FHV Radial



Vishay Techno

Thick Film Planar Resistors, Through-Hole, Radial Lead, High Voltage



MECHANICAL SPECIFICATIONS

Terminal Strength: 5 pound pull test **Solderability:** Continuous satisfactory coverage when tested in accordance with MIL-R-10509

MATERIAL SPECIFICATIONS

Element: High temperature fired cermet film Core: High purity 96 % alumina Coating: Conformal coat epoxy Termination: Standard lead material is tin plated copper

FEATURES

- Non-inductive design
- Matched sets available
- Ratio dividers available, see Vishay Techno's TR, TD datasheet

Special testing available

- Low TCR: ± 200 ppm/°C standard, ± 100 ppm/°C available
- Tolerance: ± 10 %, ± 5 %, ± 2 %, ± 1 % standard
- Tolerance and/or TCR matching available upon request
- Material categorization: For definitions of compliance please see <u>www.vishay.com/doc?99912</u>

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.

TEMPERATURE COEFFICIENT CODE					
CODE	TEMPERATURE COEFFICIENT	RANGE			
К	± 100 ppm/°C	- 55 °C to + 125 °C			
Ν	± 200 ppm/°C	- 55 °C to + 125 °C			

GLOBAL MODEL / SIZE	POWER RATING		MAXIMUM WORKING	RESISTANCE	TOLERANCE	TEMPERATURE
	P _{70 °C} ₩	P _{125 °C} W	VOLTAGE ⁽¹⁾ V	RANGE ⁽²⁾ Ω	± %	COEFFICIENT ± ppm/°C
FHV025	0.25	0.125	750	10K to 100M	1, 2, 5, 10	100, 200
FHV050	0.50	0.25	1.5K	10K to 100M	1, 2, 5, 10	100
				10K to 500M	1, 2, 5, 10	200
FHV075	0.25	0.125	3.75K	500 to 500M	1, 2, 5, 10	100
FHVU/S				100 to 1G	1, 2, 5, 10	200
	1	0.50	7.5K	500 to 1G	1, 2, 5, 10	100
FHV100				100 to 1G	1, 2, 5, 10	200
				1.1G to 2G	5, 10	200
	1.5	0.75	11.25K	1M to 1G	1, 2, 5, 10	100
FHV150				10K to 1G	1, 2, 5, 10	200
				1.1G to 2G	5, 10	200
	1	0.50	3.5K	500 to 1G	1, 2, 5, 10	100
FHV160				100 to 1G	1, 2, 5, 10	200
				1.1G to 2G	5, 10	200
		1	15K	500M to 1G	1, 2, 5, 10	100
FHV200	2			200 to 1G	1, 2, 5, 10	200
				1.1G to 8G	5, 10	200
	2	1	7.5K	1M to 1G	1, 2, 5, 10	100
FHV400				20K to 1G	1, 2, 5, 10	200
				1.1G to 2G	5, 10	200
FHV500	4	2	15K	1M to 1G	1, 2, 5, 10	100
				30K to 1G	1, 2, 5, 10	200
				1.1G to 10G	5, 10	200

Notes

⁽¹⁾ Continuous working voltage shall be $\sqrt{P \times R}$ or maximum working voltage, whichever is less.

⁽²⁾ All resistance values are calibrated at 100 V_{DC}. Calibration at other voltages upon request.



RoHS

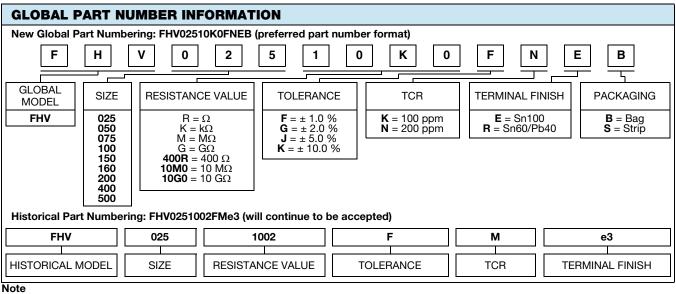
HALOGEN

FREE



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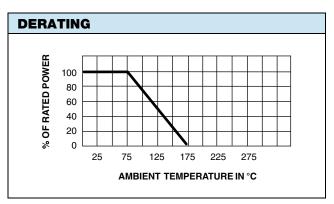
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For additional information on packaging, refer to the Through Hole Resistor Packaging document (<u>www.vishay.com/doc?31544</u>).

DIMENSIONS in inches (millimeters) Figure 1 Figure 2 в 0.125 (3.18) 0.125 (3.18) в max. max. Α 0.080 (2.03) Ref. — D[±]/2^{0.100} 0.050 (1.27) Ref. D ±,0.100 (2.54) ¥ (2.54) C ± 0.032 (0.813) ¥ ± 0.002 E (0.051) →^{||}← E ± 0.002 (0.051) →II← E 0.010 (0.25) <- C Dia FIGURE **MODEL - SIZE** A (max.) (Height) B (max.) (Length) C (Lead Spacing) D (Lead Length) E (Lead DIA) FHV025 0.300 (7.62) 0.300 (7.62) 0.200 (5.08) 0.250 (6.35) 0.018 (0.457) 1 FHV050 0.380 (9.65) 0.380 (9.65) 0.200 (5.08) 0.360 (9.14) 0.020 (0.508) 1 FHV075 0.570 (14.48) 1.50 (38.10) 2 0.210 (5.33) 0.400 (10.16) 0.025 (0.635) 2 FHV100 0.280 (7.11) 1.07 (27.18) 0.900 (22.86) 1.50 (38.10) 0.032 (0.813) FHV150 0.330 (8.38) 1.57 (39.88) 1.40 (35.56) 1.50 (38.10) 0.032 (0.813) 2 2 FHV160 0.550 (13.97) 0.550 (13.97) 0.400 (10.16) 1.50 (38.10) 0.032 (0.813) 2 FHV200 0.330 (8.38) 2.04 (51.82) 1.90 (48.26) 1.50 (38.10) 0.032 (0.813) FHV400 0.550 (13.97) 1.05 (26.67) 0.900 (22.86) 1.50 (38.10) 0.032 (0.813) 2 FHV500 0.550 (13.97) 2.07 (52.58) 1.90 (48.26) 1.50 (38.10) 0.032 (0.813) 2

ENVIRONMENTAL PERFORMANCE				
TEST	MAXIMUM ∆R (Typical Test Lots)			
Short time overload	< ± 0.2 %			
Moisture resistance	< ± 0.5 %			
Shock	< ± 0.2 %			
Vibration	< ± 0.2 %			
Temperature cycling	< ± 0.5 %			
Load life	< ± 1.0 %			
Dielectric withstanding voltage	< ± 0.15 %			
Resistance to soldering heat	< ± 0.1 %			



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2 For technical questions, contact: te1resistors@vishay.com Document Number: 68001

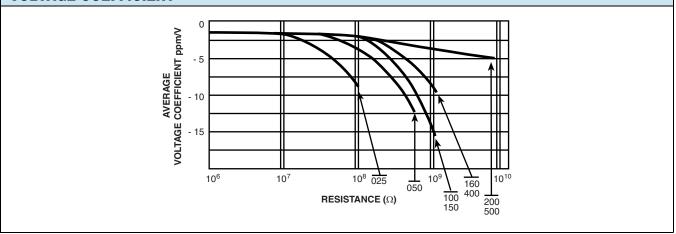
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VOLTAGE COEFFICIENT





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