FEATURES Isolated, bussed and schematics available 14, 16, or 20 terminal package

PACKAGE P70 °C

Ŵ

1.05

1.125

1.05

 Molded case construction Thick film resistive elements

Ω

10 to 1M

- Reflow solderable
- Compatible with automatic surface mounting equipment

RESISTANCE MAXIMUM WORKING RANGE VOLTAGE ⁽²⁾

- Reduces total assembly costs
- For wave flow soldering contact factory
- Material categorization: for definitions of compliance please see <u>www.vishay.com/doc?99912</u>

VDC

50

50

50

50

50

50

50

50

50

dual

Note

GLOBAL MODEL

SOMC14

CIRCUIT

01

03

05

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

TOLERANCE (3)

± %

1, 2, 5

1, 2, 5

1, 2, 5

01 0.08 1.20 1.2.5 SOMC16 03 0.16 1.28 1, 2, 5 1, 2, 5 05 0.08 1.20 01 0.08 1.52 1, 2, 5 SOMC20 03 0.16 1.60 1, 2, 5 05 0.08 1.52 1, 2, 5

POWER RATING | POWER RATING

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 ELEMENT P _{70 °C} W	POWER RATING PACKAGE P _{70 °C} W	RESISTANCE RANGE Ω	TOLERANCE ± %	TEMPERATURE COEFFICIENT (0 °C to 70 °C) ± ppm/°C	MAXIMUM WORKING VOLTAGE ⁽²⁾ V _{DC}
87012	SOMC160116 SOMC160317 SOMC160548	01 (B) 03 (A) 05 (J)	0.08 0.16 0.08	1.20	10 to 2.2M	1, 2, 5	100, 300	50
87013	SOMC14016 SOMC140313 SOMC140522	01 (B) 03 (A) 05 (J)	0.08 0.16 0.08	1.00	10 to 2.2M	1, 2, 5	100, 300	50

These drawings can be viewed at: www.landandmaritime.dla.mil/Programs/MilSpec/ListDwgs.aspx?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 m Ω)

Packaging: According to EIA; see appropriate catalog or web page

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

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

(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 ⁽¹⁾	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

⁽¹⁾ Rated voltage: $\sqrt{P \times R}$

Vishay Dale

terminator

SOMC

ilm Resistor Networks, Dual-In-Line, Medium Body, Thic Small Outline, Molded DIP, Surface Mount

ck	Film	Resi	st

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STANDARD ELECTRICAL SPECIFICATIONS

