

**NEW!**

# Ceramic Chip Inductors 016008C Series (0402)



- World's smallest high-frequency-wirewound chip inductor
- First performance-optimized 01005 size (metric 0402, 0.4 x 0.2 mm)
- Extremely high Q, the highest in the market – higher than all thin film type
- Exceptionally low DCR – lower than all thin film type
- 36 inductance values from 0.45 nH to 24 nH

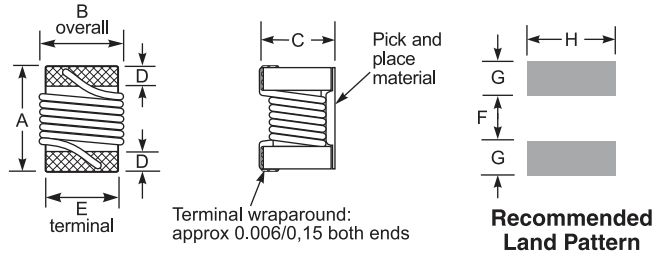
Part number <sup>1</sup>	L <sup>2</sup> (nH)	Percent tolerance	Q typ <sup>3</sup>			SRF typ <sup>4</sup> (GHz)	DCR max <sup>5</sup> (mOhms)	Irms (mA)		
			900 MHz	1.7 GHz	2.4 GHz			at 25°C <sup>6</sup>	at 85°C <sup>7</sup>	at 125°C <sup>8</sup>
016008C-N45XKRW	0.45	<b>10</b>	37	48	59	36.0	60	550	240	140
016008C-N50XKRW	0.5	<b>10</b>	30	40	48	36.0	75	445	170	90
016008C-1N1XKRW	1.1	<b>10</b>	38	50	62	21.0	95	415	240	140
016008C-1N2XKRW	1.2	<b>10</b>	34	45	56	21.3	130	335	170	90
016008C-1N3XKRW	1.3	<b>10</b>	27	37	46	21.0	200	270	120	50
016008C-2N0XJRW	2.0	<b>5</b>	34	45	55	15.2	125	345	240	140
016008C-2N2XJRW	2.2	<b>5</b>	33	45	54	14.8	180	275	170	90
016008C-2N3XJRW	2.3	<b>5</b>	25	36	46	14.8	160	340	190	100
016008C-2N4XJRW	2.4	<b>5</b>	27	36	43	14.2	260	225	120	50
016008C-2N5XJRW	2.5	<b>5</b>	25	35	44	13.6	205	305	170	90
016008C-3N3XJRW	3.3	<b>5</b>	34	45	52	12.2	150	305	240	140
016008C-3N6XJRW	3.6	<b>5</b>	31	42	48	12.0	230	245	170	90
016008C-3N8XJRW	3.8	<b>5</b>	27	36	42	11.4	345	195	120	50
016008C-3N9XJRW	3.9	<b>5</b>	27	37	42	11.3	230	275	190	100
016008C-4N3XJRW	4.3	<b>5</b>	32	42	48	10.8	190	265	240	140
016008C-4N7XJRW	4.7	<b>5</b>	34	47	57	11.0	275	220	170	90
016008C-5N1XJRW	5.1	<b>5</b>	31	42	50	10.0	325	200	140	70
016008C-5N3XJRW	5.3	<b>5</b>	29	40	47	9.7	430	175	120	50
016008C-5N6XJRW	5.6	<b>5</b>	28	39	47	9.8	275	220	190	100
016008C-5N8XJRW	5.8	<b>5</b>	35	48	58	9.8	315	220	190	100
016008C-6N0XJRW	6.0	<b>5</b>	31	42	51	9.8	340	200	170	90
016008C-6N2XJRW	6.2	<b>5</b>	33	44	53	9.7	385	185	140	70
016008C-6N8XJRW	6.8	<b>5</b>	31	42	48	9.0	310	200	190	100
016008C-6N9XJRW	6.9	<b>5</b>	30	40	46	8.8	510	160	120	50
016008C-7N5XJRW	7.5	<b>5</b>	28	37	43	8.2	320	260	190	100
016008C-7N8XJRW	7.8	<b>5</b>	31	42	49	8.4	380	180	170	90
016008C-8N2XJRW	8.2	<b>5</b>	30	40	46	8.1	445	170	140	70
016008C-8N8XJRW	8.8	<b>5</b>	30	39	44	7.8	600	145	120	50
016008C-9N5XJRW	9.5	<b>5</b>	28	37	44	7.6	575	180	140	70
016008C-10NXJRW	10	<b>5</b>	31	40	46	7.4	520	155	140	70
016008C-12NXJRW	12	<b>5</b>	27	37	42	6.5	640	170	140	70
016008C-13NXJRW	13	<b>5</b>	30	38	43	6.5	730	130	120	50
016008C-15NXJRW	15	<b>5</b>	27	35	38	6.2	820	120	120	50
016008C-18NXJRW	18	<b>5</b>	27	37	42	5.5	1020	120	100	40
016008C-20NXJRW	20	<b>5</b>	28	35	37	5.3	1300	110	90	40
016008C-24NXJRW	24	<b>5</b>	28	33	33	4.8	1550	100	90	40

