



MAXIMUM RF OUTPUT POWER MEASUREMENTS

SCREEN SERVICE BROADCASTING TECHNOLOGIES

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1.1 PURPOSE

The document purpose is to give the sufficient and necessary information about:

1. MAXIMUM RF OUTPUT POWER MEASUREMENT

Over:

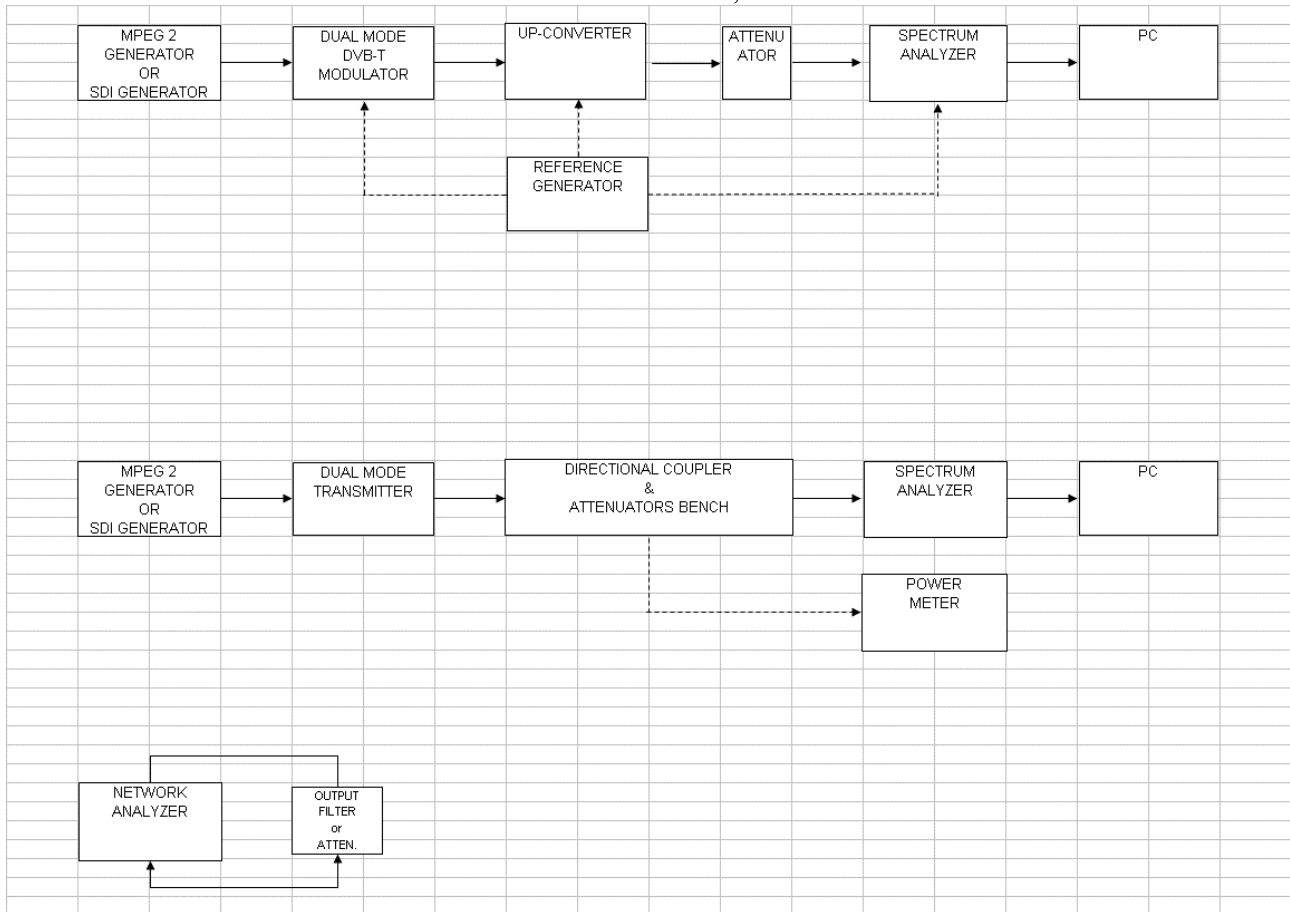
- TEMPERATURE VARIATION: 0°C; 25°C; 50 °C
- POWER SUPPLY VARIATION: 90 to 264 VAC SINGLE PHASE

The rated output power is 20.0 W under ATSC standard

It is worth to be noted the output power has been measured under modulated ATSC carrier with a power meter giving the real RMS VALUE.

