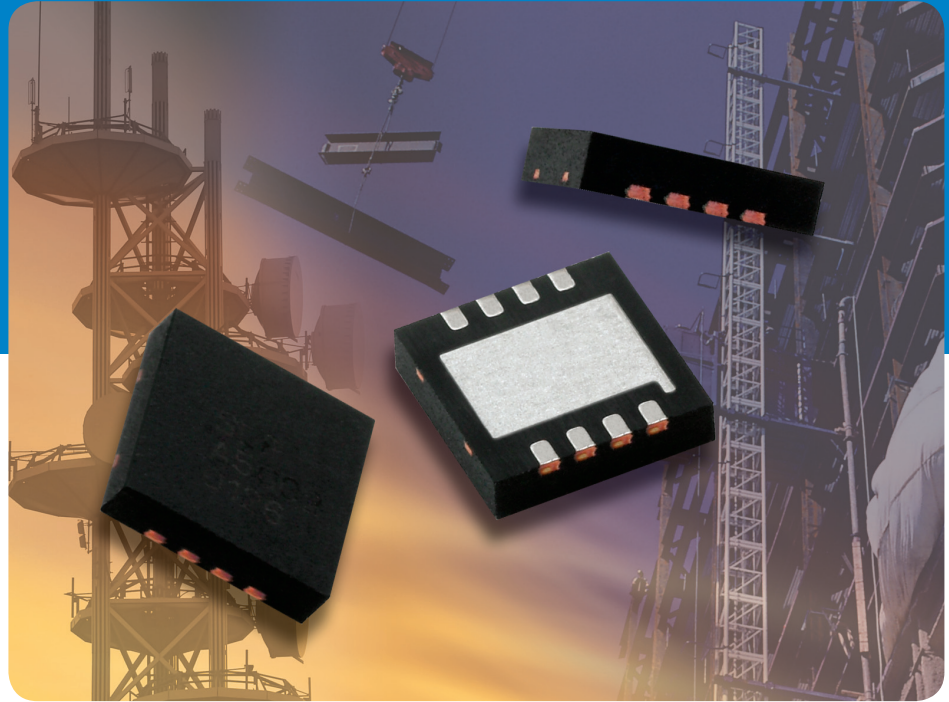




THIN FILM RESISTORS

DFN Series



Dual Flat No Lead Precision Thin Film Resistor SMD Network

KEY BENEFITS

- Four isolated resistors: 500 Ω to 100 k Ω
- Ratio tolerance to $\pm 0.025\%$
- Small size: 4 mm x 4 mm
- Low profile: 1 mm max.
- 0.8 mm terminal pitch
- Stable film and performance characteristics
 - Absolute: 500 ppm at 70 $^{\circ}\text{C}$, 2000 h
 - Ratio: 150 ppm at 70 $^{\circ}\text{C}$, 2000 h
- Lead (Pb)-free terminations
- Compliant to RoHS directive 2002/95/EC

APPLICATIONS

- Industrial
- Military
- Instrumentation
- Telecommunications
- Medical

Datasheet is available on our web site at www.vishay.com
 for DFN - <http://www.vishay.com/doc?60109>
 for DFN Divider - <http://www.vishay.com/doc?60110>

Molded Surface Mount Precision Thin Film Resistor Network

DFN



FEATURES

- 0.8 mm lead pitch
- MSL level 1 per J-STD-020
- Low profile 1 mm seated height
- Small size 4 mm x 4 mm size 50 % board savings over SOIC packages
- Wide resistance range 100 Ω to 100 kΩ available
- Custom configurations available
- Low TCR ± 25 ppm, TCR tracking to ± 3 ppm
- Ratio tolerances to ± 0.025 %
- Compliant to RoHS directive 2002/95/EC



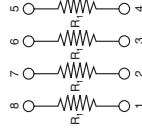
RoHS COMPLIANT

TYPICAL PERFORMANCE

	ABSOLUTE	TRACKING
TCR	25	3
TOL	0.1	0.05

The DFN series of precision surface mount resistor networks feature isolated thin film precision resistors mounted in a 0.8 mm pitch 4 mm x 4 mm dual flat no lead package. The networks feature 50 % savings in board space over traditional SOIC packages. They are ideally suited for applications of unity gain operational amplifiers that require close TC tracking and tight ratio tolerances over temperature. Custom configurations are available upon request.

SCHEMATIC



Note

- Consult factory for additional R values and schematics

GLOBAL PART NUMBER INFORMATION

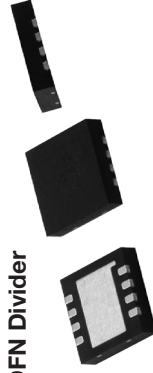
New Global Part Numbering: DFNA1002AT1

GLOBAL MODEL DFN (Lead (Pb)-free) (e3)	SCHEMATIC A = Isolated equal value resistors	RESISTANCE The first 3 digits are significant figures and the last digit specifies the number of zeros to follow. Example: 1002 = 10 kΩ 1003 = 100 kΩ 4991 = 4.99 kΩ	TOLERANCE AND RATIO TOLERANCE Z = ± 0.05 % abs. ± 0.025 ratio (1) A = ± 0.1 % abs. ± 0.05 % ratio B = ± 0.1 % abs. ± 0.1 % ratio C = ± 0.25 % abs. ± 0.1 % ratio D = ± 0.5 % abs. ± 0.1 % ratio F = ± 1.0 % abs. ± 0.5 % ratio	PACKAGING TAPE AND REEL T0 = 100 min., 100 mult T1 = 1000 min., 1000 mult (2) T3 = 300 min., 300 mult T5 = 500 min., 500 mult TF = Full reel TS = 100 min., 1 mult UF = TUBED
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Notes

- (1) Tolerance available on 1 kΩ and up
- (2) Preferred packaging code

DFN Divider



FEATURES

- 0.8 mm lead pitch
- MSL level 1 per J-STD-020
- Low profile 1 mm seated height
- Small size 4 mm x 4 mm size 50 % board savings over SOIC packages
- Low TCR ± 25 ppm, TCR tracking to ± 5 ppm
- Compliant to RoHS directive 2002/95/EC



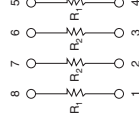
RoHS COMPLIANT

TYPICAL PERFORMANCE

	ABSOLUTE	TRACKING
TCR	25	5
TOL	0.1	0.05

The DFN series of thin film precision dividers surface mount resistor networks offer a wide ratio range that is listed in the standard resistance offering table. The 4 mm x 4 mm 0.8 mm pitch dual flat no lead package feature 50 % savings in board space over traditional SOIC packages. The DFN dividers are ideal for applications that require tight TC tracking and ratio tolerances over temperature.

SCHEMATIC



STANDARD RESISTANCE OFFERING (R1/R2)	
RATIO	R1 R2
100:1	100K 1K
50:1	50K 1K
25:1	25K 1K
20:1	20K 1K
10:1	10K 1K
5:1	10K 2K
2:1	10K 5K

GLOBAL PART NUMBER INFORMATION

GLOBAL MODEL DFNA (Lead (Pb)-free) (e3)	RESISTANCE (3, 4 or 5 digits) 2-1 5-1 10-1 20-1 50-1 100-1	PACKAGING TAPE AND REEL T0 = 100 min., 100 mult T1 = 1000 min., 1000 mult (3) T3 = 300 min., 300 mult T5 = 500 min., 500 mult TF = Full reel 3000 TS = 100 min., 1 mult UF = TUBED
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Note

- (3) Preferred packaging code

Revision 25-Jan-10

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For technical questions, contact thinfilm@vishay.com