Self Electronic

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ساختمان عباسیان، طبقه همکف، پلاک ۷
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Product List:

1. Nanocrystalline Cores for Common Mode Chokes

2. DC Current Immunity Composite Cores for Watt-hour Meters

3. DC Current Immunity Single Cores for Watt-hour Meters

4. Nanocrystalline Cores for Current Transformer

5. Nanocrystalline Cores for Leakage Circuit Breakers

6. Nanocrystalline Cores for Large Power Transformer

7. Amorphous No- air gap Choke Cores

8. Amorphous Choke Cores with air gap

9. CC- type Amorphous Choke Cores

10. Cores for Magnetic Compensation type Hall Current Sensors

11. Amorphous Cores for interface of ISDN Communication Net

12. Saturable Nanocrystalline Cores for Magnetic Amplifier (MAG-AMP)

13. Saruable Co-based Amorphous Cores for Magnetic Amplifier (MAG-AMP)

14. Nanocrystalline Cores with high permeability and low core loss

15. Co-based Amorphous Cores with very lower core loss

16. Nanocrystalline cores with lower remanene and core loss

17. Co- based Amorphous cores with lower remanence and core loss

Part key customer:

ABB GROUP

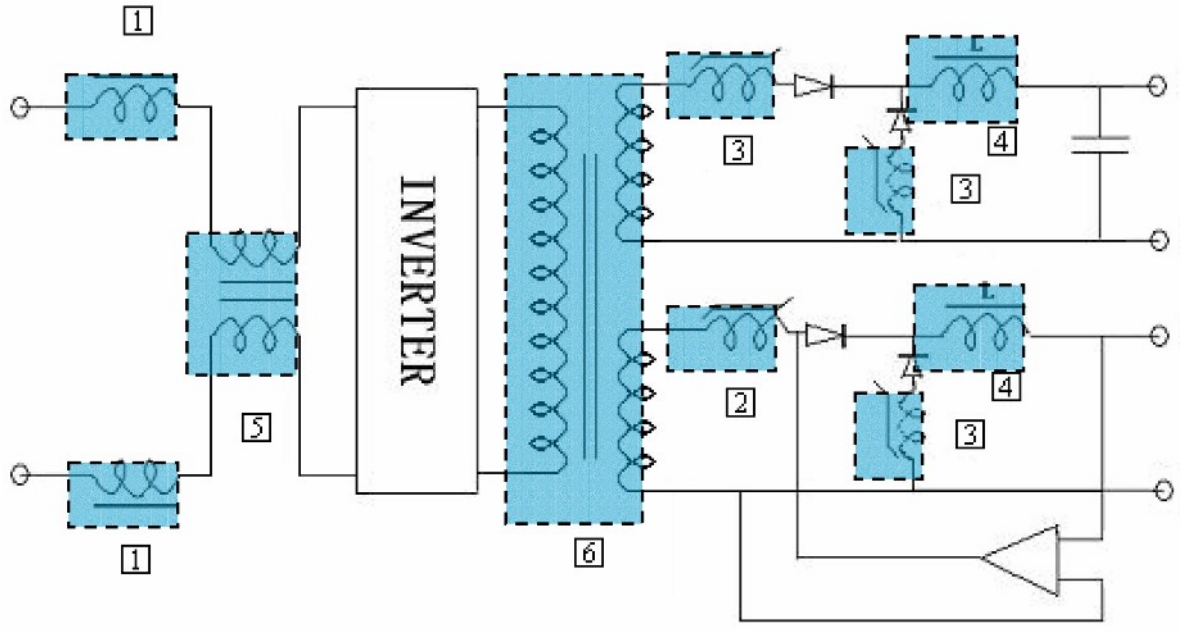
Schneider Electric

Dong Woo Electron Co., Ltd

Tae Hwa Trans Co., Ltd

Epcos

Typical Application:



1、Normal Mode Choke	: AI50 JHL AI50-CC
2、Magnetic Amplifier	: CAH FUH
3、Spike Blocker	: CAH FUH
4、Smoothing Choke	: AI50 JHL AI50-CC
5、Common Mode Choke	: FUO CAM
6、Power Transformer	: FUM FUL FUL-P
7、Current Transformer	: FUO FUL GN10LFU AI

Normal standard core dimensions:

No.	Bare core dimensions(mm)			Finished core dimensions (mm)		
	ID	OD	Ht	ID	OD	Ht
1	4.3	7.3	2.8	3.7	7.8	3.3
2	6.5	9.8	4.5	5.1	11.2	5.7
3	8.0	12.0	4.5	6.3	13.8	6.5
4	8.5	15.3	5.0	7.4	16.8	6.3
5	9.5	15.5	20.0	7.7	17.3	22.5
6	9.6	13.2	10.0	8.5	15.0	12.0
7	10.0	14.0	5.0	8.5	15.0	12.0
8	10.0	16.0	5.0	8.5	17.8	6.8
9	10.0	16.0	8.0	8.3	18.2	10.3
10	10.0	18.5	5.0	8.0	20.8	6.6
11	10.0	22.0	10.0	8.1	24.3	12.8
12	11.0	18.0	8.0	9.1	20.0	10.2
13	11.0	18.0	10.0	9.1	20.0	12.2
14	11.0	23.0	20.0	9.8	26.4	23.2
15	12.0	20.0	5.0	10.0	21.7	7.1
16	12.0	20.0	8.0	10.6	21.2	10.2
17	12.0	20.0	10.0	10.6	21.8	12.0
18	13.2	21.5	10.0	11.5	24.0	12.9
19	14.0	19.0	6.5	11.8	22.1	9.0
20	14.0	19.0	8.0	12.1	22.5	10.2
21	14.0	20.0	10.0	12.1	22.5	12.2
22	14.0	20.0	12.0	12.1	22.5	14.2
23	15.0	21.0	10.0	12.8	23.5	12.8
24	15.0	23.0	8.0	12.9	25.8	10.7
25	15.0	24.0	6.5	13.0	26.5	9.0
26	15.0	24.0	10.0	13.0	26.5	12.5
27	15.0	24.0	15.0	13.0	26.5	17.5
28	16.0	21.0	10.0	14.0	24.7	12.5
29	16.0	23.0	4.0	14.0	25.0	6.0
30	16.0	23.0	8.0	14.0	25.0	10.5
31	16.0	23.0	10.0	14.0	25.0	13.0
32	16.0	25.0	8.0	14.0	27.2	10.8
33	16.0	26.0	10.0	14.0	28.5	12.8
34	17.0	22.0	10.0	15.4	24.3	12.3
35	17.0	23.0	15.0	14.9	25.4	17.9
36	18.0	23.0	10.0	15.8	25.2	12.7
37	18.0	24.0	10.0	15.8	26.6	12.7
38	18.0	28.0	15.0	16.0	30.2	17.6
39	19.0	22.0	10.0	17.5	23.5	12.9
40	19.0	26.0	10.0	17.0	28.2	12.8

No.	Bare core dimensions (mm)			Finished core dimensions (mm)		
	ID	OD	Ht	ID	OD	Ht
41	19.0	27.0	8.0	16.5	29.2	9.8
42	20.0	25.0	6.5	18.2	27.4	9.4
43	20.0	26.0	10.0	17.9	27.7	12.7
44	20.0	30.0	10.0	17.8	32.2	12.5
45	20.0	32.0	10.0	17.8	34.0	12.5
46	20.0	30.0	15.0	17.8	33.1	17.5
47	23.0	33.0	25.0	22.0	36.7	29.8
48	25.0	32.0	8.0	22.0	35.1	11.1
49	25.0	32.0	6.5	22.0	35.1	8.7
50	25.0	32.0	10.0	22.0	35.1	12.4
51	25.0	40.0	10.0	21.8	43.0	13.5
52	25.0	40.0	12.5	22.5	42.2	16.0
53	25.0	40.0	15.0	21.7	43.0	18.8
54	25.0	40.0	20.0	21.3	44.0	24.6
55	28.0	34.0	8.0	25.6	36.8	10.5
56	30.0	40.0	10.0	27.6	43.0	13.7
57	30.0	41.0	15.0	27.6	44.2	18.5
58	32.0	38.0	6.5	29.6	40.5	9.3
59	32.0	44.0	6.5	29.6	46.8	9.3
60	32.0	50.0	15.0	29.6	53.0	18.2
61	32.0	50.0	20.0	18.0	53.0	23.8
62	40	50	10	37	54	14.6
63	40	60	20	37	63	24
64	40	64	15	37	68	20
65	40	64	20	37	68	23.2
66	40	70	20	37	73	24
67	50	60	10	47	65	15
68	50	80	20	47	83	25
69	50	80	25	47	84	29
70	50	90	30	46	94	34
71	55	65	10	52	68	14
72	61	70	10	58	73	14
73	70	120	30	65	125	35
74	77	86	10	74	90	15
75	80	120	25	75	125	30
76	90	125	25	85	130	30
77	90	130	30	85	135	35
78	100	120	25	94	126	31
79	100	140	25	94	146	31
80	120	170	25	114	176	31

Plastic case box material:

1、 Polycarbonate;

2、 PA66,additions of 50%glass fibre;

3、PBT,additions of 30% glass fibre;

4、Flame resisitant ABS.

