

**SURFACE MOUNTING RF AIR CORE INDUCTORS**



**Features :**

- Inductance values from 3.9 nH up to 120 nH.
- feature high Q and current handling
- It features an SMD package and comes in various package dimensions.
- All % values available in 10% tolerance.
- Ag-solder coated leads ensure reliable soldering.



**Applications :**

- RF Applications.
- RF Circuits.
- Broadband I/O Filtering.
- Impedance Matching/ Tuning.
- Decoupling/Bypassing.

**Environmental Data :**

- Operating temperature : - 40°C~+125°C, (Including coil's self temperature rise).
- Ambient temperature : - 40°C~+125°C. (referring to Irms) .
- Storage temperature(on tape & reel packing) : - 40°C~+80°C; 75% RH max.
- Full RoHS compliance.

**► PRODUCT IDENTIFICATION :**

**SMDS2**

**0603**

**- 3N9**

**G**

**-**

**R**

**S**



**Product Type :**  
 SMD RF  
 Air core Inductors

**Product Series Code**

**Inductance value : [nH]**  
 3N9=3.9nH

**Inductance Tolerance:**  
 K = 10%

**Termination code :**  
**R**=RoHS compliant standard tin-silver-copper alloy (96.5% tin / 3% silver / 0.5% copper) , tin dipping over copper.  
**T**=RoHS compliant standard tin (100% tin), tin electroplating over copper.

**Packaging code :**  
 S=7" N/A  
 L=13" 4000 pcs/reel

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 Dongguan Naheng Electronics Technology Co.,Ltd.

► ELECTRICAL SPECIFICATION :

S2 0603 TYPE:

Part Number	Inductance nH	Percent tolerance	Q(MIN)	Test Freq. (MHz)	DCR max (m )	SRF(GHz) MIN	IDC(mA) MAX
S2 0603-3N9	3.9	10%	80	300	3.0	3.0	950
S2 0603-4N7	4.7	10%	80	300	3.6	3.0	900
S2 0603-5N6	5.6	10%	80	300	3.8	3.0	950
S2 0603-6N8	6.8	10%	80	300	4.5	3.0	900
S2 0603-8N2	8.2	10%	80	300	5.3	3.0	840
S2 0603-10N	10.0	10%	70	300	6.9	3.0	600
S2 0603-12N	12.0	10%	70	300	8.3	3.0	600
S2 0603-15N	15.0	10%	70	300	11.5	2.5	500
S2 0603-18N	18.0	10%	70	300	12.8	2.5	500
S2 0603-22N	22.0	10%	70	300	11.3	2.5	550
S2 0603-27N	27.0	10%	70	300	17.0	1.6	500
S2 0603-33N	33.0	10%	70	300	26.9	1.6	320
S2 0603-39N	39.0	10%	70	300	30.7	1.5	320
S2 0603-47N	47.0	10%	70	300	34.5	1.5	320
S2 0603-56N	56.0	10%	70	300	38.4	1.3	320

S2 0805 TYPE:

Part Number	Inductance nH	Percent tolerance	Q(MIN)	Test Freq. (MHz)	DCR max (m )	SRF(GHz) MIN	IDC(mA) MAX
S2 0805-3N9	3.9	10%	80	300	2.6	3.0	1200
S2 0805-4N7	4.7	10%	80	300	3.6	3.0	900
S2 0805-5N6	5.6	10%	80	300	3.7	3.0	950
S2 0805-6N8	6.8	10%	80	300	4.5	3.0	900
S2 0805-8N2	8.2	10%	80	300	5.3	3.0	840
S2 0805-10N	10.0	10%	70	300	5.4	3.0	900
S2 0805-12N	12.0	10%	70	300	6.3	3.0	900
S2 0805-15N	15.0	10%	70	300	7.2	2.5	900
S2 0805-18N	18.0	10%	70	300	12.5	2.5	500
S2 0805-22N	22.0	10%	70	300	12.9	2.4	550
S2 0805-27N	27.0	10%	70	300	14.5	1.6	550
S2 0805-33N	33.0	10%	70	300	18.7	1.6	500
S2 0805-39N	39.0	10%	70	300	25.7	1.5	380
S2 0805-47N	47.0	10%	70	300	34.5	1.5	320
S2 0805-56N	56.0	10%	70	300	38.4	1.3	320
S2 0805-68N	68.0	10%	70	300	42.2	1.3	320

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► ELECTRICAL SPECIFICATION :

S2 1008 TYPE:

