

**Type 3639 Series**

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The 3639 series unique design allows for a range of products which give not only a high current rating, but minimizes the board space required for this product. Tyco Sigma quality, matched with reliability and low cost make this series suitable for many applications in power line DC-DC conversion. The low height profile and high heat resistance of the components make this series also suitable for hard disk drives, notebook PC's and other electronic equipment.

**Key Features**

- Available in 5 different sizes
- Down to 2.8mm height profile
- Isat to 8.5A
- Taped and Reeled
- Low RDC
- Wide Inductance range
- Ferrite core

**Electrical Characteristics - 3639A Series**

Inductance Code	Inductance (µH)	Q Ref.	Test Freq.		S.R.F. (MHz) Typ.	R.D.C. (mΩ)		Isat (A)	Irms (A)
			L (KHz)	Q (MHz)		Typ.	Max.		
2R5	2.5	15	100	7.96	65.0	13.6	18.0	4.20	4.50
3R3	3.3	12	100	7.96	60.0	17.5	23.0	3.50	3.60
4R7	4.7	15	100	7.96	50.0	20.0	26.0	3.20	3.70
6R8	6.8	13	100	7.96	40.0	34.0	45.0	2.50	2.80
100	10.0	22	100	2.52	35.0	45.0	57.0	2.20	2.60
150	15.0	20	100	2.52	25.0	66.0	85.0	1.70	2.00
220	22.0	22	100	2.52	20.0	106.0	130.0	1.50	1.60
330	33.0	20	100	2.52	15.0	147.0	185.0	1.10	1.30
470	47.0	14	100	2.52	12.0	177.0	230.0	1.00	1.20
680	68.0	23	100	2.52	9.0	317.0	390.0	0.80	0.85
101	100.0	35	100	0.796	8.0	390.0	500.0	0.70	0.75

**Electrical Characteristics - 3639B Series**

Inductance Code	Inductance (µH)	Q Ref.	Test Freq.		S.R.F. (MHz) Typ.	R.D.C. (mΩ)		Isat (A)	Irms (A)
			L (KHz)	Q (MHz)		Typ.	Max.		
2R2	2.2	15	100	7.96	65.0	11.2	15.0	5.2	5.4
3R9	3.9	15	100	7.96	42.0	14.6	19.0	4.0	4.8
4R7	4.7	13	100	7.96	36.0	17.0	22.0	3.6	4.6
6R8	6.8	12	100	7.96	30.0	22.4	30.0	3.1	3.8
100	10.0	27	100	2.52	20.0	30.0	40.0	2.7	3.5
150	15.0	26	100	2.52	15.0	46.0	60.0	2.0	2.7
220	22.0	24	100	2.52	12.0	72.5	95.0	1.7	2.2
330	33.0	21	100	2.52	11.0	100.0	130.0	1.4	1.7
470	47.0	21	100	2.52	9.0	120.0	150.0	1.2	1.5
680	68.0	20	100	2.52	7.0	192.0	250.0	1.0	1.2
101	100.0	50	100	0.796	6.0	287.0	370.0	0.8	1.0

**Electrical Characteristics - 3639C Series**

Inductance Code	Inductance (µH)	Q Ref.	S.R.F. (MHz) Typ.	R.D.C. (mΩ)		Irms (A) Max.	Isat (A) Typ.
				Typ.	Max.		
1R0	1.0	14	100	4.9	6.5	7.00	8.00
1R5	1.5	12	80	7.3	10.0	6.50	6.50
2R2	2.2	12	65	11.0	15.0	5.30	4.80
3R3	3.3	14	55	15.0	20.0	4.60	4.30
4R7	4.7	12	40	16.5	23.0	4.50	3.80
6R8	6.8	12	30	25.0	33.0	3.50	3.00
8R2	8.2	12	28	28.5	37.0	3.30	2.70
100	10.0	20	25	40.0	53.0	2.80	2.40
150	15.0	26	22	69.0	90.0	2.00	2.00
220	22.0	26	16	104.0	135.0	1.60	1.40
330	33.0	24	12	139.0	180.0	1.25	1.20
470	47.0	20	11	167.0	230.0	1.30	1.10
560	56.0	22	10	208.0	270.0	1.10	1.00
680	68.0	20	9	232.0	300.0	1.00	0.90
820	82.0	20	8	323.0	420.0	0.90	0.85
101	100.0	20	7	365.0	470.0	0.85	0.80
121	120.0	18	6	428.0	560.0	0.65	0.70
151	150.0	18	5	518.0	680.0	0.70	0.65

**Type 3639 Series**

**Electrical Characteristics -  
3639D Series**

Inductance Code	Inductance (μH)	R.D.C. (mΩ)		Isat (A) Typ.	Irms (A) Max.
		Typ.	Max.		
1R5	1.5	5.2	7.5	7.00	7.20
2R2	2.2	7.7	10.5	6.50	6.80
3R5	3.5	11.5	15.0	5.50	5.50
5R0	5.0	14.5	22.0	4.80	4.60
6R2	6.2	16.5	24.0	4.20	4.00
100	10.0	25.0	35.0	3.60	3.80
150	15.0	37.0	50.0	2.70	2.80
220	22.0	55.8	75.0	2.30	2.20
330	33.0	86.0	112.0	1.80	1.80
470	47.0	121.0	160.0	1.60	1.65
680	68.0	166.0	216.0	1.30	1.10
101	100.0	220.0	300.0	1.10	1.30
151	150.0	358.0	476.0	0.80	0.90
221	220.0	565.0	740.0	0.65	0.65
331	330.0	773.0	1000.0	0.52	0.55

