RM Cores

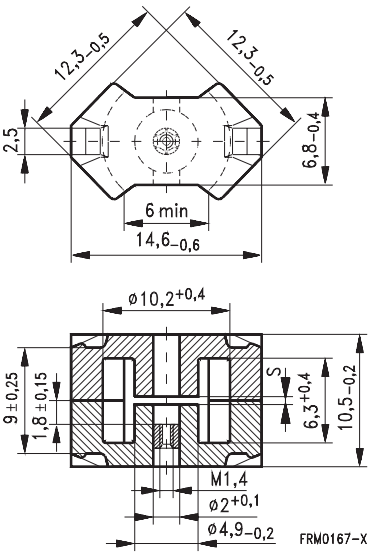
Series/Type: **RM 5**

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B65805C0000R026	B65805C0000R048	2002-08-02	2002-12-31	2003-03-31
B65805J0000Y042	B65805J0000Y066	2002-08-02	2002-12-31	2003-03-31
B65806K1004D002	B65806K1006D002	2003-08-08	2004-02-29	2004-08-31
B65539C1003X101	B65539C1003X001	2004-01-23		
B65806A50000000		2004-10-18	2005-03-31	2005-09-30
B65806A3002X022	B65806C3001X022	2003-08-08	2004-02-29	2004-08-31
B65539C1002X101	B65539C1003X001	2003-08-08	2004-02-29	2004-08-31

For further information please contact your nearest EPCOS sales office, which will also support you in selecting a suitable substitute. The addresses of our worldwide sales network are presented at www.epcos.com/sales.

- In accordance with IEC 60431
- Core without center hole
  for transformer applications
- RM cores are supplied in sets



Magnetic characteristics (per set)

	with center hole	without center hole	
$\Sigma l/A$	1,0	0,93	mm^{-1}
l_e	20,8	22,1	mm
A_e	20,8	23,8	mm^2
A_{min}	—	18	mm^2
V_e	430	526	mm^3

Approx. weight (per set)

m	2,9	3,0	g

Gapped

Material	A_L value nH	*s* approx. mm	μ_e	Ordering code[1)] -C with center hole -N with threaded sleeve
K1	25 ± 3 %	1,0	19,9	B65805-+25-A1
	40 ± 3 %	0,40	31,8	B65805-+40-A1
M33	63 ± 3 %	0,4	50,2	B65805-+63-A33
	100 ± 3 %	0,2	79,6	B65805-+100-A33
N48	160 ± 3 %	0,12	128	B65805-+160-A48
	250 ± 3 %	0,06	200	B65805-+250-A48
	315 ± 3 %	0,03	255	B65805-+315-A48

1) Replace the + by the code letter “C” or “N” for the required version.

Ungapped

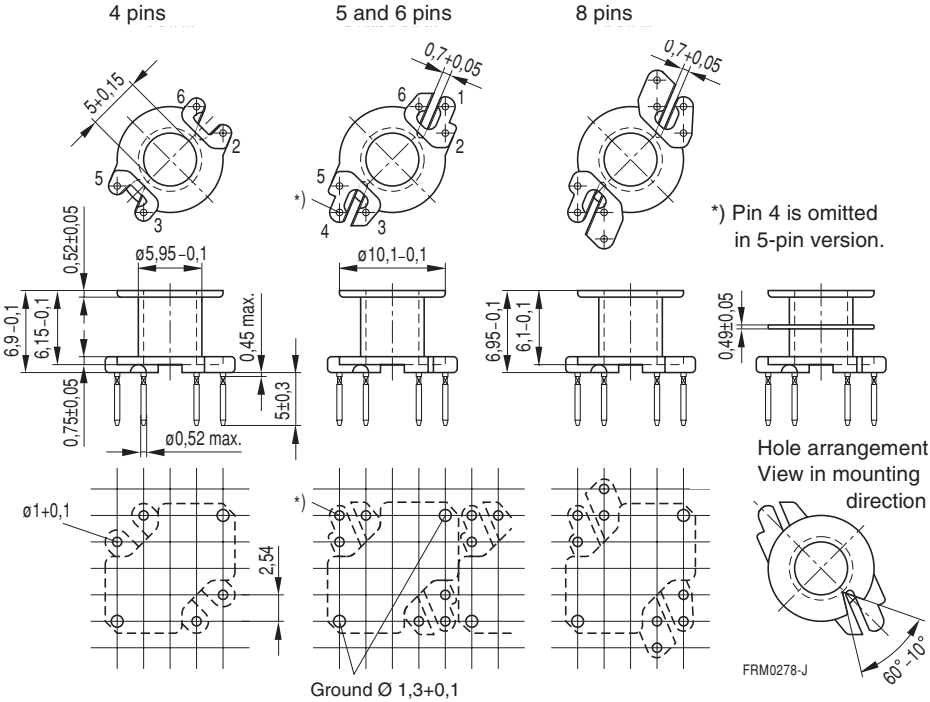
Material	A_L value nH	μ_e	A_{L1min} nH	P_V W/set	Ordering code -C with center hole -J w/o center hole
N26	1800 + 30/– 20 %	1430			B65805-C-R26
T57[1)]	2600 + 30/– 20 %	1920			B65805-J-R57
N30	3500 + 30/– 20 %	2590			B65805-J-R30
T38	6700 + 40/– 30 %	4960			B65805-J-Y38
T42	9600 + 40/– 30 %	7090			B65805-J-Y42
N49	1300 + 30/– 20 %	960	810	< 0,06 (50 mT, 500 kHz, 100 °C)	B65805-J-R49
N87	2000 + 30/– 20 %	1470	1200	< 0,32 (200 mT, 100 kHz, 100 °C)	B65805-J-R87
N97[1)]	2000 + 30/– 20 %	1470	1200	< 0,24 (200 mT, 100 kHz, 100 °C)	B65805-J-R97
N41	2600 + 30/– 20 %	1920	1200	< 0,10 (200 mT, 100 kHz, 100 °C)	B65805-J-R41

