East Manufacturing Technologies Ltd.
The Pixmore Centre, Pixmore Avenue,
Letchworth, Hertfordshire, England SG61JG

+44 (0) 1462 680689
sales@east-trading-ltd.com
www.emtl.co.uk

Definition Of Magnetic Parameters

Initial Permeability	$\frac{C_1.A_L}{0.4p}$	Measured using LCR meter at f=10kHz B<=0.1mT Measurements carried out on toroidal cores wound with ten turns.
Saturation Flux Density, Tesla	Bsat	DC measurements carried out using digital fluxmeter and variable current source. AC measurements made using digital oscilloscope, wideband amplifier and signal generator.
Remanent Flux Density, Tesla	Br	Measured at 10kHz using the equipment described in the Bsat measurement.
Coercivity, A/m	Hc	Measured at 10kHz using the equipment described in the Bsat measurement.
Loss Factor	$\frac{\tan d_{(r+e)}}{m_i}$	Measured using LCR meter at f=100kHz and B<=0.1mT Pot cores measured with fully wound bobbins with the appropriate Litz wire.
Temperature Factor	$\frac{Dm}{m_i^2 DT}$	Measured using LCR meter and temperature controlled oven. Measurements made at 25°C and 55°C.
Curie Temperature	q_c	Curie temperature definition is the temperature where the intrinsic permeability has fallen to 10% of its room temperature value.
Disaccomodation Factor	$\frac{Dm}{m_i^2.\log_{10}(t_2/t_1)}$	When a ferrite core is subjected to a shock its permeability increases. The inductance then starts to decrease, this trend continues for a long period of time.
Hysteresis Material Constant	h_B	This gives us a measurement of the size of the B-H loop and is particularly useful in the design of transformers. There are several definitions.
Resistivity	r	Depending on the composition of the ferrite its ability to conduct current changes. The resistance is measured at 1V/cm and is measured in ohm-cm.
Amplitude Permeability	m_a	As the drive on a ferrite changes so does its permeability. Intrinsic or initial permeability Is measured on ring cores with a peak plux density less than 0.1mT. As the flux density increases the core is then working at an amplitude permeability.

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General material characteristics

Standard material properties				MnZn ferrite for power applications					Wide band, pulse, common mode chokes					Tcomms mtl	Ferrite antennas RF suppression		
Parameter	Symbol	Standard Conditions of test	Unit	KM2	KM21	KM22	KM3	KM65	KM4	KM5	KM7	KM10	KM12	KM26G	KN1000	KN120	KN2
Initial Permeability (nominal)	μ_i	B<=0.1mT 10kHz 25 °C	-	2000 +/-20%	2100 +/-20%	2200 +/-20%	3000 +/-20%	1800 +/-20%	4000 +/-20%	5000 +/-20%	7000 +/-20%	10000 +/-30%	12000 +/-35%	2000 +/-20%	1000 +/-20%	200 +/-20%	120 +/-20%
Saturation Flux Density (typical)	B_{sat}	H=796 A/m 25 °C = 10 Oe 100°C	mT	470 350	500 380	500 400	460 330	500 420	380	450	380	380	380	330	250	340	340
Remanent Flux Density (typical)	B_{rem}	H® 0 (from near saturation) 10kHz 25 °C	mT	200	180	180	150	140	180	175	250	220	220	35	170	220	260
Coercivity (typical)	H_c	B® 0 (from near saturation) 10kHz 25 °C	A/m	20	15	15	17	25	15	13	18	17	16	8	55	180	200
Loss Factor (maximum)	$\frac{\tan d_{(\mu i)}}{\mu_i}$	B<0.1mT 25 °C 100kHz 1MHz 2MHz	10^{-6}	------	------	------	------	------	20	20	------	------	------	2.5	350	42 50	60
Temperature Factor	$\frac{Dm}{m_i DT}$	+25 °C to+55°C B<0.1mT 10kHz	10^{-6}/ °C	------	------	------	------	------	------	-2 to +2	------	------	------	0.4 to +1.0	3 to 7	12 to 35	20 to 55
Curie Temperature (minimum)	q_c	B<0.1mT 10kHz	°C	200	200	220	175	175	130	160	130	130	130	150	120	260	260
Hysteresis Material Constant (max)	h_B	B from 1.5 to 3.0mT 10kHz 25 °C	10^{-6}/ mT	------	------	------	------	------	1.1	1.1	------	------	------	0.45	------	------	------
Resistivity (typical)	r	1 V/cm 25 °C	ohm-cm	100	100	100	100	100	20	20	100	100	100	100	------	10^5	10^5
Amplitude Permeability (min)	μ_a	400mT 25 °C 340mT 100°C	-----	2400 1800	2500 1900	2500 1900	2300	2500 2500									
Total Power Loss Density (maximum)	P_v	200mT; 25kHz 25°C 200mT; 25kHz 100°C 100mT; 100kHz 25°C 100mT; 100kHz 100°C 200mT; 100kHz 100°C	mW/cc	220 190	 80 500	200 130 250 160 750	220 190	120 110 110 80									
Typical core shapes				E ETD RM EFD RING	E ETD RM EFD RING	E ETD RM EFD RING	E RM RING	E ETD RM EP EFD RING	RM EP POT RING	RM EP POT RING	RM EP RING	RM EP RING	EP RING	RM POT RING	RING DRUM	RING ROD TUBE DRUM	RING ROD TUBE

Measured on 30x19x6.5mm toroids fired under perfect conditions.
Production part characteristics may vary considerably.

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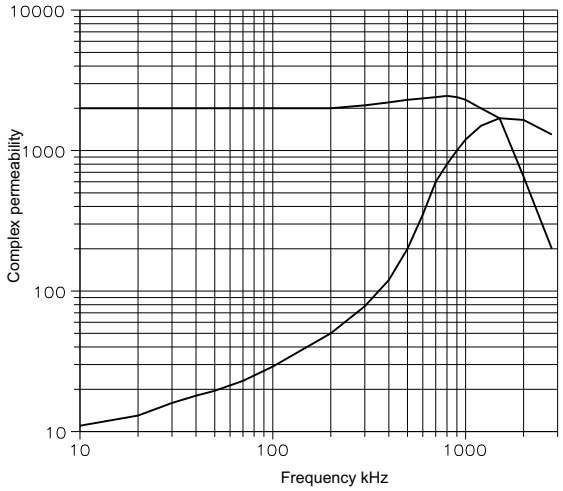
KM2 MATERIAL

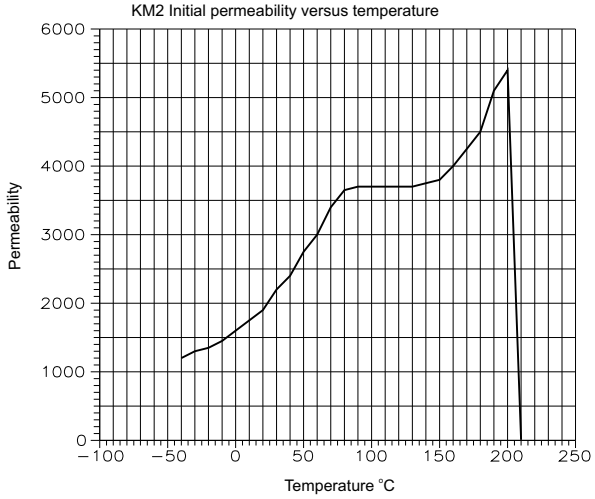
A general purpose MnZn ferrite for PSU applications. Losses are minimised in the range 60°C-100°C.Typical applications include switched mode power supplies and EHT transformers.

