

LTE Base Station test Picocell

based on National Instruments hardware

Required tests for Pico-Cell BS

| Parameter | Description | Min | Typical | Max | Unit |
|--|-------------|------|---------|------|------|
| 4G Support | LTE | | | | |
| Frequency-Division Duplex (FDD) Support | | | | | |
| Number of TX/RX | 2x2 MIMO | | | | |
| Transmitter Frequency Range | Band 3 | 1805 | | 1880 | MHz |
| Receiver Frequency Range | Band 3 | 1710 | | 1785 | MHz |
| Network Listening Mode Support for Active Band/s | Band 3 TX | 1805 | | 1880 | MHz |
| Antenna Port Return Loss | TX/RX | 10 | | | dB |
| LTE Bandwidth Support | | | 5 | | MHz |
| | | | 10 | | MHz |
| | | | 15 | | MHz |
| | | | 20 | | MHz |

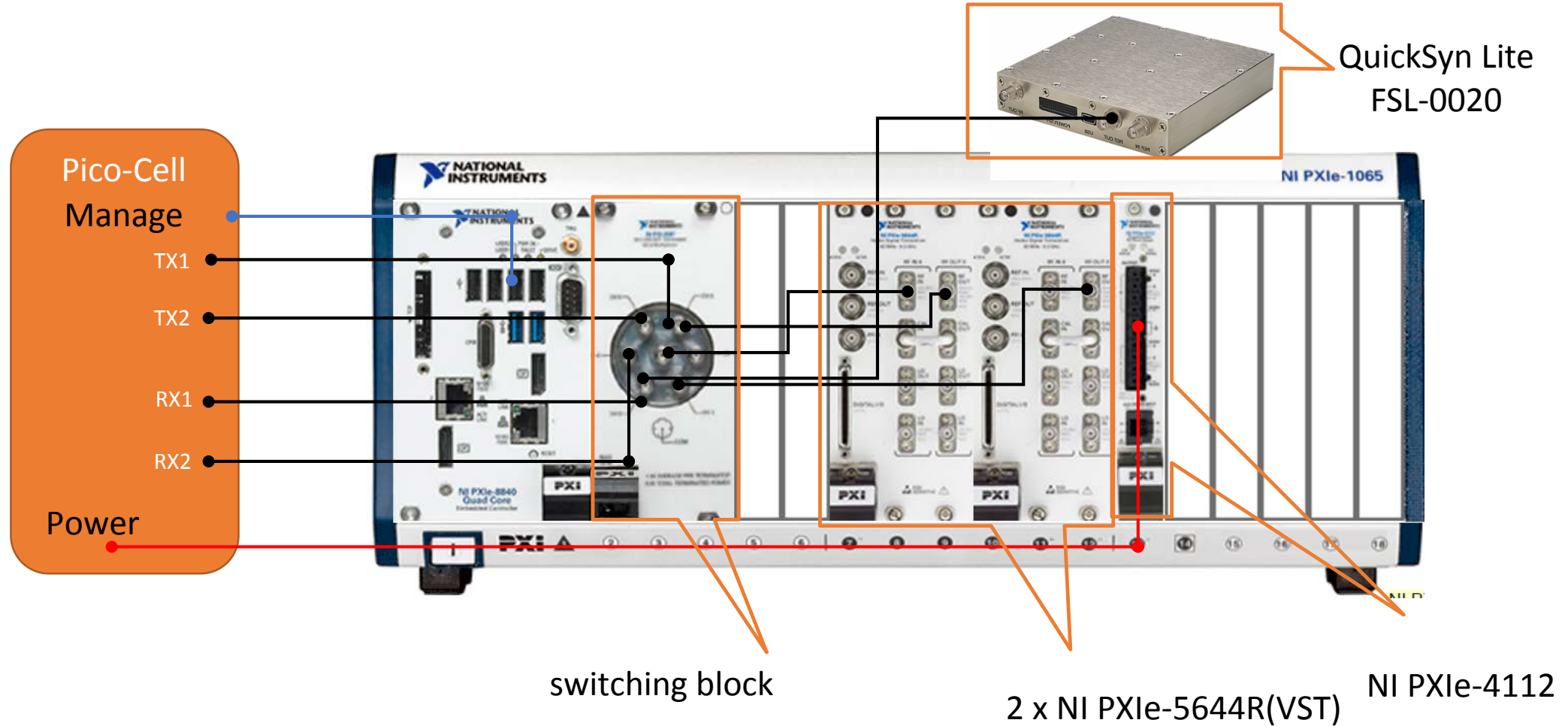
Receiver tests

- Reference Sensitivity
- Dynamic Range
- In-Channel Selectivity
- Adjacent Channel Selectivity
- Narrowband Blocking
- In-band Blocking
- Out of Band Blocking
- Intermodulation
- Intermodulation Narrowband

