YN-AT-FJ10 Series with No Gap 1000μDifferential Mode Choke for Filter Inductor Core

1.Features

- High saturation flux density at 1.5T and high permeability at 800-1200μ
- Good DC bias characteristic
- Low leakage current due to no-gap
- Excellent frequency and temperature characteristics
- Low core loss and high Q value

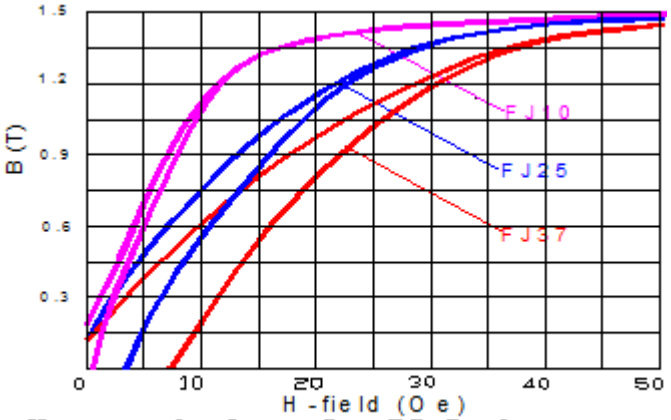
2. Applications

Suitable for PFC, car audio, and normal mode cho

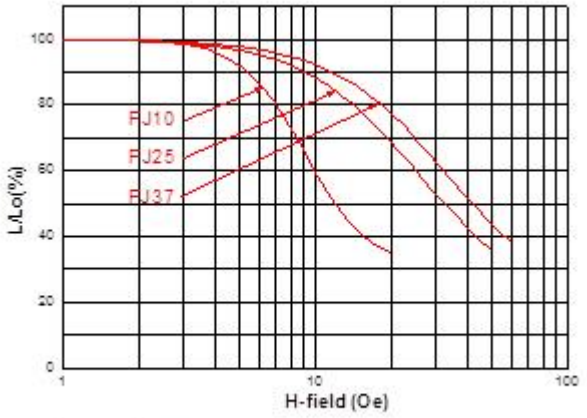
3. Dimension and Performance

Core Grade	Core Dimension (mm)	Finished Dimension (mm)	Le (cm)	AL Idc=0 (μH)	DCB Rated (A.T)	DC Bias Property		
						N (T)	Idc Rated (A)	Lv min (μH)
YN-AT-FJ10-120804	Φ8/12×4.5	Φ6.3/13.8×6.5	3.14	0.19	38	38	1.0	100
YN-AT-FJ10-160905	Φ8.5/15.6×5	Φ7.4/17.0×6.5	3.78	0.22	70	36	2.0	170
YN-AT-FJ10-191005	Φ10/19×5	Φ8.1/21×6.7	4.55	0.31	70	35	2.0	200
YN-AT-FJ10-161008A	Φ10/16×8.0	Φ8.3/18.2×10.3	4.08	0.85	16	32	0.5	500
YN-AT-FJ10-161008B	Φ10/16×8.0	Φ8.3/18.2×10.3	4.08	0.50	20	20	1.0	150
YN-AT-FJ10-181110A	Φ11/18×8.0	Φ9.1/20.3×10.2	4.55	0.70	24	24	1.0	250
YN-AT-FJ10-181110B	Φ11/18×10	Φ9.1/20.3×12.2	4.55	0.50	20	20	1.0	150
YN-AT-FJ10-181110C	Φ11/18×10	Φ9.1/20.3×12.2	4.55	0.57	46	27	1.7	240
YN-AT-FJ10-181110D	Φ11/18×10	Φ9.1/20.3×12.2	4.55	0.78	30	30	1.0	350
YN-AT-FJ10-181110E	Φ11/18×10	Φ9.1/20.3×12.2	4.55	1.00	23	23	1.0	400
YN-AT-FJ10-201208A	Φ12/20×8.0	Φ10.6/21.8×10	5.02	0.64	25	25	1.0	350
YN-AT-FJ10-201208B	Φ12/20×8.0	Φ10.6/21.8×10	5.02	0.30	54	27	2.0	187
YN-AT-FJ10-201210	Φ12/20×10	Φ10.6/21.8×12	5.02	0.84	31.5	28	1.8	280

