

Common Mode Choke Cores

For signal lines, DC and AC power lines and Output filters

FINEMET® is the product of Materials Mag^{ic}
The best solution for energy saving, electromagnetic noise reduction and size reduction.



● **Features**

- 1) Satisfy both high saturation magnetic flux density and high permeability
- 2) Low core loss
- 3) Low magnetostriction
- 4) Excellent temperature characteristics and small aging effects
- 5) Excellent high frequency characteristics
- 6) Flexibility to control magnetic properties " B-H curve shape " during annealing (Fig.1)

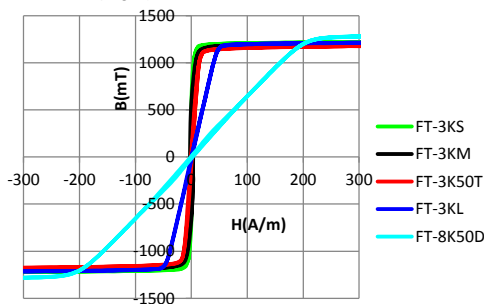
● **Line-up of FINEMET® Materials**

FT-3K50T and **FT-8K50D** are brand new materials, controlled by applying a magnetic field during annealing.

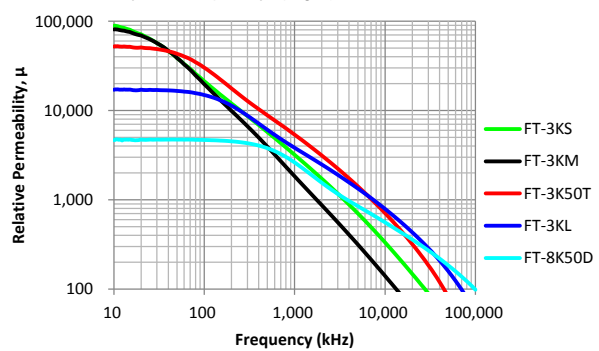
- FT-3K50T having high relative permeability μ_r over than 100 kHz range compared to standard material, FT-3KM. (Fig.2)
- FT-8K50D having excellent saturation characteristics compared to FT-3KL. (Fig.3)

Material code	Bs (T)	Br/Bs (%)	Hc (A/m)	μ_r (10kHz) ($\times 10^3$)	μ_r (100kHz) ($\times 10^3$)	λ_s ($\times 10^{-6}$)	Tc (deg.C)
FT-3KS	1.23	40	1.5	100	20	< 1	~ 570
FT-3KM		50	2.5	70	15		
FT-3K50T		10	1.2	50	31		
FT-3KL		5	0.6	27	17		
FT-8K50D	1.32	0.7	1.4	5	5	< 8	~ 550

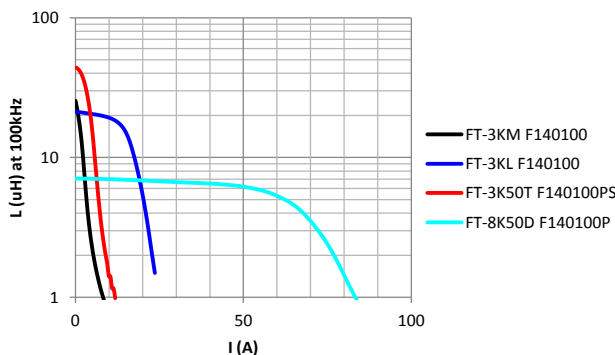
DC B-H (Fig.1)



Permeability vs. Frequency (Fig.2)



Inductance vs. DC bias current (Fig.3)
(1 turn)



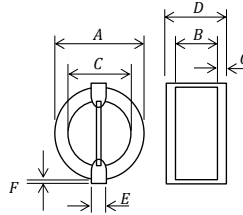
Common Mode Choke Cores for Single-phase

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● **FT-3KM K Series**
FT-3K50T K Series

FT-3KM K series cores made of FT-3 M type material are for common mode chokes for single lines, DC and single-phase AC power lines.

FT-3K50T K series cores made of FT-3 50T type material are upgrade version of FT-3KM, which has higher inductance and impedance in the range of over than 100kHz frequency.



