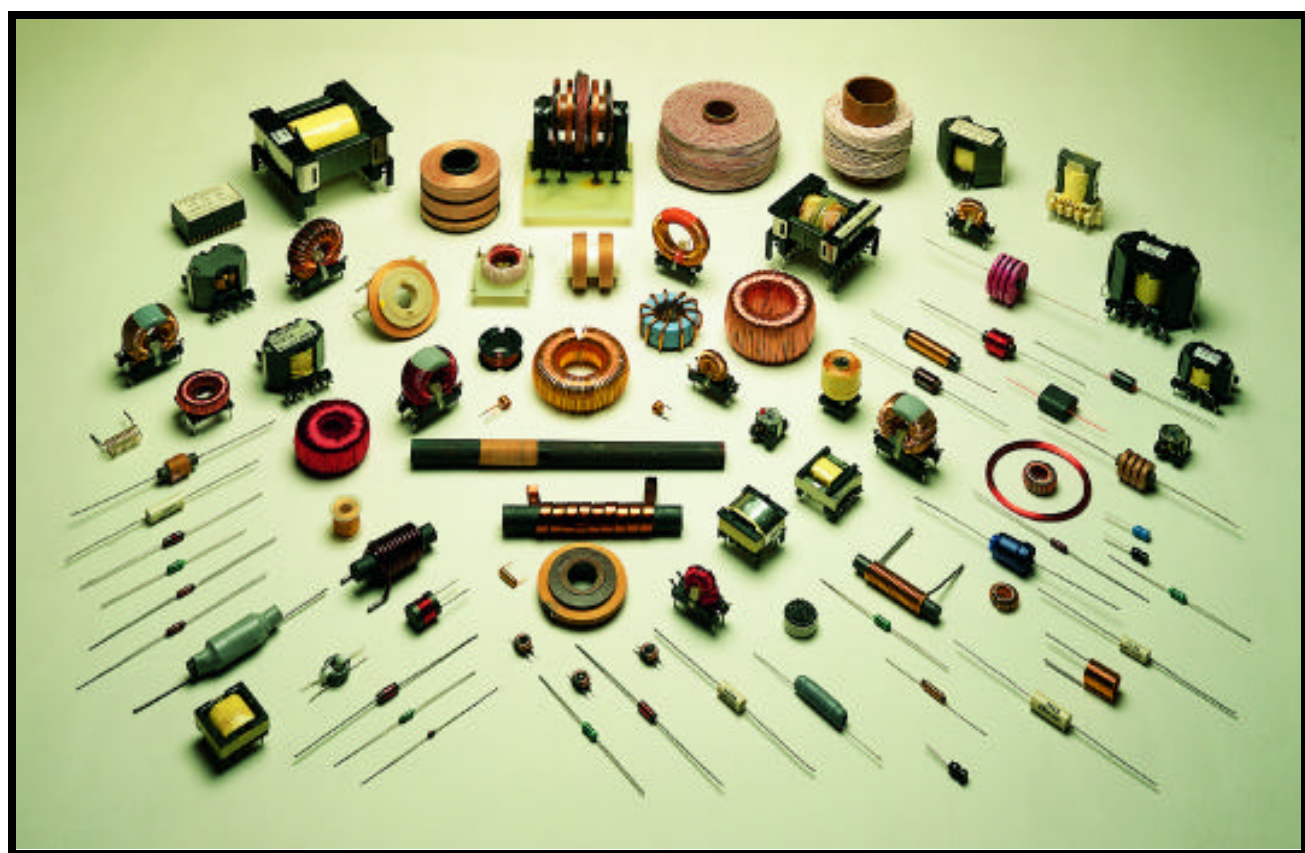


*The Reliable Source ...*

# FERROPERM



*for High Quality*



*Inductors and*



*Transformers*

## **INDUCTORS AND TRANSFORMERS**

**from FERROPERM UK Ltd.**

FERROPERM offers a manufacturing capability for the production of most types of high quality inductors and transformers, including surface mounting types. Toroidal types and wave-wound types are particular specialities.

Transformers are all produced as custom designs (see page 16). Inductors are produced as custom designs (see page 15) and in standard ranges which are presented in this catalogue.

