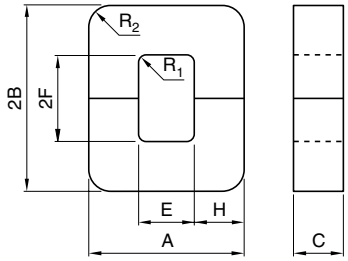
UU Series

UU CORE

CORE SHAPES AND DIMENSIONS/CHARACTERISTICS



PRODUCT IDENTIFICATION

PE22	UU	79	×	129	×	31
(1)	(2)	(3)		(4)		(5)

(1) Material name
(2) Shape
(3) Dimension A
(4) Dimension 2B
(5) Dimension C

Part No.	A_L*1(nH/N²) ±25%	Dimensions (mm) A	2B	C	E	2F	H	R_1	R_2	E×2F(mm²)
PE22 UU79×129×31	4790									
PC40 UU79×129×31	6030	79.0±2.5	129.0±2.5	31.5±1.0	34.0min.	85.0±1.5	22.0±1.0	5	22	2980
PE90 UU79×129×31	5768									
PE22 UU100×151×30	5540									
PC40 UU100×151×30	6990	100.0±3.0	151.0±2.5	30.0±1.0	39.0min.	90.0±1.5	30.0±1.5	5	30	3600
PE90 U100×151×30	6686									
PE22 UU100×160×20	3460									
PC40 UU100×160×20	4360	100.0±3.0	160.0±2.5	20.0±1.0	39.0min.	100.0±1.5	30.0±1.5	5	35	4000
PE90 UU100×160×20	4170									
PE22 UU101×115×25	4480									
PC40 UU101×115×25	5640	101.0±3.0	115.0±2.5	25.4±1.0	50.0min.	64.0±1.5	25.0±1.0	5	25	3260
PE90 UU101×115×25	5395									
PE22 UU120×160×20	3140									
PC40 UU120×160×20	3960	120.0±3.0	160.0±2.5	20.0±1.0	59.0min.	100.0±1.5	30.0±1.5	5	35	6000
PE90 UU120×160×20	3788									
PE22 UU120×310×20*2	—									
PC40 UU120×310×20*2	—	120.0±3.0	310.0±2.5	20.0±1.0	59.0min.	250.0±1.5	30.0±1.5	5	35	15000
PE90 UU120×310×20*2	—									
PE22 UU80×150×30N	3570									
PC40 UU80×150×30N	4500	80.0±2.5	150.0±2.5	30.0±1.0	39.0min.	110.0±1.5	20.0±1.0	1	0	4400
PE90 UU80×150×30N	4304									
PE22 UU100×151×30N	5470									
PC40 UU100×151×30N	6900	100.0±3.0	151.0±2.5	30.0±1.0	39.0min.	90.0±1.5	30.0±1.5	1	1	3600
PE90 UU100×151×30N	6600									
PE22 UU101×114×25N	4425									
PC40 UU101×114×25N	5570	101.2±3.0	114.0±2.5	25.4±1.0	49.5min.	63.8±1.5	25.1±1.0	0	0	3254
PE90 UU101×114×25N	5328									

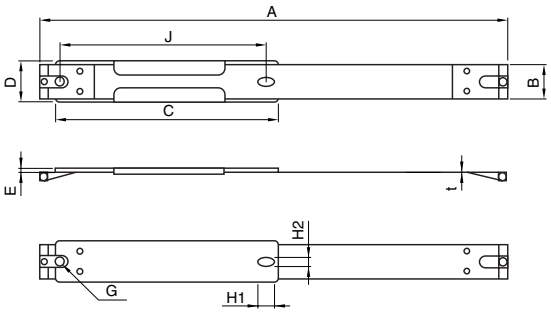
*1 Measuring condition: T=23°C, f=1kHz, H_m=0.4A/m
*2 UU120X310X20 is a bonded product.

