Based on IEC 60401, the data specified here are typical data for the material in question, which have been determined principally on the basis of ring cores.

The purpose of such characteristic material data is to provide the user with improved means for comparing different materials.

There is no direct relationship between characteristic material data and the data measured using other core shapes and/or core sizes made of the same material. In the absence of further agreements with the manufacturer, only those specifications given for the core shape and/or core size in question are binding.

1 Material application survey

Usage	Frequency range	Material	Specific application	Type
High Q inductors in resonant circuits and filters	up to 0,1 MHz	N 48	Filters in telephony, MW IF filters	Gapped P and RM cores, adjusting cores, TT/PR
	0,2 – 1,6 MHz	M 33		
	1,5 – 12 MHz	K 1		
	6 – 30 MHz	K 12	VHF filters	
	up to 100 MHz	U 17		
Line attenuation	up to 2 MHz	M 13	Balun transformers	Ring cores, double-aperture cores
		K 10		
Broadband transformers (e.g. antenna transformers for MW, SW, VHF, TV) ISDN transformers, digital data transformers (xDSL), current-compensated interference suppression chokes	up to 3 MHz	T 46	ISDN transformers Impedance and matching transformers	Ring cores
		T 42		RM, P, ER, EP, ring cores
		T 38		
		T 37	Current-compensated chokes	Ring cores, DE cores
		T 35		RM, P, ring, DE
		T 65		P, ring cores, TT/PR, EP
	up to 5 MHz	N 30	Current-compensated chokes	Ring cores, double-aperture cores
		N 26	Radio-frequency transformers	
	up to 10 MHz	M 33		
	up to 250 MHz	K 1		
		K 12		
	up to 400 MHz	U 17		
Sensors, ID systems	up to 1 MHz	N 22	Inductive proximity switches	P core halves
	up to 2 MHz	M 33		
	up to 100 MHz	FPC		

Usage	Frequency range	Material	Specific application	Type
Power transformers, chokes	1 to 100 kHz	N 27	Transformers for flyback converters	E, EC, ETD, U, RM, PM
		N 41	Chokes	Pot cores, RM
	up to 200 kHz	N 53	Diode splitting transformers	E, U, UR
		N 62		E, U, UR, ETD, ER
		N 67	High-voltage transformers	
		N 72	Electronic lamp ballast devices	E, ETD
	up to 300 kHz	N 82	Diode splitting transformers	U, UR
	up to 500 kHz	N 87	Transformers for forward and push-pull converters	ETD, EFD, RM, TT/PR, ER, ELP
	0,3 – 1 MHz	N 49	Transformers for DC/DC converters, particularly resonance converters	EFD, ER, ELP, RM (low profile)
	0,5 – 1 MHz	N 59		

2 Material properties

Preferred application			Resonant circuit inductors				
Material			U 17[1)]	K 12[1)]	K 1	M 33[2)]	N 48
Base material			NiZn	NiZn	NiZn	MnZn	MnZn
Color code (adjuster)			gray	yellow	violet	white	—
	Symbol	Unit					
Initial permeability (T = 25 °C)	μ_i		10 ± 30 %	26 ± 25 %	80 ± 25 %	750 ± 25 %	2300 ± 25 %
Meas. field strength Flux density (near saturation) (f = 10 kHz)	H B_S (25 °C) B_S (100 °C)	A/m mT mT	10000 180 170	2000 230 210	5000 310 280	2000 400 310	1200 420 310
Coercive field strength (f = 10 kHz)	H_c (25 °C) H_c (100 °C)	A/m A/m	1900 1800	450 410	380 350	80 65	26 19
Optimum frequency range		MHz	10 … 220	3 … 40	1,5 … 12	0,2 … 1,0	0,001 … 0,1
Relative loss factor at f_{min} at f_{max}	$\tan \delta/\mu_i$	10^{-6} 10^{-6}	< 100 < 1700	< 150 < 600	< 40 < 120	< 12 < 20	2,7 4,2
Hysteresis material constant	η_B	10^{-6}/mT	< 27	< 45	< 36	< 1,8	< 0,4
Curie temperature	T_C	°C	> 550	> 450	> 400	> 200	> 170
Relative temperature coefficient at 25 ... 55 °C at 5 ... 20 °C	α_F	10^{-6}/K	25 … 50 45 … 20	3 … 14 12 … 0	2 … 8 7 … 1	0,5 … 2,6 —	0,4 … 0,5 0,7 … 0,5
Mean value of α_F at 25 ... 55 °C		10^{-6}/K	37	9	4	1,6	0,50
Density (typical values)		kg/m³	4400	4600	4650	4500	4700
Disaccommodation factor at 25 °C	DF	10^{-6}	—	—	20	8	2
Resistivity	ρ	Ωm	10^5	10^5	10^5	5	3
Core shapes			P, Double aperture	P, Ring	RM, P, Ring, P core half	RM, P, Ring, Double aperture, P core half	RM, P
Other material properties (graphs) see page			49	51	53	55	57

1) Perminvar ferrite: irreversible variations in quality and permeability may occur in case of strong fields in the core (> 1500 A/m). In the case of shape-related dimensions, these dimensions may be exceeded by up to 5%.
2) For threaded cores μi = 600 ± 20%

Material properties (continued)

Preferred application			Inductors for line attenuation		Special type
Material			K 10	M 13	N 22
Base material			NiZn	NiZn	MnZn
Color code (adjuster)			—	—	red
	Symbol	Unit			
Initial permeability (T = 25 ˚C)	μ_i		800 ± 25 %	2300 ± 25 %	2300 ± 25 %
Meas. field strength Flux density (near saturation) (f = 10 kHz)	H B_S (25 ˚C) B_S (100 ˚C)	A/m mT mT	5000 320 240	1200 280 135	1200 370 260
Coercive field strength (f = 10 kHz)	H_c (25 ˚C) H_c (100 ˚C)	A/m A/m	40 25	12 8	18 14
Optimum frequency range		MHz	0,1 … 1	0,001 … 0,1	0,001 … 0,2
Relative loss factor at f_{min} at f_{max}	$\tan \delta/\mu_i$	10^{-6} 10^{-6}	< 15 < 60	< 5 < 20	< 2 < 20
Hysteresis material constant	η_B	10^{-6}/mT	< 5	< 4	< 1,4
Curie temperature	T_C	˚C	> 150	> 105	> 145
Relative temperature coefficient at 25 ... 55 ˚C at 5 ... 20 ˚C	α_F	10^{-6}/K	— —	3,0 … 5,0 5,0 … 7,5	— —
Mean value of α_F at 25 ... 55 ˚C		10^{-6}/K	10,0	3,7	0,9
Density (typical values)		kg/m^3	5000	5200	4700
Disaccommodation factor at 25 ˚C	DF	10^{-6}	—	—	4
Resistivity	ρ	Ωm	10^5	10^5	1
Core shapes			Ring, Double aperture	Ring, Double aperture	Ring, P core half, Double aperture
Other material properties (graphs) see page			59	60	61

Material properties (continued)

Preferred application			Broadband transformers				
Material			N 26	N 30	T 65	T 35	T 37
Base material			MnZn	MnZn	MnZn	MnZn	MnZn
	Symbol	Unit					
Initial permeability (T = 25 ˚C)	μ_i		2300 ± 25 %	4300 ± 25 %	5200 ± 30 %	6000 ± 25 %	6500 ± 25 %
Meas. field strength Flux density (near saturation) (f = 10 kHz)	H B_S (25 ˚C) B_S (100 ˚C)	A/m mT mT	1200 380 260	1200 380 240	1200 460 320	1200 390 270	1200 380 240
Coercive field strength (f = 10 kHz)	H_c (25 ˚C) H_c (100 ˚C)	A/m A/m	23 17	12 8	12 11	12 9	9 8
Optimum frequency range		MHz	0,001 … 0,1	— —	— —	— —	— —
Relative loss factor at f_{min} at f_{max}	tan δ/μ_i	10^{-6} 10^{-6}	< 2,8 < 3,8	— —	— —	— —	— —
Hysteresis material constant	η_B	10^{-6}/mT	< 0,3	< 1,1	< 1,1	< 1,1	< 1,1
Curie temperature	T_C	˚C	> 150	> 130	> 160	> 130	> 130
Relative temperature coefficient at 25 ... 55 ˚C at 5 ... 25 ˚C	α_F	10^{-6}/K	0 … 1,5 0 … 1,8	— —	— —	— —	— —
Mean value of α_F at 25 ... 55 ˚C		10^{-6}/K	1,0	0,6	– 0,5	0,8	– 0,3
Density (typical values)		kg/m³	4700	4800	4930	4900	4900
Disaccommodation factor at 25 ˚C	DF	10^{-6}	—	—	—	—	—
Resistivity	ρ	Ωm	2	0,5	0,30	0,2	0,2
Core shapes			RM, P, EP	RM, P, EP, E, Ring, Double aperture	RM, P, ER, Ring	RM, P, EP, Ring	Ring, DE
Other material properties (graphs) see page			62	64	66	68	70

Material properties (continued)

Preferred application			Broadband transformers		
Material			T 38	T 42[3]	T 46[3]
Base material			MnZn	MnZn	MnZn
	Symbol	Unit			
Initial permeability (T = 25 ˚C)	μ_i		10000 ± 30 %	12000 ± 30 %	15000 ± 30 %
Meas. field strength Flux density (near saturation) (f = 10 kHz)	H B_S (25 ˚C) B_S (100 ˚C)	A/m mT mT	1200 380 240	1200 400 250	1200 400 240
Coercive field strength (f = 10 kHz)	H_c (25 ˚C) H_c (100 ˚C)	A/m A/m	9 6	7 6	7 6
Optimum frequency range		MHz	— —	— —	— —
Relative loss factor at f_{min} at f_{max}	tan δ/μ_i	10^{-6} 10^{-6}	— —	— —	— —
Hysteresis material constant	η_B	10^{-6}/mT	< 1,4	< 1,4	< 2,0
Curie temperature	T_C	˚C	> 130	> 130	> 130
Relative temperature coefficient at 25 ... 55 ˚C at 5 ... 20 ˚C	α_F	10^{-6}/K	— —	— —	— —
Mean value of α_F at 25 ... 55 ˚C		10^{-6}/K	– 0,4	– 0,3	– 0,6
Density (typical values)		kg/m^3	4900	4950	5000
Disaccommodation factor at 25 ˚C	DF	10^{-6}	—	—	—
Resistivity	ρ	Ωm	0,1	0,1	0,01
Core shapes			RM, P, EP, ER, E, Ring	RM, EP	Ring
Other material properties (graphs) see page			72	74	76

3) Material values defined on the basis of small ring cores (≤ R10)

Material properties (continued)

Preferred application			Power transformers				
Material			N 59	N 49	N 53	N 82[4)]	N 62
Base material			MnZn	MnZn	MnZn	MnZn	MnZn
	Symbol	Unit					
Initial permeability (T = 25 ˚C)	μ_i		850 ± 25 %	1300 ± 25 %	1700 ± 25 %	1900 ± 25 %	1900 ± 25 %
Flux density (H = 1200 A/m, f = 10 kHz)	B_S (25 ˚C) B_S (100 ˚C)	mT mT	460 370	460 370	490 420	490 415	500 410
Coercive field strength (f = 10 kHz)	H_c (25 ˚C) H_c (100 ˚C)	A/m A/m	60 50	55 45	26 16	17 11	18 11
Typical frequency range		kHz	500 … 1500	300 … 1000	16 … 200	16 … 300	16 … 200
Hysteresis material constant	η_B	10^{-6}/mT	—	—	—	—	—
Curie temperature	T_C	˚C	> 240	> 240	> 240	> 240	> 240
Mean value of α_F at 20 … 55 ˚C		10^{-6}/K	—	—	—	—	—
Density (typical values)		kg/m³	4750	4750	4800	4800	4800
Relative core losses (typical values)	P_V						
25 kHz, 200 mT, 100 ˚C		mW/g mW/cm³			20 100	14 69	16 80
100 kHz, 200 mT, 100 ˚C		mW/g mW/cm³			125 625	84 421	105 525
300 kHz, 100 mT, 100 ˚C		mW/g mW/cm³		120 600	135 670	88 440	
500 kHz, 50 mT, 100 ˚C		mW/g mW/cm³	39 180	24 120			
1 MHz, 50 mT, 100 ˚C		mW/g mW/cm³	110 510	115 560			
Resistivity	ρ	Ωm	26	11	6	11	4
Core shapes			EFD	RM, Ring, EFD, ER ELP	E, U	U, UR	ETD, E, U
Other material properties (graphs) see page			78	81	84	87	90

4) Preliminary data

Material properties (continued)

Preferred application			Power transformers				
Material			N 27	N 67[5]	N 87	N 72	N 41
Base material			MnZn	MnZn	MnZn	MnZn	MnZn
	Symbol	Unit					
Initial permeability (T = 25 ˚C)	μ_i		2000 ± 25 %	2100 ± 25 %	2200 ± 25 %	2500 ± 25 %	2800 ± 25 %
Flux density (H = 1200 A/m, f = 10 kHz)	B_S (25 ˚C) B_S (100 ˚C)	mT mT	500 410	480 380	480 380	480 370	490 390
Coercive field strength (f = 10 kHz)	H_c (25 ˚C) H_c (100 ˚C)	A/m	23 19	20 14	16 9	15 11	22 20
Typical frequency range		kHz	25 … 150	25 … 300	25 … 500	25 … 300	25 … 150
Hysteresis material constant	η_B	10^{-6}/mT	< 1,5	< 1,4	< 1,4	—	< 1,4
Curie temperature	T_C	˚C	> 220	> 220	> 210	> 210	> 220
Mean value of α_F at 20 … 55 ˚C		10^{-6}/K	3	4	4	—	4
Density (typical values)		kg/m³	4750	4800	4800	4800	4800
Relative core losses (typical values)	P_V						
25 kHz, 200 mT, 100 ˚C		mW/g mW/cm³	32 155	17 80		16 80	35 180
100 kHz, 200 mT, 100 ˚C		mW/g mW/cm³	190 920	105 525	80 385	110 540	280 1400
300 kHz, 100 mT, 100 ˚C		mW/g mW/cm³		115 560	85 410		
500 kHz, 50 mT, 100 ˚C		mW/g mW/cm³					
1 MHz, 50 mT, 100 ˚C		mW/g mW/cm³					
Resistivity	ρ	Ωm	3	6	8	12	2
Core shapes			P, PM, ETD, EC, ER, E, U, Ring	RM, P, EP, ETD, ER, EFD, E, U, Ring	RM, TT, P, PM, ETD, EFD, E, ER, ELP	E, EFD	RM, P
Other material properties (graphs) see page			93	96	99	102	105

5) Not for new design

Material properties (continued)

Preferred application			Injection-molded parts	Film	
Material			Ferrite Polymer Composite (FPC)		
Base material			C302	C350	C351
	Symbol	Unit			
Initial permeability f = 1 MHz	μ_i		17 ± 20 %	9 ± 20 %	9 ± 20 %
Flux density (near saturation) H = 25 kA/m f = 10 kHz	B_S (25 °C)	mT	330	255	255
Remanent induction H = 25 kA/m f = 10 kHz	B_r (25 °C)	mT	15	9	9
Coercive field strength H = 25 kA/m f = 10 kHz	H_C (25 °C)	A/m	770	600	600
Relative loss factor f = 1 MHz f = 100 MHz f = 1 GHz	$\tan\delta/\mu_i$		 < 0,0004 < 0,03 	 < 0,005 < 0,400	 < 0,005 < 0,400
Hysteresis material constant	η_B	10^{-3}/mT	< 0,25	< 2	< 2
Temperature coefficient	$\alpha = \Delta\mu/\mu\Delta T$	1/K	< 0,0002	$< 5 \cdot 10^{-5}$	$< 5 \cdot 10^{-5}$
Density		kg/m³	3500	2930	2930
Resistivity f = 1 kHz f = 10 kHz f = 10 MHz	ρ	Ωm	 21 13	 500 100	 500 100
Relative permittivity f = 1 kHz f = 10 kHz f = 10 MHz	ε_r		 280 100	 700 21	 700 21
Maximum operating temperature	T_{max}	°C	180	120	200
Dielectric strength		kV/mm	—	1	0,8
Tensile strength 6)	σ_Z	N/mm²	—	1,5	2,5
Tearing resistance 6)		%	—	25	25
Compressibility 6)	κ	N/mm²	—	70	70
Other material properties (graphs) see page			108	—	—

6) T = 23 °C and 50 % relative humidity

3 Measuring conditions

The following measuring conditions, which correspond largely to IEC 60401, apply for the material properties given in the table:

Properties (valid only for ring cores of sizes R 10 to R 36)			Measuring conditions			
			Frequency kHz	Field strength (material-dependent) kA/m	Max. flux density mT	Temper-ature ˚C
Initial permeability	μ_i		≤ 10		≤ 0,25	25
Flux density near to saturation	B	mT	≤ 10	≥ 1,2		25; 100
Coercive field strength	H_{cB}	A/m kA/m	≤ 10	≥ 1,2	near saturation	25; 100
Relative loss factor	$\tan \delta/\mu_i$		–		≤ 0,25	25
Hysteresis material constant	η_B	T^{-1}	 10 ($\mu_i \geq 500$) 100 ($\mu_i < 500$)		B_1 B_2 1,5 3,0 0,3 1,2	25
Curie temperature	T_c	˚C	≤ 10		≤ 0,25	
Relative temperature coefficient	α_F	10^{-6}/K	≤ 10		≤ 0,25	5 … 20 25 … 55
Density		kg/m^3				25
Disaccommodation factor	DF	10^{-6}	≤ 10		≤ 0,25	25; 60 [1)]
Resistivity	ρ	Ωm			—	25

The following properties are given only for materials for power applications:

Power loss	P_V	mW/cm^3 mW/g	25 100 300 500 1000		200 200 100 50 50	100

1) Higher temperature than specified by IEC (40˚C)

4 Specific material data

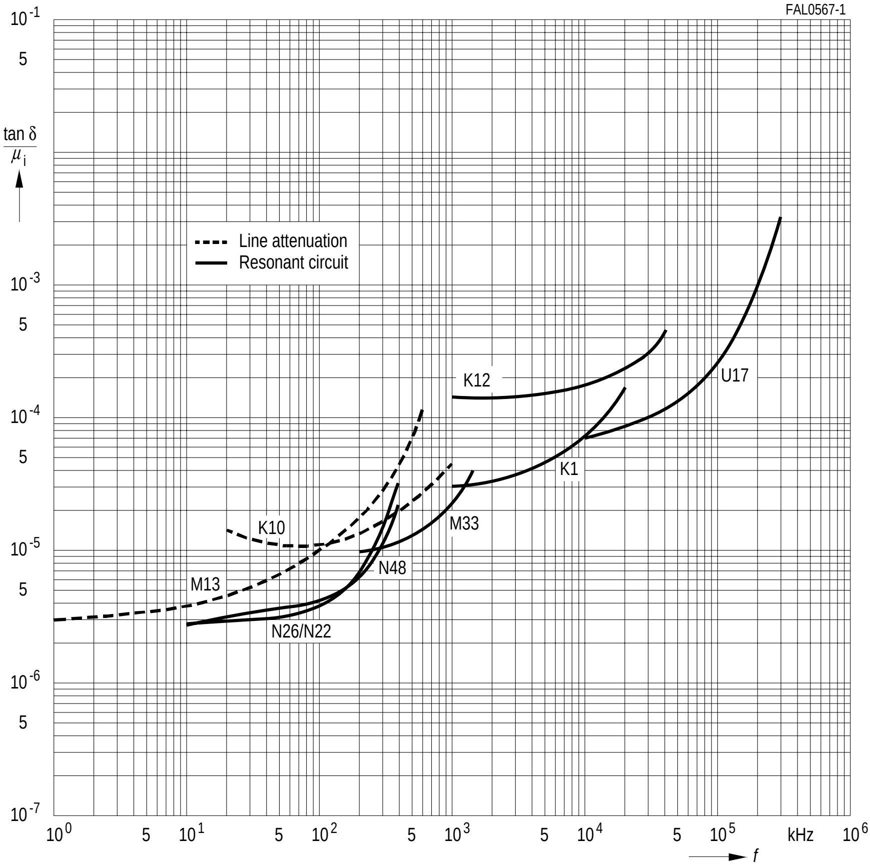
DC magnetic bias

$$H\_ = \frac{I\_ \cdot N}{l_e}$$

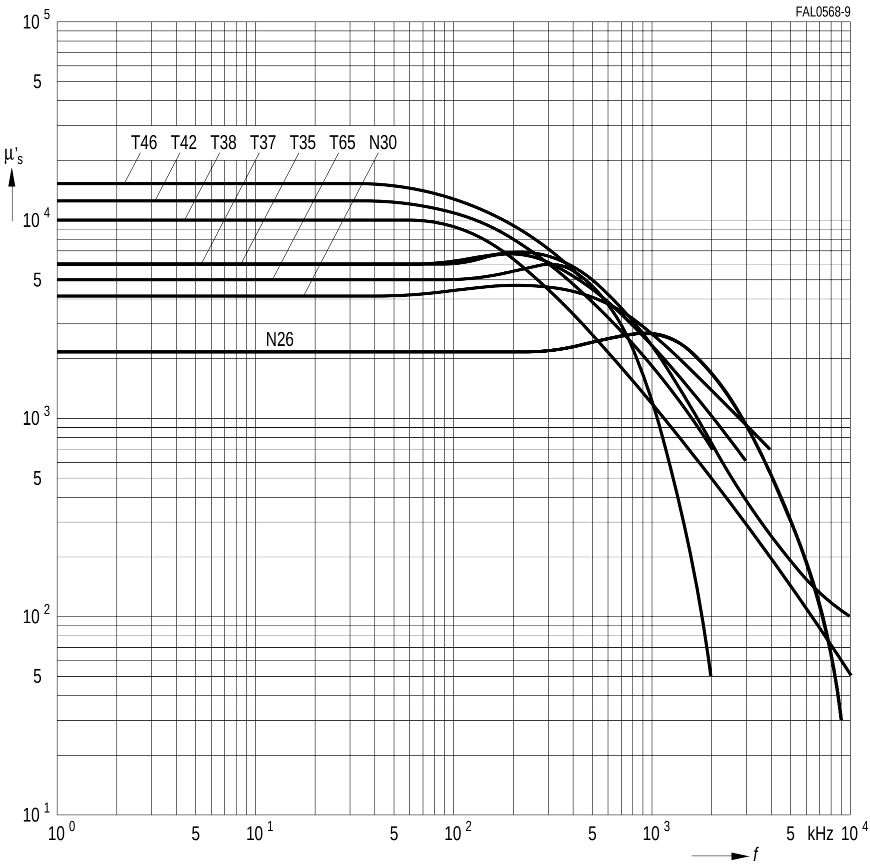
$H\_$ = DC field strength [A/m]
$I\_$ = Direct current [A]
N = Number of turns
l_e = Effective magnetic path length [m]

The curves of $\mu_{rev} = f(H\_)$ allow an approximate calculation of the variation in reversible permeability (μ_{rev}) and A_L value caused by magnetic bias. These curves are of particular interest for cores for transformers and chokes, since magnetic bias should be avoided if possible with inductors requiring high stability (filter inductors etc.). In the case of geometrically similar cores (i.e. in particular the same A_{min}/A_e ratio) the effective permeability of the core in question in conjunction with the given curves suffices to determine the reversible permeability to a close approximation.

