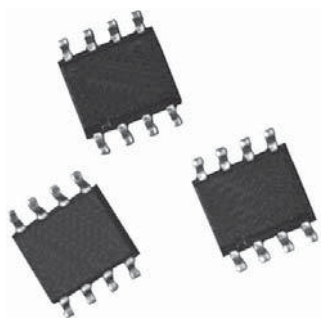


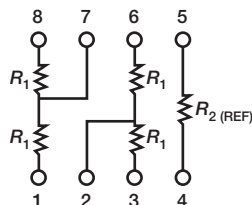
Molded, 50 mil Pitch, Dual-In-Line Resistor, Surface Mount Network



 Actual Size

Vishay Thin Film ORNV series voltage 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

- Close ratio tolerance (0.05 %)
- Tight TCR tracking ± 5 ppm/ $^{\circ}$ C
- 0.068" (1.73 mm) maximum seated height
- Rugged molded case construction with no internal solder (JEDEC MS-012 variation AA package)
- Compliant to RoHS Directive 2002/95/EC
- Halogen-free according to IEC 61249-2-21 definition



RoHS*
COMPLIANT
HALOGEN
FREE

TYPICAL PERFORMANCE

	ABSOLUTE	TRACKING
TCR	25	5
	ABSOLUTE	RATIO
TOL.	0.1	0.05

STANDARD RESISTANCE OFFERING

R_1 (Ω) (4 Voltage Divider Resistors)	R_2 (Ω) (Reference)
2K	2K
	5K
	10K
5K, 10K, 20K, 25K, 50K	5K
	10K
	20K
	25K
	50K

Note

- Consult factory for additional values and schematics

STANDARD ELECTRICAL SPECIFICATIONS

TEST	SPECIFICATIONS	CONDITIONS
Material	Passivated nichrome	-
Pin/Lead Number	8	-
Resistance Range	2 k Ω to 50 k Ω	-
TCR: Absolute	± 25 ppm/ $^{\circ}$ C	- 55 $^{\circ}$ C to + 125 $^{\circ}$ C
TCR: Tracking	± 5 ppm/ $^{\circ}$ C	- 55 $^{\circ}$ C to + 125 $^{\circ}$ C
Tolerance: Absolute	± 0.1 %	+ 25 $^{\circ}$ C
Tolerance: Ratio	± 0.05 %	+ 25 $^{\circ}$ C
Power Rating: Resistor	100 mW	Maximum at + 70 $^{\circ}$ C
Power Rating: Package	400 mW	Maximum at + 70 $^{\circ}$ C
Stability: Absolute	$\Delta R \pm 0.05$ %	2000 h at + 70 $^{\circ}$ C
Stability: Ratio	$\Delta R \pm 0.015$ %	2000 h at + 70 $^{\circ}$ C
Voltage Coefficient	< 0.1 ppm/V	-
Working Voltage	100 V max. not to exceed $\sqrt{P \times R}$	-
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	$\Delta R \pm 0.01$ %	1 year at + 25 $^{\circ}$ C
Shelf Life Stability: Ratio	$\Delta R \pm 0.002$ %	1 year at + 25 $^{\circ}$ C

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

ORNV (Divider)

Vishay Thin Film

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



DIMENSIONS AND IMPRINTING in inches and millimeters

Technical drawing of an ORNV x-x component. The drawing includes three views: a top view, a side view, and a detail view of the mounting tabs.

- Top View:** Shows a rectangular component with four mounting tabs on each long side. Dimensions include:
 - A:** Overall height.
 - B:** Distance from the left edge to the center of the first tab.
 - C:** Distance between the centers of adjacent tabs.
 - D:** Overall width.
- Side View:** Shows the component's profile with dimensions:
 - E:** Height of the top flange.
 - F:** Height of the main body.
 - G:** Total height.
 - Ø:** Diameter of the mounting hole.
- Detail View:** Shows a close-up of the mounting tabs with dimensions:
 - H:** Height of the tab.
 - I:** Width of the tab.

Labels on the component include "ORNV x-x", "Part Number", and "Date Code".

DIMENSION	INCHES	MILLIMETERS
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°	2° to 6°

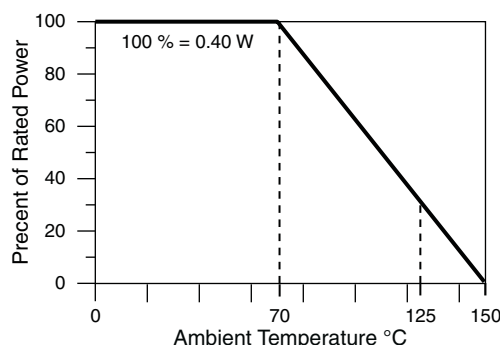
Note

- 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

DERATING CURVE



GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: ORNV50015001UF

O	R	N	V	5	0	0	1	5	0	0	1	U	F	
O	R	N	T	V	5	0	0	1	5	0	0	1	U	F
GLOBAL MODEL (4 or 5 digits)				RESISTANCE				(REF.) RESISTANCE				PACKAGING		
ORNV (Tin/lead)				R_1 The first 3 digits are significant figures and the last digit specifies the number of zeros. Example: 5001 = 5 kΩ				R_2 The first 3 digits are significant figures and the last digit specifies the number of zeros. Example: 5001 = 5 kΩ				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		
ORNTV (Lead (Pb)-free) (e3)														