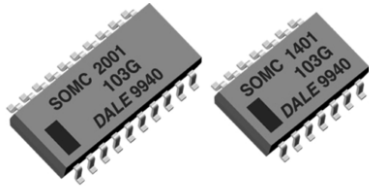


# Thick Film, Dual-in-Line Resistor Networks



## FEATURES

- 14, 16 or 20 terminal package
- Isolated, bussed or TTL-terminator circuits
- 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
- Lead (Pb)-free version is RoHS compliant



RoHS\*  
COMPLIANT

## STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	ELEMENT $P_{70^\circ C}$ W	PACKAGE POWER RATING $P_{70^\circ C}$ W			CIRCUIT	LIMITING ELEMENT VOLTAGE MAX. V $\equiv$	TEMPERATURE COEFFICIENT <sup>1)</sup> ppm/ $^\circ C$	TOL. %	RESISTANCE RANGE $\Omega$	E-SERIES
		14	16	20						
SOMC	0.08 0.16 0.08	1.05 1.125 1.05	1.20 1.28 1.20	1.52 1.60 1.52	01 03 05	50	100	1, 2, 5 1, 2, 5 1, 2, 5	10R - 1M	24

- <sup>1)</sup> Temperature Range: - 55  $^\circ C$  to + 125  $^\circ C$
- Power rating depends on the max. temperature at the solder point, the component placement density and the substrate material
  - Jumper: Zero-Ohm-Resistor on request (100 m $\Omega$ )
  - Packaging: according to EIA; see appropriate catalog or web page

## TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	01 CIRCUIT	03 CIRCUIT	05 CIRCUIT
Rated Dissipation at 70 $^\circ C$ per Element	W	0.08	0.16	0.08
Limiting Element Voltage <sup>2)</sup>	V $\equiv$	50		
Voltage Coefficient	ppm/V	< 50		
Insulation Voltage (1min)	V <sub>dc/ac</sub> peak	200		
Category Temperature Range	$^\circ C$	- 55/+ 150		
Insulation Resistance	$\Omega$	> 10 <sup>10</sup>		
TC Tracking (- 55 $^\circ C$ to + 125 $^\circ C$ )	ppm/ $^\circ C$	50		

<sup>2)</sup>Rated voltage:  $\sqrt{P \times R}$

## GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: SOMC16011K00GD (preferred part numbering format)

S O M C 1 6 0 1 1 K 0 0 G D C

GLOBAL MODEL	PIN COUNT	SCHEMATIC	RESISTANCE VALUE	TOLERANCE CODE	PACKAGING	SPECIAL
SOMC	14 16 20	01 = Bussed 03 = Isolated 00 = Special	R = Decimal K = Thousand M = Million 10R0 = 10 $\Omega$ 680K = 680 k $\Omega$ 1M00 = 1.0 M $\Omega$	F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ S = Special	EJ = Lead Free, Tube EA = Lead Free, Tape & Reel DC = Tin/Lead, Tube RZ = Tin/Lead, Tape & Reel	Blank = Standard (Dash Number) (up to 3 digits) From 1-999 as applicable

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

SOMC 16 01 102 G D02

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

S O M C 2 0 0 5 5 0 0 B G R Z

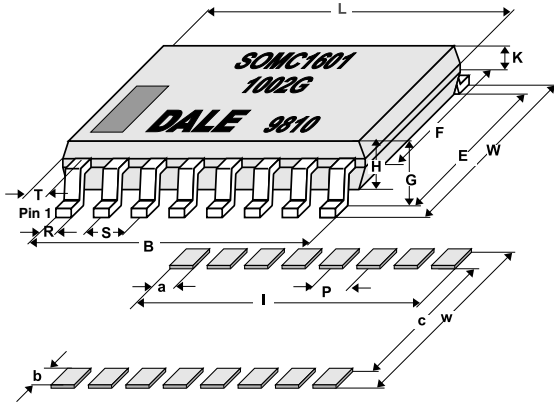
GLOBAL MODEL	PIN COUNT	SCHEMATIC	RESISTANCE VALUE	TOLERANCE CODE	PACKAGING	SPECIAL
SOMC	14 16 20	05 = Dual Terminator	3 digit Impedence code, followed by Alpha modifier (see Impedence table)	F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$	EJ = Lead Free, Tube EA = Lead Free, Tape & Reel DC = Tin/Lead, Tube RZ = Tin/Lead, Tape & Reel	Blank = Standard (Dash Number) (up to 3 digits) From 1-999 as applicable