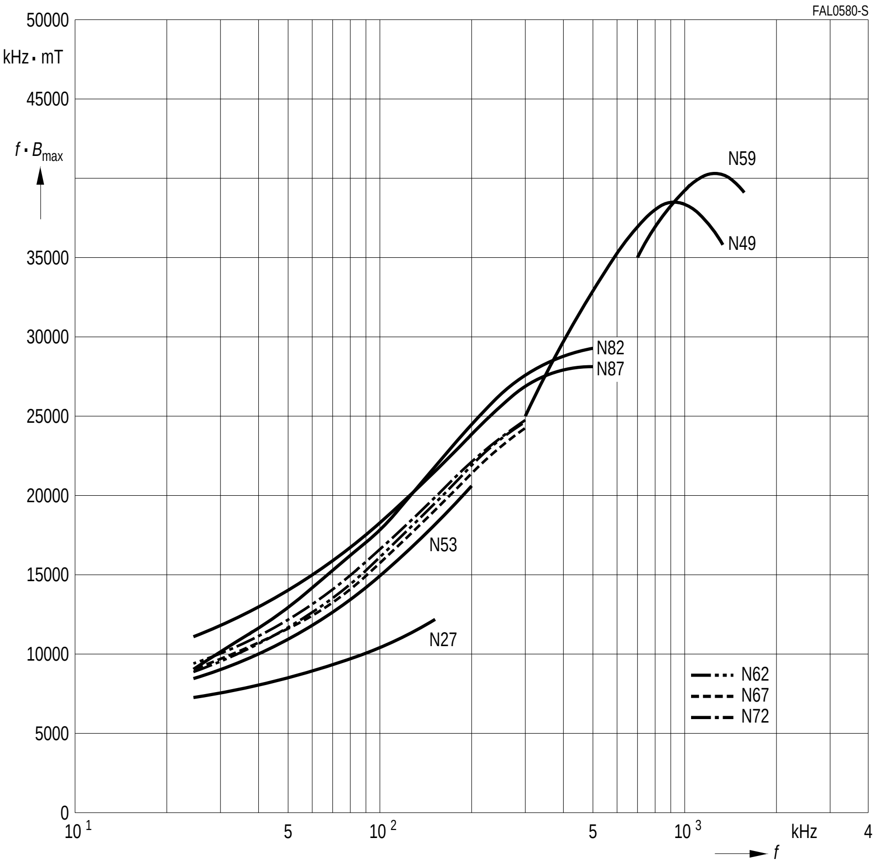
Relative loss factor versus frequency
(measured with ring cores, measuring flux density $\hat{B} \leq$ 0,25 mT)



Relative inductance component versus frequency
(measured with ring cores, measuring flux density $\hat{B} \leq 0{,}25$ mT)

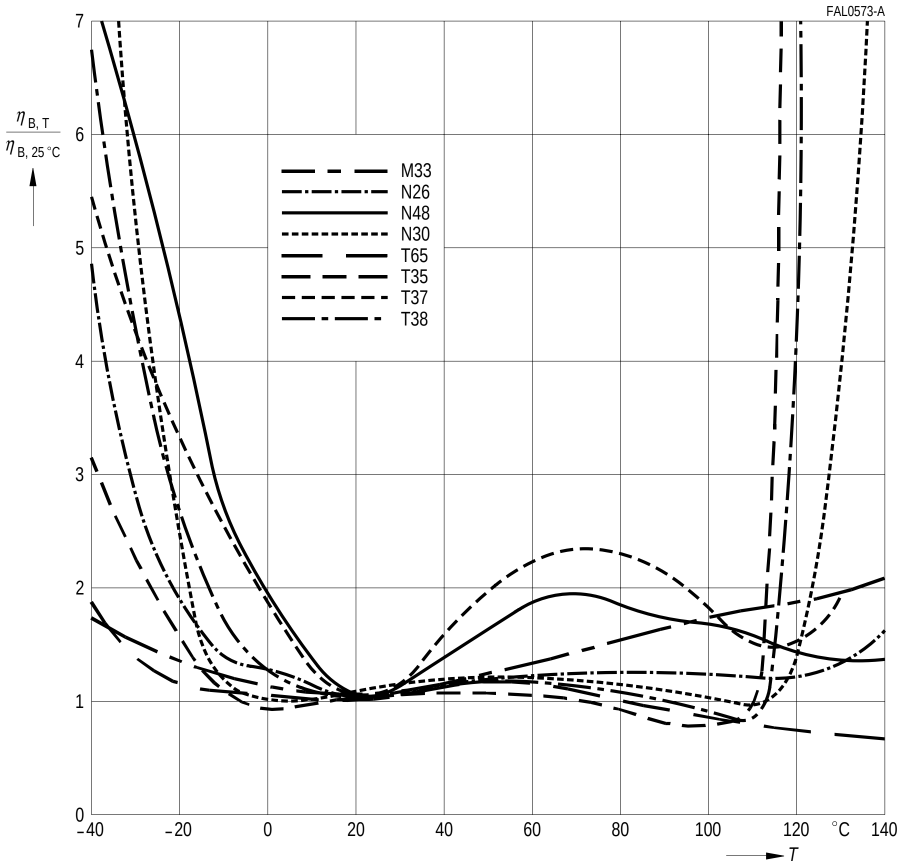


Performance factor versus frequency
(measured with ring cores R29, T = 100 ˚C, P_V = 300 kW/m³)

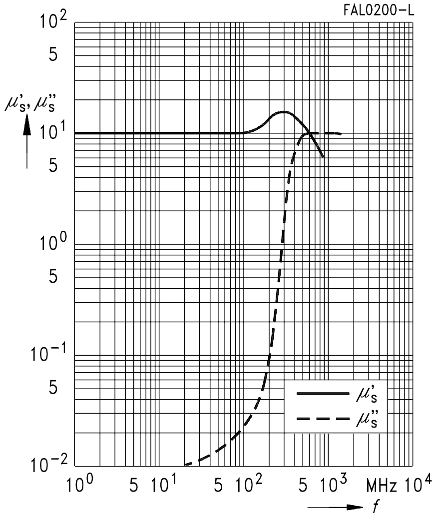


For definition of performance factor see page 120.

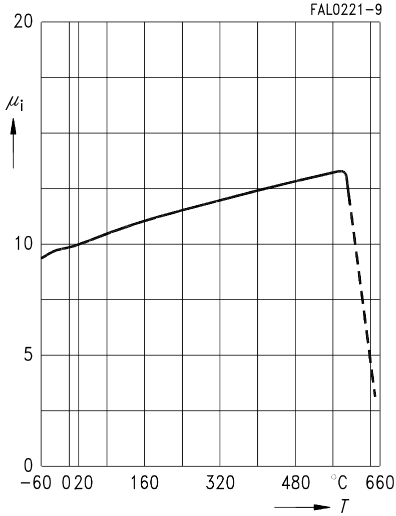
Standardized hysteresis material constant versus temperature



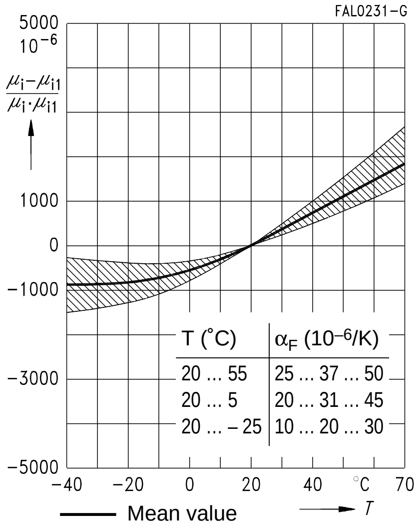
Complex permeability
versus frequency
(measured with R10 ring cores, $\hat{B} \leq 0{,}25$ mT)



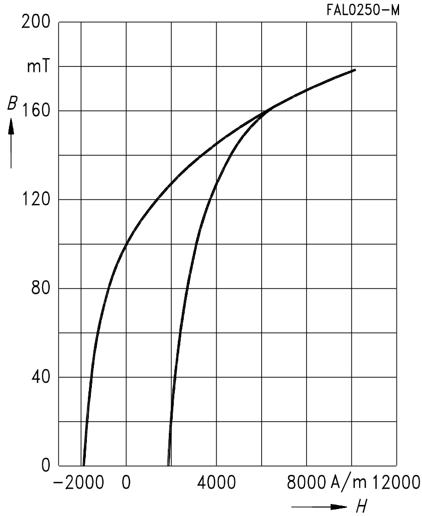
Initial permeability μ_i
versus temperature
(measured with R10 ring cores, $\hat{B} \leq 0{,}25$ mT)



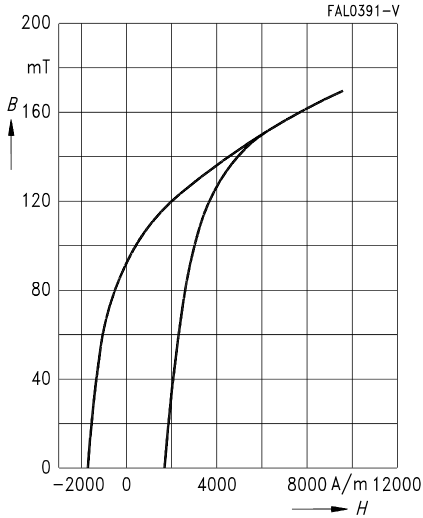
Permeability factor versus temperature
(measured with P and RM cores,
$\hat{B} \leq 0{,}25$ mT), $\mu_i \approx 10$



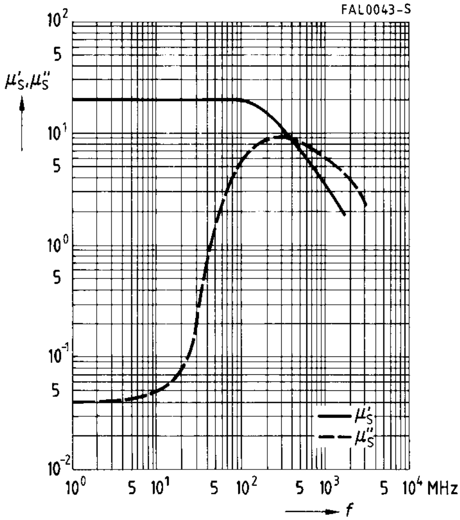
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 25 ˚C)



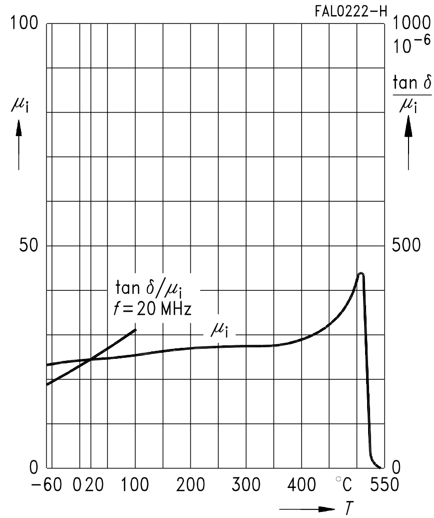
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 100 ˚C)



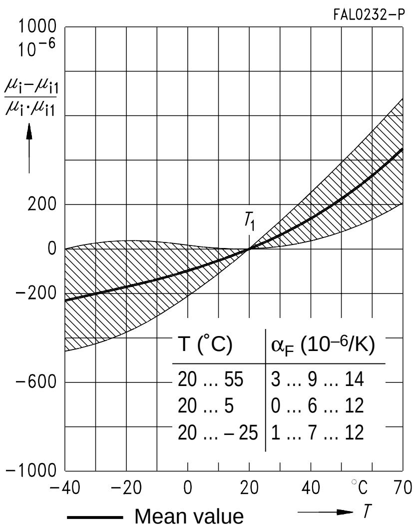
Complex permeability versus frequency (measured with R10 ring cores, $\hat{B} \leq 0{,}25$ mT)



Initial permeability μ_i and relative loss factor tan δ/μ_i versus temperature (measured with R10 ring cores, $\hat{B} \leq 0{,}25$ mT)

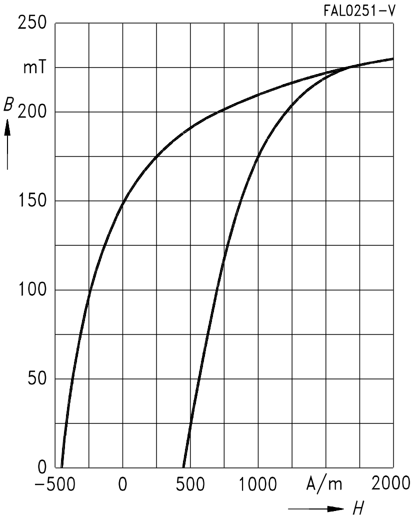


Permeability factor versus temperature (measured with P and RM cores, $\hat{B} \leq 0{,}25$ mT), $\mu_i \approx 26$

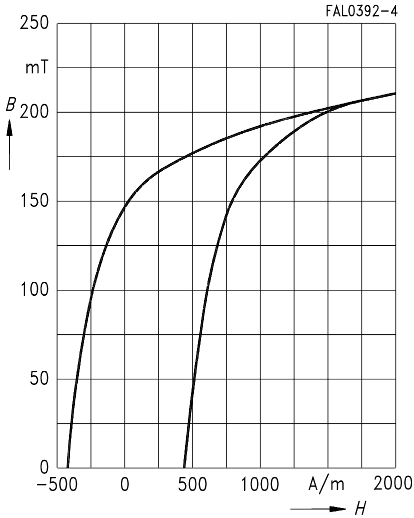


T (°C)	α_F (10^{-6}/K)
20 ... 55	3 ... 9 ... 14
20 ... 5	0 ... 6 ... 12
20 ... – 25	1 ... 7 ... 12

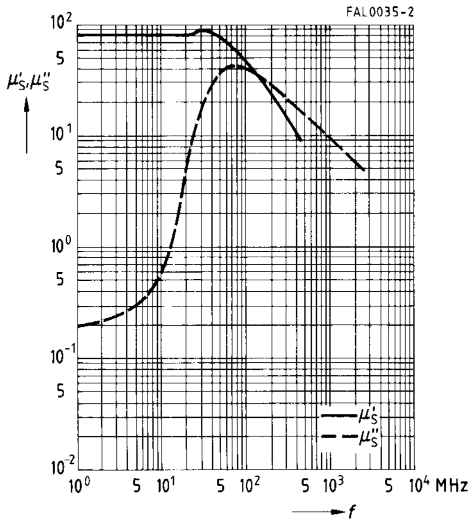
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 25 ˚C)



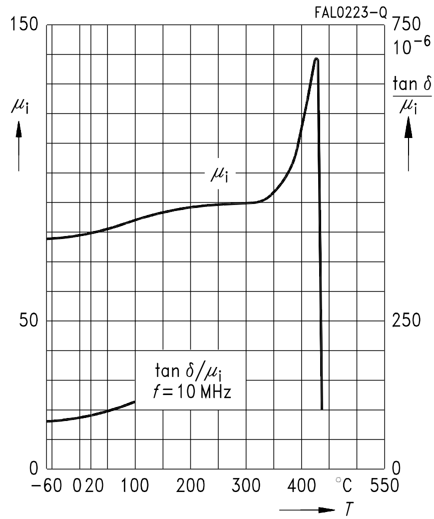
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 100 ˚C)



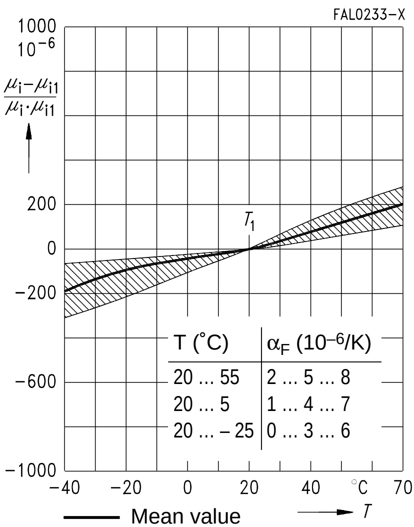
Complex permeability
versus frequency
(measured with R10 ring cores, $\hat{B} \leq 0{,}25$ mT)



Initial permeability μ_i and relative loss factor
tan δ/μ_i versus temperature
(measured with R10 ring cores, $\hat{B} \leq 0{,}25$ mT)

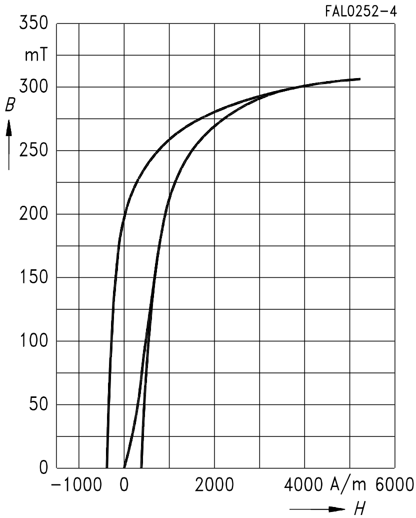


Permeability factor versus temperature
(measured with P and RM cores,
$\hat{B} \leq 0{,}25$ mT), $\mu_i \approx 80$

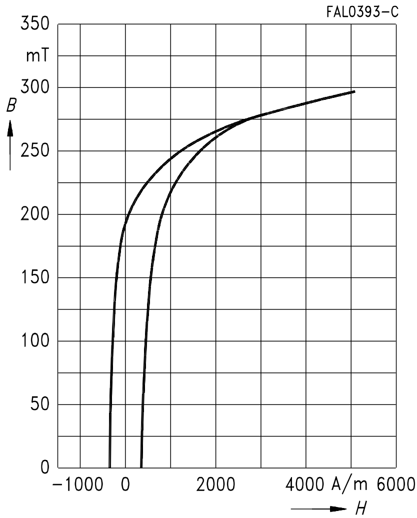


T (˚C)	α_F (10^{-6}/K)
20 ... 55	2 ... 5 ... 8
20 ... 5	1 ... 4 ... 7
20 ... – 25	0 ... 3 ... 6

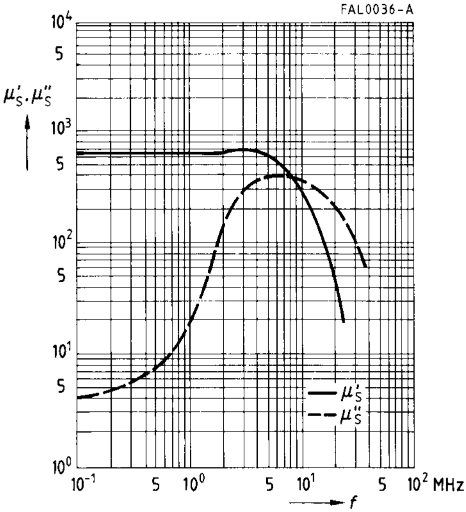
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 25 ˚C)



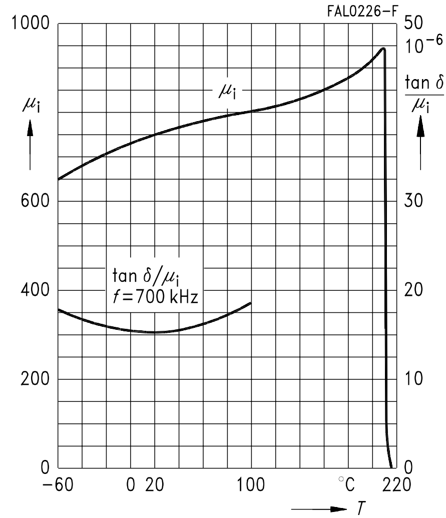
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T =100 ˚C)



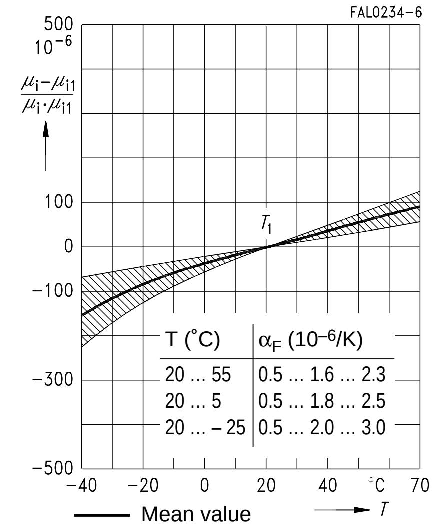
Complex permeability
versus frequency
(measured with R10 ring cores, $\hat{B} \leq$ 0,25 mT)



Initial permeability μ_i and relative loss factor tan δ/μ_i versus temperature
(measured with R10 ring cores, $\hat{B} \leq$ 0,25 mT)

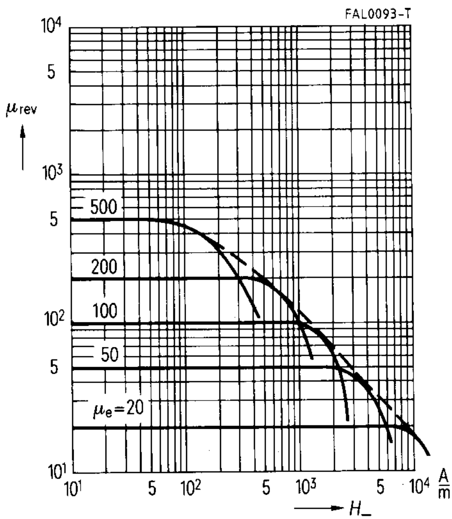


Permeability factor versus temperature
(measured with P and RM cores,
$\hat{B} \leq$ 0,25 mT), $\mu_i \approx$ 750

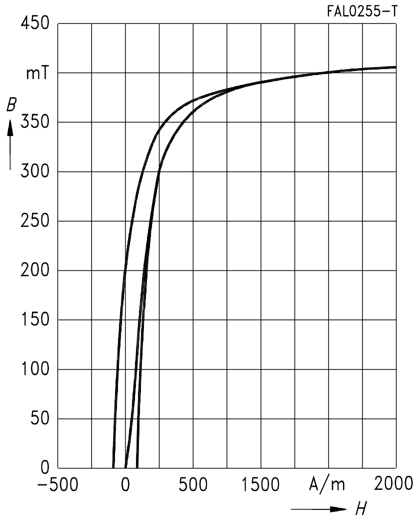


T (˚C)	α_F (10^{-6}/K)
20 ... 55	0.5 ... 1.6 ... 2.3
20 ... 5	0.5 ... 1.8 ... 2.5
20 ... – 25	0.5 ... 2.0 ... 3.0

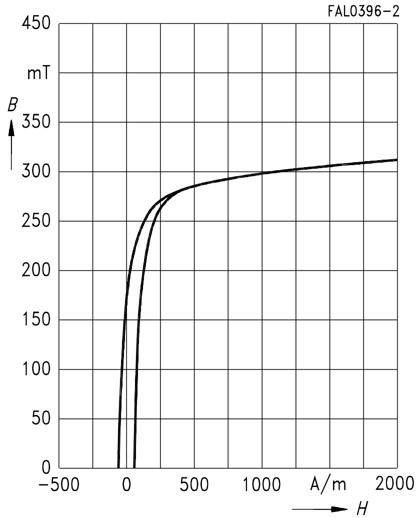
DC magnetic bias of P and RM cores
(typical values)
($\hat{B} \leq$ 0,25 mT, f = 10 kHz, T = 25 ˚C)



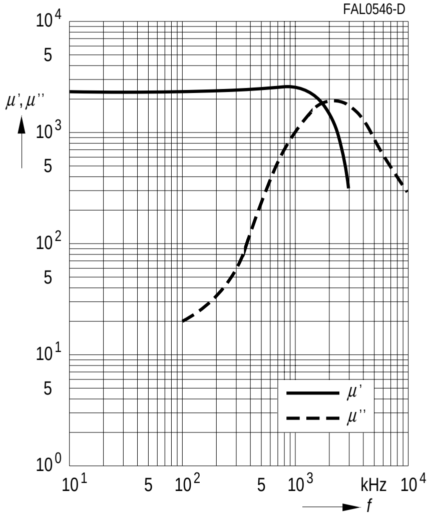
Dynamic magnetization curves
(typical values)
(*f* = 10 kHz, *T* = 25 ˚C)



