Technical Data Sheet

INDUCTORS ELECTRONIC COMPONENTS

PEKING P.R.CHINA
ORIGIN

TOROIDAL CHOKES series

Products Advantages

Toroidal common mode Inductors ring transformer Inductance EMI Filters Audio/High frequency Choke Coils

- Quality conform to ISO 9001:2008 and AS9100 certifications.
- Quality approved by GE, PHIPS, OSRAM, TDK, FDK and OTIS.
- International safety standard conform to UL, IEC,CUL, VDE, RoHS, FCC, CCC, Directive-compliant and CE standards.
- High quality raw materials. Imported cores (Magnets, TDK, Epcos, Ferroxcube, CSC...).
- Premium fine copper wires.

- **Customization** as users' design and specifications. Best solution for users based on experiences includes expertise in highly sought-after high current inductors, designed and manufactured to meet virtually any customer specification.
- **Low cost** for users to reach.The smaller size allows for excellent efficiency maintaining top level performance. Using less raw materials.

- Original manufacturers P.R.C. direct export.
- All green products.
- 500K pieces monthly.
- Short lead time. About 10-30 working days.
- Small order acceptable.
- Samples available.

- Strong & Safe packages international export standard. Anti-static.
- Comprehensive tests before delivery packages included.
  1) Turns Ratios
  2) Inductance
  3) Phase Test
  4) Inductance leakage
  5) DC resistance test
  6) Withstand voltage
  7) Insulation resistance
  8) 100% hi-pot testing

Toroidal common mode Inductors ring transformer Inductance EMI Filters Audio/High frequency Choke Coils

- The phase angle control loop is matched with a choke coil.
- Suppress the noise of equipment without ground.
- Restrain the high interference level.
- Through hole pin connection.
- Double choke configuration.

- Operating temperature: -55 to +55°C
- Storage temperature: -40 to +40°C
- Inductance range: 0.25-1.3mH
- Resistance: 2.4mΩ
- Nominal current: 20A
- Rated voltage: 250V
- Iron power core material 26: 50Hz-100kHz
- Iron power core material 52: 10kHz-500kHz

- Available in various sizes and types
- Various structures meet customer requirements
- Compact size design.
- Multi-shell option, available in customized versions.

- High current capacity.
- High operation frequency.
- High saturation resistance
- Wide operation voltage.
- Wide range of inductance and current ratings.
- Suitable for high-temperature environment
- Min. Max. operating temperature: -55 to +200 °C

- Low magnetic radiation with self-shielding.
- Low loss realized with low RDC.
- Low core loss.
- Low resistances.
- Low insertion loss

- Distributed air gap for high energy storage.
- Excellent mechanical strength.
- Excellent solderability
- **Distributed air gap for high energy storage.**
- **Excellent performance and thermal efficiency stability.**

Toroidal common mode Inductors ring transformer Inductance EMI Filters Audio/High frequency Choke Coils

- Filter choke coil
  1) Filter noise emitted by ultrasonic equipment.
  2) Filter static noise generated by a power supply and a signal line.
  3) Restrain the noise of the dc circuit of the switching regulator.
  4) Protect the starting ac side from the switching regulator.
- Audio frequency choke coil
- High-frequency choke coil
- Filter common mode EMI signals
- Bidirectional filter

