ACME Electronics Corporation
越峯電子材料股份有限公司

USI Group



Product Catalogue

Nanocrystalline Ribbon Core
Magnetic Powder Core

Always Committed to Manufacturing Excellence

bsi
ISO 9001 Quality Management Systems CERTIFIED
ISO 14001 Environmental Management CERTIFIED
IATF 16949 Automotive Quality Management CERTIFIED
ISO 50001 Energy Management CERTIFIED



COMPANY BRIEF

ACME Electronics Corporation, a subsidiary of USI Corporation, has been developed into one of the world's leading manufacturers of soft magnetic products since her establishment. Incorporated in 1991 and listed in Taiwan OTC market in 2005, ACME with her headquarter in Taipei possesses four manufacturing sites where one is in Taiwan, one in Malaysia, and two in China.

OUR PRODUCTS

A variety of soft magnetic products in different material types, core shapes and sizes are manufactured in ACME. These products are widely used for the manufacture of chokes, inductors, filters, transformers, antennas and other components or devices that are applied in the fields of communication, lighting, alternative energy, automotive, medical system, consumer and industrial electronics. ACME's products are adopted by leading manufacturers of these components and devices worldwide.

1991
ACME Taiwan was incorporated

1994
Built the first manufacturing site in Taoyuan, Taiwan

2000
Incorporated ACME Kunshan, China

2005
Incorporated ACME Guangzhou, China

2009
Acquired ACME Malaysia, located in Ipoh, Perak

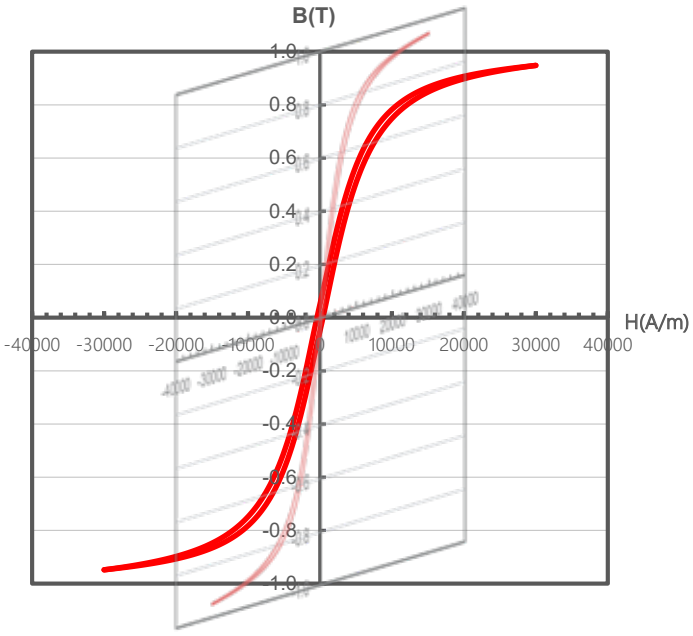
2016
Established high purity SiC Powder line

2017
Established Ferrite Injection Molding line

2018
SiC mass production

2021
Launched metal soft magnetic products

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1K107B series

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Material Introduction P.3

This section provides a concise overview of the core materials we utilize. It highlights their key properties, performance standards, and the specific advantages they bring to our final products.

Material Characteristics P.4

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Toroidal Core Summary P.13

This summary provides a clear, organized table to help you quickly identify and select the appropriate toroidal cores for your specific requirements.

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The Toroidal Core section features 25 different types to meet diverse needs.

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2026

Nanocrystalline Ribbon Core

Nanocrystalline Material

1K107B series

1K107B is an iron-based nanocrystalline ribbon produced by high-temperature melting of metal followed by ultra-rapid cooling.

Features

- High Permeability
- Low core loss
- Excellent temperature stability

Applications

- High Frequency Transformer
- Common Mode Choke
- Current Transformer

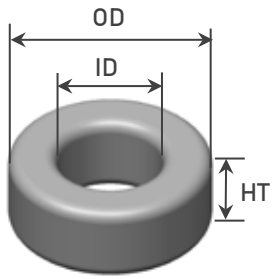
1K107B Property	Thickness 14 ~ 17 μm	Thickness 17 ~ 20 μm
Filling coefficient (%)	75 ~ 82	75 ~ 82
Saturation Flux Density Bs (T)	1.25	1.25
Coercivity Hc (A/m)	≤ 2.0	≤ 2.0
Core Loss Pcm (W/kg) @20kHz 0.5T	-	≤ 12
Core Loss Pcm (W/kg) @100kHz 0.3T	≤ 60	≤ 70
Permeability μ @10kHz	70000	75000
Permeabilityμ @100kHz	30000	25000
Curie Temperature Tc (°C)	560	560

Nanocrystalline Ribbon Cores

Specifications	Dimensions(mm)						Housing form	Path Length Le	Cross Section Ae	A_L(μH)	
	Bare core			Finished product							
	OD	ID	HT	OD	ID	HT		(mm)	(mm^2)	10kHz 0.1V	100kHz 0.1V
NC-100505AC	10	5	5	10.6	4.4	5.6	coating	23.6	10.3	7 ~ 64	5.5 ~ 64
NC-130805AC	13	8	5	13.6	7.4	5.6	coating	33.0	10.3	5 ~ 46	4 ~ 19
NC-151005AP	15	10	5	17	8.3	6.6	case	39.3	10.3	4.2 ~ 39	3.2 ~ 16
NC-151006AC	15	10	6	15.8	9.2	6.8	coating	39.3	12.4	5 ~ 46	4 ~ 19.5
NC-161206AC	16	12	6	16.6	11.4	6.6	coating	44.0	9.9	3.6 ~ 33	2.8 ~ 13.8
NC-161008AC	16	10	8	16.8	9.2	8.8	coating	40.8	19.8	7.7 ~ 70	6 ~ 29.5
NC-181006AC	18	10.5	6	18.8	9.7	6.8	coating	44.8	18.6	6.6 ~ 61	5.1 ~ 61
NC-191510AP	19	15	10	21.4	13.4	12.2	case	53.4	16.5	5 ~ 45	3.8 ~ 19
NC-201208AP	20	12.5	8	22.2	10.4	12.4	case	51.1	24.8	7.7 ~ 71	6 ~ 30
NC-201208AC	20	12.5	8	20.8	11.7	8.8	coating	51.1	24.8	7.7 ~ 71	6 ~ 30
NC-201210AP	20.6	12.7	10	22.9	10.9	12.4	case	52.3	32.6	10 ~ 90	7.6 ~ 38
NC-221508AC	22	15	8	22.8	14.2	8.8	coating	58.1	23.1	6.3 ~ 59	4.9 ~ 24.5
NC-221710AP	22	17	10	24.6	15	12.6	case	61.3	20.6	-	9.5 ~ 20.5
NC-251512AC	25	15	12	25.8	14.2	12.8	coating	62.8	49.5	-	22 ~ 48
NC-251608AC	25	16	8	25.8	15.2	8.8	coating	64.4	29.7	7.5 ~ 67	6 ~ 28
NC-251610AP	25	16	10	27.9	13.9	12.7	case	64.4	37.1	9.2 ~ 85	7 ~ 35
NC-252010AC	25	20	10	25.8	19.2	10.8	coating	70.7	20.6	4.7 ~ 43	3.6 ~ 18
NC-302010AP	30	20	10	33.2	17.7	13.4	case	78.5	41.3	8.5 ~ 77	6.5 ~ 32
NC-302012AP	30	20	12	33	18.2	14.7	case	78.5	49.5	-	18 ~39
NC-302015AP	30	20	15	33.7	17.7	17.9	case	78.5	61.9	-	22 ~ 48
NC-402512AP	40	25	12	43.2	21.6	15.6	case	102.1	74.3	-	20.5 ~ 45
NC-453015AP	45	30	15	47.8	27.3	18	case	117.8	92.8	-	22 ~ 48
NC-503015AP	50	30	15	53.8	28.8	18.8	case	125.7	123.8	-	26 ~ 60

The product data in the list is for customers' initial evaluation and selection purposes only. Specific information is subject to the product specifications.

Nanocrystalline Cores Type Nomenclature



NC	30	20	10	A	P
(1)	(2)	(3)	(4)	(5)	(6)

(1) Toroidal series
(2) Bare core OD
(3) Bare core ID
(4) Bare core HT
(5) Material
(6) Housing form

Magnetic Powder Core

Material Introduction

Property \ Material	AS Fe-Si-Al (Ball milled)	AG Fe-Si-Al (Gas atomized)	AK Fe-Si	AH Fe-Ni
Permeability	26~125	26~90	26~125	26~173
Bs(Tesla)	1.0	1.2	1.5	1.5
Core Loss (@50kHz, 1000G)	350kW/m^3	250kW/m^3	600kW/m^3	300kW/m^3
DC-Bias (% of 60μ @100Oe)	48%	60%	70%	80%

AS - FeSiAl series

AS cores are made of alloy powders with specific of Fe-9.6%Si-5.4%Al and feature almost zero magnetostriction. As a result, sendust cores can work without audible noise and are the high C/P choice of power choke design, very suitable for application frequency range 50kHz~100kHz.

AG - FeSiAl series

AG cores are made of alloy powders with specific composition of Fe-9.6%Si-5.4%Al by gas atomized powder preparation and feature almost zero magnetostriction, featuring excellent DC-bias property and very low core loss, are the best alternative choice to expensive MPP and APM(Amotech) cores.

AK - FeSi series

AK cores are made of alloy powders with specific composition of Fe-3~6.5%Si and feature very excellent DC-bias properties, very suitable for hi-power applications within 20kHz~40kHz and the first choice for filter choke applications.

AH - FeNi series

AH cores are made of metal alloy powders with composition of Fe-50%Ni and feature the best DC-bias properties and lower core loss, the first choice for high-power density modules.

AS series

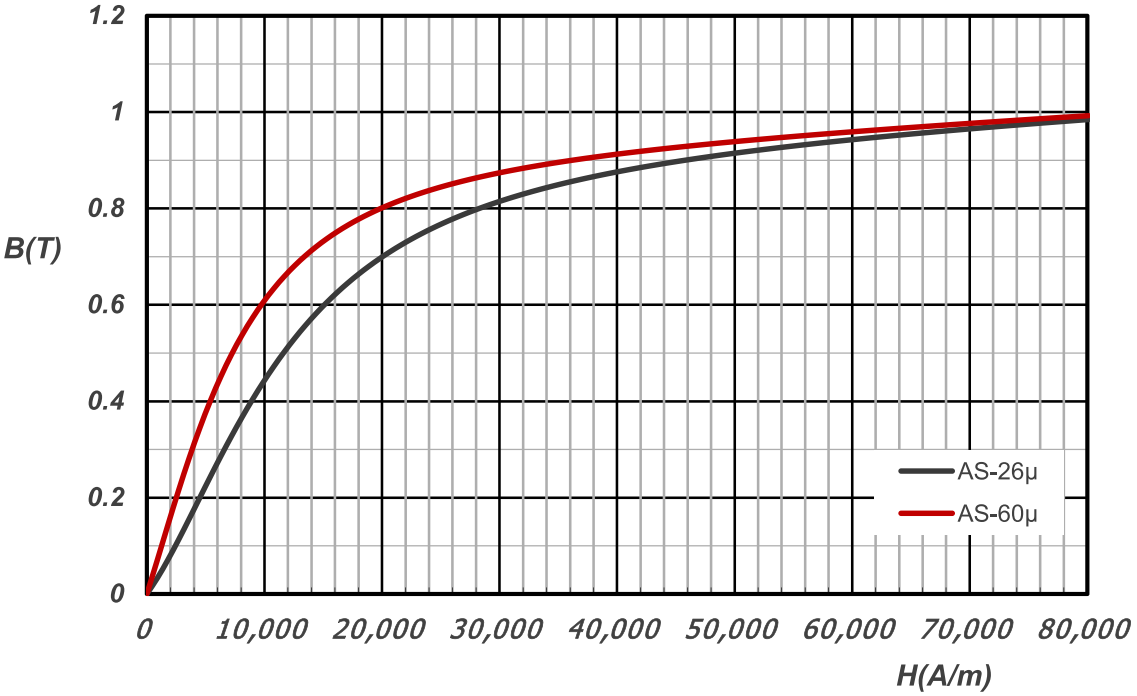
Features

- Magnetostriction close to zero
- Good temperature stabilization
- High cost-effectiveness

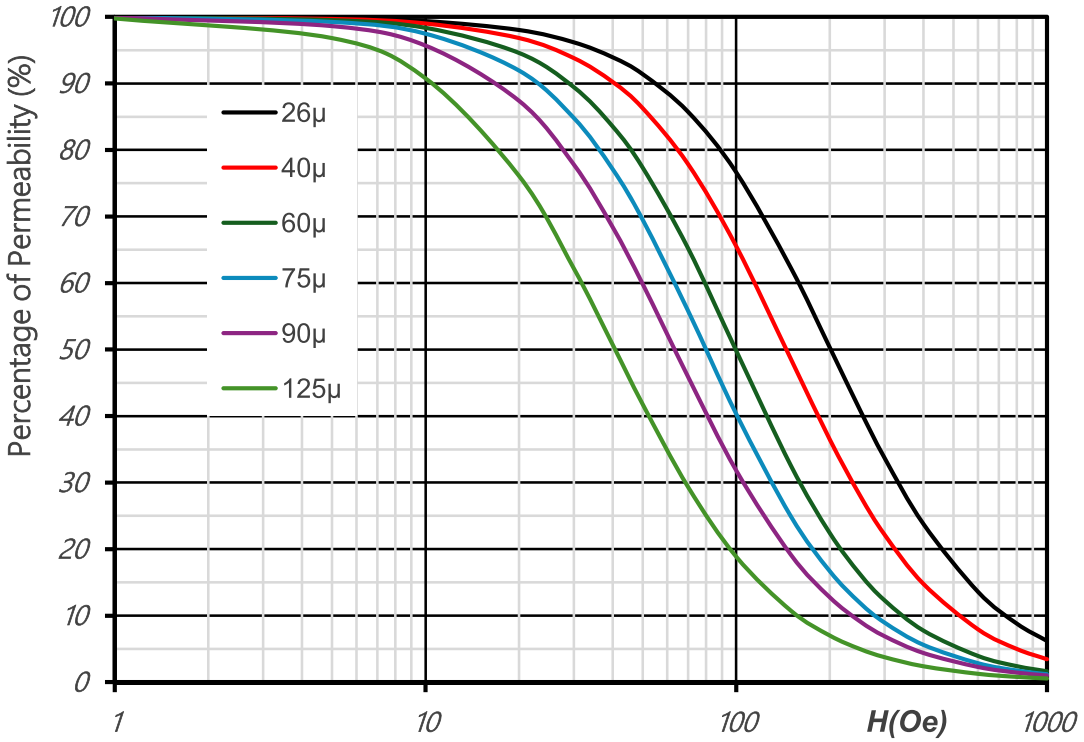
Applications

- PFC inductor
- Boost choke for PV inverter
- 50~100kHz power applications

Saturation Flux Density vs Magnetic Field



Percent Initial Permeability vs DC Magnetizing Force



Material Characteristics

AS series

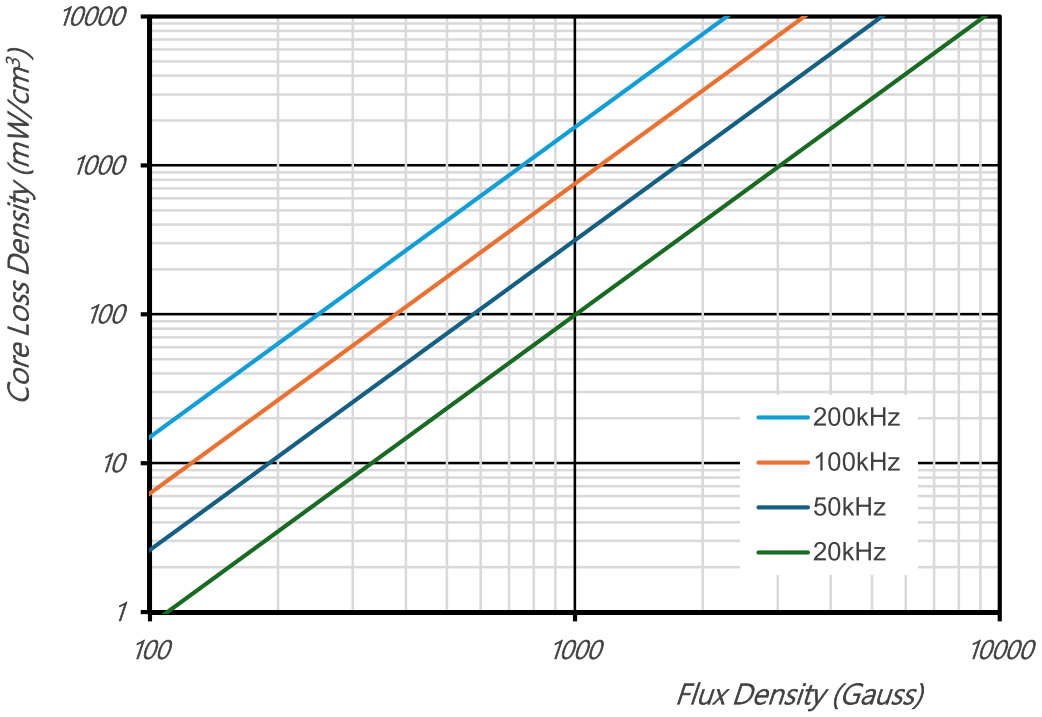
The curve fitting process gives rise to the following core loss density Pv(mW/cm³) equation:

$$Pv(mW/cm^3) = Cm \cdot f^x \cdot B^y$$

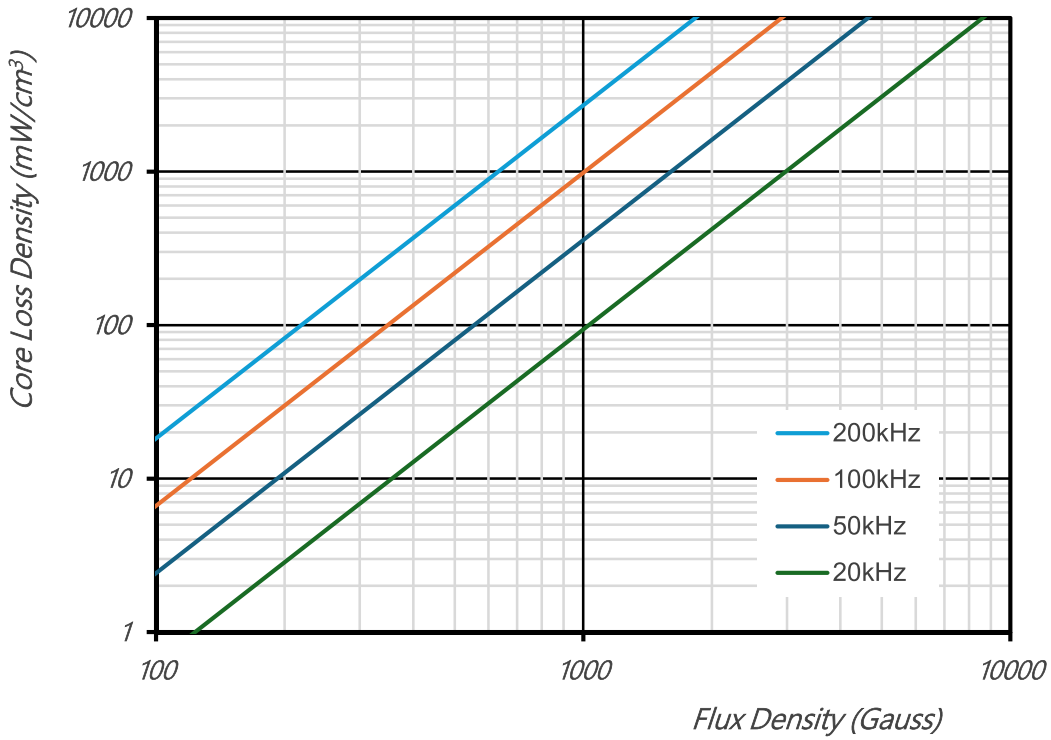
*frequency(f) unit in kHz and flux density(B) unit in kGauss

