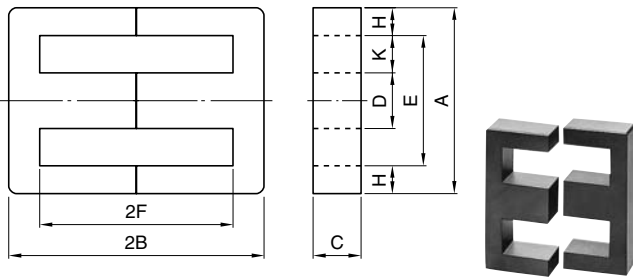


EE Series

EE CORE

CORE SHAPES AND DIMENSIONS/CHARACTERISTICS



PRODUCT IDENTIFICATION

PE22 EE 320 × 250 × 20
(1) (2) (3) (4) (5)

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

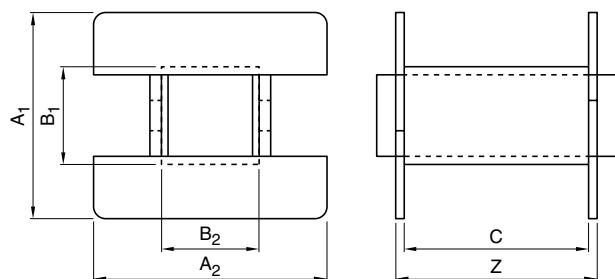
Part No.	AL*1(nH/N ²) ±25%	Dimensions (mm)												
		A	2B	C	D	E	2F	H	R	K	K×2F(mm ²)			
PE22 EE70×91×19	3930													
PC40 EE70×91×19	4910	70.0±1.5	91.0±1.0	19.5±0.5	19.5±0.5	48.5min.	71.0±1.0	10.0±0.5	0	15.3	1086			
PE90 EE70×91×19	4697													
PE22 EE80×76×20	4590													
PC40 EE80×76×20	5720	80.0±1.5	76.0±1.0	20.0±0.5	20.0±0.5	58.5min.	55.0±0.8	10.0±0.5	0.5max.	20.0	1100			
PE90 EE80×76×20	5471													
PE22 EE90×56×16	5960													
PC40 EE90×56×16	7380	90.0±2.0	56.4±1.0	16.5±0.5	25.0±1.0	63.0min.	30.4±1.0	12.5±0.5	0.5max.	20.0	608			
PE90 EE90×56×16	7059													
PE22 EE320×250×20*2	—													
PC40 EE320×250×20*2	—	320.0±5.0	250.0±1.0	20.0±1.0	100.0±2.4	217.0min.	150.0±3.0	50.0±1.0	0	60.0	7950			
PE90 EE320×250×20*2	—													
PE22 EE70×108×31N	6360													
PC40 EE70×108×31N	7970	70.0±1.5	108.0±1.0	31.6±0.5	22.2±0.5	46.3min.	85.6±1.0	11.1±0.5	2.0max.	12.8	1096			
PE90 EE70×108×31N	7623													

**1 Measuring condition: T=23°C, f=1kHz, H_m=0.4A/m

*2 EE320x250x20-Z is a bonded product.

Part No.	Core factor					Weight (g)
	C ₁ (mm ⁻¹)	C ₂ ×10 ⁻² (mm ⁻³)	A _e (mm ²)	ℓ _e (mm)	V _e (mm ³)	
PE22 EE70×91×19						394
PC40 EE70×91×19	0.52779	0.13669	386	204	78690	394
PE90 EE70×91×19						402
PE22 EE80×76×20						372
PC40 EE80×76×20	0.44878	0.11058	406	182	73910	372
PE90 EE80×76×20						380
PE22 EE90×56×16						306
PC40 EE90×56×16	0.33583	0.08009	419	141	59050	306
PE90 EE90×56×16						312
PE22 EE320×250×20						6150
PC40 EE320×250×20	0.28854	0.01443	2000	577	1154160	6150
PE90 EE320×250×20						6278
PE22 EE70×108×31N						815
PC40 EE70×108×31N	0.32992	0.04695	703	232	162900	815
PE90 EE70×108×31N						832

