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BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM,
DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
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KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD,
ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI,

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- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

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(54) Title: APPARATUS AND METHODS RELATED TO JUNCTION FERRITE DEVICES HAVING IMPROVED INSERTION LOSS PERFORMANCE

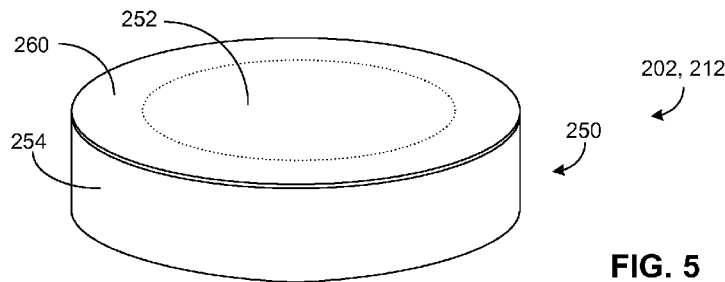


FIG. 5

(57) Abstract: Disclosed are apparatus and methods related to junction ferrite devices having improved insertion loss performance, in some implementations, a ferrite disk assembly can be configured for a radio-frequency (RF) circulator. The disk assembly can include a ferrite-based disk having a ferrite portion and a metalized layer formed on a grounding surface of the disk to improve electrical contact between the grounding surface of the disk with an external grounding surface. The ferrite-based disk can further include a dielectric portion disposed around the periphery of the ferrite center portion, in some embodiments, the metalized layer can be a silver layer formed on the grounding surface of the disk and having a desired thickness.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/041442**A. CLASSIFICATION OF SUBJECT MATTER****H01P 1/393(2006.01)i, H01P 1/397(2006.01)i**

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHEDMinimum documentation searched (classification system followed by classification symbols)
H01P 1/393; H01P 1/32; H01P 1/387; H05K 3/10; H01P 1/38; C01G 49/00; H01P 1/36; H01P 1/397Documentation 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 modelsElectronic data base consulted during the international search (name of data base and, where practicable, search terms used)
eKOMPASS(KIPO internal) & keywords: circulator, ferrite disk, radio-frequency (RF), magnet**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KR 10-1007544 B1 (PARTRON CO., LTD.) 14 January 2011 See paragraphs [0008]-[0038], [0047]-[0085]; and figures 1-7, 9-14.	1-30
A	US 2011-0193649 A1 (DAVID J. POPELKA et al.) 11 August 2011 See paragraphs [0055]-[0069]; and figures 2A-3.	1-30
A	US 2009-0002090 A1 (RAINER PIETIG et al.) 01 January 2009 See paragraphs [0033]-[0042]; and figures 1a-7.	1-30
A	KR 10-2006-0085221 A (SUNG SOO KIM et al.) 26 July 2006 See pages 2-4 ; and figures 1, 2.	1-30
A	US 5495210 A (GERARD E. E. FORTERRE et al.) 27 February 1996 See column 2, line 58 - column 6, line 21; and figures 1-9.	1-30

 Further documents are listed in the continuation of Box C. See patent family annex.

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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
KR 10-1007544 B1	14/01/2011	WO 2012-070698 A1	31/05/2012
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