μ_e	C_m	x	y
26 & 40	2.27	1.26	2.08
60 & 75 90 & 125	1.18	1.46	2.17

Typical Core Loss Curves (26μ, 40μ)



Typical Core Loss Curves (60μ, 75μ, 90μ, 125μ)



AG series

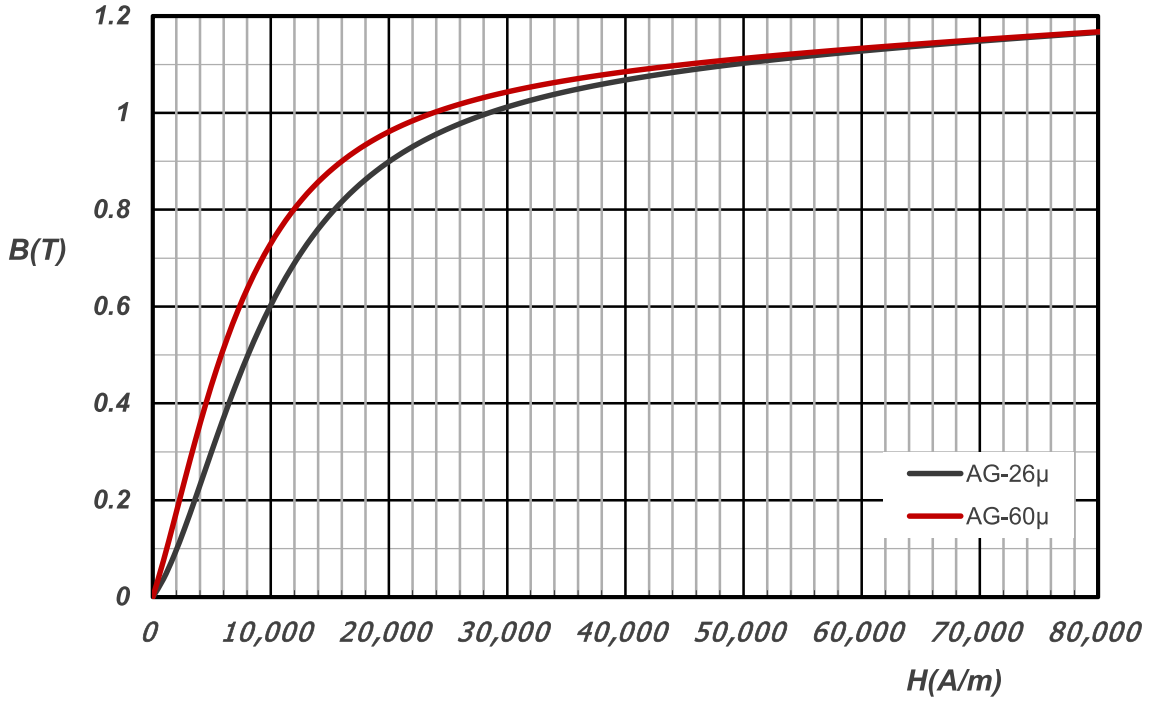
Features

- Lowest core loss characteristics
- Good DC-bias performance
- Excellent temp. and freq. stability

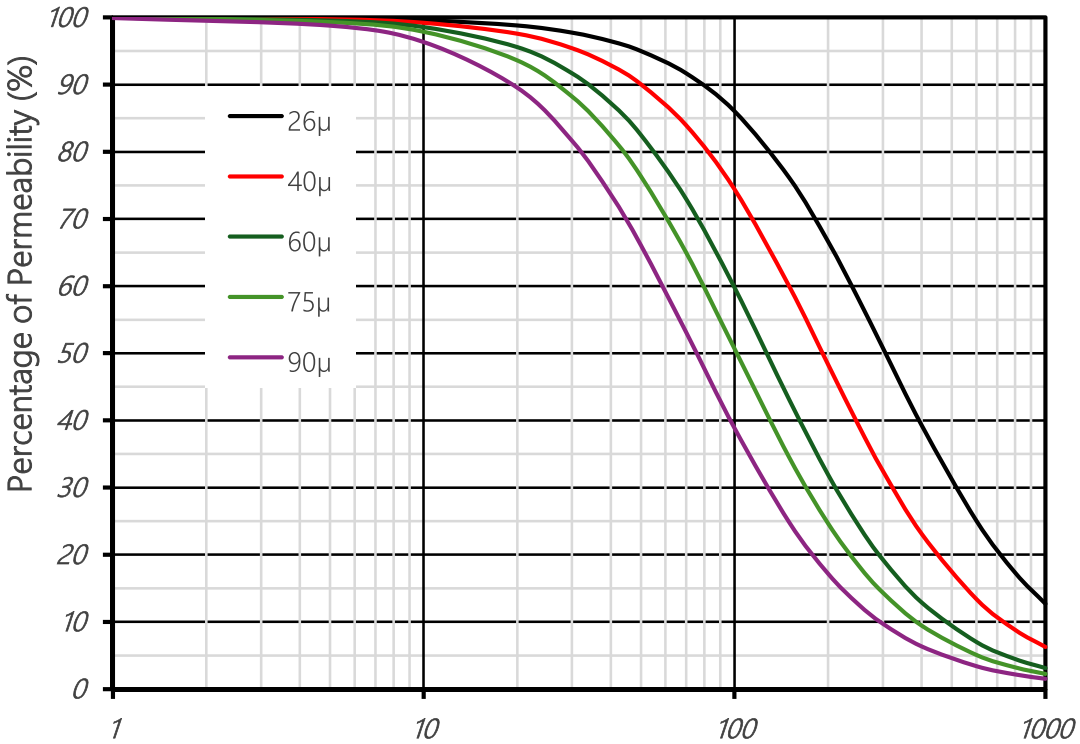
Applications

- Server power supply
- PFC inductor
- >50kHz power applications

Saturation Flux Density vs Magnetic Field



Percent Initial Permeability vs DC Magnetizing Force



Material Characteristics

AG series

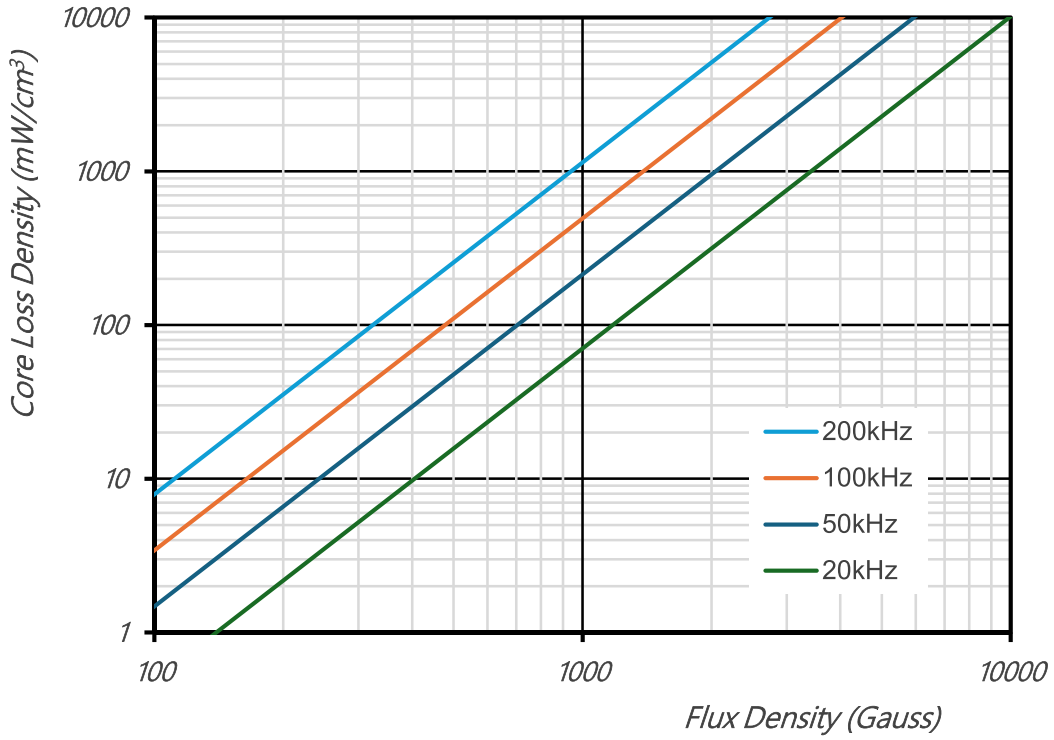
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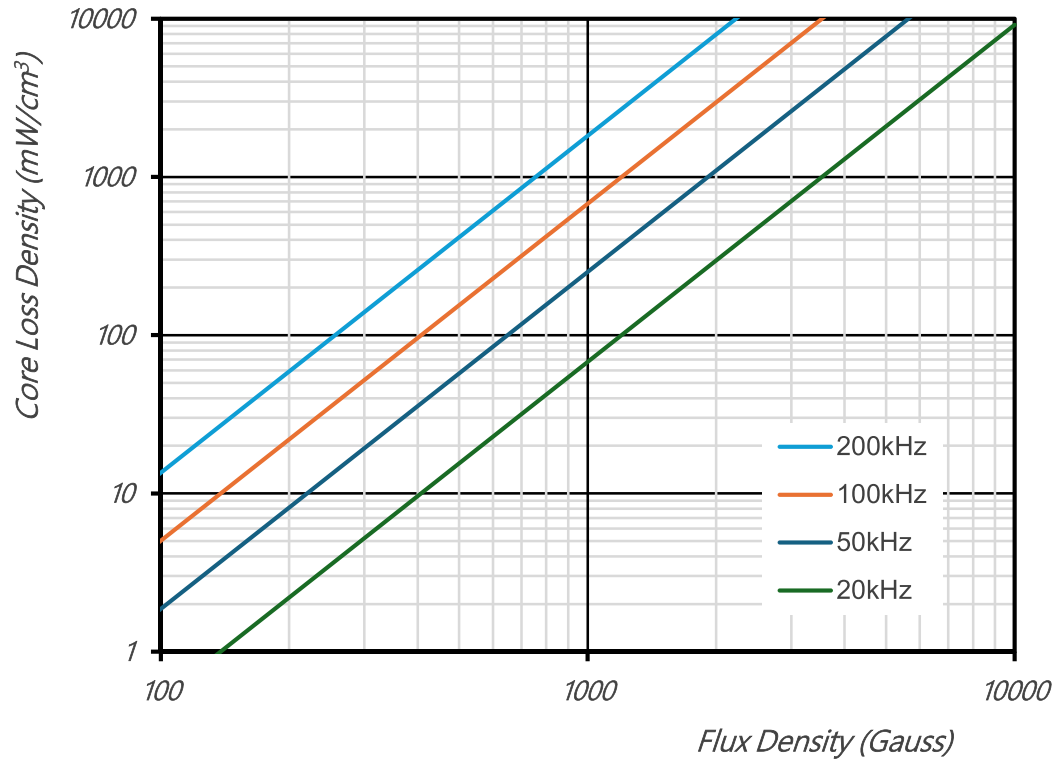
*frequency(f) unit in kHz and flux density(B) unit in kGauss

μ_e	C_m	x	y
26 & 40	1.872	1.21	2.16
60 & 75 90	0.935	1.43	2.13

Typical Core Loss Curves (26μ, 40μ)



Typical Core Loss Curves (60μ, 75μ, 90μ)



AK series

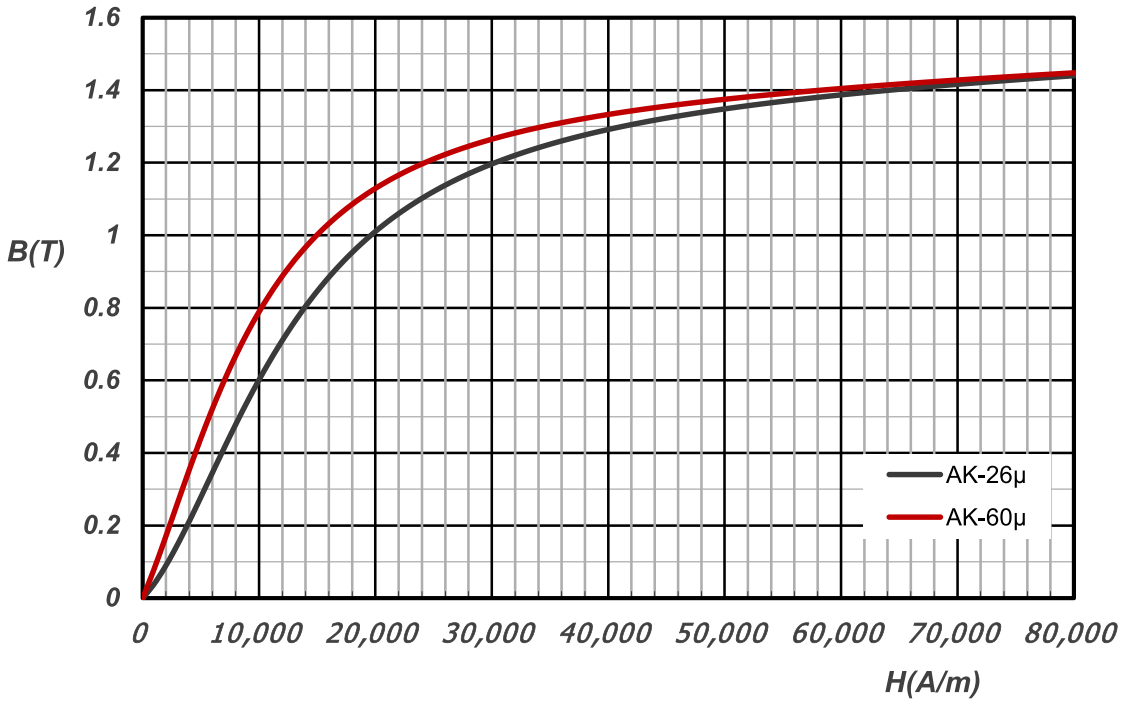
Features

- High saturation characteristics
- High C/P value
- Excellent DC-bias performance

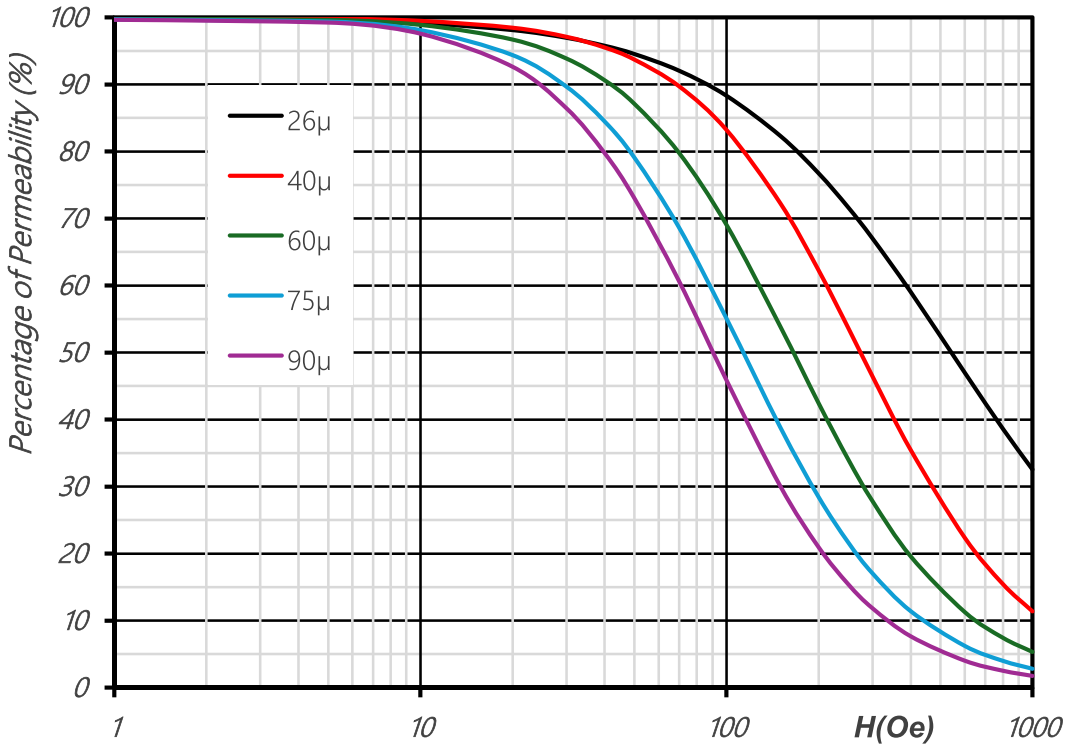
Applications

- Industrial power supply
- PV inverter
- <40kHz power applications

Saturation Flux Density vs Magnetic Field



Percent Initial Permeability vs DC Magnetizing Force



Material Characteristics

AK series

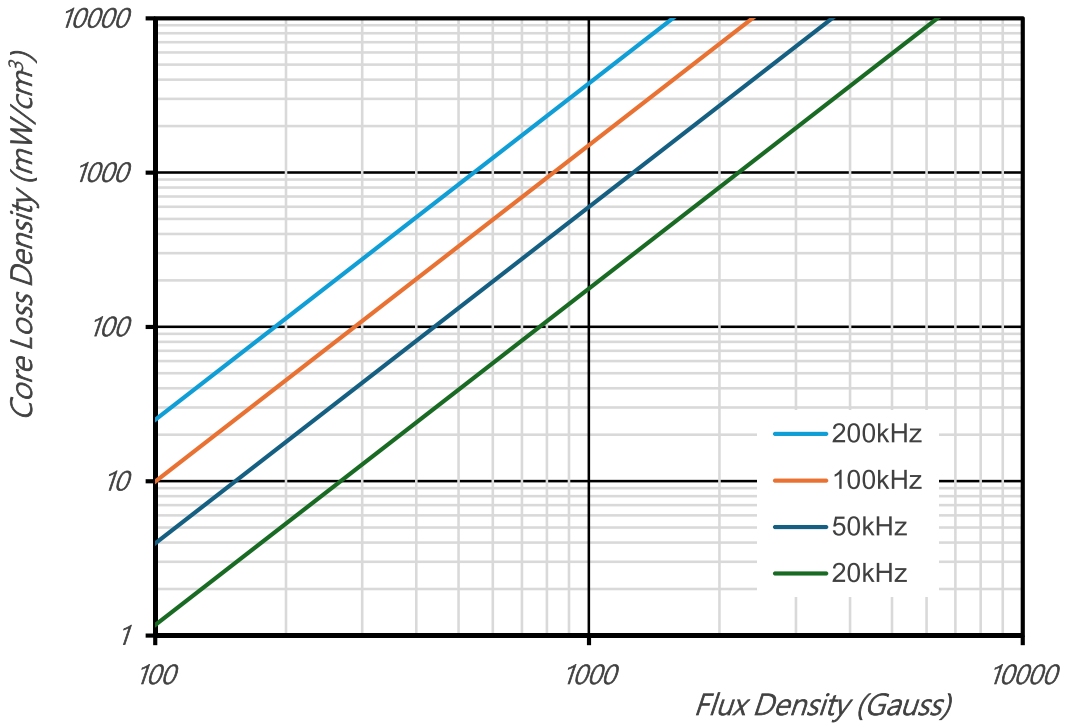
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$$Pv(mW/cm^3) = Cm \cdot f^x \cdot B^y$$

