Ferrite for Switching Power Supplies

Original cores

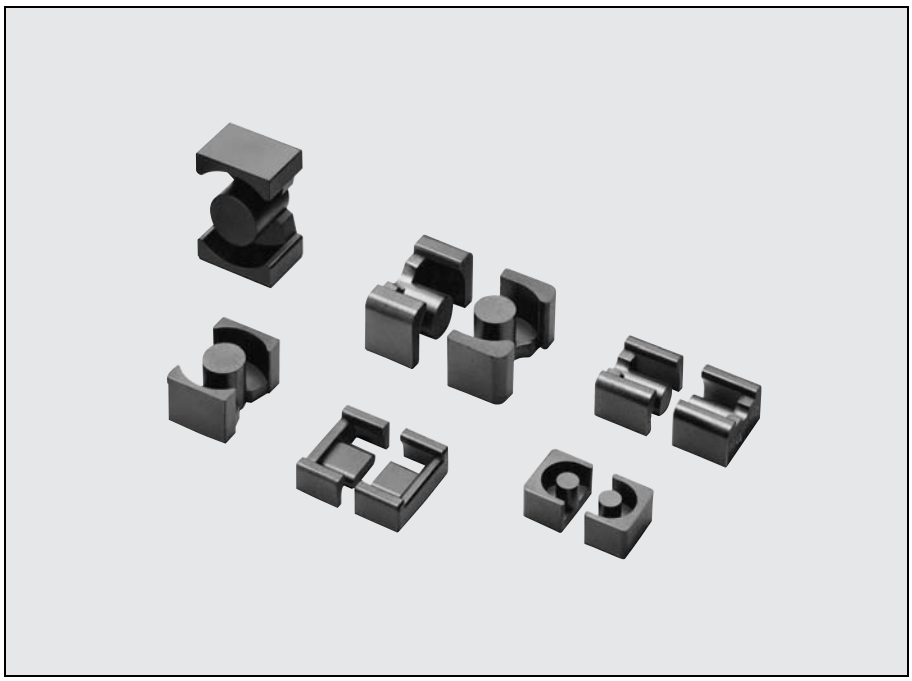
PQ/LP/EPC/EP series

Issue date: March 2010

- All specifications are subject to change without notice.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

Ferrite for Switching Power Supplies
Original Cores

PQ20/16 to PQ50/50
LP23/8 to LP32/13
EPC10 to EPC30
EP7 to EP20



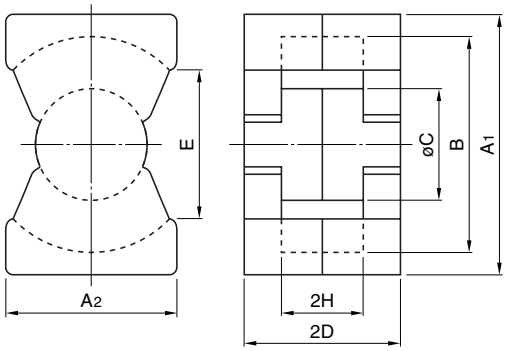
Ordering Code System

PC44 PQ 26/25 A400 – 2 2

- Material: PC44
- Size of PQ core: PQ 26/25
- AL-value(Z: without air gap): A400
- Type: 2
  - 1: Without air gap
  - 2: With air gap
- Number of Lead Slot: 2

PQ CORES

DE. PAT. 2,944,583
DE. DES. 15,655
EP. PAT. 26,104(DE, FR, GB, NL)
GB. PAT. 2,035,706
GB. DES. 990,685
JP. U. M 1,589,580
JP. U. M 1,621,895
JP. U. M PUB.
85(60)-3556 1,647,781
JP. U. M PUB.
86(61)-5779 1655608
JP. DES. 580,081
JP. DES. 649,618
KR. U. M 23,487
NL. PAT. 178,826
NL. DES. 5,777
US. PAT. 4,352,080
US. DES. 264,959



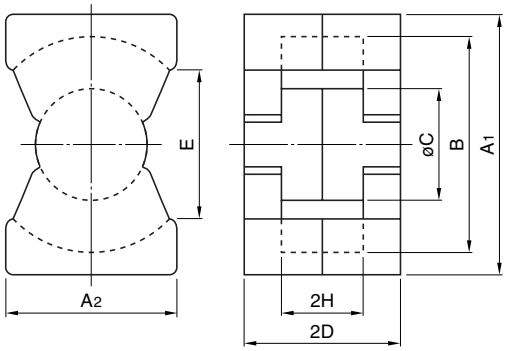
Part No.	Dimensions in mm						
	A_1	**A_2**	**B**	**øC**	**2D**	**E min.**	**2H**
PC44PQ20/16Z-12 **PC90PQ20/16Z-12** **PC95PQ20/16Z-12**	20.5±0.4	14.0±0.4	18.0±0.4	8.8±0.2	16.2±0.2	12.0	10.3±0.3
PC44PQ20/20Z-12 **PC90PQ20/20Z-12** **PC95PQ20/20Z-12**	20.5±0.4	14.0±0.4	18.0±0.4	8.8±0.2	20.2±0.2	12.0	14.3±0.3
PC44PQ26/20Z-12 **PC90PQ26/20Z-12** **PC95PQ26/20Z-12**	26.5±0.45	19.0±0.45	22.5±0.45	12.0±0.2	20.15±0.25	15.5	11.5±0.3
PC44PQ26/25Z-12 **PC90PQ26/25Z-12** **PC95PQ26/25Z-12**	26.5±0.45	19.0±0.45	22.5±0.45	12.0±0.2	24.75±0.25	15.5	16.1±0.3
PC44PQ32/20Z-12 **PC90PQ32/20Z-12** **PC95PQ32/20Z-12**	32.0±0.5	22.0±0.5	27.5±0.5	13.45±0.25	20.55±0.25	19.0	11.5±0.3

Part No.	Effective parameter				Electrical characteristics			Weight (g)
	C_1 (mm^{-1})	**Ae (mm^2)**	**ℓe (mm)**	**Ve (mm^3)**	**A_L-value (nH/N^2)***		**Core loss (W) max.**	
					Without air gap	**With air gap**	**100kHz, 200mT, 100°C**	
PC44PQ20/16Z-12					3880±25%	100±5%	0.84	
PC90PQ20/16Z-12	0.605	62	37.4	2310	3100±25%	250±7%	1.10	13
PC95PQ20/16Z-12					4480±25%	400±10%	1.14/0.96/1.14**	
PC44PQ20/20Z-12					3150±25%	100±5%	1.02	
PC90PQ20/20Z-12	0.738	62	45.4	2790	2700±25%	160±5%	1.35	15
PC95PQ20/20Z-12					4000±25%	250±7%	1.38/1.16/1.38**	
PC44PQ26/20Z-12					6170±25%	160±5%	1.94	
PC90PQ26/20Z-12	0.391	119	46.3	5490	5550±25%	315±5%	2.45	31
PC95PQ26/20Z-12					7470±25%	630±10%	2.62/2.20/2.62**	
PC44PQ26/25Z-12					5250±25%	160±5%	2.32	
PC90PQ26/25Z-12	0.472	118	55.5	6530	4500±25%	315±5%	2.9	36
PC95PQ26/25Z-12					6520±25%	630±10%	3.14/2.63/3.14**	
PC44PQ32/20Z-12					7310±25%	160±5%	2.92	
PC90PQ32/20Z-12	0.326	170	55.5	9420	6400±25%	315±5%	3.7	42
PC95PQ32/20Z-12					9120±25%	630±7%	3.94/3.31/3.94**	

* A_L-value: 1kHz, 0.5mA, 100Ts
** Core loss: 100kHz, 200mT, 25°C/80°C/120°C

PQ CORES

DE. PAT. 2,944,583
DE. DES. 15,655
EP. PAT. 26,104(DE, FR, GB, NL)
GB. PAT. 2,035,706
GB. DES. 990,685
JP. U. M 1,589,580
JP. U. M 1,621,895
JP. U. M PUB.
85(60)-3556 1,647,781
JP. U. M PUB.
86(61)-5779 1655608
JP. DES. 580,081
JP. DES. 649,618
KR. U. M 23,487
NL. PAT. 178,826
NL. DES. 5,777
US. PAT. 4,352,080
US. DES. 264,959

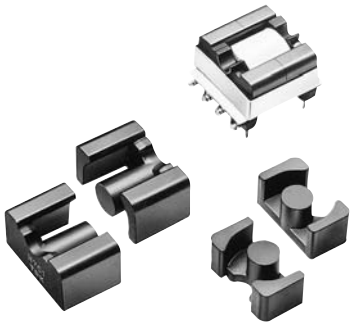


Part No.	Dimensions in mm						
	A_1	**A_2**	**B**	**øC**	**2D**	**E min.**	**2H**
PC44PQ32/30Z-12							
PC90PQ32/30Z-12	32.0±0.5	22.0±0.5	27.5±0.5	13.45±0.25	30.35±0.25	19.0	21.3±0.3
PC95PQ32/30Z-12							
PC44PQ35/35Z-12							
PC90PQ35/35Z-12	35.1±0.6	26.0±0.5	32.0±0.5	14.35±0.25	34.75±0.25	23.5	25.0±0.3
PC95PQ35/35Z-12							
PC44PQ40/40Z-12							
PC90PQ40/40Z-12	40.5±0.9	28.0±0.6	37.0±0.6	14.9±0.3	39.75±0.25	28.0	29.5±0.3
PC95PQ40/40Z-12							
PC44PQ50/50Z-12							
PC90PQ50/50Z-12	50.0±0.7	32.0±0.5	44.0±0.7	20.0±0.35	49.95±0.25	31.5	36.1±0.3
PC95PQ50/50Z-12							

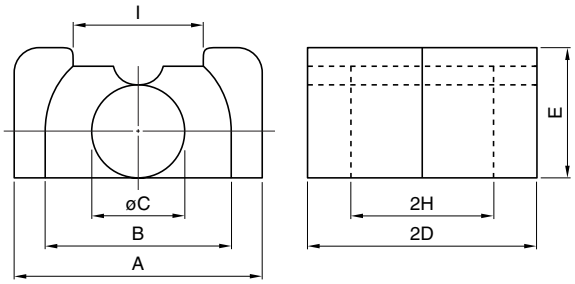
Part No.	Effective parameter				Electrical characteristics			
					A_L-value (nH/N²)*		**Core loss (W) max.**	**Weight (g)**
	C_1 (mm^{-1})	**Ae (mm^2)**	**ℓe (mm)**	**Ve (mm^3)**	**Without air gap**	**With air gap**	**100kHz, 200mT, 100°C**	
PC44PQ32/30Z-12					5140±25%	160±5%	3.92	
PC90PQ32/30Z-12	0.464	161	74.6	12000	4900±25%	315±5%	4.90	55
PC95PQ32/30Z-12					7000±25%	630±7%	5.30/4.45/5.30***	
PC44PQ35/35Z-12					4860±25%	160±5%	5.27	
PC90PQ35/35Z-12	0.448	196	87.9	17300	4700±25%	315±5%	6.6	73
PC95PQ35/35Z-12					7320±25%	630±7%	7.12/5.98/7.12***	
PC44PQ40/40Z-12					4300±25%	160±5%	6.56	
PC90PQ40/40Z-12	0.508	201	102	20500	4300±25%	315±5%	8.2	95
PC95PQ40/40Z-12					6400±25%	630±7%	8.87/7.45/8.87***	
PC44PQ50/50Z-12					6720±25%	250±5%	6.10**	
PC90PQ50/50Z-12	0.346	328	113	37200	6250±25%	400±5%	8.4	195
PC95PQ50/50Z-12					9700±25%	630±5%	9.00/7.50/9.00***	

* A_L-value: 1kHz, 0.5mA, 100Ts
** Core loss: 100kHz, 150mT, 100°C
*** Core loss: 100kHz, 200mT, 25°C/80°C/120°C

LP CORES



DE. DES. 19,581
EP. PAT. 68,745(DE, FR, GB, NL)
FR. DES. 201,586
GB. DES. 1,007,200
JP. U. M PRO. PUB. 82(57)-201,824
JP. DES. 630,754
NL. DES. 9,767
US. PAT. 4,424,504
US. DES. 280,810

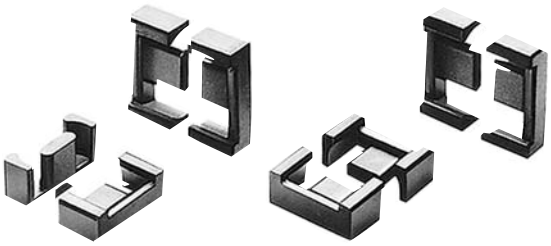


Part No.	Dimensions in mm						
	A	**B**	**øC**	**2D**	**E**	**2H**	**I**
PC44LP23/8Z-12	16.5±0.3	12.5±0.3	5.7±0.1	23.4±0.2	8.7±0.2	17.4±0.2	9.0±0.5
PC44LP22/13Z-12	25.0±0.4	19.0±0.3	8.6±0.2	22.4±0.2	12.9±0.3	16.4±0.3	13.5±0.5
PC44LP32/13Z-12	25.0±0.4	19.0±0.3	8.6±0.2	31.8±0.2	12.9±0.3	24.1±0.3	13.5±0.5

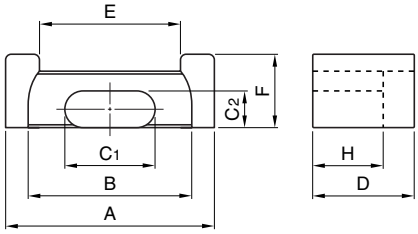
Part No.	Effective parameter				Electrical characteristics			
					AL-value (nH/N²)*		**Core loss (W) max.**	**Weight (g)**
	C1 (mm⁻¹)	**Ae (mm²)**	**ℓe (mm)**	**Ve (mm³)**	**Without air gap**	**With air gap**	**100kHz, 200mT, 100°C**	
PC44LP23/8Z-12	1.41	31.3	44.1	1380	1600±25%	63±5% 100±7% 250±13%	0.42	9.6
PC44LP22/13Z-12	0.721	67.9	49.0	3330	3310±25%	100±5% 200±7% 400±10%	1.05	21
PC44LP32/13Z-12	0.909	70.3	64.0	4500	2630±25%	100±5% 200±7% 400±10%	1.38	30

* AL-value: 1kHz, 0.5mA, 100Ts

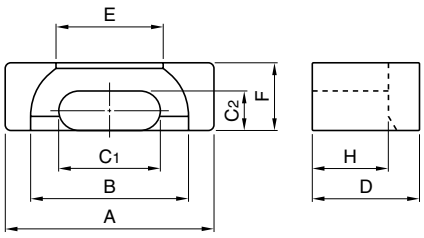
EPC CORES



US. PAT. 4,760,366
EP. PAT. 245,083(DE, FR, GB, NL)
KS. UM 50,836
TW. UM 39,406
JP. PENDING



Type 1



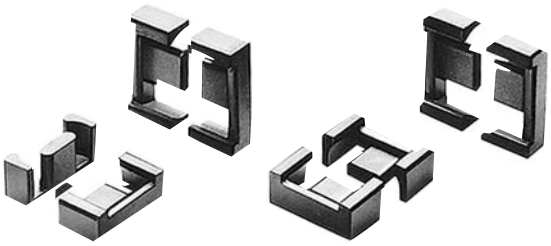
Type 2

Part No.	Type	Dimensions in mm							
		A	B min.	C_1	C_2	D	E min.	F	H
PC44EPC10-Z PC90EPC10-Z PC95EPC10-Z	2	10.2±0.2	7.6	5.0±0.1	1.9±0.1	4.05±0.10	5.3	3.4±0.1	2.65±0.10
PC44EPC13-Z PC90EPC13-Z PC95EPC13-Z	1	13.25±0.3	10.5	5.60±0.15	2.05±0.10	6.6±0.2	8.3	4.60±0.15	4.5±0.2
PC44EPC17-Z PC90EPC17-Z PC95EPC17-Z	1	17.6±0.4	14.3	7.70±0.15	2.8±0.1	8.55±0.20	11.5	6.00±0.15	6.05±0.20
PC44EPC19-Z PC90EPC19-Z PC95EPC19-Z	1	19.1±0.4	15.8	8.50±0.15	2.5±0.1	9.75±0.20	13.1	6.00±0.15	7.25±0.20

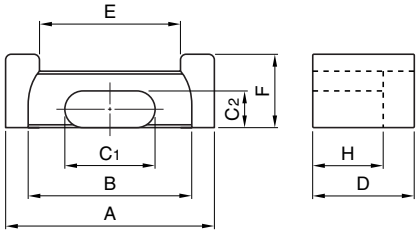
Part No.	Effective parameter				Electrical characteristics			Weight (g)
	C_1 (mm^{-1})	Ae (mm^2)	ℓe (mm)	Ve (mm^3)	A_L-value (nH/N^2)*		Core loss (W) max.	
					Without air gap	With air gap	100kHz, 200mT, 100°C	
PC44EPC10-Z PC90EPC10-Z PC95EPC10-Z	1.89	9.39	17.8	167	1000±25% 900±25% 1040±25%	40±7% 63±10%	0.072 0.090 0.100/0.080/0.100**	1.1
PC44EPC13-Z PC90EPC13-Z PC95EPC13-Z	2.45	12.5	30.6	382	870±25% 800±25% 1060±25%	40±4% 63±5%	0.14 0.17 0.17/0.15/0.17**	2.1
PC44EPC17-Z PC90EPC17-Z PC95EPC17-Z	1.76	22.8	40.2	917	1150±25% 1100±25% 1500±25%	80±4% 125±5%	0.35 0.45 0.45/0.35/0.45**	4.5
PC44EPC19-Z PC90EPC19-Z PC95EPC19-Z	2.03	22.7	46.1	1050	940±25% 940±25% 1400±25%	80±4% 125±5%	0.4 0.5 0.5/0.4/0.5**	5.3

