

ADJUSTABLE POT CORE
for high quality inductors
to BS4061—range 1—ref 6

21mm VINKOR

LA1224

μ_e 100

AVAILABLE FOR CURRENT PRODUCTION;
FOR NEW DESIGNS REFER TO RM INDUCTOR CORES, BOOK 3 PART 4

Frequency range for which the Q-factor is normally greater than 100 3 to 700kHz

Material Ferroxcube grade A13

Standard adjuster LA1502

ELECTRICAL AND MAGNETIC DESIGN DATA FOR CORE ASSEMBLY

Parameter	Symbol	Measuring frequency (kHz)	Value without adjuster	Derived value with standard adjuster (note 1)
Effective permeability	μ_e	<10	89.42	100
Turns factor (turns for 1mH)	α	<10	61.50 \pm 1.5%	58.16
Inductance factor (nH for 1 turn)	A_L	<10	264.4 \pm 3%	295.7
Residual plus eddy current core loss tangent	$\tan \delta_{r+F}$	30	$<0.30 \times 10^{-3}$	$<0.32 \times 10^{-3}$
		100	$<0.56 \times 10^{-3}$	$<0.60 \times 10^{-3}$
Hysteresis loss tangent at $\hat{B}_e = 1\text{mT}$ (note 5)	$\tan \delta_h$	4	$<0.093 \times 10^{-3}$	$<0.10 \times 10^{-3}$
Temperature coefficient (ppm per degC)	5 to 25°C	α_L	43 to 139	50 to 150
	25 to 55°C			

NOTES:

1. These derived values, which are not guaranteed, apply to the core assembly with the standard adjuster in the nominal mid-range position.
2. Except for hysteresis loss tangent, the above parameters are measured at an effective flux density of $\hat{B}_e < 0.1\text{mT}$.
3. Except for temperature coefficient, the above parameters apply at a temperature of 25°C.

4. Hysteresis factor $F_h = \frac{2\pi \tan \delta_h}{I\sqrt{L}}$

where I = r.m.s. current in amperes, and L = inductance in henrys.

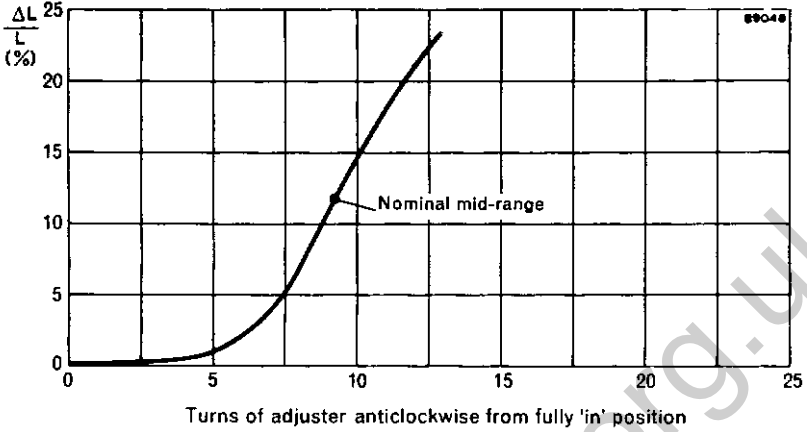
5. $\tan \delta_h$ is determined from measurements at $\hat{B}_e = 0.1$ and 1mT.

