

Title (en)
Integrated circulators sharing a continuous circuit

Title (de)
Integrierte Umwälzer mit gemeinsamer durchgehender Schaltung

Title (fr)
Circulateurs intégrés partageant un circuit continu

Publication
EP 2487750 A1 20120815 (EN)

Application
EP 12154357 A 20120207

Priority
US 201113024986 A 20110210

Abstract (en)
The present invention is directed to a circuit assembly that includes an integrated circulator assembly. The circuit assembly has a first substrate, which contains a continuous circuit trace that includes a circulator component from the circulator assembly and at least one electrical component from the circuit assembly. A second substrate is disposed beneath the first substrate and includes a cladding on one surface. The second substrate contains an aperture that accepts a ferrite element, which is axially aligned with the circulator component of the circuit trace. A conductive material is placed across the ferrite element so that it forms a continuous ground plane with the cladding, which is common to the entire circuit trace. The circulator assembly also contains a magnet bonded to the ferrite element. The circulator assembly may also include a yoke disposed below the magnet to shield the circulator from external magnetic fields.

IPC 8 full level
H01P 1/387 (2006.01)

CPC (source: EP)
H01P 1/387 (2013.01)

Citation (applicant)
• US 4761621 A 19880802 - KANE ROBERT C [US], et al
• US 3334317 A 19670801 - ANDRE STEPHEN N
• US 3854106 A 19741210 - TRESSELT C

Citation (search report)
• [XYI] US 2006139118 A1 20060629 - VAUGHN TODD [US], et al
• [XYI] WO 2006066254 A1 20060622 - EMS TECHNOLOGIES INC [US], et al
• [Y] EP 1816702 A1 20070808 - HITACHI METALS LTD [JP]

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