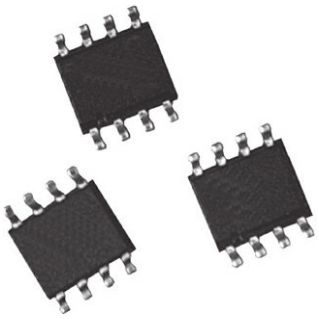
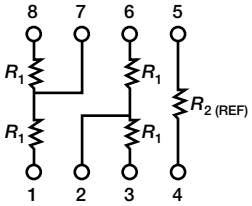
Molded, 50 mil Pitch, Dual-In-Line Thin Film Divider, Surface Mount Resistor Network



Actual Size

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 ± 5 ppm/°C
- 0.068" (1.73 mm) maximum seated height
- Rugged molded case construction with no internal solder (JEDEC® MS-012 variation AA package)
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Pb-free Available

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

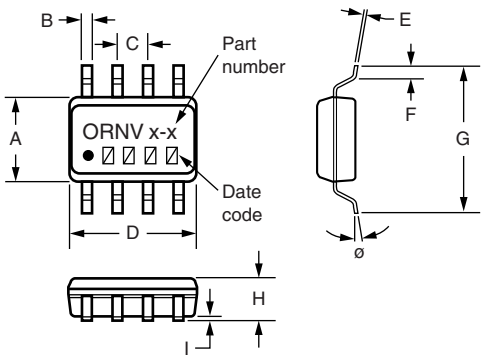
Note

- Consult factory for additional values and schematics

STANDARD ELECTRICAL SPECIFICATIONS

TEST	SPECIFICATIONS	CONDITIONS
Material	Passivated nichrome	-
Pin/Lead Number	8	-
Resistance Range	2 kΩ to 50 kΩ	-
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	Δ*R* ± 0.05 %	2000 h at +70 °C
Stability: Ratio	Δ*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	Δ*R* ± 0.01 %	1 year at +25 °C
Shelf Life Stability: Ratio	Δ*R* ± 0.002 %	1 year at +25 °C

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°

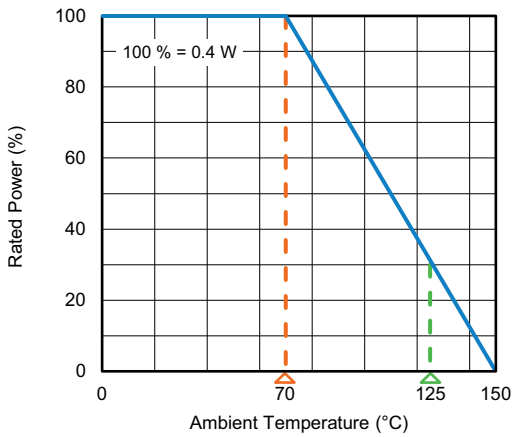
Note

- 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

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) **ORNTV** (Lead (Pb)-free) (e3)	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

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