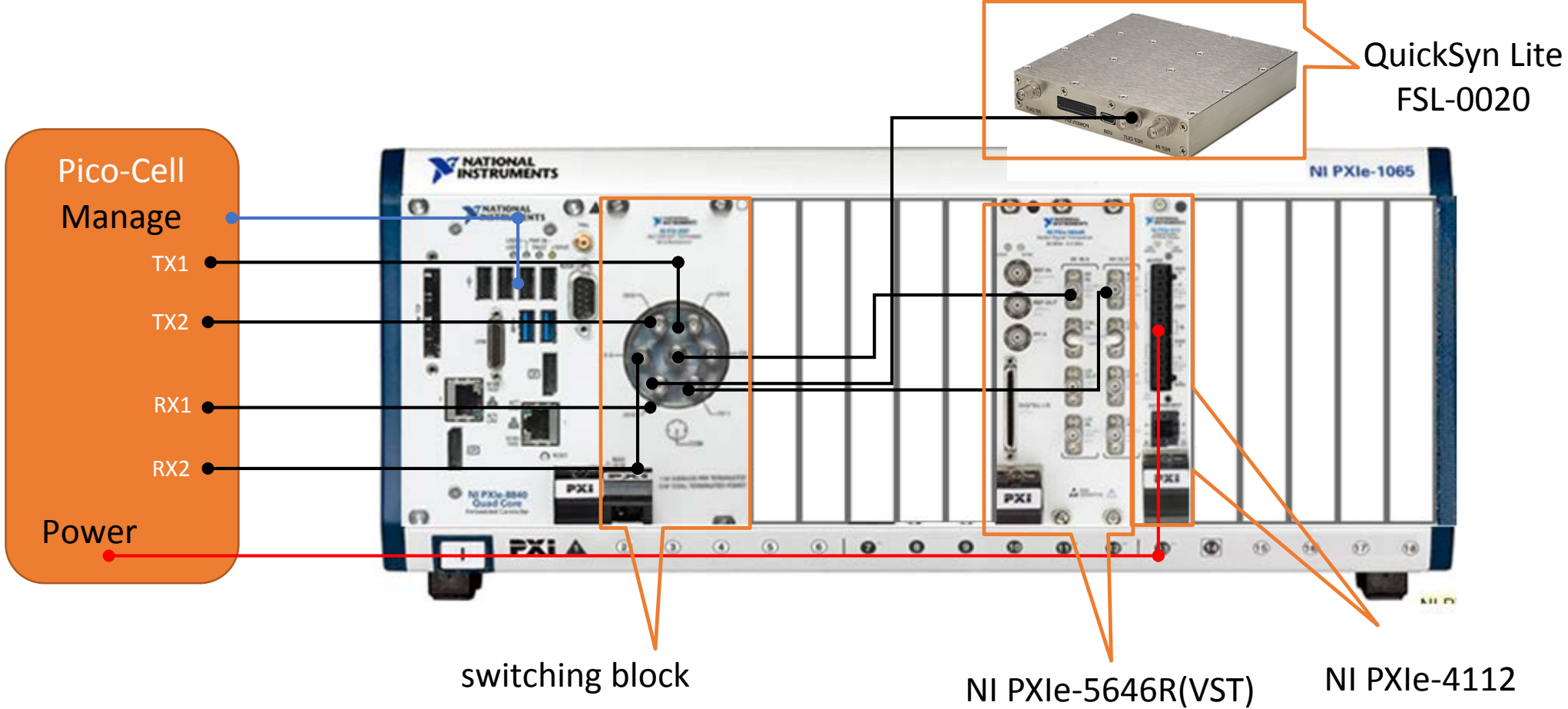
Transmitter tests

- Base Station Output Power
- Total power dynamic range
- Frequency Error
- Error Vector Magnitude
- DL RS power
- Occupied bandwidth
- Adjacent Channel Leakage Ratio [ACLR]
- Operating band unwanted emissions
- Spurious Emissions
- Transmitter Intermodulation