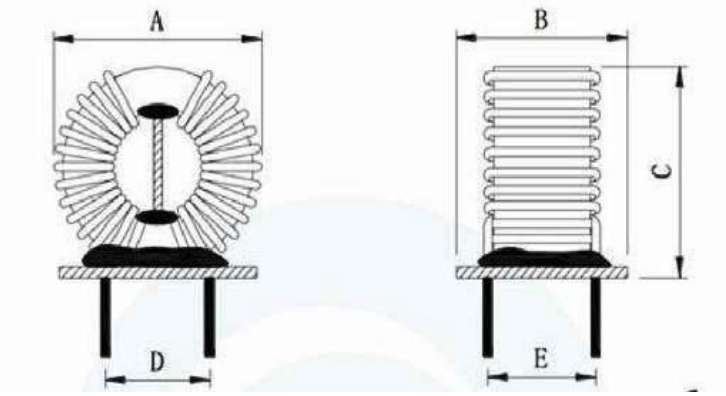
The principle of a coil choke is that, when a current passes through, the magnetic field generated by the coil is self-induced to block the magnetic field generated by the current, thus delaying its passage. The low-frequency choke coil prevents alternating current from flowing because it takes longer to delay thanit does to change direction. The delay time of the hf choke coil is less than the time it takes for the lf AC to change direction but more than the time it takes for the hf AC to change direction, so the lf AC can pass and the hf AC cannot.

The inductive coil is resistant to alternating current. The coil reactance is proportional to the frequency, which can choke the high-frequency AC current and let the low Frequency and DC pass through. According to the frequency, the use of air core, ferrite core, silicon steel core. When used for rectification, it is called "filter choke coil"; Used to choke the audio frequency current is called "audio frequency choke coil"; Used to choke high-frequency current is called "high-frequency choke coil". The inductance coil used for "pass-through DC, pass through AC" and "pass-through low frequency, pass through high frequency" is called high-frequency choke coil.

Common Mode Choke, is used to filter Common mode EMI signals in the switching power supply of computers. In the design of the board, the common-mode inductance also ACTS as an EMI filter, which is used to restrain the electromagnetic wave emitted from the high-speed signal line. The common-mode inductance is essentially a bidirectional filter: on the one hand to filter out the common mode electromagnetic interference on the signal line, on the other hand, to suppress itself not to emit electromagnetic interference, to avoid affecting the normal work of other electronic equipment in the same electromagnetic environment. A small common mode inductance produced in China, adopting high-frequency noise suppression countermeasure, common mode choke coil structure, no attenuation of the signal, small size, easy to use, good balance, easy to use, high quality and so on. It is widely used in double balance tuning devices, multi-frequency transformer, impedance transformer, balance, and unbalanced conversion transformer... And so on.

Toroidal common mode Inductors ring transformer Inductance EMI Filters Audio/High frequency Choke Coils

- **Magnetic core:** Iron powder,MnZn ferrite,NiZn ferrite,Magnetic alloy powder cores,
- **Raw materials:**
  1) Imported AB adhesive
  2) Epoxy substrate (plate base)
  3) 100% copper wire
  4) Matt (vanish) insulation oil.



Electrical Characteristics

No.	Types	Inductance Value	Dimension (mm)				Work Frequency
			A	B	C	D	
1	8*4*3	0.2mH-1.0mH	12	7	14	5	10.0-100.0KHZ
2	9*5*3	0.8mH-3.0mH	13	7	15	5	10.0-100.0KHZ
3	10*6*5	0.8mH-3.1mH	14	9	16	6	10.0-100.0KHZ
4	12*6*4	1.5mH-4.0mH	16	8.5	18	6	10.0-100.0KHZ
5	14*9*5	1.5mH-4.5mH	18	10	20	8	10.0-100.0KHZ
6	16*9*5	1.8mH-5.0mH	20	10	22	8	10.0-100.0KHZ
7	18*10*8	2.5mH-6.0mH	23	13	25	12	10.0-100.0KHZ
8	20*10*10	3.0mH-10.0mH	24	15	26	13	10.0-100.0KHZ
9	22*14*8	3.5mH-12.0mH	26	13	28	12	10.0-100.0KHZ
10	25*15*10	5.0mH-20.0mH	30	15	32	13	10.0-100.0KHZ
11	25*15*13	5.0mH-25.0mH	30	18	32	15	10.0-100.0KHZ
12	31*19*13	3.0mH-25.0mH	36	18	38	16	10.0-100.0KHZ
13	38*19*13	3.0mH-25.0mH	44	18	46	16	10.0-100.0KHZ
14	48*30*15	10.0mH-30.0mH	54	20	56	18	10.0-100.0KHZ
15	78*50*16	10.0mH-50.0mH	88	25	90	18	10.0-100.0KHZ
16	85*55*25	10.0mH-50.0mH	96	40	96	30	10.0-100.0KHZ
17	102*65*20	10.0mH-50.0mH	115	40	115	30	10.0-100.0KHZ

