

P 5,8 × 3,3

Core

B65501

- Pot cores are supplied in sets

Magnetic characteristics (per set)

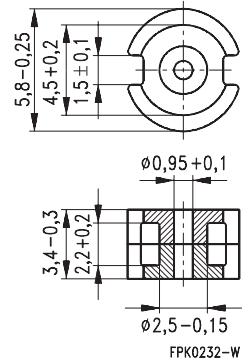
$$\Sigma l/A = 1,68 \text{ mm}^{-1}$$

$$l_e = 7,9 \text{ mm}$$

$$A_e = 4,7 \text{ mm}^2$$

$$V_e = 37 \text{ mm}^3$$

Approx. weight 0,2 g/set



Ungapped ¹⁾

Material	A_L value	μ_e	Ordering code
	nH		-D with center hole
M33	350 + 30/- 20 %	470	B65501-D-R33
N26	800 + 40/- 30 %	1070	B65501-D-Y26

1) Gapped pot cores on request

- With center hole

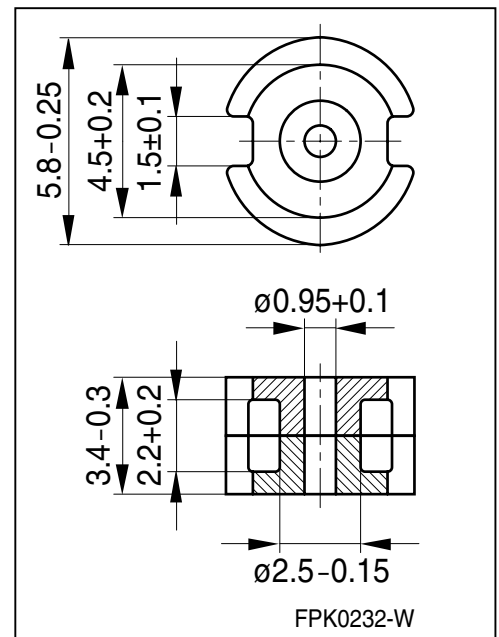
Magnetic characteristics (per set)

$$\begin{aligned} \Sigma l/A &= 1.68 \text{ mm}^{-1} \\ l_e &= 7.9 \text{ mm} \\ A_e &= 4.7 \text{ mm}^2 \\ V_e &= 37 \text{ mm}^3 \end{aligned}$$

Approx. weight: 0.2 g/set

Mode of delivery: Sets

Packing: Standard styrofoam tray
(size 200 mm x 300 mm)



Material	A_L value ¹⁾ [nH]	μ_e	Air gap [mm]	Ordering code ²⁾
N48	800 +40% / -30%	1070	—	B65501D0000Y048

¹⁾ Measurement parameter: $f = 10 \text{ kHz}$ / $B = 0.25 \text{ mT}$ / 100 turns / room temperature