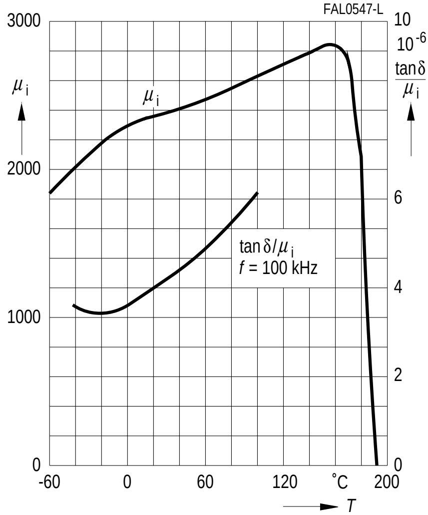
Dynamic magnetization curves
(typical values)
(*f* = 10 kHz, *T* = 100 ˚C)



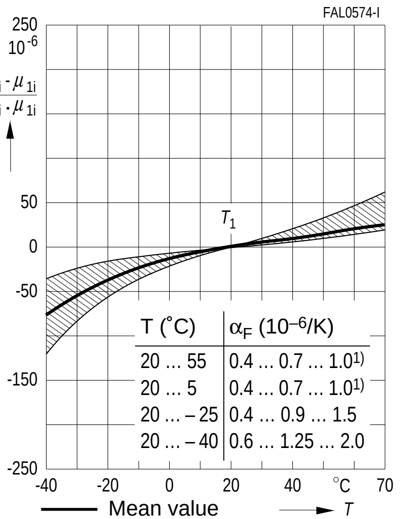
Complex permeability
versus frequency
(measured with R10 ring cores, $\hat{B} \leq$ 0,25 mT)



Initial permeability μ_i and relative loss factor tan δ/μ_i versus temperature
(measured with R10 ring cores, $\hat{B} \leq$ 0,25 mT)

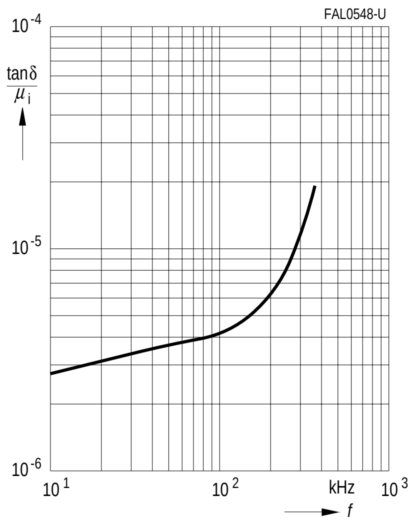


Permeability factor versus temperature
(measured with P and RM cores,
$\hat{B} \leq$ 0,25 mT), $\mu_i \approx$ 2300



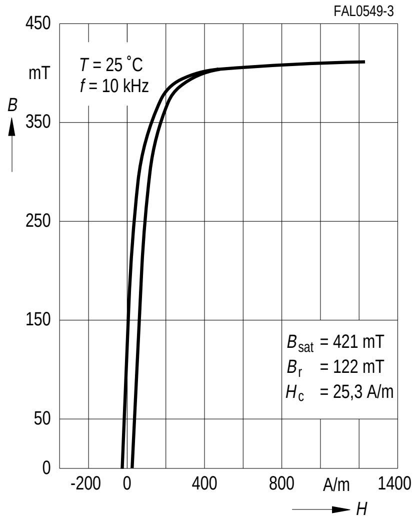
T (°C)	α_F (10^{-6}/K)
20 … 55	0.4 … 0.7 … 1.0[1)]
20 … 5	0.4 … 0.7 … 1.0[1)]
20 … – 25	0.4 … 0.9 … 1.5
20 … – 40	0.6 … 1.25 … 2.0

Relative loss factor tan δ/μ_i versus frequency
(measured with R29 ring cores)

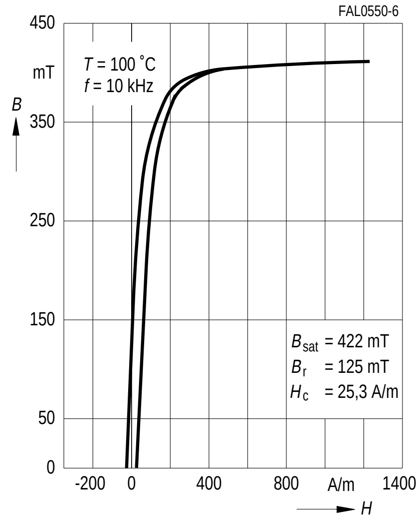


1) With P cores ≥ P22 × 13 and RM cores ≥ RM 8 the α_F value may deviate by up to 1,2 · 10^{-6}/K.

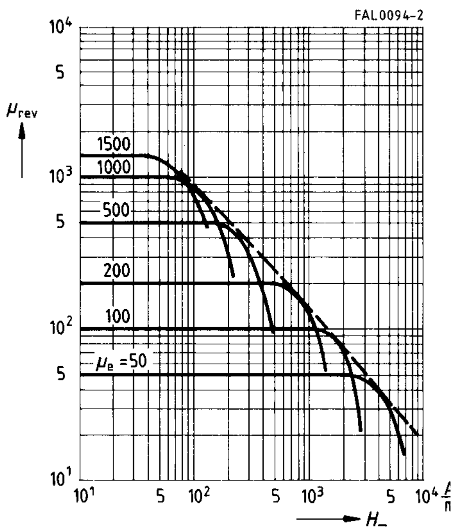
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 25 ˚C)



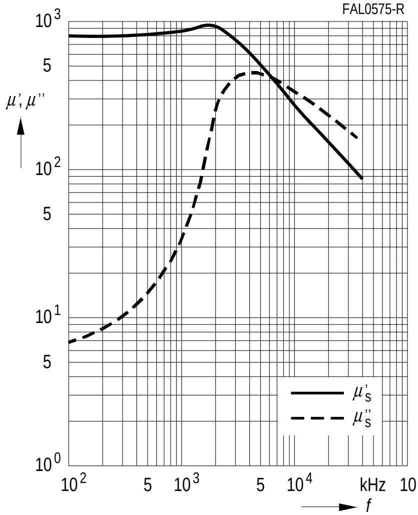
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 100 ˚C)



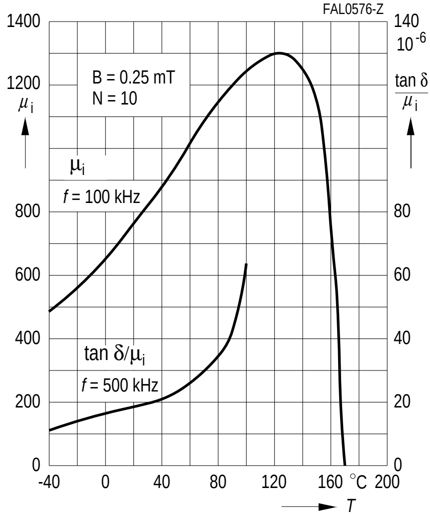
DC magnetic bias of P and RM cores
(typical values)
($\hat{B}$ ≤ 0,25 mT, f = 10 kHz, T = 25 ˚C)



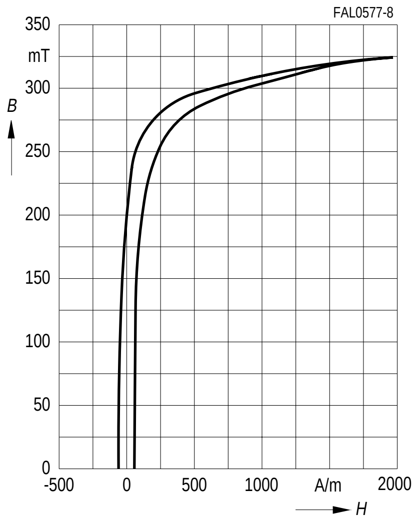
Complex permeability
versus frequency
(measured with R10 ring cores, $\hat{B} \leq$ 0,25 mT)



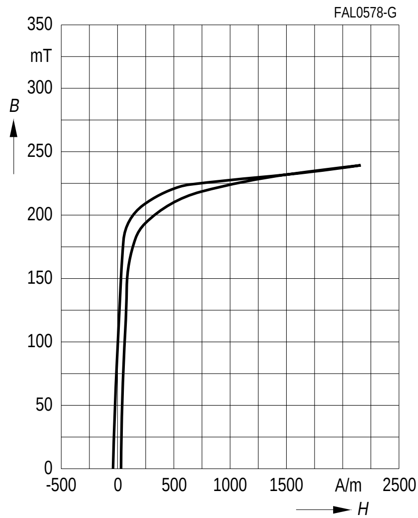
Initial permeability μ_i and relative loss factor tan δ/μ_i versus temperature
(measured with R10 ring cores, $\hat{B} \leq$ 0,25 mT)



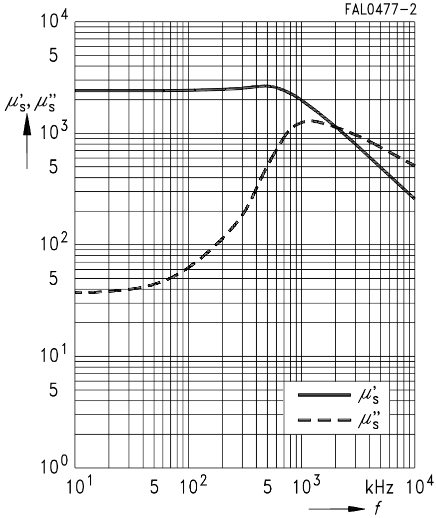
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 25 ˚C)



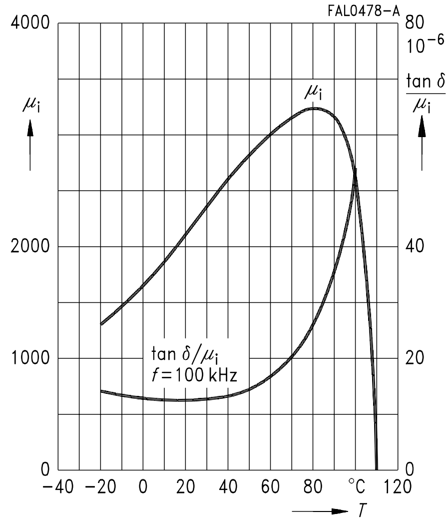
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 100 ˚C)



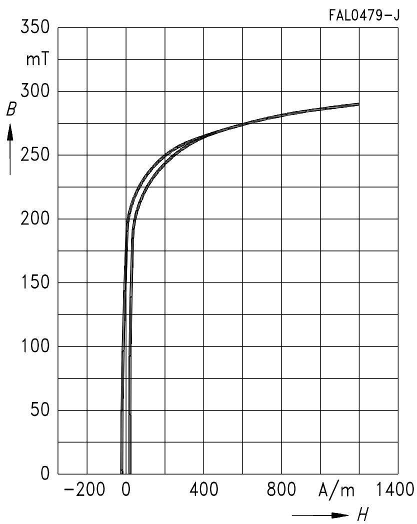
Complex permeability
versus frequency
(measured with R10 ring cores, $\hat{B} \leq 0{,}25$ mT)



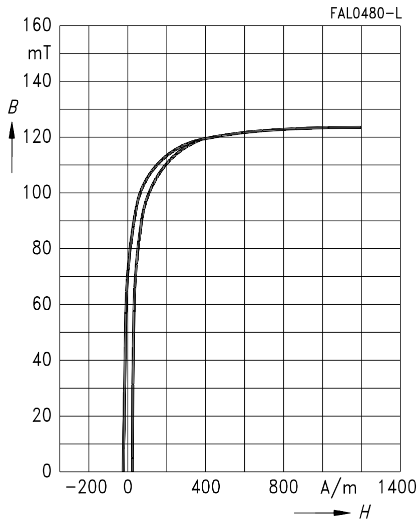
Initial permeability μ_i and relative loss factor tan δ/μ_i versus temperature
(measured with R25 ring cores, $\hat{B} \leq 0{,}25$ mT)



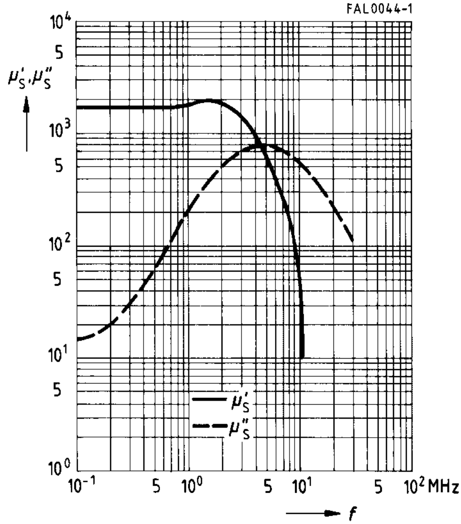
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 25 ˚C)



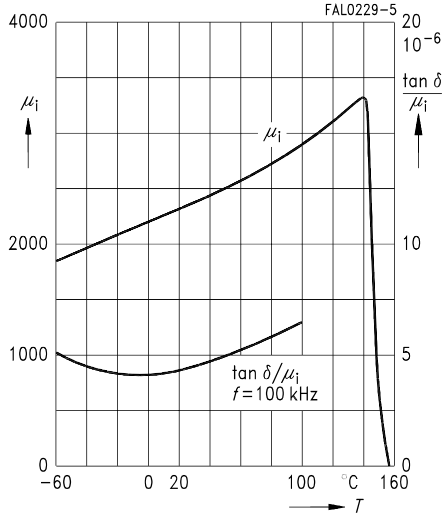
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 100 ˚C)



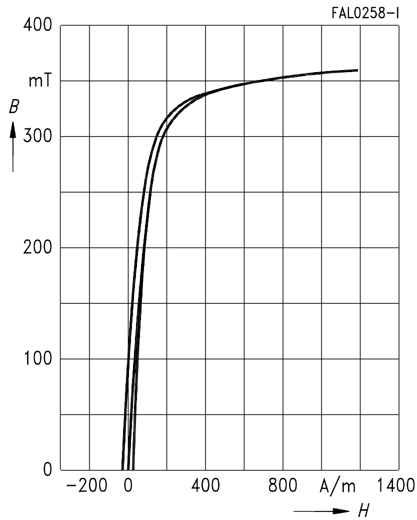
Complex permeability
versus frequency
(measured with R10 ring cores, $\hat{B} \leq 0{,}25$ mT)



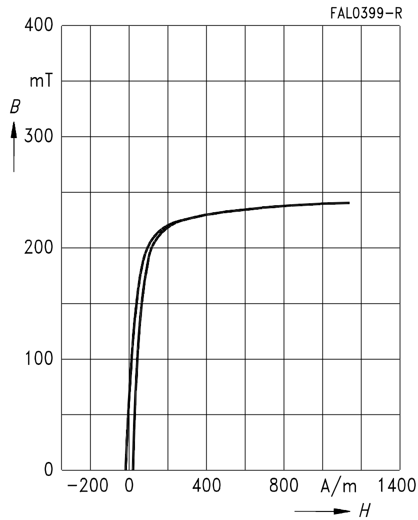
Initial permeability μ_i and relative loss factor
tan δ/μ_i versus temperature
(measured with R10 ring cores, $\hat{B} \leq 0{,}25$ mT)



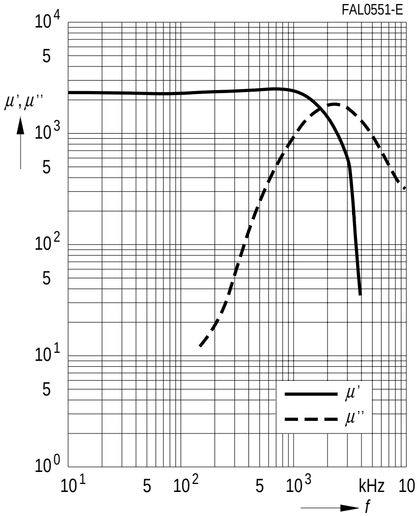
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 25 ˚C)



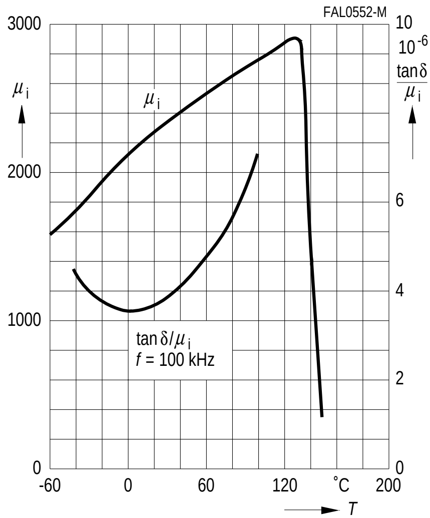
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 100 ˚C)



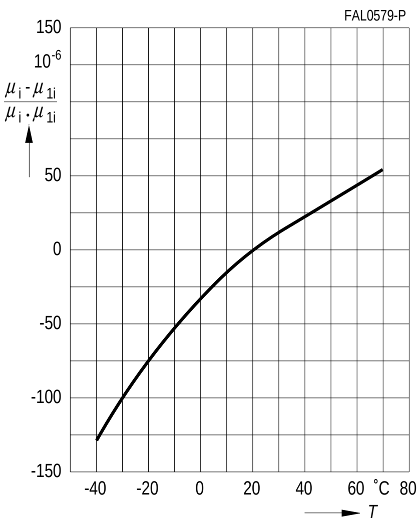
Complex permeability
versus frequency
(measured with R10 ring cores, $\hat{B} \leq 0,25$ mT)



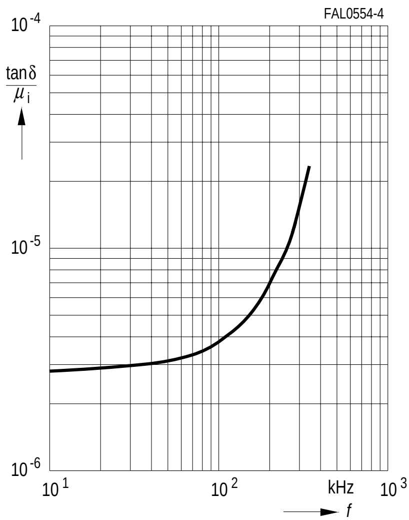
Initial permeability $\mu_i$and relative los factor
tan δ/μ_i versus temperature
(measured with R10 ring cores, $\hat{B} \leq 0,25$ mT)



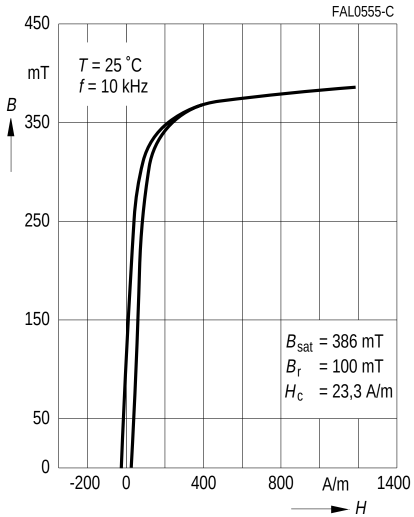
Permeability factor
versus temperature
(measured with R10 ring cores, $\hat{B} \leq 0,25$ mT)



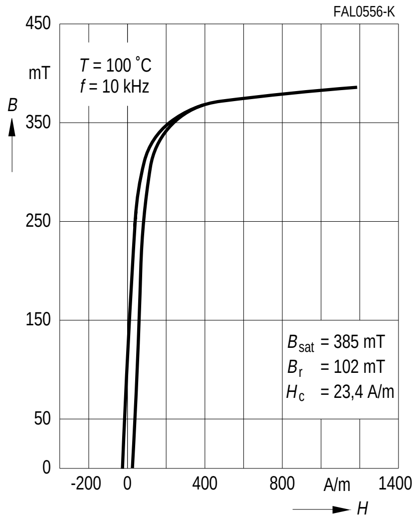
Relative loss factor
versus frequency
(measured with R14 ring cores, $\hat{B} \leq 0,25$ mT)



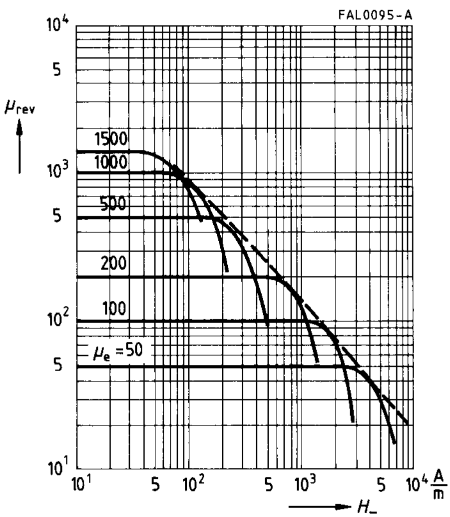
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 25 ˚C)



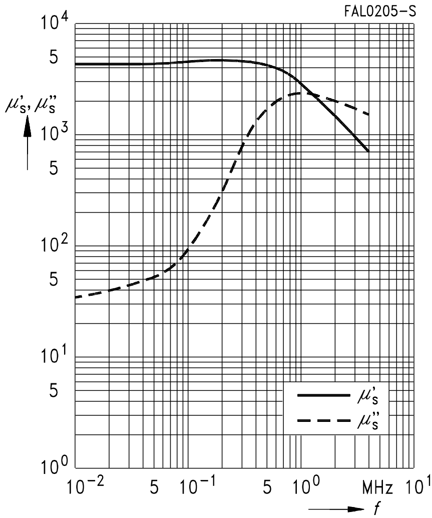
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 100 ˚C)



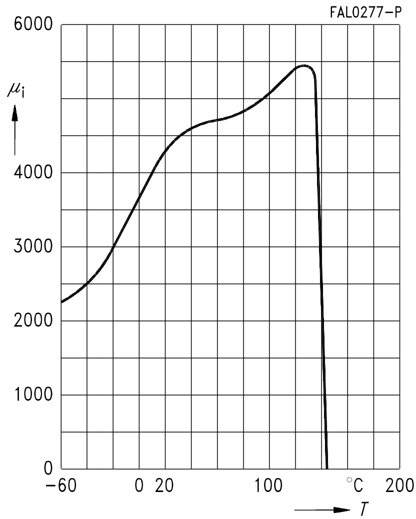
DC magnetic bias of P and RM cores
(typical values)
($\hat{B}$ ≤ 0,25 mT, f = 10 kHz, T = 25 ˚C)



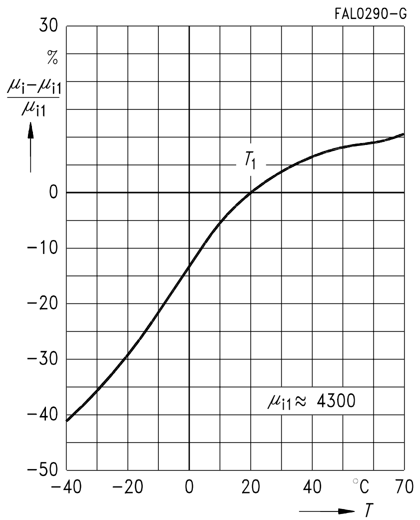
Complex permeability
versus frequency
(measured with R10 ring cores, $\hat{B} \leq 0{,}25$ mT)



