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ELECTRONICS

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Jameco Part Number 2009797

FEATURES

- SUPER MINIATURE SIZE AND LOW PROFILE
- HIGH DENSITY PACKAGING OFFERS SIGNIFICANT SPACE SAVINGS
- LOWER PRODUCTION COSTS WITH LESS PLACEMENT (UP TO 8 RESISTORS IN ONE PACKAGE)
- STANDARD FOOTPRINTS MAKE CONVERSIONS EASY
- BOTH FLOW AND REFLOW SOLDERING APPLICABLE

**RoHS
Compliant**

includes all homogeneous materials

*See Part Number System for Details



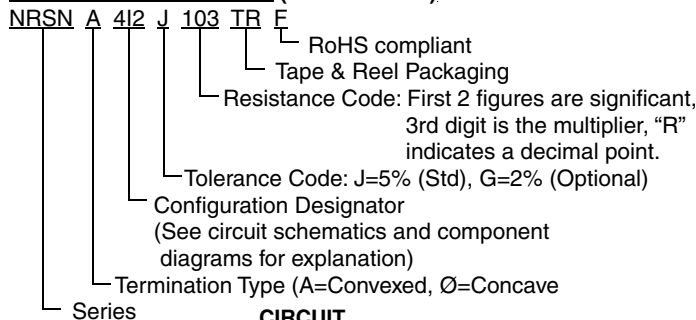
SPECIFICATIONS

Type	NRSNA4I2	NRSNØ4I4	NRSNA4I4	NRSNA6I4	NRSNØ6I4	NRSNØ6C NRSNØ6D	NRSN12I4	
Termination Type	Convex	Concave	Convex	Convex	Concave	Concave	Concave	
Size W x L (mm)	1.0 x 1.0	1.0 x 2.0	1.0 x 2.0	1.6 x 3.2		3.1 x 6.4	3.0 x 5.1	
No. of Resistors & Circuit	2R Isolated	4R Isolated	4R Isolated	4R Isolated		8R Common	4R Isolated	
Power Rating per Resistor @ +70°C	1/16 (.0625W)	1/16 (.0625W)	1/16 (.0625W)	1/16 (.0625W)			1/8 (.125W)	
Resistance Tolerance	J(±5%), G(±2%)	J(±5%), G(±2%)	J(±5%), G(±2%)	J(5%), G(2%)		J (5%)	J (5%)	G (2%)
Resistance Range	10Ω ~ 1MΩ	10Ω ~ 1MΩ	10Ω ~ 1MΩ	10Ω ~ 1MΩ		100Ω ~ 470KΩ	10Ω ~ 1MΩ	47Ω ~ 1MΩ
Temperature Coefficient	±250ppm	±200ppm	±200ppm	±200ppm		±200ppm	±200ppm	±200ppm
Maximum Working Voltage*	25V			50V			75V	
Maximum Overload Voltage	50V			100V			125V	
Operating Temperature Range	-55°C ~ +125°C (derated as shown)							

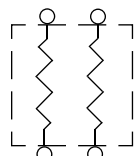
* Maximum allowable continuous voltage for all resistors is the lower of the two values: "MAXIMUM WORKING VOLTAGE" as specified, or

$$\sqrt{\text{Power rating (WATTS)} \times \text{Resistance (OHMS)}}$$

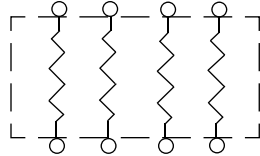
PART NUMBER SYSTEM (E-24 VALUES)



