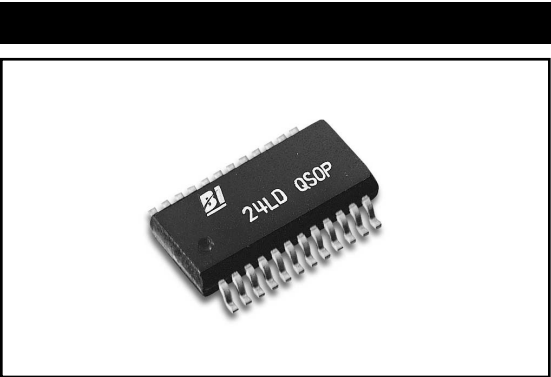


MODEL NQS SERIES
.025" Pitch DIP
Precision Thin Film
Surface Mount
Resistor Networks



FEATURES/BENEFITS

- **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

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.

MECHANICAL

Lead Plating	85/15 Tin Lead
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	B	D	F	G	J
Absolute Resistance Tolerances, at 25°C	0.1%	0.5%	1.0%	2%	5%
Ratio Matching (Matched to R1)	0.1%	0.1%	0.5%	1%	1%
Temperature Coefficient of Resistance			±25ppm/°C (Q) ±50ppm/°C (P) ±100ppm/°C		
Temperature Coefficient of Resistance, Tracking			±5ppm/°C		

STANDARD RESISTANCE VALUES, OHMS

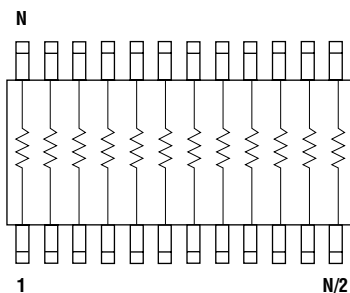
NQS16A		NQS20A		NQS20B		NQS24A	
Ohms	Code	Ohms	Code	Ohms	Code	Ohms	Code
1K	1001	3K	3001	10K	1002	3K	3001
10K	1002	267K	2673				
34K	3402						
47K	4702						
100K	1003						

POWER DISSIPATION, WATTS AT 70°C

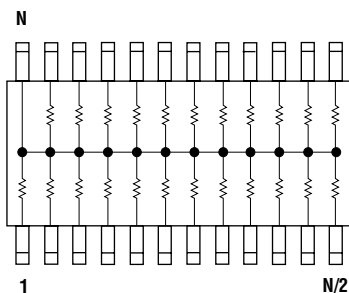
Model	Package	Resistor
NQS16	0.8	0.1
NQS20	1.0	0.1
NQS24	1.0	0.1

SCHEMATICS

NQS16A, NQS20A, NQS24A
Isolated Resistors

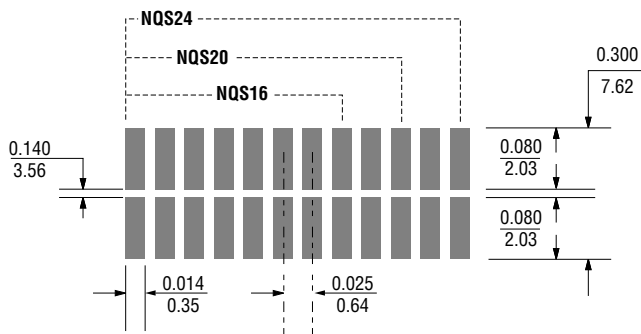


NQS16B, NQS20B, NQS24B
Bussed Resistors

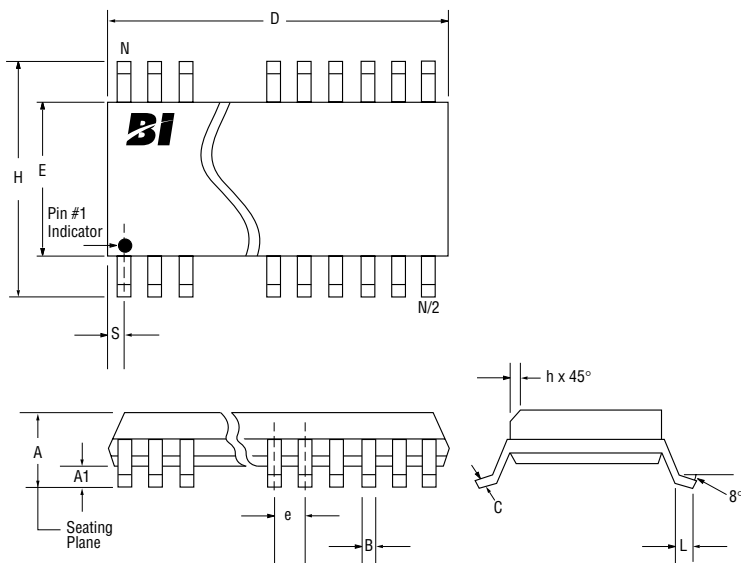


Note: Model NQS16: N = 16 Leads, Model NQS20: N = 20 Leads, Model NQS24: N = 24 Leads.

RECOMMENDED SOLDER PAD LAYOUTS



OUTLINE DIMENSIONS (Inch/mm)



Model	NQS16	NQS20	NQS24
Dim. A (Max.)	<u>0.068</u> 1.727	<u>0.068</u> 1.727	<u>0.068</u> 1.727
Dim. A1 (Max.)	<u>0.008</u> 0.203	<u>0.008</u> 0.203	<u>0.008</u> 0.203
Dim. B (Max.)	<u>0.012</u> 0.305	<u>0.012</u> 0.305	<u>0.012</u> 0.305
Dim. C (Max.)	<u>0.0098</u> 0.249	<u>0.0098</u> 0.249	<u>0.0098</u> 0.249
Dim. D (Max.)	<u>0.197</u> 5.004	<u>0.345</u> 8.763	<u>0.345</u> 8.763
Dim. E (Max.)	<u>0.157</u> 3.988	<u>0.157</u> 3.988	<u>0.157</u> 3.988
Dim. e (Max.)	<u>0.025</u> 0.635	<u>0.025</u> 0.635	<u>0.025</u> 0.635
Dim. H (Max.)	<u>0.244</u> 6.198	<u>0.244</u> 6.198	<u>0.244</u> 6.198
Dim. h (Max.)	<u>0.016</u> 0.406	<u>0.016</u> 0.406	<u>0.016</u> 0.406
Dim. L (Max.)	<u>0.035</u> 0.889	<u>0.035</u> 0.889	<u>0.035</u> 0.889
Dim. S (Max.)	<u>0.010</u> 0.254	<u>0.06</u> 1.524	<u>0.035</u> 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	7" Reel	13" Reel
	Capacity	= 1,000 Units	2,500 unit

ORDERING INFORMATION

