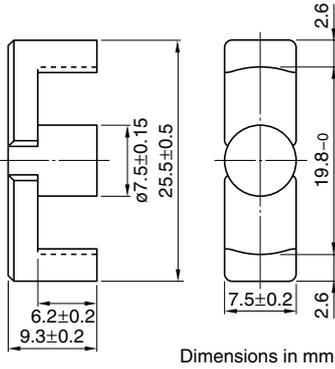


## EER Series EER25.5 Cores(JIS FEER 25.5A)



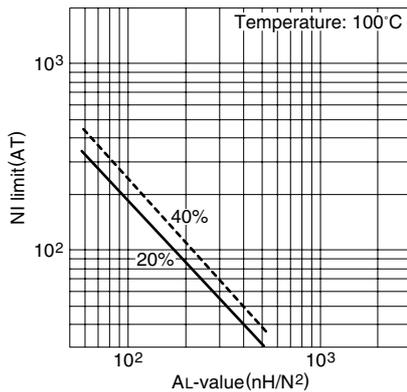
### Parameter

Core factor	C1	mm <sup>-1</sup>	1.08
Effective magnetic path length	ℓ <sub>e</sub>	mm	48.2
Effective cross-sectional area	A <sub>e</sub>	mm <sup>2</sup>	44.8
Effective core volume	V <sub>e</sub>	mm <sup>3</sup>	2160
Cross-sectional center pole area	A <sub>cp</sub>	mm <sup>2</sup>	44.2
Minimum cross-sectional center pole area	A <sub>cp min.</sub>	mm <sup>2</sup>	42.4
Cross-sectional winding area of core	A <sub>cw</sub>	mm <sup>2</sup>	79.4
Weight (approx.)	g		11

Part No.	AL-value (nH/N <sup>2</sup> )	Core loss (W) at 100°C 100kHz, 200mT	Calculated output power (forward converter mode)
<b>PC40EER25.5-Z</b>	1920±25% (1kHz, 0.5mA)* 2910 min. (100kHz, 200mT)	0.98 max.	87W (100kHz)

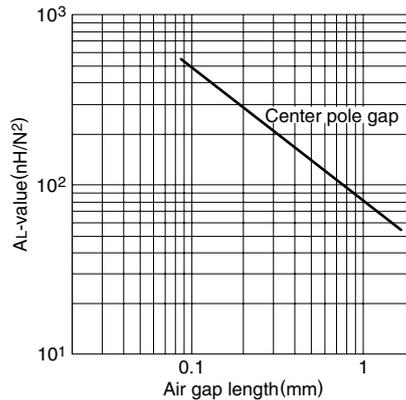
\* Coil: ø0.35 2UEW 100Ts

### NI limit vs. AL-value for PC40EER25.5 gapped core (Typical)



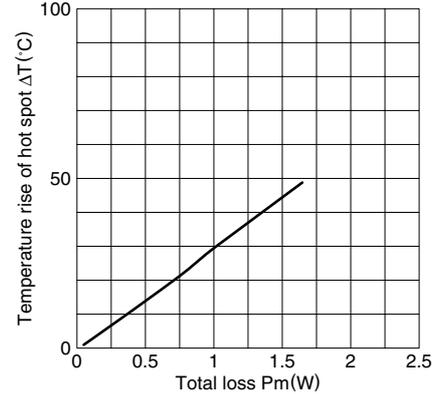
Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

### AL-value vs. Air gap length for PC40EER25.5 core (Typical)

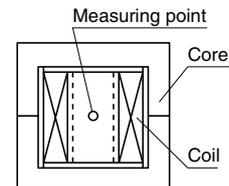


Measuring conditions • Coil: ø0.35 2UEW 100Ts  
• Frequency: 1kHz  
• Level: 0.5mA

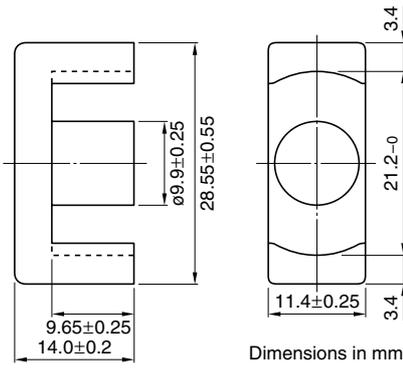
### Temperature rise vs. Total loss for EER25.5 core (Typical) (Ambient temperature: 25°C)



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)