6. For material properties see data sheet LINEAR FERRITE MATERIALS.

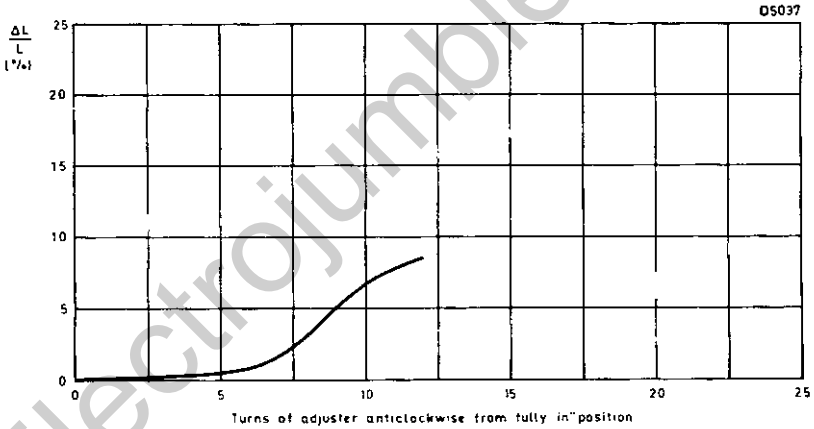
C129

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TYPICAL ADJUSTMENT CURVES



STANDARD ADJUSTER LA1502



ALTERNATIVE ADJUSTER LA1503

L is the inductance of the assembly without adjuster

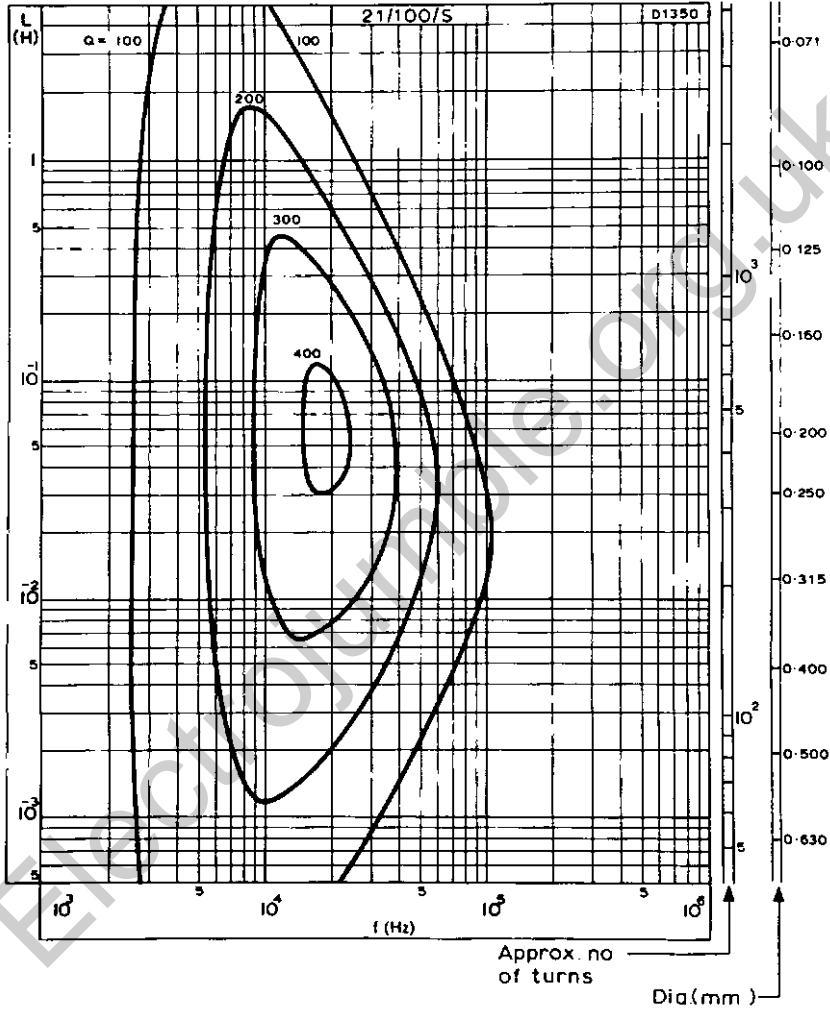
Adjusters are not included in the LA1224 core type number, and they must therefore be ordered separately.

