

Type 3630 Series



The 3630 series is a shielded power inductor offered in six convenient sizes. Careful selection of materials ensure that these Tyco Sigma inductors offer high reliability, long life and repeatability but are very cost competitive. The low profile makes this product very effective in space – conscious applications and designs. With its low resistance and high energy storage capabilities the products are highly suitable for use in DC-DC converter applications, step up or step down converters and flash memory programmers.

Key Features

- High Current Capability Ferrite Core
- Available in E12 series values
- Up to 8.2A
- Down to 2.7mm height
- Available in 6 different styles
- High reliability
- Taped and Reeled

Electrical Characteristics - 3630A Series

Inductance Code	Inductance (µH)	Tolerance	Q Ref.	Test Freq. (Hz)		S.R.F. (MHz) Nom.	R.D.C. (Ω) Max.	IDC (mA) Max.
				L	Q			
5R0	5.0	±20%	20	1K	7.960M	45.0	0.080	1.70
7R5	7.5	±20%	20	1K	7.960M	40.0	0.100	1.40
100	10.0	±20%	38	1K	2.520M	32.0	0.120	1.20
120	12.0	±20%	38	1K	2.520M	28.0	0.150	1.10
150	15.0	±20%	38	1K	2.520M	25.0	0.170	1.00
180	18.0	±15%	35	1K	2.520M	23.0	0.190	0.90
220	22.0	±15%	30	1K	2.520M	22.0	0.250	0.80
270	27.0	±15%	28	1K	2.520M	18.0	0.270	0.70
330	33.0	±15%	26	1K	2.520M	17.0	0.300	0.65
390	39.0	±15%	26	1K	2.520M	16.0	0.380	0.60
470	47.0	±10%	24	1K	2.520M	14.0	0.460	0.55
560	56.0	±10%	24	1K	2.520M	12.0	0.600	0.50
680	68.0	±10%	22	1K	2.520M	11.0	0.700	0.45
820	82.0	±10%	20	1K	2.520M	10.0	0.800	0.40
101	100.0	±10%	50	1K	0.796M	9.0	0.950	0.37
121	120.0	±10%	50	1K	0.796M	8.5	1.000	0.35
151	150.0	±10%	53	1K	0.796M	7.0	1.300	0.30
181	180.0	±10%	53	1K	0.796M	6.0	1.450	0.28
221	220.0	±10%	55	1K	0.796M	5.5	1.900	0.24
271	270.0	±10%	50	1K	0.796M	5.5	2.150	0.22
331	330.0	±10%	60	1K	0.796M	5.0	2.800	0.19
391	390.0	±10%	55	1K	0.796M	4.5	3.300	0.17
471	470.0	±10%	50	1K	0.796M	4.0	3.600	0.16

