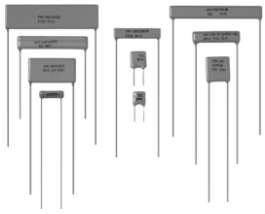
Thick Film Planar Resistors, Through-Hole, High Voltage



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 and ± 50 ppm/°C available
- Tolerance: ± 10 %, ± 5 %, ± 2 %, ± 1 % standard tolerance and/or TCR matching available upon request
- Halogen-free according to IEC 61249-2-21 definition
- Compliant to RoHS directive 2002/95/EC

Pb Available
e3
RoHS* COMPLIANT
HALOGEN FREE

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

STANDARD ELECTRICAL SPECIFICATIONS

MODEL	POWER RATING		MAXIMUM WORKING VOLTAGE (2)	RESISTANCE RANGE (Ω) (1)	
	$P_{70\,°C}$ (W)	$P_{125\,°C}$ (W)	(V)	± 200 ppm/°C	± 100 ppm/°C
FHV025	0.25	0.125	750	10K to 100M	10K to 100M
FHV050	0.50	0.25	1.5K	10K to 500M	10K to 100M
FHV075	0.25	0.125	3.75K	100 to 1G	500 to 500M
FHV100	1.0	0.50	7.5K	100 to 2G	500 to 1G
FHV150	1.5	0.75	11.25K	10K to 2G	1M to 1G
FHV160	1.0	0.50	3.5K	100 to 2G	500 to 1G
FHV200	2.0	1.0	15K	200 to 8G	500M to 1G
FHV400	2.0	1.0	7.5K	20K to 2G	1M to 1G
FHV500	4.0	2.0	15K	30K to 10G	1M to 1G

Notes
(1) All resistance values are calibrated at 100 V_{DC}. Calibration at other voltages upon request.
(2) Continuous working voltage shall be $\sqrt{P \times R}$ or maximum working voltage, whichever is less.

GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: FHV02510K0FNEB (preferred part number format)

F	H	V	0	2	5	1	0	K	0	F	N	E	B

GLOBAL MODEL	SIZE	RESISTANCE VALUE	TOLERANCE	TCR	TERMINAL FINISH	PACKAGING
FHV	**025** **050** **075** **100** **150** **160** **200** **400** **500**	R = Ω K = kΩ M = MΩ G = GΩ **400R** = 400 Ω **10M0** = 10 MΩ **10G0** = 10 GΩ	**F** = ± 1.0 % **G** = ± 2.0 % **J** = ± 5.0 % **K** = ± 10.0 %	**K** = 100 ppm **N** = 200 ppm	**E** = Sn100 **R** = Sn60/Pb40	**B** = Bag **S** = Strip

Historical Part Numbering: FHV0251002FMe3 (will continue to be accepted)

FHV	025	1002	F	M	e3
HISTORICAL MODEL	SIZE	RESISTANCE VALUE	TOLERANCE	TCR	TERMINAL FINISH

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

DIMENSIONS in inches (millimeters)

Figure 1

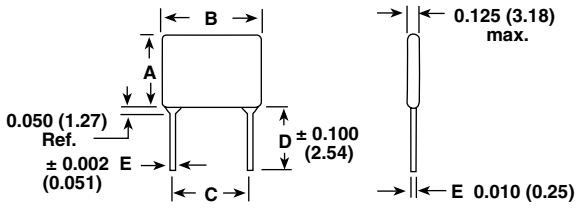
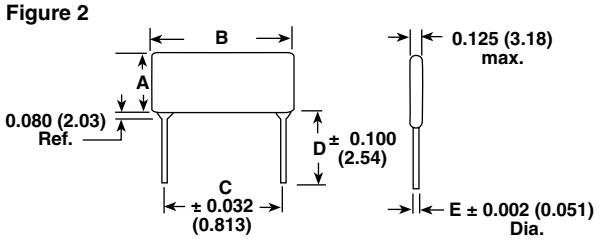


Figure 2

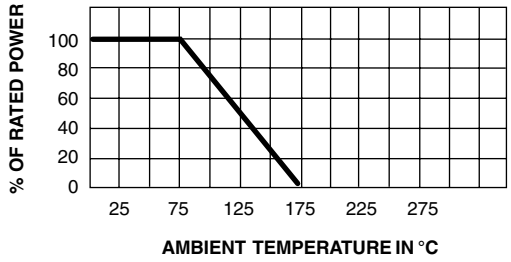


MODEL - SIZE	A (max.)	B (max.)	C	D	E	FIGURE
FHV025	0.300 (7.62)	0.300 (7.62)	0.200 (5.08)	0.250 (6.35)	0.018 (0.457)	1
FHV050	0.380 (9.65)	0.380 (9.65)	0.200 (5.08)	0.360 (9.14)	0.020 (0.508)	1
FHV075	0.210 (5.33)	0.570 (14.48)	0.400 (10.16)	1.50 (38.10)	0.025 (0.635)	2
FHV100	0.280 (7.11)	1.07 (27.18)	0.900 (22.86)	1.50 (38.10)	0.032 (0.813)	2
FHV150	0.330 (8.38)	1.57 (39.88)	1.40 (35.56)	1.50 (38.10)	0.032 (0.813)	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)	2
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

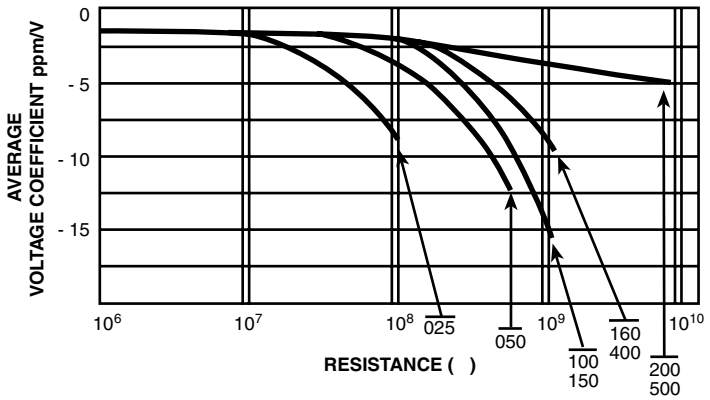
ENVIRONMENTAL PERFORMANCE

TEST	MAXIMUM ΔR (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 %

DERATING



VOLTAGE COEFFICIENT



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