

Fe-based Nanocrystalline High Frequency Voltage Transformer Core

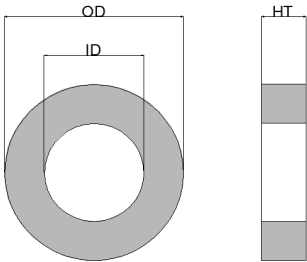
Application

- Inverter welding power transformer
PFC
- X ray power transformer, laser power transformer, communication equipment power transformer
- UPS and high frequency induction heating power transformer
- Charging power transformer
- Power plus transformer
- Frequency control transformer
- Cutting machine transformer



Features

- High saturation magnetic induction intensity and high magnetic conductivity: effectively helps to reduce the size and the weight of the components.
- High permeability and low coercivity: helps to improve transformer efficiency and reduce excitation power.
- Low remanence: obtain greater magnetic induction increment, resulting in greater output power.
- Low loss: reduce transformer temperature rise, improve transformer efficiency
- -40°C~130°C工作Good temperature stability: -40°C~130°C



	NH	0001	w	01
P/N Description	Transformer core series	Serial No.	Encapsulation method: w-white plastic case b-black plastic case, c-coating t-stainless steel case	Feature No.

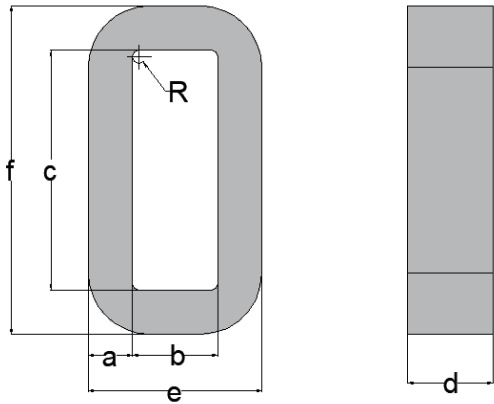
P/N	Bare core dimension (mm)			Finished core dimension (mm)			Cross section area (cm²)	Magnetic path length (cm)	Weight (g)	AL nominal (μH)	Core loss P (W/kg)
	OD	ID	HT	OD	ID	HT	Ae	Le	m	1kHz/0.3V	20kHz,0.5T
NH0577-w	30	20	10	32.5	18.3	14.5	0.40	7.85	23	AL=34-65 @ 20kHz	/
NH0449-C	35	22	15	37	20.5	17	0.74	8.95	48	22-65	≤30
NH0002-b	50	32	20	55	27	25	1.37	12.87	128	34-62	≤25
NH0456	50	32	30	51	31	31	2.05	12.87	191	≥48	≤30
NH0586-C	54	39	55	57	36	58	3.14	14.61	333	≥67	≤30
NH0004-b	70	40	20	68	37	29	2.28	17.27	285	≥44	≤25
NH0286-f	70	40	25	76	39	26	2.85	17.27	357	≥42	≤25
NH0309-f	80	50	25	73	37	28	2.85	20.41	422	≥52	≤25
NH0637	85.5	51	15	83	47	28	2.23	21.43	346	≥52	≤25
NH0393-f	90	60	50	93	57	53	5.71	23.55	975	≥75	≤30
NH0008-f	93	60	20	96	57	23	2.28	23.55	389	≥34	≤25
NH0009	93	60	25	96	57	28	2.85	23.55	487	≥40	≤25
NH0099-f	93	60	45	96	57	48	5.13	23.55	876	≥70	≤25
NH0648-f	93	60	70	96	57	73	7.98	23.55	1362	80-140	≤25
NH0011-b2	100	60	20	107	52	28	3.04	25.12	554	38-68	≤25
NH0475-f	100	75	45	103	72	48	4.28	27.48	853	≥50	≤30
NH0493-b	103	75	30	108	70	35	3.19	27.95	646	≥35	≤25
NH0017	107	70	25	109	68	27	3.52	27.79	709	≥40	≤25
NH0685-f	107	70	45	110	67	28	6.33	27.79	1275	70-120	≤25
NH0706-f	108	80	95	110	78	97	10.11	29.52	2164	110-220	≤30
NH0414-f	115	72	55	118	69	58	8.99	29.36	1914	≥210	≤30
NH0021-b4	120	60	30	126	55	36	6.84	28.26	1401	≥72	≤25
NH0733-b4	120	70	20	126	65	26	3.80	29.83	822	AL ≥35 @10kHz	≤25
NH0284-b4	120	70	30	126	65	36	5.71	29.83	1235	≥80	≤25
NH0042-f	120	80	45	123	77	48	6.84	31.42	1558	≥63	≤25
NH0026-b8	130	80	40	137	75	47	7.61	32.97	1819	≥72	≤25
NH0027-b8	130	80	50	138	77	56	9.51	32.97	2273	≥90	≤25
NH0037-b8	130	80	60	138	76	71	11.41	32.97	2727	≥108	≤25
NH0029-b	130	90	50	137	84	56	7.62	34.54	1908	≥69	≤25
NH0448-f	154	105	45	157	102	48	8.38	40.66	2470	≥104	≤30

