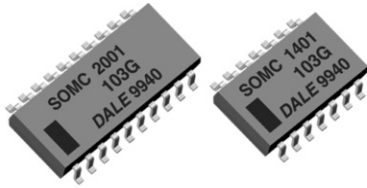


Thick Film Resistor Networks, Dual-In-Line, Medium Body, Small Outline, Molded DIP, Surface Mount


FEATURES

- Isolated, bussed and dual terminator schematics available
- 14, 16 or 20 terminal package
- Molded case construction
- Thick film resistive elements
- Reflow solderable
- Compatible with automatic surface mounting equipment
- Reduces total assembly costs
- For wave flow soldering contact factory
- Compliant to RoHS directive 2002/95/EC


RoHS*
COMPLIANT

| STANDARD ELECTRICAL SPECIFICATIONS | | | | | | | | | | |
|------------------------------------|------------------------------------|------------------------------------|------|------|---------|--|---|----------------------|-----------------------|----------|
| GLOBAL MODEL | POWER RATING | | | | CIRCUIT | MAXIMUM WORKING VOLTAGE (2) V _{DC} | TEMPERATURE COEFFICIENT (1) ± ppm/°C | TOLERANCE (3) ± % | RESISTANCE RANGE Ω | E-SERIES |
| | ELEMENT P _{70 °C} W | PACKAGE P _{70 °C} W | | | | | | | | |
| | | 14 | 16 | 20 | | | | | | |
| SOMC | 0.08 | 1.05 | 1.20 | 1.52 | 01 | 50 | 100 | 1, 2, 5 | 10 to 1M | 24 |
| | 0.16 | 1.125 | 1.28 | 1.60 | 03 | | | | | |
| | 0.08 | 1.05 | 1.20 | 1.52 | 05 | | | | | |

Notes

- DSCC has created series of drawings to support the need for a surface mount gull wing resistor network product. Vishay Dale is listed as a resource on this drawing as follows:

| DSCC DRAWING NUMBER | VISHAY DALE MODEL | CIRCUIT | POWER RATING | | RESISTANCE RANGE Ω | TOLERANCE ± % | TEMPERATURE COEFFICIENT (0 °C to 70 °C) ± ppm/°C | MAXIMUM WORKING VOLTAGE (2) V _{DC} |
|---------------------|-------------------|---------|------------------------------------|------------------------------------|-----------------------|------------------|--|--|
| | | | ELEMENT P _{70 °C} W | PACKAGE P _{70 °C} W | | | | |
| 87012 | SOMC1601..16 | 01 (B) | 0.08 | 1.20 | 10 to 2.2M | 1, 2, 5 | 100, 300 | 50 |
| | SOMC1603..17 | 03 (A) | 0.16 | | | | | |
| | SOMC1605..48 | 05 (J) | 0.08 | | | | | |
| 87013 | SOMC1401..6 | 01 (B) | 0.08 | 1.00 | 10 to 2.2M | 1, 2, 5 | 100, 300 | 50 |
| | SOMC1403..13 | 03 (A) | 0.16 | | | | | |
| | SOMC1405..22 | 05 (J) | 0.08 | | | | | |

 These drawings can be viewed at: www.dscclia.mil/Programs/milSpec/ListDwgs.asp?DocType=DSCCdwg.

- Power rating depends on the max. temperature at the solder point, the component placement density and the substrate material.
- Jumper: 0 Ω-resistor on request (100 mΩ).
- Packaging: According to EIA; see appropriate catalog or web page.

(1) Temperature range: - 55 °C to + 125 °C.

 (2) Continuous working voltage shall be $\sqrt{P \times R}$ or maximum working voltage, whichever is less.

(3) ± 2 % standard, ± 1 % and ± 5 % available.

| TECHNICAL SPECIFICATIONS | | | | |
|--|-------------------------|--------------------|------------|------------|
| PARAMETER | UNIT | 01 CIRCUIT | 03 CIRCUIT | 05 CIRCUIT |
| Rated dissipation at 70 °C per element | W | 0.08 | 0.16 | 0.08 |
| Limiting element voltage (4) | V _{DC} | 50 | | |
| Voltage coefficient | ppm/V | < 50 | | |
| Insulation voltage (1 min) | V _{DC/AC} peak | 200 | | |
| Category temperature range | °C | - 55/+ 150 | | |
| Insulation resistance | Ω | > 10 ¹⁰ | | |
| TC tracking (- 55 °C to + 125 °C) | ppm/°C | 50 | | |

Note

 (4) Rated voltage: $\sqrt{P \times R}$.

