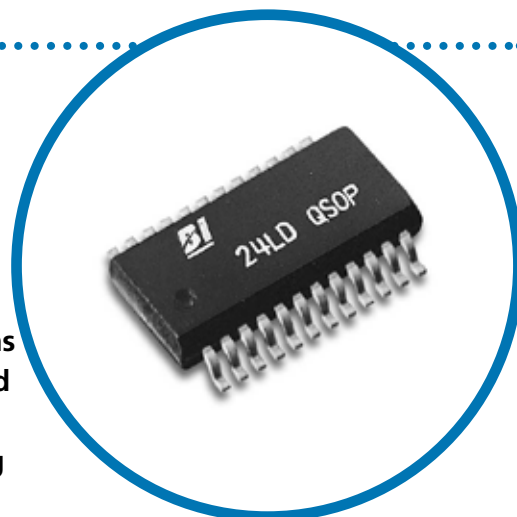


# Nichrome Resistor Networks on Ceramic Substrates

## NQS Series

- **.025" Pitch DIP**
- **Precision Thin Film**
- **Surface Mount**
- **Resistor Networks**
- **RoHS Compliant**
- **Unique passivation coating eliminates moisture concerns and allows for use in applications traditionally restricted to tantalum nitride**
- **Outperforms other thin film resistor materials providing excellent tolerances, ratio matching, temperature coefficient, and temperature tracking**
- **Improved performance over silicon substrates in stray capacitance, frequency response and stability**



**Not Recommended for New Designs** **OBSOLETE**

For alternative see [http://www.irctt.com/file.aspx?product\\_id=214&file\\_type=datasheet](http://www.irctt.com/file.aspx?product_id=214&file_type=datasheet)

## Electrical

Operating Temperature Range	-55°C to +125°C
Resistance Voltco	≈0
Interlead Capacitance	<2pF
Operating Voltage, Maximum	100 Vdc or √PR
Insulation Resistance	≥10,000 Megohms
Noise, Maximum (MIL-STD-202, Method 308)	-40dB

## Environmental

Thermal Shock plus Power Conditioning	ΔR 0.25%
Low Temperature Operation	ΔR 0.10%
Short Time Overload	ΔR 0.10%
Terminal Strength	ΔR 0.10%
Moisture Resistance	ΔR 0.20%
Mechanical Shock	ΔR 0.25%
Vibration	ΔR 0.25%
Low/High Temperature Storage	ΔR 0.10%
Load Life, 1,000 Hours	ΔR 0.10%
Resistance to Solder Heat	ΔR 0.10%
Dielectric Withstanding Voltage	100V for 1 minute
Temperature Exposure, Maximum	215°C for 3 minutes
Marking Permanency	per MIL-STD-202, Method 215
Lead Solderability	per MIL-STD-202, Method 208
Flammability	UL-94V-O Rated
Storage Temperature Range	-55°C to +125°C

Specifications subject to change without notice.

### General Note

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## Mechanical

Lead Plating	100% matte Tin (RoHS)
Lead Material	Copper Alloy
Lead Configuration	Gull Wing
Lead Coplanarity	0.004" (0.102mm)
Substrate Material	Alumina
Resistor Material	Nichrome
Body Material	Molded Epoxy

## Tolerances

Accuracy Code	A	B	D	F	G	J
Absolute Resistance Tolerances, at 25°C	±0.1%	±0.1%	±0.5%	±1.0%	±2%	±5%
Ratio Matching (Matched to R1)	±0.05%	±0.1%	±0.1%	±0.5%	NA	NA
Temperature Coefficient of Resistance	±25ppm/°C (Q) ±50ppm/°C (P) ±100ppm/°C					
Temperature Coefficient of Resistance, Tracking	±5ppm/°C					

## Standard Resistance Values, Ohms

NQS16A		NQS20A		NQS20B		NQS24A	
Ohms	Code	Ohms	Code	Ohms	Code	Ohms	Code
1K	1001	3K	3001	10K	1002	3K	3001
10K	1002	267K	2673	-	-	-	-
34K	3402	-	-	-	-	-	-
47K	4702	-	-	-	-	-	-
100K	1003	-	-	-	-	-	-

