

DATA SHEET

3C11 Material specification

Supersedes data of September 2004

2008 Sep 01

Material specification

3C11

3C11 SPECIFICATIONS

A medium permeability material mainly for use in current compensated chokes in EMI-suppression filters.

SYMBOL	CONDITIONS	VALUE	UNIT
μ_i	25 °C; ≤ 10 kHz; 0.25 mT	$4300 \pm 20\%$	
B	25 °C; 10 kHz; 1200 A/m 100 °C; 10 kHz; 1200 A/m	≈ 390 ≈ 230	mT
$\tan\delta/\mu_i$	25 °C; 100 kHz; 0.25 mT 25 °C; 300 kHz; 0.25 mT	$\leq 20 \times 10^{-6}$ $\leq 200 \times 10^{-6}$	
ρ	DC; 25 °C	≈ 1	Ωm
T_C		≥ 125	°C
density		≈ 4900	kg/m ³

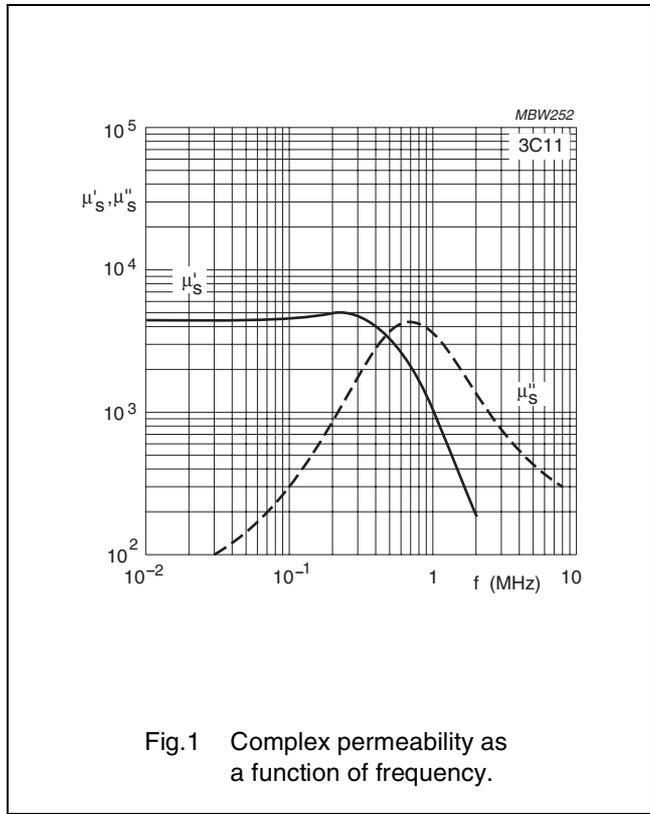


Fig.1 Complex permeability as a function of frequency.

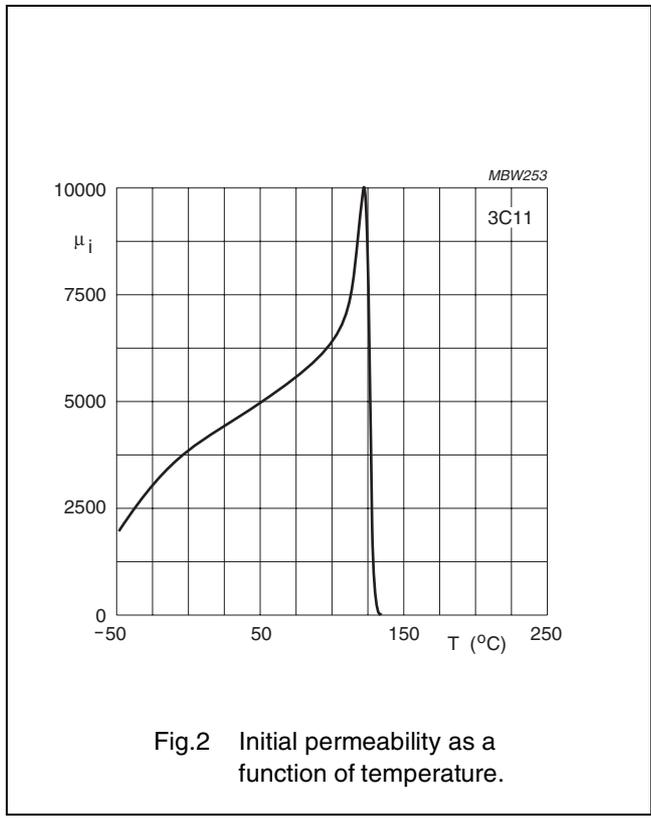


Fig.2 Initial permeability as a function of temperature.

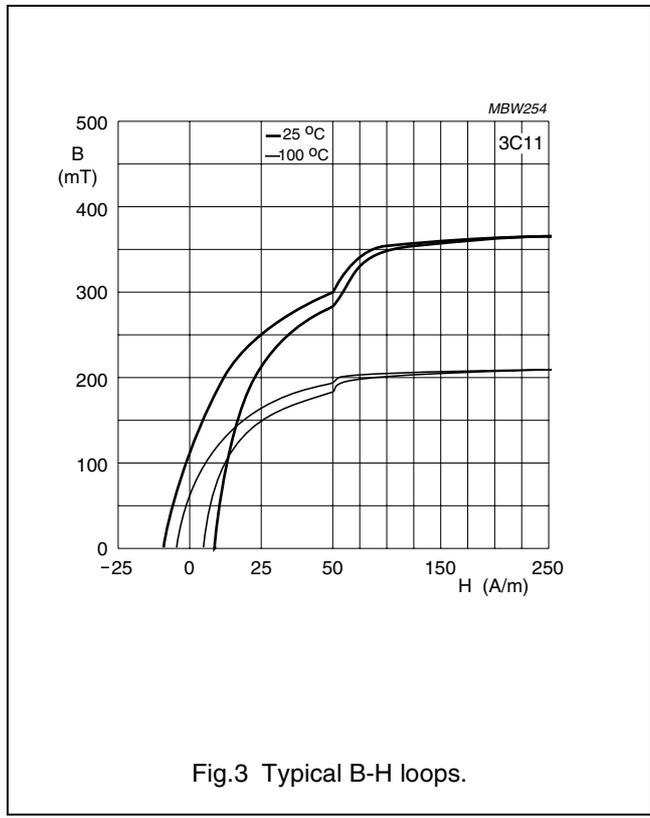
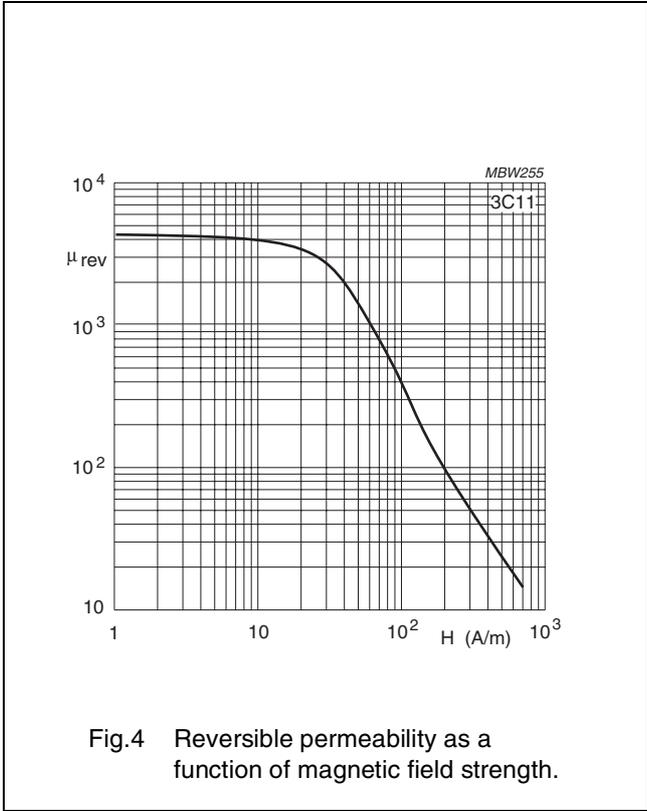


Fig.3 Typical B-H loops.



DATA SHEET STATUS DEFINITIONS

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DATA SHEET

3E65

Material specification

2015 Oct 29

3E65 SPECIFICATIONS

A medium permeability material with low losses and high T_c , optimized for use in wideband transformers as well as EMI-suppression filters.

