# Mn-Zn EE, EF Cores

## SHAPES AND DIMENSIONS

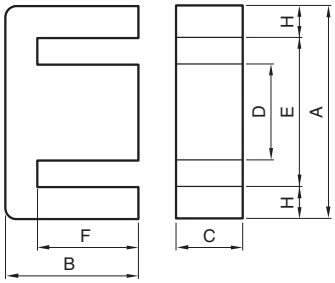



Fig. 1

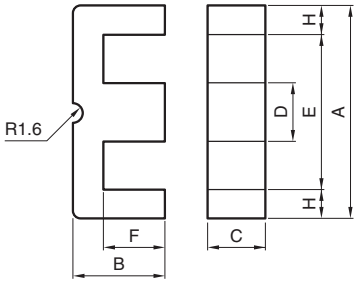



Fig 2

PC47 EE8 - Z

| Material | Size of E core | AL-value (Z: without air gap) |
|---|---|---|

| Part No. | U.S. lam. cores, DIN standard JIS | Core | Dimensions (mm) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | A | B | C | D | E min. | F | H |
| PC47EE8-Z | JIS FEE 8.3 | 1 | 8.3±0.2 | 4.0±0.1 | 3.6±0.2 | 1.85±0.15 | 6.0 | 3.0±0.1 | 1.0 |
| PC47EE10/11-Z | JIS FEE 10.2 | 1 | 10.2±0.2 | 5.5±0.1 | 4.75±0.15 | 2.45±0.15 | 7.7 | 4.20±0.15 | 1.1 |
| PC47EF12.6-Z | DIN 41985 | 1 | 12.7±0.4 | 6.4±0.1 | 3.6±0.2 | 3.65±0.15 | 8.8 | 4.65±0.15 | 1.83 |
| PC47EE13-Z | | 1 | 13.0±0.2 | 6.00±0.15 | 6.15±0.15 | 2.75±0.15 | 10.0 | 4.6±0.1 | 1.4 |
| PC47EE16-Z | JIS FEE 16A | 1 | 16.0±0.3 | 7.15±0.15 | 4.8±0.2 | 4.0±0.2 | 11.7 | 5.1±0.2 | 2.0 |
| PC47SEE16-Z | | 1 | 16.0±0.3 | 7.15±0.15 | 6.8±0.2 | 3.18±0.18 | 12.5 | 5.5±0.1 | 1.6 |
| PC47EF16-Z | DIN 41985 | 1 | 16.1±0.6 | 8.05±0.15 | 4.5±0.2 | 4.55±0.15 | 11.3 | 5.9±0.2 | 2.2 |
| PC47EE19-Z | JIS FEE 19A | 1 | 19.1±0.3 | 7.95±0.15 | 5.0±0.2 | 4.55±0.15 | 14.2 | 5.6±0.1 | 2.3 |

| Part No. | Effective parameter | | | | | Electrical characteristics | | |
|---|---|---|---|---|---|---|---|---|
| | Core factor $C_1(mm^{-1})$ | Effective cross-sectional area $Ae(mm^2)$ | Effective magnetic path length $\ell e(mm)$ | Effective core volume $Ve(mm^3)$ | Weigh (g) | AL-value ($nH/N^2$) 1kHz 0.5mA 100Ts | | Core loss (W) max. 100kHz 200mT 100°C |
| | | | | | | Without air gap | With air gap | |
| PC47EE8-Z | 2.75 | 7.0 | 19.2 | 134 | 0.7 | 610±25% | 40±7% 63±10% | 0.05 |
| PC47EE10/11-Z | 2.16 | 12.1 | 26.1 | 315 | 1.5 | 850±25% | 40±7% 63±10% | 0.12 |
| PC47EF12.6-Z | 2.28 | 13.0 | 29.6 | 385 | 2.0 | 810±25% | 63±7% 100±10% | 0.16 |
| PC47EE13-Z | 1.77 | 17.1 | 30.2 | 517 | 2.7 | 1130±25% | 63±7% 100±10% | 0.22 |
| PC47EE16-Z | 1.82 | 19.0 | 34.5 | 656 | 3.3 | 1140±25% | 80±7% 160±10% | 0.28 |
| PC47SEE16-Z | 1.69 | 21.7 | 36.6 | 795 | 4.1 | 1240±25% | 80±7% 160±10% | 0.34 |
| PC47EF16-Z | 1.87 | 20.1 | 37.6 | 754 | 3.9 | 1100±25% | 63±7% 100±10% | 0.31 |
| PC47EE19-Z | 1.71 | 23.0 | 39.4 | 906 | 4.8 | 1250±25% | 80±7% 160±10% | 0.39 |

