1 Purpose

This procedure allows to measure the emitted power and the pulse width. The emitted power is a determining factor for the measurement range and it should always be within the tolerances around the nominal value.

2 Remarks

- This procedure contains measurements at high power radiation. Experience and careful handling is absolutely necessary!
- The procedure has been tested for a lap-3000. For other models, it is referred to the documentation.
- This procedure can also be found in the Factory Acceptance Test.

3 Material

- Male and female SMA, BNC and N adapters
- 50 loads
- Attenuators (for example: 20 dB, 0 - 2 GHz, 5 kW peak power, 80 W average power)
- Directional coupler (for example: 10 kW peak power, 200 W average power, 950 - 2000 MHz)
- RF cable (type RG58)
- Power meter with power sensor (>30 MHz bandwidth)

4 Procedure

1. Connect the the power meter to the wind profiler as illustrated here:Media: SchemaPowerVaisala.png and Media: PicturePowerVaisala.png
2. Start acquisition using the following configuration file: Vaisala Configuration File
3. Press PAUSE in the acquisition software
4. Read the pulse width and the peak power value from the power meter
5. Convert the peak power to Watts with this formula: peak power (W) = 10^[peak power (dBm) + attenuator loss - 30 dB]. It shoud be >450 W (lap-3000)

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