



Mn-Zn

Large Size Ferrite Cores for High Power

E series

EC
EIC
EE
EI

**REMINDERS FOR USING THESE PRODUCTS**

Please be sure to read this manual thoroughly before using the products.

The products listed on this catalog are intended for use in general electronic equipment (AV equipment, telecommunications equipment, home appliances, amusement equipment, computer equipment, personal equipment, office equipment, measurement equipment, industrial robots) under a normal operation and use condition.

The products are not designed or warranted to meet the requirements of the applications listed below, whose performance and/or quality require a more stringent level of safety or reliability, or whose failure, malfunction or trouble could cause serious damage to society, person or property.

When using the products for specific purposes, please first make confirmations in areas such as safety, reliability, and quality.

Please understand that we are not in a position to be held responsible for any damage or the like caused by any use exceeding the range or conditions of this specification sheet or by any use in the specific applications.

- | | |
|---|--|
| (1) Aerospace/Aviation equipment | (8) Public information-processing equipment |
| (2) Transportation equipment (electric trains, ships, etc.) | (9) Military equipment |
| (3) Medical equipment | (10) Electric heating apparatus, burning equipment |
| (4) Power-generation control equipment | (11) Disaster prevention/crime prevention equipment |
| (5) Atomic energy-related equipment | (12) Safety equipment |
| (6) Seabed equipment | (13) Other applications that are not considered general-purpose applications |
| (7) Transportation control equipment | |

When using this product in general-purpose standard applications, you are kindly requested to take into consideration securing protection circuit/equipment or providing backup circuits, etc to ensure higher safety.

Large Size Ferrite Cores for High Power

Product compatible with RoHS directive
Halogen-free

Overview of the E Series

FEATURES

- Large size cores for transformers with large power outputs.
- Can also be used in reactors.

APPLICATION

- Large size industrial equipment, transformers for consumer equipment
- Reactors

PART NUMBER CONSTRUCTION

PE22	EC	70	×	69	×	16
Material	Core shape	Width		Thickness		Inside Diameter
PE22	EC	70		69		16
PC40	EIC	90		90		30
PE90	EE	80		101		19
	EI	120		46		20
				55		31N
				65		
				91		
				76		
				56		
				108		
				64		

RANGE OF USE AND STORAGE TEMPERATURE

Temperature range	
Operating temperature (°C)	Storage temperature (°C)
−30 to +105	−30 to +85

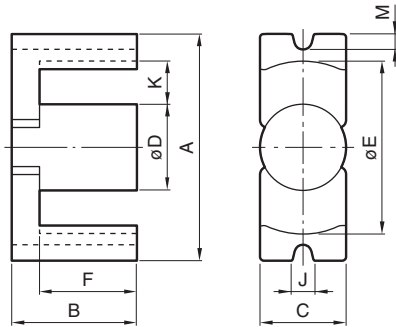
○ RoHS Directive Compliant Product: See the following for more details related to RoHS Directive compliant products. <http://www.tdk.co.jp/rohs/>

○ Halogen-free: Indicates that Cl content is less than 900ppm, Br content is less than 900ppm, and that the total Cl and Br content is less than 1500ppm.

• All specifications are subject to change without notice.

Mn-Zn **EC Cores**

■ SHAPES AND DIMENSIONS



PE22	EC	70	×	69	×	16
Material	Core shape	Width		Thickness		Inside Diameter

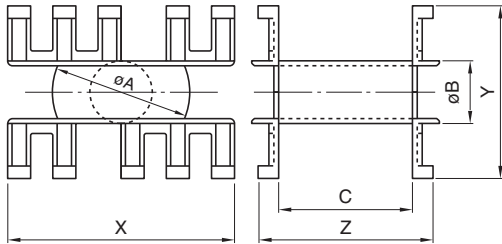
Part No.	Dimensions (mm)											
	A	B×2	C	øD	øE	F×2	M	J	R	K	K×2F(mm ²)	
PE22 EC70×69×16 PC40 EC70×69×16 PE90 EC70×69×16	70.0±1.7	69.0±1.0	16.4±0.5	16.4±0.5	43.3min.	45.5±1.0	5.2	4.75	1max.	14.1	639	
PE22 EC90×90×30 PC40 EC90×90×30 PE90 EC90×90×30	90.0±1.8	90.0±1.3	30.0±1.0	30.0±1.0	68.5min.	71.0±1.0	5.5	6.0	1max.	20.0	1420	
PE22 EC120×101×30 PC40 EC120×101×30 PE90 EC120×101×30	120.0±2.0	101.0±1.3	30.0±1.0	30.0±1.0	93.3min.	71.0±1.0	5.5	6.03	1.5max.	32.5	2307	

Part No.	Effective parameter						Electrical characteristics
	Core factor		Effective cross-sectional area	Effective magnetic path length	Effective core volume	Weigh(approx.)	AL-value
	C ₁ (mm ⁻¹)	C ₂ ×10 ⁻² (mm ⁻³)					
			A _e (mm ²)	ℓ _e (mm)	V _e (mm ³)	(g)	(nH/N ²) 1kHz 0.4A/m 23°C
PE22 EC70×69×16	0.5138891	0.18322	280	144	40420	250	3910±25%
PC40 EC70×69×16						250	4845±25%
PE90 EC70×69×16						255	4634±25%
PE22 EC90×90×30	0.3533380	0.05648	626	221	138270	635	5925±25%
PC40 EC90×90×30						635	7415±25%
PE90 EC90×90×30						648	7093±25%
PE22 EC120×101×30	0.3300745	0.04278	772	255	196490	986	6395±25%
PC40 EC120×101×30						986	8025±25%
PE90 EC120×101×30						1007	7676±25%

Mn-Zn EC Core Bobbin

SHAPES AND DIMENSIONS

For EC70

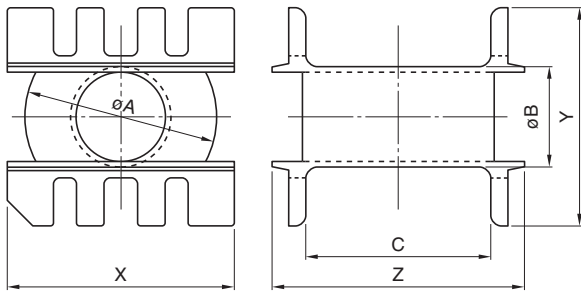


Bobbin is optional parts.

Part No.	Dimensions (mm)							Cross-sectional winding area $A_w(\text{mm}^2)$	Average winding length $\ell_w(\text{mm})$	Weigh (approx.) (g)	Material
	øA	øB	C	X	Y	Z	t*				
BEC70	42.5±0.5	19.3±0.3	41.5±2.5	70.0±1.5	56.0±1.5	57.0±2.0	1.13	471.4	98	19.0	PBT

* Bobbin minimum thickness

For EC90, 120



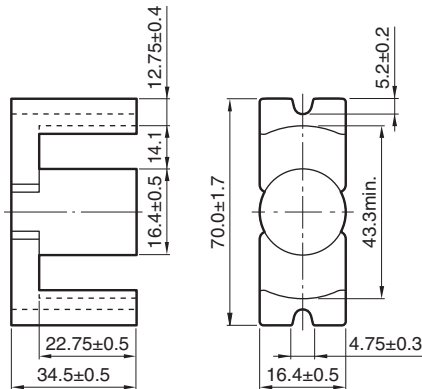
Bobbin is optional parts.

Part No.	Dimensions (mm)							Cross-sectional winding area $A_w(\text{mm}^2)$	Average winding length $\ell_w(\text{mm})$	Weigh (approx.) (g)	Material
	øA	øB	C	X	Y	Z	t*				
BEC90	67.0±0.7	35.0±0.5	65.0±3.0	79.5±0.5	76.0±1.0	89.5±2.5	1.7	1047	162	82.0	PBT

* Bobbin minimum thickness

Mn-Zn EC series **Part No.: PE22 EC70X69X16**

SHAPES AND DIMENSIONS



Dimensions in mm

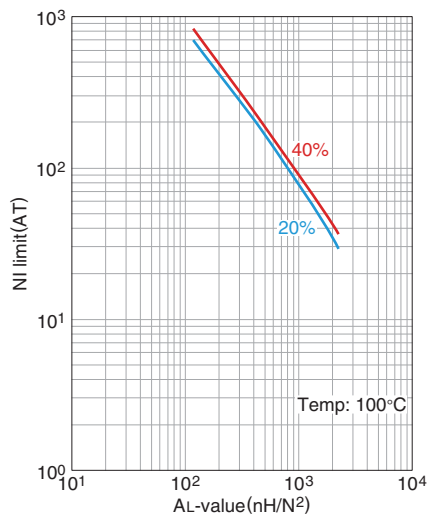
Effective parameter									Electrical characteristics
Core factor		Effective magnetic path length	Effective cross-sectional area	Effective core volume	Cross-sectional center pole area	Minimum cross-sectional area	Winding cross-sectional area	Weigh (approx.)	AL-value
C ₁ (mm ⁻¹)	C ₂ ×10 ⁻² (mm ⁻³)	ℓ _e (mm)	A _e (mm ²)	V _e (mm ³)	A _c (mm ²)	A min.* (mm ²)	A _{cw} (mm ²)	(g)	(nH/N ²) 1kHz 0.4A/m 23°C
0.5138891	0.18322	144	280	40420	211	211C*	642	250	3910±25%

* The symbol followed A min. value shows minimum cross-sectional area part.