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DEVICE UNDER TEST

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NETWORK ANALYSER



MPEG GENERATOR



SPECTRUM ANALYSER

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POWER METER R&S®NRVS power meter

1.3 MEASURE

This chapter shows the used equipment for testing:



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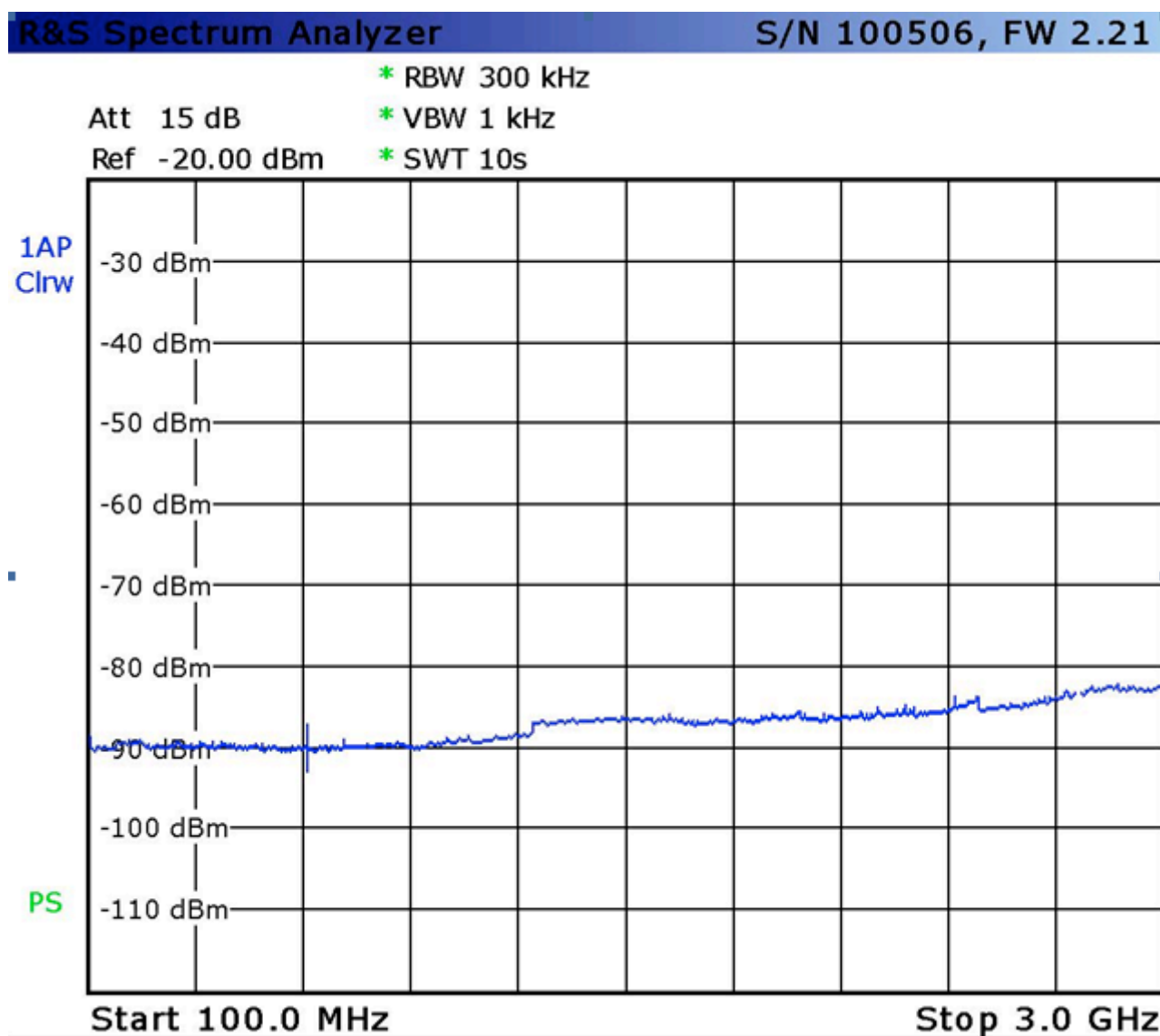
1.3.1 Power measurement

This chapter shows the maximum power measurement details.

NO HARMONICS ARE DETECTED above the noise of the instrument so the RF POWER MEASUREMENT IS NOT AFFECTED AND IT IS REAL.