# EER Series EER28 Cores(JIS FEER 28.5A)



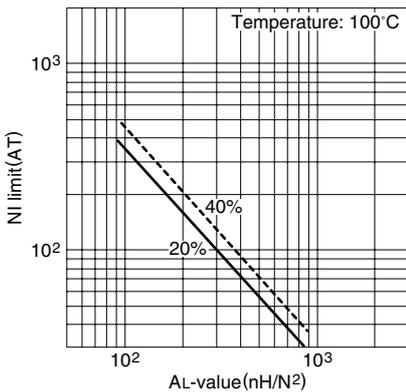
### Parameter

Core factor	C1	mm <sup>-1</sup>	0.78
Effective magnetic path length	$\ell_e$	mm	64.0
Effective cross-sectional area	$A_e$	mm <sup>2</sup>	82.1
Effective core volume	$V_e$	mm <sup>3</sup>	5250
Cross-sectional center pole area	$A_{cp}$	mm <sup>2</sup>	77.0
Minimum cross-sectional center pole area	$A_{cp \text{ min.}}$	mm <sup>2</sup>	73.1
Cross-sectional winding area of core	$A_{cw}$	mm <sup>2</sup>	114
Weight (approx.)		g	28

Part No.	AL-value (nH/N <sup>2</sup> )	Core loss (W) at 100°C 100kHz, 200mT	Calculated output power (forward converter mode)
<b>PC40EER28-Z</b>	2870±25% (1kHz, 0.5mA)* 4350 min. (100kHz, 200mT)	2.3 max.	203W (100kHz)

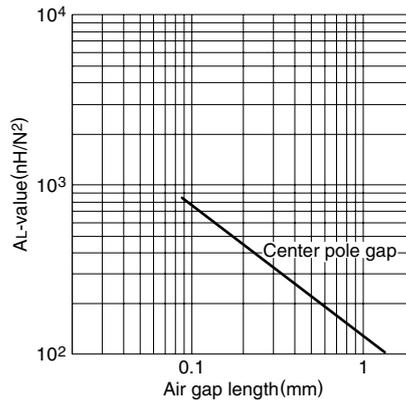
\* Coil:  $\phi 0.35$  2UEW 100Ts

### NI limit vs. AL-value for PC40EER28 gapped core (Typical)



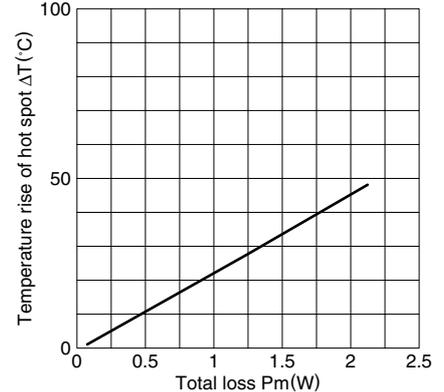
Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

### AL-value vs. Air gap length for PC40EER28 core (Typical)

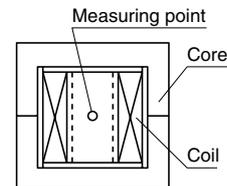


Measuring conditions • Coil:  $\phi 0.35$  2UEW 100Ts  
• Frequency: 1kHz  
• Level: 0.5mA

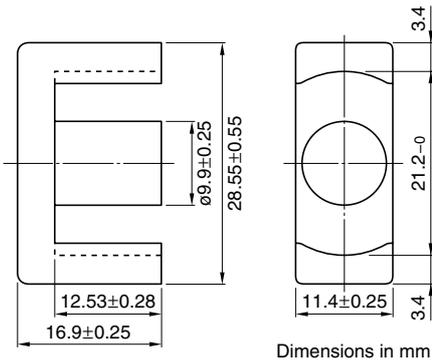
### Temperature rise vs. Total loss for EER28 core (Typical) (Ambient temperature: 25°C)



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)



# EER Series EER28L Cores(JIS FEER 28.5B)



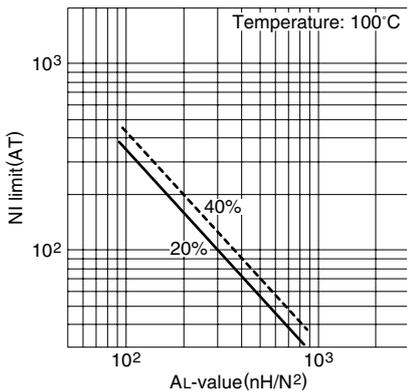
### Parameter

Core factor	C1	mm <sup>-1</sup>	0.928
Effective magnetic path length	ℓ <sub>e</sub>	mm	75.5
Effective cross-sectional area	A <sub>e</sub>	mm <sup>2</sup>	81.4
Effective core volume	V <sub>e</sub>	mm <sup>3</sup>	6150
Cross-sectional center pole area	A <sub>cp</sub>	mm <sup>2</sup>	77.0
Minimum cross-sectional center pole area	A <sub>cp min.</sub>	mm <sup>2</sup>	73.1
Cross-sectional winding area of core	A <sub>cw</sub>	mm <sup>2</sup>	148
Weight (approx.)	g		33

