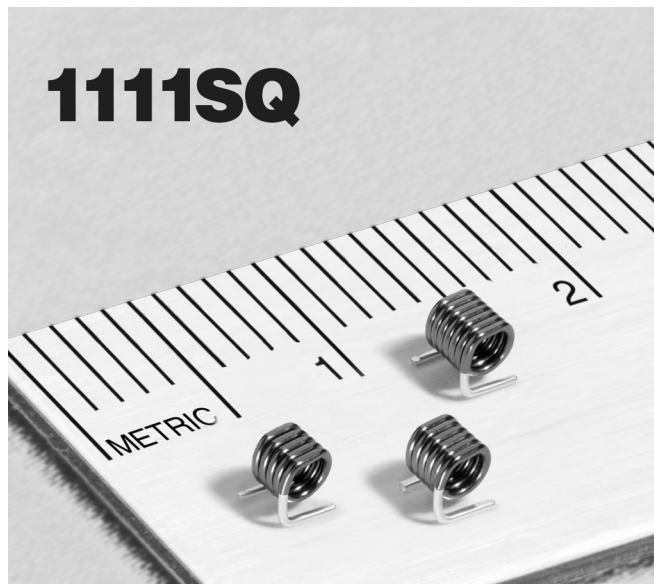


**NEW!**

# Square Air Core Inductors – 1111SQ



- Excellent Q factors – 210 at 400 MHz!
- Inductance values from 27 to 47 nH
- Flat top and bottom for reliable pick and place and mechanical stability

**Terminations** RoHS compliant tin-silver over copper

**Environment** RoHS compliant, halogen free

**Weight** 34 – 50 mg

**Ambient temperature** –40°C to +125°C with Irms current, +125°C to +145°C with derated current

**Storage temperature** Component: –40°C to +145°C. Tape and reel packaging: –40°C to +80°C

**Resistance to soldering heat** Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

**Temperature Coefficient of Inductance (TCL)** +5 to +70 ppm/°C

**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at <30°C / 85% relative humidity)

**Failures in Time (FIT) / Mean Time Between Failures (MTBF)**

One per billion hours / one billion hours, calculated per Telcordia SR-332

**Packaging** 600/7" reel; 2500/13" reel; Plastic tape: 12 mm wide, 0.35 mm thick, 8 mm pocket spacing, 3.05 mm pocket depth

**PCB washing** Tested with pure water or alcohol only. For other solvents, see Doc787\_PCB\_Washing.pdf

Part number <sup>1</sup>	Inductance <sup>2</sup> (nH)	Percent tolerance	Q <sup>3</sup> typ	Test frequency (MHz)	SRF min <sup>4</sup> (GHz)	DCR (mOhm)		Irms <sup>5</sup> (A)
						typ	max	
1111SQ-27N_E_	27	<b>5,2</b>	200	400	2.60	7.0	8.1	5.5
1111SQ-30N_E_	30	<b>5,2</b>	200	400	2.40	7.2	8.3	5.5
1111SQ-33N_E_	33	<b>5,2</b>	200	400	2.30	8.3	9.5	4.8
1111SQ-36N_E_	36	<b>5,2</b>	200	400	2.30	8.5	9.8	4.8
1111SQ-39N_E_	39	<b>5,2</b>	200	400	2.20	8.7	10.0	4.8
1111SQ-43N_E_	43	<b>5,2</b>	200	400	2.20	9.4	10.8	4.4
1111SQ-47N_E_	47	<b>5,2</b>	200	400	2.20	9.8	11.3	4.4

1. When ordering, specify **tolerance**, **termination** and **packaging** codes:

1111SQ-47N**J**E**C**

**Tolerance:** **G** = 2% **J** = 5%

(Table shows stock tolerances in bold.)

**Termination:** **E** = RoHS compliant tin-silver (96.5/3.5) over copper.

**Special order, added cost:**

**T** = RoHS tin-silver-copper (95.5/4/0.5) over copper or **S** = non-RoHS tin-lead (63/37) over copper.

**Packaging:** **C** = 7" machine-ready reel. EIA-481 embossed plastic tape (600 parts per full reel).

**B** = Less than full reel. In tape, but not machine ready.

To have a leader and trailer added (\$25 charge), use code letter **C** instead.