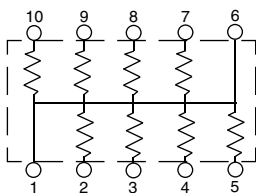
CIRCUIT SCHEMATICS



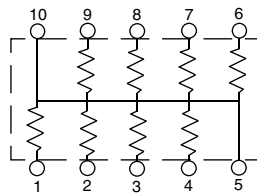
NRSNA4I2
Circuit Type "I"
Isolated



NRSNA4I4/Ø4I
NRSNA6I/Ø6I & NRSN12I
Circuit Type "I"
Isolated

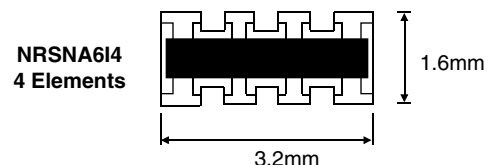
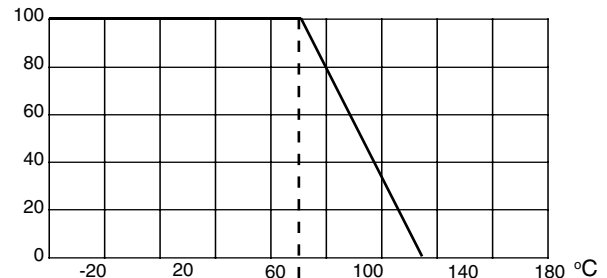


NRSNØ6C8
Circuit Type "C"
Bussed/Common



NRSNØ6D8
Circuit Type "D"
Bussed/Common

Power Derating Curve: For operation above 70°C, power rating must be derated according to the following chart:



Note 1:

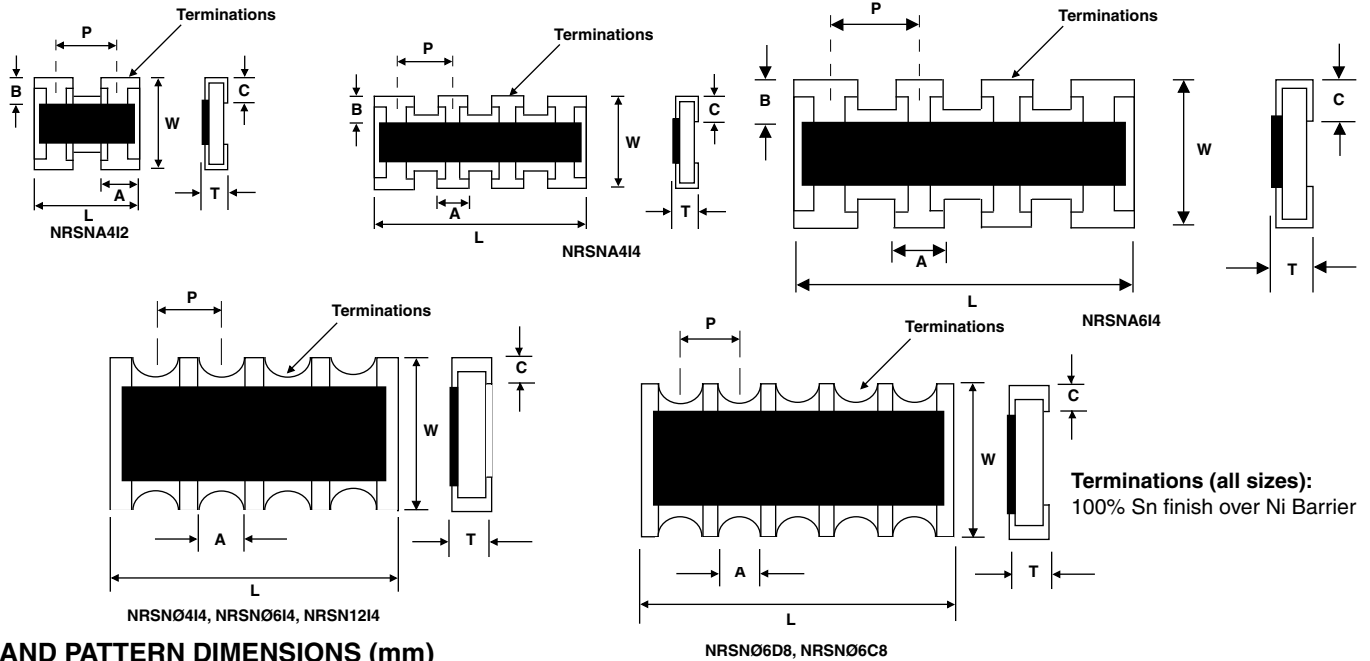
Zero ohm versions (R<0.050 ohms)

are available in the following parts:

