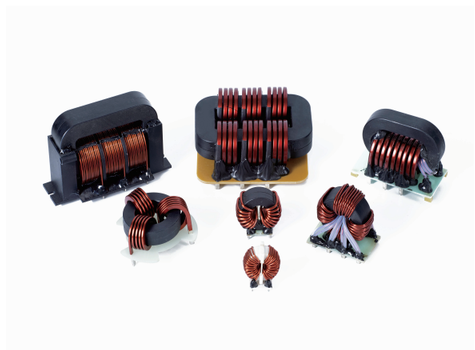
Fe-based Nanocrystalline CMC Core para choque comun

Automotive parts（OBC, DC-DC, electric control, battery monitoring, EPS, AC compressor control components）） New energy applications（PV Inverter, wind driven generator, EV charging station）

Consumer Appliance（TV, AC, computer, game machine）

Medical equipments（MRI machine, ventilator）

Other electronics（Server power supply, UPS, subway）



Prodin Ferrite S.L.

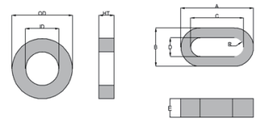
Calle A, 27, 08620 Sant Vicenç dels Horts, Barcelona (Spain) Tel.: +34 93 672 46 10
info@prodinferrite.com www.prodinferrite.com

Features

1 High Bs, high μi	High Bs (1.2T), high μi (>80000), and high anti-saturation ability, that can effectively reduce the core geometry.
2 Excellent frequency	Excellent permeability characteristics in a wide frequency range.
3 Stable temperature characteristic	The performance change rate is ±10% during temperature -40°C~150°C.
4 Excellent high frequency impedance characteristic	Impedance performance comparison of Nanocrystalline CMC and Mn-Zn ferrite in P25
5 Low magnetostriction coefficient, low noise	Saturated magnetostriction coefficient is close to zero, λs≈0

Nanocrystalline Core

Encapsulation method: w-white plastic case
b-black plastic case, c-coating
t-stainless steel case



P/N	Oval core dimensions										Cross section area	Magnetic path length	Weight	Permeability (μ3' at 10kHz)		AL 10 kHz nominal μH
	Bare core dimensions					Finished core dimensions										
	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Ae (cm^2)	le (cm)	m (g)	specified value	design refer	
TSNC-0778-L-b	72.5	44.5	58.5	30.5	15.0	77.5	49.5	53.5	25.5	18.5	0.82	17.3	105.0	50000 ⩽ μ_3' ⩽ 97000	80000	48
TSNC-0778-L-b-01														17850 ⩽ μ_3' ⩽ 34500	30000	18
TSNC-0778-L-b-02														11000 ⩽ μ_3' ⩽ 23000	20000	12
TSNC-0778-L-b-03														2800 ⩽ μ_3' ⩽ 5400 (100kHz)	4500	2.7
TSNC-0800-L-b	88.8	53.3	68.0	32.5	15.0	94.0	58.5	63.0	27.5	18.8	1.24	20.5	187.0	17850 ⩽ μ_3' ⩽ 34500	30000	22
TSNC-0535-L-b	92.9	41.0	80.9	29.0	15.0	96.8	45.0	76.8	25.0	18.0	0.70	21.3	110.0	50000 ⩽ μ_3' ⩽ 97000	80000	28
TSNC-0598-L-b (矩形 rectangle)	108.8	41.6	96.7	29.4	12.0	113.2	46.0	91.2	24.0	16.0	0.57	25.8	109.0	45000 ⩽ μ_3' ⩽ 95000	80000	18

