- Fail-short option available
- RoHS compliant*
- UL Recognized

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2046 Series Heavy Duty 3-Electrode Gas Discharge Tube

Characteristics

Test Methods per ITU-T K.12 and IEC 61643-311.

Characteristic	Model No.				
	2046-09	2046-14	2046-20	2046-23	2046-25
DC Sparkover $\pm 20\%$ @ 100 V/s	90 V	145 V	200 V	230 V	250 V
Impulse Sparkover ⁽¹⁾					
100 V/ μ s	< 600 V	< 500 V	< 500 V	< 600 V	< 600 V
1000 V/ μ s	< 700 V	< 700 V	< 700 V	< 700 V	< 700 V

Characteristic	Model No.				
	2046-35	2046-40	2046-42	2046-47	2046-60
DC Sparkover $\pm 20\%$ @ 100 V/s	350 V	400 V	420 V	470 V	600 V
Impulse Sparkover ⁽¹⁾					
100 V/ μ s	< 700 V	< 800 V	< 800 V	< 900 V	< 1000 V
1000 V/ μ s	< 800 V	< 900 V	< 900 V	< 1000 V	< 1100 V

⁽¹⁾ Impulse Sparkover voltage is defined as typical values of distribution.

Insulation Resistance (IR) ⁽²⁾	50 / 100 / 250 Vdc	> 10 G Ω
Glow Voltage	10 mA	~ 70 V
Arc Voltage	1 A	~ 10 V
Glow-Arc Transition Current		< 1 A
Maximum Capacitance	1 MHz	< 2 pF
Maximum Impulse Discharge Current	20,000 A, 8/20 μ s	1 operation
	10,000 A, 8/20 μ s	10 operations
Nominal Alternating Discharge Current	20 A, 50 Hz, 1 second	1 operation
Impulse Life	200 A 10/1000 μ s	130 operations
DC Holdover Voltage ⁽³⁾		< 150 ms
Operating Temperature		-30 to +85 °C
Storage Temperature		-40 to +115 °C
Climatic Category (IEC 60068-1)		40 / 90 / 21

Notes:

- UL Recognized component, UL File E153537.
- At delivery AQL 0.65, level II DIN ISO 2859
- Line to Line voltage is approximately 1.8 to 2 times the stated Line to Ground voltage.
- Discharge current rating is total current equally divided between Each Line To Ground (ELTG).

⁽²⁾ DC Sparkover Voltage	IR Measuring Voltage
90 V	50 V
145–400 V	100 V
420–600 V	250 V

⁽³⁾ Network Applied	DC Holdover Voltage
DC Sparkover Voltage	
90–145 V	52 V
200–250 V	135 V
350–600 V	150 V



WARNING
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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Applications

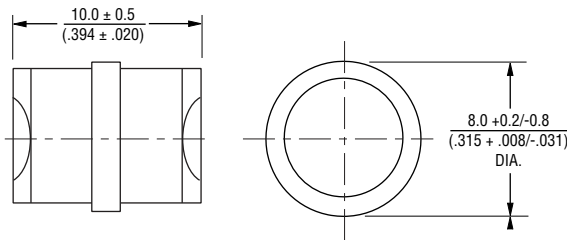
- Telecommunications equipment
- Industrial equipment/electronics
- Consumer electronics

2046 Series Heavy Duty 3-Electrode Gas Discharge Tube

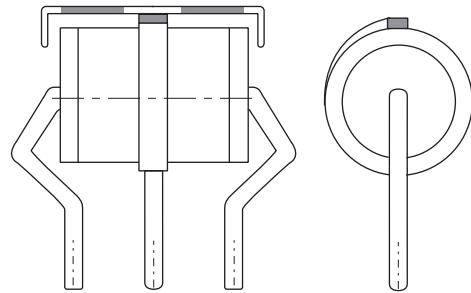
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Product Dimensions

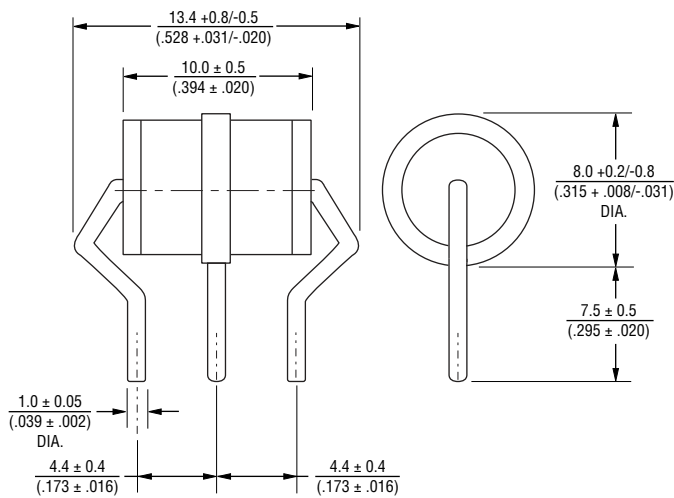
2046-xx-A



**2046-xx-C2F
FAIL-SHORT CONFIGURATION**



**2046-xx-C2
1.0 mm dia. lead wire**



DIMENSIONS: $\frac{\text{MM}}{(\text{INCHES})}$

How to Order

Model Number Designator **2046 - xx - xx (F) LF**

Voltage (Divided by 10)

09 = 90 V	35 = 350 V
14 = 145 V	40 = 400 V
20 = 200 V	42 = 420 V
23 = 230 V	47 = 470 V
25 = 250 V	60 = 600 V

Leads

A = No leads/Cassette Applications

C2 = 1.0 mm dia., 4.4 mm spacing

Fail-Short Option

(Blank) = None

F = Fail-Short Device (Optional)

RoHS Compliancy

LF = RoHS Compliant Product

Packaging Specifications

Model 2046 ships standard bulk pack, 100 pieces per tray; 5 trays per inner box; 2 inner boxes per outer pack (1K units).

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REV. B 09/19

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