SYMBOL	CONDITIONS	VALUE	UNIT
μ_i	25 °C; ≤ 10 kHz; 0.25 mT	$5200 \pm 20\%$	
B	25 °C; 10 kHz; 1200 A/m 100 °C; 10 kHz; 1200 A/m	≈ 480 ≈ 320	mT
$\tan\delta/\mu_i$	25 °C; 100 kHz; 0.25 mT	$\leq 10 \times 10^{-6}$	
$\tan\delta/\mu_i$	25 °C; 200 kHz; 0.25 mT	$\leq 25 \times 10^{-6}$	
ρ	DC; 25 °C	≈ 0.5	Ωm
T_C		≥ 165	°C
density		≈ 4900	kg/m^3

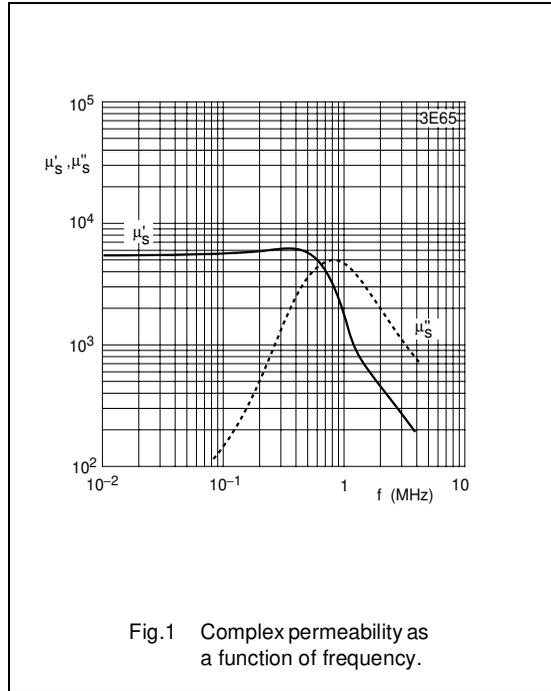


Fig.1 Complex permeability as a function of frequency.

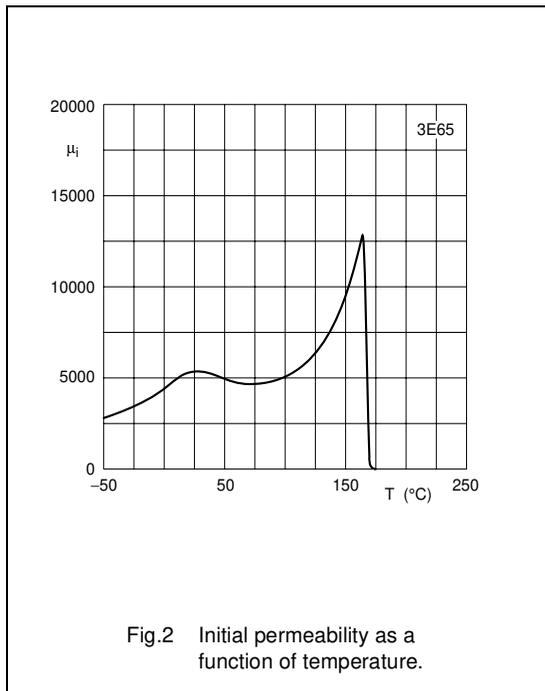


Fig.2 Initial permeability as a function of temperature.

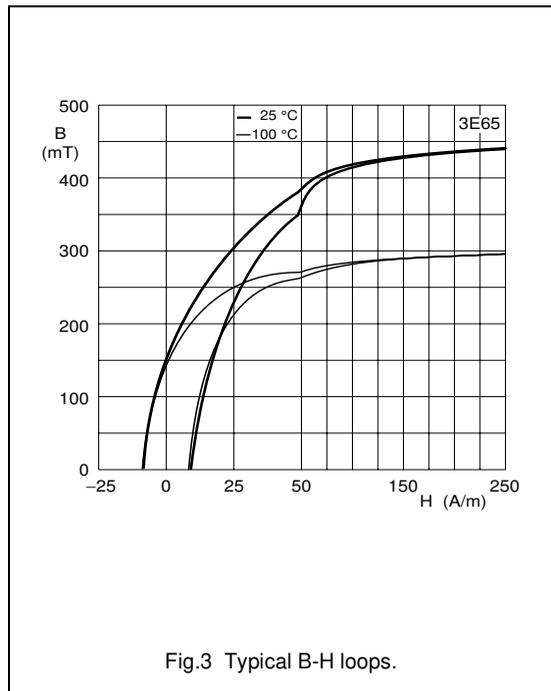


Fig.3 Typical B-H loops.

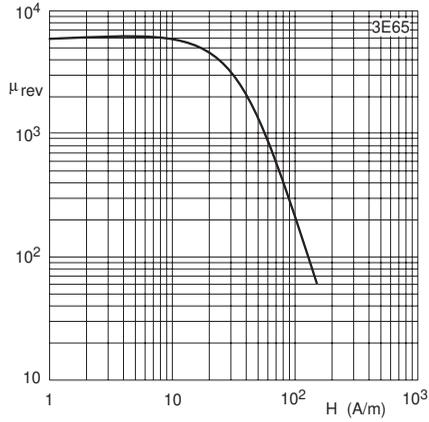


Fig.4 Reversible permeability as a function of magnetic field strength.

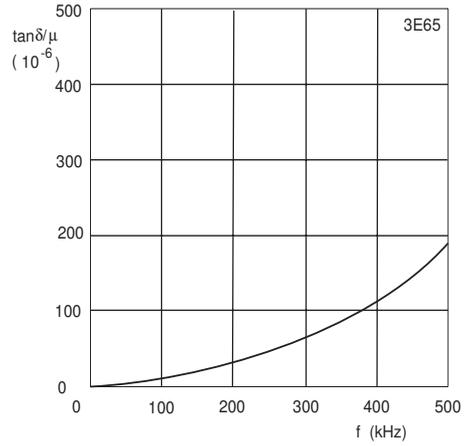


Fig.5 Loss factor as function of frequency

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DATA SHEET

3E25 Material specification

Supersedes data of September 2004

2008 Sep 01

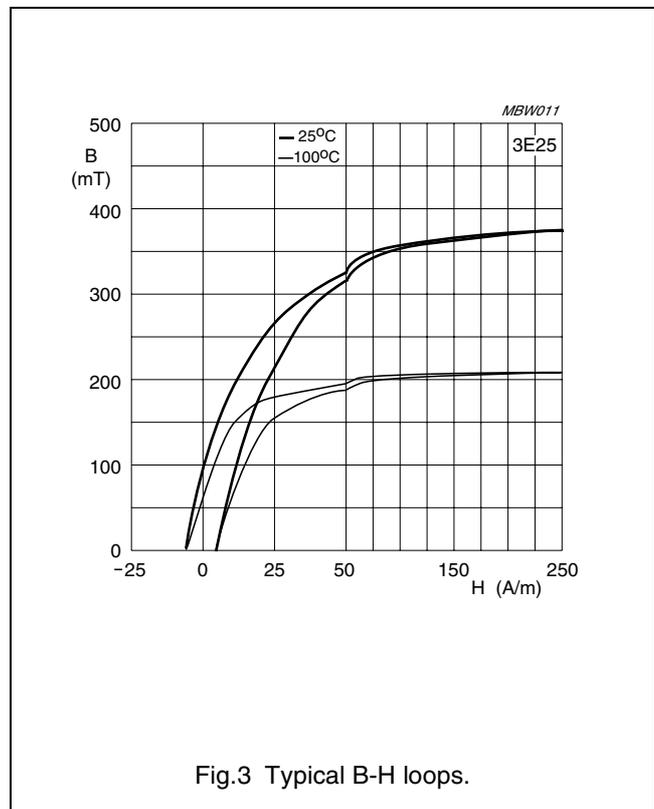
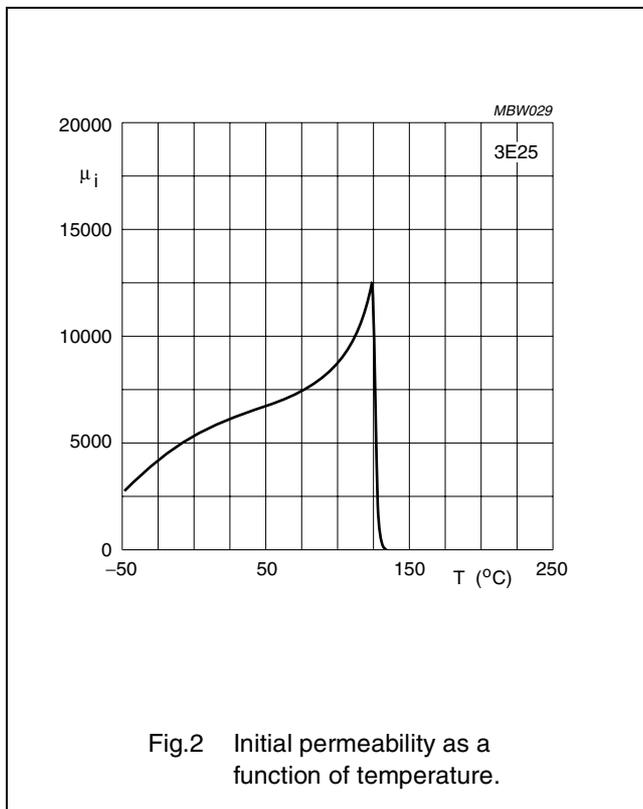
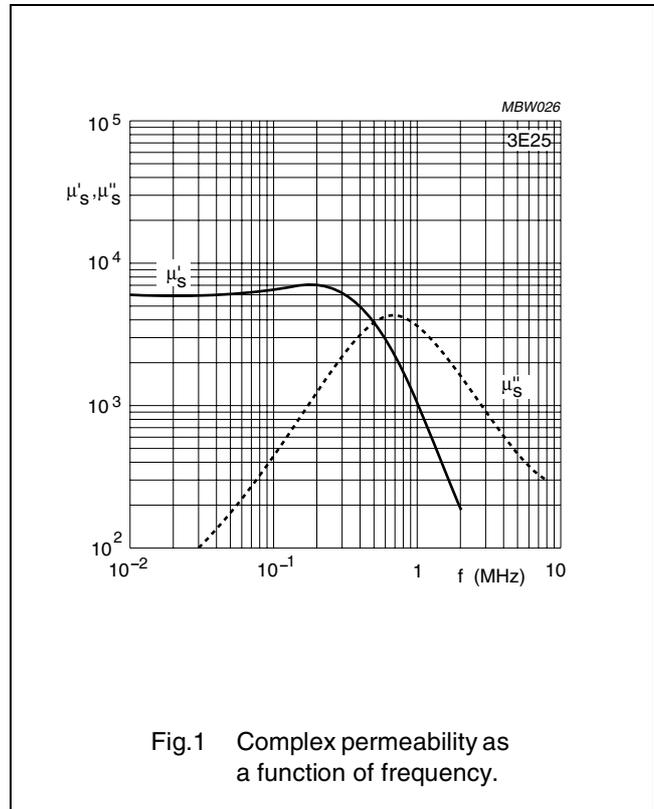
Material specification

