

Type 3638 Series

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The 3638 series of shielded inductors are available in three different packages. Excellent solderability and high heat resistance, together with Tyco Sigma quality and reliability make these products suitable for a wide range of electronic equipment applications.

Key Features

- Available in 3 different packages
- Up to 3A
- Low RDC
- Tape and Reeled
- High heat resistance
- Excellent reliability
- Ferrite Core

**PRODUCT
PLANNED FOR
EOL**

LTB 18/08/2023

Electrical Characteristics -
3638A Series

Inductance Code	Inductance (µH)	Test Freq. (Hz)	R.D.C. (Ω) Max.	I _{rms} (A)	I _{sat} (A)
1R0	1.0±20%	1K	0.016	3.80	3.00
1R5	1.5±20%	1K	0.020	3.20	250
2R2	2.2±20%	1K	0.032	3.00	220
3R3	3.3±20%	1K	0.044	1.92	1.55
4R7	4.7±20%	1K	0.050	1.80	1.35
6R8	6.8±20%	1K	0.070	1.45	1.20
100	10.0±20%	1K	0.105	1.20	1.00
150	15.0±20%	1K	0.140	1.00	0.80
220	22.0±20%	1K	0.220	0.80	0.65
330	33.0±20%	1K	0.280	0.65	0.55
470	47.0±20%	1K	0.380	0.55	0.48
680	68.0±20%	1K	0.600	0.45	0.38
101	100.0±20%	1K	0.840	0.38	0.31
151	150.0±20%	1K	1.200	0.30	0.26
221	220.0±20%	1K	1.700	0.25	0.22
331	330.0±20%	1K	2.450	0.20	0.17
471	470.0±20%	1K	3.600	0.17	0.14
681	680.0±20%	1K	5.400	0.13	0.11
102	1000.0±20%	1K	8.200	0.11	0.09

Environmental Characteristics -
3638A Series

Storage Temp:	-40°C to +125°C
Operating Temp:	-40°C to +105°C (Temp. rise included)

Electrical Characteristics -
3638B Series

Inductance Code	Inductance (µH)	Q Ref.	Test Freq. (MHz)	S.R.F. (MHz) Typ.	R.D.C. (Ω) Max.	I _{rms} (A)	I _{sat} (A)
3R3	3.3±20%	16	7.96	55.0	0.027	2.40	2.20
4R7	4.7±20%	16	7.96	43.0	0.042	2.00	2.00
6R8	6.8±20%	17	7.96	37.0	0.054	1.60	1.80
100	10.0±20%	25	2.52	35.0	0.068	1.40	1.60
150	15.0±20%	22	2.52	32.0	0.095	1.10	1.20
220	22.0±20%	20	2.52	29.0	0.135	0.96	1.05
330	33.0±20%	23	2.52	20.0	0.200	0.76	0.86
470	47.0±20%	26	2.52	18.0	0.270	0.67	0.70
680	68.0±20%	22	2.52	16.0	0.380	0.60	0.67
101	100.0±20%	28	0.796	12.0	0.540	0.45	0.50
151	150.0±20%	35	0.796	10.0	0.800	0.37	0.38
221	220.0±20%	47	0.796	7.5	1.300	0.30	0.32
331	330.0±20%	46	0.796	6.1	1.900	0.22	0.24
471	470.0±20%	34	0.796	5.1	2.400	0.20	0.20
681	680.0±20%	58	0.796	3.8	3.750	0.16	0.15
102	1000.0±20%	120	0.252	3.1	5.400	0.15	0.14

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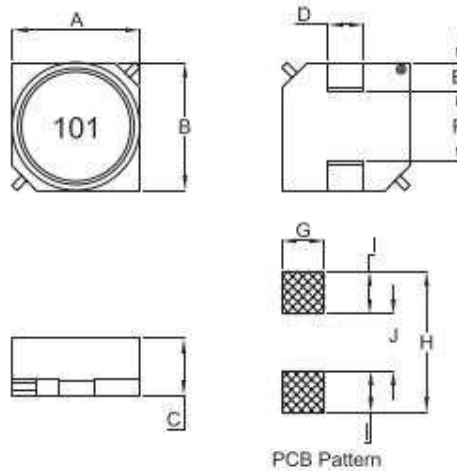
Electrical Characteristics - 3638C Series

Inductance Code	Inductance (µH)	Q Ref.	Test Freq. (MHz)	S.R.F. (MHz) Typ.	R.D.C. (Ω) Max.	I _{rms} (A)	I _{sat} (A)
100	10±20%	30	2.52	25	0.042	2.00	1.70
150	15±20%	31	2.52	24	0.062	1.60	1.35
220	22±20%	26	2.52	18	0.082	1.35	1.10
330	33±20%	25	2.52	12	0.115	1.15	0.90
470	47±20%	29	2.52	11	0.150	0.95	0.78
680	68±20%	22	2.52	10	0.210	0.77	0.60
101	100±20%	40	0.796	8	0.300	0.65	0.50
151	150±20%	51	0.796	7	0.480	0.53	0.41
221	220±20%	44	0.796	5	0.700	0.45	0.36
331	330±20%	65	0.796	4	0.730	0.40	0.25
471	470±20%	80	0.796	3	1.100	0.32	0.22
681	680±20%	65	0.796	3	1.600	0.27	0.20
102	1000±20%	90	0.252	3	2.400	0.25	0.15

Environmental Characteristics - B, C Series

Storage Temp:	-40°C to +125°C
Operating Temp:	-25°C to +105°C
Temp Rise:	30°C Max.

Dimensions A, B, C Series



Series	A	B	C	D	E	F	G	H	I	J
3638A	6.0 ^{+0.1}	6.0 ^{+0.2}	2.8 ^{+0.1}	2.0 ^{+0.1}	1.9 typ.	2.2 ref.	2.4 ref.	6.7 ref.	2.3 ref.	2.1 ref.
3638B	7.0 ^{+0.1}	7.0 ^{+0.2}	3.2 ^{+0.1}	2.0 typ.	1.5 typ.	4.0 typ.	2.4 ref.	7.8 ref.	1.8 ref.	4.2 ref.
3638C	7.0 ^{+0.1}	7.0 ^{+0.2}	4.5 ^{+0.1}	2.0 typ.	1.5 typ.	4.0 typ.	2.4 ref.	7.8 ref.	1.8 ref.	4.2 ref.



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Reliability Test -
A, B, C Series

Test Item	Specification	Test Condition
Thermal Shock Test: (Temp Cycle)	$\Delta L \leq 20\%$	Room Temp: $-25 \pm 2^\circ\text{C}$ 15 minutes \rightarrow 30 minutes Room Temp: $85 \pm 2^\circ\text{C}$ 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: $105 \pm 2^\circ\text{C}$ ($125 \pm 2^\circ\text{C}$ - A Series) Applied Current: Per spec. Time: 500 hours

How to Order

3638	A	220	M
Common Part	Style	Inductance	Tolerance
3638	A, B or C	See Relevant Table for Inductance Code	M - 20%

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