PARAMETER	SYMBOL	Standard Conditions of test	UNIT	KM2
Initial Permeability (nominal)	μ_i	B<=0.1mT 10kHz 25 °C	-	2000 +/-20%
Saturation Flux Density (typical)	B_{sat}	H=796 A/m = 10 Oe 25 °C 100°C	mT	470 350
Remanent Flux Density (typical)	B_{rem}	H® 0 (from near saturation) 10kHz 25 °C	mT	200
Coercivity (typical)	H_c	B® 0 (from near saturation) 10kHz 25 °C	A/m	22
Loss Factor (maximum)	$\frac{\tan d_{(\mu e)}}{\mu_i}$	B<0.1mT 100kHz 25 °C	10^{-6}	-----
Temperature Factor	$\frac{Dm}{m_i^2 DT}$	+25 °C to +55°C B<0.1mT 10kHz	10^{-6}/°C	-----
Curie Temperature (minimum)	θ_c	B<0.1mT 10kHz	°C	200
Hysteresis Material Constant (max)	h_B	B from 1.5 to 3.0mT 10kHz 25 °C	10^{-6}/mT	-----
Resistivity (typical)	r	1 V/cm 25 °C	ohm-cm	100
Amplitude Permeability (minimum)	m_b	400mT 25 °C 340mT 100°C	-----	2400 1825
Total Power Loss Density (maximum)	P_v	200mT; 16kHz 25 °C 200mT; 16kHz 60°C 200mT; 16kHz 100 °C 200mT; 25kHz 60°C 200mT; 100kHz 100°C	mW/cc	120 110 110 190 190

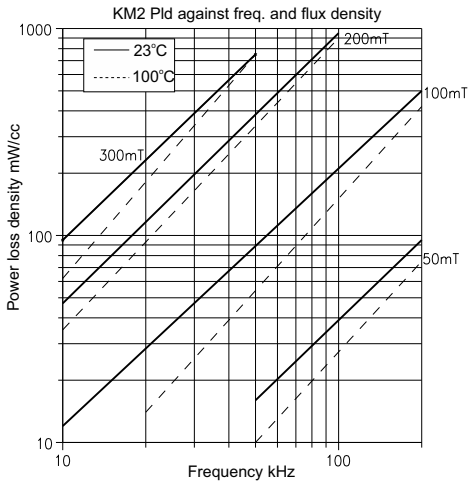
KM2 Complex permeability versus frequency



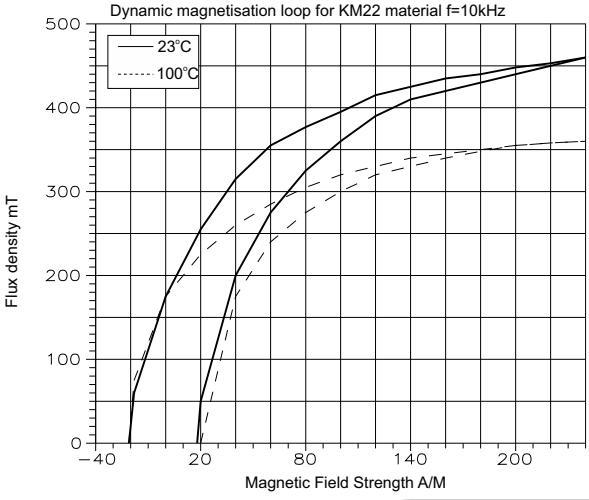
KM2 Initial permeability versus temperature



KM2 Pld against freq. and flux density



Dynamic magnetisation loop for KM22 material f=10kHz



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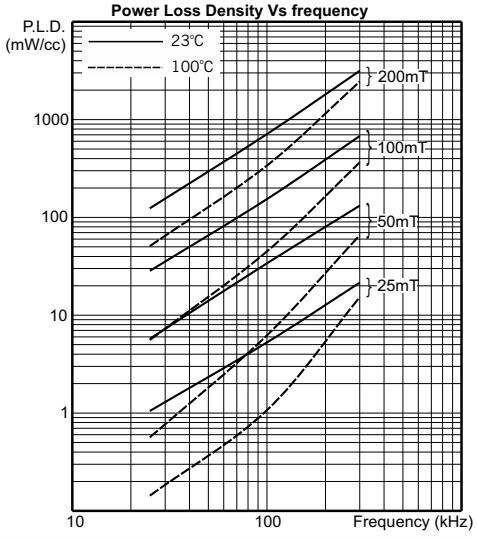
KM21 MATERIAL

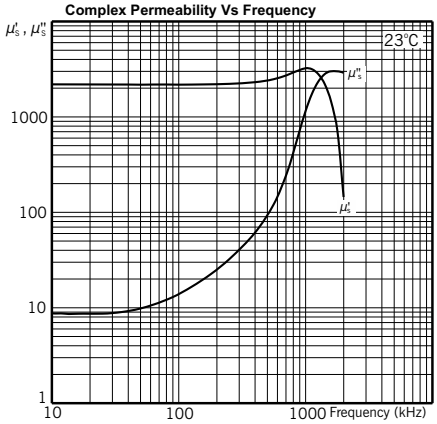
A low loss power material, for SMPUS designed for high frequencies, Available core shapes include E, RM and toroid.

PARAMETER	SYMBOL	Standard Conditions of test	UNIT	KM21
Initial Permeability (nominal)	μ_i	B<=0.1mT 10kHz 25 °C	-	2100 +/-20%
Saturation Flux Density (typical)	B_{sat}	H=796 A/m = 10 Oe 25 °C 100°C	mT	500 380
Remanent Flux Density (typical)	B_{rem}	H® 0 (from near saturation) 10kHz 25 °C	mT	180
Coercivity (typical)	H_c	B® 0 (from near saturation) 10kHz 25 °C	A/m	15
Loss Factor (maximum)	$\frac{\tan d_{(\mu e)}}{\mu_i}$	B<0.1mT 100kHz 25 °C	10^{-6}	-----
Temperature Factor	$\frac{Dm}{m_i^2 DT}$	+25 °C to +55°C B<0.1mT 10kHz	10^{-6}/ °C	-----
Curie Temperature (minimum)	θ_c	B<0.1mT 10kHz	°C	>200
Hysteresis Material Constant (max)	h_B	B from 1.5 to 3.0mT 10kHz 25 °C	10^{-6}/ mT	-----
Resistivity (typical)	r	1 V/cm 25 °C	ohm-cm	100
Amplitude Permeability (minimum)	m_b	400mT 25 °C 340mT 100°C	-----	2500 1900
Total Power Loss Density (maximum)	P_v	200mT; 16kHz 25 °C 200mT; 16kHz 60°C 200mT; 16kHz 100 °C 100mT; 100kHz 100°C 200mT; 100kHz 100°C	mW/cc	80 500

