Abstracts

Extended Range Coverage of an Imaging Radar System with Feed-Mounted 94 GHz MIMIC HEMT Low Noise Amplifier and External ILO

L.Q. Bui, Y. Alon and D. Neilson. "Extended Range Coverage of an Imaging Radar System with Feed-Mounted 94 GHz MIMIC HEMT Low Noise Amplifier and External ILO." 1992 MTT-S International Microwave Symposium Digest 92.2 (1992 Vol. II [MWSYM]): 687-690.

Low transmitted power and high noise figure of a homodyne FMCW front-end limit range coverage of 94 GHz imaging radars to less than 1000 meters. Using a combination of 2-stage MIMIC, 94 GHz HEMT low noise amplifier and external ILO mounted at the feed locations, the improved imaging radar can produce visible runway images up to 3,000 meters away. The very first FMCW runway images are shown to demonstrate the 94 GHz system resolution; additional images will be presented for adverse weather conditions. This is the first time low noise MIMIC technology is being used in a high potential, 94 GHz commercial airborne radar system.

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