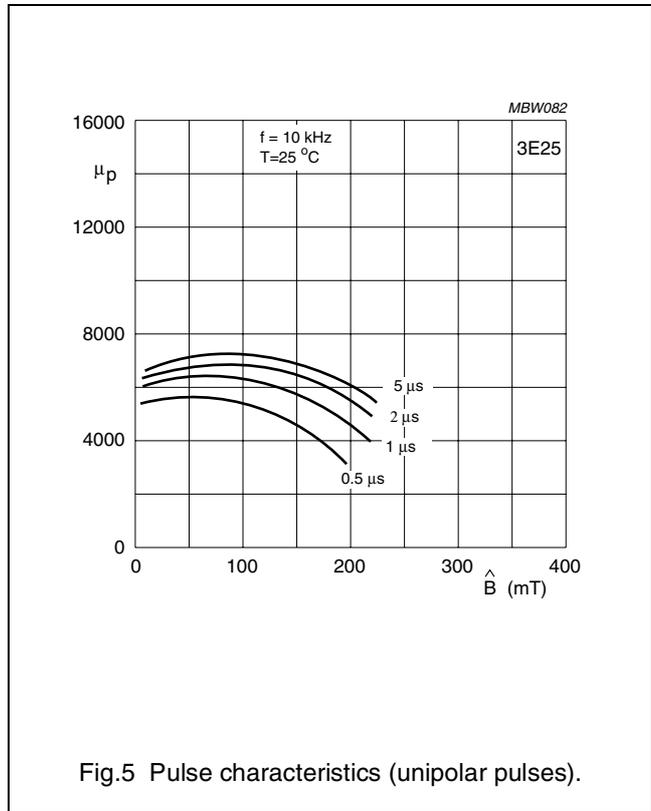
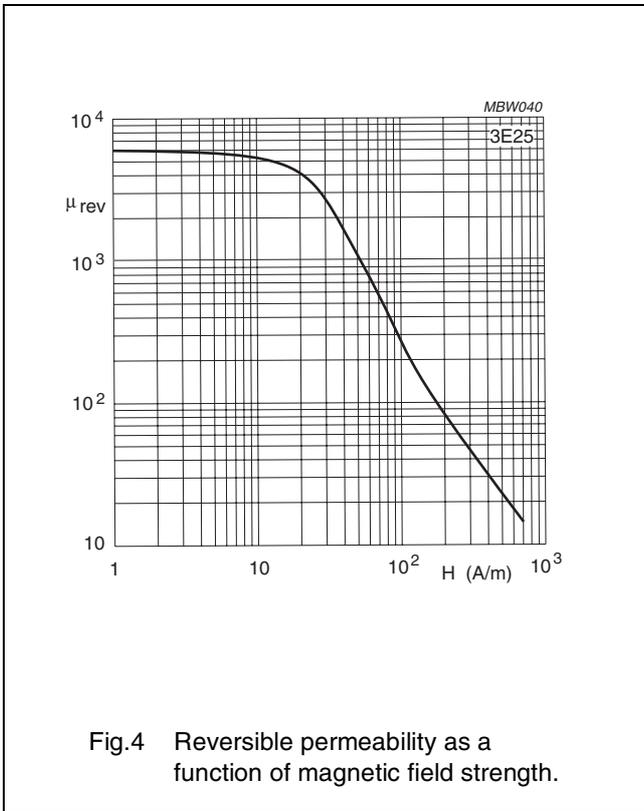
3E25

3E25 SPECIFICATIONS

A medium permeability material mainly for use in current compensated chokes in EMI-suppression filters.

SYMBOL	CONDITIONS	VALUE	UNIT
μ_i	25 °C; ≤ 10 kHz; 0.25 mT	$6000 \pm 20\%$	
B	25 °C; 10 kHz; 1200 A/m	≈ 390	mT
	100 °C; 10 kHz; 1200 A/m	≈ 220	
$\tan\delta/\mu_i$	25 °C; 100 kHz; 0.25 mT	$\leq 25 \times 10^{-6}$	
	25 °C; 300 kHz; 0.25 mT	$\leq 200 \times 10^{-6}$	
ρ	DC; 25 °C	≈ 0.5	Ωm
T_C		≥ 125	°C
density		≈ 4900	kg/m^3





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DATA SHEET

3E27

Material specification

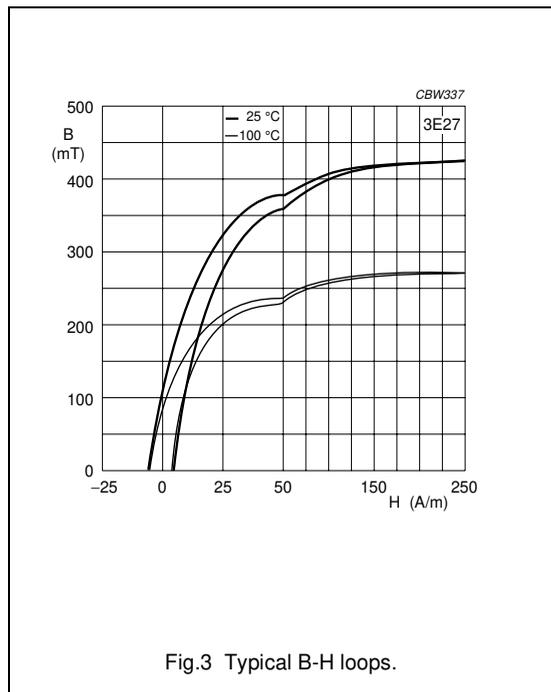
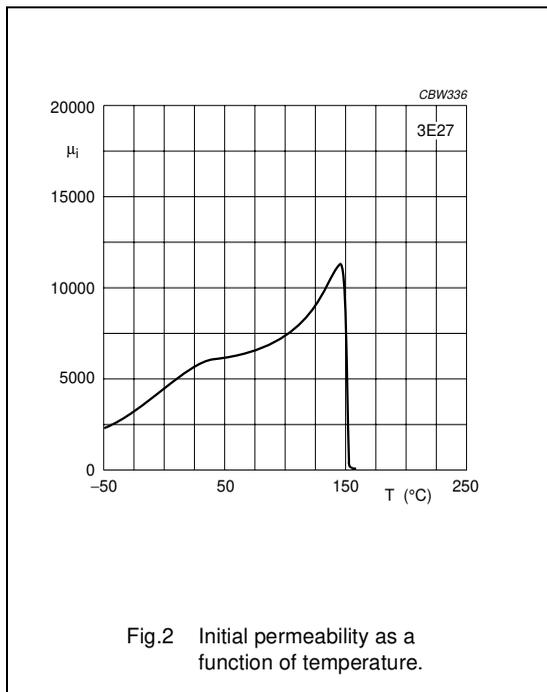
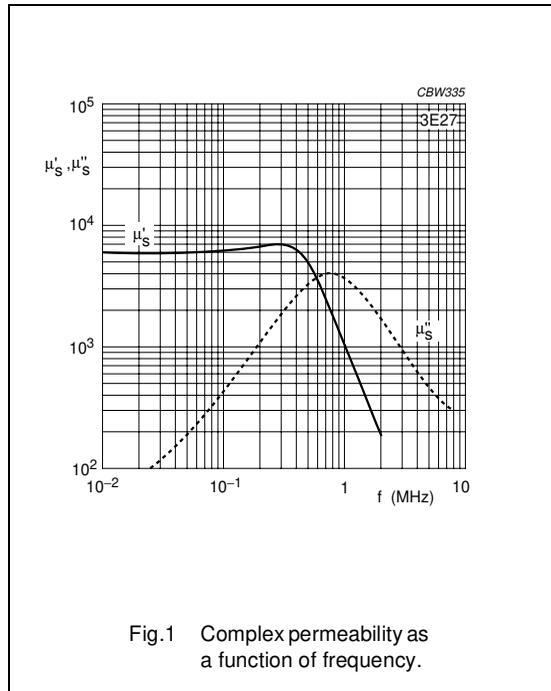
Supersedes data of September 2008