EE CORE BOBBIN

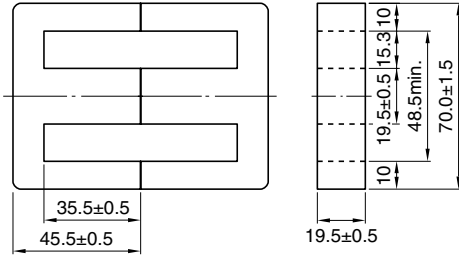


Bobbin is optional parts.

EE CORE BOBBIN

Part No.	Dimensions (mm)						Cross-sectional winding area $A_w(\text{mm}^2)$	Average winding length $\bar{l}_w(\text{mm})$	Weight (g)	Material
	A1	A2	B1	B2	C	Z				
BE-80-S	56.5±0.5	61.0±0.5	25.2±0.5	25.2±0.5	47.5±2.5	51.5±2.5	747	168	32	PBT
BE-80-W	56.5±0.5	81.5±0.7	25.2±0.5	45.8±0.5	47.5±2.5	51.5±2.5	747	209	41	PBT

EE70X91X19



Parameter

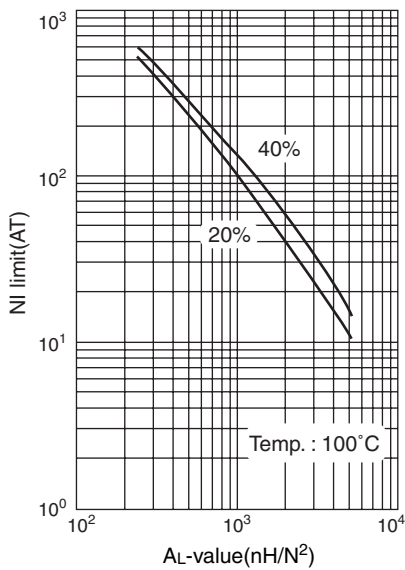
Core constant	C ₁	mm ⁻¹	0.5278
	C ₂ ×10 ⁻²	mm ⁻³	0.1367
Effective magnetic path length	ℓ _e	mm	204
Effective cross-sectional area	A _e	mm ²	386
Effective core volume	V _e	mm ³	78690
Cross-sectional center leg area	A _c	mm ²	380
Minimum cross-sectional area	A _{min.*}	mm ²	380C*
Winding cross-sectional area	A _{cw}	mm ²	1086
Weight(approx.)	g		394

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

Part No.	AL-value*(nH/N ²)	Calculated output power(kW) (forward converter mode)
PE22 EE70X91X19	3930±25%	1.4(100kHz)
PC40 EE70X91X19	4910±25%	1.6(100kHz)