Part No.	Core factor					Weight(g)
	$C_1(mm^{-1})$	$C_2\times10^{-2}(mm^{-3})$	$A_e(mm^2)$	$\ell_e(mm)$	$V_e(mm^3)$	
PE22 UU79×129×31						1080
PC40 UU79×129×31	0.44605	0.06437	693	309	214220	1080
PE90 UU79×129×31						1103
PE22 UU100×151×30						1630
PC40 UU100×151×30	0.38801	0.04241	915	355	324860	1630
PE90 UU100×151×30						1664
PE22 UU100×160×20						1130
PC40 UU100×160×20	0.62375	0.10396	600	374	224550	1130
PE90 UU100×160×20						1154
PE22 UU101×115×25						1000
PC40 UU101×115×25	0.47757	0.07373	648	309	200350	1000
PE90 UU101×115×25						1021
PE22 UU120×160×20						1240
PC40 UU120×160×20	0.69041	0.11507	600	414	248550	1240
PE90 UU120×160×20						1266
PE22 UU120×310×20						2110
PC40 UU120×310×20	1.19041	0.19840	600	714	428550	2110
PE90 UU120×310×20						2154
PE22 UU80×150×30N						1095
PC40 UU80×150×30N	0.60472	0.00101	600	363	217700	1095
PE90 UU80×150×30N						1118
PE22 UU100×151×30N						1642
PC40 UU100×151×30N	0.39361	0.04373	900	354	318820	1642
PE90 UU100×151×30N						1676
PE22 UU101×114×25N						1013
PC40 UU101×114×25N	0.48382	0.07589	638	308	196650	1013
PE90 UU101×114×25N						1034

UU CORE BAND

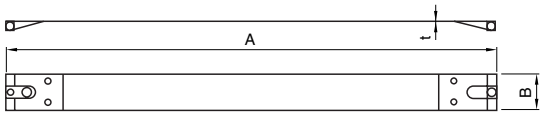
BAND SHAPES AND DIMENSIONS/CHARACTERISTICS

AH-type band



Band is optional parts.
AH-type is the band with a board.

B-type band



Band is optional parts.
B-type is the band without a board.

AH type

B type

Part No.	Dimensions (mm)									
	A	B	C	D	E	G	H1	H2	J	t
FHH 79×129AH	370	27	180	31.5	1.5	7	14	7	160	0.2
FHH 79×129B	370	27	—	—	—	—	—	—	—	0.3
FHH 100×151AH	435	27	190	31.5	1.5	7	14	7	170	0.3
FHH 100×151B	435	30	—	—	—	—	—	—	—	0.3
FHH 100×160AH	447	18	206	23.0	1.5	7	14	7	186	0.3
FHH 100×160B	447	18	—	—	—	—	—	—	—	0.3
FHH 101×115AH	380	23.4	160	28.0	1.5	7	14	7	140	0.3
FHH 101×115B	378	23.4	—	—	—	—	—	—	—	0.3
FHH 120×160AH	482	18	206	23.0	1.5	7	14	7	186	0.3
FHH 120×160B	482	18	—	—	—	—	—	—	—	0.3
FHH 120×310B	782	18	—	—	—	—	—	—	—	0.3

HANDLING INSTRUCTIONS OF UU CORE BAND

When using this product, read and follow the handling instructions below carefully to ensure the safety of the products that you design.

ASSEMBLING

- Certain parts of the ferrite core tightening band (hereinafter referred to as the "band") can be sharp. Be careful when handling these parts.
  Use protective equipment such as gloves if necessary.
- When putting a band and ferrite core together, make sure that the ferrite core matches the band's size, and set the ferrite core in the correct position.
- To tighten the band, use a cross point screwdriver of the correct size equipped with a torque reading mechanism.
- The torque for tightening the band must be determined and controlled according to the band's strength, the ferrite core's size, and the usage environment.
- Take special care not to overtighten the band as this could damage the ferrite core and/or the band.
- Conversely, if the tightening torque is too low, you will not be able to secure the ferrite core properly. Take special care to avoid this as this can cause the ferrite core to become displaced, fall off, drop, or affect the ferrite core's characteristics.

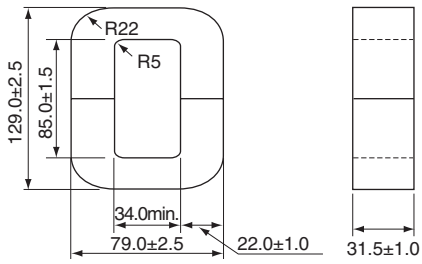
USAGE ENVIRONMENT

- Depending on the usage environment, the band may become damaged or its strength may be compromised, reducing the strength at which it can secure the ferrite core.
  When using the band, make sure that it is resistant to the intended usage environment.
- The band is constructed in such a way that it can become extended or damaged when subjected to shocks, excessive loads, vibrations, temperature variations, or high and low temperatures, causing the ferrite core to become displaced, fall off, or drop.
  Make sure that the strength of the band itself and the strength at which it secures the ferrite core can be maintained in the intended usage environment.
- The band is made of metal, which means it can be affected by water, chemicals and other elements, which may in turn lead to corrosion.
  When using the band, make sure that it is resistant to the intended usage environment.

OTHER PRECAUTIONS

- The band is essentially a thin metal plate. Take special care to avoid accidents because its ends can behave like the tip of a whip.
  Persons handling the band must take special care to protect themselves as well as others from getting injured.
- Never re-work the band or replace any parts becomes such actions can compromise the band's strength and lead to problems.
- Do not reuse a band that you have used once before as it may not have sufficient strength.
- Do not use the bands for purposes other than to secure ferrite cores.
  The bands are not edible. Keep them out of the reach of children.

