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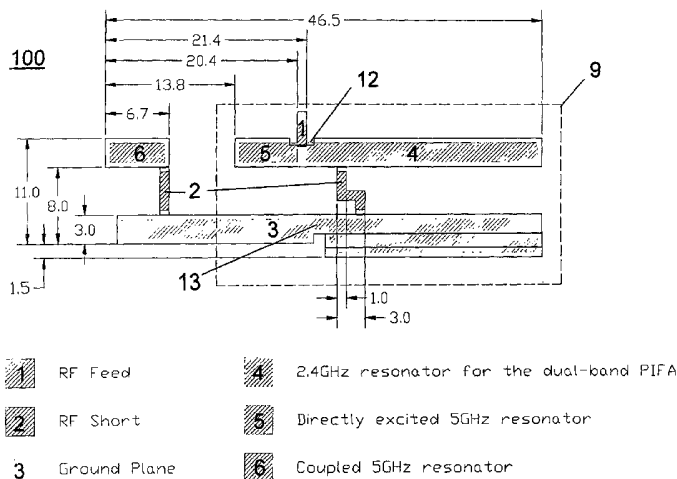
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(54) Title: MULTIBAND ANTENNA WITH PARASITICALLY-COUPLED RESONATORS



All measured units are in Millimeters

(57) Abstract: A multiband antenna includes at least two resonators that are driven directly and resonate in different frequency bands and a parasitically coupled resonator that resonates in one of the frequency bands. The coupled resonator is grounded with a conductive trace at one end and is thus not directly fed by the RF feed of the antenna. The coupled resonator increases the efficiency bandwidth near the frequency of operation for the coupled resonator. The antenna is fabricated from a stamped metal that is bent around or overmolded by a spacer layer. A clip formed integrally with the antenna by bending a portion of the ground plane permits attachment to the metal shield of the display of a laptop computer and is thus grounded along its length.

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

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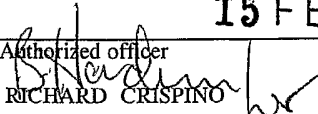
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International application No.

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B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) U.S. : 343/700ms, 725, 727, 729, 741; 333/126, 203, 204, 206, 207, 219 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) East search: multiband antenna, feed, ground plane, resonators		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,483,246 A (BARNETT et al.) 09 January 1996, see col. 3, lines 46-61; fig. 4; col. 4, lines 6-39 and 40-49; col. 5, lines 43-63.	1-4, 6-9, 12-26, 28-30
Y	US 6,476,766 B1 (COHEN) 05 November 2002, see col. 26, lines 6-22	10-11, 27
☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.		
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"O"	document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
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Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230		Authorized officer  RICHARD CRISPINO Telephone No. 571 272-1700