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P/N	Bare core dimension	Stacked thickness (mm)	Window Width (mm)	Window Length (mm)	Core Height (mm)	Core width (mm)	Core Length (mm)	R Angle	Cross section area (cm²)	Magnetic path length (cm)	Weight (g)	AL nominal (µH)	Core loss P (W/kg)
	c * b / a * d	a	b	c	d	e	f	R	Ae	Le	m	1kHz/0.3V	20kHz,0.5T
NH0666-f	76*55/10*60	10	55	76	60	75	96	10	4.80	27.79	973	58-130	≤30
NH0635-f	76*55/16*50	16	55	76	50	87	108	5	6.40	30.77	1440	50-150	≤30
NH0619-f	76*55/16*70	16	55	76	70	87	108	5	8.96	30.77	2010	85-180	≤30
NH0804-f	95*55/12*60	12	55	95	60	79	119	10	5.76	32.34	1360	50-140	≤30
NH0567	130*50/20*25	20	50	130	25	90	170	10	4.00	40.89	1210	≥88	≤30
NH0779	160*60/15*90	15	60	160	90	90	190	30	10.80	43.96	3466	50kHz/0.3V, Al≥80	50kHz/0.23T, P≤35
NH0782	146*66/27*35	27	66	146	35	120	200	2	7.56	51.13	2846	≥135	15kHz/0.36T, P≤35
NH0588	130*50/40*50	40	50	130	50	130	210	3	16.00	48.67	5685	≥280	20kHz/0.2T, P≤2.5
NH0712	140*95/45*30	45	95	140	30	185	230	10	10.80	57.97	4780	≥160	≤30
NH0715	184*47/25*80	25	47	184	80	97	234	5	16.00	53.85	6465	100-170	20kHz/0.3T, P≤10
NH0795	155*60/40*40	40	60	155	40	140	235	2	12.80	55.65	5300	≥200	15kHz/0.4T, P≤15
NH0679	160*35/40*75	40	35	160	75	115	240	3	24.00	51.57	9095	≥420	40kHz/0.3T, P≤35
NH0410	168*90/40*40	40	90	168	40	170	248	10	12.80	63.11	5925	≥180	≤20
NH0450	160*60/45*50	45	60	160	50	150	250	10	18.00	57.93	7700	20kHz/0.3V, Al≥120	≤30
NH0780	200*150/45*50	45	150	200	50	240	290	20	18.00	81.49	10825	≥65	40kHz/0.3T, P≤35
NH0674	210*115/45*50	45	115	210	50	205	300	20	18.00	76.15	10000	≥210	40kHz/0.3T, P≤28
NH0725	234*170/35*30	35	170	234	30	240	304	15	8.40	90.03	5560	≥82	≤30
NH0599-f	215*195/50*60	50	195	215	60	295	315	15	24.00	95.93	16975	≥240	≤30
NH0694	230*115/50*40	50	115	230	40	215	330	10	16.00	83.83	9890	≥170	7.4kHz/0.7T, P≤9 7.4kHz/0.8T, P≤11
NH0761	240*120/50*50	50	120	240	50	220	340	20	20.00	85.09	12548	≥210	≤35
NH0697	240*140/50*50	50	140	240	50	240	340	20	20.00	89.01	13126	≥200	7.4kHz/0.63T, P≤11
NH0430	260*160/50*50	50	160	260	50	260	360	20	20.00	98.91	14440	≥180	≤30
NH0246	280*150/45*50	45	150	280	50	240	370	20	18.00	97.02	13050	≥165	40kHz/0.3T, P≤35
NH0354-f	250*250/70*70	70	250	250	70	390	390	20	39.20	119.79	34525	≥290	≤30
NH0486-02	273*170/60*60	60	170	273	60	290	393	20	28.80	105.19	22300	≥245	20kHz/50mT, P≤0.26
NH0771	330*150/45*50	45	150	330	50	240	420	20	18.00	107.86	14330	≥150	40kHz/0.3T, P≤35
NH0702	320*170/60*60	60	170	320	60	290	440	10	28.80	116.33	24665	≥220	20kHz/0.34T, P≤20 50kHz/0.1T, P≤12
NH0486-01	360*210/50*50	50	210	360	50	310	460	15	20.00	127.79	18660	65-125	20kHz/50mT, P≤0.26