1. Nanocrystalline cores for Common Mode Choke

（FUO）

1. Features

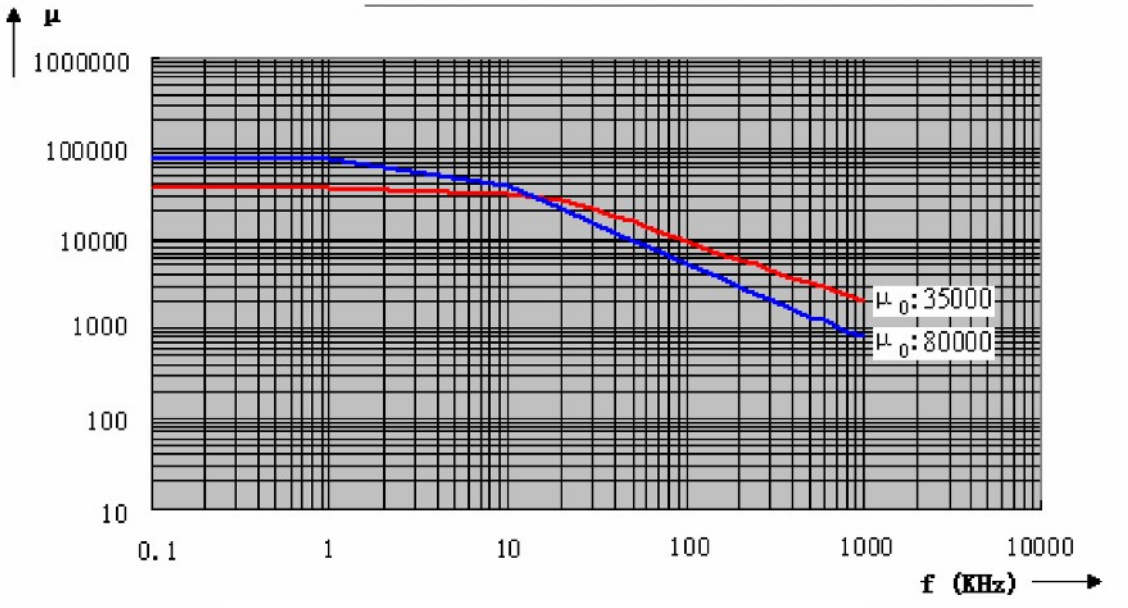
- High initial permeability and high AL value
- High effective insertion loss and excellent noise suppression
- Wide frequency range, large adjustable range for permeability （μ0）from 20000～160000
- Low core loss， small choke size for volume and weight with epoxy coating

2. Application

- Switched-mode Power supplies
- Uninterrruptible Power Systems
- Pulsed welding equipment
- Power inverter
- Wind generators
- Frequency Converter

3. Properties:

	Nanocrystalline cores	Ferrite cores
Saturation magnetic induction Bs（T）	≥1.20T	0.4
Curie temperature（℃）	≥560	170
Saturation magnetism flexible coefficient（$\times 10^{-6}$）	<2	4
Operating Temperature Range	-55—130℃	<80℃
Initial permeability μ_0	20000－160000	2000
Coercivity A/m	<1.6	30
High frequency core lose P(20KHZ.0.2T)	3.4	7.5



Initial permeability & Frequency curve

4. Specifications and electric parameters:

Part No.	Core dimensions(mm) ID×OD×H	Finished dimensions(mm)			l_{Fe} (cm)	A_{Fe} (cm^2)	AL※		Type of finish
		ID	OD	Ht			10K nominal	100K nominal	
FUO070403	4.5×7.2×3.0	3.5	8.0	4.5	1.81	0.03	12	--	Plastic case
FUO071004	6.5×9.8×4.5	5.1	11.2	5.7	2.56	0.06	22	5	Plastic case
FUO071005	6.5×10×5.0	5.1	11.2	6.5	2.59	0.07	24	--	Plastic case
FUO081204	8.0×12×4.5	6.5	13.5	6.5	3.14	0.07	25	--	Plastic case
FUO101405	10×14×5.0	8.5	15.5	6.8	3.77	0.08	21	--	Plastic case
FUO101608	10×16×8	8.5	17.2	10	4.08	0.19	40	--	Plastic case
FUO122008	12×20×8	10	22.3	10.3	5.03	0.25	45	--	Plastic case
FUO122008B	12×20×8	10	22.3	10.3	5.03	0.25	20	9	Plastic case
FUO131606	12.5×16×6	≥10.7	≤17.8	≤8.0	4.48	0.08	16	5.3	Epoxy coating
FUO162610	16×26×10	14.0	27.5	12.5	6.60	0.39	65	15	Plastic case
FUO162112	16.5×21×12	14.6	22.8	15	5.89	0.21	--	7.5	Plastic case
FUO182815	18×28×15	16.0	30.2	17.6	7.23	0.59	60	--	Plastic case
FUO202510	20×25×10	18	27.8	12.7	7.07	0.20	30	7	Plastic case
FUO203015	20×30×15	17.8	33.1	17.5	7.85	0.59	70	--	Plastic case
FUO203210	20×32×10	17.8	34	12.5	8.17	0.47	45	--	Plastic case
FUO254010	25×40×10	22.5	42.5	13.0	10.21	0.59	50	--	Plastic case
FUO254015	25×40×15	21.9	43.2	18.9	10.21	0.88	70	--	Plastic case
FUO324015	32×40×15	29.2	44.3	18.6	11.31	0.47	45	7	Plastic case
FUO324015B	32×40×15	≥28.5	≤43.5	≤17.8	11.31	0.47	14	7.2	Epoxy coating
FUO325015	32×50×15	29.0	53.2	18.2	12.88	1.05	60	--	Plastic case
FUO325020	32×50×20	29.5	53.2	23.5	12.88	1.40	80	--	Plastic case
FUO405020	40×50×20	≥36.5	≤53.5	≤22.8	14.14	0.78	30	10	Epoxy coating

FUO405025	40×50×25	36.2	53.4	28.3	14.14	0.98	62	12	Plastic case
FUO406020	40×60×20	37	63	24	15.71	1.56	70	--	Plastic case
FUO406420	40×64×20	37	67	24	16.34	1.87	80	--	Plastic case
FUO506525	50×65×25	47	68	29	18.06	1.46	60	18	Plastic case
FUO508020	50×80×20	47	84	24	20.42	2.34	80	--	Plastic case
FUO7010030	70×120×30	65.5	125.1	36.1	29.85	5.85	150	--	Plastic case
FUO8010020	80×100×20	103.6	76	23.7	28.27	1.56	45	13	Plastic case
FUO9012525	90×125×25	85.4	129.5	30	33.77	3.41	90	--	Plastic case
FUO10013030	100×130×25	≥95	≤134.5	≤28.5	36.13	2.93	75	--	Epoxy coating
FUO13016030	130×160×30	≥125	≤165	≤33.5	45.55	3.51	70	--	Epoxy coating
FUO19022030	190×220×30	184	227.5	35.7	64.40	3.51	50	13	Plastic case

※ Test conditions： 0.1 V

A_L = Inductivity for N = 1 (tolerance +30/ -25%)

others cores can be made for meeting user's need.

2. DC Current Immunity composite cores （GN10LFU）

1、Features：

- Unique patent hold, DC current immunity composite cores with amorphous and nanocrystalline cores together.

2、Magnetic features：

- Strong immunity for DC current
- Applicable Current range 1.5-200A
- Good temperature stability
- With competitive price and good quality

3、Allpications：

- DC current immunity transformers in electronic energy meter / watt-hour meter
- Metering transformer in electronic power system

4、Standard cores dimensions, Applicable CT accuracy , Maximal DC current immunity range

Part No.	Core dimensions	Finished Dimensions	CT accuracy	DC Compliance
1	Φ14×20×10	Φ12.1×22.5×12.2	0.5—0.1 class	30A
2	Φ15×21×10	Φ12.8×23.6×12.8	0.5—0.1 class	20A
3	Φ15.5×24×8	Φ13.7×26.3/×9.9	0.5—0.1 class	60A
4	Φ16×21×10	Φ14.0×24.7×12.5	0.5—0.1 class	40A
5	Φ16×23×10	Φ14.0×25.0×13.0	0.5—0.1 class	60A
6	Φ16×25×8	Φ13.7×27.8×10.8	0.5—0.1 class	60A
7	Φ17×22×10	Φ15.3×24.4×12.3	0.5—0.1 class	30A
8	Φ17×22×10A	Φ15.3×24.4×12.3	0.5—0.1 class	60A
9	Φ17×24×8	Φ15.3×26.3×9.9	0.5—0.1 class	80A
10	Φ17×25×10	Φ15.6×28.0×12.8	0.5—0.1 class	65A
11	Φ17×25×10A	Φ15.6×28.0×12.8	0.5—0.1 class	100A
12	Φ17×28×8	Φ15.2×29.8×10.1	0.5—0.1 class	60A
13	Φ17×28×8A	Φ15.2×29.8×10.1	0.5—0.1 class	100A
14	Φ18×24×10	Φ15.8×26.6×12.8	0.5—0.1 class	100A
15	Φ18×25×12	Φ16.2×27.6×14.2	0.5—0.2 class	100A
16	Φ18×28×15	Φ16.0×30.2×17.6	0.5—0.1 class	100A
17	Φ19×27×8	Φ16.6×29.3×9.8	0.5—0.1 class	120A
18	Φ19×27×12	Φ17.1×28.9×13.9	0.5—0.2 class	100A
19	Φ19×28×12	Φ17.1×30.2×13.9	0.5—0.1 class	80A
20	Φ20×30×8A	Φ18.0×32.7×9.8	0.5—0.1 class	100A
21	Φ21×29×10	Φ18.8×32.1×13.8	0.5—0.1 class	200A
22	Φ21×29×10A	Φ18.8×32.1×13.8	0.5—0.1 class	200A

Notes: For your reference, the standard parameters above may vary according to your specifically designed turns and coil diameter of the transformer. We could design and manufacture the suitable cores according to your exact requirement.