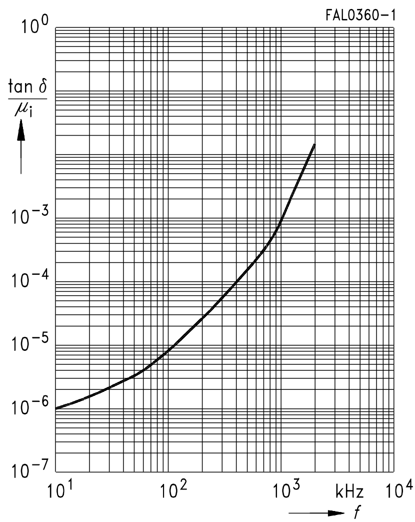
Initial permeability μ_i
versus temperature
(measured with R10 ring cores, $\hat{B} \leq 0{,}25$ mT)



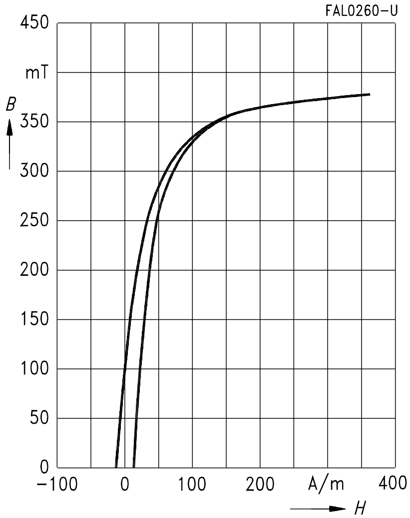
Variation of initial permeability
with temperature
(measured with R10 ring cores, $\hat{B} \leq 0{,}25$ mT)



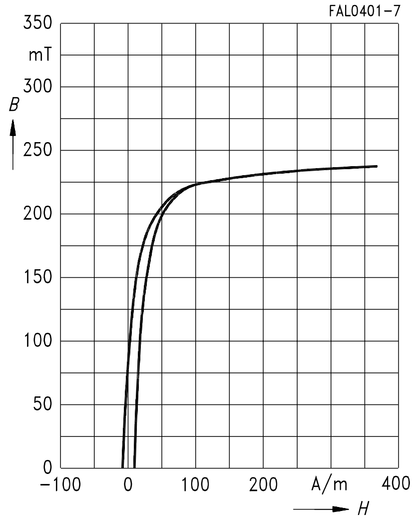
Relative loss factor
versus frequency
(measured with R20 ring cores, $\hat{B} \leq 0{,}25$ mT)



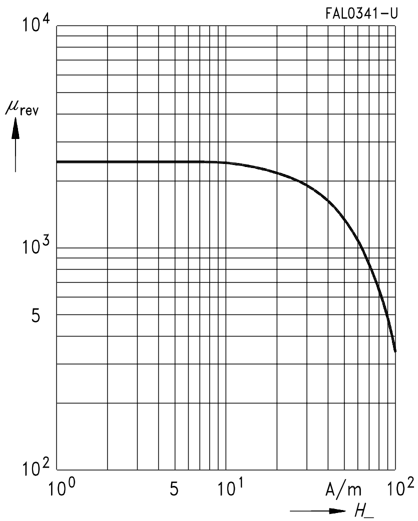
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 25 ˚C)



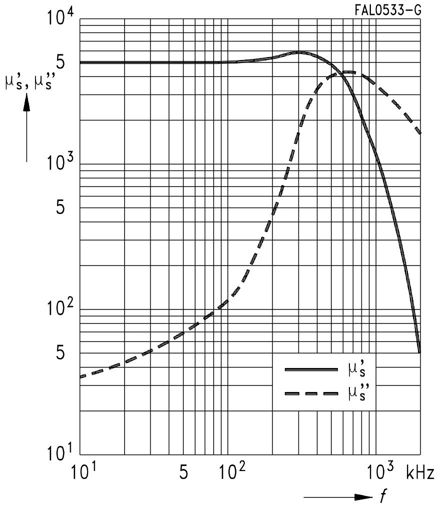
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 100 ˚C)



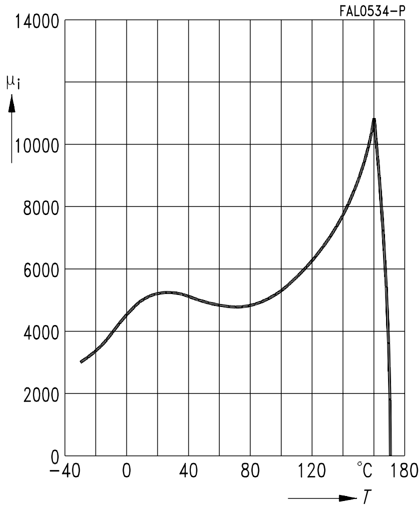
DC magnetic bias of RM cores
(typical values)
($\hat{B}$ ≤ 0,25 mT, f = 10 kHz, T = 25 ˚C)



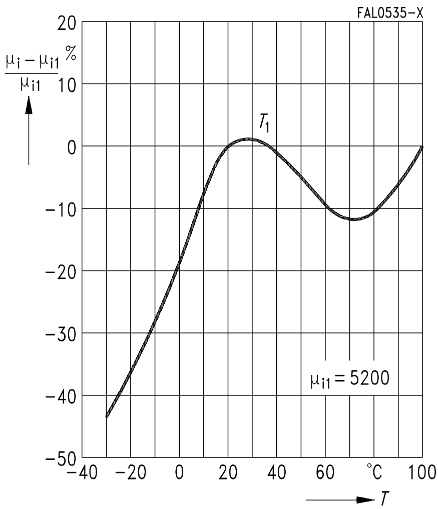
Complex permeability
versus frequency
(measured with R29 ring cores, $\hat{B} \leq 0{,}25$ mT)



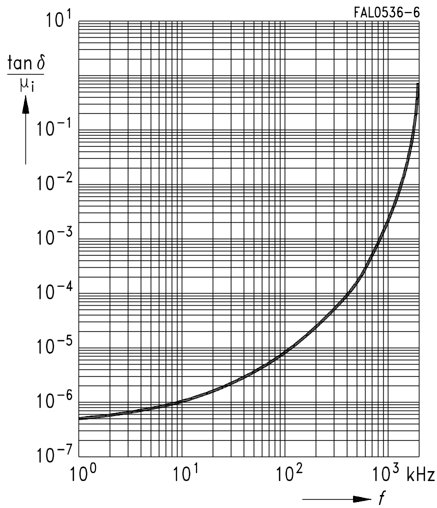
Initial permeability μ_i
versus temperature
(measured with R29 ring cores, $\hat{B} \leq 0{,}25$ mT)



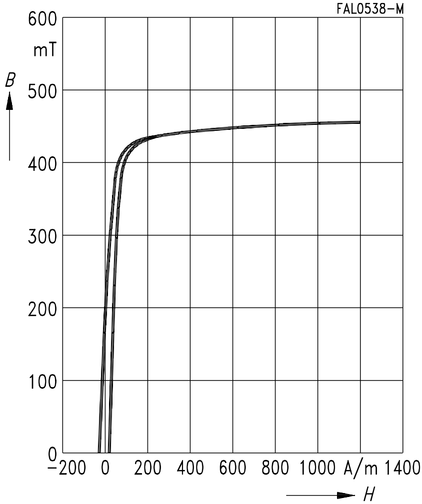
Variation of initial permeability
with temperature
(measured with R29 ring cores, $\hat{B} \leq 0{,}25$ mT)



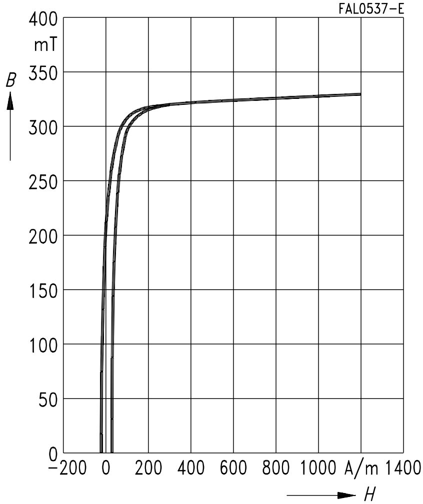
Relative loss factor
versus frequency
(measured with R29 ring cores, $\hat{B} \leq 0{,}25$ mT)



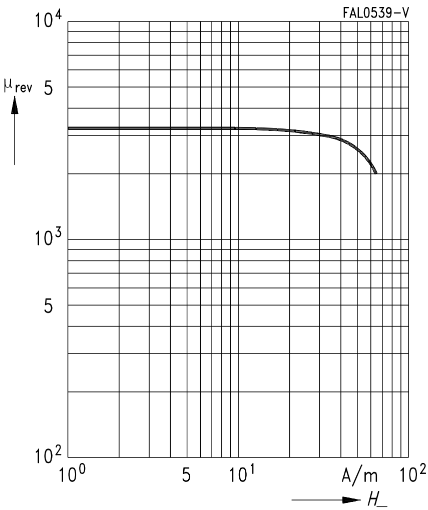
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 25 ˚C)



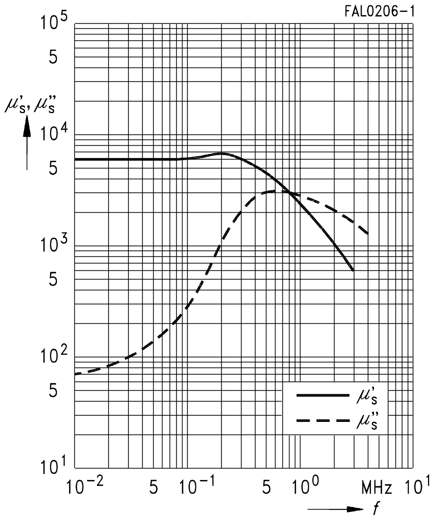
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 100 ˚C)



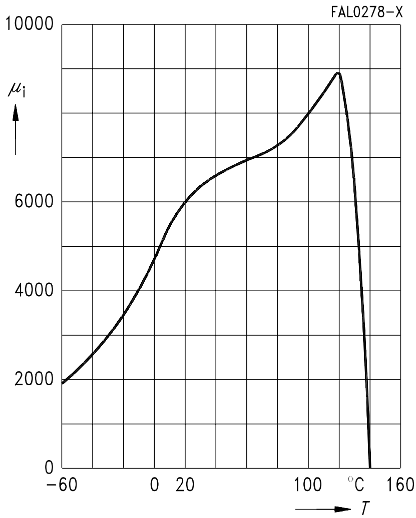
DC magnetic bias of RM cores
(typical values)
($\hat{B}$ ≤ 0,25 mT, f = 10 kHz, T = 25 ˚C)



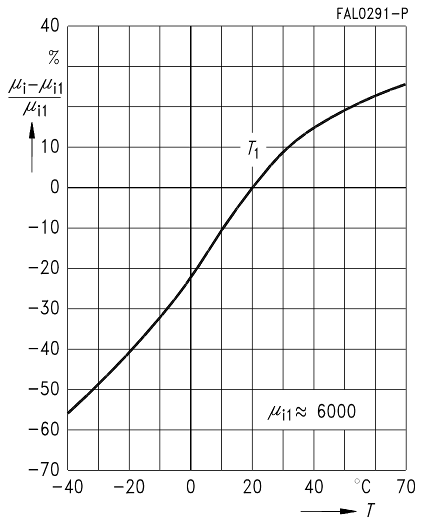
Complex permeability
versus frequency
(measured with R10 ring cores, $\hat{B} \leq 0{,}25$ mT)



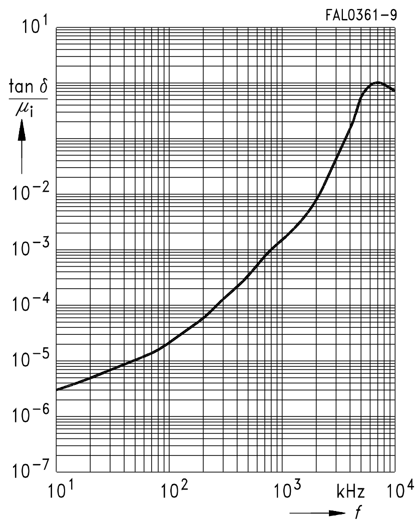
Initial permeability μ_i
versus temperature
(measured with R16 ring cores, $\hat{B} \leq 0{,}25$ mT)



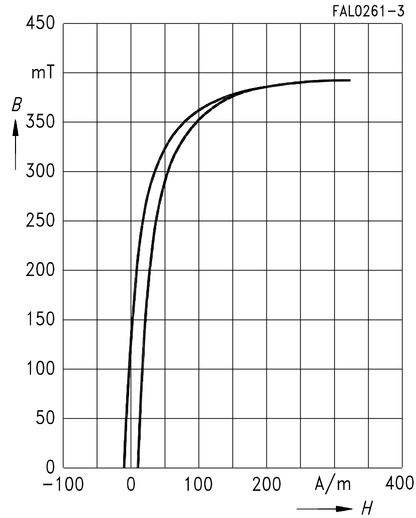
Variation of initial permeability
with temperature
(measured with R16 ring cores, $\hat{B} \leq 0{,}25$ mT)



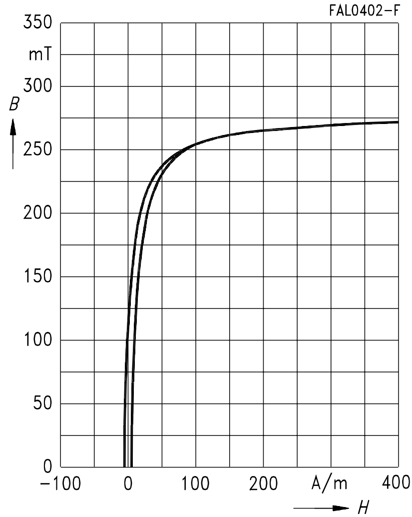
Relative loss factor
versus frequency
(measured with R16 ring cores, $\hat{B} \leq 0{,}25$ mT)



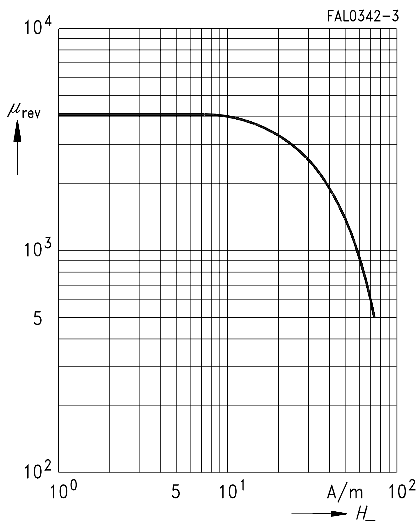
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 25 ˚C)



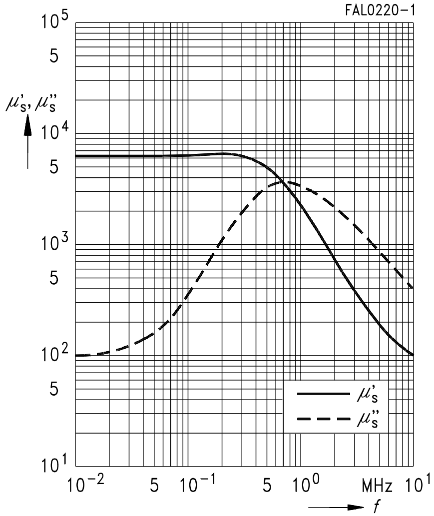
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 100 ˚C)



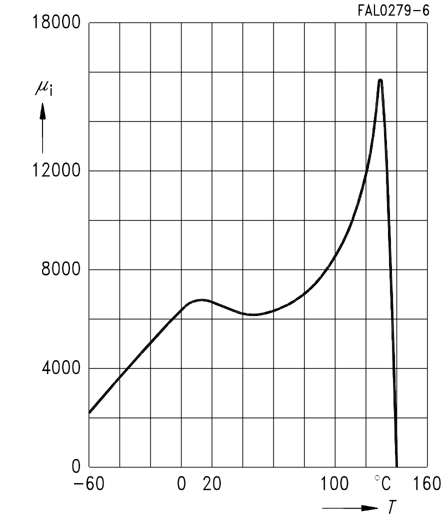
DC magnetic bias of RM cores
(typical values)
($\hat{B}$ ≤ 0,25 mT, f = 10 kHz, T = 25 ˚C)



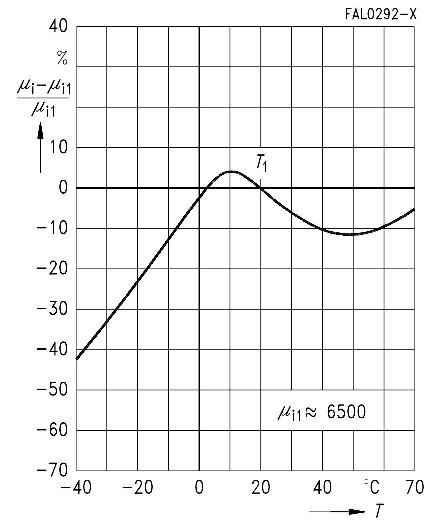
Complex permeability
versus frequency
(measured with R16 ring cores, $\hat{B} \leq 0{,}25$ mT)



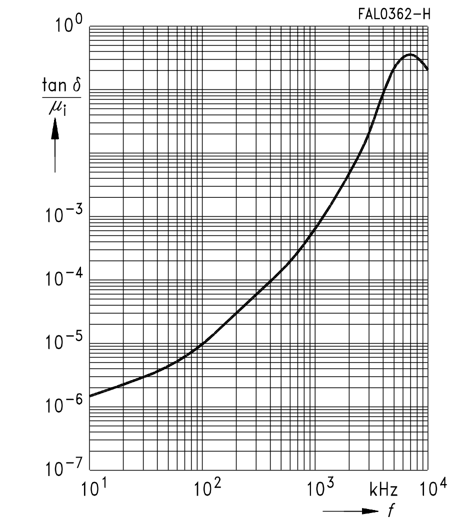
Initial permeability μ_i
versus temperature
(measured with R22 ring cores, $\hat{B} \leq 0{,}25$ mT)



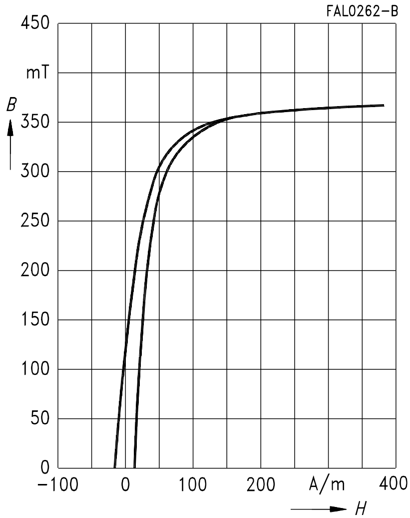
Variation of initial permeability
with temperature
(measured with R22 ring cores, $\hat{B} \leq 0{,}25$ mT)



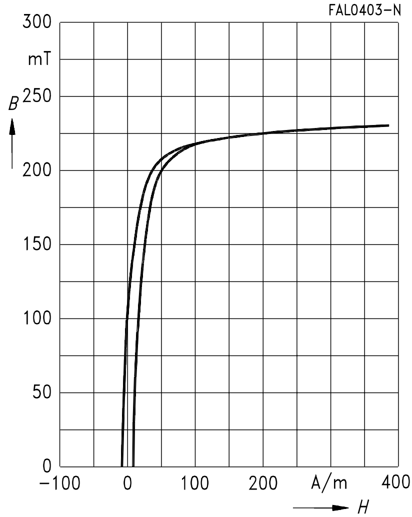
Relative loss factor
versus frequency
(measured with R16 ring cores, $\hat{B} \leq 0{,}25$ mT)



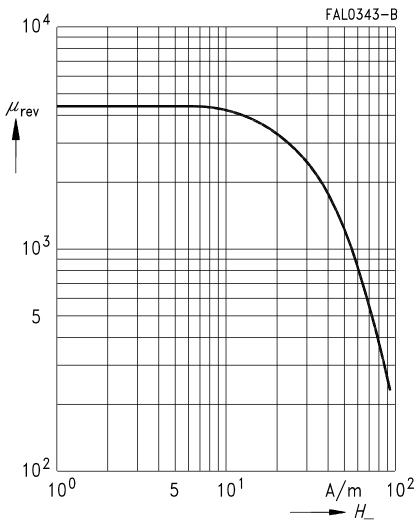
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 25 ˚C)



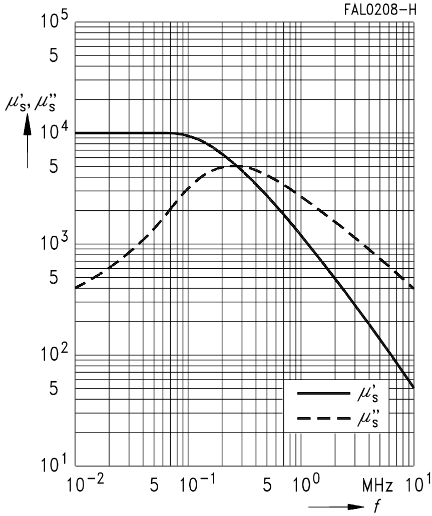
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 100 ˚C)



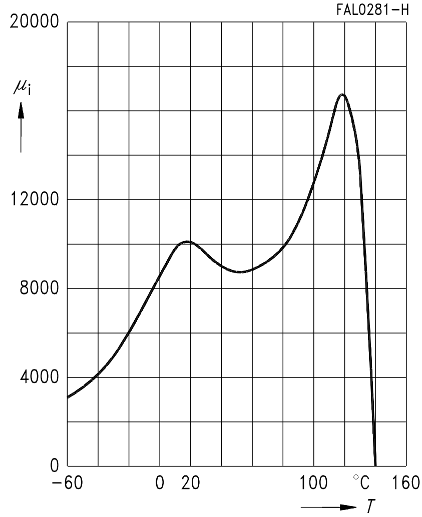
DC magnetic bias of RM cores
(typical values)
($\hat{B}$ ≤ 0,25 mT, f = 10 kHz, T = 25 ˚C)



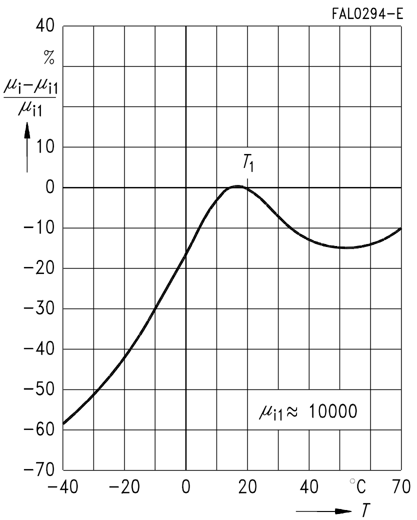
Complex permeability
versus frequency
(measured with R14 ring cores, $\hat{B} \leq 0{,}25$ mT)



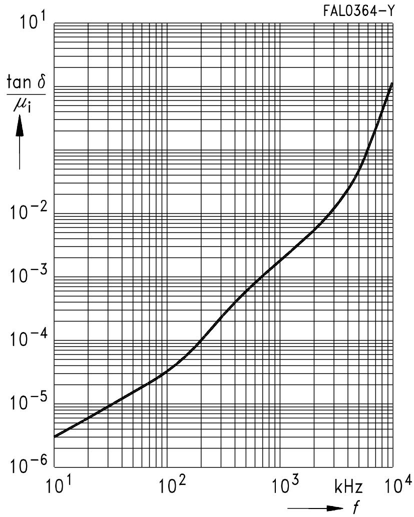
Initial permeability μ_i
versus temperature
(measured with R16 ring cores, $\hat{B} \leq 0{,}25$ mT)



