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Transmission characteristics of the wave cut-off probe with parallel plates HYUN-JU KANG, YU-SIN KIM, CHIN-WOOK CHUNG, Department of Electrical Engineering, Hanyang University — A cut-off probe has been used to obtain an absolute electron density from a plasma frequency. A cut-off probe with parallel plates was constructed to investigate the transmission characteristics of electromagnetic waves and electrostatic waves at various gaps, pressures and powers. It is found that a clear cut-off peak at a plasma frequency and many other peaks due to plasma sheath series resonance, cavity resonance and transmission line are observed. By using circuit model of plasma and transmission line theory, the various peaks was analyzed and discussed.

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