

# Magnetic Powder Cores

Neu Flux<sup>™</sup> Cores

Sendust Cores

Si-Fe<sup>™</sup> Cores

High Flux Cores

MPP Cores





## Neu Flux™ Cores



## 产品介绍 Introduction of products

**Neu Flux™ Cores**是KDM于2008年4月份开始研发，并于2010年10月份正式量产的新一代合金磁粉芯，由85%Fe和15%Si-Ni合金粉末制成；其饱和磁感应强度在16000Gs，磁导率在26-90，损耗比Si-Fe™ Cores低近一倍，与High Flux Cores相近，直流偏置性能更优于Si-Fe™ Cores，与High Flux Cores相同，是一种替代High Flux Cores的低成本材料；同时也是非晶粉末磁芯理想的替代者，并且更具有优异的温度稳定性与高能量储存能力，也解决了非晶粉末磁芯噪音的问题。主要用于PFC电路、电源电感器等，广泛应用在太阳能、风能及混合动力车等领域。

**Neu Flux™ Cores** is a new generation alloy powder cores from KDM. The research started from April, 2008 and mass-production started from October, 2010. Neu Flux™ Core composes of 85% Fe and 15% Si-Ni. It has saturation flux density of 16000Gs and permeability is between 26-90. Neu Flux™ Core loss is nearly half of Si-Fe™ Cores and very close to the High Flux Cores. Its DC-Bias is also better than Si-Fe™ Cores and same as the High Flux Cores. It is an ideal low cost material to replace High Flux Cores and Amorphous Powder Cores. Neu Flux™ Cores have excellent temperature stability and large energy storage capacity characteristics. It also resolves the audible noise problem of Amorphous Powder Cores at the same time. Main application of Neu Flux™ Cores is in PFC Chokes and Power Inductors. It is also widely used in solar, wind energy, hybrid powered vehicles.

## 特点

饱和磁通密度高达16000Gs  
最优的DC偏流特性  
优异的温度稳定性  
比Si-Fe™ Core更低的损耗  
高储能  
无噪音

## Characteristics

High Bmax 16000Gs  
The Best DC-Bias Characteristics  
Excellent Temperature Stability  
Lower Core Loss than Si-Fe™ Core  
High Energy Storage Capacity  
No Audible Noise

## 用途

大电流电源抗流器  
高储能功率电感器  
PFC抗流器  
开关电源的功率输出电感器  
混合动力汽车的升压电感  
风能及太阳能转换器

## Applications

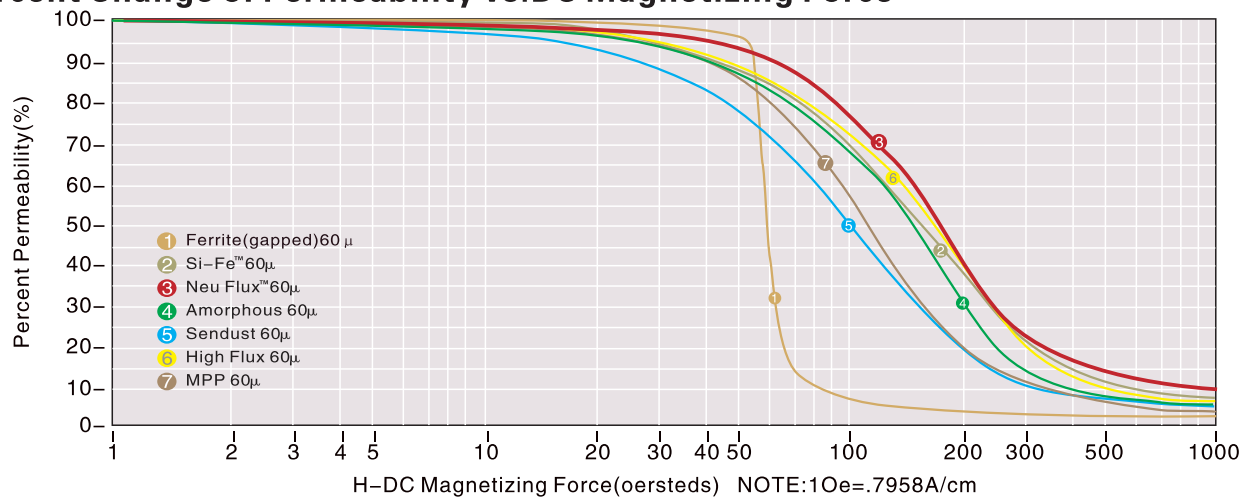
High Current Power Choke  
Power Inductor for Energy Storage  
PFC Chokes  
Output Chokes for Switching Power Supplies  
Boost Buck Power Inductor for HEV  
Inverters of Solar or Wind power generator

**Neu Flux™ KNF™ Si-Fe™** 是浙江科达磁电有限公司的注册商标  
is registered trademark of Zhejiang KEDA Magnetolectricity Co.,Ltd.

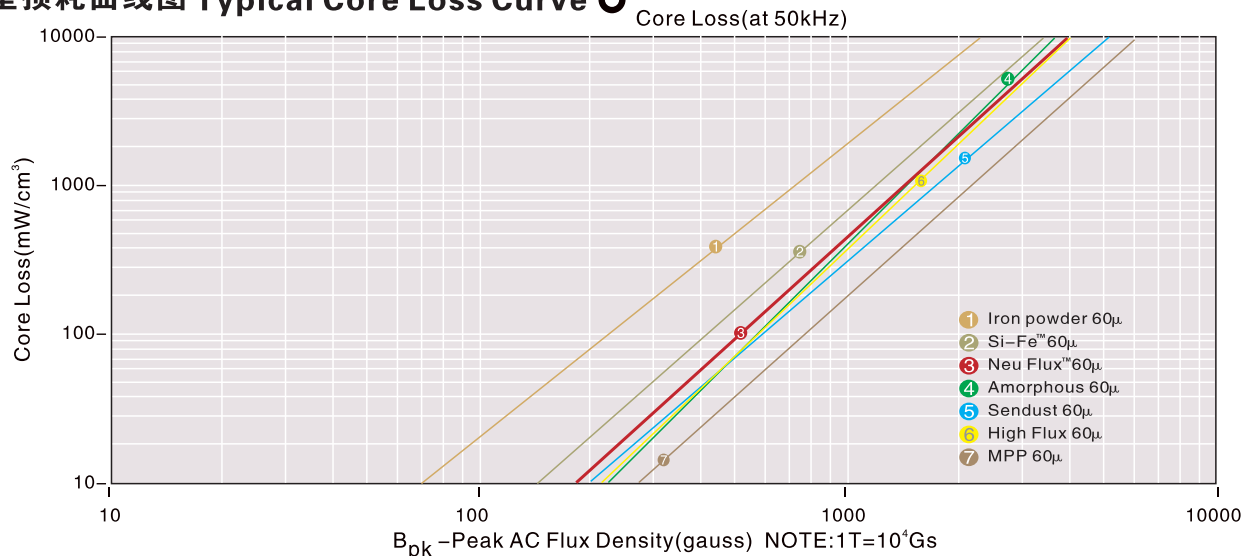
软磁材料性能对照表 Reference Table of Soft Magnetic Material Properties

Property	Composition	Core Loss(mW/cm <sup>3</sup> ) @1000Gs/50kHz	DC-Bias(% $\mu_o$ ) @1000e	Flux Density (Sat.)	Curie Temp.	Temp Stability	Color Code	Relative cost
Iron Powder	99%Fe	2000	40	12000Gs	750℃	Medium	Mix Color	0 . 3
Sendust	85%Fe,9%Si,6%Al	300	45	10500Gs	600℃	Good	Black	1
Si-Fe™	94%Fe,6%Si	750	70	16000Gs	700℃	Good	Blue	1 . 5
High Flux	80%Fe, 50%Ni	400	70	15000Gs	500	Better	Khaki	4
MPP	17%Fe,81%Ni,2%Mo	280	50	7500Gs	400	Best	Gray	6
※ Amorphous PowderCores	78%Fe, 94%Si, 13%B	68	68	15000Gs	400	Poor	-	3 . 5
Neu Flux™	85%Fe,15%Si-Ni	480	78	16000Gs	650℃	Better	Brown	2

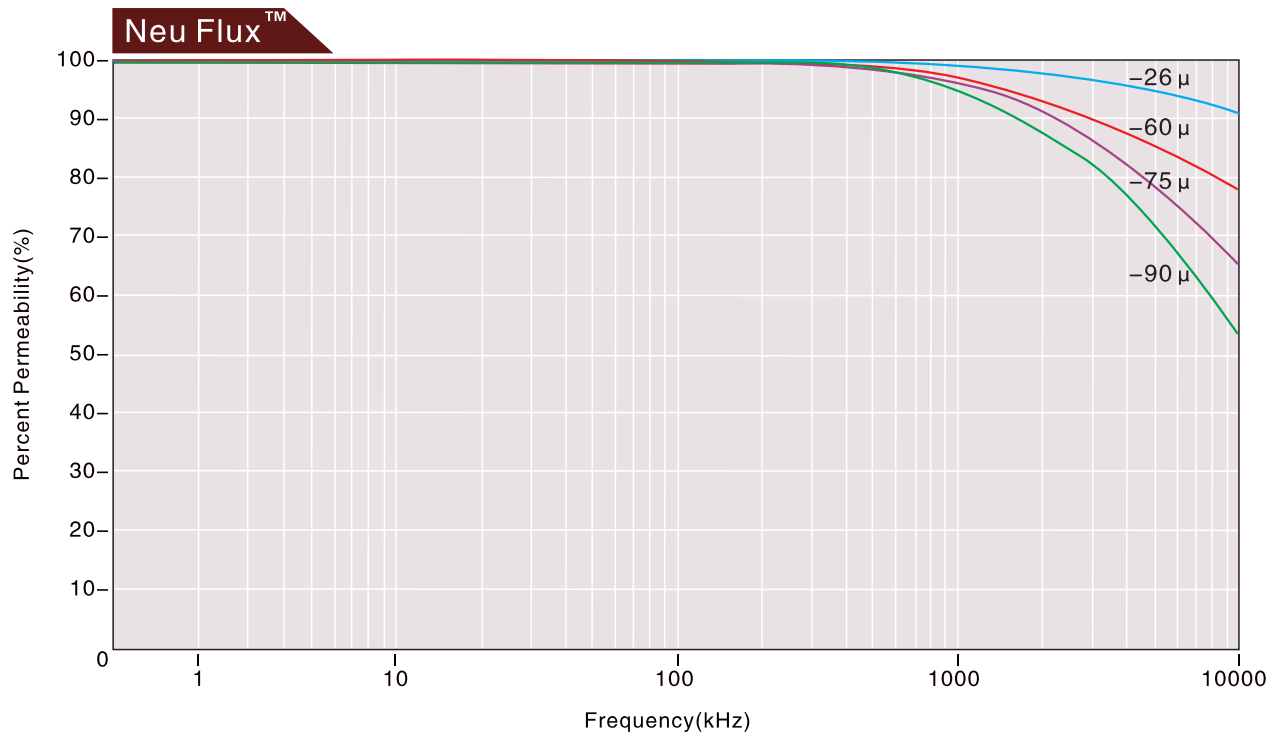
\* 每种测试材料均采用了相同的有效磁导率为60 $\mu$ i. All tests are based on 60 $\mu$ i material.  
※ 只供参考, KDM没有生产。For regerue only, not in KDM product portfolio.

