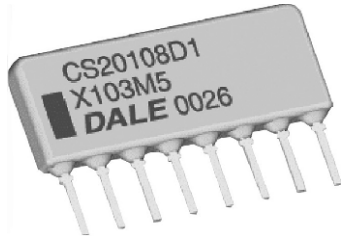


## Capacitor Networks, Single-In-Line, Conformal Coated SIP “D” Profile



### FEATURES

- X7R and COG capacitors available
- Multiple isolated capacitors
- Multiple capacitors, common ground
- Custom design capability
- Lead (Pb)-free version is RoHS compliant
- “D” 0.300" [7.62 mm] package height (maximum)



Available



**RoHS\***  
COMPLIANT

### STANDARD ELECTRICAL SPECIFICATIONS

| VISHAY<br>DALE<br>MODEL | PROFILE | SCHEMATIC | CAPACITANCE<br>RANGE |                 | CAPACITANCE<br>TOLERANCE<br>(- 55 °C to + 125 °C)<br>% | CAPACITOR<br>VOLTAGE<br>at 85 °C<br>VDC |
|-------------------------|---------|-----------|----------------------|-----------------|--------------------------------------------------------|-----------------------------------------|
|                         |         |           | COG*                 | X7R             |                                                        |                                         |
| CS201                   | D       | 1         | 33 pF - 3900 pF      | 470 pF - 0.1 µF | ± 10 (K), ± 20 (M)                                     | 50 (5)                                  |
| CS201                   | D       | 3         | 33 pF - 3900 pF      | 470 pF - 0.1 µF | ± 10 (K), ± 20 (M)                                     | 50 (5)                                  |
| CS201                   | D       | 4         | 33 pF - 3900 pF      | 470 pF - 0.1 µF | ± 10 (K), ± 20 (M)                                     | 50 (5)                                  |

\* COG capacitors may be substituted for X7R capacitors

### TECHNICAL SPECIFICATIONS

| PARAMETER                                       | UNIT              | CS201          |        |
|-------------------------------------------------|-------------------|----------------|--------|
|                                                 |                   | COG            | X7R    |
| Temperature Coefficient<br>(- 55 °C to +125 °C) | ppm/°C<br>or<br>% | ± 30<br>ppm/°C | ± 15 % |
| Dissipation Factor<br>(maximum)                 | ± %               | 0.15           | 2.5    |

### MECHANICAL SPECIFICATIONS

|                                    |                                                                                          |
|------------------------------------|------------------------------------------------------------------------------------------|
| Marking Resistance<br>to Solvents: | Permanency testing per MIL-STD-202, Method 215                                           |
| Solderability:                     | Per MIL-STD-202, Method 208E                                                             |
| Body:                              | High alumina, epoxy coated<br>(Flammability UL94 V-0)                                    |
| Terminals:                         | Phosphorus-bronze, solder plated                                                         |
| Marking:                           | Pin #1 identifier, DALE or D, Part<br>number (abbreviated as space<br>allows), Date code |

### GLOBAL PART NUMBER INFORMATION

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

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

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

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

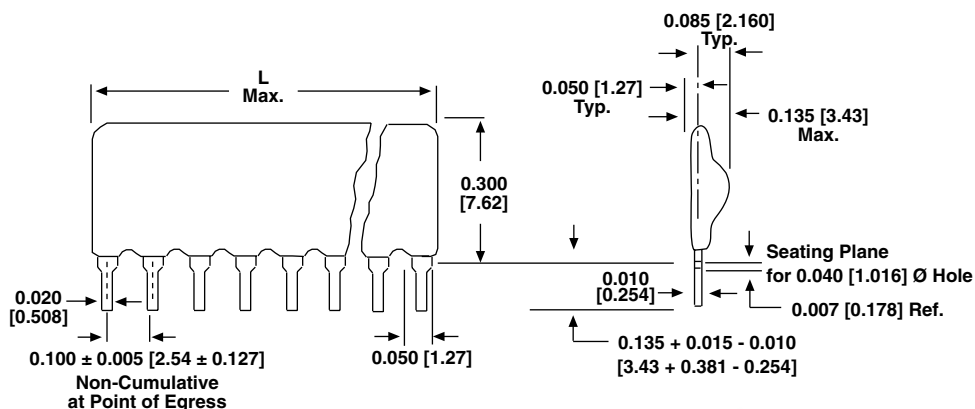
\* Pb containing terminations are not RoHS compliant, exemptions may apply



# Capacitor Networks, Single-In-Line, Conformal Coated SIP, "D" Profile

**CS201**  
Vishay Dale

## DIMENSIONS in inches [millimeters]

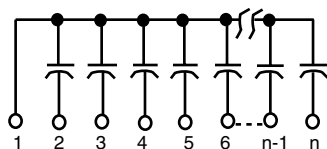


Pin #1 is extreme left-hand terminal on side with marking.

| 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] |

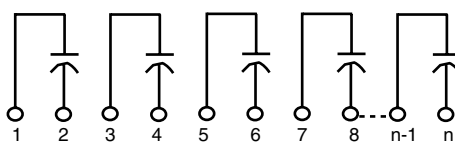
## SCHEMATICS

Schematic 1



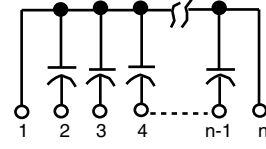
Common Bus - 1 Ground Lead

Schematic 3



Isolated Capacitor Sections

Schematic 4



Common Bus - 2 Ground Leads



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