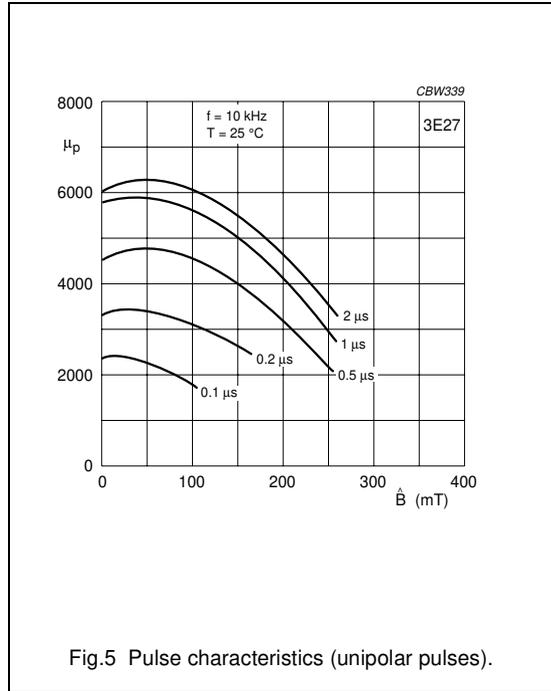
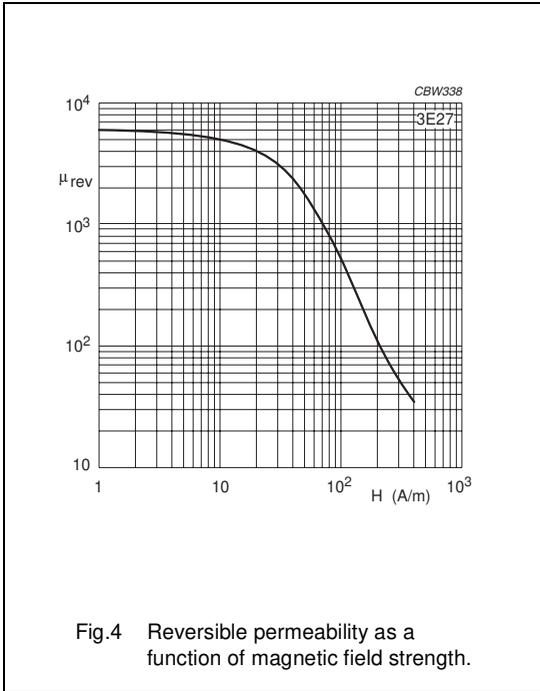
2016 Apr 26

3E27 SPECIFICATIONS

A medium permeability material with low losses and a relatively high T_C optimized for use in wideband transformers as well as EMI-suppression filters.

SYMBOL	CONDITIONS	VALUE	UNIT
μ_i	25 °C; ≤ 10 kHz; 0.25 mT	$6000 \pm 20\%$	
B	25 °C; 10 kHz; 1200 A/m 100 °C; 10 kHz; 1200 A/m	≈ 460 ≈ 300	mT
$\tan\delta/\mu_i$	25 °C; 100 kHz; 0.25 mT	$\leq 15 \times 10^{-6}$	
ρ	DC; 25 °C	≈ 0.5	Ωm
T_C		≥ 150	°C
density		≈ 4850	kg/m^3





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DATA SHEET

3E26

Material specification

Supersedes data of September 2004

2008 Sep 01

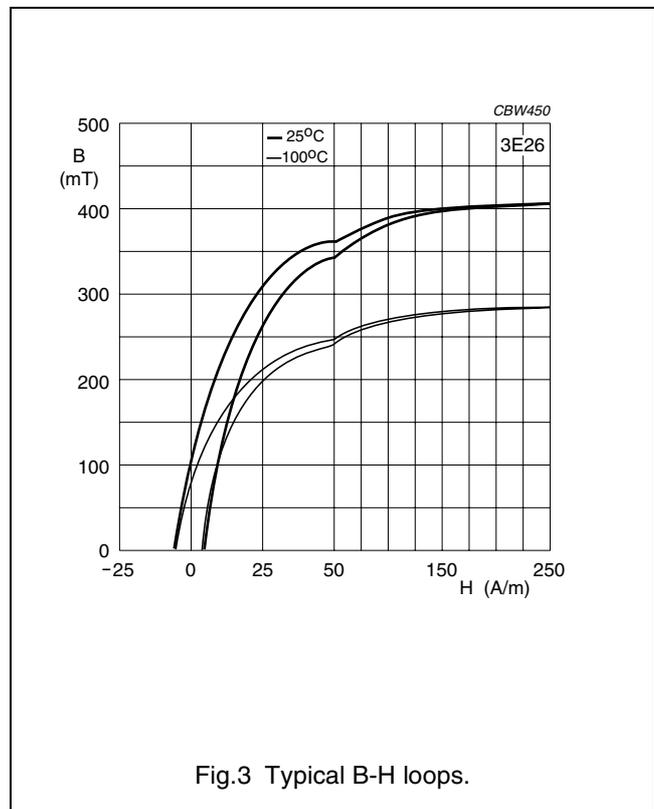
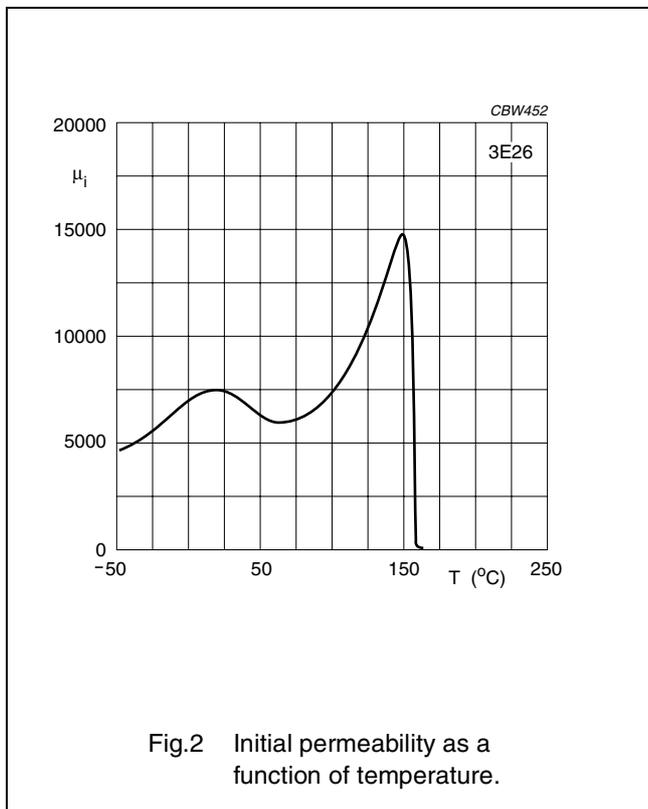
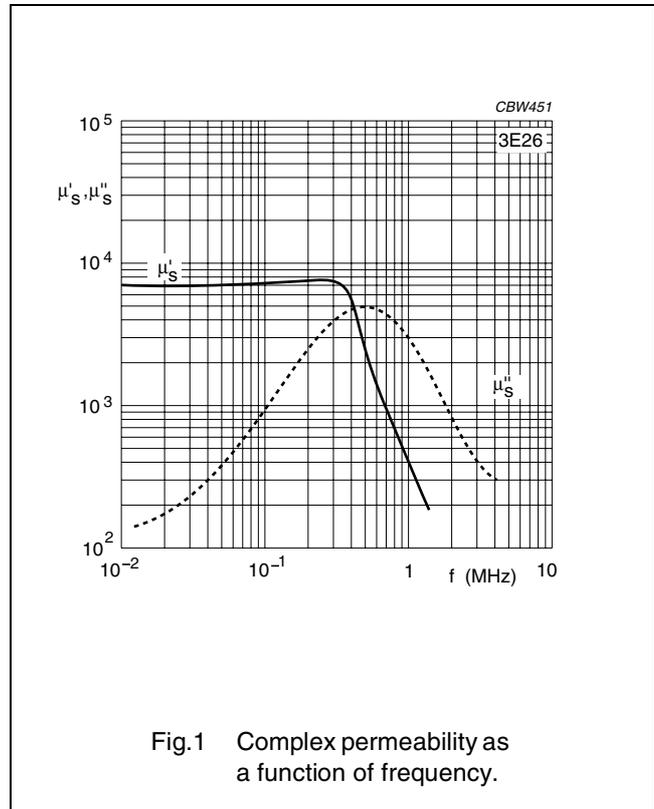
Material specification

