Abstracts

Reduction of intermodulation distortion in active phased array antenna systems using a distortion controller

T. Kaho, T. Nakagawa and K. Araki. "Reduction of intermodulation distortion in active phased array antenna systems using a distortion controller." 2002 MTT-S International Microwave Symposium Digest 02.2 (2002 Vol. II [MWSYM]): 781-784 vol.2.

This paper describes a novel technique to compensate the intermodulation distortion (IM) of high power amplifiers in an active phased array antenna system. This technique uses IM phase control to break the strong association between carrier and IM. This technique can make the radiation patterns of carriers and IMs different on the active phased array antenna system. As a result, carrier power to intermodulation distortion power ratio (C/IM) is increased at the carrier beam direction. This paper shows the experimental result to confirm this technique using 6-element linear array.

❑ Return to main document.