

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
9 October 2003 (09.10.2003)

PCT

(10) International Publication Number
WO 2003/084295 A3

(51) International Patent Classification⁷: **H04B 1/00**,
1/40, 1/10, H05K 1/16, G06F 9/455

(21) International Application Number:
PCT/US2003/009965

(22) International Filing Date: 31 March 2003 (31.03.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/113,660 29 March 2002 (29.03.2002) US
60/373,264 17 April 2002 (17.04.2002) US
60/373,268 17 April 2002 (17.04.2002) US
60/373,255 17 April 2002 (17.04.2002) US

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(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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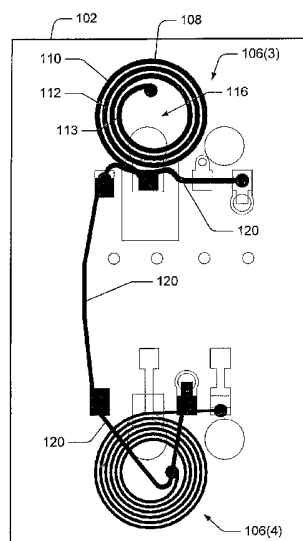
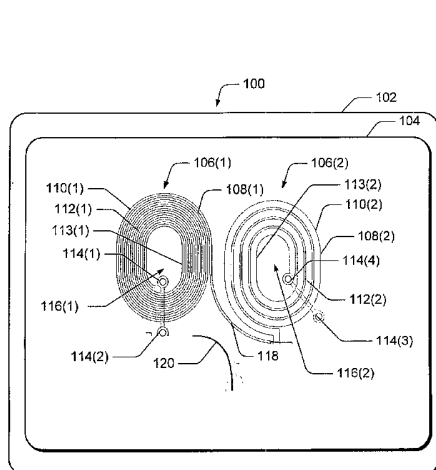
— of inventorship (Rule 4.17(iv)) for US only

Published:

— with international search report

[Continued on next page]

(54) Title: INDUCTOR AND DECOUPLING STRUCTURES FOR FILTERS AND DESIGN METHOD THEREOF



(57) Abstract: Inductor topologies for filters used in broadband applications are described. In one implementation, an apparatus, such as an interface module includes a printed circuit board (102) and a filter (104). The filter includes a generally circular high Quality factor (Q) value spiral planar inductor (106) etched directly into the printed circuit board (102). The generally circular high Q value spiral planar inductor (106) is configured to operate in a broadband application. Other implementations involve the use of decoupling structures (120) with respect to the planar inductors as well as a design methodology for the filters.



— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(88) Date of publication of the international search report:

15 July 2004

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/09965

A. CLASSIFICATION OF SUBJECT MATTER																						
IPC(7) : H04B 1/00, 1/40 1/10 ; H05K 1/16; G06F 9/455;																						
US CL : 336/180,199,200; 333/185,177,246; 703/14,2 ; 716/2,7 ; 455/307,26.1																						
According to International Patent Classification (IPC) or to both national classification and IPC																						
B. FIELDS SEARCHED																						
Minimum documentation searched (classification system followed by classification symbols)																						
U.S. : 336/180,199,200; 333/185,177,246; 703/14,2 ; 716/2,7 ; 455/307,26.1																						
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched																						
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)																						
C. DOCUMENTS CONSIDERED TO BE RELEVANT																						
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.																				
X	US 6,175,727 (MOSTOV) 16 January 2001 (16.01.2001), figures 1, 6 and 10b, column 5, line 46 through column 6, line 40.	1 2 4 8 9 11-13 15 18-21 23-25 28 30-32																				

Y		3 5-7 10 14 16 17 22 26 27 29 33-71																				
Y	US 5,255,318 (GURUSAMI et al) 19 October 1993 (16.10.1993), figure 5 and column 5, line 55 through column 6, line 40.	3, 14, 35, 48																				
Y	US 5,697,087 (MIYA et al) 9 December 1997 (09.12.1997), figure 6 and column 2, lines 35-30.	5 16 26 37 50																				
Y	US 5,745,857 (MAENG et al) 28 April 1998 (28.04.1998), column 5, lines 3-9.	6 17 27 38 51 55																				
Y	US 6,072,394 (HASEGAWA et al) 06 June 2000 (06.06.2000), column 6, lines 15-20.	7 10 22 29 39 44 65 69																				
Y	US 6,002,593 (TAYLOR et al) 14 December 1999 (14.12.1993), abstract and column 6, line 14 through column 8, line 8.	33 34 36 40-43 45-47 49 52-54 56-64 66-68 70 71																				
☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.																						
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Date of the actual completion of the international search		Date of mailing of the international search report																				
10 December 2003 (10.12.2003)		07 MAY 2004																				
Name and mailing address of the ISA/US		Authorized officer																				
Mail Stop PCT, Attn: ISA/US		Kimberly Glenn																				
Commissioner for Patents																						
P.O. Box 1450		Telephone No. (703) 308-0956																				
Alexandria, Virginia 22313-1450																						
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Form PCT/ISA/210 (second sheet) (July 1998)

IPR2024-00728

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PCT/US03/09965

C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y,P	US 6,397,171 (BELK) 28 May 2002 (28.05.2002), abstract.	56-64 66-68 70 71

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Continuation of Item 4 of the first sheet:

INDUCTOR AND DECOUPLING STRUCTURES FOR FILTERS AND DESIGN METHOD THEREOF