* A_L-value: 1kHz, 0.5mA, 100Ts
** Core loss: 100kHz, 200mT, 25°C/80°C/120°C

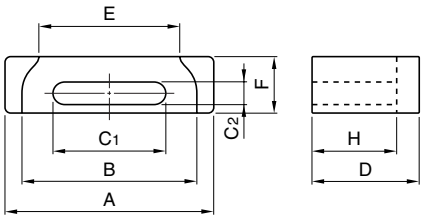
EPC CORES



US. PAT. 4,760,366
EP. PAT. 245,083(DE, FR, GB, NL)
KS. UM 50,836
TW. UM 39,406
JP. PENDING



Type 1



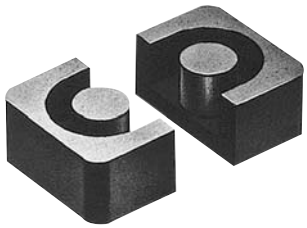
Type 2

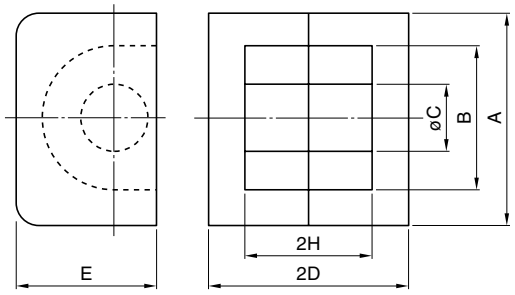
Part No.	Type	Dimensions in mm							
		A	B min.	C_1	C_2	D	E min.	F	H
PC44EPC25-Z **PC90EPC25-Z** **PC95EPC25-Z**	1	25.1±0.5	20.65	11.5±0.2	4.0±0.1	12.5±0.2	17.1	8.0±0.2	9.0±0.3
PC44EPC25B-Z **PC90EPC25B-Z** **PC95EPC25B-Z**	2	25.1±0.5	20.4	13.8±0.2	2.50±0.15	11.43±0.15	16.5	6.5±0.2	8.78±0.15
PC44EPC27-Z **PC90EPC27-Z** **PC95EPC27-Z**	1	27.1±0.5	21.6	13.0±0.3	4.0±0.1	16.0±0.2	18.5	8.0±0.2	12.0±0.3
PC44EPC30-Z **PC90EPC30-Z** **PC95EPC30-Z**	1	30.1±0.5	23.6	15.0±0.3	4.0±0.1	17.5±0.2	20.0	8.0±0.2	13.0±0.3

Part No.	Effective parameter				Electrical characteristics			Weight (g)
	C_1 (mm^{-1})	Ae (mm^2)	ℓe (mm)	Ve (mm^3)	A_L-value (nH/N^2)*		Core loss (W) max.	
					Without air gap	With air gap	100kHz, 200mT, 100°C	
PC44EPC25-Z **PC90EPC25-Z** **PC95EPC25-Z**	1.40	40.4	56.3	2280	1560±25% 1400±25% 2200±25%	125±5% 200±7%	1.11 1.4 1.4/1.2/1.4**	13
PC44EPC25B-Z **PC90EPC25B-Z** **PC95EPC25B-Z**	1.39	33.3	46.2	1540	1560±25% 1400±25% 2200±25%	80±5% 125±7%	0.65 0.8 0.8/0.65/0.8**	11
PC44EPC27-Z **PC90EPC27-Z** **PC95EPC27-Z**	1.43	48.6	69.4	3370	1540±25% 1400±25% 2200±25%	125±5% 200±7%	1.56 2.0 2.0/1.7/2.0**	18
PC44EPC30-Z **PC90EPC30-Z** **PC95EPC30-Z**	1.35	55.6	75.3	4190	1570±25% 1700±25% 2300±25%	125±5% 200±7%	2.03 2.5 2.3/2.0/2.3**	23

* A_L-value: 1kHz, 0.5mA, 100Ts
** Core loss: 100kHz, 200mT, 25°C/80°C/120°C

EP CORES



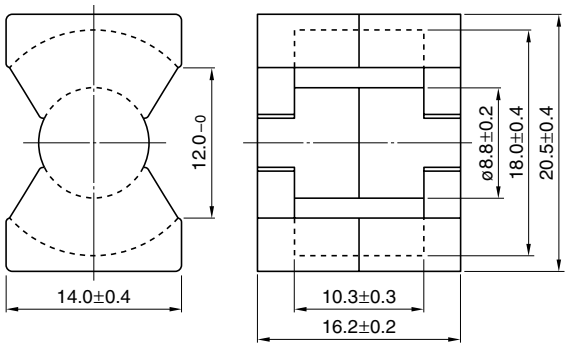


Part No.	Dimensions in mm					
	A	**B**	**øC**	**2D**	**E**	**2H**
PC40EP7-Z	9.2±0.2	7.4±0.2	3.3±0.1	7.4±0.1	6.35±0.15	5.2±0.2
PC40EP10-Z	11.5±0.3	9.4±0.2	3.3±0.15	10.2±0.2	7.65±0.2	7.4±0.2
PC40EP13-Z	12.5±0.3	10.0±0.3	4.35±0.15	12.85±0.15	8.8±0.2	9.2±0.2
PC40EP17-Z	18.0±0.4	12.0±0.4	5.68±0.18	16.8±0.2	11.0±0.25	11.3±0.3
PC40EP20-Z	24.0±0.5	16.5±0.4	8.75±0.25	21.4±0.2	14.95±0.35	14.3±0.3

Part No.	Effective parameter				Electrical characteristics			Weight (g)
	C_1 (mm^{-1})	**Ae (mm^2)**	**ℓe (mm)**	**Ve (mm^3)**	**A_L-value (nH/N^2)***		**Core loss (W) max.**	
					Without air gap	**With air gap**	**100kHz, 200mT, 100°C**	
PC40EP7-Z	1.52	10.3	15.7	162	830 min.	63±3% 100±4%	0.065	1.4
PC40EP10-Z	1.70	11.3	19.2	217	800 min. 800±25%	63±3% 100±4%	0.08	2.8
PC40EP13-Z	1.24	19.5	24.2	472	1170 min. 1100±25%	100±3% 160±3%	0.17	5.1
PC40EP17-Z	0.84	33.9	28.5	966	1840 min.	100±5% 250±7%	0.33	12
PC40EP20-Z	0.508	78	39.8	3120	3200 min.	100±5% 250±7%	1.1	28

* A_L-value: 1kHz, 0.5mA, 100Ts

PQ Series PQ20/16 Cores



Dimensions in mm

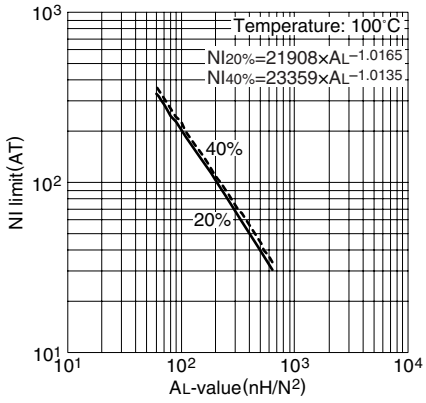
PARAMETER

Core factor	C1	mm^{-1}	0.605
Effective magnetic path length	ℓe	mm	37.4
Effective cross-sectional area	Ae	mm^2	62
Effective core volume	Ve	mm^3	2310
Cross-sectional center pole area	Acp	mm^2	60.8
Minimum cross-sectional center pole area	Acp min.	mm^2	58.1
Cross-sectional winding area of core	Acw	mm^2	47.4
Weight (approx.)		g	13

Part No.	AL-value (nH/N^2)*	Core loss (W) max. 100kHz, 200mT	Calculated output power (forward converter mode)
PC44PQ20/16Z-12	3880±25% (1kHz, 0.5mA)	0.84(100°C)	70W (100kHz)
PC90PQ20/16Z-12	3100±25% (1kHz, 0.5mA)	1.10(100°C)	70W
PC95PQ20/16Z-12	4480±25% (1kHz, 0.5mA)	1.14/0.96/1.14(25°C/80°C/120°C)	74W

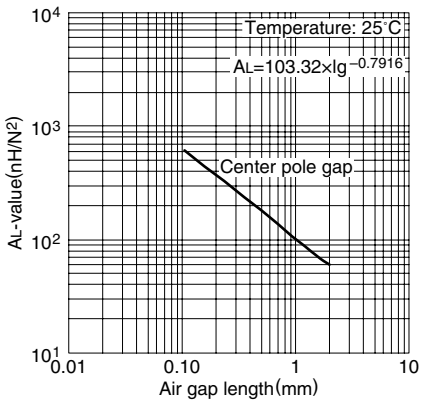
* Coil: ø0.35 2UEW 100Ts

NI limit vs. AL-value for PC44PQ20/16 gapped core (Typical)



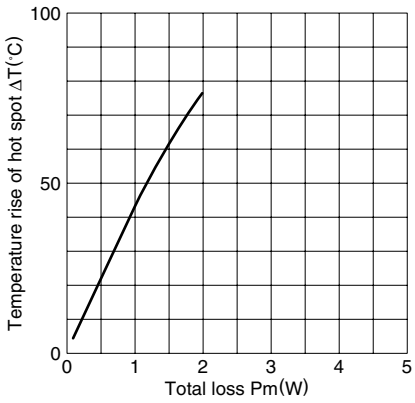
Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

AL-value vs. Air gap length for PC44PQ20/16 core (Typical)

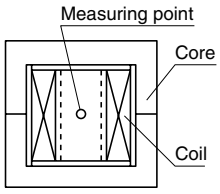


Measuring conditions
- Coil: ø0.35 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

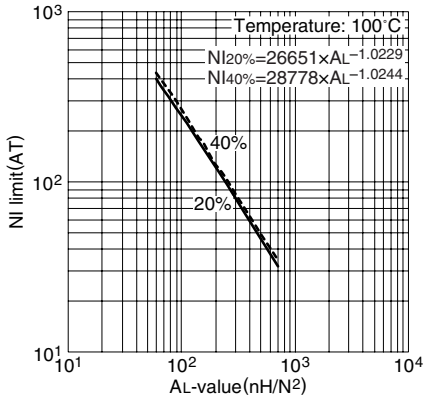
Temperature rise vs. Total loss for PQ20/16 core (Typical) (Ambient temperature: 25°C)



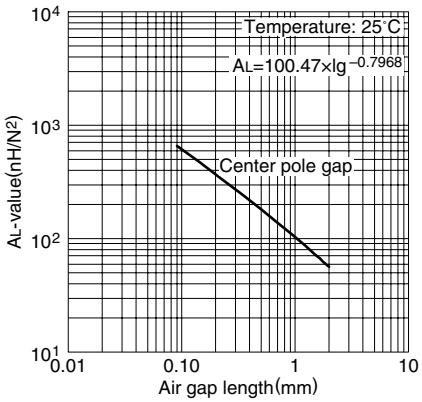
Note: The temperature rise is measured in the room whose temperature and humidity are fixed to 25°C and 45(%)RH. respectively. (approx. 400×300×300cm)



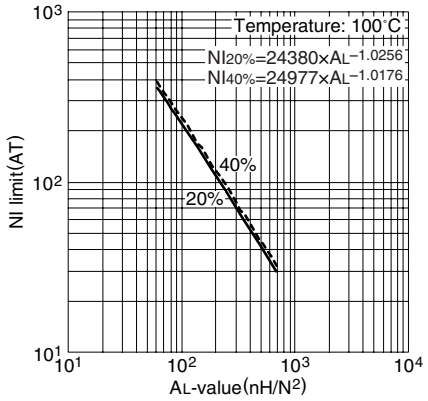
NI limit vs. AL-value for PC90PQ20/16 gapped core (Typical)



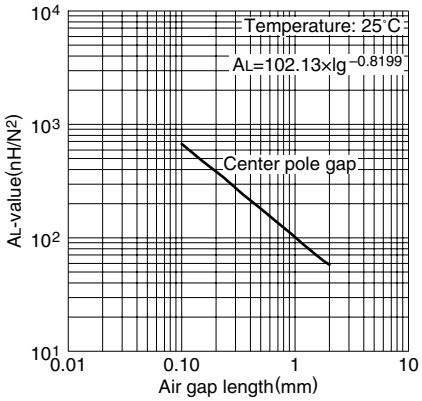
AL-value vs. Air gap length for PC90PQ20/16 core (Typical)



NI limit vs. AL-value for PC95PQ20/16 gapped core (Typical)



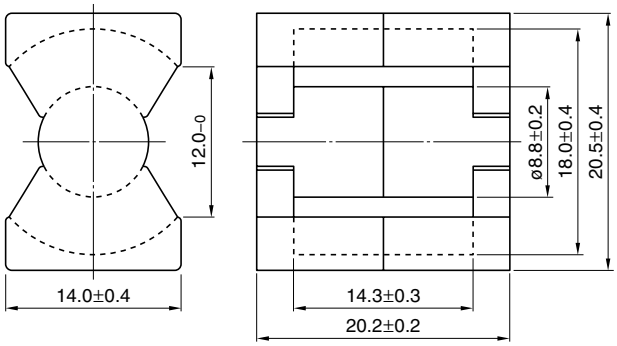
AL-value vs. Air gap length for PC95PQ20/16 core (Typical)



Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

Measuring conditions
- Coil: ø0.35 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

PQ Series PQ20/20 Cores



Dimensions in mm

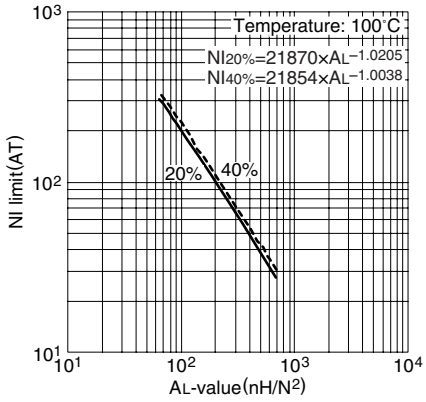
PARAMETER

Core factor	C1	mm^{-1}	0.738
Effective magnetic path length	ℓe	mm	45.4
Effective cross-sectional area	Ae	mm^2	62
Effective core volume	Ve	mm^3	2790
Cross-sectional center pole area	Acp	mm^2	60.8
Minimum cross-sectional center pole area	Acp min.	mm^2	58.1
Cross-sectional winding area of core	Acw	mm^2	65.8
Weight (approx.)		g	15

Part No.	AL-value (nH/N^2)*	Core loss (W) max. 100kHz, 200mT	Calculated output power (forward converter mode)
PC44PQ20/20Z-12	3150±25% (1kHz, 0.5mA)	1.02(100°C)	92W (100kHz)
PC90PQ20/20Z-12	2700±25% (1kHz, 0.5mA)	1.35(100°C)	92W
PC95PQ20/20Z-12	4000±25% (1kHz, 0.5mA)	1.38/1.16/1.38(25°C/80°C/120°C)	96W

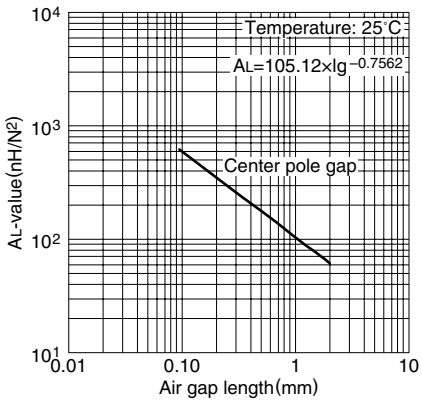
* Coil: ø0.35 2UEW 100Ts

NI limit vs. AL-value for PC44PQ20/20 gapped core (Typical)



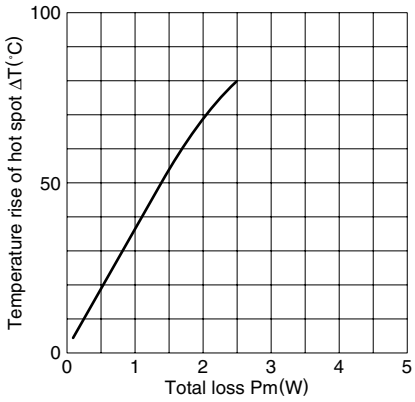
Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

AL-value vs. Air gap length for PC44PQ20/20 core (Typical)

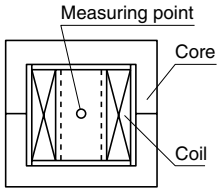


Measuring conditions
- Coil: ø0.35 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

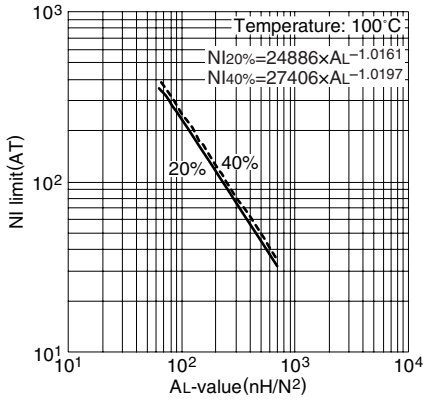
Temperature rise vs. Total loss for PQ20/20 core (Typical) (Ambient temperature: 25°C)



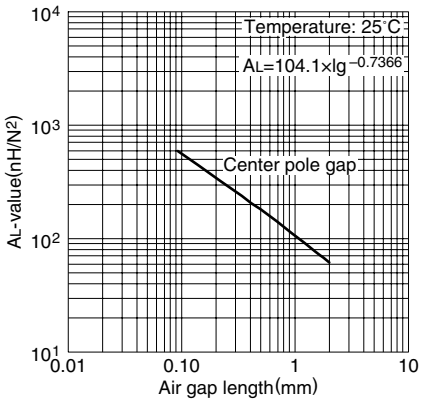
Note: The temperature rise is measured in the room whose temperature and humidity are fixed to 25°C and 45(%)RH. respectively. (approx. 400×300×300cm)



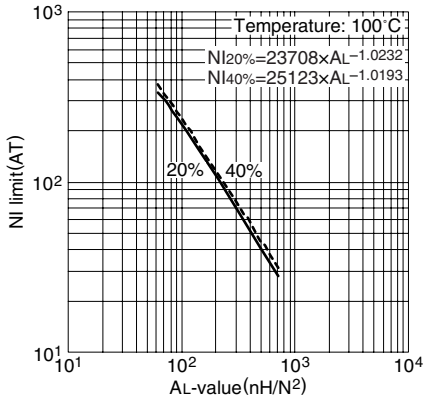
NI limit vs. AL-value for PC90PQ20/20 gapped core (Typical)



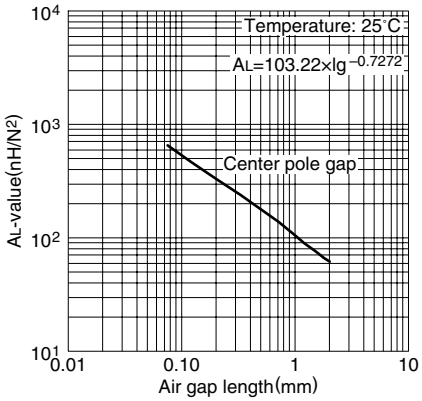
AL-value vs. Air gap length for PC90PQ20/20 core (Typical)



NI limit vs. AL-value for PC95PQ20/20 gapped core (Typical)