A highly flexible production facility ensures short lead times on custom designs as well as standard products. We can produce designs for your applications or we can manufacture to your own designs.

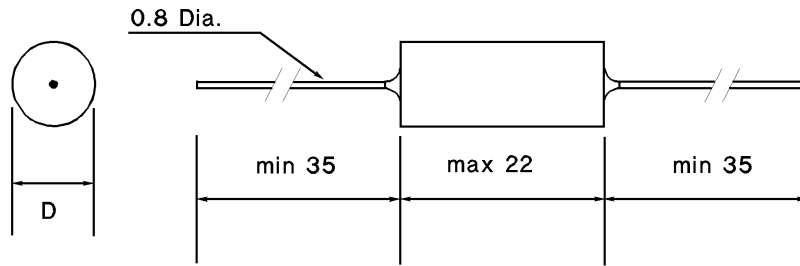
Rather than trying to list all the types of inductors and transformers FERROPERM can produce, it is easier to list types not made:

1. ``Mains" (50 or 60Hz) power transformers.
2. Inductors and transformers with any dimension larger than about 300 mm.

**FERROPERM**

# TYPE 1580

## RADIO-FREQUENCY CHOKES



Dimensions in mm.

Core ..... Low-loss Iron Powder  
 Coating ..... Insulated with heat-shrink tube  
 Load on Terminals ..... 2Kg max  
 Working Temperature ..... -55 to +85°C ambient  
 Marking ..... Type and inductance

Inductance μH (±10%)	Maximum Rdc Ω		Idc A Max	Fr MHz Typ	D mm Max
	@ 25°C	@ 85°C			
10 *	0.3	0.4	0.9	36.0	8.0
16	0.7	0.9	0.6	32.0	8.0
25 *	0.9	1.1	0.6	27.0	8.0
40	1.3	1.7	0.5	18.0	8.0
50	1.6	2.0	0.5	16.0	8.0
63	1.7	2.2	0.5	14.0	8.5
80	1.9	2.4	0.4	13.0	8.5
100 *	2.0	2.6	0.4	10.0	8.5
125	2.3	2.9	0.4	10.0	8.5
160	2.6	3.3	0.4	9.0	9.0
200	3.0	3.8	0.3	8.0	9.0
250 *	3.4	4.3	0.3	7.0	9.0
315	3.9	4.9	0.3	5.5	9.0
400	4.5	5.6	0.2	5.0	9.0
500 *	5.2	6.5	0.2	5.5	9.0

\* Preferred values

Idc max: Maximum Current at 85°C ambient

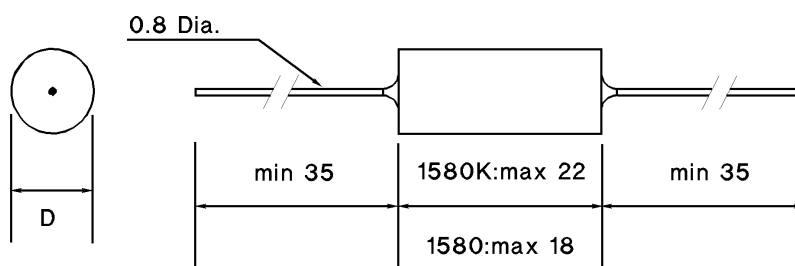
For other temperatures use the "Load Ratings" curve 1 on page 17

To order these chokes please specify type 1580 and the inductance value.

# FERROPERM

# TYPE 1580 and 1580K

## RADIO-FREQUENCY CHOKES



Dimensions in mm.

