

Features

- Size: 4 mm diameter, 4.2 mm length
- Mini-surface mount footprint
- Low capacitance
- High insulation resistance
- RoHS compliant*
- UL Recognized

Additional Information

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2053 Series Light Duty 2-Electrode Miniature Gas Discharge Tube

Characteristics

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

Characteristic	Model No.				
	2053-07	2053-09	2053-14	2053-23	2053-25
DC Sparkover ± 20 % @ 100 V/s	75 V	90 V	145 V	230 V	250 V
Impulse Sparkover (1) 100V/µs 1000V/µs	 < 700 V < 800 V	 < 700 V < 800 V	 < 700 V < 800 V	 < 600 V < 700 V	 < 600 V < 700 V

Characteristic	Model No.				
	2053-30	2053-35	2053-40	2053-47	2053-60
DC Sparkover ± 20 % @ 100 V/s	300 V	350 V	400 V	470 V	600 V
Impulse Sparkover (1) 100V/µs 1000V/µs	 < 600 V < 700 V	 < 650 V < 800 V	 < 700 V < 800 V	 < 800 V < 900 V	 < 900 V < 1000 V

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

Insulation Resistance (IR) (2)	50/100/250 V	> 1 GΩ
Glow Voltage	10 mA	~ 70 V
Arc Voltage	>1 A	~ 10 V
Glow-Arc Transition Current		< 1 A
Capacitance	1 MHz	0.5 pF typical
Maximum Impulse Discharge Current	5,000 A, 8/20 µs	1 operation
	3,000 A, 8/20 µs	10 operations
Nominal Alternating Discharge Current	3 A, 50 Hz, 1 second	1 operation
	6 A, 9 cycles	1 operation
Impulse Life	100 A, 10/1000 µs	300 operations
DC Holdover Voltage (3)		< 150 ms
Operating Temperature		-40 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.
- Bourns recommends reflowing surface mount devices per IPC/JEDEC J-STD-020 rev D.

(2)

DC Sparkover Voltage	DC Measuring Voltage
75–90 V	50 V
120–400 V	100 V
470–600 V	250 V

(3) Network Applied

DC Sparkover Voltage	DC Holdover Voltage
75–145 V	52 V
230–250 V	80 V
300–600 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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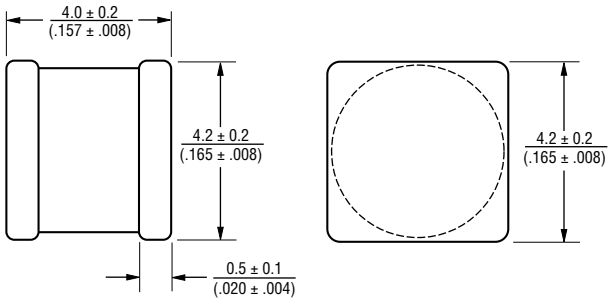
Applications

- Telecommunications equipment
- Industrial equipment/electronics
- Consumer electronics

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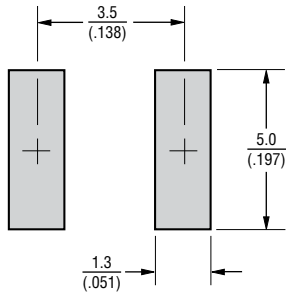
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Product Dimensions



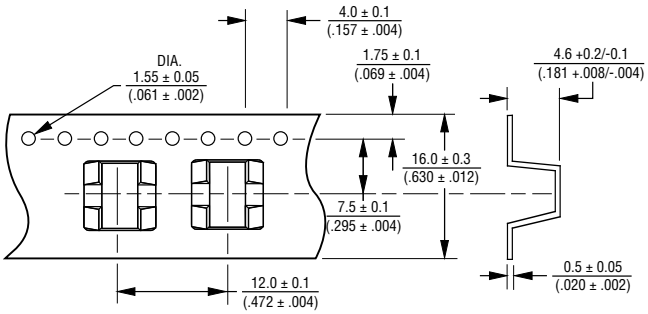
DIMENSIONS: MM / (INCHES)

Recommended Pad Layout



Packaging Specifications

The Model 2053-xx-SM ships standard reelpack (-RP), 900 pieces per reel, 2,700 pieces per box. Reel is 330 mm in diameter and 16 mm wide.



DIMENSIONS: MM / (INCHES)

How to Order

2053 - xx - SM - RP LF

Model Number Designator

Voltage (Divided by 10)

07 = 75 V	30 = 300 V
09 = 90 V	35 = 350 V
14 = 145 V	40 = 400 V
23 = 230 V	47 = 470 V
25 = 250 V	60 = 600 V

Surface Mount

Packaging
RP = Reelpack

RoHS Compliancy
LF = RoHS Compliant Product

BOURNS®

Asia-Pacific: Tel: +886-2 2562-4117 • Email: asiacus@bourns.com
EMEA: Tel: +36 88 885 877 • Email: eurocus@bourns.com
The Americas: Tel: +1-951 781-5500 • Email: americus@bourns.com
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