3. DC Current Immunity single cores （AI）

1、Features:

- Made by single magnetic materials with constant permeability (μ = 1400-2000)

2、Magnetic features:

- Strong immunity for DC current，Applicable current range （1.5A-200A）
- High linearity, High accuracy class, Applicable transformer accuracy range 0.5-0.1 Class
- Good temperature stability
- Core size saving by Volume and weight

3、Allpications:

- DC current immunity transformers in electronic energy meter / watt-hour meter
- Metering transformer in electronic power system

4、Standard cores dimensions, Applicable CT accuracy , Maximal DC current immunity range

Part No.	Core dimensions	Finished Dimensions	CT accuracy	DC Compliance
1	Φ14×20×10	Φ12.1×22.5×12.2	0.5—0.1 class	60A
2	Φ16×21×10	Φ14.0×24.7×12.5	0.5—0.1 class	80A
3	Φ17×22×10	Φ15.3×24.4×12.3	0.5—0.1 class	80A
4	Φ17×24×8	Φ15.3×26.3×9.9	0.5—0.1 class	60A
5	Φ18.5×24.5×6.5	Φ16.5×26.5×8.5	0.5—0.1 class	100A
6	Φ21×29.5×5	Φ19×31.5×7	0.5—0.1 class	105A
7	Φ25×32×6.5	Φ22×34×8.5	0.5—0.1 class	150A
8	Φ30×40×8	Φ27×42×10.5	0.5—0.1 class	200A

Notes: For your reference, the standard parameters above may vary according to your specifically designed turns and coil diameter of the transformer. We could design and manufacture the suitable cores according to your exact requirement.

4. Nanocrystalline core for Current transformer（FUO-I）

1. Features:

- High Saturate magnetic induction B_S
- High initial permeability. High linearity. High Accuracy
- Good temperature stability（-55℃~130℃）
- Applying for transformer class grade: 0.5-0.05 Class

2. Applications:

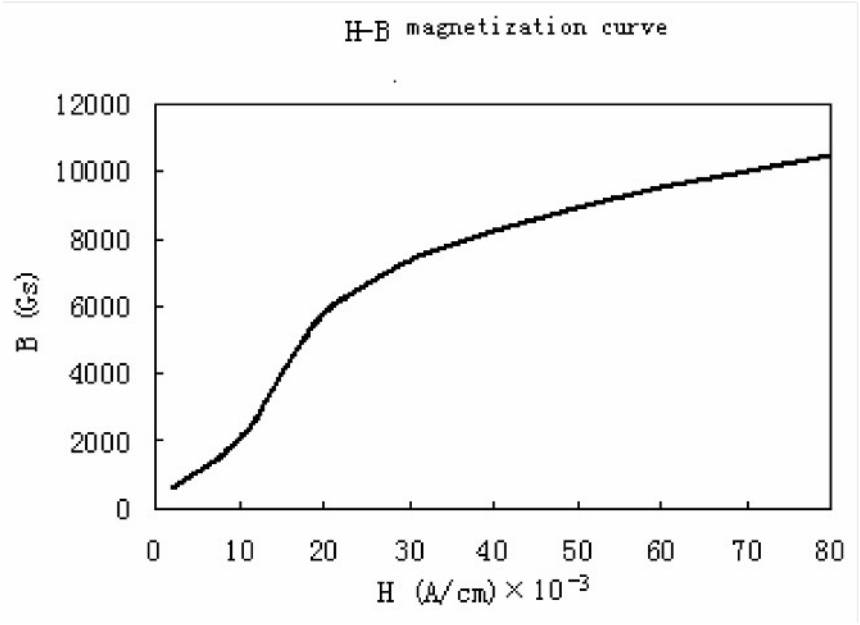
- High precision current and voltage transformer
- Current leakage circuit breakers
- Common mode choke

3. Specification:

3-1 Basic parameter

Basic magnetic parameter	Nan-crystalline FUI-I	Permalloy(Ni80Fe)
Saturate magnetic induction B_S (T)	1.20	0.70
Initial permeability（G_S/Oe）	50000～100000	50000～100000
Maximum permeability（G_S/Oe）	>300000	>200000
Coercivity（A/m）	<1.6	<0.8
Density（g/cm^3）	7.2	8.8

3-2 Typical magnetization curve



4. Specification and electric parameter

Part No.	Core dimensions (mm) OD×ID×H	Finished dimensions (mm) OD×ID×H	Cross section A_{Fe} (cm^2)	Mean path length (cm)	Output Voltage (mV)
FUO-I101310	9.6×13.2×10	8.5×15.0×12.0	0.14	3.58	≥0.30
FUO-I132210	13.2×21.5×10	11.5×24.0×12.9	0.32	5.45	≥0.40
FUO-I141907	14×19×6.5	12.0×22.1×9.0	0.12	5.2	≥0.12
FUO-I141908	14×19×8	12.1×22.5×10.1	0.15	5.2	≥0.18
FUO-I142010	14×20×10	12.1×22.5×12.2	0.23	5.3	≥0.25
FUO-I152110	15×21×10	12.9×23.5×12.8	0.23	5.7	≥0.28
FUO-I162110	16×21×10	14.0×24.5×12.5	0.19	5.8	≥0.25
FUO-I162308	16×23×8	14.0×24.9×10.9	0.21	6.1	≥0.20
FUO-I162610	16×26×10	14.0×28.1×13.0	0.38	6.6	≥0.30
FUO-I202507	20×25×6.5	18.2×27.4×9.4	0.12	7.1	≥0.07
FUO-I182815	18×28×15	16.2×29.5×17.0	0.57	7.2	
FUO-I203015	20×30×15	17.8×33.1×17.5	0.57	7.9	
FUO-I203210	20×32×10	18.0×34.2×13.1	0.46	8.2	
FUO-I254010	25×40×10	22.5×42.5×13.0	0.57	10.2	
FUO-I254015	25×40×15	21.9×43.2×18.9	0.86	10.2	
FUO-I325015	32×50×15	29.0×53.2×18.2	1.03	12.9	
FUO-I325020	32×50×20	28.5×53.2×23.5	1.37	12.9	
FUO-I406020	40×60×20	37×63×24	1.52	15.7	
FUO-I406420	40×64×20	37×67×24	1.82	16.3	
FUO-I407020	40×70×20	37×73×24	2.28	17.3	
FUO-I508020	50×80×20	47×84×25	2.28	20.4	
FUO-I508025	50×80×25	47×84×29	2.85	20.4	
FUO-I509030	50×90×30	46×94×34	4.56	22.0	
FUO-I5010025	50×100×25	46×104×29	4.75	23.6	
FUO-I7012030	70×120×30	65×125×35	5.7	29.8	
FUO-I8012025	80×120×25	75×125×30	3.80	31.4	
FUO-I9012525	90×125×25	85×130×30	3.33	33.8	
FUO-I9013030	90×130×30	85×135×35	4.56	34.5	
FUO-I10012025	100×120×25	94×126×31	1.90	34.5	
FUO-I10014025	100×140×25	94×146×31	3.80	37.7	
FUO-I12017025	120×170×25	114×176×31	4.75	45.5	

Note: Testing condition: input 10mA

To the specification in the form, cores can be made for meeting user's need.

5. Nanocrystalline Cores for Leakage Circuit Breakers (FUL-L)

1. Features:

- High initial permeability, High output voltage, core size saving.
- Low core loss, Good tolerance ability for large current impulse, Good protection of tripping of high current
- High Cuire temperature, Good temperature stability（-55℃~130℃）
- Competitive price

2. Applications:

- Electronic Leakage Circuit Breakers
- Electromagnetic Leakage Circuit Breakers（Type A， Type AC）

3. Specifications:

	Nanocrystalline cores	Permallloy cores
Saturate magnetic induction Bs（T）	1.20	0.70
Initial Permeability（GS/Oe）	50000～100000	50000～100000
Maximum permeability（GS/Oe）	>300000	>200000
Remanency Br（T）	0.1	0.4
Coercivity（A/m）	<1.6	<0.8
Density（g/cm3）	7.3	8.8
Stacking factor	>0.75	>0.88

4. Specification and electric parameter

Part No.	Core dimensions (mm) OD×ID×H	Finished dimensions (mm) OD×ID×H	Input Current I(mA)	N1： N2	Output Voltage Uout（mV）
FUL-L	9.1×12.1×3.8	7.8×13.4×5.0	24.7	1：1	0.058-0.088
FUL-L	9.5×12.8×3.2	7.0×14.6×4.8	24.6	1：1	0.05-0.08
FUL-L	9.6×12.8×2.65	7.7×14.2×5	22.5	1：1	0.055-0.095
FUL-L	8.9×12.9×16.7	6.7×14.9×19.3	30	1：1	1.0-1.7
FUL-L	10×17×20	7.9×19.2×22.5	45	1：1	≥1.9
FUL-L	11.5×18.5×16.7	10.0×22.0×19.3	33.3	1：1	1.19-1.78
FUL-L	13×19×10	10.8×21.5×12.2	53.5	1：1	0.59-0.87
FUL-L	14×19×3.2	12.3×21.5×5.4	22.5	1：1	0.07-0.12
FUL-L	15×18.6×4.5	13.3×20.6×6.6	24.6	1：1	0.06-0.09
FUL-L	14×22×16.7	11.8×24.2×19.3	70	1：1	≥1.9

To the specification in the form, cores can be made for meeting user's need.