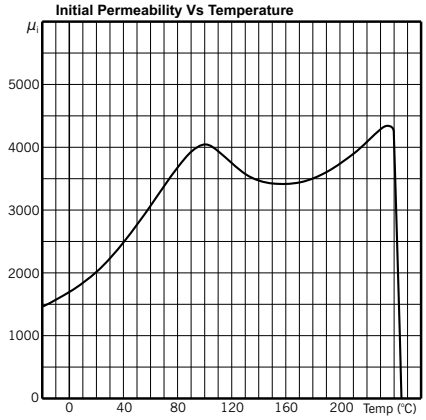
Power Loss Density Vs frequency



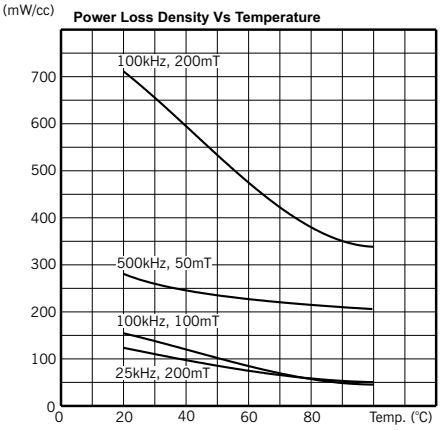
Complex Permeability Vs Frequency



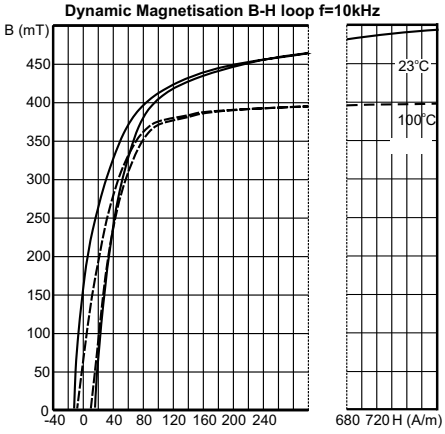
Initial Permeability Vs Temperature



Power Loss Density Vs Temperature



Dynamic Magnetisation B-H loop f=10kHz



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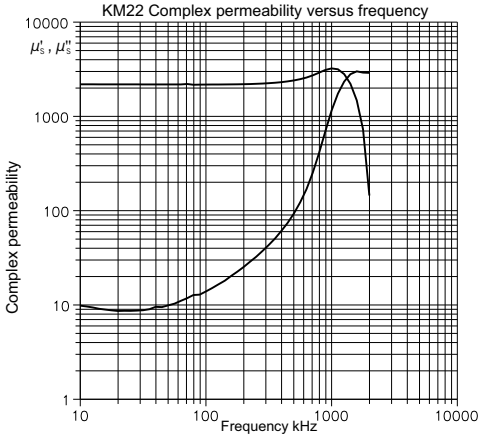
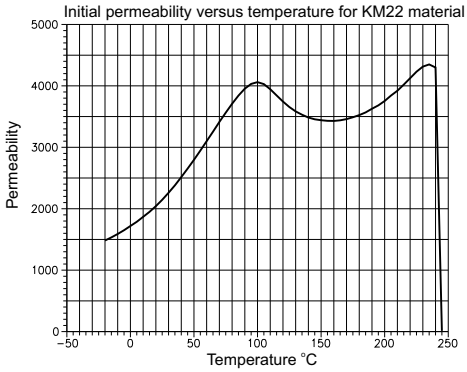
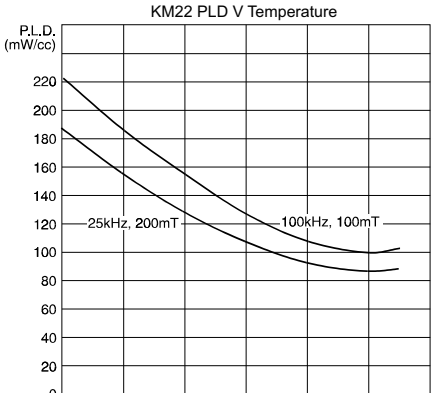
KM 22 MATERIAL

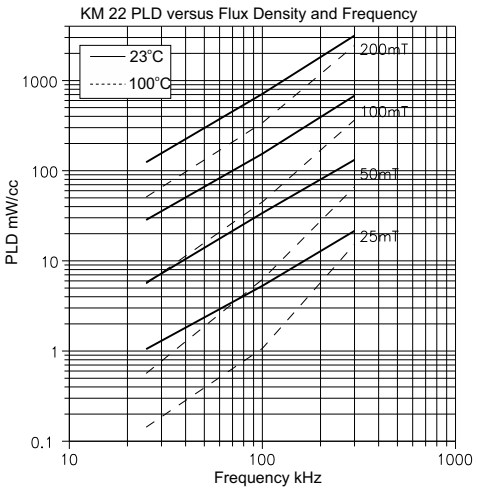
A low power loss material with high saturation. Designed for use at frequencies up to 350kHz.
Core shapes available include ETD, E,EFD and RM.

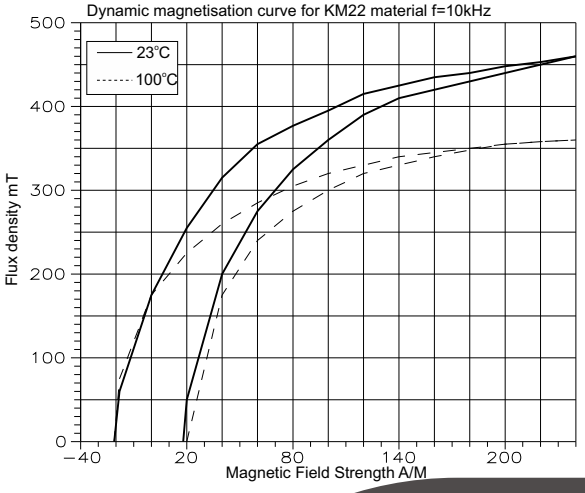
PARAMETER	SYMBOL	Standard Conditions of test	UNIT	KM22
Initial Permeability (nominal)	μ_i	B<=0.1mT 10kHz 25 °C	-	2200 +/-20%
Saturation Flux Density (typical)	B_{sat}	H=796 A/m = 10 Oe 25 °C 100°C	mT	500 400
Remanent Flux Density (typical)	B_{rem}	H® 0 (from near saturation) 10kHz 25 °C	mT	270
Coercivity (typical)	H_c	B® 0 (from near saturation) 10kHz 25 °C	A/m	27
Loss Factor (maximum)	$\frac{\tan d_{(\mu e)}}{\mu_i}$	B<0.1mT 100kHz 25 °C	10^{-6}	-----
Temperature Factor	$\frac{Dm}{m_i^2 DT}$	+25 °C to +55°C B<0.1mT 10kHz	10^{-6}/ °C	-----
Curie Temperature (minimum)	θ_c	B<0.1mT 10kHz	°C	>230
Hysteresis Material Constant (max)	h_B	B from 1.5 to 3.0mT 10kHz 25 °C	10^{3}/ mT	-----
Resistivity (typical)	r	1 V/cm 25 °C	ohm-cm	100
Amplitude Permeability (minimum)	m_b	400mT 25 °C 340mT 100°C	-----	2500 1900
Total Power Loss Density (maximum)	P_v	200mT; 25kHz 25 °C 200mT; 25kHz 100°C 100mT; 100kHz 25 °C 100mT; 100kHz 100°C 200mT; 100kHz 100°C	mW/cc	200 130 250 160 750











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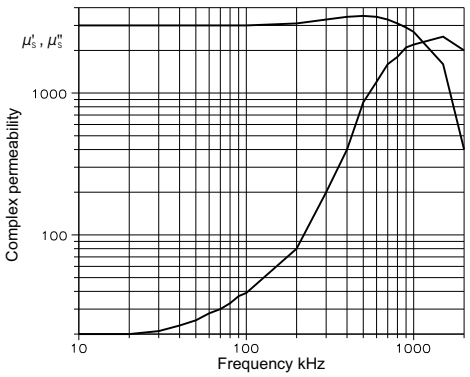
KM3 MATERIAL

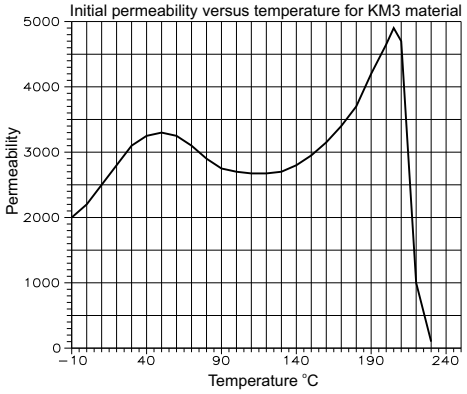
KM3 is a Manganese Zinc soft ferrite for power and filter applications. The power loss minimum is around 60°C. Core shapes available include E cores and ring cores.

PARAMETER	SYMBOL	Standard Conditions of test	UNIT	KM3
Initial Permeability (nominal)	μ_i	B<=0.1mT 10kHz 25 °C	-	3000 +/-20%
Saturation Flux Density (typical)	B_{sat}	H=796 A/m = 10 Oe 25 °C 100°C	mT	460 330
Remanent Flux Density (typical)	B_{rem}	H® 0 (from near saturation) 10kHz 25 °C	mT	150
Coercivity (typical)	H_c	B® 0 (from near saturation) 10kHz 25 °C	A/m	18
Loss Factor (maximum)	$\frac{\tan d_{(\mu e)}}{\mu_i}$	B<0.1mT 100kHz 25 °C	10^{-6}	-----
Temperature Factor	$\frac{Dm}{m_i^2 DT}$	+25 °C to +55°C B<0.1mT 10kHz	10^{-6}/ °C	-----
Curie Temperature (minimum)	θ_c	B<0.1mT 10kHz	°C	180
Hysteresis Material Constant (max)	h_B	B from 1.5 to 3.0mT 10kHz 25 °C	10^{3}/ mT	-----
Resistivity (typical)	r	1 V/cm 25 °C	ohm-cm	100
Amplitude Permeability (minimum)	m_b	400mT 25 °C 340mT 100°C	-----	2400
Total Power Loss Density (maximum)	P_v	200mT; 16kHz 25 °C 200mT; 16kHz 60°C 200mT; 16kHz 100 °C 200mT; 25kHz 60°C 200mT; 100kHz 100°C	mW/cc	120 110 110 190 190

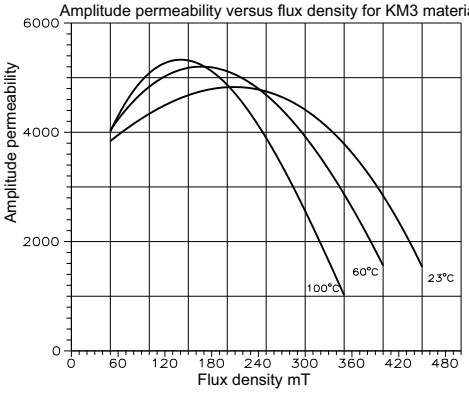
Complex permeability versus frequency for KM3 material