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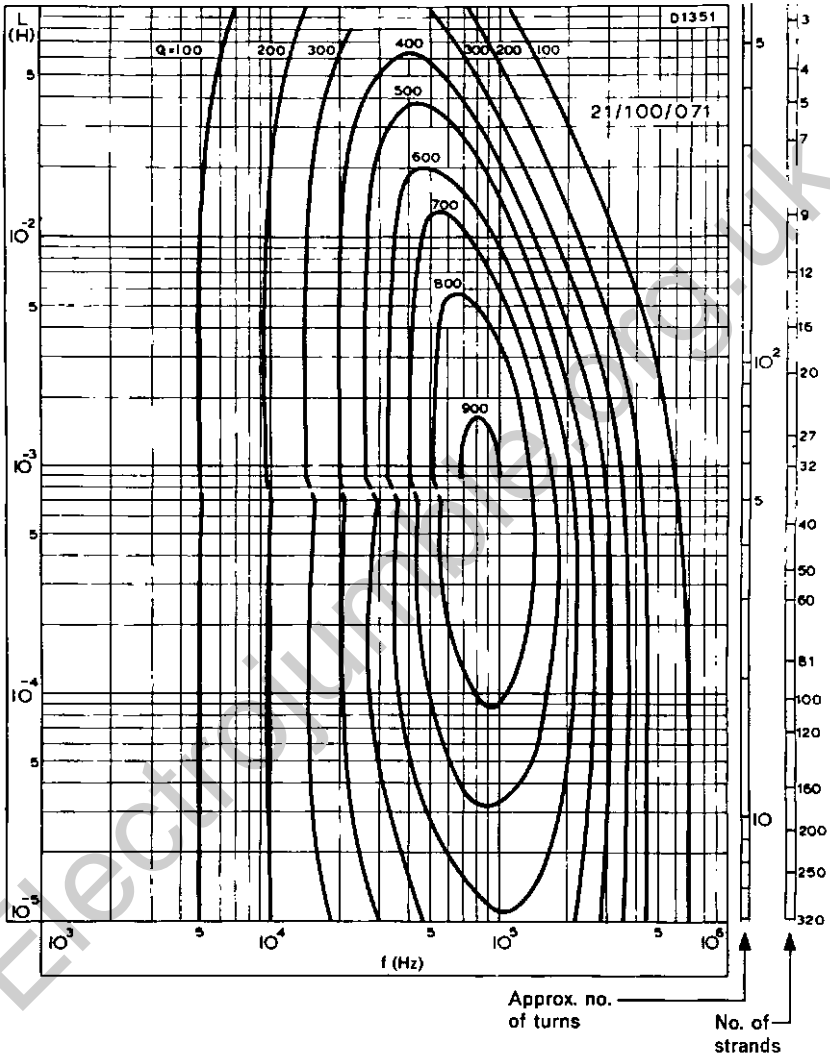


ISO-Q CURVES

These curves, show typical Q-factors obtainable with full windings of enamelled copper wire on coil former type DT2204 (see winding tables in 'white' 21mm Vinkor Series sheets).