6. Nanocrystalline core for large power transformer （FUL-P）

1. Features

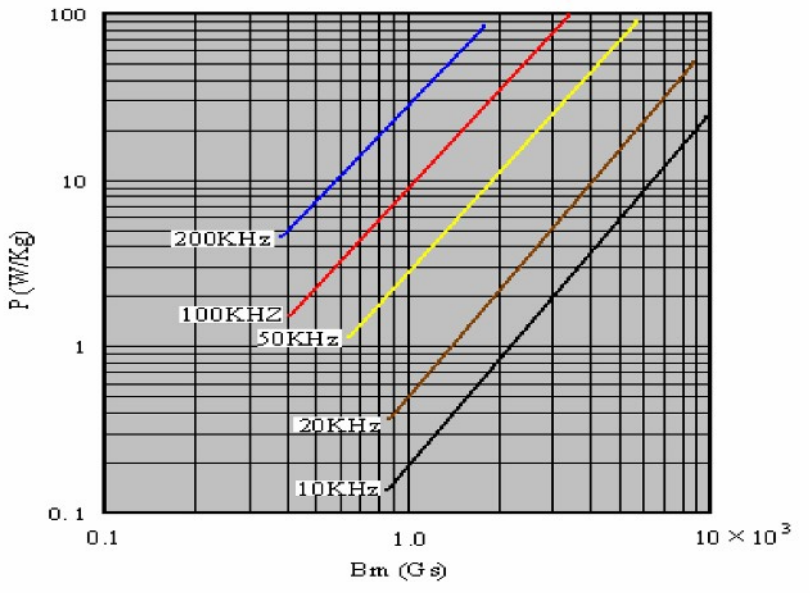
- High saturation magnetic induction Bs
- High permeability
- Low core loss
- Good temperature stability. Working range -50℃ and 130℃

4. Applications:

- Converter,
- Communication power
- Charges power , UPS power
- Electroplates power, laser power, X-Ray machine power

5. Properties：

Bs(T)	≥1.2T
Br(T)	≤0.15T
Core loss P3/50K(50KHZ 0.3T)	≤30W/Kg
Core loss P5/20K(20KHZ 0.5T)	≤25W/Kg
Initial permeability μ_0(H_m=0.08A/cm)	≥30000
Coercivity H_c(A/m)	<2.0
Curie temperatureT_c	570℃



P-f-Bm The curve of loss

4. Specifications:

Part No.	Core dimensions(mm)			Finished dimensions(mm)			The effective section (cm^2)	Mean core path length (cm)	Weight (g)	Suitable power (KW) (working frequency at20KHz)
	ID	OD	H	ID	OD	H				
FUL-P 406420	40	64	20	37	66	23	1.77	16.3	215	0.8—1.4
FUL-P 407025	40	70	25	37	73	28	2.42	17.3	310	1.2—2.0
FUL-P 507525	50	75	25	47	78	28	2.13	19.6	310	1.2—2.1
FUL-P 508020	50	80	20	47	83	23	2.18	20.4	330	1.3—2.2
FUL-P 508025	50	80	25	47	83	28	2.65	20.4	400	1.6—2.7
FUL-P 408030	40	80	30	37	83	33	4.50	18.8	625	2.5—4.2
FUL-P 409020	40	90	20	37	93	23	3.64	20.4	550	2.2—3.8
FUL-P 509030	50	90	30	46	94	34	4.42	21.98	720	3.0—4.8
FUL-P 5010025	50	100	25	46	104	29	4.63	23.55	810	3.5—5.2
FUL-P 7012030	70	120	30	65	125	35	5.55	29.83	1225	5.8—8.0
FUL-P 8012020	80	120	20	75	125	25	2.96	31.40	688	2.8—4.6
FUL-P 8012025	80	120	25	75	125	30	3.70	31.40	860	3.5—5.2
FUL-P 8012030	80	120	30	75	125	35	4.44	31.40	1032	4.2—7.0
FUL-P 9013030	90	130	30	85	136	35	4.44	34.54	1135	5.0—8.0
FUL-P 9012525	90	130	50	85	136	55	7.20	34.54	1850	8—13
FUL-P 406420	40	64	20	37	66	23	1.77	16.3	215	0.8—1.4

To the specification in the form, cores can be made for meeting user's need.

7. Amorphous No-gap Choke Core(JHL)

1. Features:

- High saturation magnetic induction(Bs)
- Low core loss compared to other core materials
- Good frequency and temperature characteristics,usable to 300KHz
- Good DC bias characteristics
- Low leakage flux
- Size saving and lighter weight,compared to others

2. Applications:

- Output choke coil for SMPS
- Choke coil for DC/DC converter
- Normal mode choke coil
- Choke coil for adapter and battery charger
- PFC choke coil

3. Properties and technical parameters for winding coil:

1） Core for car audio

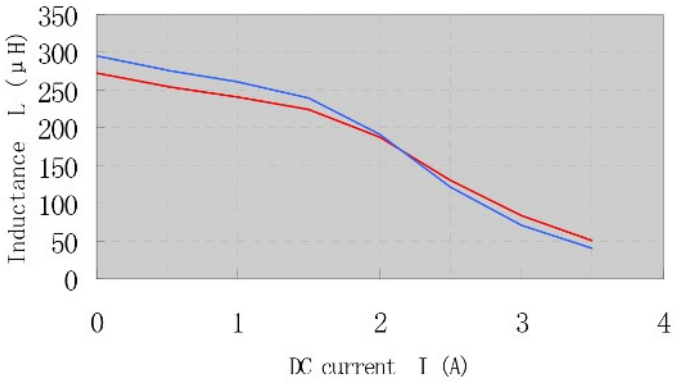
Part No.	Core dimension (mm)	Finished dimension(mm)	AL min. Idc=0 (μH)	N (Turns)	Idc (A)	Lv min. Idc=Rated (μH)
JHL061005	6.5×9.8×4.5	5.1×11.2×5.9	0.12	50	0.3	150
JHL081205-1	8×12×4.5	6.3×13.8×6.5	0.10	50	1.5	160
JHL081205-2	8×12×4.5	6.3×13.8×6.5	0.19	38	1.0	100
JHL091505	8.5×15.3×5.0	7.4×16.8×6.3	0.21	36	1.0 2.0 3.0	240 160 50
JHL101608-1	10×16×8.0	8.3×18.2×10.3	0.13	40	2.0	150
JHL101608-2	10×16×8.0	8.3×18.2×10.3	0.21	46	2.0	300
JHL101608-3	10×16×8.0	8.3×18.2×10.3	0.62	27	1.0	300
JHL101905-1	10×18.5×5.0	8.0×20.8×6.8	0.26	35	2.0	230
JHL101905-2	10×18.5×5.0	8.0×20.8×6.8	0.35	43	1.0 2.0	500 200
JHL111808-1	11×18×8.0	8.8×19.8×9.7	0.55	21	2.0	180
JHL111808-2	11×18×8.0	8.8×19.8×9.7	0.78	24	1.0	300
JHL111810-1	11×18×10	8.8×19.8×11.9	0.2	50	1.0 2.0 3.0	400 350 280
JHL111810-2	11×18×10	8.8×19.8×11.9	0.63	26	2.0	280

JHL111810-3	11×18×10	8.8×19.8×11.9	0.85	23	1.0	400
JHL122008-1	12×20×8.0	10.6×21.8×10	0.30	27	2.0	190
JHL122008-2	12×20×8.0	10.6×21.8×10	0.56	25	1.0 2.0	350 100
JHL122010	12×20×10	10.6×21.8×12	0.84	21	1.5	250
JHL122406	12×24×6.5	——	0.39	30	2.0	300
JHL132210	13.2×21.5×10	11.5×24.0×12.9	0.90	23	1.0	400
JHL162508	16×25×8.0	14×27.2×10.8	0.09	21	10	25

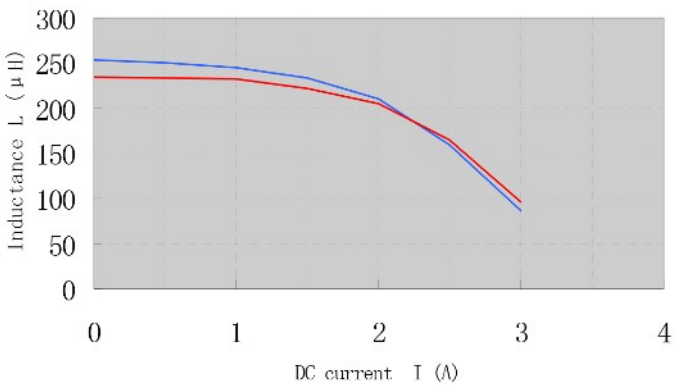
2） Core for PFC & CHOKE

Part No.	Core dimensions (mm)	Finished dimensions(mm)	AL（Idc=Rated）（μH）		Max AT(N╳Idc)	
			A type (min)	B type (min)	A type (max)	B type (max)
JHL-1608	10×16×8.0	8.3×18.2×10.3	0.30	0.10	26	75
JHL-1810	11×18×10	9.1×20×12.2	0.39	0.13	30	90
JHL-2610	16×26×10	14.2×28.5×12.8	0.38	0.12	42	120
JHL-3210	20×32×10	18.2×37×13.5	0.37	0.12	54	150
JHL-4013	25×40×12.5	22.5×42.2×16	0.46	0.15	67	200
JHL-5920	40×59×20	36×63×24	0.60	0.20	100	300