²⁾ Gapped pot cores on request

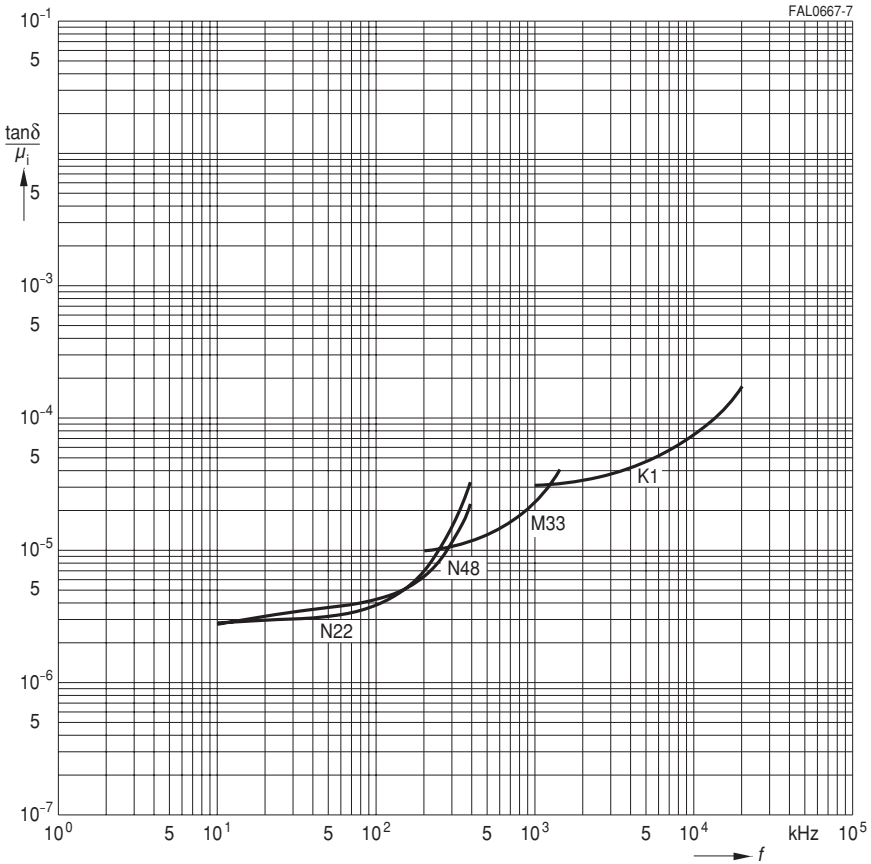
2 Material properties

Preferred application			Resonant Circuit inductors			Inductors for line attenuation	
Material			K 1	M 33 ¹⁾	N 48	K 10	K 8
Base material			NiZn	MnZn	MnZn	NiZn	NiZn
Color code (adjuster)			violet	white	—	—	—
	Symbol	Unit					
Initial permeability ($T = 25\text{ °C}$)	μ_i		80 $\pm 25\%$	750 $\pm 25\%$	2300 $\pm 25\%$	800 $\pm 25\%$	860 $\pm 25\%$
Meas. field strength	H	A/m	5000	2000	1200	5000	1200
Flux density (near saturation) ($f = 10\text{ kHz}$)	$B_S(25\text{ °C})$ $B_S(100\text{ °C})$	mT mT	310 280	400 310	420 310	320 240	340 240
Coercive field strength ($f = 10\text{ kHz}$)	$H_C(25\text{ °C})$ $H_C(100\text{ °C})$	A/m A/m	380 350	80 65	26 19	40 25	40 25
Optimum frequency range	f_{\min} f_{\max}	MHz	1,5 ... 12	0,2 ... 1,0	0,01 ... 0,1	0,1 ... 1	0,1 ... 0,5
Relative loss factor at f_{\min} at f_{\max}	$\tan \delta/\mu_i$	10^{-6} 10^{-6}	< 40 < 120	< 12 < 20	< 4 < 6	< 15 < 60	< 20 < 30
Hysteresis material constant	η_B	$10^{-6}/\text{mT}$	< 36	< 1,8	< 0,4	< 5	< 4,5
Curie temperature	T_C	°C	> 400	> 200	> 170	> 150	> 150
Relative temperature coefficient at 25 ... 55 °C at 5 ... 25 °C	α_F	$10^{-6}/\text{K}$	2 ... 8 7 ... 1	0,5 ... 2,6 —	0,3 ... 1,3 0,3 ... 1,3	— —	— —
Mean value of α_F at 25 ... 55 °C		$10^{-6}/\text{K}$	4	1,6	0,70	10,0	9,2
Density (typical values)		kg/m^3	4650	4500	4700	5000	5100
Disaccommodation factor at 25 °C	DF	10^{-6}	20	8	2	—	—
Resistivity	ρ	Ωm	10^5	5	3	10^5	10^5
Core shapes			RM, P, Toroid, P core half	RM, P, Toroid, Double- aperture, P core- half	RM, P	Toroid, Double- aperture	Toroid
Other material properties (graphs) see page			50	57	70	55	54

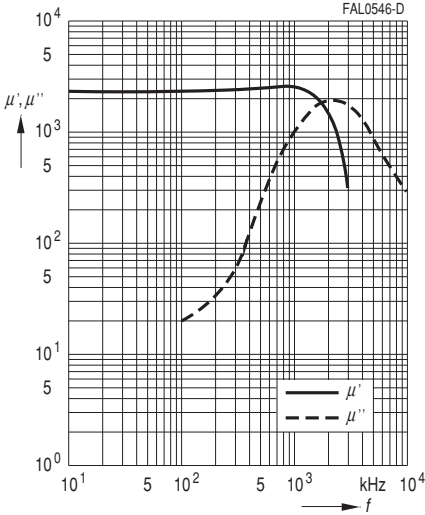
1) For threaded cores $\mu_i = 600 \pm 20\%$

Relative loss factor versus frequency

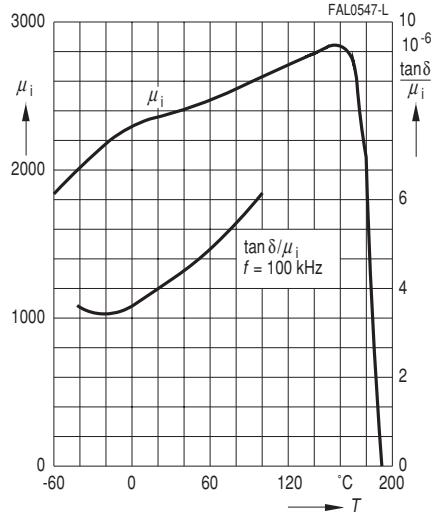
(measured with ring cores, measuring flux density $\hat{B} \leq 0,25 \text{ mT}$)