- A professional manufacturer for 15 years more.
- Three factories covering 38,000 ㎡.
- Ten R&D famous Engineers/Specialists, 20-year experiences.Skillful and Experienced 500 employees. Focus on customer's needs, with high-quality high-efficiency management to provide high-quality service and products.
- 100% Guarantee quality. Manufactured under strict controls.

- To care for the health and safety of employees as corporate responsibility, all production activities must give priority to employee's safety and health.
- To control the production process effectively and abide by the law.
- To save resources, lower energy consumption.
- To reduce environmental pollution caused by the production.
- To continuous improvement, sustainable operation.

Impregnation processes for encapsulated Inductors /Transformers

Step 1. Preparation of the components in the machine vats of mixture

Degassing of the resin and the flexibilizer and colouring in the vats of mixture during 4horas to a pressure of 1mbar. This process extracts the air that contains the mixture inside the vat, mixing sayings components during the time specified previously, assuring the perfect condition for the later process. Degassing of the hardener for 4hours to a pressure of 1mbar, the same process as procedure previously described.

Step 2. Warm-up of the component

Process of warm-up of the component and plastic before resin for 3 hours to 75o. This process will improve the penetration of the resin and it prevents that in the process of polymerization there are big differences of temperature, avoiding breaks in the plastic and ensuring the adherence of the resin with the plastic.

Step 3. Impregnation

Temperature of the mixture between 50-60º
Emptiness of the cabin of impregnation

This is the process of filling of the component with the mixture of already prepared resin, the temperature of the mixture avoids contractions and the process of emptiness extracts all the air of cabin ensuring that do not remain hollow of air inside the piece, since on having treated itself about an electrical component with high tensions air residues cannot stay inside the resin, this process assures completely that do not produce air bubbles.

Step 4. Process of drying

This process will dry the resin up to turning it in occurred. Once the process is completed the component will be totally protected and will assures its reliability.

Step 5. Process of staggered dried

1st stage - 2.5 hours of duration to 80^{o}

2nd stage - 4.5 hours of duration to 95^{o}

Step 6. Process of cooling

Once finished the process of drying the components were left to cool at environment temperature before going on to the electrical controls of quality of 100 %.

Controlling the whole production is to avoid possible problems such as:

a. Adherence of the resin is absent with the plastic.
b. Air bubbles inside the component.
c. Fissures.
d. Penetration of the resin is absent

Comparison Table

Parts of All

Brand/Material	ACME	P2 Obsolete	P4	P41	P42	P43 New	P44 New	P46	P5	P51	P52	N2	N4	N42	N43 New
	TDK	PC30/PC32	PC40	PC44	PC90			PC95		PC50		DN45			
	NICERA	NC-1M	NC-2H	2H-M4/ 2H-M5	BM27/ BM30			3H	2M	5M		4B	2B	3B	
	FDK (FUJI)	6H10	6H10/6H12 0	6H40/6H41				6H42		7H10					
	HITACHI		ML24D	ML25D			MB19D	ML30D/ ML32D		ML14D		MQ40D	MQ25D		
	NEC-TOKIN		BH2	BH1					BH5	B40					
	JFE	MB1	MB3	MB4				MBT1		MC2					
	TOMITA	2E6	2 G 8	2E8					2H8			2H5		2N3	
	天通(TDG)	TP3	TP4	TP4A	TP4S	TP4F		TK,TP4W		TP5,TP5B		TD5A	TF3	TD5A	
	東磁(DMEGC)	DMR30	DMR40	DMR44	DMR24		DMR90	DMR95	DMR55 /DMR56	DMR50 /DMR50B		DMR72	DMR70	DMR71	
	FERROXCUBE (PHILIPS)		3C30&3C34&3C90	3C94, 3C96	3C92	3C93		3C95	3F3	3F35		3E28	3B7	3B46, 3S5	3D3
	EPCOS (SIEMENS)	N41	N67,N72	N87, N97	N92				N87	N49		T57	N48	N45	M33
	KOLEKTOR MAGMA (ISKRA)	25G	45G	65G	55G				35G	75G,76G	76G		16G,26G	27G	10G
	VOGT	Fi324	8	Fi325						Fi327					

