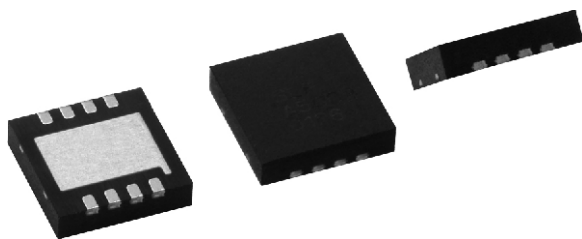
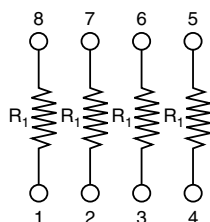


Dual Flat No Lead Molded Precision Thin Film Resistor Surface Mount Network



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



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 k Ω available
- Custom configurations available
- Low TCR ± 25 ppm, TCR tracking to ± 3 ppm
- Ratio tolerances to ± 0.025 %
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912


**RoHS
COMPLIANT**

TYPICAL PERFORMANCE

	ABSOLUTE	TRACKING
TCR	25	3
	ABSOLUTE	RATIO
TOL.	0.1	0.05

STANDARD RESISTANCE OFFERING ($R_1 =$)

500 Ω	10 k Ω
1 k Ω	20 k Ω
2 k Ω	50 k Ω
4.99 k Ω	100 k Ω
5 k Ω	

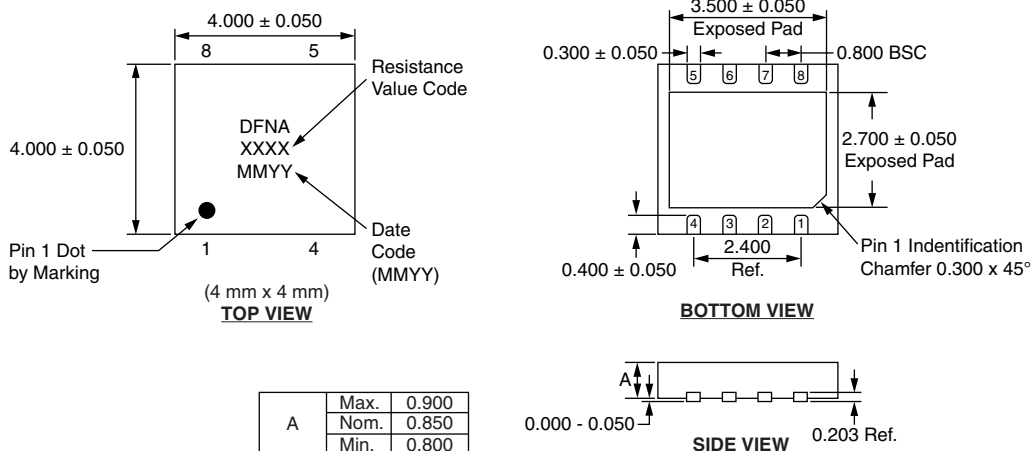
Note

- Consult factory for additional R values and schematics

STANDARD ELECTRICAL SPECIFICATIONS

TEST	SPECIFICATIONS	CONDITIONS
Material	Passivated nichrome	-
Pin/Lead Number	8	-
Resistance Range	100 Ω to 100 k Ω per resistor	-
TCR: Absolute	± 25 ppm/ $^{\circ}\text{C}$	-55 $^{\circ}\text{C}$ to +125 $^{\circ}\text{C}$
TCR: Tracking	± 3 ppm/ $^{\circ}\text{C}$	-55 $^{\circ}\text{C}$ to +125 $^{\circ}\text{C}$
Tolerance: Absolute	± 0.05 % to ± 1.0 %	+25 $^{\circ}\text{C}$
Tolerance: Ratio	± 0.025 % to ± 0.5 %	+25 $^{\circ}\text{C}$
Power Rating: Resistor	100 mW	Maximum at +70 $^{\circ}\text{C}$
Power Rating: Package	100 mW x number of resistors	Maximum at +70 $^{\circ}\text{C}$
Stability: Absolute	$\Delta R \pm 0.05$ %	2000 h at +70 $^{\circ}\text{C}$
Stability: Ratio	$\Delta R \pm 0.015$ %	2000 h at +70 $^{\circ}\text{C}$
Voltage Coefficient	< 0.1 ppm/V	-
Working Voltage	100 V max. not to exceed $\sqrt{P \times R}$	-
Operating Temperature Range	-55 $^{\circ}\text{C}$ to +125 $^{\circ}\text{C}$	-
Storage Temperature Range	-55 $^{\circ}\text{C}$ to +150 $^{\circ}\text{C}$	-
Noise	< -30 dB	-
Thermal EMF	< 0.08 $\mu\text{V}/^{\circ}\text{C}$	-
Shelf Life Stability: Absolute	$\Delta R \pm 0.01$ %	1 year at +25 $^{\circ}\text{C}$
Shelf Life Stability: Ratio	$\Delta R \pm 0.002$ %	1 year at +25 $^{\circ}\text{C}$

DIMENSIONS AND IMPRINTING in millimeters



Note

- Contact factory for package outlines for higher pin count or custom configurations

MECHANICAL SPECIFICATIONS

Resistive Element	Passivated nichrome
Substrate Material	Ceramic
Body	Molded epoxy
Terminals	Copper alloy
Plating	100 % matte tin
Marking Resistance to Solvents	Per MIL-PRF-914

GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: DFNA1002AT1

D	F	N	A	1	0	0	2	A	T	1
GLOBAL MODEL		SCHEMATIC		RESISTANCE		TOLERANCE AND RATIO TOLERANCE		PACKAGING		
DFN (Lead (Pb)-free) (e3)		A = Isolated equal value resistors		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		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		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		

Notes

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



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