**D** = 13" machine-ready reel. EIA-481 embossed plastic tape (2500 parts per full reel). Factory order only, not stocked.

2. Inductance measured at specified test frequency, 0.1 Vrms, 0 A using an Agilent/HP 4286A LCR meter or equivalent with a Coilcraft CCF1191C test fixture.

3. Q measured at specified test frequency, using an Agilent/HP 4291A impedance analyzer or equivalent.

4. SRF measured using an Agilent/HP 8753 network analyzer or equivalent with a Coilcraft CCF1143 test fixture.

5. Current that causes a 20°C temperature rise from 25°C ambient.

6. Electrical specifications at 25°C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.



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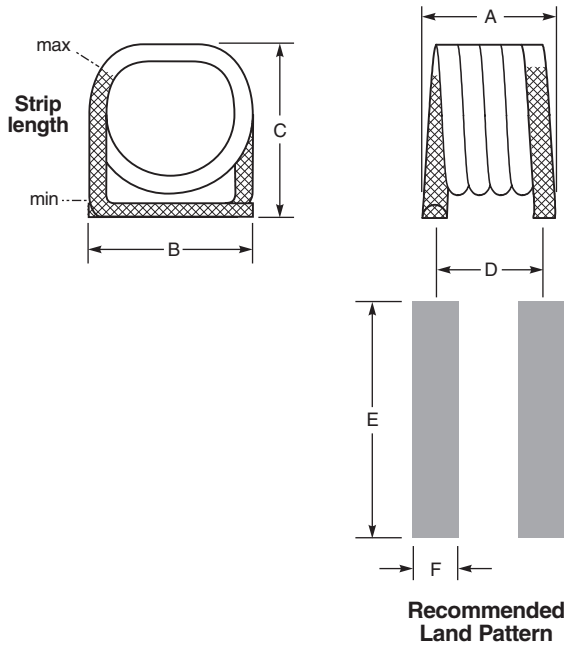
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**NEW!**



