



# SMD Power Inductors

## Toroidal Power Inductors SMT - TCTX-2P/4P Series / 环型功率电感贴片式

### Toroidal Inductor Features

- Closed magnetic circuit for lowest EMI
- Maximum Power density
- With Powdered Iron cores & Low cost

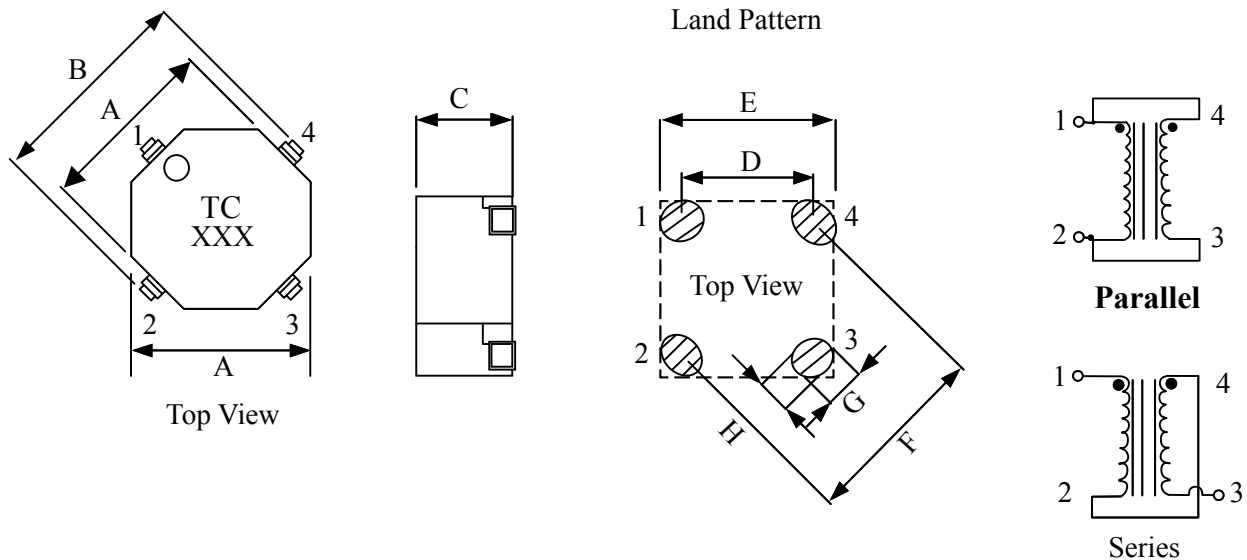
### Applications

- Power Supply applications
- Output Ripple Current Filter
- VGA Card

### Toroidal Inductors Dimensions & Configurations (Unit In mm)

Type	A ± 0.5	B ± 0.5	C(max)	D	E	F	G	H
TCTX-2P	9.00	11.60	5.96	7.04	10.72	9.96	3.68	3.05
TCTX-4P	11.40	14.40	7.00	8.84	12.50	12.50	4.06	3.05

Note: Design as Customer's Requested Specifications.



### Electrical Characteristics for TCTX-2P Series Toroidal Inductors

Part Number	Parallel				Series			
	L (μH) ±20%	L @ IDC (μH) (min)	DCR (Ω) (max)	IDC (A) (max)	L (μH) ±20%	L @ IDC (μH) (min)	DCR (Ω) (max)	IDC (A) (max)
TCTX0.47-2P	0.54	0.42	0.006	5.90	2.18	1.69	0.024	2.95
TCTX0.68-2P	0.85	0.64	0.008	5.40	3.40	2.55	0.029	2.70
TCTX1-2P	1.22	0.89	0.009	5.00	4.90	3.57	0.034	2.50
TCTX2-2P	2.18	1.56	0.014	3.90	8.70	6.26	0.056	1.95
TCTX5-2P	4.90	3.57	0.032	2.50	19.58	14.26	0.128	1.25
TCTX8-2P	7.65	5.31	0.040	2.30	30.60	21.23	0.159	1.15
TCTX10-2P	9.83	6.73	0.045	2.10	39.30	26.92	0.179	1.05
TCTX15-2P	14.99	10.51	0.085	1.60	59.98	42.02	0.339	0.80
TCTX20-2P	19.58	13.37	0.097	1.50	78.34	53.48	0.387	0.75
TCTX25-2P	24.79	16.60	0.109	1.40	99.14	66.38	0.436	0.70
TCTX33-2P	32.67	21.29	0.126	1.30	130.70	85.17	0.503	0.65