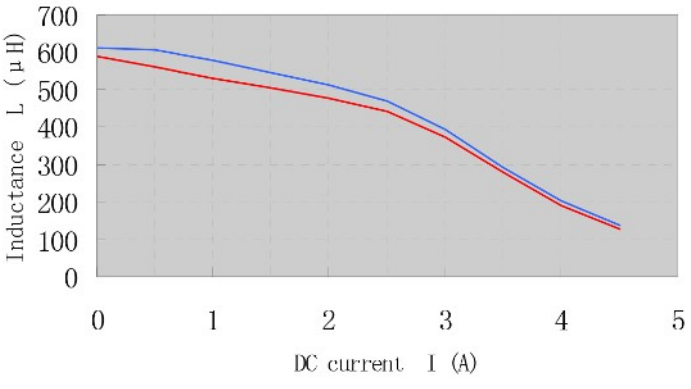
JHL091505
(8.5×15.3×5, 36turns, 1kHz, 1V)



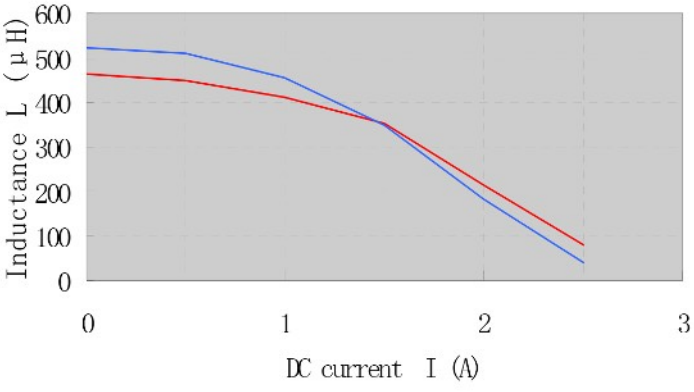
JHL111808-1
(11×18×8, 21turns, 1kHz, 1V)



JHL111810-1
(11×18×10, 50turns, 1kHz, 1V)



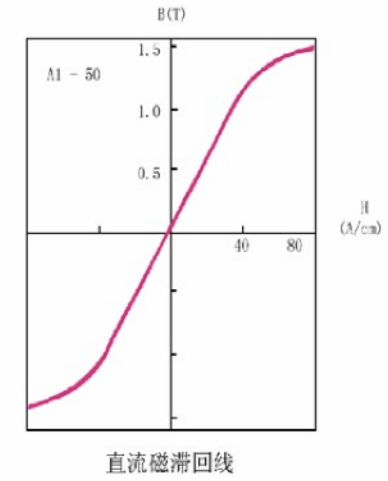
JHL12008-2
(12×20×8, 25turns, 1kHz, 1V)



8. Amorphous choke core with gap（AI50）

1. Features：

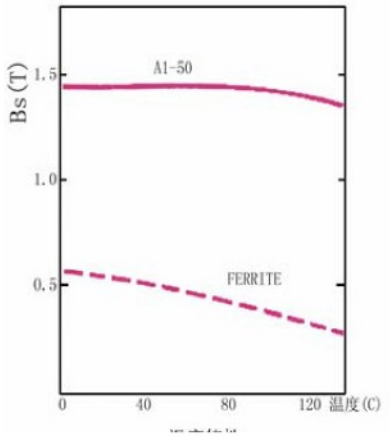
- **Large DC bias characteristics,**
- **Permeabilityμ=180~200**
- **Good frequency and temperature characteristics**
- **Low core loss**



直流磁滞回线

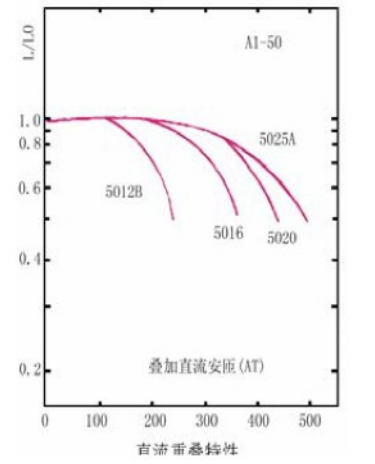
2. Applications：

- **Output choke coil for SMPS**
- **Choke coil for DC/DC converter**
- **Normal mode choke coil**
- **Choke coil for adapter and battery charger**
- **PFC choke coil**



3. Specifications and electric parameters

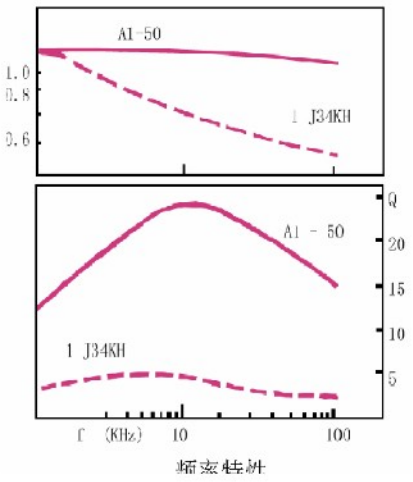
Grade	Core dimensions（mm）			Finished dimensions（mm）			Electric Parameters	
	ID	OD	H	ID	OD	H	AL(μH)	AT
5012A	12	20	5.0	9.7	22.5	8.0	0.085	180
5012B	12	20	8.0	9.7	22.5	11.0	0.120	180
5016	16	26	10.0	14.3	30.2	13.5	0.132	280
5020	20	32	10.0	17.5	34.5	13.5	0.120	350
5025A	25	40	12.5	23.0	45.0	16.0	0.150	370
5025B	25	40	15.0	23.0	45,0	19.0	0.200	370
5032	32	50	15.0	29.0	55.0	18.0	0.126	470
5040	40	64	15.0	37.8	67.5	19.0	0.160	600
5050	50	80	20.0	47.0	85,0	24.0	0.200	730
5056	56	92	25.0	53.0	97.0	29.0	0.250	800



直流重叠特性

Technical parameter for winding choke

grade	Core Dimensions (mm)	Normal rated Current I(A)	inductance L(μH)	AL (μH)	Wing turns N
5012B	12×20×8.0	3.0	400	0.115	60



频率特性

		5.0	155		37
		8.0	60		23
		10.0	40		19
5016	16×26×10	3.0	1000	0.133	87
		5.0	300		48
		8.0	155		34
		10.0	100		28
		15.0	45		18
		20.0	25		14
5020	20×32×10	5.0	505	0.120	65
		8.0	255		46
		10.0	165		37
		15.0	75		25
		20.0	45		19
5025A	25×40×12.5	5.0	520	0.140	61
		8.0	255		43
		10.0	170		35
		15.0	75		23
		20.0	45		18

Physical characteristic

Density g/cm^3	Curie Temperature Tc(℃)	Crystallization Temperature Tx(℃)	Saturation Bs(T)	Electrical Resistivity ρ(Ω-cm)	Saturation Magnetostriction $\lambda_S(10^{-6})$
7.3	410	530	1.4	130	27

9. CC- type Amorphous Choke Cores (AI50 –CC)

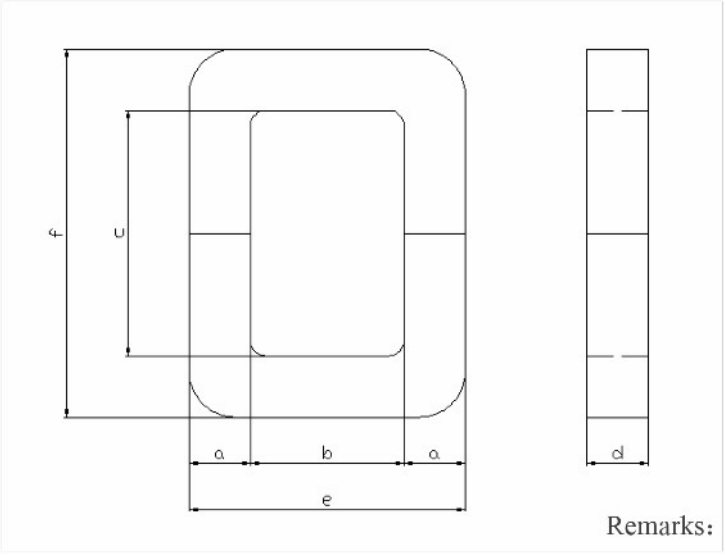
1. Features

- With high saturation magnetic induction
- With low core loss
- With good temperature stability, The working temperature -55℃～130℃

2. Applications：

- Output choke coil for SMPS
- Choke coil for DC/DC converter
- Normal mode choke coil
- Choke coil for adapter and battery charger
- PFC choke coil
- Uninterrruptible Power Systems

3. Specifications and electric parameters



Remarks：

a—Core Build
b—Window Width
c—Window length
d—Core Height
e—Core Width
f—CorcLlength

1) Specification

Self
Electronic
خیابان جمهوری، بعد از پل حافظ ساختمان عباسیان، طبقه همکف، پلاک ۷ تلفن: ۶۶۷۱۶۸۰۶ – ۶۶۷۴۵۴۷۳ فکس : ۶۶۷۴۲۳۶۸

