

Title (en)

AN ELECTRONIC CIRCUITRY FOR AN ACTIVE PHASED ARRAY RADAR SYSTEM

Title (de)

ELEKTRONISCHE SCHALTUNG FÜR EIN AKTIVES PHASENGESTEUERTES RADARSYSTEM

Title (fr)

CIRCUIT ÉLECTRONIQUE POUR UN SYSTÈME RADAR À RÉSEAU À COMMANDE DE PHASE ACTIF

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Application

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Priority

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Abstract (en)

An electronic circuitry (100) for an active phased array system with multiple transmit/receive, T/R, channels (101a 101b) is disclosed. The electronic circuitry (100) comprises: at least one pair of circuit carriers (110, 120), electronic components (200), at least one cooling plate (300), and one or more cooling channels (400). The at least one pair of circuit carriers (110, 120) includes a first circuit carrier (110) and a second circuit carrier (120), each circuit carrier (110, 120) having a front surface and a rear surface. The electronic components (200) are mounted on the front surface of the circuit carriers (110, 120), each electronic component (200) being associated with one or multiple of the T/R channels (101) to process transmit or receive signals. The at least one cooling plate (300) has two opposite sides, wherein the rear surface of the first circuit carrier (110) is attached to one side and the rear surface of the second circuit carrier (120) attached to an opposite side to hold the circuit carriers (110, 120) in a sandwich structure. The one or more cooling channels (400) are formed by the at least one cooling plate (300) between the rear surface of the first circuit carrier (110) and the rear surface of the second circuit carrier (120), the one or more cooling channels (400) are adapted to accommodate a coolant to cool the one or more electronic components (200).

IPC 8 full level

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Citation (search report)

- [XAI] KR 102089545 B1 20200316 - HANWHA SYSTEMS CO LTD [KR]
- [A] EP 2808941 A1 20141203 - BAE SYSTEMS PLC [GB]
- [XAI] RIEGER RALF ET AL: "Design and Realization of a Highly Integrated and Scalable X-Band Tile Array", 2022 IEEE INTERNATIONAL SYMPOSIUM ON PHASED ARRAY SYSTEMS & TECHNOLOGY (PAST), IEEE, 11 October 2022 (2022-10-11), pages 1 - 5, XP034250376, DOI: 10.1109/PAST49659.2022.9974983

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