L is outer pole part, B is the back part.

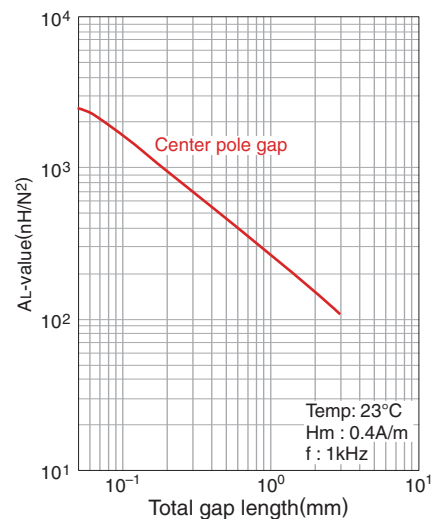
○ Calculated output power (forward converter mode): 1.1kW (100kHz)

NI limit vs. AL-value



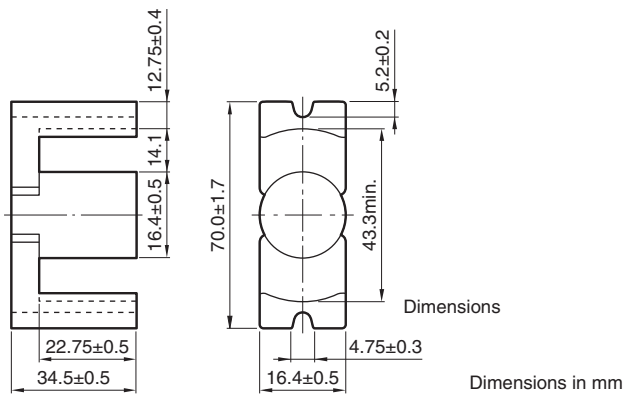
The 20% and 40% graph shows when a 20% and 40% drop from the initial AL-value has been made due to the DC superimposition.

AL-value vs. Air gap length



Mn-Zn EC series Part No.: PC40 EC70X69X16

SHAPES AND DIMENSIONS



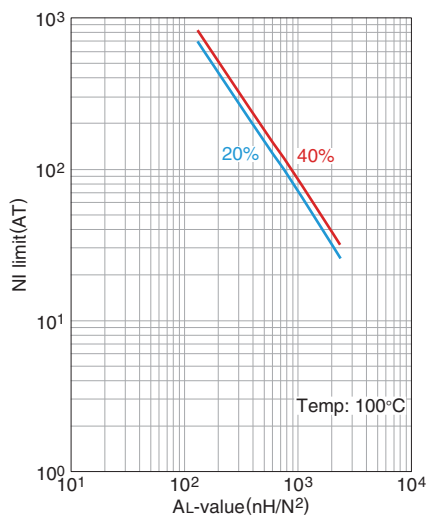
Effective parameter									Electrical characteristics
Core factor		Effective magnetic path length	Effective cross-sectional area	Effective core volume	Cross-sectional center pole area	Minimum cross-sectional area	Winding cross-sectional area	Weigh (approx.)	AL-value
C_1 (mm ⁻¹)	$C_2 \times 10^{-2}$ (mm ⁻³)	ℓ_e (mm)	A_e (mm ²)	V_e (mm ³)	A_c (mm ²)	$A_{min.}^*$ (mm ²)	A_{cw} (mm ²)	(g)	(nH/N ²) 1kHz 0.4A/m 23°C
0.5138891	0.18322	144	280	40420	211	211C*	642	250	4845±25%

* The symbol followed A min. value shows minimum cross-sectional area part.

L is outer pole part, B is the back part.

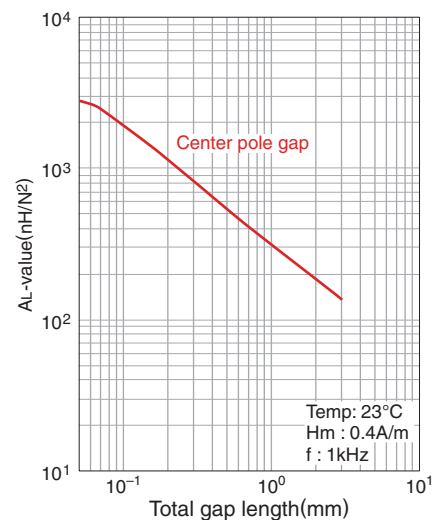
○ Calculated output power (forward converter mode): 1.2kW (100kHz)

NI limit vs. AL-value



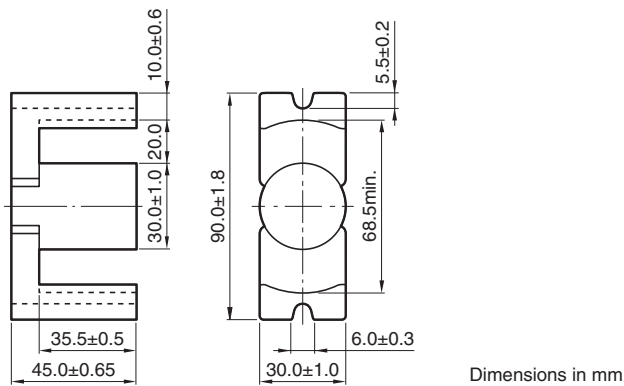
The 20% and 40% graph shows when a 20% and 40% drop from the initial AL-value has been made due to the DC superimposition.

AL-value vs. Air gap length



Mn-Zn EC series **Part No.: PE22 EC90X90X30**

■ SHAPES AND DIMENSIONS



Dimensions in mm

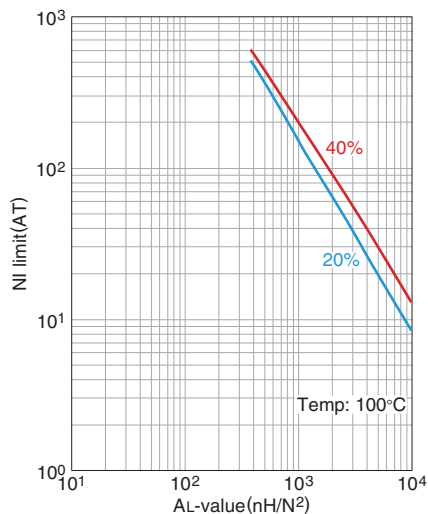
Effective parameter									Electrical characteristics
Core factor		Effective magnetic path length	Effective cross-sectional area	Effective core volume	Cross-sectional center pole area	Minimum cross-sectional area	Winding cross-sectional area	Weigh (approx.)	AL-value
C ₁ (mm ⁻¹)	C ₂ ×10 ⁻² (mm ⁻³)	ℓ _e (mm)	A _e (mm ²)	V _e (mm ³)	A _c (mm ²)	A min.* (mm ²)	A _{cw} (mm ²)	(g)	(nH/N ²) 1kHz 0.4A/m 23°C
0.3533380	0.05648	221	626	138270	707	570B*	1420	635	5925±25%

* 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.

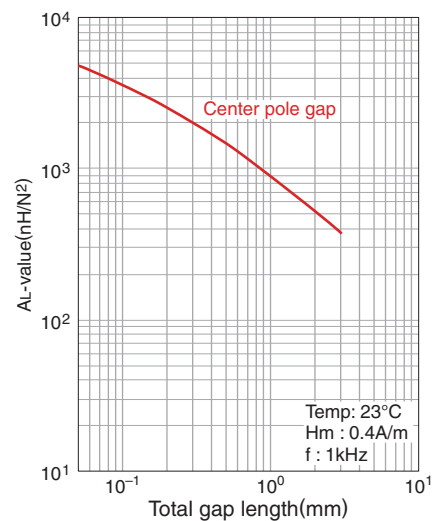
○ Calculated output power (forward converter mode): 3.2kW (100kHz)

NI limit vs. AL-value



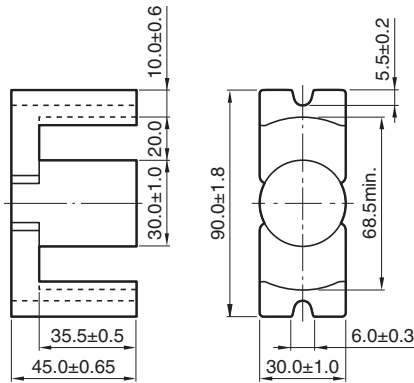
The 20% and 40% graph shows when a 20% and 40% drop from the initial AL-value has been made due to the DC superimposition.