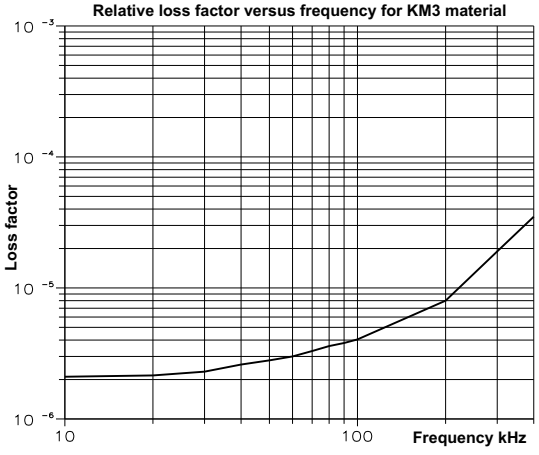
Initial permeability versus temperature for KM3 material



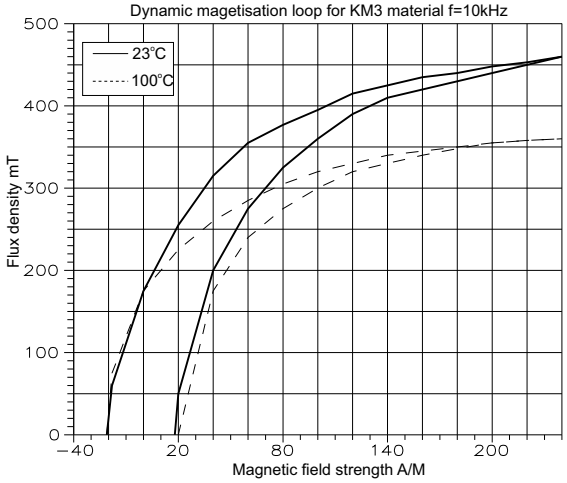
Amplitude permeability versus flux density for KM3 material



Relative loss factor versus frequency for KM3 material



Dynamic magetisation loop for KM3 material f=10kHz



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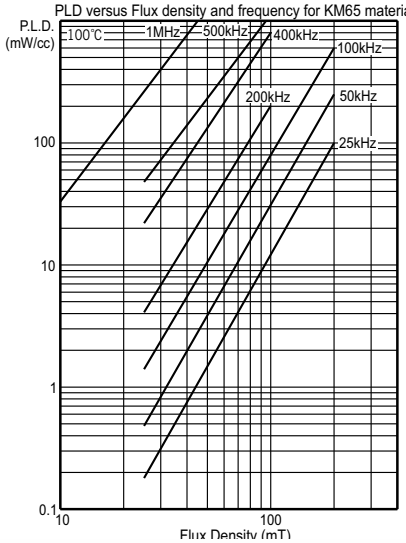
KM65 MATERIAL

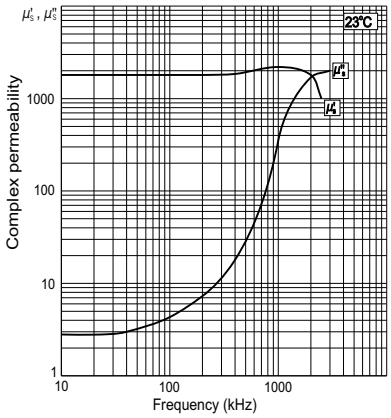
Designed as a high frequency power material for SMPUS. KM65 is a MnZn Ferrite. It is available in a range of core shapes including RM, ETD, EFD and toroids.

PARAMETER	SYMBOL	Standard Conditions of test	UNIT	KM65
Initial Permeability (nominal)	μ_i	B<=0.1mT 10kHz 25 °C	-	1800 +/-20%
Saturation Flux Density (typical)	B_{sat}	H=796 A/m = 10 Oe 25 °C 100°C	mT	500 400
Remanent Flux Density (typical)	B_{rem}	H® 0 (from near saturation) 10kHz 25 °C	mT	130
Coercivity (typical)	H_c	B® 0 (from near saturation) 10kHz 25 °C	A/m	25
Loss Factor (maximum)	$\frac{\tan d_{(\mu e)}}{\mu_i}$	B<0.1mT 100kHz 25 °C	10^{-6}	-----
Temperature Factor	$\frac{Dm}{m_i^2 DT}$	+25 °C to +55°C B<0.1mT 10kHz	10^{-6}/ °C	-----
Curie Temperature (minimum)	θ_c	B<0.1mT 10kHz	°C	200
Hysteresis Material Constant (max)	h_B	B from 1.5 to 3.0mT 10kHz 25 °C	10^{-6}/ mT	-----
Resistivity (typical)	r	1 V/cm 25 °C	ohm-cm	100
Amplitude Permeability (minimum)	m_b	400mT 25 °C 340mT 100°C	-----	2500 1900
Total Power Loss Density (maximum)	P_v	200mT; 25kHz 25 °C 200mT; 25kHz 100°C 200mT; 100kHz 25 °C 200mT; 100kHz 100°C 200mT; 400kHz 100°C	mW/cc	120 100 110 80 150

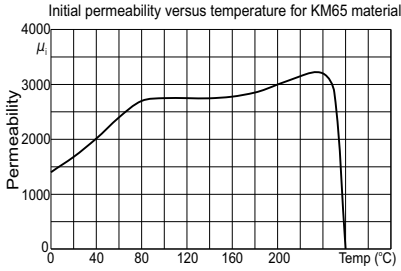
PLD versus Flux density and frequency for KM65 material



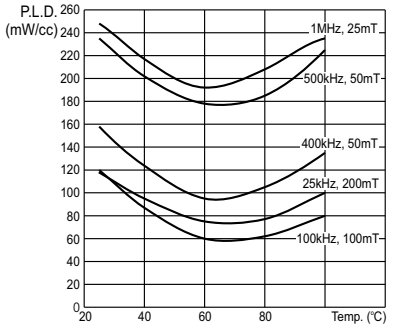
Complex permeability versus frequency for KM65 material



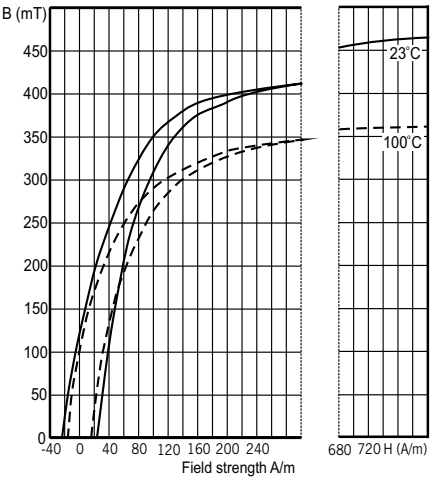
Initial permeability versus temperature for KM65 material



Power loss density versus temperature for KM65 material



Dynamic B-H for KM65 material f=10kHz



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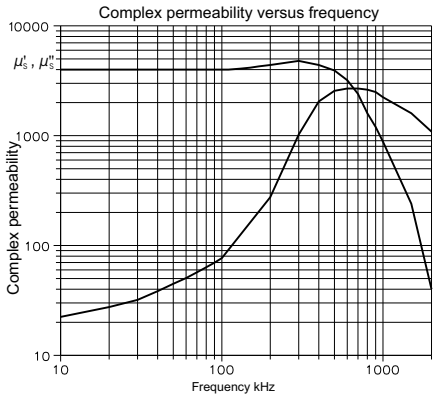
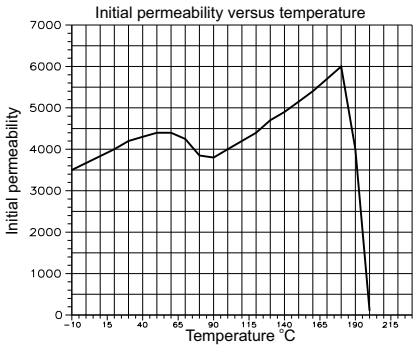
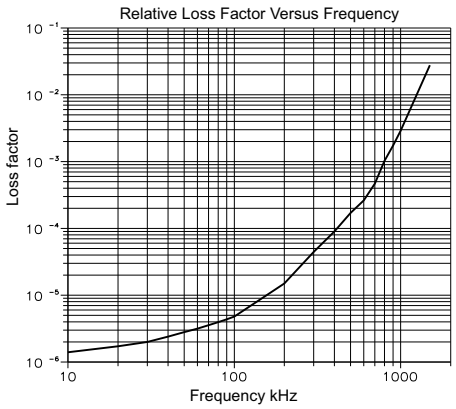
KM4 MATERIAL

