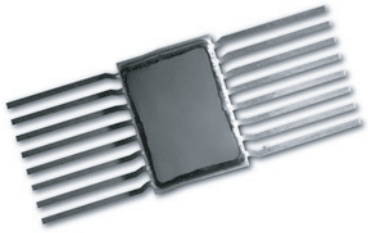
Hermetic Flat-Pak Resistor Networks



Product may not be to scale

FEATURES

- Lead (Pb)-free available
- Military/Aerospace
- Hermetically sealed

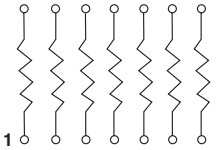
Pb-free Available

RoHS* COMPLIANT

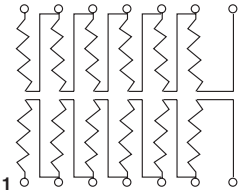
Vishay Thin Film offers a broad line of precision resistor networks in hermetic Flat-Packs for surface mount requirements in military, space or other harsh environmental applications. These networks provide the long-term stability necessary to insure continuous specification and performance over the 20 to 30 year life required for space applications. The fabrication of these devices is performed under tight procedural and environmental controls to insure conformance to all 883C Level H or K requirements. Custom configurations, values and tolerance combinations are available with fast turnaround.

PRODUCT CAPABILITIES	
Material	Passivated nichrome
Resistance Range	10 Ω to 1 MΩ total
Absolute Resistance Tolerance	1 % to 0.05 %
Resistance Ratio Tolerance	0.1 % to 0.01 %
Absolute TCR	± 10, 25, 50 ppm/°C
Ratio TCR	± 5 ppm/°C standard
Absolute Resistor Stability	1000 ppm/2000 h at 70 °C
Ratio Resistor Stability	300 ppm/2000 h at 70 °C
Package Power Dissipation	800 mW/70 °C
Operating Temperature Range	- 55 °C to + 125 °C

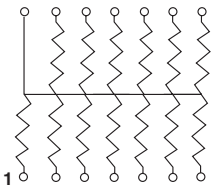
STANDARD CONFIGURATIONS



FP200	
Number of Resistors	7, 8
Number of Leads	14, 16
Type Connection	Isolated
Values Available	500 Ω - 100 kΩ



FP201	
Number of Resistors	12, 14
Number of Leads	14, 16
Type Connection	Series
Values Available	500 Ω - 100 kΩ



FP202	
Number of Resistors	13, 15
Number of Leads	14, 16
Type Connection	Common
Values Available	500 Ω - 100 kΩ

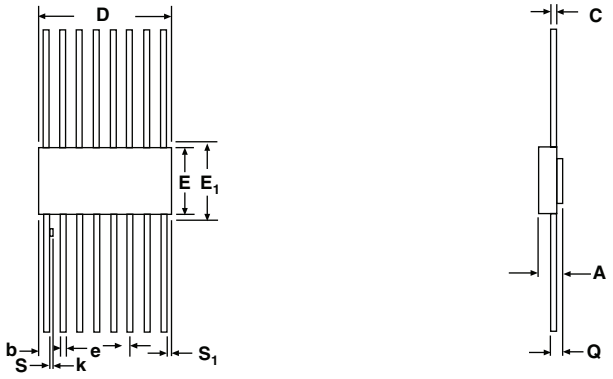
* Pb containing terminations are not RoHS compliant, exemptions may apply

FP 200, 201, 202

Vishay Thin Film — Hermetic Flat-Pak Resistor Networks

PACKAGE OUTLINE DRAWING AND DIMENSIONS

FLAT-PAK FP200



DIMENSIONS in inches	14 LEAD		16 LEAD	
	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM
A	0.086	0.106	0.045	0.115
b	0.015	0.019	0.015	0.019
C	0.004	0.007	0.003	0.009
D	0.373	0.383	-	0.440
e	0.047	0.053	0.050	BSC
E	0.250	0.260	0.245	0.285
E_1	-	0.290	-	0.315
E_2	0.158	0.172	0.130	-
E_3	0.030	-	0.030	-
L	-	-	0.250	0.370
Q	0.026	-	0.26	0.045
S	-	0.045	-	0.045
S_1	0.005	-	0.005	-
K	-	-	0.008	0.015

DIMENSIONS in millimeters	14 LEAD		16 LEAD	
	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM
A	2.18	2.69	1.14	2.92
b	0.38	0.48	0.38	0.48
C	0.10	0.18	0.08	0.23
D	9.47	9.73	-	11.18
e	1.19	1.35	1.27	BSC
E	6.35	6.60	6.22	7.24
E_1	-	7.37	-	8.00
E_2	4.01	4.37	3.30	-
E_3	0.76	-	0.76	-
L	-	-	6.35	9.40
Q	0.66	-	0.66	1.14
S	-	1.14	-	1.14
S_1	0.13	-	0.13	-
K	-	-	0.20	0.38

GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: FP2001681001BFBCW (preferred part number format)

F	P	2	0	0	1	6	8	1	0	0	1	B	F	B	C	W
F	P	2	0	2	1	6	1	3	1	0	0	1	B	F	B	C	W

GLOBAL MODEL	CASE SIZE	NUMBER OF RESISTORS (1 or 2 digits)	OHMIC VALUE	ABSOLUTE TOLERANCE	RATIO TOLERANCE	ABSOLUTE TCR	RATIO TCR	PACKAGING
FP200 **FP201** **FP202**	**14** **16** **14** **16** **14** **16**	**7** **8** **12** **14** **13** **16**	The first 3 digits are significant figures and the last digit specifies the number of zeros to follow. "R" designates the decimal point. Example: 10R0 = 10 Ω 1000 = 100 Ω 1001 = 1000 Ω	**A** = 0.05 % **B** = 0.1 % **C** = 0.2 % **D** = 0.5 % **F** = 1 % **G** = 2 % **J** = 5 % **K** = 10 % **M** = 20 %	**B** = 0.01 % **C** = 0.025 % **D** = 0.05 % **F** = 0.1 % **H** = 0.25 % **J** = 0.5 % **K** = 1 % **X** = Not applicable	**A** = 10 ppm/°C **B** = 25 ppm/°C **D** = 50 ppm/°C **E** = 100 ppm/°C	***C** = 2 ppm ***D** = 3 ppm **F** = 5 ppm **G** = 10 ppm **X** = N/A * Value dependant	**W** = WAFFLE 100 min. 1 mult

Historical Part Number example: FP2001681002BFBC (will continue to be accepted)

FP200	16	8	1002	B	F	B	C
MODEL	NUMBER OF LEADS	NUMBER OF RESISTORS	RESISTANCE	ABSOLUTE TOLERANCE	RATIO TOLERANCE	ABSOLUTE TCR	RATIO TCR

For technical questions, contact: thin-film@vishay.com

Document Number: 61073
Revision: 05-Mar-08

Disclaimer

All product specifications and data are subject to change without notice.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, “Vishay”), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay’s terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.