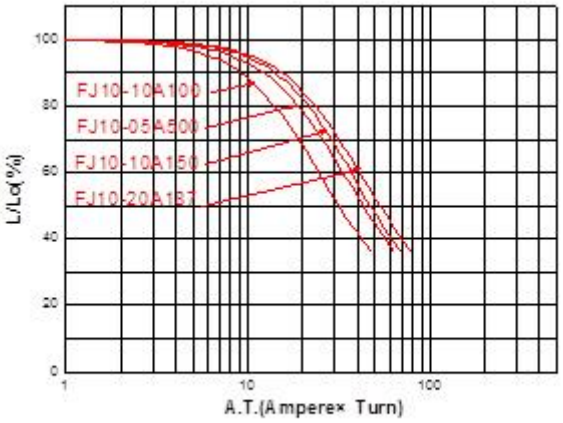
1) f = 1 KHz
2) L value at rated N，Idc and DCB
3) DCB: DC Bias value rated
4) AL tolerance at ±20%



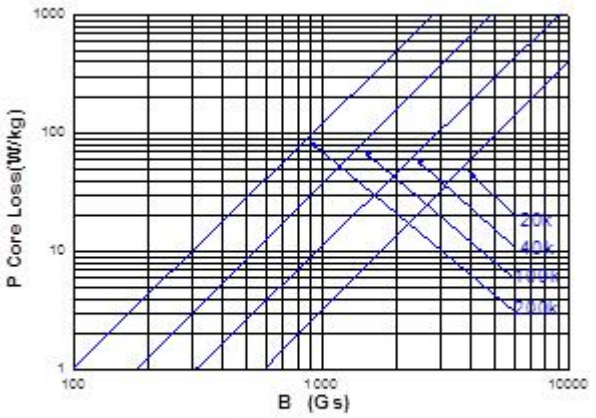
Hysteresis loop for FJ Series core



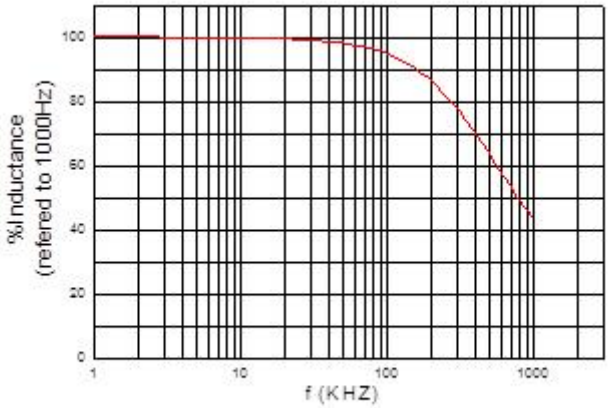
DC bias characteristics for FJ series core



DC bias characteristics for FJ10 core

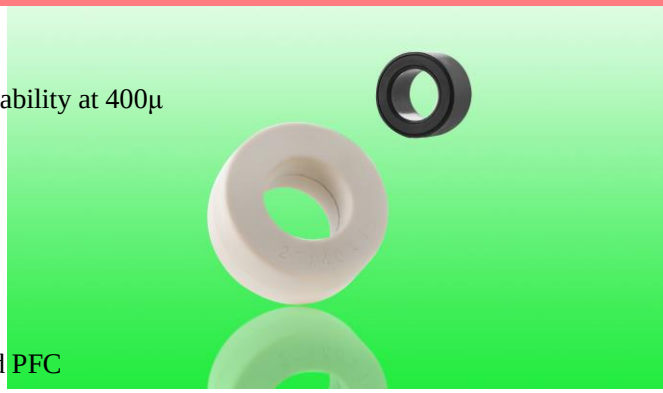


Core loss vs. flux density for FJ10 core



Inductance vs. frequency for FJ10 core

YN-AT-FJ25 Type No Gap 400μ Differential Mode Choke for Filter Inductor Core



1 Features

- High saturation flux density at 1.5T and high permeability at 400μ
- Good DC bias characteristics for bias field at 25 Oe
- Very low leakage current due to no gap
- Excellent frequency and temperature characteristics
- Low core loss and high Q value

