

UNIVERSITI TEKNOLOGI MARA

**A LOW FREQUENCY OF DIPLEXER
BASED ON SUBSTRATE
INTEGRATED WAVEGUIDE (SIW)
TECHNOLOGY WITH
CIRCULAR CAVITY**

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ABSTRACT

This paper presents the prototype design of S-band diplexer using Substrate Integrated Waveguide Technology (SIW) with circular cavity. The diplexer will operate at S-band frequencies which related to the mobile tv and satellite radio application. SIW technology and circular cavity is used to design the diplexer due to its attractive advantage of reduction in size and low cost. The simulation has been performed by using CST Microwave Studio.

Keywords: substrate integrated waveguide (SIW), diplexer, microstrip, S-band, circular cavity

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