IT IS WORTH TO BE NOTED THAT THERE ARE NO OUTPUT POWER DIFFERENCE OVER THE FREQUENCY CHANNEL BECAUSE IT IS SOFTWARE CONTROLLED.

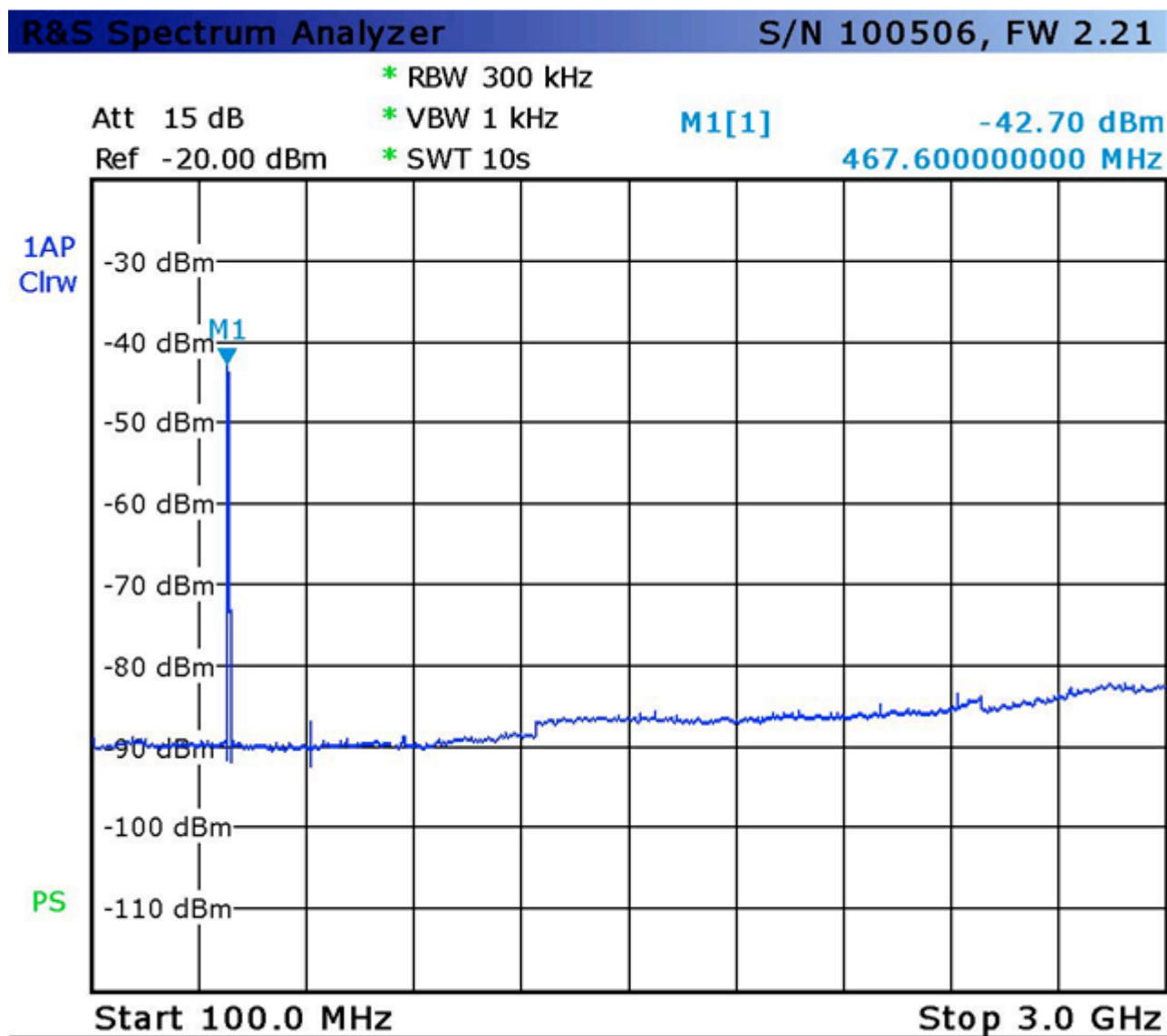
1.3.1.1 REFERENCE



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1.3.1.2 MAXIMUM OUTPUT POWER at channel 14



THE RF OUTPUT POWER MEASURE IS 20.1 W RMS USING THE TEST BENCH PREVIOUSLY DESCRIBED.