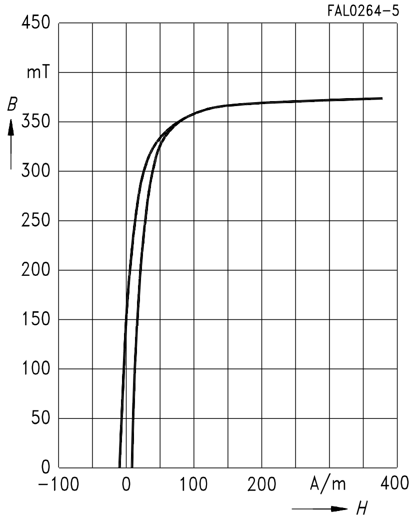
Variation of initial permeability
with temperature
(measured with R16 ring cores, $\hat{B} \leq 0{,}25$ mT)



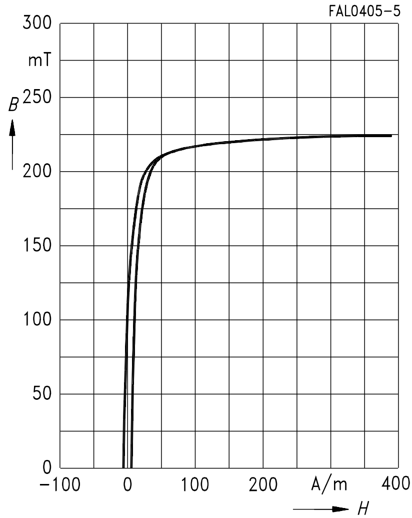
Relative loss factor
versus frequency
(measured with R14 ring cores, $\hat{B} \leq 0{,}25$ mT)



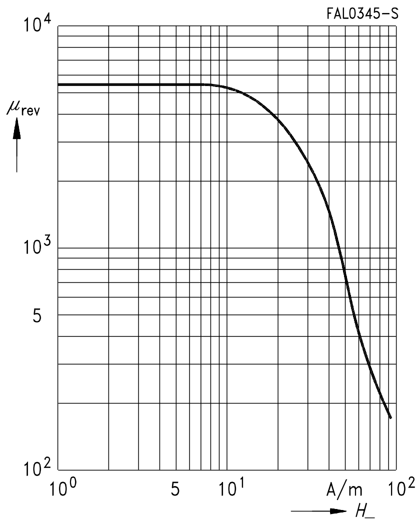
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 25 ˚C)



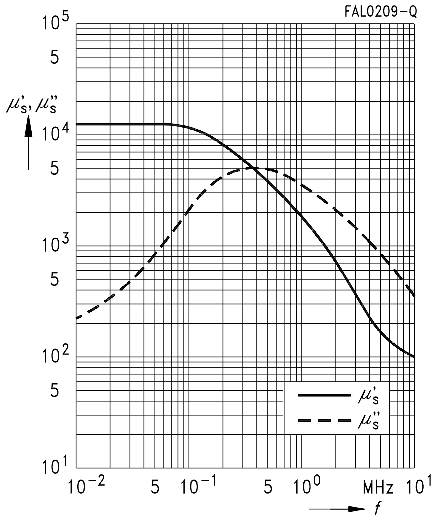
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 100 ˚C)



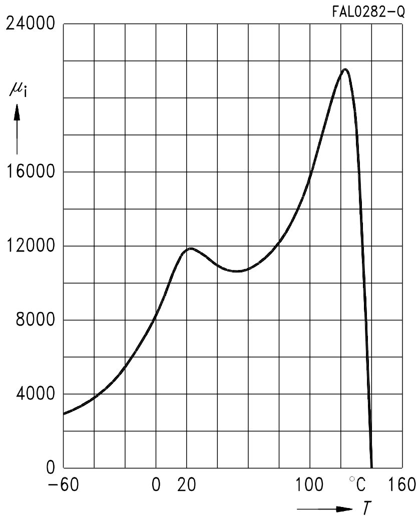
DC magnetic bias of RM cores
(typical values)
($\hat{B} \leq$ 0,25 mT, f = 10 kHz, T = 25 ˚C)



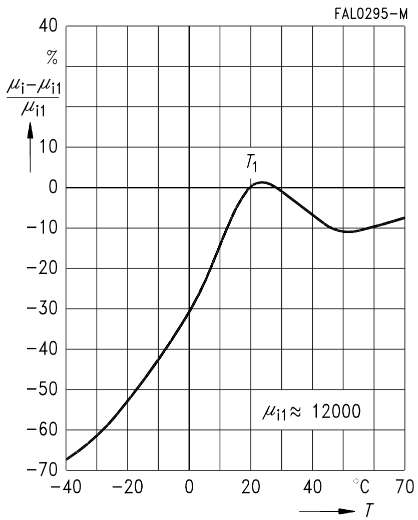
Complex permeability
versus frequency
(measured with R9,5 ring cores, $\hat{B} \leq$ 0,25 mT)



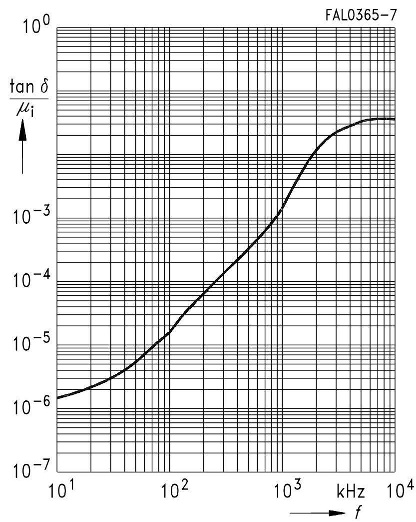
Initial permeability μ_i
versus temperature
(measured with R9,5 ring cores, $\hat{B} \leq$ 0,25 mT)



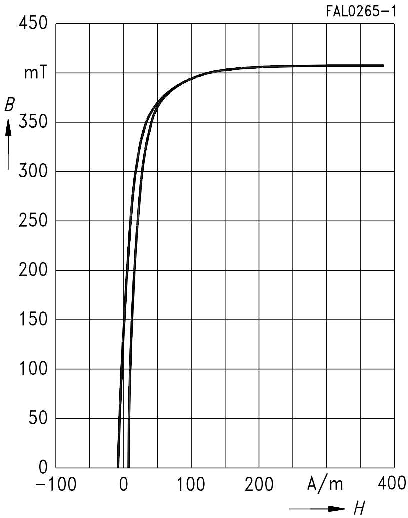
Variation of initial permeability
with temperature
(measured with R9,5 ring cores, $\hat{B} \leq$ 0,25 mT)



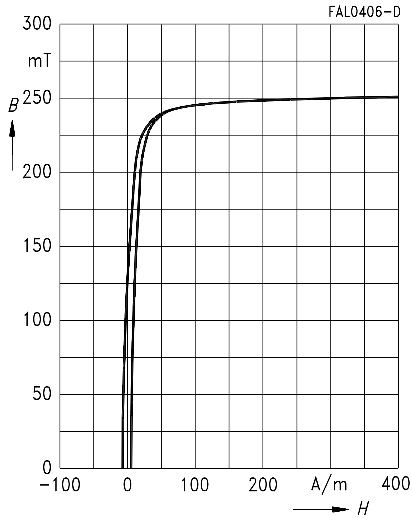
Relative loss factor
versus frequency
(measured with R9,5 ring cores, $\hat{B} \leq$ 0,25 mT)



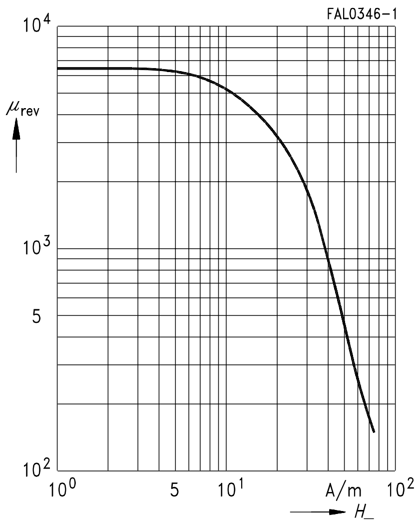
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 25 ˚C)



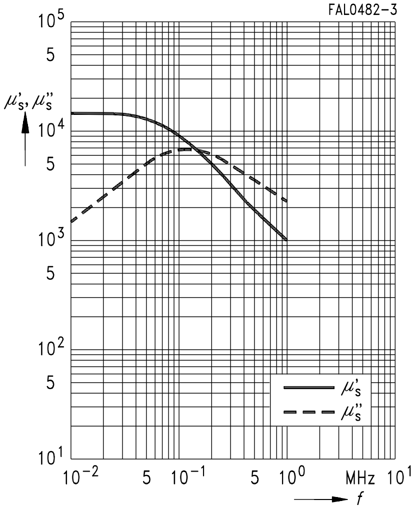
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 100 ˚C)



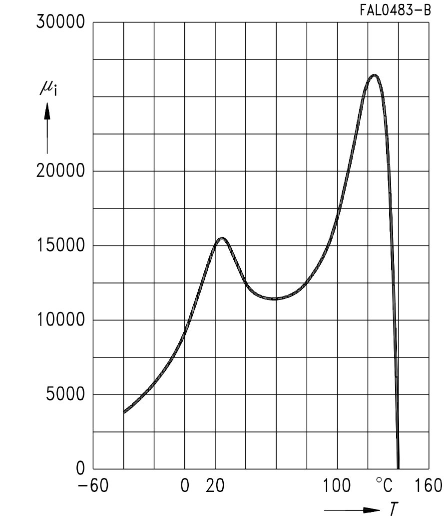
DC magnetic bias of RM cores
(typical values)
($\hat{B} \leq$ 0,25 mT, f = 10 kHz, T = 25 ˚C)



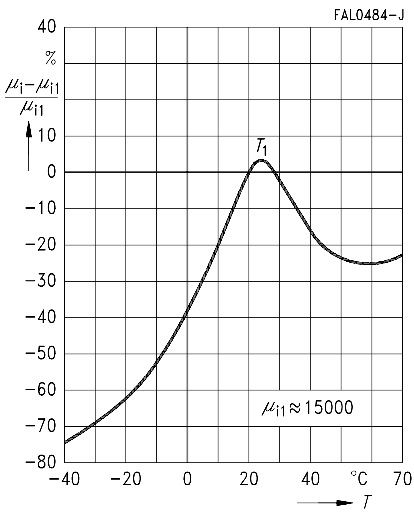
Complex permeability
versus frequency
(measured with R10 ring cores, $\hat{B} \leq 0{,}25$ mT)



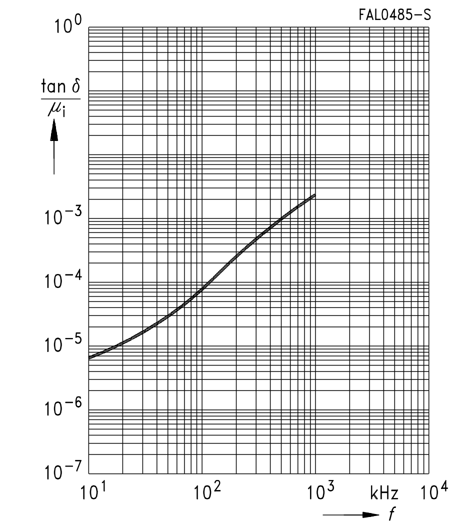
Initial permeability μ_i
versus temperature
(measured with R10 ring cores, $\hat{B} \leq 0{,}25$ mT)



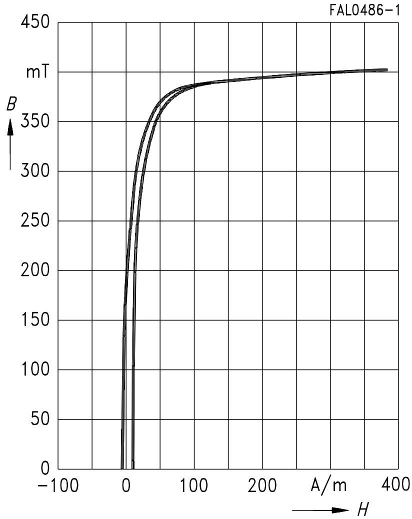
Variation of initial permeability
with temperature
(measured with R10 ring cores, $\hat{B} \leq 0{,}25$ mT)



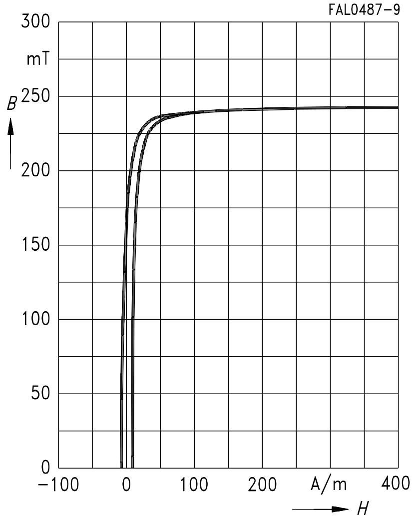
Relative loss factor
versus frequency
(measured with R10 ring cores, $\hat{B} \leq 0{,}25$ mT)



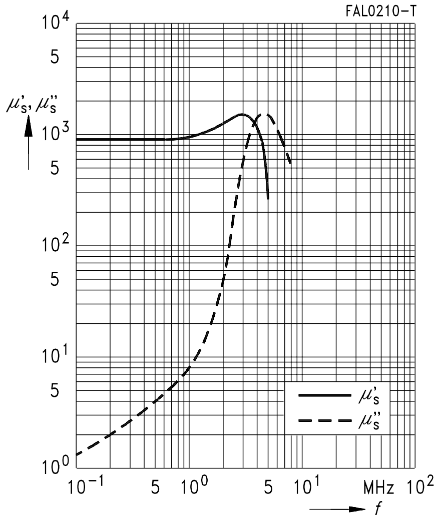
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 25 ˚C)



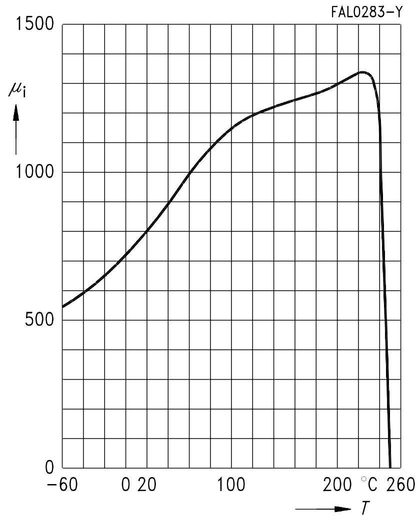
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 100 ˚C)



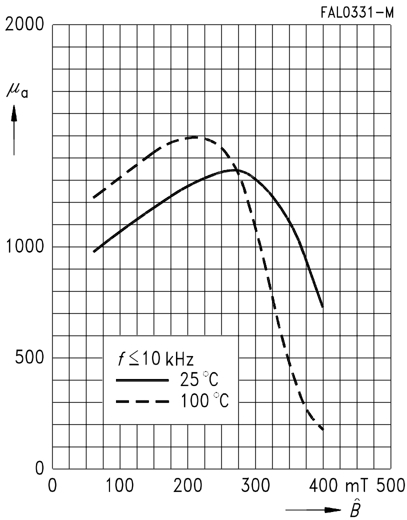
Complex permeability
versus frequency
(measured with R25 ring cores, $\hat{B} \leq 0{,}25$ mT)



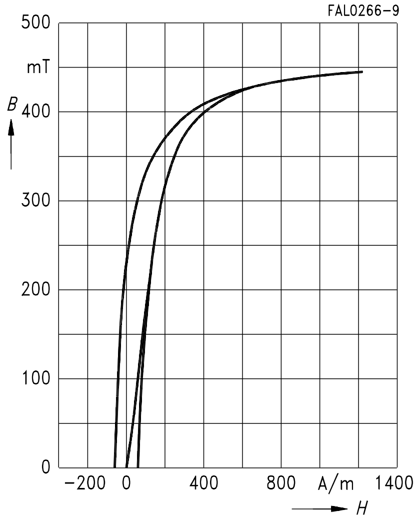
Initial permeability μ_i
versus temperature
(measured with R29 ring cores, $\hat{B} \leq 0{,}25$ mT)



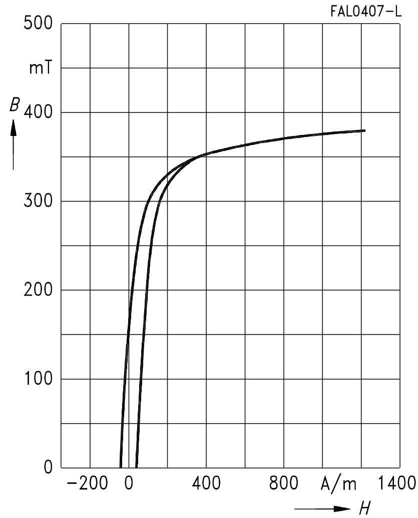
Amplitude permeability
versus AC field flux density
(measured with ungapped E cores)



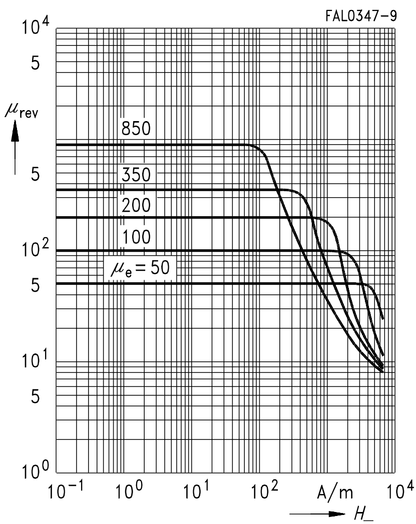
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 25 ˚C)



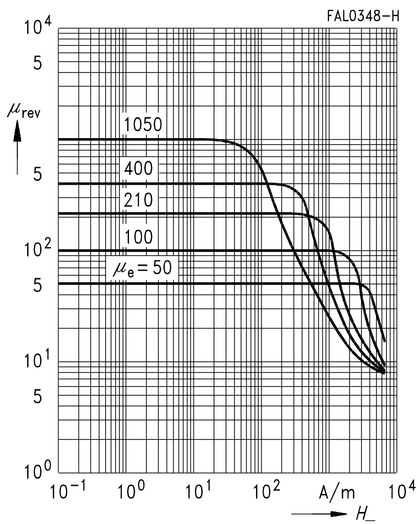
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 100 ˚C)



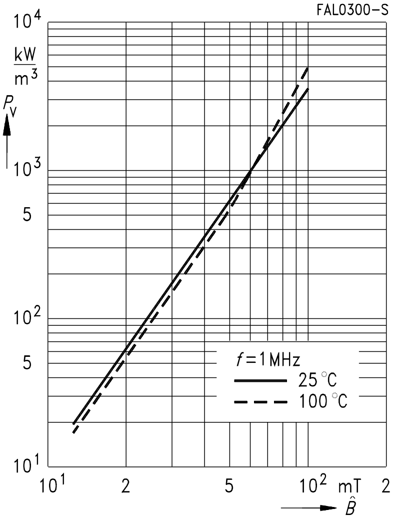
DC magnetic bias
of P, RM, PM and E cores
($\hat{B}$ ≤ 0,25 mT, f = 10 kHz, T = 25 ˚C)



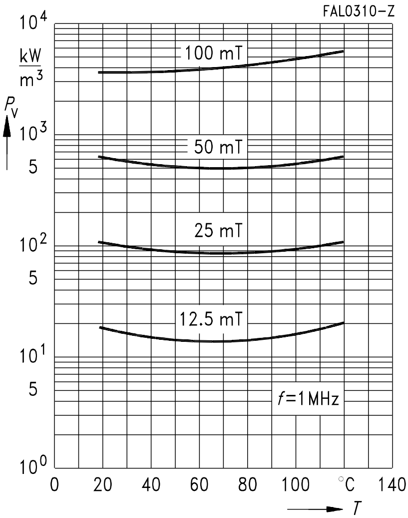
DC magnetic bias
of P, RM, PM and E cores
($\hat{B}$ ≤ 0,25 mT, f = 10 kHz, T = 100 ˚C)



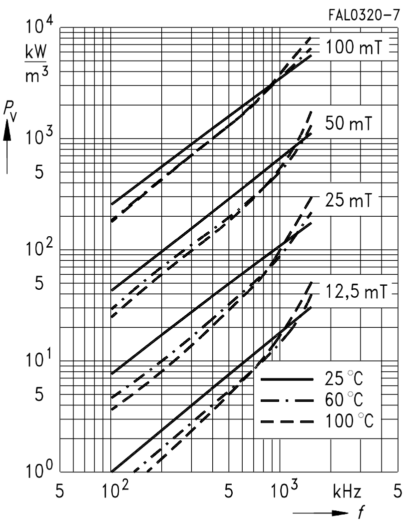
Relative core losses
versus AC field flux density
(measured with R29 ring cores)



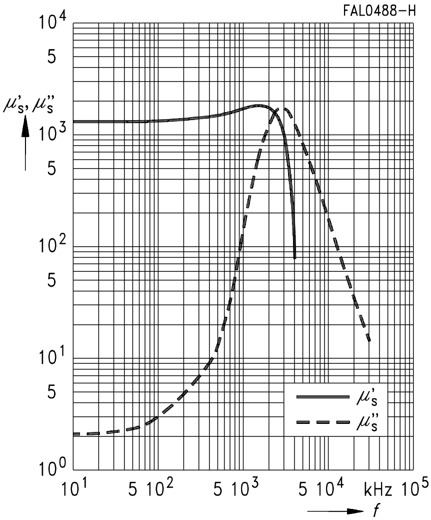
Relative core losses
versus temperature
(measured with R29 ring cores)



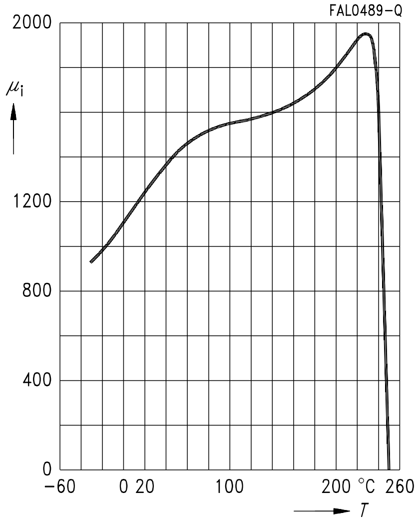
Relative core losses
versus frequency
(measured with R29 ring cores)



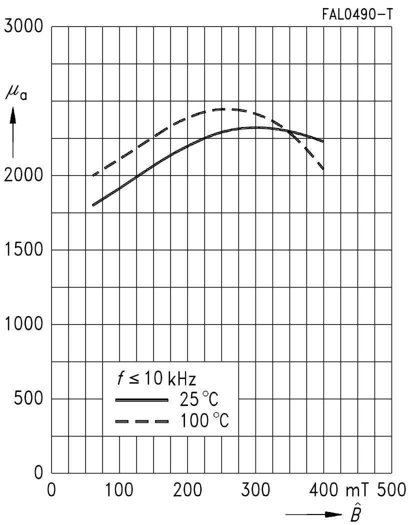
Complex permeability
versus frequency
(measured with R17 ring cores, $\hat{B} \leq 0{,}25$ mT)



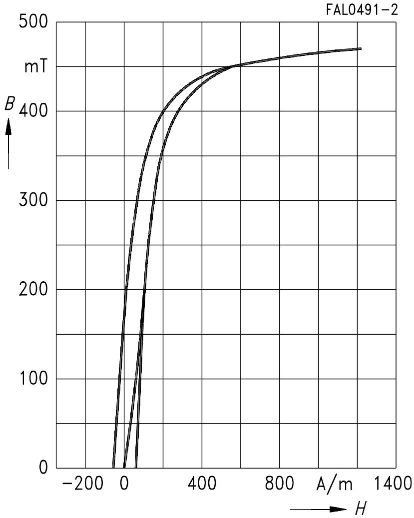
Initial permeability μ_i
versus temperature
(measured with R17 ring cores, $\hat{B} \leq 0{,}25$ mT)



