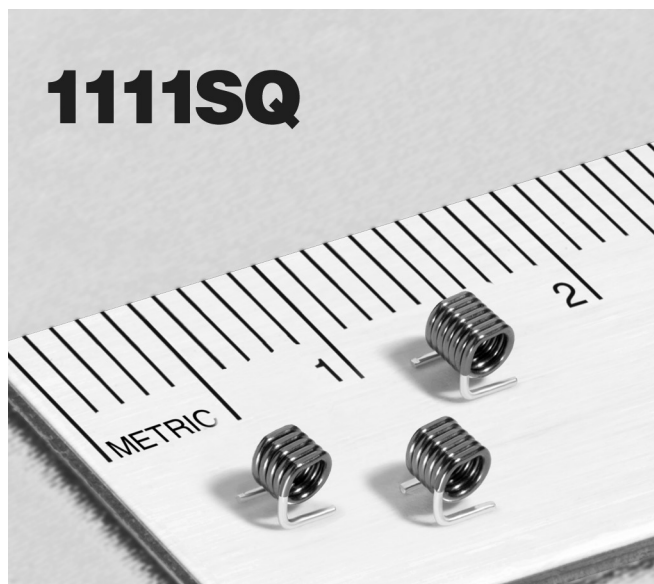


Square Air Core Inductors – 1111SQ



- 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

Environmental 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

Recommended pick and place nozzle: OD: 0.054"; ID: 0.031"

PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787_PCB_Washing.pdf](#).

Part number ¹	Inductance ² (nH)	Percent tolerance	Q ³ typ	Test frequency (MHz)	SRF min ⁴ (GHz)	DCR (mOhm)		Irms ⁵ (A)
						typ	max	
1111SQ-27N_E_	27	5,2	200	400	2.60	7.0	8.1	5.5
1111SQ-30N_E_	30	5,2	200	400	2.40	7.2	8.3	5.5
1111SQ-33N_E_	33	5,2	200	400	2.30	8.3	9.5	4.8
1111SQ-36N_E_	36	5,2	200	400	2.30	8.5	9.8	4.8
1111SQ-39N_E_	39	5,2	200	400	2.20	8.7	10.0	4.8
1111SQ-43N_E_	43	5,2	200	400	2.20	9.4	10.8	4.4
1111SQ-47N_E_	47	5,2	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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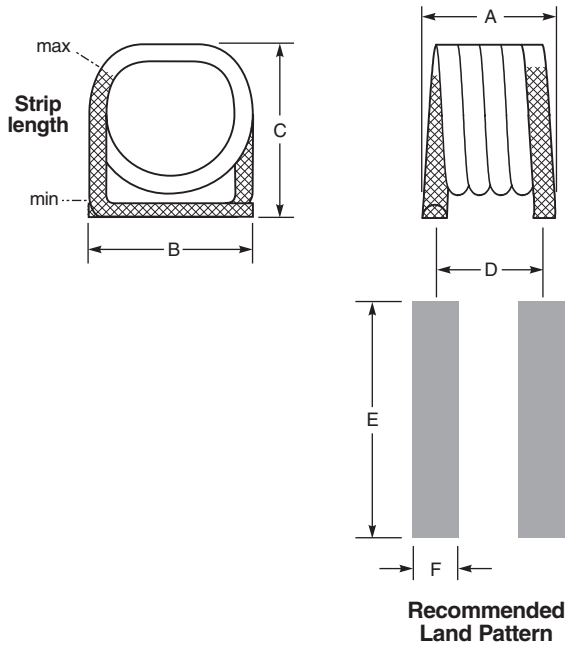
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This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.



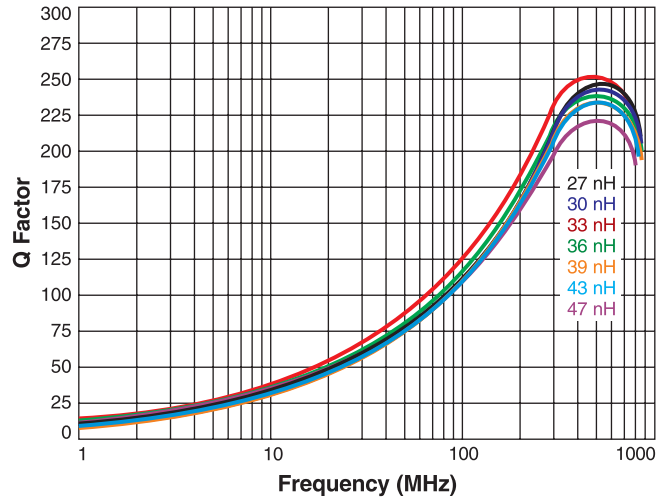
Square Air Core Inductors – 1111SQ



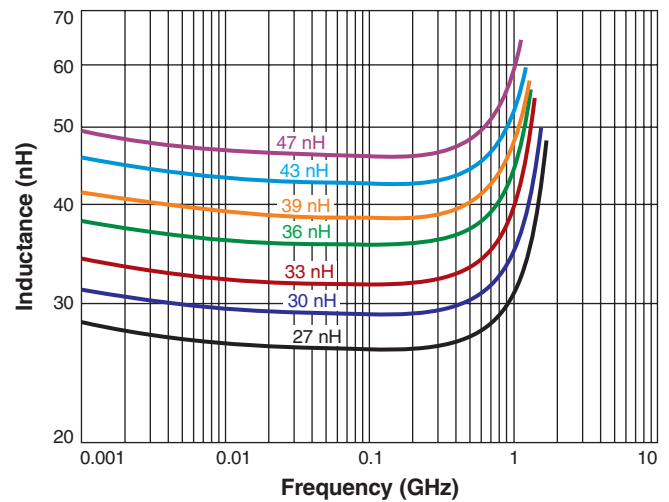
Part number	A	B	C	D	E	F
1111SQ-27N	0.105±0.010 2,67 ±0,254	0.105 ±0.015 2,67 ±0,127	0.110 ±0.005 2,79 ±0,127	0.090 2,29	0.120 3,05	0.040 1,02
1111SQ-30N	0.105 ±0.010 2,67 ±0,254	0.105 ±0.015 2,67 ±0,127	0.110 ±0.005 2,79 ±0,127	0.090 2,29	0.120 3,05	0.040 1,02
1111SQ-33N	0.115 ±0.010 2,92 ±0,254	0.105 ±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 $\frac{\text{inches}}{\text{mm}}$.

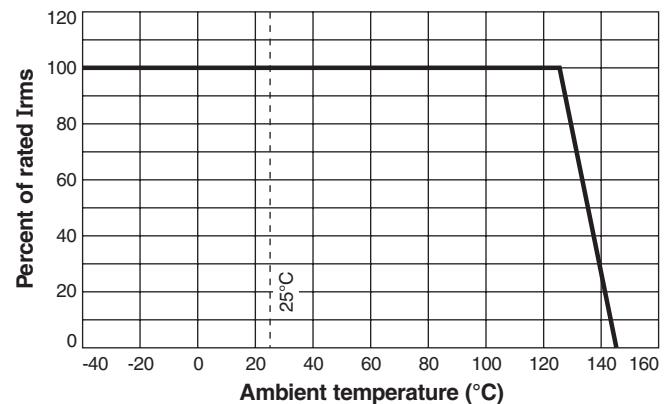
Typical Q vs Frequency



Typical L vs Frequency



Irms Derating



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