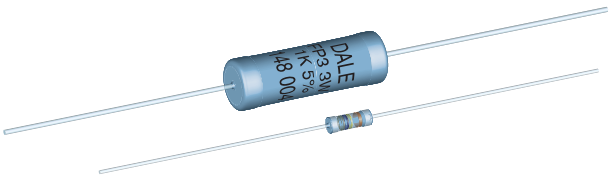
Metal Film Resistors, Industrial, Flameproof



FEATURES

- Small physical size
- Low cost
- FP resistors have the ability to withstand overloads up to 100 times rated power without any trace of flame
- Exceptional frequency characteristics
- Especially suited for circuitry where functions, environments and duty cycles demand power resistors
- Electroplated tin-lead or lead (Pb)-free solder finish leads
- Tighter tolerances available on request
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912

Pb-free Available

e3 RoHS* COMPLIANT

Note

* Lead (Pb)-containing terminations are not RoHS-compliant. Exemptions may apply.

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	HISTORICAL MODEL	POWER RATING $P_{25\,°C}$ W	POWER RATING $P_{40\,°C}$ W	POWER RATING $P_{70\,°C}$ W	MAXIMUM WORKING VOLTAGE (1) V	RESISTANCE RANGE (2) Ω	TOLERANCE ± %	TEMPERATURE COEFFICIENT ± ppm/°C
FP01/2	FP1/2	-	-	0.5	350	10 to 1M	1, 2, 5, 10	150
FP0001	FP1	-	-	1	500	10 to 1M	1, 2, 5, 10	150
FP0032	FP32	-	-	1	500	10 to 1M	1, 2, 5, 10	150
FP0002	FP2	3.5	3	2	500	25 to 125K	1, 2, 5, 10	150
FP0042	FP42	-	-	2	500	25 to 125K	1, 2, 5, 10	150
FP0003	FP3	4	4	3	500	22 to 125K	1, 2, 5, 10	150
FP0004	FP4	5.5	5	4	500	70 to 125K	1, 2, 5, 10	150
FP0005	FP5	6.5	6	5	600	70 to 125K	1, 2, 5, 10	150
FP0007	FP7	7.5	-	7	700	25 to 125K	1, 2, 5, 10	150
FP0010	FP10	-	10	-	700	25 to 125K	1, 2, 5, 10	150
FP0067	FP67	5	-	-	500	35 to 19K	1, 2, 5, 10	150
FP0069	FP69	3	-	2	500	25 to 126K	1, 2, 5, 10	150

Notes

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

(2) Contact factory for values outside these published range.

GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: FP000251K1F9251B8 (preferred part numbering format)

F	P	0	0	0	2	5	1	K	1	F	9	2	5	1	B	8

GLOBAL MODEL	RESISTANCE VALUE	TOLERANCE CODE	SPEC CODES	PACKAGING (3)
(See Standard Electrical Specifications table)	**R** = Ω **K** = kΩ **M** = MΩ **10R0** = 10 Ω **1K30** = 1.3 kΩ **1M00** = 1.0 MΩ	**F** = ± 1 % **G** = ± 2 % **J** = ± 5 % **K** = ± 10 %	(See Spec Codes table)	**EK** = Lead (Pb)-free, strip **EL** = Lead (Pb)-free, lacer **EA** = Lead (Pb)-free, T/R **B8** = Tin/lead, strip **LB** = Tin/lead, lacer **CH** = Tin/lead, T/R (750 pieces) **CJ** = Tin/lead, T/R (1000 pieces) **G1** = Tin/lead, T/R (600 pieces)

Historical Part Number: FP2 5112 F B8 (will continue to be accepted)

FP2	5112	F	B8
HISTORICAL MODEL	RESISTANCE VALUE	TOLERANCE CODE	PACKAGING

Notes

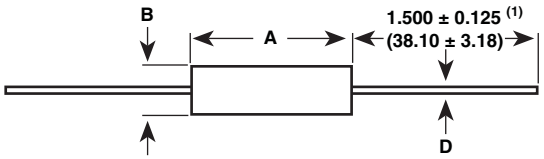
(3) Some packaging codes are model specific.