AL-value vs. Air gap length



Mn-Zn EC series **Part No.: PC40 EC90X90X30**

SHAPES AND DIMENSIONS



Dimensions in mm

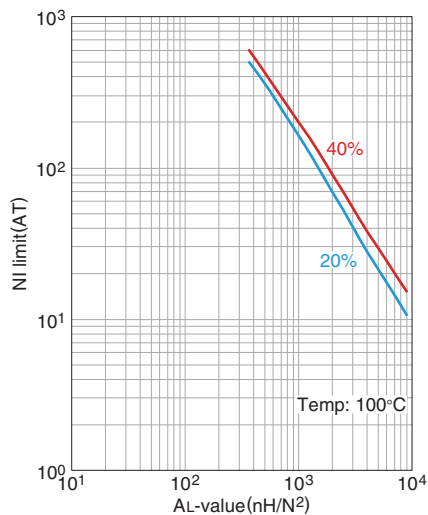
Effective parameter									Electrical characteristics
Core factor		Effective magnetic path length	Effective cross-sectional area	Effective core volume	Cross-sectional center pole area	Minimum cross-sectional area	Winding cross-sectional area	Weigh (approx.)	AL-value
C_1 (mm ⁻¹)	$C_2 \times 10^{-2}$ (mm ⁻³)	ℓ_e (mm)	A_e (mm ²)	V_e (mm ³)	A_c (mm ²)	A_{min}^* (mm ²)	A_{cw} (mm ²)	(g)	(nH/N ²) 1kHz 0.4A/m 23°C
0.3533380	0.05648	221	626	138270	707	570B*	1420	635	7415±25%

* 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.

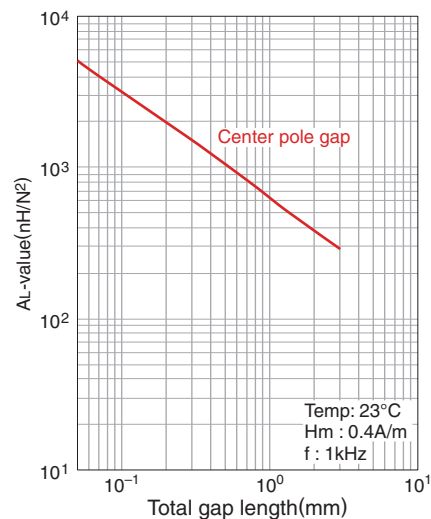
○ Calculated output power (forward converter mode): 3.4kW (100kHz)

NI limit vs. AL-value



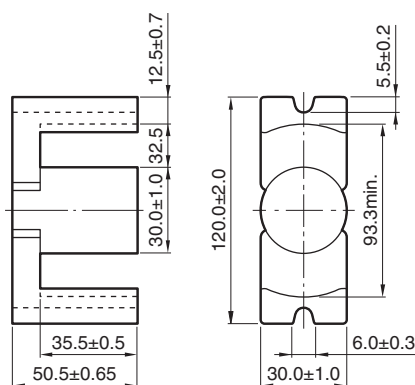
The 20% and 40% graph shows when a 20% and 40% drop from the initial AL-value has been made due to the DC superimposition.

AL-value vs. Air gap length



Mn-Zn EC series **Part No.: PE22 EC120X101X30**

■ SHAPES AND DIMENSIONS



Dimensions in mm

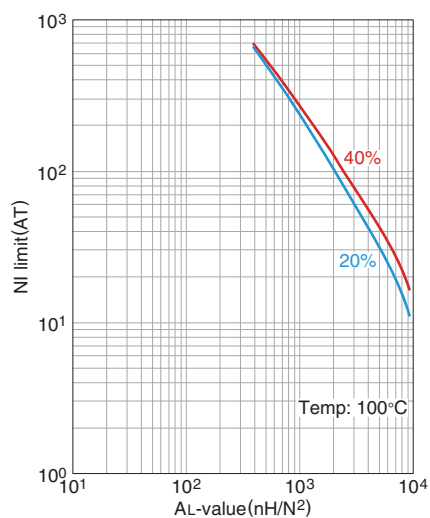
Effective parameter									Electrical characteristics
Core factor		Effective magnetic path length	Effective cross-sectional area	Effective core volume	Cross-sectional center pole area	Minimum cross-sectional area	Winding cross-sectional area	Weight (approx.)	AL-value
C_1 (mm ⁻¹)	$C_2 \times 10^{-2}$ (mm ⁻³)	ℓ_e (mm)	A_e (mm ²)	V_e (mm ³)	A_c (mm ²)	$A_{min.}^*$ (mm ²)	A_{cw} (mm ²)	(g)	(nH/N ²) 1kHz 0.4A/m 23°C
0.3300745	0.04278	255	773	196490	707	707C*	2307	986	6395±25%

* 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.

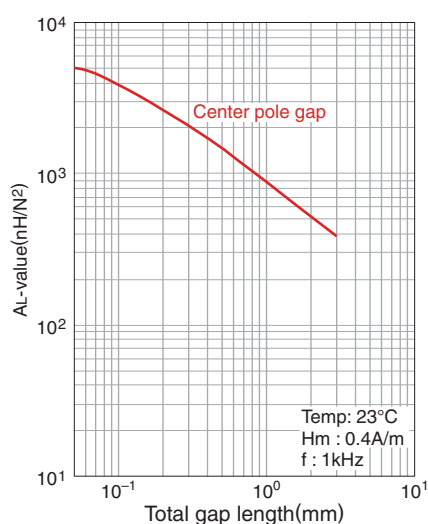
○ Calculated output power (forward converter mode): 4.3kW (100kHz)

NI limit vs. AL-value



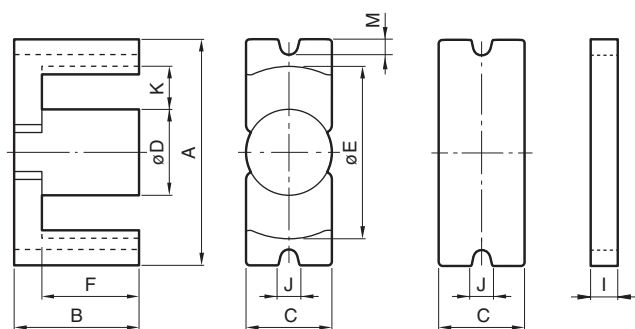
The 20% and 40% graph shows when a 20% and 40% drop from the initial AL-value has been made due to the DC superimposition.

AL-value vs. Air gap length



Mn-Zn EIC Cores

SHAPES AND DIMENSIONS



PE22	EC	70	×	69	×	16
Material	Core shape	Width		Thickness		Inside Diameter

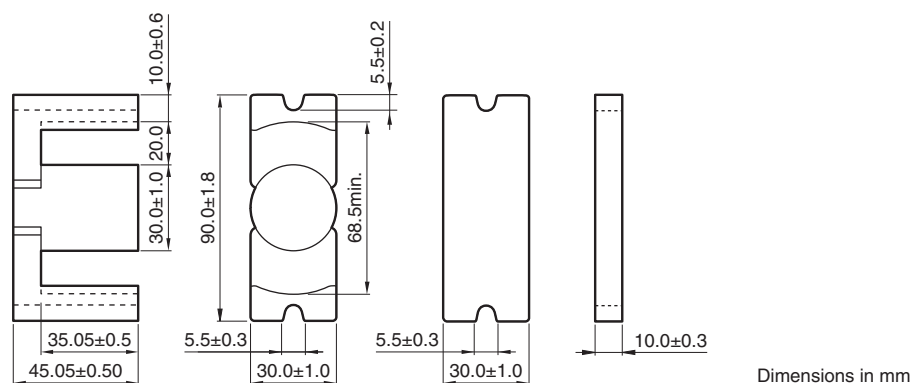
Part No.	Dimensions (mm)									
	A	B+I	C	øD	øE	F	I	M	J	K
PE22 EIC70×46×16	70.0±1.7	46.25±1.0	16.4±0.5	16.4±0.5	43.3min.	22.75±0.5	11.75±0.5	5.2	4.75	14.1
PC40 EIC70×46×16										
PE90 EIC70×46×16										
PE22 EIC90×55×30	90.0±1.8	55.0±1.0	30.0±1.0	30.0±1.0	68.5min.	35.5±0.5	10.0±0.35	5.5	6.0	20.0
PC40 EIC90×55×30										
PE90 EIC90×55×30										
PE22 EIC120×65×30	120.0±2.0	65.5±1.3	30.0±1.0	30.0±1.0	93.3min.	35.5±0.5	15.0±0.65	5.5	6.0	32.5
PC40 EIC120×65×30										
PE90 EIC120×65×30										

Part No.	Effective parameter						Electrical characteristics
	Core factor		Effective cross-sectional area	Effective magnetic path length	Effective core volume	Weigh (approx.)	AL-value
	C ₁ (mm ⁻¹)	C ₂ ×10 ⁻² (mm ⁻³)					(nH/N ²) 1kHz 0.4A/m 23°C
PE22 EIC70×46×16	0.3479	0.1173	297	103	30601	188	5550±25%
PC40 EIC70×46×16						188	6810±25%
PE90 EIC70×46×16						191	6514±25%
PE22 EIC90×55×30	0.2422	0.0388	624	151	94432	469	8350±25%
PC40 EIC90×55×30						469	10365±25%
PE90 EIC90×55×30						479	9914±25%
PE22 EIC120×65×30	0.2319	0.0292	794	184	146310	747	8890±25%
PC40 EIC120×65×30						747	11085±25%
PE90 EIC120×65×30						763	10603±25%

• All specifications are subject to change without notice.