Test system configuration based on National Instruments

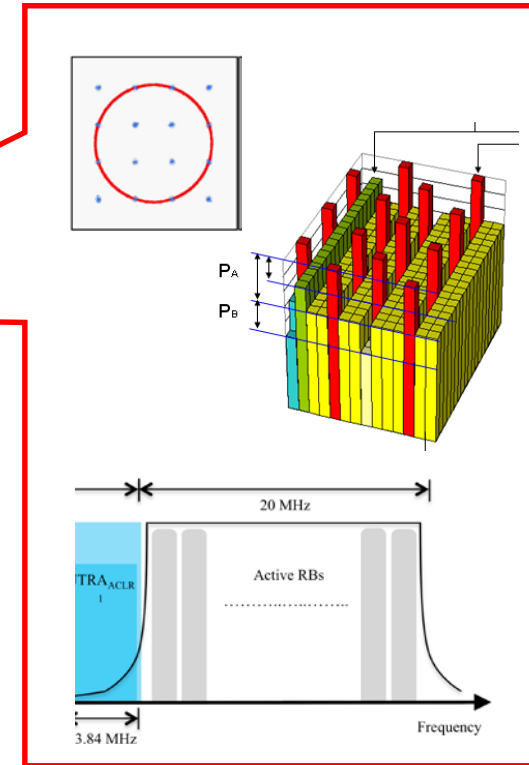
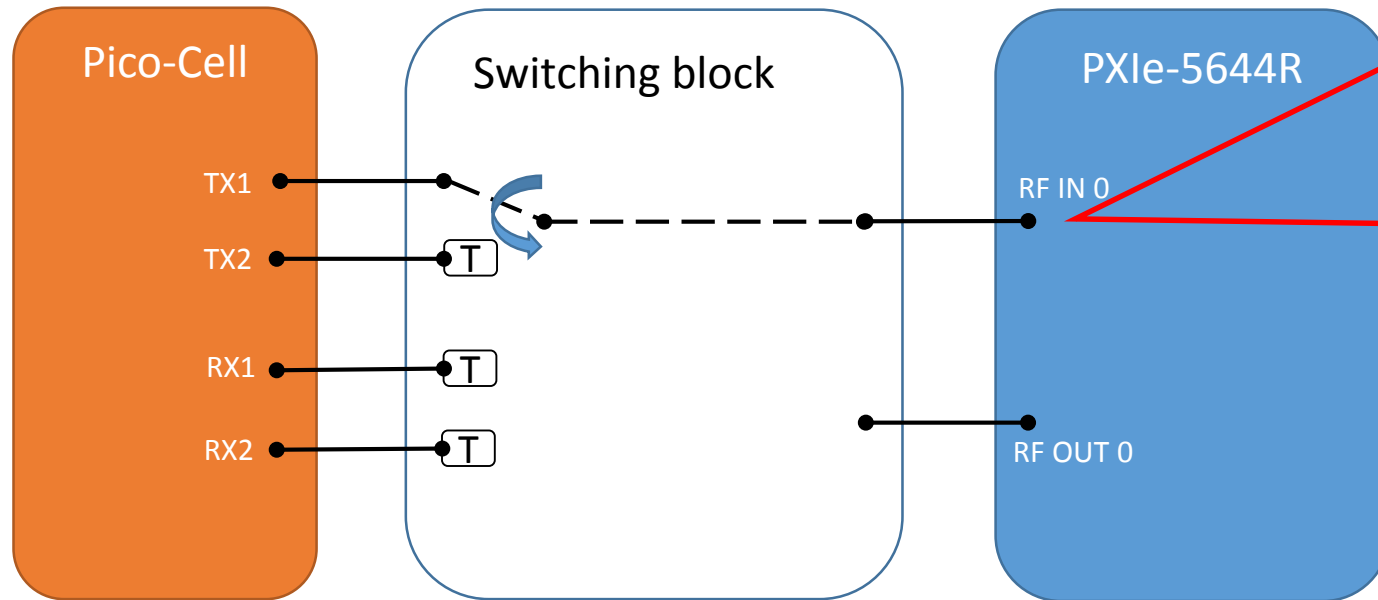


Test system configuration based on National Instruments (lite)



