

5.4 - The Quarter-Wave Transformer

Reading Assignment: pp. 73-76, 240-243

By now you've noticed that a **quarter-wave length** of transmission line ($l = \lambda/4$, $2\beta l = \pi$) appears **often** in microwave engineering problems.

Another application of the $l = \lambda/4$ transmission line is as an **impedance matching network**.

HO: THE QUARTER-WAVE TRANSFORMER

HO: THE SIGNAL-FLOW GRAPH OF A QUARTER-WAVE TRANSFORMER

Q: *Why does the quarter-wave matching network work—after all, the quarter-wave line is **mismatched** at both ends?*

A: **HO: MULTIPLE REFLECTION VIEWPOINT**