Homodyne Receiver

Introduction

This super-block compresses the function of the following blocks:

- Photodiode;
- Trans-Impedance Amplifier;

This compression allows for a cleaner code.

Input Parameters

- Responsivity
- Gain
- ElectricalNoiseSpectralDensity
- RollOffFactor
- ImpulseResponseTimeLength
- ImpulseResponseLength
- PassiveFilterMode

Functional Description

The input signals are evaluated by coherent detection and an electrical signal is generated from this evaluation. A diagram of the blocks that constitute this super-block, with the corresponding relations is presented in Figure 1.

Figure 1: Homodyne Receiver Block Diagram.

Inputs

Number: 2
Type: Complex or Complex_XY (OpticalSignal)

Outputs

Number: 1
Type: Real Signal (ContinuousTimeContinuousAmplitude)