Mn-Zn EIC series **Part No.: PE22 EIC90X55X30**

■ SHAPES AND DIMENSIONS



Effective parameter									Electrical characteristics
Core factor		Effective magnetic path length	Effective cross-sectional area	Effective core volume	Cross-sectional center pole area	Minimum cross-sectional area	Winding cross-sectional area	Weight (approx.)	AL-value
C ₁ (mm ⁻¹)	C ₂ ×10 ⁻² (mm ⁻³)	ℓ _e (mm)	A _e (mm ²)	V _e (mm ³)	A _c (mm ²)	A min.* (mm ²)	A _{cw} (mm ²)	(g)	(nH/N ²) 1kHz 0.4A/m 23°C
0.2422	0.0388	151	624	94432	707	586B*	710	469	8350±25%

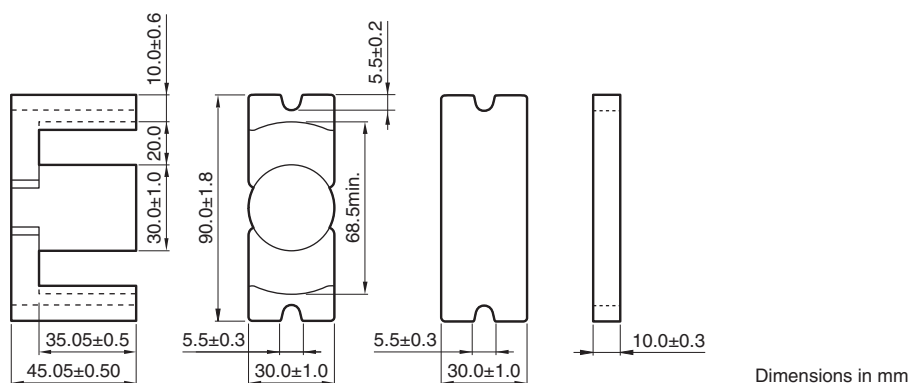
* The symbol followed A min. value shows minimum cross-sectional area part.

C is center pole part, L is outer pole part, B is the back part.

○ Calculated output power (forward converter mode): 1.8kW (100kHz)

Mn-Zn EIC series **Part No.: PC40 EIC90X55X30**

■ SHAPES AND DIMENSIONS



Effective parameter									Electrical characteristics
Core factor		Effective magnetic path length	Effective cross-sectional area	Effective core volume	Cross-sectional center pole area	Minimum cross-sectional area	Winding cross-sectional area	Weight (approx.)	AL-value
C ₁ (mm ⁻¹)	C ₂ ×10 ⁻² (mm ⁻³)	ℓ _e (mm)	A _e (mm ²)	V _e (mm ³)	A _c (mm ²)	A min.* (mm ²)	A _{cw} (mm ²)	(g)	(nH/N ²) 1kHz 0.4A/m 23°C
0.2422	0.0388	151	624	94432	707	586B*	710	469	10365±25%

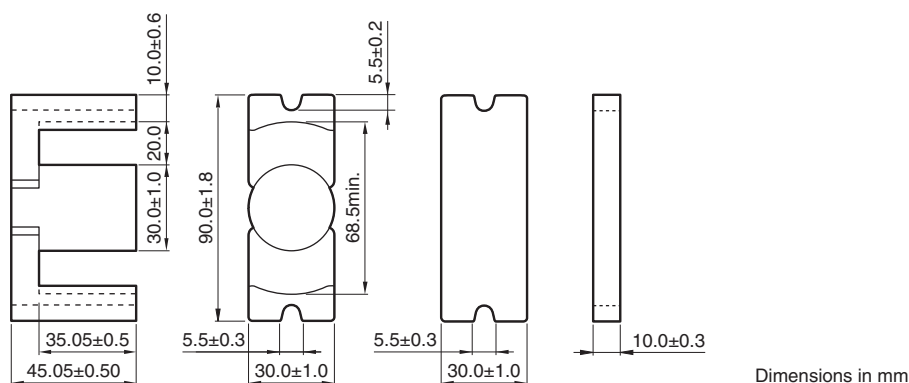
* The symbol followed A min. value shows minimum cross-sectional area part.

C is center pole part, L is outer pole part, B is the back part.

○ Calculated output power (forward converter mode): 1.9kW (100kHz)

Mn-Zn EIC series **Part No.: PE90 EIC90X55X30**

■ SHAPES AND DIMENSIONS



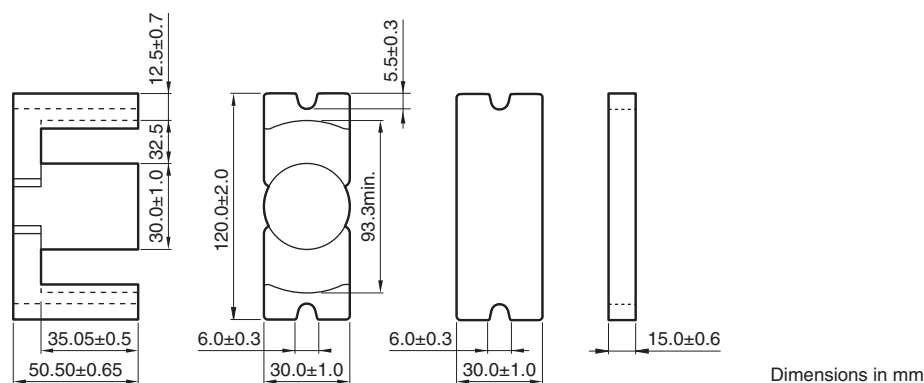
Effective parameter									Electrical characteristics
Core factor		Effective magnetic path length	Effective cross-sectional area	Effective core volume	Cross-sectional center pole area	Minimum cross-sectional area	Winding cross-sectional area	Weigh (approx.)	AL-value
C ₁ (mm ⁻¹)	C ₂ ×10 ⁻² (mm ⁻³)	ℓ _e (mm)	A _e (mm ²)	V _e (mm ³)	A _c (mm ²)	A min.* (mm ²)	A _{cw} (mm ²)	(g)	(nH/N ²) 1kHz 0.4A/m 23°C
0.2422	0.0388	151	624	94432	707	586B*	710	469	9914±25%

* 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.

Mn-Zn EIC series **Part No.: PE22 EIC120X65X30**

■ SHAPES AND DIMENSIONS



Dimensions in mm

Effective parameter									Electrical characteristics
Core factor		Effective magnetic path length	Effective cross-sectional area	Effective core volume	Cross-sectional center pole area	Minimum cross-sectional area	Winding cross-sectional area	Weight (approx.)	AL-value
C ₁ (mm ⁻¹)	C ₂ ×10 ⁻² (mm ⁻³)	ℓ _e (mm)	A _e (mm ²)	V _e (mm ³)	A _c (mm ²)	A min.* (mm ²)	A _{cw} (mm ²)	(g)	(nH/N ²) 1kHz 0.4A/m 23°C
0.2319	0.0292	184	794	146310	707	707C*	1154	747	8890±25%

* The symbol followed A min. value shows minimum cross-sectional area part.

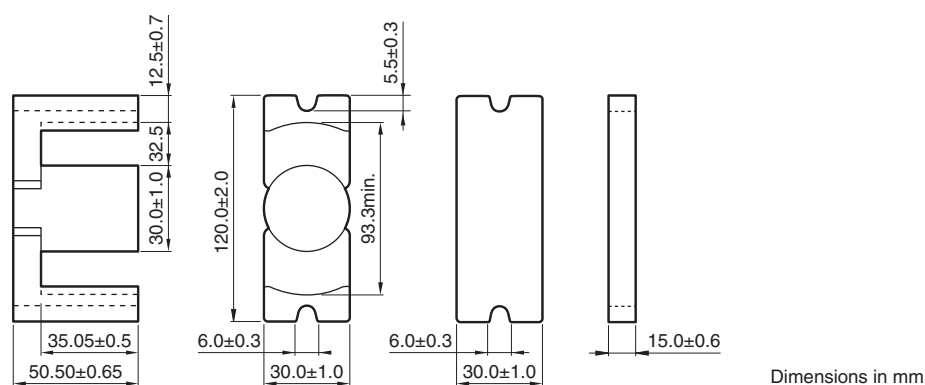
C is center pole part, L is outer pole part, B is the back part.

• Available customize core like this. Please specify when ordering.

○ Calculated output power (forward converter mode): 2.8kW (100kHz)

Mn-Zn EIC series **Part No.: PC40 EIC120X65X30**

■ SHAPES AND DIMENSIONS



Effective parameter									Electrical characteristics
Core factor		Effective magnetic path length	Effective cross-sectional area	Effective core volume	Cross-sectional center pole area	Minimum cross-sectional area	Winding cross-sectional area	Weight (approx.)	AL-value
C ₁ (mm ⁻¹)	C ₂ ×10 ⁻² (mm ⁻³)	ℓ _e (mm)	A _e (mm ²)	V _e (mm ³)	A _c (mm ²)	A min.* (mm ²)	A _{cw} (mm ²)	(g)	(nH/N ²) 1kHz 0.4A/m 23°C
0.2319	0.0292	184	794	146310	707	707C*	1154	747	11085±25%

* The symbol followed A min. value shows minimum cross-sectional area part.

