

E-Plane 3-Port X-Band Waveguide Circulators (Correspondence)

L.E. Davis and S.R. Longley. "E-Plane 3-Port X-Band Waveguide Circulators (Correspondence)." 1963 Transactions on Microwave Theory and Techniques 11.5 (Sep. 1963 [T-MTT]): 443-445.

When a circulator is used with a parametric amplifier or maser, the noise contribution of the circulator may be reduced by cooling it in liquid nitrogen or liquid helium. Compact devices are required to put the dewar and, depending on the microwave frequency, a compromise may be necessary in choosing between a compact stripline circulator and a comparatively bulky H-plane waveguide circulator, because waveguide feeds will have lower loss than coaxial line. This problem may be eased by using a very compact E-plane waveguide circulator, as shown in Fig. 1(a).

 [Return to main document.](#)