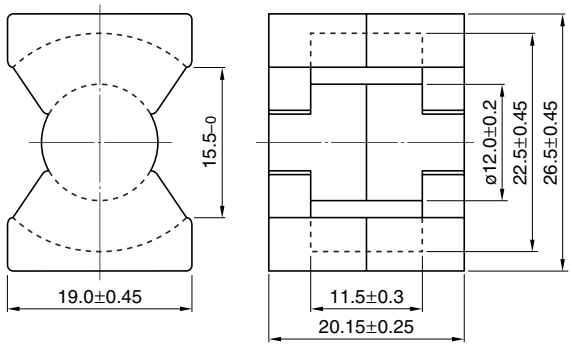
AL-value vs. Air gap length for PC95PQ20/20 core (Typical)



Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

Measuring conditions
- Coil: ø0.35 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

PQ Series PQ26/20 Cores



Dimensions in mm

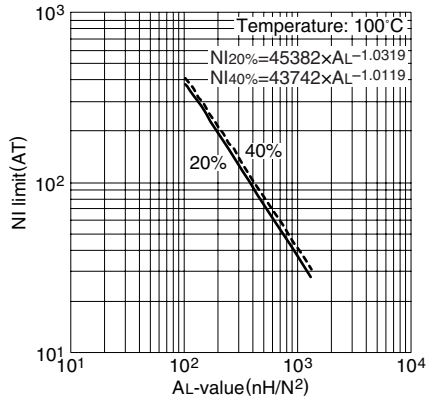
PARAMETER

Core factor	C1	mm^{-1}	0.391
Effective magnetic path length	ℓe	mm	46.3
Effective cross-sectional area	Ae	mm^2	119
Effective core volume	Ve	mm^3	5490
Cross-sectional center pole area	Acp	mm^2	113
Minimum cross-sectional center pole area	Acp min.	mm^2	109
Cross-sectional winding area of core	Acw	mm^2	60.4
Weight (approx.)		g	31

Part No.	AL-value (nH/N^2)*	Core loss (W) max. 100kHz, 200mT	Calculated output power (forward converter mode)
PC44PQ26/20Z-12	6170±25% (1kHz, 0.5mA)	1.94(100°C)	170W (100kHz)
PC90PQ26/20Z-12	5500±25% (1kHz, 0.5mA)	2.45(100°C)	170W
PC95PQ26/20Z-12	7470±25% (1kHz, 0.5mA)	2.62/2.20/2.62(25°C/80°C/120°C)	179W

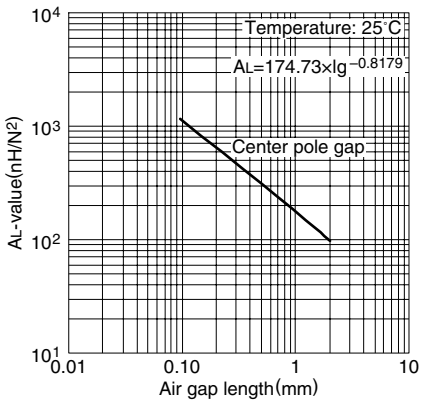
* Coil: ø0.35 2UEW 100Ts

NI limit vs. AL-value for PC44PQ26/20 gapped core (Typical)



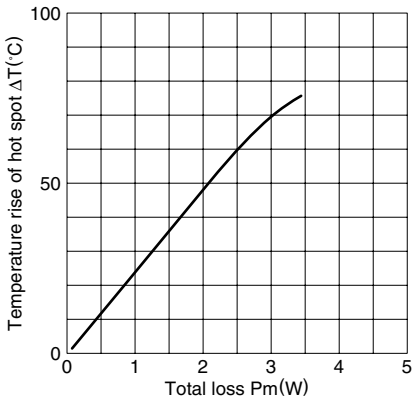
Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

AL-value vs. Air gap length for PC44PQ26/20 core (Typical)

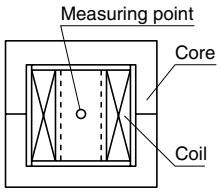


Measuring conditions
- Coil: ø0.35 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

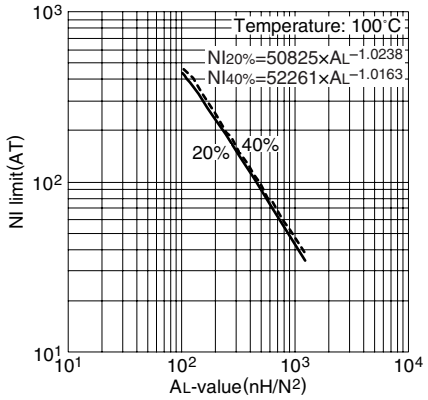
Temperature rise vs. Total loss for PQ26/20 core (Typical) (Ambient temperature: 25°C)



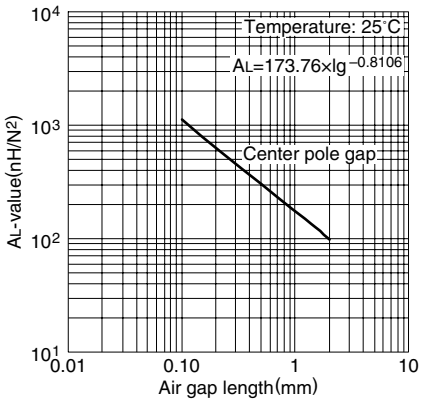
Note: The temperature rise is measured in the room whose temperature and humidity are fixed to 25°C and 45(%)RH. respectively. (approx. 400×300×300cm)



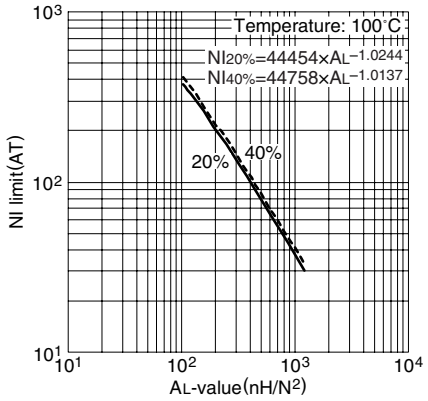
NI limit vs. AL-value for PC90PQ26/20 gapped core (Typical)



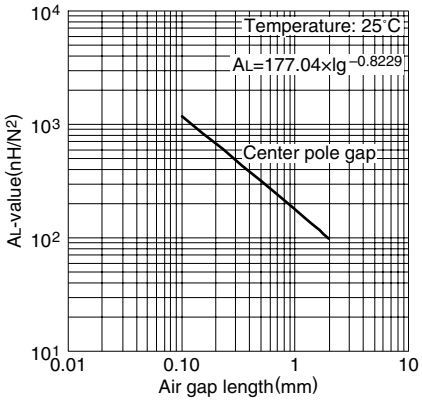
AL-value vs. Air gap length for PC90PQ26/20 core (Typical)



NI limit vs. AL-value for PC95PQ26/20 gapped core (Typical)



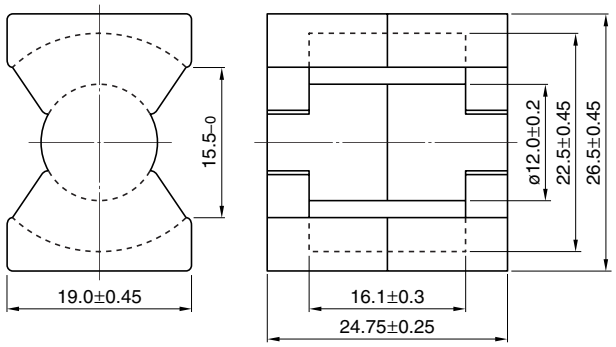
AL-value vs. Air gap length for PC95PQ26/20 core (Typical)



Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

Measuring conditions
- Coil: ø0.35 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

PQ Series PQ26/25 Cores



Dimensions in mm

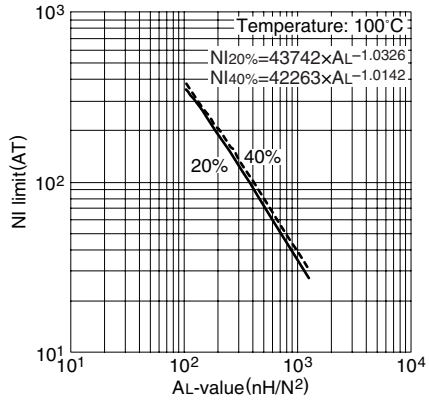
PARAMETER

Core factor	C1	mm^{-1}	0.472
Effective magnetic path length	ℓe	mm	55.5
Effective cross-sectional area	Ae	mm^2	118
Effective core volume	Ve	mm^3	6530
Cross-sectional center pole area	Acp	mm^2	113
Minimum cross-sectional center pole area	Acp min.	mm^2	109
Cross-sectional winding area of core	Acw	mm^2	84.5
Weight (approx.)		g	36

Part No.	AL-value (nH/N^2)*	Core loss (W) max. 100kHz, 200mT	Calculated output power (forward converter mode)
PC44PQ26/25Z-12	5250±25% (1kHz, 0.5mA)	2.32(100°C)	195W (100kHz)
PC90PQ26/25Z-12	4500±25% (1kHz, 0.5mA)	2.9(100°C)	195W
PC95PQ26/25Z-12	6520±25% (1kHz, 0.5mA)	3.14/2.63/3.14(25°C/80°C/120°C)	206W

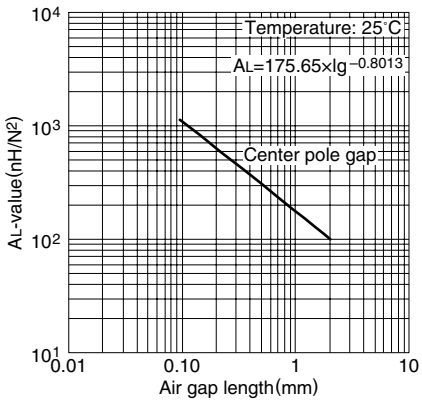
* Coil: ø0.35 2UEW 100Ts

NI limit vs. AL-value for PC44PQ26/25 gapped core (Typical)



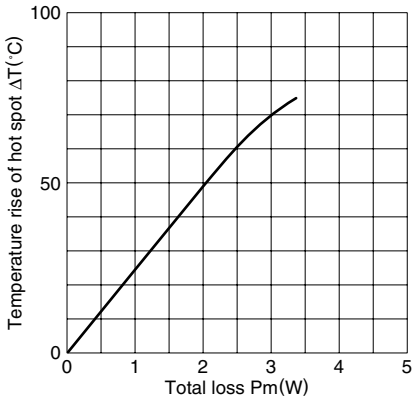
Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

AL-value vs. Air gap length for PC44PQ26/25 core (Typical)

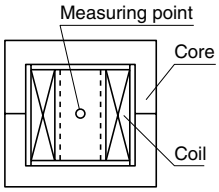


Measuring conditions
- Coil: ø0.35 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

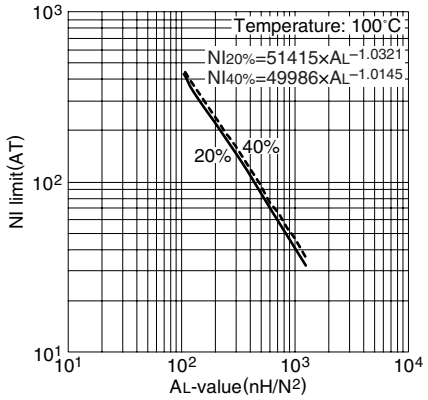
Temperature rise vs. Total loss for PQ26/25 core (Typical) (Ambient temperature: 25°C)



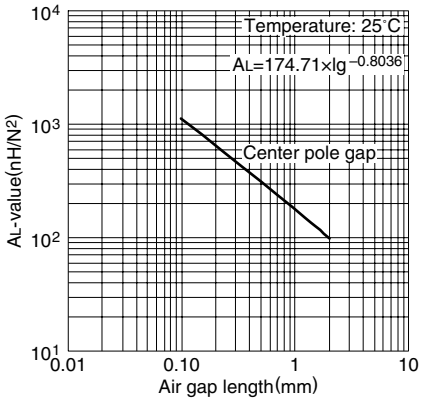
Note: The temperature rise is measured in the room whose temperature and humidity are fixed to 25°C and 45(%)RH. respectively. (approx. 400×300×300cm)



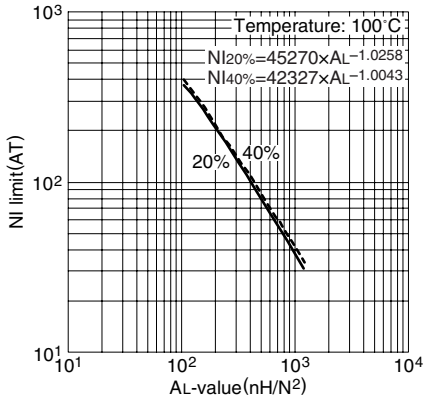
NI limit vs. AL-value for PC90PQ26/25 gapped core (Typical)



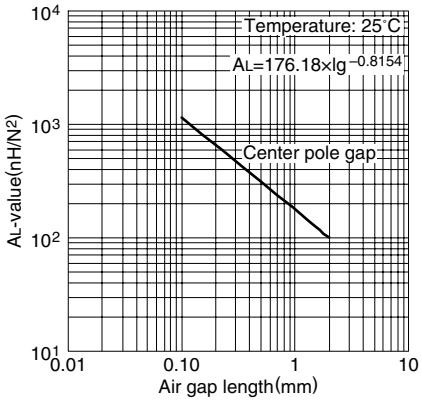
AL-value vs. Air gap length for PC90PQ26/25 core (Typical)



NI limit vs. AL-value for PC95PQ26/25 gapped core (Typical)



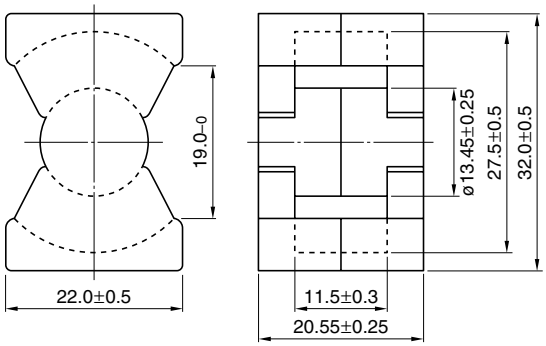
AL-value vs. Air gap length for PC95PQ26/25 core (Typical)



Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

Measuring conditions
- Coil: ø0.35 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

PQ Series PQ32/20 Cores



Dimensions in mm

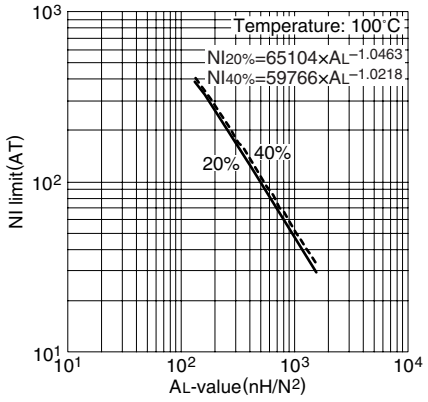
PARAMETER

Core factor	C1	mm^{-1}	0.326
Effective magnetic path length	ℓe	mm	55.5
Effective cross-sectional area	Ae	mm^2	170
Effective core volume	Ve	mm^3	9420
Cross-sectional center pole area	Acp	mm^2	142
Minimum cross-sectional center pole area	Acp min.	mm^2	137
Cross-sectional winding area of core	Acw	mm^2	80.8
Weight (approx.)		g	42

Part No.	AL-value (nH/N^2)*	Core loss (W) max. 100kHz, 200mT	Calculated output power (forward converter mode)
PC44PQ32/20Z-12	7310±25% (1kHz, 0.5mA)	2.92(100°C)	232W (100kHz)
PC90PQ32/20Z-12	6400±25% (1kHz, 0.5mA)	3.7(100°C)	238W
PC95PQ32/20Z-12	9120±25% (1kHz, 0.5mA)	3.94/3.31/3.94(25°C/80°C/120°C)	251W

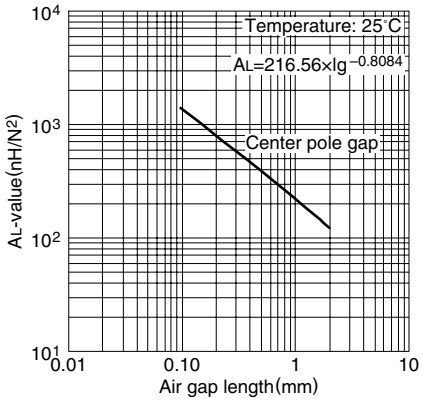
* Coil: ø0.35 2UEW 100Ts

NI limit vs. AL-value for PC44PQ32/20 gapped core (Typical)



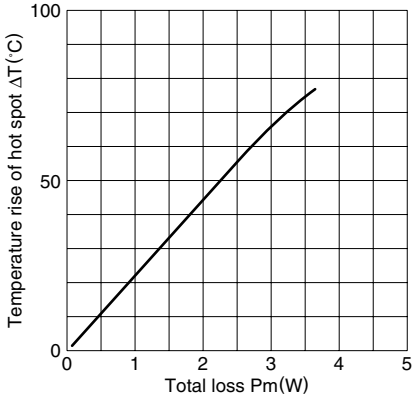
Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

AL-value vs. Air gap length for PC44PQ32/20 core (Typical)

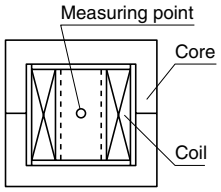


Measuring conditions
- Coil: ø0.35 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

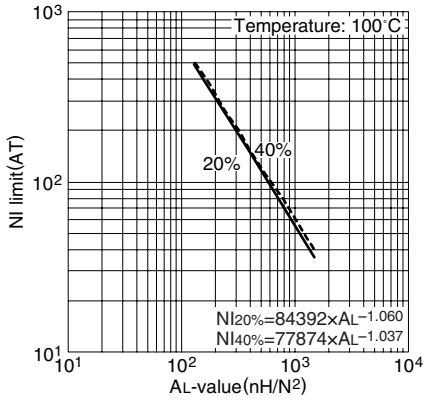
Temperature rise vs. Total loss for PQ32/20 core (Typical) (Ambient temperature: 25°C)



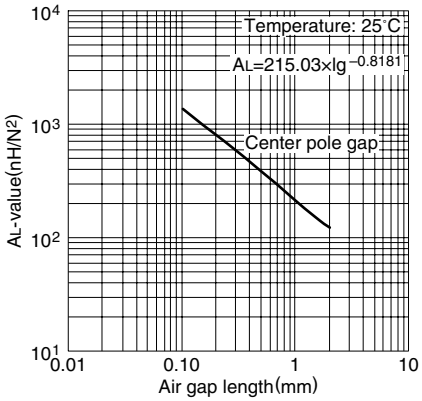
Note: The temperature rise is measured in the room whose temperature and humidity are fixed to 25°C and 45(%)RH. respectively. (approx. 400×300×300cm)



