



**THE DATASHEET OF  
0201DS-5N5XJEW**

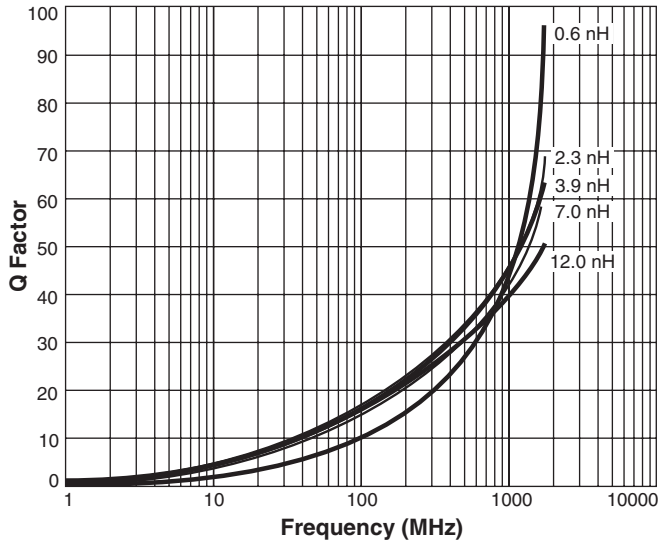




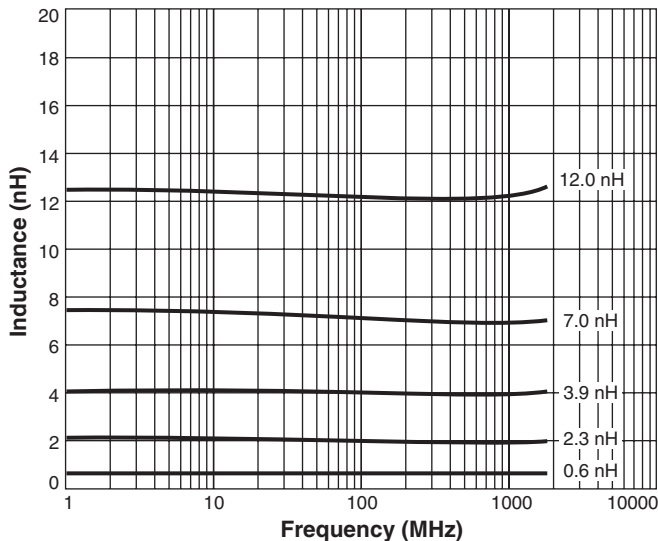
# Chip Inductors - 0201DS Series (0603)

- 0201 size; world's smallest wirewound inductor
- 52 inductance values from 0.5 to 14 nH

## Typical Q vs Frequency



## Typical L vs Frequency



**Designer's Kit C425** contains 20 of each value

**Core material** Ceramic

**Environmental** RoHS compliant without exemption, halogen free

**Terminations** Matte tin over nickel over silver

**Weight** 0.14 – 0.23 mg

**Ambient temperature**  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$  with Irms current

**Maximum part temperature**  $+140^{\circ}\text{C}$  (ambient + temp rise).

**Storage temperature** Component:  $-40^{\circ}\text{C}$  to  $+140^{\circ}\text{C}$ .

Tape and reel packaging:  $-40^{\circ}\text{C}$  to  $+80^{\circ}\text{C}$

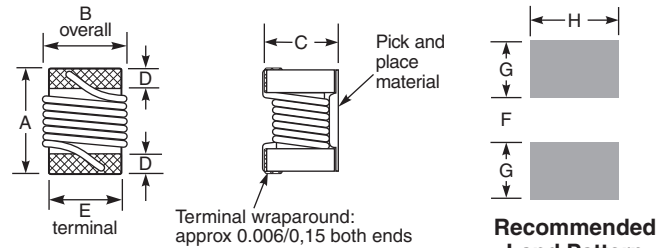
**Resistance to soldering heat** Max three 40 second reflows at  $+260^{\circ}\text{C}$ , parts cooled to room temperature between cycles

**Temperature Coefficient of Inductance (TCL)**  $+25$  to  $+125$  ppm/ $^{\circ}\text{C}$

**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at  $<30^{\circ}\text{C}$  / 85% relative humidity)

**Packaging** 2000 per 7" reel. Paper tape: 8 mm wide, 0.6 mm thick, 2 mm pocket spacing

**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787\\_PCB\\_Washing.pdf](#).



A max	B max	C max	D	E	F	G	H	
0.023	0.018	0.0177	0.004	0.015	0.009	0.013	0.018	inches
0,58	0,46	0,45	0,10	0,38	0,23	0,33	0,46	mm