P/N	Toroidal core dimensions		Cross section area	Magnetic path length	Weight	Permeability (μ3' at 10kHz)		AL Nominal μ H	
	Bare core dimensions OD * ID * H (mm)	Finished core dimensions OD * ID * H (mm)	Ae (cm^2)	le (cm)	m (g)	Specified value	Design refer	10kHz	100kHz
NC-0178-L-w	9.8*6.5*4.5	11.2*4.9*5.9	0.06	2.6	1.1	65600⩽μ_3'⩽127000	87000	25.5	6.4
NC-0010-L-w-03	12*8*5	13.8*6.7*6.4	0.07	3.1	1.7	72000⩽μ_3'⩽139000	97000	30	6.5
NC-0226-L-w	12.5*10*5	14.6*8.2*6.8	0.05	3.5	1.3	42200⩽μ_3'⩽81500	56000	10.0	3.6
NC-0039-L-w	15*10*5	17.0*8.2*6.7	0.09	3.9	2.6	72000⩽μ_3'⩽139000	94000	27.0	6.7
NC-0217-L-w	16*10*6	17.9*8.1*8.1	0.14	4.1	4	72000⩽μ_3'⩽135000	97000	43.0	10.1
NC-0217-L-w-01					4	18000⩽μ_3'⩽35000	23700	11.7	6.5
NC-0179-L-w	17.5*12.6*6	19.0*10.8*8.0	0.12	4.7	4.1	72000⩽μ_3'⩽135000	96000	30.0	6.9
NC-0044-L-w-01	19*15*10	21.1*13.3*12.1	0.16	5.3	6.3	72000⩽μ_3'⩽130000	96000	36.1	8.8
NC-0038-L-w-21	20*12.5*8	21.8*10.9*9.8	0.24	5.1	9	72000⩽μ_3'⩽135000	97000	55.2	13.6
NC-0038-L-w-01					9	18100⩽μ_3'⩽35000	23700	14.3	9.1
NC-0007-L-w	20*12*10	22.6*10.4*12.3	0.32	5.0	11.6	63000⩽μ_3'⩽122000	85000	68	16.8
NC-0007-L-w-01						14300⩽μ_3'⩽30000	20000	16	13.6
NC-0056-L-HF-02	22*17*10	24.5*15.2*12.5	0.20	6.1	8.8	66000⩽μ_3'⩽129000	90000	35.6	8.5
NC-0089-L-w-06	28*18*10	30.5*15.9*12.4	0.40	7.2	21	55000⩽μ_3'⩽122000	106000	55	15
NC-0088-L-w-03	25*20*10	27.5*17.2*12.3	0.20	7.1	10.4	60000⩽μ_3'⩽116000	80000	28.4	7.3
NC-0141-L-w-18	25*16*10	27.5*13.8*12.5	0.36	6.4	17	72000⩽μ_3'⩽135000	95000	65.6	15.5
NC-0141-L-w-02					17	15000⩽μ_3'⩽35000	24300	17.0	11.5
NC-0141-L-w-04					17	3300⩽μ_3'⩽6400(100kHz)	4400	3.2	3.1

Prodin Ferrite S.L.

Calle A, 27, 08620 Sant Vicenç dels Horts, Barcelona
(Spain) Tel.: +34 93 672 46 10
info@prodinferrite.com www.prodinferrite.com

P/N	Core dimensions		Cross section area	Magnetic path length	Weight	Permeability (μ3' at 10kHz)		AL Nominal μ H	
	Bare core dimensions OD * ID * H (mm)	Finished core dimensions OD * ID * H (mm)	Ae (cm^2)	le (cm)	m (g)	Specified value	Design refer	10kHz	100kHz
NC-0008-L-w-01	30*20*10	33.2*17.7*13.3	0.40	7.9	23	72000≤μ_3'≤135000	103000	59.3	14.0
NC-0008-L-w-14					23	19500≤μ_3'≤35200	25500	15.5	11.1
NC-0008-L-w-11					23	3280≤μ_3'≤6400(100kHz)	4400	2.9	2.8
NC-0058-L-b	30*20*15	33.5*17.7*17.8	0.57	7.9	33	72000≤μ_3'≤135000	96000	88.0	20.0
NC-0071-L-y	30*20*20	33.3*17.9*24.0	0.80	7.9	45	64500≤μ_3'≤125000	95000	118.5	30.0
NC-0014-L-b-07	32*20*15	34.6*17.9*17.9	0.70	8	42	66000≤μ_3'≤128000	90000	97	23
NC-0187-L-w-04	33*23*15	35.7*21.1*17.9	0.58	8.79	38	58000≤μ_3'≤116000	80000	66.8	18.3
NC-0893-L-w	33*22*20	36.2*19*23.8	0.83	8.6	55	μ_3'≥68000	90000	112.3	27.4
NC-0175-L-b-01	37.8*24.2*15	40.7*21.7*18.2	0.76	9.4	56	72000≤μ_3'≤135000	94000	96.4	22.5
NC-0015-L-w-03	40*32*15	44.7*28.8*18.7	0.46	11.3	38	72000≤μ_3'≤135000	9500	47.2	11.1
NC-0015-L-w-04					38	15000≤μ_3'≤29000	20000	12.2	7.9
NC-0015-L-w-10					38	3160≤μ_3'≤6300(100kHz)	4300	2.3	2.2
NC-0023-L-b-02	40*25*15	43.7*21.7*18.8	0.86	10.2	64	72000≤μ_3'≤135000	94000	101.0	23.1
NC-0023-L-b-22					64	17850≤μ_3'≤34500	23700	25.4	17.2
NC-0003-L-b-01	40*25*20	44.7*21.6*24.6	1.17	10.2	86	50000≤μ_3'≤95600	66000	95	28
NC-0177-L-b	45*30*15	47.5*27.5*17.8	0.86	11.8	74	72000≤μ_3'≤135000	96000	87.5	20.3
NC-0177-L-s-01					74	20000≤μ_3'≤38700	26700	24.3	15.9
NC-0177-L-b-02					74	12900≤μ_3'≤25000	17200	15.7	14.3
NC-0070-L-b-03	46*27*20	48.7*24.6*22.3	1.44	11.5	120	μ_3'≥50000	80000	130	32
NC-0078-L-b-04	46*27*25	48.7*24.6*28.3	1.85	11.5	157	μ_3'≥60000	80000	160	39

