

Type 3631 Series

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The 3631 series of SMD shielded Power Inductors are designed to handle high current and have been designed for use in SMD power circuits. With the superior ferrite core material and its low profile construction we can ensure excellent inductance characteristics coupled with proven Tyco Sigma quality.

Key Features

- **Very High Current Capability**
- **Wide Value Range**
- **Available in 6 different styles**
- **Up to 14A**
- **Down to 4mm height**
- **High reliability**
- **Taped and Reeled**

Electrical Characteristics - 3631A Series

Inductance Code	Inductance (μH)	Tolerance	Test Freq. (Hz)	R.D.C. (mΩ) Max.	I.D.C. (A) Max.
2R5	2.5	±20%	1K	24.0	5.00
5R0	5.0	±20%	1K	35.0	4.00
7R5	7.5	±20%	1K	40.0	3.50
100	10.0	±20%	1K	54.0	3.00
120	12.0	±20%	1K	65.0	2.80
150	15.0	±20%	1K	70.0	2.70
180	18.0	±20%	1K	82.0	2.60
220	22.0	±20%	1K	95.0	2.40
250	25.0	±20%	1K	120.0	2.00
330	33.0	±20%	1K	145.0	1.80
390	39.0	±20%	1K	160.0	1.65
500	50.0	±10%	1K	200.0	1.50
560	56.0	±10%	1K	240.0	1.40
680	68.0	±10%	1K	280.0	1.30
750	75.0	±10%	1K	330.0	1.20
101	100.0	±10%	1K	400.0	1.00
121	120.0	±10%	1K	500.0	0.90
151	150.0	±10%	1K	580.0	0.80
181	180.0	±10%	1K	750.0	0.70
221	220.0	±10%	1K	840.0	0.65
271	270.0	±10%	1K	1000.0	0.60
331	330.0	±10%	1K	1340.0	0.54
391	390.0	±10%	1K	1500.0	0.50
471	470.0	±10%	1K	1980.0	0.45
561	560.0	±10%	1K	2200.0	0.40
681	680.0	±10%	1K	2400.0	0.35
821	820.0	±10%	1k	3000.0	0.30

Electrical Characteristics - 3631B Series

Inductance Code	Inductance (μH)	Tolerance	Test Freq. (Hz)	R.D.C. (mΩ) Max.	I.D.C. (A) Max.
2R5	2.5	±20%	1K	16.0	6.20
5R0	5.0	±20%	1K	22.0	4.70
7R5	7.5	±20%	1K	25.0	3.80
100	10.0	±20%	1K	35.0	3.30
120	12.0	±20%	1K	38.0	3.00
150	15.0	±20%	1K	42.0	2.80
180	18.0	±20%	1K	50.0	2.50
220	22.0	±20%	1K	62.0	2.30
270	27.0	±15%	1K	68.0	2.00
330	33.0	±15%	1K	90.0	1.90
390	39.0	±15%	1K	100.0	1.75
470	47.0	±15%	1K	130.0	1.60
560	56.0	±15%	1K	155.0	1.45
680	68.0	±15%	1K	170.0	1.30
820	82.0	±15%	1K	185.0	1.20
101	100.0	±10%	1K	220.0	1.10
121	120.0	±10%	1K	260.0	1.00
151	150.0	±10%	1K	320.0	0.90
181	180.0	±10%	1K	330.0	0.80
221	220.0	±10%	1K	460.0	0.70
271	270.0	±10%	1K	520.0	0.65
331	330.0	±10%	1K	660.0	0.60
391	390.0	±10%	1K	870.0	0.55

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**Electrical Characteristics -
3631B Series (continued)**

Inductance Code	Inductance (µH)	Tolerance	Test Freq. (Hz)	R.D.C. (mΩ) Max.	I.D.C. (A) Max.
471	470.0	±10%	1K	970.0	0.50
561	560.0	±10%	1K	1320.0	0.45
681	680.0	±10%	1K	1500.0	0.40
821	820.0	±10%	1k	1700.0	0.35
102	1000.0	±10%	1K	2300.0	0.30
122	1200.0	±10%	1K	2650.0	0.25
152	1500.0	±10%	1K	3500.0	0.20

