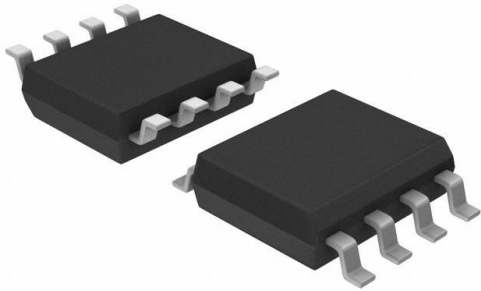


# ORNTV25025002T1 Datasheet

[www.digi-electronics.com](http://www.digi-electronics.com)



<https://www.DiGi-Electronics.com>

DiGi Electronics Part Number	ORNTV25025002T1-DG
Manufacturer	<a href="#">Vishay Dale Thin Film</a>
Manufacturer Product Number	ORNTV25025002T1
Description	RES NETWORK 5 RES MULT OHM 8SOIC
Detailed Description	25k, 50k Ohm $\pm 0.1\%$ 100mW Power Per Element Voltage Divider 5 Resistor Network/Array $\pm 25\text{ppm}/^\circ\text{C}$ 8-SOIC (0.154", 3.90mm Width)

This model ORNTV25025002T1 is available at DiGi Electronics.

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## Purchase and inquiry

Manufacturer Product Number:

ORNTV25025002T1

Series:

ORNV

Circuit Type:

Voltage Divider

Tolerance:

±0.1%

Resistor Matching Ratio:

±0.05%

Number of Pins:

8

Temperature Coefficient:

±25ppm/°C

Grade:

-

Applications:

Voltage Divider (TCR Matched)

Package / Case:

8-SOIC (0.154", 3.90mm Width)

Size / Dimension:

0.194" L x 0.157" W (4.93mm x 3.99mm)

Manufacturer:

Vishay Dale Thin Film

Product Status:

Active

Resistance (Ohms):

25k, 50k

Number of Resistors:

5

Resistor-Ratio-Drift:

±5ppm/°C

Power Per Element:

100mW

Operating Temperature:

-55°C ~ 125°C

Qualification:

-

Mounting Type:

Surface Mount

Supplier Device Package:

8-SOIC

Height - Seated (Max):

0.068" (1.73mm)

## Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8533.21.0020

Moisture Sensitivity Level (MSL):

1 (Unlimited)

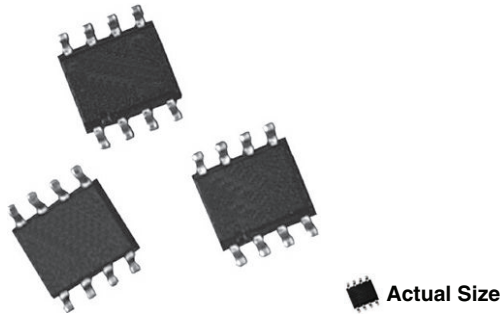
ECCN:

EAR99


[www.vishay.com](http://www.vishay.com)
**ORNV (Divider)**

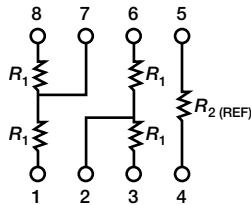
Vishay Dale Thin Film

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



Vishay Dale 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  $\pm 5$  ppm/ $^{\circ}$ C
- 0.068" (1.73 mm) maximum seated height
- Rugged molded case construction with no internal solder (JEDEC<sup>®</sup> MS-012 variation AA package)
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS\***  
Available  
**HALOGEN FREE**

### Note

\* This datasheet provides information about parts that are RoHS-compliant and / or parts that are non RoHS-compliant. For example, parts with lead (Pb) terminations are not RoHS-compliant. Please see the information / tables in this datasheet for details

### TYPICAL PERFORMANCE

	ABSOLUTE	TRACKING
TCR	25	5
	ABSOLUTE	RATIO
TOL.	0.1	0.05

### STANDARD RESISTANCE OFFERING

$R_1$ ( $\Omega$ ) (4 Voltage Divider Resistors)	$R_2$ ( $\Omega$ ) (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 $\Omega$ to 50 k $\Omega$	-
TCR: Absolute	$\pm 25$ ppm/ $^{\circ}$ C	-55 $^{\circ}$ C to +125 $^{\circ}$ C
TCR: Tracking	$\pm 5$ ppm/ $^{\circ}$ C	-55 $^{\circ}$ C to +125 $^{\circ}$ C
Tolerance: Absolute	$\pm 0.1$ %	+25 $^{\circ}$ C
Tolerance: Ratio	$\pm 0.05$ %	+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 $\mu$ 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



www.vishay.com

# ORNV (Divider)

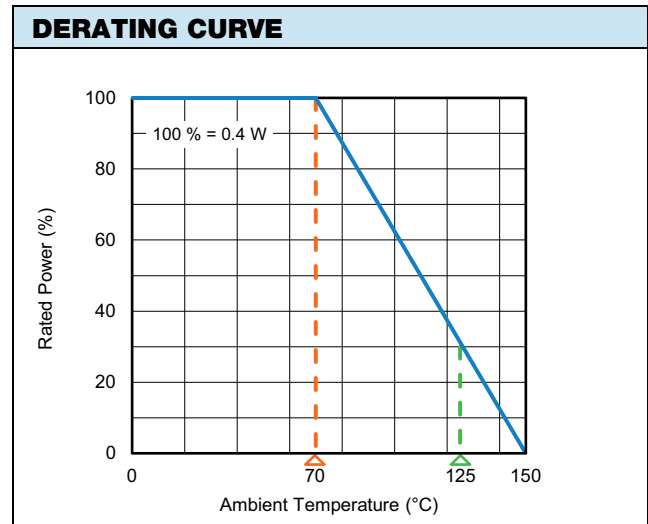
Vishay Dale Thin Film

DIMENSIONS AND IMPRINTING in inches and millimeters			
	DIMENSION	INCHES	MILLIMETERS
	A	0.154 ± 0.003	3.90 ± 0.09
	B	0.016 ± 0.002	0.4 ± 0.06
	C	0.050	1.27
	D	0.193 ± 0.004	4.90 ± 0.1
	E	0.008 ± 0.001	0.20 ± 0.03
	F	0.032 ± 0.016	0.81 ± 0.4
	G	0.236 ± 0.008	6.00 ± 0.2
	H	0.068 max.	1.73
	I	0.007 ± 0.003	0.18 ± 0.07
	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



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		
<b>ORNV</b> (Tin/lead)  <b>ORNTV</b> (Lead (Pb)-free) (e3)				<b>R<sub>1</sub></b> The first 3 digits are significant figures and the last digit specifies the number of zeros. Example: <b>5001 = 5 kΩ</b>				<b>R<sub>2</sub></b> The first 3 digits are significant figures and the last digit specifies the number of zeros. Example: <b>5001 = 5 kΩ</b>				TAPE AND REEL <b>T0</b> = 100 min., 100 mult. <b>T1</b> = 1000 min., 1000 mult. <b>T3</b> = 300 min., 300 mult. <b>T5</b> = 500 min., 500 mult. <b>TF</b> = full reel 3000 <b>TS</b> = 100 min., 1 mult.  <b>UF = TUBED</b>		



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