Part No.	AL-value (nH/N <sup>2</sup> )	Core loss (W) at 100°C 100kHz, 200mT	Calculated output power (forward converter mode)
<b>PC40EER28L-Z</b>	2520±25% (1kHz, 0.5mA)* 3660 min. (100kHz, 200mT)	2.7 max.	228W (100kHz)

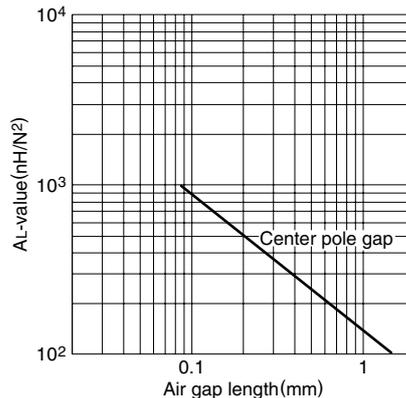
\* Coil: ø0.35 2UEW 100Ts

### NI limit vs. AL-value for PC40EER28L gapped core (Typical)



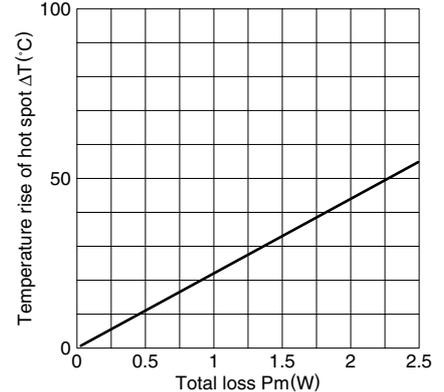
Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

### AL-value vs. Air gap length for PC40EER28L core (Typical)

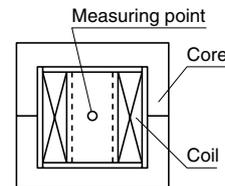


Measuring conditions • Coil: ø0.35 2UEW 100Ts  
• Frequency: 1kHz  
• Level: 0.5mA

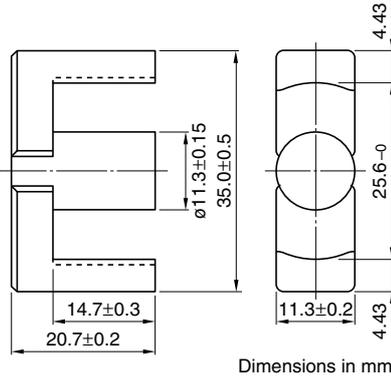
### Temperature rise vs. Total loss for EER28L core (Typical) (Ambient temperature: 25°C)



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)



## EER Series EER35 Cores(JIS FEER 35A)



Dimensions in mm

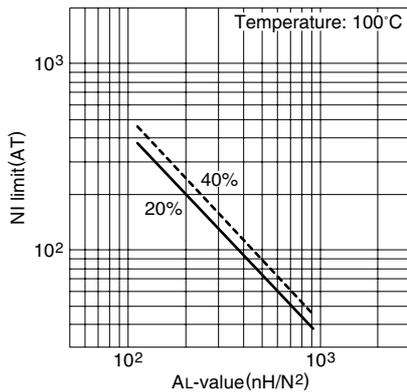
### Parameter

Core factor	C1	mm <sup>-1</sup>	0.849
Effective magnetic path length	$\ell_e$	mm	90.8
Effective cross-sectional area	$A_e$	mm <sup>2</sup>	107
Effective core volume	$V_e$	mm <sup>3</sup>	9720
Cross-sectional center pole area	$A_{cp}$	mm <sup>2</sup>	100
Minimum cross-sectional center pole area	$A_{cp \text{ min.}}$	mm <sup>2</sup>	97.6
Cross-sectional winding area of core	$A_{cw}$	mm <sup>2</sup>	218
Weight (approx.)		g	52