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# SMD Power Inductors

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Part Number	Parallel				Series			
	L (μH) ±20%	L @ IDC (μH) (min)	DCR (Ω) (max)	IDC (A) (max)	L (μH) ±20%	L @ IDC (μH) (min)	DCR (Ω) (max)	IDC (A) (max)
TCTX50-2P	49.10	35.31	0.306	0.82	196.38	141.24	1.221	0.41
TCTX68-2P	68.85	47.93	0.362	0.76	275.40	191.71	1.447	0.38
TCTX100-2P	99.14	69.56	0.541	0.62	396.58	278.22	2.162	0.31
TCTX150-2P	148.10	100.07	0.666	0.56	592.42	400.27	2.661	0.28
TCTX200-2P	201.59	138.49	0.951	0.46	806.34	553.97	3.804	0.23
TCTX300-2P	300.42	197.52	1.176	0.42	1201.70	790.08	4.703	0.21

Note: Test Freq.: 1KHz / 0.25V

Operating Temp.: -40°C ~ +85°C

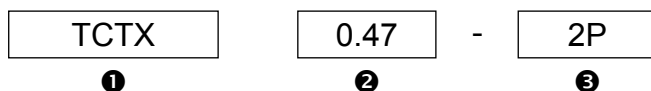
## ► Electrical Characteristics for TCTX-4P Series Toroidal Inductors

Part Number	Parallel				Series			
	L (μH) ±20%	L @ IDC (μH) (min)	DCR (Ω) (max)	IDC (A) (max)	L (μH) ±20%	L @ IDC (μH) (min)	DCR (Ω) (max)	IDC (A) (max)
TCTX0.47-4P	0.49	0.37	0.005	7.90	1.95	1.49	0.019	3.95
TCTX0.68-4P	0.76	0.56	0.006	7.20	3.05	2.24	0.023	3.60
TCTX1-4P	1.10	0.81	0.009	5.90	4.39	3.24	0.034	2.95
TCTX2-4P	1.95	1.42	0.014	4.60	7.81	5.69	0.055	2.30
TCTX5-4P	5.15	3.56	0.027	3.30	20.62	14.23	0.107	1.65
TCTX8-4P	7.81	5.15	0.033	3.00	31.23	20.61	0.131	1.50
TCTX10-4P	9.88	6.70	0.047	2.50	39.53	26.79	0.187	1.25
TCTX15-4P	14.76	9.52	0.057	2.30	59.05	38.09	0.228	1.15
TCTX20-4P	20.62	13.44	0.085	1.90	82.47	53.76	0.337	0.95
TCTX25-4P	25.65	17.17	0.116	1.60	102.60	68.68	0.462	0.80
TCTX33-4P	33.21	22.93	0.166	1.30	132.86	91.72	0.663	0.65
TCTX50-4P	48.80	32.21	0.202	1.20	195.20	128.83	0.805	0.60
TCTX68-4P	67.37	43.04	0.238	1.10	269.50	172.16	0.952	0.55
TCTX100-4P	99.09	69.54	0.565	0.72	396.38	278.15	2.259	0.36
TCTX150-4P	149.45	101.46	0.696	0.64	597.80	405.83	2.784	0.32
TCTX200-4P	200.11	131.37	0.810	0.60	800.44	525.47	3.240	0.30
TCTX300-4P	298.93	188.03	1.003	0.54	1195.72	752.13	4.011	0.27

Note: Test Freq.: 1KHz / 0.25V

Operating Temp.: -40°C ~ +85°C

## ► How to Order



❶ SMD Toroidal Power Inductors

❷ Inductance

❸ Case Type



# SMD Power Inductors

## SMD Toroidal Power Inductor+6+ - TC0718 Series / 贴片环型功率电感

### ► SMD Toroidal Power Inductor Features

- Closed magnetic circuit for lowest EMI
- Compact and thin
- Large Current and Low DCR