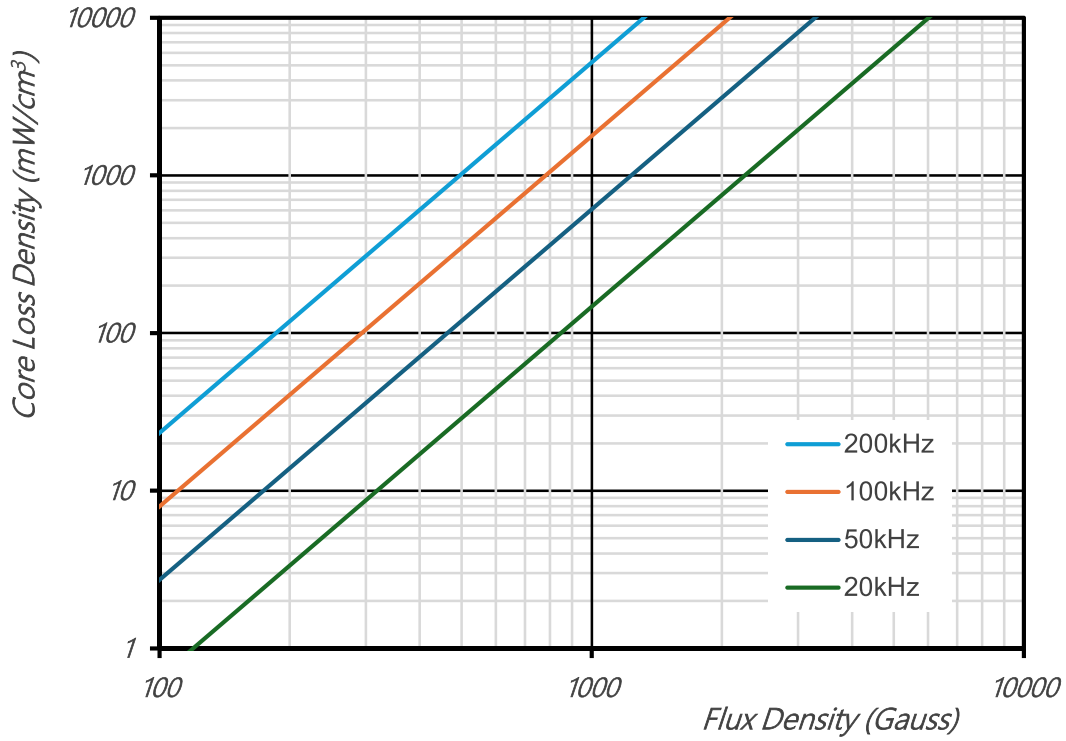
*frequency(f) unit in kHz and flux density(B) unit in kGauss

μ_e	C_m	x	y
26 & 40	3.294	1.33	2.18
60 & 75 90	1.415	1.55	2.35

Typical Core Loss Curves (26μ, 40μ)



Typical Core Loss Curves (60μ, 75μ, 90μ)



AH series

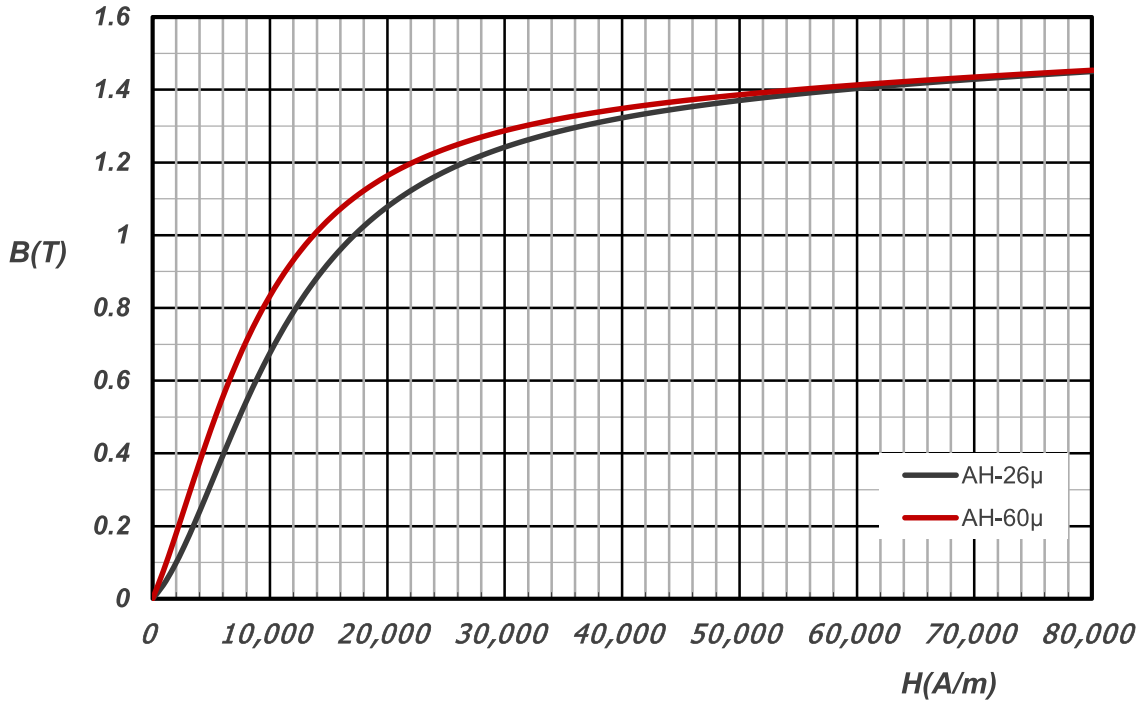
Features

- Excellent DC-bias performance
- Low core loss
- High energy storage capability

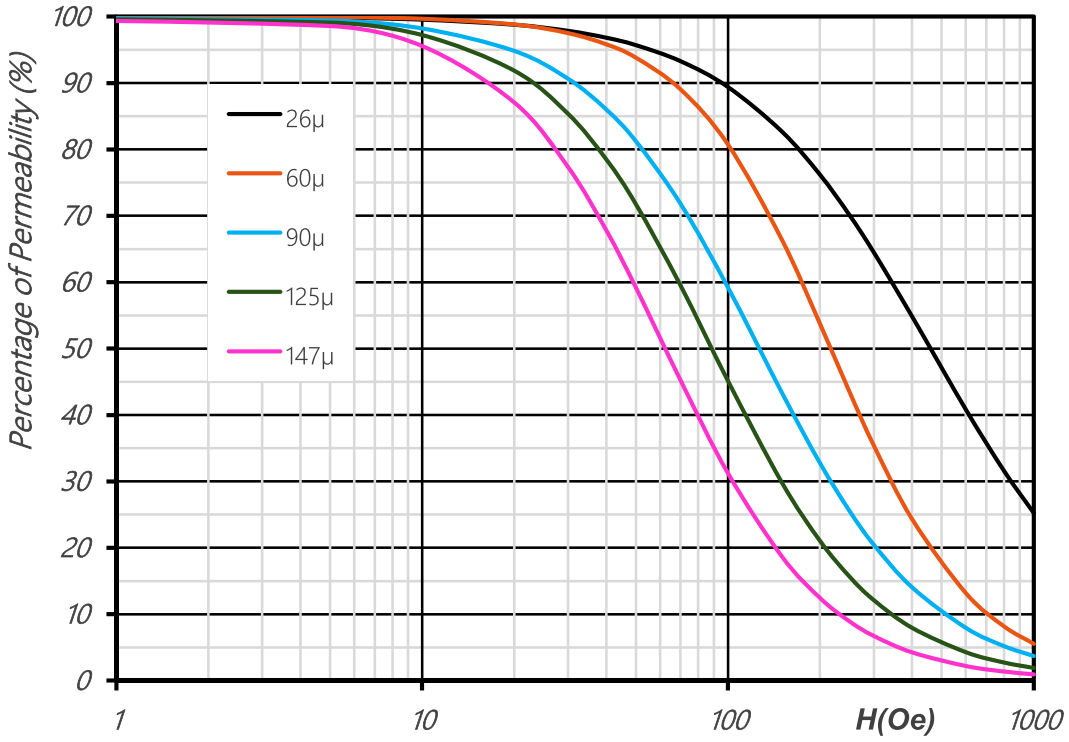
Applications

- Server switching power inductors
- Automotive OBC
- >50kHz power applications

Saturation Flux Density vs Magnetic Field



Percent Initial Permeability vs DC Magnetizing Force



Material Characteristics

AH series

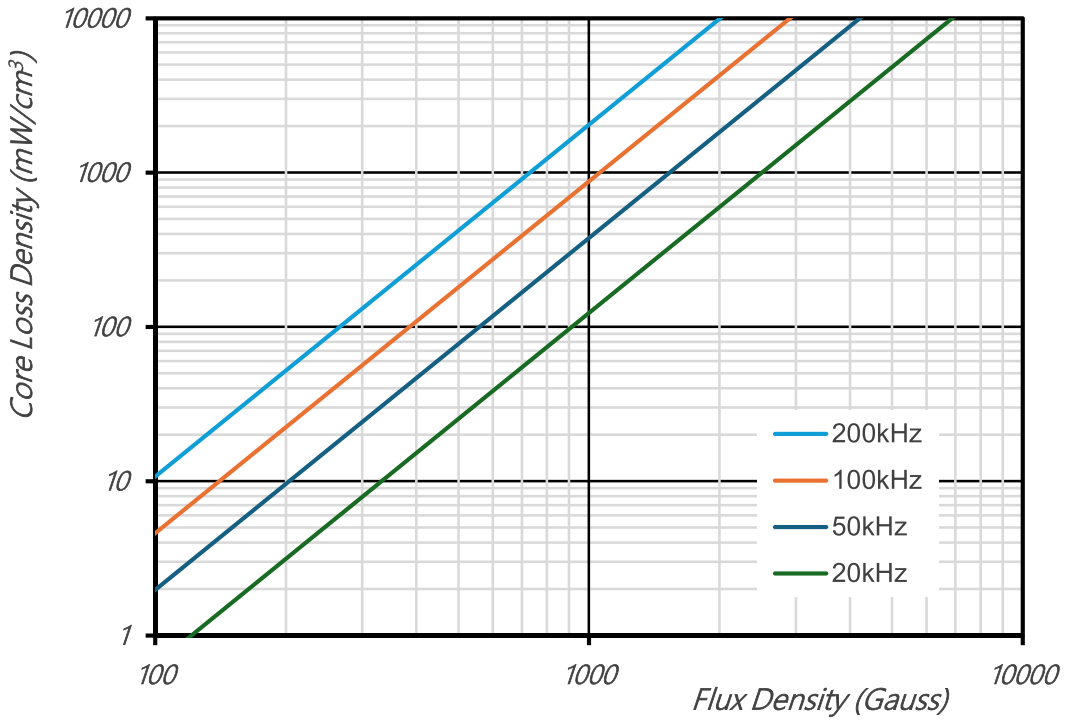
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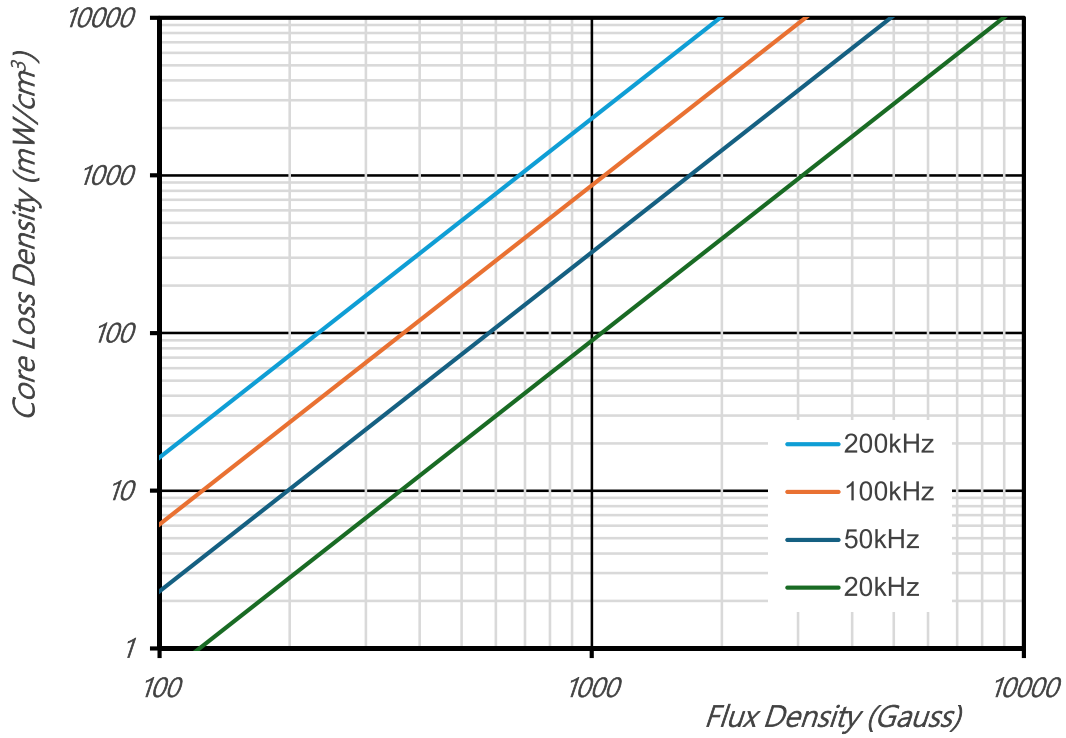
*frequency(f) unit in kHz and flux density(B) unit in kGauss

μ_e	C_m	x	y
26 & 40	3.19	1.22	2.28
60 & 75 90	1.31	1.41	2.15

Typical Core Loss Curves (26μ, 40μ)



Typical Core Loss Curves (60μ, 75μ, 90μ)



Material Characteristics

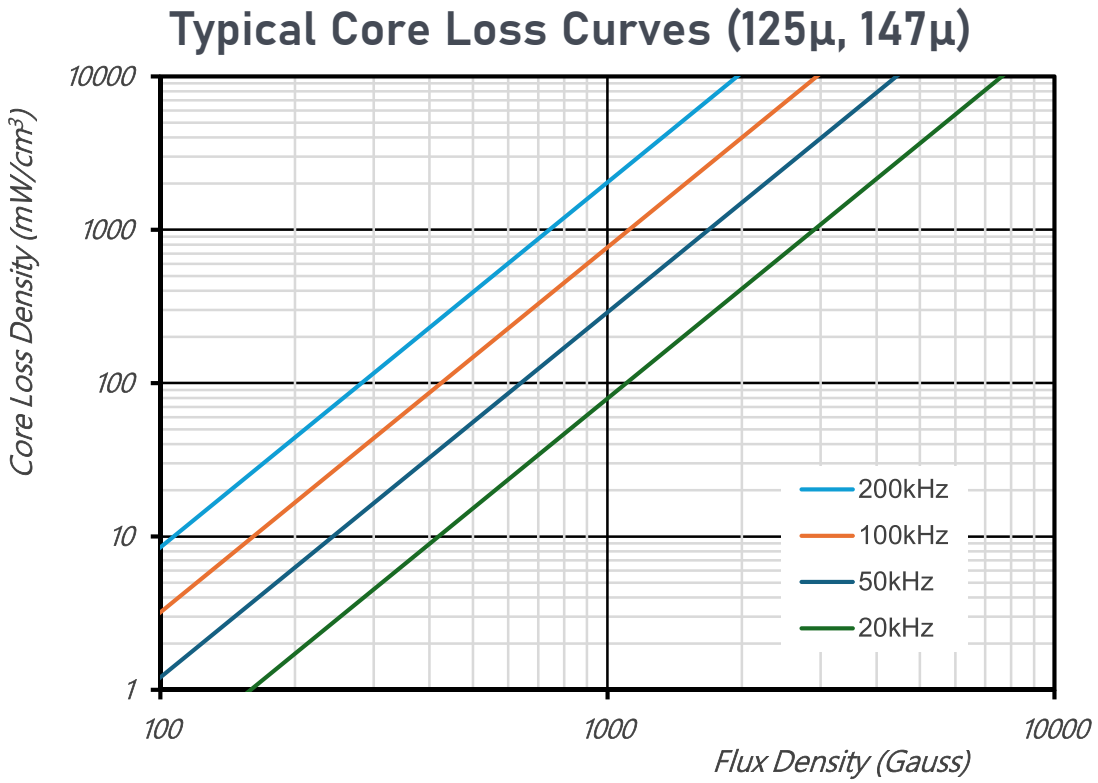
AH series

The curve fitting process gives rise to the following core loss density Pv(mW/cm³) equation:

$$Pv(mW/cm^3) = Cm \cdot f^x \cdot B^y$$

*frequency(f) unit in kHz and flux density(B) unit in kGauss

μ_e	C_m	x	y
125 & 147	1.16	1.41	2.38



Toroidal Core Summary

OD Size	Magnetic Path Length Le(cm)	Cross Section Ae(cm^2)	Window Area (cm^2)	Surface Area(cm^2)	Weight(g)				Dimensions(mm) OD(max)xID(min)xHT(max)	
				Coated	AS	AG	AK	AH	Bare	Coated
063	1.361	0.0470	0.0412	1.7	0.41	0.43	0.47	0.53	6.35x2.79x2.79	6.99x2.29x3.43
066	1.363	0.0476	0.0367	1.7	0.42	0.44	0.48	0.54	6.60x2.67x2.54	7.24x2.16x3.18
078	1.787	0.0615	0.0922	2.4	0.67	0.76	0.70	0.87	7.87x3.96x3.18	8.51x3.43x3.81
097	2.18	0.0945	0.1429	3.5	1.30	1.36	1.47	1.68	9.65x4.78x3.96	10.29x4.27x4.60
102	2.38	0.1000	0.164	3.7	1.37	1.44	1.55	1.77	10.16x5.08x3.96	10.80x4.57x4.60
112	2.69	0.0906	0.273	4.3	1.51	1.58	1.71	1.95	11.18x6.35x3.96	11.90x5.89x4.72
127	3.12	0.114	0.383	5.6	2.23	2.34	2.53	2.88	12.70x7.62x4.75	13.46x6.99x5.51
166	4.11	0.192	0.713	9.3	4.9	5.1	5.5	6.3	16.51x10.16x6.35	17.40x9.53x7.11
172	4.14	0.232	0.683	9.9	5.9	6.2	6.7	7.7	17,27x9.65x6.35	18.03x9.02x7.11
203	5.09	0.226	1.14	12.1	7.2	7.6	8.1	9.3	20.32x12.70x6.35	21.1x12.07x7.11
229	5.67	0.331	1.41	15.7	11.5	12.1	13.1	14.9	22.86x13.97x7.62	23.62x13.34x8.38
234	5.88	0.388	1.49	17.9	14.4	14.5	16.0	18.6	23.57x14.40x8.89	24.30x13.77x9.70
270	6.35	0.654	1.56	24.7	26.0	27.3	29.0	33.6	26.92x14.73x11.18	27.70x14.10x11.99
330	8.15	0.672	2.93	31.5	33.9	34.6	38.0	43.8	33.02x19.94x10.67	33.83x19.30x11.61
358	8.98	0.678	3.64	34.5	38	40	43	49	35.81x22.35x10.46	36.70x21.50x11.35
400	9.84	1.072	4.27	48.4	66	67	75	86	39.88x24.13x14.48	40.80x23.30x15.37
467	10.74	1.990	4.27	69.2	133	136	149	172	46.74x24.13x18.03	47.60x23.30x18.92
468	11.63	1.340	6.11	61.6	97	99	109	125	46.74x28.70x15.24	47.60x27.90x16.13
508	12.73	1.250	7.50	64.2	98	100	111	127	50.80x31.75x13.46	51.70x30.90x14.35
571	12.50	2.290	5.14	84.8	177	181	199	228	57.15x26.39x15.24	58.00x25.60x16.10
572	14.30	1.444	9.48	77.2	128	131	144	165	57.15x35.56x13.97	58.00x34.70x14.86
610	14.37	3.675	7.73	125.1	328	334	376	423	62.00x32.60x25.00	63.10x31.37x26.27
740	18.38	5.04	15.27	194.2	574	587	658	741	74.10x45.30x35.00	75.20x44.07x36.27
777	20.00	1.77	17.99	117.3	217	221	242	280	77.80x49.23x12.70	78.90x47.78x13.97
778	20.00	2.27	17.99	130.2	271	277	303	350	77.80x49.23x15.90	78.90x47.78x17.20