1) Preliminary data

Coil former

Material: GFR thermosetting plastic (UL 94 V-0, insulation class to IEC 60085: H ≙ max. operating temperature 180 °C), color code blue
Solderability: to IEC 60068-2-20, test Ta, method 1 (aging 3): 235 °C, 2 s
Resistance to soldering heat: to IEC 60068-2-20, test Tb, method 1B: 350 °C, 3,5 s
Winding: see *"Processing Notes"*, page 153
Pins squared in the start-of-winding area
For matching clamps and insulating washers see page 197

Sections	A_N mm²	l_N mm	A_R value μΩ	Pins	Ordering code
1	9,5	25	90	4 5 6 8	B65806-K1004-D1 B65806-K1005-D1 B65806-K1006-D1 B65806-K1008-D1
2	8,7	25	94	4 5 6	B65806-K1004-D2 B65806-K1005-D2 B65806-K1006-D2



Clamp

- With ground terminal, made of stainless spring steel (tinned), 0,335 mm thick
- Solderability to IEC 60068-2-20, 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

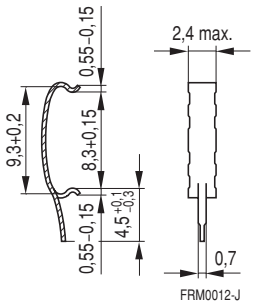
- For tolerance compensation and for insulation
- Made of polycarbonate (UL 94 V-0, insulation class to IEC 60085: E ≙ 120 °C), 0,06 mm thick

Insulating washer 2 for double-clad PCBs

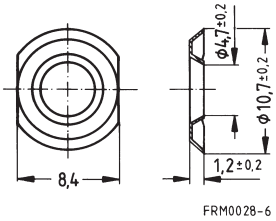
- Made of polycarbonate (UL 94 V-0, insulation class to IEC 60085: E ≙ 120 °C), 0,3 mm thick

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

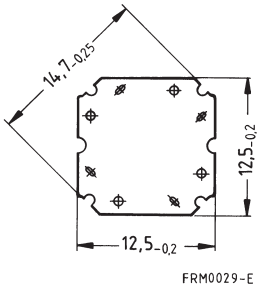
Clamp



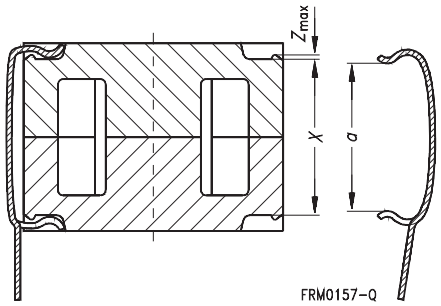
Insulating washer 1



Insulating washer 2



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

SMD

SMD coil former with gullwing terminals

Material: GFR liquid crystal polymer (UL 94 V-0, insulation class to IEC 60085: F ≙ max. operating temperature 155 °C), color code black

Solderability: to IEC 60068-2-20, test Ta, method 1 (aging 3): 350 °C, 1 s

Resistance to soldering heat: to IEC 60068-2-20, test Tb, method 1B: 350 °C, 3,5 s
permissible soldering temperature for wire-wrap connection on coil former: 400 °C, 1 s

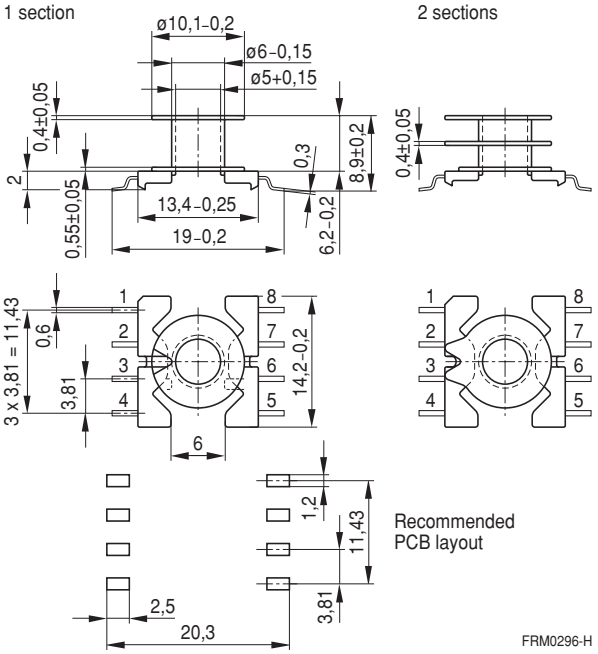
Winding: see *"Processing Notes"*, page 160