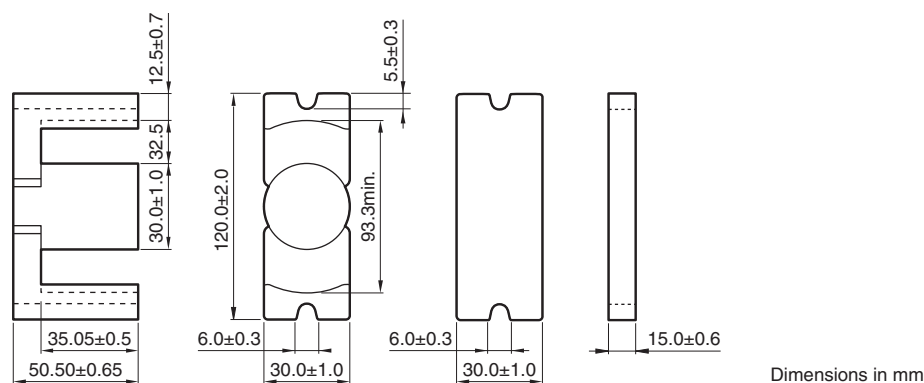
C is center pole part, L is outer pole part, B is the back part.

• Available customize core like this. Please specify when ordering.

○ Calculated output power (forward converter mode): 2.9kW (100kHz)

Mn-Zn EIC series Part No.: PE90 EIC120X65X30

SHAPES AND DIMENSIONS



Effective parameter									Electrical characteristics
Core factor		Effective magnetic path length	Effective cross-sectional area	Effective core volume	Cross-sectional center pole area	Minimum cross-sectional area	Winding cross-sectional area	Weight (approx.)	AL-value
C ₁ (mm ⁻¹)	C ₂ ×10 ⁻² (mm ⁻³)	ℓ _e (mm)	A _e (mm ²)	V _e (mm ³)	A _c (mm ²)	A min.* (mm ²)	A _{cw} (mm ²)	(g)	(nH/N ²) 1kHz 0.4A/m 23°C
0.2319	0.0292	184	794	146310	707	707C*	1154	747	10603±25%

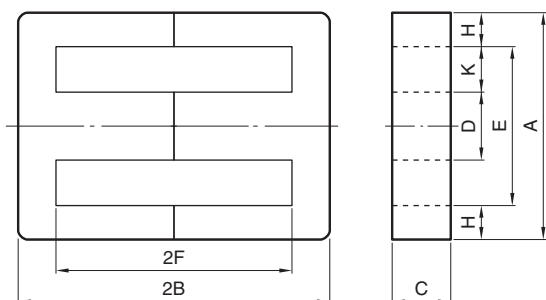
* The symbol followed A min. value shows minimum cross-sectional area part.

C is center pole part, L is outer pole part, B is the back part.

• Available customize core like this. Please specify when ordering.

Mn-Zn EE Cores

SHAPES AND DIMENSIONS



PE22	EE	70	×	91	×	19
Material	Core shape	Width		Thickness		Inside Diameter

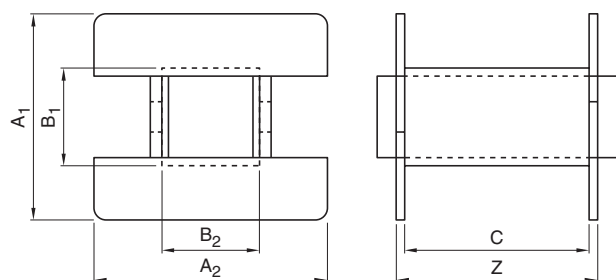
Part No.	Dimensions (mm)									
	A	2B	C	D	E	2F	H	R	K	K×2F(mm ²)
PE22 EE70×91×19 PC40 EE70×91×19 PE90 EE70×91×19	70.0±1.5	91.0±1.0	19.5±0.5	19.5±0.5	48.5min.	71.0±1.0	10.0±0.5	0	15.3	1086
PE22 EE80×76×20 PC40 EE80×76×20 PE90 EE80×76×20	80.0±1.5	76.0±1.0	20.0±0.5	20.0±0.5	58.5min.	55.0±0.8	10.0±0.5	0.5max.	20.0	1100
PE22 EE90×56×16 PC40 EE90×56×16 PE90 EE90×56×16	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
PE22 EE70×108×31N PC40 EE70×108×31N PE90 EE70×108×31N	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

Part No.	Effective parameter						Electrical characteristics AL-value (nH/N ²) 1kHz 0.4A/m 23°C
	Core factor C ₁ (mm ⁻¹)	C ₂ ×10 ⁻² (mm ⁻³)	Effective cross-sectional area A _e (mm ²)	Effective magnetic path length ℓ _e (mm)	Effective core volume V _e (mm ³)	Weigh (approx.) (g)	
PE22 EE70×91×19 PC40 EE70×91×19 PE90 EE70×91×19	0.52779	0.13669	386	204	78690	394 394 402	3930±25% 4910±25% 4697±25%
PE22 EE80×76×20 PC40 EE80×76×20 PE90 EE80×76×20	0.44878	0.11058	406	182	73910	372 372 380	4590±25% 5720±25% 5471±25%
PE22 EE90×56×16 PC40 EE90×56×16 PE90 EE90×56×16	0.33583	0.08009	419	141	59050	306 306 312	5960±25% 7380±25% 7059±25%
PE22 EE70×108×31N PC40 EE70×108×31N PE90 EE70×108×31N	0.32992	0.04695	703	232	162900	815 815 832	6360±25% 7970±25% 7623±25%

• All specifications are subject to change without notice.

Mn-Zn EE Core Bobbin

SHAPES AND DIMENSIONS

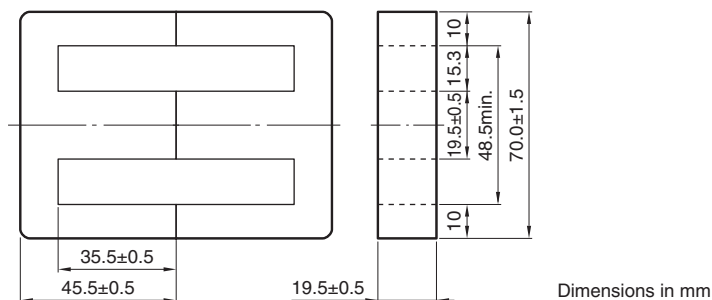


Bobbin is optional parts.

Part No.	Dimensions (mm)						Cross-sectional winding area A _w (mm ²)	Average winding length ℓ _w (mm)	Weigh (approx.) (g)	Material
	A ₁	A ₂	B ₁	B ₂	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

Mn-Zn EE series **Part No.: PE22 EE70X91X19**

■ SHAPES AND DIMENSIONS



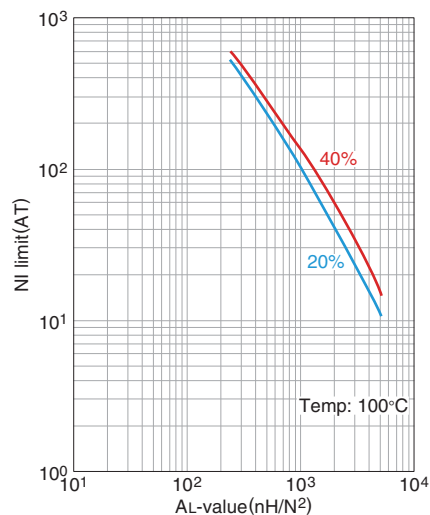
Effective parameter									Electrical characteristics
Core factor		Effective magnetic path length	Effective cross-sectional area	Effective core volume	Cross-sectional center pole area	Minimum cross-sectional area	Winding cross-sectional area	Weigh (approx.)	AL-value
C_1 (mm ⁻¹)	$C_2 \times 10^{-2}$ (mm ⁻³)	ℓ_e (mm)	A_e (mm ²)	V_e (mm ³)	A_c (mm ²)	$A_{min.}^*$ (mm ²)	A_{cw} (mm ²)	(g)	(nH/N ²) 1kHz 0.4A/m 23°C
0.5278	0.1367	204	386	78690	380	380C*	1086	394	3930±25%

* 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.