2 Applications

Suitable for differential mode choke, normal mode choke and PFC

3 Dimension and Performance

Core Grade	Core Dimension (mm)	Finished Dimension (mm)	Ae (mm^2)	Le (cm)	AL_0 Idc=0 (μH)	DC Bias Rated (A.T)
YN-AT-FJ25-100705	Φ6.5/10×4.5	Φ5.1/11.2×5.8	5.5	2.59	0.072	50.8
YN-AT-FJ25-141005	Φ10/14×4.5	Φ8.6/15.5×7.2	7.0	3.77	0.056	72.0
YN-AT-FJ25-161008	Φ10/16×8.0	Φ8.3/18.2×10.3	16.8	4.08	0.141	78.0
YN-AT-FJ25-181110A	Φ11/18×8.0	Φ9.1/20.3×10.2	19.2	4.55	0.147	87.0
YN-AT-FJ25-181110B	Φ11/18×10	Φ9.1/20.3×12.2	24.5	4.55	0.184	87.0
YN-AT-FJ25-201208	Φ12/20×8.0	Φ21.6/10.4×10.	24.5	5.02	0.110	105.0
YN-AT-FJ25-261610	Φ16/26×10	Φ14/27.5×12.5	35.0	6.60	0.200	127.0

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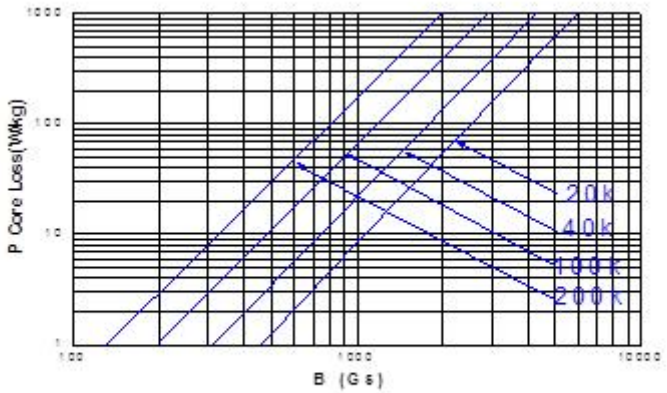
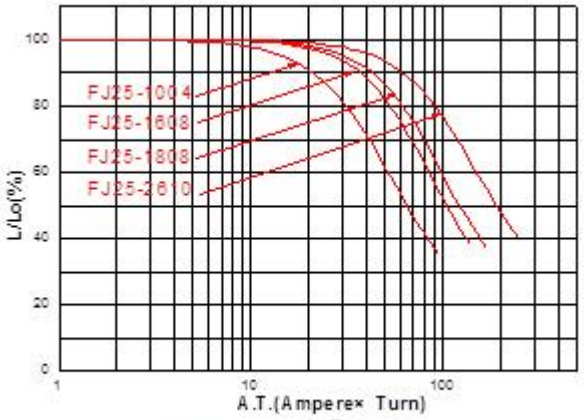
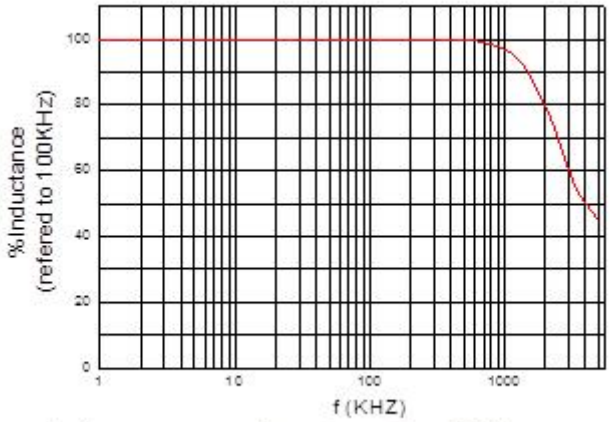
1) f = 10 KHz
2) AL tolerance at ±20%
3) Reduction ratio of inductance is 50% for DC bias at 37 Oe rated