Part No.	AL-value (nH/N <sup>2</sup> )	Core loss (W) at 100°C 100kHz, 200mT	Calculated output power (forward converter mode)
<b>PC40EER35-Z</b>	2770±25% (1kHz, 0.5mA)* 4000 min. (100kHz, 200mT)	4.2 max.	325W (100kHz)

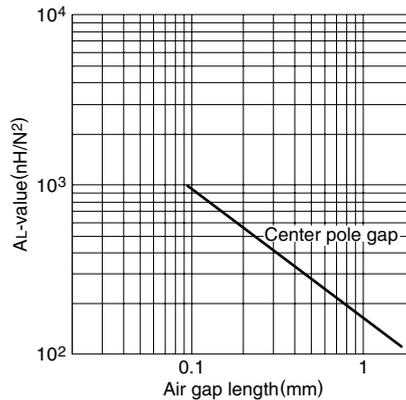
\* Coil: ø0.35 2UEW 100Ts

### NI limit vs. AL-value for PC40EER35 gapped core (Typical)



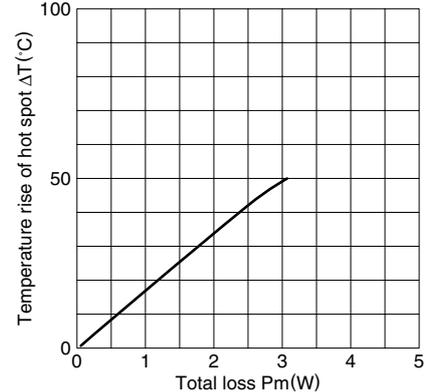
Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

### AL-value vs. Air gap length for PC40EER35 core (Typical)

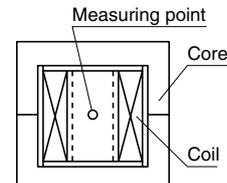


Measuring conditions • Coil: ø0.35 2UEW 100Ts  
• Frequency: 1kHz  
• Level: 0.5mA

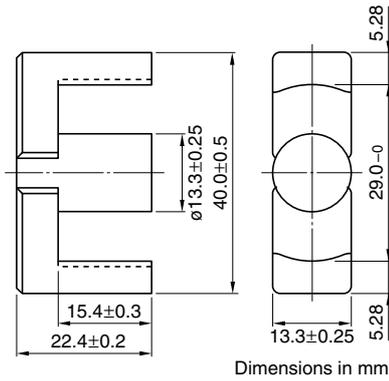
### Temperature rise vs. Total loss for EER35 core (Typical) (Ambient temperature: 25°C)



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)



## EER Series EER40 Cores



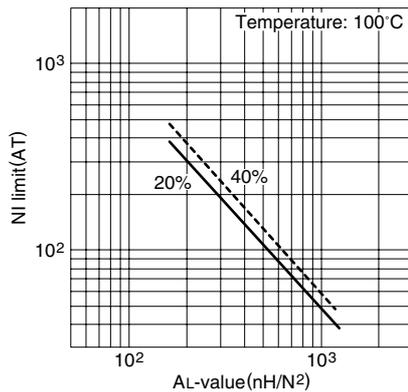
### Parameter

Core factor	C1	mm <sup>-1</sup>	0.658
Effective magnetic path length	$\ell_e$	mm	98.0
Effective cross-sectional area	$A_e$	mm <sup>2</sup>	149
Effective core volume	$V_e$	mm <sup>3</sup>	14600
Cross-sectional center pole area	$A_{cp}$	mm <sup>2</sup>	139
Minimum cross-sectional center pole area	$A_{cp \text{ min.}}$	mm <sup>2</sup>	134
Cross-sectional winding area of core	$A_{cw}$	mm <sup>2</sup>	249
Weight (approx.)	g		78

Part No.	AL-value (nH/N <sup>2</sup> )	Core loss (W) at 100°C 100kHz, 200mT	Calculated output power (forward converter mode)
<b>PC40EER40-Z</b>	3620±25% (1kHz, 0.5mA)* 5160 min. (100kHz, 200mT)	6.3 max.	421W (100kHz)