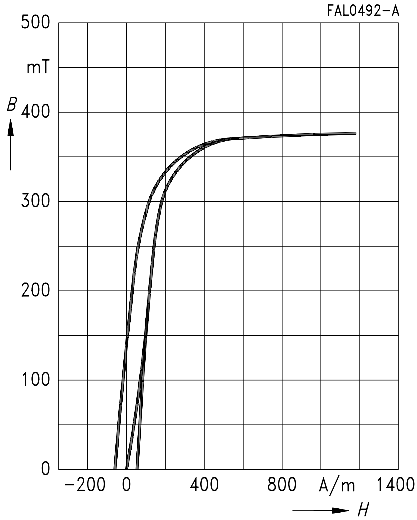
Amplitude permeability
versus AC field flux density
(measured with ungapped E cores)



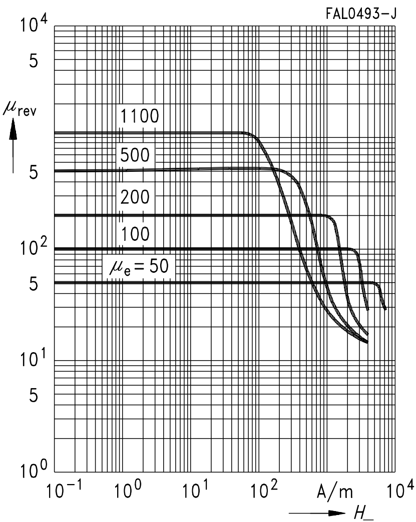
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 25 ˚C)



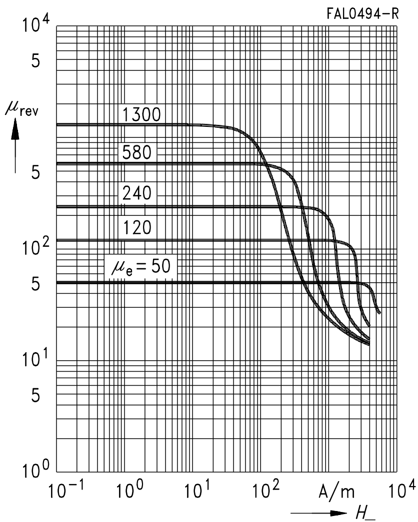
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 100 ˚C)



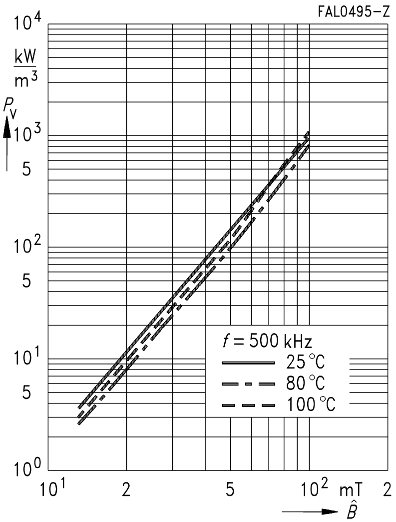
DC magnetic bias
of P, RM, PM and E cores
($\hat{B} \leq$ 0,25 mT, f = 10 kHz, T = 25 ˚C)



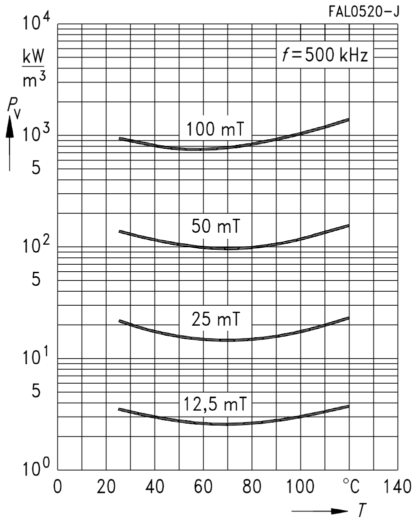
DC magnetic bias
of P, RM, PM and E cores
($\hat{B} \leq$ 0,25 mT, f = 10 kHz, T = 100 ˚C)



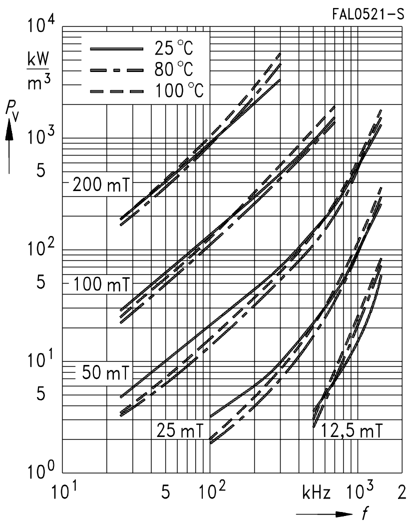
Relative core losses
versus AC field flux density
(measured with R17 ring cores)



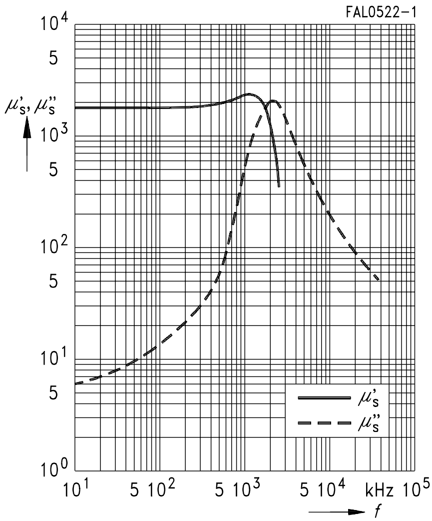
Relative core losses
versus temperature
(measured with R17 ring cores)



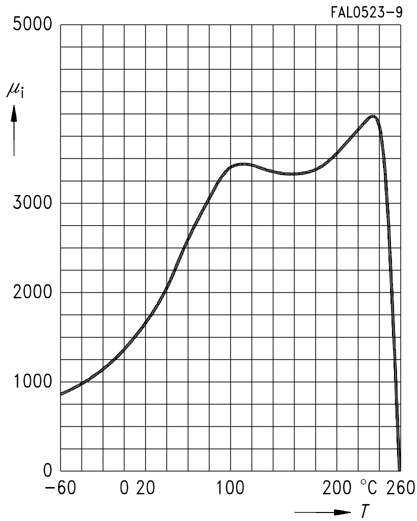
Relative core losses
versus frequency
(measured with R17 ring cores)



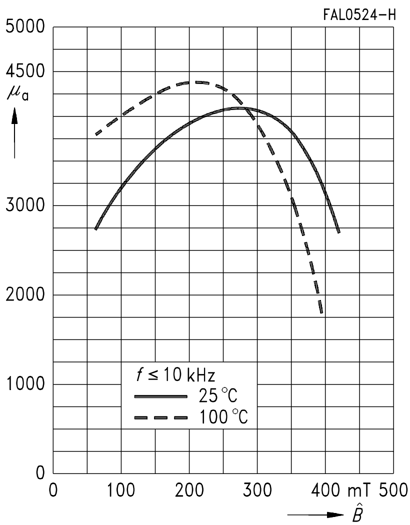
Complex permeability
versus frequency
(measured with R29 ring cores, $\hat{B} \leq 0{,}25$ mT)



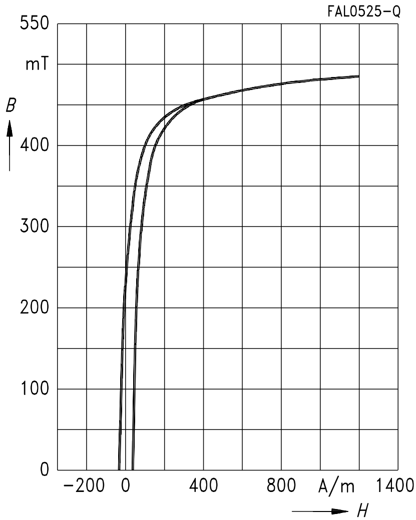
Initial permeability μ_i
versus temperature
(measured with R29 ring cores, $\hat{B} \leq 0{,}25$ mT)



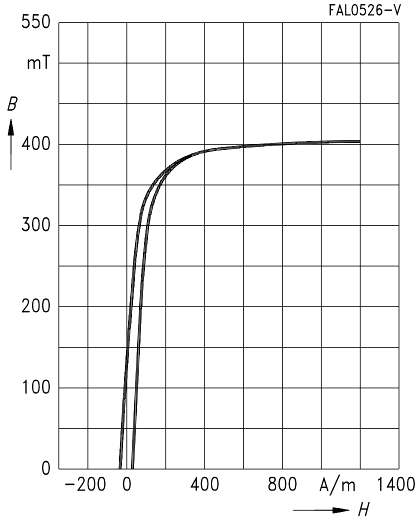
Amplitude permeability
versus AC field flux density
(measured with ungapped E and U cores)



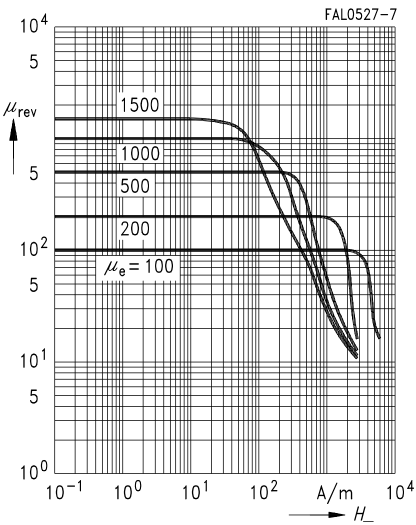
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 25 ˚C)



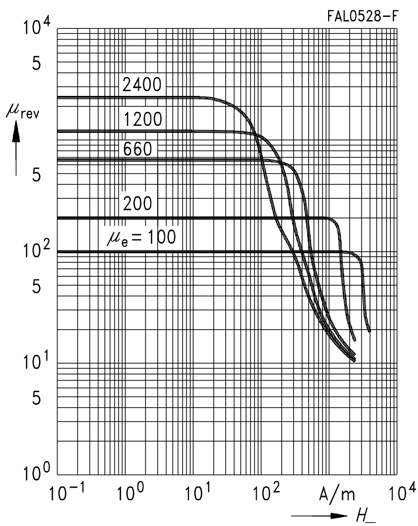
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 100 ˚C)



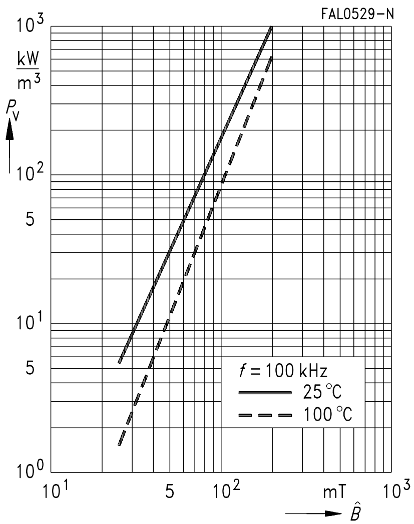
DC magnetic bias
of P, RM, PM, E and U cores
($\hat{B}$ ≤ 0,25 mT, f = 10 kHz, T = 25 ˚C)



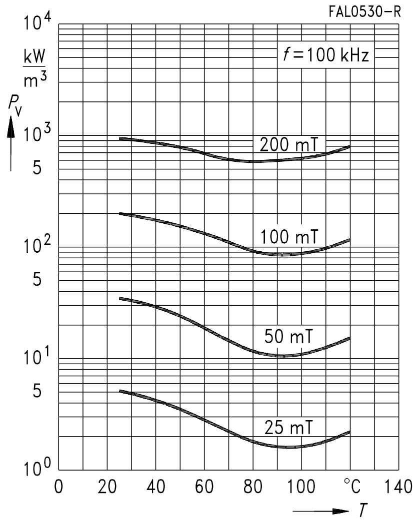
DC magnetic bias
of P, RM, PM, E and U cores
($\hat{B}$ ≤ 0,25 mT, f = 10 kHz, T = 100 ˚C)



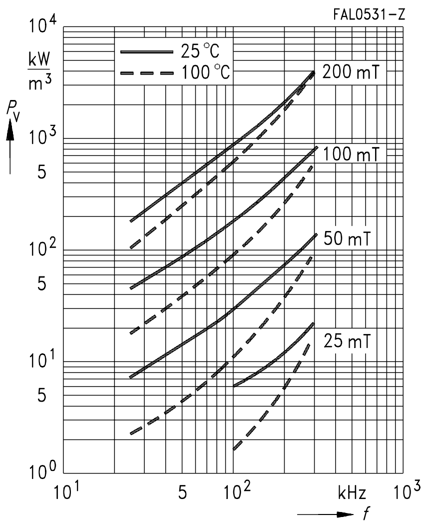
Relative core losses
versus AC field flux density
(measured with R17 ring cores)



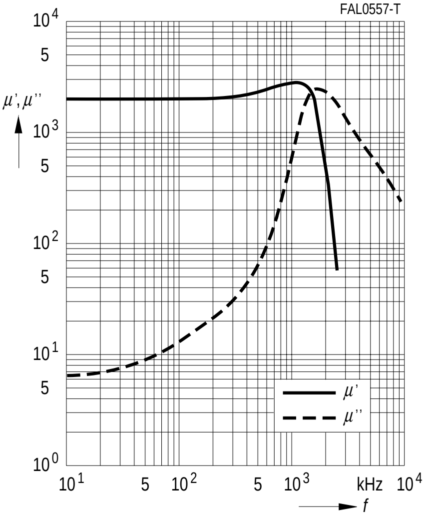
Relative core losses
versus temperature
(measured with R17 ring cores)



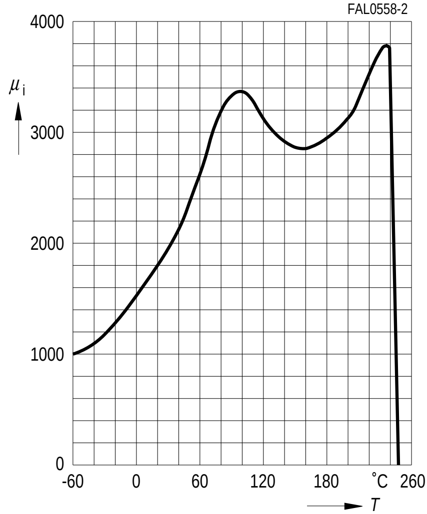
Relative core losses
versus frequency
(measured with R17 ring cores)



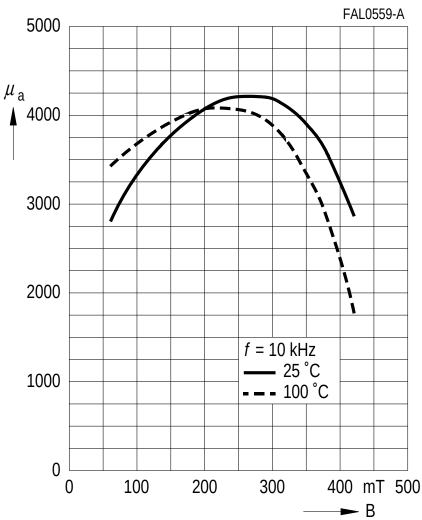
Complex permeability
versus frequency
(measured with R29 ring cores)



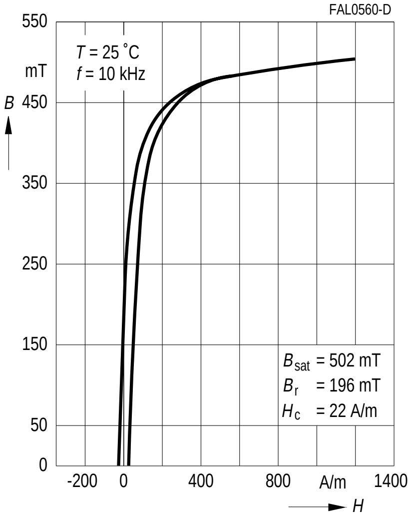
Initial permeability μ_i
versus temperature
(measured with R29 ring cores)



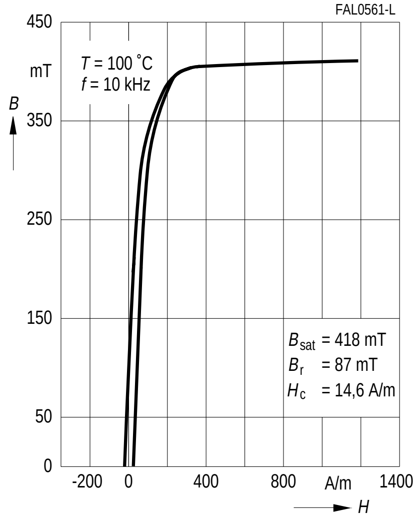
Amplitude permeability
versus AC field flux density
(measured with R29 ring cores)



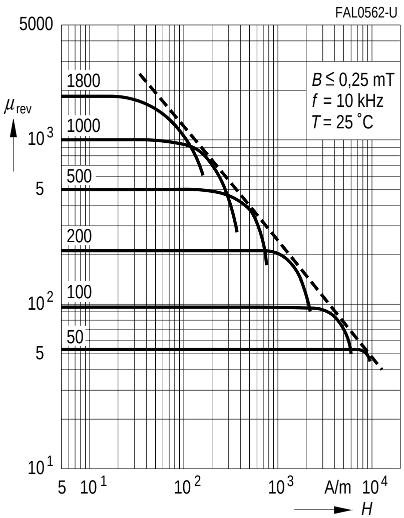
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 25 ˚C)



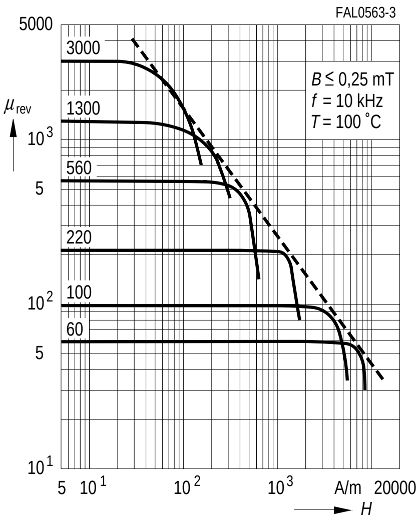
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 100 ˚C)



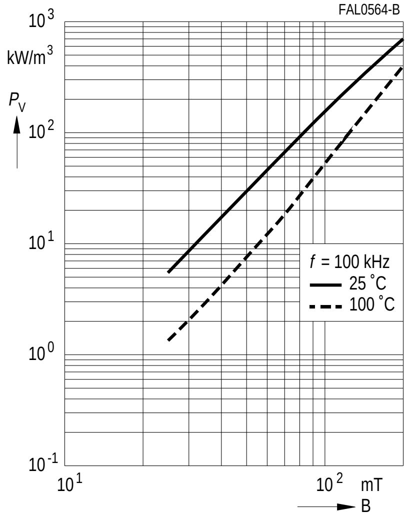
DC magnetic bias
of E, ETD and U cores
($\hat{B}$ ≤ 0,25 mT, f = 10 kHz, T = 25 ˚C)



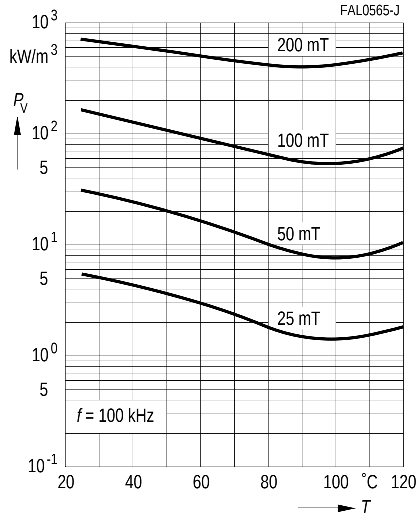
DC magnetic bias
of E, ETD and U cores
($\hat{B}$ ≤ 0,25 mT, f = 10 kHz, T = 100 ˚C)



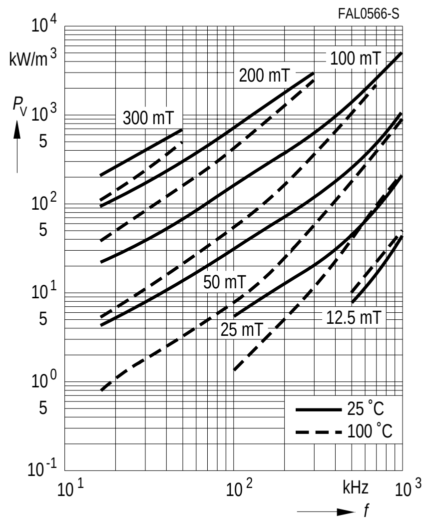
Relative core losses
versus AC field flux density
(measured with R29 ring cores)



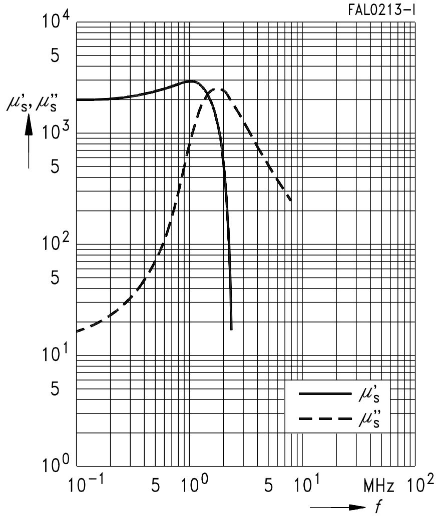
Relative core losses
versus temperature
(measured with R29 ring cores)



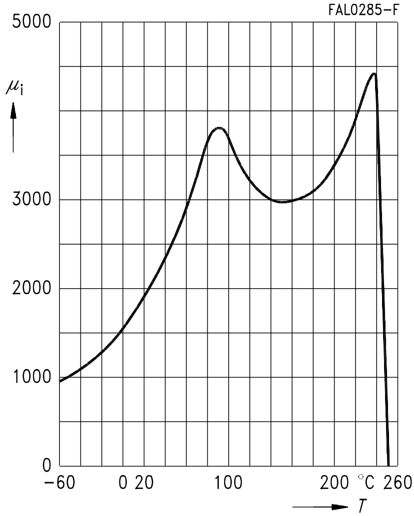
Relative core losses
versus frequency
(measured with R29 ring cores)



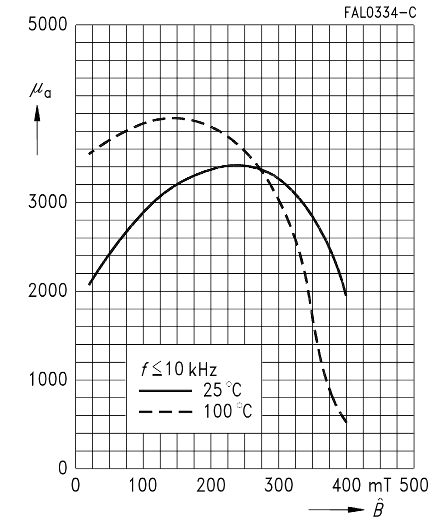
Complex permeability
versus frequency
(measured with R29 ring cores, $\hat{B} \leq 0{,}25$ mT)