P/N	Core dimensions		Cross section area	Magnetic path length	Weight	Permeability (μ3' at 10kHz)		AL Nominal μ H	
	Bare core dimensions OD * ID * H (mm)	Finished core dimensions OD * ID * H (mm)	Ae (cm)	le (cm)	m (g)	Specified value	Design refer	10kHz	100kHz
NC-0016-L-w-05	50*40*20	53.5*36.9*23.0	0.76	14.1	79	50000≤μ_3'≤97000	66000	45.3	14.0
NC-0016-L-w-08					79	20000≤μ_3'≤38700	26600	18.0	10.0
NC-0837-L-b	54*40*18	57.1*36.7*21.7	1.00	14.7	107	72000≤μ_3'≤139000	97000	81.1	19.2
NC-0017-L-b	63*50*25	67.3*46.5*28.4	1.24	17.8	161	50000≤μ_3'≤97000	67000	58.6	18.1
NC-0017-L-b-01					161	20000≤μ_3'≤38700	26500	23.3	13.5
NC-0017-L-b-02					161	2850≤μ_3'≤5510(100kHz)	3700	3.3	3.2
NC-0147-L-b	80*50*20	84.0*46.7*25.0	2.28	20.4	342	71250≤μ_3'≤137000	95000	94.0	28.0
NC-0147-L-b-02					342	18700≤μ_3'≤36300	24900	35.0	24.0
NC-0147-L-b-04					342	μ_3'≥5170	5170	9.6	9.2
NC-0121-L-b	80*50*25	83.7*47.3*29.0	2.93	20.4	430	μ_3'≥55000	80000	144.0	36.0
NC-0096-L-b-01	90*60*20	94.0*55.2*24.0	2.28	23.6	395	50000≤μ_3'≤97000	67000	81.0	25.1
NC-0096-L-b-02					400	2800≤μ_3'≤5400(100kHz)	3700	4.6	4.5
NC-0188-L-w	100*80*25	107.6*70.2*30.6	1.90	28.3	379	50000≤μ_3'≤97000	67000	56.3	16.9
NC-0188-L-w-01					379	12900≤μ_3'≤25000	17200	14.5	13.1
NC-0144-L-b	102*76*25	108.0*70.0*30.0	2.47	28.0	508	50000≤μ_3'≤97000	67000	68.8	21.6
NC-0144-L-b-02					508	12900≤μ_3'≤25000	17200	19.1	17.2
NC-0144-L-b-01					515	2840≤μ_3'≤5480(100kHz)	3800	4.3	4.2
NC-0176-L-b	120*85*25	125.9*79.9*30.3	0.86	11.8	810	μ_3'≥60000	80000	120.0	27.0
NC-0176-L-b-01						12900≤μ_3'≤25000	17200	23	21
NC-0032-L-b-03	160*130*25	165.0*125.0*30.0	2.74	45.6	917	27600≤μ_3'≤59590	36000	26.8	13.7
NC-0032-L-b-02			2.74	45.6	917	20000≤μ_3'≤38700	26500	20.1	13.1
NC-0032-L-b			2.74	45.6	917	12900≤μ_3'≤25000	17200	12.9	11.7
NC-0032-L-b-04			2.85	45.6	967	2800≤μ_3'≤5400(100kHZ)	3700	3.0	2.9

*The provided data is for customer's initial design guidelines only, please check the approval data sheet before ordering. *Toroidal, Oval, Clamp Shape or other customized designs are available.

Prodin Ferrite S.L.