UU79X129X31



Dimensions in mm

Parameter

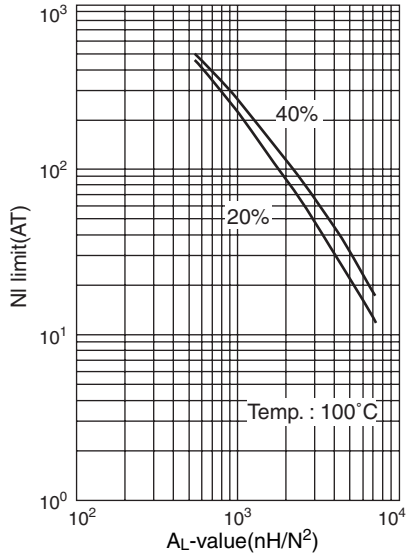
Core constant	C_1	mm^{-1}	0.44605
	$C_2 \times 10^{-2}$	mm^{-3}	0.06437
Effective magnetic path length	ℓ_e	mm	309
Effective cross-sectional area	A_e	mm^2	693
Effective core volume	V_e	mm^3	214220
Minimum cross-sectional area	Amin.*	mm^2	693LB*
Winding cross-sectional area	A_{cw}	mm^2	2980
Weight(approx.)		g	1080

* The symbol followed A min. value shows minimum cross-sectional area part. L is outer pole part, B is the back part.

Part No.	A_L-value*(nH/N^2)
PE22 UU79X129X31	4790±25%
PC40 UU79X129X31	6030±25%

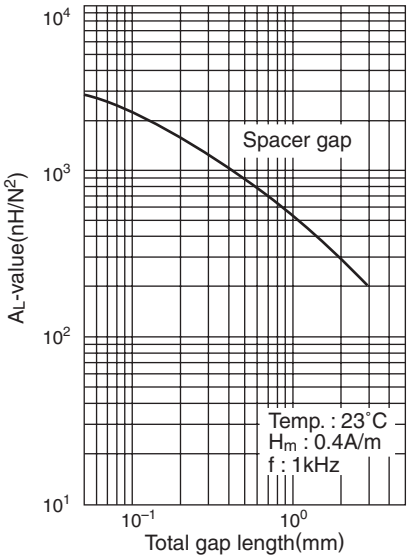
* A_L-value: T=23°C, f=1kHz, H_m=0.4A/m

NI limit vs. A_L-value for PE22 UU79X129X31

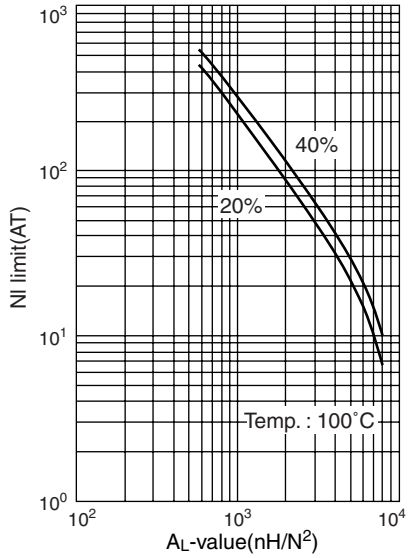


When applied magnetic field providing NI to a setting core for arbitrary A_L-value, show each NI value when decreased 20% and 40% from initial A_L-value.

A_L-value vs. Air gap length for PE22 UU79X129X31

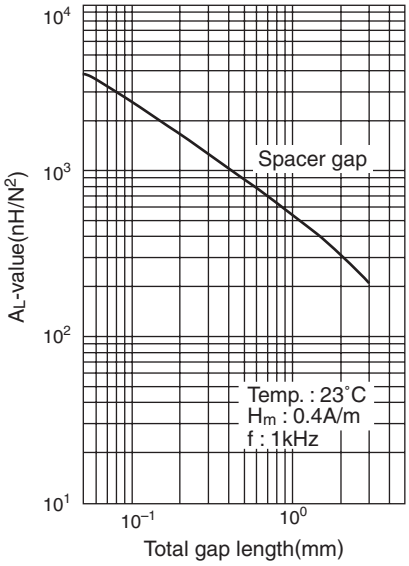


NI limit vs. A_L-value for PC40 UU79X129X31

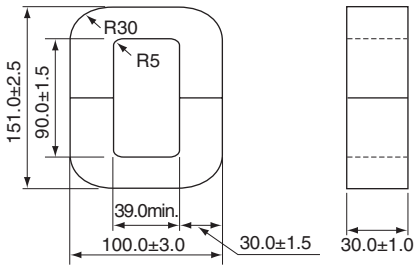


When applied magnetic field providing NI to a setting core for arbitrary A_L-value, show each NI value when decreased 20% and 40% from initial A_L-value.