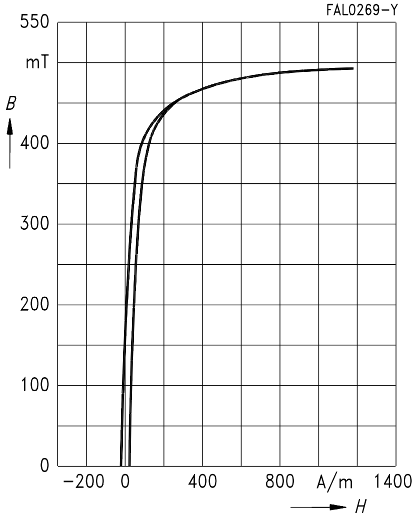
Initial permeability μ_i
versus temperature
(measured with R29 ring cores, $\hat{B} \leq 0{,}25$ mT)



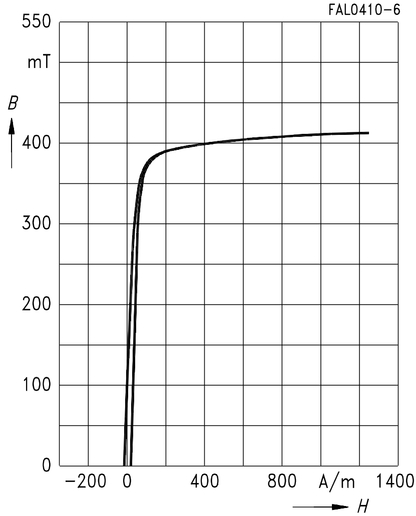
Amplitude permeability
versus AC field flux density
(measured with ungapped U cores)



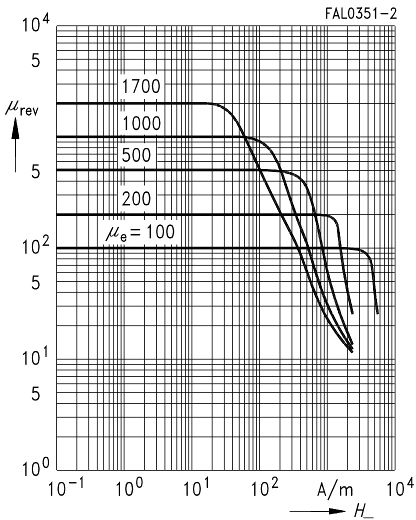
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 25 ˚C)



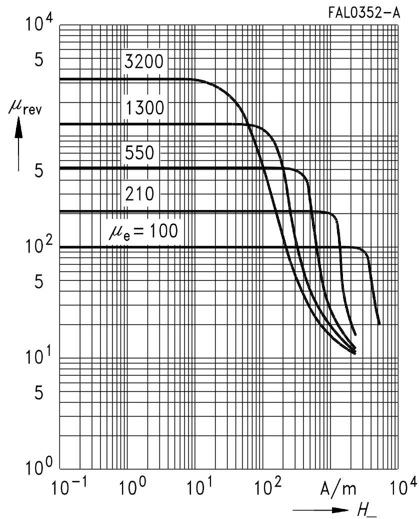
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 100 ˚C)



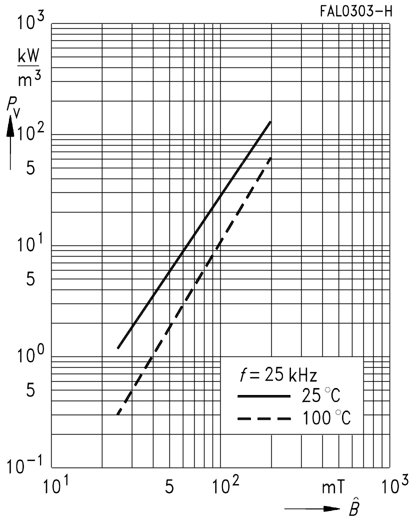
DC magnetic bias
of E, ETD and U cores
($\hat{B}$ ≤ 0,25 mT, f = 10 kHz, T = 25 ˚C)



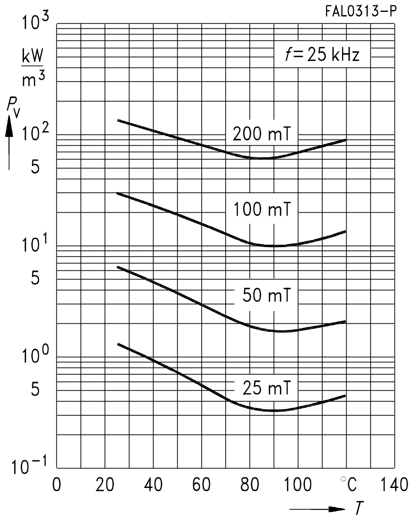
DC magnetic bias
of E, ETD and U cores
($\hat{B}$ ≤ 0,25 mT, f = 10 kHz, T = 100 ˚C)



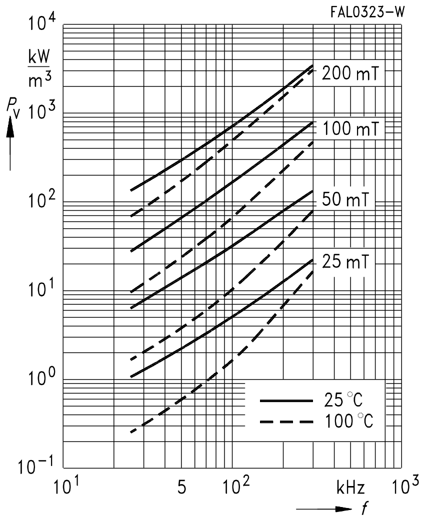
Relative core losses
versus AC field flux density
(measured with R29 ring cores)



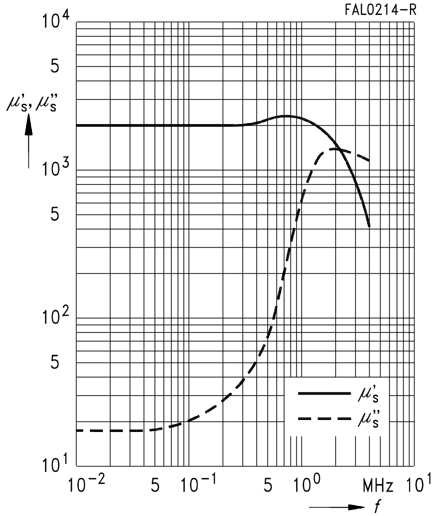
Relative core losses
versus temperature
(measured with R29 ring cores)



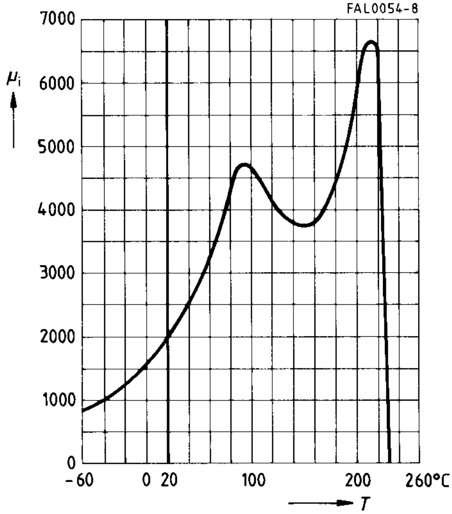
Relative core losses
versus frequency
(measured with R29 ring cores)



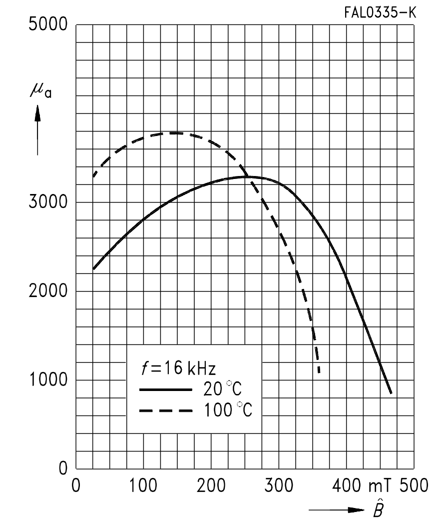
Complex permeability
versus frequency
(measured with R10 ring cores, $\hat{B} \leq 0{,}25$ mT)



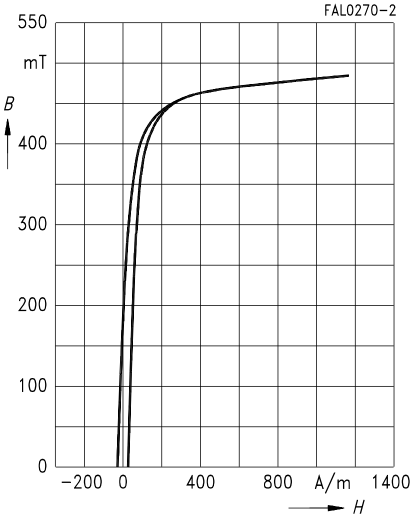
Initial permeability μ_i
versus temperature
(measured with R10 ring cores, $\hat{B} \leq 0{,}25$ mT)



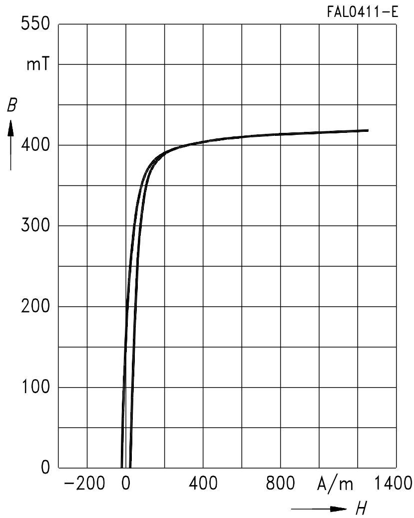
Amplitude permeability versus AC field
flux density
(measured with ungapped E cores)



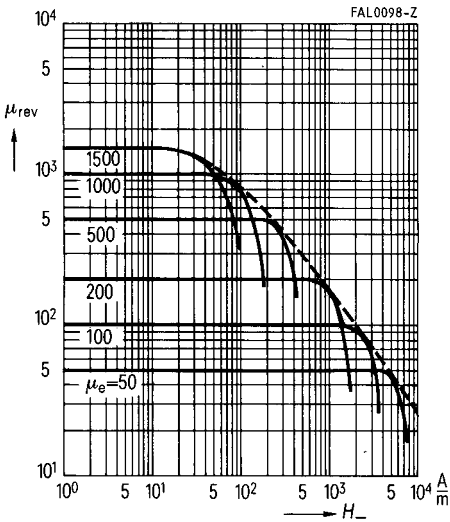
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 25 ˚C)



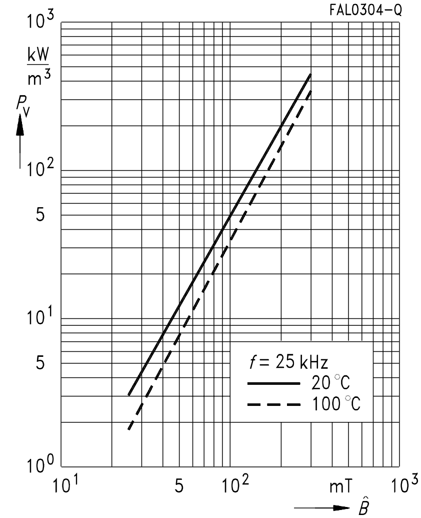
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 100 ˚C)



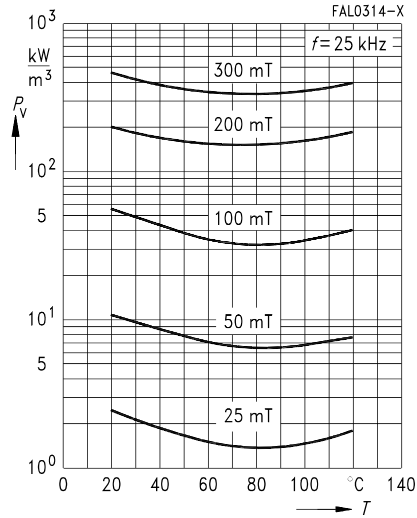
DC magnetic bias
of P, PM and E cores
($\hat{B}$ ≤ 0,25 mT, f = 10 kHz, T = 25 ˚C)



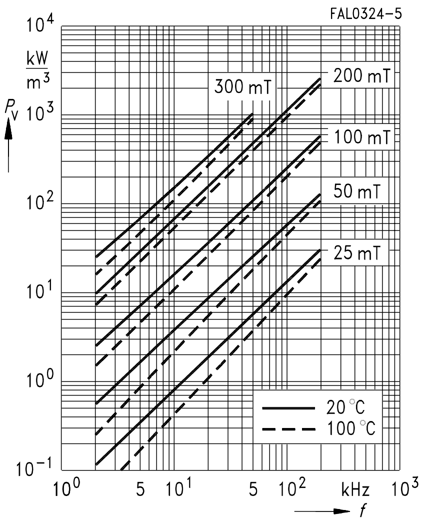
Relative core losses versus AC field flux density
(measured with R16 ring cores)



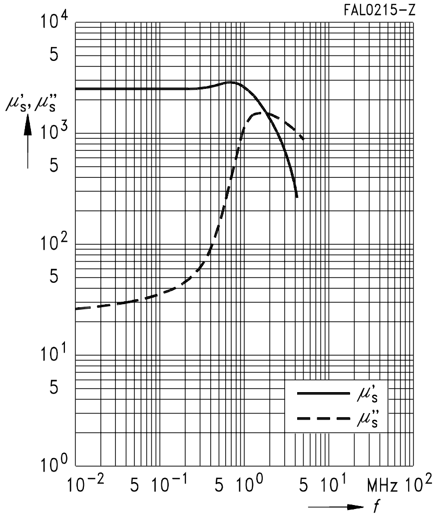
Relative core losses versus temperature
(measured with R16 ring cores)



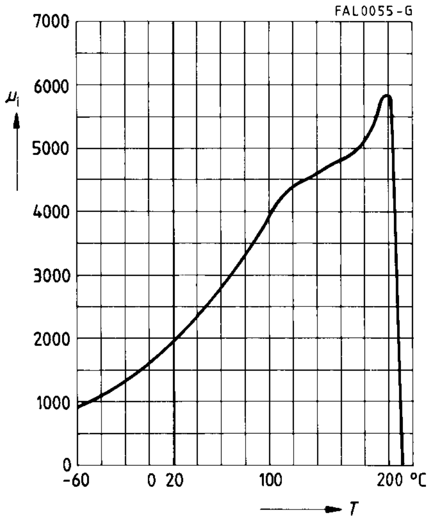
Relative core losses versus frequency
(measured with R16 ring cores)



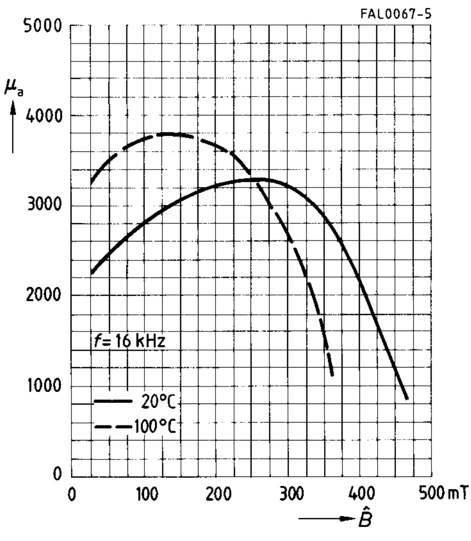
Complex permeability
versus frequency
(measured with R10 ring cores, $\hat{B} \leq 0{,}25$ mT)



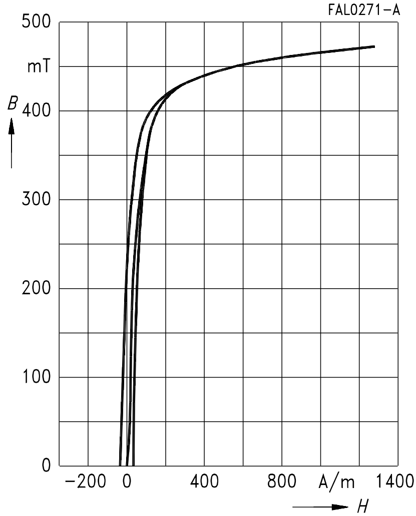
Initial permeability μ_i
versus temperature
(measured with R10 ring cores, $\hat{B} \leq 0{,}25$ mT)



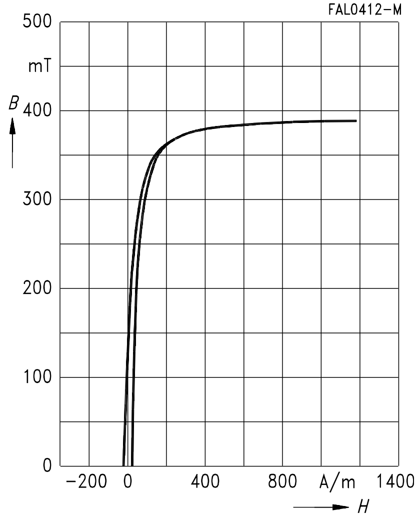
Amplitude permeability versus AC field
flux density
(measured with ungapped E cores)



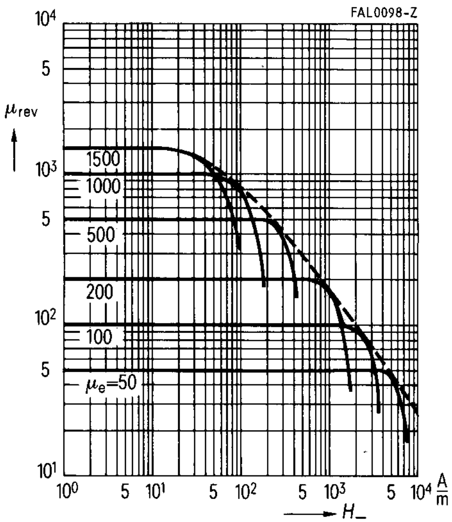
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 25 ˚C)



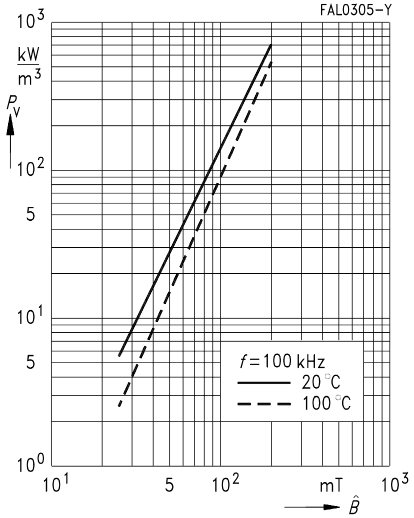
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 100 ˚C)



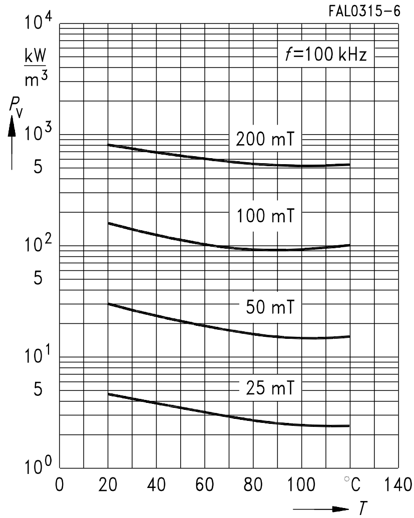
DC magnetic bias
of P, RM, PM and E cores
($\hat{B}$ ≤ 0,25 mT, f = 10 kHz, T = 25 ˚C)



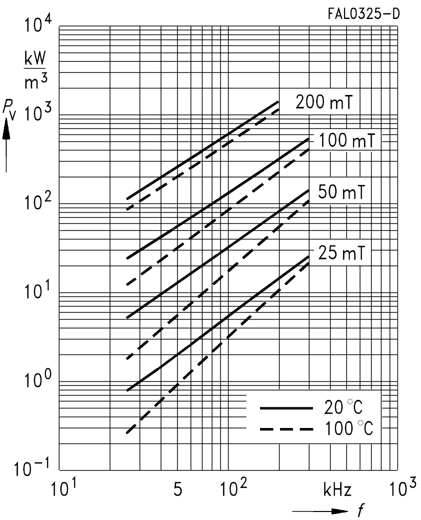
Relative core losses versus AC field flux density
(measured with R16 ring cores)



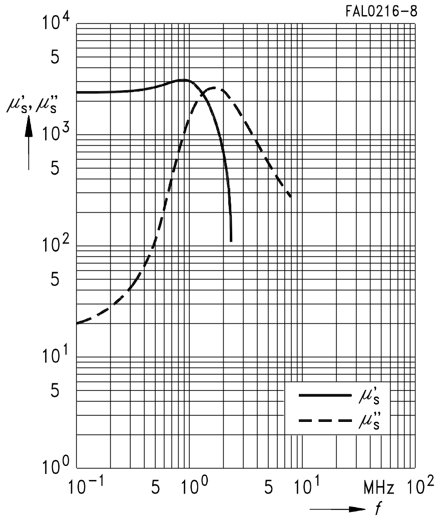
Relative core losses versus temperature
(measured with R16 ring cores)



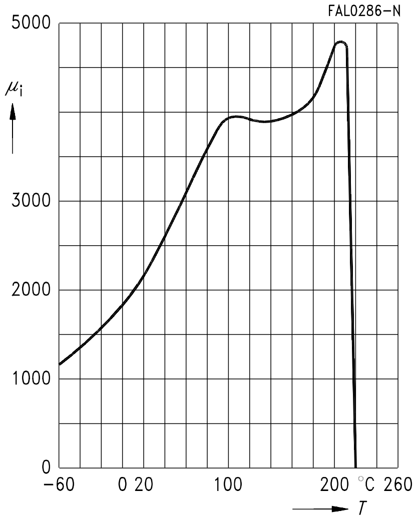
Relative core losses versus frequency
(measured with R16 ring cores)



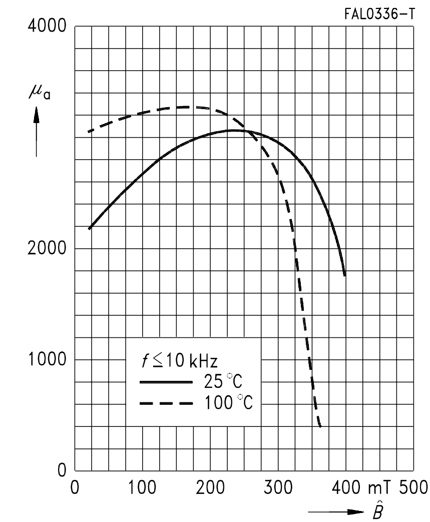
Complex permeability
versus frequency
(measured with R29 ring cores, $\hat{B} \leq 0{,}25$ mT)



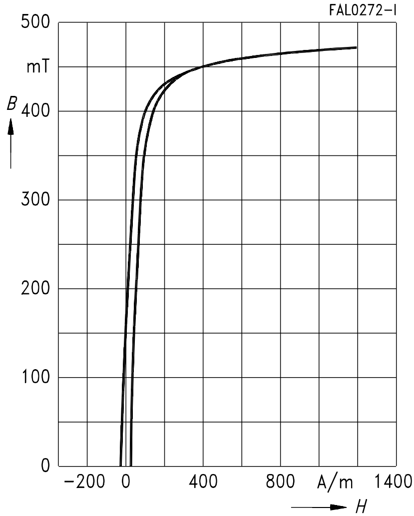
Initial permeability μ_i
versus temperature
(measured with R29 ring cores, $\hat{B} \leq 0{,}25$ mT)