Core ..... Low-loss Iron Powder

Coating ..... 1580 None  
 1580K Insulated with heat-shrink tube

Load on Terminals ..... 2Kg max

Working Temperature ..... -55 to +85°C ambient

Marking ..... 1580 None  
 1580K Type and inductance

Inductance μH (±10%)	Rdc Ω Typ	Maximum Idc A		Fr MHz Typ	Maximum D mm	
		1580	1580K		1580	1580K
1.0	11	0.22	0.16	3.3	8.5	10.0
2.5	19	0.16	0.12	2.0	10.0	11.5
5.0	32	0.12	0.09	1.4	11.0	12.5
10.0	47	0.12	0.09	1.0	14.0	16.0

Idc max: Maximum Current at 85°C ambient

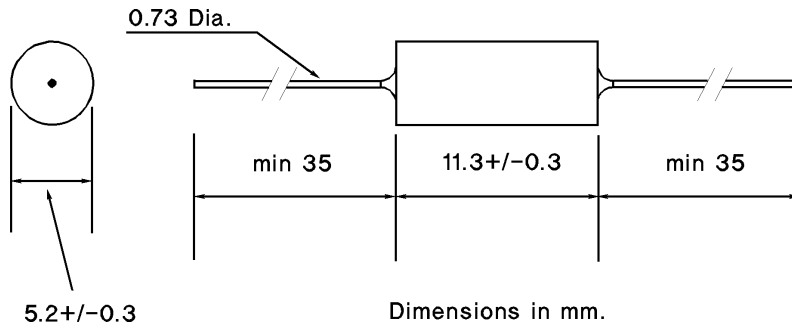
For other temperatures use the "Load Ratings" curves on page 17  
 Curve1for1580KandCurve2for1580

To order these chokes please specify the type number and the inductance value.

# FERROPERM

# TYPE 1582

## RADIO-FREQUENCY CHOKES



- Core ..... Thermoset Plastic up to 0.68μH  
Low-loss Ferrite above 0.68μH
- Coating ..... Moulded Polypropylene
- Load on Terminals ..... 2Kg max
- Working Temperature ..... -55 to +85°C ambient
- Marking ..... Type, inductance and current

Inductance μH (±10%)	Q	@	Fr MHz	Rdc Ω	Idc A
	Typ	F MHz	Typ	Typ	Max
0.10	65	25	>400	0.025	3.0
0.15	65	25	>400	0.035	2.5
0.22	55	25	>400	0.045	2.0
0.33	55	25	350	0.055	2.0
0.47	55	25	320	0.07	1.7
0.68	45	15	290	0.09	1.5
1.0	45	15	190	0.04	2.2
1.5	65	8.0	155	0.05	2.0
2.2	60	8.0	130	0.06	1.8
3.3	50	8.0	110	0.07	1.7
4.7	50	8.0	95	0.12	1.3
6.8	60	8.0	85	0.22	1.0
10	50	8.0	65	0.35	0.75
15	55	2.5	55	0.6	0.6
22	65	2.5	45	1.1	0.43
33	85	2.5	35	2.0	0.3
47	70	2.5	20	2.5	0.27
68	65	2.5	16	3.0	0.25
100	65	1.5	14	4.0	0.22
150	80	0.8	9.5	5.8	0.23
220	80	0.8	8.0	7.3	0.2
330	80	0.8	9.5	12	1.16
470	80	0.8	6.5	20	0.12
680	85	0.8	5.0	24	0.11
1000	85	0.8	3.0	30	0.1

Idc max: Maximum Current at 85°C ambient

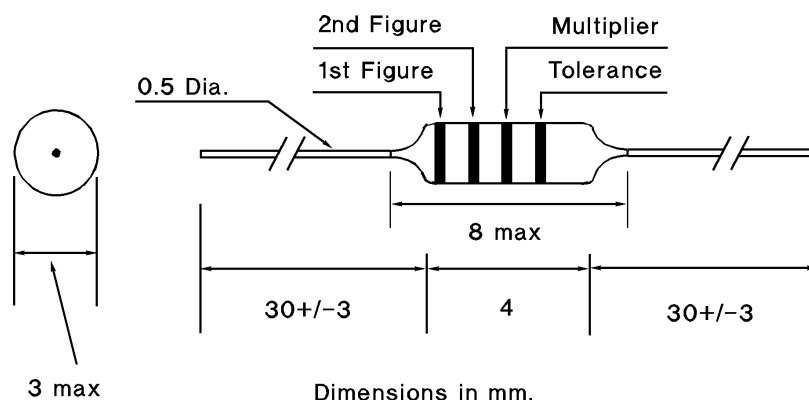
For other temperatures use the "Load Ratings" curve 2 on page 17

To order these chokes please specify type 1582 and the inductance value.