A_L-value vs. Air gap length for PC40 UU79X129X31



UU100X151X30



Parameter

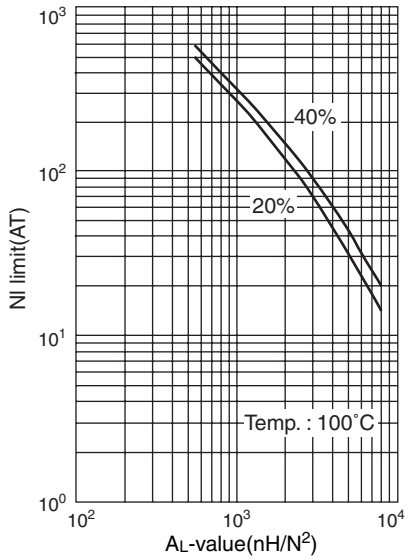
Core constant	C_1	mm^{-1}	0.38801
	$C_2 \times 10^{-2}$	mm^{-3}	0.04241
Effective magnetic path length	ℓ_e	mm	355
Effective cross-sectional area	A_e	mm^2	915
Effective core volume	V_e	mm^3	324860
Minimum cross-sectional area	Amin.*	mm^2	900L*
Winding cross-sectional area	A_{cw}	mm^2	3600
Weight(approx.)		g	1630

* The symbol followed A min. value shows minimum cross-sectional area part. L is outer pole part, B is the back part.

Part No.	A_L-value*(nH/N^2)
PE22 UU100X151X30	5540±25%
PC40 UU100X151X30	6990±25%

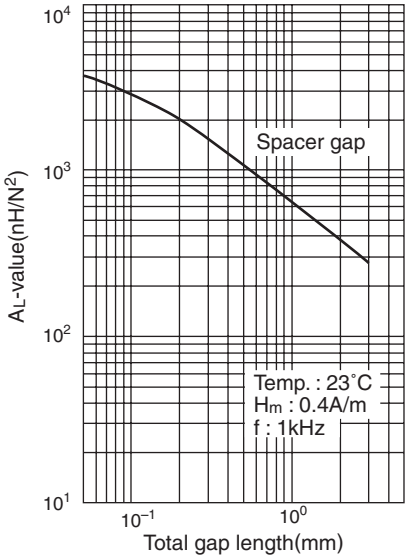
* A_L-value: T=23°C, f=1kHz, H_m=0.4A/m

NI limit vs. A_L-value for PE22 UU100X151X30

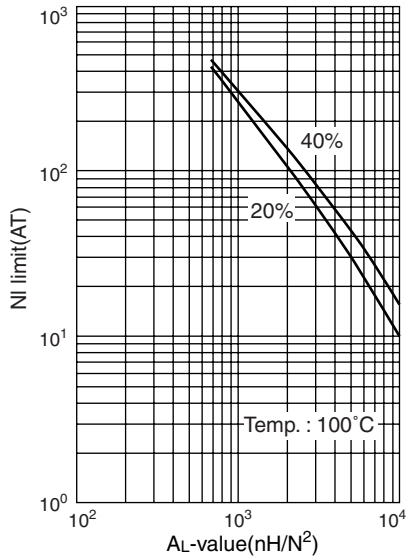


When applied magnetic field providing NI to a setting core for arbitrary A_L-value, show each NI value when decreased 20% and 40% from initial A_L-value.

A_L-value vs. Air gap length for PE22 UU100X151X30

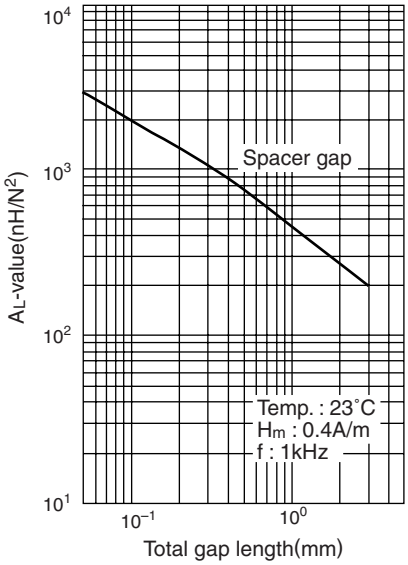


NI limit vs. A_L-value for PC40 UU100X151X30

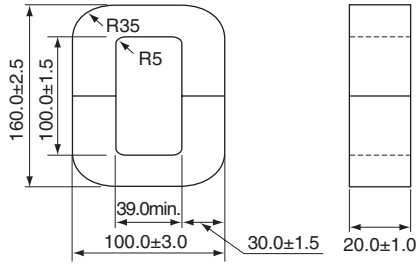


When applied magnetic field providing NI to a setting core for arbitrary A_L-value, show each NI value when decreased 20% and 40% from initial A_L-value.