FT-3KM K Series

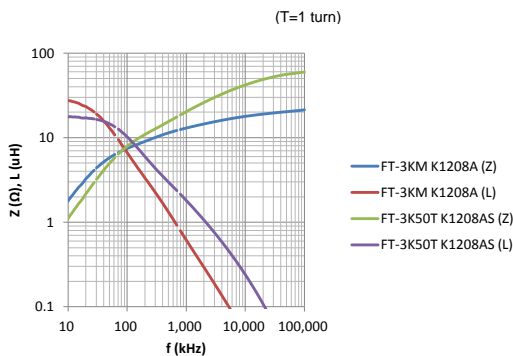
Product code	P/N	Finished dimension (mm)							Ae (mm ²)	Lm (mm)	Weight (g)	AL value (μH/N ²)	
		A Max.	B Max.	C Min.	D Max.	E REF.	F REF.	G REF.				10kHz MIN.	100kHz +/-30%
F1AH0538	FT-3KM K1208A	13.7	7.8	5.5	11.4	2.6	-	1.8	7.7	30.3	2.9	18.2	5.8
F1AH0694	FT-3KM K1208C	14.2	13.2	6.3	16.2	3.0	-	1.5	13.3	31.7	4.5	24	8.8
F1AH0654	FT-3KM K1812A	20.9	8.8	9.8	13.8	3.5	-	2.5	11.3	47.1	5.8	14.7	5.3
F1AH0693	FT-3KM K1912C	21.8	14.0	9.5	19.0	3.5	-	2.5	24.4	48.9	13.0	28.2	10.6
F1AH0694	FT-3KM K2313D	25.9	15.8	11.0	21.4	4.0	-	2.8	43.9	57.3	23.0	41.6	15.3
F1AH0695	FT-3KM K2214B	24.9	11.3	11.5	16.9	4.0	-	2.8	22.2	56.5	13.0	22.2	8.1
F1AH0696	FT-3KM K2515D	27.9	16.3	12.5	21.9	3.5	-	2.8	46.3	62.8	26.0	41.6	15.3
F1AH0697	FT-3KM K2818E	31.1	18.7	15.3	24.7	3.5	1.5	3.0	55.5	72.3	37.0	43.4	15.9
F1AH0699	FT-3KM K3819D	41.1	16.2	16.3	24.2	4.0	2.0	4.0	87.9	89.5	68.0	55.5	20.4
F1AH0700	FT-3KM K3824G	41.3	23.7	20.9	31.7	4.0	2.0	4.0	105	97.4	87.0	61	24.4
F1AH0701	FT-3KM K5328E	57.1	19.7	24.1	29.7	5.5	2.0	5.0	127.5	114.7	155.0	62.5	25.0

