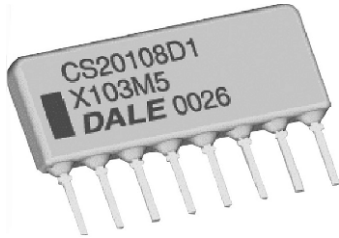


## Thick Film Capacitor Networks, Single-In-Line, Conformal Coated SIP



### 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

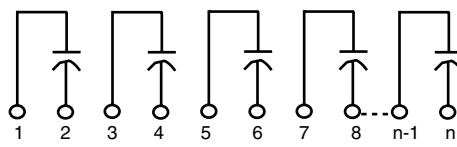
\* Pb containing terminations are not RoHS compliant, exemptions may apply

**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 specifications and data are subject to change without notice.

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 herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

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.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.