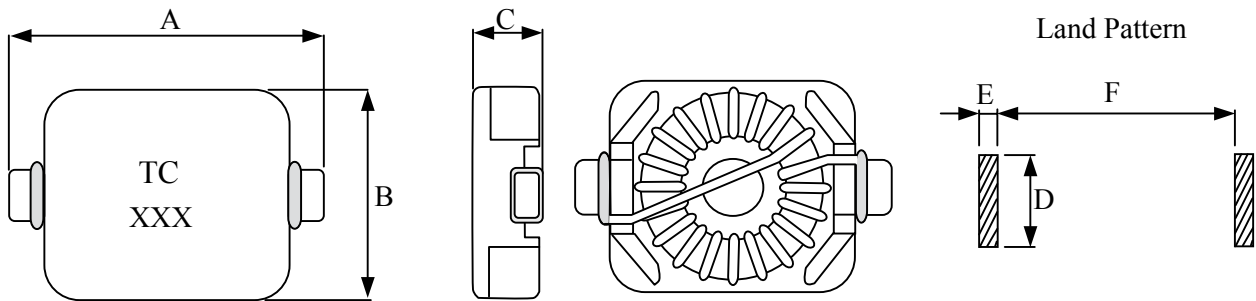
### ► Applications

- Wireless and handheld devices.
- PCMCIA cards and disk drives
- GPS

### ► SMD Toroidal Power Inductor Dimensions & Configurations (Unit In mm)

Type	A ± 0.3	B ± 0.3	C(max)	D	E	F
TC0718	7.6	5.0	1.85	2.5	1.2	5.0

Note: Design as Customer's Requested Specifications.



### ► Electrical Characteristics for TC0718 Series Toroidal Power Inductor

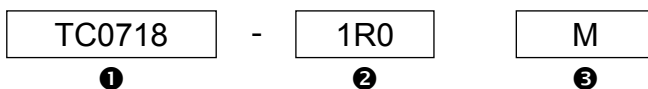
Part Number	Inductance (μH)	Inductance(μH) @ IDC (min)	Test Freq. (KHz)	DCR (Ω) (max)	Current (A)(max)	IDC(A) (max)
TC0718 - 1R0M	1.00	0.80	100	0.103	1.67	2.10
TC0718 - 2R2M	2.20	1.60	100	0.130	1.40	1.40
TC0718 - 4R7M	4.70	3.22	100	0.180	0.98	1.00
TC0718 - 100M	10.00	6.96	100	0.240	0.67	0.68
TC0718 - 150M	15.00	10.71	100	0.330	0.54	0.54
TC0718 - 220M	22.00	15.26	100	0.360	0.45	0.45
TC0718 - 330M	33.00	23.59	100	0.550	0.36	0.37
TC0718 - 470M	47.00	32.48	100	0.850	0.31	0.31

Note: Test Freq.: 100KHz / 0.25V

Operating Temp.: -40°C ~ +85°C

Current (max)...40°C temperature rise

### ► How to Order



① SMD Toroidal Power Inductors

② Inductance

③ Tolerance

Code	Tolerance
K	10%
M	20%
L	15%
Y	min



# SMD Power Inductors

## SMT Toroidal Power Inductors - TC68HC Series / 贴片环型功率电感

### ► SMT Toroidal Power Inductors Features

Closed magnetic circuit for lowest EMI  
High Current.

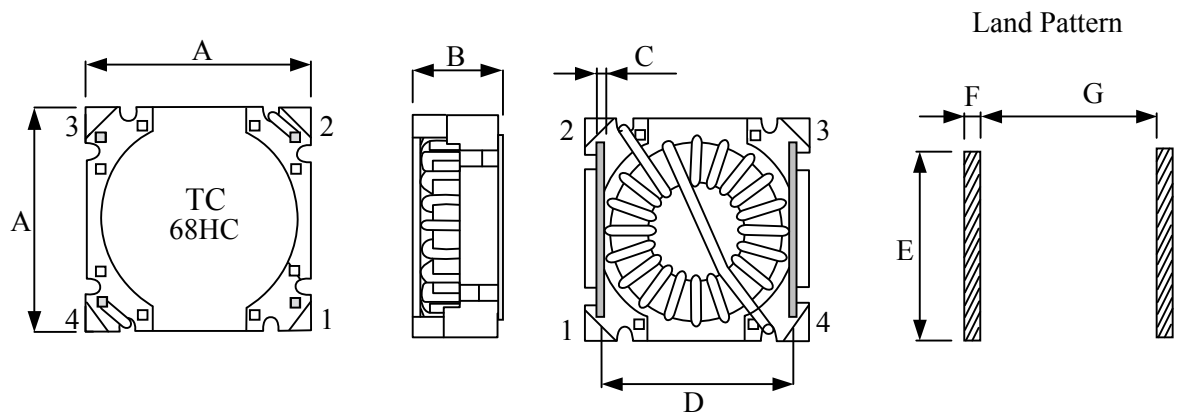
### ► Applications

Power switching, TV game, Monitor, Car recharger, etc..