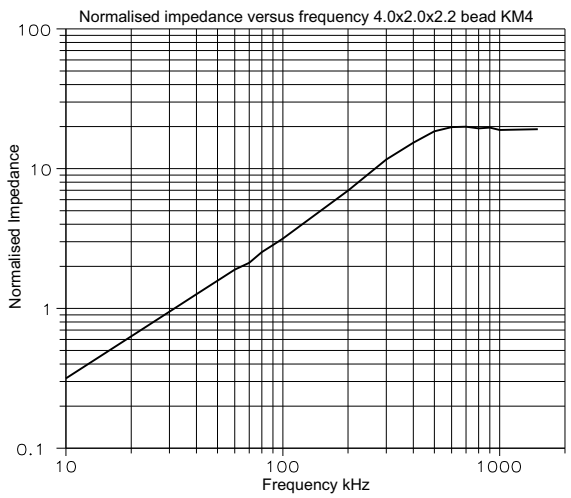
A high saturation wide band manganese zinc ferrite.
Typical applications include pulse transformers, filter circuits, and impeder cores.Core shapes include ring cores, EP and RM pot cores

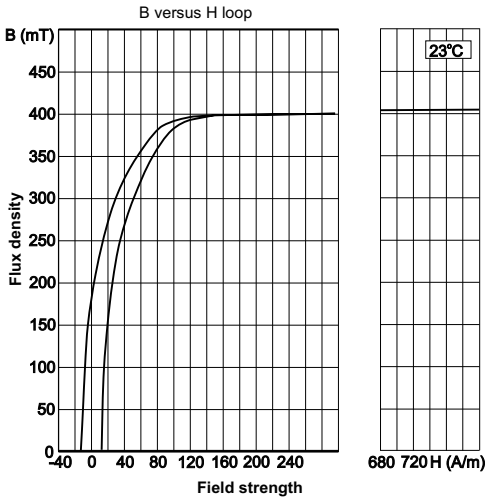
PARAMETER	SYMBOL	Standard Conditions of test	UNIT	KM4
Initial Permeability (nominal)	μ_i	B<=0.1mT 10kHz 25 °C	-	4000 +/-20%
Saturation Flux Density (typical)	B_{sat}	H=796 A/m = 10 Oe 25 °C 100°C	mT	380
Remanent Flux Density (typical)	B_{rem}	H® 0 (from near saturation) 10kHz 25 °C	mT	180
Coercivity (typical)	H_c	B® 0 (from near saturation) 10kHz 25 °C	A/m	14
Loss Factor (maximum)	$\frac{\tan d_{(\mu+e)}}{\mu_i}$	B<0.1mT 100kHz 25 °C	10^{-6}	-----
Temperature Factor	$\frac{Dm}{m_i^2 DT}$	+25 °C to +55°C B<0.1mT 10kHz	10^{-6}/ °C	-----
Curie Temperature (minimum)	q_c	B<0.1mT 10kHz	°C	130
Hysteresis Material Constant (max)	h_B	B from 1.5 to 3.0mT 10kHz 25 °C	10^{-6}/ mT	1.1
Resistivity (typical)	r	1 V/cm 25 °C	ohm-cm	20











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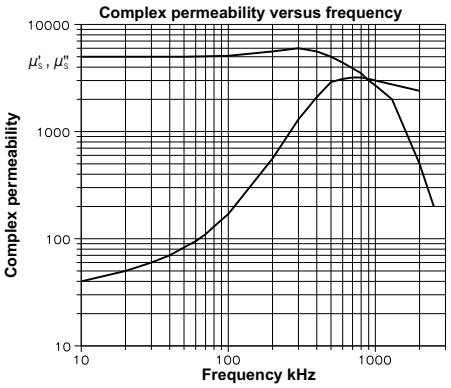
The Pixmore Centre, Pixmore Avenue,
Letchworth, Hertfordshire, England SG61JG

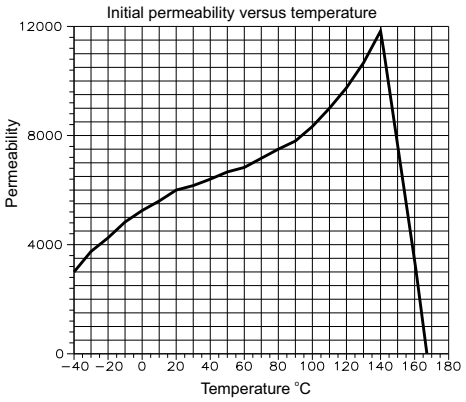
+44 (0) 1462 680689
sales@east-trading-ltd.com
www.emtl.co.uk

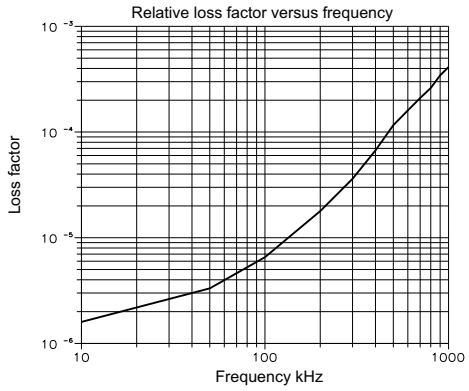
KM5 MATERIAL

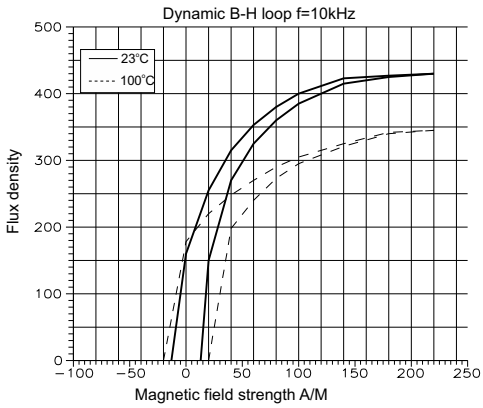
A wide band manganese zinc ferrite. KM5 has low losses at frequencies below 100kHz. Typical applications include mains filtering and pulse transformers. Core shapes include Rings, EP and RM cores.

PARAMETER	SYMBOL	Standard Conditions of test	UNIT	KM5
Initial Permeability (nominal)	μ_i	B<=0.1mT 10kHz 25 °C	-	5000 +/-20%
Saturation Flux Density (typical)	B_{sat}	H=796 A/m = 10 Oe 25 °C 100°C	mT	460
Remanent Flux Density (typical)	B_{rem}	H® 0 (from near saturation) 10kHz 25 °C	mT	170
Coercivity (typical)	H_c	B® 0 (from near saturation) 10kHz 25 °C	A/m	12
Loss Factor (maximum)	$\frac{\tan d_{(\mu+e)}}{\mu_i}$	B<0.1mT 100kHz 25 °C	10^{-6}	20
Temperature Factor	$\frac{Dm}{m_i^2 DT}$	+25 °C to +55°C B<0.1mT 10kHz	10^{-6}/ °C	-----
Curie Temperature (typical)	q_c	B<0.1mT 10kHz	°C	160
Hysteresis Material Constant (max)	h_B	B from 1.5 to 3.0mT 10kHz 25 °C	10^{-6}/ mT	1.1
Resistivity (typical)	r	1 V/cm 25 °C	ohm-cm	20









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Letchworth, Hertfordshire, England SG61JG

+44 (0) 1462 680689
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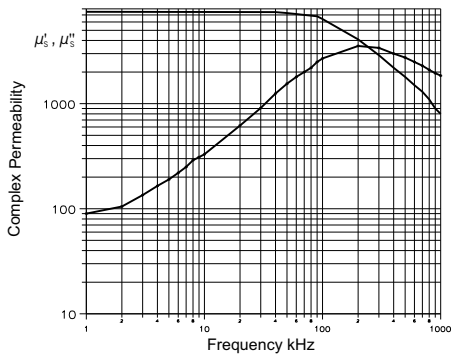
KM7 MATERIAL

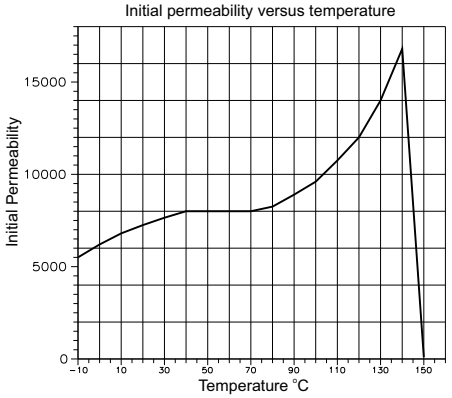
A high permeability manganese zinc ferrite. KM7 is suitable for wideband, pulse and filter applications.
Typical core shapes Rings, EP and RM.