# FERROPERM

# TYPE 15EC24

## GENERAL PURPOSE INDUCTORS



Core ..... Ferrite  
 Coating ..... Epoxy  
 Insulation withstand voltage ..... 250V a.c.  
 Load on Terminals ..... 1Kg max  
 Working Temperature ..... -55 to +85°C ambient  
 Marking ..... Standard colour banding  
 (Base unit 1µH)

Inductance µH	Q		@	Fr MHz	Rdc Ω	Idc mA
	Min		F MHz	Min	Max	Max
0.22 ±20%	40		25.2	380	0.08	1150
0.47 ±20%	40		25.2	300	0.1	1000
1.0 ±10%	40		25.2	180	0.15	815
2.2 ±10%	50		7.96	110	0.25	630
4.7 ±10%	45		7.96	50	0.35	530
10 ±10%	40		7.96	22	0.72	370
22 ±10%	50		2.52	13	1.2	385
47 ±10%	60		2.52	8.5	2.3	205
100 ±10%	60		2.52	5.5	3.5	165
220 ±10%	60		0.796	4.0	5.7	130
470 ±10%	60		0.796	2.5	11.6	90
1000 ±10%	60		0.796	1.1	30	60

To order these chokes please specify type 15EC24 and the inductance value.

Certain other inductance values are available to special order. Please contact our Sales Office with your requirements.

Examples of colour banding:-

	1st Fig	2nd Fig	Multiplier	Tolerance
15EC24 u47M	Yellow	Purple	Silver	Black
15EC24 m22K	Red	Red	Brown	Silver

# FERROPERM

# CUSTOM INDUCTORS

from FERROPERM UK Ltd.

If you already have inductor designs, we will be pleased to quote for their manufacture. Just send us your drawings!

If you would like us to design inductors to meet your requirements, please send us the following information. If you do not have all the information available, please just give what you can.

1. Specify the application. (For example, Energy Storage Choke for a Switched Mode Power Supply). Please give as much information as you can.
2. Specify the maximum dimensions of the space you have available for the inductor.
3. Specify if you require surface mounting or through-hole mounting.
4. If you have a preference for a particular hardware design (for example rod or toroidal), please state it.
5. Specify your estimated requirements of quantities and delivery dates both for short term and long term. This is important because it may influence what hardware is specified for the design.
6. If you have a target or maximum price level, please state it.
7. Specify maximum average direct current flow.
8. Specify maximum peak current flow.
9. Sketch or describe any alternating current waveform (other than interference current). If the waveform is variable, please specify the extremes.

## FOR ENERGY STORAGE CHOKES (INDUCTORS):

10. Specify inductance and widest acceptable tolerance at near zero current, at maximum average current and at maximum peak current.

## FOR ALL OTHER INDUCTORS:

10. EITHER specify inductance and widest acceptable tolerance  
OR specify minimum required impedance at particular frequencies or sketch  
a graph of minimum required impedance  
versus frequency.
11. Specify if common mode (current compensated) design is required.  
(Examples of common mode chokes are shown on page 13.)
12. Specify maximum working voltage between windings if common mode.
13. If this working voltage is a.c., please specify the frequency.

# FERROPERM

# CUSTOM TRANSFORMERS

from FERROPERM UK Ltd.

If you already have transformer designs, we will be pleased to quote for their manufacture. Just send us your drawings!

If you would like us to design transformers to meet your requirements, please send us the following information. If you do not have all the information available, please just give what you can.

1. Specify the application. (For example, Switched Mode Power Supply (SMPS) in an instrument). Please give as much information as you can.
2. Indicate by a schematic or describe how the transformer is driven and used. (For example, push-pull FET drive in a SMPS). Please give as much information as you can.
3. Draw a schematic of all windings with turns ratios and widest acceptable tolerance of turns ratios. Indicate polarity of windings where it is important. For windings with one or more taps between the ends, please make clear what turns ratios are required for each section of the winding!
4. Specify what voltage isolation requirements there are between all windings.
5. Draw or describe the voltage waveform which will be applied to the primary winding. If the waveform is variable, please specify the extremes.
6. Specify maximum working currents to be drawn from all secondary windings.
7. If occasional overload conditions have to be met, please specify these separately.
8. Specify the maximum dimensions of the space you have available for the transformer.
9. Specify if you require surface mounting or through-hole mounting.
10. If you have a preference for a particular hardware design (for example ETD, RM or toroidal), please state it.
11. Specify your estimated requirements of quantities and delivery dates both for short term and long term. This is important because it may influence what hardware is specified for the design.
12. If you have a target or maximum price level, please state it.

