Abstracts

Optical mixing of antenna signals in WDM systems

B. Cabon, V. Girod and G. Maury. "Optical mixing of antenna signals in WDM systems." 2002 MTT-S International Microwave Symposium Digest 02.3 (2002 Vol. III [MWSYM]): 1953-1956 vol.3.

We present here an original method for optical generation of microwave mixing on different multiplexed optical carriers : usually, mixing is achieved with active devices, here it is achieved with a passive optical device. Mixing on several multiplexed optical channels is obtained with the same device, a unique interferometer working on any wavelength range, and is neither limited in the number of optical carriers nor in the number of RF ports. Thus, the presented technique can be advantageously applied to radar signal processing in optical systems because this type of multiplexing cannot be obtained in the pure electrical domain.

❑ Return to main document.