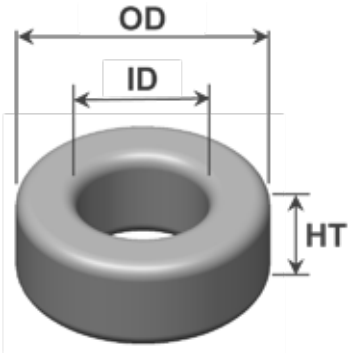
Toroidal Core Type Nomenclature

AS 330 060 XXX

- XXX: Additional code for specialty designation
- 060: Permeability μ= 60; available μ: 26 ~ 173
- 330: OD size: 33.0mm; available OD size from 6.35mm ~ 77.8mm
- AS: ACME powder grade: AS, AG, AK, AH

OD063

OD 6.35mm / 0.250inches

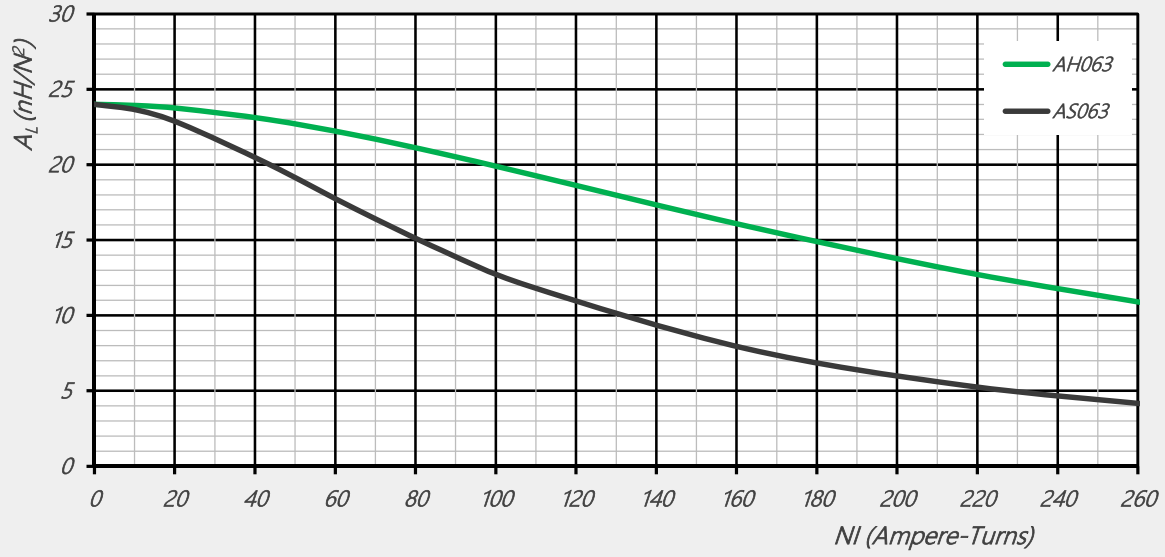


Dimensions	unit	OD(Max)	ID(Min)	HT (Max)
Bare Core	mm	6.35	2.79	2.79
	inch	0.250	0.110	0.110
Coated Core	mm	6.99	2.29	3.43
	inch	0.275	0.090	0.135

Cross Section Ae	Path Length Le	Volume Ve	Window Area Wa	M. Length/Turn MLT
0.0470cm^2	1.361cm	0.064219cm^3	0.0412cm^2	1.16cm
0.00729in^2	0.536in	0.003919in^3	8,100cmil	0.46in

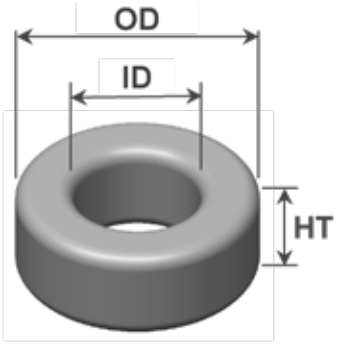
Perm. (μ)	A_L ± 8% (nH/N^2)	FeSiAl AS	FeSiAl AG	FeSi AK	FeNi AH
26	10	AS063026			AH063026
40	16	AS063040			AH063040
60	24	AS063060			AH063060
75	30	AS063075			AH063075
90	36	AS063090			AH063090
125	50	AS063125			AH063125
147	59				AH063147
160	64				AH063160
173	69				AH063173

A_L (nH/N^2) vs NI Curve (60μ)



OD066

OD 6.60mm / 0.260inches

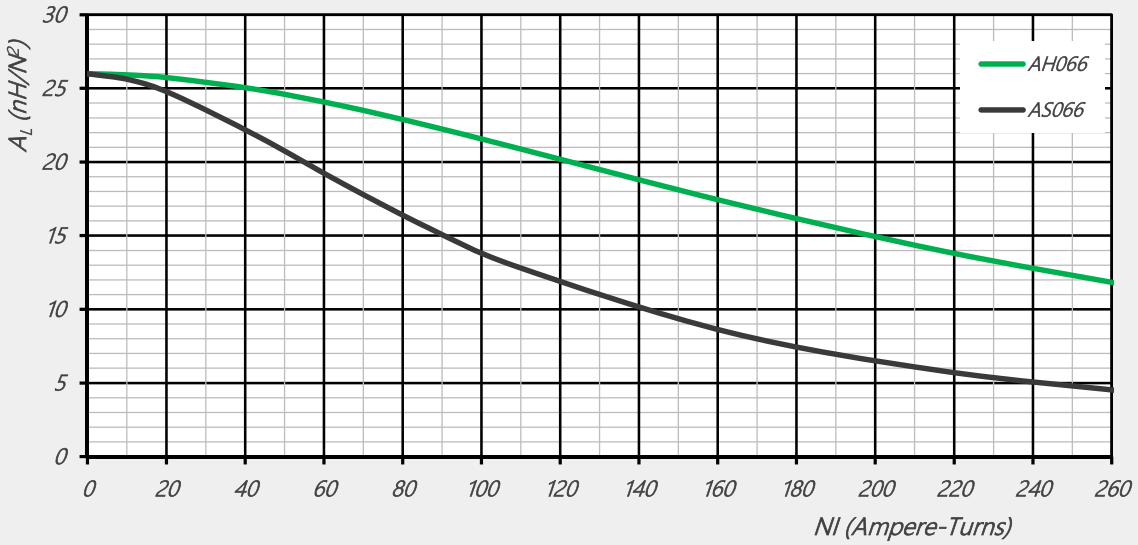


Dimensions	unit	OD(Max)	ID(Min)	HT (Max)
Bare Core	mm	6.60	2.67	2.54
	inch	0.260	0.105	0.100
Coated Core	mm	7.24	2.16	3.18
	inch	0.285	0.085	0.125

Cross Section Ae	Path Length Le	Volume Ve	Window Area Wa	M. Length/Turn MLT
0.0476cm^2	1.363cm	0.063971cm^3	0.0367cm^2	1.14cm
0.00738in^2	0.537in	0.003904in^3	7,200cmil	0.45in

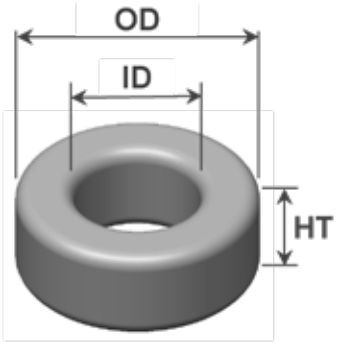
Perm. (μ)	A_L ± 8% (nH/N^2)	FeSiAl AS	FeSiAl AG	FeSi AK	FeNi AH
26	11	AS066026			AH066026
40	17	AS066040			AH066040
60	26	AS066060			AH066060
75	32	AS066075			AH066075
90	39	AS066090			AH066090
125	54	AS066125			AH066125
147	64				AH066147
160	69				AH066160
173	75				AH066173

A_L (nH/N²) vs NI Curve (60μ)



OD078

OD 7.87mm / 0.310inches

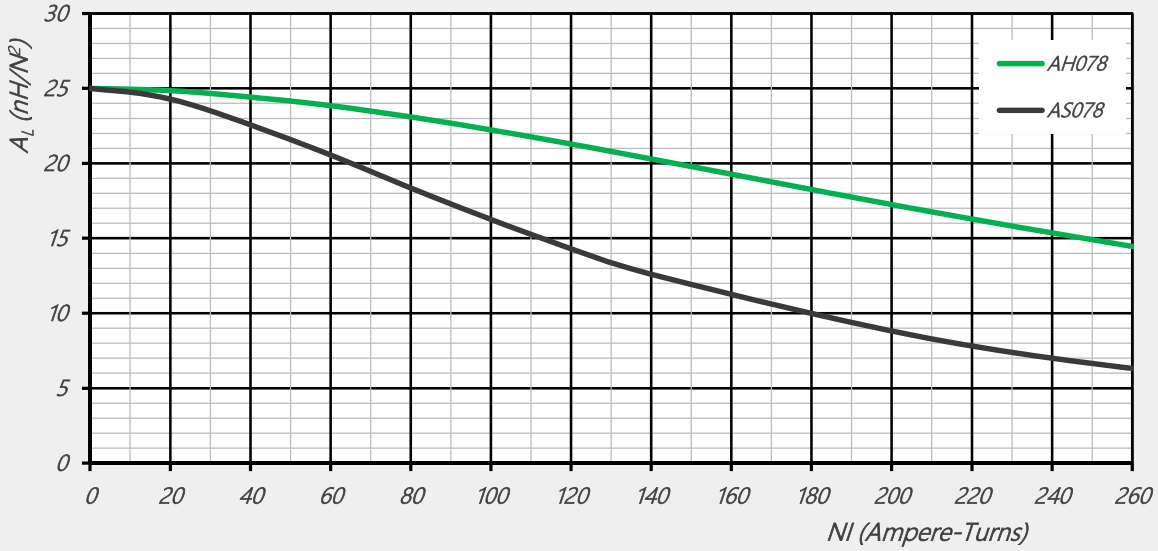


Dimensions	unit	OD(Max)	ID(Min)	HT (Max)
Bare Core	mm	7.87	3.96	3.18
	inch	0.310	0.156	0.125
Coated Core	mm	8.51	3.43	3.81
	inch	0.335	0.135	0.150

Cross Section Ae	Path Length Le	Volume Ve	Window Area Wa	M. Length/Turn MLT
0.0615cm^2	1.787cm	0.1099cm^3	0.0922cm^2	1.27cm
0.00953in^2	0.704in	0.0067in^3	18,200cmil	0.50in

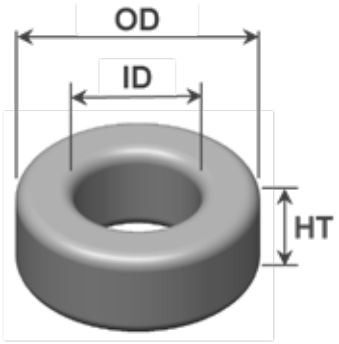
Perm. (μ)	A_L ± 8% (nH/N^2)	FeSiAl AS	FeSiAl AG	FeSi AK	FeNi AH
26	11	AS078026			AH078026
40	17	AS078040			AH078040
60	25	AS078060			AH078060
75	31	AS078075			AH078075
90	37	AS078090			AH078090
125	52	AS078125			AH078125
147	62				AH078147
160	66				AH078160
173	71				AH078173

A_L (nH/N²) vs NI Curve (60μ)



OD097

OD 9.65mm / 0.380inches

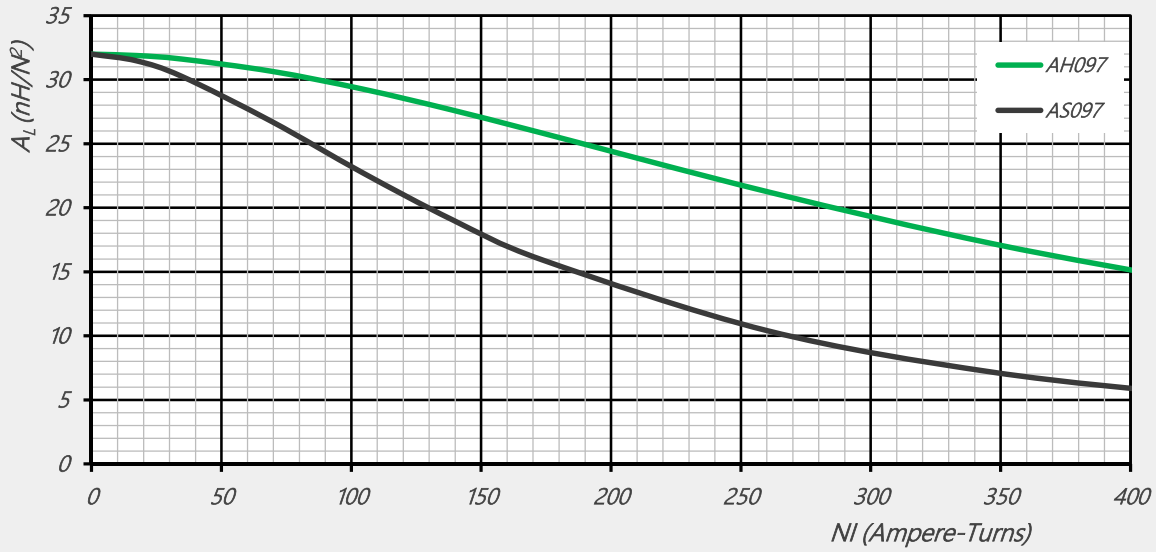


Dimensions	unit	OD(Max)	ID(Min)	HT (Max)
Bare Core	mm	9.65	4.78	3.96
	inch	0.380	0.188	0.156
Coated Core	mm	10.29	4.27	4.60
	inch	0.405	0.168	0.181

Cross Section Ae	Path Length Le	Volume Ve	Window Area Wa	M. Length/Turn MLT
0.0945cm^2	2.18cm	0.2060cm^3	0.1429cm^2	1.52cm
0.01465in^2	0.859in	0.01258in^3	28,200cmil	0.60in

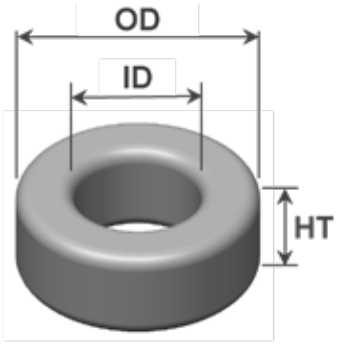
Perm. (μ)	A_L ± 8% (nH/N^2)	FeSiAl AS	FeSiAl AG	FeSi AK	FeNi AH
26	14	AS097026			AH097026
40	22	AS097040			AH097040
60	32	AS097060			AH097060
75	40	AS097075			AH097075
90	48	AS097090			AH097090
125	66	AS097125			AH097125
147	78				AH097147
160	84				AH097160
173	91				AH097173

A_L (nH/N²) vs NI Curve (60μ)



OD102

OD 10.16mm / 0.400inches

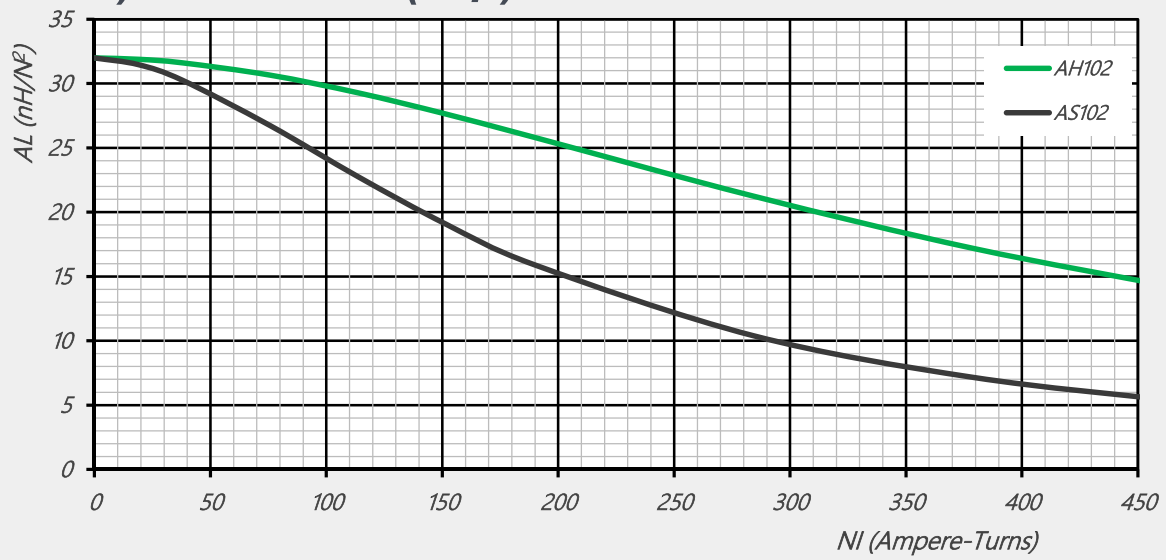


Dimensions	unit	OD(Max)	ID(Min)	HT (Max)
Bare Core	mm	10.16	5.08	3.96
	inch	0.400	0.200	0.156
Coated Core	mm	10.29	4.57	4.60
	inch	0.405	0.180	0.181