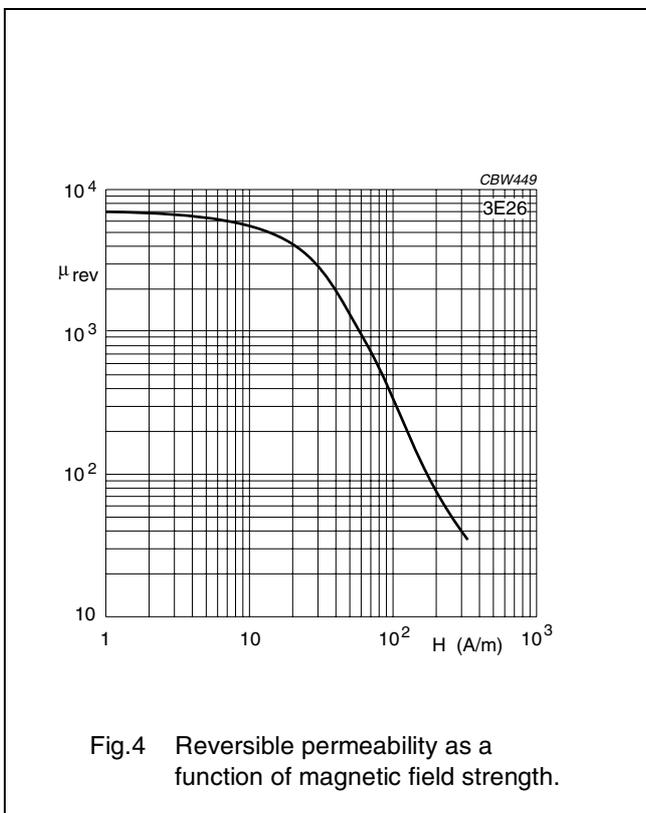
3E26

3E26 SPECIFICATIONS

A medium permeability material mainly for use in current compensated chokes in EMI-suppression filters.

SYMBOL	CONDITIONS	VALUE	UNIT
μ_i	25 °C; ≤ 10 kHz; 0.25 mT	$7000 \pm 20\%$	
B	25 °C; 10 kHz; 1200 A/m 100 °C; 10 kHz; 1200 A/m	≈ 430 ≈ 300	mT
$\tan\delta/\mu_i$	25 °C; 100 kHz; 0.25 mT	$\leq 20 \times 10^{-6}$	
ρ	DC; 25 °C	≈ 0.5	Ωm
T_C		≥ 155	°C
density		≈ 4900	kg/m^3





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DATA SHEET

3E10

Material specification

2013 July 05

3E10 SPECIFICATIONS

A high permeability material optimized for use in wideband transformers as well as EMI-suppression filters.

SYMBOL	CONDITIONS	VALUE	UNIT
μ_i	25 °C; ≤ 10 kHz; 0.25 mT	$10\,000 \pm 20\%$	
B	25 °C; 10 kHz; 1200 A/m 100 °C; 10 kHz; 1200 A/m	≈ 460 ≈ 270	mT
$\tan\delta/\mu_i$	25 °C; 30 kHz; 0.25 mT 25 °C; 100 kHz; 0.25 mT	$\leq 5 \times 10^{-6}$ $\leq 20 \times 10^{-6}$	
η_B	25 °C; 10 kHz; 1.5 to 3 mT	$\leq 0.5 \times 10^{-3}$	T ⁻¹
ρ	DC; 25 °C	≈ 0.5	Ωm
T_C		≥ 130	°C
density		≈ 5000	kg/m ³

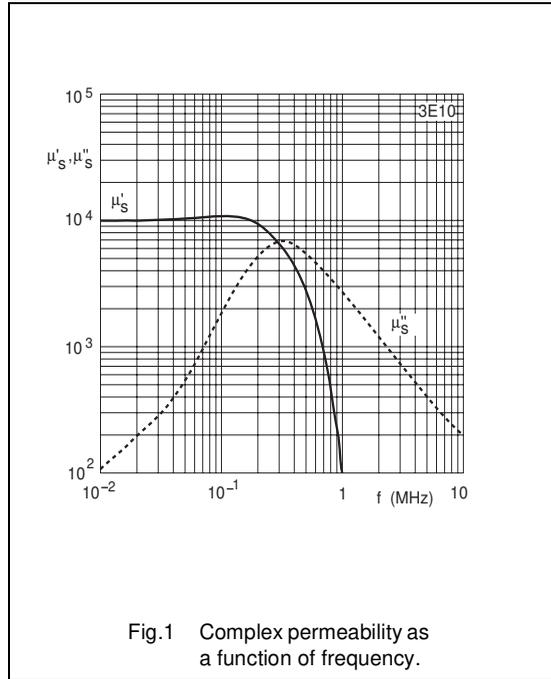


Fig.1 Complex permeability as a function of frequency.

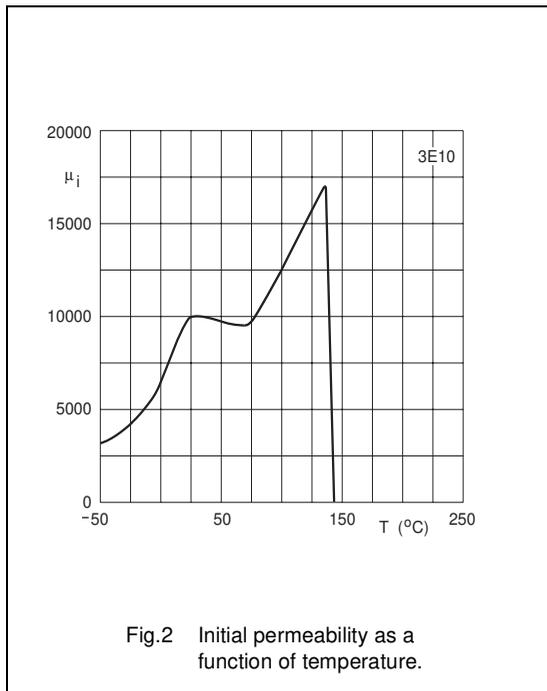


Fig.2 Initial permeability as a function of temperature.

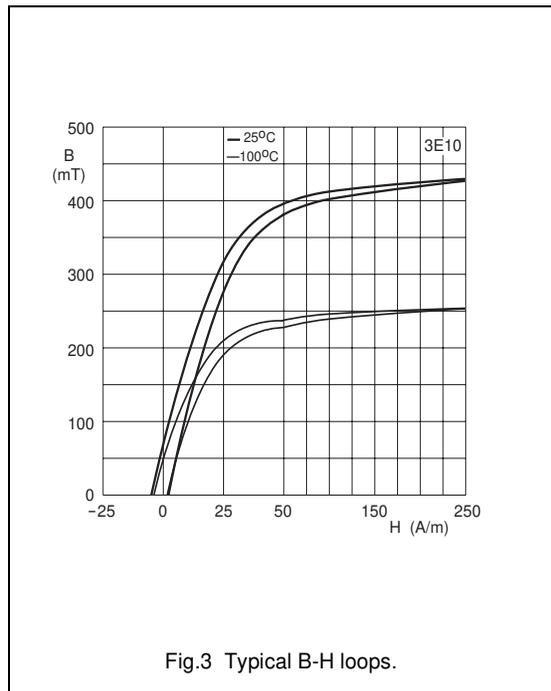


Fig.3 Typical B-H loops.

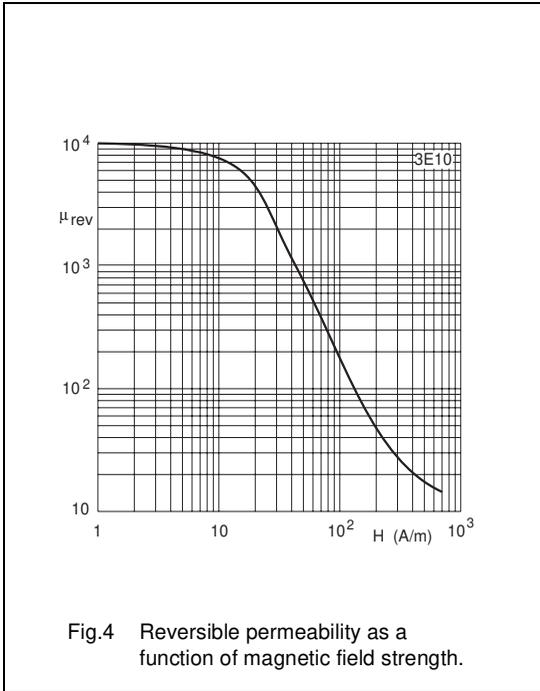


Fig.4 Reversible permeability as a function of magnetic field strength.