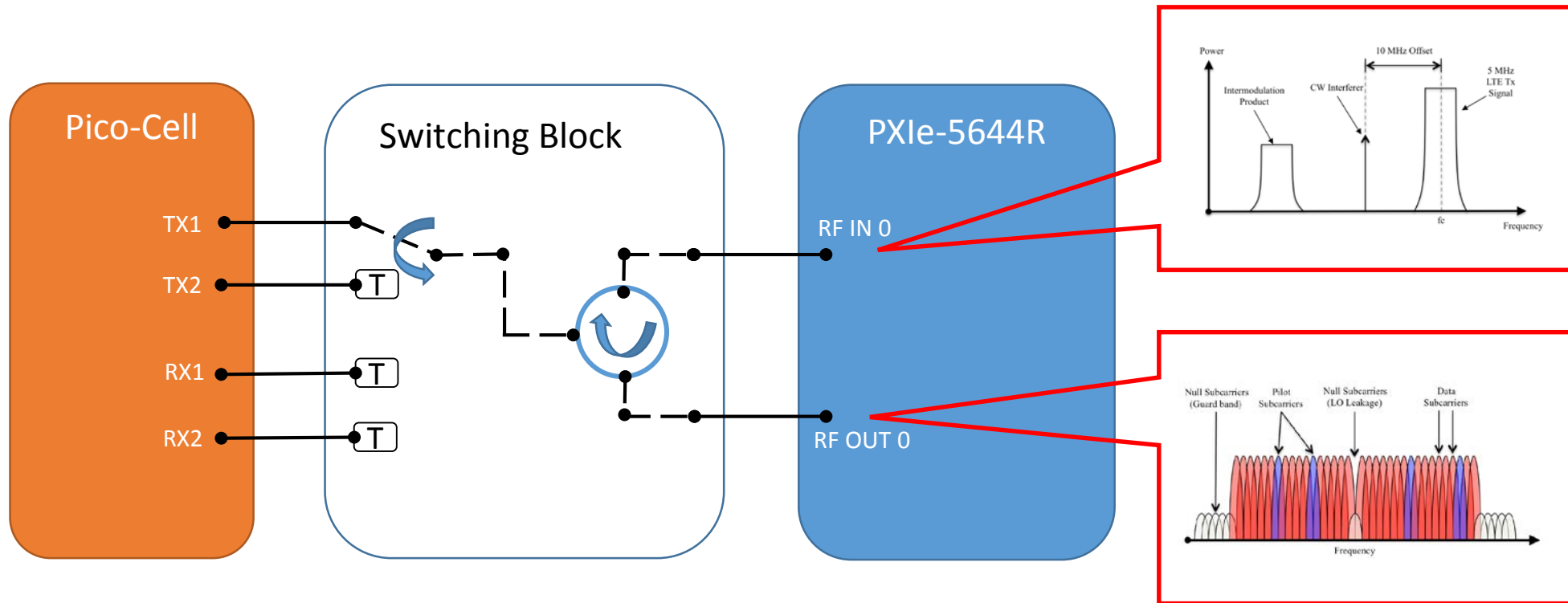
TX tests(1)

Base Station Output Power, Total power dynamic range, Frequency Error, Error Vector Magnitude, DL RS power, Occupied bandwidth, ACLR, Operating band unwanted emissions, Spurious Emissions



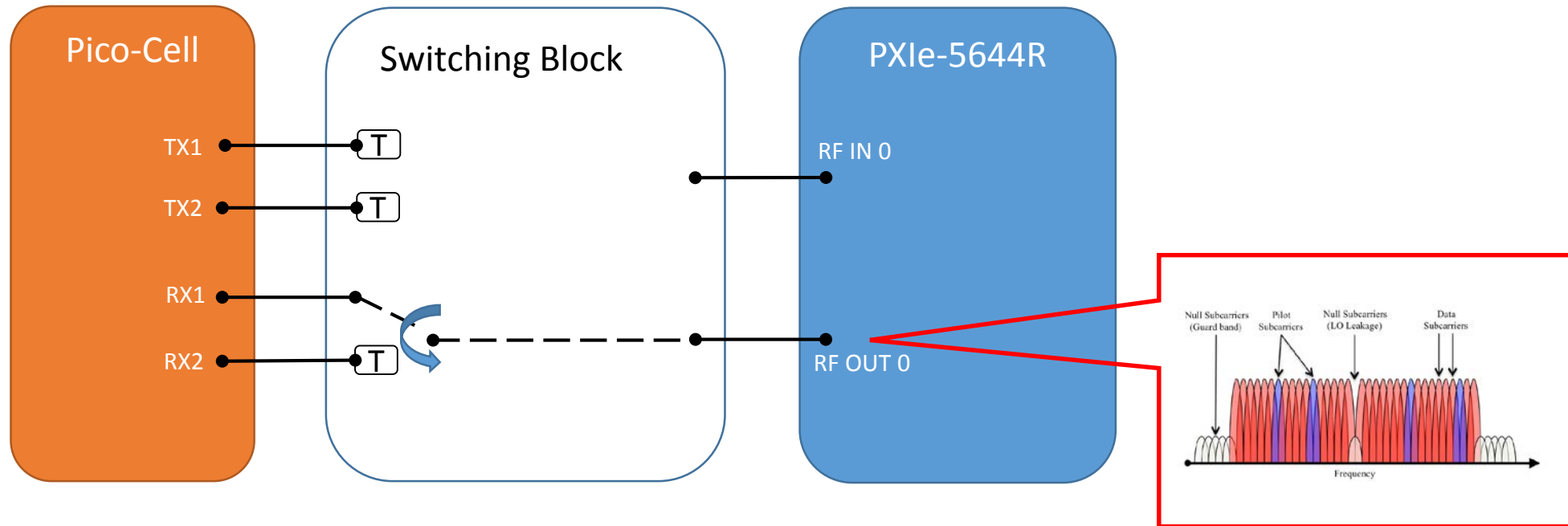
TX tests (2)