Cross Section Ae	Path Length Le	Volume Ve	Window Area Wa	M. Length/Turn MLT
0.100cm^2	2.38cm	0.2380cm^3	0.164cm^2	1.54cm
0.0155in^2	0.906in	0.0140in^3	32,400cmil	0.61in

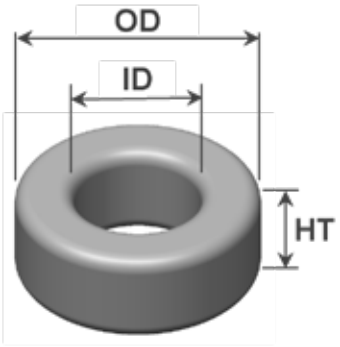
Perm. (μ)	A_L ± 8% (nH/N^2)	FeSiAl AS	FeSiAl AG	FeSi AK	FeNi AH
26	14	AS102026			AH102026
40	22	AS102040			AH102040
60	32	AS102060			AH102060
75	40	AS102075			AH102075
90	48	AS102090			AH102090
125	66	AS102125			AH102125
147	78				AH102147
160	84				AH102160
173	91				AH102173

A_L (nH/N²) vs NI Curve (60μ)



OD112

OD 11.18mm / 0.440inches

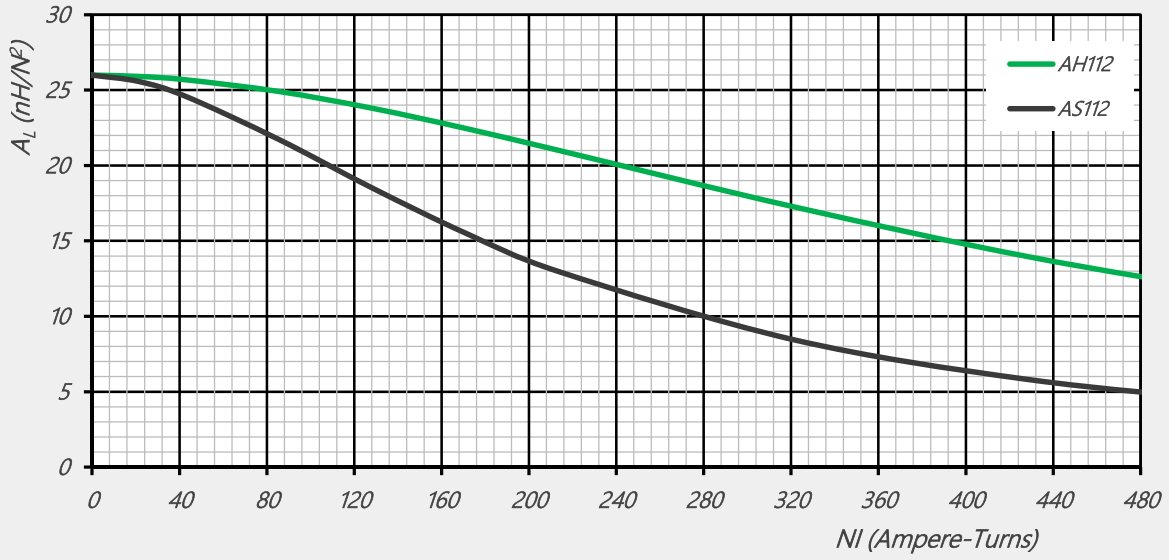


Dimensions	unit	OD(Max)	ID(Min)	HT (Max)
Bare Core	mm	11.18	6.35	3.96
	inch	0.440	0.250	0.156
Coated Core	mm	11.90	5.89	4.72
	inch	0.468	0.232	0.186

Cross Section Ae	Path Length Le	Volume Ve	Window Area Wa	M. Length/Turn MLT
0.0906cm^2	2.69cm	0.2437cm^3	0.273cm^2	1.55cm
0.01403in^2	1.08in	0.01515in^3	53,800cmil	0.61in

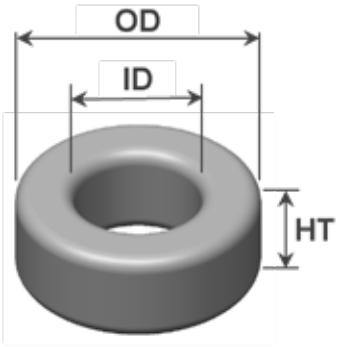
Perm. (μ)	A_L ± 8% (nH/N^2)	FeSiAl AS	FeSiAl AG	FeSi AK	FeNi AH
26	11	AS112026			AH112026
40	17	AS112040			AH112040
60	26	AS112060			AH112060
75	32	AS112075			AH112075
90	38	AS112090			AH112090
125	53	AS112125			AH112125
147	63				AH112147
160	68				AH112160
173	74				AH112173

A_L (nH/N²) vs NI Curve (60μ)



OD127

OD 12.70mm / 0.500inches

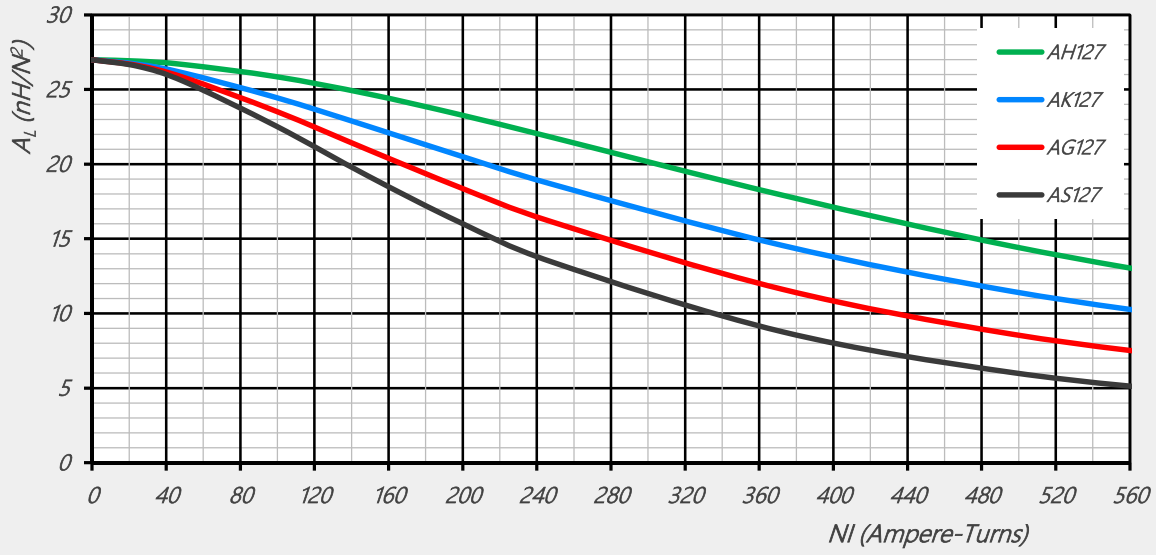


Dimensions	unit	OD(Max)	ID(Min)	HT (Max)
Bare Core	mm	12.70	7.62	4.75
	inch	0.500	0.300	0.187
Coated Core	mm	13.46	6.99	5.51
	inch	0.530	0.275	0.217

Cross Section Ae	Path Length Le	Volume Ve	Window Area Wa	M. Length/Turn MLT
0.114cm^2	3.12cm	0.35568cm^3	0.383cm^2	1.75cm
0.01767in^2	1.229in	0.02172in^3	75,600cmil	0.69in

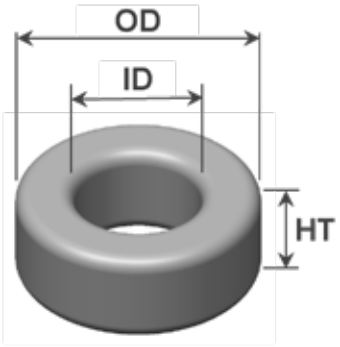
Perm. (μ)	A_L ± 8% (nH/N^2)	FeSiAl AS	FeSiAl AG	FeSi AK	FeNi AH
26	12	AS127026	AG127026	AK127026	AH127026
40	18	AS127040	AG127040	AK127040	AH127040
60	27	AS127060	AG127060	AK127060	AH127060
75	34	AS127075	AG127075	AK127075	AH127075
90	40	AS127090	AG127090	AK127090	AH127090
125	56	AS127125			AH127125
147	67				AH127147
160	72				AH127160
173	78				AH127173

A_L (nH/N²) vs NI Curve (60μ)



OD166

OD 16.51mm / 0.650inches

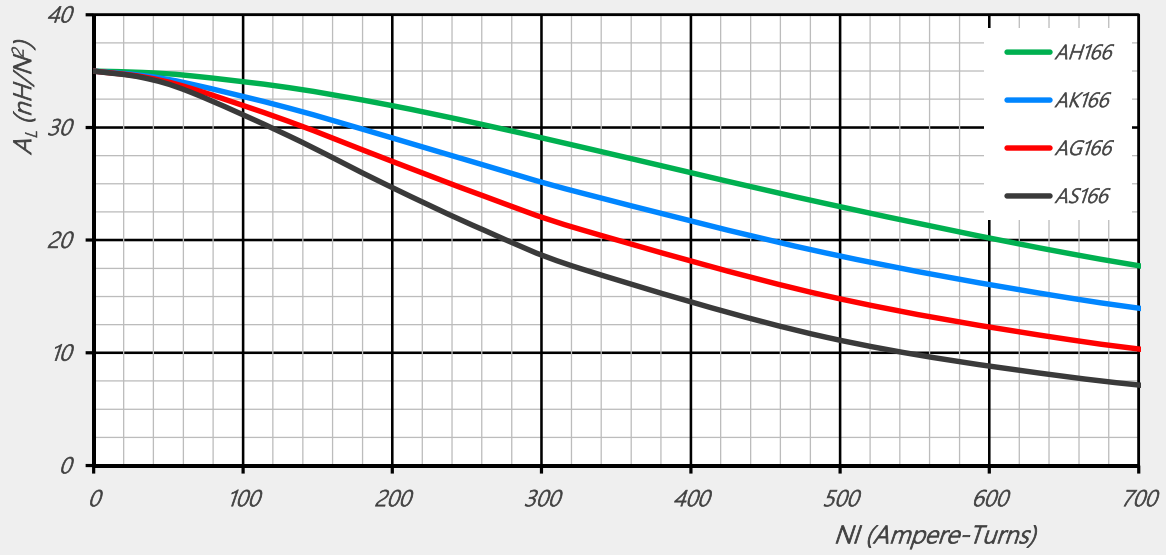


Dimensions	unit	OD(Max)	ID(Min)	HT (Max)
Bare Core	mm	16.51	10.16	6.35
	inch	0.650	0.400	0.250
Coated Core	mm	17.40	9.53	7.11
	inch	0.680	0.375	0.280

Cross Section Ae	Path Length Le	Volume Ve	Window Area Wa	M. Length/Turn MLT
0.192cm^2	4.11cm	0.7891cm^3	0.713cm^2	2.21cm
0.0298in^2	1.619in	0.0438in^3	140,600cmil	0.87in

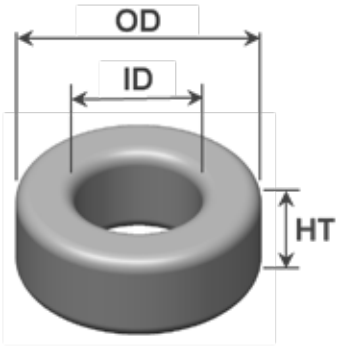
Perm. (μ)	A_L ± 8% (nH/N^2)	FeSiAl AS	FeSiAl AG	FeSi AK	FeNi AH
26	15	AS166026	AG166026	AK166026	AH166026
40	23	AS166040	AG166040	AK166040	AH166040
60	35	AS166060	AG166060	AK166060	AH166060
75	43	AS166075	AG166075	AK166075	AH166075
90	52	AS166090	AG166090	AK166090	AH166090
125	72	AS166125		AK166125	AH166125
147	88				AH166147
160	92				AH166160
173	99				AH166173

A_L (nH/N²) vs NI Curve (60μ)



OD172

OD 17.27mm / 0.680inches

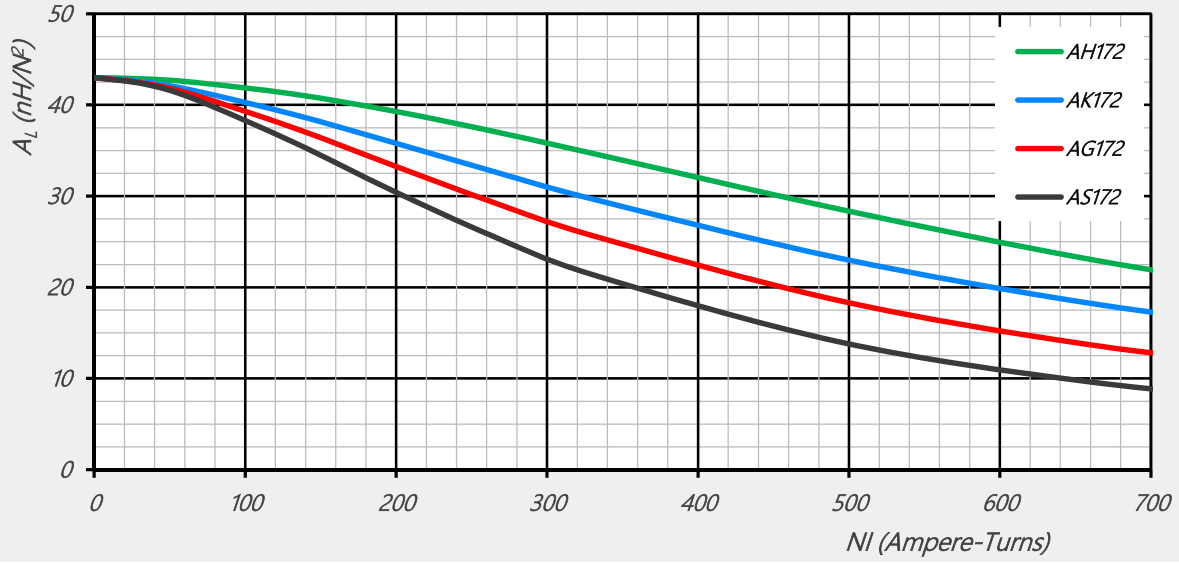


Dimensions	unit	OD(Max)	ID(Min)	HT (Max)
Bare Core	mm	17.27	9.65	6.35
	inch	0.680	0.380	0.250
Coated Core	mm	18.03	9.02	7.11
	inch	0.710	0.355	0.280

Cross Section Ae	Path Length Le	Volume Ve	Window Area Wa	M. Length/Turn MLT
0.232cm^2	4.14cm	0.9605cm^3	0.683cm^2	2.33cm
0.0360in^2	1.63in	0.05868in^3	126,000cmil	0.91in

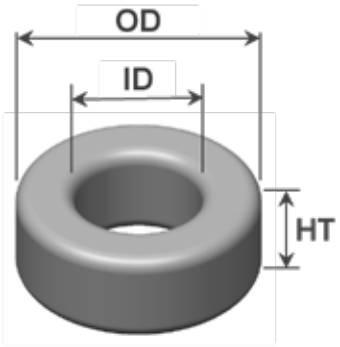
Perm. (μ)	A_L ± 8% (nH/N^2)	FeSiAl AS	FeSiAl AG	FeSi AK	FeNi AH
26	19	AS172026	AG172026	AK172026	AH172026
40	29	AS172040	AG172040	AK172040	AH172040
60	43	AS172060	AG172060	AK172060	AH172060
75	53	AS172075	AG172075	AK172075	AH172075
90	64	AS172090	AG172090	AK172090	AH172090
125	89	AS172125		AK172125	AH172125
147	105				AH172147
160	114				AH172160
173	123				AH172173

A_L (nH/N²) vs NI Curve (60μ)



OD203

OD 20.32mm / 0.800inches

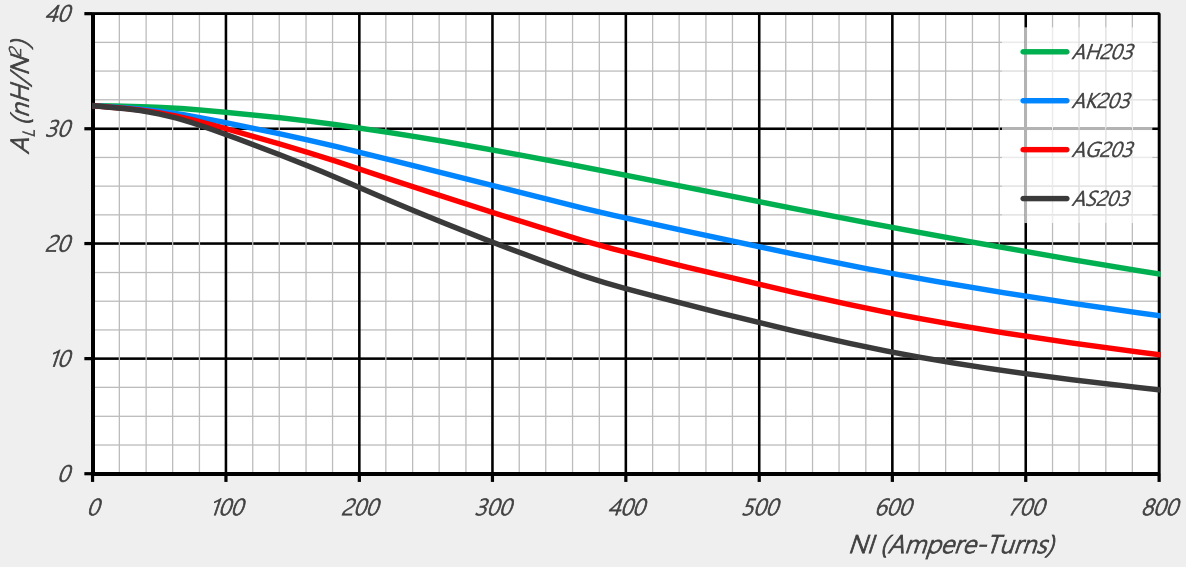


Dimensions	unit	OD(Max)	ID(Min)	HT (Max)
Bare Core	mm	20.32	12.70	6.35
	inch	0.800	0.500	0.250
Coated Core	mm	21.10	12.07	7.11
	inch	0.830	0.475	0.280

Cross Section Ae	Path Length Le	Volume Ve	Window Area Wa	M. Length/Turn MLT
0.226cm^2	5.09cm	1.1510cm^3	1.14cm^2	2.33cm
0.0350in^2	2.01in	0.07035in^3	225,600cmil	0.92in