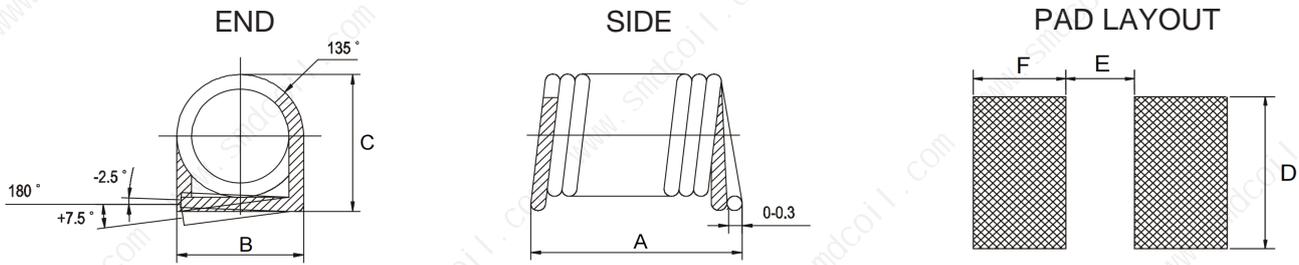
Part Number	Inductance nH	Percent tolerance	Q(MIN)	Test Freq. (MHz)	DCR max (m )	SRF(GHz) MIN	IDC(mA) MAX
S2 1008-6N8	6.8	10%	80	300	4.0	3.0	1200
S2 1008-8N2	8.2	10%	80	300	5.0	3.0	950
S2 1008-10N	10.0	10%	70	300	6.0	3.0	950
S2 1008-12N	12.0	10%	70	300	6.5	3.0	900
S2 1008-15N	15.0	10%	70	300	7.3	2.5	900
S2 1008-18N	18.0	10%	70	300	9.6	2.5	840
S2 1008-22N	22.0	10%	70	300	10.8	2.4	840
S2 1008-27N	27.0	10%	70	300	13.9	1.6	600
S2 1008-33N	33.0	10%	70	300	19.5	1.6	500
S2 1008-39N	39.0	10%	70	300	21.6	1.5	500
S2 1008-47N	47.0	10%	70	300	25.2	1.5	470
S2 1008-56N	56.0	10%	70	300	27.5	1.3	470
S2 1008-68N	68.0	10%	70	300	37.1	1.3	380
S2 1008-82N	82.0	10%	70	300	51.5	1.0	320
S2 1008-100	100.0	10%	70	300	55.5	1.0	320
S2 1008-120	120.0	10%	70	300	63.4	1.0	320

\* Custom designs are available upon requested.

Note :

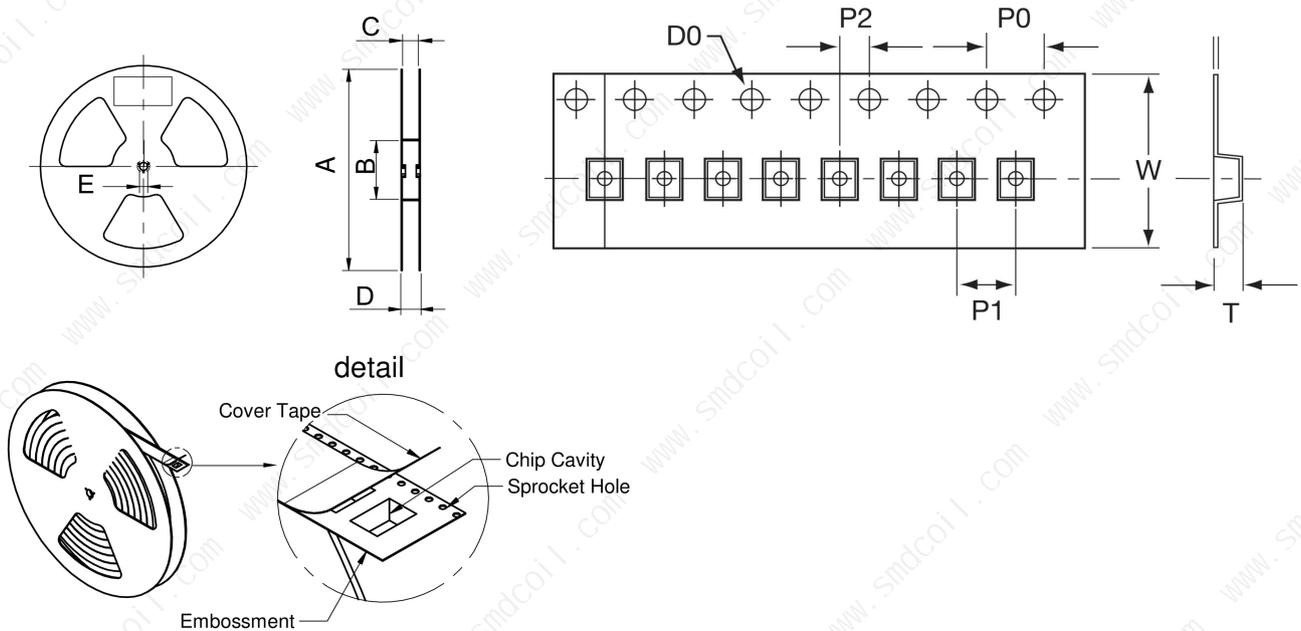
1. Inductance measured at 300MHz, 0.1Vrms, using HP4287A LCR meter or equivalent with 16193A test fixture.
2. Q measured at 300 MHz using an Agilent/HP 4291A impedance analyzer or equivalent.
3. SRF measured using HP8753 network analyzer and SMD test fixture.
4. Electrical specifications at 25.
5. RDC: Chroma 16502 or equivalent.
6. Resistance to soldering heat : Max three 40s reflows at 260°C, parts cooled to room temperature between cycles.
7. Moisture Sensitivity Level (MSL) 1

► DIMENSIONS & RECOMMENDED LAND PATTERN : [MM]



TYPE	A		BMAX	CMAX	DMIN(REF)	E±0.1	F±0.05
	MIN	MAX					
S2 0603	1.2	1.9	1.8	2.2	1.6(1.02)	0.64	0.64
S2 0805	1.3	2.4	1.8	2.2	1.6(1.78)	0.76	1.02
S2 1008	2.1	3.2	1.8	2.2	1.6(2.54)	1.27	1.02

► PACKAGING DIAGRAM



Parts per reel		Reel dimensions (mm)					Tape dimensions (mm)					
Part number	13"(330mm)	A	B	C	D	E	W	D0	P0	P1	P2	T
S2 0603	4000	330	90	8.4	12.4	13	8	1.5	4	4	2	2.05
S2 0805	4000	330	90	12.4	16.4	13	12	1.5	4	4	2	2.05
S2 1008	4000	330	90	12.4	16.4	13	12	1.5	4	4	2	2.05

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