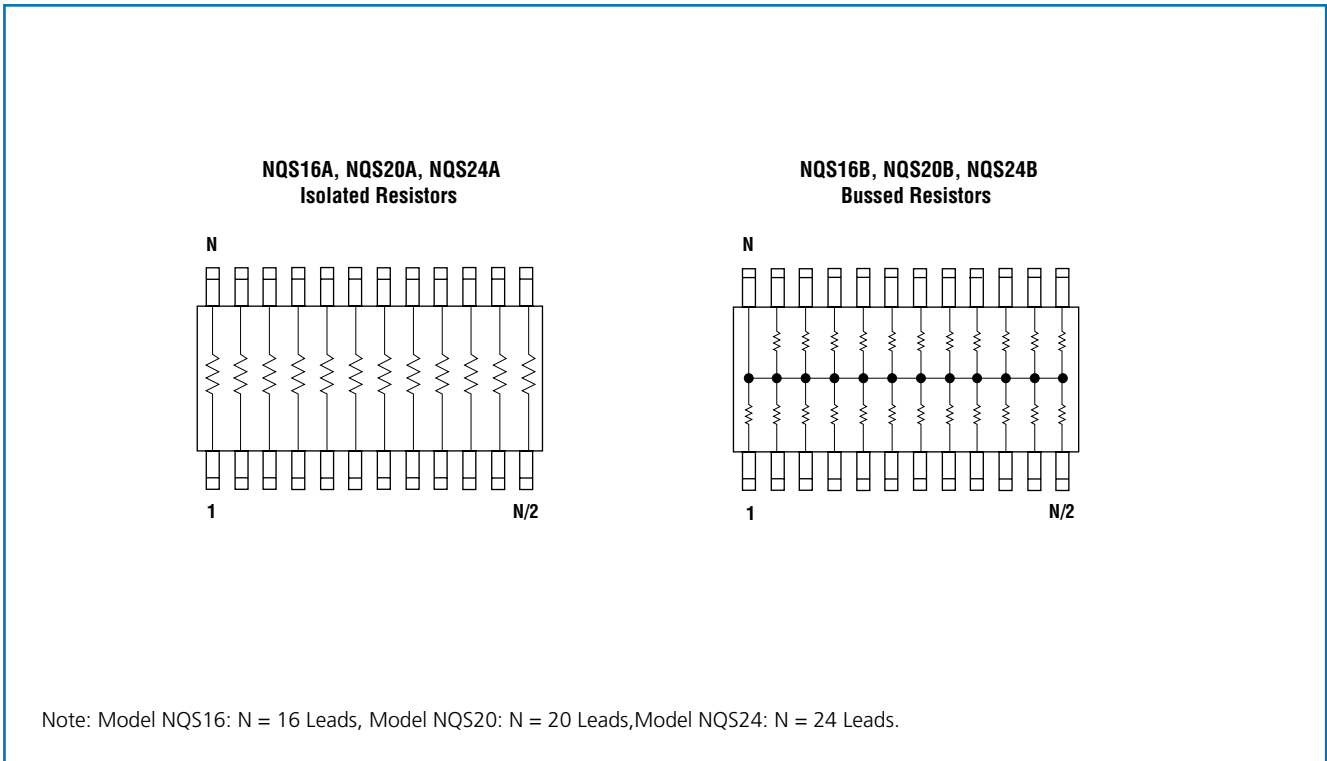
## Power Dissipation, Watts At 70°C

Model	Package	Resistor
NQS16	0.8	0.1
NQS20	1.0	0.1
NQS24	1.0	0.1

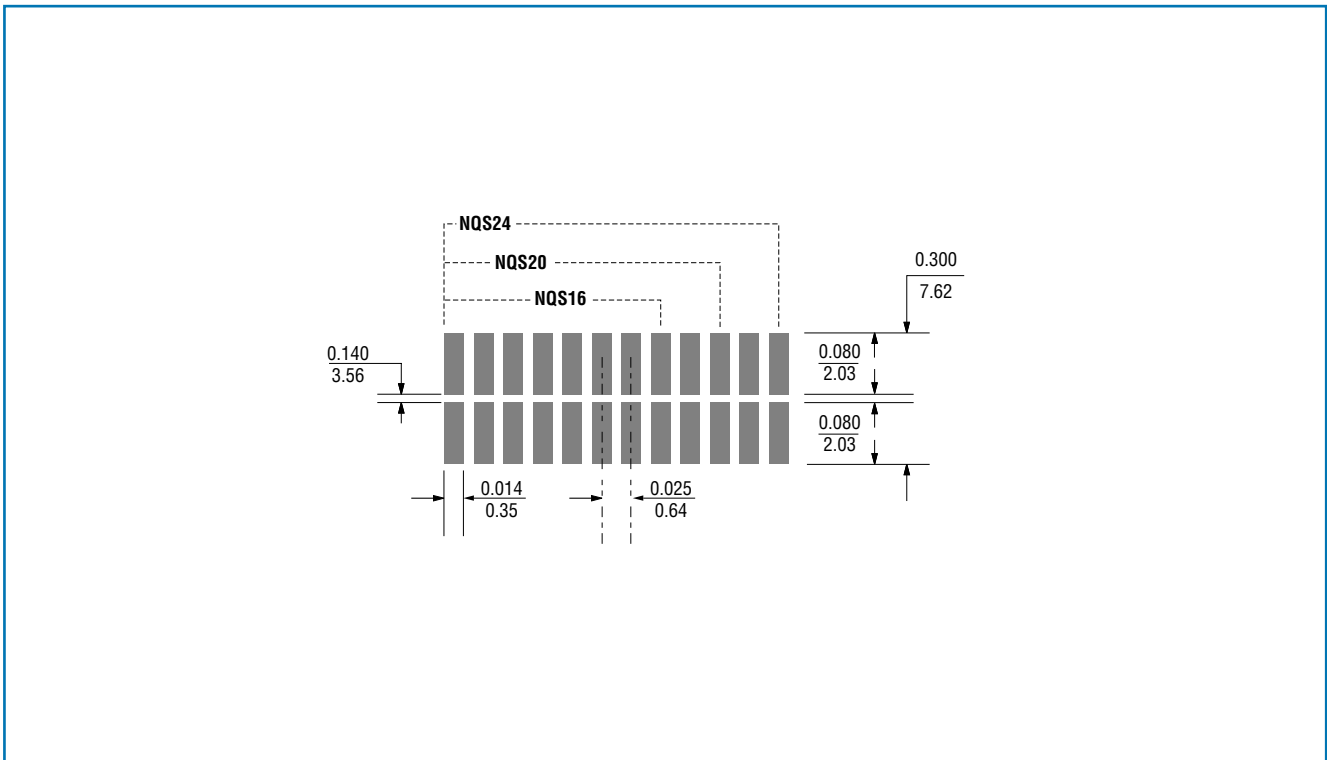