磁导率百分率与DC磁化力关系曲线  
Percent Change of Permeability vs. DC Magnetizing Force

典型损耗曲线图 Typical Core Loss Curve

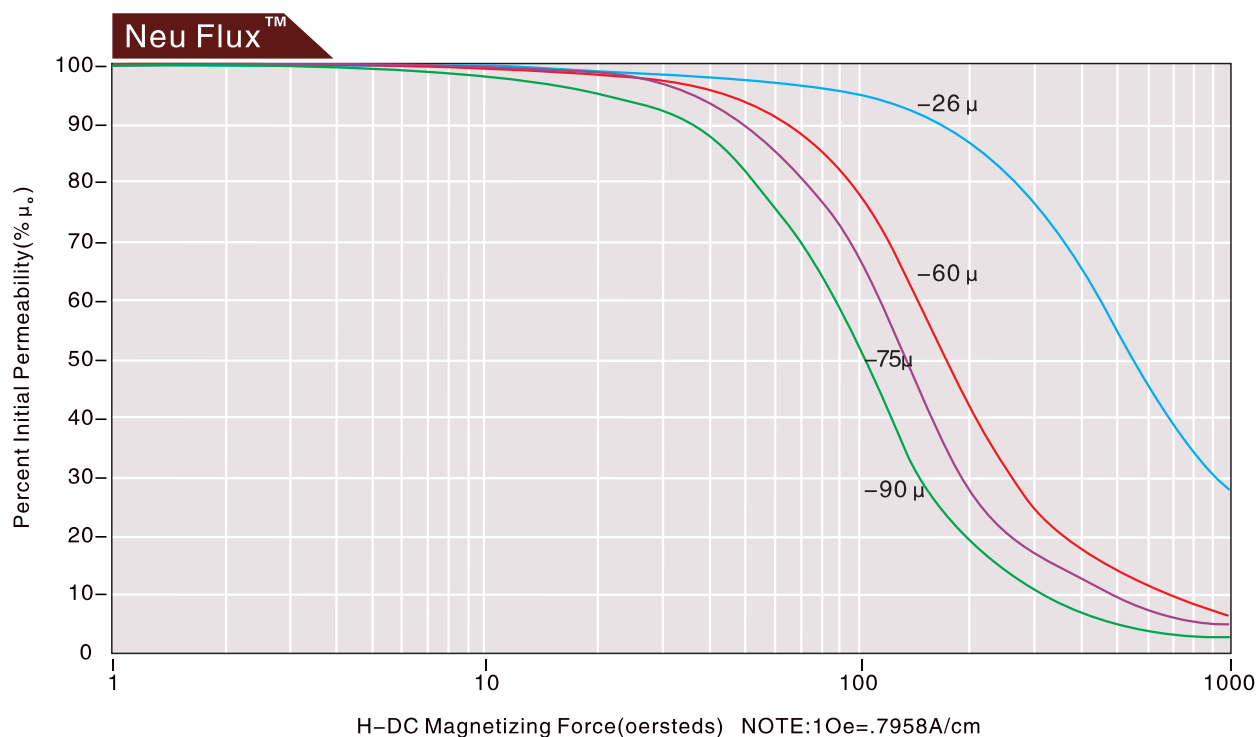


磁导率与频率关系曲线 Permeability vs .Frequency



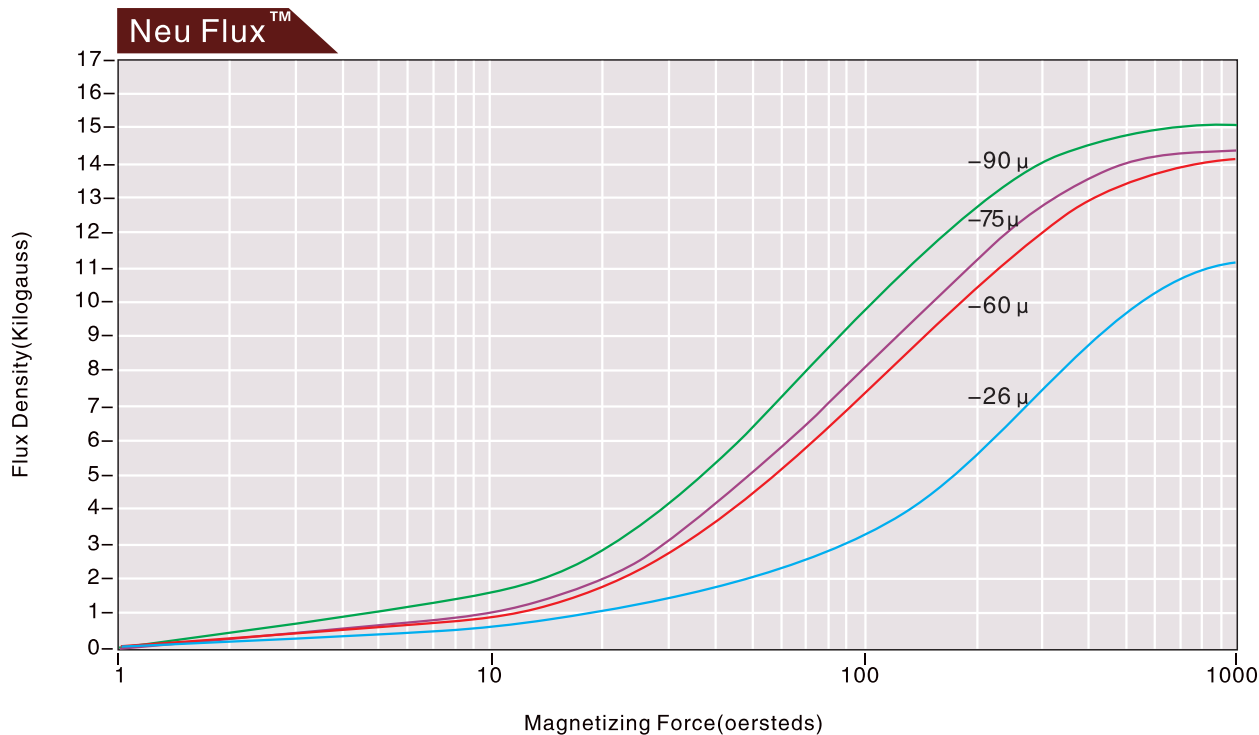
磁导率百分率与DC磁化力关系曲线

Percent Change of Permeability vs .DC Magnetizing Force

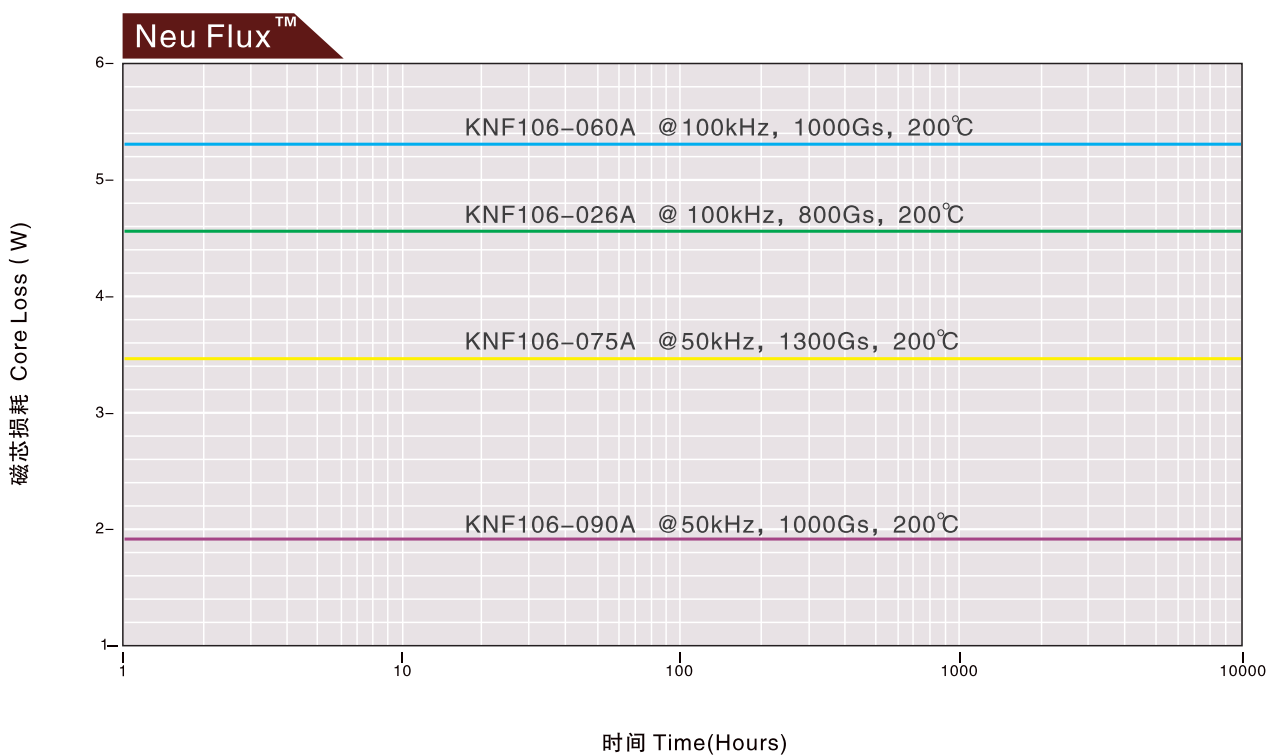




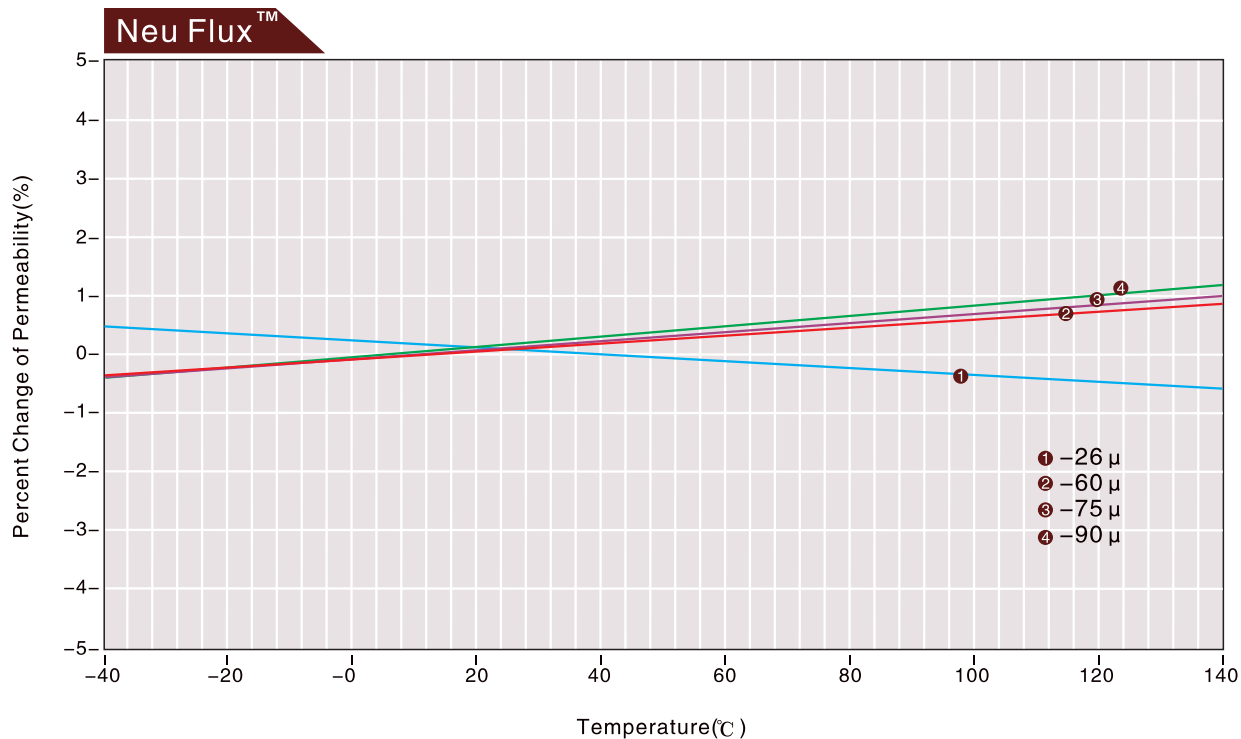
## 标准磁化曲线 Normal Magnetization Curves



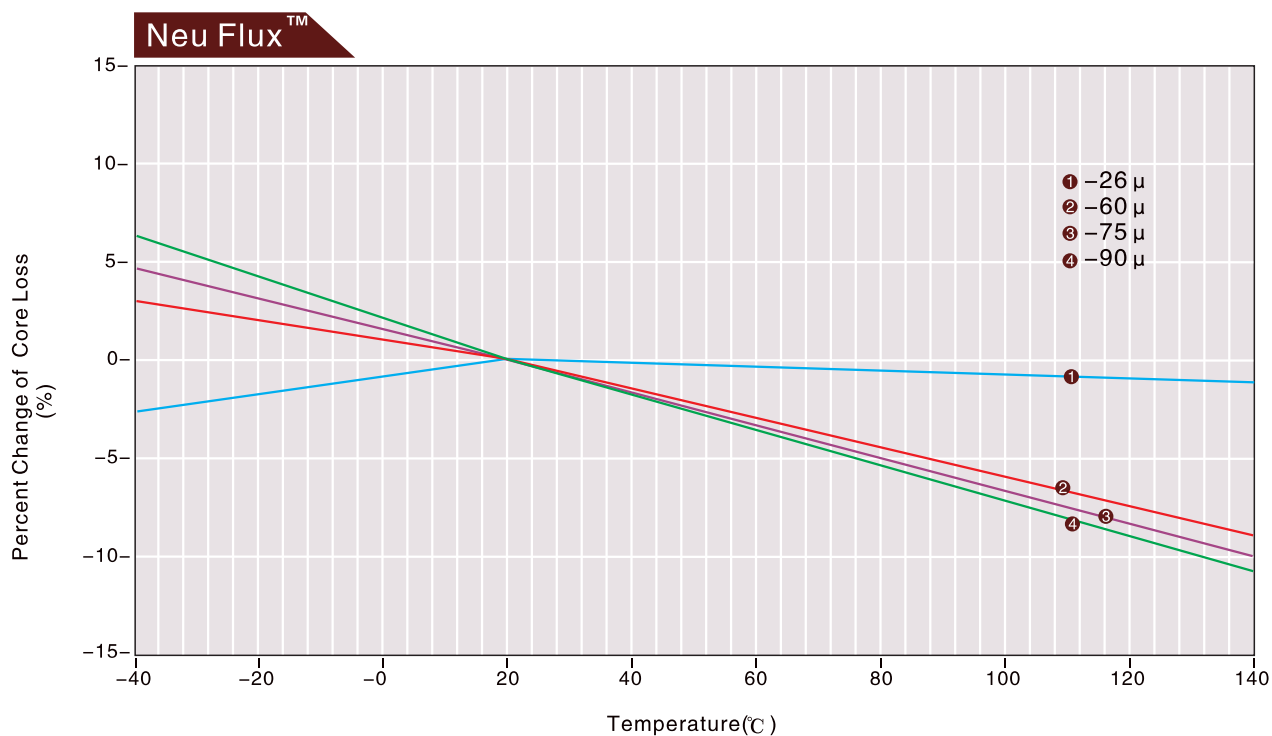
## 磁芯损耗与时间关系曲线 Core Loss vs Time



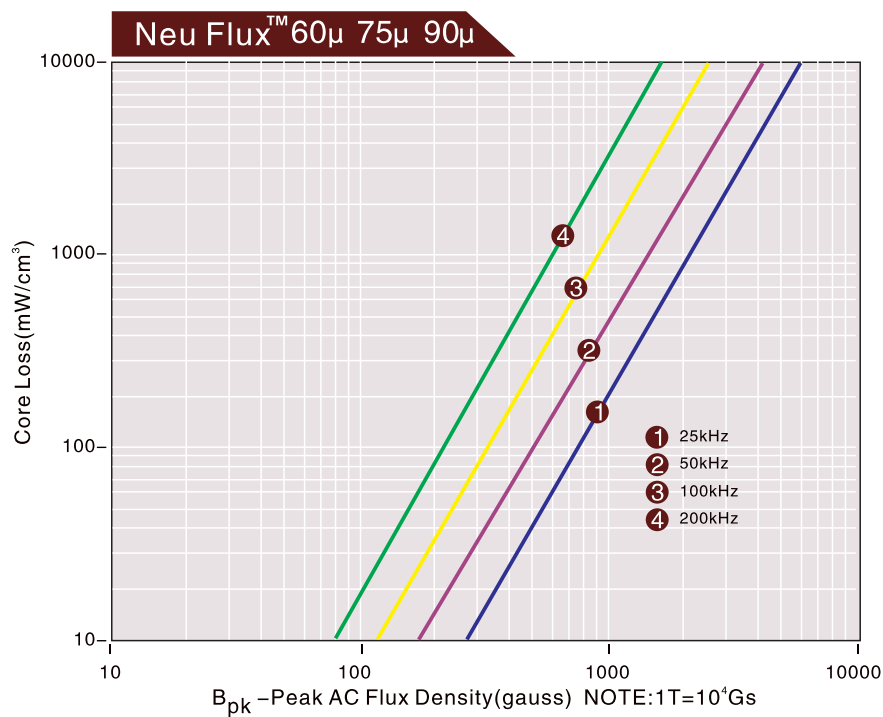
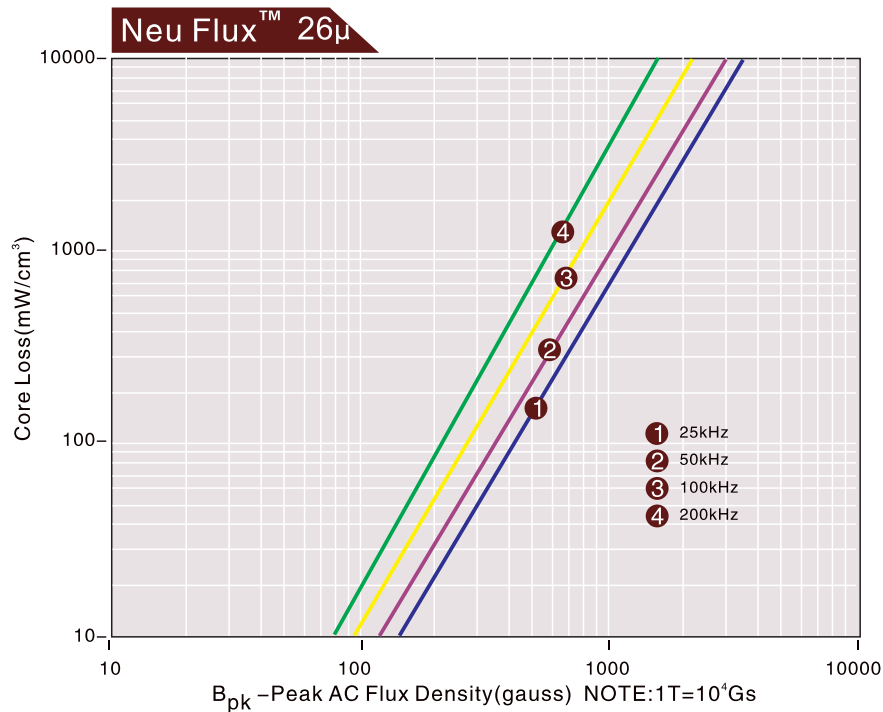
## 磁导率百分率与温度关系曲线 Temperature Stability



## 磁芯损耗百分率与温度关系曲线 Temperature Stability



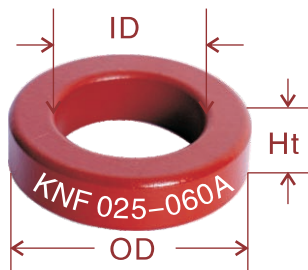
# 典型磁粉芯损耗值曲线 Typical Core Loss Curves





## TYPICAL PART NO. KNF 025-060 A

KDM.Neu Flux™ Cores  
Size:OD in 100th inches  
Permeability( $\mu_e$ )  
Core Grading



KDM Material Mix No.  
KNF™:Neu Flux™ Cores(Brown)  
KS:Sendust Cores(Black)  
KSF:Si-Fe™ Cores(Blue)  
KH:High Flux Cores(Khaki)  
KM:MPP Cores(Gray)

$\ell_e$ : 平均磁路长度 (Mean Magnetic Path Length)  
 $A_e$ : 横截面积(Cross Section Area)  
 $V$ : 磁芯体积(Core Volume)  
 $W$ : 窗口面积(Window Area)

## Physical Specifications

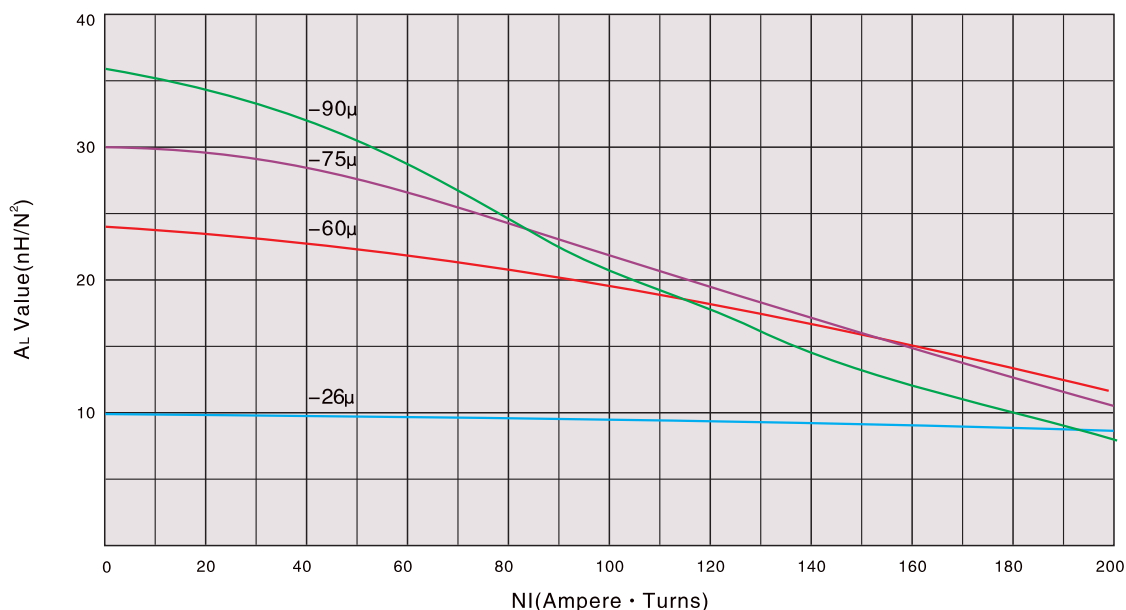
Before Coating			After Coating			$\ell_e$ in/cm	$A_e$ in <sup>2</sup> /cm <sup>2</sup>	$V$ in <sup>3</sup> /cm <sup>3</sup>	$W$ in <sup>2</sup> /cm <sup>2</sup>
OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm	OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm				
0.250 6.35	0.110 2.79	0.110 2.79	0.275 6.99	0.090 2.29	0.135 3.43	0.536 1.361	0.00729 0.047	0.00391 0.064	0.006362 0.041

## Electrical Specifications

KDM Part No.	Perm. $\mu_e$	$A_L$ $\pm 12\%$
KNF025-026A	26	10
KNF025-060A	60	24
KNF025-075A	75	30
KNF025-090A	90	36

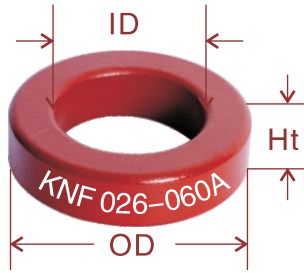
## Magnet Wire Winding Data

AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$		AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$	
24	0.0566	8	0.0132	33	0.0216	26	0.238
25	0.0505	10	0.0183	34	0.0191	30	0.337
26	0.0452	11	0.0253	35	0.0170	34	0.470
27	0.0409	13	0.0346	36	0.0152	38	0.650
28	0.0366	14	0.0482	37	0.0140	42	0.880
29	0.0330	16	0.0653	38	0.0124	47	1.24
30	0.0294	19	0.0918	39	0.0109	54	1.82
31	0.0267	21	0.126	40	0.0096	61	2.59
32	0.0241	23	0.170	41	0.00863	68	3.50

AL vs NI Curve(26 $\mu$ ,60 $\mu$ , 75 $\mu$ ,90 $\mu$ )

TYPICAL PART NO. KNF 026-060 A

KDM .Neu Flux™ Cores  
Size:OD in 100th inches  
Permeability( $\mu_e$ )  
Core Grading



KDM Material Mix No.  
KNF™:Neu Flux™ Cores(Brown)  
KS:Sendust Cores(Black)  
KSF:Si-Fe™ Cores(Blue)  
KH:High Flux Cores(Khaki)  
KM:MPP Cores(Gray)

$\ell_e$ : 平均磁路长度 (Mean Magnetic Path Length)  
 $A_e$ : 横截面积(Cross Section Area)  
 $V$ : 磁芯体积(Core Volume)  
 $W$ : 窗口面积(Window Area)

Physical Specifications

Before Coating			After Coating			$\ell_e$ in/cm	$A_e$ in <sup>2</sup> /cm <sup>2</sup>	$V$ in <sup>3</sup> /cm <sup>3</sup>	$W$ in <sup>2</sup> /cm <sup>2</sup>
OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm	OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm				
0.260 6.60	0.105 2.67	0.188 4.78	0.285 7.24	0.085 2.16	0.213 5.54	0.537 1.363	0.01426 0.092	0.00765 0.125	0.00594 0.038

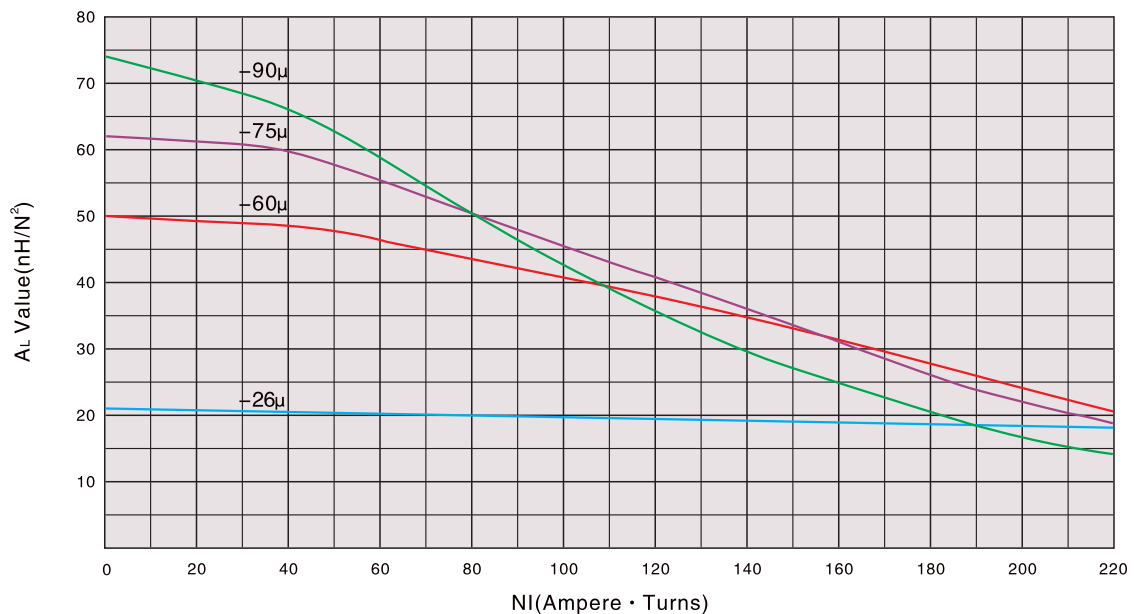
Electrical Specifications

KDM Part No.	Perm. $\mu_e$	$A_L$ $\pm 12\%$
KNF026-026A	26	21
KNF026-060A	60	50
KNF026-075A	75	62
KNF026-090A	90	74

Magnet Wire Winding Data

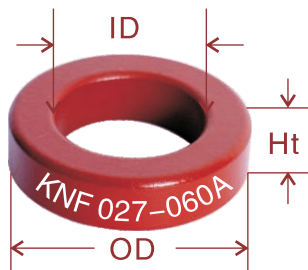
AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$		AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$	
25	0.0505	9	0.0223	34	0.0191	29	0.440
26	0.0452	11	0.0312	35	0.0170	32	0.617
27	0.0409	12	0.0431	36	0.0152	36	0.857
28	0.0366	14	0.0605	37	0.0140	40	1.17
29	0.0330	16	0.0826	38	0.0124	45	1.64
30	0.0294	18	0.117	39	0.0109	52	2.42
31	0.0267	20	0.162	40	0.0096	59	3.46
32	0.0241	22	0.220	41	0.00863	66	4.70
33	0.0216	25	0.309	42	0.00762	74	6.62

$A_L$  vs NI Curve(26 $\mu$ , 60 $\mu$ , 75 $\mu$ , 90 $\mu$ )



## TYPICAL PART NO. KNF 027-060 A

KDM Neu Flux™ Cores  
Size: OD in 100th inches  
Permeability ( $\mu_e$ )  
Core Grading



KDM Material Mix No.  
KNF™: Neu Flux™ Cores (Brown)  
KS: Sendust Cores (Black)  
KSF: Si-Fe™ Cores (Blue)  
KH: High Flux Cores (Khaki)  
KM: MPP Cores (Gray)

$\ell_e$ : 平均磁路长度 (Mean Magnetic Path Length)  
 $A_e$ : 横截面积 (Cross Section Area)  
 $V$ : 磁芯体积 (Core Volume)  
 $W$ : 窗口面积 (Window Area)

## Physical Specifications

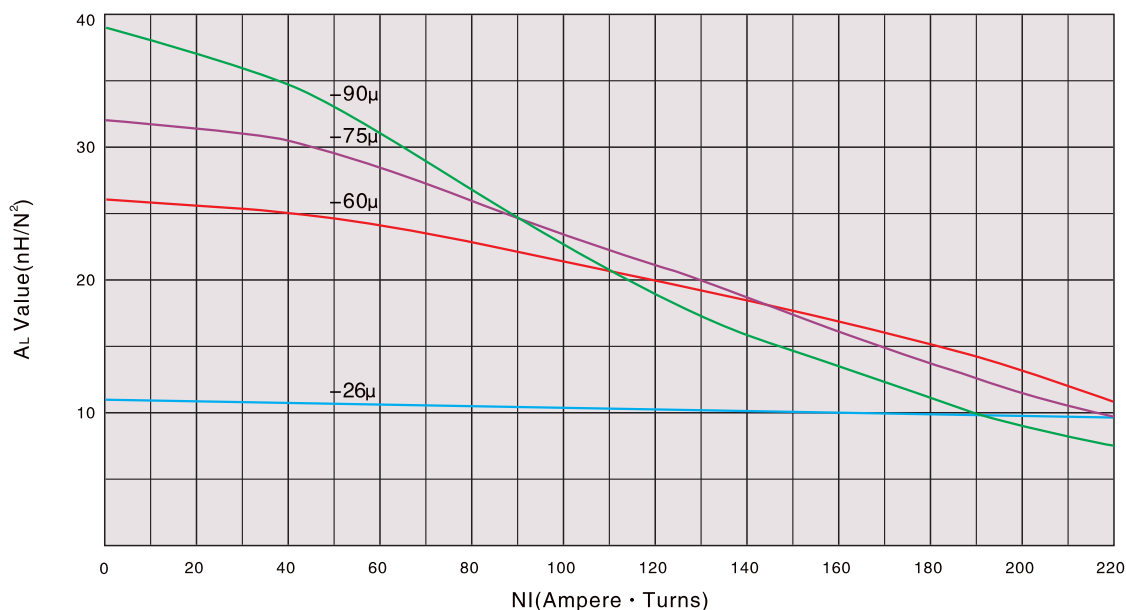
Before Coating			After Coating			$\ell_e$ in/cm	$A_e$ in <sup>2</sup> /cm <sup>2</sup>	$V$ in <sup>3</sup> /cm <sup>3</sup>	$W$ in <sup>2</sup> /cm <sup>2</sup>
OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm	OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm				
0.260 6.60	0.105 2.67	0.100 2.54	0.285 7.24	0.085 2.16	0.125 3.18	0.537 1.363	0.00738 0.047	0.00396 0.064	0.00636 0.041

## Electrical Specifications

KDM Part No.	Perm. $\mu_e$	$A_L$ $\pm 12\%$
KNF027-026A	26	11
KNF027-060A	60	26
KNF027-075A	75	32
KNF027-090A	90	39

## Magnet Wire Winding Data

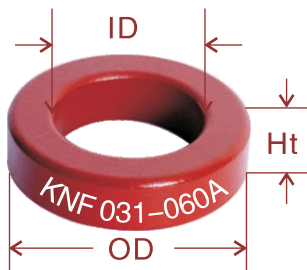
AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$		AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$	
25	0.0505	10	0.0180	34	0.0191	30	0.330
26	0.0452	11	0.0249	35	0.0170	34	0.461
27	0.0409	13	0.0341	36	0.0152	38	0.637
28	0.0366	14	0.0474	37	0.0140	42	0.862
29	0.0330	16	0.0642	38	0.0124	47	1.21
30	0.0294	19	0.0902	39	0.0109	54	1.78
31	0.0267	21	0.124	40	0.0096	61	2.53
32	0.0241	23	0.167	41	0.00863	68	3.43
33	0.0216	26	0.233	42	0.00762	77	4.81

 $A_L$  vs NI Curve (26 $\mu$ , 60 $\mu$ , 75 $\mu$ , 90 $\mu$ )



# TYPICAL PART NO. KNF 031-060 A

KDM .Neu Flux™ Cores  
Size:OD in 100th inches  
Permeability( $\mu_e$ )  
Core Grading



KDM Material Mix No.  
KNF™:Neu Flux™ Cores(Brown)  
KS:Sendust Cores(Black)  
KSF:Si-Fe™ Cores(Blue)  
KH:High Flux Cores(Khaki)  
KM:MPP Cores(Gray)

$\ell_e$ : 平均磁路长度 (Mean Magnetic Path Length)  
 $A_e$ : 横截面积(Cross Section Area)  
 $V$ : 磁芯体积(Core Volume)  
 $W$ : 窗口面积(Window Area)

## Physical Specifications

Before Coating			After Coating			$\ell_e$ in/cm	$A_e$ in <sup>2</sup> /cm <sup>2</sup>	$V$ in <sup>3</sup> /cm <sup>3</sup>	$W$ in <sup>2</sup> /cm <sup>2</sup>
OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm	OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm				
0.310 7.87	0.156 3.96	0.125 3.18	0.335 8.51	0.135 3.43	0.150 3.81	0.704 1.787	0.00953 0.061	0.00671 0.109	0.01431 0.092

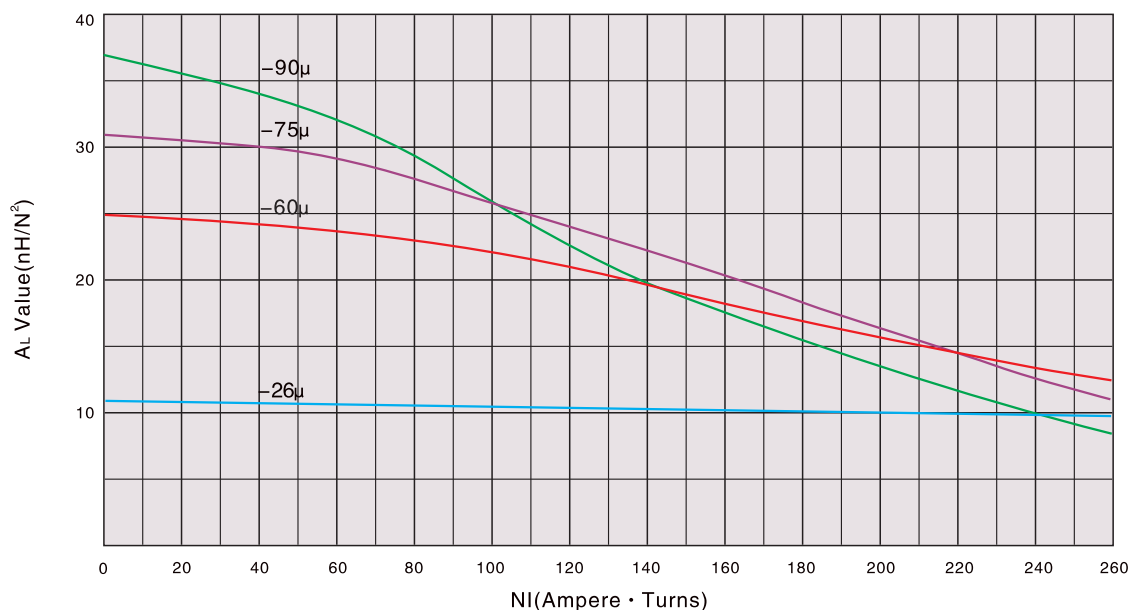
## Electrical Specifications

KDM Part No.	Perm. $\mu_e$	$A_L$ $\pm 12\%$
KNF031-026A	26	11
KNF031-060A	60	25
KNF031-075A	75	31
KNF031-090A	90	37