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1K107A Reference curve for transformer core with 1K107A material

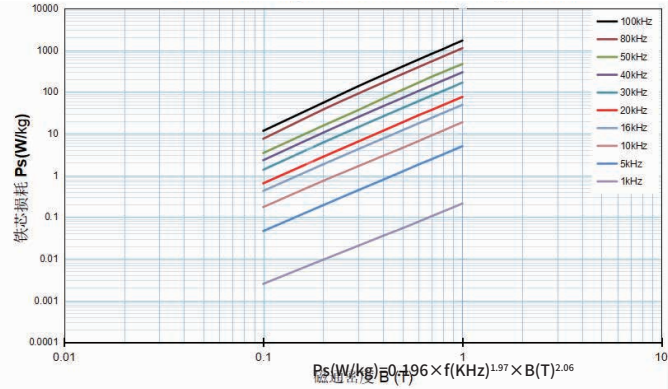


Fig1 LOSS curve diagram of transformer magnetic core

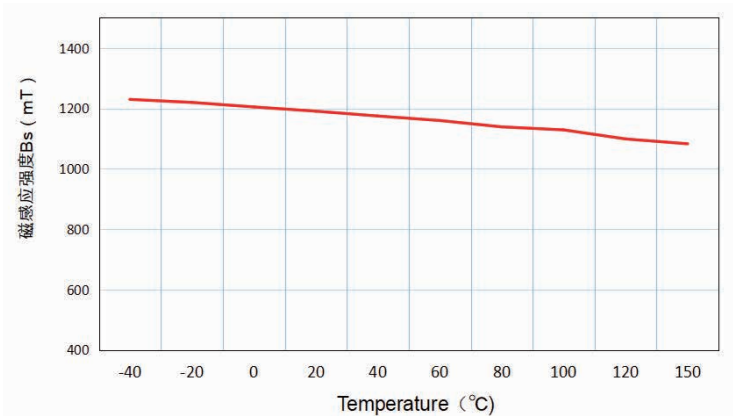


Fig2 Realitive change of Bs vs Temperature

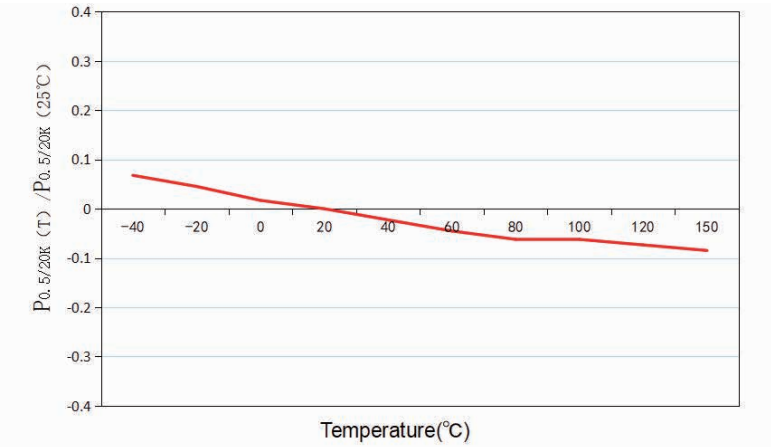


Fig3 Realitive change of Ps vs Temperature