# Mn-Zn EE, EF Cores

## SHAPES AND DIMENSIONS

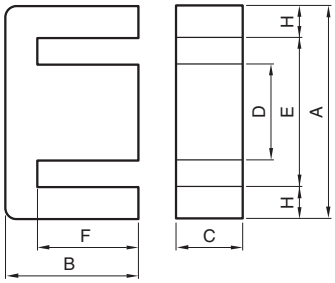



Fig. 1

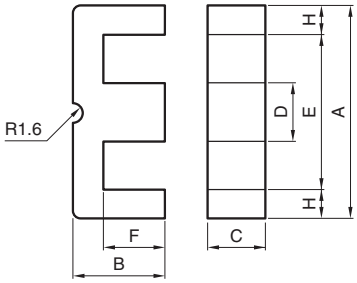



Fig 2

PC47 | EE19/16 - Z

| Material | Size of E core | AL-value (Z: without air gap) |
|---|---|---|

| Part No. | U.S. lam. cores, DIN standard JIS | | Core | Dimensions (mm) A | B | C | D | E min. | F | H |
|---|---|---|---|---|---|---|---|---|---|---|
| PC47EE19/16-Z | U.S. EE-187 | | 1 | 19.29±0.32 | 8.1±0.18 | 4.75±0.13 | 4.75±0.08 | 14.05 | 5.715±0.125 | 2.46 |
| PC47EE20/20/5-Z | DIN 41295 | | 2 | 20.15±0.55 | 10.0±0.2 | 5.1±0.2 | 5.0±0.2 | 12.8 | 6.5±0.2 | 3.53 |
| PC47EF20-Z | DIN 41985 | | 1 | 20.0±0.4 | 9.9±0.2 | 5.65±0.25 | 5.7±0.2 | 14.1 | 7.2±0.2 | 2.8 |
| PC47EE22-Z | | | 1 | 22.0±0.3 | 9.35±0.15 | 5.75±0.25 | 5.75±0.25 | 13.0 | 5.35±0.15 | 4.3 |
| PC47EE25/19-Z | U.S. EE-24/25 | | 1 | 25.4±0.5 | 9.46±0.19 | 6.29±0.19 | 6.35±0.25 | 18.55 | 6.41±0.19 | 3.11 |
| PC47EF25-Z | DIN 41985 | | 1 | 25.05±0.75 | 12.55±0.25 | 7.2±0.3 | 7.25±0.25 | 17.5 | 8.95±0.25 | 3.55 |
| PC47EE25.4-Z | JIS FEE 25.4A | | 1 | 25.4±0.76 | 9.66±0.15 | 6.35±0.25 | 6.35±0.25 | 18.5 | 6.48±0.15 | 3.18 |
| PC47EE30-Z | JIS FEE 30A | | 1 | 30.0±0.5 | 13.15±0.15 | 10.7±0.3 | 10.7±0.3 | 19.7 | 8.15±0.15 | 5.0 |

| Part No. | Effective parameter: Core factor $C_1(mm^{-1})$ | Effective cross-sectional area $Ae(mm^2)$ | Effective magnetic path length $\ell e(mm)$ | Effective core volume $Ve(mm^3)$ | Weigh (g) | Electrical characteristics: AL-value (nH/N²) 1kHz 0.5mA 100Ts: Without air gap | With air gap | Core loss (W) max. 100kHz 200mT 100°C |
|---|---|---|---|---|---|---|---|---|
| PC47EE19/16-Z | 1.75 | 22.4 | 39.1 | 876 | 4.8 | 1350±25% | 80±7% 160±10% | 0.38 |
| PC47EE20/20/5-Z | 1.38 | 31.0 | 43.0 | 1340 | 7.5 | 1400±25% | 100±7% 160±10% | 0.47 |
| PC47EF20-Z | 1.34 | 33.5 | 44.9 | 1500 | 7.4 | 1570±25% | 100±7% 160±10% | 0.59 |
| PC47EE22-Z | 0.970 | 41.0 | 39.6 | 1620 | 8.8 | 2180±25% | 125±7% 250±10% | 0.56 |
| PC47EE25/19-Z | 1.22 | 40.0 | 48.7 | 1950 | 9.1 | 2000±25% | 100±7% 200±10% | 0.80 |
| PC47EF25-Z | 1.11 | 51.8 | 57.8 | 2990 | 15 | 2000±25% | 100±7% 160±10% | 1.27 |
| PC47EE25.4-Z | 1.21 | 40.3 | 48.7 | 1963 | 10 | 2000±25% | 125±7% 250±10% | 0.84 |
| PC47EE30-Z | 0.529 | 109.0 | 57.7 | 6290 | 32 | 4690±25% | 200±5% 400±7% | 2.03 |

# Mn-Zn EE, EF Cores

## SHAPES AND DIMENSIONS

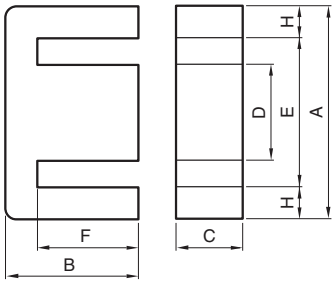



Fig. 1

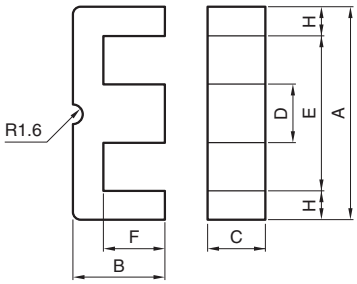



Fig 2

PC47 | EE30/30/7 - Z

| Material | Size of E core | AL-value (Z: without air gap) |
|---|---|---|

| Part No. | U.S. lam. cores, DIN standard JIS | | Core | Dimensions (mm) A | B | C | D | E min. | F | H |
|---|---|---|---|---|---|---|---|---|---|---|
| PC47EE30/30/7-Z | DIN 41295 | | 2 | 30.1±0.7 | 15.0±0.2 | 7.05±0.25 | 6.95±0.25 | 19.5 | 9.95±0.25 | 5.1 |
| PC47EF32-Z | DIN 41985 | | 1 | 32.1±0.8 | 16.1±0.3 | 9.15±0.35 | 9.2±0.3 | 22.7 | 11.6±0.3 | 4.4 |
| PC47EE35/28B-Z | U.S. EE-375 | | 1 | 34.6±0.5 | 14.27±0.37 | 9.31±0.30 | 9.4±0.3 | 25.0 | 9.78±0.25 | 4.5 |
| PC47EE35-Z | JIS FEE35B | | 1 | 34.54±1.0 | 14.35±0.35 | 9.53±0.38 | 9.39±0.27 | 24.89 | 9.71±0.28 | 4.75 |
| PC47EE40-Z | JIS FEE40A | | 1 | 40.0±0.5 | 17.0±0.3 | 10.7±0.3 | 10.7±0.3 | 27.4 | 10.25±0.25 | 6.0 |
| PC47EE41/33C-Z | U.S. EE-21 | | 1 | 41.07±0.8 | 16.78±0.4 | 12.57±0.38 | 12.64±0.45 | 28.55 | 10.38±0.3 | 6.0 |
| PC47EE42/42/15-Z | DIN 41295 | JIS FEE42A | 1 | 42.15±0.85 | 21.0±0.2 | 14.95±0.25 | 11.95±0.25 | 29.5 | 15.15±0.35 | 6.025 |

