



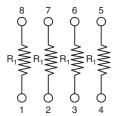
# Molded, 50 mil Pitch, Dual-In-Line Thin Film Resistor, Surface Mount Network





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**

- 0.068" (1.73 mm) maximum seated height
- Rugged molded case construction with no internal solder



FREE

- Low temperature coefficient (± 25 ppm/°C)
- JEDEC MS-012 STD variation AA package
- Compliant to RoHS Directive 2002/95/EC
- Halogen-free according to IEC 61249-2-21 definition

#### 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 (R <sub>1</sub> =)		
49.9 Ω	10 kΩ	
100 Ω	20 kΩ	
500 Ω	50 kΩ	
1 kΩ	100 kΩ	
2 kΩ	200 kΩ	
4.99 kΩ	500 kΩ	
5 kΩ		

#### Note

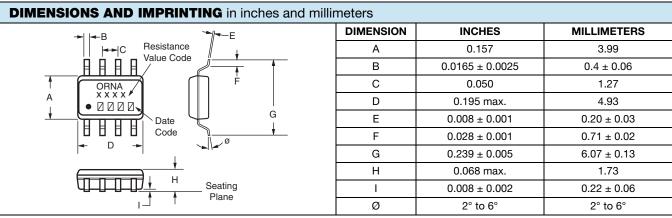
· Consult factory for additional values and schematics

STANDARD ELECTRICAL SPECIFICATIONS			
TEST	SPECIFICATIONS	CONDITIONS	
Material	Passivated nichrome	-	
Pin/Lead Number	8	-	
Resistance Range	$33~\Omega$ to $500~\text{k}\Omega$ per resistor	-	
TCR: Absolute	± 25 ppm/°C	- 55 °C to + 125 °C	
TCR: Tracking	± 5 ppm/°C	- 55 °C to + 125 °C	
Tolerance: Absolute	± 0.05 % to ± 1.0 %	+ 25 °C	
Tolerance: Ratio	± 0.01 % 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	$\Delta R \pm 0.05 \%$	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 √P x 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	

Revision: 02-Sep-11 Document Number: 60005



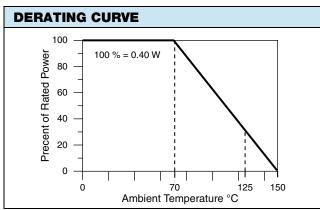
## Vishay Dale Thin Film

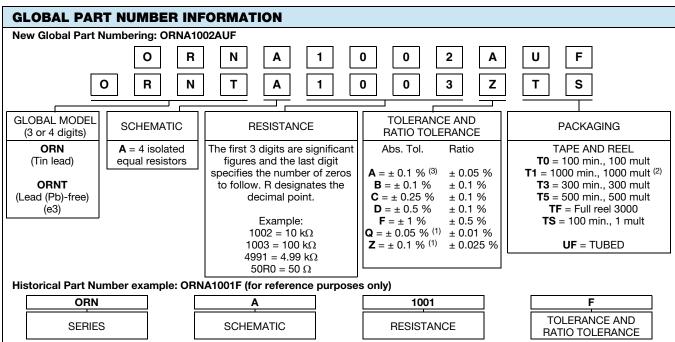


#### Note

• Marking - Vishay symbol, part number from ordering information

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	





### Notes

- 1) Tol. available 1K and up
- (2) Preferred packaging code
- $^{(3)}$  Ratio tolerance available 250  $\Omega$  and up



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Vishay

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## Vishay:

ORNA50-1 ORNA20-1 ORNA25-1T1 ORNA5-1TS ORNA50-1T5 ORNA2-1T1 ORNA5-1T1 ORNA50-1T1
ORNTA100-1T1 ORNTA2-1T1 ORNTA20-1T1 ORNTA25-1T1 ORNTA5-1T1 ORNTA50-1T1 ORNTA2-1UF
ORNTA50-1UF ORNTA100-1UF ORNTA10-1UF ORNTA5-1UF ORNA10-1T1 ORNA10-1T1 ORNA2-1T0
ORNA5-1T0 ORNA10-1T0 ORNA10-1T5 ORNA10-1TS ORNA10-1UF ORNA100-1TS ORNA2-1T5 ORNA2-1T5
ORNA2-1UF ORNA20-1TS ORNA20-1UF ORNA25-1T0 ORNA25-1TS ORNA25-1UF ORNA50-1T3 ORNA5-1T5
ORNA5-1UF ORNA50-1TS ORNA50-1UF ORNTA10-1T0 ORNTA10-1T5 ORNTA100-1T5 ORNTA20-1T5
ORNTA2-1T0 ORNTA2-1T5 ORNTA2-1TS ORNTA20-1T0 ORNTA20-1T5 ORNTA20-1TS ORNTA20-1UF
ORNTA25-1T0 ORNTA25-1T5 ORNTA25-1TS ORNTA25-1UF ORNTA50-1T0 ORNTA50-1T5
ORNTA50-1TS