A_L-value vs. Air gap length for PC40 UU100X151X30



UU100X160X20



Parameter

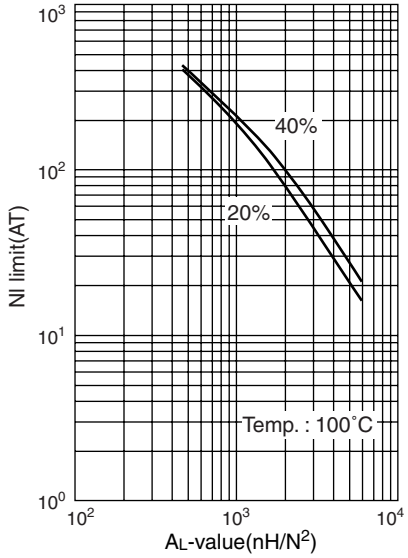
Core constant	C_1	mm^{-1}	0.62375
	$C_2 \times 10^{-2}$	mm^{-3}	0.10396
Effective magnetic path length	ℓ_e	mm	374
Effective cross-sectional area	A_e	mm^2	600
Effective core volume	V_e	mm^3	224550
Minimum cross-sectional area	Amin.*	mm^2	600LB*
Cross-sectional winding area of core	A_{cw}	mm^2	4000
Weight(approx.)		g	1130

* The symbol followed A min. value shows minimum cross-sectional area part. L is outer pole part, B is the back part.

Part No.	AL-value*(nH/N²)
PE22 UU100X160X20	3460±25%
PC40 UU100X160X20	4360±25%

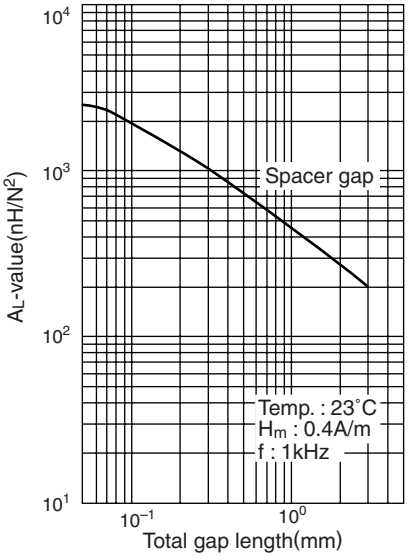
* AL-value: T=23°C, f=1kHz, Hm=0.4A/m

NI limit vs. AL-value for PE22 UU100X160X20

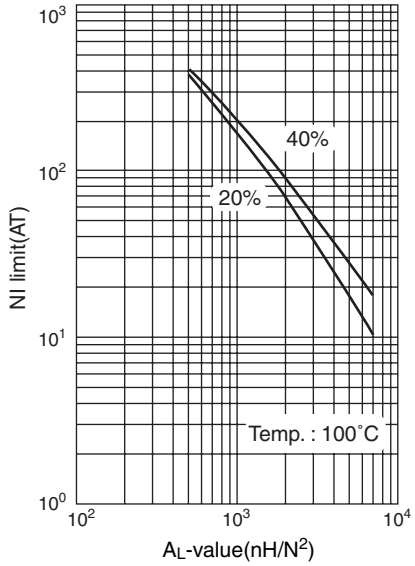


When applied magnetic field providing NI to a setting core for arbitrary AL-value, show each NI value when decreased 20% and 40% from initial AL-value.

AL-value vs. Air gap length for PE22 UU100X160X20

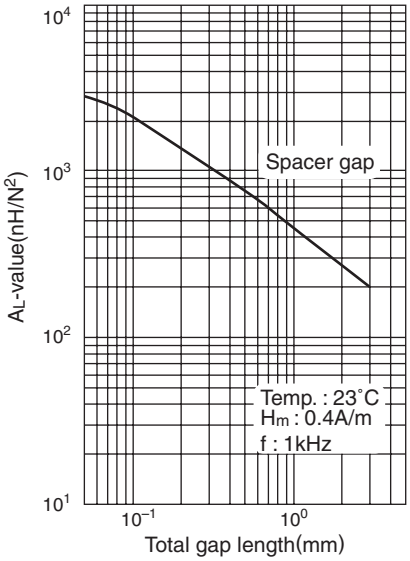


NI limit vs. AL-value for PC40 UU100X160X20

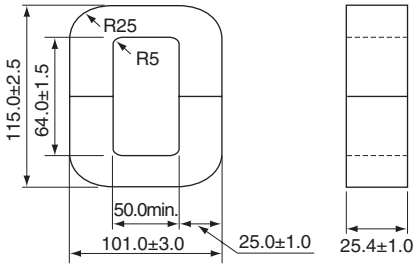


When applied magnetic field providing NI to a setting core for arbitrary AL-value, show each NI value when decreased 20% and 40% from initial AL-value.