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

For technical questions, contact: ff2aresistors@vishay.com

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DIMENSIONS in inches (millimeters)



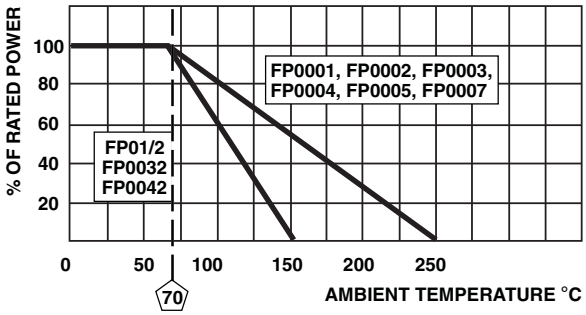
GLOBAL MODEL	A	B	D
FP01/2	0.360 ± 0.020 (9.14 ± 0.51) (2)	0.138 + 0.012 - 0.023 (3.51 + 0.31 - 0.58)	0.032 ± 0.002 (0.81 ± 0.05)
FP0001	0.560 ± 0.031 (14.22 ± 0.79)	0.190 + 0.005 - 0.030 (4.83 + 0.13 - 0.76)	0.032 ± 0.002 (0.81 ± 0.05)
FP0032	0.560 ± 0.031 (14.22 ± 0.79)	0.190 + 0.005 - 0.030 (4.83 + 0.13 - 0.76)	0.040 ± 0.002 (1.02 ± 0.05)
FP0002	0.687 ± 0.031 (17.45 ± 0.79)	0.300 ± 0.020 (7.62 ± 0.51)	0.032 ± 0.002 (0.81 ± 0.05)
FP0042	0.687 ± 0.031 (17.45 ± 0.79)	0.300 ± 0.020 (7.62 ± 0.51)	0.045 ± 0.002 (1.14 ± 0.05)
FP0003	0.900 ± 0.031 (22.86 ± 0.79)	0.300 ± 0.020 (7.62 ± 0.51)	0.032 ± 0.002 (0.81 ± 0.05)
FP0004	1.530 ± 0.035 (38.86 ± 0.89)	0.300 ± 0.020 (7.62 ± 0.51)	0.032 ± 0.002 (0.81 ± 0.05)
FP0005	1.710 ± 0.035 (43.43 ± 0.89)	0.300 ± 0.020 (7.62 ± 0.51)	0.032 ± 0.002 (0.81 ± 0.05)
FP0007	2.040 ± 0.035 (51.82 ± 0.89)	0.300 ± 0.020 (7.62 ± 0.51)	0.032 ± 0.002 (0.81 ± 0.05)
FP0010	2.040 ± 0.035 (51.82 ± 0.89)	0.300 ± 0.020 (7.62 ± 0.51)	0.032 ± 0.002 (0.81 ± 0.05)
FP0067	0.900 ± 0.031 (22.86 ± 0.79)	0.300 ± 0.020 (7.62 ± 0.51)	0.032 ± 0.002 (0.81 ± 0.05)
FP0069	0.516 ± 0.021 (13.11 ± 0.53)	0.225 ± 0.012 (5.72 ± 0.31)	0.032 ± 0.002 (0.81 ± 0.05)

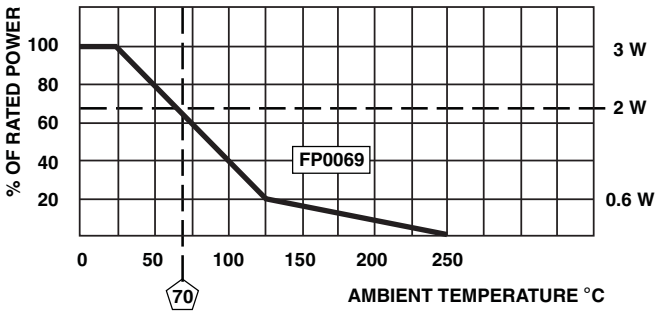
Notes

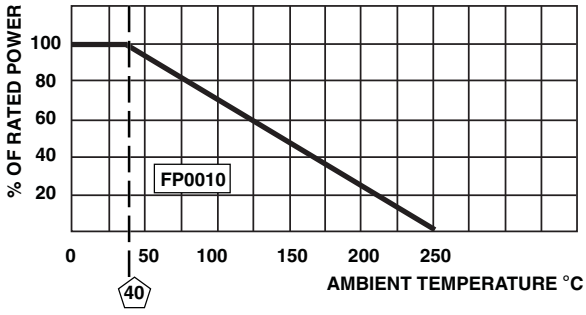
(1) Lead length for product in strip pack. For product supplied in Tape and Reel, the actual lead length would be based on body size, tape spacing and lead trim.

