

Abstracts

Biased PIN FDR 45KW, X-Band Duplexing

B.K. Sarkar. "Biased PIN FDR 45KW, X-Band Duplexing." 1979 MTT-S International Microwave Symposium Digest 79.1 (1979 [MWSYM]): 241-242.

Branched duplexer in a radar system usually uses gas filled TR and ATR tubes. These gas filled devices are getting replaced by more reliable PIN diode limiter and switches. Though in literature PIN diode limiter design is thoroughly described, PIN diode switch used as ATR tube is not discussed at all. This paper gives design and experimental results of waveguide PIN diode ATR tube. The design takes into consideration of high power handling capacity. The unit handled 45 KW peak power, 1 us pulse width at a frequency of 9.375 GHz as ATR tube inbranched duplexer with external bias. Insertion loss of 0.4 db and isolation of 40 db were achieved.

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