| Part No. | Effective parameter Core factor C1(mm−1) | Effective cross-sectional area Ae(mm2) | Effective magnetic path length ℓe(mm) | Effective core volume Ve(mm3) | Weigh (g) | Electrical characteristics AL-value (nH/N2) 1kHz 0.5mA 100Ts Without air gap | AL-value With air gap | Core loss (W) max. 100kHz 200mT 100°C |
|---|---|---|---|---|---|---|---|---|
| PC47EE30/30/7-Z | 1.12 | 59.7 | 66.9 | 4000 | 22 | 2100±25% | 160±5%<br>250±7% | 1.41 |
| PC47EF32-Z | 0.893 | 83.2 | 74.3 | 6180 | 32 | 2590±25% | 160±5%<br>250±7% | 2.09 |
| PC47EE35/28B-Z | 0.819 | 84.9 | 69.6 | 5907 | 28 | 2950±25% | 200±5%<br>400±7% | 2.02 |
| PC47EE35-Z | 0.774 | 89.3 | 69.2 | 6179 | 57 | 3170±25% | 200±5%<br>400±7% | 2.14 |
| PC47EE40-Z | 0.606 | 128 | 77.3 | 9890 | 50 | 4150±25% | 200±5%<br>400±7% | 3.10 |
| PC47EE41/33C-Z | 0.495 | 157 | 77.6 | 12200 | 64 | 5060±25% | 200±5%<br>400±7% | 4.10 |
| PC47EE42/42/15-Z | 0.534 | 182 | 97.0 | 17600 | 80 | 4700±25% | 250±5%<br>400±7% | 5.94 |

# Mn-Zn EE, EF Cores

## SHAPES AND DIMENSIONS

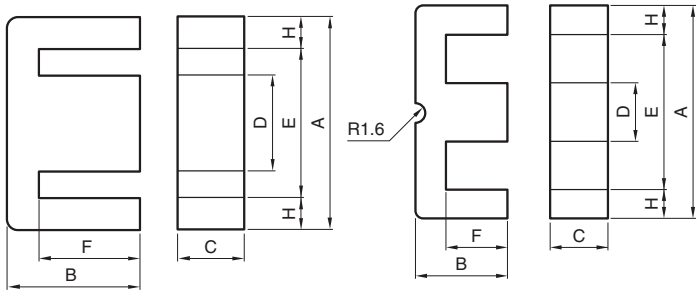



Fig. 1 Fig 2

PC47 | 42/42/20 | - | Z

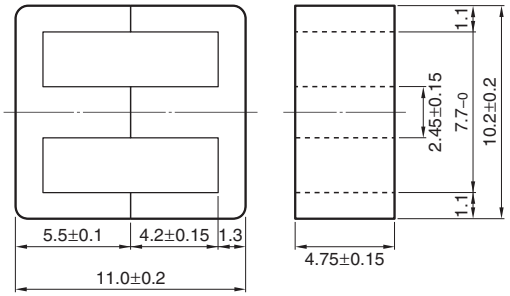
Material | Size of E core | AL-value (Z: without air gap)

| Part No. | U.S. lam. cores, DIN standard JIS | | Core | Dimensions (mm) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | A | B | C | D | E min. | F | H |
| PC47EE42/42/20-Z | DIN 41295 | JIS FEE42B | 1 | 42.15±0.85 | 21.0±0.2 | 19.7±0.3 | 11.95±0.25 | 29.5 | 15.15±0.35 | 6.025 |
| PC47EE47/39-Z | U.S. EE-625 | | Fig.1 | 47.12±0.48 | 19.63±0.2 | 15.62±0.25 | 15.62±0.25 | 31.72 | 12.2±0.13 | 7.49 |
| PC47EE50-Z | JIS FEE50A | | Fig.1 | $50.0^{+1.0}_{-0.7}$ | 21.3±0.3 | 14.6±0.4 | 14.6±0.4 | 34.2 | 12.75±0.25 | 7.5 |
| PC47EE55/55/21-Z | DIN 41295 | JIS FEE55 | Fig.1 | 55.15±1.05 | 27.5±0.3 | 20.7±0.3 | 16.95±0.25 | 37.5 | 18.8±0.3 | 8.53 |
| PC47EE57/47-Z | U.S. EE-75 | | Fig.1 | 56.57±1.0 | 23.60±0.23 | 18.8±0.25 | 18.80±0.25 | 38.1 | 14.63±0.15 | 9.02 |
| PC47EE60-Z | JIS FEE60A | | Fig.1 | $60.0^{+1.1}_{-0.8}$ | 22.3±0.3 | 15.6±0.4 | 15.6±0.4 | 43.8 | 14.05±0.25 | 7.7 |

| Part No. | Effective parameter | | | | | Electrical characteristics | | |
|---|---|---|---|---|---|---|---|---|
| | Core factor $C_1(mm^{-1})$ | Effective cross-sectional area $Ae(mm^2)$ | Effective magnetic path length $\ell e(mm)$ | Effective core volume $Ve(mm^3)$ | Weigh (g) | AL-value ($nH/N^2$) 1kHz 0.5mA 100Ts | | Core loss (W) max. 100kHz 200mT 100°C |
| | | | | | | Without air gap | With air gap | |
| PC47EE42/42/20-Z | 0.415 | 235 | 97.4 | 22900 | 116 | 6100±25% | 250±5%<br>400±7% | 9.65 |
| PC47EE47/39-Z | 0.374 | 242 | 90.6 | 21930 | 108 | 6660±25% | 250±5%<br>400±7% | 9.04 |
| PC47EE50-Z | 0.425 | 226 | 95.8 | 21600 | 116 | 6110±25% | 250±5%<br>500±7% | 8.78 |
| PC47EE55/55/21-Z | 0.348 | 354 | 123 | 43700 | 234 | 7100±25% | 250±5%<br>400±7% | 18.51 |
| PC47EE57/47-Z | 0.297 | 344 | 102 | 35100 | 190 | 8530±25% | 250±5%<br>400±7% | 14.79 |
| PC47EE60-Z | 0.446 | 247 | 110 | 27100 | 135 | 5670±25% | 250±5%<br>500±7% | 11.35 |

