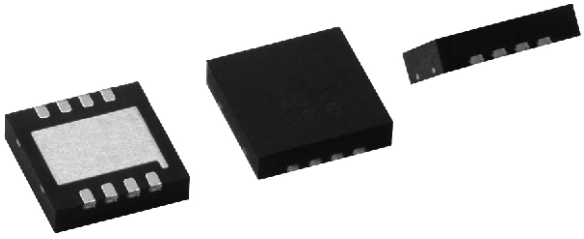
Dual Flat No Lead Molded Precision Thin Film Resistor Surface Mount Network



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.

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 %
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

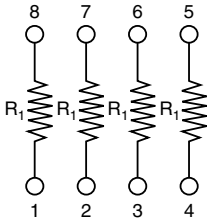
Pb-free

RoHS COMPLIANT

TYPICAL PERFORMANCE

●	ABSOLUTE	TRACKING
TCR	25	3
	ABSOLUTE	RATIO
TOL.	0.1	0.05

SCHEMATIC



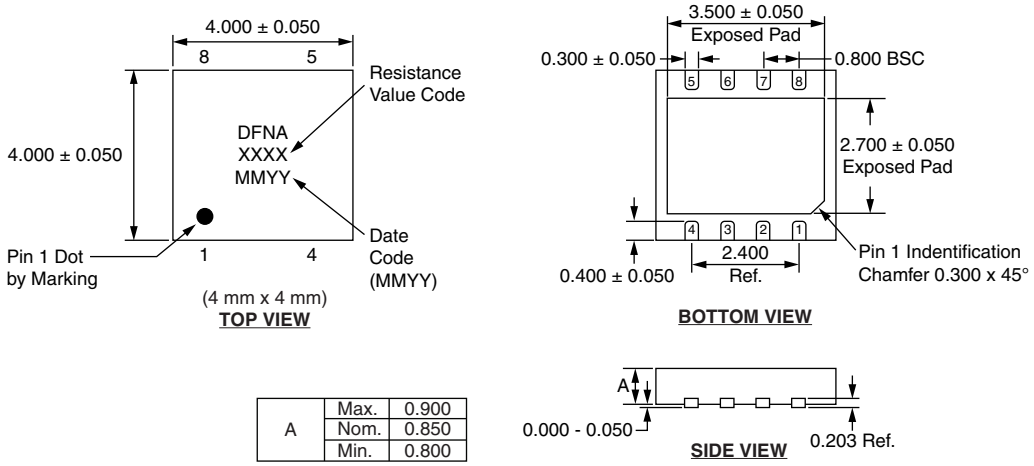
STANDARD RESISTANCE OFFERING (R_1 =)	
500 Ω	10 kΩ
1 kΩ	20 kΩ
2 kΩ	50 kΩ
4.99 kΩ	100 kΩ
5 kΩ	

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 kΩ per resistor	-
TCR: Absolute	± 25 ppm/°C	-55 °C to +125 °C
TCR: Tracking	± 3 ppm/°C	-55 °C to +125 °C
Tolerance: Absolute	± 0.05 % to ± 1.0 %	+25 °C
Tolerance: Ratio	± 0.025 % to ± 0.5 %	+25 °C
Power Rating: Resistor	100 mW	Maximum at +70 °C
Power Rating: Package	100 mW x number of resistors	Maximum at +70 °C
Stability: Absolute	ΔR ± 0.05 %	2000 h at +70 °C
Stability: Ratio	ΔR ± 0.015 %	2000 h at +70 °C
Voltage Coefficient	< 0.1 ppm/V	-
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	< -30 dB	-
Thermal EMF	< 0.08 µV/°C	-
Shelf Life Stability: Absolute	ΔR ± 0.01 %	1 year at +25 °C
Shelf Life Stability: Ratio	ΔR ± 0.002 %	1 year at +25 °C

DIMENSIONS AND IMPRINTING in millimeters



A	Max.	0.900
	Nom.	0.850
	Min.	0.800

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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