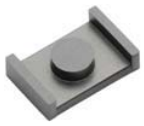
Mn-Zn ER Cores



SHAPES AND DIMENSIONS

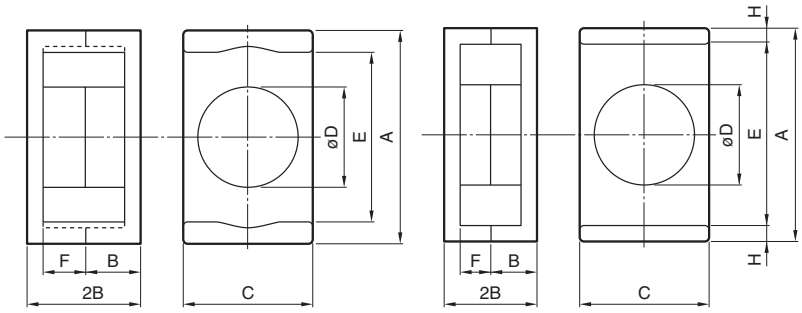


Fig.1 Fig.2

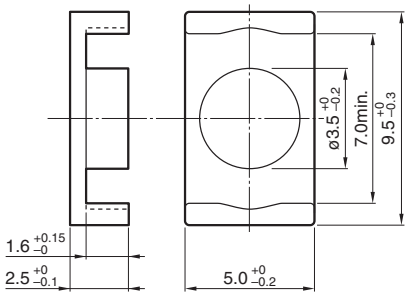
PC95	ER9.5/5	-	Z
Material	Size of E core		AL-value (Z: without air gap)

Part No.(HER+HER)	Core	Dimensions (mm) A	B	C	øD	E	F	H
PC95ER9.5/5-Z PC90ER9.5/5-Z	Fig.1	$9.5^{+0}_{-0.3}$	$2.5^{+0}_{-0.1}$	$5.0^{+0}_{-0.2}$	$3.5^{+0}_{-0.2}$	7.0min.	$1.6^{+0.15}_{-0}$	—
PC95ER11/5-Z PC90ER11/5-Z	Fig.1	$11.0^{+0}_{-0.35}$	$2.5^{+0}_{-0.1}$	$6.0^{+0}_{-0.2}$	$4.25^{+0}_{-0.25}$	7.9min.	$1.5^{+0.15}_{-0}$	—
PC95ER14/4.5/9-Z PC90ER14/4.5/9-Z	Fig.2	13.85±0.25	2.25±0.10	9.00±0.20	5.20±0.10	11.35±0.15	0.95±0.10	1.25
PC95ER14.5/6-Z PC90ER14.5/6-Z	Fig.2	14.5±0.2	$3.0^{+0}_{-0.1}$	6.7±0.1	4.7±0.1	11.8±0.2	1.65±0.1	1.35
PC95ER18/5/12-Z PC90ER18/5/12-Z	Fig.2	18.15±0.30	2.50±0.10	12.00±0.20	6.00±0.10	15.75±0.25	1.00±0.10	1.20
PC95ER22/5.5/15-Z PC90ER22/5.5/15-Z	Fig.2	22.10±0.35	2.75±0.10	15.25±0.25	6.80±0.10	19.70±0.30	1.00±0.10	1.20
PC95ER25/5.5/18-Z PC90ER25/5.5/18-Z	Fig.2	25.30±0.40	2.75±0.10	18.00±0.40	7.00±0.15	22.90±0.40	1.00±0.10	1.20