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

GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: SOMC16011K00GDC (preferred part numbering format)

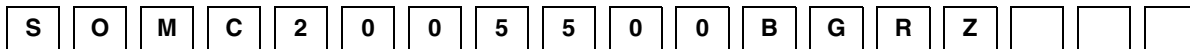


| GLOBAL MODEL | PIN COUNT | SCHEMATIC | RESISTANCE VALUE | TOLERANCE CODE | PACKAGING | SPECIAL |
|--------------|----------------|--|--|--|--|---|
| SOMC | 14 16 20 | 01 = Bussed 03 = Isolated 00 = Special | R = Ω K = k Ω M = M Ω 10R0 = 10 Ω 680K = 680 k Ω 1M00 = 1.0 M Ω | F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ S = Special | EJ = Lead (Pb)-free, tube EA = Lead (Pb)-free, tape and reel DC = Tin/lead, tube RZ = Tin/lead, tape and reel | Blank = Standard (Dash number) (Up to 3 digits) From 1 to 999 as applicable |

Historical Part Number Example: SOMC1601102G (will continue to be accepted)

| | | | | | |
|------------------|-----------|-----------|------------------|----------------|-----------|
| SOMC | 16 | 01 | 102 | G | D02 |
| HISTORICAL MODEL | PIN COUNT | SCHEMATIC | RESISTANCE VALUE | TOLERANCE CODE | PACKAGING |

New Global Part Numbering: SOMC2005500BGRZ (preferred part numbering format)

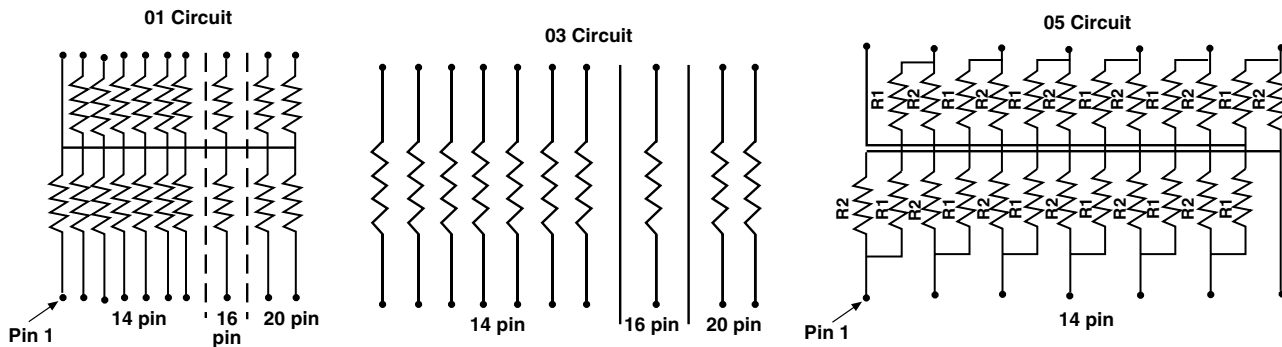


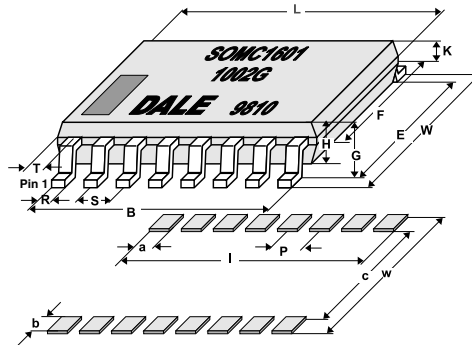
| GLOBAL MODEL | PIN COUNT | SCHEMATIC | RESISTANCE VALUE | TOLERANCE CODE | PACKAGING | SPECIAL |
|--------------|----------------|----------------------|--|---|--|---|
| SOMC | 14 16 20 | 05 = Dual terminator | 3 digit impedance code, followed by alpha modifier (see Impedance table) | F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ | EJ = Lead (Pb)-free, tube EA = Lead (Pb)-free, tape and reel DC = Tin/lead, tube RZ = Tin/lead, tape and reel | Blank = Standard (Dash number) Up to 3 digits From 1 to 999 as applicable |

