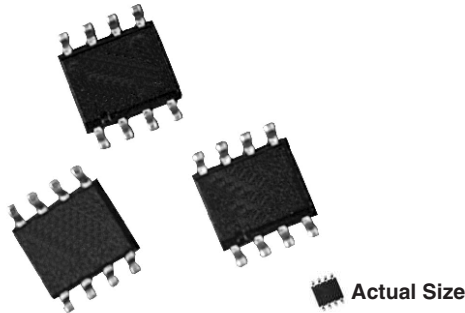


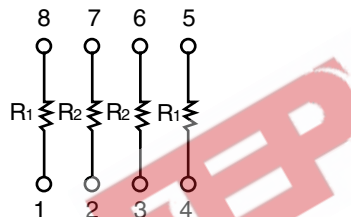


Molded, 50 Mil Pitch, Dual-In-Line Resistor Network



Vishay 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

- Lead (Pb)-free available
- 0.068" (1.73 mm) maximum seated height
- Rugged molded case construction with no internal solder (JEDEC MS-012 standard)
- Passivated nichrome
- Low temperature coefficient (± 25 ppm/ $^{\circ}$ C)



Available
RoHS*
COMPLIANT

TYPICAL PERFORMANCE

	ABS	TRACKING
TCR	25	5
	ABS	RATIO
TOL	0.1	0.05

STANDARD RESISTANCE OFFERING (R_1/R_2)		
RATIO	R_1	R_2
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

STANDARD ELECTRICAL SPECIFICATIONS			
TEST		SPECIFICATIONS	CONDITIONS
Material		Passivated nichrome	
TCR:	Tracking	± 5 ppm/ $^{\circ}$ C	- 55 $^{\circ}$ C to + 125 $^{\circ}$ C
	Absolute	± 25 ppm/ $^{\circ}$ C	- 55 $^{\circ}$ C to + 125 $^{\circ}$ C
Tolerance:	Ratio	± 0.05 %	+ 25 $^{\circ}$ C
	Absolute	± 0.1 %	+ 25 $^{\circ}$ C
Power Rating:	Resistor	100 mW	Max. at + 70 $^{\circ}$ C
	Package	400 mW	Max. at + 70 $^{\circ}$ C
Stability:	ΔR Absolute	500 ppm	2000 h at + 70 $^{\circ}$ C
	ΔR Ratio	150 ppm	2000 h at + 70 $^{\circ}$ C
Voltage Coefficient		< 0.1 ppm/V	
Working Voltage		50 V (max.)	
Operating Temperature Range		- 55 $^{\circ}$ C to + 125 $^{\circ}$ C	
Storage Temperature Range		- 55 $^{\circ}$ C to + 150 $^{\circ}$ C	
Noise		< - 30 dB	
Thermal EMF		0.08 μ V/ $^{\circ}$ C	
Shelf Life Stability:	Absolute	100 ppm	1 year at + 25 $^{\circ}$ C
	Ratio	20 ppm	1 year at + 25 $^{\circ}$ C

Note: Tantalum Nitride film is custom, consult factory

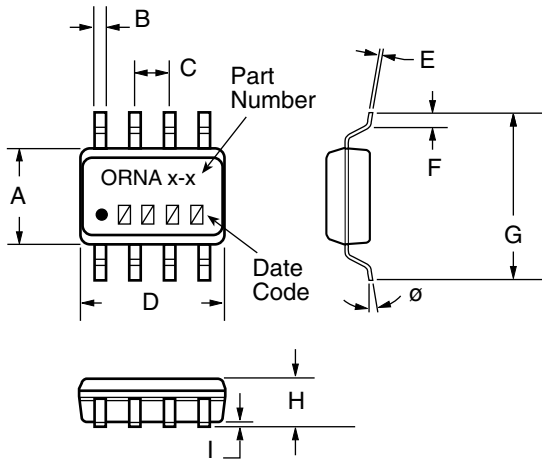
* Pb containing terminations are not RoHS compliant, exemptions may apply

ORN (Divider)

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



DIMENSIONS AND IMPRINTING in inches and millimeters



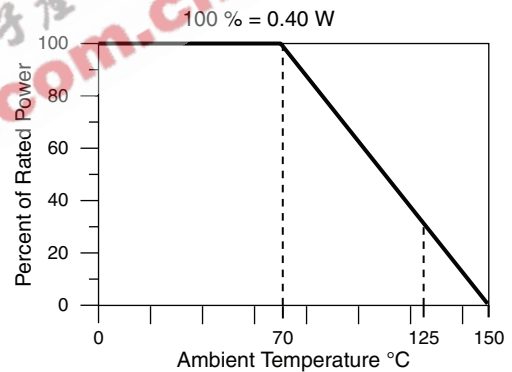
DIMENSION	INCHES	MM
A	0.157	3.99
B	0.0165 ± 0.005	0.4 ± 0.06
C	0.050	1.27
D	0.195 max.	4.93
E	0.008 ± 0.001	0.20 ± 0.03
F	0.028 ± 0.001	0.71 ± 0.02
G	0.239 ± 0.005	6.07 ± 0.13
H	0.068 max.	1.73
I	0.008 ± 0.002	0.22 ± 0.06
Ø	2° to 6°	

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
Package Format	JEDEC MS-012
Terminals	Copper alloy
Solderability	Per MIL-PRF-83401
Marking Resistance to Solvents	Permanency testing per MIL-PRF-83401
Lead (Pb)-free Option	100 % Matte tin
Lead (Pb)-free Finish	Plated

DERATING CURVE



GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: ORNA5-1UF (preferred part number format)

O	R	N	A	5	-	1	U	F			
O	R	N	T	A	1	0	0	-	1	U	F

GLOBAL MODEL (4 or 5 digits)	RESISTANCE (3, 4 or 5 digits)	PACKAGING
ORNA (Tin/Lead)	2-1 5-1 10-1 20-1 25-1 50-1 100-1	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: ORNA2-1 (will continue to be accepted)

ORNA2-1	2:1	10K	5K	2
PART NUMBER	DIVIDER NETWORK	R ₁ VALUE	R ₂ VALUE	R ₁ /R ₂ RATIO



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