Clamp

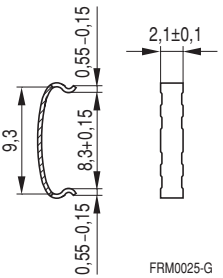
- Without ground terminal, made of stainless spring steel, 0,335 mm thick
- Also available as strip clamp (each carton containing 2 reels) on request

Sections	A_N mm²	l_N mm	A_R value μΩ	Terminals	Ordering code
1	11,1	25	77	8	B65822-F1008-T1
2	10,2	25	85	8	B65822-F1008-T2
Clamp	(ordering code per piece, 2 are required)				B65806-J2204

Coil former



Clamp



SMD

SMD coil former with J terminals

Material: GFR liquid crystal polymer (UL 94 V-0, insulation class to IEC 60085: F ≙ max. operating temperature 155 °C), color code black

Solderability: to IEC 60068-2-20, test Ta, method 1 (aging 3): 350 °C, 1 s

Resistance to soldering heat: to IEC 60068-2-20, test Tb, method 1B: 350 °C, 3,5 s
permissible soldering temperature for wire-wrap connection on coil former: 400 °C, 1 s

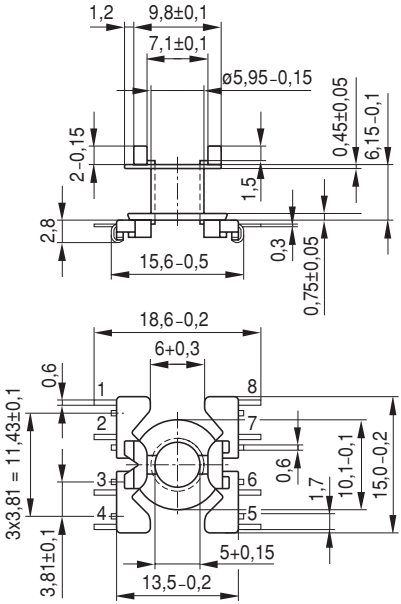
Winding: see *"Processing Notes"*, page 160

Clamp

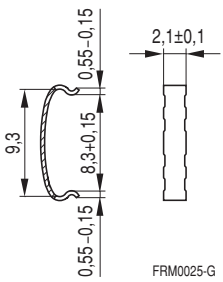
- Without ground terminal, made of stainless spring steel, 0,335 mm thick
- Also available as strip clamp (each carton containing 2 reels) on request

Sections	A_N mm²	l_N mm	A_R value μΩ	Terminals	Ordering code
1	11,1	25	73	8	B65822-J1008-T1
Clamp	(ordering code per piece, 2 are required)				B65806-J2204

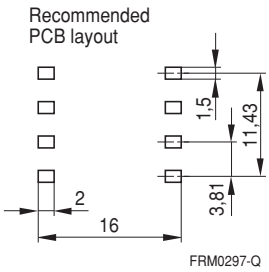
Coil former



Clamp



Recommended PCB layout



Adjusting screw

- Tube core with thread and core brake made of GFR polyterephthalate

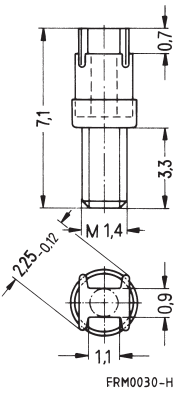
Plastic **adjusting screwdriver** (not shown)

Plastic **handle** for adjusting screwdriver (not shown)

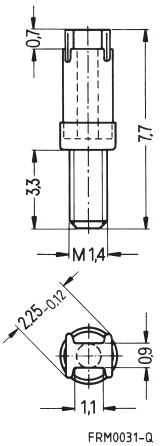
Core RM 5		**Adjusting screw**				Min. adjusting range	Ordering code
		Fig.	Tube core				
Material	A_L value nH		∅ × length mm	Material	Color code	%	
K 1	25	a	1,81 × 2,0	Si 1	black	13	B65539-C1003-X101
	40	a	1,81 × 2,0	K 1	yellow	16	B65539-C1003-X1
M 33	63	a	1,81 × 2,7	Si 1	white	11	B65539-C1002-X101
	100	a	1,81 × 2,0	K 1	yellow	14	B65539-C1003-X1
N 48	160	a	1,81 × 2,7	N 22	red	15	B65539-C1002-X22
	250 315	b	1,81 × 3,4	N 22	green	13 9	B65806-C3001-X22
	315	b	1,90 × 3,4	N 22	blue	12	B65806-A3002-X22
Adjusting screwdriver							B63399-B4
Handle							B63399-B5

Adjusting screws

a



b



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