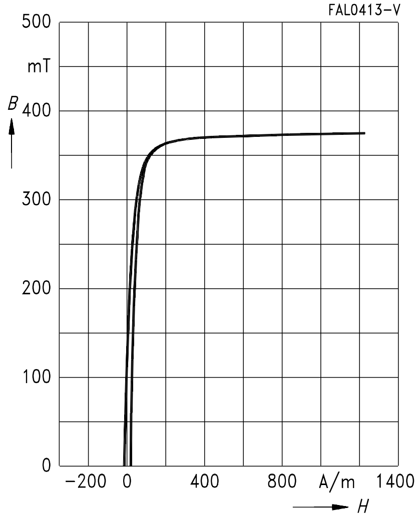
Amplitude permeability versus AC field
flux density
(measured with ungapped E cores)



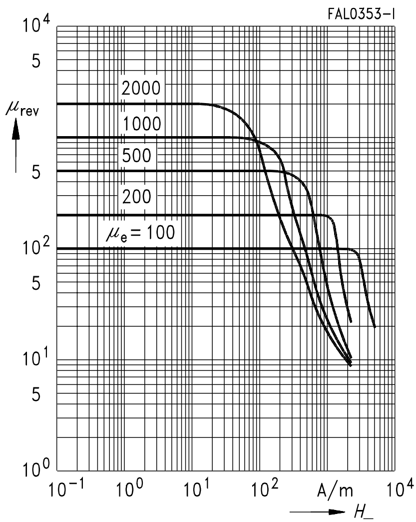
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 25 ˚C)



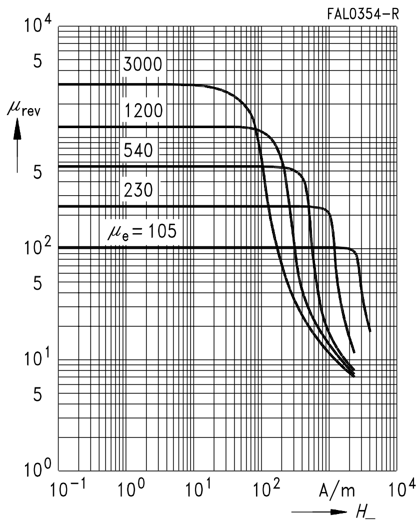
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 100 ˚C)



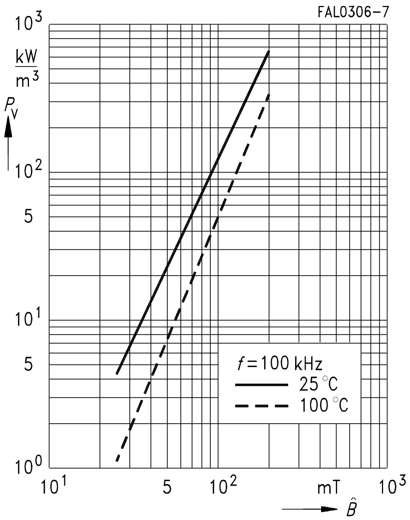
DC magnetic bias
of P, RM, PM and E cores
($\hat{B} \leq$ 0,25 mT, f = 10 kHz, T = 25 ˚C)



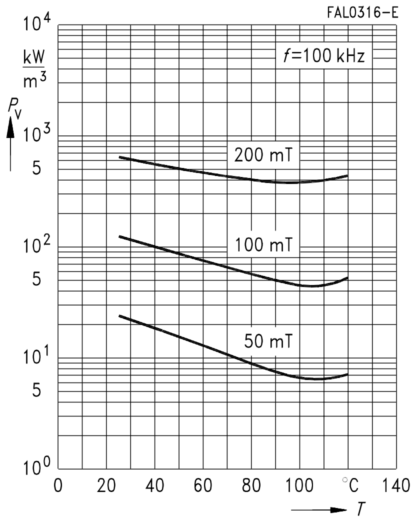
DC magnetic bias
of P, RM, PM and E cores
($\hat{B} \leq$ 0,25 mT, f = 10 kHz, T = 100 ˚C)



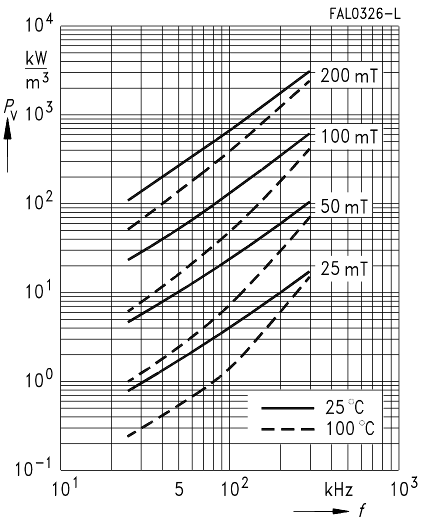
Relative core losses
versus AC field flux density
(measured with R29 ring cores)



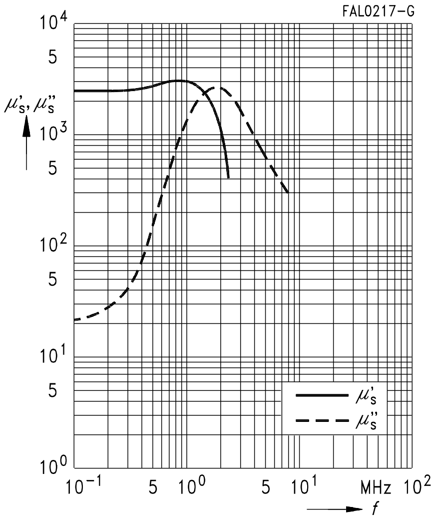
Relative core losses
versus temperature
(measured with R29 ring cores)



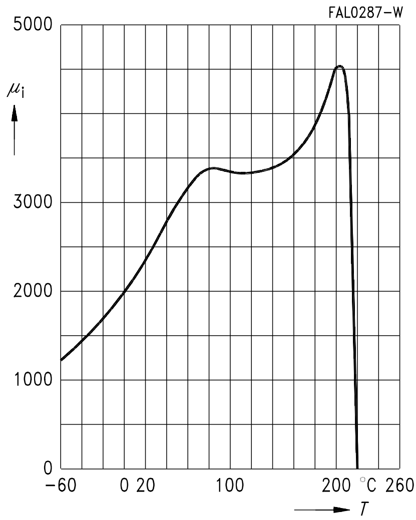
Relative core losses
versus frequency
(measured with R29 ring cores)



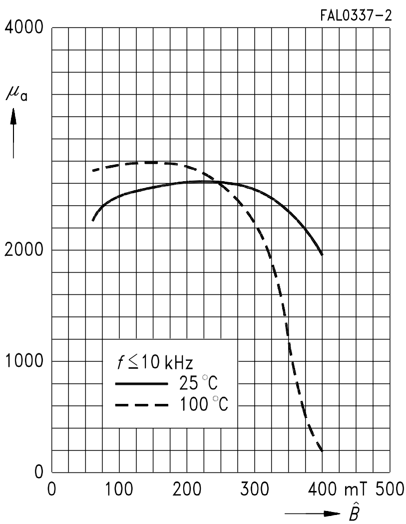
Complex permeability
versus frequency
(measured with R29 ring cores, $\hat{B} \leq 0{,}25$ mT)



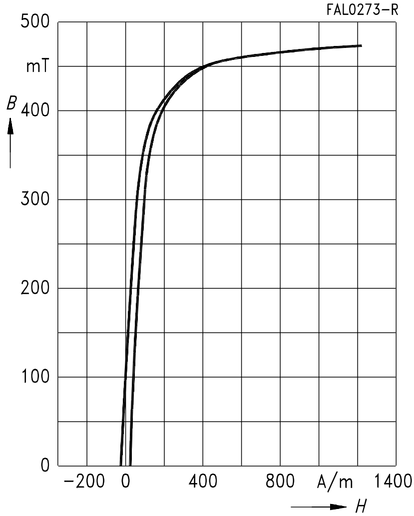
Initial permeability μ_i
versus temperature
(measured with R29 ring cores, $\hat{B} \leq 0{,}25$ mT)



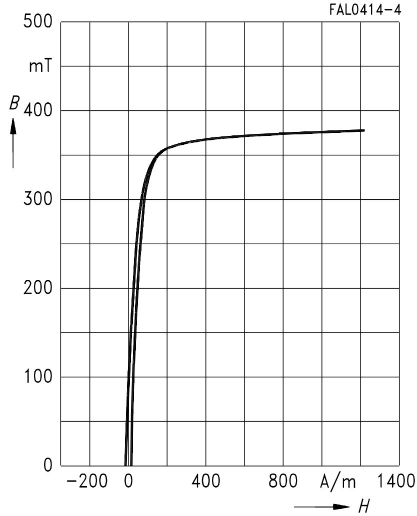
Amplitude permeability versus AC field
flux density
(measured with ungapped U cores)



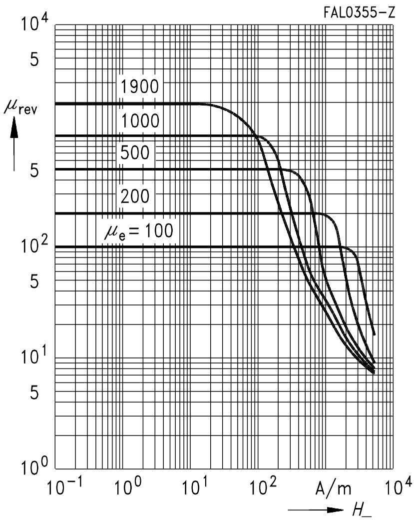
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 25 ˚C)



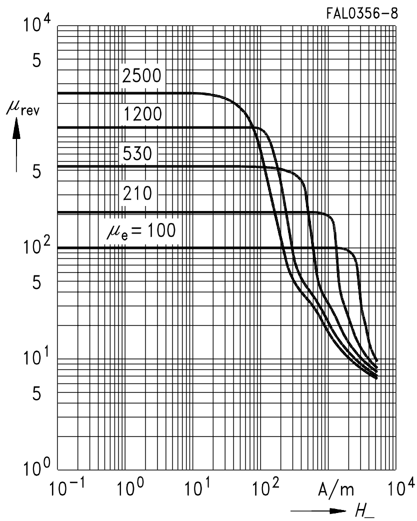
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 100 ˚C)



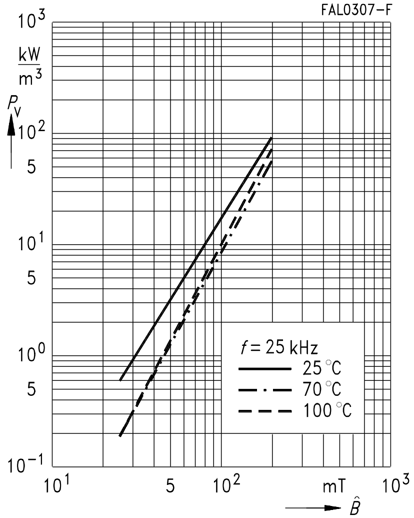
DC magnetic bias of E cores
($\hat{B}$ ≤ 0,25 mT, f = 10 kHz, T = 25 ˚C)



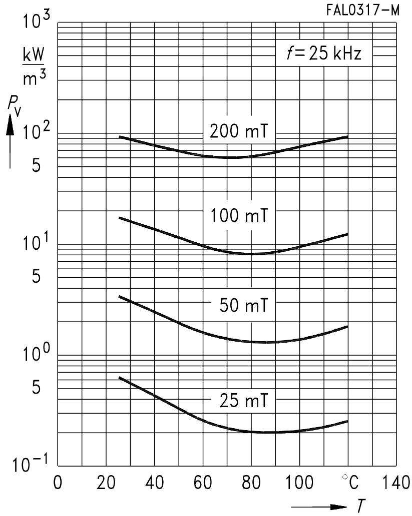
DC magnetic bias of E cores
($\hat{B}$ ≤ 0,25 mT, f = 10 kHz, T = 100 ˚C)



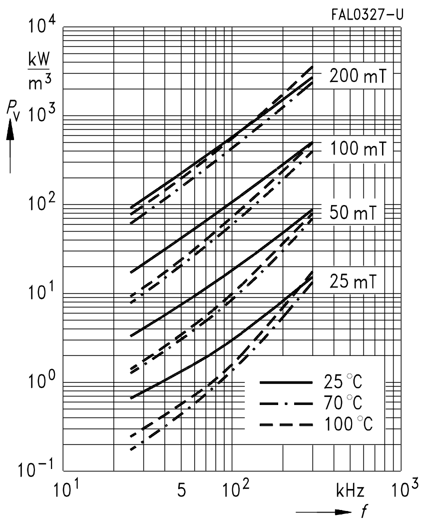
Relative core losses versus AC field flux density
(measured with R29 ring cores)



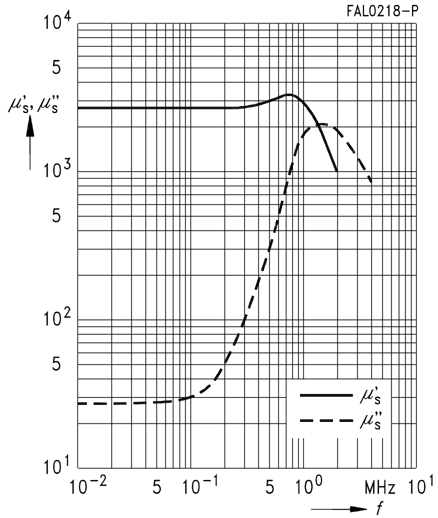
Relative core losses versus temperature
(measured with R29 ring cores)



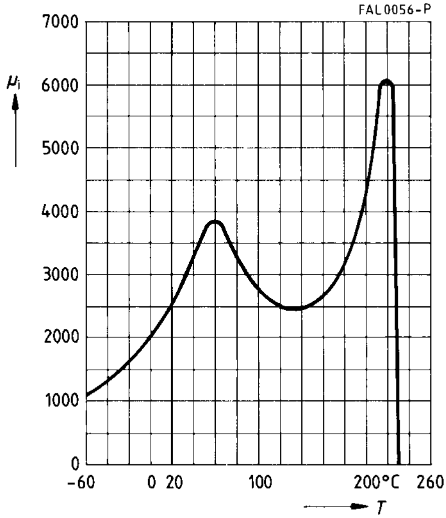
Relative core losses versus frequency
(measured with R29 ring cores)



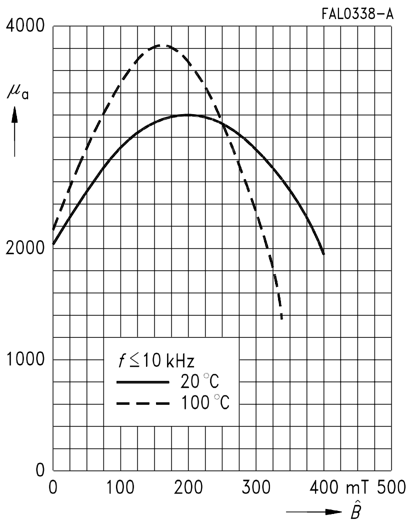
Complex permeability
versus frequency
(measured with R10 ring cores, $\hat{B} \leq 0{,}25$ mT)



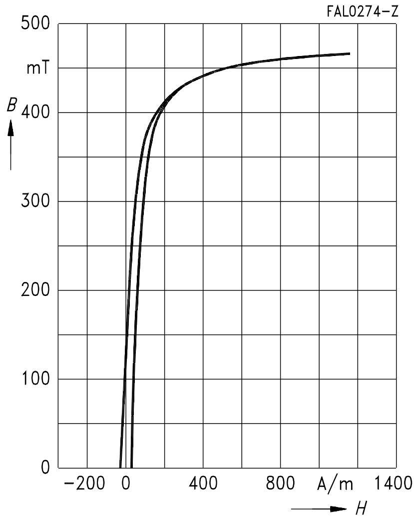
Initial permeability μ_i
versus temperature
(measured with R10 ring cores, $\hat{B} \leq 0{,}25$ mT)



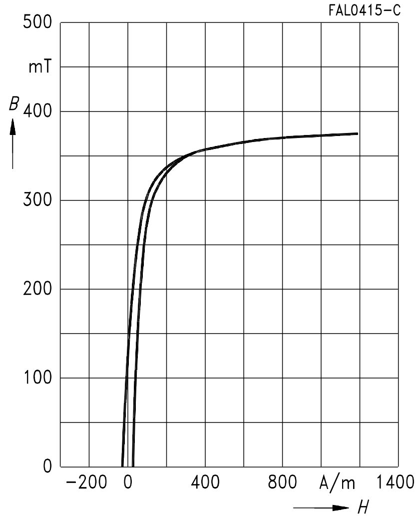
Amplitude permeability
versus AC field flux density
(measured with ungapped E cores)



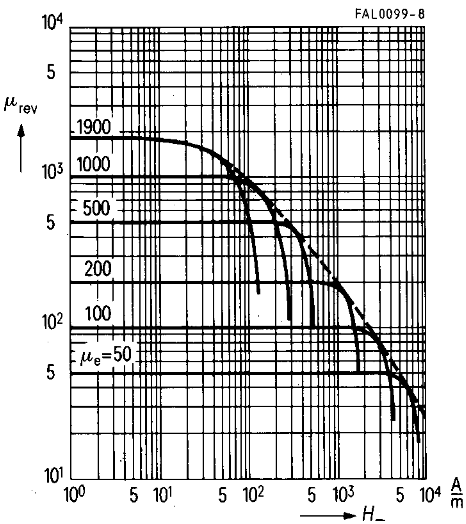
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 25 ˚C)



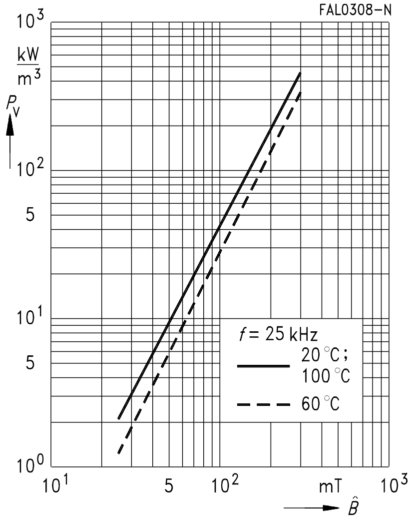
Dynamic magnetization curves
(typical values)
(f = 10 kHz, T = 100 ˚C)



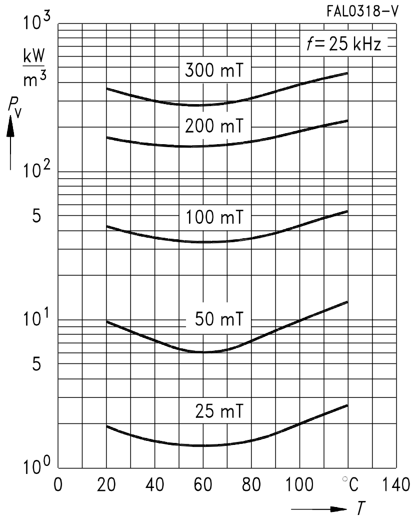
DC magnetic bias
of P and RM cores
($\hat{B}$ ≤ 0,25 mT, f = 10 kHz, T = 25 ˚C)



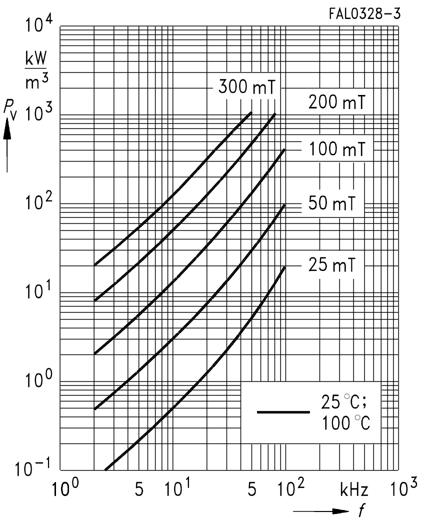
Relative core losses
versus AC field flux density
(measured with R16 ring cores)



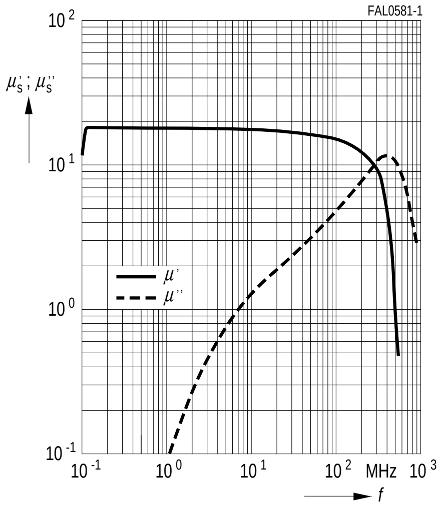
Relative core losses
versus temperature
(measured with R16 ring cores)



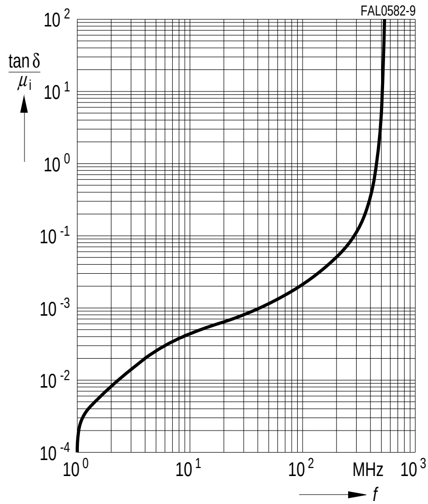
Relative core losses
versus frequency
(measured with R16 ring cores)



Complex permeability versus frequency
(measured with R20/10 ring cores, $\hat{B} \leq$ 0,25 mT)



Relative loss factor versus frequeny
(measured with R20/10 ring cores, $\hat{B} \leq$ 0,25 mT)



5 Plastic materials, manufacturers and UL numbers

- RM coil formers of thermosetting plastic with molded-in pins:
  Bakelite UP 3420® [E 61040 (M)], blue; Bakelite
- Pinned coil formers P9×5, P11×7, P14×8, P18×11, EP7 special coil former:
  AMC 2568® [E 48036 (M)], blue; Synres Almoco
- EP, EFD coil formers:
  Vyncolit/X611/green® [E167521 (M)]; Vyncolit
- RM, EP and EFD coil formers with post-inserted pins:
  Vyncolit/X611/green® [E167521 (M)]; Vyncolit
- RM coil formers with post-inserted pins:
  Sumikon PM 9630® [E41429 (M)]; Sumitomo Bakelite
- RM power, P, PM, E, EF, EC, ETD, ER coil formers and
  terminal carriers P7×4, P9×5, P11×7, P36×22:
  Valox 420-SE0® [E 45329 (M)], black; General Electric Plastics
  Vestodur GF30-FR1® [E66645 (M)], black; Creanova
  Crastin CE 7931® [E 69578 (M)], black; DuPont
  Pocan 4235® [E 41613 (M)], black; Bayer
  Amite TV4264SN® [E 47960 (M)], black; DSM
- Terminal carrier P4,6×4,1:
  Luvocom 1105/GF/20/EM® [---], natural; Lehmann u. Voss & Co.
- Terminal carriers P14×8, P18×11, P22×13, P26×16, P30×19:
  Pocan 4235® [E 41613 (M)], gray; Bayer
- SMD coil formers (except of ER11 coil former):
  Zenite 7130® [E 123598 (M)], black; DuPont
- ER11 SMD coil former :
  Sumika Super E4008® [E 54705 (M)], black; Sumitomo Chemical
  Zenite 7130® [E 123598 (M)], black; DuPont

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EMI suppression capacitors

Play it safe

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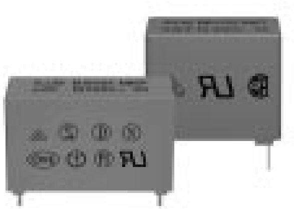

healing capability. The result – less destruction of equipment and ensuing fires. Plus the line is safeguarded against surges. In this way our capacitors satisfy the user's need for safety, and the new EMC standards too of course.

SCS – dependable, fast and competent