

**UNIVERSITI TEKNOLOGI MARA**

**DESIGN OF MULTIBAND SINGLE  
PORT E SHAPED MICROSTRIP ANTENNA**

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## ABSTRACT

This paper presents an E shaped microstrip antenna that able to be operated in C and X band to meet the multiband purpose. This E-shaped antenna is designed to operate at three sub-bands, namely 7.3GHz, 9.11 GHz and 10.35GHZ by using microstrip line feed mechanism. The physical parameters of the structure as well as fully and slotted ground plane are analyzed. Reflection coefficient (SI 1), voltage standing wave ratio (VSWR), radiation pattern and efficiency for both fully and slotted ground plane are carried out. Results are in good agreement between simulated and measurement which validates the proposed design.

*Keywords:* E-shaped, Microstrip Patch Antenna, C-band, X-band, Reflection Coefficient, bandwidth, radiation pattern, gain, efficiency, VSWR

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