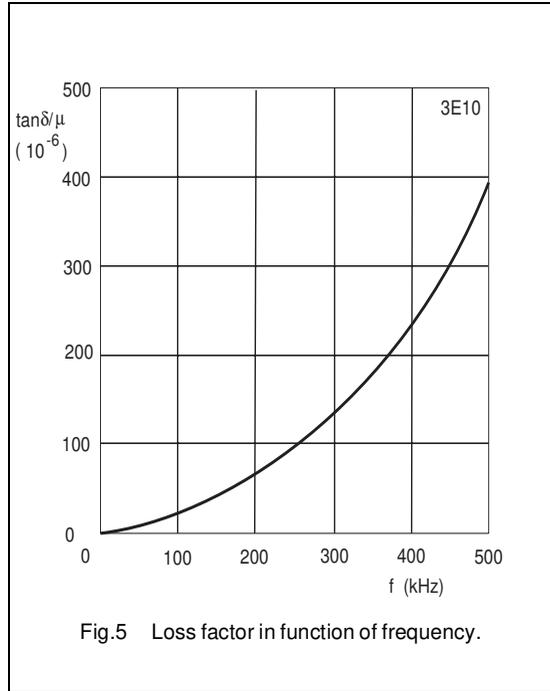


Fig.5 Loss factor in function of frequency.

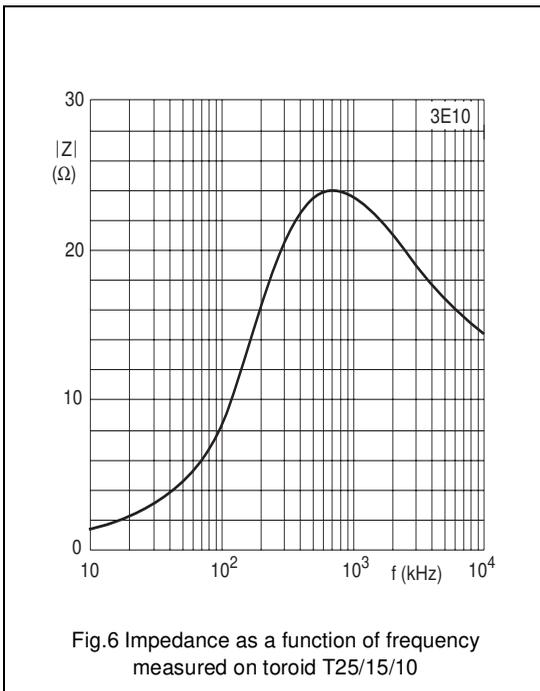


Fig.6 Impedance as a function of frequency measured on toroid T25/15/10

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DATA SHEET

3E6 (3E10-M) Material specification

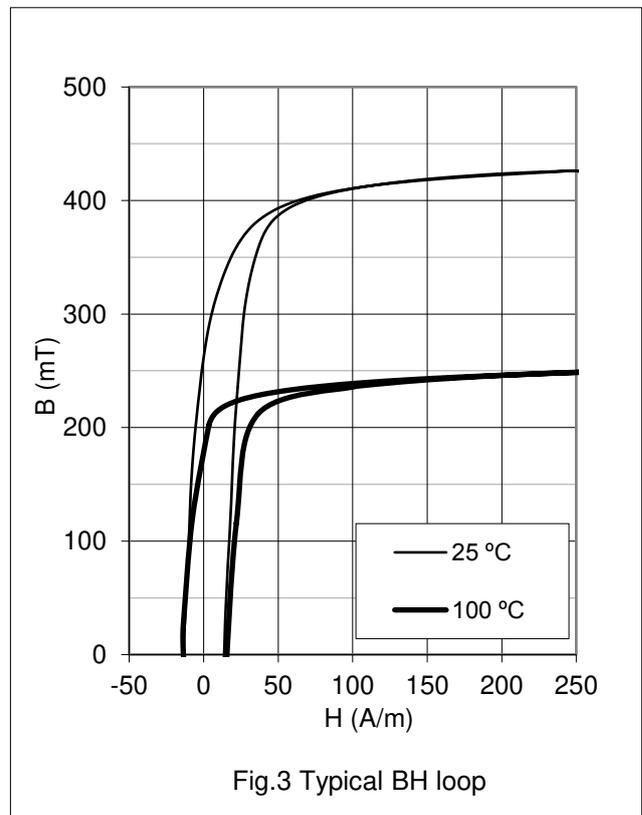
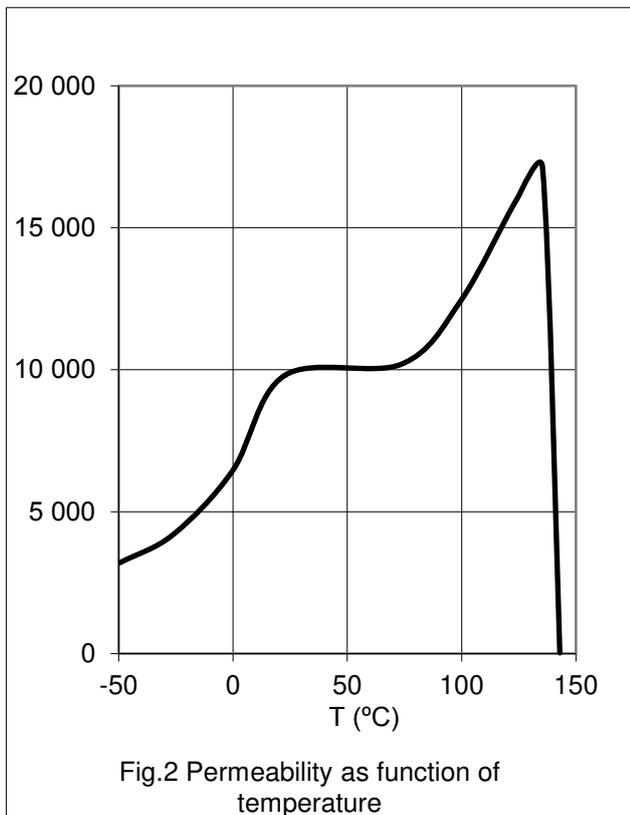
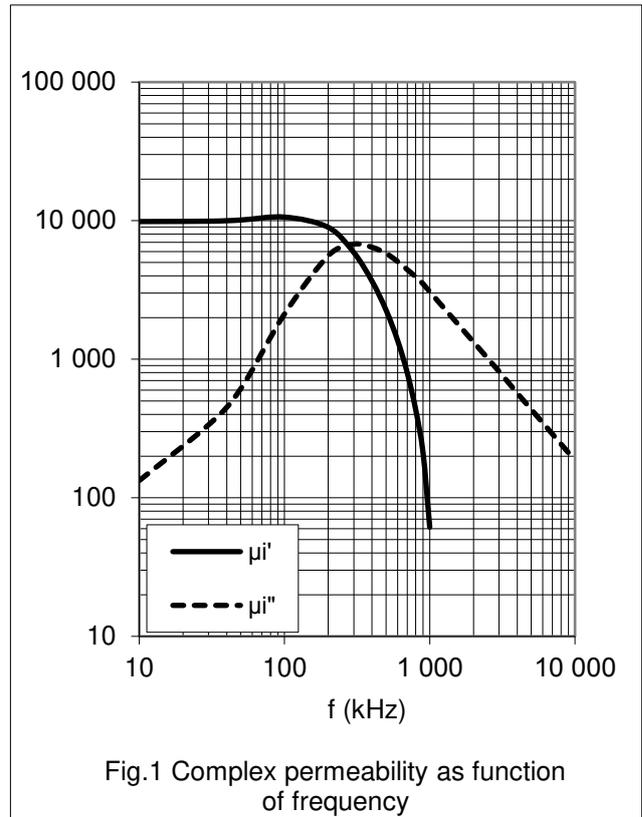
2016 November 18th

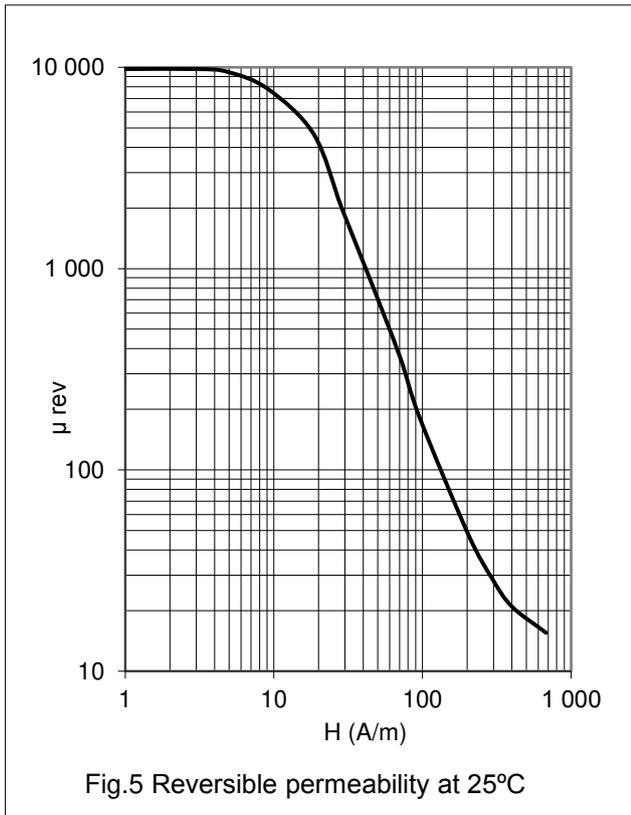
3E6 (3E10-M) SPECIFICATION

A high permeability material optimized for use in wideband transformers as well as EMI-suppression filters

SYMBOL	CONDITIONS	VALUE	UNIT
μ_i	25°C; 10kHz; 0.25mT	10000 ± 30%	
B	25°C; 10kHz; 1200A/m	≈ 460	mT
	100°C; 10kHz; 1200A/m	≈ 270	
Tanδ/ μ_i	25°C; 10kHz; 0.25mT	≤ 10 · 10 ⁻⁶	
	25°C; 30kHz; 0.25mT	≤ 30 · 10 ⁻⁶	
η_B	25°C; 10kHz; 1.5 to 3 mT	≤ 1 · 10 ⁻³	T ⁻¹
ρ_{DC}	25°C	≈ 0.1	Ωm
T _c		≥ 130	°C
density		≈ 5000	kg / m ³

Measurd on T25/15/10





DATA SHEET

3E12 Material specification

2016 May 16

3E12 SPECIFICATIONS

A high permeability material optimized for use in wideband transformers as well as EMI-suppression filters.