PARAMETER	SYMBOL	Standard Conditions of test	UNIT	KM7
Initial Permeability (nominal)	μ_i	B<=0.1mT 10kHz 25 °C	-	7000 +/-20%
Saturation Flux Density (typical)	B_{sat}	H=796 A/m = 10 Oe 25 °C 100°C	mT	380
Remanent Flux Density (typical)	B_{rem}	H® 0 (from near saturation) 10kHz 25 °C	mT	250
Coercivity (typical)	H_c	B® 0 (from near saturation) 10kHz 25 °C	A/m	18
Loss Factor (maximum)	$\frac{\tan d_{(\mu e)}}{\mu_i}$	B<0.1mT 100kHz 25 °C	10^{-6}	-----
Temperature Factor	$\frac{Dm}{m_i^2 DT}$	+25 °C to +55°C B<0.1mT 10kHz	10^{-6}/ °C	-----
Curie Temperature (typical)	q_c	B<0.1mT 10kHz	°C	130
Hysteresis Material Constant (max)	h_B	B from 1.5 to 3.0mT 10kHz 25 °C	10^{-6}/ mT	-----
Resistivity (typical)	r	1 V/cm 25 °C	ohm-cm	100

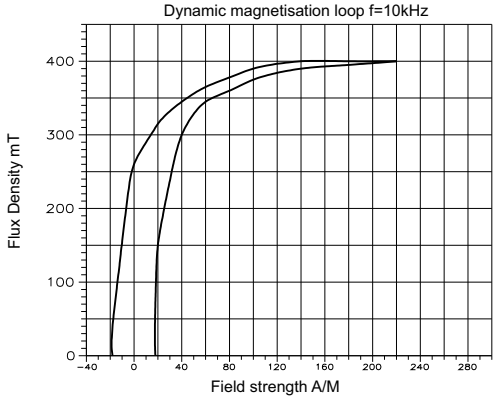
Complex permeability versus frequency



Initial permeability versus temperature



Dynamic magnetisation loop f=10kHz



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Letchworth, Hertfordshire, England SG61JG

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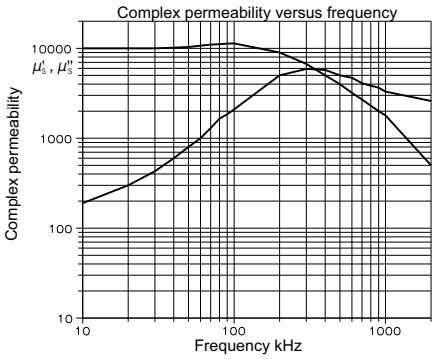
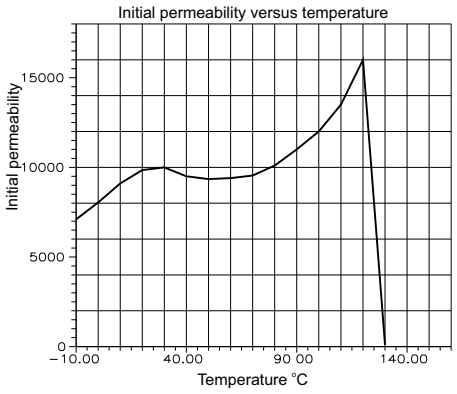
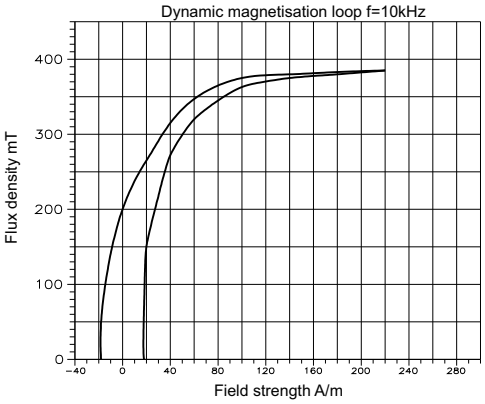
KM10 MATERIAL

A high permeability manganese zinc ferrite. KM10 is ideal for wideband and pulsed applications such as LAN networks. Typical core shape are ring cores.

PARAMETER	SYMBOL	Standard Conditions of test	UNIT	KM10
Initial Permeability (nominal)	μ_i	B<=0.1mT 10kHz 25 °C	-	10000 +/-30%
Saturation Flux Density (typical)	B_{sat}	H=796 A/m = 10 Oe 25 °C 100°C	mT	380
Remanent Flux Density (typical)	B_{rem}	H® 0 (from near saturation) 10kHz 25 °C	mT	200
Coercivity (typical)	H_c	B® 0 (from near saturation) 10kHz 25 °C	A/m	17
Loss Factor (maximum)	$\frac{\tan d_{(\mu+e)}}{\mu_i}$	B<0.1mT 100kHz 25 °C	10^{-6}	-----
Temperature Factor	$\frac{Dm}{m_i^2 DT}$	+25 °C to +55°C B<0.1mT 10kHz	10^{-6}/ °C	-----
Curie Temperature (typical)	θ_c	B<0.1mT 10kHz	°C	125
Hysteresis Material Constant (max)	h_B	B from 1.5 to 3.0mT 10kHz 25 °C	10^{-6}/ mT	-----
Resistivity (typical)	r	1 V/cm 25 °C	ohm-cm	100







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Letchworth, Hertfordshire, England SG61JG

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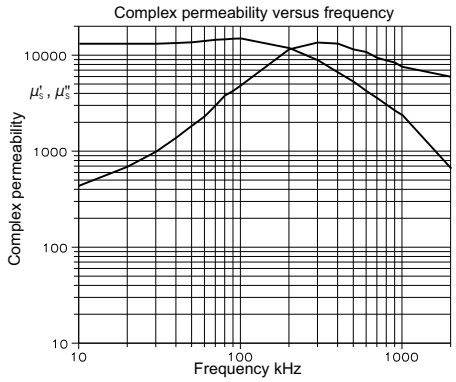
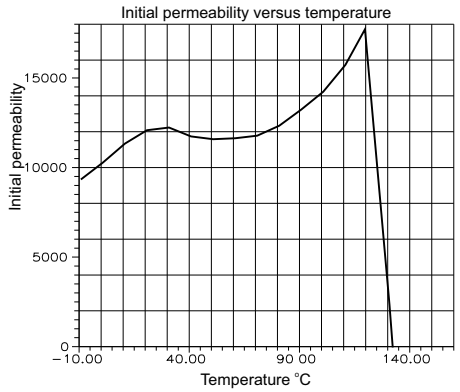
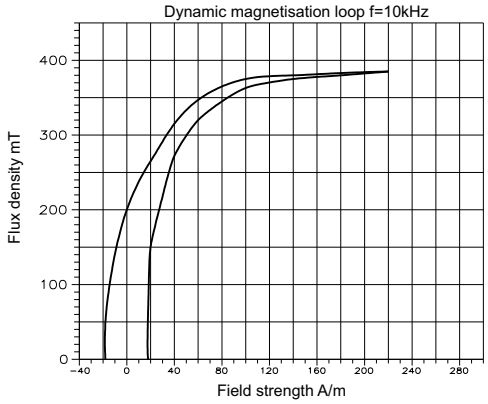
KM12 MATERIAL

A high permeability manganese zinc ferrite. KM12 is ideal for wideband and pulsed applications such as LAN networks. Typical core shape are small ring cores.