Industry used to:

[1] Telecommunications
[2] Switched-mode Power supplies
[3] Uninterruptible Power Systems
[4] Pulsed welding equipment
[5] Power inverter
[6] Wind generators
[7] Frequency Converter
[8] For common mode chokes, power transformers, and ELPB

Main fields used to:

[1] SMD IFT coils for TV receivers and AM and FM radios
[2] IFT coils with internal capacitors,
[3] for a wireless communication system and remote control toy/equipment
[4] EC, EE.EI and PQ type high-frequency switch transformer EP type magnet shielding switch transformer
[5] RM type communication filter
[6] aux power transformer
[7] ET, FT type linearity G (jar shape) switch transformer
[8] DR (I) type transformer
[9] T (ring) iron power core
[10] DC filter inductors

[1] Applicable to main and auxiliary transformers of switching power supply
[2] Common mode inductors.
[3] Switching voltage regulators.
[4] Input filter inductors.
[5] Variable inductor and coils with wide range of inductance.
[6] Designed for application in different types of circuits.
[7] Variable coils for wireless communication systems and remote control toys/devices
[8] Current sensing transformers.
[9] Suitable for different types of circuits

General fields used to:

[1] Power supply modules.
[2] DC/AC converters.
[3] AC/DC inverters.
[4] Power transformers and Aux-power transformers.
[1] PDA/Notebook/Desktop,server applications.
[2] SMD Output inductor using high flux and MPP power cores.
[3] EMI/RFI filtering applications.
[4] SMPS energy storage inductors.
[5] EMI/RFI filtering inductors
[6] DC-DC converter chokes
[7] Switching power supplies, SCR,Triac control circuits.
[8] High DC bias current with lowest inductance rolloff.
[9] Battery powered equipment.

[10] Automotive components.
[11] Load testers.
[12] Designed for application in different types of circuits.
[13] EC, EE.EI and PQ type high frequency switch transformer EP type magnet shielding switch transformer.
[14] RM type communication filter, aux power transformer.
[15] ET, FT type linearity G (jar shape) switch transformer.
[16] DR (I) type transformer T (ring) iron power core, DC filter inductorRM series: RM-4, 5, 6, 8, 10, 12,14.
[17] High-density installations.
[18] Chargers.
[19] Alarm system.
[20] Fax machines.
[21] TV/CRT monitor displays.
[22] UPS power supply.
[23] VCD/DVD players.
[24] Audio/visual equipment.
[25] OA machines and inverter Typical products.

[26] High-density installation with good shielding quality.
[27] Wave carrier filter.
[28] Insulation transformers.
[29] Matching transformer used SPC exchanges terminal and high precision electronic devices.
[30] SMPS.
[31] PSU.
[32] Instruments and meters.
[33] Displays,and navigation.

Professional fields used to:
[1] Test devices.
[2] Household appliances.
[3] Communications equipment.
[4] Production equipment.
[5] Computers.
[6] Lighting equipment.
[7] Broadcasting equipment.
[8] Optical transceiver.
[9] Railway signal.
[10] Power adapter.
[11] Power supplies field.
[12] Medical instruments and equipment.
[13] Electric locomotives.
[14] Automotive electronics.