SYMBOL	CONDITIONS	VALUE	UNIT
μ_i	25 °C; ≤ 10 kHz; 0.25 mT	$12000 \pm 30\%$	
B	25 °C; 10 kHz; 1200 A/m 100 °C; 10 kHz; 1200 A/m	≈ 470 ≈ 290	mT
$\tan\delta/\mu_i$	25 °C; 30 kHz; 0.25 mT 25 °C; 100 kHz; 0.25 mT	$\leq 7 \times 10^{-6}$ $\leq 25 \times 10^{-6}$	
η_B	25 °C; 10 kHz; 1.5 to 3 mT	$\leq 0.5 \times 10^{-3}$	T ⁻¹
ρ	DC; 25 °C	≈ 0.5	Ωm
T_C		≥ 130	°C
density		≈ 5000	kg/m ³

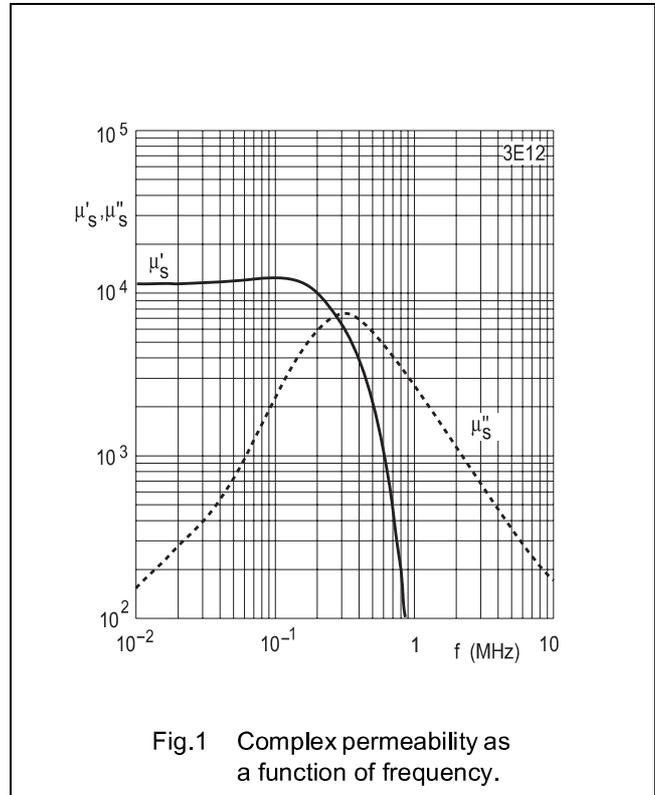


Fig.1 Complex permeability as a function of frequency.

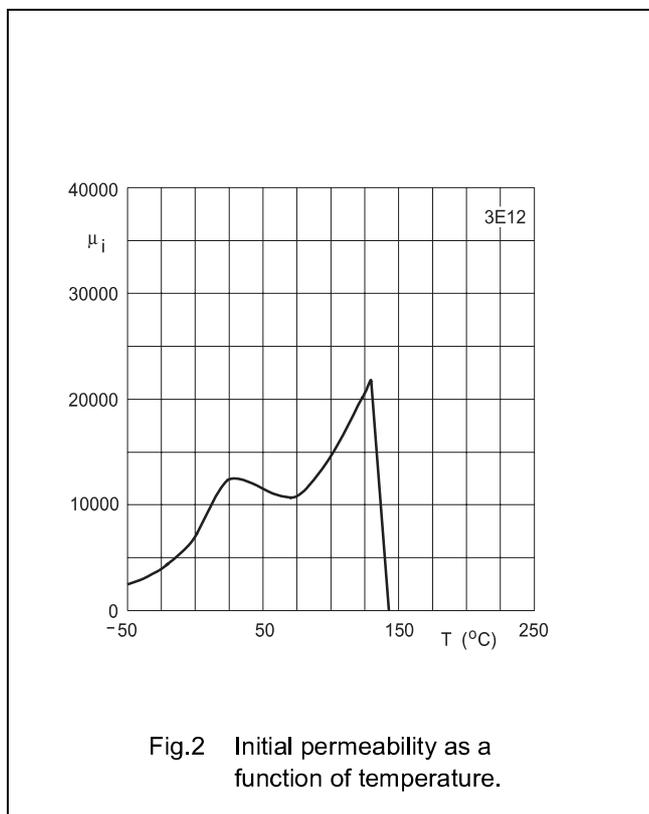


Fig.2 Initial permeability as a function of temperature.

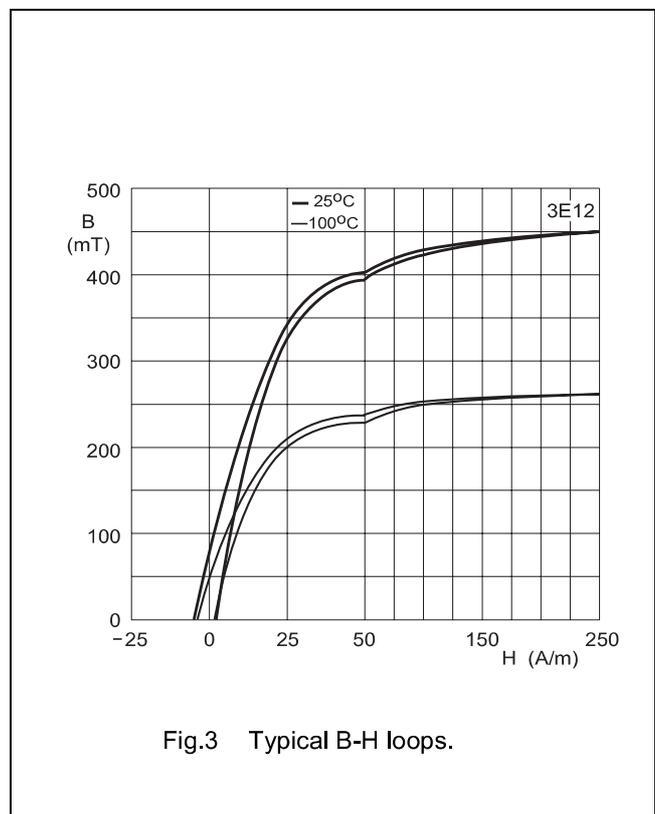


Fig.3 Typical B-H loops.

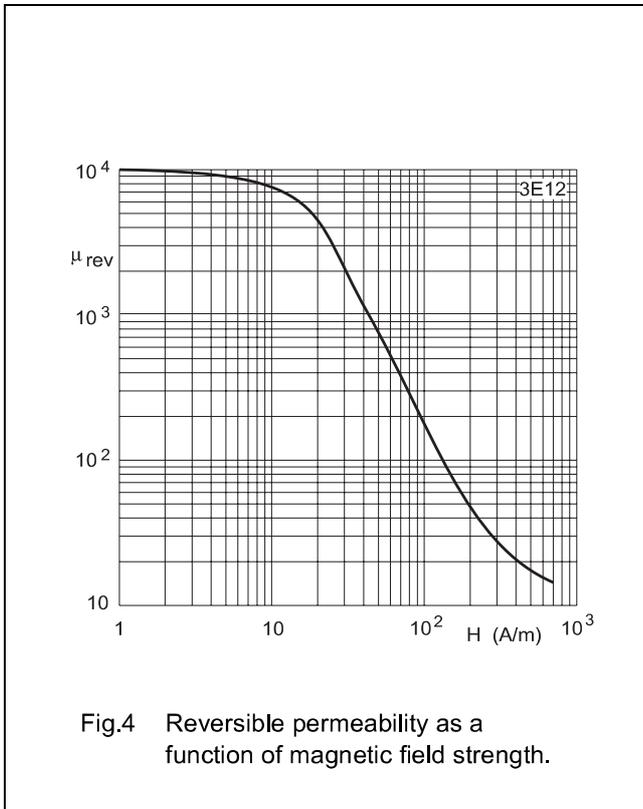


Fig.4 Reversible permeability as a function of magnetic field strength.