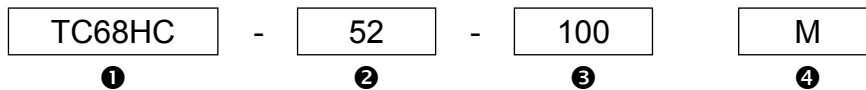
### ► SMT Toroidal Power Inductors Dimensions & Configurations (Unit In mm)

Type	MARK	A ± 0.5	B ± 0.5	C ± 0.2	D ± 0.5	E	F	G
TC68HC	TC68HC	24.0	9.6	1.0	20.8	18.0	2.5	18.0

Note: Design as Customer's Requested Specifications.



### ► How to Order



① SMT Toroidal Power Inductors

② Core Material

③ Inductance

④ Tolerance

Code	Tolerance
K	10%
M	20%
L	15%
Y	min



# SMD Power Inductors

## Toroidal Coil Inductors - TC302/502/1051 Series / 环型功率电感

### ▶ Toroidal Coil Inductor Features

Closed magnetic circuit for lowest EMI  
High Current.

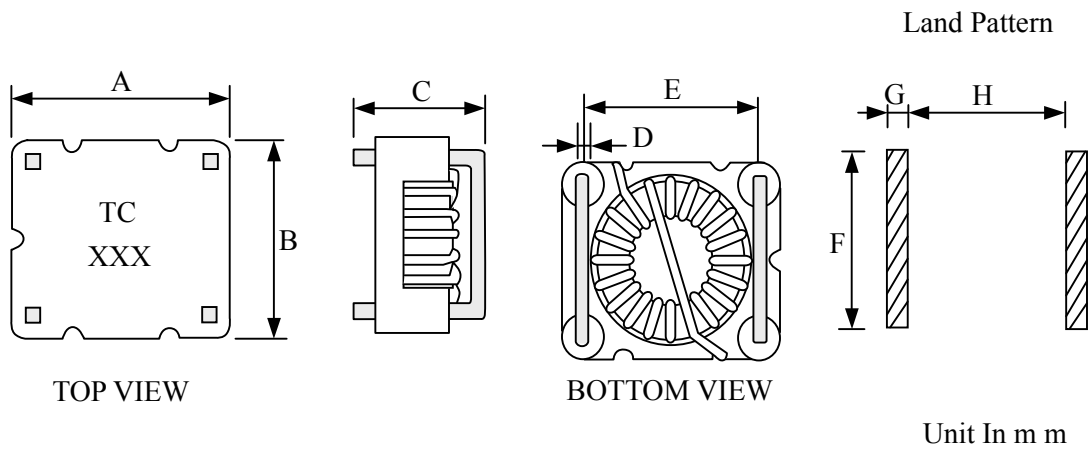
### ▶ Applications

Power switching, TV game, Monitor, Car recharger, Output Ripple Current Filter.

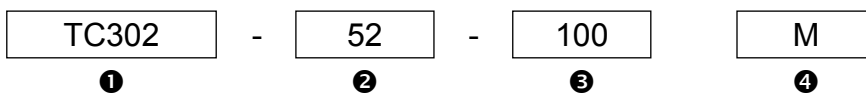
### ▶ Toroidal Coil Inductors Dimensions & Configurations (Unit In mm)

Type	MARK	A ± 0.5	B ± 0.5	C ± 0.5	D ± 0.2	E ± 0.5	F	G	H
TC302	TC302	10.0	8.6	6.2	0.64	7.6	8.0	2.0	6.4
TC502	TC502	15.7	13.2	9.7	1.0	12.7	12.0	2.5	10.7
TC1051	TC1051	31.0	22.6	12.2	1.0	26.7	20.0	2.5	24.7

Note: Design as Customer's Requested Specifications.