## Magnet Wire Winding Data

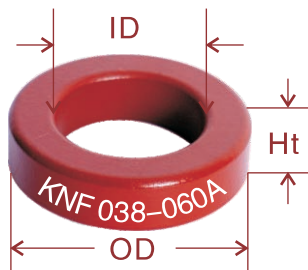
AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$		AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$	
21	0.0785	9	0.0078	30	0.0294	29	0.146
22	0.0701	11	0.0108	31	0.0267	33	0.201
23	0.0632	12	0.0148	32	0.0241	36	0.272
24	0.0566	14	0.0206	33	0.0216	41	0.382
25	0.0505	16	0.0285	34	0.0191	46	0.543
26	0.0452	18	0.0397	35	0.0170	52	0.760
27	0.0409	20	0.0545	36	0.0152	58	1.05
28	0.0366	23	0.0762	37	0.0140	64	1.43
29	0.0330	26	0.104	38	0.0124	72	2.01

## $A_L$ vs NI Curve(26 $\mu$ ,60 $\mu$ , 75 $\mu$ ,90 $\mu$ )



## TYPICAL PART NO. KNF 038-060 A

KDM Neu Flux™ Cores  
Size: OD in 100th inches  
Permeability ( $\mu_e$ )  
Core Grading



KDM Material Mix No.  
KNF™: Neu Flux™ Cores (Brown)  
KS: Sendust Cores (Black)  
KSF: Si-Fe™ Cores (Blue)  
KH: High Flux Cores (Khaki)  
KM: MPP Cores (Gray)

$\ell_e$ : 平均磁路长度 (Mean Magnetic Path Length)  
 $A_e$ : 横截面积 (Cross Section Area)  
 $V$ : 磁芯体积 (Core Volume)  
 $W$ : 窗口面积 (Window Area)

## Physical Specifications

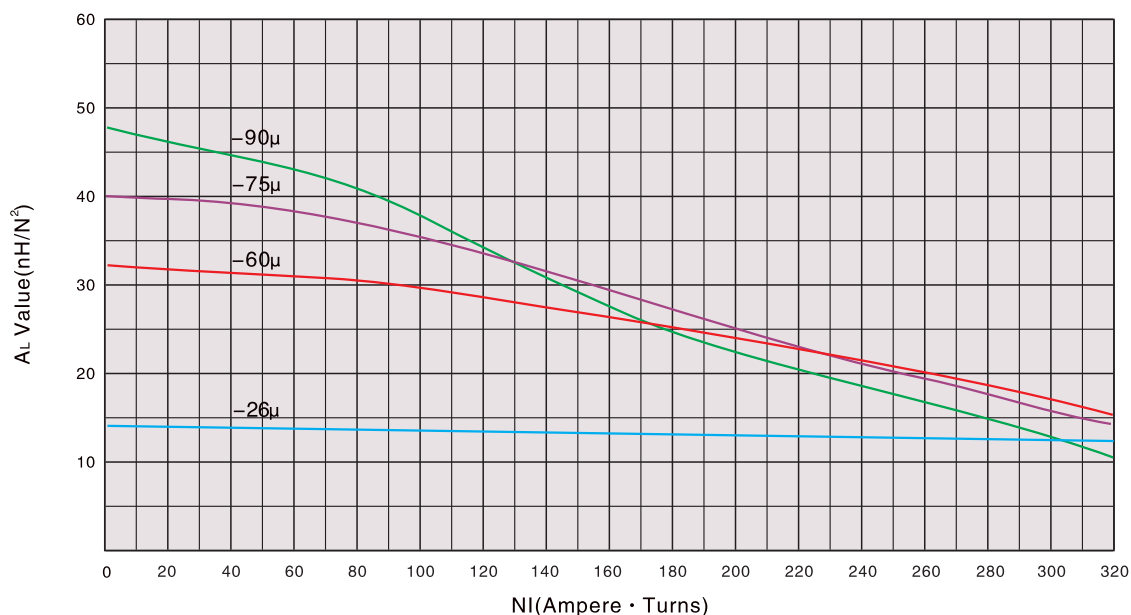
Before Coating			After Coating			$\ell_e$ in/cm	$A_e$ in <sup>2</sup> /cm <sup>2</sup>	$V$ in <sup>3</sup> /cm <sup>3</sup>	$W$ in <sup>2</sup> /cm <sup>2</sup>
OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm	OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm				
0.380 9.65	0.188 4.78	0.156 3.96	0.405 10.29	0.168 4.27	0.181 4.60	0.859 2.180	0.01465 0.094	0.0126 0.206	0.02217 0.142

## Electrical Specifications

KDM Part No.	Perm. $\mu_e$	$A_L$ $\pm 12\%$
KNF038-026A	26	14
KNF038-060A	60	32
KNF038-075A	75	40
KNF038-090A	90	48

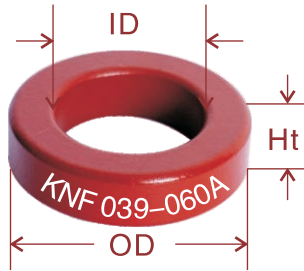
## Magnet Wire Winding Data

AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$		AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$	
19	0.0980	9	0.00567	28	0.0366	29	0.110
20	0.0879	11	0.00783	29	0.0330	33	0.150
21	0.0785	12	0.0109	30	0.0294	37	0.212
22	0.0701	14	0.0152	31	0.0267	41	0.293
23	0.0632	16	0.0209	32	0.0241	46	0.397
24	0.0566	18	0.0291	33	0.0216	51	0.558
25	0.0505	21	0.0405	34	0.0191	58	0.795
26	0.0452	23	0.0567	35	0.0170	65	1.12
27	0.0409	26	0.0782	36	0.0152	73	1.55

AL vs NI Curve (26 $\mu$ , 60 $\mu$ , 75 $\mu$ , 90 $\mu$ )

TYPICAL PART NO. KNF 039-060 A

KDM .Neu Flux™ Cores  
Size:OD in 100th inches  
Permeability( $\mu_e$ )  
Core Grading



KDM Material Mix No.  
KNF™:Neu Flux™ Cores(Brown)  
KS:Sendust Cores(Black)  
KSF:Si-Fe™ Cores(Blue)  
KH:High Flux Cores(Khaki)  
KM:MPP Cores(Gray)

$\ell_e$ : 平均磁路长度 (Mean Magnetic Path Length)  
 $A_e$ : 横截面积(Cross Section Area)  
 $V$ : 磁芯体积(Core Volume)  
 $W$ : 窗口面积(Window Area)

## Physical Specifications

Before Coating			After Coating			$\ell_e$ in/cm	$A_e$ in <sup>2</sup> /cm <sup>2</sup>	$V$ in <sup>3</sup> /cm <sup>3</sup>	$W$ in <sup>2</sup> /cm <sup>2</sup>
OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm	OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm				
0.380 9.65	0.188 4.78	0.125 3.18	0.405 10.29	0.168 4.27	0.150 3.81	0.858 2.180	0.01166 0.075	0.0100 0.163	0.02217 0.142

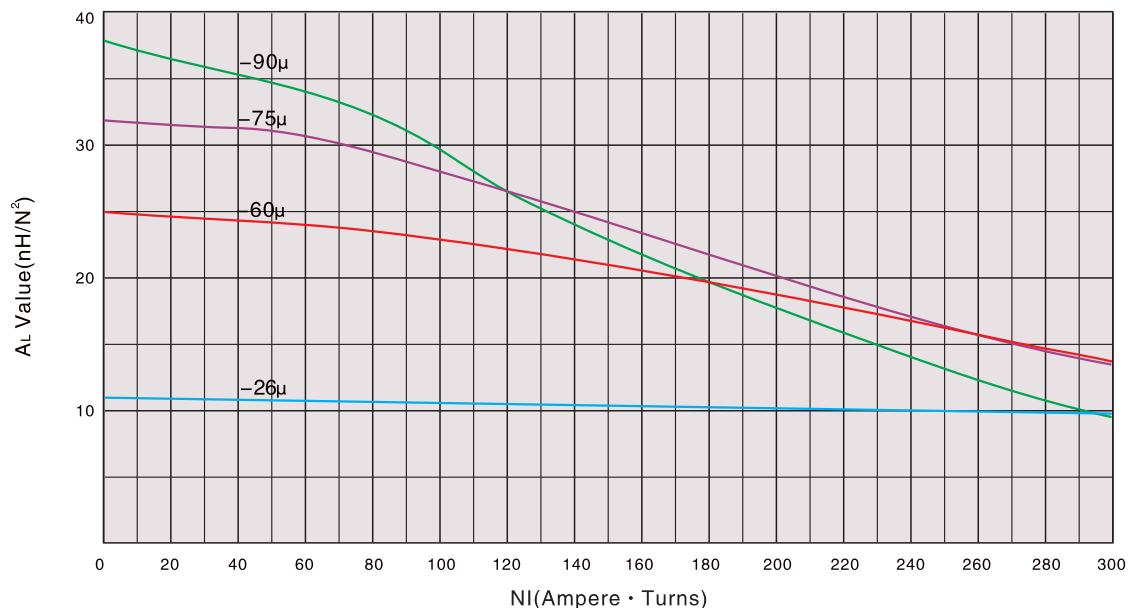
## Electrical Specifications

KDM Part No.	Perm. $\mu_e$	$A_L$ $\pm 12\%$
KNF039-026A	26	11
KNF039-060A	60	25
KNF039-075A	75	32
KNF039-090A	90	38

## Magnet Wire Winding Data

AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$		AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$	
19	0.0980	9	0.0053	28	0.0366	29	0.100
20	0.0879	11	0.0073	29	0.0330	33	0.136
21	0.0785	12	0.0101	30	0.0294	37	0.193
22	0.0701	14	0.0141	31	0.0267	41	0.266
23	0.0632	16	0.0193	32	0.0241	46	0.360
24	0.0566	18	0.0268	33	0.0216	51	0.505
25	0.0505	21	0.0372	34	0.0191	58	0.719
26	0.0452	23	0.0519	35	0.0170	65	1.01
27	0.0409	26	0.0714	36	0.0152	73	1.40

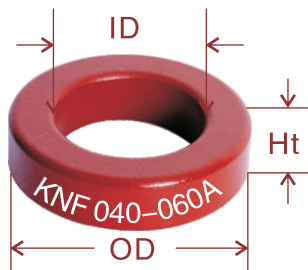
## $A_L$ vs NI Curve(26 $\mu$ , 60 $\mu$ , 75 $\mu$ , 90 $\mu$ )





## TYPICAL PART NO. KNF 040-060 A

KDM Neu Flux™ Cores  
Size: OD in 100th inches  
Permeability ( $\mu_e$ )  
Core Grading



KDM Material Mix No.  
KNF™: Neu Flux™ Cores (Brown)  
KS: Sendust Cores (Black)  
KSF: Si-Fe™ Cores (Blue)  
KH: High Flux Cores (Khaki)  
KM: MPP Cores (Gray)

$\ell_e$ : 平均磁路长度 (Mean Magnetic Path Length)  
 $A_e$ : 横截面积 (Cross Section Area)  
 $V$ : 磁芯体积 (Core Volume)  
 $W$ : 窗口面积 (Window Area)

## Physical Specifications

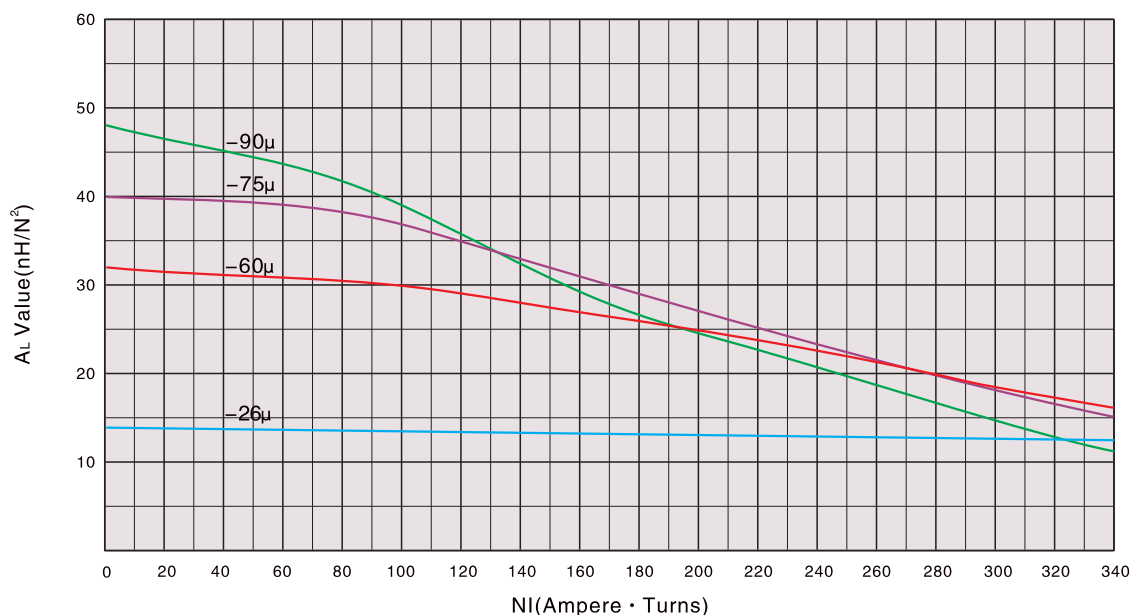
Before Coating			After Coating			$\ell_e$ in/cm	$A_e$ in <sup>2</sup> /cm <sup>2</sup>	$V$ in <sup>3</sup> /cm <sup>3</sup>	$W$ in <sup>2</sup> /cm <sup>2</sup>
OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm	OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm				
0.400 10.20	0.200 5.08	0.156 3.96	0.425 10.80	0.180 4.57	0.181 4.60	0.906 2.380	0.01550 0.100	0.01400 0.238	0.02545 0.164

## Electrical Specifications

KDM Part No.	Perm. $\mu_e$	$A_L$ $\pm 12\%$
KNF040-026A	26	14
KNF040-060A	60	32
KNF040-075A	75	40
KNF040-090A	90	48

## Magnet Wire Winding Data

AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$		AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$	
18	0.109	9	0.00442	27	0.0409	28	0.0845
19	0.0980	10	0.00613	28	0.0366	32	0.119
20	0.0879	12	0.00847	29	0.0330	35	0.162
21	0.0785	13	0.0118	30	0.0294	40	0.230
22	0.0701	15	0.0164	31	0.0267	44	0.317
23	0.0632	17	0.0226	32	0.0241	49	0.430
24	0.0566	20	0.0315	33	0.0216	55	0.605
25	0.0505	22	0.0439	34	0.0191	62	0.862
26	0.0452	25	0.0614	35	0.0170	70	1.21

 $A_L$  vs NI Curve (26 $\mu$ , 60 $\mu$ , 75 $\mu$ , 90 $\mu$ )

## TYPICAL PART NO. KNF 044-060 A

KDM .Neu Flux™ Cores  
Size:OD in 100th inches  
Permeability( $\mu_e$ )  
Core Grading



KDM Material Mix No.  
KNF™:Neu Flux™ Cores(Brown)  
KS:Sendust Cores(Black)  
KSF:Si-Fe™ Cores(Blue)  
KH:High Flux Cores(Khaki)  
KM:MPP Cores(Gray)

$\ell_e$ : 平均磁路长度 (Mean Magnetic Path Length)  
 $A_e$ : 横截面积(Cross Section Area)  
 $V$ : 磁芯体积(Core Volume)  
 $W$ : 窗口面积(Window Area)

## Physical Specifications

Before Coating			After Coating			$\ell_e$ in/cm	$A_e$ in <sup>2</sup> /cm <sup>2</sup>	$V$ in <sup>3</sup> /cm <sup>3</sup>	$W$ in <sup>2</sup> /cm <sup>2</sup>
OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm	OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm				
0.440 11.20	0.250 6.35	0.156 3.96	0.468 11.89	0.232 5.89	0.186 4.72	1.080 2.690	0.0140 0.090	0.01487 0.243	0.04227 0.273

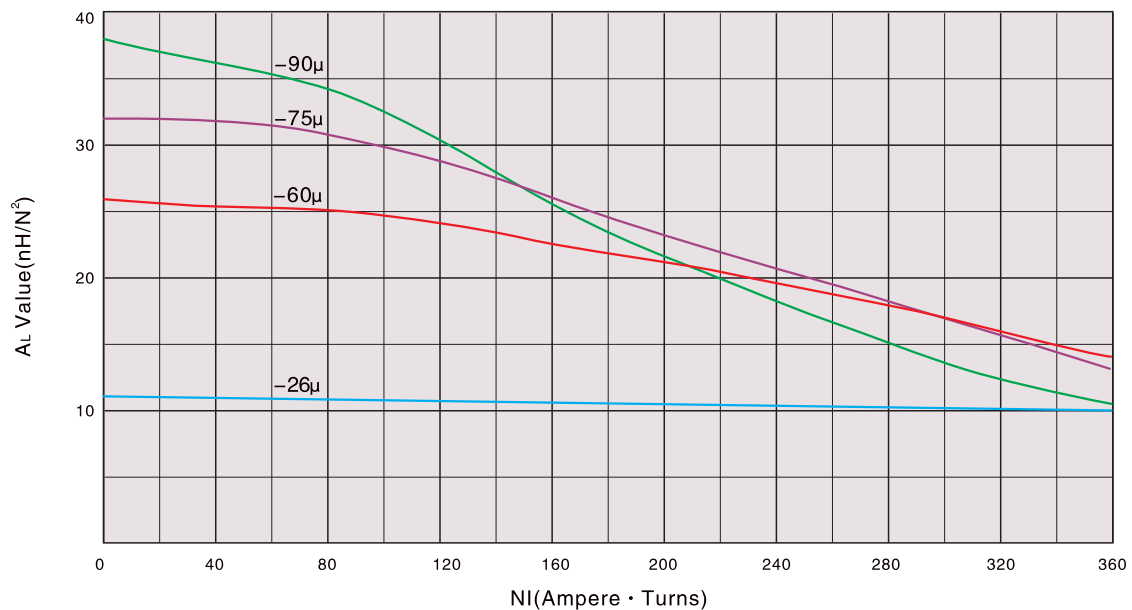
## Electrical Specifications

KDM Part No.	Perm. $\mu_e$	$A_L$ $\pm 12\%$
KNF044-026A	26	11
KNF044-060A	60	26
KNF044-075A	75	32
KNF044-090A	90	38

## Magnet Wire Winding Data

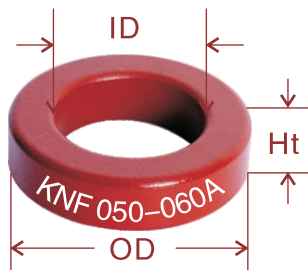
AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$		AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$	
16	0.137	9	0.00299	25	0.0505	29	0.0566
17	0.122	11	0.00412	26	0.0452	33	0.0792
18	0.109	12	0.00572	27	0.0409	37	0.109
19	0.0980	14	0.00792	28	0.0366	42	0.153
20	0.0879	16	0.0109	29	0.0330	46	0.209
21	0.0785	18	0.0152	30	0.0294	52	0.297
22	0.0701	21	0.0212	31	0.0267	58	0.410
23	0.0632	23	0.0292	32	0.0241	64	0.556
24	0.0566	26	0.0406	33	0.0215	72	0.782

## $A_L$ vs NI Curve(26 $\mu$ , 60 $\mu$ , 75 $\mu$ , 90 $\mu$ )



## TYPICAL PART NO. KNF 050-060 A

KDM Neu Flux™ Cores  
Size: OD in 100th inches  
Permeability ( $\mu_e$ )  
Core Grading



KDM Material Mix No.  
KNF™: Neu Flux™ Cores (Brown)  
KS: Sendust Cores (Black)  
KSF: Si-Fe™ Cores (Blue)  
KH: High Flux Cores (Khaki)  
KM: MPP Cores (Gray)

$\ell_e$ : 平均磁路长度 (Mean Magnetic Path Length)  
 $A_e$ : 横截面积 (Cross Section Area)  
 $V$ : 磁芯体积 (Core Volume)  
 $W$ : 窗口面积 (Window Area)

## Physical Specifications

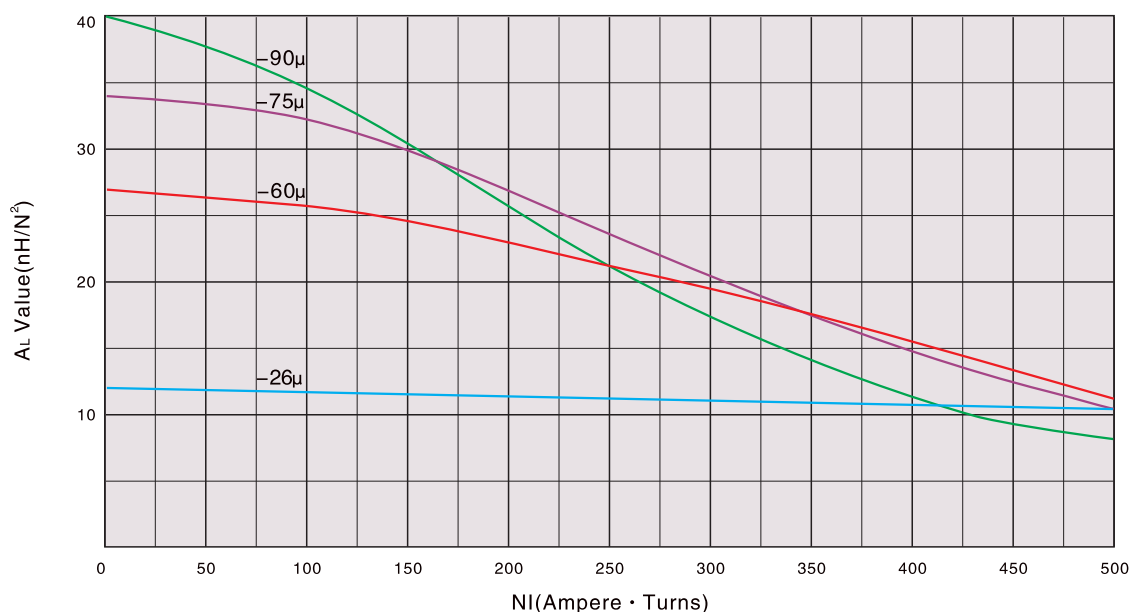
Before Coating			After Coating			$\ell_e$ in/cm	$A_e$ in <sup>2</sup> /cm <sup>2</sup>	$V$ in <sup>3</sup> /cm <sup>3</sup>	$W$ in <sup>2</sup> /cm <sup>2</sup>
OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm	OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm				
0.500 12.70	0.300 7.62	0.187 4.75	0.530 13.46	0.275 6.99	0.217 5.51	1.229 3.120	0.01767 0.114	0.0217 0.356	0.05940 0.383

## Electrical Specifications

KDM Part No.	Perm. $\mu_e$	$A_L$ $\pm 8\%$
KNF050-026A	26	12
KNF050-060A	60	27
KNF050-075A	75	34
KNF050-090A	90	40