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C131



ISO-Q CURVES

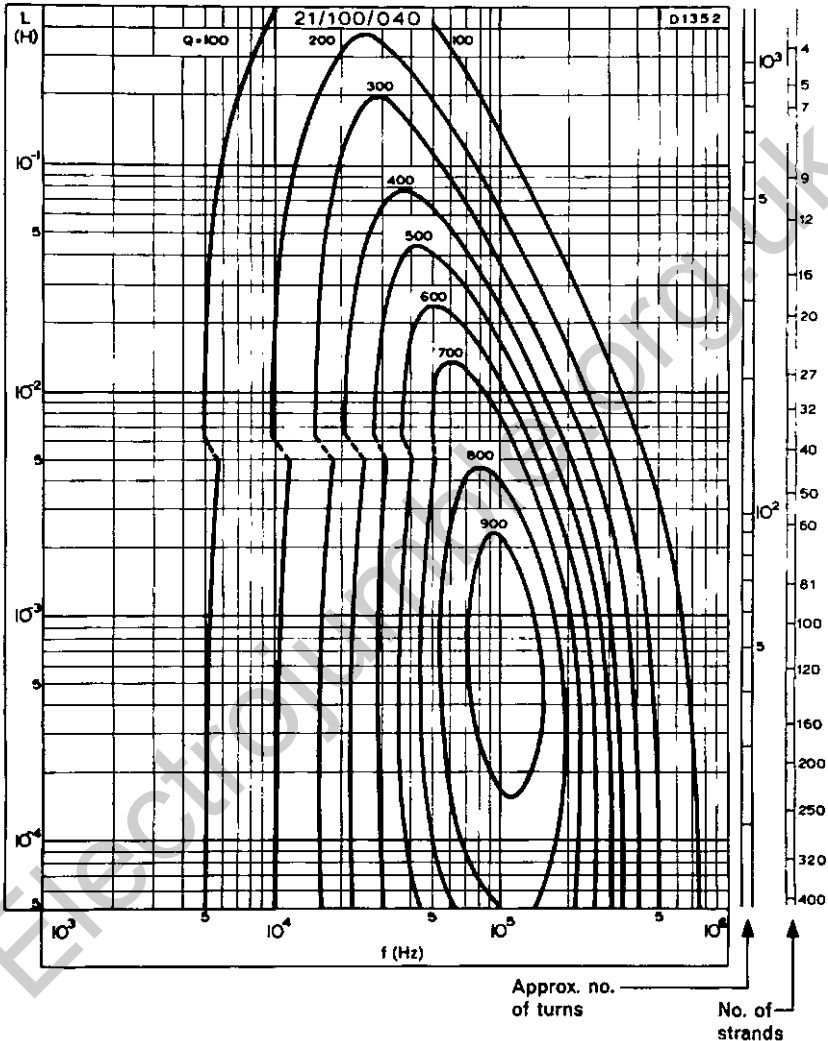
These curves show typical Q-factors obtainable with full windings of 0.071mm diameter bunched conductors on coil former type DT2204 (see winding tables in 'white' 21mm Vinkor Series sheets).

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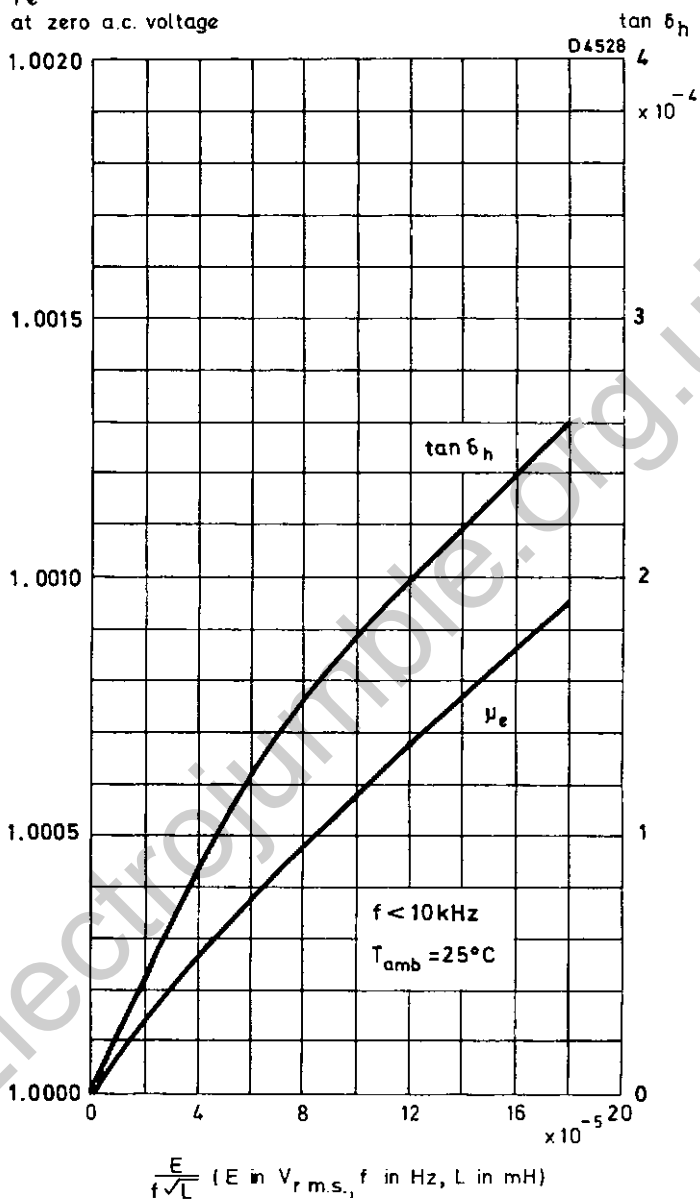
ISO-Q CURVES

