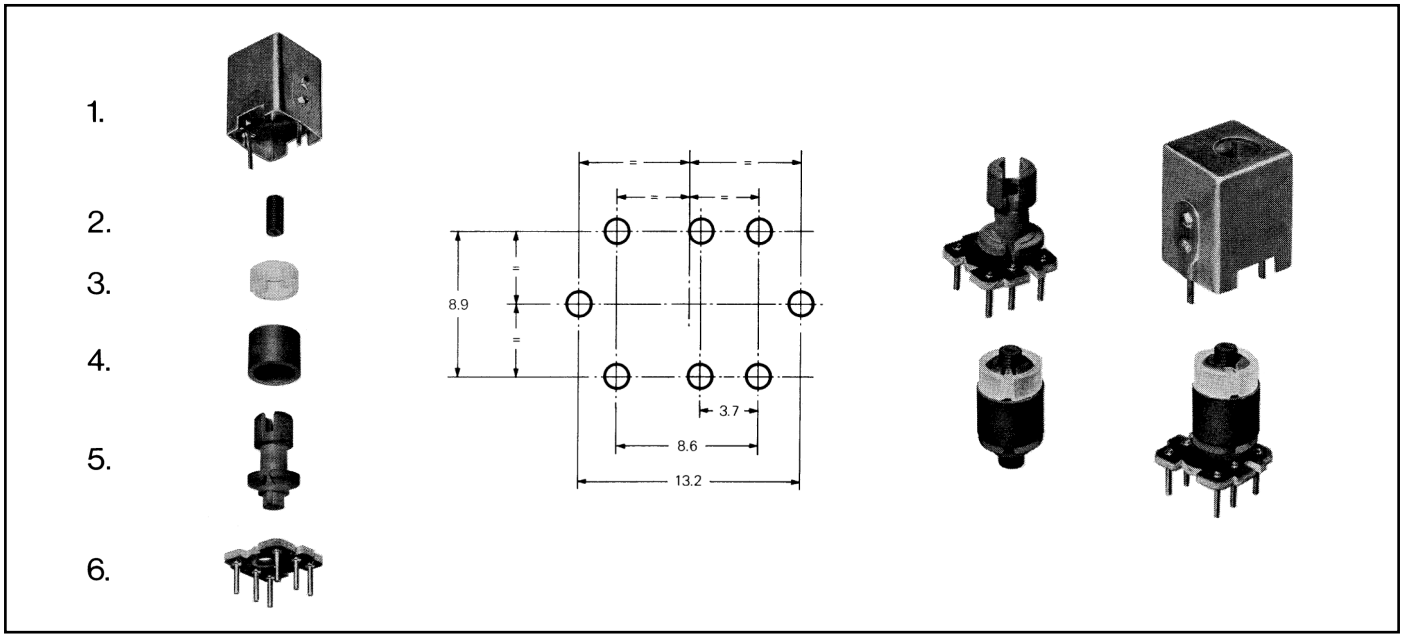

Dimensional Data & General Description

Mounting holes to be suitable for pins 0.92mm diameter and rectangular lugs 0.56x1.12mm.

The assembly consists of the following components:
1. Aluminium screening can
2. Screw core
3. Retaining ring
4. Cylindrical shell
5. Former
6. Baseplate

Parts 1, 3 and 6 are common to all types of this assembly, while parts 2,4 and 5 are supplied in grades of material which are most suitable for the frequency of the application.

This assembly is suitable for use in the frequency range 0.05 to 50MHz. It has been developed essentially for printed circuit board applications. The Former is made of thermoplastic material. The Former is supplied riveted to the base-plate. The mounting position of the Former is offset to allow a capacitor to be fitted inside the can.

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Assemblies Available and Q-values

The table below shows the recommended types of magnetic components and the grades of material for the specified frequency ranges and approximate unloaded Q-values.

Part No.	Ref.	Frequency range	Screw core	Shell	Bobbin	c	Unloaded Q (approximate)
99-011-96*	E1	50-2000kHz	F14	F14	M5B	6.1	155 @ 470kHz 250 @ 1MHz
99-012-96*	E2	2-7.5MHz	F16	F16	M5B	5.8	155 @ 5.75MHz
99-013-96	E3	7.5-12MHz	F16	900	M9B	6.25	150 @ 10.7MHz
99-014-96	E4	12-50MHz	F29	900	M9B	7.6	125 @ 40MHz

*Only available in 4 pin

Electrical Specification

Example of windings:

Part No.	Ref.	Frequency	n	Wire	Winding
99-011-96	E1	470kHz	140	3x0.06 EnCu	layer
99-011-96	E1	1MHz	52	24x0.04 DS EnCu	layer
99-012-96	E2	5.75MHz	17	3x0.06 EnCu	close
99-013-96	E3	10.7MHz	10	30x0.04 DS EnCu	close
99-014-96	E4	40MHz	4	0.38 EnCu	spaced

Note. The values of Q shown in the table for Assemblies available were obtained using the above coils

Number of Turns
The approximate number of turns is $n=c\sqrt{L}$ where c is the constant listed in the table and L is the required value of inductance in microhenries. Maximum inductance for E1 assembly when wound with 0.08 EnCu is 9.9mH.