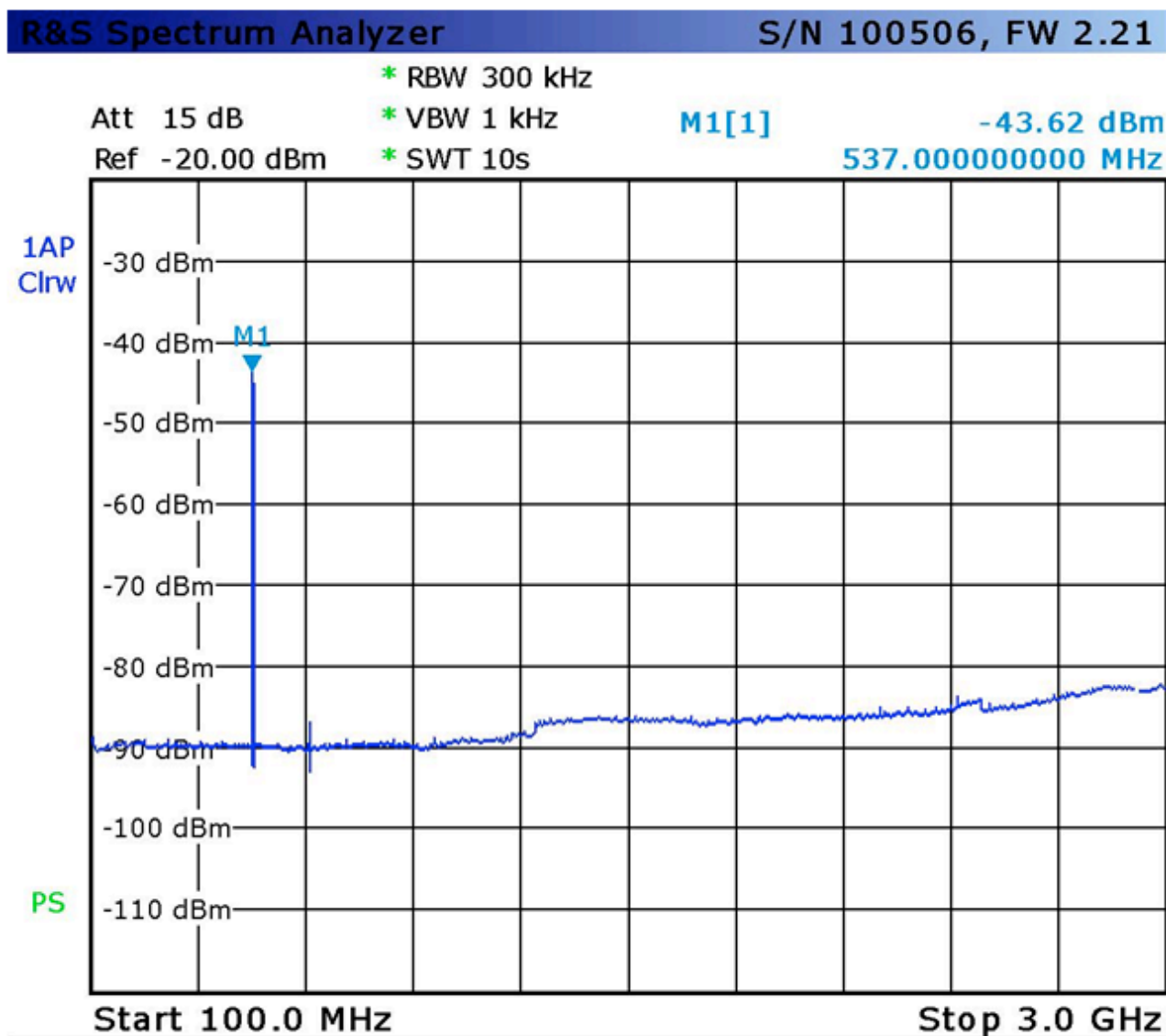
MEASUREMENTS DETAILS:

DIRECTIONAL COUPLER COUPLING FACTOR	= 40.3 dB
ATTENUATOR ATTENUATION FACTOR	= 10.5 dB
READING ON THE POWER METER	= -7.77 dBm
CORRECTED VALUE	= 20.1 W rms

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1.3.1.3 MAXIMUM OUTPUT POWER at channel 25



THE RF OUTPUT POWER MEASURE IS 20.1 W RMS USING THE TEST BENCH PREVIOUSLY DESCRIBED.