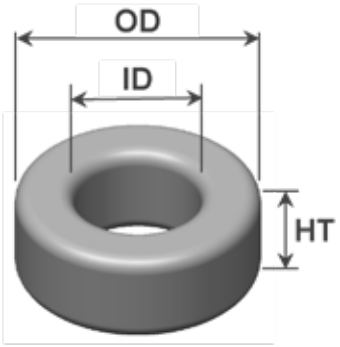
Perm. (μ)	A_L ± 8% (nH/N^2)	FeSiAl AS	FeSiAl AG	FeSi AK	FeNi AH
26	14	AS203026	AG203026	AK203026	AH203026
40	22	AS203040	AG203040	AK203040	AH203040
60	32	AS203060	AG203060	AK203060	AH203060
75	41	AS203075	AG203075	AK203075	AH203075
90	49	AS203090	AG203090	AK203090	AH203090
125	68	AS203125		AK203125	AH203125
147	81				AH203147
160	87				AH203160
173	94				AH203173

A_L (nH/N²) vs NI Curve (60μ)



OD229

OD 22.86mm / 0.900inches

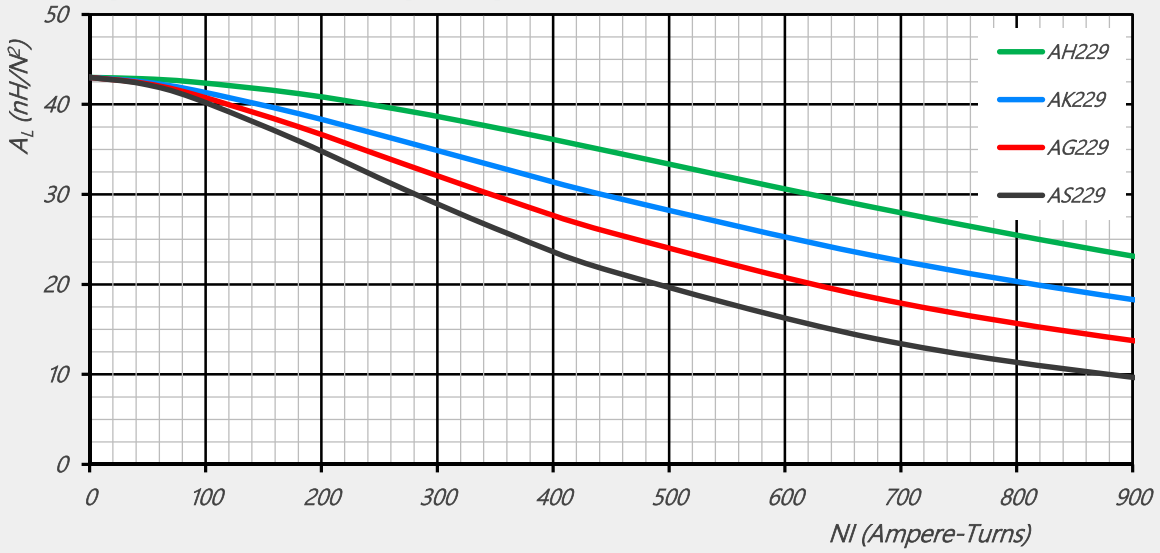


Dimensions	unit	OD(Max)	ID(Min)	HT (Max)
Bare Core	mm	22.86	13.97	7.62
	inch	0.900	0.550	0.300
Coated Core	mm	23.62	13.34	8.38
	inch	0.930	0.525	0.330

Cross Section Ae	Path Length Le	Volume Ve	Window Area Wa	M. Length/Turn MLT
0.331cm^2	5.67cm	1.8771cm^3	1.41cm^2	2.71cm
0.0513in^2	2.23in	0.11455in^3	277,700cmil	1.06in

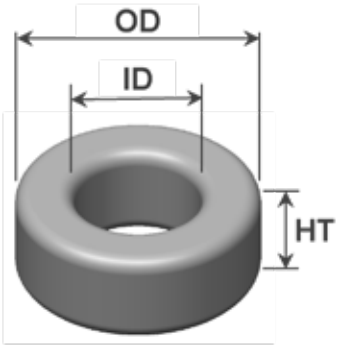
Perm. (μ)	A_L ± 8% (nH/N^2)	FeSiAl AS	FeSiAl AG	FeSi AK	FeNi AH
26	19	AS229026	AG229026	AK229026	AH229026
40	29	AS229040	AG229040	AK229040	AH229040
60	43	AS229060	AG229060	AK229060	AH229060
75	54	AS229075	AG229075	AK229075	AH229075
90	65	AS229090	AG229090	AK229090	AH229090
125	90	AS229125		AK229125	AH229125
147	106				AH229147
160	115				AH229160
173	124				AH229173

A_L (nH/N²) vs NI Curve (60μ)



OD234

OD 23.57mm / 0.928inches

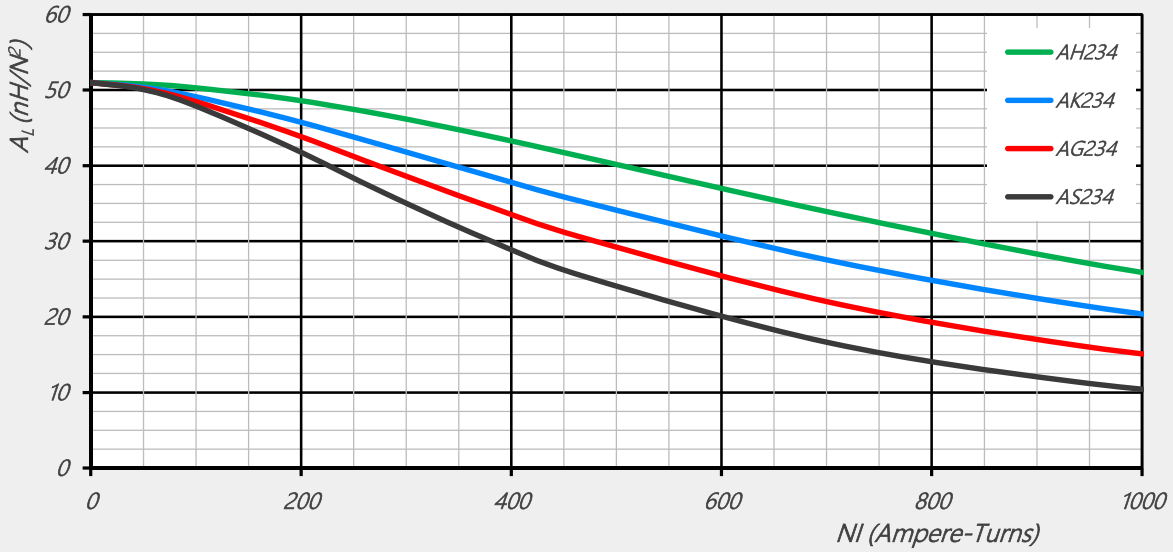


Dimensions	unit	OD(Max)	ID(Min)	HT (Max)
Bare Core	mm	23.57	14.40	8.89
	inch	0.928	0.567	0.350
Coated Core	mm	24.30	13.77	9.70
	inch	0.956	0.542	0.382

Cross Section Ae	Path Length Le	Volume Ve	Window Area Wa	M. Length/Turn MLT
0.388cm^2	5.88cm	2.2814cm^3	1.49cm^2	2.99cm
0.061in^2	2.32in	0.1415in^3	293,800cmil	1.18in

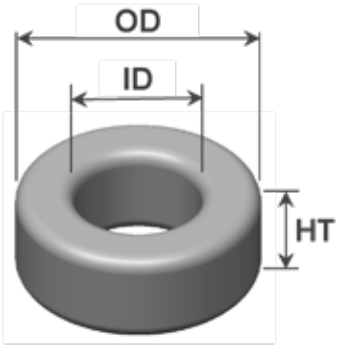
Perm. (μ)	A_L ± 8% (nH/N^2)	FeSiAl AS	FeSiAl AG	FeSi AK	FeNi AH
26	22	AS234026	AG234026	AK234026	AH234026
40	34	AS234040	AG234040	AK234040	AH234040
60	51	AS234060	AG234060	AK234060	AH234060
75	63	AS234075	AG234075	AK234075	AH234075
90	76	AS234090	AG234090	AK234090	AH234090
125	105	AS234125		AK234125	AH234125
147	124				AH234147
160	135				AH234160
173	146				AH234173

A_L (nH/N²) vs NI Curve (60μ)



OD270

OD 26.92mm / 1.060inches

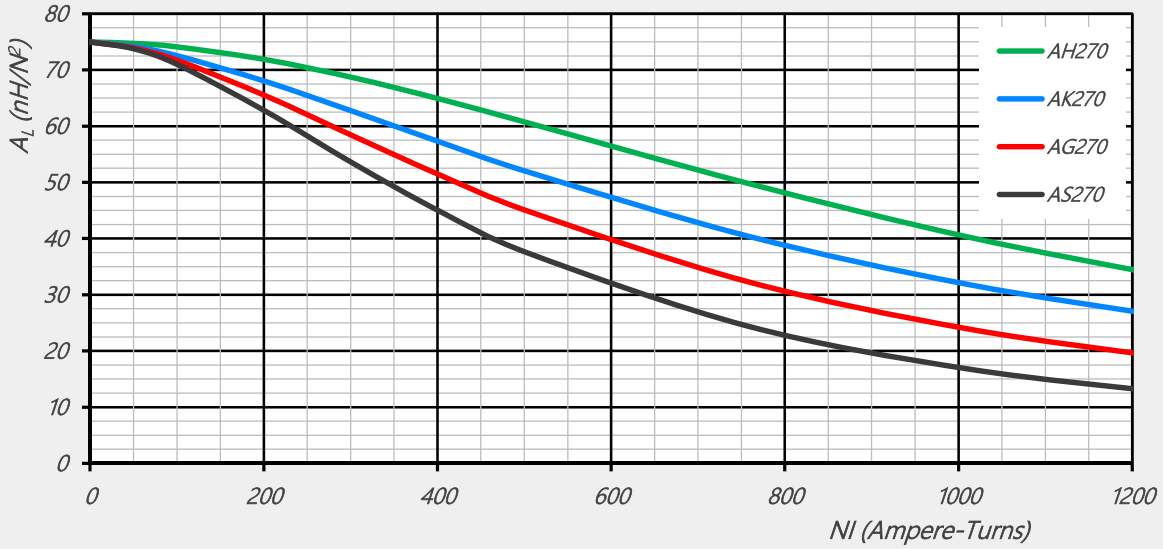


Dimensions	unit	OD(Max)	ID(Min)	HT (Max)
Bare Core	mm	26.92	14.73	11.18
	inch	1.060	0.580	0.440
Coated Core	mm	27.70	14.10	11.99
	inch	1.090	0.555	0.472

Cross Section Ae	Path Length Le	Volume Ve	Window Area Wa	M. Length/Turn MLT
0.654cm^2	6.35cm	4.154cm^3	1.56cm^2	3.76cm
0.101in^2	2.50in	0.2536in^3	308,000cmil	1.48in

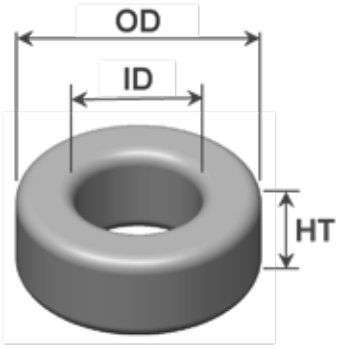
Perm. (μ)	A_L ± 8% (nH/N^2)	FeSiAl AS	FeSiAl AG	FeSi AK	FeNi AH
26	32	AS270026	AG270026	AK270026	AH270026
40	50	AS270040	AG270040	AK270040	AH270040
60	75	AS270060	AG270060	AK270060	AH270060
75	94	AS270075	AG270075	AK270075	AH270075
90	113	AS270090	AG270090	AK270090	AH270090
125	157	AS270125		AK270125	AH270125
147	185				AH270147
160	201				AH270160
173	217				AH270173

A_L (nH/N²) vs NI Curve (60μ)



OD330

OD 33.02mm / 1.300inches

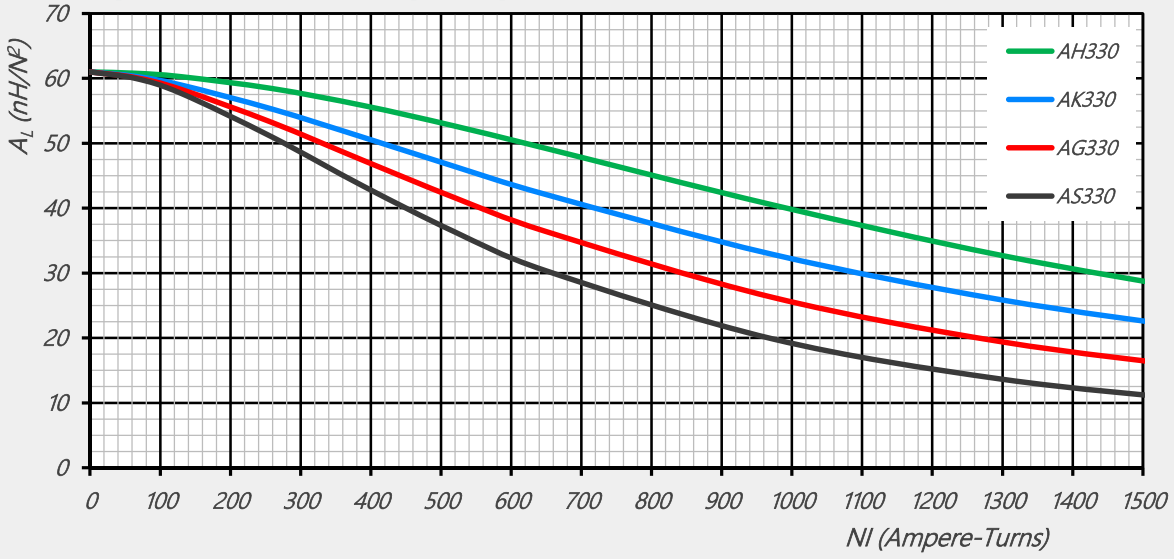


Dimensions	unit	OD(Max)	ID(Min)	HT (Max)
Bare Core	mm	33.02	19.94	10.67
	inch	1.300	0.785	0.420
Coated Core	mm	33.83	19.30	11.61
	inch	1.332	0.760	0.457

Cross Section Ae	Path Length Le	Volume Ve	Window Area Wa	M. Length/Turn MLT
0.672cm^2	8.15cm	5.4768cm^3	2.93cm^2	3.78cm
0.1042in^2	3.21in	0.3345in^3	577,600cmil	1.49in

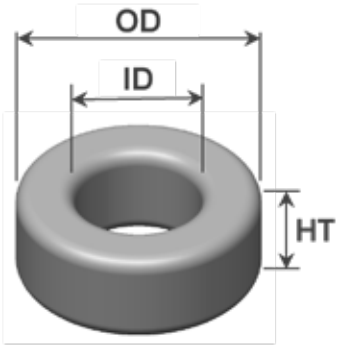
Perm. (μ)	A_L ± 8% (nH/N^2)	FeSiAl AS	FeSiAl AG	FeSi AK	FeNi AH
26	28	AS330026	AG330026	AK330026	AH330026
40	42	AS330040	AG330040	AK330040	AH330040
60	61	AS330060	AG330060	AK330060	AH330060
75	76	AS330075	AG330075	AK330075	AH330075
90	91	AS330090	AG330090	AK330090	AH330090
125	127	AS330125		AK330125	AH330125
147	150				AH330147
160	163				AH330160
173					

A_L (nH/N²) vs NI Curve (60μ)



OD358

OD 35.81mm / 1.410inches

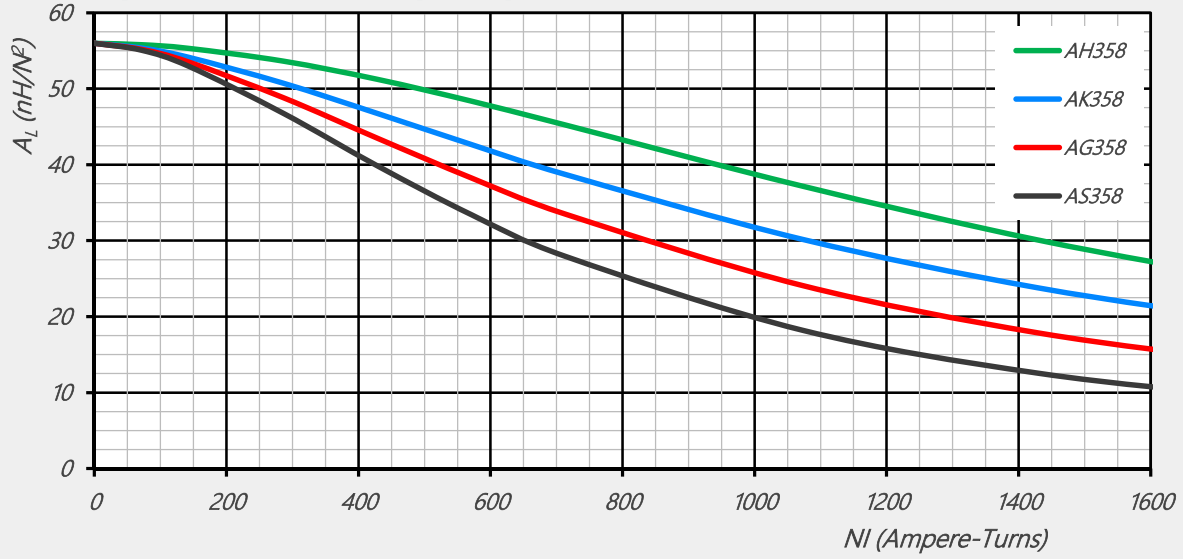


Dimensions	unit	OD(Max)	ID(Min)	HT (Max)
Bare Core	mm	35.81	22.35	10.46
	inch	1.410	0.880	0.412
Coated Core	mm	36.70	21.50	11.35
	inch	1.445	0.848	0.447

Cross Section Ae	Path Length Le	Volume Ve	Window Area Wa	M. Length/Turn MLT
0.678cm^2	8.98cm	6.0884cm^3	3.64cm^2	3.78cm
0.1051in^2	3.54in	0.3721in^3	719,100cmil	1.49in

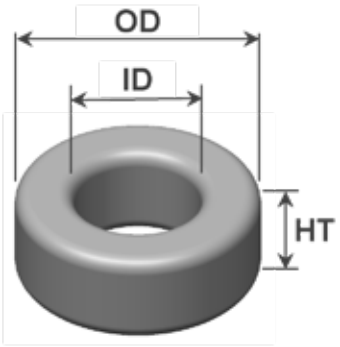
Perm. (μ)	A_L ± 8% (nH/N^2)	FeSiAl AS	FeSiAl AG	FeSi AK	FeNi AH
26	24	AS358026	AG358026	AK358026	AH358026
40	37	AS358040	AG358040	AK358040	AH358040
60	56	AS358060	AG358060	AK358060	AH358060
75	70	AS358075	AG358075	AK358075	AH358075
90	84	AS358090	AG358090	AK358090	AH358090
125	117	AS358125		AK358125	AH358125
147	138				AH358147
160	150				AH358160
173					

A_L (nH/N²) vs NI Curve (60μ)