Electrical Characteristics - 3630B Series

Inductance Code	Inductance (µH)	Tolerance	Q Ref.	Test Freq. (Hz)		S.R.F. (MHz) Nom.	R.D.C. (Ω) Max.	IDC (mA) Max.
				L	Q			
2R2	2.2	±20%	18	1K	7.960M	75.00	0.040	2.50
3R9	3.9	±20%	20	1K	7.960M	50.00	0.055	2.10
5R6	5.6	±20%	20	1K	7.960M	40.00	0.065	1.95
8R2	8.2	±20%	19	1K	7.960M	32.00	0.080	1.75
100	10.0	±20%	40	1K	2.520M	28.00	0.100	1.50
120	12.0	±20%	40	1K	2.520M	24.00	0.120	1.40
150	15.0	±20%	40	1K	2.520M	22.00	0.140	1.30
180	18.0	±15%	40	1K	2.520M	19.00	0.160	1.20
220	22.0	±15%	38	1K	2.520M	17.00	0.180	1.10
270	27.0	±15%	35	1K	2.520M	15.50	0.200	1.00
330	33.0	±15%	40	1K	2.520M	13.50	0.240	0.92
390	39.0	±15%	35	1K	2.520M	12.00	0.260	0.84
470	47.0	±15%	32	1K	2.520M	10.50	0.280	0.75
560	56.0	±10%	30	1K	2.520M	9.50	0.380	0.68
680	68.0	±10%	28	1K	2.520M	9.00	0.440	0.60
820	82.0	±10%	28	1K	2.520M	8.50	0.550	0.54
101	100.0	±10%	45	1K	0.796M	7.50	0.600	0.50
121	120.0	±10%	42	1K	0.796M	7.00	0.750	0.45
151	150.0	±10%	39	1K	0.796M	6.50	0.900	0.40
181	180.0	±10%	41	1K	0.796M	4.80	1.050	0.35
221	220.0	±10%	38	1K	0.796M	4.50	1.180	0.30
271	270.0	±10%	37	1K	0.796M	4.20	1.400	0.27
331	330.0	±10%	36	1K	0.796M	3.80	1.800	0.24
471	470.0	±10%	34	1K	0.796M	3.50	2.250	0.20
561	560.0	±10%	32	1K	0.796M	3.00	3.000	0.18
681	680.0	±10%	32	1K	0.796M	2.80	3.400	0.17
821	820.0	±10%	35	1K	0.796M	2.50	4.000	0.16
102	1000.0	±10%	35	1K	0.252M	2.20	5.000	0.15

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**Electrical Characteristics -
3630C Series**

Inductance Code	Inductance (μ H)	Tolerance	Q Ref.	Test Freq. (Hz)		S.R.F. (MHz) Nom.	R.D.C. (Ω) Max.	IDC (mA) Max.
				L	Q			
1R0	1.0	$\pm 20\%$	25	1K	7.960M	120.00	0.017	4.50
1R5	1.5	$\pm 20\%$	25	1K	7.960M	100.00	0.020	3.60
2R2	2.2	$\pm 20\%$	25	1K	7.960M	90.00	0.027	3.10
3R0	3.0	$\pm 20\%$	25	1K	7.960M	80.00	0.030	2.90
4R7	4.7	$\pm 20\%$	25	1K	7.960M	50.00	0.040	2.50
7R0	7.0	$\pm 20\%$	22	1K	7.960M	32.00	0.055	2.20
100	10.0	$\pm 20\%$	48	1K	2.520M	30.00	0.065	2.00
120	12.0	$\pm 20\%$	45	1K	2.520M	25.00	0.080	1.80
150	15.0	$\pm 20\%$	40	1K	2.520M	20.00	0.085	1.70
180	18.0	$\pm 15\%$	35	1K	2.520M	19.00	0.090	1.60
220	22.0	$\pm 15\%$	42	1K	2.520M	18.00	0.100	1.40
270	27.0	$\pm 15\%$	40	1K	2.520M	17.00	0.120	1.30
330	33.0	$\pm 15\%$	40	1K	2.520M	15.00	0.160	1.20
390	39.0	$\pm 15\%$	40	1K	2.520M	13.00	0.180	1.05
470	47.0	$\pm 15\%$	35	1K	2.520M	12.00	0.190	1.00
560	56.0	$\pm 15\%$	35	1K	2.520M	11.00	0.210	0.90
680	68.0	$\pm 15\%$	35	1K	2.520M	9.00	0.340	0.82
820	82.0	$\pm 15\%$	35	1K	2.520M	8.00	0.380	0.75
101	100.0	$\pm 10\%$	35	1K	0.796M	7.50	0.420	0.68
121	120.0	$\pm 10\%$	30	1K	0.796M	7.20	0.460	0.60
151	150.0	$\pm 10\%$	28	1K	0.796M	6.20	0.520	0.55
181	180.0	$\pm 10\%$	28	1K	0.796M	5.80	0.700	0.50
221	220.0	$\pm 10\%$	30	1K	0.796M	5.20	0.800	0.45
271	270.0	$\pm 10\%$	30	1K	0.796M	4.80	1.100	0.40
331	330.0	$\pm 10\%$	30	1K	0.796M	4.50	1.200	0.35
391	390.0	$\pm 10\%$	25	1K	0.796M	4.20	1.400	0.33
471	470.0	$\pm 10\%$	40	1K	0.796M	3.00	1.600	0.30
561	560.0	$\pm 10\%$	40	1K	0.796M	2.70	1.800	0.28
681	680.0	$\pm 10\%$	37	1K	0.796M	2.60	2.300	0.26
821	820.0	$\pm 10\%$	37	1K	0.796M	2.50	2.600	0.24
102	1000.0	$\pm 10\%$	65	1K	0.252M	2.00	3.200	0.22
122	1200.0	$\pm 10\%$	58	1K	0.252M	2.00	3.600	0.20
152	1500.0	$\pm 10\%$	53	1K	0.252M	1.60	5.200	0.17
182	1800.0	$\pm 10\%$	65	1K	0.252M	1.40	5.700	0.16
222	2200.0	$\pm 10\%$	55	1K	0.252M	1.40	6.500	0.14
272	2700.0	$\pm 10\%$	55	1K	0.252M	1.20	8.600	0.12
332	3200.0	$\pm 10\%$	50	1K	0.252M	1.20	10.000	0.10