**Electrical Characteristics -
3631C Series**

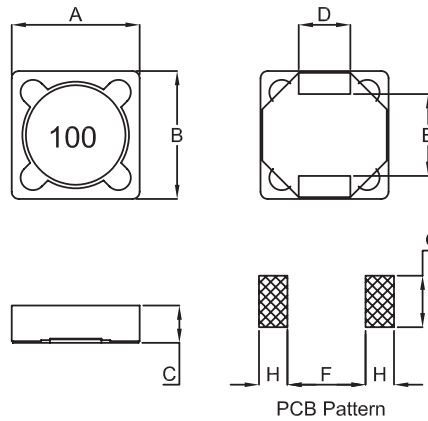
Inductance Code	Inductance (µH)	Tolerance	Test Freq. (Hz)	R.D.C. (mΩ) Max.	I.D.C. (A) Max.
2R5	2.5	±20%	1K	11.4	7.80
4R5	4.5	±20%	1K	14.0	6.80
6R5	6.5	±20%	1K	18.0	6.50
100	10.0	±20%	1K	21.0	5.40
120	12.0	±20%	1K	25.0	4.90
150	15.0	±20%	1K	36.0	4.50
180	18.0	±20%	1K	40.0	3.90
220	22.0	±20%	1K	43.0	3.60
270	27.0	±20%	1K	48.0	3.40
330	33.0	±15%	1K	62.0	3.00
390	39.0	±15%	1K	76.0	2.70
470	47.0	±15%	1K	85.0	2.50
560	56.0	±15%	1K	110.0	2.30
680	68.0	±15%	1K	135.0	2.10
820	82.0	±15%	1K	150.0	1.90
101	100.0	±15%	1K	170.0	1.70
121	120.0	±15%	1K	190.0	1.50
151	150.0	±15%	1K	240.0	1.40
181	180.0	±15%	1K	270.0	1.30
221	220.0	±15%	1K	380.0	1.10
271	270.0	±15%	1K	400.0	1.00
331	330.0	±15%	1K	650.0	0.90
391	390.0	±15%	1K	670.0	0.85
471	470.0	±10%	1K	850.0	0.80
561	560.0	±10%	1K	900.0	0.70
681	680.0	±10%	1K	1000.0	0.65
821	820.0	±10%	1K	1150.0	0.60
102	1000.0	±10%	1K	1650.0	0.55
122	1200.0	±10%	1K	2000.0	0.40
152	1500.0	±10%	1K	2350.0	0.36

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

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

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**Dimensions
A, B, C Series**



Series	A ± 0.3	B ± 0.3	C ± 0.5	D ± 0.2	E (typ)	F (ref)	G (ref)	H (ref)
3631A	12.7	12.7	5.0	5.0	8.1	6.0	7.0	4.0
3631B	12.7	12.7	6.0	5.0	8.1	6.0	7.0	4.0
3631C	12.7	12.7	8.0	5.0	8.1	6.0	7.0	4.0

**Electrical Characteristics -
3631D Series**

Inductance Code	Inductance (μ H)	Tolerance	Test Freq. (Hz)	R.D.C. ($m\Omega$) Max.	I _{rms} (A)	I _{sat} (A)
1R2	1.20	$\pm 30\%$	100K	8.0	9.20	9.80
2R4	2.40	$\pm 30\%$	100K	11.5	7.80	8.00
3R5	3.50	$\pm 30\%$	100K	13.0	7.50	7.60
4R7	4.70	$\pm 30\%$	100K	15.5	6.80	7.00
6R1	6.10	$\pm 30\%$	100K	17.0	6.60	6.80
7R6	7.60	$\pm 30\%$	100K	19.0	6.00	6.20
100	10.0	$\pm 20\%$	1K	20.0	5.50	5.50
120	12.0	$\pm 20\%$	1K	23.0	5.20	5.00
150	15.0	$\pm 20\%$	1K	27.0	5.00	4.60
180	18.0	$\pm 20\%$	1K	36.0	4.20	3.90
220	22.0	$\pm 20\%$	1K	43.0	4.00	3.70
270	27.0	$\pm 20\%$	1K	45.0	3.60	3.30
330	33.0	$\pm 20\%$	1K	60.0	3.00	2.80
390	39.0	$\pm 20\%$	1K	70.0	2.80	2.70
470	47.0	$\pm 20\%$	1K	86.0	2.60	2.50
560	56.0	$\pm 20\%$	1K	100.0	2.30	2.20
680	68.0	$\pm 20\%$	1K	110.0	2.10	2.10
820	82.0	$\pm 20\%$	1K	145.0	1.95	1.90
101	100.0	$\pm 20\%$	1K	180.0	1.70	1.70