OD400

OD 39.88mm / 1.570inches

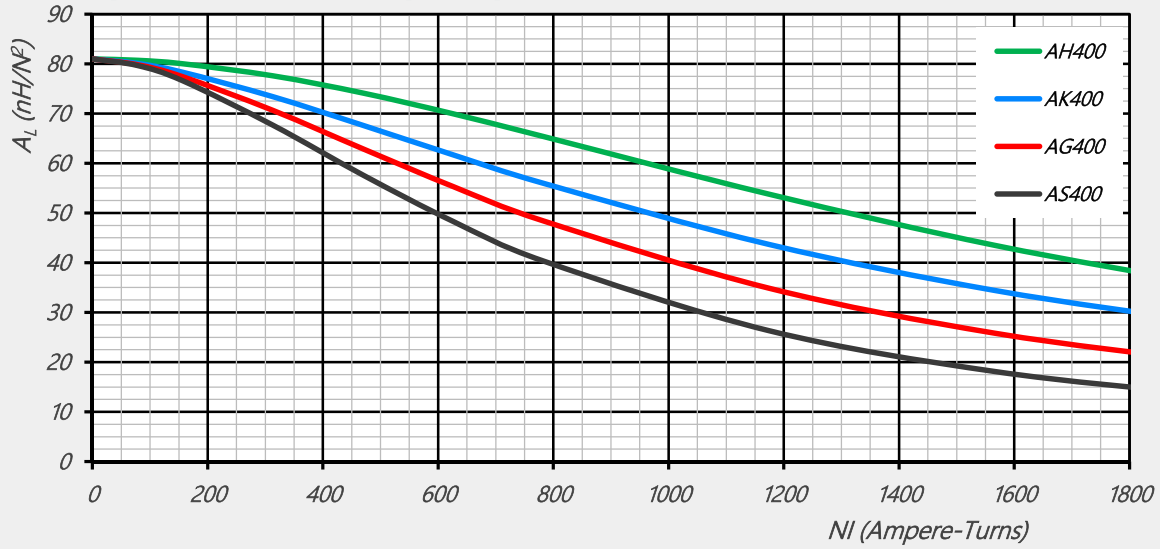


Dimensions	unit	OD(Max)	ID(Min)	HT (Max)
Bare Core	mm	39.88	24.13	14.48
	inch	1.570	0.950	0.570
Coated Core	mm	40.80	23.30	15.37
	inch	1.605	0.918	0.605

Cross Section Ae	Path Length Le	Volume Ve	Window Area Wa	M. Length/Turn MLT
1.072cm^2	9.84cm	10.5485cm^3	4.27cm^2	4.81cm
0.1662in^2	3.88in	0.6449in^3	842,700cmil	1.9in

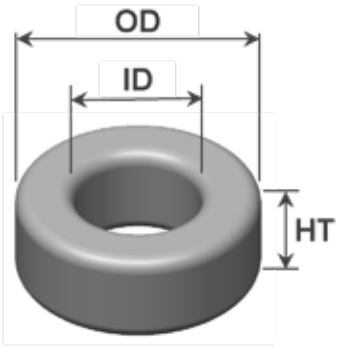
Perm. (μ)	A_L ± 8% (nH/N^2)	FeSiAl AS	FeSiAl AG	FeSi AK	FeNi AH
26	35	AS400026	AG400026	AK400026	AH400026
40	54	AS400040	AG400040	AK400040	AH400040
60	81	AS400060	AG400060	AK400060	AH400060
75	101	AS400075	AG400075	AK400075	AH400075
90	121	AS400090	AG400090	AK400090	AH400090
125	168	AS400125		AK400125	AH400125
147	198				AH400147
160	215				AH400160
173					

A_L (nH/N²) vs NI Curve (60μ)



OD467

OD 46.74mm / 1.840inches

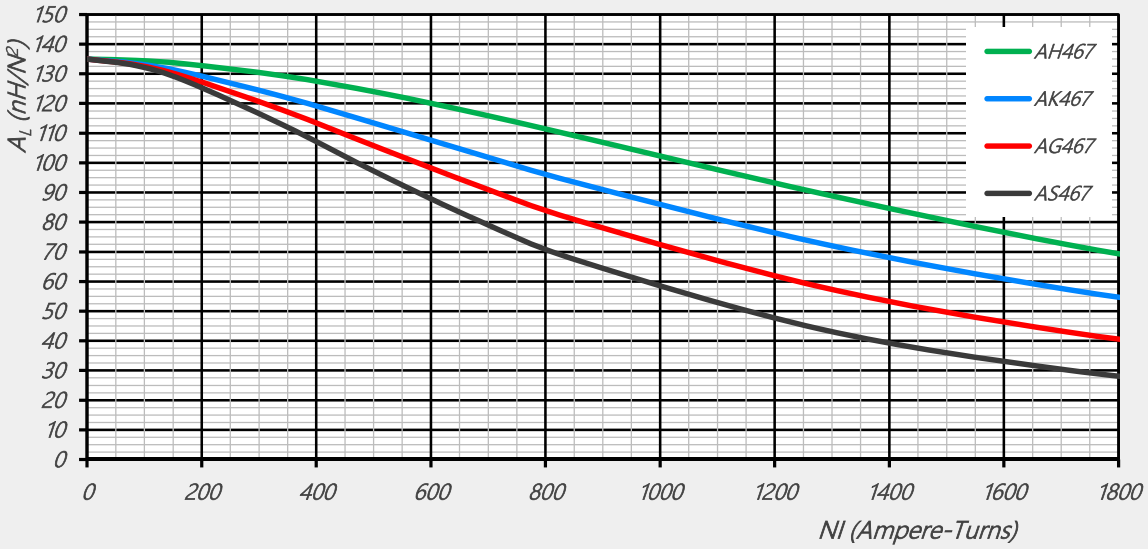


Dimensions	unit	OD(Max)	ID(Min)	HT (Max)
Bare Core	mm	46.74	24.13	18.03
	inch	1.840	0.950	0.710
Coated Core	mm	47.60	23.30	18.92
	inch	1.875	0.918	0.745

Cross Section Ae	Path Length Le	Volume Ve	Window Area Wa	M. Length/Turn MLT
1.990cm^2	10.74cm	21.373cm^3	4.27cm^2	6.22cm
0.308in^2	4.23in	1.303in^3	842,700cmil	2.45in

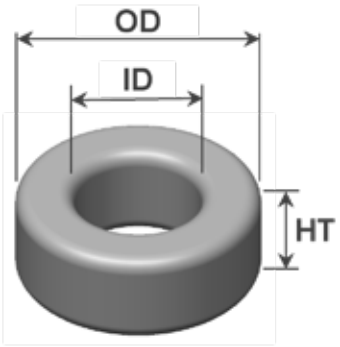
Perm. (μ)	A_L ± 8% (nH/N^2)	FeSiAl AS	FeSiAl AG	FeSi AK	FeNi AH
26	59	AS467026	AG467026	AK467026	AH467026
40	90	AS467040	AG467040	AK467040	AH467040
60	135	AS467060	AG467060	AK467060	AH467060
75	169	AS467075	AG467075	AK467075	AH467075
90	202	AS467090	AG467090	AK467090	AH467090
125	281	AS467125		AK467125	AH467125
147	330				AH467147
160					
173					

A_L (nH/N^2) vs NI Curve (60μ)



OD468

OD 46.74mm / 1.840inches

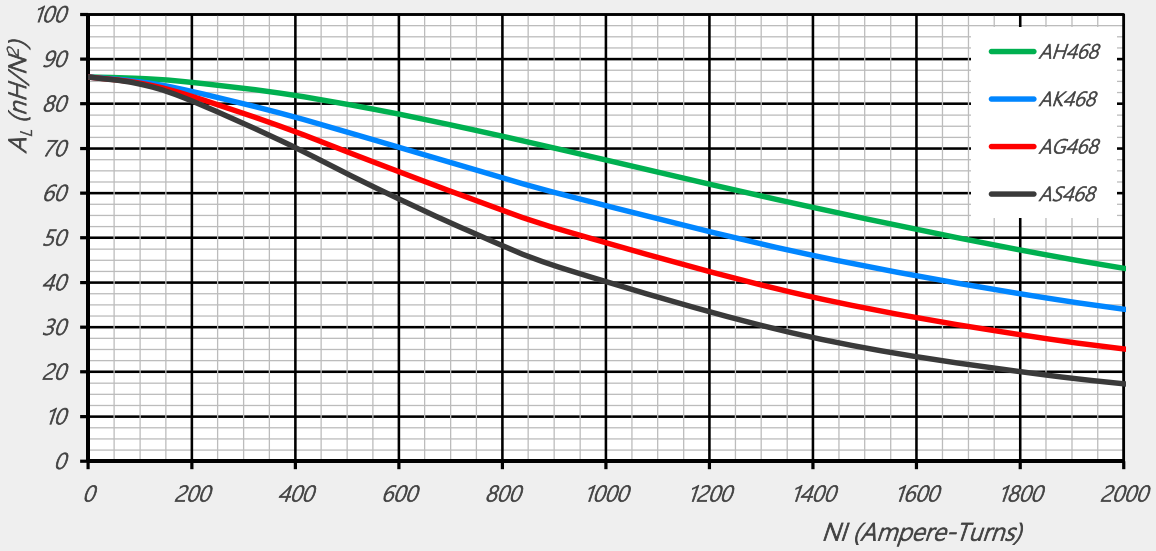


Dimensions	unit	OD(Max)	ID(Min)	HT (Max)
Bare Core	mm	46.74	28.70	15.24
	inch	1.840	1.130	0.600
Coated Core	mm	47.60	27.90	16.13
	inch	1.875	1.098	0.635

Cross Section Ae	Path Length Le	Volume Ve	Window Area Wa	M. Length/Turn MLT
1.340cm^2	11.63cm	15.584cm^3	6.11cm^2	5.20cm
0.208in^2	4.58in	0.9526in^3	1,206,000cmil	2.05in

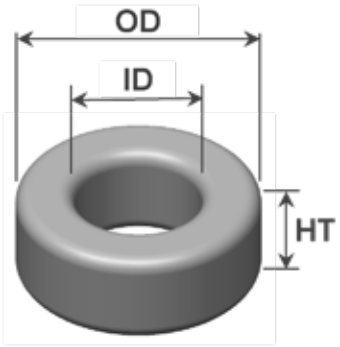
Perm. (μ)	A_L ± 8% (nH/N^2)	FeSiAl AS	FeSiAl AG	FeSi AK	FeNi AH
26	37	AS468026	AG468026	AK468026	AH468026
40	57	AS468040	AG468040	AK468040	AH468040
60	86	AS468060	AG468060	AK468060	AH468060
75	107	AS468075	AG468075	AK468075	AH468075
90	128	AS468090	AG468090	AK468090	AH468090
125	178	AS468125		AK468125	AH468125
147	210				AH468147
160					
173					

A_L (nH/N²) vs NI Curve (60μ)



OD508

OD 50.80mm / 2.000inches

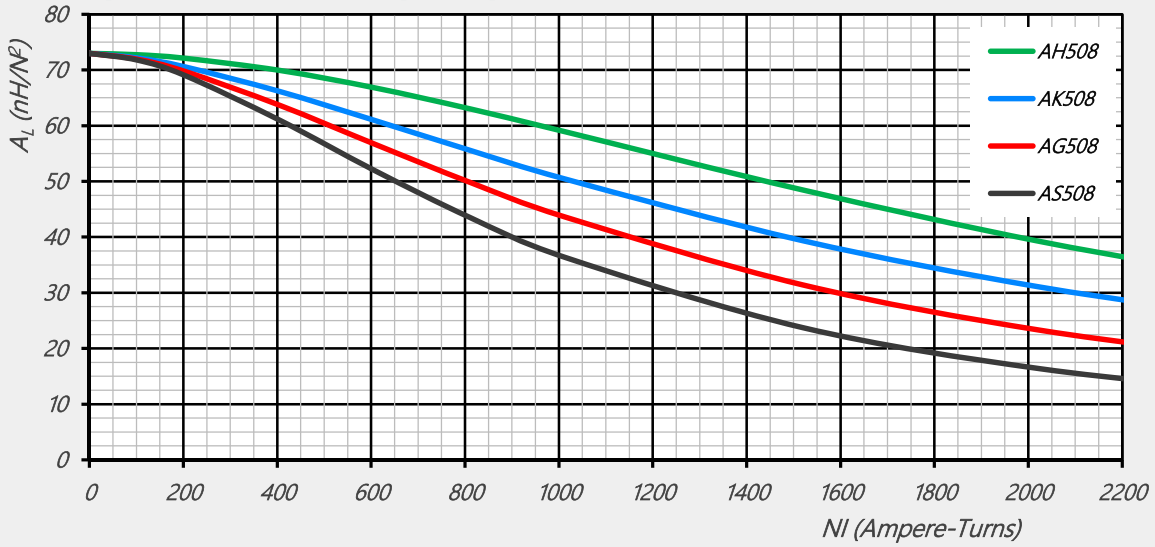


Dimensions	unit	OD(Max)	ID(Min)	HT (Max)
Bare Core	mm	50.80	31.75	13.46
	inch	2.000	1.250	0.530
Coated Core	mm	51.70	30.90	14.35
	inch	2.035	1.218	0.565

Cross Section Ae	Path Length Le	Volume Ve	Window Area Wa	M. Length/Turn MLT
1.251cm^2	12.73cm	15.929cm^3	7.50cm^2	4.95cm
0.194in^2	5.02in	0.9739in^3	1,484,000cmil	1.95in

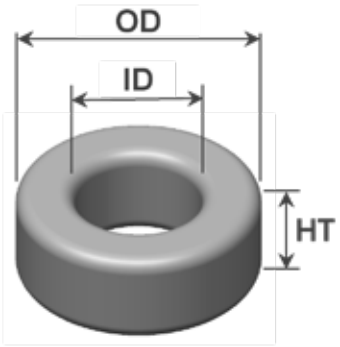
Perm. (μ)	A_L ± 8% (nH/N^2)	FeSiAl AS	FeSiAl AG	FeSi AK	FeNi AH
26	32	AS508026	AG508026	AK508026	AH508026
40	49	AS508040	AG508040	AK508040	AH508040
60	73	AS508060	AG508060	AK508060	AH508060
75	91	AS508075	AG508075	AK508075	AH508075
90	109	AS508090	AG508090	AK508090	AH508090
125	152	AS508125		AK508125	AH508125
147	179				AH508147
160					
173					

A_L (nH/N²) vs NI Curve (60μ)



OD571

OD 57.15mm / 2.250inches

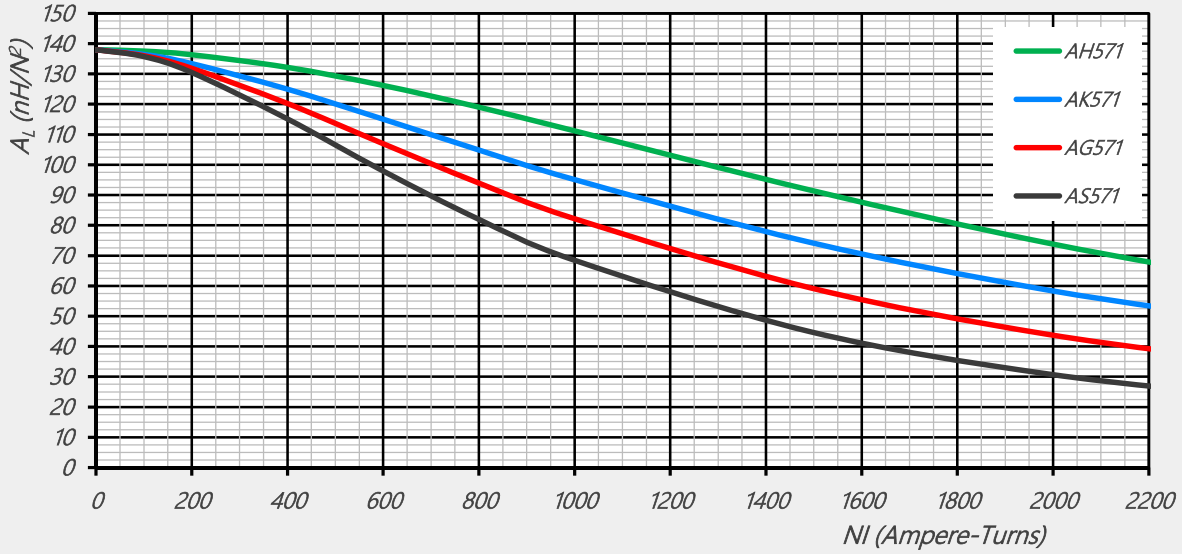


Dimensions	unit	OD(Max)	ID(Min)	HT (Max)
Bare Core	mm	57.15	26.39	15.24
	inch	2.250	1.039	0.600
Coated Core	mm	58.00	25.60	16.10
	inch	2.285	1.007	0.635

Cross Section Ae	Path Length Le	Volume Ve	Window Area Wa	M. Length/Turn MLT
2.29cm^2	12.50cm	28.60cm^3	5.14cm^2	6.46cm
0.355in^2	4.93in	1.75in^3	1,014,049cmil	2.54in

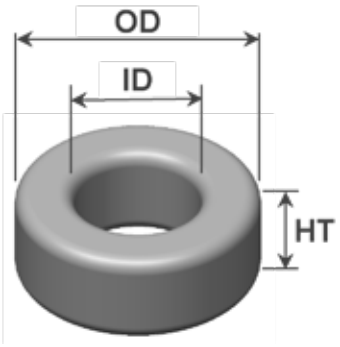
Perm. (μ)	A_L ± 8% (nH/N^2)	FeSiAl AS	FeSiAl AG	FeSi AK	FeNi AH
26	60	AS571026	AG571026	AK571026	AH571026
40	92	AS571040	AG571040	AK571040	AH571040
60	138	AS571060	AG571060	AK571060	AH571060
75	172	AS571075	AG571075	AK571075	AH571075
90	206	AS571090	AG571090	AK571090	AH571090
125	287	AS571125		AK571125	AH571125
147					
160					
173					

A_L (nH/N²) vs NI Curve (60μ)



OD572

OD 57.15mm / 2.250inches

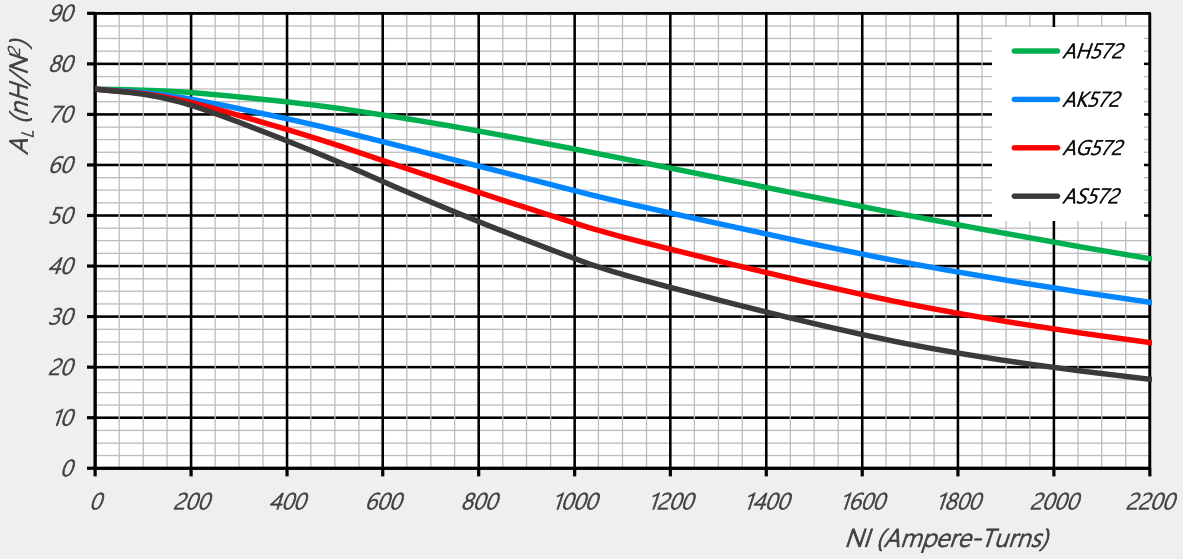


Dimensions	unit	OD(Max)	ID(Min)	HT (Max)
Bare Core	mm	57.15	35.56	13.97
	inch	2.250	1.400	0.550
Coated Core	mm	58.00	34.70	14.86
	inch	2.285	1.368	0.585