## Magnet Wire Winding Data

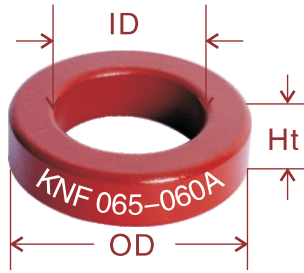
AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$		AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$	
15	0.153	10	0.00271	24	0.0566	31	0.0518
16	0.137	11	0.00376	25	0.0505	35	0.0723
17	0.122	13	0.00520	26	0.0452	40	0.101
18	0.109	15	0.00722	27	0.0409	45	0.140
19	0.0980	17	0.0100	28	0.0366	50	0.197
20	0.0879	19	0.0139	29	0.0330	56	0.269
21	0.0785	22	0.0193	30	0.0294	63	0.381
22	0.0701	25	0.0270	31	0.0267	69	0.527
23	0.0632	28	0.0371	32	0.0241	73	0.716

AL vs NI Curve (26 $\mu$ , 60 $\mu$ , 75 $\mu$ , 90 $\mu$ )



## TYPICAL PART NO. KNF 065-060 A

KDM .Neu Flux™ Cores  
Size:OD in 100th inches  
Permeability( $\mu_e$ )  
Core Grading



KDM Material Mix No.  
KNF™:Neu Flux™ Cores(Brown)  
KS:Sendust Cores(Black)  
KSF:Si-Fe™ Cores(Blue)  
KH:High Flux Cores(Khaki)  
KM:MPP Cores(Gray)

$\ell_e$ : 平均磁路长度 (Mean Magnetic Path Length)  
 $A_e$ : 横截面积(Cross Section Area)  
 $V$ : 磁芯体积(Core Volume)  
 $W$ : 窗口面积(Window Area)

## Physical Specifications

Before Coating			After Coating			$\ell_e$ in/cm	$A_e$ in <sup>2</sup> /cm <sup>2</sup>	$V$ in <sup>3</sup> /cm <sup>3</sup>	$W$ in <sup>2</sup> /cm <sup>2</sup>
OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm	OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm				
0.650 16.50	0.400 10.20	0.250 6.35	0.680 17.40	0.375 9.53	0.286 7.11	1.619 4.110	0.0298 0.192	0.0480 0.789	0.11045 0.713

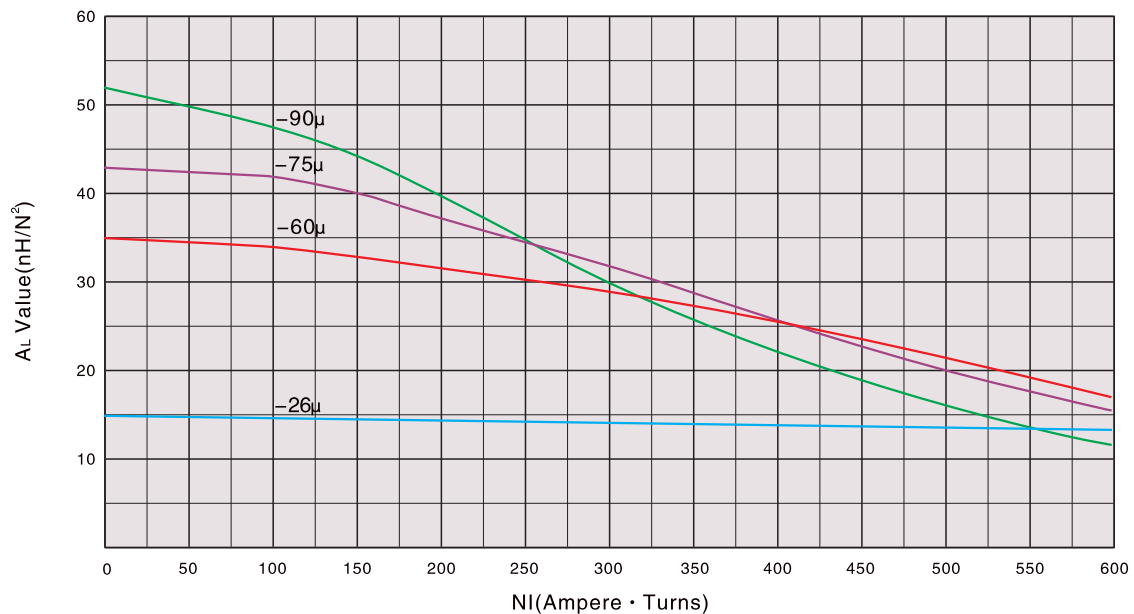
## Electrical Specifications

KDM Part No.	Perm. $\mu_e$	$A_L$ $\pm 8\%$
KNF065-026A	26	15
KNF065-060A	60	35
KNF065-075A	75	43
KNF065-090A	90	52

## Magnet Wire Winding Data

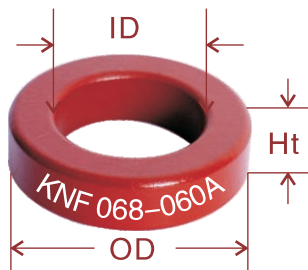
AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$		AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$	
12	0.213	10	0.00165	21	0.0785	31	0.0323
13	0.190	11	0.00230	22	0.0701	35	0.0453
14	0.171	13	0.00318	23	0.0632	39	0.0626
15	0.153	15	0.00443	24	0.0566	44	0.0876
16	0.137	17	0.00617	25	0.0505	49	0.123
17	0.122	19	0.00856	26	0.0452	55	0.172
18	0.109	21	0.0119	27	0.0409	62	0.239
19	0.0980	24	0.0166	28	0.0366	69	0.336
20	0.0879	27	0.0231	29	0.0330	77	0.460

## $A_L$ vs NI Curve(26 $\mu$ ,60 $\mu$ , 75 $\mu$ ,90 $\mu$ )



## TYPICAL PART NO. KNF 068-060 A

KDM .Neu Flux™ Cores  
Size:OD in 100th inches  
Permeability( $\mu_e$ )  
Core Grading



KDM Material Mix No.  
KNF™:Neu Flux™ Cores(Brown)  
KS:Sendust Cores(Black)  
KSF:Si-Fe™ Cores(Blue)  
KH:High Flux Cores(Khaki)  
KM:MPP Cores(Gray)

$\ell_e$ : 平均磁路长度 (Mean Magnetic Path Length)  
 $A_e$ : 横截面积(Cross Section Area)  
 $V$ : 磁芯体积(Core Volume)  
 $W$ : 窗口面积(Window Area)

## Physical Specifications

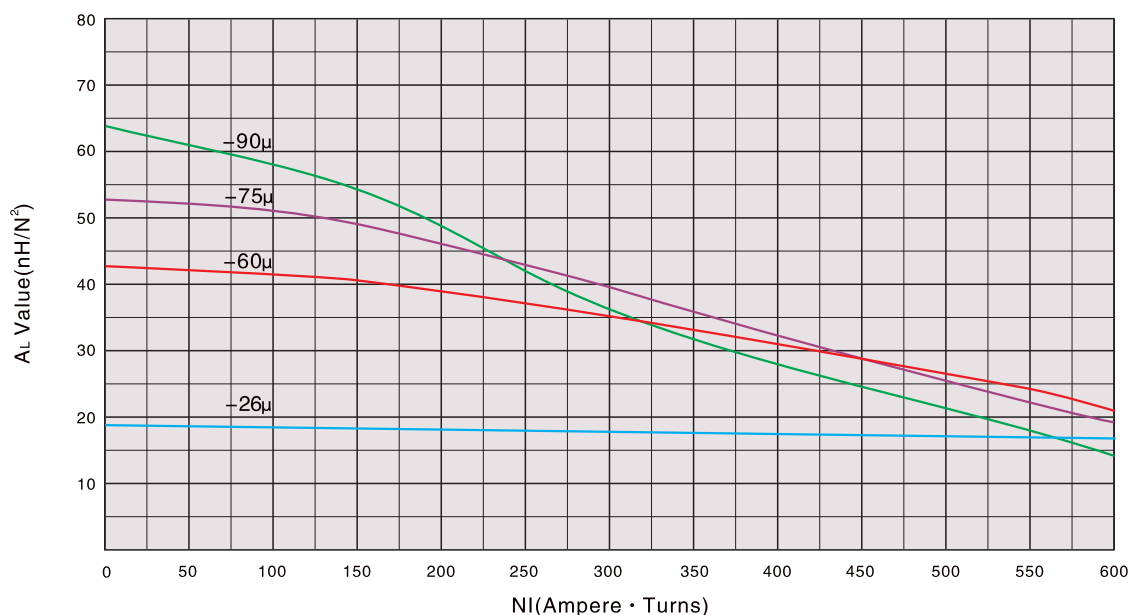
Before Coating			After Coating			$\ell_e$ in/cm	$A_e$ in <sup>2</sup> /cm <sup>2</sup>	$V$ in <sup>3</sup> /cm <sup>3</sup>	$W$ in <sup>2</sup> /cm <sup>2</sup>
OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm	OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm				
0.680 17.30	0.380 9.65	0.250 6.35	0.710 18.03	0.355 9.02	0.280 7.11	1.63 4.140	0.03600 0.232	0.05900 0.960	0.09898 0.638

## Electrical Specifications

KDM Part No.	Perm. $\mu_e$	$A_L$ $\pm 8\%$
KNF068-026A	26	19
KNF068-060A	60	43
KNF068-075A	75	53
KNF068-090A	90	64

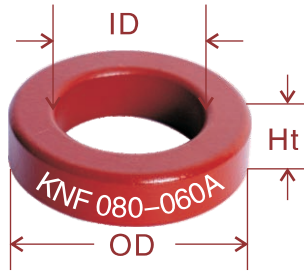
## Magnet Wire Winding Data

AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$		AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$	
12	0.213	9	0.00161	21	0.0785	29	0.0319
13	0.190	10	0.00225	22	0.0701	33	0.0449
14	0.171	12	0.00311	23	0.0632	37	0.0621
15	0.153	14	0.00434	24	0.0566	41	0.0869
16	0.137	16	0.00606	25	0.0505	47	0.122
17	0.122	18	0.00843	26	0.0452	52	0.171
18	0.109	20	0.0118	27	0.0409	58	0.237
19	0.0980	23	0.0164	28	0.0366	65	0.334
20	0.0879	26	0.0228	29	0.0330	73	0.458

AL vs NI Curve(26 $\mu$ ,60 $\mu$ , 75 $\mu$ ,90 $\mu$ )

TYPICAL PART NO. KNF 065-060 A

KDM .Neu Flux™ Cores  
Size:OD in 100th inches  
Permeability( $\mu_e$ )  
Core Grading



KDM Material Mix No.  
KNF™:Neu Flux™ Cores(Brown)  
KS:Sendust Cores(Black)  
KSF:Si-Fe™ Cores(Blue)  
KH:High Flux Cores(Khaki)  
KM:MPP Cores(Gray)

$\ell_e$ : 平均磁路长度 (Mean Magnetic Path Length)  
 $A_e$ : 横截面积(Cross Section Area)  
 $V$ : 磁芯体积(Core Volume)  
 $W$ : 窗口面积(Window Area)

Physical Specifications

Before Coating			After Coating			$\ell_e$ in/cm	$A_e$ in <sup>2</sup> /cm <sup>2</sup>	$V$ in <sup>3</sup> /cm <sup>3</sup>	$W$ in <sup>2</sup> /cm <sup>2</sup>
OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm	OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm				
0.800 20.30	0.500 12.70	0.250 6.35	0.830 21.10	0.475 12.07	0.280 7.11	2.01 5.090	0.0350 0.226	0.0703 1.150	0.1772 1.140

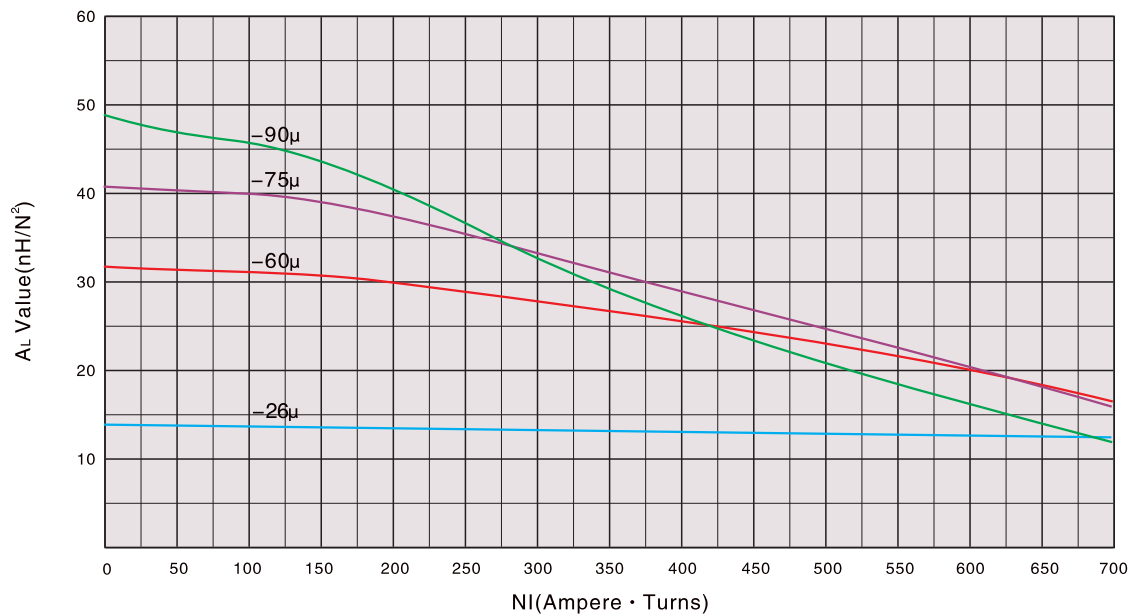
Electrical Specifications

KDM Part No.	Perm. $\mu_e$	$A_L$ $\pm 8\%$
KNF080-026A	26	14
KNF080-060A	60	32
KNF080-075A	75	41
KNF080-090A	90	49

Magnet Wire Winding Data

AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$		AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$	
12	0.213	13	0.00221	21	0.0785	40	0.0430
13	0.190	15	0.00307	22	0.0701	45	0.0604
14	0.171	17	0.00424	23	0.0632	50	0.0834
15	0.153	19	0.00590	24	0.0566	56	0.1117
16	0.137	22	0.00822	25	0.0505	63	0.164
17	0.122	25	0.0114	26	0.0452	71	0.230
18	0.109	28	0.0159	27	0.0409	79	0.318
19	0.0980	32	0.0222	28	0.0366	89	0.448
20	0.0879	35	0.0308	29	0.0330	98	0.614

$A_L$  vs NI Curve(26 $\mu$ ,60 $\mu$ , 75 $\mu$ ,90 $\mu$ )

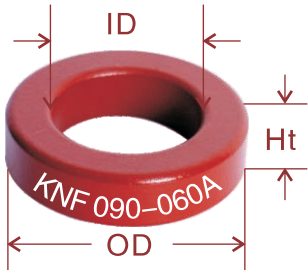


磁粉芯

铁硅镍磁粉芯  
Neu Flux™ Cores

TYPICAL PART NO. KNF 090-060 A

KDM .Neu Flux™ Cores  
Size:OD in 100th inches  
Permeability(μ<sub>e</sub>)  
Core Grading



KDM Material Mix No.  
KNF™:Neu Flux™ Cores(Brown)  
KS:Sendust Cores(Black)  
KSF:Si-Fe™ Cores(Blue)  
KH:High Flux Cores(Khaki)  
KM:MPP Cores(Gray)  
  
ℓ<sub>e</sub>: 平均磁路长度 ( Mean Magnetic Path Length)  
A<sub>e</sub>: 横截面积(Cross Section Area)  
V : 磁芯体积(Core Volume)  
W : 窗口面积(Window Area)

Physical Specifications

Before Coating			After Coating			ℓ <sub>e</sub> in/cm	A <sub>e</sub> in <sup>2</sup> /cm <sup>2</sup>	V in <sup>3</sup> /cm <sup>3</sup>	W in <sup>2</sup> /cm <sup>2</sup>
OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm	OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm				
0.900 22.9	0.550 14.00	0.300 7.62	0.930 23.62	0.527 13.39	0.330 8.38	2.23 5.670	0.0513 0.331	0.114 1.880	0.2181 1.410

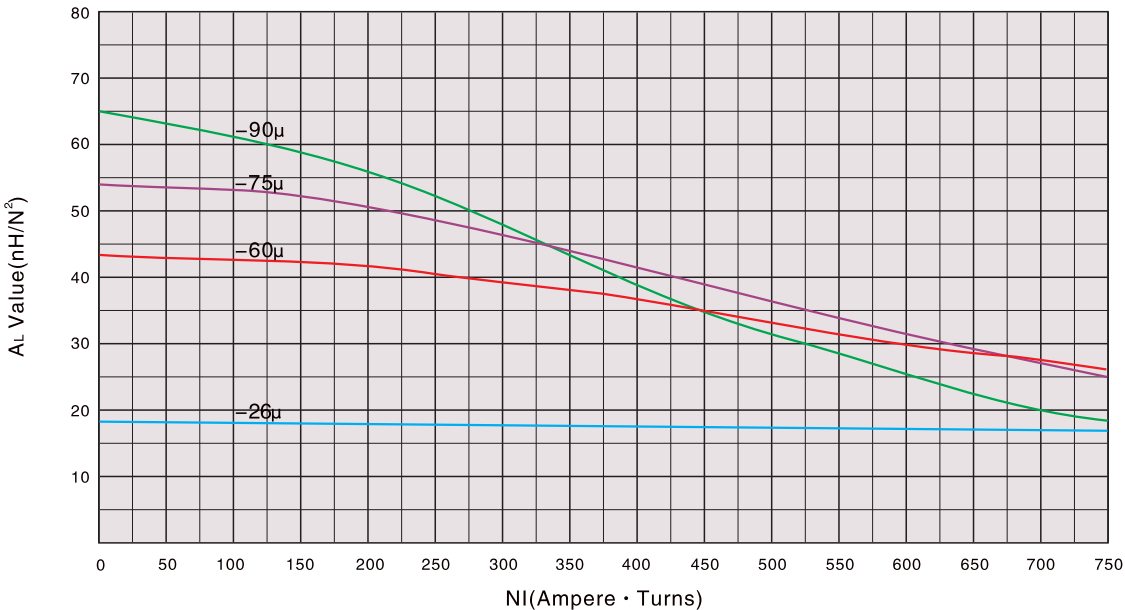
Electrical Specifications

KDM Part No.	Perm. μ <sub>e</sub>	A <sub>L</sub> ± 8%
KNF090-026A	26	19
KNF090-060A	60	43
KNF090-075A	75	54
KNF090-090A	90	65

Magnet Wire Winding Data

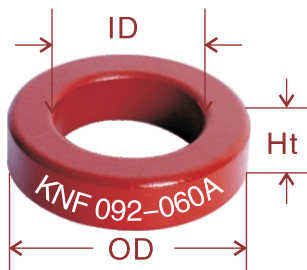
AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, Ω		AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, Ω	
12	0.213	15	0.00276	21	0.0785	45	0.0548
13	0.190	17	0.00384	22	0.0701	50	0.0770
14	0.171	19	0.00532	23	0.0632	56	0.107
15	0.153	22	0.00742	24	0.0566	63	0.150
16	0.137	25	0.0104	25	0.0505	71	0.210
17	0.122	28	0.0144	26	0.0452	79	0.295
18	0.109	31	0.0202	27	0.0409	88	0.409
19	0.0980	35	0.0281	28	0.0366	99	0.577
20	0.0879	40	0.0392	29	0.0330	109	0.791

A<sub>L</sub> vs NI Curve(26μ,60μ, 75μ,90μ)



# TYPICAL PART NO. KNF 092-060 A

KDM .Neu Flux™ Cores  
Size:OD in 100th inches  
Permeability( $\mu_e$ )  
Core Grading



KDM Material Mix No.  
KNF™:Neu Flux™ Cores(Brown)  
KS:Sendust Cores(Black)  
KSF:Si-Fe™ Cores(Blue)  
KH:High Flux Cores(Khaki)  
KM:MPP Cores(Gray)

$\ell_e$ : 平均磁路长度 (Mean Magnetic Path Length)  
 $A_e$ : 横截面积(Cross Section Area)  
 $V$ : 磁芯体积(Core Volume)  
 $W$ : 窗口面积(Window Area)

## Physical Specifications

Before Coating			After Coating			$\ell_e$ in/cm	$A_e$ in <sup>2</sup> /cm <sup>2</sup>	$V$ in <sup>3</sup> /cm <sup>3</sup>	$W$ in <sup>2</sup> /cm <sup>2</sup>
OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm	OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm				
0.928 23.60	0.567 14.40	0.350 8.89	0.956 24.30	0.542 13.77	0.382 9.70	2.32 5.880	0.061 0.388	0.142 2.280	0.2307 1.490

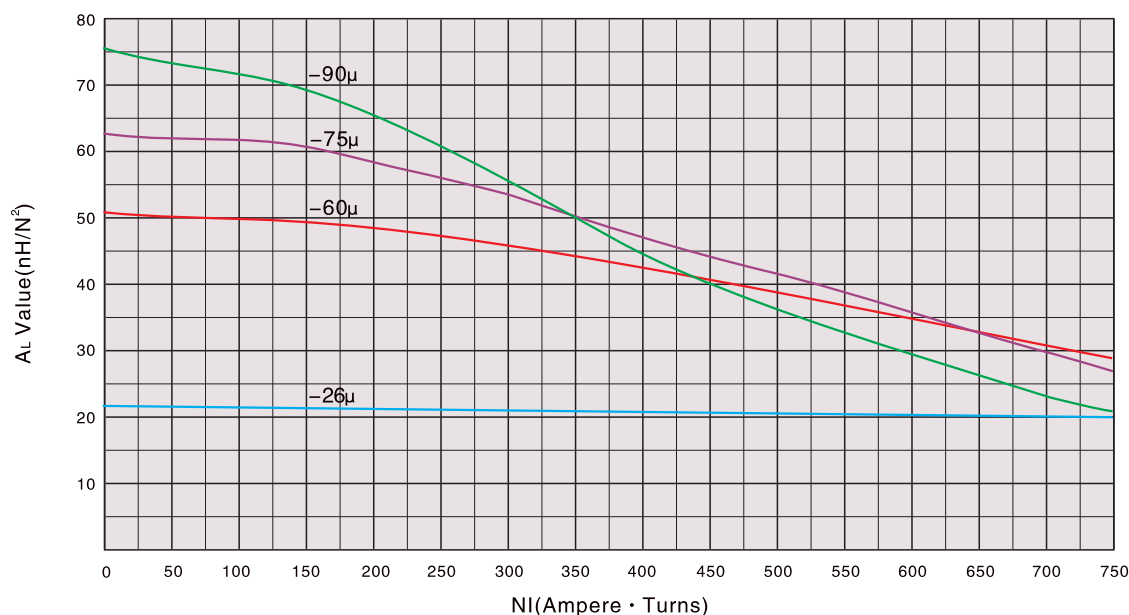
## Electrical Specifications

KDM Part No.	Perm. $\mu_e$	$A_L$ $\pm 8\%$
KNF092-026A	26	22
KNF092-060A	60	51
KNF092-075A	75	63
KNF092-090A	90	76

## Magnet Wire Winding Data

AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$		AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$	
12	0.213	15	0.00307	21	0.0785	46	0.0620
13	0.190	17	0.00429	22	0.0701	52	0.0874
14	0.171	20	0.00595	23	0.0632	58	0.1210
15	0.153	22	0.00832	24	0.0566	65	0.170
16	0.137	25	0.0116	25	0.0505	73	0.238
17	0.122	29	0.0162	26	0.0452	81	0.336
18	0.109	32	0.0227	27	0.0409	91	0.465
19	0.0980	36	0.0318	28	0.0366	104	0.657
20	0.0879	41	0.0443	29	0.0330	112	0.901

