Abstracts

28GHz Band Bandpass Filter Using High Q Dielectric Resonators

T. Nishikawa, H. Tanaka, K. Utsumi, Y. Ishikawa and K. Wakino. "28GHz Band Bandpass Filter Using High Q Dielectric Resonators." 1990 MTT-S International Microwave Symposium Digest 90.1 (1990 Vol. I [MWSYM]): 211-214.

A 28GHz band bandpass filter using high Q dielectric resonators has been developed. High Q dielectric ceramics Ba(Sn,Mg,Ta)O/sub 3/ was applied to a new configuration for symmetrically circular filter. Direct eigen mode expansion method is applied to multi-pole bandpass filter design and is effective for determination of construction parameters. The overall size of the filter is 10 x 10 x 20 mm and the volume is one fourth of dielectric resonator filters of conventional parallel structure. Insertion loss of the filter is 0.74 dB at 190 MHz bandwidth and attenuation is 33 dB at fo ± 300 MHz. The filter is suitable for K-band communication equipment.

❑ Return to main document.