Core loss vs. flux density for FJ25 core



DC bias characteristics for FJ25 core



Inductance vs. frequency for FJ25 core

YN-AT-FJ37 Type No Gap 250μ Differential Mode Choke for Filter Inductor Core

1 Feature

- High saturation flux density at 1.55T and high permeability at 250μ
- Good DC bias characteristics for bias filed at 37 Oe at inductance reduction ratio at 50%
- Very low leakage current due to no-gap
- Excellent frequency and temperature characteristics
- Low core loss and high Q value

2 Applications

Suitable for DFC, smoothing mode choke, and PFC

3 Dimension and Performance

Core Grade	Core Dimension (mm)	Finished Dimension (mm)	Ae (mm^2)	Le (cm)	AL_0 Idc=0 (μH)	DC Bias Rated (A.T)
YN-AT-FJ37-141005	Φ10/14×5.0	Φ8.6/15.5×7.2	7.0	3.77	0.072	111
YN-AT-FJ37-161008	Φ10/16×8.0	Φ8.3/18.2×10.3	8.4	4.08	0.150	121
YN-AT-FJ37-1811108	Φ11/18×8.0	Φ9.1/20.3×10.2	19.2	4.55	0.130	136
YN-AT-FJ37-181110	Φ11/18×10	Φ9.1/20.3×12.2	24.5	4.55	0.160	136
YN-AT-FJ37-201008	Φ12/20×8.0	Φ21.6/10.4×10.	24.5	5.02	0.135	145
YN-AT-FJ37-261610	Φ16/26×10	Φ14/27.5×12.5	35.0	6.60	0.150	192
YN-AT-FJ37-322010	Φ20/32×10	Φ17.8/34×12.5	42.0	8.16	0.160	244
YN-AT-FJ37-402513	Φ25/40×12.5	Φ22.5/42.5×15.5	65.7	10.21	0.250	302
YN-AT-FJ37-462720	Φ27/46×20	Φ23/49.5×23.5	133	115	0.368	344
YN-AT-FJ37-462725	Φ27/46×25	Φ23/49.5×29	166	115	0.460	344

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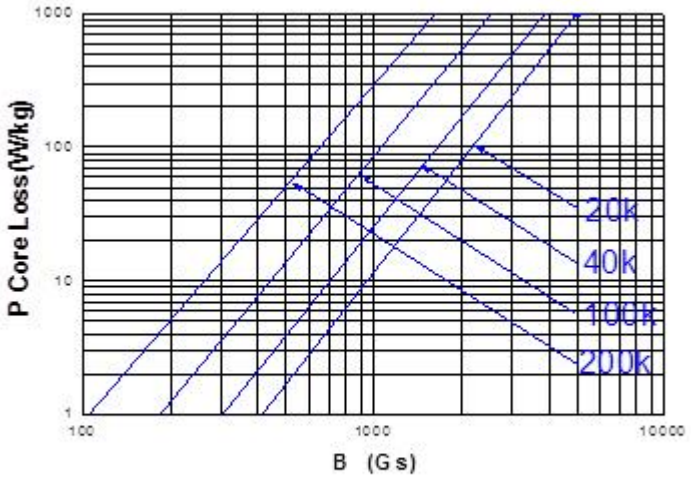
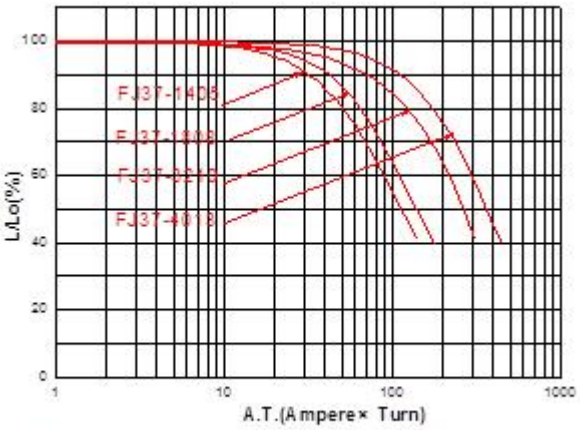
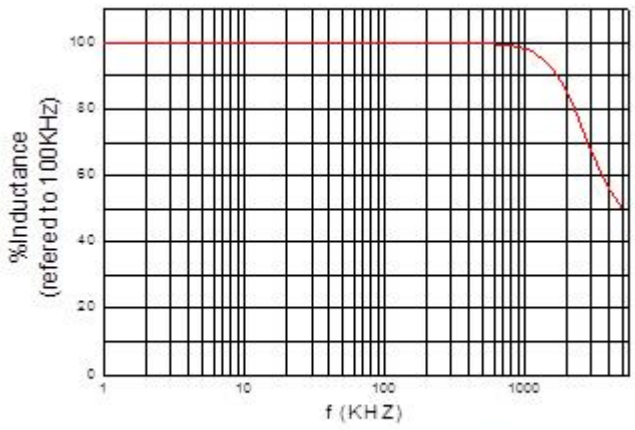
1) f = 10 KHz
2) AL tolerance at ±20%
3) Reduction ratio of inductance is 50% for DC bias at 37 Oe rated