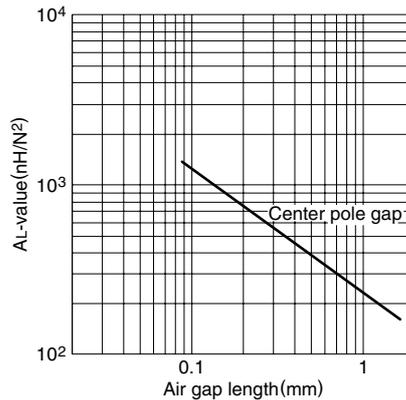
\* Coil:  $\phi 0.35$  2UEW 100Ts

**NI limit vs. AL-value for PC40EER40 gapped core (Typical)**



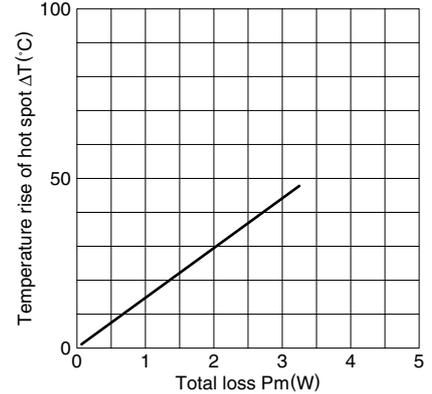
Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

**AL-value vs. Air gap length for PC40EER40 core (Typical)**

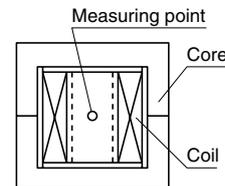


Measuring conditions • Coil:  $\phi 0.35$  2UEW 100Ts  
• Frequency: 1kHz  
• Level: 0.5mA

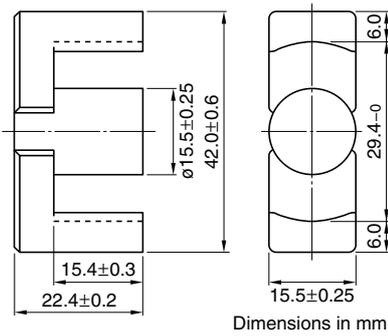
**Temperature rise vs. Total loss for EER40 core (Typical)**  
(Ambient temperature: 25°C)



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)



# EER Series EER42 Cores(JIS FEER 42)



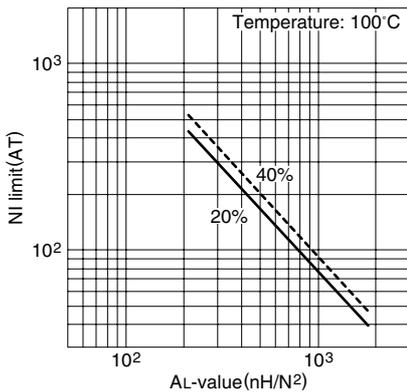
### Parameter

Core factor	C1	mm <sup>-1</sup>	0.509
Effective magnetic path length	ℓ <sub>e</sub>	mm	98.8
Effective cross-sectional area	A <sub>e</sub>	mm <sup>2</sup>	194
Effective core volume	V <sub>e</sub>	mm <sup>3</sup>	19200
Cross-sectional center pole area	A <sub>cp</sub>	mm <sup>2</sup>	187
Minimum cross-sectional center pole area	A <sub>cp min.</sub>	mm <sup>2</sup>	183
Cross-sectional winding area of core	A <sub>cw</sub>	mm <sup>2</sup>	223
Weight (approx.)	g		102

Part No.	AL-value (nH/N <sup>2</sup> )	Core loss (W) at 100°C 100kHz, 200mT	Calculated output power (forward converter mode)
<b>PC40EER42-Z</b>	4690±25% (1kHz, 0.5mA)* 6670 min. (100kHz, 200mT)	8.6 max.	433W (100kHz)

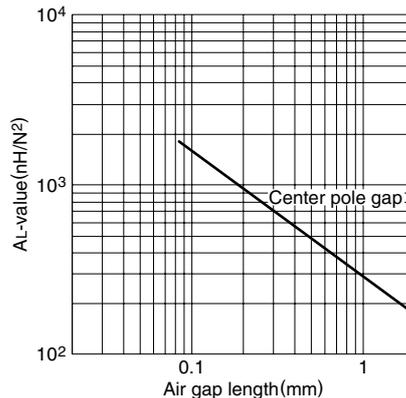
\* Coil: ø0.35 2UEW 100Ts

**NI limit vs. AL-value for PC40EER42 gapped core (Typical)**



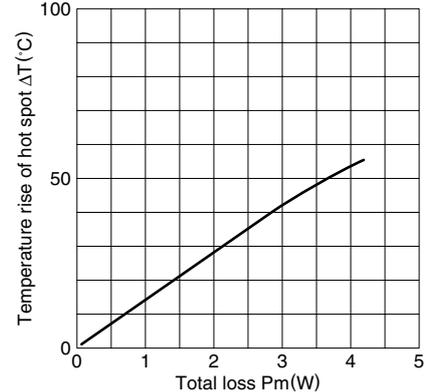
Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