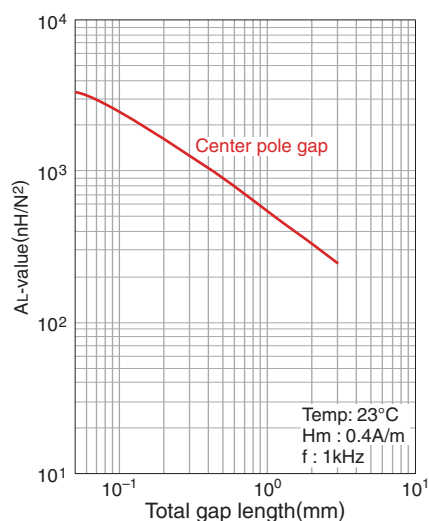
○ Calculated output power (forward converter mode): 1.4kW (100kHz)

NI limit vs. AL-value



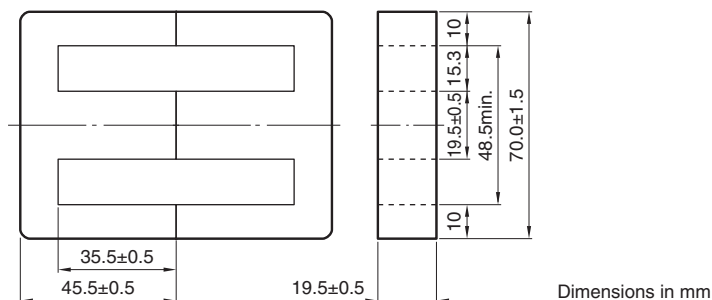
The 20% and 40% graph shows when a 20% and 40% drop from the initial AL-value has been made due to the DC superimposition.

AL-value vs. Air gap length



Mn-Zn EE series **Part No.: PC40 EE70X91X19**

■ SHAPES AND DIMENSIONS



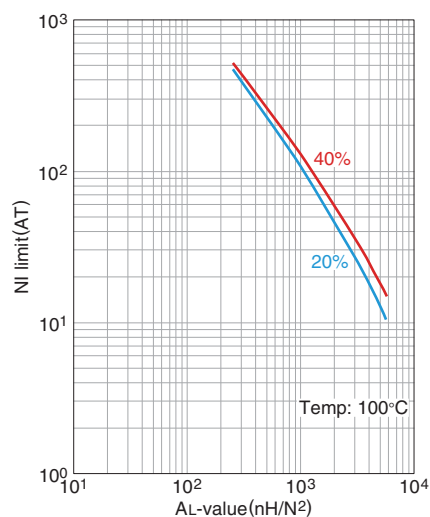
Effective parameter									Electrical characteristics
Core factor		Effective magnetic path length	Effective cross-sectional area	Effective core volume	Cross-sectional center pole area	Minimum cross-sectional area	Winding cross-sectional area	Weigh (approx.)	AL-value
C_1 (mm ⁻¹)	$C_2 \times 10^{-2}$ (mm ⁻³)	ℓ_e (mm)	A_e (mm ²)	V_e (mm ³)	A_c (mm ²)	A_{min}^* (mm ²)	A_{cw} (mm ²)	(g)	(nH/N ²) 1kHz 0.4A/m 23°C
0.5278	0.1367	204	386	78690	380	380C*	1086	394	4910±25%

* 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.

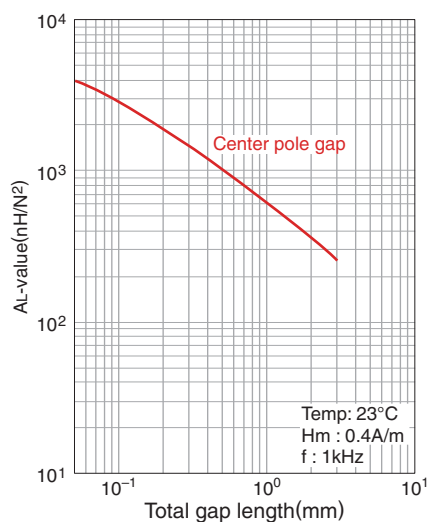
○ Calculated output power (forward converter mode): 1.6kW (100kHz)

NI limit vs. AL-value



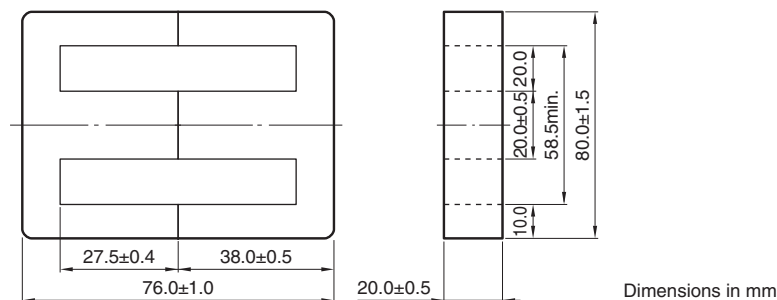
The 20% and 40% graph shows when a 20% and 40% drop from the initial AL-value has been made due to the DC superimposition.

AL-value vs. Air gap length



Mn-Zn EE series **Part No.: PE22 EE80X76X20**

■ SHAPES AND DIMENSIONS



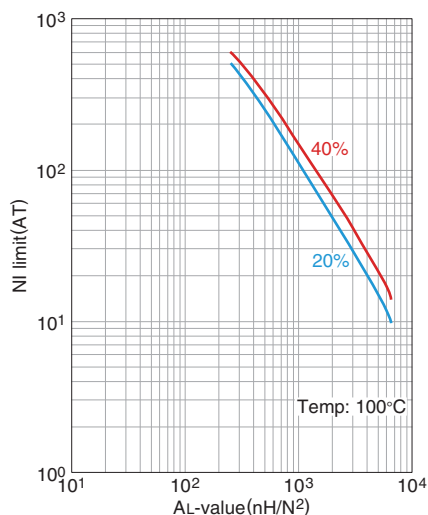
Effective parameter									Electrical characteristics
Core factor		Effective magnetic path length	Effective cross-sectional area	Effective core volume	Cross-sectional center pole area	Minimum cross-sectional area	Winding cross-sectional area	Weigh (approx.)	AL-value
C ₁ (mm ⁻¹)	C ₂ ×10 ⁻² (mm ⁻³)	ℓ _e (mm)	A _e (mm ²)	V _e (mm ³)	A _c (mm ²)	A min.* (mm ²)	A _{cw} (mm ²)	(g)	(nH/N ²) 1kHz 0.4A/m 23°C
0.44878	0.1106	182	406	73910	400	400LC*	1100	372	4590±25%

* 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.

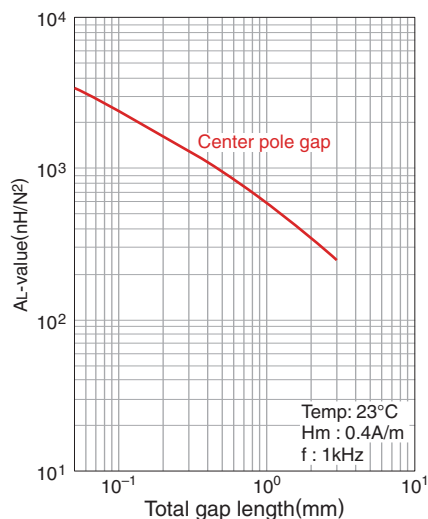
○ Calculated output power (forward converter mode): 1.4kW (100kHz)

NI limit vs. AL-value



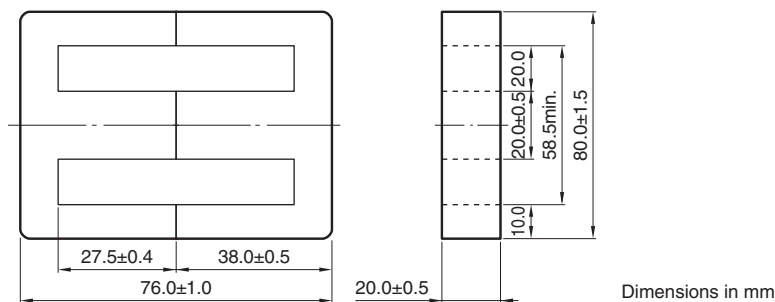
The 20% and 40% graph shows when a 20% and 40% drop from the initial AL-value has been made due to the DC superimposition.

AL-value vs. Air gap length



Mn-Zn EE series **Part No.: PC40 EE80X76X20**

■ SHAPES AND DIMENSIONS



Dimensions in mm

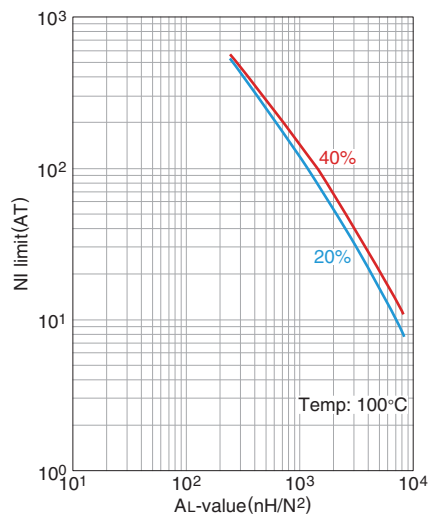
Effective parameter									Electrical characteristics
Core factor		Effective magnetic path length	Effective cross-sectional area	Effective core volume	Cross-sectional center pole area	Minimum cross-sectional area	Winding cross-sectional area	Weigh (approx.)	AL-value
C ₁ (mm ⁻¹)	C ₂ ×10 ⁻² (mm ⁻³)	ℓ _e (mm)	A _e (mm ²)	V _e (mm ³)	A _c (mm ²)	A min.* (mm ²)	A _{cw} (mm ²)	(g)	(nH/N ²) 1kHz 0.4A/m 23°C
0.44878	0.1106	182	406	73910	400	400LC*	1100	372	5720±25%

* 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.