CARTONS international standard Anti-static packages.

Big carton size: 44* 35*36 LWH cm **Volume:** 0.05544 M^3
Small paper case size: 42*33*6 LWH cm **Volume:** 0.008316 M^3
5 cases / carton

Model	Quantity / Carton	N.W. / Carton	G.W. / Carton	Cases inside
				5

Big carton size: 42* 32*36 LWH cm **Volume:** 0.048384 M^3
Small paper case size: 19*15*7.5 LWH cm **Volume:** 0.0021375 M^3
16 cases/ carton

Model	Quantity / Carton	N.W. / Carton	G.W. / Carton	Cases inside
				16

Official Names

[1] Power Inductors.
[2] Toroidal Power Inducers.
[3] Common mode choke
[4] Common mode filter

Other Names

[1] Power reactor
[2] Power dynamic reactor
[3] Power choker coils
[4] Power spoiler
[5] Power turbulator
[6] Power vortex
[7] Power generator
[8] Iron-core reactor
[9] Iron-core choke
[10] Iron-core choking coil
[11] Core memory
[12] Ferrite inductors
[13] Controlled magnetic core reactor

Descriptions

Industry belongs to POWER INDUCTORS /COMMON-MODE CHOKE

Toroidal common mode Inductors ring transformer Inductance EMI Filters Audio/High frequency Choke Coils

[1] Filter choke coil
[2] Audio frequency choke coil
[3] High-frequency choke coil
[4] Filter common mode EMI signals
[5] Bidirectional filter
[1] Ring type power inductor
[2] Toroidal type power inductor

[1] Power inductor
[2] Common mode choke
[3] Choke-coils
[4] Toroidal coils inductors
[5] Ferrite core inductors

Key words:

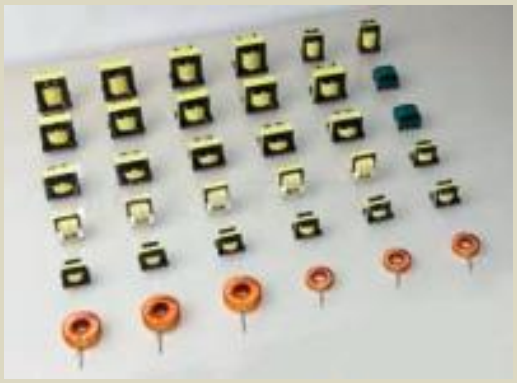
[1] Inductor
[2] Power inductor
[3] Air core coil inductor

[4] Ferrite rod inductor

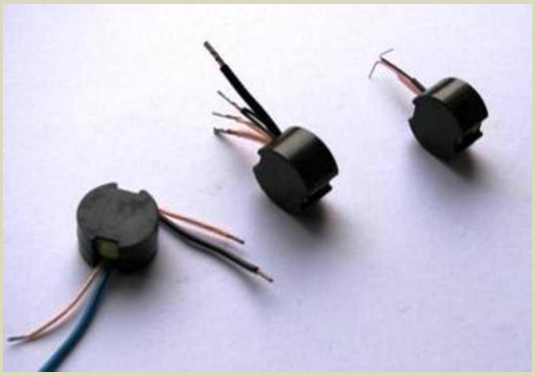
[1] Voice coil
[2] Steel coil
[3] Stainless steel coil
[4] Solenoid coil
[5] Rogowski coil
[6] Pvc coil mat
[7] Ppgl coil
[8] Ppgi steel coil
[9] Ppgi prepainted steel coil
[10] Ppgi coil
[11] Mosquito coil
[12] Induction heating coil
[13] Ignition coil
[14] Hot rolled coil
[15] Gi coil
[16] Galvanized steel coil
[17] Galvalume steel coil and sheet
[18] Fan coil unit
[19] Dx51d z100 galvanized steel coil
[20] Diamond ignition coil
[21] Common mode choke
[22] Coil winding machine
[23] Coil spring
[24] Coil nail
[25] Coil
[26] Choke coil
[27] Aluzinc steel coil
[28] Aluminum coil
[29] Air core coil inductor
[30] Air coil
[31] 304 stainless steel coil