### ▶ How to Order



① SMD Toroidal Coil Inductors: TC302 , TC502 , TC1051

② Core Material

③ Inductance

④ Tolerance

Code	Tolerance
K	10%
M	20%
L	15%
Y	min



# SMD Power Inductors

## Toroidal Power Inductor - TC302A/502A Series

### ▶ Toroidal Power Inductor Features

- Closed magnetic circuit for lowest EMI
- High Current.
- Compatible with vapor phase and infrared reflow soldering

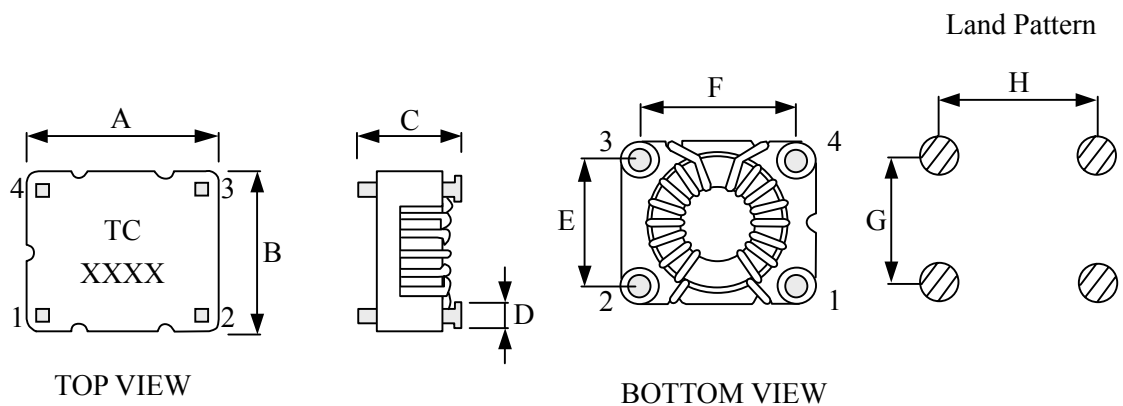
### ▶ Applications

- Power switching, TV game, Monitor, Car recharger.
- Output Ripple Current Filter

### ▶ Toroidal Power Inductor Dimensions & Configurations (Unit In mm)

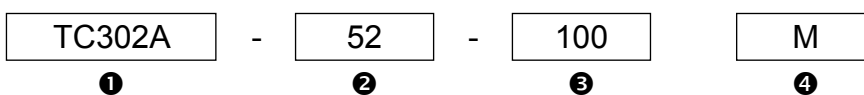
Type	MARK	A ± 0.5	B ± 0.5	C ± 0.5	D ± 0.2	E ± 0.5	F ± 0.5	G	H
TC302A	TC302A	10.0	8.6	6.2	1.0	6.1	7.7	6.1	7.7
TC502A	TC502A	15.8	13.2	7.7	1.4	10.3	12.7	10.3	12.7

Note: Design as Customer's Requested Specifications.



Unit In m m

### ▶ How to Order



❶ Toroidal Power Inductors : TC302A , TC502A

❷ Core Material

❸ Inductance

❹ Tolerance

Code	Tolerance
K	10%
M	20%
L	15%
Y	min



# Power Inductors

## Toroidal Power Inductor - TCSHD01/02/03 Series

### Toroidal Power Inductor Features

- Closed magnetic circuit for lowest EMI
- High performance low loss powder iron core is excellent for high frequency applications
- Compatible with vapor phase and infrared reflow soldering

### Applications

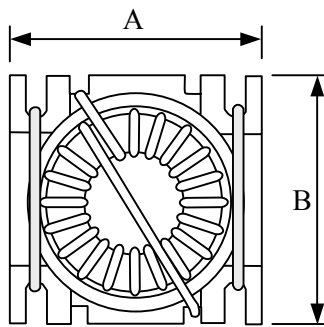
- Notebook
- DC/DC Converter
- Output Ripple Current Filter

### Toroidal Power Inductor Dimensions & Configurations (Unit In mm)

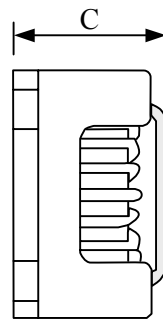
Type	A ± 0.5	B ± 0.5	C (max)	D	E	F
TCSHD01	15.4	14.5	8.80	13.0	12.5	2.5
TCSHD02	15.7	15.3	9.40	12.8	13.0	2.5
TCSHD03	14.2	14.1	8.80	12.5	11.3	2.5

Note: Design as Customer's Requested Specifications.

