



**THE DATASHEET OF  
S103M69Z5U283L0R**



### Ceramic Singlelayer DC Disc Capacitors (Straight Leads) Gap-Kap, 1 kV<sub>DC</sub> to 3 kV<sub>DC</sub>



QUICK REFERENCE DATA			
DESCRIPTION	VALUE		
Ceramic Class	2		
Ceramic Dielectric	Z5P, Z5U		
Voltage (V <sub>AC</sub> )	1000	1500	3000
Min. Capacitance (pF)	0.75		
Max. Capacitance (pF)	22 000		
Mounting	Radial		

#### INTRODUCTION

Vishay BCcomponents Gap-Kap capacitors provide a safe reliable discharge path for stray transient overvoltages and static voltage build-up. Combination of capacitor-spark-gap construction allows the circuit designer to specify lower voltage components and consequently lower cost, with assurance that overvoltage conditions will be prevented.

The Gap-Kap capacitor is ideally suited for many industrial commercial equipment applications. A typical application in color TV monitors utilizes a minimum capacitance Gap-Kap which is inserted between the grid lead and chassis ground. This protects the components of control circuitry by providing a low impedance path to ground for transient voltages of 1500 V and above.

#### MARKING

Marking indicates capacitance value and tolerance in accordance with "EIA 198" and voltage marks.

#### OPERATING TEMPERATURE RANGE

- 30 °C to + 85 °C

#### TEMPERATURE COEFFICIENTS

EIA code Z5P or Z5U

#### SECTIONAL SPECIFICATIONS

Class 2, IEC 60384-9, EIA 198

#### Note

- The capacitors meet the essential requirements of IEC 60384-9 and EIA 198. Unless stated otherwise all electrical values apply at an ambient temperature of 25 °C ± 3 °C, at normal atmospheric conditions.

#### FEATURES

- High reliability
- Straight leads
- Material categorization:  
For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)

#### APPLICATIONS

- Monitors
- Color TV

#### DESIGN

The capacitors consist of a ceramic disc both sides of which are silver-plated. Connection leads are made of tinned copper having a diameter of 0.8 mm.

The capacitors are supplied with straight leads and lead spacings from 5.0 mm to 10.0 mm. Encapsulation is phenolic resin coated, flammable resistant in accordance with "UL 94 V-0".

#### CAPACITANCE RANGE

At 1 kHz, 1 V<sub>RMS</sub> ± 0.2 V<sub>RMS</sub>; 0.75 pF to 22 000 pF

#### RATED DC VOLTAGE

1 kV; 1.5 kV; 3 kV

#### INSULATION RESISTANCE AT 500 V<sub>DC</sub>

≥ 10 000 MΩ min.

#### TOLERANCE ON CAPACITANCE

± 10 %; ± 20 %

#### DISSIPATION FACTOR

At 1 kHz, 1 V<sub>RMS</sub> ± 0.2 V<sub>RMS</sub>; 2.5 % max.



RoHS  
COMPLIANT



ORDERING INFORMATION							
C (pF)	TOL. (%)	VOLTAGE		D <sub>MAX.</sub> (mm)	T <sub>MAX.</sub> (mm)	LEAD SPACING S (mm)	CLEAR TEXT CODE
		WORKING (kV <sub>DC</sub> )	ARC (kV <sub>DC</sub> )				16 <sup>TH</sup> DIGIT: R = RoHS COMPLIANT
0.75	max.	1.0	1.0 to 2.0	11.0	5.0	5.0	S758X43000183L5.
						6.4	S758X43000183L6.
1000	± 20	1.5	2.0 to 3.0	11.0	4.5	5.0	S102M43Z5P283L5.
						6.4	S102M43Z5P283L6.
4700	± 20	3.0	4.0 to 6.0	24.5	6.0	10.0	S472M96Z5P483L0.
10 000	± 20	1.5	2.0 to 3.0	17.5	5.0	10.0	S103M69Z5U283L0.
22 000	± 20	1.5	2.0 to 3.0	24.5	4.5	10.0	S223M96Z5U283L0.

PACKAGING					
PACKAGING TYPE	SIZE CODE	LEAD SPACE (mm)	VOLTAGE (V <sub>DC</sub> )	SPQ	BOX DIMENSIONS L x W x H (mm)
Bulk (long lead L ≥ 25.4 mm)	20 to 47	All	All	1000	245 x 120 x 65
				1000	
	1000				
	500				
	84 to 96			250	

**Note**

- The capacitors are supplied in bulk packaging (cardboard boxes).



## **Disclaimer**

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Hyperlinks included in this datasheet may direct users to third-party websites. These links are provided as a convenience and for informational purposes only. Inclusion of these hyperlinks does not constitute an endorsement or an approval by Vishay of any of the products, services or opinions of the corporation, organization or individual associated with the third-party website. Vishay disclaims any and all liability and bears no responsibility for the accuracy, legality or content of the third-party website or for that of subsequent links.

Vishay products are not designed for use in life-saving or life-sustaining applications or any application in which the failure of the Vishay product could result in personal injury or death unless specifically qualified in writing by Vishay. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.

## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

 [View S103M69Z5U283L0R on WIN SOURCE](#)

 [Vishay Information](#)

## Optimize Your Supply Chain with WIN SOURCE Solutions

-  Global Sourcing Solution
-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management