Equal AMCC Series

Part No.	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	f (mm)	lm (cm	Ac (cm^2)	Wa (cm^2)	Wa Ac (cm^4)	M (g)
AI50-CC-33111020	10±0.5	11	33	20+0.5	31+1	53+2	13.1	1.59	3.6	5.8	150
AI50-CC-30131120	11±0.8	13	30	20+0.5	35+1	52+2	13.2	1.79	3.9	7	170
AI50-CC-40131120	11±0.8	13	40	20+0.5	35+1	62+2	15.4	1.81	5.2	9.4	200
AI50-CC-40131125	11±0.8	13	40	25+0.5	35+1	62+2	15.1	2.31	5.2	12	250
AI50-CC-60301220	12±0.8	30	60	20+0.5	54+1	84+2	21.8	1.72	18	31	270
AI50-CC-50131125	11±0.8	13	50	25+0.5	35+1	72+2	16.9	2.31	6.5	15	280
AI50-CC-50131130	11±0.8	13	50	30+0.5	35+1	72+2	17.5	2.71	6.5	17.6	340
AI50-CC-56151325	13±0.8	15	56	25+0.5	41+1	82+2	19.6	2.7	8.4	22.7	380
AI50-CC-76251520	15±0.8	25	76	20+0.5	55+1	106+2	24.9	2.16	19	41	387
AI50-CC-56151330	13±0.8	15	56	30+0.5	41+1	82+2	20	3.2	8.4	26.9	460
AI50-CC-60302020	20±0.8	30	60	20+0.5	70+1	100+2	24.6	2.88	18	51.84	510
AI50-CC-56151335	13±0.8	15	56	35+0.5	41+1	82+2	19.9	3.71	8.4	31.2	530
AI50-CC-70201625	16±1	20	70	25+0.5	52+1	102+3	24.9	3.3	14	46.2	590
AI50-CC-60362030	20±1	36	60	30+0.5	76+1	100+2	25.6	3.60	21.6	77.76	663
AI50-CC-70201630	16±1	20	70	30+0.5	52+1	102+3	25.3	3.91	14	54.7	710
AI50-CC-84352225	22±1	35	84	25+0.5	79+1	128+2	30.7	3.90	29.4	114.7	860
AI50-CC-70201640	16±1	20	70	40+1	52+1	102+3	25.4	5.21	14	72.9	950
AI50-CC-70201645	16±1	20	70	45+1	52+1	102+3	25	5.91	14	82.7	1060
AI50-CC-83251935	19±1	25	83	35+1	63+1	121+3	30.2	5.4	20.8	112	1170
AI50-CC-83251940	19±1	25	83	40+1	63+1	121+3	28.5	6.5	20.8	135	1330
AI50-CC-88452530	26±1	45	88	30+1	97+1	140+2	34.8	5.46	39.6	216.2	1368
AI50-CC-60403030	30±1	40	60	30+1	100+1	120+2	30.2	6.30	24	151.2	1370
AI50-CC-130452630	25±1	45	130	30+1	95+1	180+2	42.2	5.25	58.5	307.1	1595
AI50-CC-80403030	30±1	40	80	30+1	100+1	140+2	35.8	6.30	32	201.6	1624
AI50-CC-83251950	19±1	25	83	50+1	63+1	121+3	29.8	7.81	20.8	162	1670
AI50-CC-100322540	25±1	32	100	40+1	82+1	150+2	34.5	7.00	32	224	1740
AI50-CC-85622050	20±1	62	85	50+1	102+1	125+2	35.4	7.00	52.7	368.9	1784
AI50-CC-90251960	19±1	25	90	60+1	63+1	128+3	31.4	9.31	22.5	210	2100
AI50-CC-85352250	22±1	35	85	50+1	79+1	129+4	32.5	9.3	29.8	277	2170
AI50-CC-85352265	22±1	35	85	65+1	79+1	129+4	33.6	11.7	29.8	348	2820
AI50-CC-85402555	25±1	40	85	55+1	90+1	135+4	35.6	11.3	34	386	2900
AI50-CC-85402570	25±1	40	85	70+1	90+1	135+4	35.6	14.4	34	488	3670
AI50-CC-85402585	25±1	40	85	85±1.5	90+1	135+4	35.6	17.4	34	592	4450
AI50-CC-95403085	30±1	40	95	85±1.5	100+1	155+4	39.3	21	38	799	5930
AI50-CC-105403385	33±1	40	105	85±1.5	106+1	171+5	42.7	23	42	967	7060

2) Technical parameters for winding coil

Part No.	Size of gap（mm）	AL±10%μH	Max AT(N×Idc)
AI50-CC-60301220	2×0.5	0.38	600
	2×1.0	0.30	1200
	2×2.0	0.23	1800
AI50-CC-60302020	2×0.5	0.50	520
	2×1.0	0.39	1100
	2×2.0	0.29	1700
AI50-CC-60403030	2×1.0	0.40	1000
	2×2.0	0.35	1600
	2×3.0	0.30	2800
AI50-CC-80403030	2×1.0	0.70	800
	2×2.0	0.49	1500
	2×3.0	0.42	2600
	2×4.0	0.38	3800
AI50-CC-88452530	2×1.0	0.60	700
	2×2.0	0.45	1400
	2×3.0	0.38	2500
	2×4.0	0.34	3600
AI50-CC-130452630	2×2.0	0.42	1400
	2×3.0	0.35	2400
	2×4.0	0.30	3500

10. Cores for magnetic compensation type Hall current sensors (ASL)

1. Features

- Low coercivity
- Low remanence
- High linearity and precision
- Low cost and price

2. Classification

(1) PH series cores

Material	Density g/cm^3	Curie temperature ℃	Coercivity Hc (A/M)	Remanence Br (T)	Saturation Bs (T)
Ni80Fe alloy	8.75	400	2.1	0.24	0.8

Grade	Core dimension (mm)			Finished dimensions (mm)			Size of gap (mm)
	OD	ID	H	OD	ID	H	
PH2410	24.0	18.0	10				2.0
PH3410	34.0	26.0	10				2.0
PH4010	39.5	31.0	10				2.0
PH5410	54.0	44.0	10				2.0

(2)AH series cores

Materials	Density g/cm^3	Curie temperature ℃	Coercivity Hc (A/M)	Remanence Br (T)	Saturation Bs (T)
Amorphous alloy	7.4	270	2.1	0.05	0.9

Core code	Core dimensions (mm)			Finished dimensions(mm)			Size of gap (mm)
	OD	ID	H	OD	ID	H	
AH2410	24.0	18.0	10	26.0	16.2	13.3	2.0
AH3410	34.0	26.0	10	36.0	24.2	13.3	2.0
AH4010	39.5	31.0	10	41.5	29.0	13.3	2.0
AH5410	54.0	44.0	10	56.0	42.0	13.3	2.0

11. Amorphous Core for interface of ISDN Communication

Net

1. Features:

- Meet the pulse masks and impedances according to CCITT.I.430
- Constant permeability over a wide frequency range
- High DC bias characteristics
- Low core loss

2. Applications:

- ISDN pulse Transformers :S0,S2M,Upo,Uko
- Common mode choke
- HDSL,ADSL transformer

2. Specifications and electric parameter:

Part No.	Dimension OD×ID×H Core Dimensions (mm) Finished Dimensions (mm)	10KHz I_{dc} =0 AL_0 (μH)	10KHz I_{dc} (mA) ALv (μH)	Wing Turns N	Inductance L min (mH) (10KHz 100mV)	Q value (10KHz 100mV)	Impedance Z min (Ω) (20KHz 100mV) I_{dc} (mA)
FU1004-I0 (K196)	9.8×6.5×4.5 11.2×5.1×5.7	0 ≥20					
FU1004-I1 K162)	9.8×7.2×6.5 11.2×5.7×7.7	0 ≥19	19 ≥16	19×2 23×2	Lo ≥30 (N=19×2) ≥30 (N=23×2)	2.0 (N=19×2)	≥625 (N=19) ≥625 (N=23) 1.0
FU1004-I3 (K195) (W455)	9.8×6.5×4.5 11.2×5.1×5.7	0 ≥17	65 ≥12	23×2	Lo ≥30 (N=23×2)	2.6 (N=23×2)	≥625 (N=23) 3.0
FU1004-I5 (K229) (W457)	9.8×6.5×4.5 11.2×5.1×5.7	0 ≥10	145 ≥7.1	29×2	Lo ≥30 (N=29×2)	3.3 (N=29×2)	≥625 (N=29) 5.0
FL2-0805	8.0×4.5×5.0 9.0×3.5×6.8		1500 ≥0.6				
FL3－1004 (K197)	9.8×6.5×4.5 11.2×5.1×5.7		4080 ≥0.6	26×2	Lv (I_{dc}=75mA) ≥1.7 min (N=26×2)	25 (I_{dc}=75mA) (N=26×2)	
FL5-0704 (W305)	7.0×3.5×3.8 7.3×3.1×4.1		4500 ≥0.6				
FL4－1004 (W204)	9.8×6.5×4.5 11.2×5.1×5.7		7200 ≥0.44	51×2	Lv (I_{dc}=60mA) ≥5.2 min (N=51×2)	33 (I_{dc}=60mA) (N=51×2)	

12. Saturable Nanocrystalline cores for MAG-AMP（FUH）

1. Features

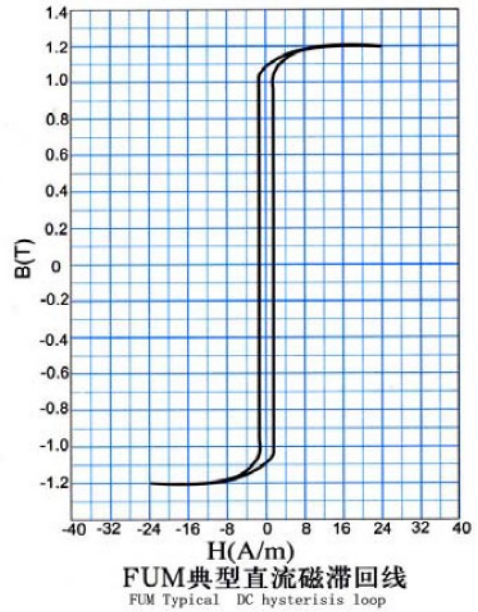
- Low coercive force and high squareness ratio
- High saturation magnetic induction Bs
- Low core losses
- Extended temperature rang up to 120℃

