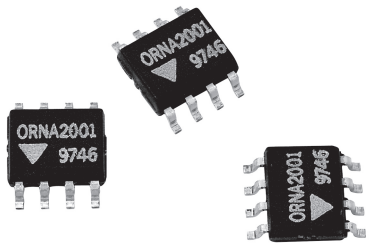
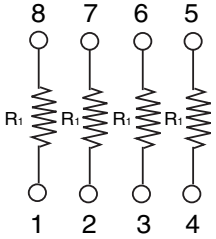
Molded, 50 Mil Pitch, Dual-In-Line Resistor Network



Actual Size

ORN series resistor networks feature four isolated resistors with standard 50 mil pitch lead spacing. The networks feature close TCR tracking and tight ratio tolerance and are ideally suited for unity gain operational amplifier circuitry. The standard resistance offering listed are available for immediate delivery.

SCHEMATIC



FEATURES

- Lead (Pb)-free available
- 0.068" (1.73 mm) maximum seated height
- Rugged molded case construction with no internal solder
- Thin film passivity Microbe element
- Low temperature coefficient (± 25 ppm/°C)
- JEDEC MS-012 STD Package

Pb-free Available

RoHS* COMPLIANT

TYPICAL PERFORMANCE

	ABS	TRACKING
TCR	25	5
	ABS	RATIO
TOL	0.1	0.05

STANDARD RESISTANCE OFFERING (R_1 =)	
500 Ω	10 kΩ
1 kΩ	20 kΩ
2 kΩ	50 kΩ
4.99 kΩ	100 kΩ
5 kΩ	

Consult factory for additional values

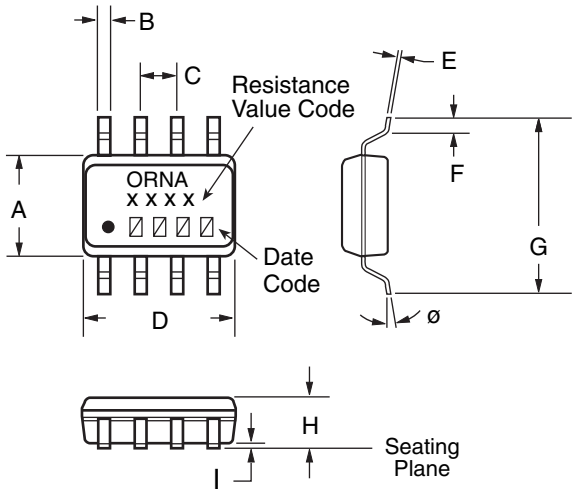
STANDARD ELECTRICAL SPECIFICATIONS			
TEST		SPECIFICATIONS	CONDITIONS
Material		Passivated Nichrome	
TCR:	Tracking	± 5 ppm/°C	- 55 °C to + 125 °C
	Absolute	± 25 ppm/°C	- 55 °C to + 125 °C
Tolerance:	Ratio	± 0.5 % to ± 0.01 %	+ 25 °C
	Absolute	± 1.0 % to ± 0.05 %	+ 25 °C
Power Rating:	Resistor	100 mW	Max. at + 70 °C
	Package	400 mW	Max. at + 70 °C
Stability:	ΔR Absolute	500 ppm	2000 h at + 70 °C
	ΔR Ratio	150 ppm	2000 h at + 70 °C
Voltage Coefficient		0.1 ppm/V typical	
Working Voltage		50 V	
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	100 ppm	1 year at + 25 °C
	Ratio	20 ppm	1 year at + 25 °C

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

ORN

Vishay Thin Film Molded, 50 Mil Pitch, Dual-In-Line Resistor Network

DIMENSIONS AND IMPRINTING in inches and millimeters

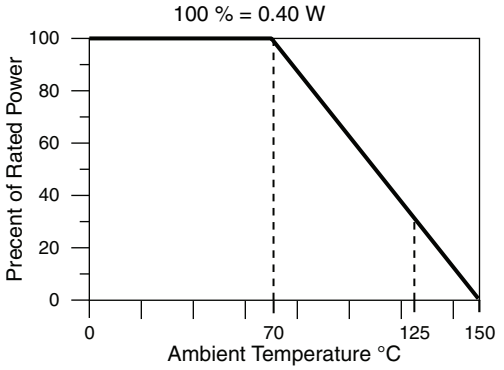


DIMENSION	INCHES	MM
A	0.157	3.99
B	0.0165 ± 0.0025	0.4 ± 0.06
C	0.050	1.27
D	0.195 Max.	4.93
E	0.008 ± 0.001	0.20 ± 0.03
F	0.028 ± 0.001	0.71 ± 0.02
G	0.239 ± 0.005	6.07 ± 0.13
H	0.068 Max.	1.73
I	0.008 ± 0.002	0.22 ± 0.06
Ø	2° to 6°	

Notes
1. Leads are within 0.005" (0.13 mm) of true position
2. Leads coplanar to ± 0.004" (± 0.50 mm)
3. Marking - VISHAY Symbol, Part Number from Ordering Information

MECHANICAL SPECIFICATIONS	
Resistive Element	Passivated Nichrome
Body	Molded epoxy
Terminals	Copper Alloy, solderable
Solderability	Per MIL-PRF-83401
Marking Resistance to Solvents	Permanency testing per MIL-PRF-83401
Lead (Pb)-free Option	100 % Sn Matte
Lead (Pb)-free Finish	Plated

DERATING CURVE



GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: ORNA1002AUF (preferred part number format)

O	R	N	A	1	0	0	2	A	U	F
O	R	N	T	A	1	0	0	3	Z	T	S

GLOBAL MODEL (3 or 4 digits)	SCHEMATIC	RESISTANCE	TOLERANCE AND RATIO TOLERANCE	PACKAGING
ORN (Tin Lead) **ORNT** (Lead (Pb)-free) (e3)	**A** = 4 isolated equal resistors	The first 3 digits are significant figures and the last digit specifies the number of zeros to follow. Example: 1002 = 10K 1003 = 100K 4991 = 4.99K	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 % ***Q** = ± 0.05 % / ± 0.01 % ***Z** = ± 0.1 % / ± 0.025 % * Tol. available 1K and up	TAPE AND REEL **T0** = 100 Min 100 Mult **T1** = 1000 Min 1000 Mult **T3** = 300 Min 300 Mult **T5** = 500 Min 500 Mult **TF** = Full Reel 3000 **TS** = 100 Min 1 Mult **UF** = TUBED

Historical Part Number example: ORNA1001F (will continue to be accepted)

ORN	A	1001	F
SERIES	SCHEMATIC	RESISTANCE	TOLERANCE AND RATIO TOLERANCE

For technical questions, contact: thin-film@vishay.com
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