# Mn-Zn E series **Part No.: PC47EE10/11-Z**

## SHAPES AND DIMENSIONS




Dimensions in mm

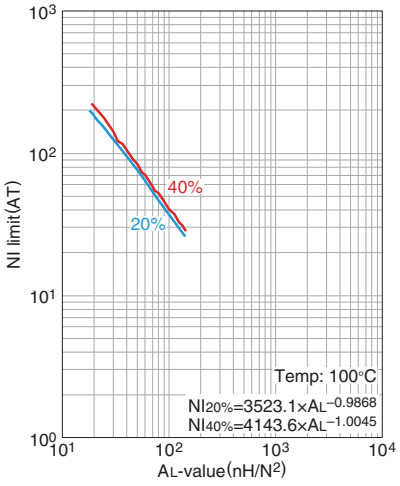
Based on JIS FEE 10.2.

| Effective parameter | | | | | | | | Electrical characteristics | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Core factor $C_1$ ($mm^{-1}$) | Effective magnetic path length $\ell e$ (mm) | Effective cross-sectional area Ae ($mm^2$) | Effective core volume Ve ($mm^3$) | Cross-sectional center pole area Acp ($mm^2$) | Minimum cross-sectional center pole are Acp min. ($mm^2$) | Cross-sectional winding area of core Acw ($mm^2$) | Weigh (g/set) | $A_L$-value * ($nH/N^2$) 1kHz 0.5mA | ($nH/N^2$) 100kHz 200mT | Core loss (W)max. 100kHz 200mT 100°C |
| 2.16 | 26.1 | 12.1 | 315 | 11.6 | 10.6 | 23.3 | 1.5 | 850±25% | 1450 min. | 0.12 |

* Coil：ø0.18 2UEW 100Ts

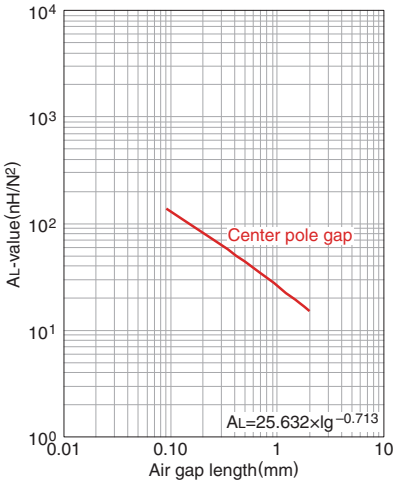
○ Calculated output power (forward converter mode): 12.1W (100kHz)

### NI limit vs. $A_L$-value (Typ.)



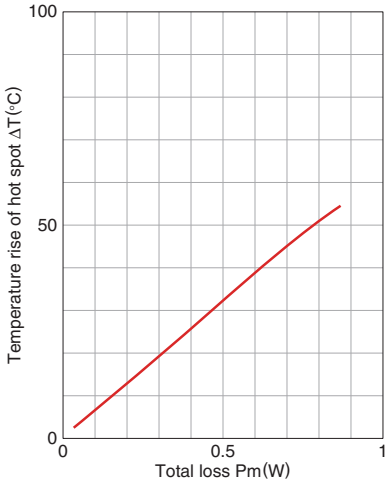

The 20% and 40% graph shows when a 20% and 40% drop from the initial $A_L$-value has been made due to the DC superimposition.

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

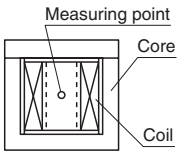



Measuring conditions
- Coil：ø0.18 2UEW 100Ts
- Frequency：1kHz
- Current level：0.5mA
- Ambient temperature：25°C

### Temperature rise vs. Total loss (Typ.)

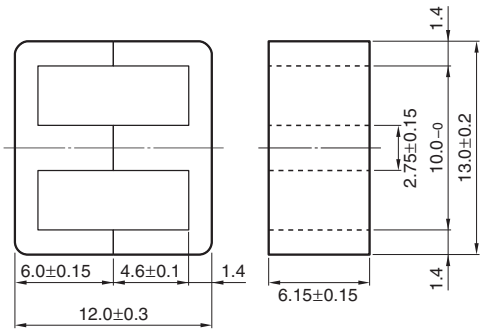



Measuring conditions
- Room space: approx. 400x300x 300cm
- Ambient temperature：25°C
- Humidity：45(%)RH.



# Mn-Zn E series **Part No.: PC47EE13-Z**

## SHAPES AND DIMENSIONS




Dimensions in mm

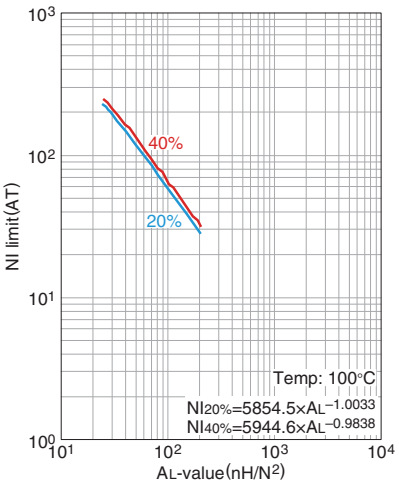
Based on JIS FEI 12.5.

| Effective parameter | | | | | | | | Electrical characteristics | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Core factor | Effective magnetic path length | Effective cross-sectional area | Effective core volume | Cross-sectional center pole area | Minimum cross-sectional center pole are | Cross-sectional winding area of core | Weigh | AL-value * | | Core loss |
| C1 | ℓe | Ae | Ve | Acp | Acp min. | Acw | | | | |
| (mm−1) | (mm) | (mm2) | (mm3) | (mm2) | (mm2) | (mm2) | (g/set) | (nH/N2) | | (W)max. |
| | | | | | | | | 1kHz 0.5mA | 100kHz 200mT | 100kHz 200mT 100°C |
| 1.77 | 30.2 | 17.1 | 517 | 16.9 | 15.6 | 34.3 | 2.7 | 1130±25% | 1770 min. | 0.22 |