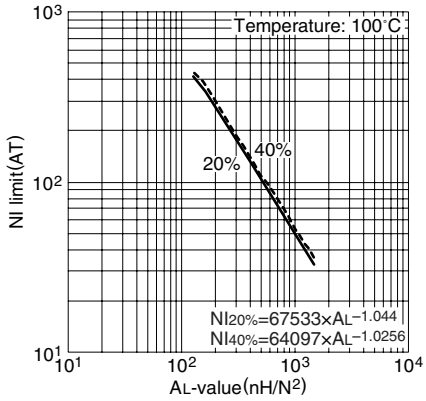
NI limit vs. AL-value for PC90PQ32/20 gapped core (Typical)



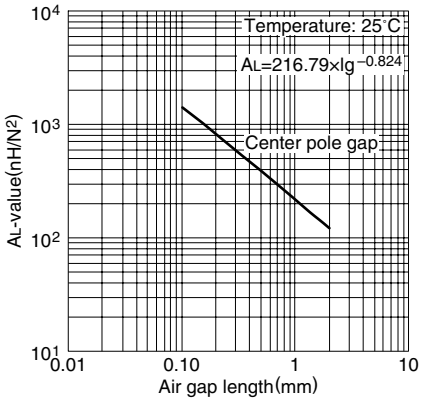
AL-value vs. Air gap length for PC90PQ32/20 core (Typical)



NI limit vs. AL-value for PC95PQ32/20 gapped core (Typical)



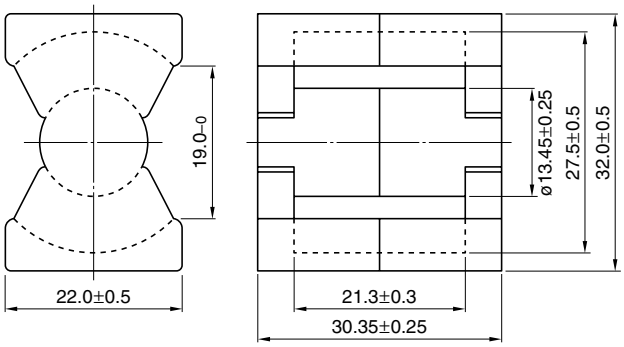
AL-value vs. Air gap length for PC95PQ32/20 core (Typical)



Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

Measuring conditions
- Coil: ø0.35 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

PQ Series PQ32/30 Cores



Dimensions in mm

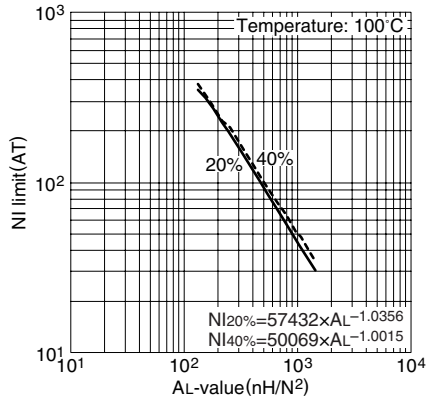
PARAMETER

Core factor	C1	mm^{-1}	0.464
Effective magnetic path length	ℓe	mm	74.6
Effective cross-sectional area	Ae	mm^2	161
Effective core volume	Ve	mm^3	12000
Cross-sectional center pole area	Acp	mm^2	142
Minimum cross-sectional center pole area	Acp min.	mm^2	137
Cross-sectional winding area of core	Acw	mm^2	149.6
Weight (approx.)		g	55

Part No.	AL-value (nH/N2)*	Core loss (W) max. 100kHz, 200mT	Calculated output power (forward converter mode)
PC44PQ32/30Z-12	5140±25% (1kHz, 0.5mA)	3.92(100°C)	331W (100kHz)
PC90PQ32/30Z-12	4900±25% (1kHz, 0.5mA)	4.90(100°C)	348W
PC95PQ32/30Z-12	7000±25% (1kHz, 0.5mA)	5.30/4.45/5.30(25°C/80°C/120°C)	365W

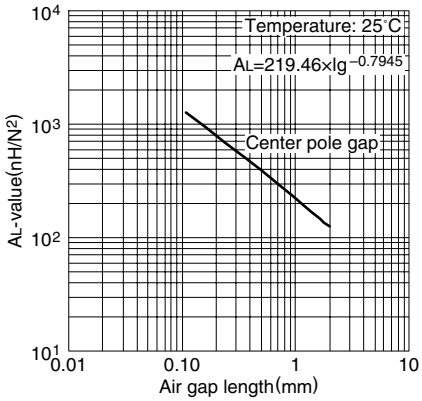
* Coil: ø0.4 2UEW 100Ts

NI limit vs. AL-value for PC44PQ32/30 gapped core (Typical)



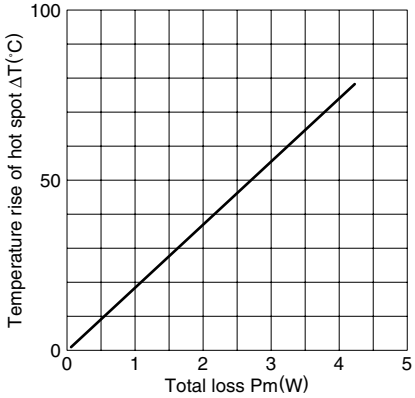
Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

AL-value vs. Air gap length for PC44PQ32/30 core (Typical)

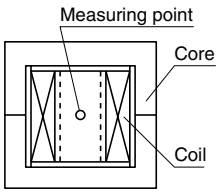


Measuring conditions
- Coil: ø0.4 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

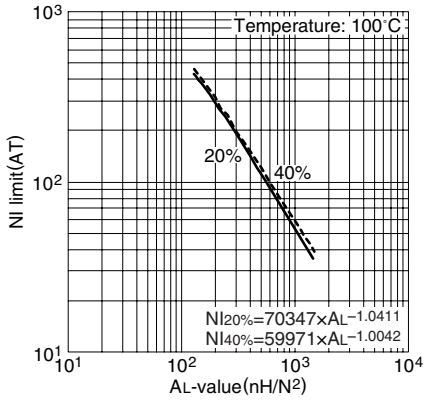
Temperature rise vs. Total loss for PQ32/30 core (Typical) (Ambient temperature: 25°C)



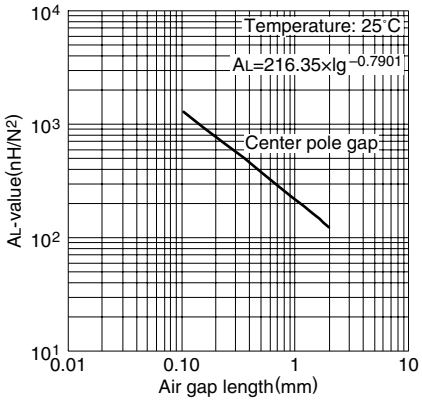
Note: The temperature rise is measured in the room whose temperature and humidity are fixed to 25°C and 45(%)RH. respectively. (approx. 400×300×300cm)



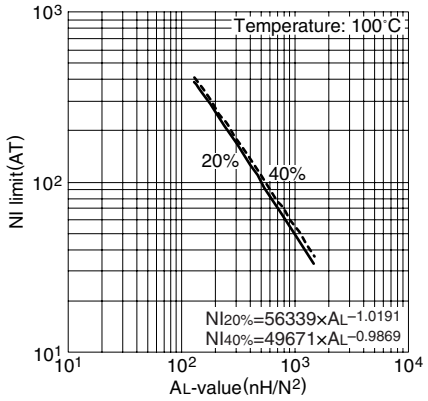
NI limit vs. AL-value for PC90PQ32/30 gapped core (Typical)



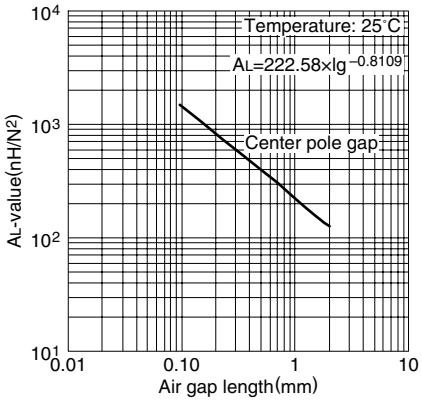
AL-value vs. Air gap length for PC90PQ32/30 core (Typical)



NI limit vs. AL-value for PC95PQ32/30 gapped core (Typical)



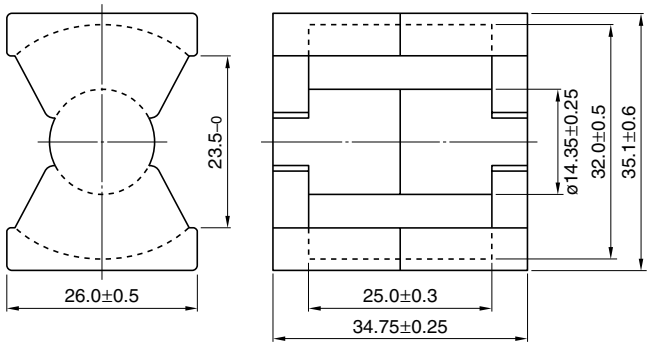
AL-value vs. Air gap length for PC95PQ32/30 core (Typical)



Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

Measuring conditions
- Coil: ø0.4 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

PQ Series PQ35/35 Cores



Dimensions in mm

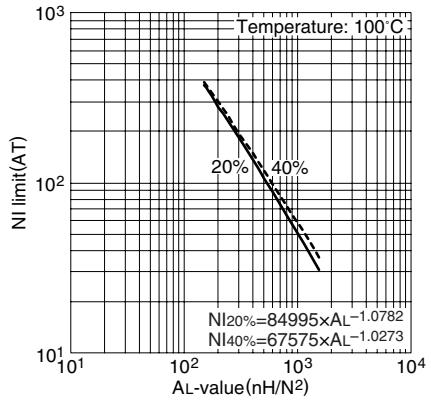
PARAMETER

Core factor	C1	mm^{-1}	0.448
Effective magnetic path length	ℓe	mm	87.9
Effective cross-sectional area	Ae	mm^2	196
Effective core volume	Ve	mm^3	17300
Cross-sectional center pole area	Acp	mm^2	162
Minimum cross-sectional center pole area	Acp min.	mm^2	156
Cross-sectional winding area of core	Acw	mm^2	220.6
Weight (approx.)		g	73

Part No.	AL-value (nH/N^2)*	Core loss (W) max. 100kHz, 200mT	Calculated output power (forward converter mode)
PC44PQ35/35Z-12	4860±25% (1kHz, 0.5mA)	5.27(100°C)	452W (100kHz)
PC90PQ35/35Z-12	4700±25% (1kHz, 0.5mA)	6.6(100°C)	475W
PC95PQ35/35Z-12	7320±25% (1kHz, 0.5mA)	7.12/5.98/7.12(25°C/80°C/120°C)	500W

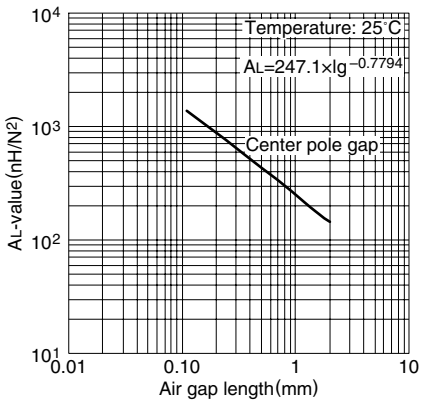
* Coil: ø0.4 2UEW 100Ts

NI limit vs. AL-value for PC44PQ35/35 gapped core (Typical)



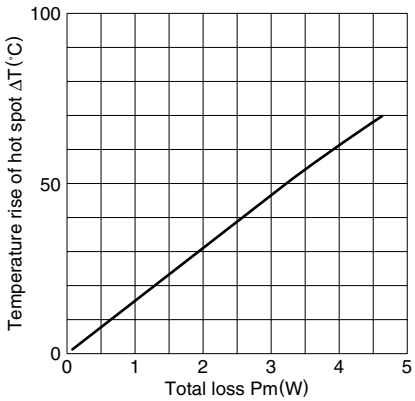
Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

AL-value vs. Air gap length for PC44PQ35/35 core (Typical)

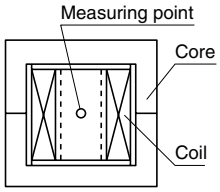


Measuring conditions
- Coil: ø0.4 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

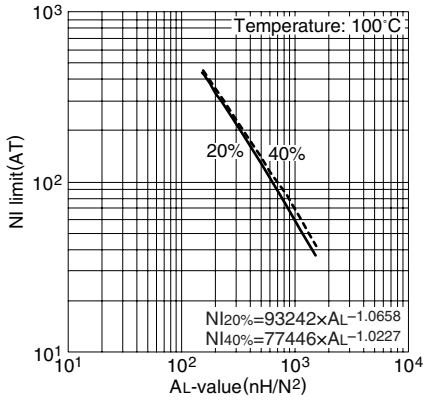
Temperature rise vs. Total loss for PQ35/35 core (Typical) (Ambient temperature: 25°C)



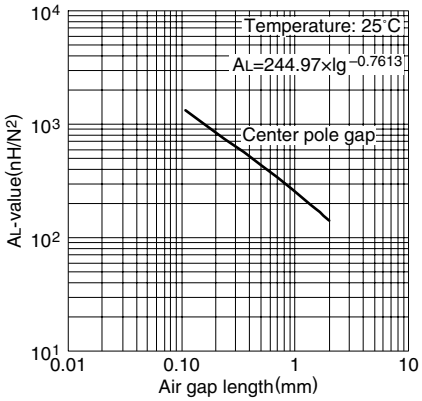
Note: The temperature rise is measured in the room whose temperature and humidity are fixed to 25°C and 45(%)RH. respectively. (approx. 400×300×300cm)



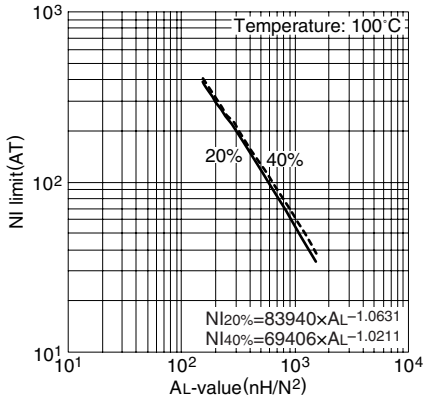
NI limit vs. AL-value for PC90PQ35/35 gapped core (Typical)



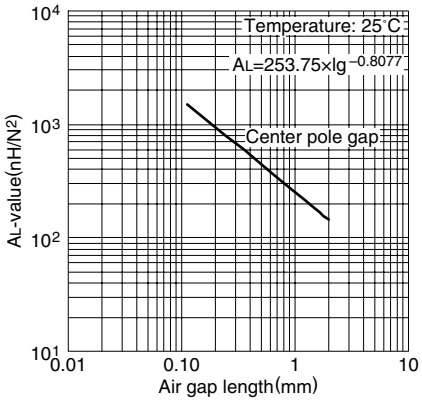
AL-value vs. Air gap length for PC90PQ35/35 core (Typical)



NI limit vs. AL-value for PC95PQ35/35 gapped core (Typical)



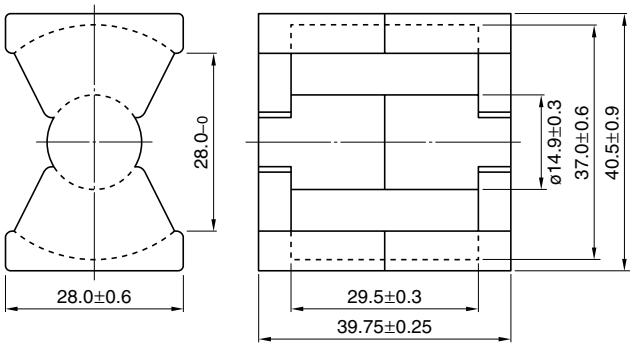
AL-value vs. Air gap length for PC95PQ35/35 core (Typical)



Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

Measuring conditions
- Coil: ø0.4 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

PQ Series PQ40/40 Cores



Dimensions in mm

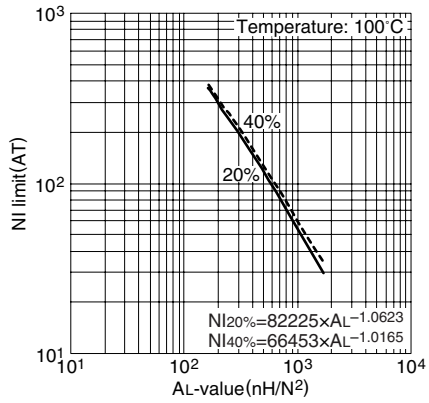
PARAMETER

Core factor	C_1	mm^{-1}	0.508
Effective magnetic path length	ℓe	mm	102
Effective cross-sectional area	Ae	mm^2	201
Effective core volume	Ve	mm^3	20500
Cross-sectional center pole area	Acp	mm^2	174
Minimum cross-sectional center pole area	Acp min.	mm^2	167
Cross-sectional winding area of core	Acw	mm^2	326
Weight (approx.)		g	95

Part No.	A_L-value (nH/N^2)*	Core loss (W) max. 100kHz, 200mT	Calculated output power (forward converter mode)
PC44PQ40/40Z-12	4300±25% (1kHz, 0.5mA)	6.56(100°C)	596W (100kHz)
PC90PQ40/40Z-12	4300±25% (1kHz, 0.5mA)	8.2(100°C)	626W
PC95PQ40/40Z-12	6400±25% (1kHz, 0.5mA)	8.87/7.45/8.87(25°C/80°C/120°C)	650W

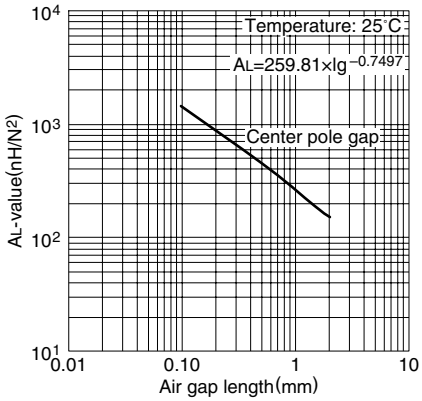
* Coil: ø0.4 2UEW 100Ts

NI limit vs. A_L-value for PC44PQ40/40 gapped core (Typical)