Core loss vs. flux density for FJ37 core



DC-bias characteristics for FJ37 core



Inductance vs. frequency for FJ37 core

YN-AT-FG Toroidal Gap Core for Differential Mode Choke Filter Inductor Core

1 Features

- High saturation flux density at 1.55T, high permeability at 100~300μ and small coercive force
- Better DC bias characteristic than FJ series
- Good frequency property

2 Applications:

Suitable for PFC, resistor and high current filter inductor

3 Dimension and Performance

1）FG50 Series

Core Grade	Core Dimension mm			Finished Dimensions mm			Electric Parameter (Typical)	
	内径 ID	外径 OD	高 H	内径 ID	外径 OD	高 H	AL (μH)	DCB* (AT)
YN-AT-FG50-201208	12.0	20.0	8.0	9.7	22.5	11.0	0.110	180
YN-AT-FG50-261610	16.0	26.0	10.0	14.3	30.2	13.5	0.130	240
YN-AT-FG50-322010	20.0	32.0	10.0	17.5	34.5	13.5	0.140	300
YN-AT-FG50-402513	25.0	40.0	12.5	23.0	45.0	16.0	0.150	360
YN-AT-FG50-402515	25.0	40.0	15.0	23.0	45,0	19.0	0.200	360
YN-AT-FG50-503215	32.0	50.0	15.0	29.0	55.0	18.0	0.200	460
YN-AT-FG50-594020	40.0	59.0	20.0	37.0	63.5	24.0	0.220	600