* Coil：ø0.18 2UEW 100Ts

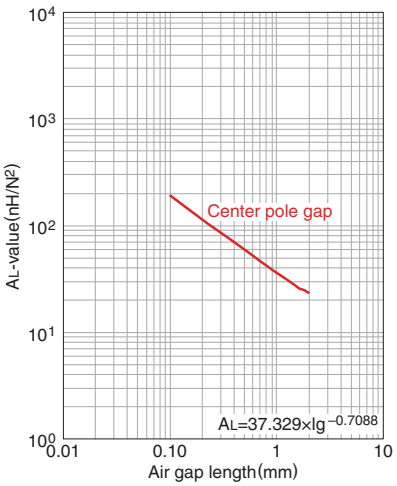
○ Calculated output power (forward converter mode): 25W (100kHz)

### NI limit vs. AL-value (Typ.)



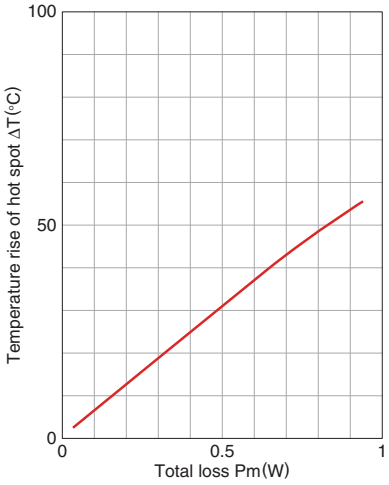

The 20% and 40% graph shows when a 20% and 40% drop from the initial AL-value has been made due to the DC superimposition.

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

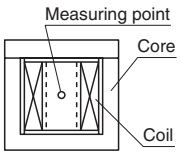



Measuring conditions
- Coil：ø0.18 2UEW 100Ts
- Frequency：1kHz
- Current level：0.5mA
- Ambient temperature：25°C

### Temperature rise vs. Total loss (Typ.)

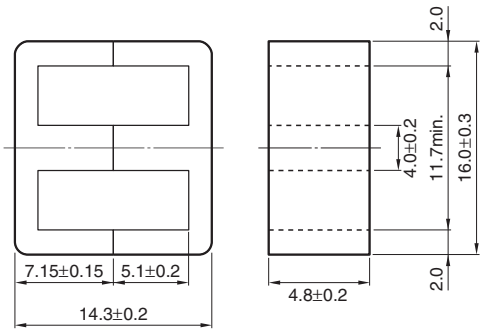



Measuring conditions
- Room space: approx. 400x300x 300cm
- Ambient temperature：25°C
- Humidity：45(%)RH.



# Mn-Zn E series **Part No.: PC47EE16-Z**

## SHAPES AND DIMENSIONS



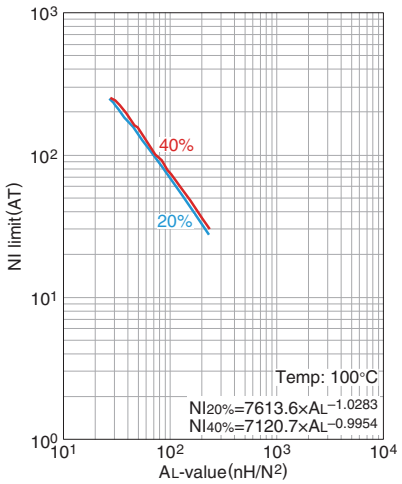

Dimensions in mm

| Effective parameter | | | | | | | | Electrical characteristics | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Core factor | Effective magnetic path length | Effective cross-sectional area | Effective core volume | Cross-sectional center pole area | Minimum cross-sectional center pole are | Cross-sectional winding area of core | Weigh | AL-value * | | Core loss |
| C1 | ℓe | Ae | Ve | Acp | Acp min. | Acw | | | | |
| ($mm^{-1}$) | (mm) | ($mm^2$) | ($mm^3$) | ($mm^2$) | ($mm^2$) | ($mm^2$) | (g/set) | (nH/N²) | | (W)max. |
| | | | | | | | | 1kHz 0.5mA | 100kHz 200mT | 100kHz 200mT 100°C |
| 1.82 | 34.5 | 19.0 | 656 | 19.2 | 17.5 | 41.4 | 3.3 | 1140±25% | | 0.28 |

* Coil：ø0.18 2UEW 100Ts

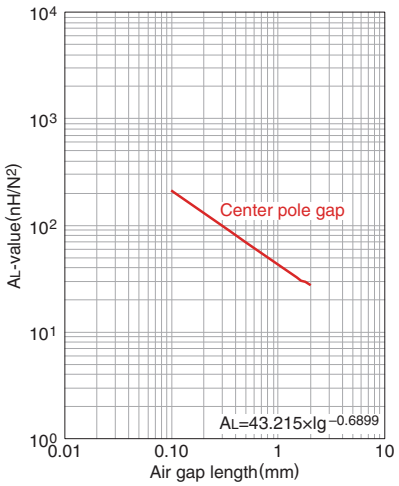
○ Calculated output power (forward converter mode): 32W (100kHz)

### 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.

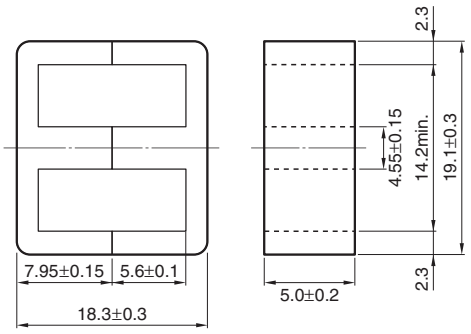
### AL-value vs. Air gap length (Typ.)