Part No.(HER+HER)	Effective parameter Core factor C1(mm−1)	Effective cross-sectional area Ae(mm2)	Effective magnetic path length ℓe(mm)	Effective core volume Ve(mm3)	Amin. (mm2)	Acw (mm2)	Weigh (g)	Electrical characteristics AL-value (nH/N2) 1kHz 0.5mA 100Ts Without air gap	With air gap
PC95ER9.5/5-Z	1.67	14.2	8.47	120	7.6	7.07	0.7	1190±25%	63±5%
PC90ER9.5/5-Z								610min.	100±7%
PC95ER11/5-Z	1.23	14.7	11.9	174	10.3	7.44	1.1	1680±25%	63±5%
PC90ER11/5-Z								1300±25%	100±7%
PC95ER14/4.5/9-Z	0.679	15.4	22.7	349	21.2	5.84	2.0	2550±25%	63±3% 100±5% 160±7%
PC90ER14/4.5/9-Z								2100±25%	
PC95ER14.5/6-Z	1.08	19.0	17.6	333	17.3	8.42	2.0	1880±25%	100±5%
PC90ER14.5/6-Z								1300±25%	160±7%
PC95ER18/5/12-Z	0.601	19.7	32.8	645	28.3	9.75	3.8	3500±25%	80±3% 125±5% 200±7%
PC90ER18/5/12-Z								2900±25%	
PC95ER22/5.5/15-Z	0.505	23.2	46.1	1070	36.3	12.9	6.5	4300±25%	80±3% 125±5% 200±7%
PC90ER22/5.5/15-Z								3200±25%	
PC95ER25/5.5/18-Z	0.486	26.1	53.7	1400	38.5	15.9	8.5	4400±25%	80±3% 125±3% 200±5%
PC90ER25/5.5/18-Z								3400±25%	

Mn-Zn Planar series **Part No.: PC90ER9.5/5-Z**

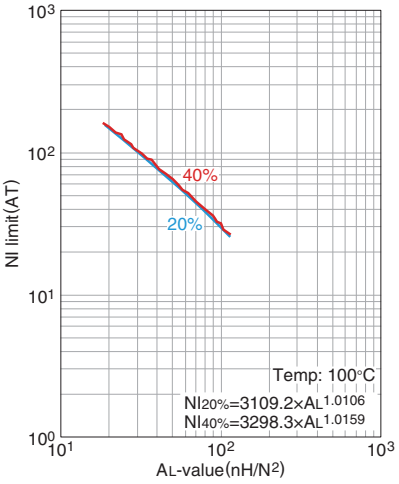
SHAPES AND DIMENSIONS



Dimensions in mm

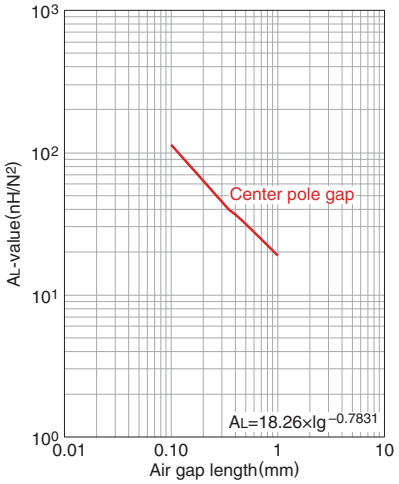
Effective parameter						Electrical characteristics	
Core factor C1 (mm⁻¹)	Effective magnetic path length ℓe (mm)	Effective cross-sectional area Ae (mm²)	Effective core volume Ve (mm³)	Cross-sectional winding area of core Acw (mm²)	Weigh (g/set)	AL-value * (nH/N²) 1kHz 0.5mA	Core loss (W)max. 100kHz 200mT 100°C
1.67	14.2	8.47	120	7.07	0.7	610min.	0.1

NI limit vs. AL-value (Typ.)



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.

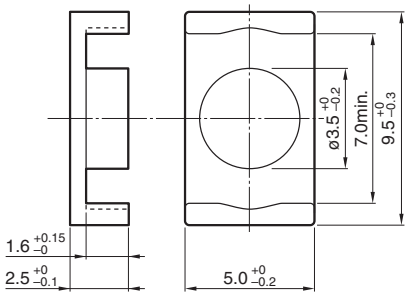
AL-value vs. Air gap length (Typ.)