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**Electrical Characteristics -
3631E Series**

Inductance Code	Inductance (µH)	Tolerance	Test Freq. (Hz)	R.D.C. (mΩ) Max.	I _{rms} (A)	I _{sat} (A)
1R5	1.5	±30%	100K	9.5	9.20	9.00
3R3	3.3	±30%	100K	15.0	6.80	6.50
4R7	4.7	±20%	100K	18.0	6.00	5.60
5R6	5.6	±20%	100K	20.0	5.40	5.10
6R8	6.8	±20%	100K	23.0	5.20	4.70
100	10.0	±20%	100K	32.0	4.00	4.00
150	15.0	±20%	100K	47.0	3.50	3.20
220	22.0	±20%	100K	67.5	3.00	2.60
330	33.0	±20%	100K	97.0	2.30	2.10
470	47.0	±20%	100K	135.0	2.00	1.80
680	68.0	±20%	100K	200.0	1.50	1.50
101	100.0	±20%	100K	300.0	1.25	1.20

**Electrical Characteristics -
3631F Series**

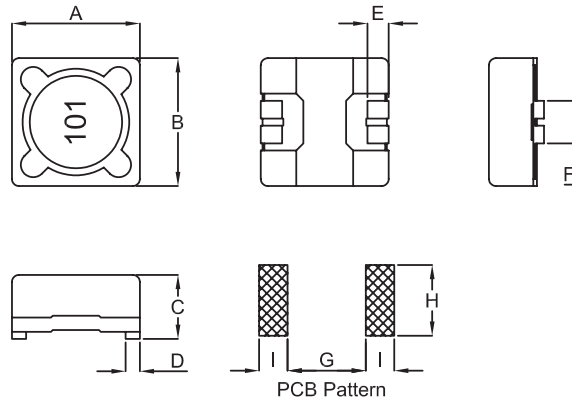
Inductance Code	Inductance (µH)	Tolerance	Test Freq. (Hz)	R.D.C. (mΩ) Max.	I _{rms} (A)	I _{sat} (A)
1R1	1.1	±30%	100K	6.5	10.2	14.0
2R4	2.4	±30%	100K	10.0	9.2	10.5
3R3	3.3	±30%	100K	12.0	8.8	9.8
4R5	4.5	±30%	100K	13.5	8.5	9.0
5R6	5.6	±30%	100K	16.0	8.0	8.5
7R5	7.5	±30%	100K	17.5	6.4	7.0
100	10.0	±20%	1K	19.5	6.0	6.3
150	15.0	±20%	1K	28.5	5.2	5.0
220	22.0	±20%	1K	38.6	4.3	4.1
330	33.0	±20%	1K	57.0	3.5	3.3
470	47.0	±20%	1K	80.0	2.9	2.8
680	68.0	±20%	1K	120.0	2.4	2.3
101	100.0	±20%	1K	150.0	2.1	2.0

**Environmental Characteristics -
D, E, F, Series**

Storage Temp:	-40°C to +125°C
Operating Temp:	-40°C to +125°C (Temp. Rise Included)
Rated Current:	Base on temp. rise & ΔL/L=25% typ.
Temp. Rise:	40°C typ.

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**Dimensions
D, E, F Series**



Series	A ±0.3	B ±0.3	C ±0.5	D ±0.3	E (typ)	F (ref)	G (ref)	H (ref)
3631D	12.5	12.5	6.0	5.0	7.0	6.8	5.4	2.9
3631E	12.5	12.5	4.0	5.0	7.0	6.8	5.4	2.9
3631F	12.5	12.5	7.5	5.0	7.0	6.8	5.4	2.9

**Reliability Test -
D, E, F Series**

Test Item	Specification	Test Condition
Temperature Cycling:	$\Delta L/L \leq \pm 20\%$	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:	$\Delta L/L \leq \pm 20\%$	Temperature: $40 \pm 2^\circ\text{C}$ Humidity: 90 ~ 95% Applied Current: Per spec. Time: 500 hours
High Temp. Resistance Test:	$\Delta L/L \leq \pm 20\%$	Temperature: $85 \pm 2^\circ\text{C}$ Applied Current: Per spec. Time: 500 hours

How to Order

3631	A	2R5	K	T
Common Part	Style	Inductance	Tolerance	Package
3631	A, B, C, D, E or F	See Relevant Table for Inductance Code	K - $\pm 10\%$ L - $\pm 15\%$ M - 20% N - 30%	T - Taped and Reeled