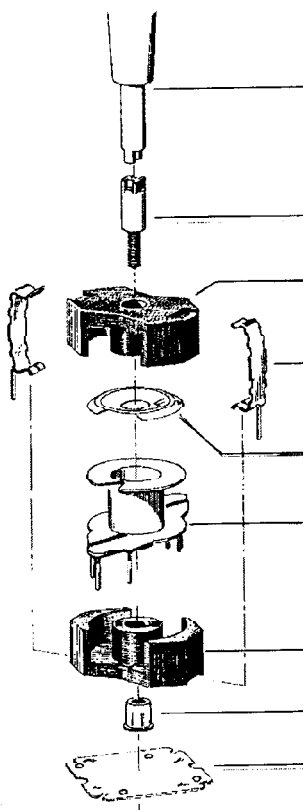


RM 5 Core and Accessories

Individual parts		Part no.	Page
	Adjusting screwdriver (for assembly only)	B63399	208
	Matching handle	B63399	208
	Centering pin	B65806	208
	Adjusting screw	B65539	208
	Core	B65806	208
	Clamps	B65805	202
	Insulating washer 1	B65806	205
	Coil former	B65806	204
	Core	B65805	202
	Threaded sleeve (glued-in)	B65806	205
	Insulating washer 2	D65006	205
FR110005-2			
Example of an assembly set			
Also available:			
SMD coil former		B65822	206, 207
RM 5 low profile:			
Core		D65805 P	213
SMD coil former		B65822	214
Clamp		B65804	214

RM 5 Accessories

B65806

Coil former

Material: GFR thermosetting plastic (UL 94 V-0, insulation class to IEC 85:

$H \leq \text{max. operating temperature } 180^\circ\text{C}$), color code blue

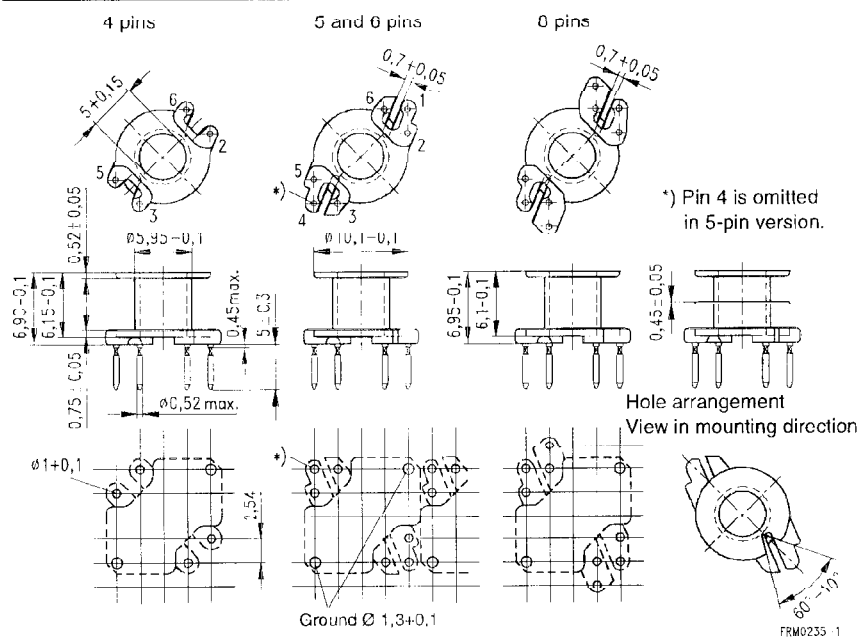
Solderability: to IEC 68-2-20, test 1a, method 1 (aging 3): 235°C , 2 s

Resistance to soldering heat: to IEC 68-2-20, test Tb, method 1B: 350°C , 3,5 s

Winding: see page 152

Pins squared in the start-of-winding area; also available in stick magazines

Sections	A_N mm ²	l_N mm	A_R value μΩ	Pins	Ordering code	PU Pcs
1	9,5	25	90	4 5 6 8	B65806-K1004-D1 B65806-K1005-D1 B65806-K1006-D1 B65806-K1008-D1	500
2	8,7	25	94	4 5 6	B65806-K1004-D2 B65806-K1005-D2 B65806-K1006-D2	
1 or 2	with 4 special solder terminals for litz wire on request					