Inductance Adjustment
Not less than ± 15% for all assemblies.

Temperature Coefficient

The value of the temperature coefficient is greatly affected by the structure of the winding and reliable data can only be obtained from measurement of coils wound under production conditions.
A typical value for all assemblies is:
$+150x10^{-6}$ per °C

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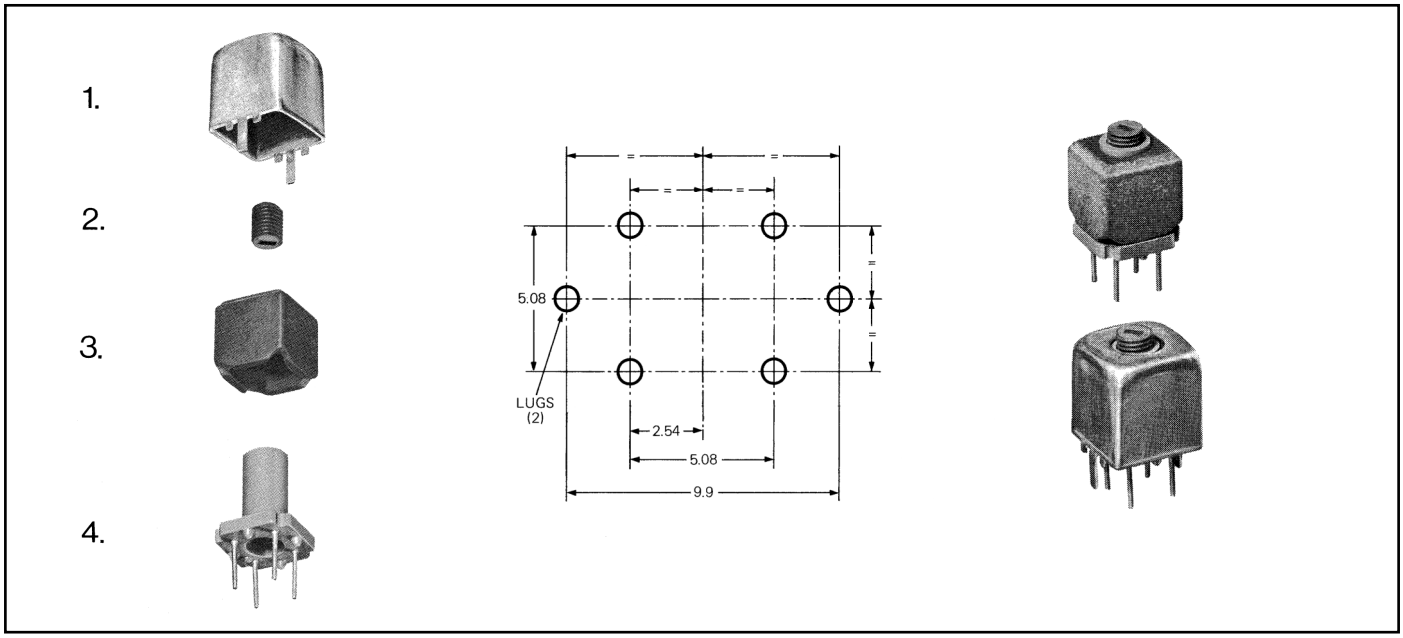

Dimensional Data & General Description

Mounting holes to be suitable for square pins 0.70mm accross diagonal and for lugs 0.33x1.35mm.

The assembly consists of the following components:
1. Screening can
2. Screw core (iron powder)
3. Shell (iron powder)
4. Former 4 pin (glass filled Phenolic)

This assembly has been designed for use in professional applications where a high degree of stability is required. The assembly is suitable for use up to 200MHz within the temperature range -55°C to 100°C.

Assemblies Available

The table below lists the assemblies recommended for use in the specified frequency ranges.