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

# Mn-Zn E series **Part No.: PC47EE19-Z**

## SHAPES AND DIMENSIONS



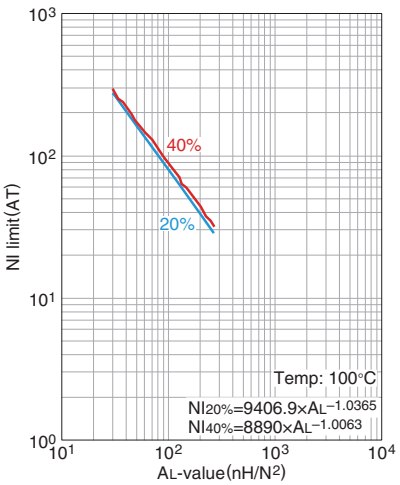

Dimensions in mm

| Effective parameter | | | | | | | | Electrical characteristics | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Core factor | Effective magnetic path length | Effective cross-sectional area | Effective core volume | Cross-sectional center pole area | Minimum cross-sectional center pole are | Cross-sectional winding area of core | Weigh | AL-value * | | Core loss |
| C1 | ℓe | Ae | Ve | Acp | Acp min. | Acw | | | | |
| (mm−1) | (mm) | (mm2) | (mm3) | (mm2) | (mm2) | (mm2) | (g/set) | (nH/N2) | | (W)max. |
| | | | | | | | | 1kHz 0.5mA | 100kHz 200mT | 100kHz 200mT 100°C |
| 1.71 | 39.4 | 23.0 | 906 | 22.8 | 21.1 | 55.8 | 4.8 | 1250±25% | | 0.39 |

* Coil：ø0.18 2UEW 100Ts

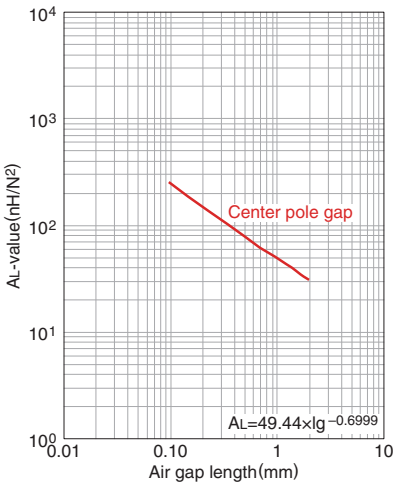
○ Calculated output power (forward converter mode): 45W (100kHz)

### 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.

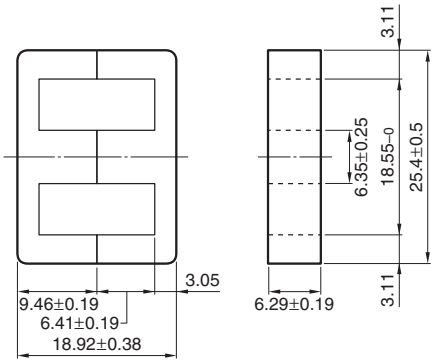
### AL-value vs. Air gap length (Typ.)




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

# Mn-Zn E series **Part No.: PC47EE25/19-Z**

## SHAPES AND DIMENSIONS



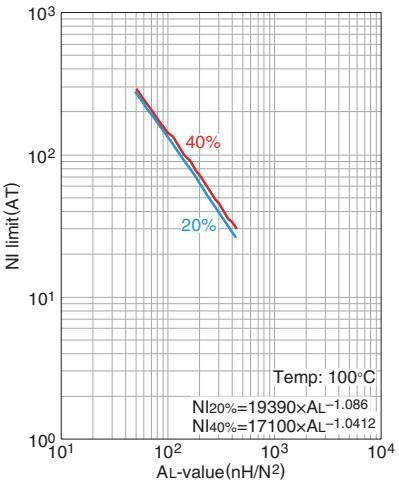

Dimensions in mm

| Effective parameter | | | | | | | | Electrical characteristics | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Core factor | Effective magnetic path length | Effective cross-sectional area | Effective core volume | Cross-sectional center pole area | Minimum cross-sectional center pole are | Cross-sectional winding area of core | Weigh | AL-value * | | Core loss |
| C1 | ℓe | Ae | Ve | Acp | Acp min. | Acw | | | | |
| (mm−1) | (mm) | (mm2) | (mm3) | (mm2) | (mm2) | (mm2) | (g/set) | (nH/N2) | | (W)max. |
| | | | | | | | | 1kHz 0.5mA | 100kHz 200mT | 100kHz 200mT 100°C |
| 1.22 | 48.7 | 40.0 | 1950 | 39.9 | 37.2 | 79.0 | 9.1 | 2000±25% | 2570 min. | 0.80 |

* Coil：ø0.23 2UEW 100Ts

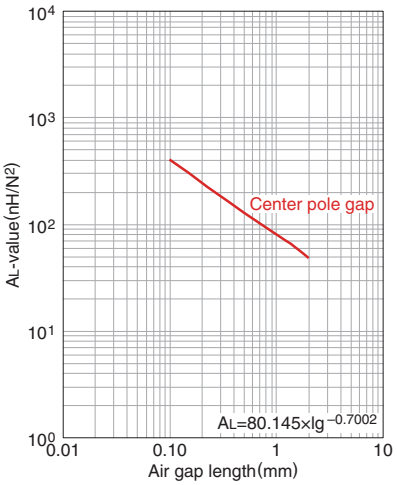
○ Calculated output power (forward converter mode): 93W (100kHz)

### NI limit vs. AL-value (Typ.)



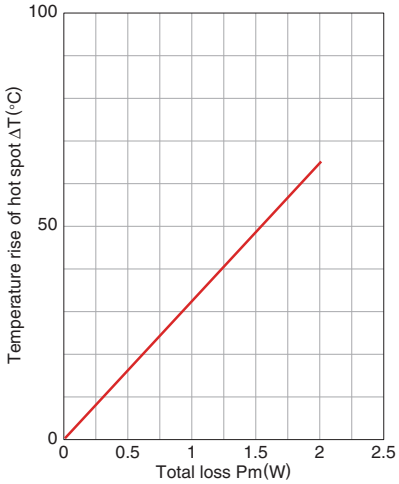

The 20% and 40% graph shows when a 20% and 40% drop from the initial AL-value has been made due to the DC superimposition.