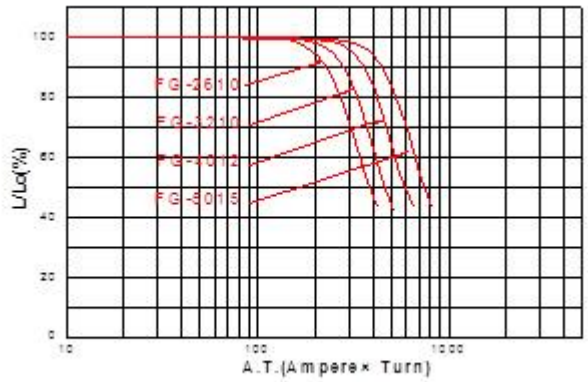
2）FG100 Series

Core Grade	Core Dimension mm			Finished Dimension mm			Electric Parameter (Typical)	
	内径 ID	外径 OD	高 H	内径 ID	外径 OD	高 H	AL (μH)	DCB* (AT)
YN-AT-FG100-261610	16.0	26.0	10.0	14.3	30.2	13.5	0.060	520
YN-AT-FG100-322010	20.0	32.0	10.0	17.5	34.5	13.5	0.070	650
YN-AT-FG100-372018	20.0	37.0	18.0	18.0	39.0	19.7	0.095	700
YN-AT-FG100-402513	25.0	40.0	12.5	23.0	45.0	16.0	0.080	800
YN-AT-FG100-402515	25.0	40.0	15.0	23.0	45,0	19.0	0.095	810
YN-AT-FG100-462720	27.0	46.0	20.0	24.5	48,8	23.0	0.155	910
YN-AT-FG100-462725	27.0	46.0	25.0	24.5	48,8	28.0	0.190	900
YN-AT-FG100-503215	32.0	50.0	15.0	29.0	55.0	18.0	0.090	1030
YN-AT-FG100-603525	35.0	60.0	25.0	30.0	65.0	30.0	0.200	1200
YN-AT-FG100-594020	40.0	59.0	20.0	37.0	63.5	24.0	0.100	1250
YN-AT-FG100-644020	40.0	64.0	20.0	37.0	69.0	24.0	0.120	1300
YN-AT-FG100-905520	55.0	90.0	20.0	52.0	93.0	23.0	0.130	1700
YN-AT-FG100-1006020	60.0	100.0	20.0	57.0	103.0	23.0	0.140	2000

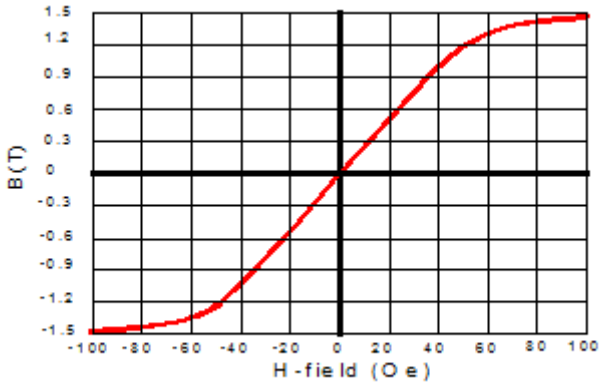
** 1. DC bias value rated with 75% of AL value
2. AL tolerance at ±20%

4. Electric Parameter for Coil (Example)

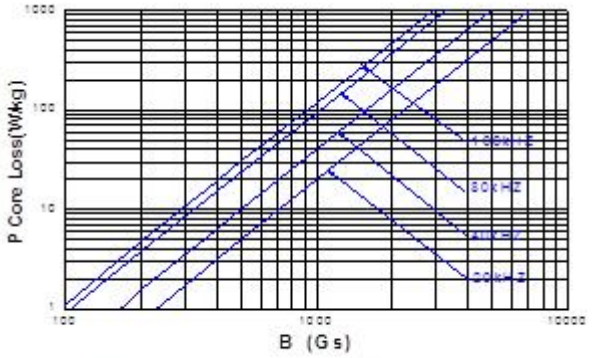
Code	Core Dimension (mm)	Rated Current (A)	Inductance L (μH)	AL (μH)	Turns (Ts)
YN-AT-FG50-201208	12×20×8.0	3.0 5.0 8.0 10.0	400 155 60 40	0.115	60 37 23 19
YN-AT-FG50-261610	16×26×10	3.0 5.0 8.0 10.0 15.0	1000 300 155 100 45	0.133	87 48 34 28 18
YN-AT-FG50-322010	20×32×10	5.0 8.0 10.0 15.0 20.0	505 255 165 75 45	0.120	65 46 37 25 19
YN-AT-FG50-402513	25×40×12.5	5.0 8.0 10.0 15.0 20.0	520 255 170 75 45	0.140	61 43 35 23 18



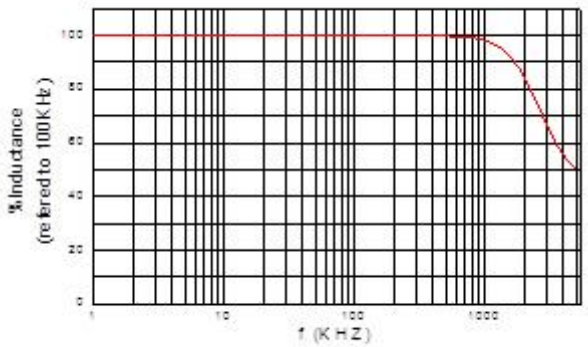
DC bias characteristics for FG50 core



Hysteresis loop for FG50 series core



Core loss vs. flux density for FG50 core



Inductance vs. frequency for FG50 core

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