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(54) Title: BELOW RESONANCE CIRCULATOR AND METHOD OF MANUFACTURING THE SAME

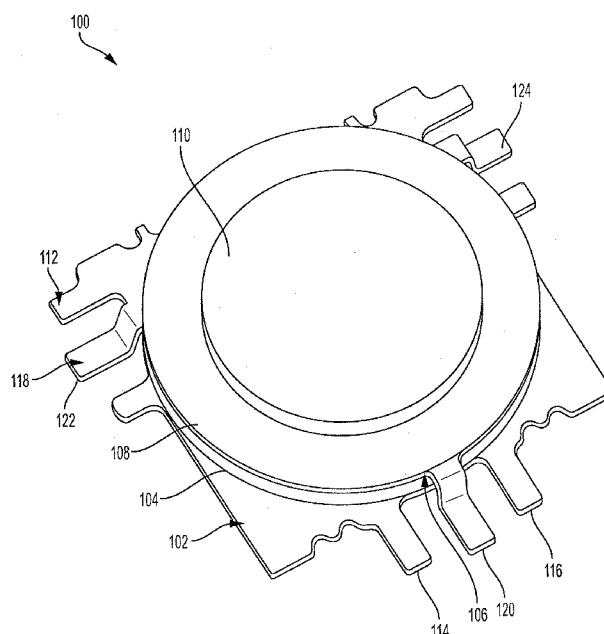


FIG. 1

(57) Abstract: A microstrip circulator includes a carrier and a ferrite slab having a first side and a second side. The circulator further includes a first microwave epoxy positioned between the carrier and the first side of the ferrite slab. The circulator further includes a conductor having a center portion with three legs extending therefrom. The circulator further includes a second microwave epoxy positioned between the second side of the ferrite slab and the conductor. The circulator further includes an insulator and a third microwave epoxy positioned between the conductor and the insulator. The circulator further includes a magnet and a fourth epoxy positioned between the insulator and the magnet.





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A. CLASSIFICATION OF SUBJECT MATTER**H01P 1/387(2006.01)i**

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)

H01P 1/387; H01P 1/32; H01P 1/383; H01P 1/36

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & keywords: isolator, circulator, microwave epoxy, heat, cure

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2004-0174224 A1 (JAMES KINGSTON et al.) 09 September 2004 See paragraphs [0012]–[0042] and figures 1–4.	1–4, 7–12, 15–17 , 19–20
Y		6, 14
A		5, 13, 18
Y	US 2003-0112089 A1 (DONG-SUK JUN et al.) 19 June 2003 See paragraph [0012] and figure 4.	6, 14
A	US 2003-0107448 A1 (KAREN N. KOCHARYAN) 12 June 2003 See paragraphs [0043]–[0050] and figure 2.	1–20
A	JP 06-310914 A (TOKIN CORP.) 04 November 1994 See paragraphs [0007]–[0018] and figures 1–4.	1–20
A	KR 10-1007544 B1 (PARTRON CO., LTD.) 14 January 2011 See paragraphs [0047]–[0055] and figure 9.	1–20



Further documents are listed in the continuation of Box C.



See patent family annex.

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"&" document member of the same patent family

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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