Measuring conditions
- Coil : ø0.18 2UEW 100Ts
- Frequency : 1kHz
- Current level : 0.5mA
- Ambient temperature : 25°C

Mn-Zn Planar series **Part No.: PC95ER9.5/5-Z**

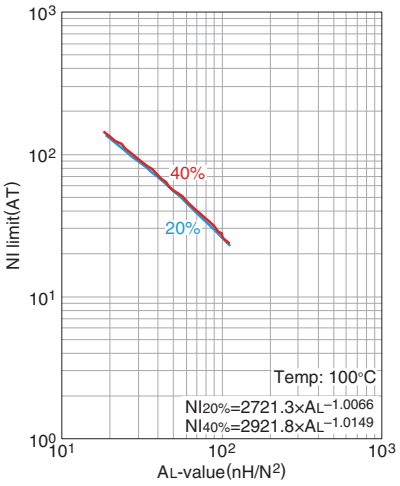
SHAPES AND DIMENSIONS



Dimensions in mm

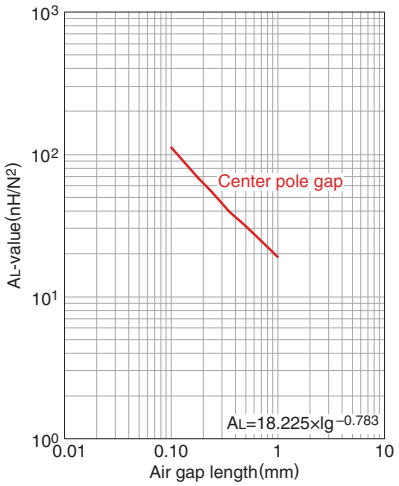
Effective parameter						Electrical characteristics			
Core factor	Effective magnetic path length	Effective cross-sectional area	Effective core volume	Cross-sectional winding area of core	Weigh	AL-value *	Core loss		
C1	ℓe	Ae	Ve	Acw					
(mm−1)	(mm)	(mm2)	(mm3)	(mm2)	(g/set)	(nH/N2) 1kHz 0.5mA	(W)max. 100kHz 200mT		
							25°C	80°C	120°C
1.67	14.2	8.47	120	7.07	0.7	1190±25%	0.1	0.09	0.1

NI limit vs. AL-value (Typ.)



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.

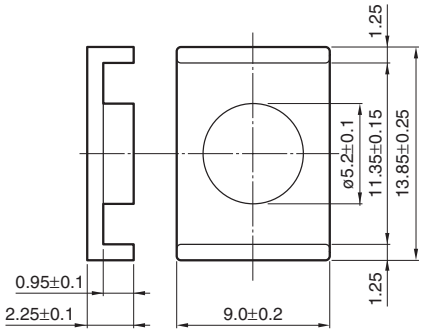
AL-value vs. Air gap length (Typ.)



Measuring conditions
- Coil : ø0.18 2UEW 100Ts
- Frequency : 1kHz
- Current level : 0.5mA
- Ambient temperature : 25°C