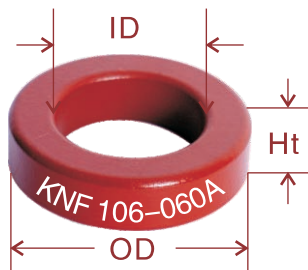
## $A_L$ vs NI Curve(26 $\mu$ ,60 $\mu$ , 75 $\mu$ ,90 $\mu$ )





## TYPICAL PART NO. KNF 106-060 A

KDM Neu Flux™ Cores  
Size: OD in 100th inches  
Permeability ( $\mu_e$ )  
Core Grading



KDM Material Mix No.  
KNF™: Neu Flux™ Cores (Brown)  
KS: Sendust Cores (Black)  
KSF: Si-Fe™ Cores (Blue)  
KH: High Flux Cores (Khaki)  
KM: MPP Cores (Gray)

$\ell_e$ : 平均磁路长度 (Mean Magnetic Path Length)  
 $A_e$ : 横截面积 (Cross Section Area)  
 $V$ : 磁芯体积 (Core Volume)  
 $W$ : 窗口面积 (Window Area)

## Physical Specifications

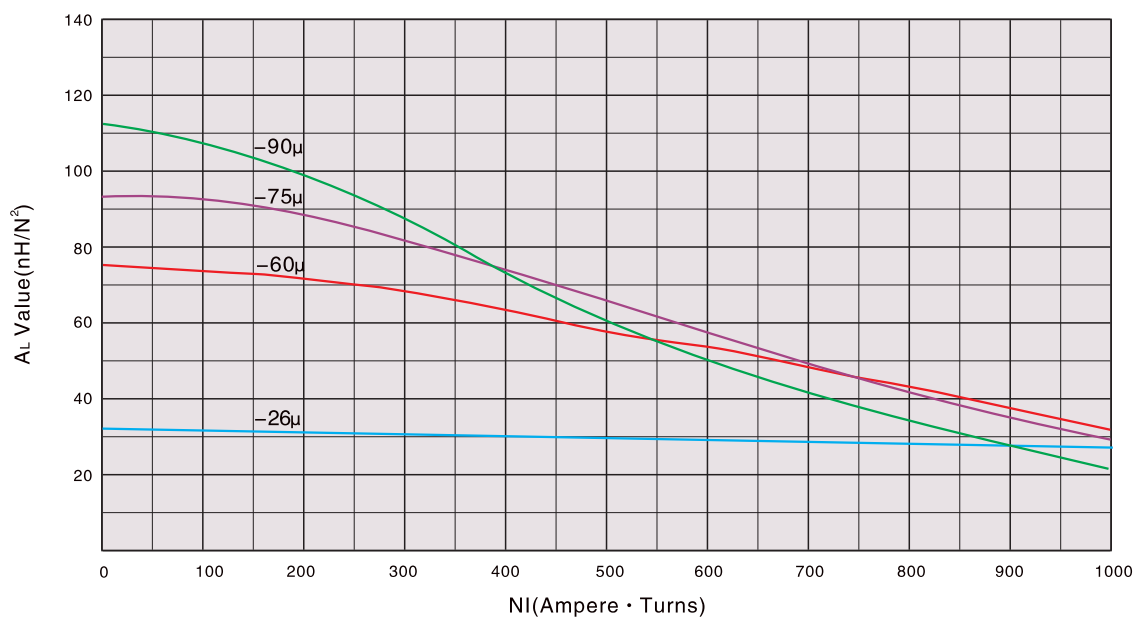
Before Coating			After Coating			$\ell_e$ in/cm	$A_e$ in <sup>2</sup> /cm <sup>2</sup>	$V$ in <sup>3</sup> /cm <sup>3</sup>	$W$ in <sup>2</sup> /cm <sup>2</sup>
OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm	OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm				
1.060 26.90	0.580 14.70	0.440 11.20	1.090 27.70	0.555 14.10	0.472 11.99	2.50 6.350	0.1014 0.654	0.254 4.150	0.2419 1.560

## Electrical Specifications

KDM Part No.	Perm. $\mu_e$	$A_L$ $\pm 8\%$
KNF106-026A	26	32
KNF106-060A	60	75
KNF106-075A	75	94
KNF106-090A	90	113

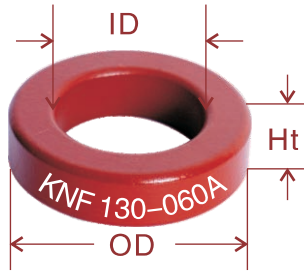
## Magnet Wire Winding Data

AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$		AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$	
12	0.213	16	0.00367	21	0.0785	47	0.0759
13	0.190	18	0.00514	22	0.0701	53	0.107
14	0.171	20	0.00715	23	0.0632	59	0.149
15	0.153	23	0.0100	24	0.0566	66	0.209
16	0.137	26	0.0141	25	0.0505	74	0.294
17	0.122	29	0.0197	26	0.0452	83	0.414
18	0.109	33	0.0276	27	0.0409	93	0.575
19	0.0980	37	0.0387	28	0.0366	104	0.812
20	0.0879	42	0.0541	29	0.0330	115	1.11

 $A_L$  vs NI Curve (26 $\mu$ , 60 $\mu$ , 75 $\mu$ , 90 $\mu$ )

# TYPICAL PART NO. KNF 130-060 A

KDM .Neu Flux™ Cores  
Size:OD in 100th inches  
Permeability( $\mu_e$ )  
Core Grading



KDM Material Mix No.  
KNF™:Neu Flux™ Cores(Brown)  
KS:Sendust Cores(Black)  
KSF:Si-Fe™ Cores(Blue)  
KH:High Flux Cores(Khaki)  
KM:MPP Cores(Gray)

$\ell_e$ : 平均磁路长度 ( Mean Magnetic Path Length)  
 $A_e$ : 横截面积(Cross Section Area)  
 $V$ : 磁芯体积(Core Volume)  
 $W$ : 窗口面积(Window Area)

## Physical Specifications

Before Coating			After Coating			$\ell_e$ in/cm	$A_e$ in <sup>2</sup> /cm <sup>2</sup>	$V$ in <sup>3</sup> /cm <sup>3</sup>	$W$ in <sup>2</sup> /cm <sup>2</sup>
OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm	OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm				
1.300 33.00	0.785 19.90	0.420 10.70	1.332 33.83	0.760 19.30	0.457 11.61	3.21 8.150	0.1042 0.672	0.334 5.480	0.4537 2.930

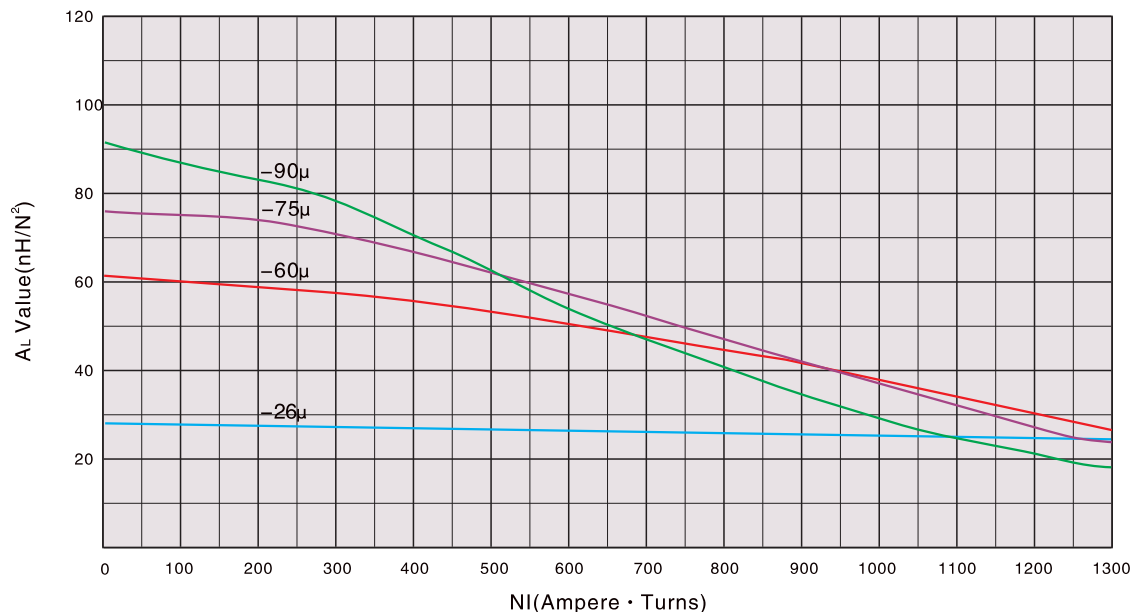
## Electrical Specifications

KDM Part No.	Perm. $\mu_e$	$A_L$ $\pm 8\%$
KNF130-026A	26	28
KNF130-060A	60	61
KNF130-075A	75	76
KNF130-090A	90	91

## Magnet Wire Winding Data

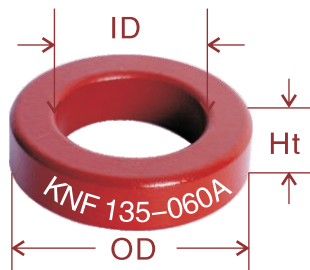
AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$		AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$	
12	0.213	23	0.00517	21	0.0785	66	0.105
13	0.190	26	0.00722	22	0.0701	74	0.148
14	0.171	29	0.0100	23	0.0632	82	0.206
15	0.153	32	0.0140	24	0.0566	92	0.289
16	0.137	37	0.0197	25	0.0505	103	0.406
17	0.122	41	0.0274	26	0.0452	115	0.572
18	0.109	46	0.0384	27	0.0409	128	0.794
19	0.0980	52	0.0538	28	0.0366	143	1.12
20	0.0879	58	0.0750	29	0.0330	159	1.54

## $A_L$ vs NI Curve(26 $\mu$ ,60 $\mu$ , 75 $\mu$ ,90 $\mu$ )



## TYPICAL PART NO. KNF 135-060 A

KDM .Neu Flux™ Cores  
Size:OD in 100th inches  
Permeability( $\mu_e$ )  
Core Grading



KDM Material Mix No.  
KNF™:Neu Flux™ Cores(Brown)  
KS:Sendust Cores(Black)  
KSF:Si-Fe™ Cores(Blue)  
KH:High Flux Cores(Khaki)  
KM:MPP Cores(Gray)

$\ell_e$ : 平均磁路长度 (Mean Magnetic Path Length)  
 $A_e$ : 横截面积(Cross Section Area)  
 $V$ : 磁芯体积(Core Volume)  
 $W$ : 窗口面积(Window Area)

## Physical Specifications

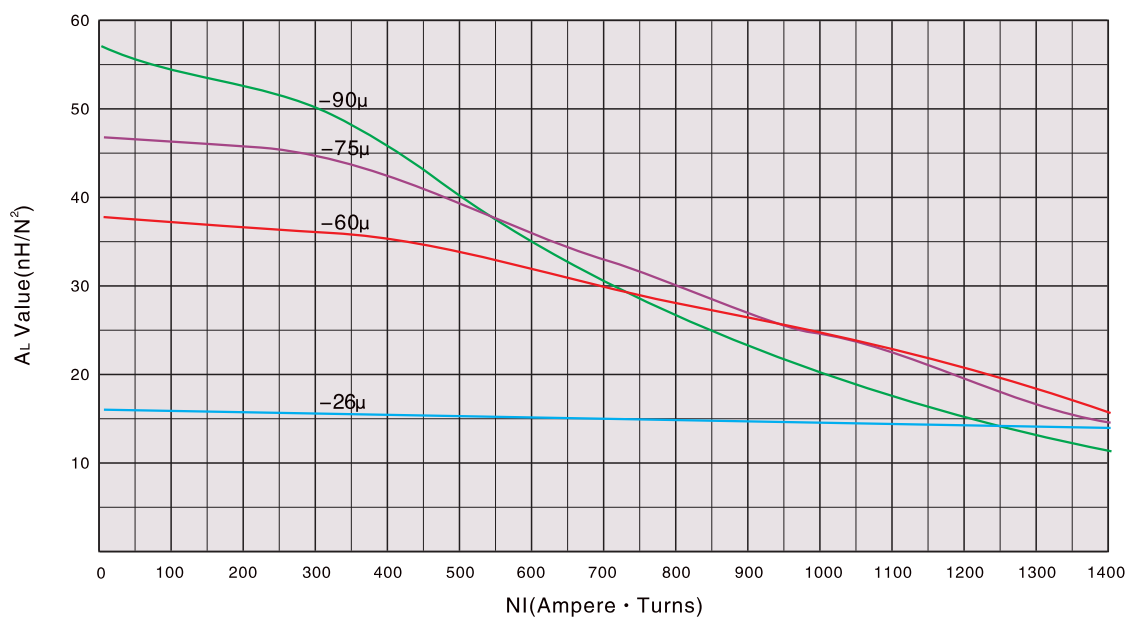
Before Coating			After Coating			$\ell_e$ in/cm	$A_e$ in <sup>2</sup> /cm <sup>2</sup>	$V$ in <sup>3</sup> /cm <sup>3</sup>	$W$ in <sup>2</sup> /cm <sup>2</sup>
OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm	OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm				
1.350 34.30	0.920 23.40	0.350 8.89	1.382 35.10	0.888 22.56	0.387 9.83	3.53 8.950	0.0704 0.454	0.2490 4.060	0.6193 4.010

## Electrical Specifications

KDM Part No.	Perm. $\mu_e$	$A_L$ $\pm 8\%$
KNF135-026A	26	16
KNF135-060A	60	38
KNF135-075A	75	47
KNF135-090A	90	57

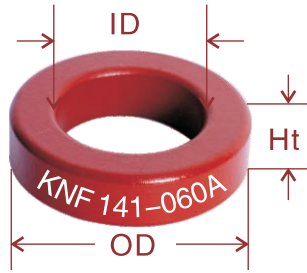
## Magnet Wire Winding Data

AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$		AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$	
12	0.213	27	0.00533	21	0.0785	77	0.105
13	0.190	30	0.00740	22	0.0701	87	0.148
14	0.171	34	0.0102	23	0.0632	96	0.206
15	0.153	38	0.0143	24	0.0566	108	0.288
16	0.137	43	0.0199	25	0.0505	121	0.404
17	0.122	49	0.0277	26	0.0452	135	0.569
18	0.109	55	0.0388	27	0.0409	150	0.789
19	0.0980	61	0.0541	28	0.0366	168	1.11
20	0.0879	69	0.0754	29	0.0330	186	1.53

 $A_L$  vs NI Curve(26 $\mu$ ,60 $\mu$ , 75 $\mu$ ,90 $\mu$ )

### TYPICAL PART NO. KNF 141-060 A

KDM .Neu Flux™ Cores  
Size:OD in 100th inches  
Permeability( $\mu_e$ )  
Core Grading



KDM Material Mix No.  
KNF™:Neu Flux™ Cores(Brown)  
KS:Sendust Cores(Black)  
KSF:Si-Fe™ Cores(Blue)  
KH:High Flux Cores(Khaki)  
KM:MPP Cores(Gray)

$\ell_e$ : 平均磁路长度 (Mean Magnetic Path Length)  
 $A_e$ : 横截面积(Cross Section Area)  
 $V$ : 磁芯体积(Core Volume)  
 $W$ : 窗口面积(Window Area)

### Physical Specifications

Before Coating			After Coating			$\ell_e$ in/cm	$A_e$ in <sup>2</sup> /cm <sup>2</sup>	$V$ in <sup>3</sup> /cm <sup>3</sup>	$W$ in <sup>2</sup> /cm <sup>2</sup>
OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm	OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm				
1.410 35.80	0.880 22.40	0.412 10.50	1.442 36.63	0.848 21.54	0.444 11.28	3.540 8.980	0.1051 0.678	0.3720 6.088	0.5648 3.640

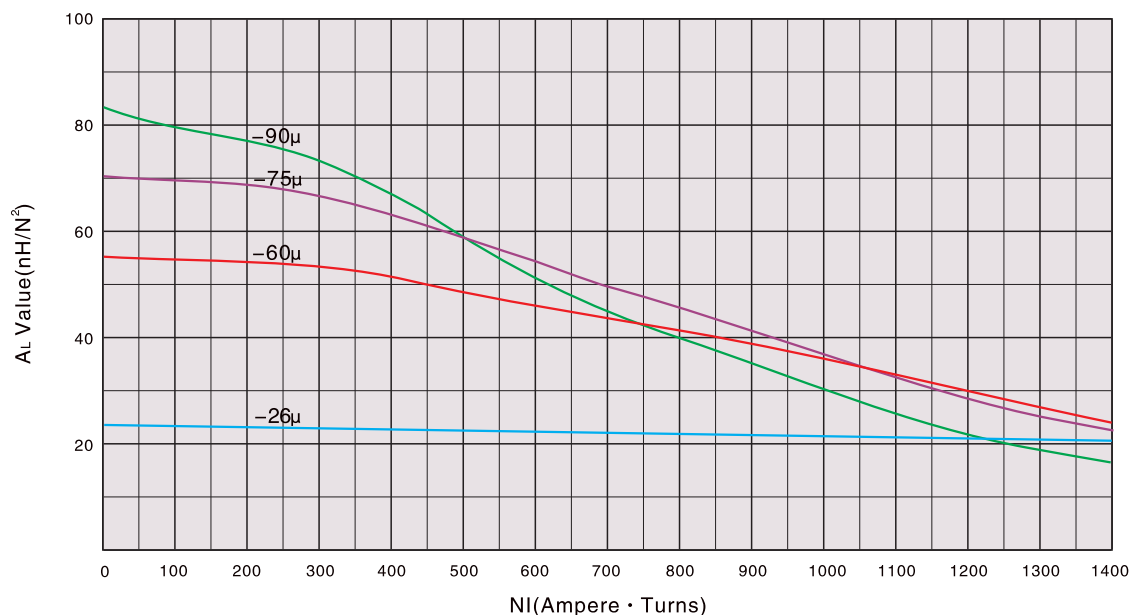
### Electrical Specifications

KDM Part No.	Perm. $\mu_e$	$A_L$ $\pm 8\%$
KNF141-026A	26	24
KNF141-060A	60	56
KNF141-075A	75	70
KNF141-090A	90	84

### Magnet Wire Winding Data

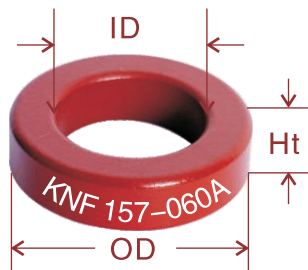
AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$		AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$	
12	0.213	25	0.00579	21	0.0785	74	0.117
13	0.190	29	0.00809	22	0.0701	82	0.116
14	0.171	32	0.0112	23	0.0632	92	0.229
15	0.153	37	0.0157	24	0.0566	103	0.322
16	0.137	41	0.0220	25	0.0505	115	0.452
17	0.122	46	0.0306	26	0.0452	129	0.637
18	0.109	52	0.0429	27	0.0409	143	0.885
19	0.0980	58	0.0600	28	0.0366	160	1.25
20	0.0879	65	0.0837	29	0.0330	177	1.71

### $A_L$ vs NI Curve(26 $\mu$ ,60 $\mu$ , 75 $\mu$ ,90 $\mu$ )



## TYPICAL PART NO. KNF 157-060 A

KDM .Neu Flux™ Cores  
Size:OD in 100th inches  
Permeability( $\mu_e$ )  
Core Grading



KDM Material Mix No.  
KNF™:Neu Flux™ Cores(Brown)  
KS:Sendust Cores(Black)  
KSF:Si-Fe™ Cores(Blue)  
KH:High Flux Cores(Khaki)  
KM:MPP Cores(Gray)

$\ell_e$ : 平均磁路长度 ( Mean Magnetic Path Length)  
 $A_e$ : 横截面积(Cross Section Area)  
 $V$ : 磁芯体积(Core Volume)  
 $W$ : 窗口面积(Window Area)

## Physical Specifications

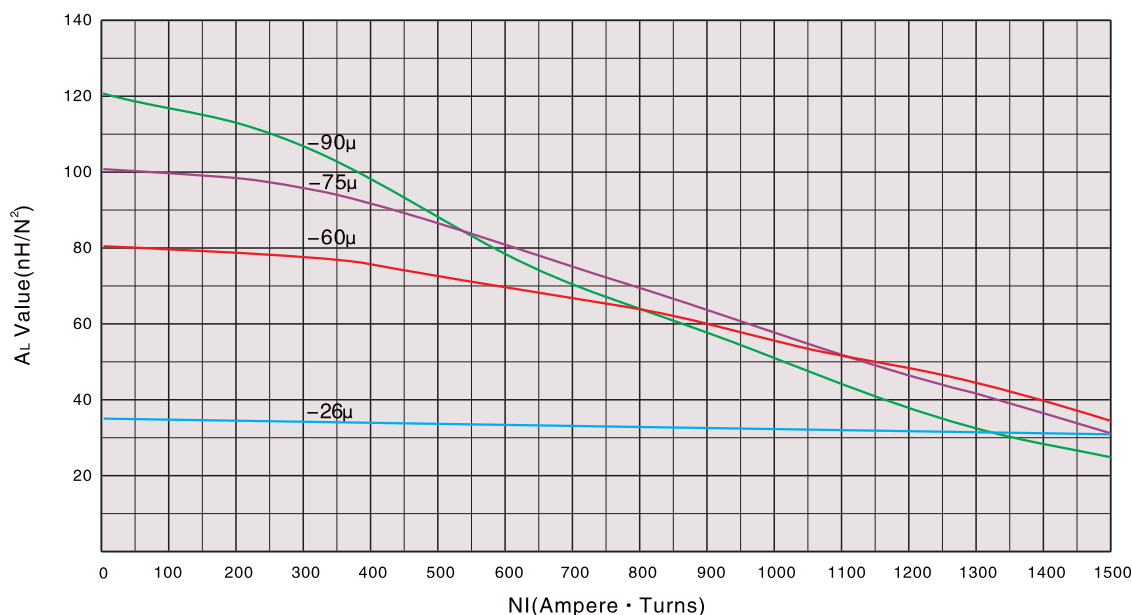
Before Coating			After Coating			$\ell_e$ in/cm	$A_e$ in <sup>2</sup> /cm <sup>2</sup>	$V$ in <sup>3</sup> /cm <sup>3</sup>	$W$ in <sup>2</sup> /cm <sup>2</sup>
OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm	OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm				
1.570 39.90	0.950 24.10	0.570 14.50	1.602 40.72	0.918 23.30	0.605 15.37	3.880 9.840	0.1662 1.072	0.645 10.500	0.6619 4.270

## Electrical Specifications

KDM Part No.	Perm. $\mu_e$	$A_L$ $\pm 8\%$
KNF157-026A	26	35
KNF157-060A	60	81
KNF157-075A	75	101
KNF157-090A	90	121

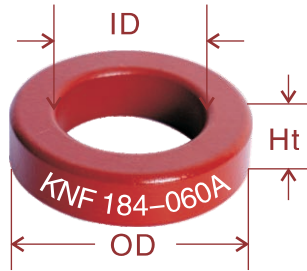
## Magnet Wire Winding Data

AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$		AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$	
10	0.267	22	0.00389	19	0.0785	64	0.0804
11	0.238	25	0.00545	20	0.0701	71	0.112
12	0.213	28	0.00762	21	0.0632	80	0.158
13	0.190	31	0.0107	22	0.0566	90	0.223
14	0.171	35	0.0148	23	0.0505	100	0.309
15	0.153	40	0.0208	24	0.0452	112	0.435
16	0.137	45	0.0292	25	0.0409	125	0.611
17	0.122	50	0.0408	26	0.0366	140	0.862
18	0.109	57	0.0574	27	0.0330	155	1.20

AL vs NI Curve(26 $\mu$ ,60 $\mu$ , 75 $\mu$ ,90 $\mu$ )