Clamp

- With ground terminal, made of stainless spring steel (tinned), 0,335 mm thick
- Soloerability to IEC 68-2-20, test Ta, method 1 (aging 3): 235 °C, 2 s
- Also available as strip clamp on reels

Insulating washer 1 between core and coil former

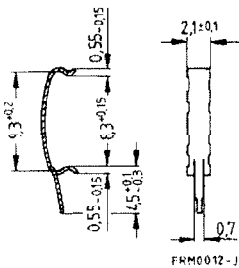
- For tolerance compensation and for insulation
- Made of polycarbonate (UL 94 V-0, insulation class to 85: E $\geq$ 120 °C), 0,06 mm thick

Insulating washer 2 for double-clad PCBs

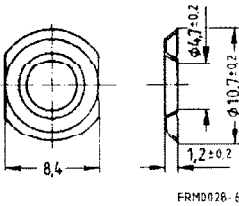
- Made of polycarbonate (UL 94 V-0, insulation class to IEC 85: E $\geq$ 120 °C), 0,3 mm thick

	Ordering code	PU Pcs
Clamp (ordering code per piece. 2 are required)	B65806-A2203	1000
Insulating washer 1 (reel packing, PU = 1 reel)	B65806-A5000	2500
Insulating washer 2 (bulk)	B65806-D2005	2500

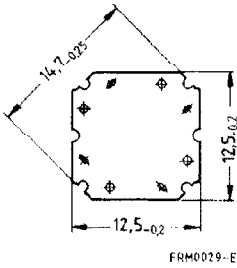
Clamp



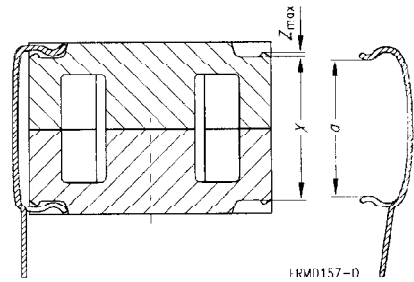
Insulating washer 1



Insulating washer 2



RM clamping forces for RM 5



$F_{\min}$: Extension of clamp from a to $a_2 = X_{\min}$
 $F_{\max}$: Extension of clamp from a to $a_1 = X_{\max}$

Clamp opening a (mm)	8,3 + 0,15
Core nose $Z_{\max}$ (mm)	0,15
Height of core pair X (mm)	$X_{\min}$ 8,75 $X_{\max}$ 9,25
Clamping force F (N)	$F_{\min}$ 5 $F_{\max}$ 40

RM 5 Accessories



B65822
B65806

SMD coil former with gullwing terminals

Material: GFR liquid crystal polymer (UL 94 V-0, insulation class to IEC 85:

F $\triangleq$ max. operating temperature 155 °C), color code black

Solderability: to IEC 68-2-20, test Ta, method 1 (aging 3): 235 °C, 2 s

Resistance to soldering heat: to IEC 68-2-20, test Tb, method 1B: 350 °C, 3,5 s

permissible soldering temperature for wire-wrap connection on coil former: 400 °C, 1 s