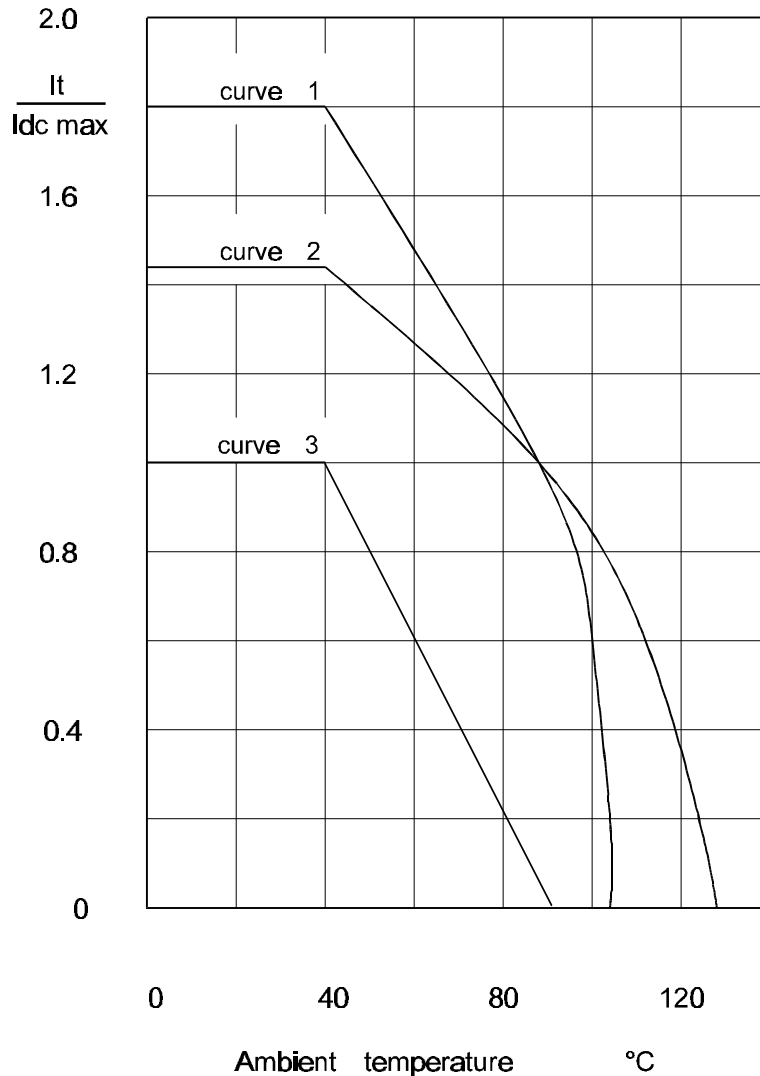
**FERROPERM**



# INDUCTORS AND TRANSFORMERS

from FERROPERM UK Ltd.

## LOAD RATINGS for CHOKES



$I_t$  = Maximum current at ambient temperature

$I_{dc\ max}$  = Maximum current shown on data sheet.

Whilst every care was taken to avoid any mistakes in the compilation of this catalogue, no responsibility can be assumed for any errors which may have occurred in it.

In line with Ferroperm's policy of continual development, Ferroperm reserves the right to alter specifications of any products without notice.

# FERROPERM

*The Reliable Source ..*

# FERROPERM

*... serving the*

*electronics industry*

Other products from Ferroperm include ...

- Filtered Sub-D Connectors
- Soft magnetic Ferrites & Iron Dust Cores
- Hard magnetic Ferrites
- Piezo Electric Ceramics
- Thin Film Optical Interference Filters

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