

Title (en)  
DUAL-FREQUENCY FEED SOURCE AND DUAL-FREQUENCY ANTENNA

Title (de)  
DOPPELFREQUENZSPEISEQUELLE UND DOPPELFREQUENZANTENNE

Title (fr)  
SOURCE D'ALIMENTATION À DOUBLE FRÉQUENCE ET ANTENNE À DOUBLE FRÉQUENCE

Publication  
**EP 4231457 A1 20230823 (EN)**

Application  
**EP 20962032 A 20201120**

Priority  
CN 2020130611 W 20201120

Abstract (en)  
This application provides a dual-band feed and a dual-band antenna, to resolve problems of an existing dual-band antenna: disordered distribution of an electromagnetic field, a high side lobe, and deterioration of a radiation pattern of the antenna, so that performance of the radiation pattern of the antenna is improved. The dual-band antenna includes a primary reflection surface, a secondary reflection surface, a dual-band feed, and a dielectric support. The primary reflection surface is disposed opposite to the secondary reflection surface. The dual-band feed includes a low-band feed and a high-band feed. The dielectric support is disposed between the primary reflection surface and the secondary reflection surface. The dielectric support includes an annular first support portion with an opening on one side. The opening of the first support portion is disposed toward the secondary reflection surface. A thickness of the first support portion is related to a relative permittivity of the first support portion, an operating frequency of the low-band feed, and an operating frequency of the high-band feed. The secondary reflection surface is fixedly connected to an opening position of the first support portion, and is enclosed with the first support portion to form a cavity. A first end of the dual-band feed passes through the first support portion and is disposed in the cavity, and a second end of the dual-band feed is connected to a center of the primary reflection surface.

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