- NRSNA4I2ZOTR - 0.5A/element (no markings)
- NRSNØ4I4ZOTR - 0.5A/element (marked "R00")
- NRSNA4I4ZOTR - 0.5A/element (marked "R00")
- NRSNØ6I4ZOTR - 1.0A/element (marked "000")
- NRSNA6I4ZOTR - 1.0A/element (marked "R00")
- NRSN12I4ZOTR - 1.5A/element (marked "000")

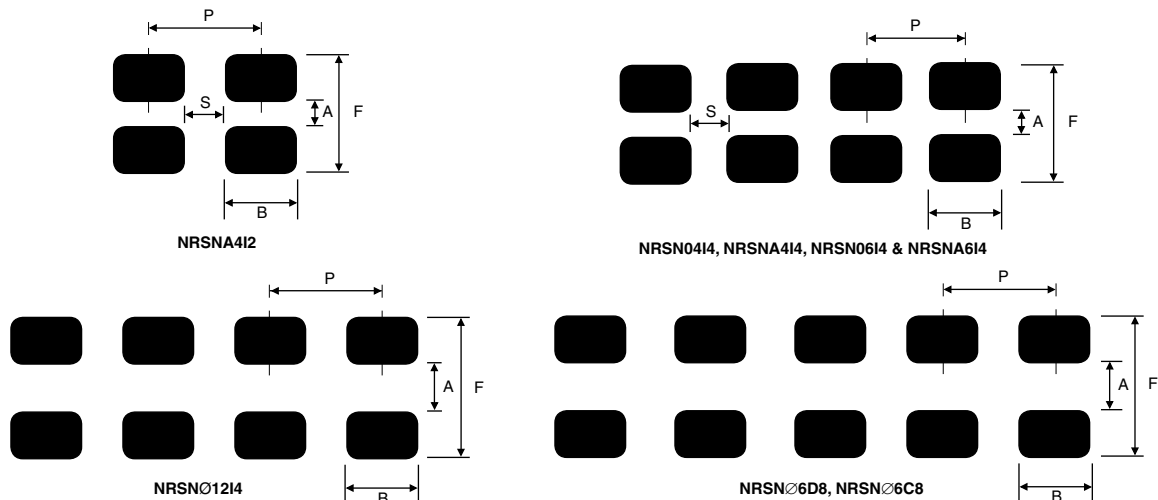
PART DIMENSIONS (mm)

Type	W	L	P	T	A	B	C
NRSNA4I2	1.00 ± 0.20	1.00 ± 0.10	0.67 nom.	0.30 ± 0.05	0.33 ± 0.10	0.15 ± 0.10	0.25 ± 0.10
NRSNA4I4	1.00 ± 0.20	2.00 ± 0.10	0.50 nom.	0.40 ± 0.10	0.30 ± 0.10	0.20 ± 0.10	0.25 ± 0.10
NRSNØ4I4	1.00 ± 0.20	2.00 ± 0.10	0.50 nom.	0.40 ± 0.10	0.30 ± 0.10	0.15 ± 0.10	0.25 ± 0.10
NRSNA6I4	1.60 ± 0.15	3.20 ± 0.20	0.80 nom.	0.50 ± 0.10	0.50 ± 0.10	0.30 ± 0.15	0.30 ± 0.15
NRSNØ6I4	1.60 ± 0.15	3.20 ± 0.20	0.80 nom.	0.55 ± 0.10	0.50 ± 0.10	0.35 ± 0.15	0.45 ± 0.15
NRSNØ6C8	3.10 ± 0.20	6.40 ± 0.20	1.27 ± 0.20	0.60 ± 0.20	1.00 ± 0.20	0.55 ± 0.20	0.50 ± 0.20
NRSNØ6D8	3.10 ± 0.20	6.40 ± 0.20	1.27 ± 0.20	0.60 ± 0.20	1.00 ± 0.20	0.55 ± 0.20	0.50 ± 0.20
NRSN12I4	3.00 ± 0.20	5.08 ± 0.20	1.27 ± 0.20	0.70 ± 0.20	0.80 ± 0.20	0.60 ± 0.20	0.60 ± 0.20