Part No.	Assembly type	Frequency range
99-041-96	HA1	0 - 1MHz
99-043-96	HA2	0 - 10MHz
99-045-96	HA3	5 - 70MHz
99-047-96	HA4	30 - 200MHz

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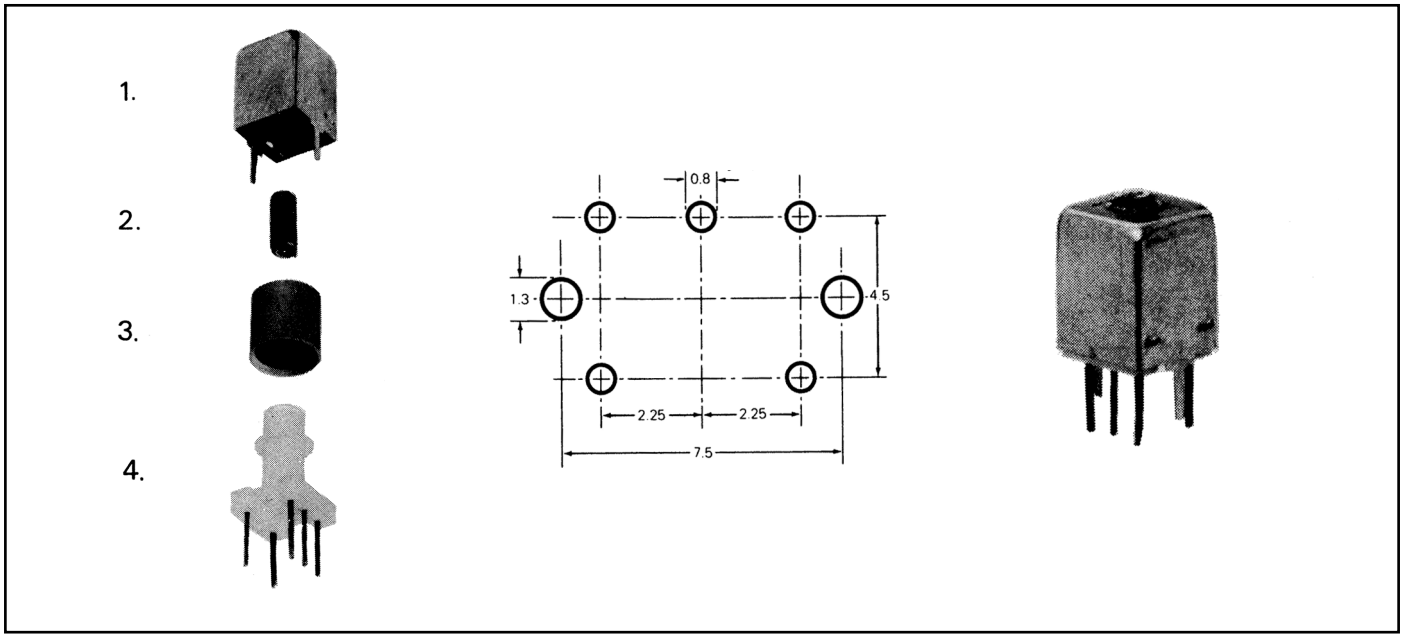

Dimensional Data & General Description

Mounting holes to be suitable for pins 0.45mm square, provided the soldered wire termination extends no more than 1.5mm below the base.

The assembly consists of the following components:
1. Silver coated copper screening can
2. Ferrite screw core (self-locking)
3. Ferrite cup core
4. Former (glass filled Polybutylene Terephtalate)

This assembly has been designed for printed circuit applications and is suitable for use up to 200MHz. For optimum value of Q a cup core has to be used to prevent damping effect of the can. The former is designed to be a 'push fit'

Assemblies Available and A_L Values

The table below shows the recommended types of magnetic components and grades of ferrite for the specified frequency ranges.

Part No.	Ref.	Frequency range	Screw core	Cup core	A_L values (nominal)
99-072-96	K2	0.1-5MHz	F14	F14	8nH
99-073-96	K3	5-12MHz	F16	F16	8nH
99-074-96	K4	12-20MHz	F22	F22	6.5nH
99-075-96	K5	20-60MHz	F25	F25	6nH
99-076-96	K6	60-200MHz	F29	F29	5.5nH

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Electrical Specification

Number of Turns
The approximate number of turns can be calculated from the formula:
$L=A_L n^2$ (nH)
The cross-sectional area available for the winding is 3.5mm^2 and the mean length of the turn is 12.5mm.

Inductance Adjustment
Not less than ± 12% for all assemblies.