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**Electrical Characteristics -
3630D Series**

Inductance Code	Inductance (μH)	Tolerance	Q Ref.	Test Freq. (Hz)		R.D.C. (Ω) Max.	Irms (A) ΔT=40°C Max.	Isat(A) ΔL/L=10% Max.
				L	Q			
1R8	1.8	±20%	10	1K	7.960M	0.038	3.00	3.60
2R2	2.2	±20%	11	1K	7.960M	0.045	2.76	3.40
3R0	3.0	±20%	11	1K	7.960M	0.062	2.20	2.60
3R9	3.9	±20%	10	1K	7.960M	0.070	2.10	2.40
4R7	4.7	±20%	10	1K	7.960M	0.078	1.90	2.30
7R5	7.5	±20%	10	1K	7.960M	0.100	1.44	1.70
100	10.0	±20%	18	1K	2.520M	0.145	1.24	1.50
120	12.0	±20%	20	1K	2.520M	0.185	1.10	1.30
150	15.0	±20%	20	1K	2.520M	0.200	1.02	1.20
180	18.0	±20%	20	1K	2.520M	0.270	0.90	1.10
220	22.0	±20%	17	1K	2.520M	0.300	0.80	1.00
270	27.0	±20%	17	1K	2.520M	0.400	0.75	0.90
330	33.0	±20%	17	1K	2.520M	0.450	0.70	0.85
390	39.0	±20%	18	1K	2.520M	0.560	0.65	0.80
470	47.0	±20%	18	1K	2.520M	0.650	0.60	0.72
560	56.0	±20%	15	1K	2.520M	0.680	0.52	0.65
680	68.0	±20%	15	1K	2.520M	0.800	0.48	0.58
820	82.0	±20%	20	1K	2.520M	1.200	0.42	0.52
101	100.0	±20%	23	1K	0.796M	1.400	0.40	0.48
121	120.0	±20%	22	1K	0.796M	1.520	0.35	0.44
151	150.0	±20%	23	1K	0.796M	1.800	0.32	0.40
181	180.0	±20%	20	1K	0.796M	2.200	0.28	0.35
221	220.0	±20%	20	1K	0.796M	2.200	0.26	0.32
271	270.0	±15%	26	1K	0.796M	3.100	0.22	0.28
331	330.0	±15%	26	1K	0.796M	3.600	0.20	0.26
391	390.0	±15%	28	1K	0.796M	4.600	0.18	0.22
471	470.0	±15%	28	1K	0.796M	5.100	0.16	0.20