## TYPICAL PART NO. KNF 184-060 A

KDM .Neu Flux™ Cores  
Size:OD in 100th inches  
Permeability( $\mu_e$ )  
Core Grading



KDM Material Mix No.  
KNF™:Neu Flux™ Cores(Brown)  
KS:Sendust Cores(Black)  
KSF:Si-Fe™ Cores(Blue)  
KH:High Flux Cores(Khaki)  
KM:MPP Cores(Gray)

$\ell_e$ : 平均磁路长度 (Mean Magnetic Path Length)  
 $A_e$ : 横截面积(Cross Section Area)  
 $V$ : 磁芯体积(Core Volume)  
 $W$ : 窗口面积(Window Area)

## Physical Specifications

Before Coating			After Coating			$\ell_e$ in/cm	$A_e$ in <sup>2</sup> /cm <sup>2</sup>	$V$ in <sup>3</sup> /cm <sup>3</sup>	$W$ in <sup>2</sup> /cm <sup>2</sup>
OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm	OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm				
1.840 46.70	0.950 24.10	0.710 18.00	1.875 47.63	0.918 23.32	0.745 18.92	4.230 10.740	0.308 1.990	1.300 21.300	0.6619 4.270

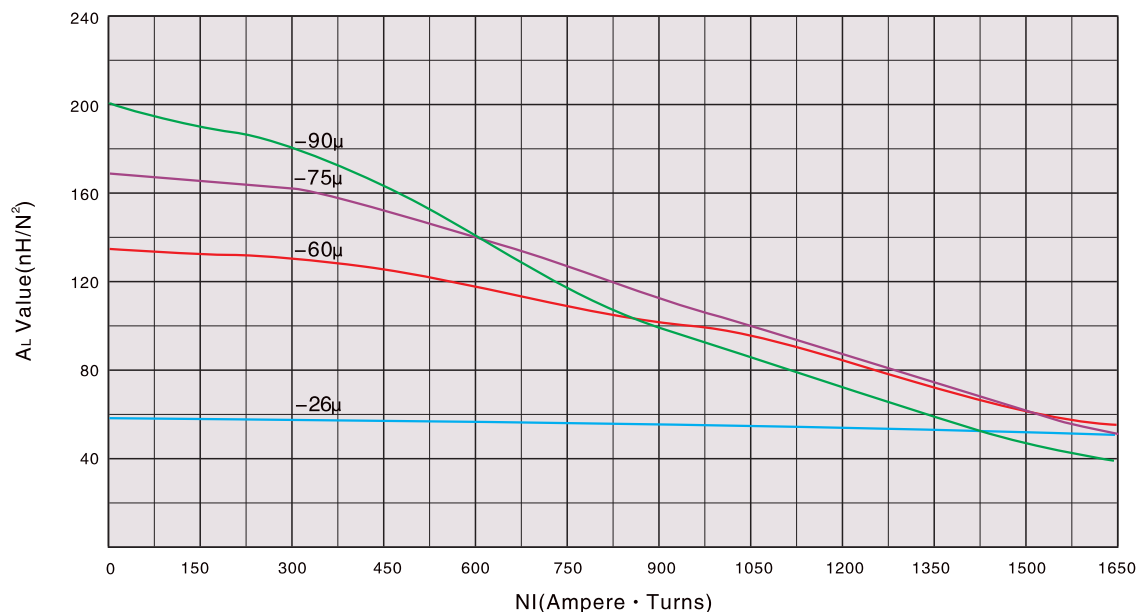
## Electrical Specifications

KDM Part No.	Perm. $\mu_e$	$A_L$ $\pm 8\%$
KNF184-026A	26	59
KNF184-060A	60	135
KNF184-075A	75	169
KNF184-090A	90	202

## Magnet Wire Winding Data

AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$		AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$	
10	0.267	22	0.0488	19	0.0785	64	0.104
11	0.238	25	0.0688	20	0.0701	71	0.146
12	0.213	28	0.0966	21	0.0632	80	0.205
13	0.190	31	0.0136	22	0.0566	90	0.290
14	0.171	35	0.0189	23	0.0505	100	0.403
15	0.153	40	0.0267	24	0.0452	112	0.567
16	0.137	45	0.0375	25	0.0409	125	0.798
17	0.122	50	0.0526	26	0.0366	140	1.13
18	0.109	57	0.0740	27	0.0330	155	1.57

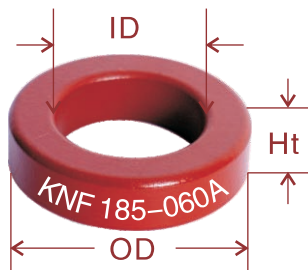
## $A_L$ vs NI Curve(26 $\mu$ ,60 $\mu$ , 75 $\mu$ ,90 $\mu$ )





## TYPICAL PART NO. KNF 185-060 A

KDM Neu Flux™ Cores  
Size: OD in 100th inches  
Permeability ( $\mu_e$ )  
Core Grading



KDM Material Mix No.  
KNF™: Neu Flux™ Cores (Brown)  
KS: Sendust Cores (Black)  
KSF: Si-Fe™ Cores (Blue)  
KH: High Flux Cores (Khaki)  
KM: MPP Cores (Gray)

$\ell_e$ : 平均磁路长度 (Mean Magnetic Path Length)  
 $A_e$ : 横截面积 (Cross Section Area)  
 $V$ : 磁芯体积 (Core Volume)  
 $W$ : 窗口面积 (Window Area)

## Physical Specifications

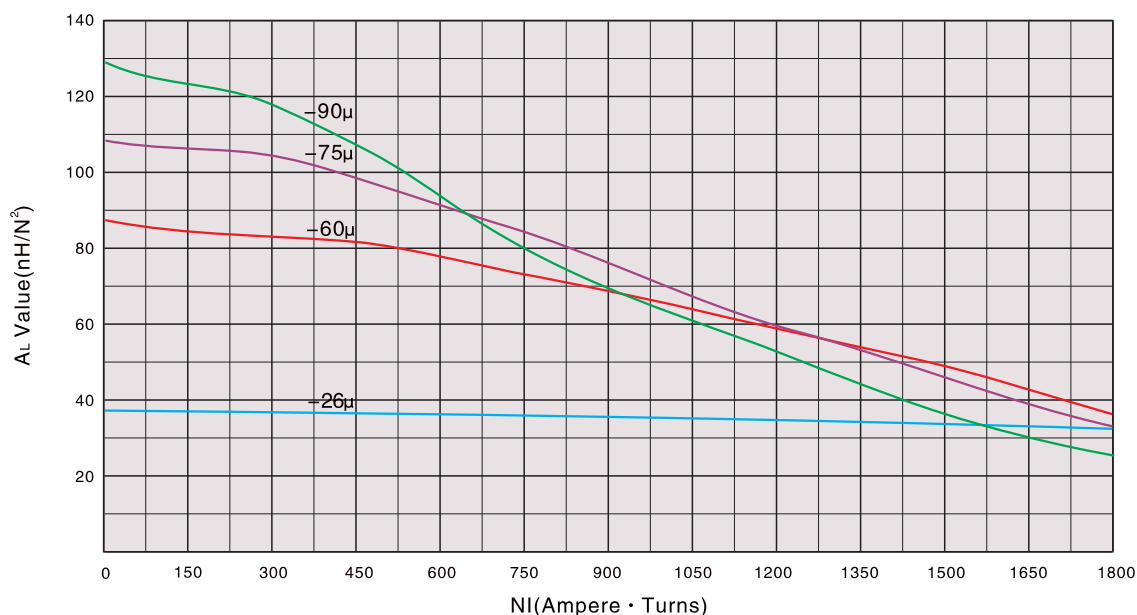
Before Coating			After Coating			$\ell_e$ in/cm	$A_e$ in <sup>2</sup> /cm <sup>2</sup>	$V$ in <sup>3</sup> /cm <sup>3</sup>	$W$ in <sup>2</sup> /cm <sup>2</sup>
OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm	OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm				
1.840 46.70	1.130 28.70	0.600 15.20	1.875 47.63	1.098 27.89	0.635 16.13	4.580 11.630	0.208 1.340	0.953 15.530	0.6469 6.110

## Electrical Specifications

KDM Part No.	Perm. $\mu_e$	$A_L$ $\pm 8\%$
KNF185-026A	26	37
KNF185-060A	60	86
KNF185-075A	75	107
KNF185-090A	90	128

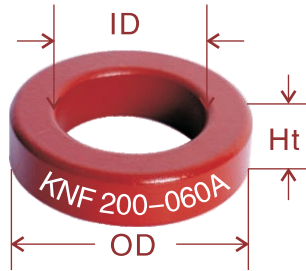
## Magnet Wire Winding Data

AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$		AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$	
10	0.267	26	0.00505	19	0.0980	77	0.104
11	0.238	30	0.00708	20	0.0879	86	0.146
12	0.213	34	0.0099	21	0.0785	96	0.205
13	0.190	38	0.0139	22	0.0701	108	0.290
14	0.171	43	0.0193	23	0.0632	120	0.402
15	0.153	48	0.0270	24	0.0566	134	0.565
16	0.137	54	0.0380	25	0.0505	150	0.795
17	0.122	61	0.0530	26	0.0452	168	1.12
18	0.109	68	0.0745	27	0.0409	186	1.56

AL vs NI Curve (26 $\mu$ , 60 $\mu$ , 75 $\mu$ , 90 $\mu$ )

TYPICAL PART NO. KNF 200-060 A

KDM .Neu Flux™ Cores  
Size:OD in 100th inches  
Permeability( $\mu_e$ )  
Core Grading



KDM Material Mix No.  
KNF™:Neu Flux™ Cores(Brown)  
KS:Sendust Cores(Black)  
KSF:Si-Fe™ Cores(Blue)  
KH:High Flux Cores(Khaki)  
KM:MPP Cores(Gray)

$\ell_e$ : 平均磁路长度 ( Mean Magnetic Path Length)  
 $A_e$ : 横截面积(Cross Section Area)  
 $V$ : 磁芯体积(Core Volume)  
 $W$ : 窗口面积(Window Area)

Physical Specifications

Before Coating			After Coating			$\ell_e$ in/cm	$A_e$ in <sup>2</sup> /cm <sup>2</sup>	$V$ in <sup>3</sup> /cm <sup>3</sup>	$W$ in <sup>2</sup> /cm <sup>2</sup>
OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm	OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm				
2.000 50.80	1.250 31.80	0.530 13.50	2.035 51.69	1.218 30.94	0.565 14.35	5.020 12.730	0.194 1.251	0.974 15.930	1.165 7.500

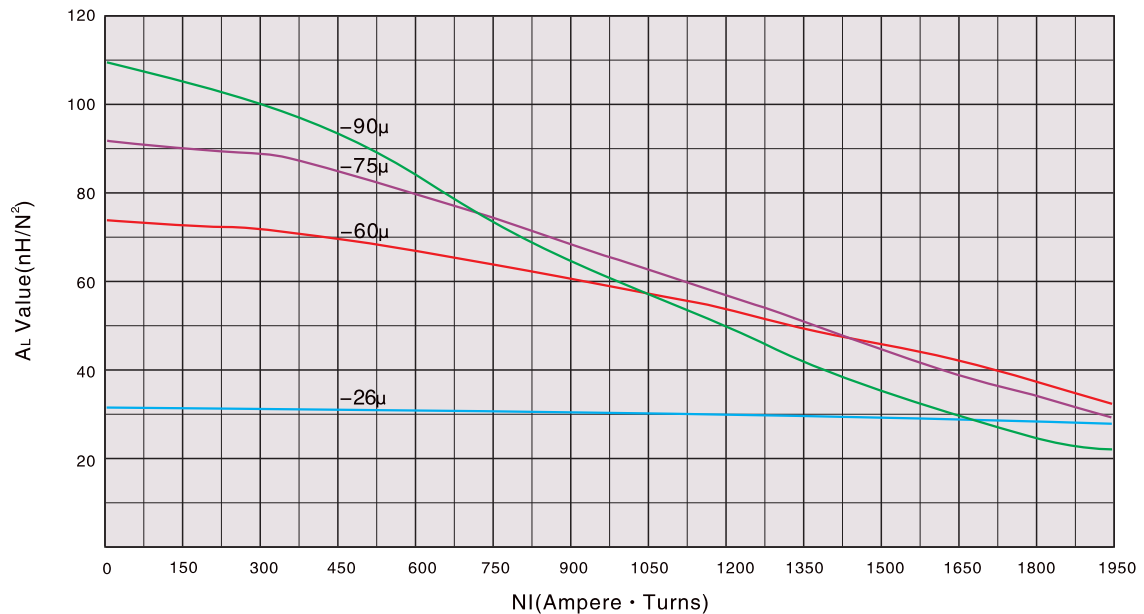
Electrical Specifications

KDM Part No.	Perm. $\mu_e$	$A_L$ $\pm 8\%$
KNF200-026A	26	32
KNF200-060A	60	73
KNF200-075A	75	91
KNF200-090A	90	109

Magnet Wire Winding Data

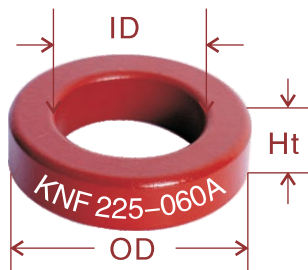
AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$		AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$	
10	0.267	30	0.00539	19	0.0980	85	0.110
11	0.238	33	0.00754	20	0.0879	95	0.154
12	0.213	38	0.0105	21	0.0785	107	0.216
13	0.190	43	0.0147	22	0.0701	120	0.306
14	0.171	48	0.0205	23	0.0632	133	0.424
15	0.153	54	0.0287	24	0.0566	149	0.596
16	0.137	60	0.0402	25	0.0505	167	0.838
17	0.122	68	0.0562	26	0.0452	186	1.18
18	0.109	76	0.0788	27	0.0409	207	1.64

$A_L$  vs NI Curve(26 $\mu$ ,60 $\mu$ , 75 $\mu$ ,90 $\mu$ )



## TYPICAL PART NO. KNF 225-060 A

KDM Neu Flux™ Cores  
Size: OD in 100th inches  
Permeability ( $\mu_e$ )  
Core Grading



KDM Material Mix No.  
KNF™: Neu Flux™ Cores (Brown)  
KS: Sendust Cores (Black)  
KSF: Si-Fe™ Cores (Blue)  
KH: High Flux Cores (Khaki)  
KM: MPP Cores (Gray)

$\ell_e$ : 平均磁路长度 (Mean Magnetic Path Length)  
 $A_e$ : 横截面积 (Cross Section Area)  
 $V$ : 磁芯体积 (Core Volume)  
 $W$ : 窗口面积 (Window Area)

## Physical Specifications

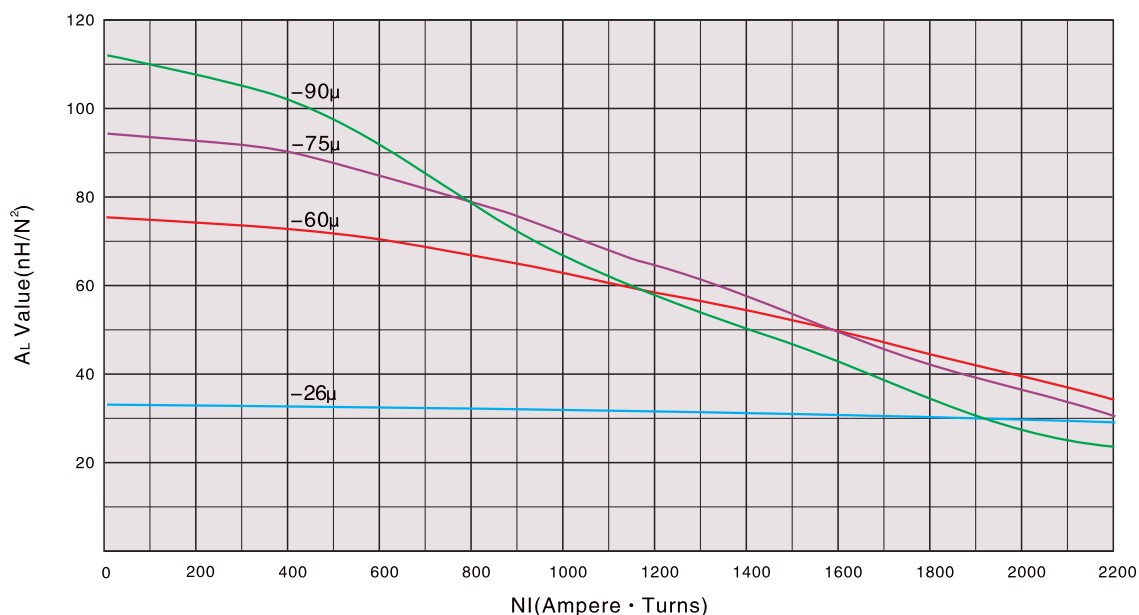
Before Coating			After Coating			$\ell_e$ in/cm	$A_e$ in <sup>2</sup> /cm <sup>2</sup>	$V$ in <sup>3</sup> /cm <sup>3</sup>	$W$ in <sup>2</sup> /cm <sup>2</sup>
OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm	OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm				
2.250 57.20	1.400 35.60	0.550 14.00	2.285 58.00	1.368 34.70	0.585 14.86	5.630 14.300	0.224 1.444	1.260 20.650	1.470 9.480

## Electrical Specifications

KDM Part No.	Perm. $\mu_e$	$A_L$ $\pm 8\%$
KNF225-026A	26	33
KNF225-060A	60	75
KNF225-075A	75	94
KNF225-090A	90	112

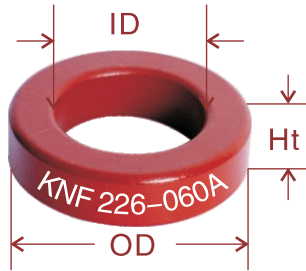
## Magnet Wire Winding Data

AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$		AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$	
10	0.267	37	0.00644	19	0.0980	108	0.152
11	0.238	42	0.00920	20	0.0879	120	0.211
12	0.213	48	0.0133	21	0.0785	135	0.300
13	0.190	54	0.0188	22	0.0701	152	0.428
14	0.171	60	0.0263	23	0.0632	169	0.596
15	0.153	68	0.0376	24	0.0566	189	0.845
16	0.137	76	0.0531	25	0.0505	212	1.19
17	0.122	85	0.0746	26	0.0452	237	1.69
18	0.109	96	0.107	27	0.0409	263	2.35

 $A_L$  vs NI Curve (26 $\mu$ , 60 $\mu$ , 75 $\mu$ , 90 $\mu$ )

### TYPICAL PART NO. KNF 226-060 A

KDM .Neu Flux™ Cores  
Size:OD in 100th inches  
Permeability( $\mu_e$ )  
Core Grading



KDM Material Mix No.  
KNF™:Neu Flux™ Cores(Brown)  
KS:Sendust Cores(Black)  
KSF:Si-Fe™ Cores(Blue)  
KH:High Flux Cores(Khaki)  
KM:MPP Cores(Gray)

$\ell_e$ : 平均磁路长度 (Mean Magnetic Path Length)  
 $A_e$ : 横截面积(Cross Section Area)  
 $V$ : 磁芯体积(Core Volume)  
 $W$ : 窗口面积(Window Area)

### Physical Specifications

Before Coating			After Coating			$\ell_e$ in/cm	$A_e$ in <sup>2</sup> /cm <sup>2</sup>	$V$ in <sup>3</sup> /cm <sup>3</sup>	$W$ in <sup>2</sup> /cm <sup>2</sup>
OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm	OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm				
2.250 57.20	1.039 26.40	0.600 15.20	2.285 58.00	1.007 25.60	0.635 16.10	4.930 12.500	0.355 2.290	1.750 28.600	0.796 5.140

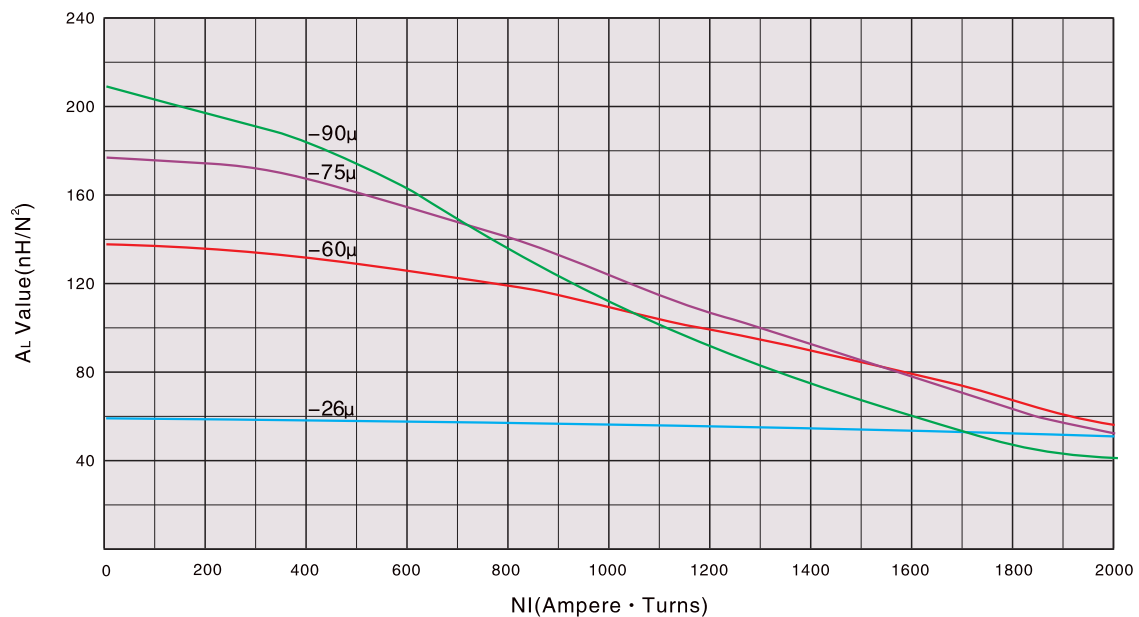
### Electrical Specifications

KDM Part No.	Perm. $\mu_e$	$A_L$ $\pm 8\%$
KNF226-026A	26	60
KNF226-060A	60	138
KNF226-075A	75	175
KNF226-090A	90	207

### Magnet Wire Winding Data

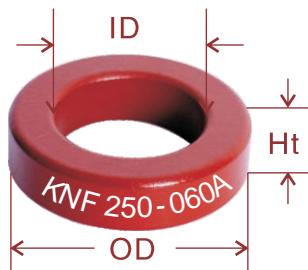
AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$		AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$	
10	0.267	26	0.00551	19	0.0980	78	0.133
11	0.238	30	0.00801	20	0.0879	88	0.189
12	0.213	34	0.0115	21	0.0785	99	0.269
13	0.190	39	0.0165	22	0.0701	111	0.381
14	0.171	43	0.0230	23	0.0632	124	0.534
15	0.153	49	0.0330	24	0.0566	138	0.752
16	0.137	55	0.0469	25	0.0505	156	1.07
17	0.122	62	0.0664	26	0.0452	174	1.51
18	0.109	70	0.0948	27	0.0409	193	2.10

### $A_L$ vs NI Curve(26 $\mu$ ,60 $\mu$ , 75 $\mu$ ,90 $\mu$ )



## TYPICAL PART NO. KNF 250-060 A

KDM .Neu Flux™ Cores  
Size:OD in 100th inches  
Permeability( $\mu_e$ )  
Core Grading



KDM Material Mix No.  
KNF™:Neu Flux™ Cores(Brown)  
KS:Sendust Cores(Black)  
KSF:Si-Fe™ Cores(Blue)  
KH:High Flux Cores(Khaki)  
KM:MPP Cores(Gray)

$\ell_e$ : 平均磁路长度 (Mean Magnetic Path Length)  
 $A_e$ : 横截面积(Cross Section Area)  
 $V$ : 磁芯体积(Core Volume)  
 $W$ : 窗口面积(Window Area)

