This module defines objects of the following class.

Class

Microstripline

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                <----W---->
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                                |
                        er      h
                                |
    ==============================

Microstrip line

Reference: Hong & Lancaster.

Defines an object of the type Microstrip line. The object can be defined in
either of the following two ways.

1) Defining the characteristics impedance Z0 of the line. In this  method, the
required width of the msl will be computed using synthsis equations.

2) Defining the width W of the line. In this method, the resultant
characteristics impedance is computed using the analysis equations.

If both W and Z0 are given during the definition, then priority is given to W
over Z0 for defining the msl. Either one of these must be defined.

Attributes:
- Substrate dielectric constant: er (Given by user)

- Substrate thickness: h (Given by user. In units of meters. Must.)

- Thickness of the msl metal conductor: t (Given by the user. In units of
meters. OPTIONAL. Not implemented yet.)

- Effective substrate dielectric constant: er_eff (Computed)
```

- Width of the msl: W (In units of meters. Computed from Z0, if not defined by the user.)

- Characteristics impedance: Z0 (In units of Ohm. Computed if W is defined. If W is not defined, takes the value given by the user.)

- If both W and Z0 are not defined: Gives an error.

- Length of the msl: l (In units of meters. Preferably should be given by the user. Takes value=1 meter, if not defined by the user.)

- Frequency: omega. (In units of rad/sec. Must if an object of Network class has to be computed as an attribute. Optional is only using it for synthesis and analysis.)

- An object of class Network: NW (Object type: Network. Computed and defined only when omega is defined.)

- Guided wavelength: lambda_g (In units of meters. Computed when omega is defined.)

- Phase velocity: vp (In units of meters/sec. Computed)

- Phase constant: beta (In units of rad/m. Computed when omega is defined.)