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

SOMC 20 05 810 131 G R61

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

**DIMENSIONS**



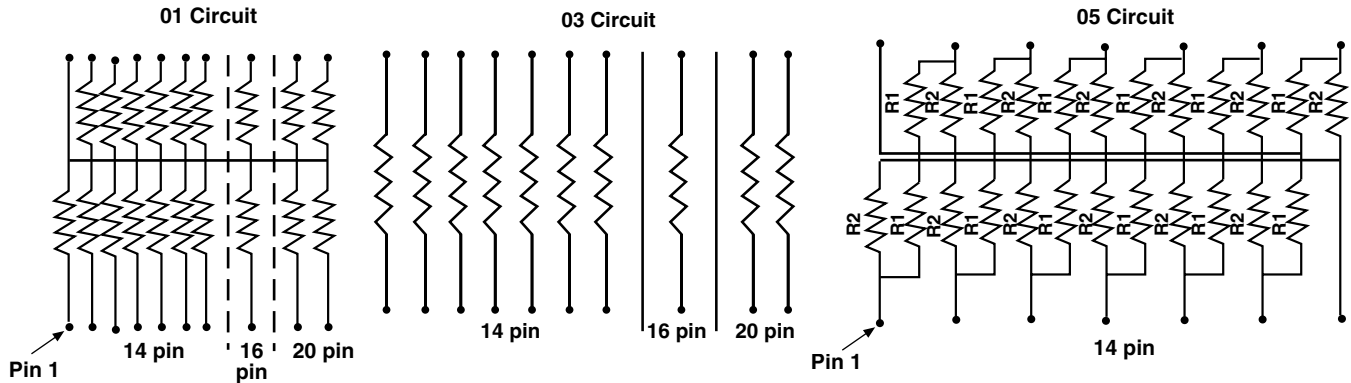
SOLDER PAD DIMENSIONS in inches [millimeters]						
	a	b	c	l	p	w
WAVE	0.64	1.91	5.34	9.53	1.27	9.15
REFLOW	0.64	1.91	5.34	9.53	1.27	9.15

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.

NOTE: 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

**CIRCUIT SCHEMATICS**



IMPEDANCE CODES					
CODE	R <sub>1</sub> (Ω)	R <sub>2</sub> (Ω)	CODE	R <sub>1</sub> (Ω)	R <sub>2</sub> (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
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%



## 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.

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

## Vishay:

[SOMC1603820RGDC](#) [SOMC16014K75GDC](#) [SOMC14011K00GDC](#) [SOMC14011M00GDC](#) [SOMC2003330RGDC](#)  
[SOMC16012K20GDC](#) [SOMC16012K70GDC](#) [SOMC160356K0GRZ](#) [SOMC160382R0GRZ](#) [SOMC160320K0FRZ](#)  
[SOMC1401300RGRZ](#) [SOMC16034K70GDC](#) [SOMC1603560RGRZ](#) [SOMC160310K0FRZ](#) [SOMC1603390RGRZ](#)  
[SOMC16033K00GRZ](#) [SOMC1601470RGDC](#) [SOMC16018K20GDC](#) [SOMC160315K0FDC](#) [SOMC16034K70GRZ](#)  
[SOMC160339R0GRZ](#) [SOMC20014K70GRZ](#) [SOMC1601-100K](#) [SOMC1401100KGDC](#) [SOMC20011K00GDC](#)  
[SOMC16033K40FRZ](#) [SOMC160312K0GDC](#) [SOMC14014K70GDC](#) [SOMC1603510RGRZ](#) [SOMC160356R0GRZ](#)  
[SOMC1603330RGRZ](#) [SOMC16035K60GDC](#) [SOMC14011K00GRZ](#) [SOMC1403470RGDC](#) [SOMC1603470RGDC](#)  
[SOMC1603270KGRZ](#) [SOMC14031K00GDC](#) [SOMC16032K00GDC](#) [SOMC16031M00GDC](#) [SOMC16031K00GDC](#)  
[SOMC16037K87FRZ](#) [SOMC1601470KGDC](#) [SOMC160122R0GDC](#) [SOMC16031K00FRZ](#) [SOMC160368K0GRZ](#)  
[SOMC1603120RGRZ](#) [SOMC1601390RGDC](#) [SOMC160356K0GDC](#) [SOMC140356K0GDC](#) [SOMC160351R0GDC](#)  
[SOMC1603220KGDC](#) [SOMC140110K0GRZ](#) [SOMC1405221/331GTR](#) [SOMC1405271/271GTR](#) [SOMC1601103GTR-S399](#)  
[SOMC1601472GTR-S399](#) [SOMC16031K00GRZ399](#) [SOMC160310K0GRZ](#) [SOMC1603103GTR-S399](#)  
[SOMC1603104GTR-S399](#) [SOMC1603120RGDC](#) [SOMC160327K0GDC](#) [SOMC1603473GTR-S399](#)  
[SOMC1603680RGDC](#) [SOMC1605221/331G](#) [SOMC160310K0FDC](#) [SOMC1601-330K](#) [SOMC1603220RGEJ](#)  
[SOMC1603220RGEA](#) [SOMC1603330RGEJ](#) [SOMC1603330RGEA](#) [SOMC1601-1.5K](#) [SOMC160110K0GEA](#)  
[SOMC160110K0GEJ](#) [SOMC160310K0GEJ](#) [SOMC160310K0GEA](#) [SOMC16012K20GEA](#) [SOMC16012K20GEJ](#)  
[SOMC160322K0GEA](#) [SOMC160322K0GEJ](#) [SOMC16032K20GEJ](#) [SOMC16032K20GEA](#) [SOMC160333R0GEA](#)  
[SOMC160333R0GEJ](#) [SOMC1603-2K](#) [SOMC16034K70GEJ](#) [SOMC16034K70GEA](#) [SOMC16014K70GEA](#)  
[SOMC16014K70GEJ](#) [SOMC1601100KGEJ](#) [SOMC1601100KGEA](#) [SOMC1405331/471G](#) [MSP10A012203F](#)  
[SOMC160347R0GEJ](#) [SOMC140110K0FRZ](#) [SOMC1401680RGRZ](#) [SOMC20011K00GEA](#) [SOMC20014K70GEA](#)  
[SOMC16031M00GRZ](#) [SOMC2005191AGRZ](#)