PARAMETER	SYMBOL	Standard Conditions of test	UNIT	KM12
Initial Permeability (nominal)	μ_i	B<=0.1mT 10kHz 25 °C	-	12000 +/-35%
Saturation Flux Density (typical)	B_{sat}	H=796 A/m = 10 Oe 25 °C 100°C	mT	380
Remanent Flux Density (typical)	B_{rem}	H® 0 (from near saturation) 10kHz 25 °C	mT	200
Coercivity (typical)	H_c	B® 0 (from near saturation) 10kHz 25 °C	A/m	17
Loss Factor (maximum)	$\frac{\tan d_{(\mu+e)}}{\mu_i}$	B<0.1mT 100kHz 25 °C	10^{-6}	-----
Temperature Factor	$\frac{Dm}{m_i^2 DT}$	+25 °C to +55°C B<0.1mT 10kHz	10^{-6}/ °C	-----
Curie Temperature (typical)	q_c	B<0.1mT 10kHz	°C	120
Hysteresis Material Constant (max)	h_B	B from 1.5 to 3.0mT 10kHz 25 °C	10^{-6}/ mT	-----
Resistivity (typical)	r	1 V/cm 25 °C	ohm-cm	100







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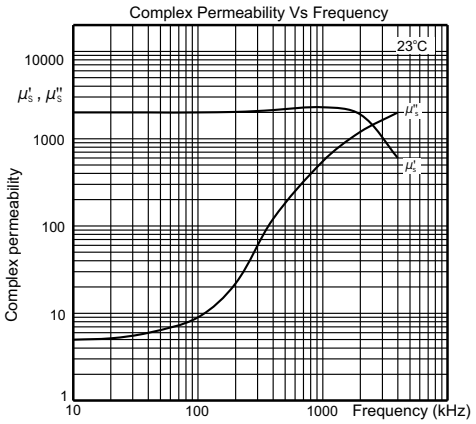
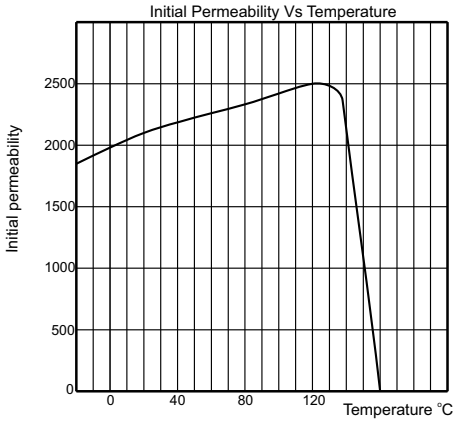
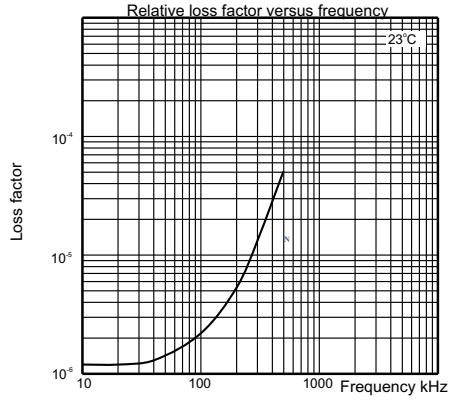
KM26G MATERIAL

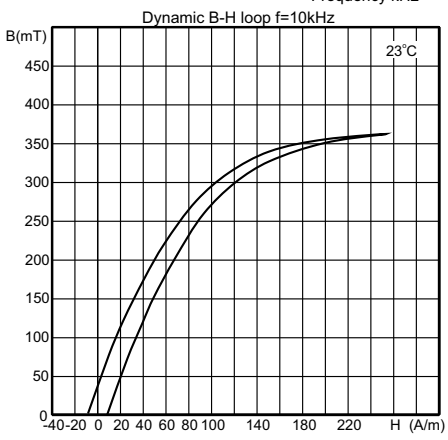
A very low loss MnZn ferrite with very stable inductance versus temperature. Ideal for filter networks, resonant coils and proximity detection.

PARAMETER	SYMBOL	Standard Conditions of test	UNIT	KM26G
Initial Permeability (nominal)	μ_i	B<=0.1mT 10kHz 25 °C	-	2200 +/-20%
Saturation Flux Density (typical)	B_{sat}	H=796 A/m = 10 Oe 25 °C 100°C	mT	390
Remanent Flux Density (typical)	B_{rem}	H® 0 (from near saturation) 10kHz 25 °C	mT	40
Coercivity (typical)	H_c	B® 0 (from near saturation) 10kHz 25 °C	A/m	8
Loss Factor (maximum)	$\frac{\tan d_{(\mu+e)}}{\mu_i}$	B<0.1mT 100kHz 25 °C 10kHz	10^{-6}	<2.5 <0.8
Temperature Factor	$\frac{Dm}{\mu_i^2 DT}$	+25 °C to +55°C B<0.1mT 10kHz	10^{-6}/ °C	0.4 to 1.0
Curie Temperature (typical)	θ_c	B<0.1mT 10kHz	°C	150
Hysteresis Material Constant (max)	h_B	B from 1.5 to 3.0mT 10kHz 25 °C	10^{-6}/ mT	0.45
Disaccommodation Factor *(maximum)*	$\frac{Dm}{\mu_i^2 . \log_{10}(t_2/t_1)}$	6 to 60 mins. 50°C B<=0.25mT 10kHz	10^{-6}	3.0
Resistivity (typical)	r	1 V/cm 25 °C	ohm-cm	100









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Letchworth, Hertfordshire, England SG61JG

+44 (0) 1462 680689
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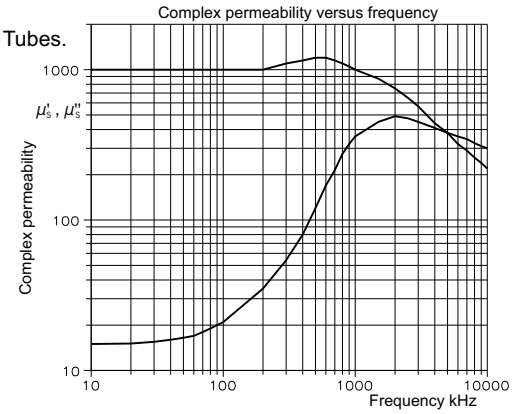
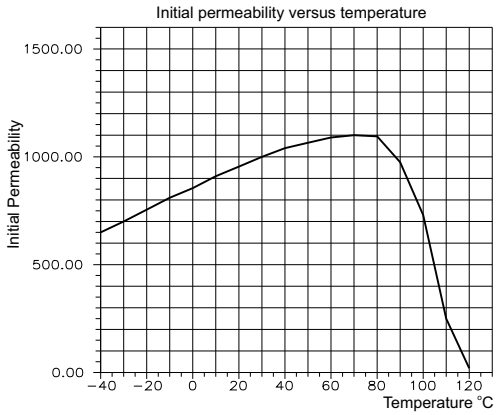
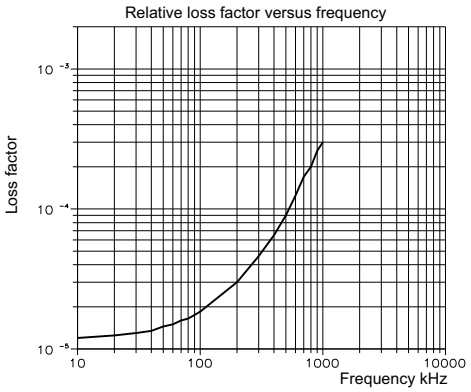
KN1000 MATERIAL

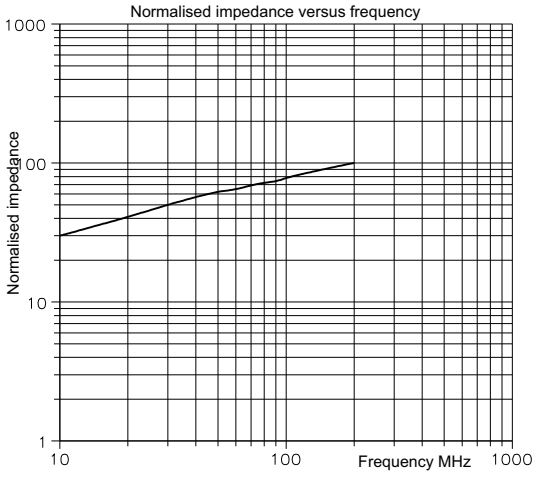
A high permeability NiZn ferrite having low losses up to1MHz.
The material gives high impedances in the range 10MHz -100MHz
Particularly suited for suppression.Core shapes SMD beads, Rings and Tubes.