Mn-Zn Planar series **Part No.: PC90ER14/4.5/9-Z**

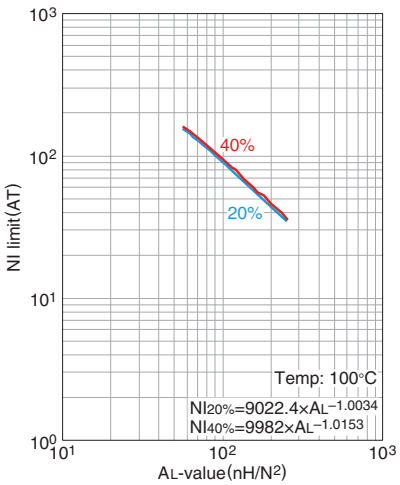
SHAPES AND DIMENSIONS



Dimensions in mm

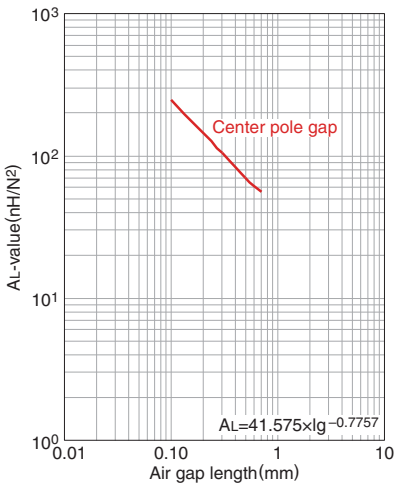
Effective parameter						Electrical characteristics	
Core factor C_1 (mm^{-1})	Effective magnetic path length ℓe (mm)	Effective cross-sectional area Ae (mm^2)	Effective core volume Ve (mm^3)	Cross-sectional winding area of core Acw (mm^2)	Weigh (g/set)	A_L-value * (nH/N^2) 1kHz 0.5mA	Core loss (W)max. 100kHz 200mT 100°C
0.679	15.4	22.7	349	5.84	2.0	2100±25%	0.3

NI limit vs. A_L-value (Typ.)



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

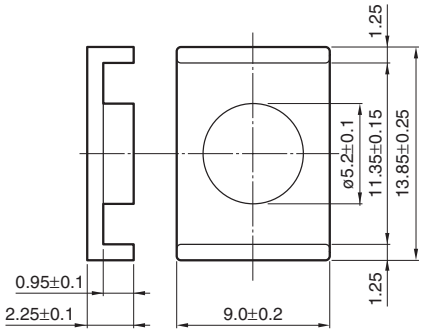
A_L-value vs. Air gap length (Typ.)



Measuring conditions
- Coil : ø0.18 2UEW 100Ts
- Frequency : 1kHz
- Current level : 0.5mA
- Ambient temperature : 25°C

Mn-Zn Planar series **Part No.: PC95ER14/4.5/9-Z**

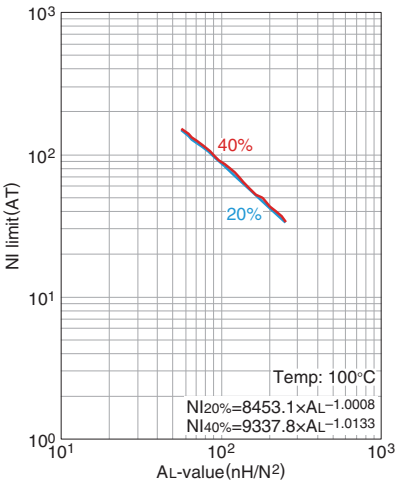
SHAPES AND DIMENSIONS



Dimensions in mm

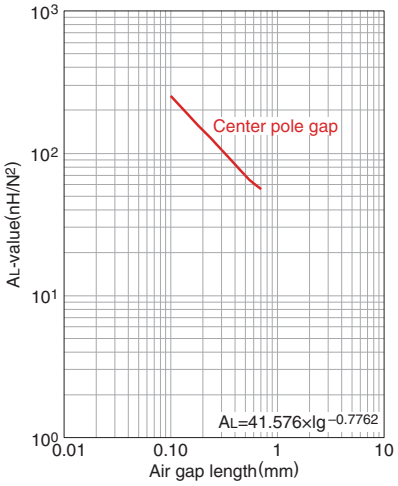
Effective parameter						Electrical characteristics			
Core factor	Effective magnetic path length	Effective cross-sectional area	Effective core volume	Cross-sectional winding area of core	Weigh	AL-value *	Core loss		
C1	ℓe	Ae	Ve	Acw					
(mm^{-1})	(mm)	(mm^2)	(mm^3)	(mm^2)	(g/set)	(nH/N^2) 1kHz 0.5mA	(W)max. 100kHz 200mT		
							25°C	80°C	120°C
0.679	15.4	22.7	349	5.84	2.0	2550±25%	0.25	0.2	0.25

NI limit vs. AL-value (Typ.)



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.

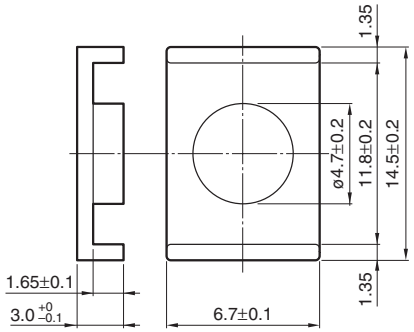
AL-value vs. Air gap length (Typ.)



