Product Specification

Part no : 37-256-31
Issue No : 01

Description : F/ROD 9.525X203.2/F14
Issue Date : 12.02.03
UoM : Each

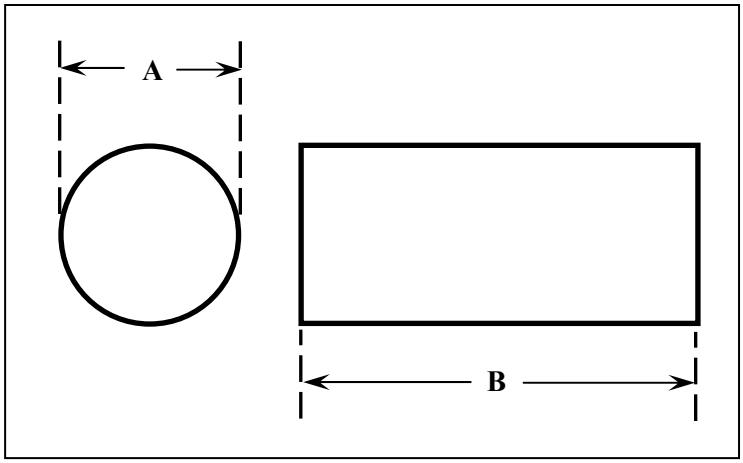
Electrical specification:

S.No	PARAMETERS	TEST CONDITION	SPECIFICATION
1	Permeability	F=1MHz	STD±10%
2	Q	F=1MHz	STD +30%/-10%

Mechanical specification:

ID	PARAMETER	SPECIFICATION
A	Diameter	9.23-9.80 mm
B	Length	197.10-209.30 mm

1.- Bow gauge 11.30mmØ, full rod length.



F14

Material Type: Nickel-Zinc Ferrite

Properties:
*Low loss factors at medium frequencies
*High suppression impedance at high frequencies

Frequency range: Up to 3MHz (Low losses)
Over 100MHz (Suppression)

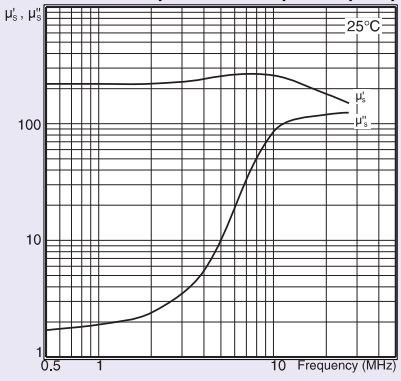
Typical Applications: RF Suppression, balun transformers, aerial rods, medium frequency tuned circuits.

Available core shapes: Rods, Chokes.

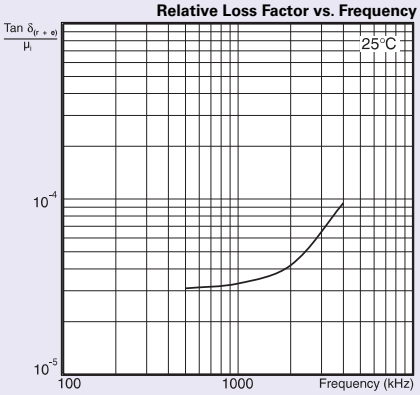
Material Specification

Parameter	Symbol	Standard Conditions of test	Unit	F14
Initial Permeability *(nominal)*	-	B<0.1mT 10kHz 25°C	-	**220** *±20%*
Saturation Flux Density *(typical)*	B_{sat}	H=796 A/m = 10 Oe 25°C	mT	**350**
Remanent Flux Density *(typical)*	B_r	H→ 0 (from near Saturation) 10kHz 25°C	mT	**217**
Coercivity *(typical)*	H_c	B→ 0 (from near Saturation) 10kHz 25°C	A/m	**172**
Loss Factor *(maximum)*	$\frac{\tan \delta_{(r+e)}}{\mu_i}$	B<0.10mT 500kHz 1MHz 25°c 2MHz	10^{-6}	**40** **42** **50**
Curie Temperature *(minimum)*	Θ_C	B<0.10mT 10kHz	°C	**270**
Temperature Factor	$\frac{\Delta\mu}{\mu_i^2.\Delta T}$	+25°C to +55°C B<0.10mT 10kHz	°C	**12 to 30**
Resistivity *(typical)*	ρ	1 V/cm 25°C	ohm-cm	**10^5**