## Physical Specifications

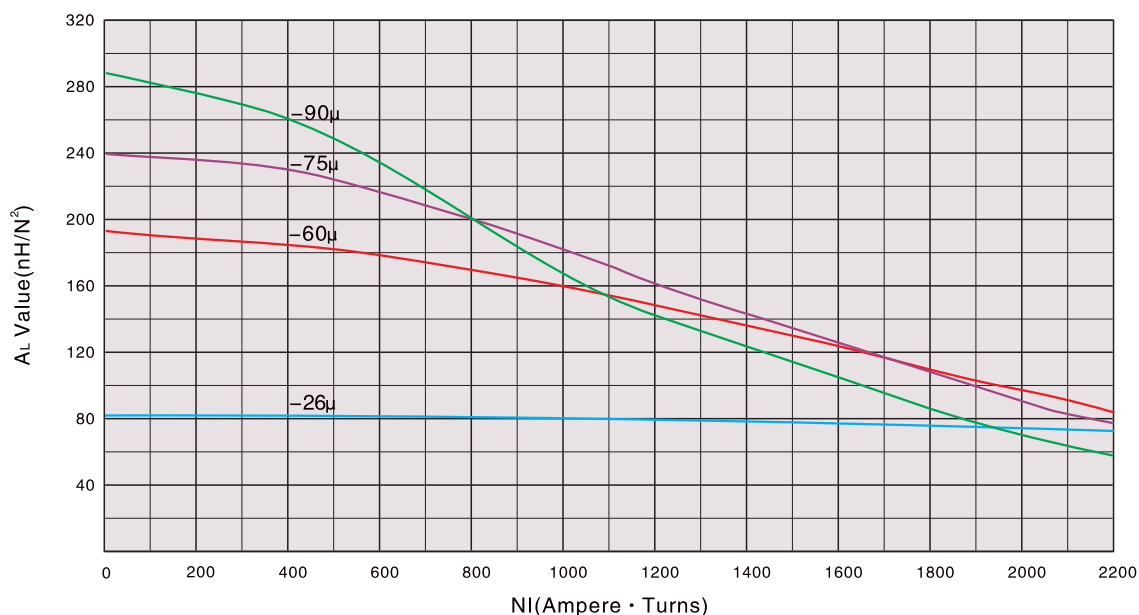
Before Coating			After Coating			$\ell_e$ in/cm	$A_e$ in <sup>2</sup> /cm <sup>2</sup>	$V$ in <sup>3</sup> /cm <sup>3</sup>	$W$ in <sup>2</sup> /cm <sup>2</sup>
OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm	OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm				
2.441 62.00	1.283 32.60	0.984 25.00	2.484 63.10	1.235 31.37	1.034 26.27	5.660 14.370	0.570 3.675	3.223 52.810	9.250 7.730

## Electrical Specifications

KDM Part No.	Perm. $\mu_e$	$A_L$ $\pm 8\%$
KNF250-026A	26	83
KNF250-060A	60	192
KNF250-075A	75	240
KNF250-090A	90	288

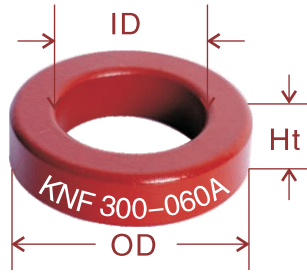
## Magnet Wire Winding Data

AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$	AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$
10	0.267		19	0.0980	
11	0.238		20	0.0879	
12	0.213		21	0.0785	
13	0.190		22	0.0701	
14	0.171	N.A	23	0.0632	N.A
15	0.153		24	0.0566	
16	0.137		25	0.0505	
17	0.122		26	0.0452	
18	0.109		27	0.0409	

 $A_L$  vs NI Curve(26 $\mu$ , 60 $\mu$ , 75 $\mu$ , 90 $\mu$ )

## TYPICAL PART NO. KNF 300-060 A

KDM .Neu Flux™ Cores  
Size:OD in 100th inches  
Permeability( $\mu_e$ )  
Core Grading



KDM Material Mix No.  
KNF™:Neu Flux™ Cores(Brown)  
KS:Sendust Cores(Black)  
KSF:Si-Fe™ Cores(Blue)  
KH:High Flux Cores(Khaki)  
KM:MPP Cores(Gray)

$\ell_e$ : 平均磁路长度 ( Mean Magnetic Path Length)  
 $A_e$ : 横截面积(Cross Section Area)  
 $V$ : 磁芯体积(Core Volume)  
 $W$ : 窗口面积(Window Area)

## Physical Specifications

Before Coating			After Coating			$\ell_e$ in/cm	$A_e$ in <sup>2</sup> /cm <sup>2</sup>	$V$ in <sup>3</sup> /cm <sup>3</sup>	$W$ in <sup>2</sup> /cm <sup>2</sup>
OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm	OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm				
3.063 77.80	1.938 49.20	0.500 12.70	3.108 78.90	1.898 48.2	0.545 13.84	7.720 20.000	0.274 1.770	2.115 34.700	2.800 17.990

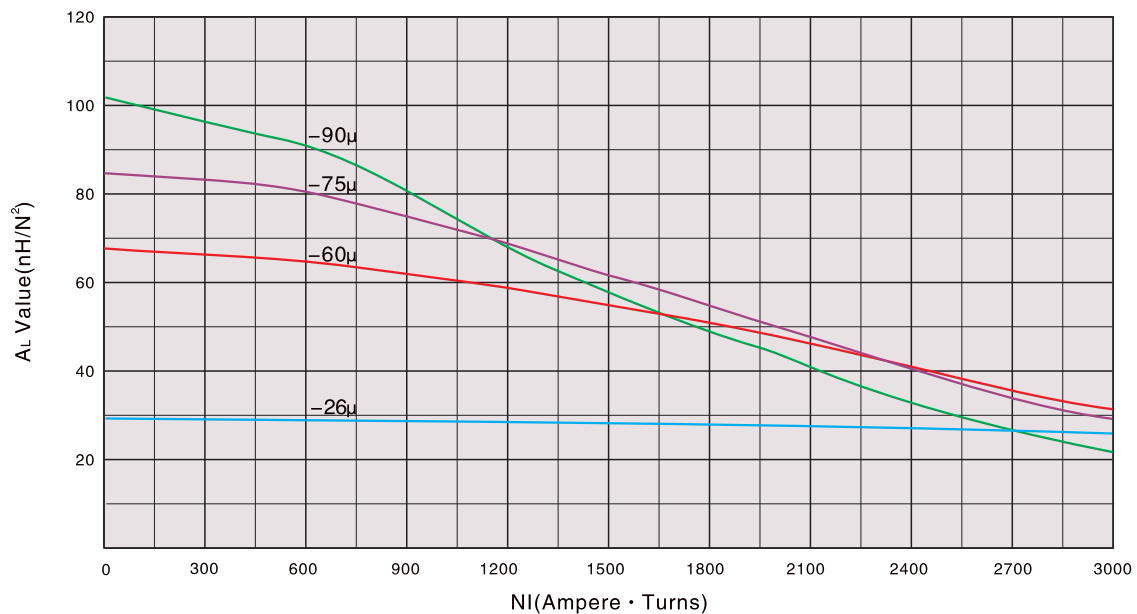
## Electrical Specifications

KDM Part No.	Perm. $\mu_e$	$A_L$ $\pm 8\%$
KNF300-026A	26	30
KNF300-060A	60	68
KNF300-075A	75	85
KNF300-090A	90	102

## Magnet Wire Winding Data

AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$		AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$	
10	0.267	47	0.0100	19	0.0980	134	0.206
11	0.238	53	0.0140	20	0.0879	149	0.288
12	0.213	60	0.0196	21	0.0785	167	0.404
13	0.190	68	0.0274	22	0.0701	187	0.570
14	0.171	75	0.0381	23	0.0632	208	0.792
15	0.153	85	0.0534	24	0.0566	232	1.11
16	0.137	95	0.0749	25	0.0505	260	1.56
17	0.122	107	0.105	26	0.0452	290	2.21
18	0.109	119	0.147	27	0.0409	323	3.07

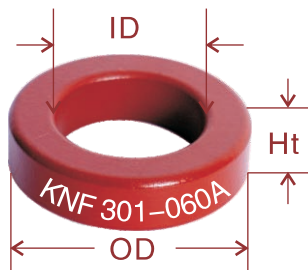
## $A_L$ vs NI Curve(26 $\mu$ ,60 $\mu$ , 75 $\mu$ ,90 $\mu$ )





## TYPICAL PART NO. KNF 301-060 A

KDM Neu Flux™ Cores  
Size: OD in 100th inches  
Permeability ( $\mu_e$ )  
Core Grading



KDM Material Mix No.  
KNF™: Neu Flux™ Cores (Brown)  
KS: Sendust Cores (Black)  
KSF: Si-Fe™ Cores (Blue)  
KH: High Flux Cores (Khaki)  
KM: MPP Cores (Gray)

$\ell_e$ : 平均磁路长度 (Mean Magnetic Path Length)  
 $A_e$ : 横截面积 (Cross Section Area)  
 $V$ : 磁芯体积 (Core Volume)  
 $W$ : 窗口面积 (Window Area)

## Physical Specifications

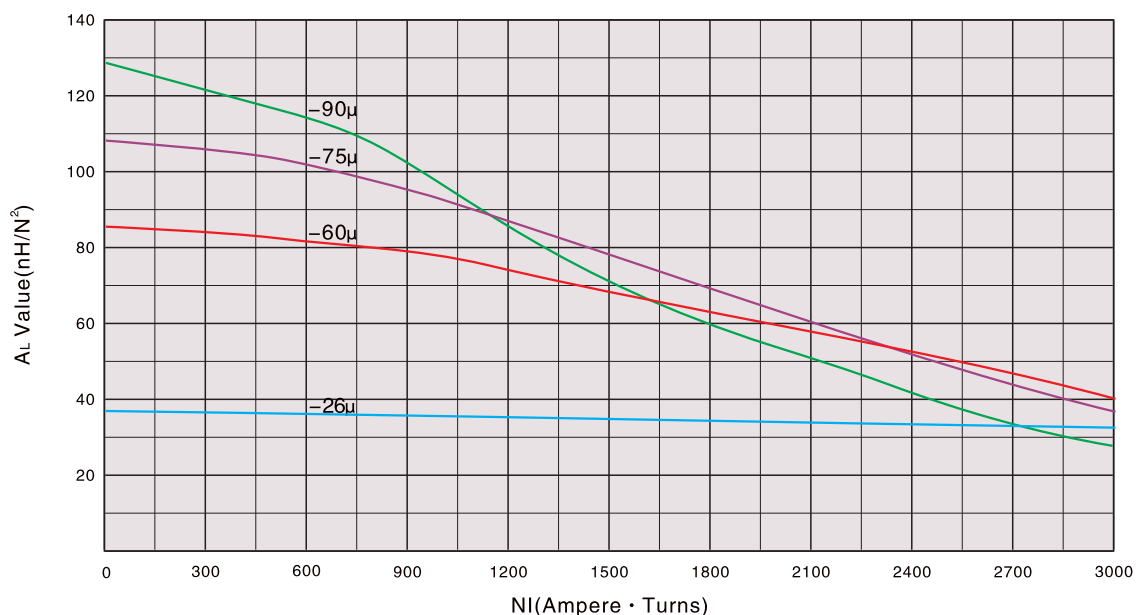
Before Coating			After Coating			$\ell_e$ in/cm	$A_e$ in <sup>2</sup> /cm <sup>2</sup>	$V$ in <sup>3</sup> /cm <sup>3</sup>	$W$ in <sup>2</sup> /cm <sup>2</sup>
OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm	OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm				
3.063 77.80	1.938 49.20	0.625 15.90	3.108 78.90	1.898 48.20	0.670 17.02	7.860 19.950	0.352 2.270	2.770 45.300	2.800 17.990

## Electrical Specifications

KDM Part No.	Perm. $\mu_e$	$A_L$ $\pm 8\%$
KNF301-026A	26	37
KNF301-060A	60	85
KNF301-075A	75	107
KNF301-090A	90	128

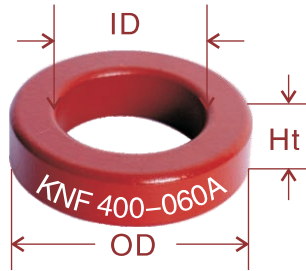
## Magnet Wire Winding Data

AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$		AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$	
10	0.267	47	0.0110	19	0.0980	134	0.228
11	0.238	53	0.0154	20	0.0879	149	0.318
12	0.213	60	0.0216	21	0.0785	167	0.449
13	0.190	68	0.0302	22	0.0701	187	0.634
14	0.171	75	0.0420	23	0.0632	208	0.880
15	0.153	85	0.0590	24	0.0566	232	1.24
16	0.137	95	0.0829	25	0.0505	260	1.74
17	0.122	107	0.116	26	0.0452	290	2.45
18	0.109	119	0.163	27	0.0409	323	3.41

 $A_L$  vs NI Curve (26 $\mu$ , 60 $\mu$ , 75 $\mu$ , 90 $\mu$ )

### TYPICAL PART NO. KNF 400-060 A

KDM .Neu Flux™ Cores  
Size:OD in 100th inches  
Permeability( $\mu_e$ )  
Core Grading



KDM Material Mix No.  
KNF™:Neu Flux™ Cores(Brown)  
KS:Sendust Cores(Black)  
KSF:Si-Fe™ Cores(Blue)  
KH:High Flux Cores(Khaki)  
KM:MPP Cores(Gray)

$\ell_e$ : 平均磁路长度 (Mean Magnetic Path Length)  
 $A_e$ : 横截面积(Cross Section Area)  
 $V$ : 磁芯体积(Core Volume)  
 $W$ : 窗口面积(Window Area)

### Physical Specifications

Before Coating			After Coating			$\ell_e$ in/cm	$A_e$ in <sup>2</sup> /cm <sup>2</sup>	$V$ in <sup>3</sup> /cm <sup>3</sup>	$W$ in <sup>2</sup> /cm <sup>2</sup>
OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm	OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm				
4.000 101.60	2.250 57.15	0.650 16.51	4.060 103.12	2.195 55.75	0.700 17.78	9.555 24.271	0.546 3.5226	5.217 85.495	3.784 24.413

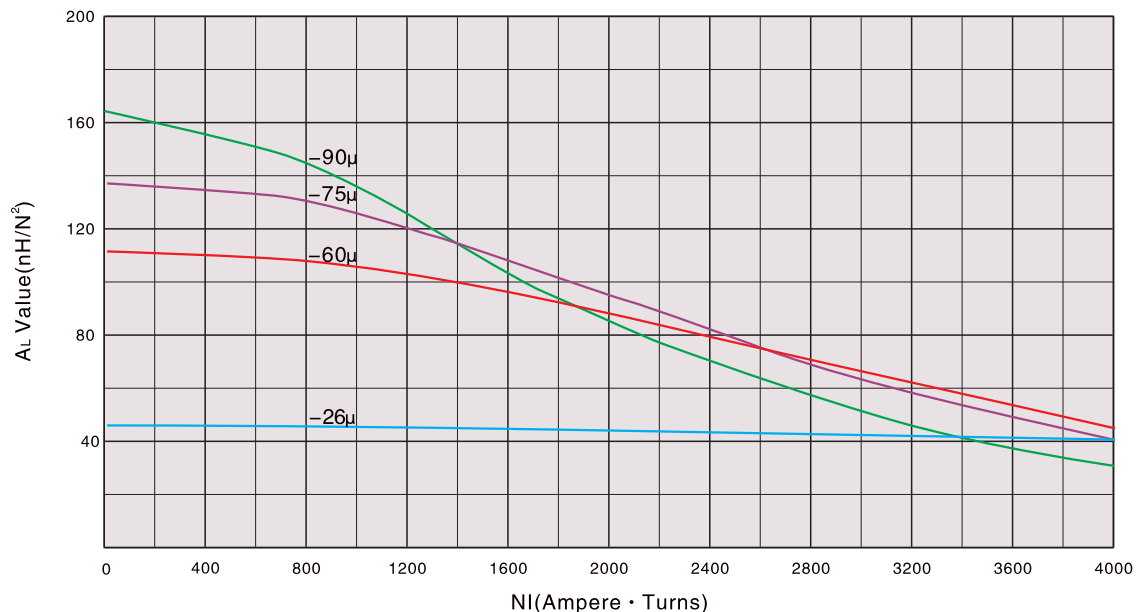
### Electrical Specifications

KDM Part No.	Perm. $\mu_e$	$A_L$ $\pm 8\%$
KNF400-026A	26	47
KNF400-060A	60	112
KNF400-075A	75	137
KNF400-090A	90	164

### Magnet Wire Winding Data

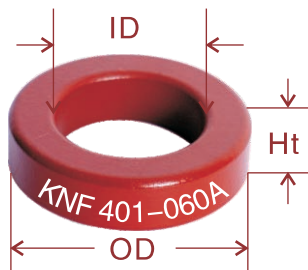
AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$		AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$	
10	0.267	56	0.0158	19	0.0980	156	0.332
11	0.238	63	0.0222	20	0.0879	174	0.464
12	0.213	70	0.0311	21	0.0785	195	0.653
13	0.190	79	0.0436	22	0.0701	218	0.924
14	0.171	88	0.0608	23	0.0632	242	1.28
15	0.153	99	0.0854	24	0.0566	271	1.81
16	0.137	111	0.120	25	0.0505	303	2.54
17	0.122	124	0.168	26	0.0452	338	3.59
18	0.109	139	0.236	27	0.0409	376	4.99

### $A_L$ vs NI Curve(26 $\mu$ , 60 $\mu$ , 75 $\mu$ , 90 $\mu$ )



## TYPICAL PART NO. KNF 401-060 A

KDM .Neu Flux™ Cores  
Size:OD in 100th inches  
Permeability( $\mu_e$ )  
Core Grading



KDM Material Mix No.  
KNF™:Neu Flux™ Cores(Brown)  
KS:Sendust Cores(Black)  
KSF:Si-Fe™ Cores(Blue)  
KH:High Flux Cores(Khaki)  
KM:MPP Cores(Gray)

$\ell_e$ : 平均磁路长度 (Mean Magnetic Path Length)  
 $A_e$ : 横截面积(Cross Section Area)  
 $V$ : 磁芯体积(Core Volume)  
 $W$ : 窗口面积(Window Area)

## Physical Specifications

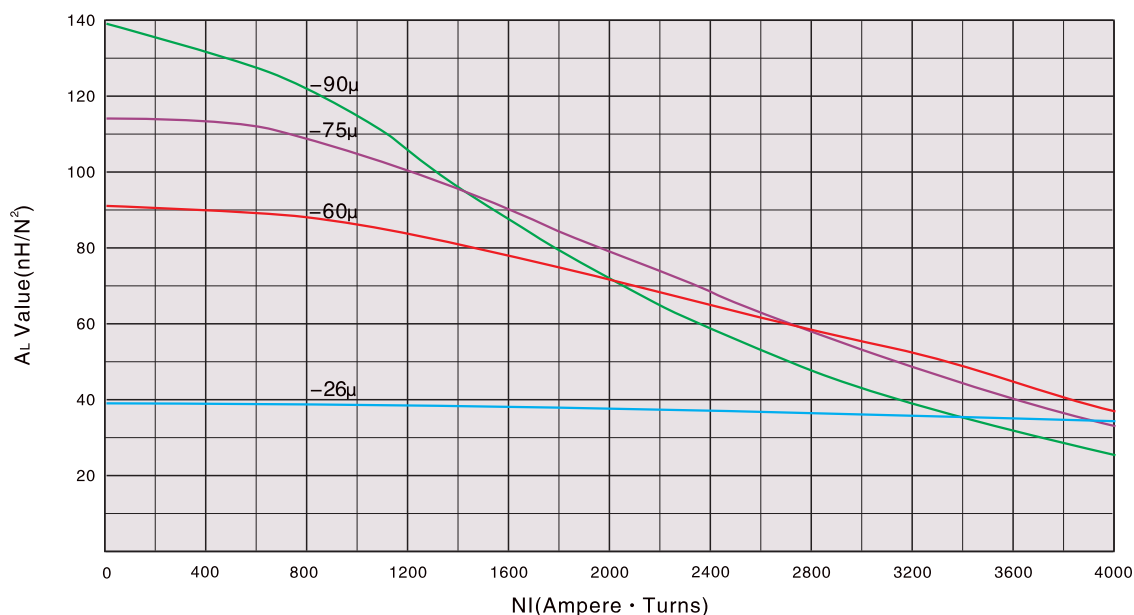
Before Coating			After Coating			$\ell_e$ in/cm	$A_e$ in <sup>2</sup> /cm <sup>2</sup>	$V$ in <sup>3</sup> /cm <sup>3</sup>	$W$ in <sup>2</sup> /cm <sup>2</sup>
OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm	OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm				
4.000 101.60	2.250 57.15	0.535 13.59	4.060 103.12	2.195 55.75	0.585 14.86	9.555 24.271	0.461 2.971	4.401 72.122	3.784 24.413

## Electrical Specifications

KDM Part No.	Perm. $\mu_e$	$A_L$ $\pm 8\%$
KNF401-026A	26	40
KNF401-060A	60	92
KNF401-075A	75	115
KNF401-090A	90	139

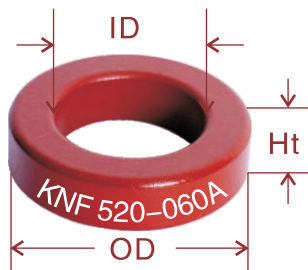
## Magnet Wire Winding Data

AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$		AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$	
10	0.267	56	0.0147	19	0.0980	156	0.308
11	0.238	63	0.0207	20	0.0879	174	0.431
12	0.213	70	0.0289	21	0.0785	195	0.605
13	0.190	79	0.0406	22	0.0701	218	0.856
14	0.171	88	0.0565	23	0.0632	242	1.19
15	0.153	99	0.0794	24	0.0566	271	1.67
16	0.137	111	0.112	25	0.0505	303	2.35
17	0.122	124	0.156	26	0.0452	338	3.32
18	0.109	139	0.219	27	0.0409	376	4.62

AL vs NI Curve(26 $\mu$ , 60 $\mu$ , 75 $\mu$ , 90 $\mu$ )

## TYPICAL PART NO. KNF 520-060 A

KDM .Neu Flux™ Cores  
Size:OD in 100th inches  
Permeability( $\mu_e$ )  
Core Grading



KDM Material Mix No.  
KNF™:Neu Flux™ Cores(Brown)  
KS:Sendust Cores(Black)  
KSF:Si-Fe™ Cores(Blue)  
KH:High Flux Cores(Khaki)  
KM:MPP Cores(Gray)

$\ell_e$ : 平均磁路长度 (Mean Magnetic Path Length)  
 $A_e$ : 横截面积(Cross Section Area)  
 $V$ : 磁芯体积(Core Volume)  
 $W$ : 窗口面积(Window Area)

## Physical Specifications

Before Coating			After Coating			$\ell_e$ in/cm	$A_e$ in <sup>2</sup> /cm <sup>2</sup>	$V$ in <sup>3</sup> /cm <sup>3</sup>	$W$ in <sup>2</sup> /cm <sup>2</sup>
OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm	OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm				
5.218 132.54	3.094 78.59	0.800 20.32	5.284 134.21	3.033 77.04	0.855 21.72	12.767 32.428	0.829 5.347	10.580 173.400	7.225 46.612