Measuring conditions
- Coil : ø0.18 2UEW 100Ts
- Frequency : 1kHz
- Current level : 0.5mA
- Ambient temperature : 25°C

Mn-Zn Planar series **Part No.: PC95ER14.5/6-Z**

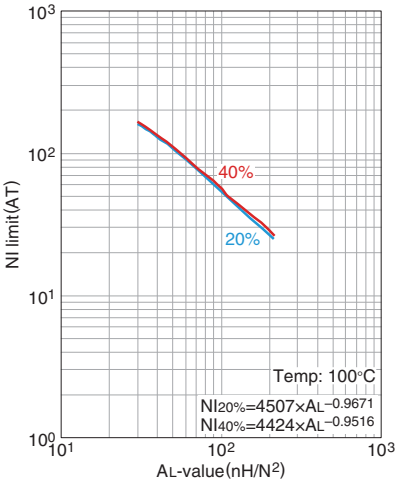
SHAPES AND DIMENSIONS



Dimensions in mm

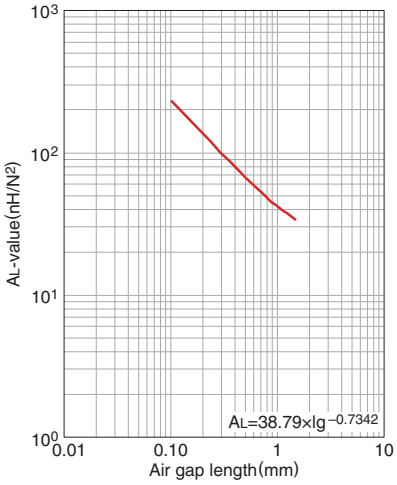
Effective parameter						Electrical characteristics			
Core factor	Effective magnetic path length	Effective cross-sectional area	Effective core volume	Cross-sectional winding area of core	Weigh	AL-value *	Core loss		
C1	ℓe	Ae	Ve	Acw					
(mm^{-1})	(mm)	(mm^2)	(mm^3)	(mm^2)	(g/set)	(nH/N^2) 1kHz 0.5mA	(W)max. 100kHz 200mT		
							25°C	80°C	120°C
1.08	19.0	17.6	333	8.42	2.0	3500±25%	0.3	0.28	0.3

NI limit vs. AL-value (Typ.)



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.

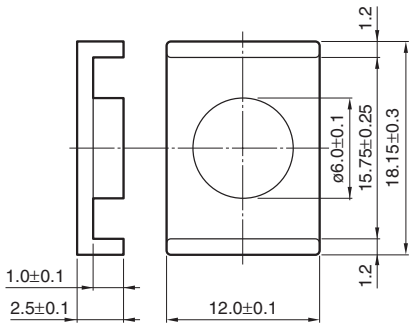
AL-value vs. Air gap length (Typ.)



Measuring conditions
- Coil : ø0.18 2UEW 100Ts
- Frequency : 1kHz
- Current level : 0.5mA
- Ambient temperature : 25°C

