Hermetic Flat Pack Thin Film Resistor, Surface Mount Network



Product may not be to scale

FEATURES

- Military / aerospace
- Hermetically sealed
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Pb-free Available

RoHS* Available

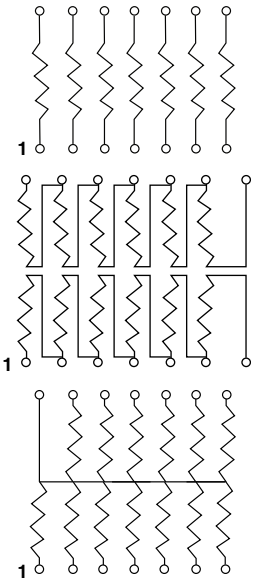
HALOGEN FREE

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

Vishay Dale 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 years to 30 years 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.

SCHEMATICS



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

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

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

STANDARD ELECTRICAL SPECIFICATIONS

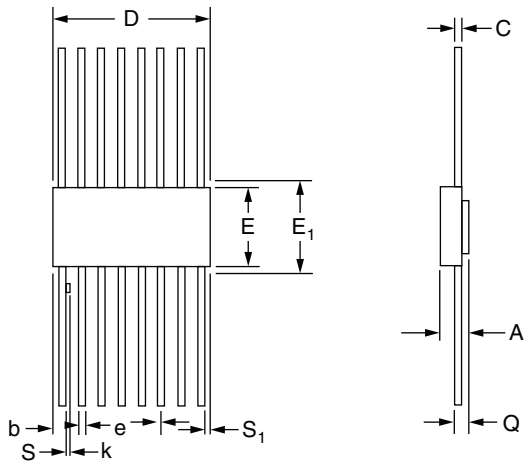
TEST	SPECIFICATIONS	CONDITIONS
Material	Passivated nichrome	-
Pin / Lead Number	14, 16	-
Resistance Range	10 Ω to 1 MΩ (total)	-
TCR: Absolute	± 10 ppm/°C to 50 ppm/°C	-
TCR: Tracking	± 5 ppm/°C (standard)	-
Tolerance: Absolute	± 0.05 % to ± 1 %	-
Tolerance: Ratio	± 0.01 % to ± 0.1 %	-
Power Rating: Resistor	100 mW	-
Power Rating: Package	800 mW	70 °C
Stability: Absolute	ΔR ± 0.05 %	2000 h at +70 °C
Stability: Ratio	ΔR ± 0.015 %	2000 h at +70 °C
Voltage Coefficient	-	-
Working Voltage	100 V max. not to exceed $\sqrt{P} \times R$	-
Operating Temperature Range	-55 °C to +125 °C	-
Storage Temperature Range	-55 °C to +150 °C	-
Noise	-	-
Thermal EMF	-	-
Shelf Life Stability: Absolute	ΔR ± 0.01 %	1 year at +25 °C
Shelf Life Stability: Ratio	ΔR ± 0.002 %	1 year at +25 °C

For technical questions, contact: thinfilm@vishay.com

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DIMENSIONS in inches (millimeters)

FLAT-PAK FP200



DIMENSION	14 LEAD		16 LEAD	
	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM
A	0.086 (2.18)	0.106 (2.69)	0.045 (1.14)	0.115 (2.92)
b	0.015 (0.38)	0.019 (0.48)	0.015 (0.38)	0.019 (0.48)
C	0.004 (0.10)	0.007 (0.18)	0.003 (0.08)	0.009 (0.23)
D	0.373 (9.47)	0.383 (9.73)	-	0.440 (11.18)
e	0.047 (1.19)	0.053 (1.35)	0.050 (1.27)	BSC
E	0.250 (6.35)	0.260 (6.60)	0.245 (6.22)	0.285 (7.24)
E_1	-	0.290 (7.37)	-	0.315 (8.00)
E_2	0.158 (4.01)	0.172 (4.37)	0.130 (3.30)	-
E_3	0.030 (0.76)	-	0.030 (0.76)	-
L	-	-	0.250 (6.35)	0.370 (9.40)
Q	0.026 (0.66)	-	0.26 (0.66)	0.045 (1.14)
S	-	0.045 (1.14)	-	0.045 (1.14)
S_1	0.005 (0.13)	-	0.005 (0.13)	-
k	-	-	0.008 (0.20)	0.015 (0.38)

GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: FP2001681001BFBCW

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 (1) **D** = 3 ppm (1) **F** = 5 ppm **G** = 10 ppm **X** = n/a	**W** = carrier packaging, 25 min., 1 mult.

Historical Part Number example: FP2001681002BFBC (for reference purposes only)

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

Note

(1) Value dependent

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