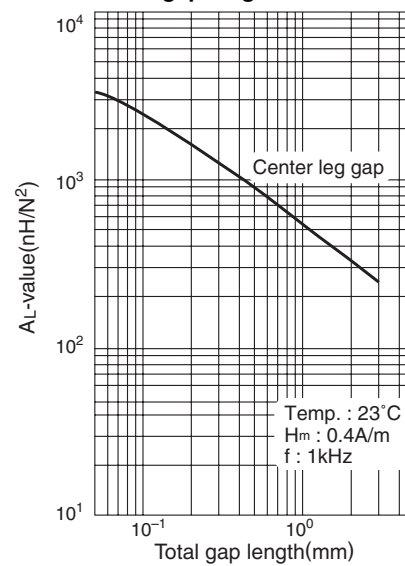
* AL-value: T=23°C, f=1kHz, H_m=0.4A/m

NI limit vs. AL-value for PE22 EE70X91X19

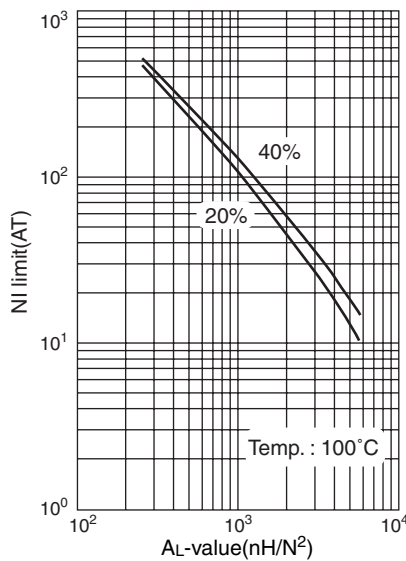


When applied magnetic field providing NI to a setting core for arbitrary AL-value, show each NI value when decreased 20% and 40% from initial AL-value.

AL-value vs. Air gap length for PE22 EE70X91X19

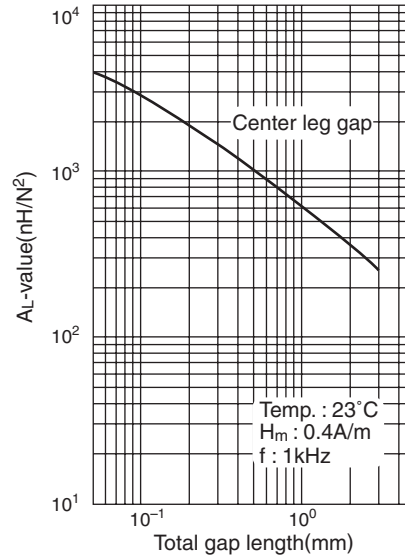


NI limit vs. AL-value for PC40 EE70X91X19

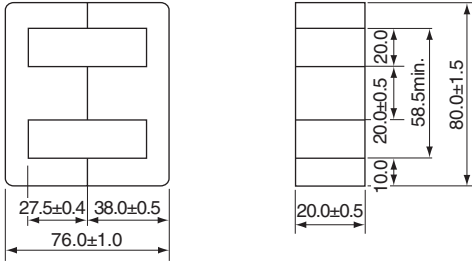


When applied magnetic field providing NI to a setting core for arbitrary AL-value, show each NI value when decreased 20% and 40% from initial AL-value.

AL-value vs. Air gap length for PC40 EE70X91X19



EE80X76X20



Parameter

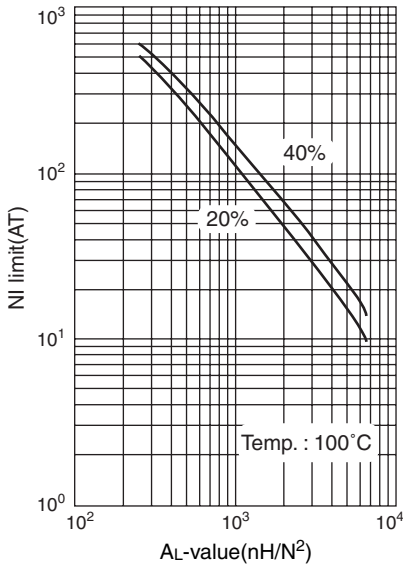
Core constant	C ₁	mm ⁻¹	0.44878
	C ₂ ×10 ⁻²	mm ⁻³	0.1106
Effective magnetic path length	ℓ _e	mm	182
Effective cross-sectional area	A _e	mm ²	406
Effective core volume	V _e	mm ³	73910
Cross-sectional center leg area	A _c	mm ²	400
Minimum cross-sectional area	A _{min.*}	mm ²	400LC*
Winding cross-sectional area	A _{cw}	mm ²	1100
Weight(approx.)	g		372

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

Part No.	AL-value*(nH/N ²)	Calculated output power(kW) (forward converter mode)
PE22 EE80X76X20	4590±25%	1.4(100kHz)
PC40 EE80X76X20	5720±25%	1.5(100kHz)

