

Title (en)  
MICROWAVE-SIGNAL TRANSMISSION PATH ASSEMBLY AND SINGLE-POLE SIX-THROW COAXIAL ELECTROMECHANICAL SWITCH

Title (de)  
MIKROWELLENSIGNALÜBERTRAGUNGSWEGANORDNUNG UND EINPOLIGER ELEKTROMECHANISCHER SECHSFACH-KOAXIALSCHALTER

Title (fr)  
ENSEMBLE TRAJET DE TRANSMISSION DE SIGNAUX HYPERFRÉQUENCE ET COMMUTATEUR ÉLECTROMÉCANIQUE COAXIAL À SIX DIRECTIONS À PÔLE UNIQUE

Publication  
**EP 3716307 A4 20210804 (EN)**

Application  
**EP 17932779 A 20171218**

Priority  
• CN 201711187205 A 20171124  
• CN 2017116813 W 20171218

Abstract (en)  
[origin: EP3716307A1] Disclosed are a microwave signal transmission path component and a single-pole six-throw coaxial electromechanical switch belonging to the field of radio frequency relays. The single-pole six-throw coaxial electromechanical switch includes a control circuit component, an electromagnetic driving component and a microwave signal transmission path component, wherein the control circuit component controls whether there is an electric current flowing through a solenoid of the electromagnetic driving component; when there is the electric current flowing through the solenoid, a magnetic field is generated on a duplex iron core. A generated electromagnetic force attracts an armature to press an ejector rod, and further drive a transmission spring sheet to act, so that an intermediate joint and a peripheral joint of the microwave signal transmission path component are connected or disconnected. In this case, a microwave signal is input from the intermediate joint and output from any one of the six peripheral joints, thereby realizing a function of gating the microwave signal. The single-pole six-throw coaxial electromechanical switch has an advantage of high frequency, and a use frequency is capable of reaching 50 GHz. As a result, special requirements of a switch matrix in an automatic test system for an electromechanical switch are satisfied.

IPC 8 full level  
**H01P 1/12** (2006.01); **H01H 50/16** (2006.01); **H01H 50/64** (2006.01); **H01P 5/08** (2006.01)

CPC (source: CN EP)  
**H01H 50/16** (2013.01 - CN); **H01H 50/64** (2013.01 - CN); **H01P 1/047** (2013.01 - CN); **H01P 1/125** (2013.01 - EP); **H01P 5/085** (2013.01 - EP)

Citation (search report)  
• [YA] US 2007069832 A1 20070329 - TANBAKUCHI HASSAN [US], et al  
• [I] US 9508513 B1 20161129 - SHEN JUN [US]  
• [YA] XIANGRUI BU ET AL: "The design of a wide-band SP6T electromechanical Coaxial Switch", 2016 IEEE INTERNATIONAL CONFERENCE ON MICROWAVE AND MILLIMETER WAVE TECHNOLOGY (ICMMT), IEEE, vol. 2, 5 June 2016 (2016-06-05), pages 931 - 933, XP033014072, DOI: 10.1109/ICMMT.2016.7762490  
• See references of WO 2019100476A1

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CN113496826A

Designated contracting state (EPC)  
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**EP 17932779 A 20171218**; CN 201711187205 A 20171124; CN 2017116813 W 20171218