Abstracts

High Power UHF Y Junction Circulator

Y. Konishi. "High Power UHF Y Junction Circulator." 1967 G-MTT International Microwave Symposium Program and Digest 67.1 (1967 [MWSYM]): 70-72.

The nonlinearity and characteristics deviation of ferrite caused by rising temperature should be considered in a CW high power circulator. The nonlinearity of ferrite operated at above resonance occurs at a comparatively low power level in a polycrystal. Such a phenomena is not observed in a single crystal, as shown in Fig. 1(a), which shows the experimental results of low power simulation by a lumped element circulator. And the nonlinearity takes place only under CW power and not under pulsed power, as illustrated in Fig. 1(b). The above phenomena are supposedly caused by the Iocal heating by the spin wave generation around pore regions of polycrystals where the internal DC field is below resonance by the demagnetizing and anisotropic field in their vicinities.

❑ Return to main document.