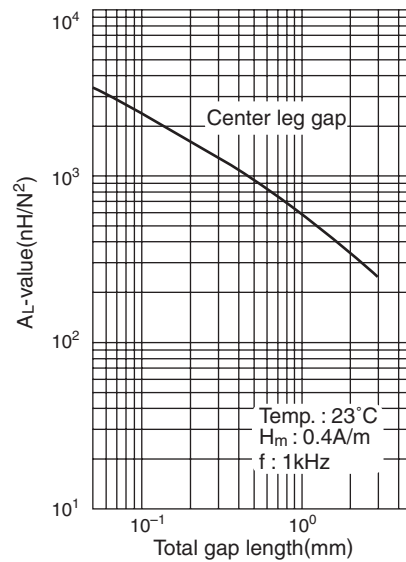
* AL-value: T=23°C, f=1kHz, H_m=0.4A/m

NI limit vs. AL-value for PE22 EE80X76X20

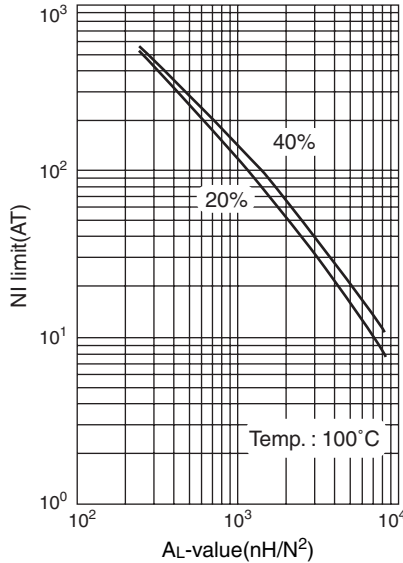


When applied magnetic field providing NI to a setting core for arbitrary AL-value, show each NI value when decreased 20% and 40% from initial AL-value.

AL-value vs. Air gap length for PE22 EE80X76X20

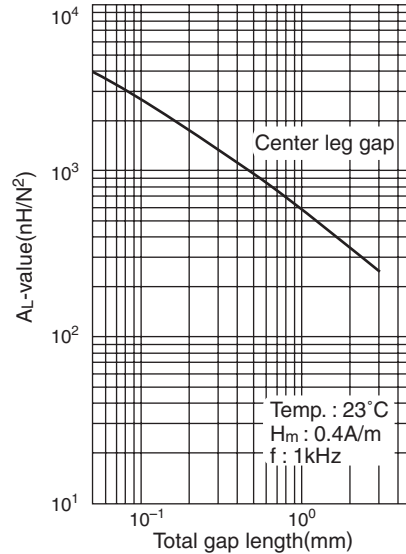


NI limit vs. AL-value for PC40 EE80X76X20

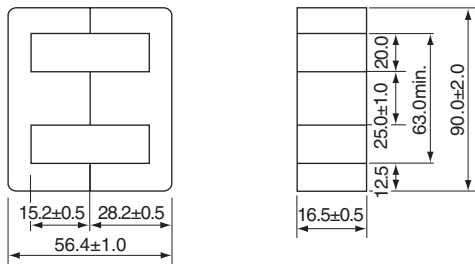


When applied magnetic field providing NI to a setting core for arbitrary AL-value, show each NI value when decreased 20% and 40% from initial AL-value.

AL-value vs. Air gap length for PC40 EE80X76X20



EE90X56X16



Parameter

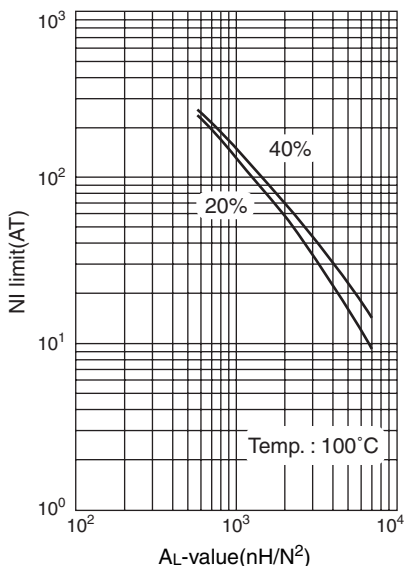
Core constant	C ₁	mm ⁻¹	0.33583
	C ₂ ×10 ⁻²	mm ⁻³	0.0801
Effective magnetic path length	ℓ _e	mm	141
Effective cross-sectional area	A _e	mm ²	419
Effective core volume	V _e	mm ³	59050
Cross-sectional center leg area	A _c	mm ²	413
Minimum cross-sectional area	A _{min.*}	mm ²	413LC*
Winding cross-sectional area	A _{cw}	mm ²	608
Weight(approx.)	g		306