**Electrical Characteristics -
3630F Series**

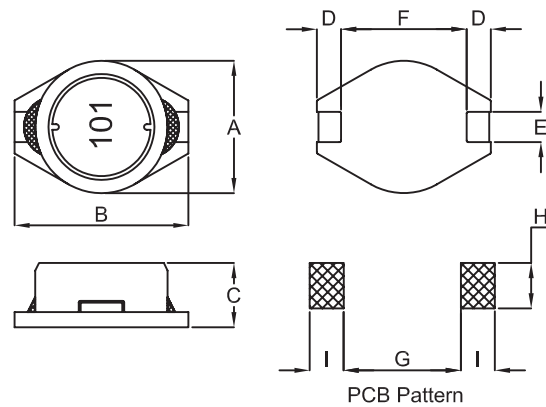
Inductance Code	Inductance (μH)	Tolerance	Q Ref.	Test Freq. (MHz)	S.R.F. (MHz) Typ.	R.D.C. (Ω) Max.	Irms (A) ΔT=40°C Max.	Isat(A) ΔL/L=10% Max.
100	10.0	±20%	56	2.520	19.00	0.040	4.00	8.20
150	15.0	±20%	53	2.520	17.50	0.052	3.60	7.20
220	22.0	±20%	51	2.520	16.00	0.070	3.00	6.20
330	33.0	±20%	44	2.520	10.00	0.100	2.50	5.00
470	47.0	±20%	40	2.520	8.00	0.130	2.00	4.20
680	68.0	±20%	37	2.520	6.00	0.200	1.60	3.40
101	100.0	±20%	40	0.796	4.60	0.320	1.30	2.60
151	150.0	±20%	39	0.796	4.30	0.500	1.05	2.30
221	220.0	±20%	29	0.796	3.50	0.600	1.00	1.90
331	330.0	±20%	30	0.796	3.00	0.920	0.80	1.40
471	470.0	±20%	27	0.796	2.40	1.150	0.64	1.30
681	680.0	±20%	19	0.796	2.10	1.700	0.54	1.10
102	1000.0	±10%	46	0.252	1.50	2.450	0.45	0.90

**Environmental Characteristics -
A, B, C, D, F Series**

Storage Temp:	-40°C to +125°C
Operating Temp:	-25°C to +105°C
Rated Current:	Base on temp. rise & ΔL/L=10% max
Temp. Rise:	40°C max.

Type 3630 Series

**Dimensions
A, B, C, D, F Series**



Series	A	B	C	D	E	F	G(Ref)	H(Ref)	I(Ref)
3630A	8.0±0.2	10.5±0.2	3.7±0.3	2.1±0.2	2.0±0.2	6.0±0.3	5.7	2.2	2.4
3630B	8.0±0.2	10.5±0.2	4.5±0.3	2.1±0.2	2.0±0.2	6.0±0.3	5.7	2.2	2.4
3630C	10.0±0.2	12.7±0.2	4.9±0.3	2.4±0.2	2.5±0.2	7.6±0.3	7.3	2.8	3.0
3630D	10.1±0.2	12.7±0.2	2.7±0.3	2.4±0.2	2.5±0.2	7.6±0.3	7.3	2.8	3.0
3630F	14.0±0.5	18.3±0.5	6.8±0.3	2.5±0.2	2.6±0.2	13.0±0.3	12.7	2.9	3.2