TCSHD01

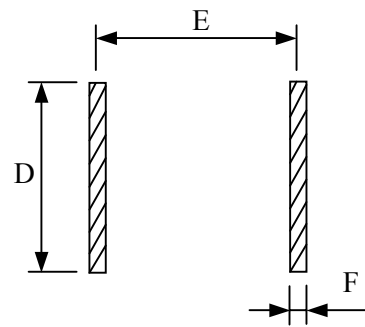


Bottom View

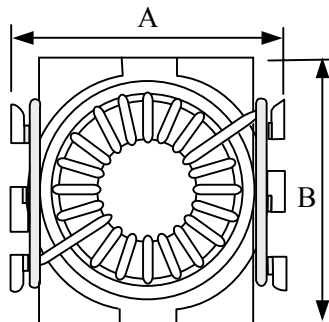


Side View

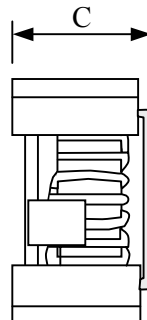
Land Pattern



TCSHD02

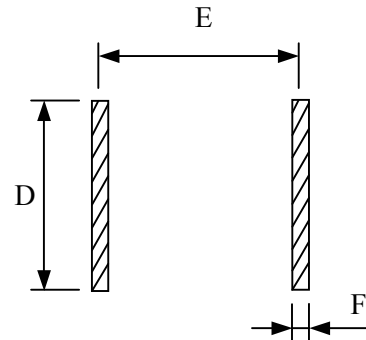


Bottom View



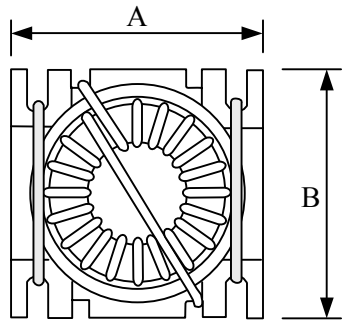
Side View

Land Pattern

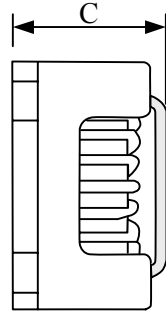




TCSHD03

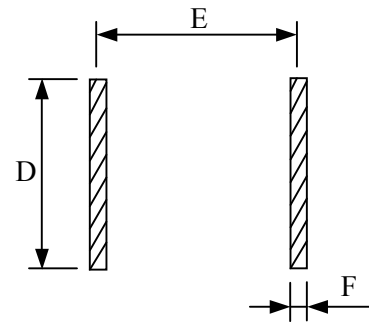


Bottom View

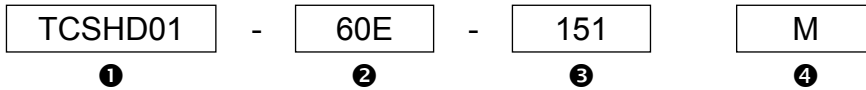


Side View

Land Pattern



## ► How to Order



❶ Toroidal Power Inductors: TCSHD01, TCSHD02, TCSHD03

❷ Core Material

❸ Inductance

❹ Tolerance

Code	Tolerance
M	20%
N	30%





# Power Inductors

## Toroidal Power Inductors - TC0950 Series

### Toroidal Inductors Features

- Magnetically shielded construction
- Compact and thin

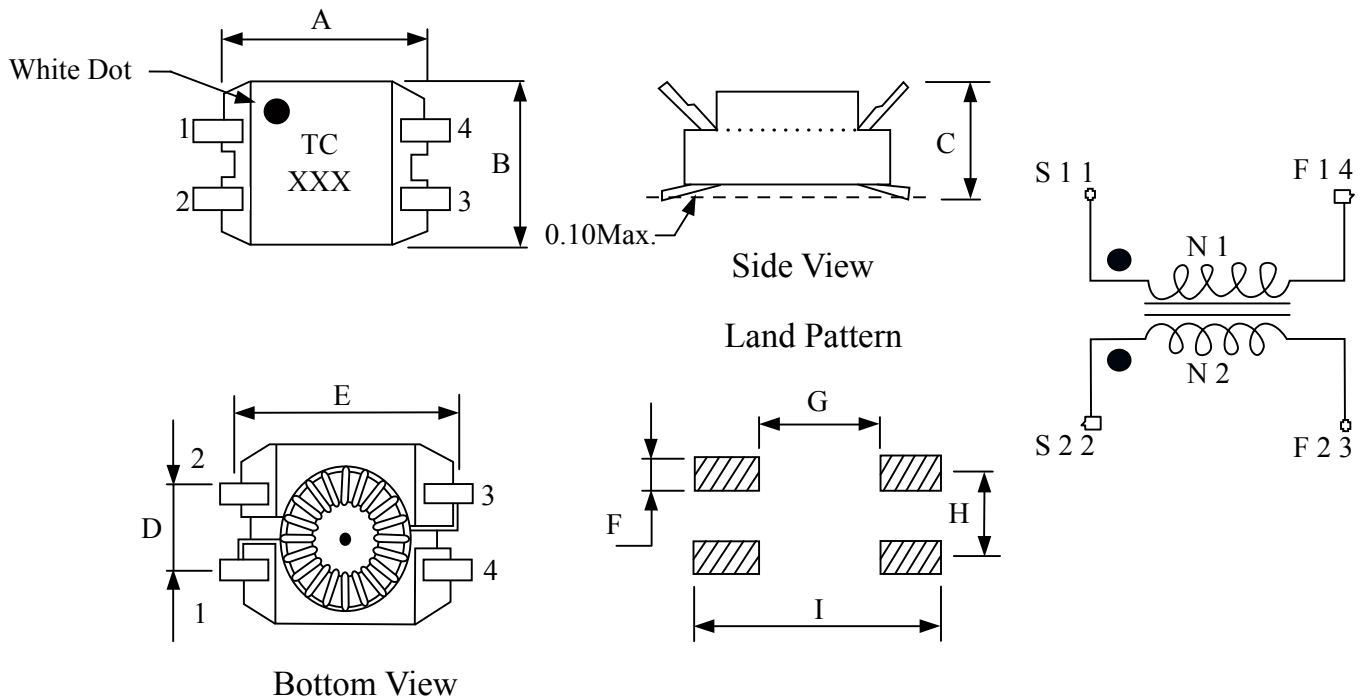
### Applications

- Range suited for many DSL and Telecom applications