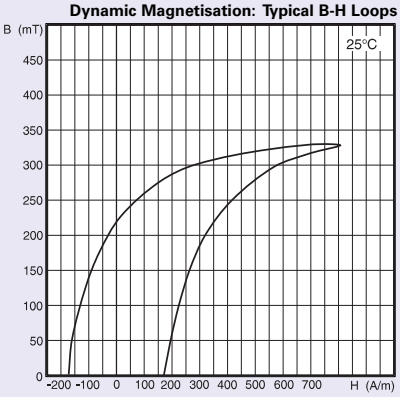
Complex Permeability vs. Frequency



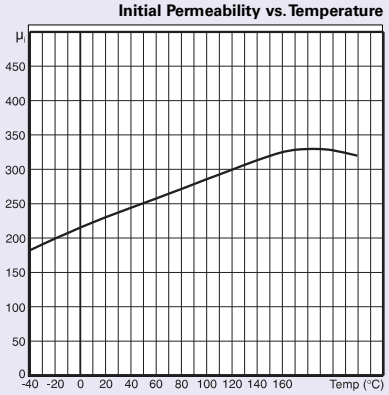
Relative Loss Factor vs. Frequency



Dynamic Magnetisation: Typical B-H Loops



Initial Permeability vs. Temperature



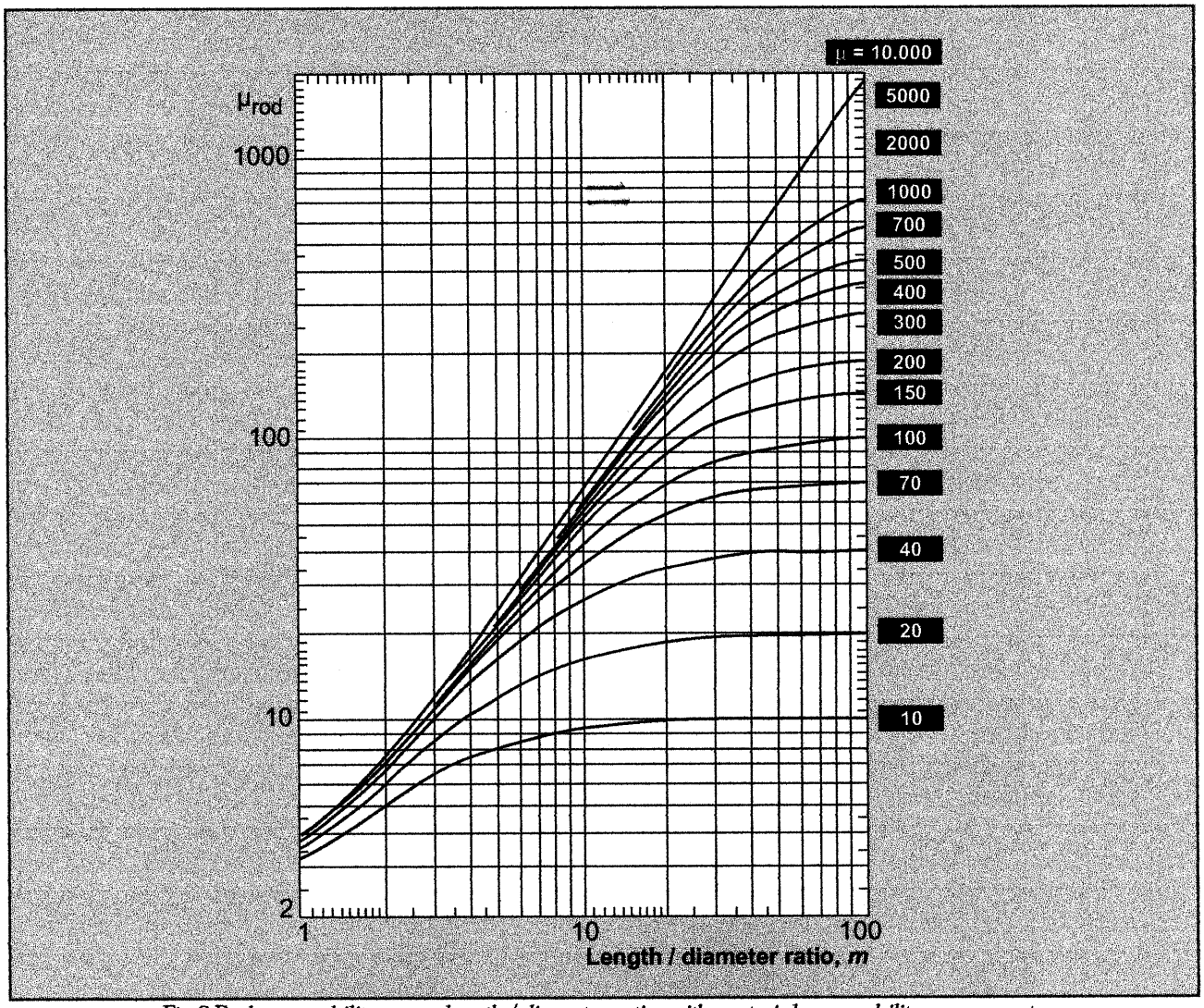


Fig.3 Rod permeability versus length / diameter ratio, with material permeability as parameter

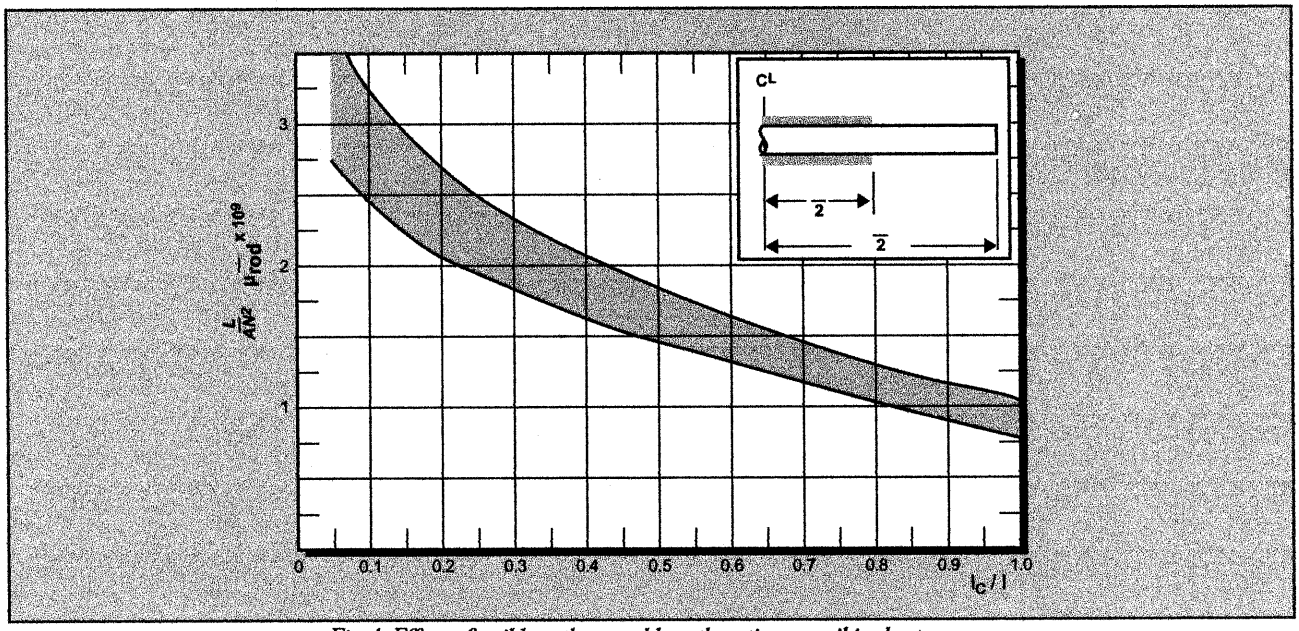


Fig.4 Effect of coil length to rod length ratio on coil inductance.