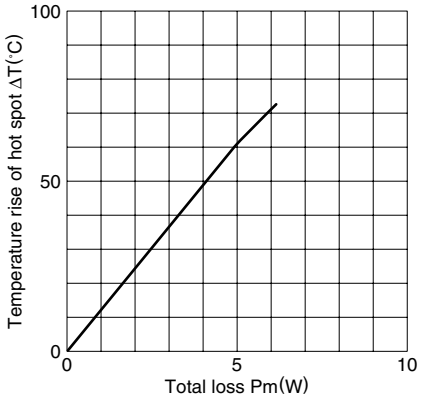
Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

A_L-value vs. Air gap length for PC44PQ40/40 core (Typical)

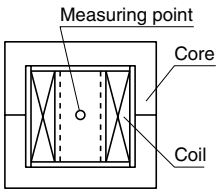


Measuring conditions
- Coil: ø0.4 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

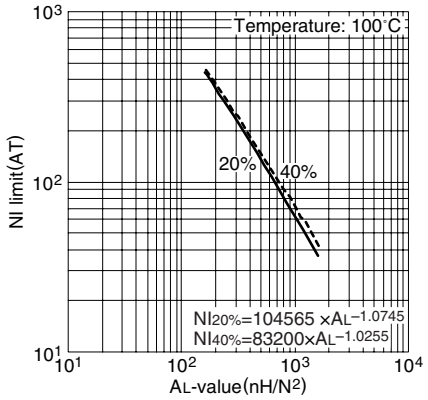
Temperature rise vs. Total loss for PQ40/40 core (Typical)



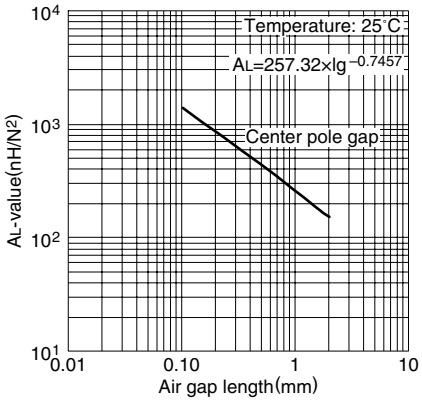
Note: The temperature rise is measured in the room whose temperature and humidity are fixed to 25°C and 45(%)RH. respectively. (approx. 400×300×300cm)



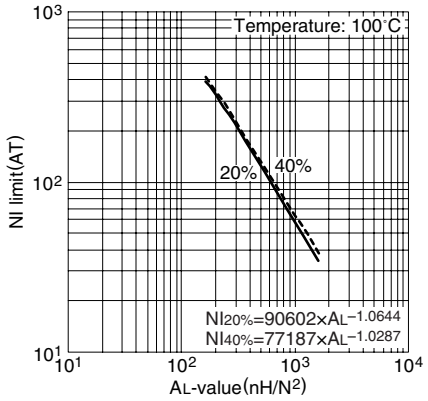
NI limit vs. AL-value for PC90PQ40/40 gapped core (Typical)



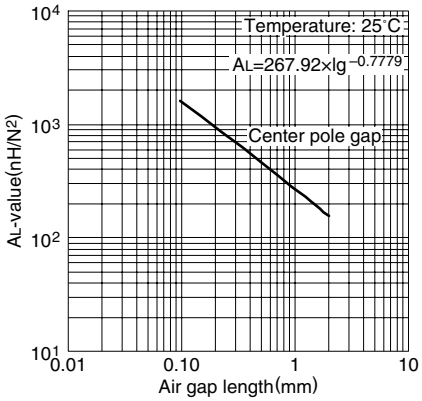
AL-value vs. Air gap length for PC90PQ40/40 core (Typical)



NI limit vs. AL-value for PC95PQ40/40 gapped core (Typical)



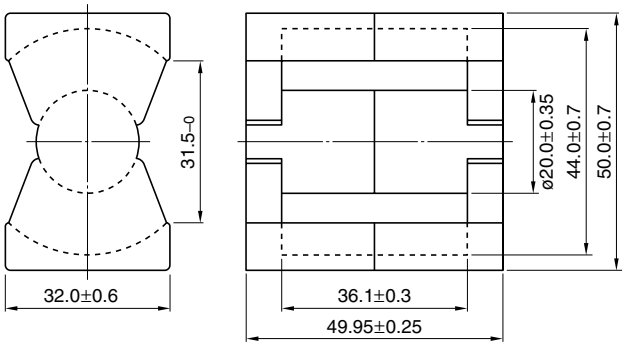
AL-value vs. Air gap length for PC95PQ40/40 core (Typical)



Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

Measuring conditions
- Coil: ø0.4 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

PQ Series PQ50/50 Cores



Dimensions in mm

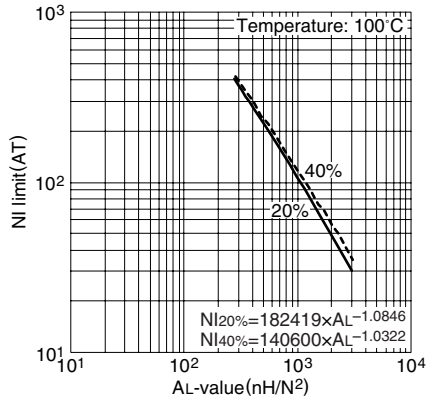
PARAMETER

Core factor	C1	mm^{-1}	0.346
Effective magnetic path length	ℓe	mm	113
Effective cross-sectional area	Ae	mm^2	328
Effective core volume	Ve	mm^3	37200
Cross-sectional center pole area	Acp	mm^2	314
Minimum cross-sectional center pole area	Acp min.	mm^2	303
Cross-sectional winding area of core	Acw	mm^2	433
Weight (approx.)		g	195

Part No.	AL-value (nH/N^2)*	Core loss (W) max. 100kHz, 200mT	Calculated output power (forward converter mode)
PC44PQ50/50Z-12	6720±25% (1kHz, 0.5mA)	6.1(100°C)	1045W (100kHz)
PC90PQ50/50Z-12	6250±25% (1kHz, 0.5mA)	8.4(100°C)	1300W
PC95PQ50/50Z-12	9700±25% (1kHz, 0.5mA)	9.00/7.50/9.00(25°C/80°C/120°C)	1200W

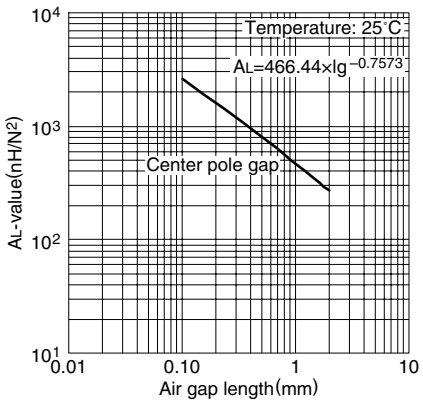
* Coil: ø0.4 2UEW 100Ts

NI limit vs. AL-value for PC44PQ50/50 gapped core (Typical)



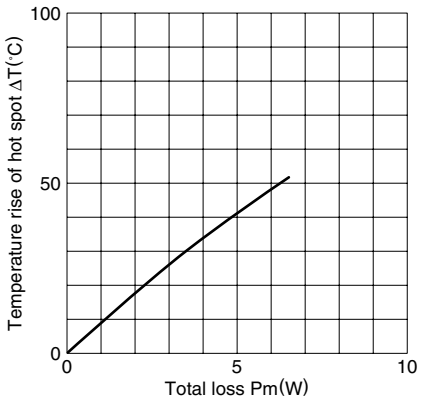
Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

AL-value vs. Air gap length for PC44PQ50/50 core (Typical)

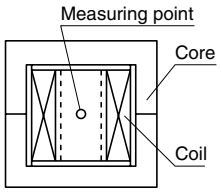


Measuring conditions
- Coil: ø0.4 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

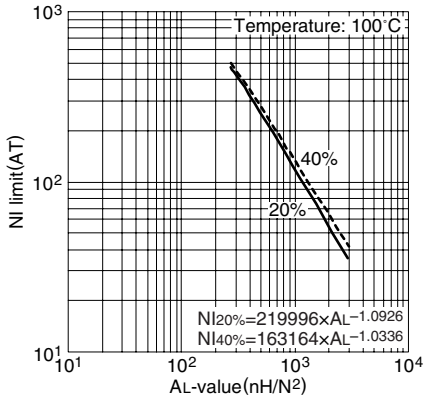
Temperature rise vs. Total loss for PQ50/50 core (Typical) (Ambient temperature: 25°C)



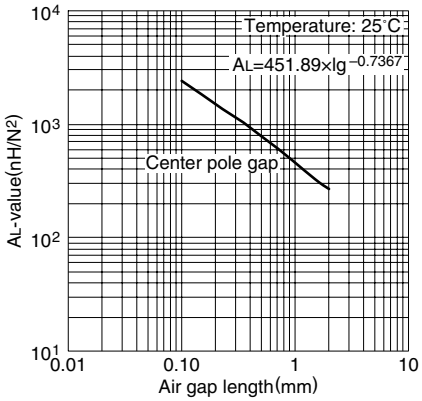
Note: The temperature rise is measured in the room whose temperature and humidity are fixed to 25°C and 45(%)RH. respectively. (approx. 400×300×300cm)



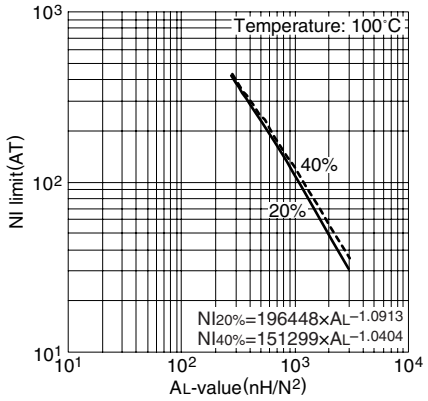
NI limit vs. AL-value for PC90PQ50/50 gapped core (Typical)



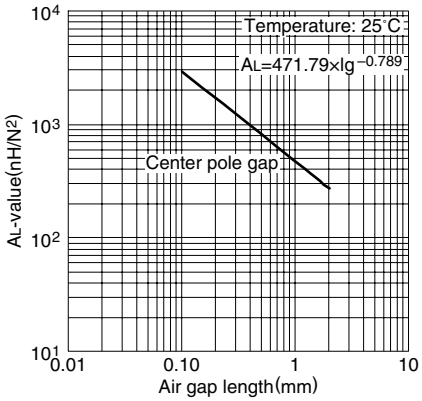
AL-value vs. Air gap length for PC90PQ50/50 core (Typical)



NI limit vs. AL-value for PC95PQ50/50 gapped core (Typical)



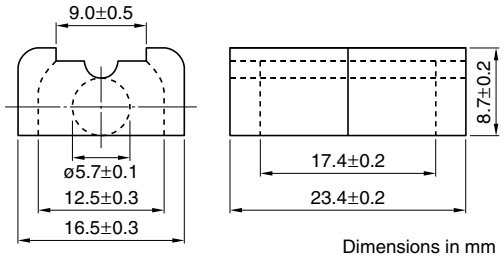
AL-value vs. Air gap length for PC95PQ50/50 core (Typical)



Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

Measuring conditions
- Coil: ø0.4 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

LP Series LP23/8 Cores



Dimensions in mm

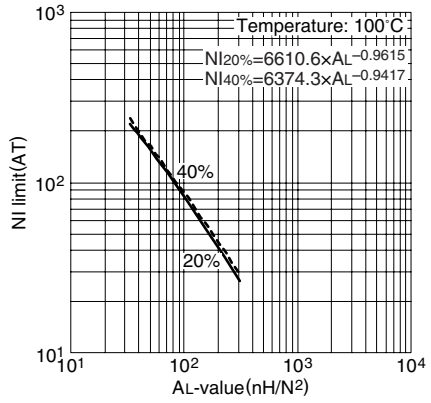
PARAMETER

Core factor	C1	mm^{-1}	1.41
Effective magnetic path length	ℓe	mm	44.1
Effective cross-sectional area	Ae	mm^2	31.3
Effective core volume	Ve	mm^3	1380
Cross-sectional center pole area	Acp	mm^2	25.5
Minimum cross-sectional center pole area	Acp min.	mm^2	24.6
Cross-sectional winding area of core	Acw	mm^2	59.2
Weight (approx.)		g	9.6

Part No.	AL-value (nH/N2)	Core loss (W) at 100°C 100kHz, 200mT	Calculated output power (forward converter mode)
PC44LP23/8Z-12	1600±25% (1kHz, 0.5mA)* 2230 min. (100kHz, 200mT)	0.42 max.	50W (100kHz)

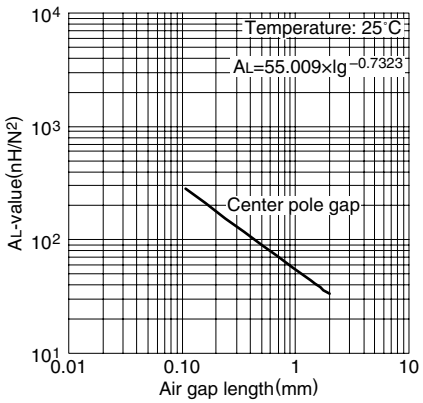
* Coil: ø0.3 2UEW 100Ts

NI limit vs. AL-value for PC44LP23/8 gapped core (Typical)



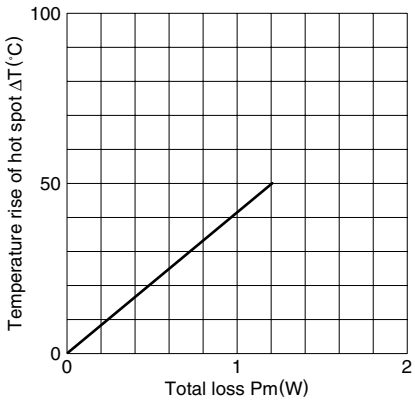
Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

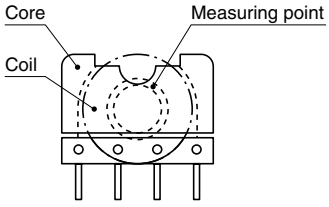
AL-value vs. Air gap length for PC44LP23/8 core (Typical)



Measuring conditions
- Coil: ø0.3 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

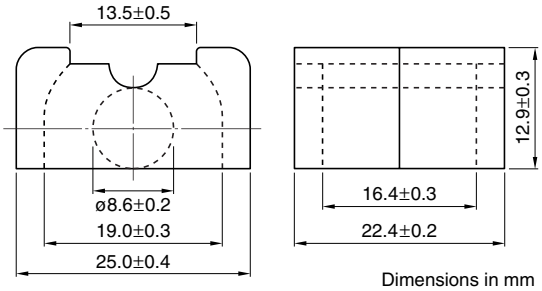
Temperature rise vs. Total loss for LP23/8 core (Typical) (Ambient temperature: 25°C)





Note: The temperature rise is measured in the room whose temperature and humidity are fixed to 25°C and 45(%)RH. respectively. (approx. 400×300×300cm)

LP Series LP22/13 Cores



Dimensions in mm

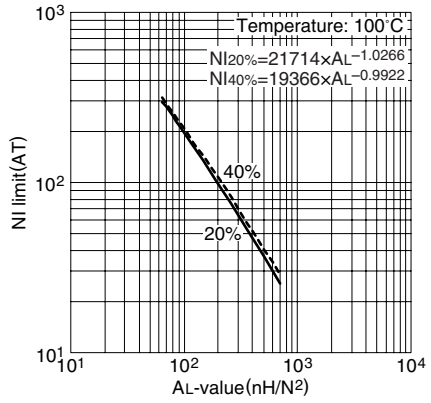
PARAMETER

Core factor	C1	mm^{-1}	0.721
Effective magnetic path length	ℓe	mm	49.0
Effective cross-sectional area	Ae	mm^2	67.9
Effective core volume	Ve	mm^3	3330
Cross-sectional center pole area	Acp	mm^2	58.1
Minimum cross-sectional center pole area	Acp min.	mm^2	55.4
Cross-sectional winding area of core	Acw	mm^2	84.2
Weight (approx.)		g	21

Part No.	AL-value (nH/N2)	Core loss (W) at 100°C 100kHz, 200mT	Calculated output power (forward converter mode)
PC44LP22/13Z-12	3310±25% (1kHz, 0.5mA)* 4700 min. (100kHz, 200mT)	1.05 max.	121W (100kHz)

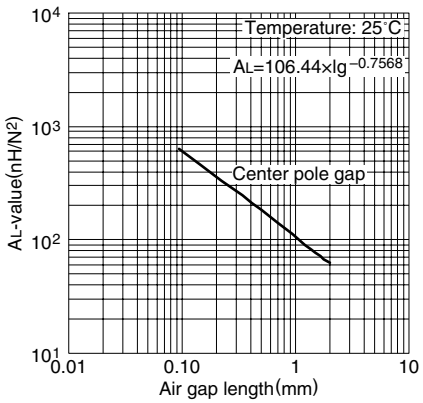
* Coil: ø0.35 2UEW 100Ts

NI limit vs. AL-value for PC44LP22/13 gapped core (Typical)



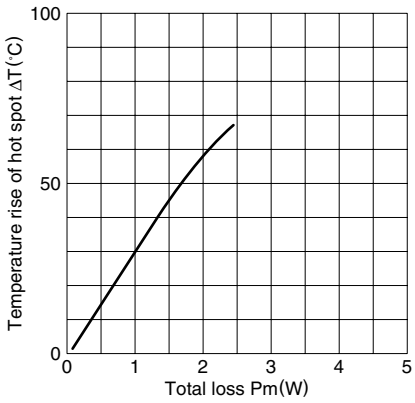
Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

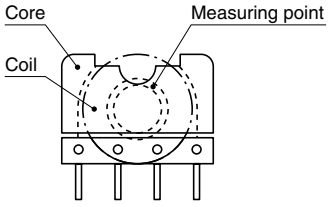
AL-value vs. Air gap length for PC44LP22/13 core (Typical)



Measuring conditions
- Coil: ø0.35 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

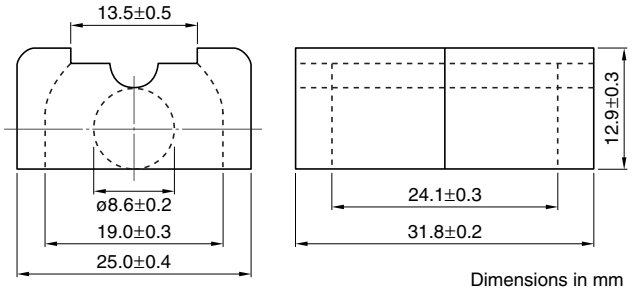
Temperature rise vs. Total loss for LP22/13 core (Typical) (Ambient temperature: 25°C)





