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(54) Title: A DIELECTRIC AND CONDUCTIVE FOIL BASED DISTRIBUTION NETWORK WITH BENDABLE FEEDING PROBES

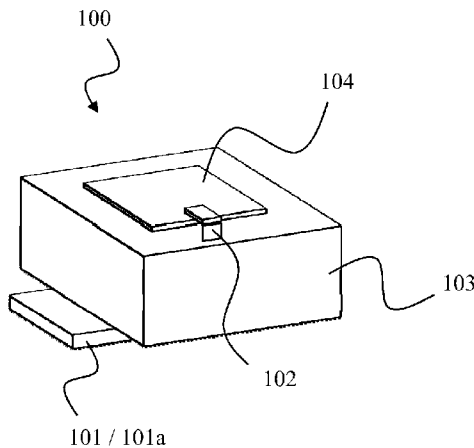


FIG. 1

(57) Abstract: This disclosure relates to a radio frequency (RF) device, which comprises radiators and a distribution network (DN). The DN comprises one or more DN layers. Each DN layer comprises RF circuitry designed to feed at least one radiator or to connect to another DN layer. Each DN layer further comprises one or more bendable feeding probes, each protruding from the DN layer and being connected to the RF circuitry of the DN layer. The RF device also comprises a planar dielectric structure arranged on the DN. The one or more feeding probes extend through one or more gaps in the dielectric structure, and each feeding probe is bent onto and attached to a surface of the dielectric structure. The RF device further comprises a planar array of one or more radiators arranged on the surface of the dielectric structure. Each radiator is coupled to one or two of the feeding probes.



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<b>A. CLASSIFICATION OF SUBJECT MATTER</b>		
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<b>B. FIELDS SEARCHED</b>		
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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)		
CJFD,CNXT,ENTXTC,VEN,ENTXT,CNKI,IEEE:distribution,feed,network,DN,power,divider,splitter,allocation,bendable,bent,bended,"L",probe?		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CN 212412193 U (GUANGDONG TONGYU COMMUNICATION EQUIP CO) 26 January 2021 (2021-01-26) the description, paragraphs 14-18, figures 1-4	1-5, 13, 14, 16-19
A	CN 109193152 A (ANHUI YAOFENG RADAR TECHNOLOGY CO LTD) 11 January 2019 (2019-01-11) the whole document	1-19
A	CN 110176663 A (JIANGSU 3CORETEL INFORMATION COMMUNICATI) 27 August 2019 (2019-08-27) the whole document	1-19
A	CN 113013588 A (UNIV NANJING SCI & TECHNOLOGY) 22 June 2021 (2021-06-22) the whole document	1-19
A	CN 201956461 U (UNIV SOUTHEAST) 31 August 2011 (2011-08-31) the whole document	1-19
A	US 2010177012 A1 (LAIRD TECHNOLOGIES INC) 15 July 2010 (2010-07-15) the whole document	1-19
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "D" document cited by the applicant in the international application "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
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**Information on patent family members**

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Patent document cited in search report			Publication date (day/month/year)	Patent family member(s)			Publication date (day/month/year)
CN	212412193	U	26 January 2021	None			
CN	109193152	A	11 January 2019	None			
CN	110176663	A	27 August 2019	None			
CN	113013588	A	22 June 2021	None			
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US	2010177012	A1	15 July 2010	US	8072384	B2	06 December 2011