AL-value vs. Air gap length for PC40 UU100X160X20



UU101X115X25



Parameter

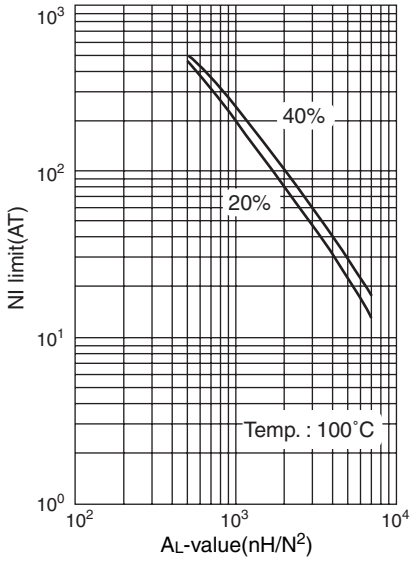
Core constant	C_1	mm^{-1}	0.47757
	$C_2 \times 10^{-2}$	mm^{-3}	0.07373
Effective magnetic path length	ℓ_e	mm	309
Effective cross-sectional area	A_e	mm^2	648
Effective core volume	V_e	mm^3	200350
Minimum cross-sectional area	Amin.*	mm^2	635L*
Cross-sectional winding area of core	A_{cw}	mm^2	3260
Weight(approx.)		g	1000

* The symbol followed A min. value shows minimum cross-sectional area part. L is outer pole part, B is the back part.

Part No.	A_L-value*(nH/N^2)
PE22 UU101X115X25	4480±25%
PC40 UU101X115X25	5640±25%

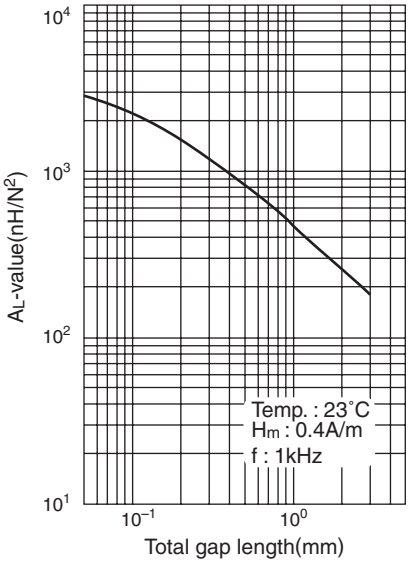
* A_L-value: T=23°C, f=1kHz, H_m=0.4A/m

NI limit vs. A_L-value for PE22 UU101X115X25

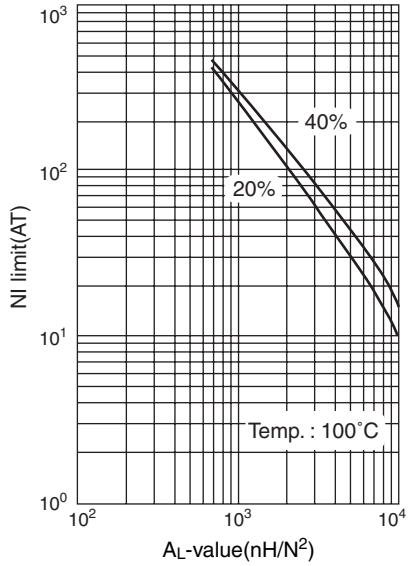


When applied magnetic field providing NI to a setting core for arbitrary A_L-value, show each NI value when decreased 20% and 40% from initial A_L-value.