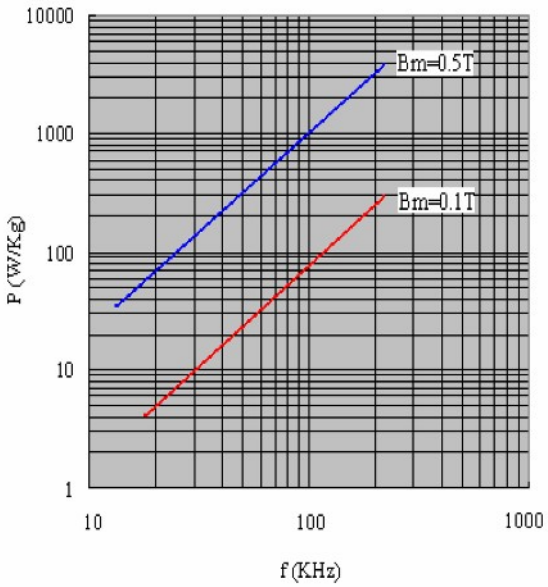
2. Applications：

- Magnetic amplifier for switched mode power supply
- Magnetic amplifier for DC to DC converter
- ATX computer, micro ATX computer
- Other kinds of saturable reactor

3. Properties：

	FUH	Co-base base amorphous	Ferrite
Saturation magnetic induction Bs(T)	1.21	0.54	0.37
Squareness ratio Br/Bs	0.85	0.85	0.5
Coercivity Hc (A/M)	0.70	0.60	30
Curie temperature Tc (℃)	550	200	170
Core losses P2/100K (kW/m3)	800	450	650





P-f-Bm The curve of loss

4. Specifications：

Part No.	Finished dimensions (mm) OD ID H	Core dimensions(mm) OD ID H	Core cross-section (mm^2)	Mean core path length(mm)	Total flux 2ϕm(μWb)	Squareness ratio (Br/Bs) f=100kHz
FUH7×4×3	9.2 3.2 4.8	7 4.0 3.0	3.38	18.8	8.11	≥0.92
FUH8×4.5×5	9.0 3.5 7.2	8 4.5 5.0	6.56	19.6	15.74	
FUH10×6.5×4.5	11.3 5.1 6.6	10 6.5 4.5	5.90	25.9	14.16	
FUH12×8×4.5	13.9 6.7 6.6	12 8.0 4.5	6.75	31.4	16.20	
FUH14×10×5	15.9 8.8 7.2	14 10 5.0	7.50	37.6	18.00	
FUH18×12×4.5	19.8 10.8 6.6	18 12 4.5	10.12	47.1	24.28	
FUH21×14×4.5	22.8 12.8 6.6	21 14 4.5	11.80	55.0	28.32	

13. Saturable Co-based Amorphous core for MAG-AMP (CAH)

1. Features

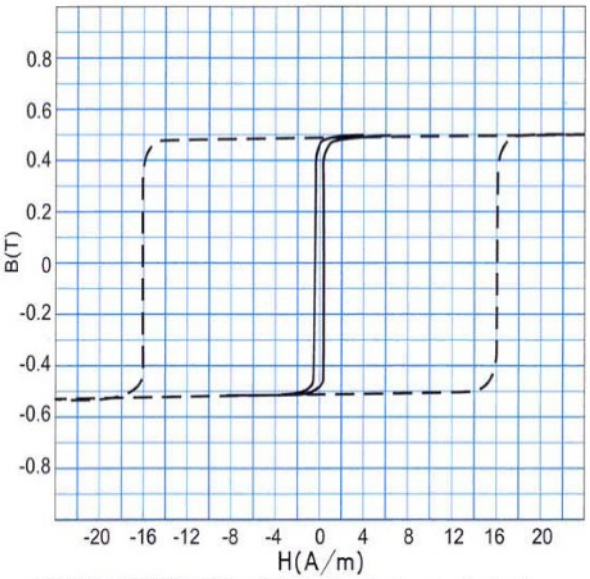
- Good high-frequency characteristic
- Low coercicity force and high squareness ratio
- Low core loss
- Low temperature raising and good temperature stability （-55℃~120℃）

2. Applications:

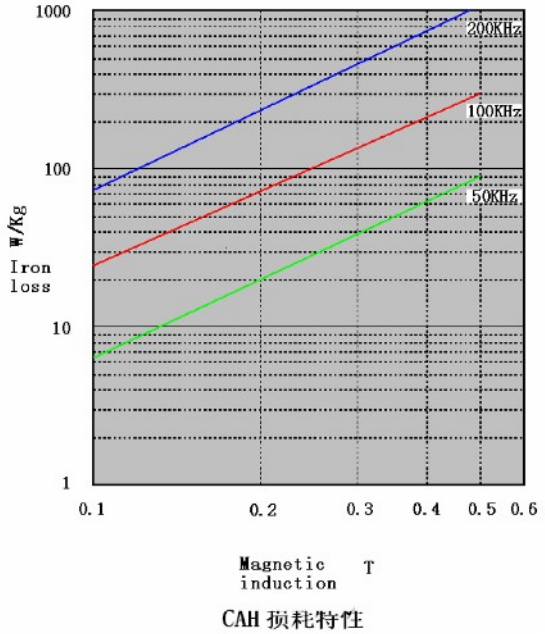
- Magnetic amplifier for switched mode power supply
- Magnetic amplifier for DC to DC converter
- ATX computer, micro ATX computer
- Other kinds of saturable reactor

3. Properties:

	CAH	Ferrite
Saturation Magnetic Induction Bs(T)	0.55	0.37
Squareness Ratio Br/Bs	0.85	0.5
Coercivity Hc (A/M)	0.60	30
Curie Temperature Tc （℃）	210	170
Core Loss P2/100K (kW/M^3)	450	650



CAH典型磁滞回线 CAM Typical hysterisis loop
(实线：DC 虚线：f=100KHz)
(Full line:DC dotted line:f=100KHz)



P-f-Bm the curve of loss

4. Specification：

Part No.	Finished Dimensions（mm） OD	ID	H	Core Dimensions（mm） OD	ID	H	Core cross-section (mm^2)	Mean core path length(mm	Total flux 2ϕm(μWb)	Quareness ratio (Br/Bs) f=100kHz
CAH040703	9.2	3.2	4.8	7	4.0	3.0	3．38	18.8	3．71	
CAH050805	9.0	3.5	7.2	8	4.5	5.0	6．56	19.6	7．21	
CAH071004	11.3	5.1	6.6	10	6.5	4.5	5．90	25.9	6．49	≥0.94
CAH081204	13.9	6.7	6.6	12	8.0	4.5	6．75	31.4	7．43	
CAH101405	15.8	8.8	7.2	14	10	5.0	7．50	37.6	8．25	
CAH121804	19.8	10.8	6.6	18	12	4.5	10．12	47.1	11．12	
CAH142104	22.8	12.8	6.6	21	14	4.5	11．80	55.0	12．99	

14. Nanocrystalline core with high permeability and low core loss （FUM）

1. Features

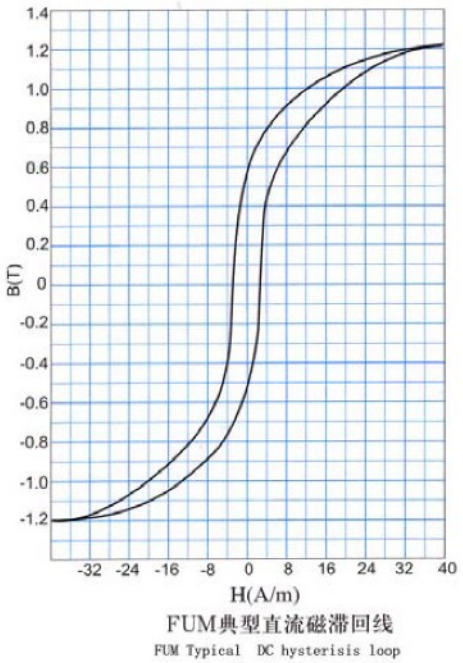
- High saturation magnetic induction
- Low coercive force：
- Low core loss
- High permeability
- Good temperature stability（-55--130℃）

2. Applications:

- Switching mode power supply
- DC/DC,AC/DC converter
- High frequency transformer

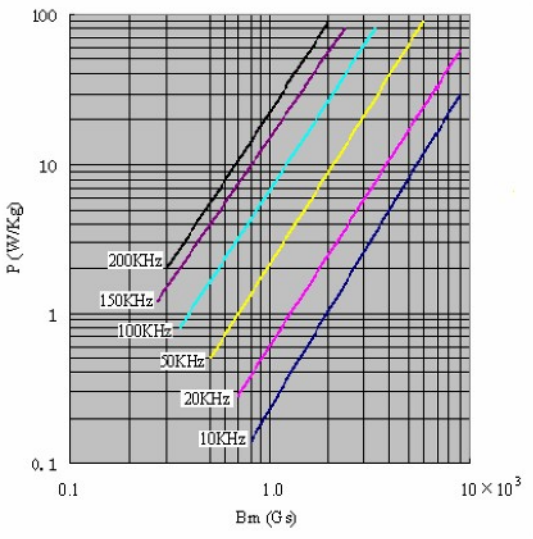
3. Properties:

Initial permeability Hm=0.08A/m	coercivity Hc(A/m)	Saturation magnetic induction Bs(T)	Core loss P（W/kg） Bm=0.5T f=20 kHz
≥80000	≤2.4	≥1.25	≤25



FUM典型直流磁滞回线

FUM Typical DC hysterisis loop



P-f-Bm the curve of loss

4. Specification：

According to the specification of our company, other cores also can be made for meeting user's need.