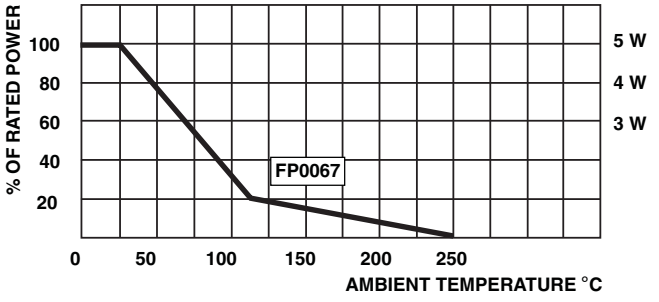
(2) Clean lead to clean lead dimensions on FP1/2 are 0.347" (11.10 mm) maximum.

DERATING









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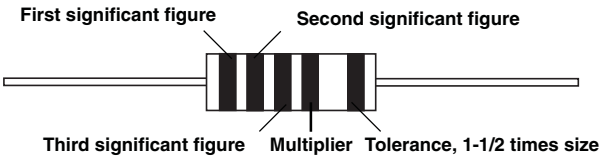
SPEC CODES

GLOBAL MODEL	SPEC	RESISTOR TOLERANCE	DESCRIPTION
FP01/2	5605	1, 2, 5, 10	Color banded, 4 or 5 bands depending on tolerance
	5610	1, 2, 5, 10	Alphanumeric marking
FP0001	6200	2, 5, 10	Color banded, 4 bands
	6201	1	Color banded, 5 bands
FP0032	6601	1	Color banded, 5 bands
	6602	2, 5, 10	Color banded, 4 bands
FP0002	9251	1, 2, 5, 10	Alphanumeric marking
FP0042	9201	1	Color banded, 5 bands
	9202	2, 5, 10	Color banded, 4 bands
FP0003	9300	1, 2, 5, 10	Alphanumeric marking
	9320	2, 5, 10	Color banded, 4 bands
	9330	1	Color banded, 5 bands
FP0004	9400	1, 2, 5, 10	Alphanumeric marking
FP0005	9500	1, 2, 5, 10	Alphanumeric marking
FP0007	9700	1, 2, 5, 10	Alphanumeric marking
FP0010	9800	1, 2, 5, 10	Alphanumeric marking
FP0067	9550	1, 2, 5, 10	Alphanumeric marking
FP0069	7500	1, 2, 5, 10	Alphanumeric marking
	7536	2, 5, 10	Color banded, 4 bands
	7538	1	Color banded, 5 bands

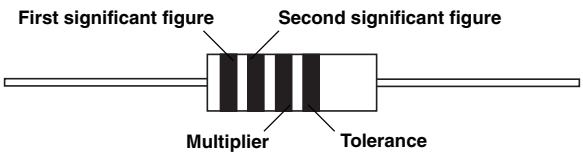
MARKING

- DALE - Value - Tolerance - Model and case size
(Date and source code included on some styles)

± 1 % tolerance parts are marked with 5 color bands. 5 bands, EIA Standard RS196.



± 2 %, ± 5 % and ± 10 % tolerance parts are marked with 4 color bands. 4 band commercial, EIA Standard.



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PERFORMANCE

TEST	MAXIMUM ΔR (TYPICAL TEST LOTS) ± %											
	FP01/2	FP0001	FP0032	FP0002	FP0042	FP0003	FP0004	FP0005	FP0007	FP0010	FP0067	FP0069
Short Time Overload	0.5	1.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Low Temperature Operation	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.25	0.25
Moisture Resistance	1.0	1.5	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Shock	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Vibration	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Temperature Cycle	1.0	1.0	1.0	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.5
Load Life (1000 h Rated Conditions)	1.0	2.0	2.0	5.0	2.0	5.0	5.0	5.0	5.0	5.0	5.0	3.0
Terminal Strength	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Dielectric Withstanding Voltage	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.25	0.25
Effect Solder Heat	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.25	0.25

PACKAGING

GLOBAL MODEL	PACKAGING TYPE	PACKAGING CODE	
		LEAD (Pb)-BEARING	LEAD (Pb)-FREE
FP01/2, FP0001, FP0032, FP0069	Strip	B8	EK
	Tape/reel	CJ	EA
FP0002, FP0003, FP0042, FP0067	Strip	B8	EK
	Tape/reel	CH	EA
FP0004	Lacer	LB	EL
	Tape/reel	G1	EA
FP0005, FP0007, FP0010	Lacer	LB	EL

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