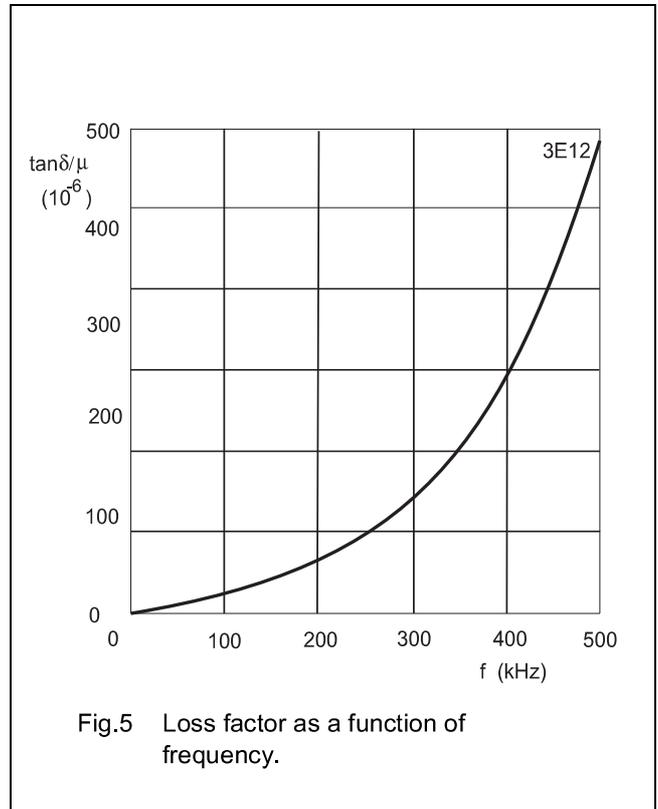


Fig.5 Loss factor as a function of frequency.

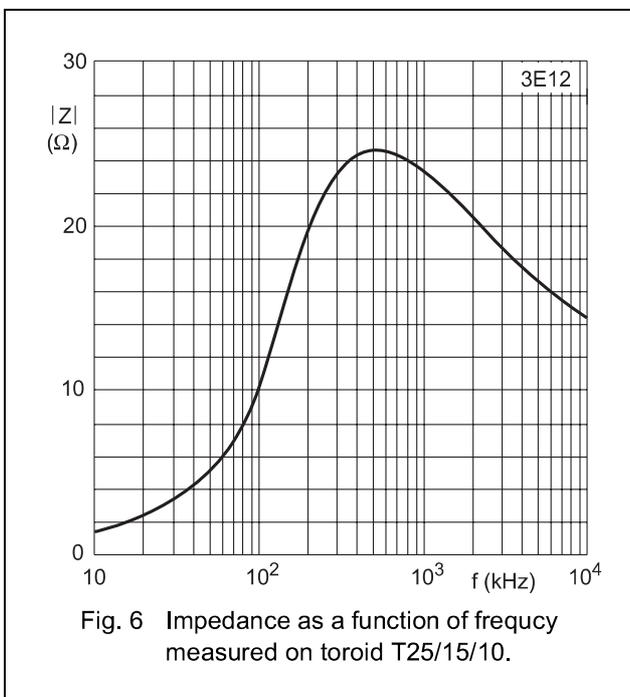


Fig. 6 Impedance as a function of frequency measured on toroid T25/15/10.

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DATA SHEET

3E15

Material specification

2016 June 09

3E15 SPECIFICATION

A high permeability material for use in wideband transformers as well as EMI suppression filters and signal processing.

SYMBOL	CONDITIONS	VALUE	UNIT
μ_i	25°C; 10kHz; 0.25mT	15000 ± 30%	
B	25°C; 10kHz; 1200A/m	≈ 470	mT
	100°C; 10kHz; 1200A/m	≈ 290	
tan δ/μ_i	25°C; 10kHz; 0.25mT	≤ 10	10 ⁻⁶
	25°C; 30kHz; 0.25mT	≤ 15	10 ⁻⁶
ρ_{DC}	25°C	≈ 0.5	Ωm
Tc		≥ 130	°C
density		≈ 5000	kg / m ³

Measured on non-stressed ring T14/9/5

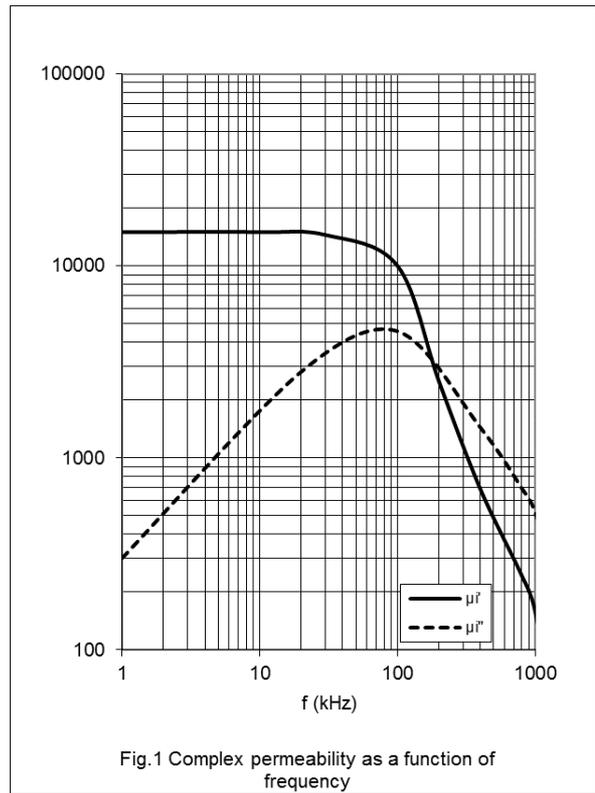


Fig.1 Complex permeability as a function of frequency

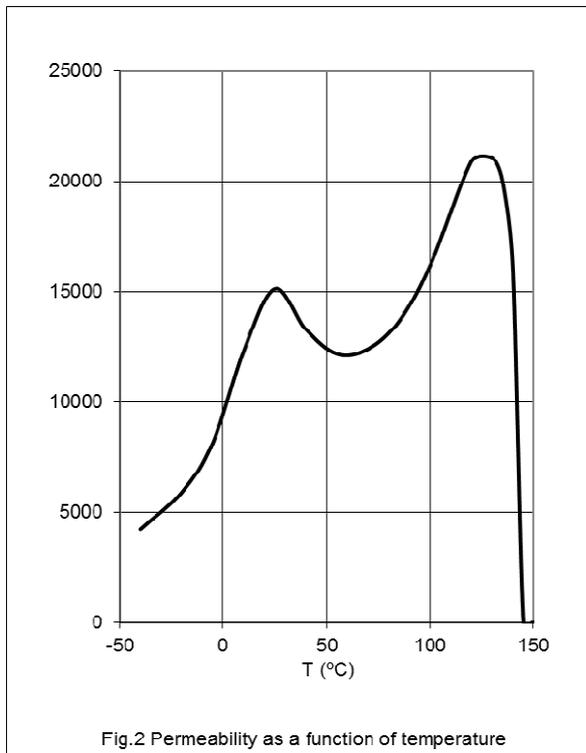


Fig.2 Permeability as a function of temperature

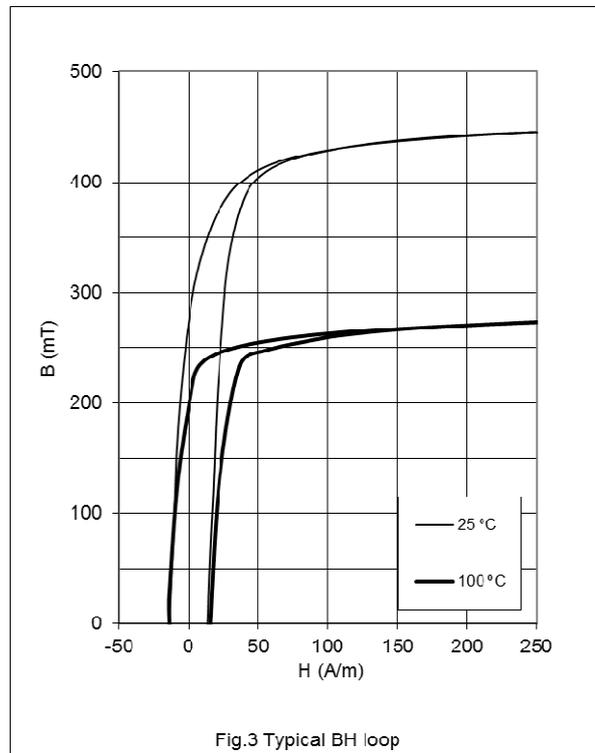


Fig.3 Typical BH loop