15. Co-based amorphous core with very lower cores（CAM）

1. Features:

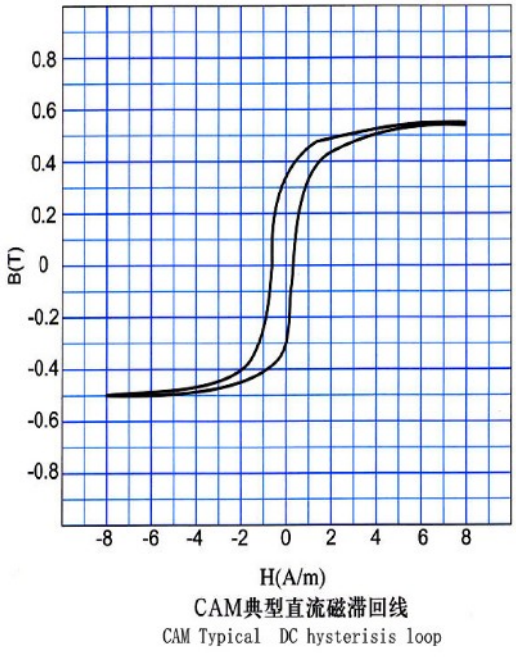
- Very lower core loss
- High permeability and low coercivity.
- Excellent high frequency characteristics: operating frequency range 1~300KHz
- Good temperature stability（-55℃~120℃）

2. Applications:

- Switching mode powers supply
- DC/DC converter
- High-frequency transformer
- Common mode choke

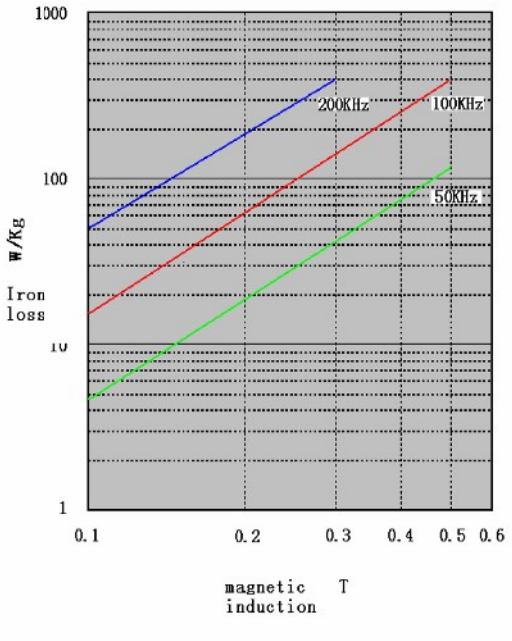
3. Properties:

Saturation Bs（T）	≥0.55
Remanency Br（T）	≥0.2
core loss P（f=100KHz，Bm=0.1T）（W/Kg）	≤16
Coercivity Hc（A/m）	≤0.6



CAM典型直流磁滞回线

CAM Typical DC hysterisis loop



4. Specification :

See the daily specification of our company, others cores can be made for meeting the user's needs .

16.Nanocrystalline cores with lower remanene and core loss

（FUL）

1. Features

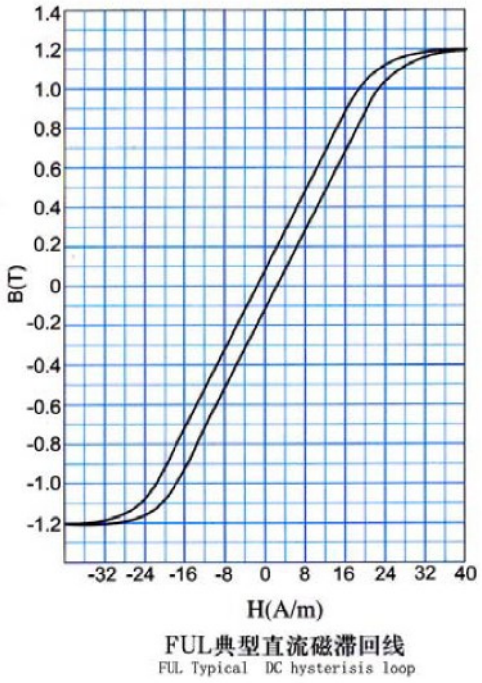
- Low remanence
- High pulse permeability
- Low core loss
- Good frequency character and temperature stability

2. Application

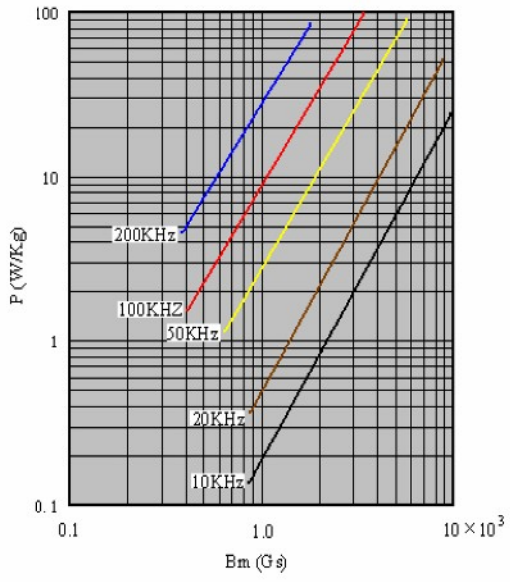
- Unipolarity pulse transformer
- Switching power supply and choppers,triggers
- Current leakage circuit breakers with DC bias

3. Properties：

average permeability μ（DC）	remanence Br(T)	saturation Bs(T)	pulse permeability μ_p		core loss P（W/Kg） Bm=0.5T f=20 kHz
			△B=0.6T τ=1us	△B=0.9T τ=3us	
30000	<0.15	1.25	>9000	>10000	≤22



FUL典型直流磁滞回线
FUL Typical DC hysterisis loop



P-f-Bm curve of

.

4. Specification

See the daily specification of our company ,other cores can be made for meeting the user's needs .

17.Co- based Amorphous cores with lower remanence and core loss（CAL）

1. Features

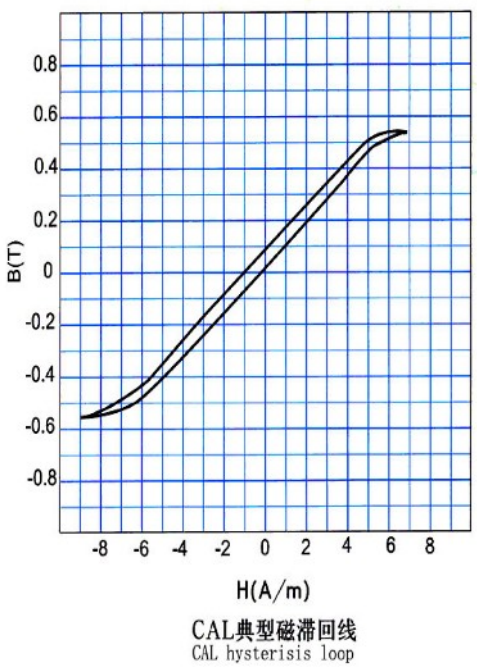
- Low remanence and coercivity
- Low high-frequency core loss
- High pulse permeability
- Good frequency character. working frequency is 1~300KHz .
- Good temperature stability（-55℃~120℃）

2. Applications:

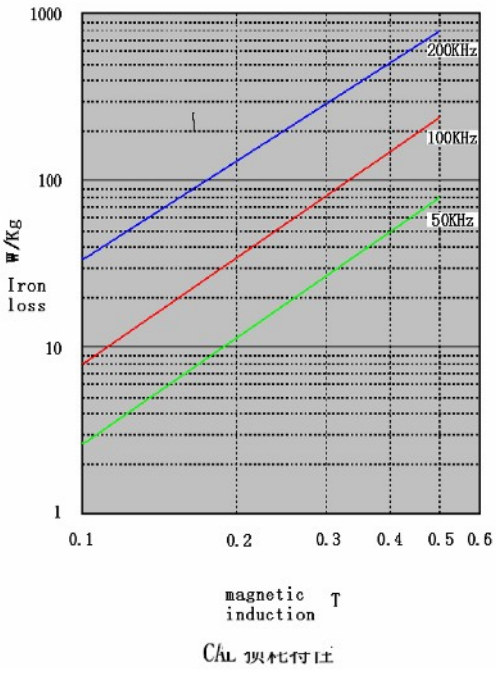
- Unipolarity pluse transformers
- Choppers
- High-frequency transformers

3. Properties:

Saturation magnetic induction Bs（T）	≥0.55
Remanence Br（T）	≤0.1
Core loss P（f=100KHz，Bm=0.1T）（W/Kg）	≤12
Coercivity Hc（A/m）	≤0.7



CAL典型磁滞回线
CAL hysterisis loop



P-f-Bm curve

4. specification

See the daily specification of our company, others cores can be made for meeting the user's needs .