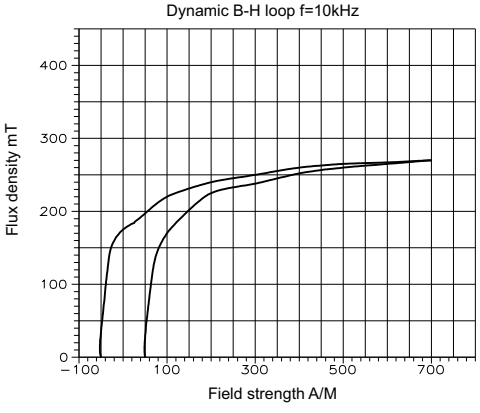
PARAMETER	SYMBOL	Standard Conditions of test	UNIT	KN1000
Initial Permeability (nominal)	μ_i	B<=0.1mT 10kHz 25 °C	-	1000
Saturation Flux Density (typical)	B_{sat}	H=796 A/m = 10 Oe 25 °C 100°C	mT	260
Remanent Flux Density (typical)	B_{rem}	H® 0 (from near saturation) 10kHz 25 °C	mT	165
Coercivity (typical)	H_c	B® 0 (from near saturation) 10kHz 25 °C	A/m	53
Loss Factor (maximum)	$\frac{\tan d_{(\mu=i)}}{\mu_i}$	B<0.1mT 500kHz 25 °C 1000kHz	10^{-6}	130 350
Temperature Factor	$\frac{Dm}{m_i^2 DT}$	+25 °C to +55°C B<0.1mT 10kHz	10^{-6}/ °C	3 to 6.5
Curie Temperature (typical)	θ_c	B<0.1mT 10kHz	°C	120











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Letchworth, Hertfordshire, England SG61JG

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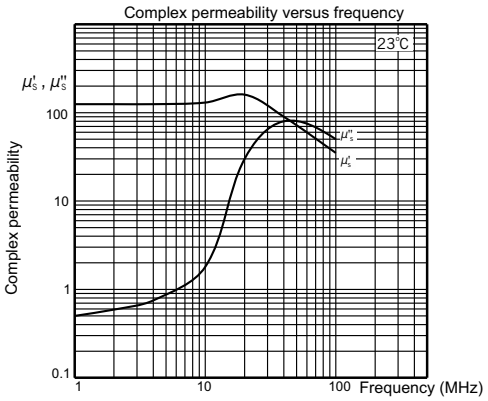
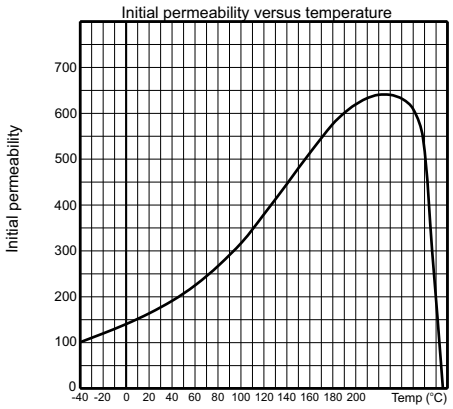
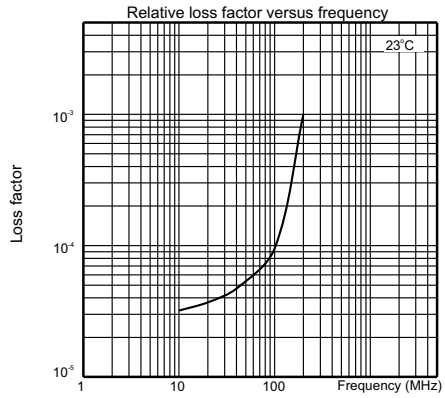
KN120 MATERIAL

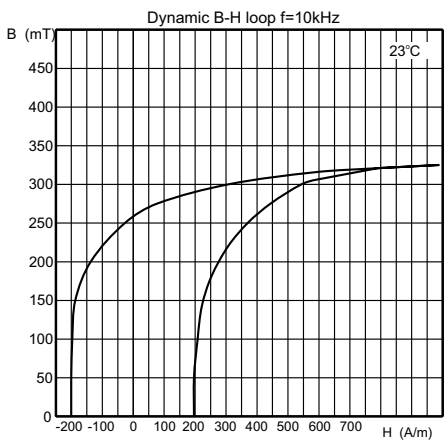
A NiZn ferrite designed for high Q factor
in the frequency range 10kHz-10MHz.
Typical components include rods and ring cores.

PARAMETER	SYMBOL	Standard Conditions of test	UNIT	KN120
Initial Permeability (nominal)	μ_i	B<=0.1mT 10kHz 25 °C	-	120 +/-20%
Saturation Flux Density (typical)	B_{sat}	H=796 A/m = 10 Oe 25 °C 100°C	mT	340
Remanent Flux Density (typical)	B_{rem}	H® 0 (from near saturation) 10kHz 25 °C	mT	160
Coercivity (typical)	H_c	B® 0 (from near saturation) 10kHz 25 °C	A/m	195
Loss Factor (maximum)	$\frac{\tan d_{(\mu+e)}}{\mu_i}$	B<0.1mT 1MHz 25 °C 10MHz	10^{-6}	60 100
Temperature Factor	$\frac{Dm}{m_i^2 DT}$	+25 °C to +55°C B<0.1mT 10kHz	10^{-6}/ °C	15 to 55
Curie Temperature (typical)	q_c	B<0.1mT 10kHz	°C	270
Resistivity (typical)	r	1 V/cm 25 °C	ohm-cm	10^5









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+44 (0) 1462 680689
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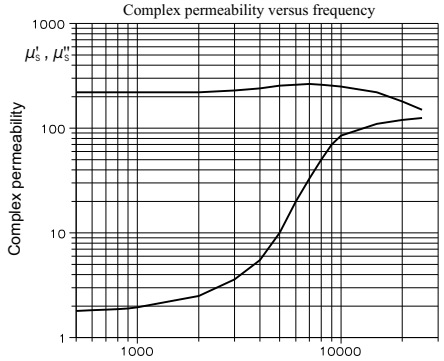
KN2 MATERIAL

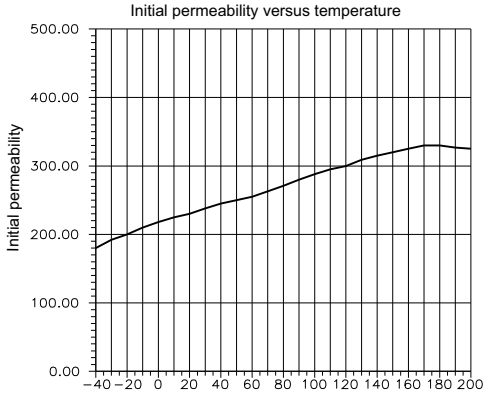
KN2 is a NiZn material designed for use in the medium band frequency range. Above 3MHz the material can be used as a suppressor. Applications aerials, baluns and suppression. Typical shapes rods, tubes, baluns and toroids.

PARAMETER	SYMBOL	Standard Conditions of test	UNIT	KN2
Initial Permeability (nominal)	μ_i	B<=0.1mT 10kHz 25 °C	-	200 +/-20%
Saturation Flux Density (typical)	B_{sat}	H=796 A/m = 10 Oe 25 °C 100°C	mT	325
Remanent Flux Density (typical)	B_{rem}	H® 0 (from near saturation) 10kHz 25 °C	mT	220
Coercivity (typical)	H_c	B® 0 (from near saturation) 10kHz 25 °C	A/m	190
Loss Factor (maximum)	$\frac{\tan d_{(\mu+e)}}{\mu_i}$	B<0.1mT 100kHz 25 °C 4MHz	10^{-6}	35 150
Temperature Factor	$\frac{Dm}{m_i^2 DT}$	+25 °C to +55°C B<0.1mT 10kHz	10^{-6}/ °C	12 to 30
Curie Temperature (typical)	θ_c	B<0.1mT 10kHz	°C	270
Resistivity (typical)	r	1 V/cm 25 °C	ohm-cm	10^5

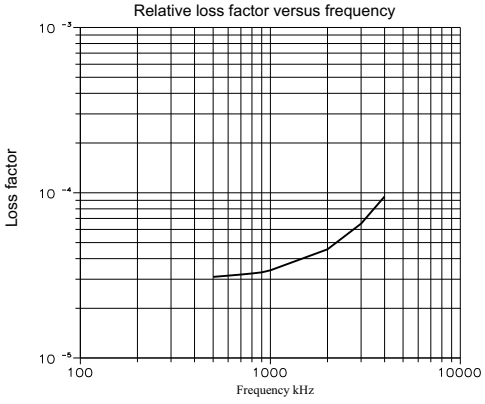
Complex permeability versus frequency



Initial permeability versus temperature



Relative loss factor versus frequency



Dynamic B-H loop f=10kHz