Note: The temperature rise is measured in the room whose temperature and humidity are fixed to 25°C and 45(%)RH. respectively. (approx. 400×300×300cm)

LP Series LP32/13 Cores



Dimensions in mm

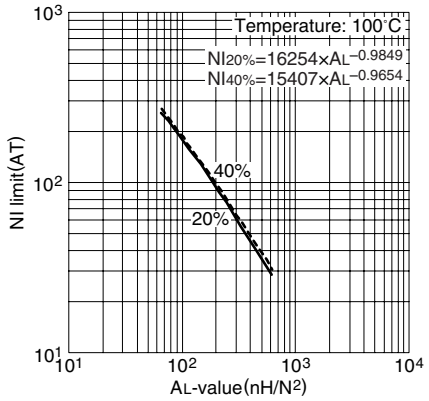
PARAMETER

Core factor	C_1	mm^{-1}	0.909
Effective magnetic path length	ℓe	mm	64.0
Effective cross-sectional area	Ae	mm^2	70.3
Effective core volume	Ve	mm^3	4500
Cross-sectional center pole area	Acp	mm^2	58.1
Minimum cross-sectional center pole area	Acp min.	mm^2	55.4
Cross-sectional winding area of core	Acw	mm^2	125.3
Weight (approx.)		g	30

Part No.	A_L-value (nH/N^2)	Core loss (W) at 100°C 100kHz, 200mT	Calculated output power (forward converter mode)
PC44LP32/13Z-12	2630±25% (1kHz, 0.5mA)* 3730 min. (100kHz, 200mT)	1.38 max.	164W (100kHz)

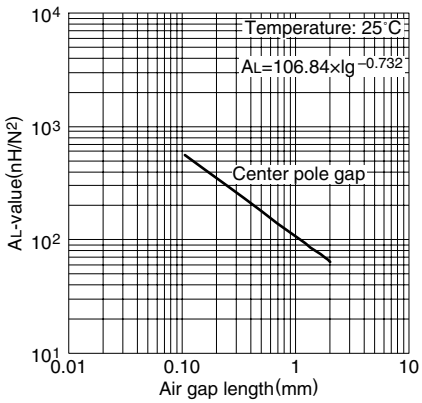
* Coil: ø0.35 2UEW 100Ts

NI limit vs. A_L-value for PC44LP32/13 gapped core (Typical)



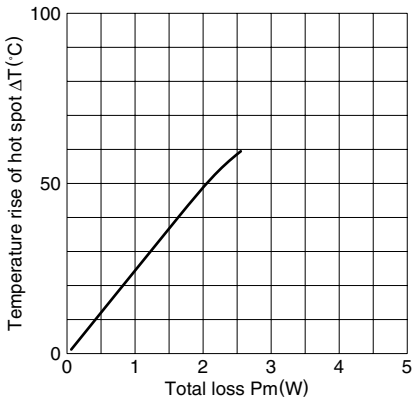
Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

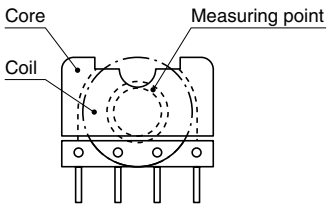
A_L-value vs. Air gap length for PC44LP32/13core (Typical)



Measuring conditions
- Coil: ø0.35 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

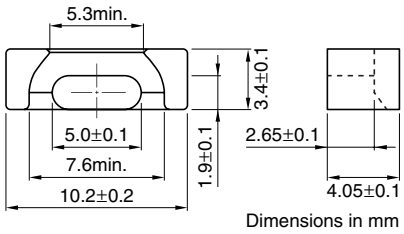
Temperature rise vs. Total loss for LP32/13 core (Typical) (Ambient temperature: 25°C)





Note: The temperature rise is measured in the room whose temperature and humidity are fixed to 25°C and 45(%)RH. respectively. (approx. 400×300×300cm)

EPC Series EPC10 Cores



Dimensions in mm

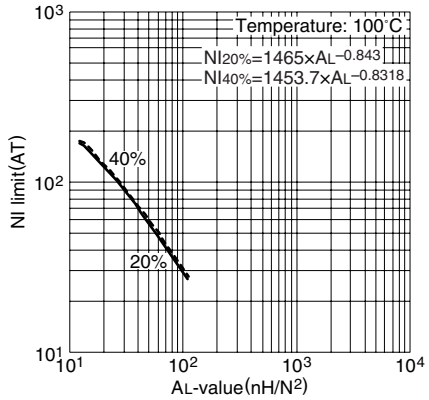
PARAMETER

Core factor	C1	mm^{-1}	1.89
Effective magnetic path length	ℓe	mm	17.8
Effective cross-sectional area	Ae	mm^2	9.39
Effective core volume	Ve	mm^3	167
Cross-sectional center pole area	Acp	mm^2	8.73
Minimum cross-sectional area	Acp min.	mm^2	8.13
Cross-sectional winding area of core	Acw	mm^2	7.69
Weight (approx.)		g	1.1

Part No.	AL-value (nH/N2)*	Core loss (W) max. 100kHz, 200mT	Calculated output power (forward converter mode)
PC44EPC10-Z	1000±25% (1kHz, 0.5mA)	0.072(100°C)	5.4W (100kHz)
PC90EPC10-Z	900±25% (1kHz, 0.5mA)	0.090(100°C)	5.4W
PC95EPC10-Z	1040±25% (1kHz, 0.5mA)	0.100/0.080/0.100(25°C/80°C/120°C)	5.6W

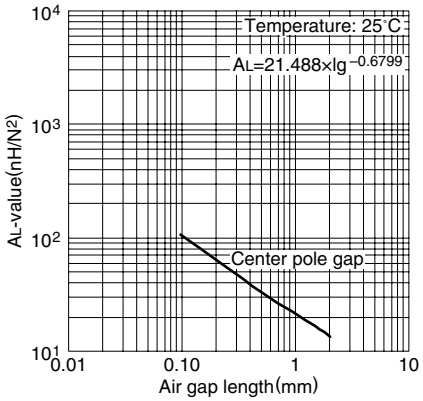
* Coil: ø0.1 2UEW 100Ts

NI limit vs. AL-value for PC44EPC10 gapped core (Typical)



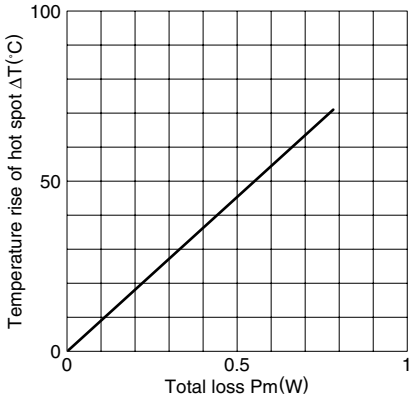
Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

AL-value vs. Air gap length for PC44EPC10 core (Typical)

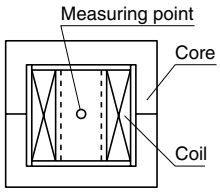


Measuring conditions
- Coil: ø0.1 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

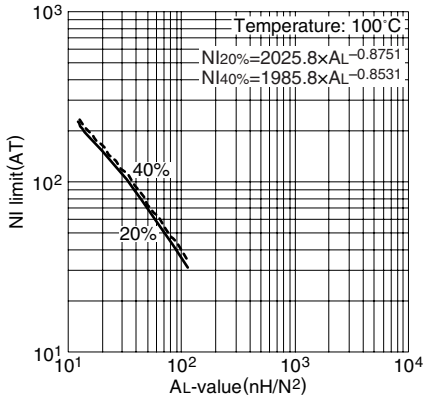
Temperature rise vs. Total loss for EPC10 core (Typical) (Ambient temperature: 25°C)



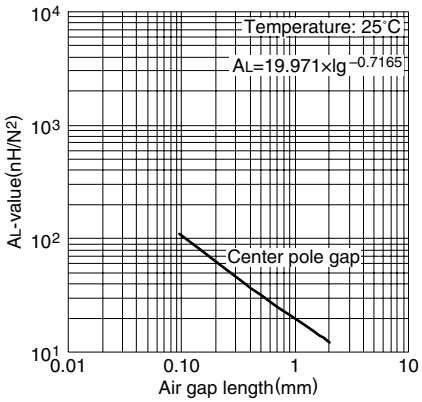
Note: The temperature rise is measured in the room whose temperature and humidity are fixed to 25°C and 45(%)RH. respectively. (approx. 400×300×300cm)



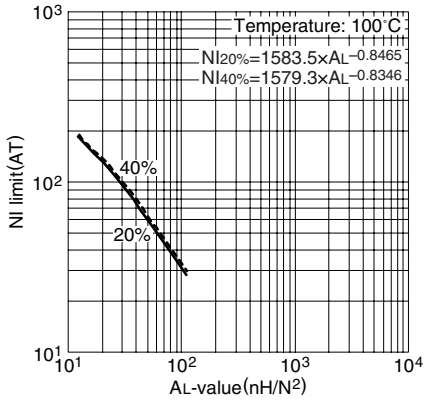
NI limit vs. AL-value for PC90EPC10 gapped core (Typical)



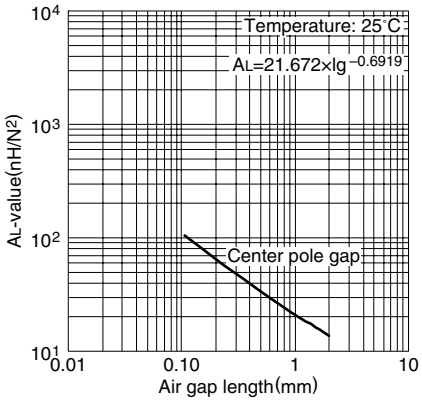
AL-value vs. Air gap length for PC90EPC10 core (Typical)



NI limit vs. AL-value for PC95EPC10 gapped core (Typical)



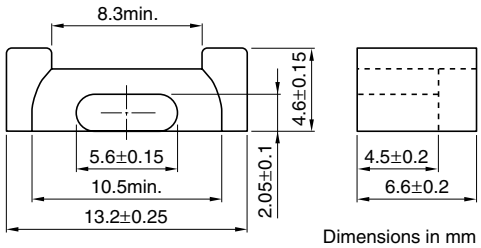
AL-value vs. Air gap length for PC95EPC10 core (Typical)



Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

Measuring conditions
- Coil: ø0.1 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

EPC Series EPC13 Cores



Dimensions in mm

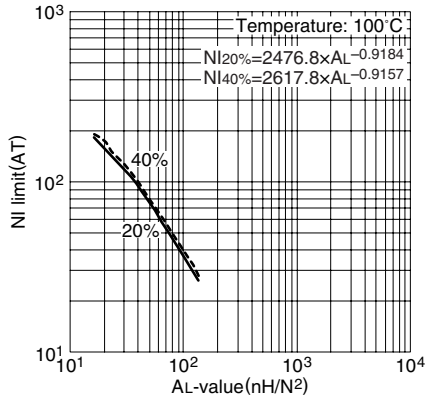
PARAMETER

Core factor	C1	mm^{-1}	2.45
Effective magnetic path length	ℓe	mm	30.6
Effective cross-sectional area	Ae	mm^2	12.5
Effective core volume	Ve	mm^3	382
Cross-sectional center pole area	Acp	mm^2	10.6
Minimum cross-sectional area	Acp min.	mm^2	9.71
Cross-sectional winding area of core	Acw	mm^2	23.0
Weight (approx.)		g	2.1

Part No.	AL-value (nH/N^2)*	Core loss (W) max. 100kHz, 200mT	Calculated output power (forward converter mode)
PC44EPC13-Z	870±25% (1kHz, 0.5mA)	0.14(100°C)	8W (100kHz)
PC90EPC13-Z	800±25% (1kHz, 0.5mA)	0.17(100°C)	8.6W
PC95EPC13-Z	1060±25% (1kHz, 0.5mA)	0.17/0.15/0.17(25°C/80°C/120°C)	8.8W

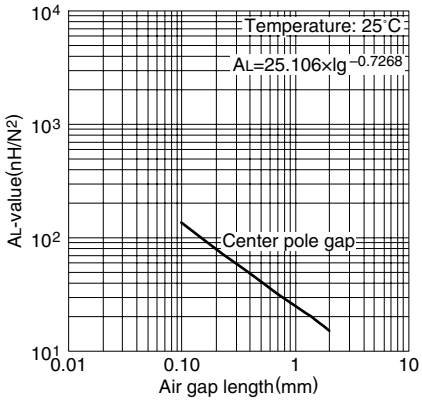
* Coil: ø0.2 2UEW 100Ts

NI limit vs. AL-value for PC44EPC13 gapped core (Typical)



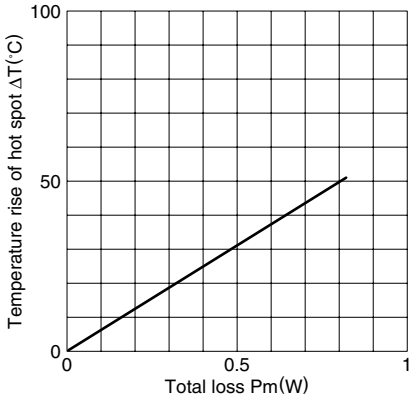
Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

AL-value vs. Air gap length for PC44EPC13 core (Typical)

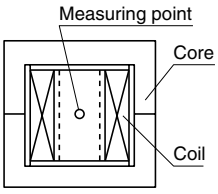


Measuring conditions
- Coil: ø0.2 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

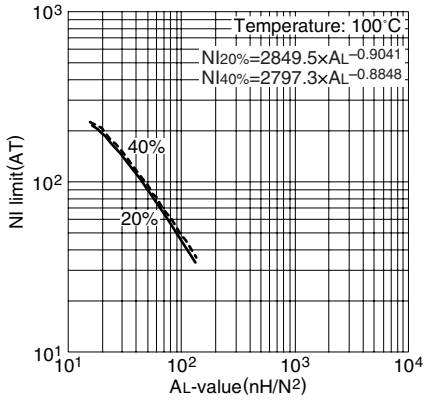
Temperature rise vs. Total loss for EPC13 core (Typical) (Ambient temperature: 25°C)



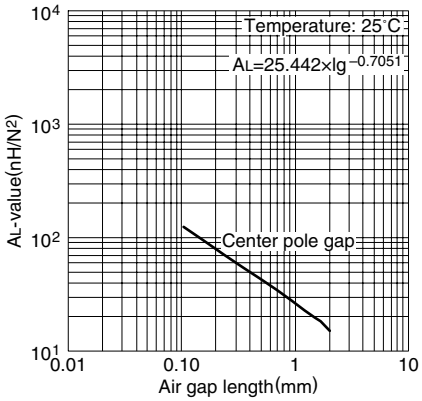
Note: The temperature rise is measured in the room whose temperature and humidity are fixed to 25°C and 45(%)RH. respectively. (approx. 400×300×300cm)



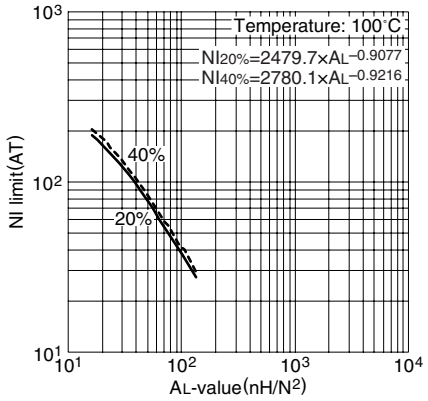
NI limit vs. AL-value for PC90EPC13 gapped core (Typical)



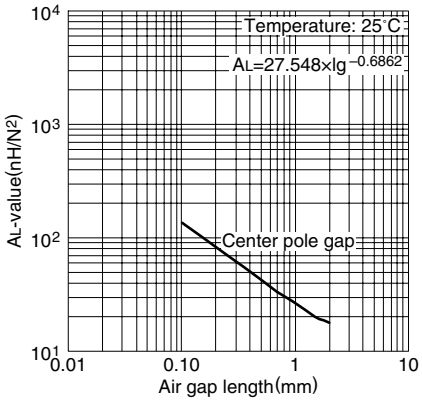
AL-value vs. Air gap length for PC90EPC13 core (Typical)



NI limit vs. AL-value for PC95EPC13 gapped core (Typical)



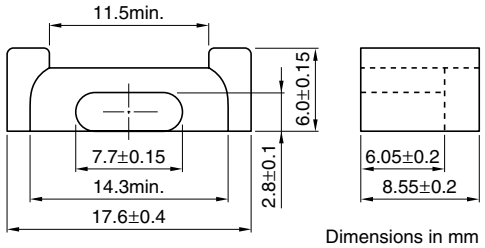
AL-value vs. Air gap length for PC95EPC13 core (Typical)



Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

Measuring conditions
- Coil: ø0.2 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

EPC Series EPC17 Cores



Dimensions in mm

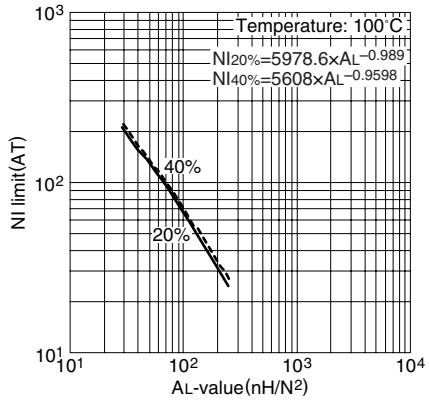
PARAMETER

Core factor	C1	mm^{-1}	1.76
Effective magnetic path length	ℓe	mm	40.2
Effective cross-sectional area	Ae	mm^2	22.8
Effective core volume	Ve	mm^3	917
Cross-sectional center pole area	Acp	mm^2	19.9
Minimum cross-sectional area	Acp min.	mm^2	18.7
Cross-sectional winding area of core	Acw	mm^2	41.1
Weight (approx.)		g	4.5

Part No.	AL-value (nH/N^2)*	Core loss (W) max. 100kHz, 200mT	Calculated output power (forward converter mode)
PC44EPC17-Z	1150±25% (1kHz, 0.5mA)	0.35(100°C)	20W (100kHz)
PC90EPC17-Z	1100±25% (1kHz, 0.5mA)	0.45(100°C)	20.5W
PC95EPC17-Z	1500±25% (1kHz, 0.5mA)	0.45/0.35/0.45(25°C/80°C/120°C)	21.1W