Cross Section Ae	Path Length Le	Volume Ve	Window Area Wa	M. Length/Turn MLT
1.444cm^2	14.30cm	20.65cm^3	9.48cm^2	5.30cm
0.244in^2	5.63in	1.261in^3	1,871,000cmil	2.09in

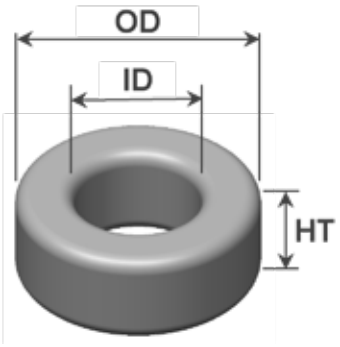
Perm. (μ)	A_L ± 8% (nH/N^2)	FeSiAl AS	FeSiAl AG	FeSi AK	FeNi AH
26	33	AS572026	AG572026	AK572026	AH572026
40	50	AS572040	AG572040	AK572040	AH572040
60	75	AS572060	AG572060	AK572060	AH572060
75	94	AS572075	AG572075	AK572075	AH572075
90	112	AS572090		AK572090	AH572090
125	156	AS572125			AH572125
147					
160					
173					

A_L (nH/N^2) vs NI Curve (60μ)



OD610

OD 62.00mm / 2.441inches

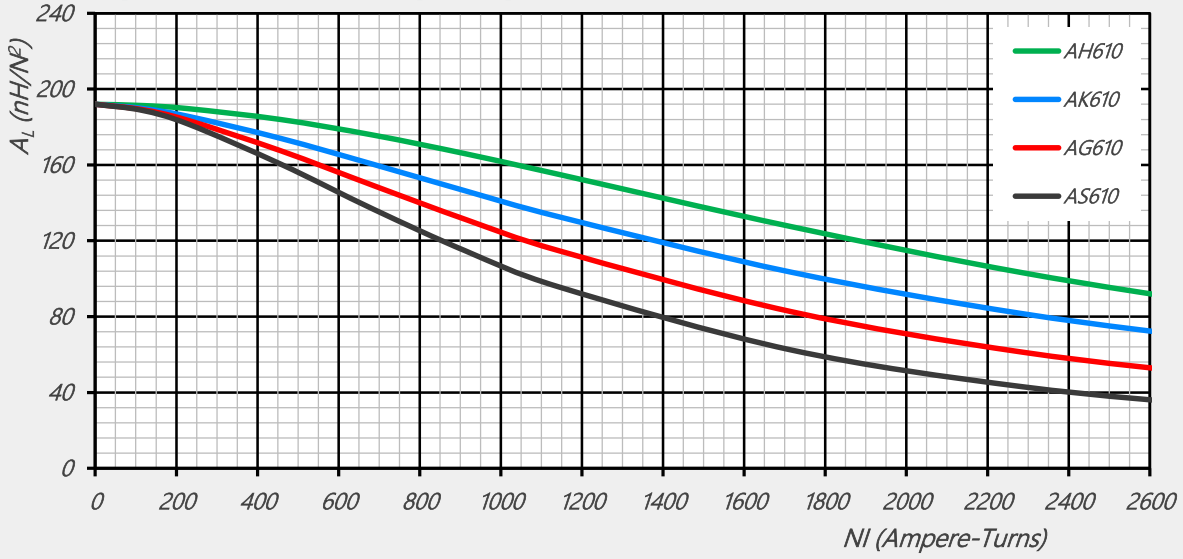


Dimensions	unit	OD(Max)	ID(Min)	HT (Max)
Bare Core	mm	62.00	32.60	25.00
	inch	2.441	1.283	0.984
Coated Core	mm	63.10	31.37	26.27
	inch	2.484	1.235	1.034

Cross Section Ae	Path Length Le	Volume Ve	Window Area Wa	M. Length/Turn MLT
3.675cm^2	14.37cm	52.81cm^3	7.73cm^2	8.43cm
0.570in^2	5.66in	3.223in^3	1,525,610cmil	3.32in

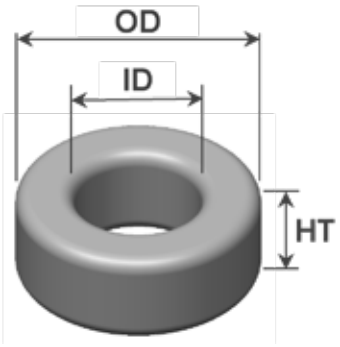
Perm. (μ)	A_L ± 8% (nH/N^2)	FeSiAl AS	FeSiAl AG	FeSi AK	FeNi AH
26	83	AS610026	AG610026	AK610026	AH610026
40	128	AS610040	AG610040	AK610040	AH610040
60	192	AS610060	AG610060	AK610060	AH610060
75	240	AS610075	AG610075	AK610075	AH610075
90	288	AS610090		AK610090	AH610090
125	400	AS610125			AH610125
147					
160					
173					

A_L (nH/N²) vs NI Curve (60μ)



OD740

OD 74.10mm / 2.917inches

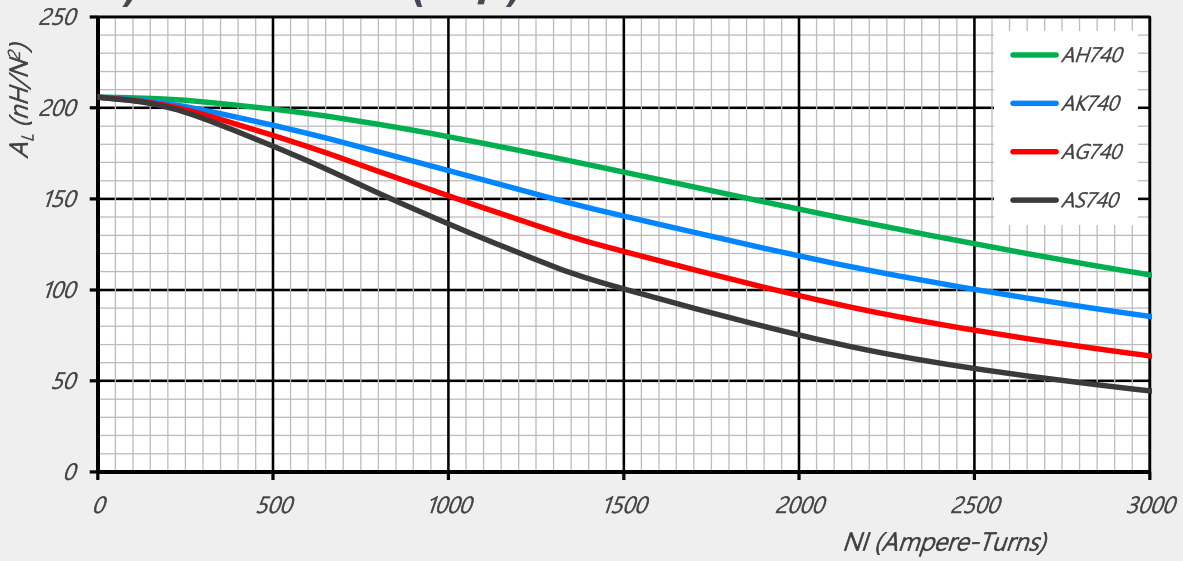


Dimensions	unit	OD(Max)	ID(Min)	HT (Max)
Bare Core	mm	74.10	45.30	35.00
	inch	2.917	1.783	1.378
Coated Core	mm	75.20	44.07	36.27
	inch	2.961	1.735	1.428

Cross Section Ae	Path Length Le	Volume Ve	Window Area Wa	M. Length/Turn MLT
5.040cm^2	18.38cm	92.64cm^3	15.25cm^2	10.37cm
0.781in^2	7.24in	5.653in^3	3,009,310cmil	4.08in

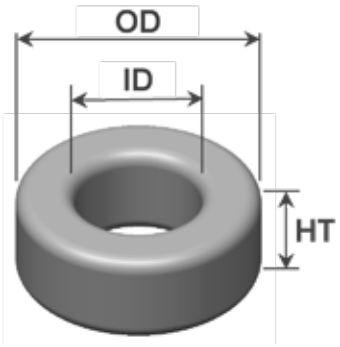
Perm. (μ)	A_L ± 8% (nH/N^2)	FeSiAl AS	FeSiAl AG	FeSi AK	FeNi AH
26	89	AS740026	AG740026	AK740026	AH740026
40	137	AS740040	AG740040	AK740040	AH740040
60	206	AS740060	AG740060	AK740060	AH740060
75	257	AS740075	AG740075	AK740075	AH740075
90	309	AS740090		AK740090	AH740090
125	429	AS740125			AH740125
147					
160					
173					

A_L (nH/N²) vs NI Curve (60μ)



OD777

OD 77.80mm / 3.063inches

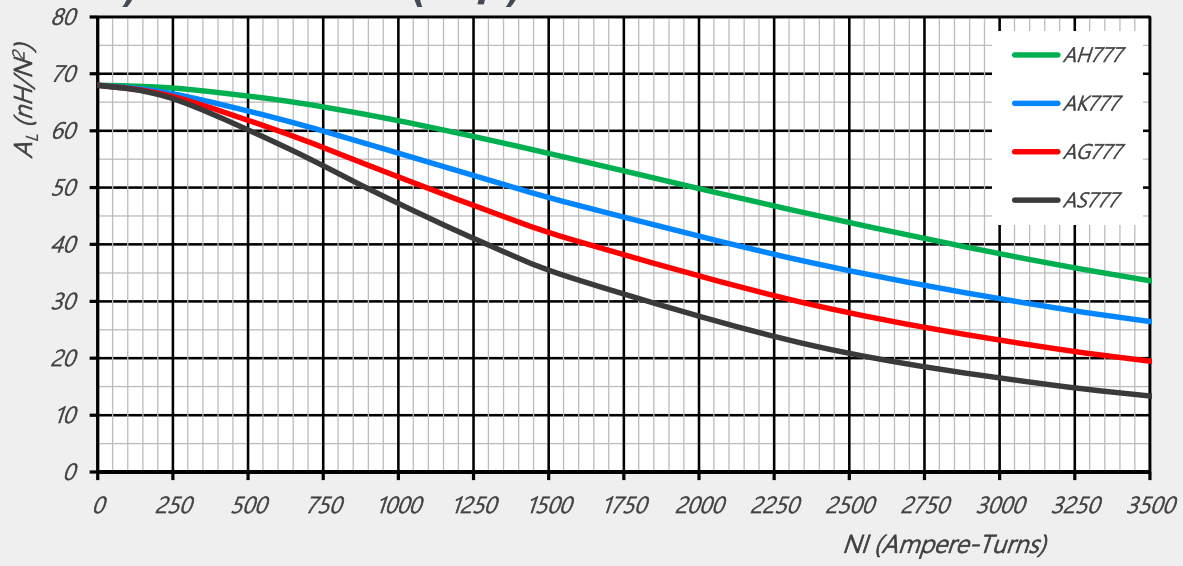


Dimensions	unit	OD(Max)	ID(Min)	HT (Max)
Bare Core	mm	77.80	49.23	12.70
	inch	3.063	1.938	0.500
Coated Core	mm	78.90	47.78	13.97
	inch	3.108	1.881	0.550

Cross Section Ae	Path Length Le	Volume Ve	Window Area Wa	M. Length/Turn MLT
1.770cm^2	20.00cm	34.770cm^3	17.99cm^2	5.88cm
0.274in^2	7.72in	2.122in^3	3,550,000cmil	2.32in

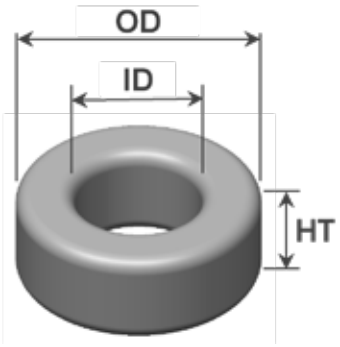
Perm. (μ)	A_L ± 8% (nH/N^2)	FeSiAl AS	FeSiAl AG	FeSi AK	FeNi AH
26	30	AS777026	AG777026	AK777026	AH777026
40	46	AS777040	AG777040	AK777040	AH777040
60	68	AS777060	AG777060	AK777060	AH777060
75	85	AS777075	AG777075	AK777075	AH777075
90	102	AS777090		AK777090	AH777090
125	142	AS777125			AH777125
147					
160					
173					

A_L (nH/N²) vs NI Curve (60μ)



OD778

OD 77.80mm / 3.063inches

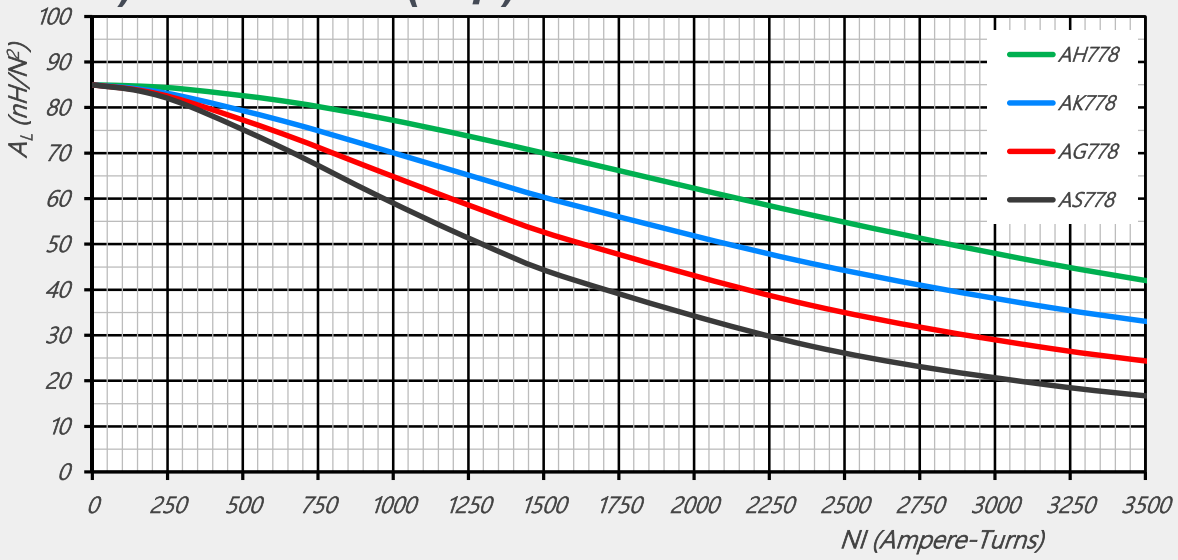


Dimensions	unit	OD(Max)	ID(Min)	HT (Max)
Bare Core	mm	77.80	49.23	15.90
	inch	3.063	1.938	0.626
Coated Core	mm	78.90	47.78	17.20
	inch	3.108	1.881	0.677

Cross Section Ae	Path Length Le	Volume Ve	Window Area Wa	M. Length/Turn MLT
2.270cm^2	20.00cm	43.531cm^3	17.99cm^2	6.55cm
0.352in^2	7.72in	2.656in^3	3,550,000cmil	2.58in

Perm. (μ)	A_L ± 8% (nH/N^2)	FeSiAl AS	FeSiAl AG	FeSi AK	FeNi AH
26	37	AS778026	AG778026	AK778026	AH778026
40	57	AS778040	AG778040	AK778040	AH778040
60	85	AS778060	AG778060	AK778060	AH778060
75	107	AS778075	AG778075	AK778075	AH778075
90	128	AS778090		AK778090	AH778090
125	178	AS778125			AH778125
147					
160					
173					

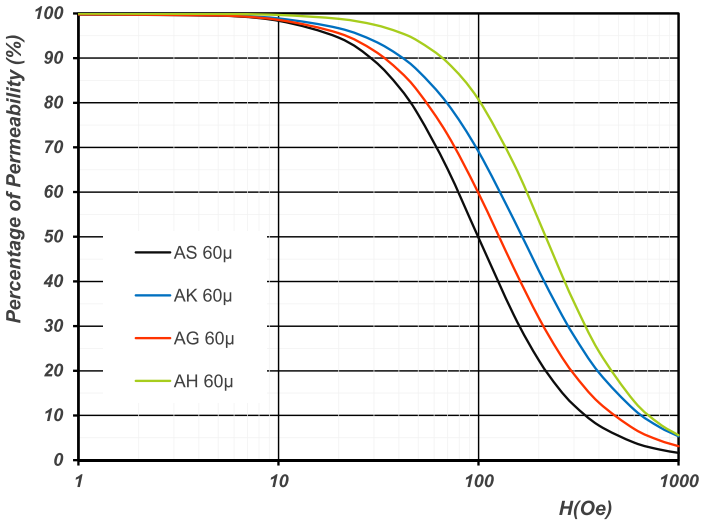
A_L (nH/N²) vs NI Curve (60μ)



Calculation Parameters

Formula for "Permeability vs DC-bias" Curves

With regression analysis of Chi-square minimization the data set of DC bias test of reversible permeability can be processed to get a fitted regression model.



The curve fitting process gives rise to the following equation for the percentage of reversible permeability (%) vs bias field strength:

$$\mu_{rev}\% = \frac{1}{a + b \cdot H^{c}}$$

in which H is the static bias field strength, unit in Oested. For the purpose of numerical calculation the parameters, a, b and c, are given in terms of the specific material grade as follows,

AS

μ_e	a	b	c
26	0.01	1.23E-06	1.697
40	0.01	1.85E-06	1.727
60	0.01	2.75E-06	1.782
75	0.01	4.58E-06	1.755
90	0.01	9.54E-06	1.676
125	0.01	2.41E-05	1.626

AK

μ_e	a	b	c
26	0.01	5.39E-06	1.195
40	0.01	1.35E-06	1.587
60	0.01	2.85E-06	1.598
75	0.01	4.58E-06	1.625
90	0.01	5.24E-06	1.676

AG

μ_e	a	b	c
26	0.01	9.03E-07	1.627
40	0.01	1.83E-06	1.637
60	0.01	3.15E-06	1.665
75	0.01	4.86E-06	4.651
90	0.01	9.24E-06	1.616

AH

μ_e	a	b	c
26	0.01	1.91E-06	1.397
60	0.01	4.72E-07	1.852
90	0.01	4.88E-06	1.575
125	0.01	6.81E-06	1.626
147	0.01	9.84E-06	1.675

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