# 0201DS Chip Inductor Series (0603)

Part number <sup>1</sup>	Inductance <sup>2</sup> (nH)	Percent tolerance	900 MHz		1.7 GHz		SRF typ <sup>4</sup> (GHz)	DCR max <sup>5</sup> (Ohms)	Irms <sup>6</sup> (mA)
			L typ	Q typ <sup>3</sup>	L typ	Q typ <sup>3</sup>			
0201DS-0N5XKE_	0.5	10	0.50	29	0.49	43	23.5	0.020	1250
0201DS-0N6XKE_	0.6	10	0.58	31	0.58	51	24.5	0.030	1000
0201DS-1N2XJE_	1.2	5	1.16	42	1.16	60	17.9	0.042	870
0201DS-1N3XJE_	1.3	5	1.24	38	1.24	57	17.6	0.048	820
0201DS-1N4XJE_	1.4	5	1.35	27	1.34	37	17.0	0.080	630
0201DS-1N5XJE_	1.5	5	1.47	28	1.47	40	17.0	0.090	600
0201DS-2N2XJE_	2.2	5	2.23	32	2.23	54	16.7	0.070	700
0201DS-2N3XJE_	2.3	5	2.28	45	2.28	64	16.5	0.070	670
0201DS-2N4XJE_	2.4	5	2.36	35	2.36	53	13.0	0.082	620
0201DS-2N5XJE_	2.5	5	2.50	31	2.49	44	12.5	0.165	440
0201DS-3N3XJE_	3.3	5	3.31	42	3.32	62	12.8	0.080	630
0201DS-3N4XJE_	3.4	5,3	3.38	42	3.42	62	12.7	0.080	630
0201DS-3N5XJE_	3.5	5,3	3.41	44	3.45	64	12.4	0.080	630
0201DS-3N6XJE_	3.6	5,3	3.53	40	3.57	61	12.5	0.105	550
0201DS-3N7XJE_	3.7	5,3	3.65	39	3.66	58	10.6	0.105	550
0201DS-3N8XJE_	3.8	5,3	3.81	38	3.81	60	10.2	0.180	420
0201DS-3N9XJE_	3.9	5,3	3.89	35	3.89	50	11.2	0.240	360
0201DS-4N8XJE_	4.8	5,3	4.83	34	4.83	50	11.0	0.096	570
0201DS-4N9XJE_	4.9	5,3	4.72	33	4.71	52	11.7	0.130	510
0201DS-5N0XJE_	5.0	5,3	4.90	34	4.90	54	11.5	0.130	510
0201DS-5N1XJE_	5.1	5,3	4.96	35	4.96	54	11.1	0.130	510
0201DS-5N2XJE_	5.2	5,3	5.21	36	5.21	55	10.0	0.170	430
0201DS-5N3XJE_	5.3	5,3	5.15	36	5.15	57	10.6	0.130	510
0201DS-5N4XJE_	5.4	5,3	5.30	36	5.31	56	10.2	0.130	510
0201DS-5N5XJE_	5.5	5,3	5.49	35	5.49	50	9.5	0.285	330
0201DS-6N7XJE_	6.7	5,3	6.71	40	6.72	59	6.8	0.150	460
0201DS-6N8XJE_	6.8	5,3	6.52	35	6.52	52	9.5	0.150	460
0201DS-6N9XJE_	6.9	5,3	6.70	36	6.73	54	9.3	0.150	460
0201DS-7N0XJE_	7.0	5,3	6.97	39	6.97	60	6.7	0.210	390
0201DS-7N1XJE_	7.1	5,3	6.91	36	6.90	54	9.5	0.250	390
0201DS-7N2XJE_	7.2	5,3	6.97	36	6.97	55	9.4	0.250	390
0201DS-7N3XJE_	7.3	5,3	7.05	37	7.04	56	9.3	0.250	390
0201DS-7N4XJE_	7.4	5,3	7.29	40	7.30	61	9.1	0.250	390
0201DS-7N5XJE_	7.5	5,3	7.44	36	7.46	50	6.8	0.340	300
0201DS-7N6XJE_	7.6	5,3	7.32	39	7.31	59	9.3	0.300	340
0201DS-7N7XJE_	7.7	5,3	7.38	39	7.37	60	9.2	0.300	340
0201DS-7N8XJE_	7.8	5,3	7.49	38	7.49	58	9.2	0.300	340
0201DS-7N9XJE_	7.9	5,3	7.56	38	7.56	58	9.1	0.300	340
0201DS-8N0XJE_	8.0	5,3	7.65	35	7.68	53	9.2	0.300	340
0201DS-8N1XJE_	8.1	5,3	7.74	37	7.75	59	9.1	0.300	340
0201DS-8N2XJE_	8.2	5,3	8.14	37	8.22	53	6.4	0.270	340
0201DS-8N3XJE_	8.3	5,3	7.93	36	7.95	57	8.9	0.300	340
0201DS-8N4XJE_	8.4	5,3	8.03	35	8.04	55	8.9	0.350	300
0201DS-8N5XJE_	8.5	5,3	8.11	35	8.13	55	8.9	0.350	300
0201DS-8N7XJE_	8.7	5,3	8.68	38	8.74	59	6.3	0.350	300
0201DS-9N0XJE_	9.0	5,3	9.02	42	9.04	63	6.4	0.350	300
0201DS-9N4XJE_	9.4	5,3	9.38	36	9.39	51	6.4	0.400	280
0201DS-9N6XJE_	9.6	5,3	9.62	38	9.64	53	6.2	0.400	280
0201DS-11NXJE_	11.0	5,3	11.11	40	11.15	62	5.7	0.400	280
0201DS-12NXJE_	12.0	5,3	12.15	39	12.20	56	5.6	0.360	300
0201DS-13NXJE_	13.0	5,3	13.12	38	13.22	52	6.7	0.440	270
0201DS-14NXJE_	14.0	5,3	14.13	37	14.37	51	5.1	0.440	270

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

0201DS-14NXJEW

**Tolerance:** H = 3%, J = 5%, K = 10%

**Packaging:** W = 7" machine-ready reel. EIA-481 punched paper tape (2000 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

U = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from U to W.

- Inductance measured at 250 MHz using a Coilcraft SMD-F fixture in an Agilent/HP 4286 impedance analyzer with Coilcraft-provided correlation pieces.
- Q measured using an Agilent/HP 4291A with an Agilent/HP 16197 test fixture.
- SRF measured using an Agilent/HP 8722ES network analyzer and a test fixture with a 0.010" air gap.
- DCR measured on a micro-ohmmeter and a Coilcraft CCF858 test fixture.
- Current that causes a 15°C temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings

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



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