**Electrical Characteristics -
3630E Series**

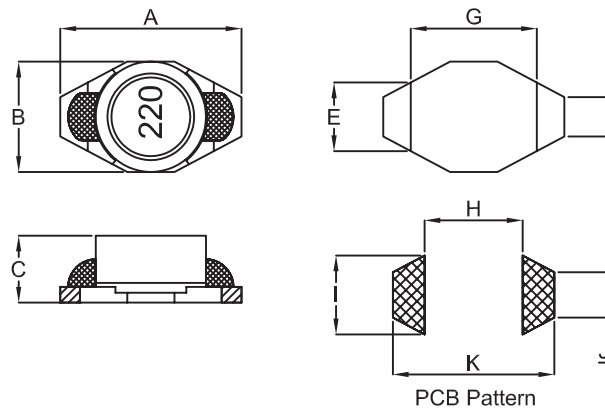
Inductance Code	Inductance (μH) ±20%	Q Ref.	Test Freq. (KHz)		S.R.F. (MHz) Nom.	R.D.C. (Ω) Max.	I _{rms} (A) ΔT=40°C Max.	I _{sat} (A) L/L _{0A} =10% Max.
			L	Q				
1R0	1.0	30	100	200	250	0.040	3.00	1.200
1R5	1.5	30	100	200	125	0.045	2.80	0.920
2R2	2.2	40	100	200	120	0.050	1.80	0.800
3R3	3.3	40	100	200	120	0.055	1.60	0.620
4R7	4.7	40	100	200	105	0.060	1.40	0.500
6R8	6.8	40	100	200	50	0.065	1.20	0.400
100	10	40	100	200	38	0.075	1.00	0.320
150	15	40	100	100	33	0.090	0.80	0.260
220	22	40	100	100	25	0.111	0.70	0.240
330	33	40	100	100	20	0.190	0.60	0.160
470	47	40	100	100	20	0.230	0.50	0.140
680	68	40	100	100	15	0.290	0.40	0.120
101	100	40	100	100	10	0.480	0.30	0.100
151	150	40	100	100	9	0.590	0.26	0.080
221	220	40	100	100	6	0.770	0.22	0.070
331	330	40	100	100	5	1.400	0.20	0.050
471	470	40	100	100	4	1.800	0.19	0.045
681	680	40	100	100	3	2.200	0.18	0.040
102	1000	40	100	100	2	3.400	0.15	0.028
152	1500	50	100	100	2	4.200	0.12	0.024
222	2200	50	100	100	2	8.500	0.10	0.020
332	3300	50	100	100	1	11.000	0.08	0.018
472	4700	50	100	100	1	13.900	0.06	0.014
682	6800	50	100	100	1	25.000	0.04	0.012
103	10000	50	100	100	0.8	32.800	0.02	0.010

**Environmental Characteristics -
E Series**

Storage Temp:	-40°C to +125°C
Operating Temp:	-25°C to +105°C
Rated Current:	Base on temp. rise & ΔL/L=10% max
Temp. Rise:	30°C max.

Type 3630 Series

**Dimensions
E Series**



Series	A	B	C	E	F	G	H	I	J	K
3630E	6.50±0.5	4.40 max	2.90±0.15	2.50 ref.	1.24 ref.	4.45 ref.	4.10 ref.	1.60 ref.	3.00 ref.	7.00 ref.

**Reliability Test -
E Series**

Test Item	Specification	Test Condition
Thermal Shock Test: (Temp Cycle)	$\Delta L \leq 20\%$	Room Temp. $\rightarrow -25 \pm 2^\circ\text{C}$ 15 minutes $\rightarrow$ 30 minutes Room Temp. $\rightarrow 85 \pm 2^\circ\text{C}$ 15 minutes $\rightarrow$ 30 minutes Total: 50 cycles
Humidity Resistance Test:	$\Delta L \leq 20\%$	Temperature: $40 \pm 2^\circ\text{C}$ Humidity: 90 ~ 95% Applied Current: Per spec. Time: 500 hours
High Temp. Resistance Test:	$\Delta L \leq 20\%$	Temperature: $105 \pm 2^\circ\text{C}$ Applied Current: Per spec. Time: 500 hours

How to Order

3630	A	1R0	K
Common Part	Style	Inductance	Tolerance
3630	A, B, C, D, E or F	See Relevant Table for Inductance Code	K - $\pm 10\%$ L - $\pm 15\%$ M - 20%