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## Schematics



## Recommended Solder Pad Layouts

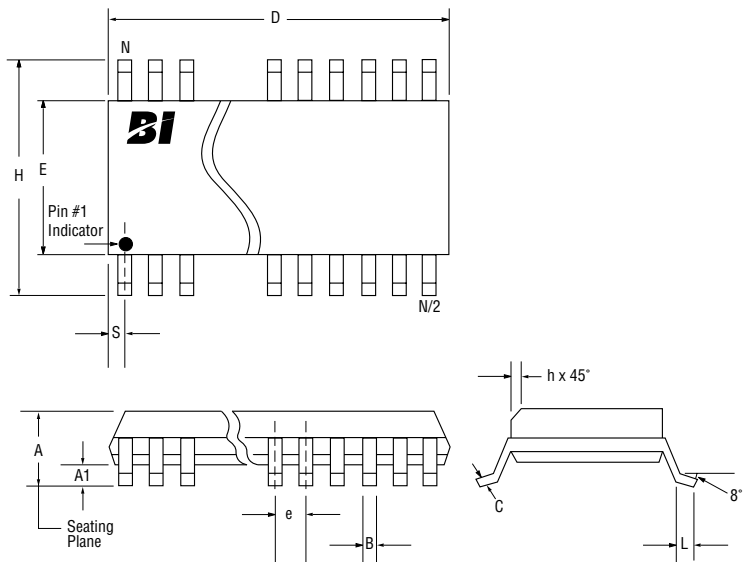


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## Outline Dimensions (Inch/mm)