### Toroidal Inductor Dimensions & Configurations (Unit In mm)

Type	A(max)	B(max)	C(max)	D± 0.5	E± 0.2	Fnom	Gnom	Hnom	Inom
TC0950	9.5	6.0	5.2	2.5	7.5	1.2	4.5	2.5	10.5

Note: Design as Customer's Requested Specifications.



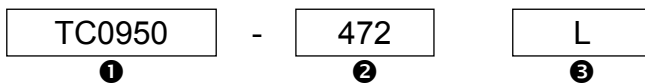
### Electrical Characteristics for TC0950 Series Toroidal Inductors

Part Number	Inductance( $\mu$ H)	Withstanding Voltage (Vrms)	Test Freq.(KHz)	DCR ( $\Omega$ )(max)	Rated Current (max)(mA)
TC0950 - 471N	470	250	100	0.3	220
TC0950 - 102N	1000	250	100	0.3	220
TC0950 - 222N	2200	250	100	0.4	200
TC0950 - 472N	4700	250	100	0.7	180

Note: Test Freq.: 100KHz / 0.1V.

Operating Temp.: -40°C ~ +85°C.

### How to Order



① Toroidal Power Inductors

② Inductance

Code	Inductance
471	470 $\mu$ H
472	4700 $\mu$ H

③ Tolerance

Code	Tolerance
L	15%
N	30%



# Power Inductors

## Toroidal Power Inductor - TC0950A Series

### Toroidal Power Inductor Features

- Magnetically shielded construction
- Compact and thin
- Large Current and Low DCR