ELEMENT P70 °C

w

0.08

0.16

0.08



RoHS

TEMPERATURE COEFFICIENT ⁽¹⁾

± ppm/°C

100

100

100

100

100

100

100

100

100

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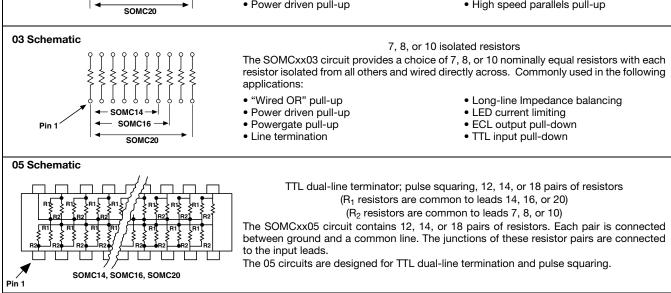
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GLOBAL P	GLOBAL PART NUMBER INFORMATION								
New Global Pa	New Global Part Numbering: SOMC16011K00GDC (preferred part numbering format)								
S	0 М С	1	6 0 1	1	К	0	0 G	D C	
GLOBAL MODEL	PIN COUNT	SCHEMA	ATIC RESISTA	-	TOLERAN CODE	-	PAC	KAGING	SPECIAL
SOMC	14 16 20	01 = bus 03 = isola 00 = spe	ated K = k	Ω ΛΩ 10 Ω i80 kΩ .0 MΩ 0 Ω	$F = \pm 1 G$ $G = \pm 2 G$ $J = \pm 5 G$ $S = \text{spec}$ $Z = 0 G$ jumper	% % ial 2	EA = lead (Pb) DC = tir	(Pb)-free, tube -free, tape and reel n / lead, tube ad, tape and reel	Blank = standard (dash number) (up to 3 digits) from 1 to 999 as applicable
Historical Part	Historical Part Number Example: SOMC1601102G (will continue to be accepted)								
SOMC 16 HISTORICAL MODEL PIN COUNT			SCHEM	ATIC	RESI	102 Stai	-	G DLERANCE CODE	D02
New Global Pa	art Numbering: \$	SOMC200	5500BGRZ (pref	erred p	art numberi	ng f	ormat)		
S	о м с	2	0 0 5	5	0	0	BG	R Z	
GLOBAL MODEL	PIN COUNT	SCHEMA	ATIC RESISTA		TOLERAN		PAC	KAGING	SPECIAL
SOMC14 16 2005 = dual terminator3 digit impedance code, followed by alpha modifier (see Impedance table) $F = \pm 1 \%$ $G = \pm 2 \%$ $J = \pm 5 \%$ $EJ = lead (Pb)$ -free, tub $EA = lead $			-free, tape and reel / lead, tube	Blank = standard (dash number) up to 3 digits from 1 to 999 as applicable					
Historical Part	Historical Part Number Example: SOMC2005820131G (will continue to be accepted)								
SOMC	20		05		820		131	G	R61
HISTORICAL MODEL	PIN COU	NT	SCHEMATIC	-	STANCE LUE 1	F	RESISTANCE VALUE 2	TOLERANCE CODE	PACKAGING

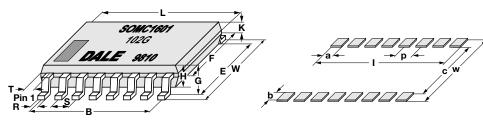
Note

• For additional information on packaging, refer to the Surface Mount Network Packaging document (www.vishay.com/doc?31540)

www.vishay.com Vishay Dale **CIRCUIT APPLICATIONS** 01 Schematic 13, 15, or 19 resistors with one pin common The SOMCxx01 circuit provides a choice of 13, 15, or 19 nominally equal resistors, each connected between a common lead (14, 16, or 20) and a discrete PC board pin. Commonly used in the following applications: Ş • MOS/ROM pull-up/pull-down • TTL input pull-down j • Open collector pull-up • Digital pulse squaring SOMC14 • "Wired OR" pull-up • TTL unused gate pull-up SOMC16 Pin • Power driven pull-up • High speed parallels pull-up SOMC20



DIMENSIONS



SOLDER PAI	SOLDER PAD DIMENSIONS in millimeters							
	а	b	С	I	р	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

DIMEN	DIMENSIONS in millimeters										
PIN NO#	L	W	В	E	F	G	Н	K	R	S	Т
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		± 0.076	± 0.254	

MARKING INFORMATION

1 % parts have 4 digits while 2 % and 5 % parts have 3 digits.

3

SOMC

SOMC



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IMPEDANCE CODES			
	IMDED	ANCE	CODES

IMPEDANCE CODES						
CODE	R ₁ (Ω)	R₂ (Ω)	CODE	R ₁ (Ω)	R₂ (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	

Note

For additional impedance codes, refer to the Dual Terminator Impedance Code Table document (<u>www.vishay.com/doc?31530</u>)

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 %				
Moisture 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 %				

MECHANICAL SPECIFICATIONS					
Marking	Model number, schematic number, value tolerance, pin 1 indicator, date code				
Marking resistance to solvents	Permanency testing per MIL-STD-202, method 215				
Maximum solder reflow temperature	+255 °C				
Solderability	Per MIL-STD-202, method 208E				
Terminals	Copper alloy. Solder dipped terminal				
Body	Molded epoxy				



Vishay

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