A_L-value vs. Air gap length for PE22 UU101X115X25

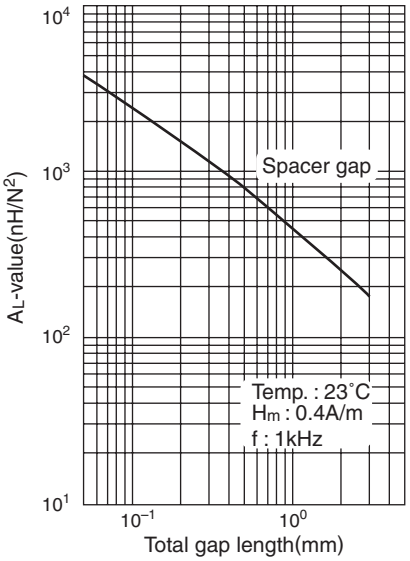


NI limit vs. A_L-value for PC40 UU101X115X25

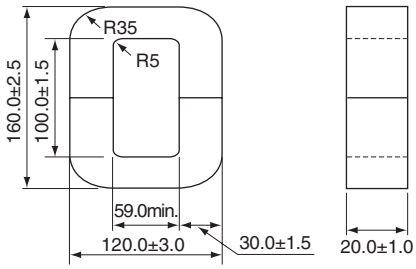


When applied magnetic field providing NI to a setting core for arbitrary A_L-value, show each NI value when decreased 20% and 40% from initial A_L-value.

A_L-value vs. Air gap length for PC40 UU101X115X25



UU120X160X20



Parameter

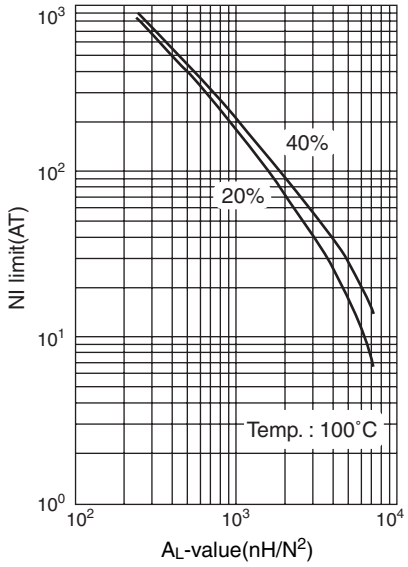
Core constant	C_1	mm^{-1}	0.69041
	$C_2 \times 10^{-2}$	mm^{-3}	0.11507
Effective magnetic path length	ℓ_e	mm	414
Effective cross-sectional area	A_e	mm^2	600
Effective core volume	V_e	mm^3	248550
Minimum cross-sectional area	Amin.*	mm^2	600LB*
Cross-sectional winding area of core	A_{cw}	mm^2	6000
Weight(approx.)		g	1240

* The symbol followed A min. value shows minimum cross-sectional area part. L is outer pole part, B is the back part.

Part No.	A_L-value*(nH/N^2)
PE22 UU120X160X20	3140±25%
PC40 UU120X160X20	3960±25%

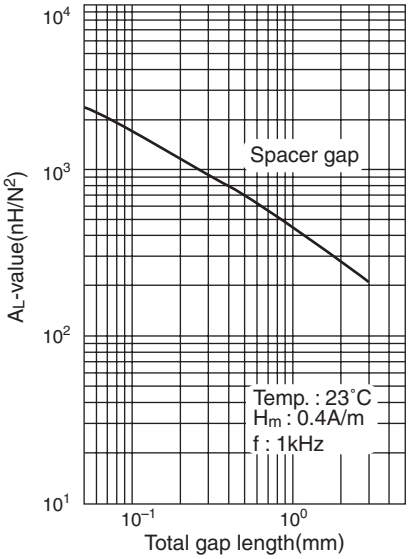
* A_L-value: T=23°C, f=1kHz, H_m=0.4A/m

NI limit vs. A_L-value for PE22 UU120X160X20

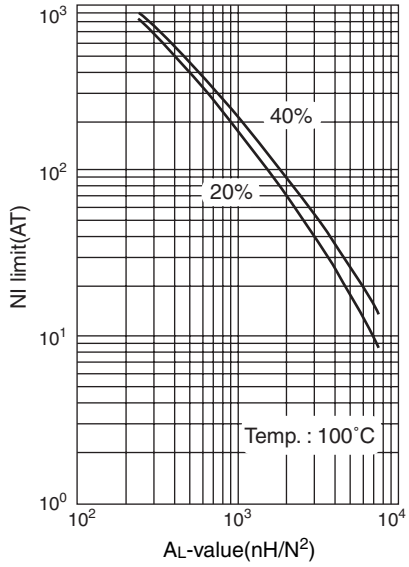


When applied magnetic field providing NI to a setting core for arbitrary A_L-value, show each NI value when decreased 20% and 40% from initial A_L-value.