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

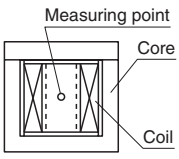



Measuring conditions
- Coil：ø0.23 2UEW 100Ts
- Frequency：1kHz
- Current level：0.5mA
- Ambient temperature：25°C

### Temperature rise vs. Total loss (Typ.)

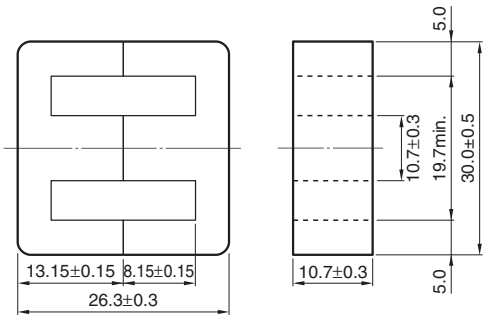



Measuring conditions
- Room space: approx. 400x300x 300cm
- Ambient temperature：25°C
- Humidity：45(%)RH.



# Mn-Zn E series **Part No.: PC47EE30-Z**

## SHAPES AND DIMENSIONS




Dimensions in mm

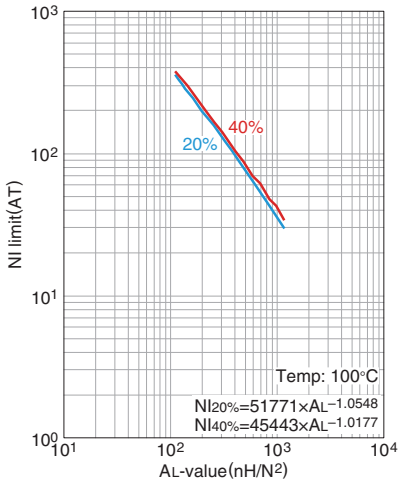
Based on DIN 41295.

| Effective parameter | | | | | | | | Electrical characteristics | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Core factor | Effective magnetic path length | Effective cross-sectional area | Effective core volume | Cross-sectional center pole area | Minimum cross-sectional center pole are | Cross-sectional winding area of core | Weigh | AL-value * | | Core loss |
| C1 | ℓe | Ae | Ve | Acp | Acp min. | Acw | | | | |
| (mm−1) | (mm) | (mm2) | (mm3) | (mm2) | (mm2) | (mm2) | (g/set) | (nH/N2) | | (W)max. |
| | | | | | | | | 1kHz 0.5mA | 100kHz 200mT | 100kHz 200mT 100°C |
| 0.529 | 57.7 | 109.9 | 6290 | 114 | 108 | 75.8 | 32 | 4690±25% | | 2.03 |

* Coil：ø0.35 2UEW 100Ts

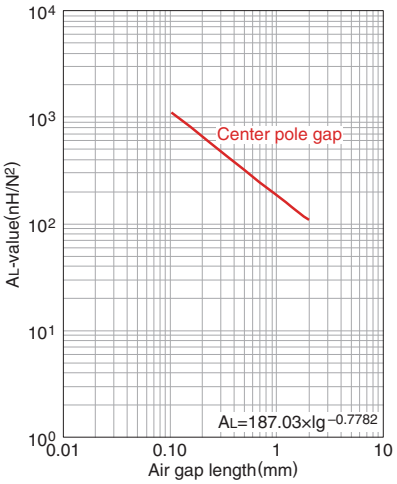
○ Calculated output power (forward converter mode): 203W (100kHz)

### 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.

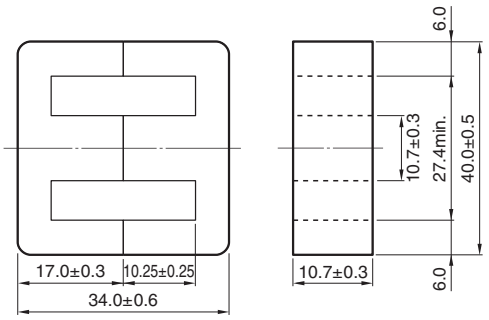
### AL-value vs. Air gap length (Typ.)




Measuring conditions
- Coil：ø0.35 2UEW 100Ts
- Frequency：1kHz
- Current level：0.5mA
- Ambient temperature：25°C

# Mn-Zn E series **Part No.: PC47EE40-Z**

## SHAPES AND DIMENSIONS



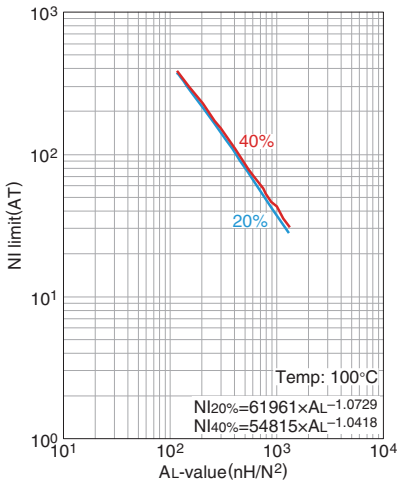

Dimensions in mm

| Effective parameter | | | | | | | | Electrical characteristics | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Core factor | Effective magnetic path length | Effective cross-sectional area | Effective core volume | Cross-sectional center pole area | Minimum cross-sectional center pole are | Cross-sectional winding area of core | Weigh | AL-value * | | Core loss |
| C1 | ℓe | Ae | Ve | Acp | Acp min. | Acw | | | | |
| (mm−1) | (mm) | (mm2) | (mm3) | (mm2) | (mm2) | (mm2) | (g/set) | (nH/N2) | | (W)max. |
| | | | | | | | | 1kHz 0.5mA | 100kHz 200mT | 100kHz 200mT 100°C |
| 0.060 | 77.3 | 128 | 9890 | 114 | 108 | 164 | 50 | 4150±25% | | 3.1 |

* Coil：ø0.18 2UEW 100Ts

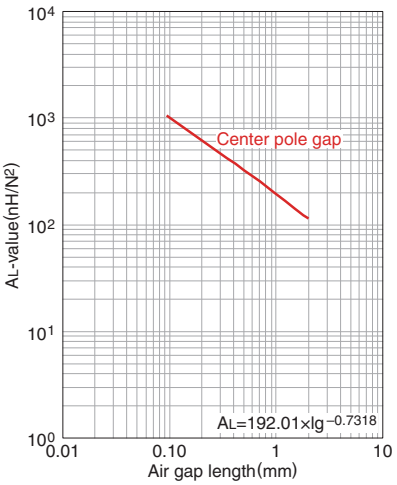
○ Calculated output power (forward converter mode): 311W (100kHz)

### 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.

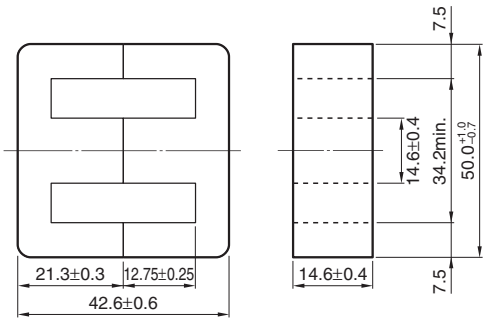
### AL-value vs. Air gap length (Typ.)