Temperature Coefficient

The value of the temperature coefficient is greatly affected by the structure of the winding and reliable data can only be obtained from measurement of coils wound under production conditions.
Typical values are:
K2 and K3 +300x10^{-6} per °C
K4, K5 and K6 +200x10^{-6} per °C

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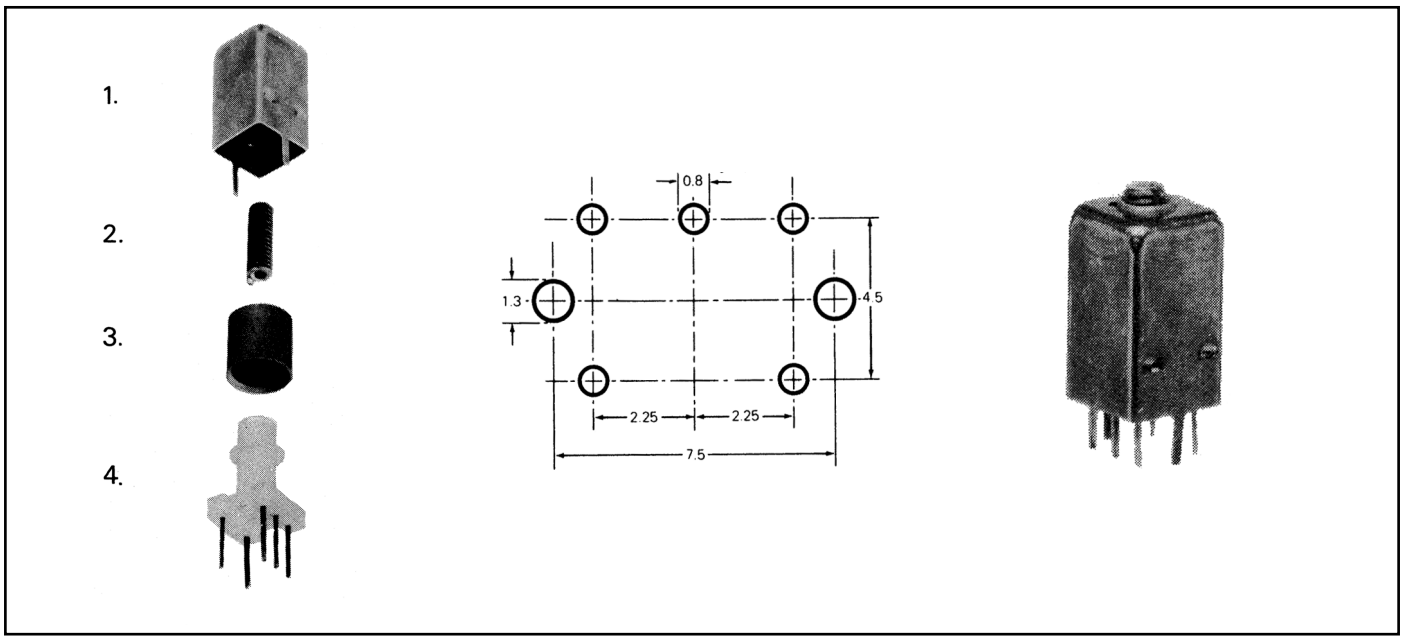

Dimensional Data & General Description

Mounting holes to be suitable for pins 0.45mm square, provided the soldered wire termination extends no more than 1.5mm below the base.

The assembly consists of the following components:
1. Silver coated copper screening can
2. Ferrite screw core (self-locking)
3. Ferrite cup core
4. Former (glass filled Polybutylene Terephtalate)

The two projections at the base of the former prevent the screw core from falling out when adjustment is made from the top assembly.

This assembly has been designed for printed circuit applications and is suitable for use from 0.1 to 12MHz. The former is designed to be a 'push fit' into the can.

Assemblies Available and A_L Values

The table below shows the recommended types of magnetic components and grades of ferrite for the specified frequency ranges.

Part No.	Ref.	Frequency range	Screw core	Cup core	A_L values (nominal)
99-082-96	S2	0.1-5MHz	F14	F14	13nH
99-083-96	S3	5-12MHz	F16	F16	12nH

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Electrical Specification

Number of Turns
The approximate number of turns can be calculated from the formula:
$L=A_L n^2$ (nH)
The cross-sectional area available for the winding is 3.5mm^2 and the mean length of the turn is 12.5mm.

Inductance Adjustment
Not less than ± 15% for all assemblies.

Temperature Coefficient

The value of the temperature coefficient is greatly affected by the structure of the winding and reliable data can only be obtained from measurement of coils wound under production conditions.
A typical value for all assemblies is:
+200x10^{-6} per °C

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