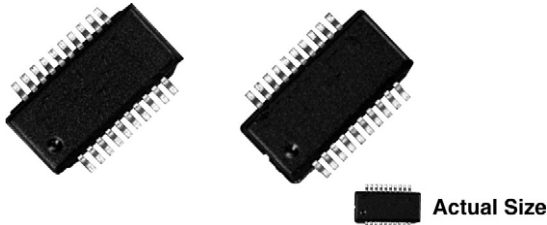
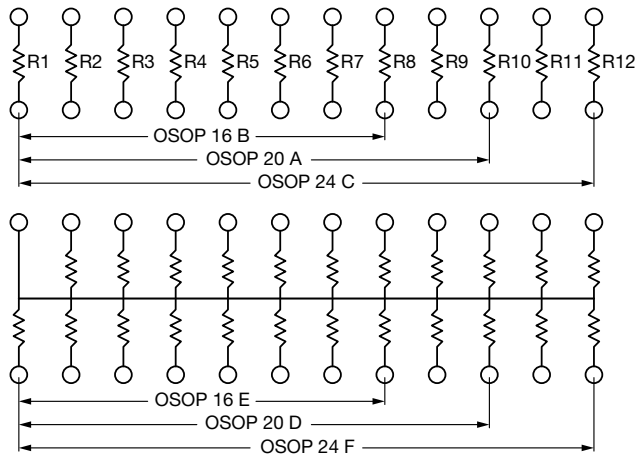


## Molded, 25 mil Pitch, Dual-In-Line Thin Film Resistor, Surface Mount Network



OSOP Series resistor networks feature a space saving 25 mil lead pitch versus the current 50 mil pitch standard. This allows users to reduce board space more than 50 % over current standards. The OSOP series features 16, 20, and 24 pin variations with isolated and last pin common schematics. Custom schematics and resistor values are also available, consult factory.

### SCHEMATIC



### FEATURES

- 0.068" (1.73 mm) maximum seated height
- Rugged molded case construction with no internal solder
- JEDEC® MO-137 variation AB = 16 pin, AD = 20 pin, AE = 24 pin
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://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

### TYPICAL PERFORMANCE

	ABSOLUTE	TRACKING
TCR	25	5
	ABSOLUTE	RATIO
TOL.	0.1	0.05

### STANDARD RESISTANCE OFFERING (R<sub>1</sub> =)

500 Ω	10 kΩ
1 kΩ	20 kΩ
2 kΩ	50 kΩ
5 kΩ	100 kΩ

### Note

- Consult factory for additional values and schematics

### STANDARD ELECTRICAL SPECIFICATIONS

TEST	SPECIFICATIONS	CONDITIONS
Material	Passivated nichrome	-
Pin / Lead Number	16, 20, 24	-
Resistance Range	500 Ω to 100 kΩ per resistor	-
TCR: Absolute	± 25 ppm/°C	-55 °C to +125 °C
TCR: Tracking	± 5 ppm/°C	-55 °C to +125 °C
Tolerance: Absolute	± 0.1 % to 1 %	+25 °C
Tolerance: Ratio	± 0.025 % to 0.5 %	+25 °C
Power Rating: Resistor	100 mW	Maximum at +70 °C
Power Rating: Package	400 mW	Maximum at +70 °C
Stability: Absolute	ΔR ± 0.05 %	2000 h at +70 °C
Stability: Ratio	ΔR ± 0.015 %	2000 h at +70 °C
Voltage Coefficient	< 0.1 ppm/V (typical)	-
Working Voltage	100 V max. not to exceed $\sqrt{P \times R}$	-
Operating Temperature Range	-55 °C to +125 °C	-
Storage Temperature Range	-55 °C to +150 °C	-
Noise	< -30 dB	-
Thermal EMF	0.08 μV/°C	-
Shelf Life Stability: Absolute	ΔR ± 0.01 %	1 year at +25 °C
Shelf Life Stability: Ratio	ΔR ± 0.002 %	1 year at +25 °C

