

## Hermetic Flat-Pak Resistor Networks



Product may not be to scale

### FEATURES

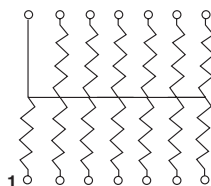
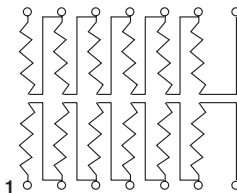
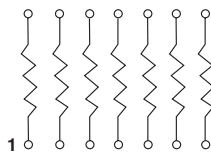
- Lead (Pb)-free available
- Military/Aerospace
- Hermetically sealed


**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 $\Omega$ to 1 M $\Omega$ total
Absolute Resistance Tolerance	1 % to 0.05 %
Resistance Ratio Tolerance	0.1 % to 0.01 %
Absolute TCR	$\pm$ 10, 25, 50 ppm/ $^{\circ}$ C
Ratio TCR	$\pm$ 5 ppm/ $^{\circ}$ C standard
Absolute Resistor Stability	1000 ppm/2000 h at 70 $^{\circ}$ C
Ratio Resistor Stability	300 ppm/2000 h at 70 $^{\circ}$ C
Package Power Dissipation	800 mW/70 $^{\circ}$ C
Operating Temperature Range	- 55 $^{\circ}$ C to + 125 $^{\circ}$ C

### STANDARD CONFIGURATIONS



FP200	
Number of Resistors	7, 8
Number of Leads	14, 16
Type Connection	Isolated
Values Available	500 $\Omega$ - 100 k $\Omega$

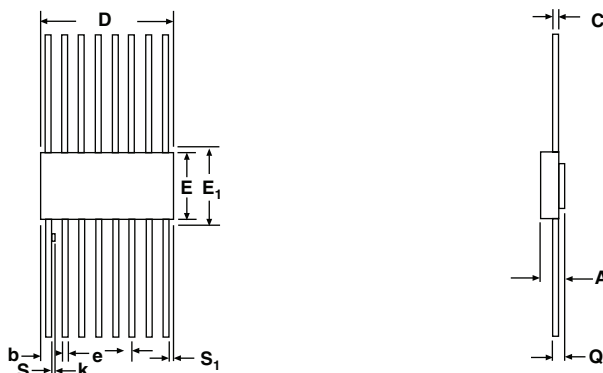
FP201	
Number of Resistors	12, 14
Number of Leads	14, 16
Type Connection	Series
Values Available	500 $\Omega$ - 100 k $\Omega$

FP202	
Number of Resistors	13, 15
Number of Leads	14, 16
Type Connection	Common
Values Available	500 $\Omega$ - 100 k $\Omega$

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

## 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 <sub>1</sub>	-	0.290	-	0.315
E <sub>2</sub>	0.158	0.172	0.130	-
E <sub>3</sub>	0.030	-	0.030	-
L	-	-	0.250	0.370
Q	0.026	-	0.26	0.045
S	-	0.045	-	0.045
S <sub>1</sub>	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 <sub>1</sub>	-	7.37	-	8.00
E <sub>2</sub>	4.01	4.37	3.30	-
E <sub>3</sub>	0.76	-	0.76	-
L	-	-	6.35	9.40
Q	0.66	-	0.66	1.14
S	-	1.14	-	1.14
S <sub>1</sub>	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	14 16	7 8	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	<b>A</b> = 0.05 % <b>B</b> = 0.1 % <b>C</b> = 0.2 % <b>D</b> = 0.5 % <b>F</b> = 1 % <b>G</b> = 2 % <b>J</b> = 5 % <b>K</b> = 10 % <b>M</b> = 20 %	<b>B</b> = 0.01 % <b>C</b> = 0.025 % <b>D</b> = 0.05 % <b>F</b> = 0.1 % <b>H</b> = 0.25 % <b>J</b> = 0.5 % <b>K</b> = 1 % <b>X</b> = Not applicable	<b>A</b> = 10 ppm/°C <b>B</b> = 25 ppm/°C <b>D</b> = 50 ppm/°C <b>E</b> = 100 ppm/°C	<b>*C</b> = 2 ppm <b>*D</b> = 3 ppm <b>F</b> = 5 ppm <b>G</b> = 10 ppm <b>X</b> = N/A  * Value dependant	<b>W</b> = WAFFLE 100 min. 1 mult
FP201	14 16	12 14						
FP202	14 16	13 16						

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



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