Transmitter Intermodulation



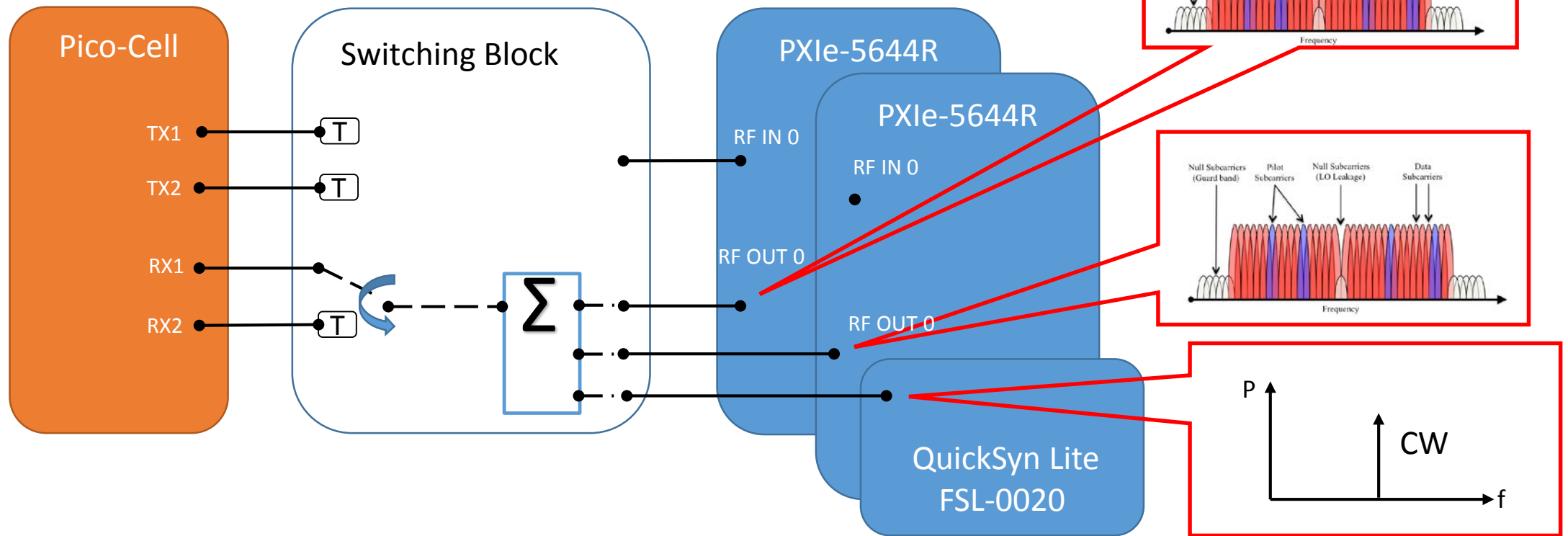
RX tests (1)

Reference Sensitivity, Dynamic Range



RX tests (2)

- In-Channel Selectivity, Adjacent Channel Selectivity, Narrowband Blocking, In-band Blocking, Out of Band Blocking, Intermodulation, Intermodulation Narrowband



RX tests (3)

- In-Channel Selectivity, Adjacent Channel Selectivity, Narrowband Blocking, In-band Blocking, Out of Band Blocking, Intermodulation, Intermodulation Narrowband