**Electrical Characteristics -  
3639E Series**

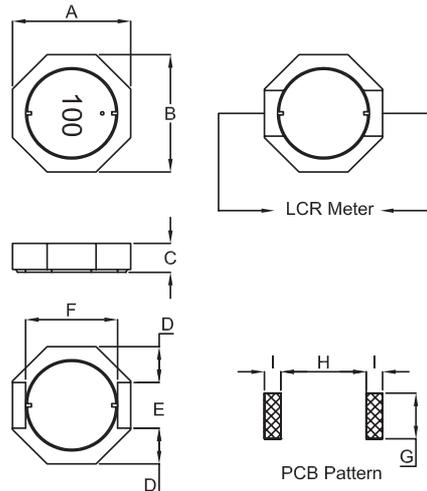
Inductance Code	Inductance (μH)	R.D.C. (mΩ)		Irms (A) Max.	Isat (A) Max.
		Typ.	Max.		
R80	0.8	3.6	4.8	7.80	8.50
1R5	1.5	4.3	5.8	7.00	7.20
2R2	2.2	5.3	7.2	6.50	6.30
3R0	3.0	7.2	10.0	6.20	6.00
4R7	4.7	9.5	12.5	5.50	4.75
6R8	6.8	13.6	18.0	4.80	4.10
8R2	8.2	15.0	20.0	4.60	3.80
100	10.0	18.5	25.0	4.50	3.70
150	15.0	29.0	40.0	3.20	2.70
220	22.0	42.0	55.0	2.60	2.00
330	33.0	63.0	84.0	2.10	1.70
470	47.0	94.0	120.0	1.70	1.50
560	56.0	110.0	145.0	1.60	1.40
680	68.0	127.0	170.0	1.40	1.25
820	82.0	149.0	200.0	1.30	1.10
101	100.0	160.0	220.0	1.20	1.00
151	150.0	235.0	305.0	1.00	0.80
221	220.0	350.0	455.0	0.80	0.70
331	330.0	490.0	640.0	0.65	0.52

**Environmental Characteristics -  
Characteristics -**

<b>Storage Temp:</b>	-40°C to +125°C
<b>Operating Temp:</b>	-40°C to +105°C
<b>Rated Current:</b>	Based on Temp. Rise & ΔL/L = 35% Typ.
<b>Temp. Rise:</b>	30°C Max. (40°C Max. - C, D, E Series)
<b>Standard Tolerance:</b>	± 30%

**Type 3639 Series**

**Dimensions**



Series	A ±0.3	B ±0.3	C ±0.3	D typ.	E typ.	F typ.	G ref.	H ref.	I ref.
3639A	8.0	8.0	2.8	2.5	2.8	6.0	3.2	5.8	2.0
3639B	8.0	8.0	4.3	2.5	2.8	6.0	3.2	5.8	2.0
3639C	10.0	10.0	2.8	3.4	3.2	7.4	3.6	7.2	1.8
3639D	10.0	10.0	3.8	3.4	3.2	7.4	3.6	7.2	1.8
3639E	10.0	10.0	4.8	3.4	3.2	7.4	3.6	7.2	1.8

**Reliability Test -  
A, B, D, E Series**

Test Item	Specification	Test Condition
<b>Thermal Shock Test: (Temp Cycle)</b>	$\Delta L \leq \pm 30\%$	Room Temp. → -25± 2°C 15 minutes → 30 minutes  Room Temp. → 85± 2°C 15 minutes → 30 minutes  Total: 50 cycles
<b>Humidity Resistance Test:</b>	$\Delta L \leq \pm 30\%$	Temperature: 40± 2°C Humidity: 90 ~ 95% Applied Current: Per spec. Time: 500 hours
<b>High Temp. Resistance Test:</b>	$\Delta L \leq \pm 30\%$	Temperature: 85± 2°C Applied Current: Per spec. Time: 500 hours

**Reliability Test -  
C Series**

Test Item	Specification	Test Condition
<b>Thermal Shock Test: (Temp Cycle)</b>	$\Delta L \leq \pm 30\%$	Room Temp. → -25± 2°C 15 minutes → 30 minutes  Room Temp. → 85± 2°C 15 minutes → 30 minutes  Total: 50 cycles
<b>Humidity Resistance Test:</b>	$\Delta L \leq \pm 30\%$	Temperature: 40± 2°C Humidity: 90 ~ 95% Applied Current: Per spec. Time: 500 hours
<b>High Temp. Resistance Test:</b>	$\Delta L \leq \pm 30\%$	Temperature: 105± 2°C Applied Current: Per spec. Time: 500 hours

**How to Order**

3639	A	820	N
<b>Common Part</b>	<b>Style</b>	<b>Inductance</b>	<b>Tolerance</b>
3639	A, B, C, D or E	See Relevant Table for Inductance Code	N - 30%

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