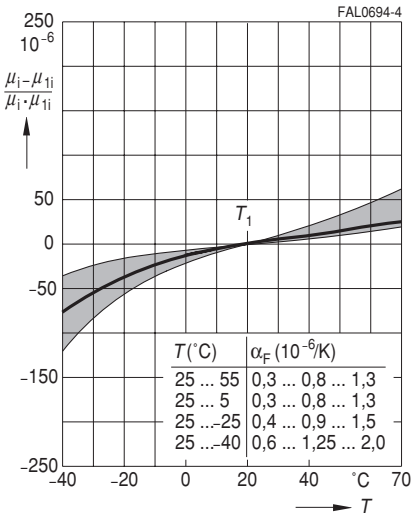
Complex permeability
versus frequency
(measured on R10 toroids, $\hat{B} \leq 0,25$ mT)



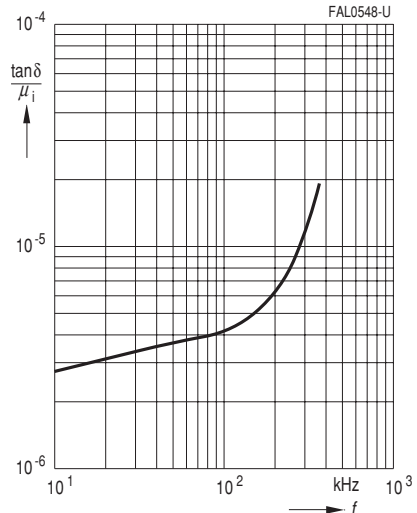
Initial permeability μ_i and relative loss factor
 $\tan \delta/\mu_i$ versus temperature
(measured on R10 toroids, $\hat{B} \leq 0,25$ mT)



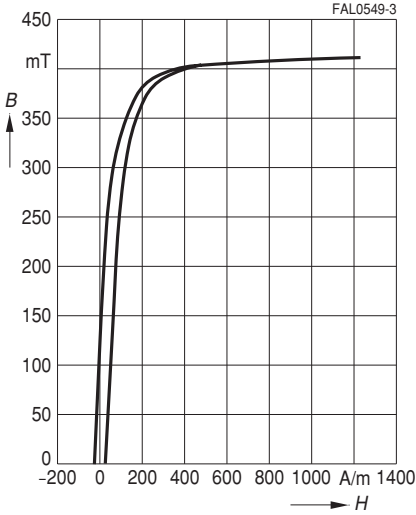
Permeability factor versus temperature
(measured on P and RM cores,
 $\hat{B} \leq 0,25$ mT), $\mu_i \approx 2300$



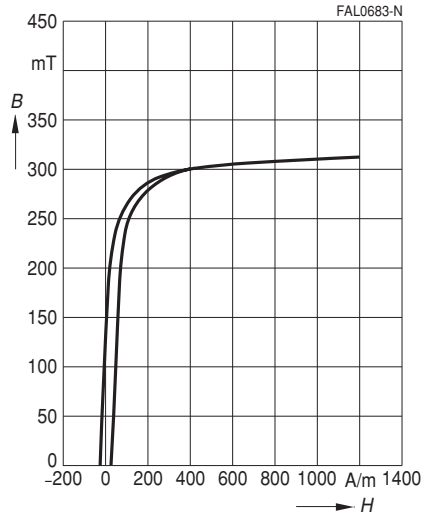
Relative loss factor $\tan \delta/\mu_i$
versus frequency
(measured on R29 toroids)



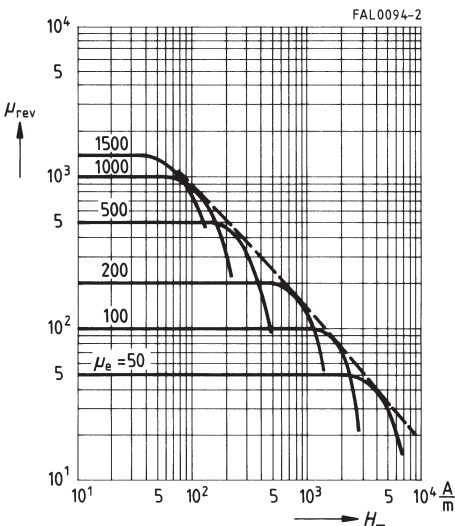
Dynamic magnetization curves
(typical values)
($f = 10 \text{ kHz}$, $T = 25 \text{ °C}$)



Dynamic magnetization curves
(typical values)
($f = 10 \text{ kHz}$, $T = 100 \text{ °C}$)



DC magnetic bias
(measured on ETD cores, typical values)
($\hat{B} \leq 0,25 \text{ mT}$, $f = 10 \text{ kHz}$, $T = 25 \text{ °C}$)



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Published by EPCOS AG

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