DFN (Divider)



Vishay Dale Thin Film

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



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



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

TYPICAL PERFORMANCE

\bullet	ABSOLUTE	TRACKING
TCR	25	5
	ABSOLUTE	RATIO
TOL.	0.1	0.05

STANDARD RESISTANCE OFFERING (R ₁ /R ₂)			
RATIO	R ₁	R ₂	
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	

STANDARD ELECTRICAL SPECIFICATIONS			
TEST	SPECIFICATIONS	CONDITIONS	
Material	Passivated nichrome	-	
Pin/Lead Number	8	-	
Resistance Range	1000 Ω to 100 k Ω per element	-	
TCR: Absolute	± 25 ppm/°C	-55 °C to +125 °C	
TCR: Tracking	± 5 ppm/°C	-55 °C to +125 °C	
Tolerance: Absolute	± 0.1 %	+25 °C	
Tolerance: Ratio	± 0.05 %	+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	$\Delta R \pm 0.05 \%$	2000 h at +70 °C	
Stability: Ratio	∆ <i>R</i> ± 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	$\Delta R \pm 0.01 \%$	1 year at + 25 °C	
Shelf Life Stability: Ratio	$\Delta R \pm 0.002 \%$	1 year at + 25 °C	

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1 For technical questions, contact: <u>thinfilm@vishay.com</u> Document Number: 60110



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DIMENSIONS AND IMPRINTING in millimeters



Notes

⁽¹⁾ 100-1 resistance ratio part marking to be 100-

(2) 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	



Note

⁽³⁾ Preferred packaging code



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