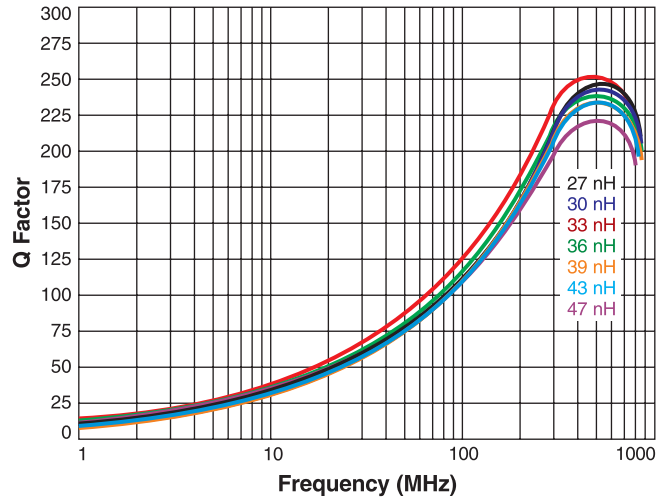
# Square Air Core Inductors – 1111SQ



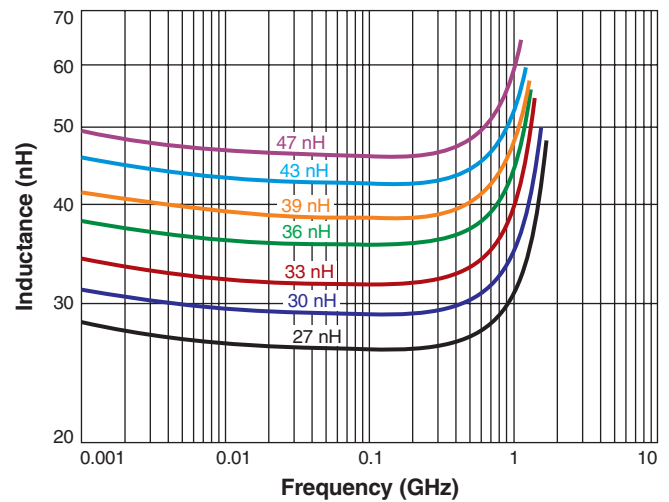
Part number	A	B	C	D	E	F
1111SQ-27N	0.105±0.010 2,67 ±0,254	0.105 ±0.015 2,67 ±0,127	0.110 ±0.005 2,79 ±0,127	0.090 2,29	0.120 3,05	0.040 1,02
1111SQ-30N	0.105 ±0.010 2,67 ±0,254	0.105 ±0.015 2,67 ±0,127	0.110 ±0.005 2,79 ±0,127	0.090 2,29	0.120 3,05	0.040 1,02
1111SQ-33N	0.115 ±0.010 2,92 ±0,254	0.105 ±0.015 2,67 ±0,127	0.110 ±0.005 2,79 ±0,127	0.100 2,54	0.120 3,05	0.040 1,02
1111SQ-36N	0.115 ±0.010 2,92 ±0,254	0.105 ±0.015 2,67 ±0,127	0.110 ±0.005 2,79 ±0,127	0.100 2,54	0.120 3,05	0.040 1,02
1111SQ-39N	0.115 ±0.010 2,92 ±0,254	0.105 ±0.015 2,67 ±0,127	0.110 ±0.005 2,79 ±0,127	0.100 2,54	0.120 3,05	0.040 1,02
1111SQ-43N	0.130 ±0.010 3,30 ±0,254	0.105 ±0.015 2,67 ±0,127	0.110 ±0.005 2,79 ±0,127	0.110 2,79	0.120 3,05	0.040 1,02
1111SQ-47N	0.130 ±0.010 3,30 ±0,254	0.105 ±0.015 2,67 ±0,127	0.110 ±0.005 2,79 ±0,127	0.110 2,79	0.120 3,05	0.040 1,02

All dimensions are in  $\frac{\text{inches}}{\text{mm}}$ .

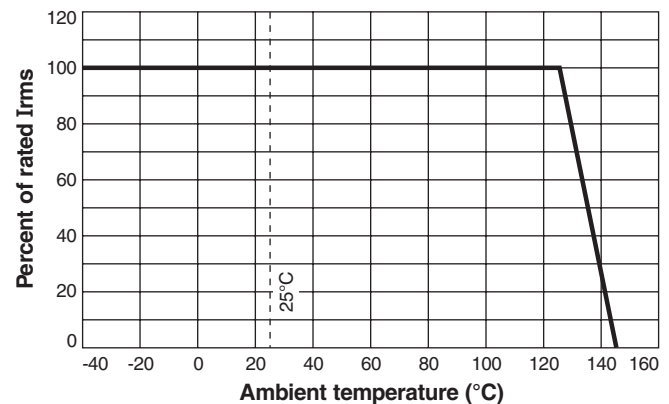
## Typical Q vs Frequency



## Typical L vs Frequency



## Irms Derating



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[1111SQ-39NJED](#) [1111SQ-33NJED](#) [1111SQ-47NGED](#) [1111SQ-36NGED](#) [1111SQ-39NGEB](#) [1111SQ-39NGED](#)  
[1111SQ-36NGEB](#) [1111SQ-33NJEB](#) [1111SQ-27NJEB](#) [1111SQ-30NGEB](#) [1111SQ-30NGED](#) [1111SQ-47NJEB](#)  
[1111SQ-47NJED](#) [1111SQ-27NGEB](#) [1111SQ-30NJEB](#) [1111SQ-27NJED](#) [1111SQ-33NGEB](#) [1111SQ-43NGED](#)  
[1111SQ-43NGEB](#) [1111SQ-30NJED](#) [1111SQ-27NGED](#) [1111SQ-33NGED](#)