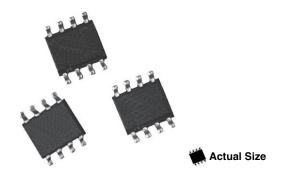
# **ORN** (Divider)



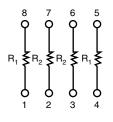
Vishay Dale Thin Film

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



Vishay Dale Thin Film ORN series Dividers provide optimum ratio precision, small size and exceptional stability for most applications. They offer a wide ratio range that is listed in the selection guide and are available for immediate delivery. The tight ratio tolerance offered on the standard ratios will provide exceptional performance throughout life.

### SCHEMATIC



### **FEATURES**

- 0.068" (1.73 mm) maximum seated height
- Rugged molded case construction with no internal solder (JEDEC MS-012 variation AA package)
- Low TCR tracking ± 5 ppm/°C
- 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**

$\bullet$	ABSOLUTE	TRACKING
TCR	25	5
	ABSOLUTE	RATIO
TOL.	0.1	0.05

STANDARD RESISTANCE OFFERING $(R_1/R_2)$				
RATIO	R <sub>1</sub>	R <sub>2</sub>		
100:1	100K	1K		
50:1	50K	1K		
25:1	25K	1K		
20:1	20K	1K		
10:1	10K	1K		
5:1	10K	2K		
2:1	10K	5K		

TEST	SPECIFICATIONS	CONDITIONS
Material	Passivated nichrome	-
Pin/Lead Number	8	-
Resistance Range	1000 $\Omega$ to 100 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	± 0.1 %	+ 25 °C
Tolerance: Ratio	± 0.05 %	+ 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	∆R ± 0.015 %	2000 h at + 70 °C
Voltage Coefficient	< 0.1 ppm/V	-
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	$\Delta R \pm 0.01$ %	1 year at + 25 °C
Shelf Life Stability: Ratio	$\Delta R \pm 0.002 \%$	1 year at + 25 °C

#### Note

Tantalum nitride film is custom, consult factory

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RoHS

COMPLIANT

HALOGEN

FREE

# **ORN (Divider)**



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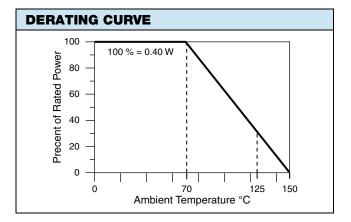
### Vishay Dale Thin Film

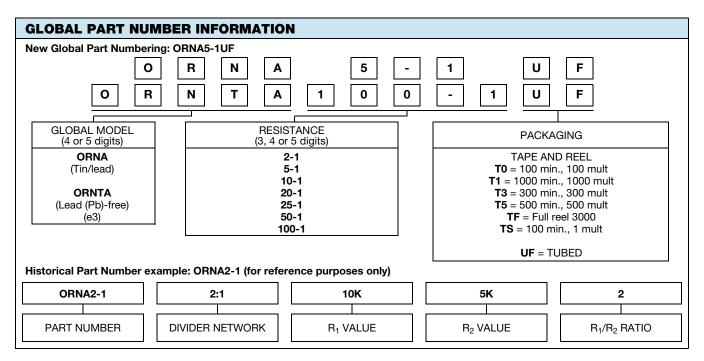
DIMENSIONS AND IMPRINTING in inches and millimeters				
B-►  ━- <sup>►</sup>   ━- E	DIMENSION	INCHES	MILLIMETERS	
C ← Part	A	0.157	3.99	
	В	$0.0165 \pm 0.005$	$0.4 \pm 0.06$	
	С	0.050	1.27	
	D	0.195 max.	4.93	
	E	$0.008 \pm 0.001$	0.20 ± 0.03	
	F	$0.028 \pm 0.001$	0.71 ± 0.02	
Ø	G	$0.239 \pm 0.005$	6.07 ± 0.13	
	Н	0.068 max.	1.73	
	I	$0.008 \pm 0.002$	0.22 ± 0.06	
	Ø	2° to 6°	2° to 6°	

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		





For technical questions, contact: thinfilm@vishay.com

Document Number: 60006

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