Optical Hybrid

December 28, 2016

This block simulates a optical hybrid. It accepts two input signals corresponding to the signal and to the local oscillator. It generates four output signals. Figure 1 shows a schematic representation of this block.

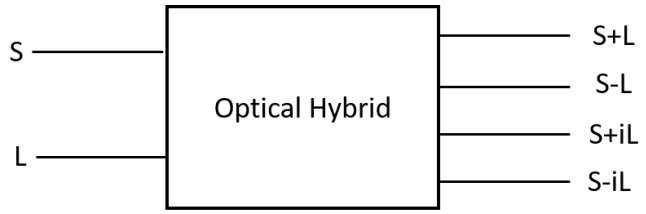

Figure 1: Schematic representation of an optical hybrid

Input Parameters

- opticalPower{ 1e-3 }
- wavelength{ 1550e-9 }
- frequency{ SPEED_OF_LIGHT / wavelength }

Methods

OpticalHybrid()

OpticalHybrid(vector<Signal *> &InputSig, vector<Signal *> &OutputSig) :Block(InputSig, OutputSig)

void initialize(void)

bool runBlock(void)

void setOutputOpticalPower(double outOpticalPower)

void setOutputOpticalPower_dBm(double outOpticalPower_dBm)

void setOutputOpticalWavelength(double outOpticalWavelength)

void setOutputOpticalFrequency(double outOpticalFrequency)

Functional description

This block accepts two input signals corresponding to the signal to be demodulated (S) and to the local oscillator (L). It generates four output optical signals given by $S + L$, $S - L$, $S + iL$, $S - iL$.

Input Signals

Number: 2

Type: Optical

Output Signals

Number: 4

Type: Optical

Examples

Sugestions for future improvement