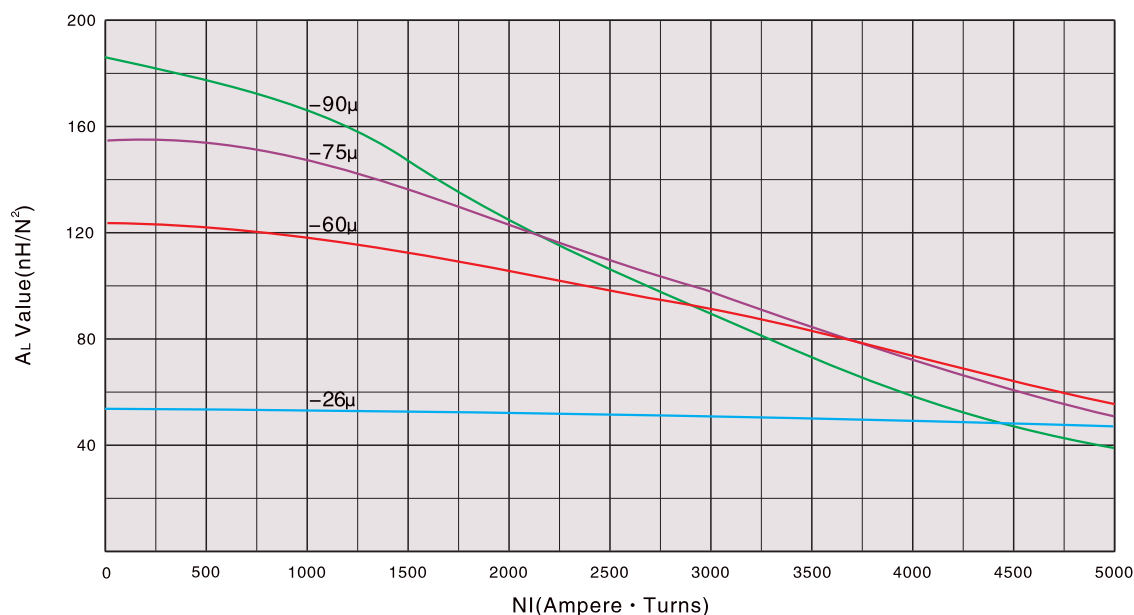
## Electrical Specifications

KDM Part No.	Perm. $\mu_e$	$A_L$ $\pm 8\%$
KNF520-026A	26	54
KNF520-060A	60	124
KNF520-075A	75	155
KNF520-090A	90	187

## Magnet Wire Winding Data

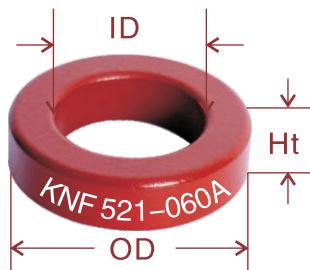
AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$		AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$	
10	0.267	78	0.0266	19	0.0980	216	0.562
11	0.238	88	0.0374	20	0.0879	241	0.786
12	0.213	98	0.0524	21	0.0785	270	1.11
13	0.190	110	0.0735	22	0.0701	302	1.56
14	0.171	123	0.103	23	0.0632	336	2.17
15	0.153	138	0.144	24	0.0566	375	3.06
16	0.137	155	0.203	25	0.0505	420	4.31
17	0.122	173	0.284				
18	0.109	193	0.400				

## $A_L$ vs NI Curve(26 $\mu$ ,60 $\mu$ , 75 $\mu$ ,90 $\mu$ )



## TYPICAL PART NO. KNF 521-060 A

KDM .Neu Flux™ Cores  
Size:OD in 100th inches  
Permeability( $\mu_e$ )  
Core Grading



KDM Material Mix No.  
KNF™:Neu Flux™ Cores(Brown)  
KS:Sendust Cores(Black)  
KSF:Si-Fe™ Cores(Blue)  
KH:High Flux Cores(Khaki)  
KM:MPP Cores(Gray)

$\ell_e$ : 平均磁路长度 (Mean Magnetic Path Length)  
 $A_e$ : 横截面积(Cross Section Area)  
 $V$ : 磁芯体积(Core Volume)  
 $W$ : 窗口面积(Window Area)

## Physical Specifications

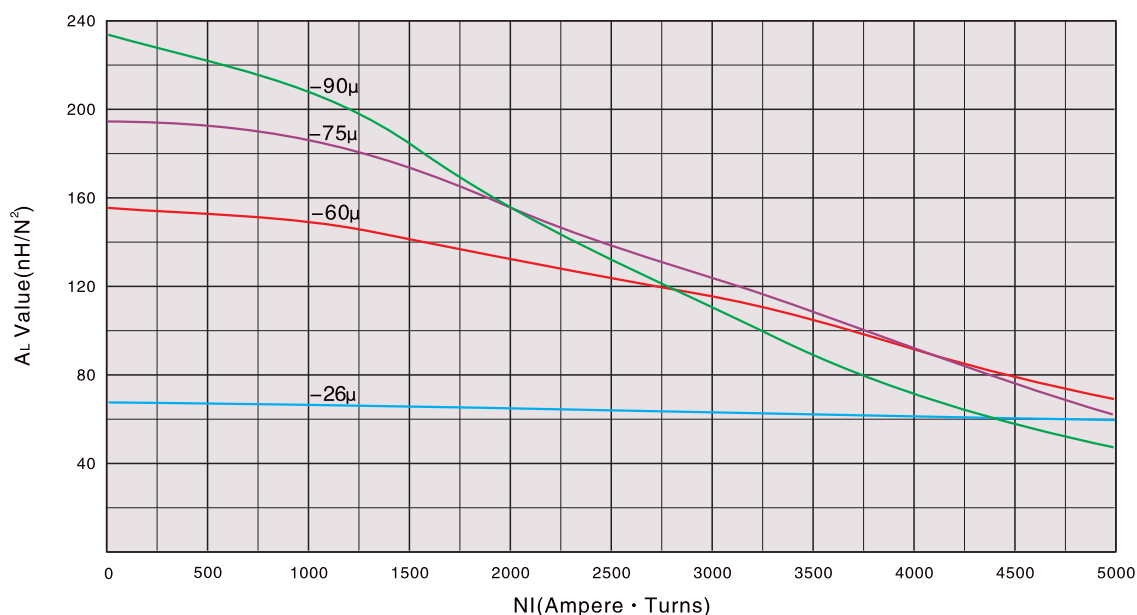
Before Coating			After Coating			$\ell_e$ in/cm	$A_e$ in <sup>2</sup> /cm <sup>2</sup>	$V$ in <sup>3</sup> /cm <sup>3</sup>	$W$ in <sup>2</sup> /cm <sup>2</sup>
OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm	OD(Max) in/mm	ID(Min) in/mm	Ht(Max) in/mm				
5.218 132.54	3.094 78.59	1.000 25.40	5.284 134.21	3.033 77.04	1.055 26.80	12.767 32.429	1.040 6.710	13.280 217.580	7.225 46.612

## Electrical Specifications

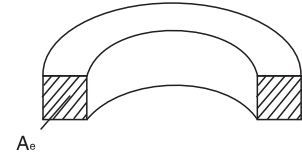
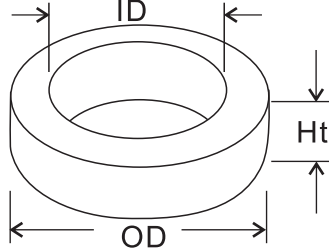
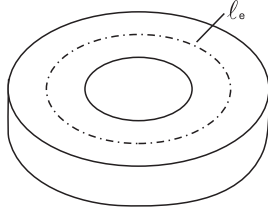
KDM Part No.	Perm. $\mu_e$	$A_L$ $\pm 8\%$
KNF521-026A	26	68
KNF521-060A	60	156
KNF521-075A	75	195
KNF521-090A	90	234

## Magnet Wire Winding Data

AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$		AWG Wire No. Dia.(cm)		Single Layer Turns Rdc, $\Omega$	
10	0.267	78	0.0292	19	0.0980	216	0.620
11	0.238	88	0.0410	20	0.0879	241	0.867
12	0.213	98	0.0576	21	0.0785	270	1.22
13	0.190	110	0.0809	22	0.0701	302	1.73
14	0.171	123	0.113	23	0.0632	336	2.40
15	0.153	138	0.159	24	0.0566	375	3.38
16	0.137	155	0.224	25	0.0505	420	4.76
17	0.122	173	0.313				
18	0.109	193	0.441				

AL vs NI Curve(26 $\mu$ , 60 $\mu$ , 75 $\mu$ , 90 $\mu$ )

## 磁粉芯的有效面积与有效磁路长度 Cross Section Area and Mean Magnetic Path Length



$$A_e = \frac{OD-ID}{2} \times Ht$$

$$l_e = \frac{OD+ID}{2} \times \pi$$

$$V = l_e \times A_e$$

$A_e$ : 有效磁粉芯面积 (cm<sup>2</sup>)与磁芯的横截面积相等(cross section area)

$l_e$ : 有效磁路长度或称平均磁路长度 (cm) (mean magnetic path length)

$V$ : 磁芯体积 (cm<sup>3</sup>)(core volume)

OD: 磁芯外径 (cm) (outside diameter of core)

ID: 磁芯内径 (cm) (inside diameter of core)

Ht: 磁芯高度 (cm)

W: 磁芯最小窗口面积 (cm<sup>2</sup>)

1英寸 (inches) = 10<sup>3</sup> mil=25.4mm

有效磁导率 Permeability( $\mu_e$ )

磁导率是磁滞回线上任何点所对应的B与H的比值。

In magnetics, permeability is the ability of a material to conduct flux. The magnetitude of the permeability at a given induction is a measure of the ease with which a core material can be magnetized to that induction. It is defined as the ratio of the flux density B to the magnetizing force H.

$$\mu_e = \frac{B}{H}$$

$\mu_e$ : 有效磁导率 (无量纲) permeability

B: 磁通量密度 (高斯 Gauss) flux density(Gauss)

H: 磁场强度 (奥斯特 Oe) magnetizing(Oe)

额定电感量和电感量  $A_L$  and Inductance Considerations

每种尺寸磁粉芯的额定电感量都与其有效磁导率有关, 有效磁导率仅作参考, 环型磁芯的电感测试是依均匀分布的单层绕组作测试依据, 以非均匀分布而少圈数的磁芯作测试会产生比预期要大的电感读数。

Neu Flux Cores的电感系数值是以1000圈时为测试依据, 其中电感系数偏差通常在 $\pm 8\%$ 之间。

The inductance of a wound core at a given number of turns is calculated using the following formula

$$L = \frac{0.4\pi \mu_e N^2 A_e \times 10^{-2}}{l_e}$$

$$L_N = A_L \times N^2 \times 10^{-3}$$

L: 电感量 ( $\mu H$ ) 1H=10<sup>3</sup>mH=10<sup>6</sup> $\mu H$ =10<sup>9</sup>nH inductance( $\mu H$ )

$A_L$ : 额定电感量 (nH/N<sup>2</sup>) nominal Inductance(nH/N<sup>2</sup>)

$\mu_e$ : 有效磁导率 permeability

$A_e$ : 有效磁芯截面积 effective cores section area(cm<sup>2</sup>)

$l_e$ : 有效磁路长度 mean magnetic path length(cm)

N: 线圈匝数 number of turns

$L_N$ : 在N圈时的电感量 ( $\mu H$ ) Inductance at N turns ( $\mu H$ )

## 磁场强度 Magnetizing Force, H(Oe;A/cm)

安培定律揭示了磁场强度 (H) 与电流、圈数和磁路长度之间的关系。

Ampere's Law relates magnetizing force (H) to current, number of turns and magnetic path length.

$$H = \frac{0.4\pi NI}{l_e}$$

H: 磁场强度 (Oersteds) magnetizing force(oersteds)

N: 圈数 number of turns

I: 电流 (A) peak magnetizing current(ampere)

$l_e$ : 磁路长度 (cm) mean magnetic path length(cm)

1Oersted=0.7958A/cm



## Q值 ( Factor) ○

Q值是指电感器电抗与有效电阻的比值，它反映了该电感的质量。对于电源滤波器而言，Q值提高就意味着截止更快，衰减比更高和谐振效果更好，Q值的大小主要由电感线圈的分布电容所决定。

如果忽略分布电容引起的自谐振效果，可以用以下公式计算电感器Q值。

The Q factor is defined as the ratio of reactance to the effective resistance for an inductor and thus indicates its quality. The Q of wound core can be calculated using the following formula, when neglecting the effects of self-resonance caused by the distributed capacitance resulting from the differential voltage between adjacent turns.

$$Q = \frac{\omega L}{R_{dc} + R_{ac} + R_{ed}}$$

Q: 品质因数 quality factor

L: 电感量 (H) inductance(henries)

$\omega$ :  $2\pi f$  (Hz)  $2\pi$  frequency(hertz)

$R_{dc}$ : 绕线直流电阻 (Ω) DC winding resistance(ohms)

$R_{ac}$ : 由于磁粉芯损耗而产生的阻抗 (Ω) resistance due to core loss(ohms)

$R_{ed}$ : 由于绕线中介电损耗而产生的阻抗 (Ω) resistance due to winding dielectric loss(ohms)

## 磁通密度 Magnetic Flux Density, B(Gauss; Tesla) ○

磁通密度的大小影响磁粉芯的损耗值和磁导率。除非另有说明，本样本中所列举的数据都是基于正弦波形和最大磁通密度（峰值）得出的。 $B_{pk}$ 指穿过磁粉芯横截面各部份平均磁通密度值的最大值。事实上，通过磁粉芯内径附近的磁通密度值高，而磁粉芯外径附近的磁通密度值低。

The corresponding parameter for the induced magnetic field in an area perpendicular to the flux density is determined by the field strength permeability of the medium in which it is measured.

$$B_{pk} = \frac{E_{rms} 10^8}{4.44f A_e N}$$

$B_{pk}$ : 最大磁通密度峰值 (高斯Gauss) maximum flux density(gauss)

$E_{rms}$ : 通过绕线正弦电压有效值 (Vrms) sinusoidal RMS voltage across winding(Vrms)

N: 圈数 number of turns

$A_e$ : 有效磁粉芯截面积 (cm<sup>2</sup>) cross section area (cm<sup>2</sup>)

f: 正弦波形电压频率 (Hz) frequency(hertz)

1特斯拉 (T) =  $10^4$ 高斯 (Gauss) =  $10^3$ mT

## 磁芯损耗 Core Loss ○

磁芯损耗是磁芯材料内交替磁场引致的结果。磁芯损耗有三部分组成：磁滞损耗、剩磁损耗和涡流损耗。在高频条件下，涡流损耗是主要损耗，而低频下磁滞损耗则是主要损耗。而各种损耗形式在总损耗中所占的比例也会受到磁通密度的影响，受到高温热老化影响的是磁芯损耗中的涡流部份。

Powder cores have low hysteresis loss, minimizing signal distortion, and low residual loss. The total core loss at low flux densities is the sum of three frequency dependent losses of hysteresis loss, residual loss, and eddy current loss. The core loss is calculated from the following Legg's equation.

$$\frac{R_{ac}}{\mu_e L} = a B_{pk} f + c f + e f^2$$

$R_{ac}$ : 由磁芯损耗产生的有效电阻 (Ω) resistance due to core loss(ohms)

$\mu_e$ : 有效磁导率 permeability

L: 电感量 (H) inductance(H)

a: 磁滞损耗系数 hysteresis loss coefficient

$B_{pk}$ : AC磁通密度峰值 (高斯Gauss) maximum flux density(gauss)

c: 剩磁损耗系数 residual loss coefficient

f: 频率 (Hz) frequency(hertz)

e: 涡流损耗系数 eddy loss coefficient

## 电感器的设计例举 Examples of Inductor Designs

**Inductor specification**      **Core Part No.: KNF106-060A**  
**Number of Winding: 34Turns**  
**Current: DC15Amperes**

采用磁导率百分率与DC磁化率关系曲线来计算电感量 Inductance calculation by Permeability vs Bias Curves

1. Formula to calculate L at 0Ampere

$$L_N = A_L \times N^2 \times 10^{-3}$$

The Nominal inductance table on page 20 shows the  $A_L$  value of KNF106-060A to be 75.

$$\text{Therefore, } L(@0A) = 75 \times 34^2 \times 10^{-3} = 86.7 (\mu H)$$

2. Determine DC magnetizing force (H) by using Ampere's law to achieve the roll off.

$$H = \frac{0.4 \pi N I}{\ell_e}$$

$$H = \frac{0.4 \times 3.14 \times 34 \times 15}{6.35} = 100.9 (\text{Oe})$$

The magnetizing force (DC-Bias) is 100.9 oersteds, yielding 77% of initial permeability on page 2.

The inductance at 15Ampere will decrease the inductance by 77% compared with 0 Ampere.

$$\begin{aligned} \text{Therefore, } L(@15A) &= 86.7 \times 77\% \\ &= 67 (\mu H) \end{aligned}$$

采用安匝数曲线来计算电感量 Inductance calculation by AL vs NI Curves

1. Calculate NI (Ampere · Turns)     $NI = 34 \text{ Turns} \times 15 \text{ Ampere} = 510$

2. Read the  $A_L$  value of KNF106-060A using the  $A_L$  vs NI curve on page 20.

$A_L$  value of KNF106-060A yields 58 when NI is 510.

3. Calculate L at 15Ampere by using formula;  $L_N = A_L \times N^2 \times 10^{-3}$

$$\begin{aligned} \text{Therefore, } L(@15A) &= 58 \times 34^2 \times 10^{-3} \\ &= 67 (\mu H) \end{aligned}$$

线径规格表 Wire Table

AWG Wire NO.	Bare Area cm <sup>2</sup> (× 10 <sup>-3</sup> ) Cir-Mil		Resistivity 10 <sup>-6</sup> Ω cm @20°C	Heavy Synthetics					Current Capacity Amps (listed by columns of amps/cm <sup>2</sup> )			
				Area cm <sup>2</sup> (× 10 <sup>-3</sup> ) Cir-Mil		Diameter cm inch		Weight gm/cm	200	400	600	800
10	53.61	10384	32.70	55.9	11046	0.267	0.1051	0.468	10.4	20.8	31.2	41.6
11	41.68	8226	41.37	44.5	8798	0.238	0.0938	0.3750	8.23	16.4	24.6	32.8
12	33.08	6529	52.09	35.64	7022	0.213	0.0838	0.2977	6.53	13.06	19.6	26.1
13	26.26	5184	65.64	28.36	5610	0.190	0.0749	0.2367	5.18	10.4	15.5	20.8
14	20.82	4109	82.80	22.95	4556	0.171	0.0675	0.1879	4.11	8.22	12.3	16.4
15	16.51	3260	104.3	18.37	3624	0.153	0.0602	0.1492	3.26	6.52	9.78	13.0
16	13.07	2581	131.8	14.73	2905	0.137	0.0539	0.1184	2.58	5.16	7.74	10.3
17	10.39	2052	165.8	11.68	2323	0.122	0.0482	0.0943	2.05	4.10	6.15	8.20
18	8.228	1624	209.5	9.326	1857	0.109	0.0431	0.07472	1.62	3.25	4.88	6.50
19	6.531	1289	263.9	7.539	1490	0.0980	0.0386	0.05940	1.29	2.58	3.87	5.16
20	5.188	1024	332.3	6.065	1197	0.0879	0.0346	0.04726	1.02	2.05	3.08	4.10
21	4.116	812.3	418.9	4.837	954.8	0.0785	0.0309	0.03757	0.812	1.63	2.44	3.25
22	3.243	640.1	531.4	3.857	761.7	0.0701	0.0276	0.02965	0.640	1.28	1.92	2.56
23	2.588	510.8	666.0	3.135	620.0	0.0632	0.0249	0.02372	0.511	1.02	1.53	2.04
24	2.047	404.0	842.1	2.514	497.3	0.0566	0.0223	0.01884	0.404	0.808	1.21	1.62
25	1.623	320.4	1062.0	2.002	396.0	0.0505	0.0199	0.01498	0.320	0.641	0.962	1.28
26	1.280	252.8	1345.0	1.603	316.8	0.0452	0.0178	0.01185	0.253	0.506	0.759	1.01
27	1.021	201.6	1687.6	1.313	259.2	0.0409	0.0161	0.00945	0.202	0.403	0.604	0.806
28	0.8046	158.8	2142.7	1.0515	207.3	0.0366	0.0144	0.00747	0.159	0.318	0.477	0.636
29	0.6470	127.7	2664.3	0.8549	169.0	0.0330	0.0130	0.00602	0.128	0.255	0.382	0.510
30	0.5067	100.0	3402.2	0.6785	134.5	0.0294	0.0116	0.00472	0.100	0.200	0.300	0.400
31	0.4013	79.21	4294.6	0.5595	110.2	0.0267	0.0105	0.00372	0.0792	0.158	0.237	0.316
32	0.3242	64.00	5314.9	0.4559	90.25	0.0241	0.0095	0.00305	0.0640	0.128	0.192	0.256
33	0.2554	50.41	6748.6	0.3662	72.25	0.0216	0.0085	0.00214	0.0504	0.101	0.152	0.202
34	0.2011	39.69	8572.8	0.2863	56.25	0.0191	0.0075	0.00189	0.0397	0.0794	0.119	0.159
35	0.1589	31.36	10849	0.2268	44.89	0.0170	0.0067	0.00150	0.0314	0.0627	0.0940	0.125
36	0.1266	25.00	13608	0.1813	36.00	0.0152	0.0060	0.00119	0.0250	0.0500	0.0750	0.100
37	0.1026	20.25	16801	0.1538	30.25	0.0140	0.0055	0.000977	0.0203	0.0405	0.0608	0.0810
38	0.08107	16.00	21266	0.1207	24.01	0.0124	0.0049	0.000773	0.0160	0.0320	0.0480	0.0640
39	0.06207	12.25	27775	0.0932	18.49	0.0109	0.0043	0.000593	0.0123	0.0245	0.0368	0.0490
40	0.04869	9.61	35400	0.0723	14.44	0.0096	0.0038	0.000464	0.00961	0.0192	0.0288	0.0384
41	0.03972	7.84	43405	0.0584	11.56	0.00863	0.0034	0.000379	0.00785	0.0157	0.0236	0.0314
42	0.03166	6.25	54429	0.04558	9.00	0.00762	0.0030	0.000299	0.00625	0.0125	0.0188	0.0250
43	0.02452	4.84	70308	0.03683	7.29	0.00685	0.0027	0.000233	0.00484	0.00968	0.0145	0.0194
44	0.0202	4.00	85072	0.03165	6.25	0.00635	0.0025	0.000195	0.00400	0.00800	0.0120	0.0160

浙江科达磁电有限公司(KDM)成立于2000年9月，位于中国杭州北郊，离上海150公里，是中国国内规模最大、品种最多的金属磁粉芯生产厂家。

除了本手册所介绍的新产品铁硅镍磁粉芯 ( Neu Flux™ Cores ) 外，本公司还生产以下产品：

铁硅铝磁粉芯 ( Sendust Cores )

硅铁磁粉芯 ( Si-Fe™ Cores )

高磁通铁镍磁粉芯 ( High Flux Cores )

铁镍钼磁粉芯 ( Mpp Cores )

铁粉芯 ( Iron powder Cores )

如需以上产品详细资料，欢迎索取相关样本说明书，同时也可以浏览本公司网站：[www.kdm-mag.com](http://www.kdm-mag.com)

KDM拥有全球领先的研发团队，一直致力于金属磁粉芯的研发和制造，努力成为全球领先的金属磁粉芯制造企业，向客户提供品质优异的产品，赢得客户的信任，感谢您选择了我们的产品。

KDM-Zhejiang KeDa Magnetoelectricity Co., Ltd was found in Sep.2000 and located in the north of HangZhou China and only 150km away from ShangHai. KDM is the biggest magnetic powder core products manufacturer in China.

Besides the new product Neu Flux™ cores that introduced in this catalogue, we also produce other products as followings:

**Sendust Cores**

**Si-Fe™ Cores**

**High Flux Cores**

**Mpp Cores**

**Iron Powder Cores**

If you need the detail information of these products, welcome to ask for related products' catalogues or you also can browse our website: [www.kdm-mag.com](http://www.kdm-mag.com)

KDM has the leading R&D center in the world, we try our best to develop new magnetic products and try to become the leading magnetic powder core products manufacturer of the world. We aim to offer our customers high-quality products and excellent service. Thanks for choosing our products.







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