A_L-value vs. Air gap length for PE22 UU120X160X20

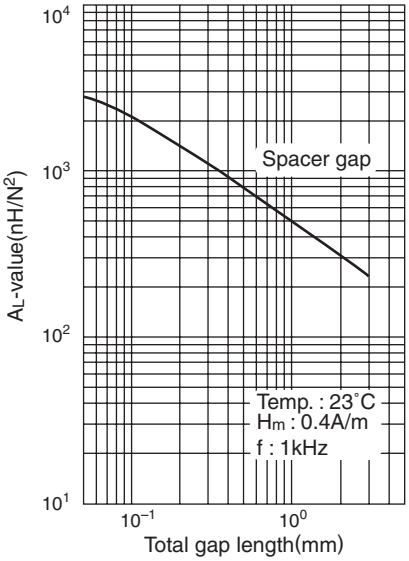


NI limit vs. A_L-value for PC40 UU120X160X20

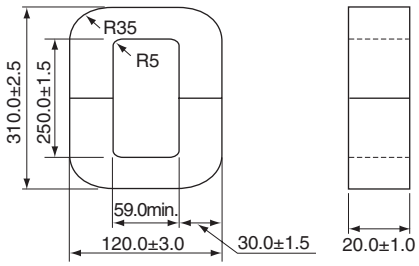


When applied magnetic field providing NI to a setting core for arbitrary A_L-value, show each NI value when decreased 20% and 40% from initial A_L-value.

A_L-value vs. Air gap length for PC40 UU120X160X20



UU120X310X20



Parameter

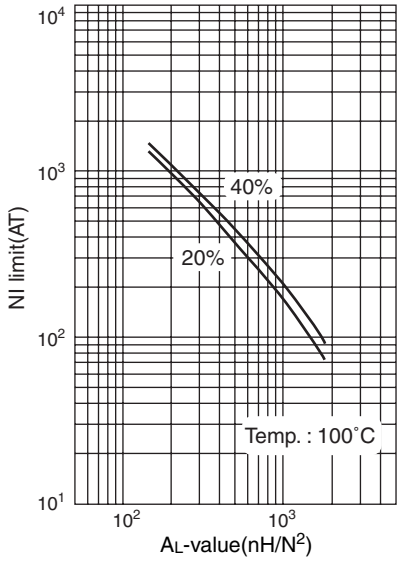
Core constant	C_1	mm^{-1}	1.19041
	$C_2 \times 10^{-2}$	mm^{-3}	0.1984
Effective magnetic path length	ℓ_e	mm	714
Effective cross-sectional area	A_e	mm^2	600
Effective core volume	V_e	mm^3	428550
Minimum cross-sectional area	Amin.*	mm^2	600LB*
Winding cross-sectional area	A_{cw}	mm^2	15000
Weight(approx.)		g	2110

* The symbol followed A min. value shows minimum cross-sectional area part. L is outer pole part, B is the back part.

Part No.	A_L-value*(nH/N^2)
PE22 UU120X310X20	—
PC40 UU120X310X20	—

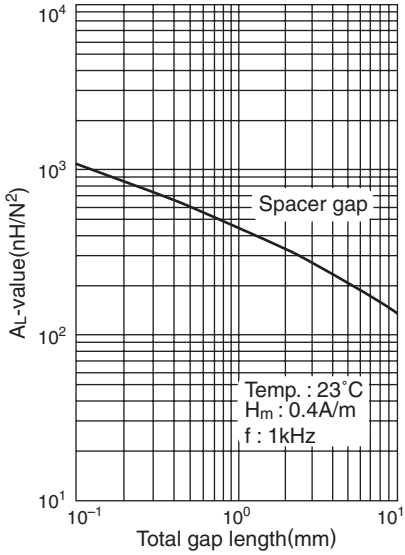
* A_L-value: T=23°C, f=1kHz, H_m=0.4A/m

NI limit vs. A_L-value for PE22 UU120X310X20

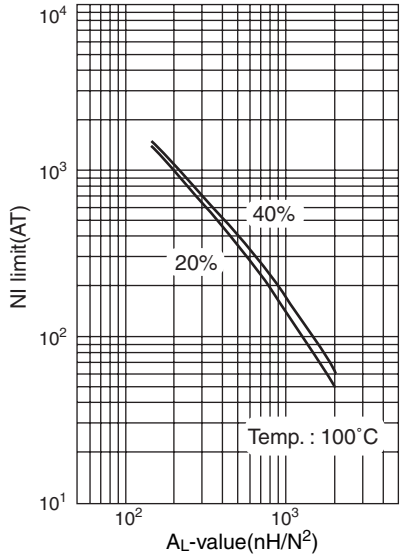


When applied magnetic field providing NI to a setting core for arbitrary A_L-value, show each NI value when decreased 20% and 40% from initial A_L-value.

A_L-value vs. Air gap length for PE22 UU120X310X20



NI limit vs. A_L-value for PC40 UU120X310X20



When applied magnetic field providing NI to a setting core for arbitrary A_L-value, show each NI value when decreased 20% and 40% from initial A_L-value.

A_L-value vs. Air gap length for PC40 UU120X310X20