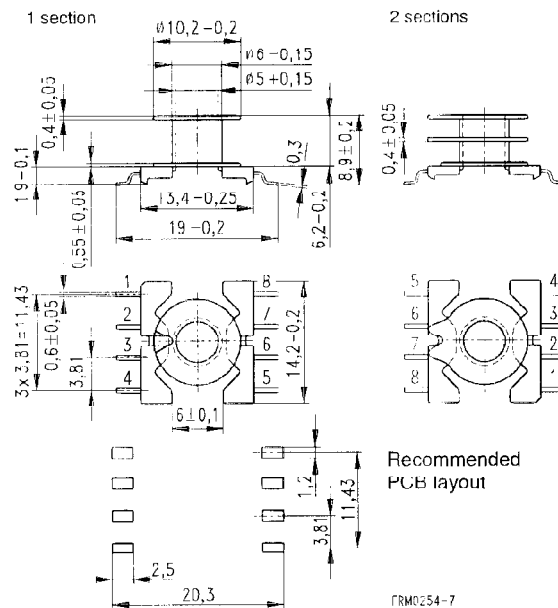
Winding: see page 160

Clamp

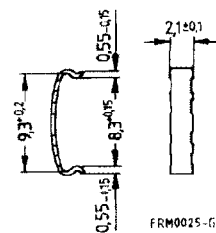
- Without ground terminal, made of stainless spring steel, 0,3 mm thick
- Also available as strip clamp (each carton containing 2 reels), also on a reel on request

Sections	A_N mm ²	l_N mm	A_R value $\mu\Omega$	Terminals	Ordering code	PU Pcs
1	11,1	25	77	0	DC5022-F1008-T1	500
2	10,2	25	85	8	B65822-F1008-T2	
Clamp	(ordering code per piece, 2 are required)				B65806-J2204	1000

Coil former



Clamp



SMD coil former with J terminals

Material: GFR liquid crystal polymer (UL 94 V-0, insulation class to IEC 85:

F Δ max. operating temperature 155 °C), color code black

Solderability: to IEC 68-2-20, test Ta, method 1 (aging 3): 235 °C, 2 s

Resistance to soldering heat: to IEC 68-2-20, test Tb, method 1B: 350 °C, 3,5 s

permissible soldering temperature for wire-wrap connection on coil former: 400 °C, 1 s

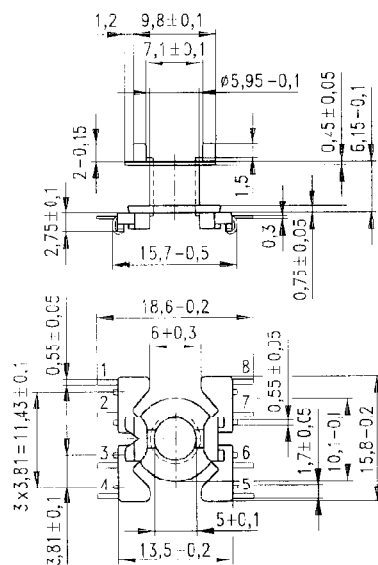
Winding: see page 160

Clamp

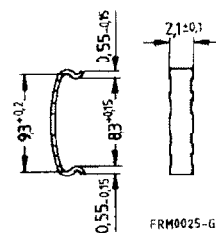
- Without ground terminal, made of stainless spring steel, 0,3 mm thick
- Also available as strip clamp (each carton containing 2 reels)
- Also available on a reel on request

Sections	A_N mm ²	l_N mm	A_R value $\mu\Omega$	Terminals	Ordering code	PU Pcs
1	11,1	25	73	8	B65822-J1008-T1	500
Clamp	(ordering code per piece, 2 are required)				B65806-J2204	1000

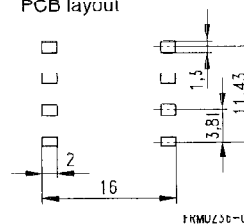
Coil former



Clamp



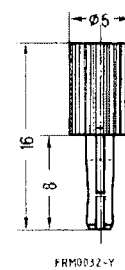
Recommended PCB layout



B65539
B63399, B65806

Centering pin as assembly aid for RM core centering

Centering pin



RM 5

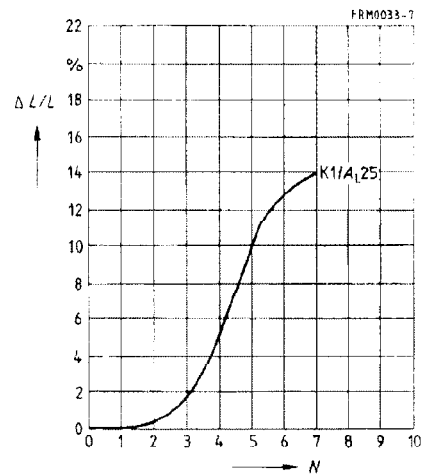
Inductance adjustment curves (nominal values)

Relative inductance change $\Delta L/L$ versus turns N of adjusting screw.