Mn-Zn Planar series **Part No.: PC90ER18/5/12-Z**

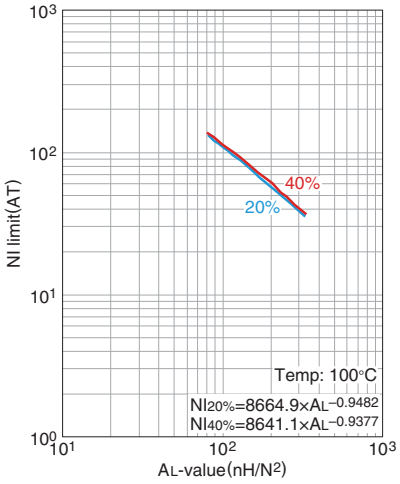
SHAPES AND DIMENSIONS



Dimensions in mm

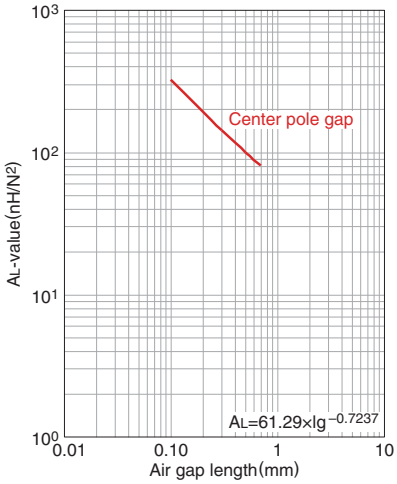
Effective parameter						Electrical characteristics	
Core factor C_1 (mm^{-1})	Effective magnetic path length ℓe (mm)	Effective cross-sectional area Ae (mm^2)	Effective core volume Ve (mm^3)	Cross-sectional winding area of core Acw (mm^2)	Weigh (g/set)	A_L-value * (nH/N^2) 1kHz 0.5mA	Core loss (W)max. 100kHz 200mT 100°C
0.601	19.7	32.8	645	9.75	3.8	2900±25%	0.5

NI limit vs. A_L-value (Typ.)



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

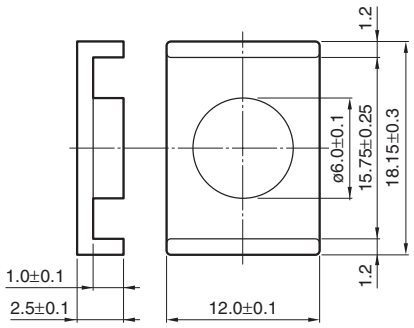
A_L-value vs. Air gap length (Typ.)



Measuring conditions
- Coil : ø0.18 2UEW 100Ts
- Frequency : 1kHz
- Current level : 0.5mA
- Ambient temperature : 25°C

Mn-Zn Planar series **Part No.: PC95ER18/5/12-Z**

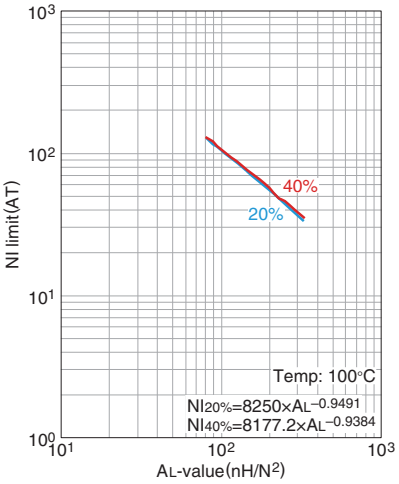
SHAPES AND DIMENSIONS



Dimensions in mm

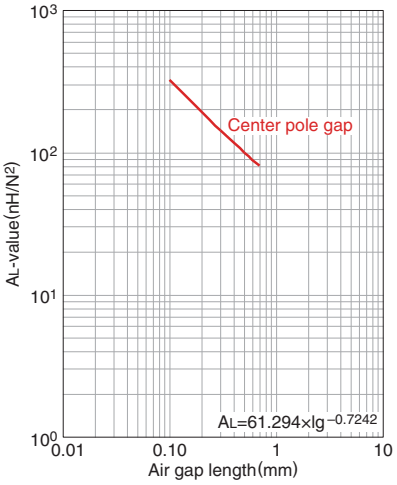
Effective parameter						Electrical characteristics			
Core factor C_1 (mm^{-1})	Effective magnetic path length ℓe (mm)	Effective cross-sectional area Ae (mm^2)	Effective core volume Ve (mm^3)	Cross-sectional winding area of core Acw (mm^2)	Weigh (g/set)	A_L-value * (nH/N^2) 1kHz 0.5mA	Core loss (W)max. 100kHz 200mT 25°C	80°C	120°C
0.601	19.7	32.8	645	9.75	3.8	3500±25%	0.45	0.4	0.45

NI limit vs. A_L-value (Typ.)



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

A_L-value vs. Air gap length (Typ.)



Measuring conditions
- Coil : ø0.18 2UEW 100Ts
- Frequency : 1kHz
- Current level : 0.5mA
- Ambient temperature : 25°C