Calle A, 27, 08620 Sant Vicenç dels Horts, Barcelona
(Spain) Tel.: +34 93 672 46 10
info@prodinferrite.com www.prodinferrite.com

Performance Curve

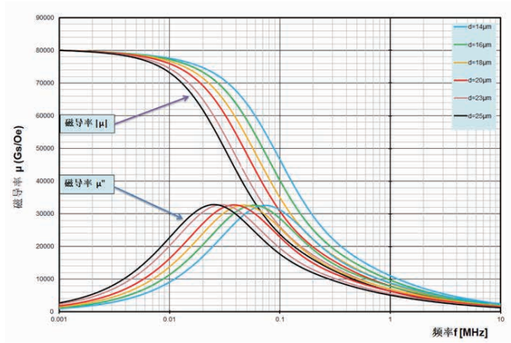


Fig.1 Material Thickness and Permeability |μ| VS Frequency of 1K107B Nanocrystalline (Fe-based)

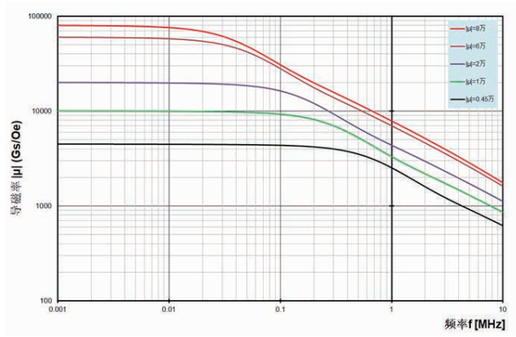


Fig.2 Permeability |μ| VS Frequency of Nanocrystalline (Fe-based)

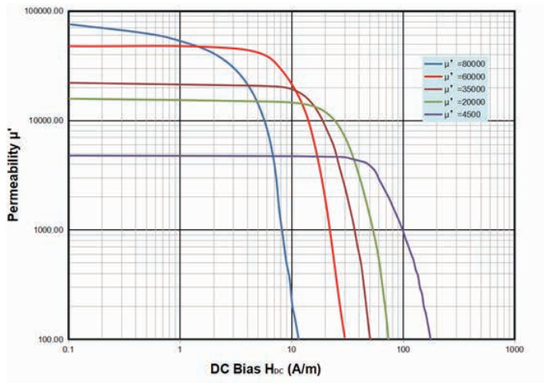


Fig.3 Permeability μ' VS DC Bias of Nanocrystalline (Fe-based)

Performance Curve

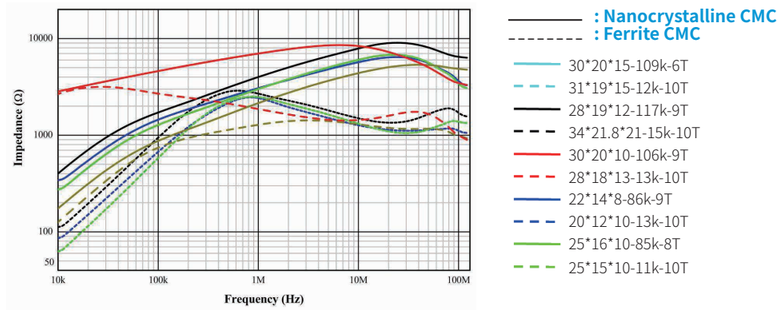


Fig.4 Comparison of Impedance of Nanocrystalline CMC and Ferrite CMC

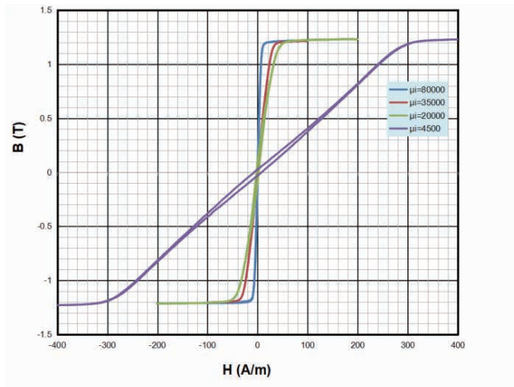


Fig.5 Magnetic Hysteresis Loop for Different Permeability

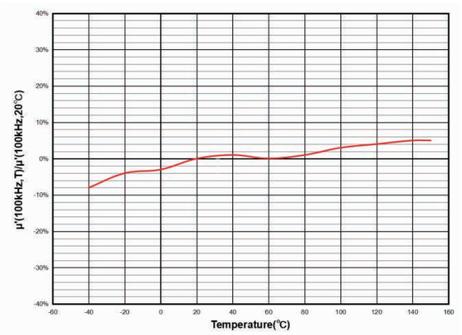


Fig.6 Permeability VS Temperature Variation Curve