FT-3K50T K Series

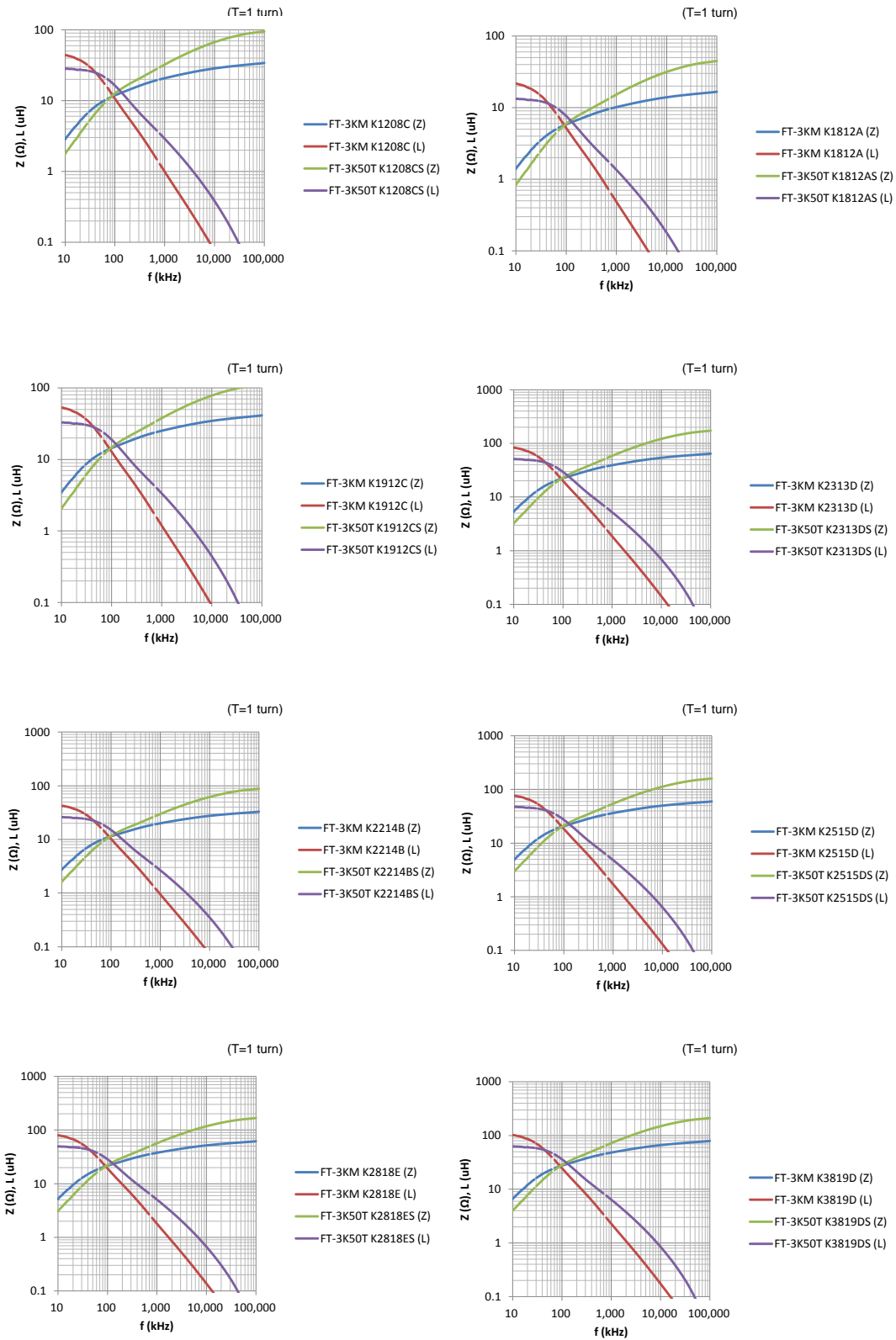
Product code	P/N	Finished dimension (mm)							Ae (mm ²)	Lm (mm)	Weight (g)	AL value (μH/N ²)	
		A Max.	B Max.	C Min.	D Max.	E REF.	F REF.	G REF.				10kHz +/-30%	100kHz +/-30%
F1AH1128	FT-3K50T K1208AS	13.7	7.8	5.5	11.4	2.6	-	1.8	7.7	30.3	2.9	16.6	10.3
F1AH1129	FT-3K50T K1208CS	14.2	13.2	6.3	16.2	3.0	-	1.5	13.3	31.7	4.5	26.9	16.7
F1AH1130	FT-3K50T K1812AS	20.9	8.8	9.8	13.8	3.5	-	2.5	11.3	47.1	5.8	13.22	8.2
F1AH1131	FT-3K50T K1912CS	21.8	14.0	9.5	19.0	3.5	-	2.5	24.4	48.9	13.0	32.6	20.2
F1AH1132	FT-3K50T K2313DS	25.9	15.8	11.0	21.4	4.0	-	2.8	43.9	57.3	23.0	50.8	31.5
F1AH1133	FT-3K50T K2214BS	24.9	11.3	11.5	16.9	4.0	-	2.8	22.2	56.5	13.0	25.8	16.0
F1AH1134	FT-3K50T K2515DS	27.9	16.3	12.5	21.9	3.5	-	2.8	46.3	62.8	26.0	46.9	29.1
F1AH1135	FT-3K50T K2818ES	31.1	18.7	15.3	24.7	3.5	1.5	3.0	55.5	72.3	37.0	49.0	30.4
F1AH1136	FT-3K50T K3819DS	41.1	16.2	16.3	24.2	4.0	2.0	4.0	87.9	89.5	68.0	62.5	38.7
F1AH1137	FT-3K50T K3824GS	41.3	23.7	20.9	31.7	4.0	2.0	4.0	105	97.4	87.0	67.4	41.8
F1AH1138	FT-3K50T K5328ES	57.1	19.7	24.1	29.7	5.5	2.0	5.0	127.5	114.7	155.0	71.1	44.1

- Plastic material: UL94 V-0 certified resin (130°C:PBT, 155°C:PET of heat resistance) is used for these core cases.
- No Ozone Layer Depleting Chemicals are used in these products or their manufacturing process.
- Ae: effective cross-section area, Lm: mean magnetic path length

Inductance, Impedance vs. Frequency



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(T=1 turn)