- Packaging:** W = 7" machine-ready reel. EIA-481 punched paper tape (2000 parts per full reel).
- Inductance measured at 250 MHz using a Coilcraft ccf1426 fixture in an Agilent/HP 4287 impedance analyzer with Coilcraft-provided correlation pieces.
- Q measured using an Agilent/HP 4991 with an Coilcraft CCF1481 test fixture.
- SRF measured using Agilent/HP 8722ES network analyzer and Coilcraft CCF1406 test fixture.
- DCR measured on Cambridge Technology micro-ohmmeter and Coilcraft CCF858 test fixture.
- Current that causes a 40°C temperature rise at 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.
- Maximum current that can be applied at 85°C.
- Maximum current that can be applied at 125°C.
- Electrical specifications at 25°C.

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



# Chip Inductors – 016008C Series



Amax	Bmax	Cmax	Dref	Eref	Fref	Gref	Href
0.0185	0.0110	0.0138	0.0035	0.0080	0.0060	0.0090	0.0120
0,47	0,28	0,35	0,09	0,20	0,15	0,23	0,30

**Designer's Kit C488** contains 3 of each value

**Core material** Ceramic

**Environmental** RoHS compliant, halogen free

**Terminations** Matte tin over copper over nickel over molybdenum - manganese

**Weight** 0.10 – 0.16 mg

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

**Maximum part temperature** +140°C (ambient + temp rise)

**Storage temperature** Component: –40°C to +140°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

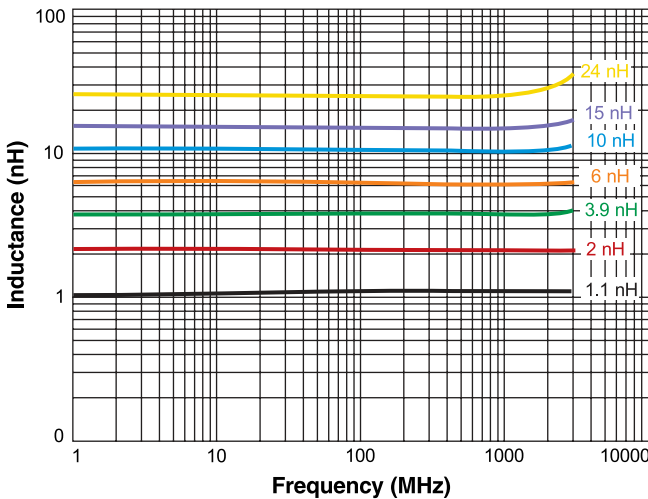
**Temperature Coefficient of Inductance (TCL)** +25 to +150 ppm/°C

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

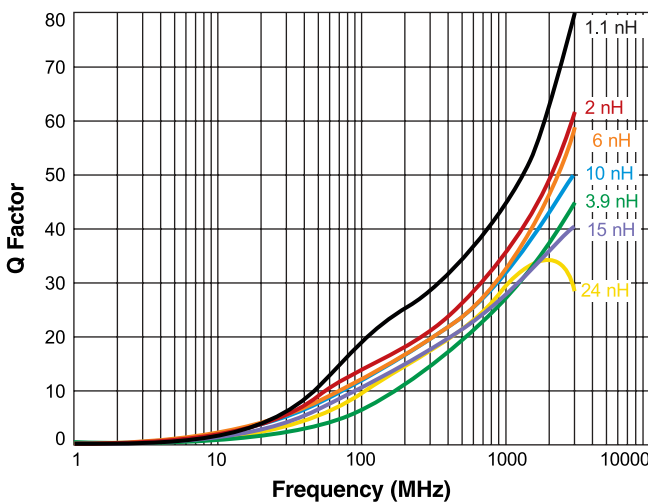
**Packaging** 2000 per 7" reel. Paper tape: 8 mm wide, 0.42 mm thick, 2 mm pocket spacing

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

## Typical L vs Frequency



## Typical Q vs Frequency



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