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)
• Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Note
* This datasheet provides information about parts that are RoHS-compliant and / or parts that are non RoHS-compliant. For example, parts with lead (Pb) terminations are not RoHS-compliant. Please see the information / tables in this datasheet for details.

STANDARD ELECTRICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>VISHAY DALE MODEL</th>
<th>PROFILE</th>
<th>SCHEMATIC</th>
<th>CAPACITANCE RANGE</th>
<th>CAPACITANCE TOLERANCE (-55 °C to +125 °C) ± %</th>
<th>CAPACITANCE VOLTAGE at 85 °C VDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS201 D 1</td>
<td></td>
<td></td>
<td>33 pF to 3900 pF</td>
<td>470 pF to 0.1 μF 10, 20 50</td>
<td></td>
</tr>
<tr>
<td>CS201 D 3</td>
<td></td>
<td></td>
<td>33 pF to 3900 pF</td>
<td>470 pF to 0.1 μF 10, 20 50</td>
<td></td>
</tr>
<tr>
<td>CS201 D 4</td>
<td></td>
<td></td>
<td>33 pF to 3900 pF</td>
<td>470 pF to 0.1 μF 10, 20 50</td>
<td></td>
</tr>
</tbody>
</table>

Note
(1) C0G capacitors may be substituted for X7R capacitors

TECHNICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>UNIT</th>
<th>CS201 C0G</th>
<th>CS201 X7R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature coefficient</td>
<td>ppm/°C or %</td>
<td>± 30 ppm/°C</td>
<td>± 15 %</td>
</tr>
<tr>
<td>Dissipation factor (maximum)</td>
<td>%</td>
<td>0.15</td>
<td>2.5</td>
</tr>
</tbody>
</table>

MATERIAL SPECIFICATIONS

| MARKING RESISTANCE TO SOLVENTS | 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 = CS201
PIN COUNT = D
PACKAGE HEIGHT = "D" profile
SCHEMATIC = 1 3 4 0 = special
CHARACTERISTIC = C = C0G X = X7R S = special
CAPACITANCE VALUE = (in picofarads)2 digit significant figure, followed by a multiplier
TOLERANCE = K = ± 10 % M = ± 20 % S = special
VOLTAGE = 5 = 50 V S = special
PACKAGING = E = lead (Pb)-free, bulk
SPECIAL = 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)

Note
* For additional information on packaging, refer to the Through-hole Network Packaging document (www.vishay.com/doc?731542)

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For technical questions, contact: ff2aresistors@vishay.com
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DIMENSIONS in inches (millimeters)

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

<table>
<thead>
<tr>
<th>NUMBER OF PINS</th>
<th>L MAXIMUM</th>
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<th>L MAXIMUM</th>
<th>NUMBER OF PINS</th>
<th>L MAXIMUM</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 pin</td>
<td>0.400 (10.16)</td>
<td>9 pin</td>
<td>0.900 (22.86)</td>
<td>14 pin</td>
<td>1.400 (35.66)</td>
</tr>
<tr>
<td>5 pin</td>
<td>0.500 (12.70)</td>
<td>10 pin</td>
<td>1.000 (25.40)</td>
<td>15 pin</td>
<td>1.500 (38.10)</td>
</tr>
<tr>
<td>6 pin</td>
<td>0.600 (15.24)</td>
<td>11 pin</td>
<td>1.100 (27.94)</td>
<td>16 pin</td>
<td>1.600 (40.64)</td>
</tr>
<tr>
<td>7 pin</td>
<td>0.700 (17.78)</td>
<td>12 pin</td>
<td>1.200 (30.48)</td>
<td>17 pin</td>
<td>1.700 (43.18)</td>
</tr>
<tr>
<td>8 pin</td>
<td>0.800 (20.32)</td>
<td>13 pin</td>
<td>1.300 (33.02)</td>
<td>18 pin</td>
<td>1.800 (45.72)</td>
</tr>
</tbody>
</table>

SCHEMATICS

Schematic 1
Common Bus - 1 Ground Lead

Schematic 3
Isolated Capacitor Sections

Schematic 4
Common Bus - 2 Ground Leads
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