

## **A New Two-way Power Divider/Combiner Based on Magic Tin W-Band**

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In this paper, a W-band two-way power divider/combiner using a new matching structure based on magic T is proposed. This divider/combiner has properties of low loss, equal power splitting, compact structure, good return loss, and good heat dissipation. The 3D EM simulation results show that, from 102GHz to 108GHz, the return loss is better than 22dB, the insertion loss is less than 0.08dB, and the isolation between the output ports is less than 23dB. The divider/combiner can be used in power combining systems to obtain solid-state high power with a high efficiency in W-band.