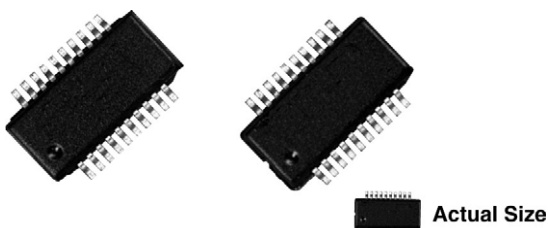
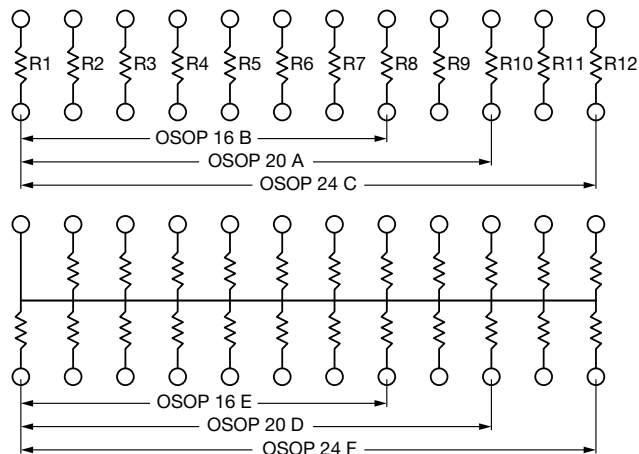


## Molded, 25 mil Pitch, Dual-In-Line Thin Film Resistor, Surface Mount Network



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)



**RoHS\***  
Available  
**HALOGEN FREE**

### 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

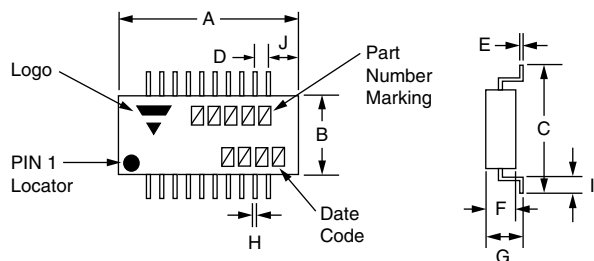
- Consult factory for additional values and schematics

### 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

	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)

**OSOP**  
(Tin Lead)

**OSOPT**  
(Lead (Pb)-free)  
(e3)

SCHEMATIC

**A** = 20 pin  
10 isolated resistors  
**B** = 16 pin  
8 isolated resistors  
**C** = 24 pin  
12 isolated resistors  
  
**D** = 20 pin 19 resistors  
pin 20 common  
**E** = 16 pin 15 resistors  
pin 16 common  
**F** = 24 pin 23 resistors  
pin 24 common

RESISTANCE

First 3 digits are significant figures and the last digit specifies the number of zeroes to follow.

Example:  
1002 = 10K  
1003 = 100K

TOLERANCE AND  
RATIO TOLERANCE

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 %

PACKAGING

TAPE AND REEL  
**T0** = 100 min., 100 mult  
**T1** = 1000 min., 1000 mult <sup>(2)</sup>  
**T3** = 300 min., 300 mult  
**T5** = 500 min., 500 mult  
**TF** = Full reel 2500  
**TS** = 100 min., 1 mult  
  
**UF** = TUBED

Historical Part Number example: OSOPA5000B (for reference purposes only)

OSOP	A	5000	B
SERIES	SCHEMATIC	RESISTANCE	TOLERANCE AND RATIO TOLERANCE

**Notes**

- <sup>(1)</sup> Tolerance available 1K and up  
<sup>(2)</sup> Preferred packaging code



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