[1] **ODM** cooperated
[2] **OEM** cooperated
[3] **IMPORT** raw materials some.
[4] **EXPORT** finished commodities T. Inductors, Converters.
[5] **INVESTMENTS** introduction of foreign capital.
[6] **INVESTMENTS** establishment of factories abroad.

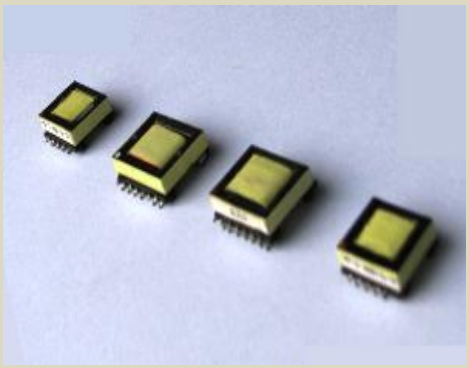
toroidal ferrite core inductors choke-coils



plug in power transformers and inductance



pot transformers and inductance



Install power transformers and inductance

UU inductors

toroidal transformers and inductance

audio power inductor

leaded radial drum inductor

I

TIW inductors

common mode choke-coils

I

totoidal choke coils with base

common mode choke-coils

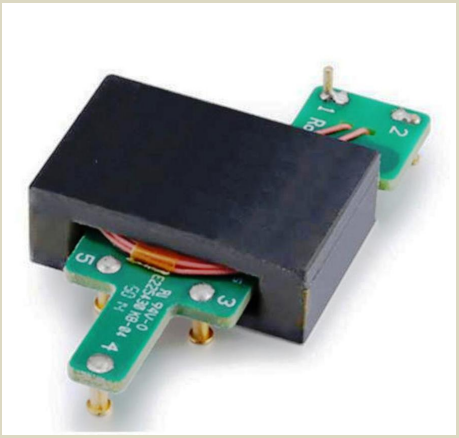
I

amorphous nanocrystalline

power frequency inductance

I

power supply inductance



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YFT

WDH

I

autohesion coils

RF antenna

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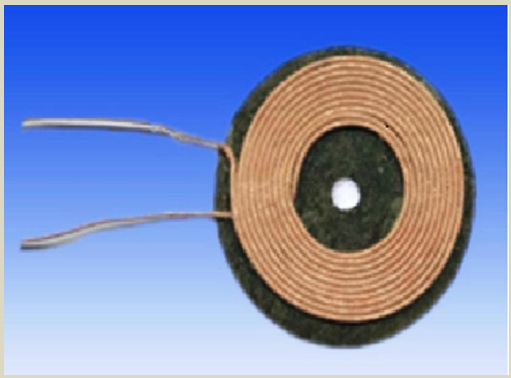
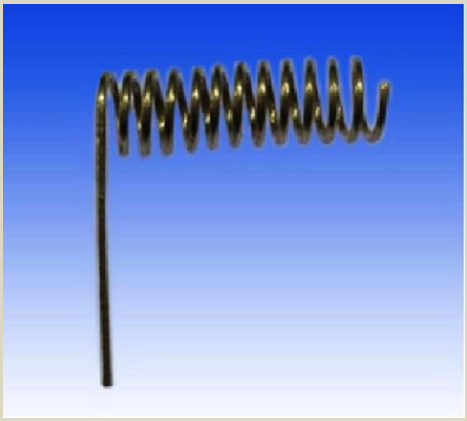


radio charger



spring coils

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Awaiting for you.....

Awaiting for you.....

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