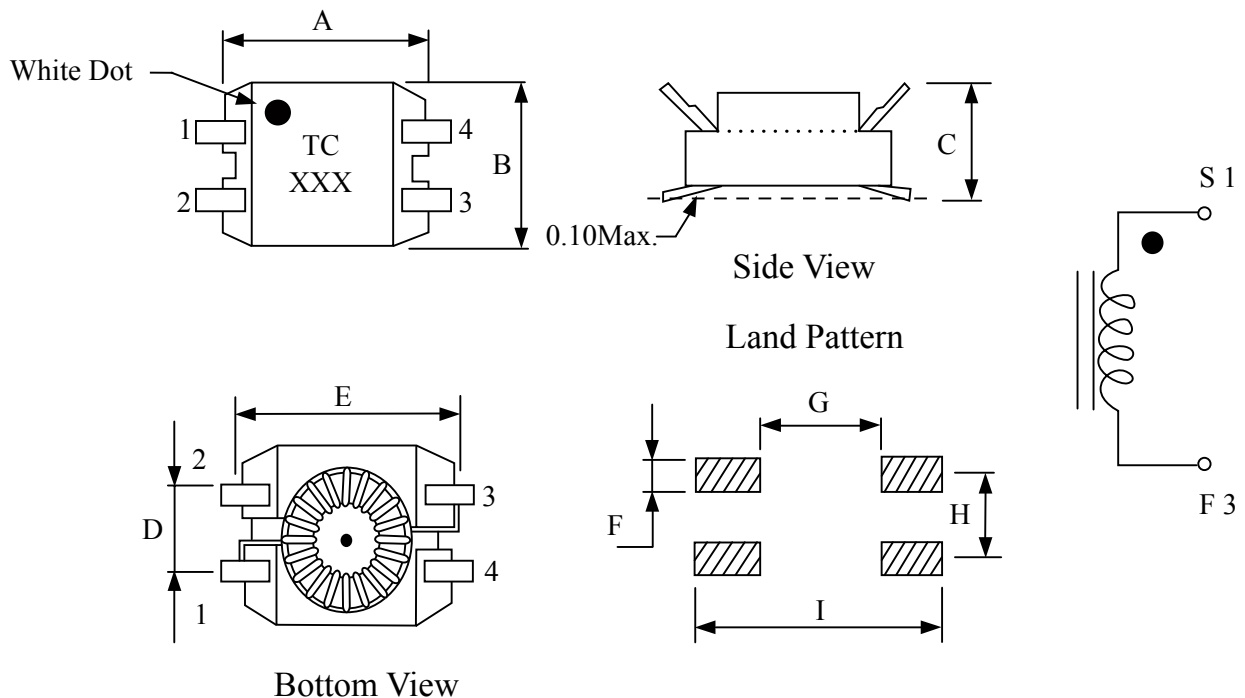
### Applications

VTR, OA equipment, LCD television set, Notebook, portable communication equipments, DC/DC converters, etc..

### Toroidal Power Inductor Dimensions & Configurations (Unit In mm)

Type	A(max)	B(max)	C(max)	D± 0.5	E± 0.2	Fnom	Gnom	Hnom	Inom
TC0950A	9.5	6.0	5.2	2.5	7.5	1.2	4.5	2.5	10.5

Note: Design as Customer's Requested Specifications.



### Electrical Characteristics for TC0950A Series Toroidal Power Inductor

Part Number	Inductance ( $\mu\text{H}$ )	IDC (A)( $\mu\text{H} / \text{min}$ )	Test Freq. (KHz)	DCR ( $\Omega$ )(max)	IDC (A)
TC0950A - R50N	0.5	0.36	100	0.012	5.5
TC0950A - 1R0N	1.0	0.85	100	0.016	3.5
TC0950A - 2R2N	2.2	1.70	100	0.022	2.5
TC0950A - 3R9N	3.9	2.80	100	0.041	1.8
TC0950A - 4R7L	4.7	4.00	100	0.057	1.5
TC0950A - 5R6L	5.6	4.70	100	0.060	1.4
TC0950A - 6R8L	6.8	5.50	100	0.066	1.3
TC0950A - 8R2L	8.2	7.00	100	0.075	1.2
TC0950A - 100L	10.0	8.80	100	0.097	1.0

Note: Test Freq.: 100KHz / 0.1V.

Operating Temp.: -40°C ~ +85°C.



# Power Inductors

## ► How to Order

**1** TC0950A - **2** 100 **3** L

**1** Toroidal Power Inductor

**2** Inductance

Code	Inductance
R50	0.5 $\mu$ H
1R0	1.0 $\mu$ H
100	10.0 $\mu$ H

**3** Tolerance

Code	Tolerance
L	15%
M	20%
N	30%