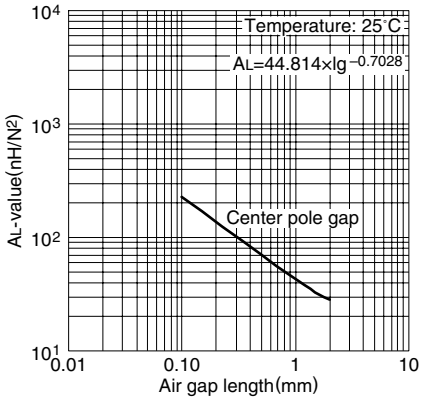
* Coil: ø0.2 2UEW 100Ts

NI limit vs. AL-value for PC44EPC17 gapped core (Typical)



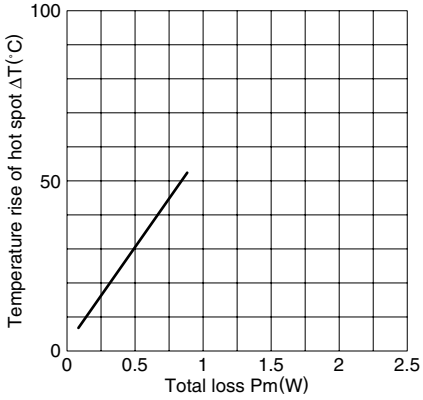
Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

AL-value vs. Air gap length for PC44EPC17 core (Typical)

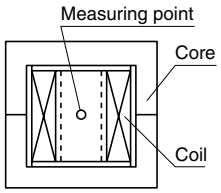


Measuring conditions
- Coil: ø0.2 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

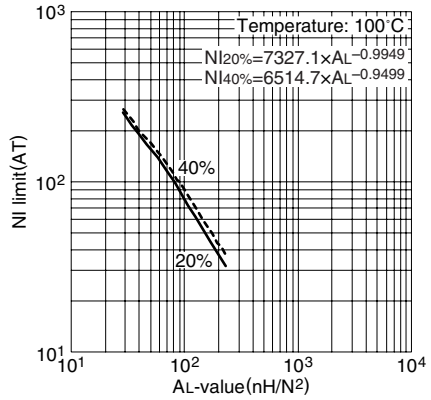
Temperature rise vs. Total loss for EPC17 core (Typical) (Ambient temperature: 25°C)



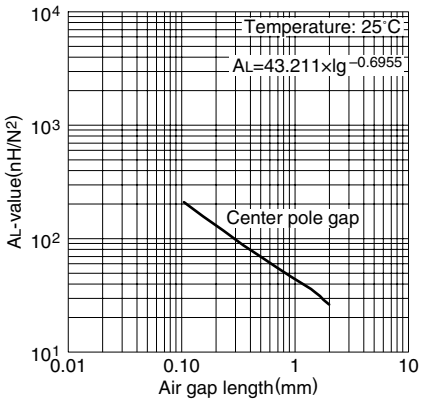
Note: The temperature rise is measured in the room whose temperature and humidity are fixed to 25°C and 45(%)RH. respectively. (approx. 400×300×300cm)



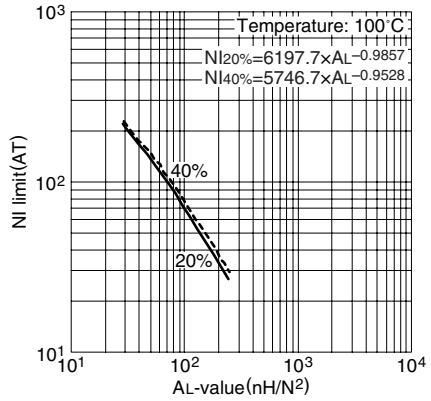
NI limit vs. AL-value for PC90EPC17 gapped core (Typical)



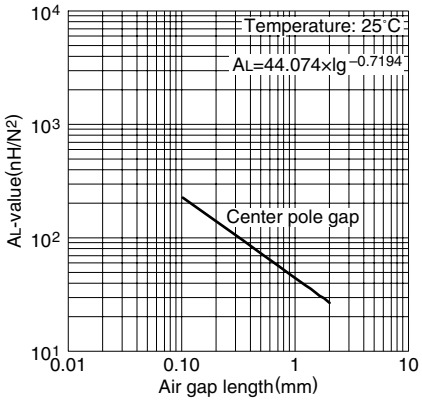
AL-value vs. Air gap length for PC90EPC17 core (Typical)



NI limit vs. AL-value for PC95EPC17 gapped core (Typical)



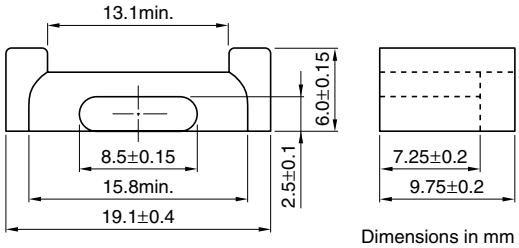
AL-value vs. Air gap length for PC95EPC17 core (Typical)



Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

Measuring conditions
- Coil: ø0.2 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

EPC Series EPC19 Cores



Dimensions in mm

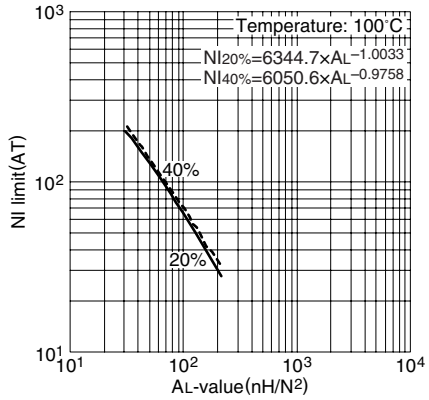
PARAMETER

Core factor	C1	mm^{-1}	2.03
Effective magnetic path length	ℓe	mm	46.1
Effective cross-sectional area	Ae	mm^2	22.7
Effective core volume	Ve	mm^3	1050
Cross-sectional center pole area	Acp	mm^2	19.9
Minimum cross-sectional area	Acp min.	mm^2	18.7
Cross-sectional winding area of core	Acw	mm^2	54.4
Weight (approx.)		g	5.3

Part No.	AL-value (nH/N^2)*	Core loss (W) max. 100kHz, 200mT	Calculated output power (forward converter mode)
PC44EPC19-Z	940±25% (1kHz, 0.5mA)	0.4(100°C)	27W (100kHz)
PC90EPC19-Z	940±25% (1kHz, 0.5mA)	0.5(100°C)	28W
PC95EPC19-Z	1400±25% (1kHz, 0.5mA)	0.5/0.4/0.5(25°C/80°C/120°C)	28.7W

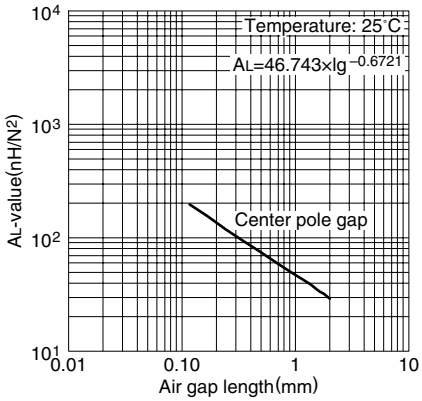
* Coil: ø0.2 2UEW 100Ts

NI limit vs. AL-value for PC44EPC19 gapped core (Typical)



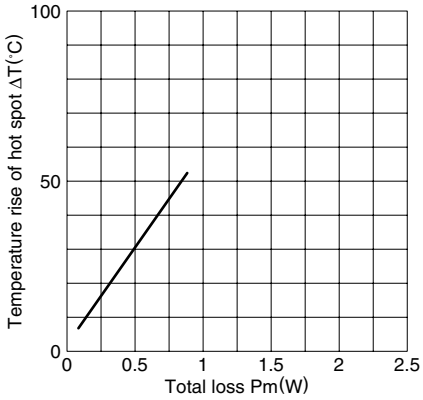
Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

AL-value vs. Air gap length for PC44EPC19 core (Typical)

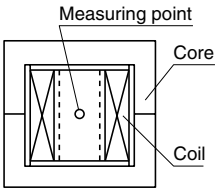


Measuring conditions
- Coil: ø0.2 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

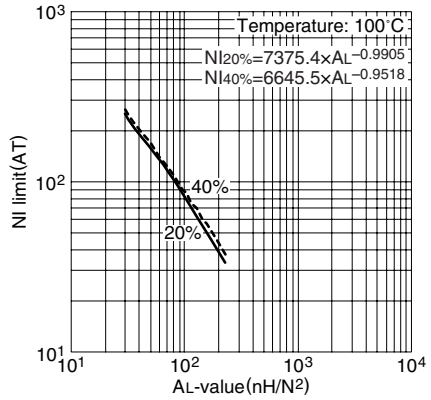
Temperature rise vs. Total loss for EPC19 core (Typical) (Ambient temperature: 25°C)



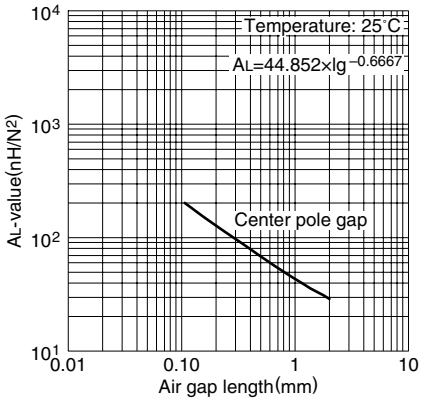
Note: The temperature rise is measured in the room whose temperature and humidity are fixed to 25°C and 45(%)RH. respectively. (approx. 400×300×300cm)



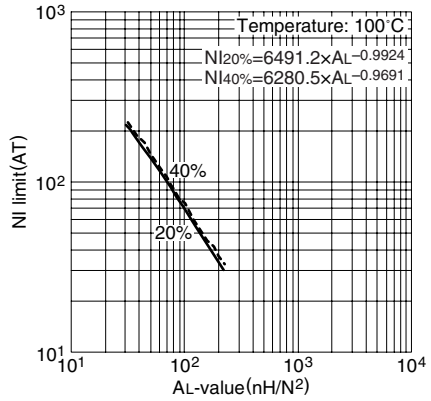
NI limit vs. AL-value for PC90EPC19 gapped core (Typical)



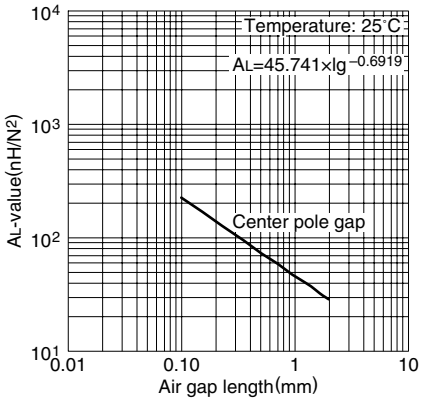
AL-value vs. Air gap length for PC90EPC19 core (Typical)



NI limit vs. AL-value for PC95EPC19 gapped core (Typical)



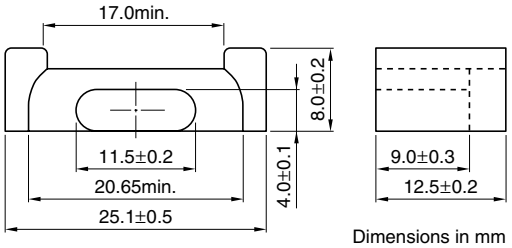
AL-value vs. Air gap length for PC95EPC19 core (Typical)



Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

Measuring conditions
- Coil: ø0.2 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

EPC Series EPC25 Cores



Dimensions in mm

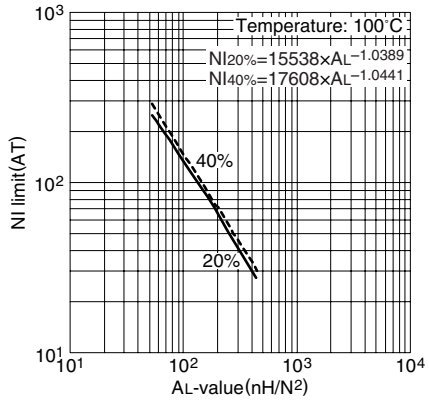
PARAMETER

Core factor	C1	mm^{-1}	1.40
Effective magnetic path length	ℓe	mm	56.3
Effective cross-sectional area	Ae	mm^2	40.4
Effective core volume	Ve	mm^3	2280
Cross-sectional center pole area	Acp	mm^2	42.6
Minimum cross-sectional area	Acp min.	mm^2	40.6
Cross-sectional winding area of core	Acw	mm^2	85.5
Weight (approx.)		g	13

Part No.	AL-value (nH/N^2)*	Core loss (W) max. 100kHz, 200mT	Calculated output power (forward converter mode)
PC44EPC25-Z	1560±25% (1kHz, 0.5mA)	1.11(100°C)	63W (100kHz)
PC90EPC25-Z	1400±25% (1kHz, 0.5mA)	1.4(100°C)	64W
PC95EPC25-Z	2200±25% (1kHz, 0.5mA)	1.4/1.2/1.4(25°C/80°C/120°C)	66.9W

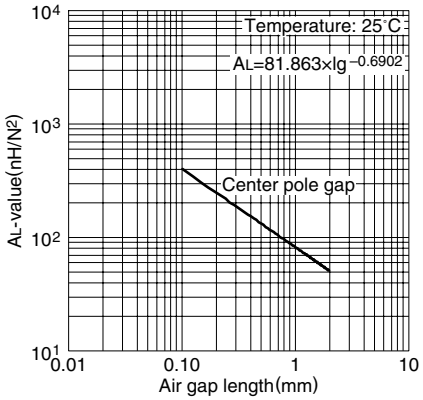
* Coil: ø0.2 2UEW 100Ts

NI limit vs. AL-value for PC44EPC25 gapped core (Typical)



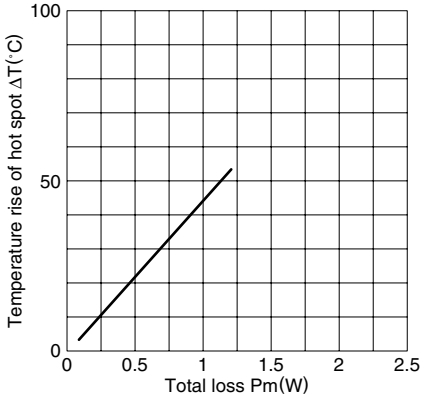
Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

AL-value vs. Air gap length for PC44EPC25 core (Typical)

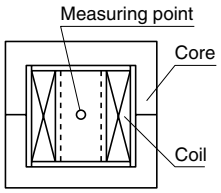


Measuring conditions
- Coil: ø0.2 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

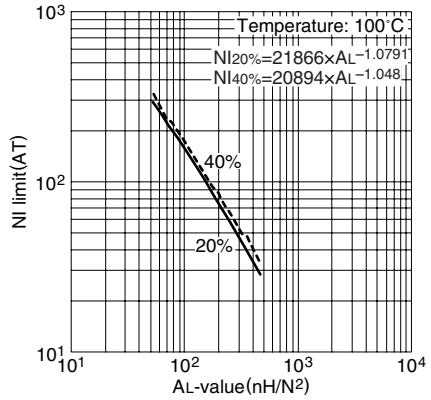
Temperature rise vs. Total loss for EPC25 core (Typical) (Ambient temperature: 25°C)



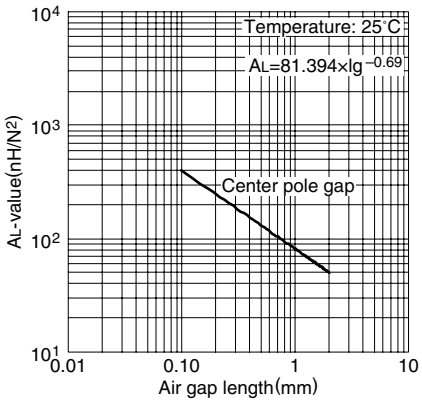
Note: The temperature rise is measured in the room whose temperature and humidity are fixed to 25°C and 45(%)RH. respectively. (approx. 400×300×300cm)



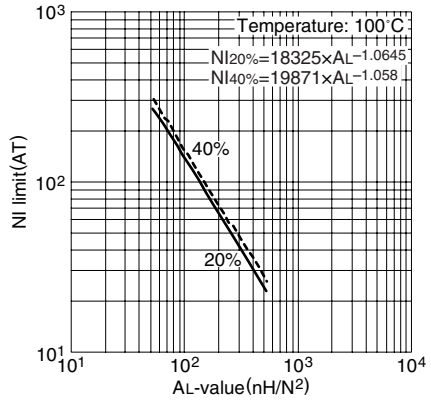
NI limit vs. AL-value for PC90EPC25 gapped core (Typical)



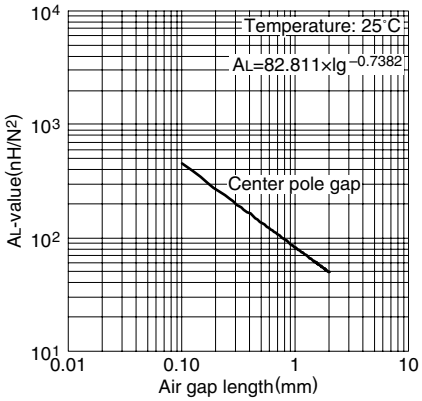
AL-value vs. Air gap length for PC90EPC25 core (Typical)



NI limit vs. AL-value for PC95EPC25 gapped core (Typical)



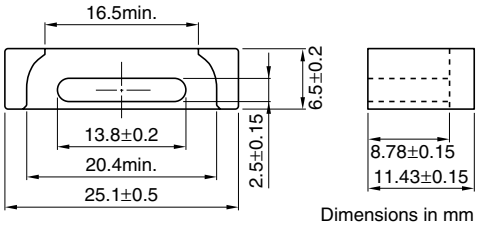
AL-value vs. Air gap length for PC95EPC25 core (Typical)



Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

Measuring conditions
- Coil: ø0.2 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

EPC Series EPC25B Cores



Dimensions in mm

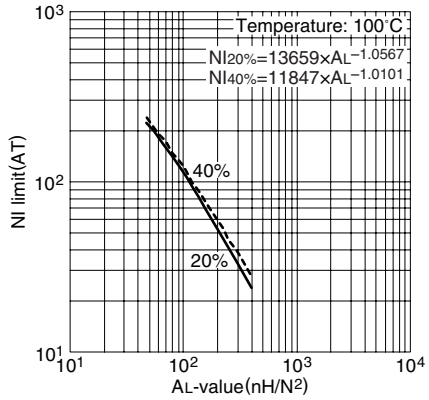
PARAMETER

Core factor	C_1	mm^{-1}	1.39
Effective magnetic path length	ℓe	mm	46.2
Effective cross-sectional area	Ae	mm^2	33.3
Effective core volume	Ve	mm^3	1540
Cross-sectional center pole area	Acp	mm^2	32.4
Minimum cross-sectional area	Acp min.	mm^2	30.3
Cross-sectional winding area of core	Acw	mm^2	62.1
Weight (approx.)		g	11