0 $\hat{=}$ at least 1 turn engaged.

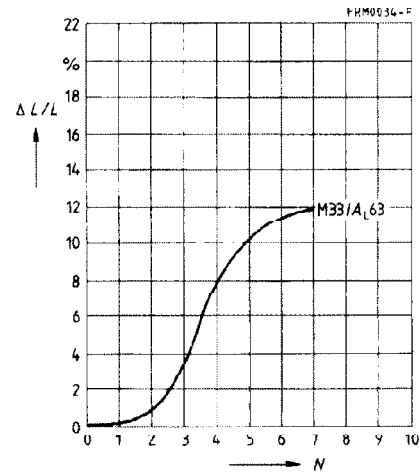
Adjusting screw B65539-C1003-X101

Color code black



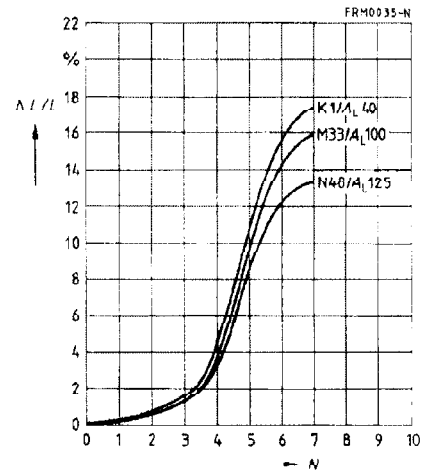
Adjusting screw B65539-C1002-X101

Color code white



Adjusting screw B65539-C1003-X1

Color code yellow



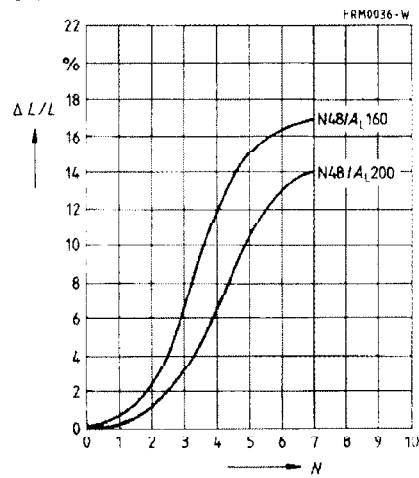
RM 5

Inductance adjustment curves (nominal values)

Relative inductance change $\Delta L/L$ versus turns N of adjusting screw.
 $0 \triangleq$ at least 1 turn engaged.

