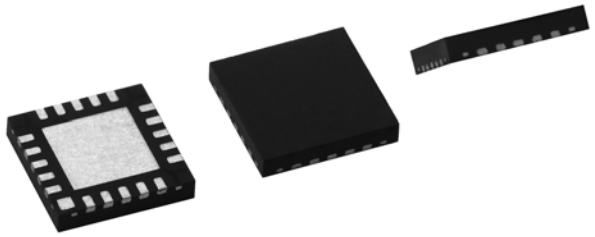
Quad Flat No Lead Molded Precision Thin Film Resistor, Surface Mount Network



FEATURES

- 0.65 mm lead pitch
- MSL level 1 per J-STD-020
- Low profile 1 mm seated height
- Small size 5 mm x 5 mm
- Low TCR ± 25 ppm, TCR tracking to ± 5 ppm
- Compliant to RoHS Directive 2002/95/EC

Pb-free

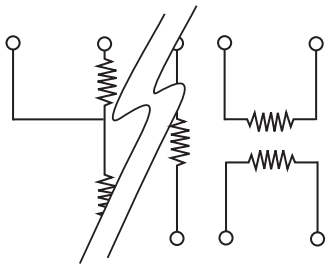
RoHS COMPLIANT

The QFN- series features a standard 20 pins quad flat no lead 5 mm x 5 mm 0.65 mm pitch package. The quad flat no lead package saves board space over traditional SOIC packages. Additional pin counts available, consult factory.

TYPICAL PERFORMANCE

	ABSOLUTE	TRACKING
TCR	25	5
	ABSOLUTE	RATIO
TOL.	0.1	0.05

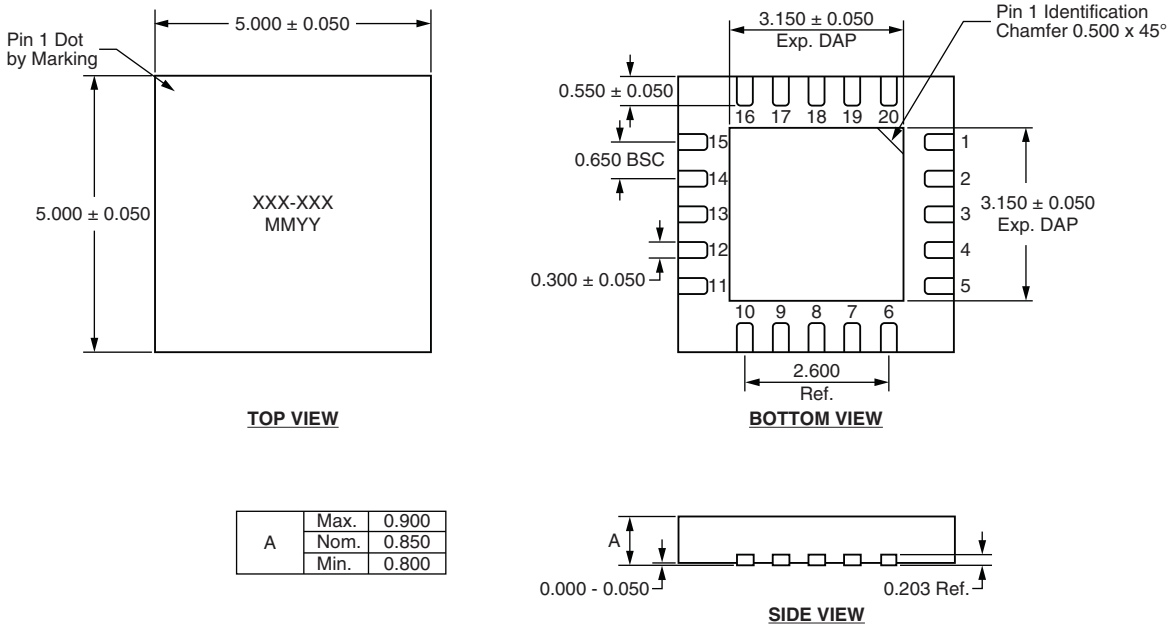
SCHEMATIC



Custom schematics available
Please consult factory

STANDARD ELECTRICAL SPECIFICATIONS		
TEST	**SPECIFICATIONS**	**CONDITIONS**
Material	Passivated nichrome	-
Pin/Lead Number	20	-
Resistance Range	100 Ω (resistor) to 500 kΩ (total)	-
TCR: Absolute	± 25 ppm/°C to ± 100 ppm/°C	- 55 °C to + 125 °C
TCR: Tracking	± 5 ppm/°C (typical)	- 55 °C to + 125 °C
Tolerance: Absolute	± 0.1 % to ± 1.0 %	+ 25 °C
Tolerance: Ratio	± 0.05 % to ± 0.1 %	+ 25 °C
Power Rating: Resistor	100 mW (per element)	Maximum at + 70 °C
Power Rating: Package	500 mW	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



Note

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

MECHANICAL SPECIFICATIONS

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

ORDERING INFORMATION CHECK LIST (Customs)

Special requirements should be identified in advance, but as a minimum, you should have the following information ready.

ELECTRICAL	MECHANICAL
1. Resistors, by value and tolerance 2. Reference resistor(s) and matching of which resistors to which reference resistors 3. Reference by ratio 4. Absolute temperature coefficient of resistivity 5. Temperature tracking of subordinate resistors to reference resistor(s) 6. Maximum operating voltage 7. Resistor power ratings 8. Operating temperature range	1. Maximum allowable seated height (from PC board to top of network) 2. Special marking concerns 3. Schematic pin out of package

GLOBAL PART NUMBER INFORMATION

Q	F	N	-	1	x	x	-	x	x	x	T	1

GLOBAL MODEL (4 digits)	CUSTOM PART NUMBER (7 or 9 digits)	PACKAGING
QFN- (Lead (Pb)-free) (e3)	**1xx-xxx** or **1xx-xxx-x**	TAPE AND REEL **T0** = 100 min., 100 mult **T1** = 1000 min., 1000 mult **T3** = 300 min., 300 mult **T5** = 500 min., 500 mult **TF** = Full reel **TS** = 100 min., 1 mult **UF** = TUBED

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