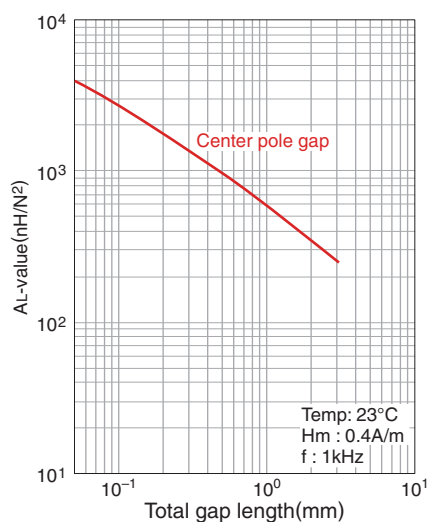
○ Calculated output power (forward converter mode): 1.5kW (100kHz)

NI limit vs. AL-value



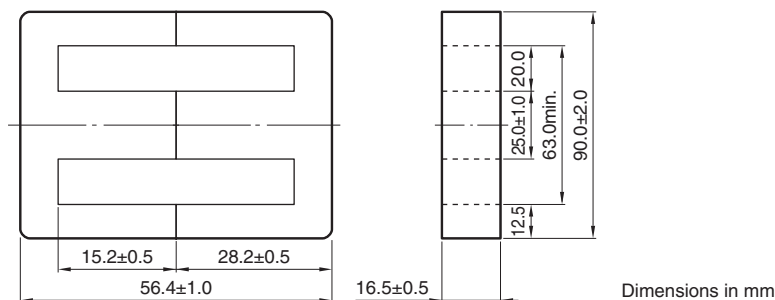
The 20% and 40% graph shows when a 20% and 40% drop from the initial AL-value has been made due to the DC superimposition.

AL-value vs. Air gap length



Mn-Zn EE series **Part No.: PE22 EE90X56X16**

■ SHAPES AND DIMENSIONS



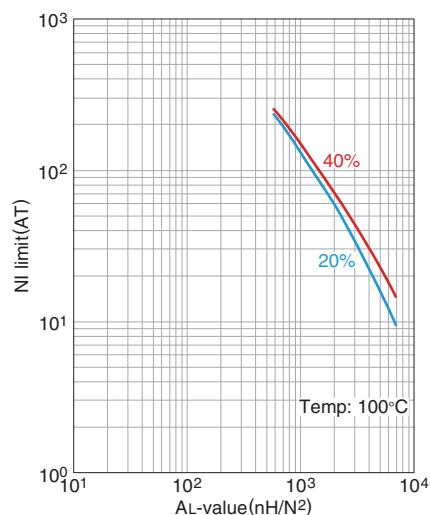
Effective parameter									Electrical characteristics
Core factor		Effective magnetic path length	Effective cross-sectional area	Effective core volume	Cross-sectional center pole area	Minimum cross-sectional area	Winding cross-sectional area	Weigh (approx.)	AL-value
C ₁ (mm ⁻¹)	C ₂ ×10 ⁻² (mm ⁻³)	ℓ _e (mm)	A _e (mm ²)	V _e (mm ³)	A _c (mm ²)	A min.* (mm ²)	A _{cw} (mm ²)	(g)	(nH/N ²) 1kHz 0.4A/m 23°C
0.33583	0.0801	144	419	59050	413	413LC*	608	306	5960±25%

* 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.

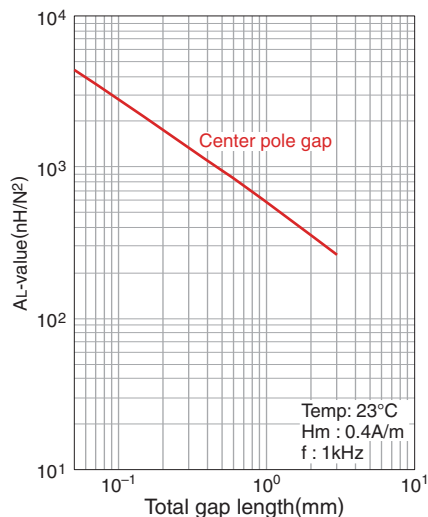
○ Calculated output power (forward converter mode): 1.2kW (100kHz)

NI limit vs. AL-value



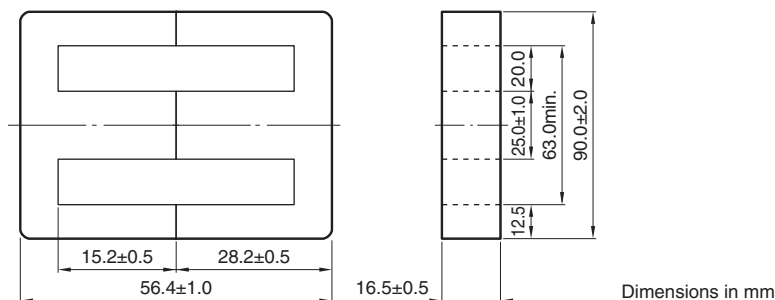
The 20% and 40% graph shows when a 20% and 40% drop from the initial AL-value has been made due to the DC superimposition.

AL-value vs. Air gap length



Mn-Zn EE series **Part No.: PC40 EE90X56X16**

■ SHAPES AND DIMENSIONS



Dimensions in mm

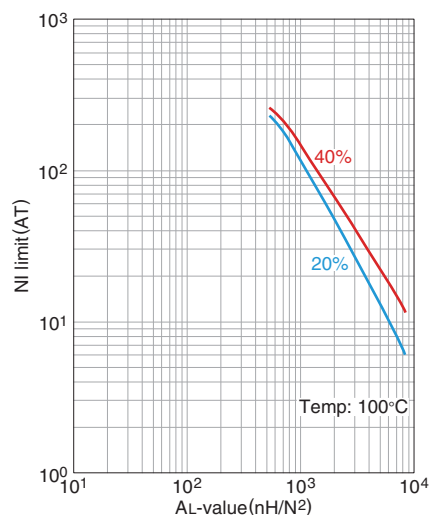
Effective parameter									Electrical characteristics
Core factor		Effective magnetic path length	Effective cross-sectional area	Effective core volume	Cross-sectional center pole area	Minimum cross-sectional area	Winding cross-sectional area	Weigh (approx.)	AL-value
C ₁ (mm ⁻¹)	C ₂ ×10 ⁻² (mm ⁻³)	ℓ _e (mm)	A _e (mm ²)	V _e (mm ³)	A _c (mm ²)	A min.* (mm ²)	A _{cw} (mm ²)	(g)	(nH/N ²) 1kHz 0.4A/m 23°C
0.33583	0.0801	141	419	59050	413	413LC*	608	306	7380±25%

* 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.

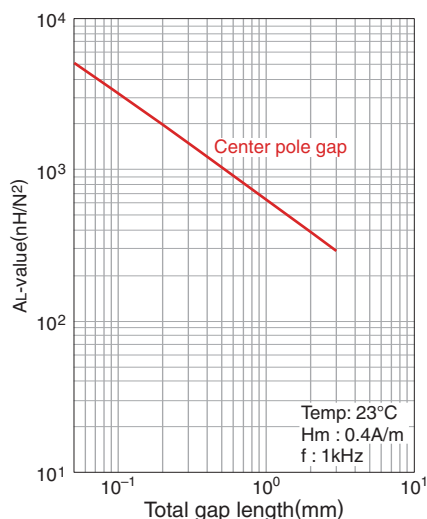
○ Calculated output power (forward converter mode): 1.3kW (100kHz)

NI limit vs. AL-value



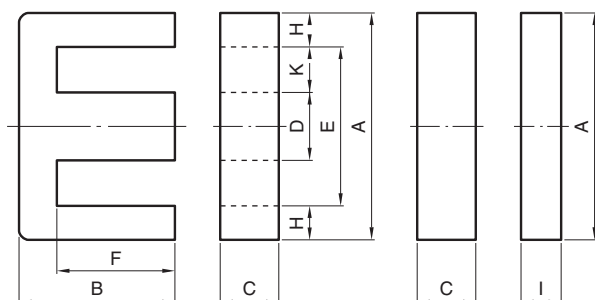
The 20% and 40% graph shows when a 20% and 40% drop from the initial AL-value has been made due to the DC superimposition.