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

# Mn-Zn E series **Part No.: PC47EE50-Z**

## SHAPES AND DIMENSIONS



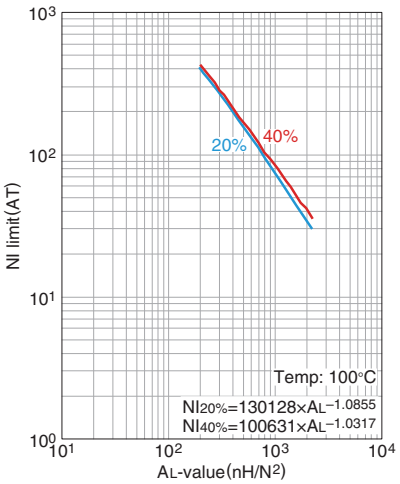

Dimensions in mm

| Effective parameter | | | | | | | | Electrical characteristics | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Core factor | Effective magnetic path length | Effective cross-sectional area | Effective core volume | Cross-sectional center pole area | Minimum cross-sectional center pole are | Cross-sectional winding area of core | Weigh | AL-value * | | Core loss |
| C1 | ℓe | Ae | Ve | Acp | Acp min. | Acw | | | | |
| (mm−1) | (mm) | (mm2) | (mm3) | (mm2) | (mm2) | (mm2) | (g/set) | (nH/N2) | | (W)max. |
| | | | | | | | | 1kHz 0.5mA | 100kHz 200mT | 100kHz 200mT 100°C |
| 0.425 | 95.8 | 226 | 21600 | 213 | 202 | 262 | 116 | 6110±25% | | 8.78 |

* Coil：ø0.18 2UEW 100Ts

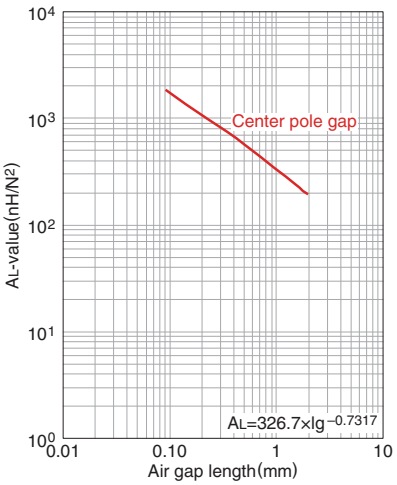
○ Calculated output power (forward converter mode): 556W (100kHz)

### 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.

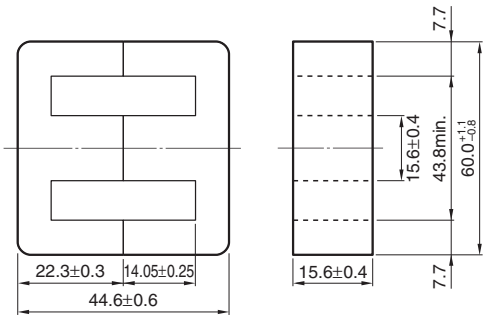
### AL-value vs. Air gap length (Typ.)




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

# Mn-Zn E series **Part No.: PC47EE60-Z**

## SHAPES AND DIMENSIONS



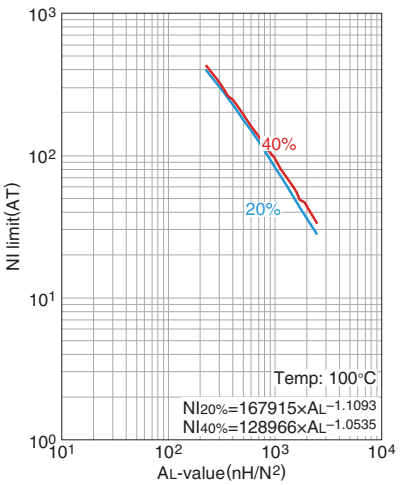

Dimensions in mm

| Effective parameter | | | | | | | | Electrical characteristics | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Core factor | Effective magnetic path length | Effective cross-sectional area | Effective core volume | Cross-sectional center pole area | Minimum cross-sectional center pole are | Cross-sectional winding area of core | Weigh | AL-value * | | Core loss |
| C1 | ℓe | Ae | Ve | Acp | Acp min. | Acw | | | | |
| (mm−1) | (mm) | (mm2) | (mm3) | (mm2) | (mm2) | (mm2) | (g/set) | (nH/N2) | | (W)max. |
| | | | | | | | | 1kHz 0.5mA | 100kHz 200mT | 100kHz 200mT 100°C |
| 0.446 | 110 | 247 | 27100 | 243 | 231 | 407 | 135 | 5670±25% | | 11.35 |

* Coil：ø0.18 2UEW 100Ts

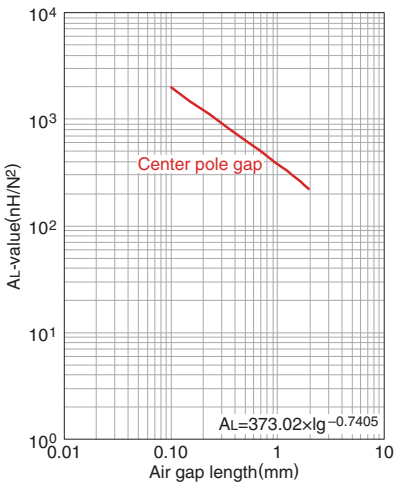
○ Calculated output power (forward converter mode): 713W (100kHz)

### 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