Model	NQS16	NQS20	NQS24
Dim. A (Max.)	0.068	0.068	0.068
	1.727	1.727	1.727
Dim. A1 (Max.)	0.008	0.008	0.008
	0.203	0.203	0.203
Dim. B (Max.)	0.012	0.012	0.012
	0.305	0.305	0.305
Dim. C (Max.)	0.0098	0.0098	0.0098
	0.249	0.249	0.249
Dim. D (Max.)	0.197	0.345	0.345
	5.004	8.763	8.763
Dim. E (Max.)	0.157	0.157	0.157
	3.988	3.988	3.988
Dim. e (Max.)	0.025	0.025	0.025
	0.635	0.635	0.635
Dim. H (Max.)	0.244	0.244	0.244
	6.198	6.198	6.198
Dim. h (Max.)	0.016	0.016	0.016
	0.406	0.406	0.406
Dim. L (Max.)	0.035	0.035	0.035
	0.889	0.889	0.889
Dim. S (Max.)	0.010	0.06	0.035
	0.254	1.524	0.889



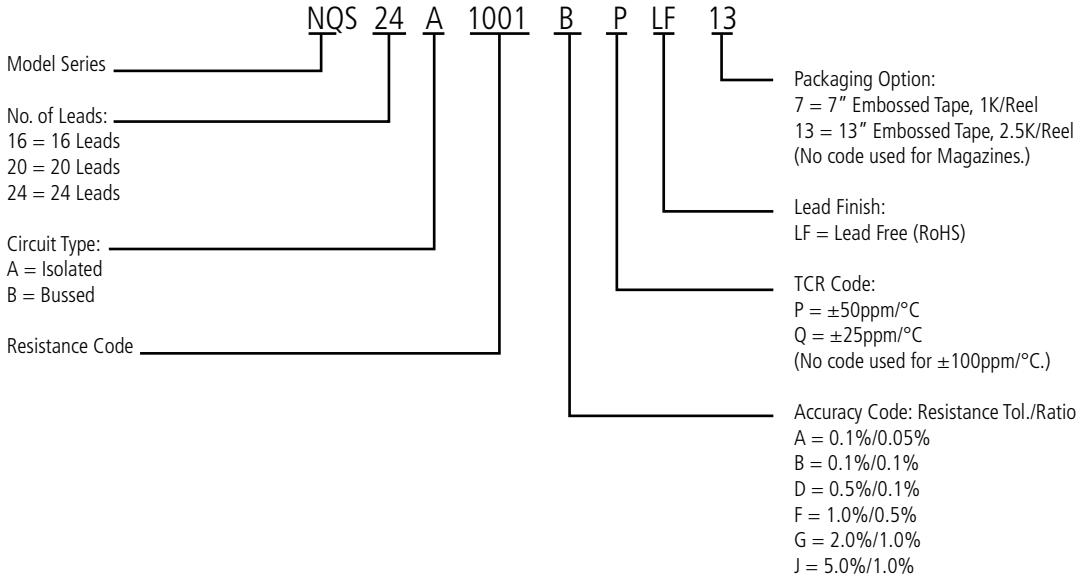
## Packaging

Standard:	Magazine All units oriented with lead #1 to the same side..	
Magazine:	Capacity =	100 Units (16 Leads) 50 Units (20 and 24 Leads)
Option:	Embossed Tape & Reel (per EIA 481).	
Reel:	Diameter = Capacity =	7" Reel 1,000 Units 13" Reel 2,500 Units

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## Ordering Information



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