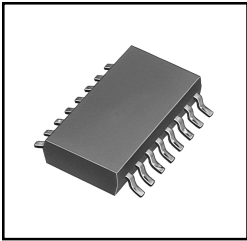


# MODEL SOMC

## Thick Film Resistor Networks

### Dual-in-Line, Small Outline Molded Dip

#### 01, 03, 05 Schematics; 14, 16 or 20 Pins



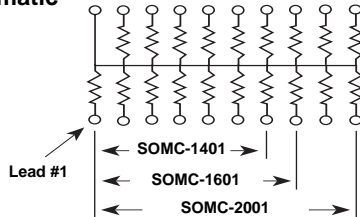
#### FEATURES

- .090" [2.29mm] maximum seated height
- Rugged, molded case construction
- Highly stable thick film
- .050" [1.27mm] lead spacing
- Low temperature coefficient, (- 55°C to + 125°C) ± 100PPM/°C

- Reduces total assembly costs
- Compatible with automatic surface mounting equipment
- Wide resistance range
- Uniform performance characteristics
- Meets EIA PDP100, SOGN-0002 outline dimensions
- Available in tube pack or tape and reel pack

#### CIRCUIT APPLICATIONS

##### 01 Schematic

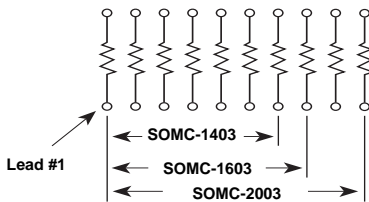


13, 15 or 19 resistors with one pin common

The SOMC-xx01 circuit provides a choice of 13, 15 or 19 nominally equal resistors, each connected between a common pin (14, 16 or 20) and a discrete PC board pin. Commonly used in the following applications:

- MOS/ROM Pull-up/Pull-down
- Open Collector Pull-up
- "Wired OR" Pull-up
- Power Driven Pull-up
- TTL Input Pull-down
- Digital Pulse Squaring
- TTL Unused Gate Pull-up
- High Speed Parallels Pull-up

##### 03 Schematic

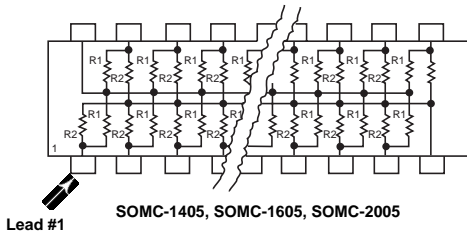


7, 8 or 10 isolated resistors

The SOMC-xx03 circuit provides a choice of 7, 8 or 10 nominally equal resistors with each resistor isolated from all others and wired directly across. Commonly used in the following applications:

- "Wired OR" Pull-up
- Power Driven Pull-up
- Powergate Pull-up
- Line Termination
- Long-line Impedance Balancing
- LED Current Limiting
- ECL Output Pull-down
- TTL Input Pull-down

##### 05 Schematic



TTL dual-line terminator;

pulse squaring, 12 or 14 pairs of resistors

(R<sub>1</sub> Resistors are common to leads 14, 16 or 20)

(R<sub>2</sub> Resistors are common to leads 7, 8 or 10)

The SOMC-xx05 circuit contains 12, 14 or 18 pairs of resistors. Each pair is connected between ground and a common line. The junctions of these resistor pairs are connected to the input leads.

The 05 circuits are designed for TTL dual-line termination and pulse squaring.

#### ELECTRICAL SPECIFICATIONS

**Resistance Range:** 10 ohm to 1 Megohm standard.  
Zero ohm jumpers available.

**Tolerance:** 01 and 03 Schematic = ± 2% standard. ± 1%, ± 5%, ± 10% and ± 20% available. 05 Schematic = ± 2% standard. ± 5% available. 100 milliohm maximum on zero ohm jumpers.

**Temperature Coefficient:** (- 55°C to + 125°C) ± 100PPM/°C typical.

**Resistor Power Rating:** (Maximum at + 70°C)  
01, 05 Schematic = .080 watt.  
03 Schematic = .160 watt.

**Package Power Rating:** (Maximum at + 70°C)  
01, 05 Schematic = 14 pin 1.05 watts, 16 pin 1.200 watts, 20 pin 1.520 watts.  
03 Schematic = 14 pin 1.125 watts, 16 pin 1.280 watts, 20 pin 1.600 watts.

**TC Tracking:** (- 55°C to + 125°C) 50PPM/°C.

**Voltage Coefficient of Resistance:** < 50PPM/V typical.

**Maximum Operating Voltage:** 50 VDC.

**Operating Temperature Range:** - 55°C to + 125°C.

**Storage Temperature Range:** - 55°C to + 150°C.

#### MECHANICAL SPECIFICATIONS

**Marking:** Model number, schematic number, value code, tolerance 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. 60/40 solder dipped terminal.

**Body:** Molded Epoxy.

# MODEL SOMC

### DIMENSIONAL CONFIGURATIONS

MODEL	A	B
SOMC-14	.390 [9.91]	.300 [7.62]
SOMC-16	.440 [11.18]	.350 [8.89]
SOMC-20	.540 [13.72]	.450 [11.43]

[Numbers in brackets indicate millimeters]

### ENVIRONMENTAL PERFORMANCE\*

TEST	MAX. ΔR (Typical Test Lots)
Power Conditioning	± 0.50% ΔR
Thermal Shock	± 0.50% ΔR
Short Time Overload	± 0.25% ΔR
Low Temperature Operation	± 0.25% ΔR
Moisture Resistance	± 0.50% ΔR
Resistance to Soldering Heat	± 0.25% ΔR
Shock	± 0.25% ΔR
Vibration	± 0.25% ΔR
Load Life	± 0.50% ΔR
Terminal Strength	± 0.25% ΔR
Insulation Resistance	10,000 Megohm (minimum)
Dielectric Withstanding Voltage	No evidence of arcing or damage (200 V RMS for 1 minute)

\* Test methods per MIL-STD-202.

### DERATING

#### 01 & 05 Schematics

#### 03 Schematic

### HOW TO ORDER

#### 01 & 03 Schematics

<u>SOMC</u>	<u>14</u>	<u>01</u>
MODEL	NUMBER OF LEADS	SCHEMATIC
	<u>16</u>	<u>03</u>
	<u>20</u>	

<u>xxx or xxxx</u>	<u>G</u>
RESISTANCE VALUE	TOLERANCE
First 2 digits (3 for F tolerance) are significant figures. Last digit specifies number of zeros to follow.	F = ± 1% G = ± 2% J = ± 5%

#### 05 Schematic

<u>SOMC</u>	<u>14</u>	<u>05</u>
MODEL	NUMBER OF LEADS	SCHEMATIC
	<u>16</u>	
	<u>20</u>	

<u>xxx or xxxx</u>	<u>xxx or xxxx</u>	<u>G</u>
R <sub>1</sub> VALUE	R <sub>2</sub> VALUE	TOLERANCE
First 2 digits (3 for F tolerance) are significant figures. Last digit specifies number of zeros to follow.		F = ± 1% G = ± 2% J = ± 5%