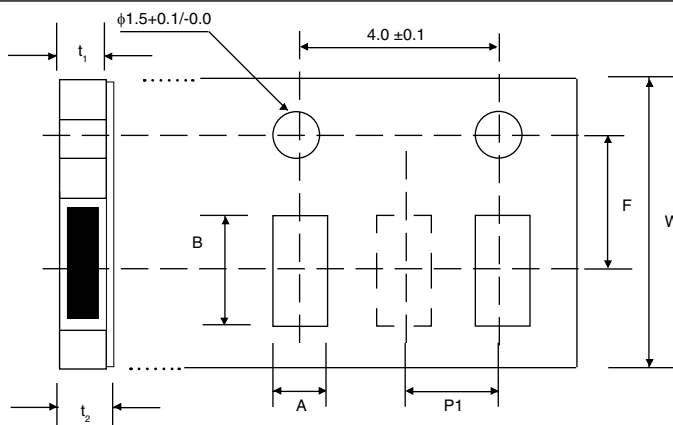
LAND PATTERN DIMENSIONS (mm)

Type	Reflow Soldering					Flow Soldering			
	A	B	P	S	F	A	B	P	F
NRSNA4I2	0.50	0.33	0.67	0.34	2.00	-	-	-	-
NRSNØ4I4	0.50	0.28	0.50	0.22	2.00	-	-	-	-
NRSNA4I4	0.50	0.28	0.50	0.22	2.00	-	-	-	-
NRSNØ6I4J	1.00	0.40	0.80	0.40	2.60	0.7 ~ 0.9	0.3 ~ 0.35	0.8	4.6 ~ 5.6
NRSNØ6I4J	1.00	0.40	0.80	0.40	2.60	0.7 ~ 0.9	0.3 ~ 0.35	0.8	4.6 ~ 5.6
NRSNØ6C8	2.20	0.50	1.27	-	4.20	1.9 ~ 2.1	0.5 ~ 0.55	1.27	5.6 ~ 6.2
NRSNØ6D8	2.20	0.50	1.27	-	4.20	1.9 ~ 2.1	0.5 ~ 0.55	1.27	5.6 ~ 6.2
NRSN12I4	2.20	0.790	1.27	-	4.20	1.0 ~ 1.2	0.4 ~ 0.45	1.27	5.6 ~ 6.2



TAPE DIMENSIONS (mm)

TYPE	Material	A	B	F	P ₁	W	t ₁	t ₂
NRSNA4I2	Paper	1.17±0.1	1.17±0.1	3.5±0.05	2.0±0.05	8.0±0.2	0.5max.	1.0max.
NRSNØ4I4 NRSNA4I4	Paper	1.3±0.2	2.3±0.2					
NRSNØ6I4 NRSNA6I4	Paper	2.0±0.1	3.6±0.1	3.5±0.05	4.0±0.1	8.0±0.2	1.0max.	1.4max.
NRSNØ6C8 NRSNØ6D8	Plastic	3.5±0.1	6.75±0.1	5.5±0.05	4.0±0.1	12.0±0.2	1.0max.	1.4max.
NRSN 12I4	Plastic	3.5±0.1	5.7±0.1	5.5±0.05	4.0±0.1	12.0±0.2	1.0max.	1.4max.



REEL DIMENSIONS (mm)

Type	A	B	C	D	E	W	Qty/Reel
NRSNA4I2 NRSNØ4I4 NRSNA4I4	φ180 -4.0+3.0	φ60 +1.0-0.0	φ13.0 ±2.0	φ21.0 ±1.0	2.0 ±0.5	8.0 ±0.2	10,000
NRSNØ6I4 NRSNA6I4		φ80 ±2.0				10 ±1.0	5,000
NRSNØ6C8 NRSNØ6D8		φ80 ±2.0				14 ±2.0	4,000
NRSN 12I4		φ80 ±2.0				14 ±2.0	4,000