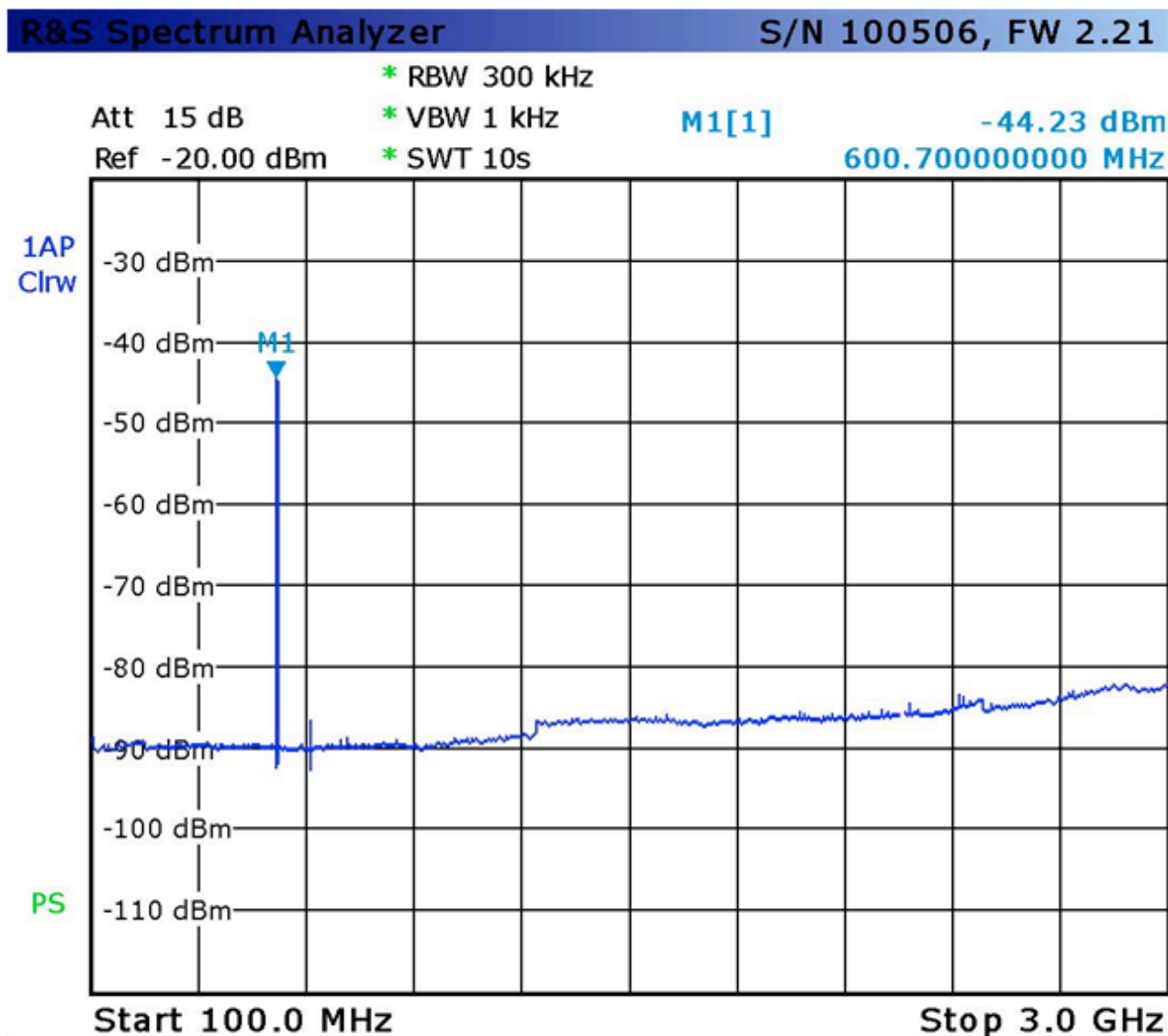
MEASUREMENTS DETAILS:

DIRECTIONAL COUPLER COUPLING FACTOR	= 40.2 dB
ATTENUATOR ATTENUATION FACTOR	= 10.3 dB
READING ON THE POWER METER	= -7.47 dBm
CORRECTED VALUE	= 20.1 W rms

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1.3.1.4 MAXIMUM OUTPUT POWER at channel 36



THE RF OUTPUT POWER MEASURE IS 20.1 W RMS USING THE TEST BENCH PREVIOUSLY DESCRIBED.

MEASUREMENTS DETAILS:

DIRECTIONAL COUPLER COUPLING FACTOR	= 40.1 dB
ATTENUATOR ATTENUATION FACTOR	= 10.1 dB
READING ON THE POWER METER	= -7.17 dBm
CORRECTED VALUE	= 20.1 W rms