AL-value vs. Air gap length



Mn-Zn EI Cores

SHAPES AND DIMENSIONS



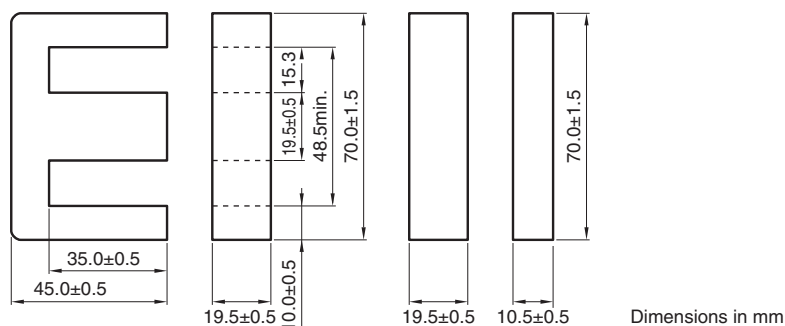
PE22	EI	70	x	55	x	19
Material	Core shape	Width		Thickness		Inside Diameter

Part No.	Dimensions (mm)										
	A	B+I	C	D	E	F	H	I	R	K	K×2F(mm ²)
PE22 EI70×55×19	70.0±1.5	55.5±1.0	19.5±0.5	19.5±0.5	48.5min.	35.0±0.5	10.0±0.5	10.5±0.5	0.5max.	15.3	536
PC40 EI70×55×19											
PE90 EI70×55×19											
PE22 EI70×64×31N	70.0±1.5	64.4±1.0	31.6±0.5	22.2±0.5	46.3min.	42.8±0.5	11.1±0.5	10.4±0.5	2.0max.	12.8	548
PC40 EI70×64×31N											
PE90 EI70×64×31N											

Part No.	Effective parameter						Electrical characteristics
	Core factor		Effective cross-sectional area A _e (mm ²)	Effective magnetic path length ℓ _e (mm)	Effective core volume V _e (mm ³)	Weigh (approx.) (g)	AL-value (nH/N ²) 1kHz 0.4A/m 23°C
	C ₁ (mm ⁻¹)	C ₂ ×10 ⁻² (mm ⁻³)					
PE22 EI70×55×19	0.33894	0.08693	390	132	51520	266	5880±25%
PC40 EI70×55×19						266	7270±25%
PE90 EI70×55×19						272	6954±25%
PE22 EI70×64×31N	0.20929	0.03010	695	146	101200	519	9585±25%
PC40 EI70×64×31N						519	11885±25%
PE90 EI70×64×31N						530	11368±25%

Mn-Zn EI series **Part No.: PE22 EI70X55X19**

■ SHAPES AND DIMENSIONS



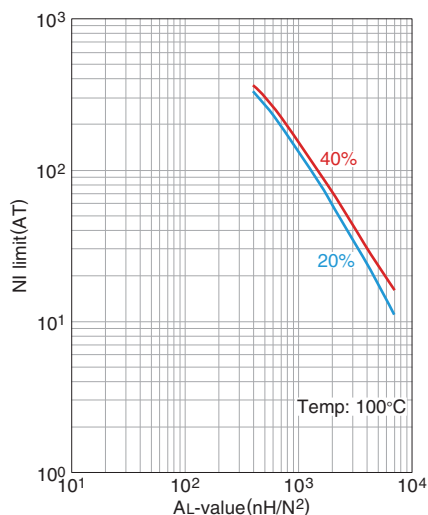
Effective parameter									Electrical characteristics
Core factor		Effective magnetic path length	Effective cross-sectional area	Effective core volume	Cross-sectional center pole area	Minimum cross-sectional area	Winding cross-sectional area	Weigh (approx.)	AL-value
C ₁ (mm ⁻¹)	C ₂ ×10 ⁻² (mm ⁻³)	ℓ _e (mm)	A _e (mm ²)	V _e (mm ³)	A _c (mm ²)	A min.* (mm ²)	A _{cw} (mm ²)	(g)	(nH/N ²) 1kHz 0.4A/m 23°C
0.33894	0.08693	132	390	51520	380	380C*	543	266	5880±25%

* 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.

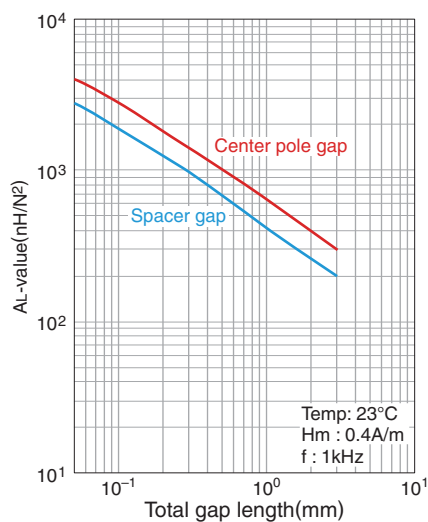
○ Calculated output power (forward converter mode): 1.4kW (100kHz)

NI limit vs. AL-value



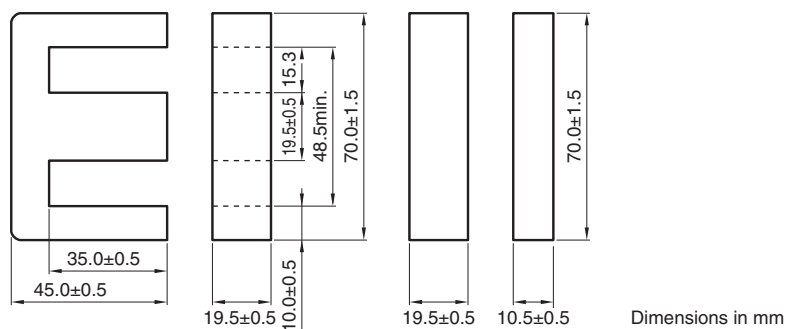
The 20% and 40% graph shows when a 20% and 40% drop from the initial AL-value has been made due to the DC superimposition.

AL-value vs. Air gap length



Mn-Zn EI series **Part No.: PC40 EI70X55X19**

■ SHAPES AND DIMENSIONS



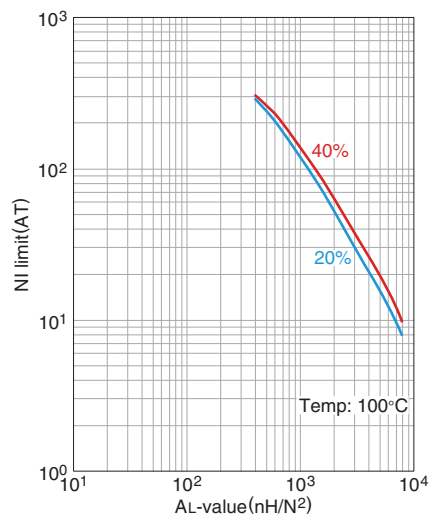
Effective parameter									Electrical characteristics
Core factor		Effective magnetic path length	Effective cross-sectional area	Effective core volume	Cross-sectional center pole area	Minimum cross-sectional area	Winding cross-sectional area	Weigh (approx.)	AL-value
C ₁ (mm ⁻¹)	C ₂ ×10 ⁻² (mm ⁻³)	ℓ _e (mm)	A _e (mm ²)	V _e (mm ³)	A _c (mm ²)	A min.* (mm ²)	A _{cw} (mm ²)	(g)	(nH/N ²) 1kHz 0.4A/m 23°C
0.33894	0.08693	132	390	51520	380	380C*	543	266	7270±25%

* 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.

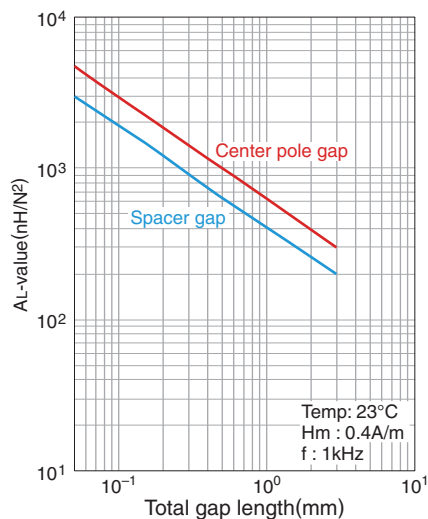
○ Calculated output power (forward converter mode): 1.6kW (100kHz)

NI limit vs. AL-value



The 20% and 40% graph shows when a 20% and 40% drop from the initial AL-value has been made due to the DC superimposition.

AL-value vs. Air gap length





**Стандарт
Электрон
Связь**

Мы молодая и активно развивающаяся компания в области поставок электронных компонентов. Мы поставляем электронные компоненты отечественного и импортного производства напрямую от производителей и с крупнейших складов мира.

Благодаря сотрудничеству с мировыми поставщиками мы осуществляем комплексные и плановые поставки широчайшего спектра электронных компонентов.

Собственная эффективная логистика и склад в обеспечивает надежную поставку продукции в точно указанные сроки по всей России.

Мы осуществляем техническую поддержку нашим клиентам и предпродажную проверку качества продукции. На все поставляемые продукты мы предоставляем гарантию .

Осуществляем поставки продукции под контролем ВП МО РФ на предприятия военно-промышленного комплекса России , а также работаем в рамках 275 ФЗ с открытием отдельных счетов в уполномоченном банке. Система менеджмента качества компании соответствует требованиям ГОСТ ISO 9001.

Минимальные сроки поставки, гибкие цены, неограниченный ассортимент и индивидуальный подход к клиентам являются основой для выстраивания долгосрочного и эффективного сотрудничества с предприятиями радиоэлектронной промышленности, предприятиями ВПК и научно-исследовательскими институтами России.

С нами вы становитесь еще успешнее!

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