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

Part No.	AL-value*(nH/N ²)	Calculated output power(kW) (forward converter mode)
PE22 EE90X56X16	5960±25%	1.2(100kHz)
PC40 EE90X56X16	7380±25%	1.3(100kHz)

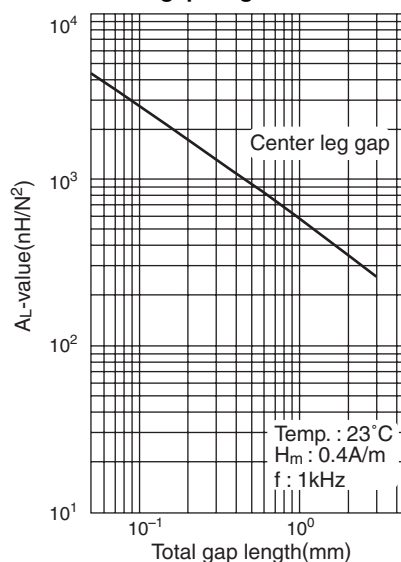
* AL-value: T=23°C, f=1kHz, H_m=0.4A/m

NI limit vs. AL-value for PE22 EE90X56X16

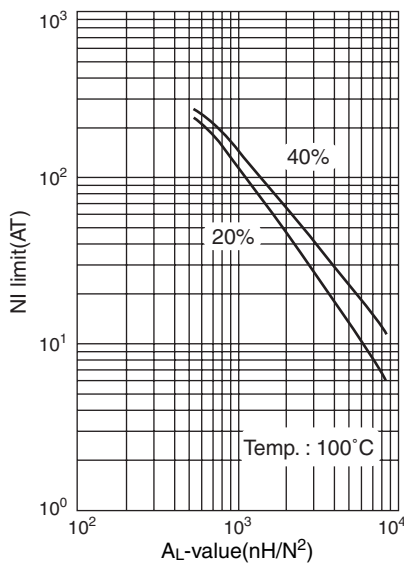


When applied magnetic field providing NI to a setting core for arbitrary AL-value, show each NI value when decreased 20% and 40% from initial AL-value.

AL-value vs. Air gap length for PE22 EE90X56X16

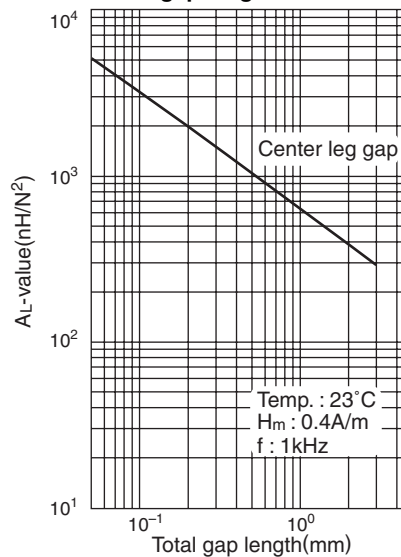


NI limit vs. AL-value for PC40 EE90X56X16

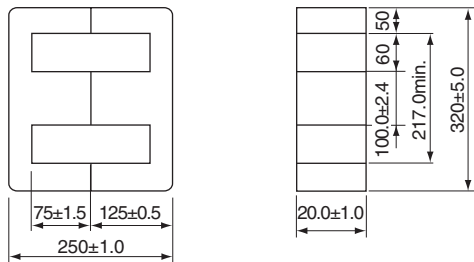


When applied magnetic field providing NI to a setting core for arbitrary AL-value, show each NI value when decreased 20% and 40% from initial AL-value.