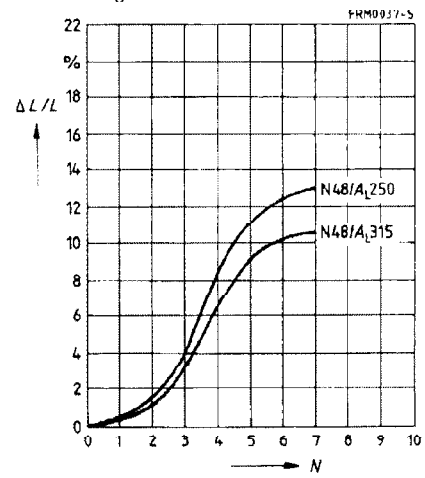
Adjusting screw B65539-C1002-X22

Color code red



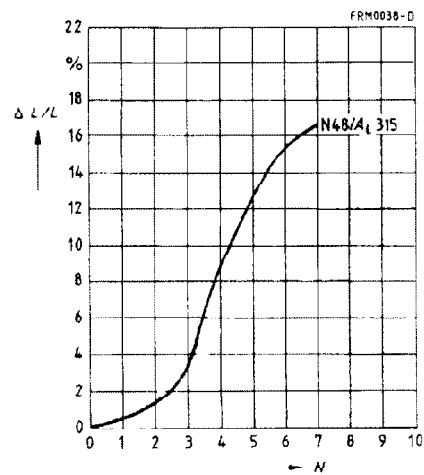
Adjusting screw B65806-C3001-X22

Color code green



Adjusting screw B65806-A3002-X22

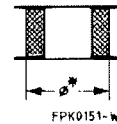
Color code blue



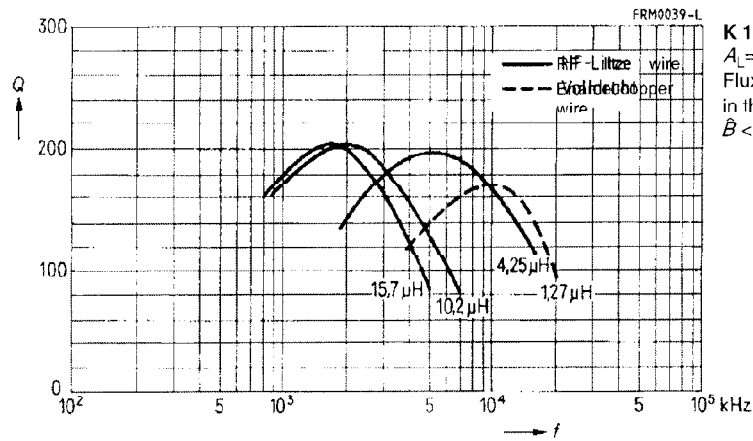
RM 5

Q factor characteristics (typical values)

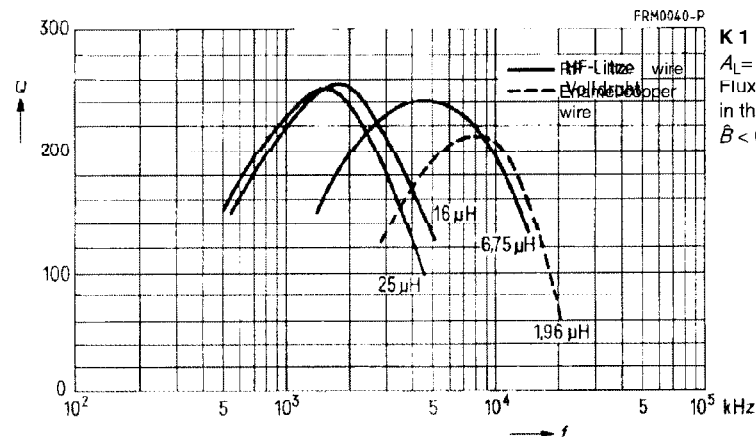
Material	L (μH) for		Turns	Wire, RF litz wire	Sections	Ø* mm
	A _L = 25 nH	A _L = 40 nH				
K 1	1,27	1,96	7	0,6 CuL	1	8,5
	4,25	6,75	13	30 × 0,04 CuLS	1	9,0
	15,7	25	25	30 × 0,04 CuLS	1	8,4
	10,2	16	20	40 × 0,04 CuLS	1	8,2



* Pad of polystyrene tape up to diameter Ø



K 1
A_L = 25 nH
Flux density
in the core
 $\hat{B} < 0,5 \text{ mT}$



K 1
A_L = 40 nH
Flux density
in the core
 $\hat{B} < 0,6 \text{ mT}$

RM 5

Q factor characteristics (typical values)
Flux density in the core $\hat{B} < 1 \text{ mT}$

Material	L (mH) for		Turns	Wire; RF litz wire	Sections
	$A_L = 100 \text{ nH}$	$A_L = 160 \text{ nH}$			
N 48	90	141	750	0,1 CuL	1
	23,1	36,1	380	0,14 CuL	1
	7,75	12,1	220	0,18 CuL	1
	4,62	7,20	170	10 × 0,05 CuLS	1
	—	4,22	130	20 × 0,04 CuLS	1
	1,30	—	90	30 × 0,04 CuLS	1
	0,74	1,16	68	45 × 0,04 CuLS	1