Part No.	A_L-value (nH/N^2)*	Core loss (W) max. 100kHz, 200mT	Calculated output power (forward converter mode)
PC44EPC25B-Z	1560±25% (1kHz, 0.5mA)	0.65(100°C)	45W (100kHz)
PC90EPC25B-Z	1400±25% (1kHz, 0.5mA)	0.8(100°C)	46W
PC95EPC25B-Z	2200±25% (1kHz, 0.5mA)	0.8/0.65/0.8(25°C/80°C/120°C)	47.6W

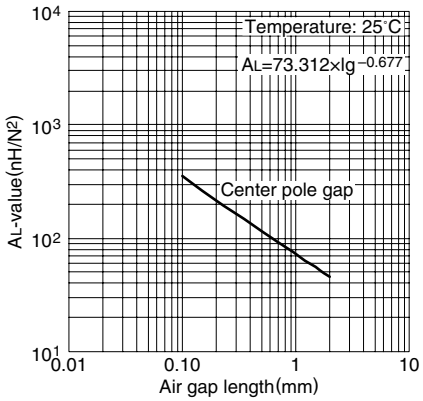
* Coil: ø0.23 2UEW 100Ts

NI limit vs. A_L-value for PC44EPC25B gapped core (Typical)



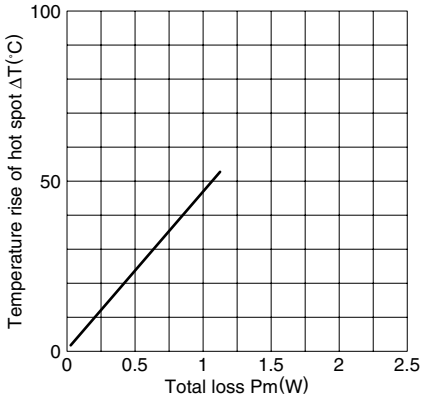
Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

A_L-value vs. Air gap length for PC44EPC25B core (Typical)

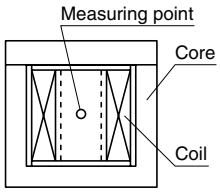


Measuring conditions
- Coil: ø0.23 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

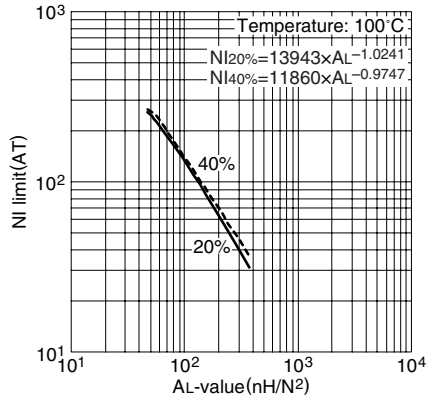
Temperature rise vs. Total loss for EPC25B core (Typical) (Ambient temperature: 25°C)



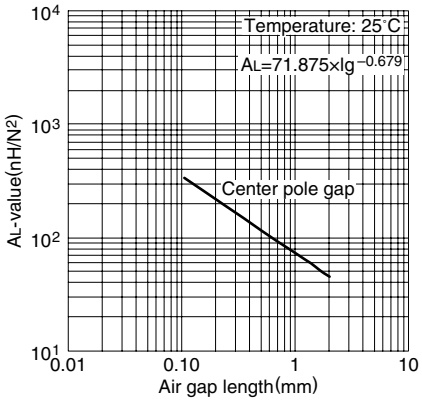
Note: The temperature rise is measured in the room whose temperature and humidity are fixed to 25°C and 45(%)RH. respectively. (approx. 400×300×300cm)



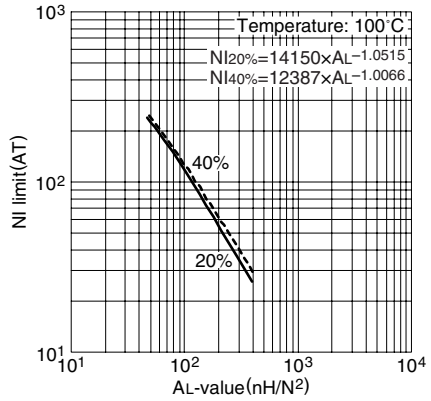
NI limit vs. AL-value for PC90EPC25 gapped core (Typical)



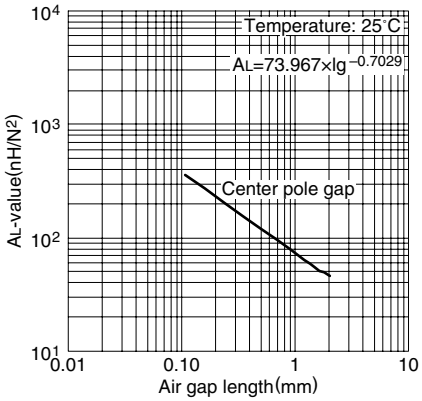
AL-value vs. Air gap length for PC90EPC25 core (Typical)



NI limit vs. AL-value for PC95EPC25 gapped core (Typical)



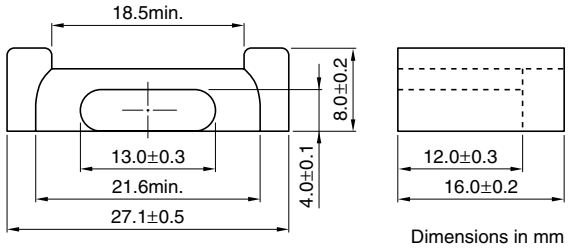
AL-value vs. Air gap length for PC95EPC25 core (Typical)



Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

Measuring conditions
- Coil: ø0.23 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

EPC Series EPC27 Cores



Dimensions in mm

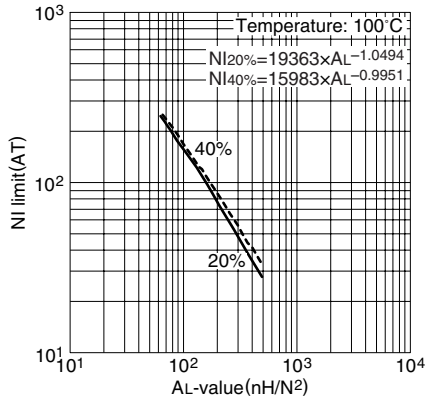
PARAMETER

Core factor	C1	mm^{-1}	1.43
Effective magnetic path length	ℓe	mm	69.4
Effective cross-sectional area	Ae	mm^2	48.6
Effective core volume	Ve	mm^3	3370
Cross-sectional center pole area	Acp	mm^2	48.6
Minimum cross-sectional area	Acp min.	mm^2	46.5
Cross-sectional winding area of core	Acw	mm^2	108
Weight (approx.)		g	18

Part No.	AL-value (nH/N2)*	Core loss (W) max. 100kHz, 200mT	Calculated output power (forward converter mode)
PC44EPC27-Z	1540±25% (1kHz, 0.5mA)	1.56(100°C)	80W (100kHz)
PC90EPC27-Z	1400±25% (1kHz, 0.5mA)	2.0(100°C)	80.5W
PC95EPC27-Z	2200±25% (1kHz, 0.5mA)	2.0/1.7/2.0(25°C/80°C/120°C)	84.8W

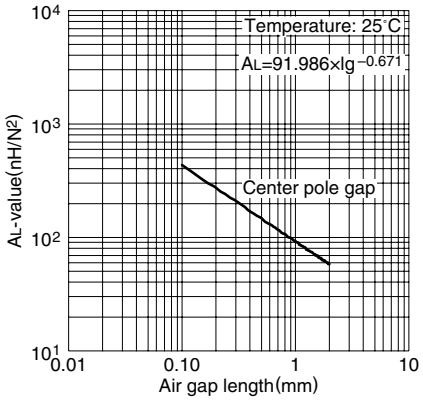
* Coil: ø0.3 2UEW 100Ts

NI limit vs. AL-value for PC44EPC27 gapped core (Typical)



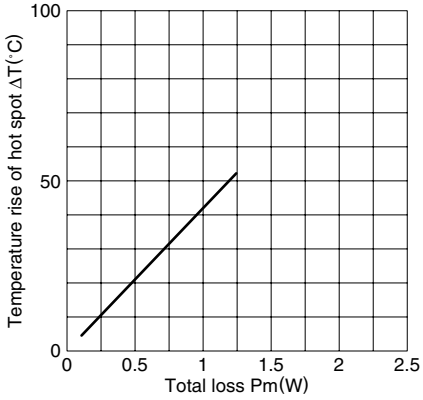
Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

AL-value vs. Air gap length for PC44EPC27 core (Typical)

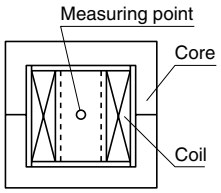


Measuring conditions
- Coil: ø0.3 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

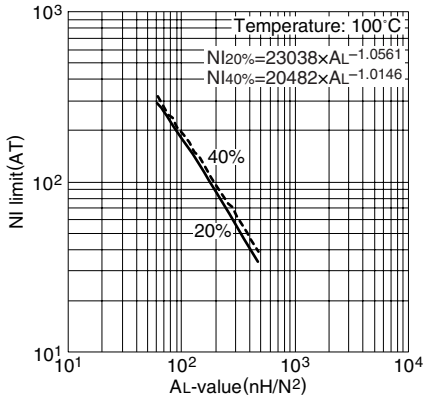
Temperature rise vs. Total loss for EPC27 core (Typical) (Ambient temperature: 25°C)



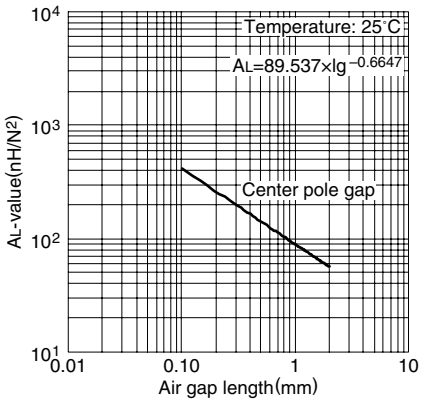
Note: The temperature rise is measured in the room whose temperature and humidity are fixed to 25°C and 45(%)RH. respectively. (approx. 400×300×300cm)



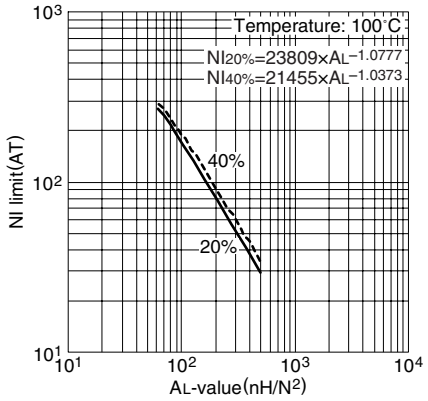
NI limit vs. AL-value for PC90EPC27 gapped core (Typical)



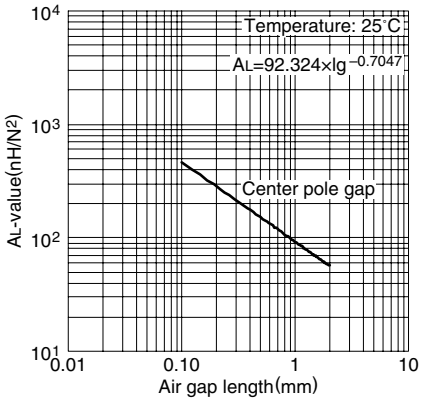
AL-value vs. Air gap length for PC90EPC27 core (Typical)



NI limit vs. AL-value for PC95EPC27 gapped core (Typical)



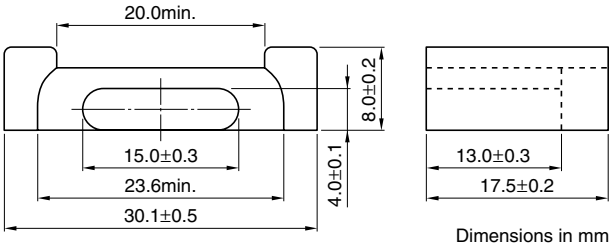
AL-value vs. Air gap length for PC95EPC27 core (Typical)



Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

Measuring conditions
- Coil: ø0.3 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

EPC Series EPC30 Cores



Dimensions in mm

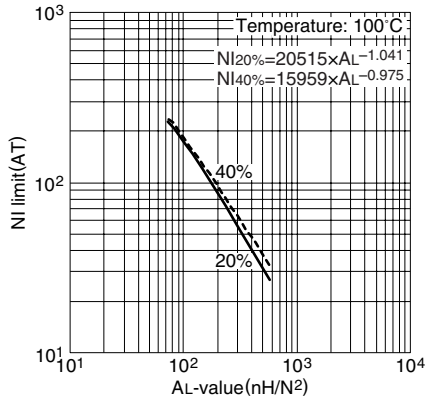
PARAMETER

Core factor	C1	mm^{-1}	1.35
Effective magnetic path length	ℓe	mm	75.3
Effective cross-sectional area	Ae	mm^2	55.6
Effective core volume	Ve	mm^3	4190
Cross-sectional center pole area	Acp	mm^2	56.6
Minimum cross-sectional area	Acp min.	mm^2	54.3
Cross-sectional winding area of core	Acw	mm^2	117
Weight (approx.)		g	23

Part No.	AL-value (nH/N^2)*	Core loss (W) max. 100kHz, 200mT	Calculated output power (forward converter mode)
PC44EPC30-Z	1570±25% (1kHz, 0.5mA)	2.03(100°C)	85W (100kHz)
PC90EPC30-Z	1700±25% (1kHz, 0.5mA)	2.5(100°C)	85.5W
PC95EPC30-Z	2300±25% (1kHz, 0.5mA)	2.3/2.0/2.3(25°C/80°C/120°C)	90.1W

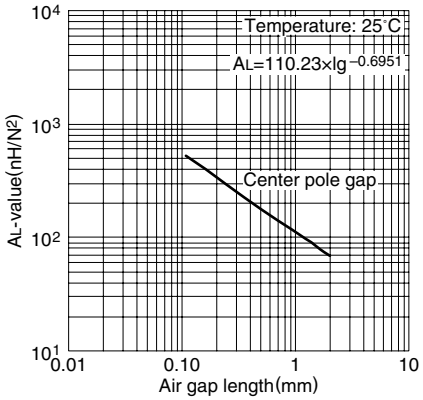
* Coil: ø0.3 2UEW 100Ts

NI limit vs. AL-value for PC44EPC30 gapped core (Typical)



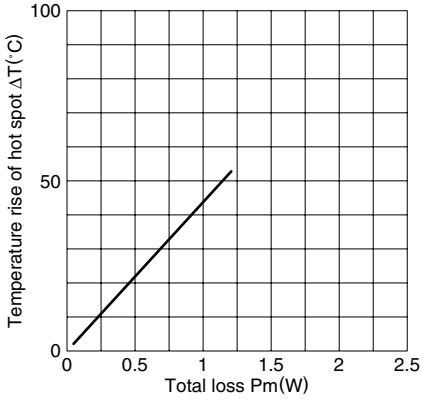
Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

AL-value vs. Air gap length for PC44EPC30 core (Typical)

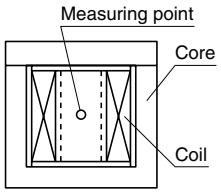


Measuring conditions
- Coil: ø0.3 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA

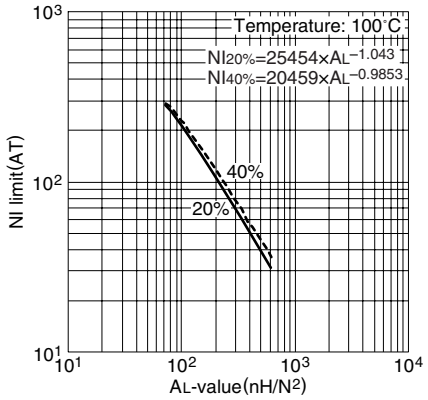
Temperature rise vs. Total loss for EPC30 core (Typical) (Ambient temperature: 25°C)



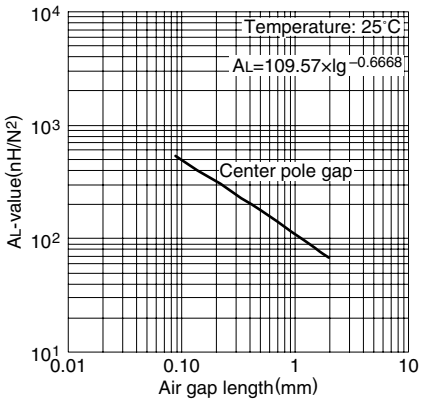
Note: The temperature rise is measured in the room whose temperature and humidity are fixed to 25°C and 45(%)RH. respectively. (approx. 400×300×300cm)



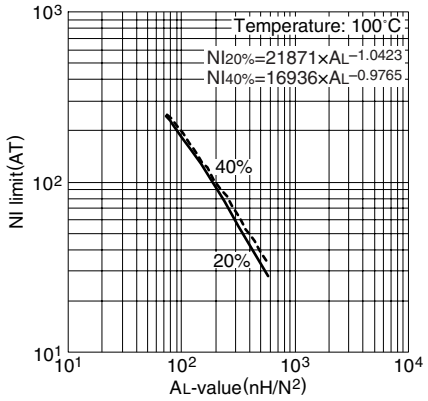
NI limit vs. AL-value for PC90EPC30 gapped core (Typical)



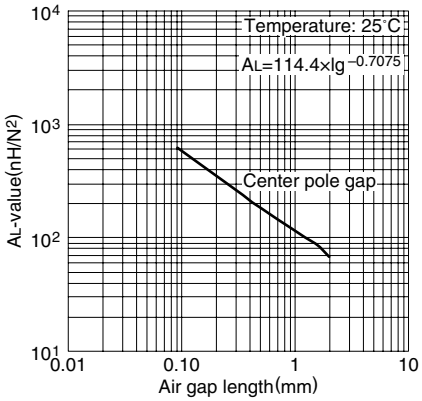
AL-value vs. Air gap length for PC90EPC30 core (Typical)



NI limit vs. AL-value for PC95EPC30 gapped core (Typical)



AL-value vs. Air gap length for PC95EPC30 core (Typical)



Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

Measuring conditions
- Coil: ø0.3 2UEW 100Ts
- Frequency: 1kHz
- Level: 0.5mA