DIMENSIONS AND IMPRINTING in inches and millimeters			
DIMENSION	INCHES	MILLIMETERS	
A	16 pin	0.193 ± 0.003	4.90
	20, 24 pin	0.341 ± 0.003	8.66
B		0.154	3.91
C		0.237	6.02
D		0.025	0.635
E		0.010 ± 0.002	0.25 ± 0.05
F		0.062	1.58
G		0.068	1.73
H		0.010 ± 0.002	0.25 ± 0.05
I		0.025	0.64
J	16 pin	0.009	0.23
	20 pin	0.057	1.47
	24 pin	0.057	1.47

MECHANICAL SPECIFICATIONS	
Resistive Element	Passivated nichrome
Substrate Material	Silicon
Body	Molded epoxy
Terminals	Copper alloy
Lead (Pb)-free Option	100 % matte tin
Tin Lead Option	Sn90
Tin Lead and Lead (Pb)-free Finish	Plated

GLOBAL PART NUMBER INFORMATION																													
New Global Part Numbering: OSOPA1002BUF																													
<table border="0" style="width: 100%; text-align: center;"> <tr> <td>O</td><td>S</td><td>O</td><td>P</td><td>A</td><td>1</td><td>0</td><td>0</td><td>2</td><td>B</td><td>U</td><td>F</td> </tr> <tr> <td>O</td><td>S</td><td>O</td><td>P</td><td>T</td><td>A</td><td>1</td><td>0</td><td>0</td><td>3</td><td>A</td><td>T</td><td>1</td> </tr> </table>					O	S	O	P	A	1	0	0	2	B	U	F	O	S	O	P	T	A	1	0	0	3	A	T	1
O	S	O	P	A	1	0	0	2	B	U	F																		
O	S	O	P	T	A	1	0	0	3	A	T	1																	
GLOBAL MODEL (4 or 5 digits)	SCHEMATIC	RESISTANCE	TOLERANCE AND RATIO TOLERANCE	PACKAGING																									
<b>OSOP</b> (Tin Lead)  <b>OSOPT</b> (Lead (Pb)-free) (e3)	<b>A</b> = 20 pin 10 isolated resistors <b>B</b> = 16 pin 8 isolated resistors <b>C</b> = 24 pin 12 isolated resistors  <b>D</b> = 20 pin 19 resistors pin 20 common <b>E</b> = 16 pin 15 resistors pin 16 common <b>F</b> = 24 pin 23 resistors pin 24 common	First 3 digits are significant figures and the last digit specifies the number of zeroes to follow.  Example: 1002 = 10K 1003 = 100K	<table border="0"> <tr> <td>Abs. Tol.</td> <td>Ratio</td> </tr> <tr> <td><b>A</b> = 0.1 %</td> <td>0.05 %</td> </tr> <tr> <td><b>B</b> = 0.1 %</td> <td>0.1 %</td> </tr> <tr> <td><b>C</b> = 0.25 %</td> <td>0.1 %</td> </tr> <tr> <td><b>D</b> = 0.5 %</td> <td>0.1 %</td> </tr> <tr> <td><b>F</b> = 1 %</td> <td>0.5 %</td> </tr> <tr> <td><b>Z</b> = 0.1 % <sup>(1)</sup></td> <td>0.025 %</td> </tr> </table>	Abs. Tol.	Ratio	<b>A</b> = 0.1 %	0.05 %	<b>B</b> = 0.1 %	0.1 %	<b>C</b> = 0.25 %	0.1 %	<b>D</b> = 0.5 %	0.1 %	<b>F</b> = 1 %	0.5 %	<b>Z</b> = 0.1 % <sup>(1)</sup>	0.025 %	TAPE AND REEL <b>T0</b> = 100 min., 100 mult <b>T1</b> = 1000 min., 1000 mult <sup>(2)</sup> <b>T3</b> = 300 min., 300 mult <b>T5</b> = 500 min., 500 mult <b>TF</b> = Full reel 2500 <b>TS</b> = 100 min., 1 mult  <b>UF</b> = TUBED											
Abs. Tol.	Ratio																												
<b>A</b> = 0.1 %	0.05 %																												
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Historical Part Number example: OSOPA5000B (for reference purposes only)																													
OSOP	A	5000	B																										
SERIES	SCHEMATIC	RESISTANCE	TOLERANCE AND RATIO TOLERANCE																										

**Notes**

- (1) Tolerance available 1K and up  
 (2) Preferred packaging code



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