**AL-value vs. Air gap length for PC40EER42 core (Typical)**

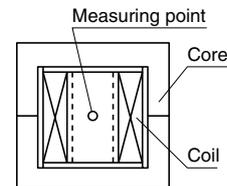


Measuring conditions • Coil: ø0.35 2UEW 100Ts  
• Frequency: 1kHz  
• Level: 0.5mA

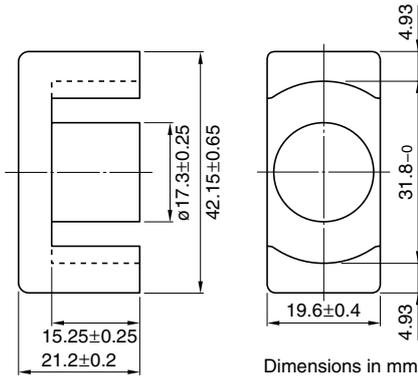
**Temperature rise vs. Total loss for EER42 core (Typical)**  
(Ambient temperature: 25°C)



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)



## EER Series EER42/42/20 Cores



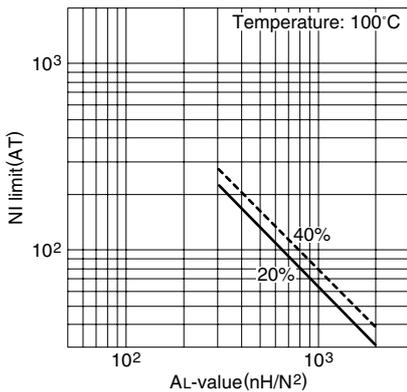
### Parameter

Core factor	C1	mm <sup>-1</sup>	0.411
Effective magnetic path length	ℓ <sub>e</sub>	mm	98.6
Effective cross-sectional area	A <sub>e</sub>	mm <sup>2</sup>	240
Effective core volume	V <sub>e</sub>	mm <sup>3</sup>	23700
Cross-sectional center pole area	A <sub>cp</sub>	mm <sup>2</sup>	235
Minimum cross-sectional center pole area	A <sub>cp min.</sub>	mm <sup>2</sup>	228
Cross-sectional winding area of core	A <sub>cw</sub>	mm <sup>2</sup>	229
Weight (approx.)	g		116

Part No.	AL-value (nH/N <sup>2</sup> )	Core loss (W) at 100°C 100kHz, 200mT	Calculated output power (forward converter mode)
<b>PC40EER42/42/20-Z</b>	5340±25% (1kHz, 0.5mA)* 8260 min. (100kHz, 200mT)	10.7 max.	509W (100kHz)

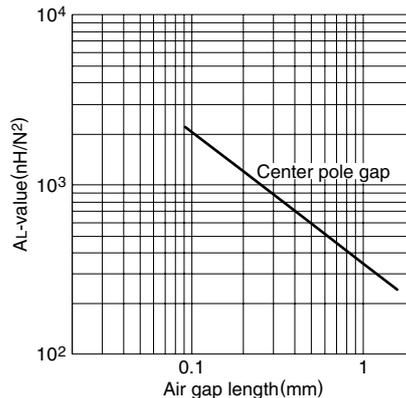
\* Coil: ø0.35 2UEW 100Ts

**NI limit vs. AL-value for PC40EER42/42/20 gapped core (Typical)**



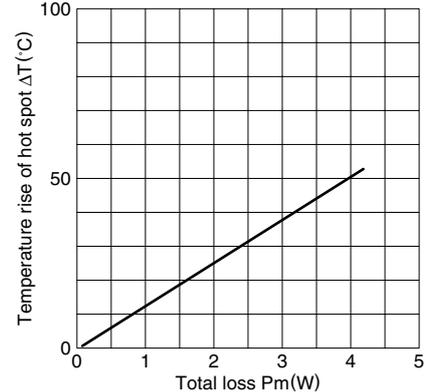
Note: NI limit shows the point where the exciting current is 20% and 40% away from its extended linear part.

**AL-value vs. Air gap length for PC40EER42/42/20 core (Typical)**



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

**Temperature rise vs. Total loss for EER42/42/20core (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)