AL-value vs. Air gap length for PC40 EE90X56X16



EE320X250X20



Parameter

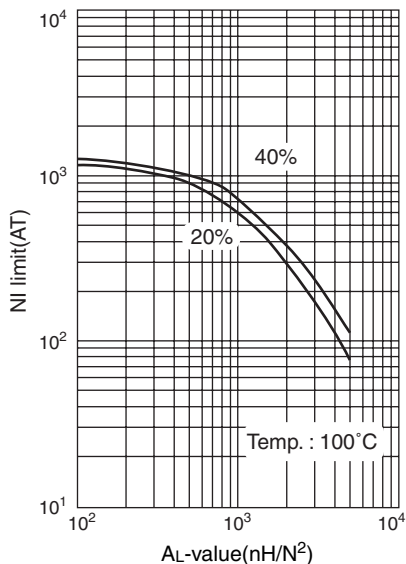
Core constant	C ₁	mm ⁻¹	0.28854
	C ₂ ×10 ⁻²	mm ⁻³	0.01443
Effective magnetic path length	ℓ _e	mm	577
Effective cross-sectional area	A _e	mm ²	2000
Effective core volume	V _e	mm ³	1154160
Cross-sectional center leg area	A _c	mm ²	2000
Minimum cross-sectional area	A _{min.*}	mm ²	2000BCL*
Winding cross-sectional area	A _{cw}	mm ²	9000
Weight(approx.)	g		6150

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

Part No.	AL-value*(nH/N ²)	Calculated output power(kW) (forward converter mode)
PE22 EE320X250X20	—	16.7(100kHz)
PC40 EE320X250X20	—	19.3(100kHz)

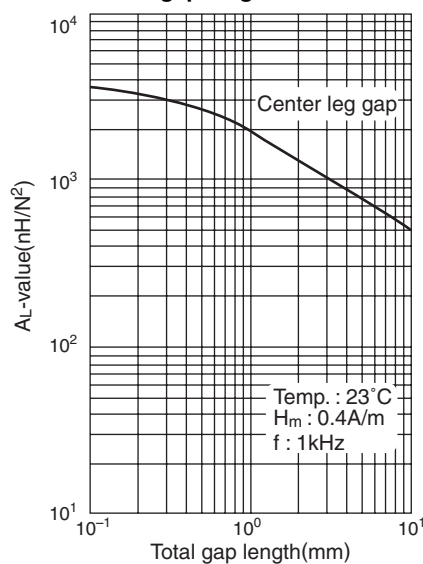
* AL-value: T=23°C, f=1kHz, H_m=0.4A/m

NI limit vs. AL-value for PE22 EE320X250X20

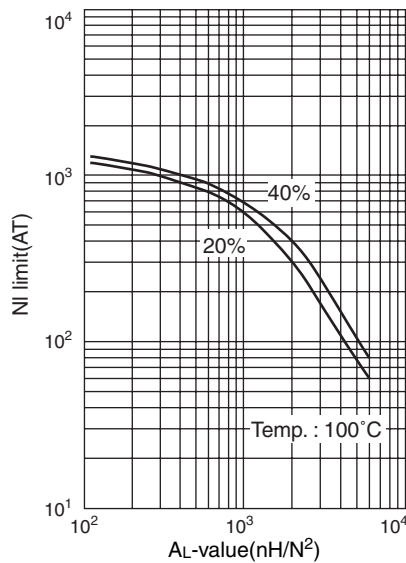


When applied magnetic field providing NI to a setting core for arbitrary AL-value, show each NI value when decreased 20% and 40% from initial AL-value.

AL-value vs. Air gap length for PE22 EE320X250X20



NI limit vs. AL-value for PC40 EE320X250X20



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 EE320X250X20

