

## Thick Film Capacitor Networks, Single-In-Line, Conformal Coated SIP



### FEATURES

- Isolated and bussed schematics available
- X7R and C0G capacitors available
- Multiple isolated capacitors
- Multiple capacitors, common ground
- Custom design capability
- "D" 0.300" (7.62 mm) package height (maximum)
- Compliant to RoHS directive 2002/95/EC
- Halogen-free according to IEC 61249-2-21 definition



**RoHS\***  
COMPLIANT  
HALOGEN  
**FREE**

### STANDARD ELECTRICAL SPECIFICATIONS

VISHAY DALE MODEL	PROFILE	SCHEMATIC	CAPACITANCE RANGE		CAPACITANCE TOLERANCE (- 55 °C to + 125 °C) ± %	CAPACITANCE VOLTAGE at 85 °C V <sub>DC</sub>
			C0G (1)	X7R		
CS201	D	1	33 pF to 3900 pF	470 pF to 0.1 μF	10, 20	50
CS201	D	3	33 pF to 3900 pF	470 pF to 0.1 μF	10, 20	50
CS201	D	4	33 pF to 3900 pF	470 pF to 0.1 μF	10, 20	50

**Note**

(1) C0G capacitors may be substituted for X7R capacitors

### TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	CS201	
		C0G	X7R
Temperature Coefficient (- 55 °C to +125 °C)	ppm/°C or %	± 30 ppm/°C	± 15 %
Dissipation Factor (Maximum)	± %	0.15	2.5

### MECHANICAL SPECIFICATIONS

Marking Resistance to Solvents	Permanency testing per MIL-STD-202, method 215
Solderability	Per MIL-STD-202, method 208E
Body	High alumina, epoxy coated (flammability UL 94 V-0)
Terminals	Phosphorus-bronze, solder plated
Marking	Pin #1 identifier, DALE or D, part number (abbreviated as space allows), date code

### GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: 20108D1C103K5P (preferred part numbering format)



GLOBAL MODEL	PIN COUNT	PACKAGE HEIGHT	SCHEMATIC	CHARACTERISTIC	CAPACITANCE VALUE	TOLERANCE	VOLTAGE	PACKAGING	SPECIAL
201 = CS201	04 to 18 pin available 04 = 4 pin 08 = 8 pin 18 = 18 pin	D = "D" Profile	1 3 4 0 = Special	C = C0G X = X7R S = Special	(in picofarads) 2 digit significant figure, followed by a multiplier 330 = 33 pF 392 = 3900 pF 104 = 0.1 μF	K = ± 10 % M = ± 20 % S = Special	5 = 50 V S = Special	E = Lead (Pb)-free, bulk P = Tin/lead, bulk	Blank = Standard (Dash Number) (Up to 3 digits) From 1 to 999 as applicable

Historical Part Number example: CS20108D1C103K5 (will continue to be accepted)

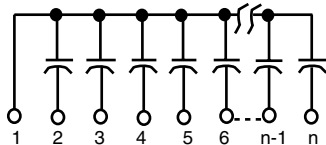
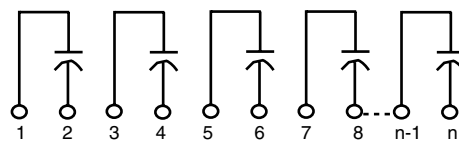
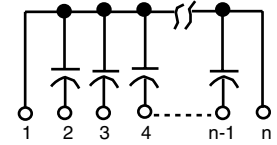
CS201	08	D	1	C	103	K	5	P03
HISTORICAL MODEL	PIN COUNT	PACKAGE HEIGHT	SCHEMATIC	CHARACTERISTIC	CAPACITANCE VALUE	TOLERANCE	VOLTAGE	PACKAGING

\* Pb containing terminations are not RoHS compliant, exemptions may apply

**DIMENSIONS** in inches (millimeters)


Pin #1 is extreme left-hand terminal on side with marking.

NUMBER OF PINS	L MAXIMUM	NUMBER OF PINS	L MAXIMUM	NUMBER OF PINS	L MAXIMUM
4 pin	0.400 (10.16)	9 pin	0.900 (22.86)	14 pin	1.400 (35.56)
5 pin	0.500 (12.70)	10 pin	1.000 (25.40)	15 pin	1.500 (38.10)
6 pin	0.600 (15.24)	11 pin	1.100 (27.94)	16 pin	1.600 (40.64)
7 pin	0.700 (17.78)	12 pin	1.200 (30.48)	17 pin	1.700 (43.18)
8 pin	0.800 (20.32)	13 pin	1.300 (33.02)	18 pin	1.800 (45.72)

**SCHEMATICS**
**Schematic 1**

**Common Bus - 1 Ground Lead**
**Schematic 3**

**Isolated Capacitor Sections**
**Schematic 4**

**Common Bus - 2 Ground Leads**



## 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.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. 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.

## Material Category Policy

**Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as RoHS-Compliant fulfill the definitions and restrictions defined under Directive 2011/65/EU of The European Parliament and of the Council of June 8, 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (EEE) - recast, unless otherwise specified as non-compliant.**

**Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.**

**Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as Halogen-Free follow Halogen-Free requirements as per JEDEC JS709A standards. Please note that some Vishay documentation may still make reference to the IEC 61249-2-21 definition. We confirm that all the products identified as being compliant to IEC 61249-2-21 conform to JEDEC JS709A standards.**

## Данный компонент на территории Российской Федерации

### Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

moschip.ru\_4

moschip.ru\_6

moschip.ru\_9