These curves show typical Q-factors obtainable with full windings of 0.040mm diameter bunched conductors on coil former type DT2204 (see winding tables in 'white' 21mm Vinkor Series sheets).

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C133

μ_e relative to value
at zero a.c. voltage



TYPICAL VARIATION
OF μ_e AND $\tan \delta_h$ WITH A.C. SIGNAL LEVEL

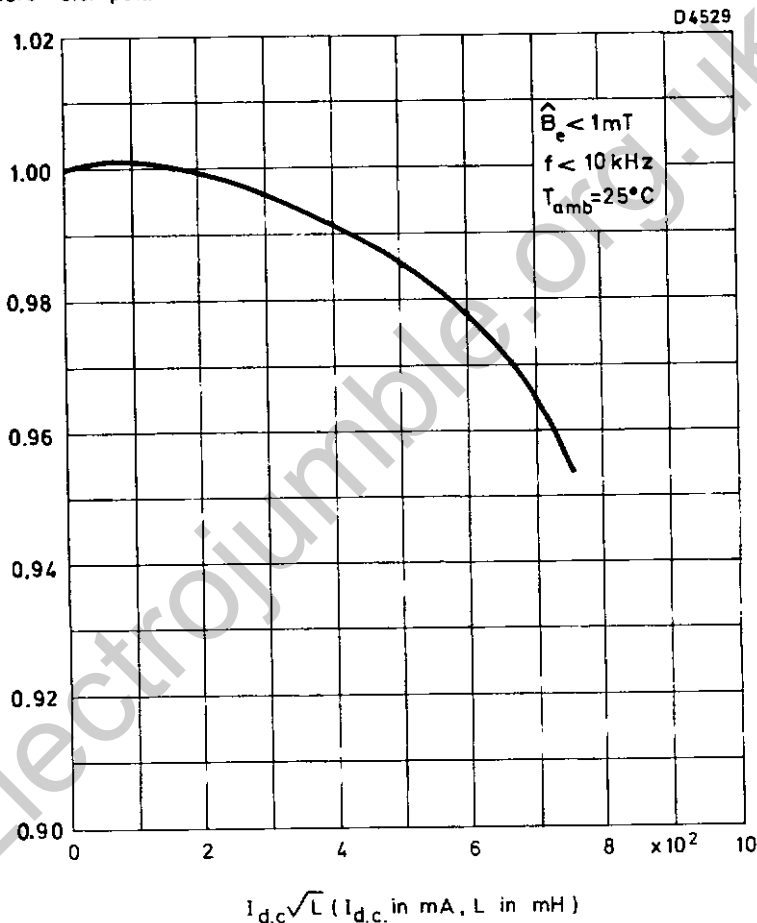
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μ_e 100

Inductance relative to value
at zero d.c. polarisation



TYPICAL D.C. POLARISATION CURVE

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C135