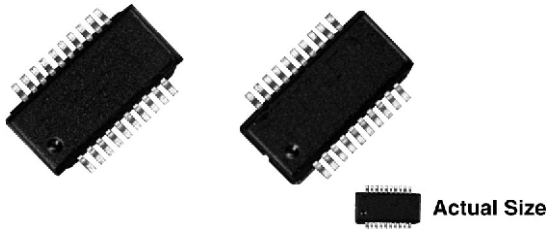


Molded, 25 mil Pitch, Dual-In-Line Thin Film Resistor, Surface Mount Network



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 feature 10 isolated resistors in a 20 lead style available for immediate delivery in the standard values listed.

SCHEMATIC



FEATURES

- 0.068" (1.73 mm) maximum seated height
- Rugged molded case construction with no internal solder
- JEDEC MO-137 variation AD
- Compliant to RoHS Directive 2002/95/EC
- Halogen-free according to IEC 61249-2-21 definition



RoHS*
COMPLIANT
HALOGEN
FREE

Note

* Pb containing terminations are not RoHS compliant, exemptions may apply

TYPICAL PERFORMANCE

	ABSOLUTE	TRACKING
TCR	25	5
	ABSOLUTE	RATIO
TOL.	0.1	0.05

STANDARD RESISTANCE OFFERING (R₁ =)

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	20	-
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	0.344	8.74
	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	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 style="border: 1px solid black; padding: 2px;">O</td> <td style="border: 1px solid black; padding: 2px;">S</td> <td style="border: 1px solid black; padding: 2px;">O</td> <td style="border: 1px solid black; padding: 2px;">P</td> <td style="border: 1px solid black; padding: 2px;">A</td> <td style="border: 1px solid black; padding: 2px;">1</td> <td style="border: 1px solid black; padding: 2px;">0</td> <td style="border: 1px solid black; padding: 2px;">0</td> <td style="border: 1px solid black; padding: 2px;">2</td> <td style="border: 1px solid black; padding: 2px;">B</td> <td style="border: 1px solid black; padding: 2px;">U</td> <td style="border: 1px solid black; padding: 2px;">F</td> </tr> <tr> <td style="border: 1px solid black; padding: 2px;">O</td> <td style="border: 1px solid black; padding: 2px;">S</td> <td style="border: 1px solid black; padding: 2px;">O</td> <td style="border: 1px solid black; padding: 2px;">P</td> <td style="border: 1px solid black; padding: 2px;">T</td> <td style="border: 1px solid black; padding: 2px;">A</td> <td style="border: 1px solid black; padding: 2px;">1</td> <td style="border: 1px solid black; padding: 2px;">0</td> <td style="border: 1px solid black; padding: 2px;">0</td> <td style="border: 1px solid black; padding: 2px;">3</td> <td style="border: 1px solid black; padding: 2px;">A</td> <td style="border: 1px solid black; padding: 2px;">T</td> <td style="border: 1px solid black; padding: 2px;">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																									
OSOP (Tin Lead) OSOPT (Lead (Pb)-free) (e3)	A = 10 nominally equal resistors with each resistor isolated from all others and wires directly across	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" style="width: 100%;"> <tr> <td style="text-align: center;">Abs. Tol.</td> <td style="text-align: center;">Ratio</td> </tr> <tr> <td style="text-align: center;">A = 0.1 % ⁽¹⁾</td> <td style="text-align: center;">0.05 %</td> </tr> <tr> <td style="text-align: center;">B = 0.1 %</td> <td style="text-align: center;">0.1 %</td> </tr> <tr> <td style="text-align: center;">C = 0.25 %</td> <td style="text-align: center;">0.1 %</td> </tr> <tr> <td style="text-align: center;">D = 0.5 %</td> <td style="text-align: center;">0.1 %</td> </tr> <tr> <td style="text-align: center;">F = 1 %</td> <td style="text-align: center;">0.5 %</td> </tr> <tr> <td style="text-align: center;">Z = 0.1 % ⁽¹⁾</td> <td style="text-align: center;">0.025 %</td> </tr> </table>	Abs. Tol.	Ratio	A = 0.1 % ⁽¹⁾	0.05 %	B = 0.1 %	0.1 %	C = 0.25 %	0.1 %	D = 0.5 %	0.1 %	F = 1 %	0.5 %	Z = 0.1 % ⁽¹⁾	0.025 %	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											
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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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