Historical Part Number Example: SOMC2005820131G (will continue to be accepted)

| | | | | | | |
|------------------|-----------|-----------|--------------------|--------------------|----------------|-----------|
| SOMC | 20 | 05 | 820 | 131 | G | R61 |
| HISTORICAL MODEL | PIN COUNT | SCHEMATIC | RESISTANCE VALUE 1 | RESISTANCE VALUE 2 | TOLERANCE CODE | PACKAGING |

CIRCUIT SCHEMATICS



DIMENSIONS


| SOLDER PAD DIMENSIONS in millimeters | | | | | | |
|---|------|------|------|------|------|------|
| | a | b | c | l | p | w |
| WAVE | 0.64 | 1.91 | 5.34 | 9.53 | 1.27 | 9.15 |
| REFLOW | 0.64 | 1.91 | 5.34 | 9.53 | 1.27 | 9.15 |

Notes

- The dimension shown are for a 16 pin part. For parts with different pin numbers use the same pitch and add or subtract pads as required.
- Maximum solder reflow temperature + 255 °C.

| DIMENSIONS in millimeters | | | | | | | | | | | |
|----------------------------------|---------|---------|---------|---------|---------|---------|---------|-------|-------|---------|------|
| PIN NO# | L | W | B | E | F | G | H | K | R | S | T |
| 14 | 9.91 | 7.62 | 7.62 | 6.20 | 5.59 | 2.16 | 2.03 | 0.914 | 0.457 | 1.27 | 1.14 |
| 16 | 11.18 | 7.62 | 8.89 | 6.20 | 5.59 | 2.16 | 2.03 | 0.914 | 0.457 | 1.27 | 1.14 |
| 20 | 13.72 | 7.62 | 11.43 | 6.20 | 5.59 | 2.16 | 2.03 | 0.914 | 0.457 | 1.27 | 1.14 |
| Tol. | ± 0.254 | ± 0.381 | ± 0.254 | ± 0.381 | ± 0.127 | ± 0.127 | ± 0.127 | | | ± 0.254 | |

| IMPEDANCE CODES | | | | | |
|------------------------|--------------------|--------------------|------|--------------------|--------------------|
| CODE | R ₁ (Ω) | R ₂ (Ω) | CODE | R ₁ (Ω) | R ₂ (Ω) |
| 500B | 82 | 130 | 141A | 270 | 270 |
| 750B | 120 | 200 | 181A | 330 | 390 |
| 800C | 130 | 210 | 191A | 330 | 470 |
| 990A | 160 | 260 | 221B | 330 | 680 |
| 101C | 180 | 240 | 281B | 560 | 560 |
| 111C | 180 | 270 | 381B | 560 | 1.2K |
| 121B | 180 | 390 | 501C | 620 | 2.7K |
| 121C | 220 | 270 | 102A | 1.5K | 3.3K |
| 131A | 220 | 330 | 202B | 3K | 6.2K |

| PERFORMANCE | | |
|------------------------------|--------------------|----------------------------------|
| TEST | CONDITIONS OF TEST | TEST RESULTS (TYPICAL TEST LOTS) |
| Power conditioning | MIL-STD-202 | ± 0.5 % |
| Load life at 70 °C | MIL-STD-202 | ± 0.5 % |
| Short time overload | MIL-STD-202 | ± 0.25 % |
| Thermal shock | MIL-STD-202 | ± 0.5 % |
| Moisure resistance | MIL-STD-202 | ± 0.5 % |
| Resistance to soldering heat | MIL-STD-202 | ± 0.25 % |
| Low temperature operation | MIL-STD-202 | ± 0.25 % |
| Vibration | MIL-STD-202 | ± 0.25 % |
| Shock | MIL-STD-202 | ± 0.25 % |
| Terminal strength | MIL-STD-202 | ± 0.25 % |



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Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.