

Title (en)  
OMT TYPE BROADBAND MULTIBAND TRANSMISSION-RECEPTION COUPLER-SEPARATOR FOR RF FREQUENCY TELECOMMUNICATIONS ANTENNAS

Title (de)  
OMT-BREITBAND- UND MULTIBAND-/SENDE- UND EMPFANGS-/KOPPLUNGS- UND TRENNVORRICHTUNG FÜR HOCHFREQUENZ-TELEKOMMUNIKATIONSANTENNEN

Title (fr)  
COUPLEUR-SEPARATEUR D'EMISSION-RECEPTION MULTIBANDE A LARGE BANDE DE TYPE OMT POUR ANTENNES DE TELECOMMUNICATIONS HYPERFREQUENCES

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Application  
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Abstract (en)  
[origin: CA2696279A1] The present invention relates to a very broadband multiband transmission-reception coupler-separator of OMT (OrthoMode Transducer) type for RF frequency telecommunications antennas. This coupler comprises a port (P1) for propagating all the frequencies, a body and a port (P2) for propagating the high frequency bands, these three parts being coaxial, and broadband coupling slots (24A) for propagating the low frequency bands cut in the body and each associated with a waveguide, and it is characterized in that its body (24) joining the two ports exhibits a shape of revolution whose profile evolves according to a multi-polynomial law, constantly decreasing from the port of larger cross section (P1) to the port of smaller cross section (P2). This coupler can operate so as to couple and separate very wide passbands (the overall use of this coupler-separator being greater than one octave), two or four broadband coupling slots are necessary for propagating linear polarizations as well as circular polarizations after recombination.

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