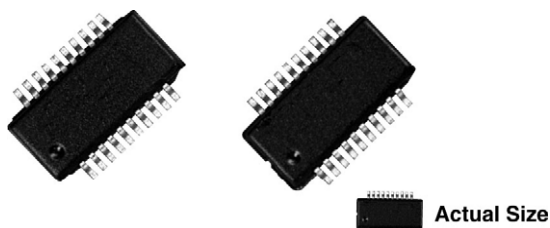


Molded, 25 mil Pitch, Dual-In-Line Thin Film Resistor, Surface Mount Network



LINKS TO ADDITIONAL RESOURCES

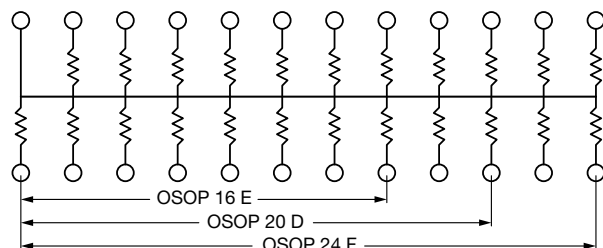
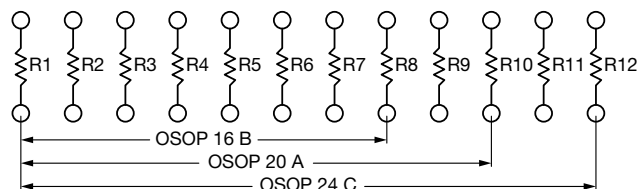


OSOP Series resistor networks feature a space saving 25 mil lead pitch versus the current 50 mil pitch standard. This allows users to reduce board space more than 50 % over current standards. The OSOP series features 16, 20, and 24 pin variations with isolated and last pin common schematics. Custom schematics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



ATTENTION!
Observe Precautions for
Handling Electrostatic Sensitive Devices!

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



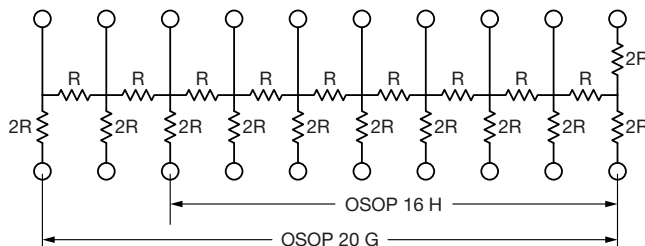
RoHS*
Available
HALOGEN FREE

Note

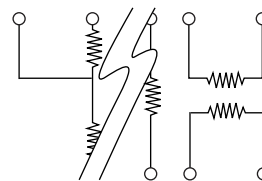
* This datasheet provides information about parts that are RoHS-compliant and / or parts that are non RoHS-compliant. For example, parts with lead (Pb) terminations are not RoHS-compliant. Please see the information / tables in this datasheet for details

TYPICAL PERFORMANCE

	ABSOLUTE	TRACKING
TCR	25	5
	ABSOLUTE	RATIO
TOL.	0.1	0.05



Custom



Custom schematics available.
Please contact factory.

STANDARD RESISTANCE OFFERING ($R_1 =$)

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

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 k Ω per resistor for the isolated (A, B, C) and bussed schematics (D, E, F) 1 k Ω to 50 k Ω per resistor (R1) for the R2R ladder schematics (G, H) Consult product marketing for custom schematic options	-
TCR: Absolute	± 25 ppm/ $^{\circ}\text{C}$	-55 $^{\circ}\text{C}$ to +125 $^{\circ}\text{C}$
TCR: Tracking	± 5 ppm/ $^{\circ}\text{C}$	-55 $^{\circ}\text{C}$ to +125 $^{\circ}\text{C}$
Tolerance: Absolute	± 0.1 % to ± 1 %	+25 $^{\circ}\text{C}$
Tolerance: Ratio	± 0.025 % to ± 0.5 %	+25 $^{\circ}\text{C}$
Power Rating: Resistor	100 mW	Maximum at +70 $^{\circ}\text{C}$
Power Rating: Package	400 mW	Maximum at +70 $^{\circ}\text{C}$
Stability: Absolute	$\Delta R \pm 0.05$ %	2000 h at +70 $^{\circ}\text{C}$
Stability: Ratio	$\Delta R \pm 0.015$ %	2000 h at +70 $^{\circ}\text{C}$
Voltage Coefficient	< 0.1 ppm/V (typical)	-
Working Voltage	100 V max. not to exceed $\sqrt{P \times R}$	-
Operating Temperature Range	-55 $^{\circ}\text{C}$ to +125 $^{\circ}\text{C}$	-
Storage Temperature Range	-55 $^{\circ}\text{C}$ to +150 $^{\circ}\text{C}$	-
Noise	< -30 dB	-
Thermal EMF	0.08 $\mu\text{V}/^{\circ}\text{C}$	-
Shelf Life Stability: Absolute	$\Delta R \pm 0.01$ %	1 year at +25 $^{\circ}\text{C}$
Shelf Life Stability: Ratio	$\Delta R \pm 0.002$ %	1 year at +25 $^{\circ}\text{C}$

DIMENSIONS AND IMPRINTING in inches and millimeters

The diagram shows the top and side views of a thin film resistor package. The top view includes the following labels and dimensions:

- Logo**: A triangle pointing downwards.
- PIN 1 Locator**: A solid black circle.
- Part Number Marking**: A series of five squares.
- Date Code**: A series of five squares.
- Dimensions**: A (overall length), B (body height), C (lead height), D (pad width), E (lead thickness), F (pad thickness), G (pad width), H (pad length), I (pad width), and J (pad length).

The side view shows the package profile with dimensions E, F, G, and I.

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	0.033	0.838

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

G = 20 pin R2R ladder
H = 16 pin R2R ladder

RESISTANCE

First 3 digits are significant
figures and the last digit
specifies the number of
zeros to follow.
For R2R ladder specify
resistance of R1.

Example:
1002 = 10K
1003 = 100K

TOLERANCE AND
RATIO TOLERANCE

Abs. Tol.

Ratio

A = 0.1 %	0.05 %
B = 0.1 %	0.1 %
C = 0.25 %	0.1 %
D = 0.5 %	0.1 %
F = 1 %	0.5 %
G = 2 %	1.0 %
Z = 0.1 % ⁽¹⁾	0.025 %

PACKAGING

TAPE AND REEL

T0 = 100 min., 100 mult.
T1 = 1000 min., 1000 mult. ⁽²⁾
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

SERIES

A

SCHEMATIC

5000

RESISTANCE

B

TOLERANCE AND
RATIO TOLERANCE

Notes

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



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