



SPECTRUM, HARMONICS AND OCCUPIED BANDWIDTH

SCREEN SERVICE BROADCASTING TECHNOLOGIES

VIA Giuseppe Di Vittorio, 17
25 125 BRESCIA, ITALIA

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1.1 PURPOSE

The document purpose is to give the sufficient and necessary information TO MATCH THE 2.1057 OF THE FCC RULES:

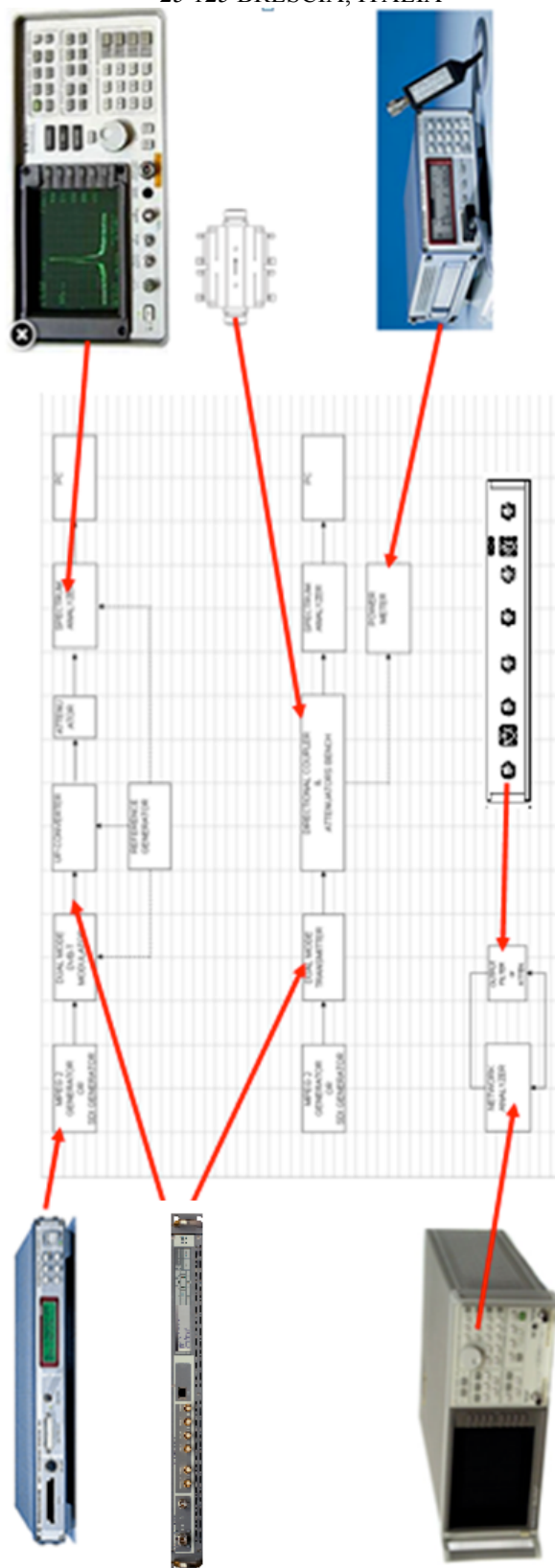
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1.2 INSTRUMENTS USED

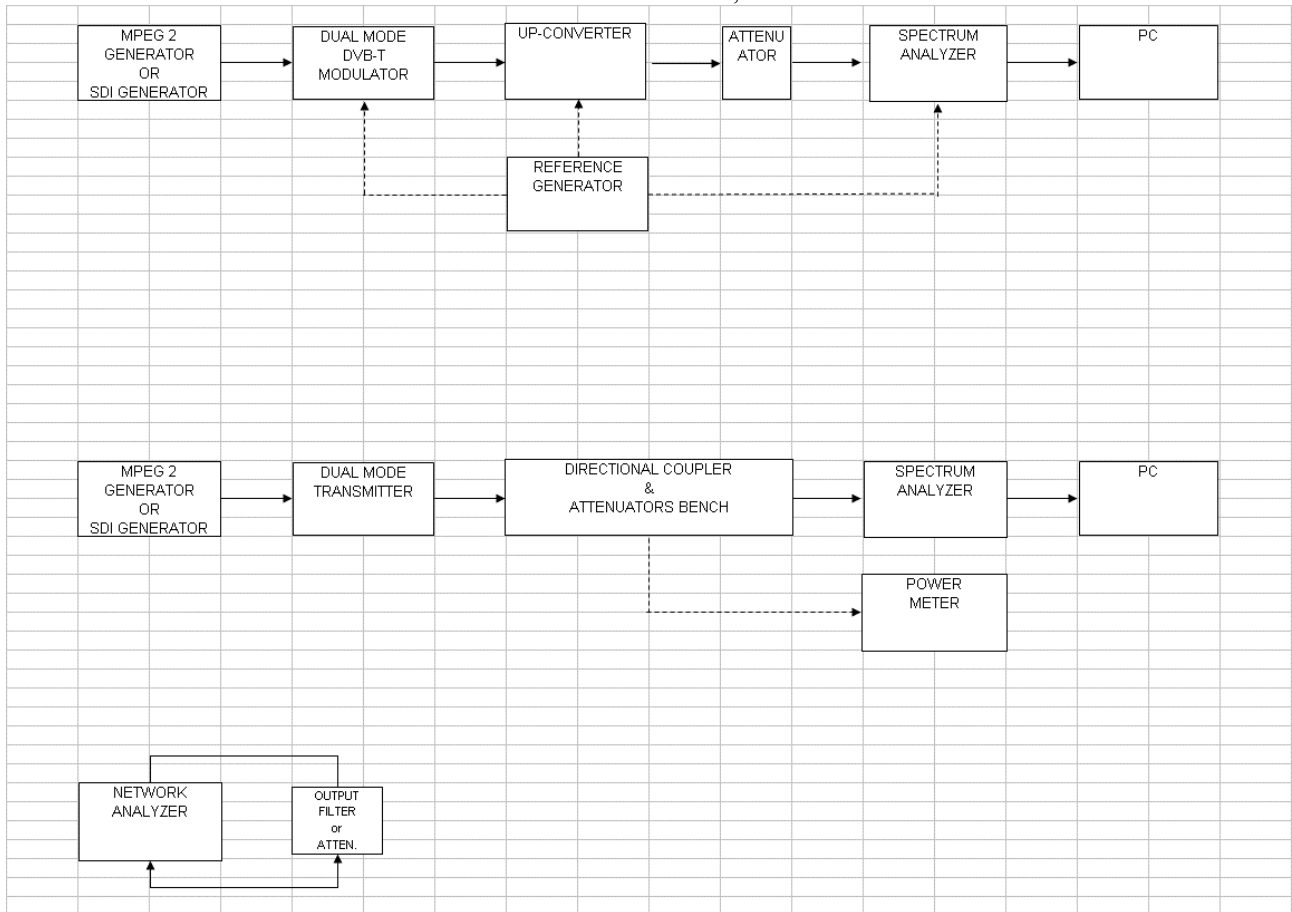
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DEVICE UNDER TEST

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NETWORK ANALYSER



MPEG GENERATOR



SPECTRUM ANALYSER

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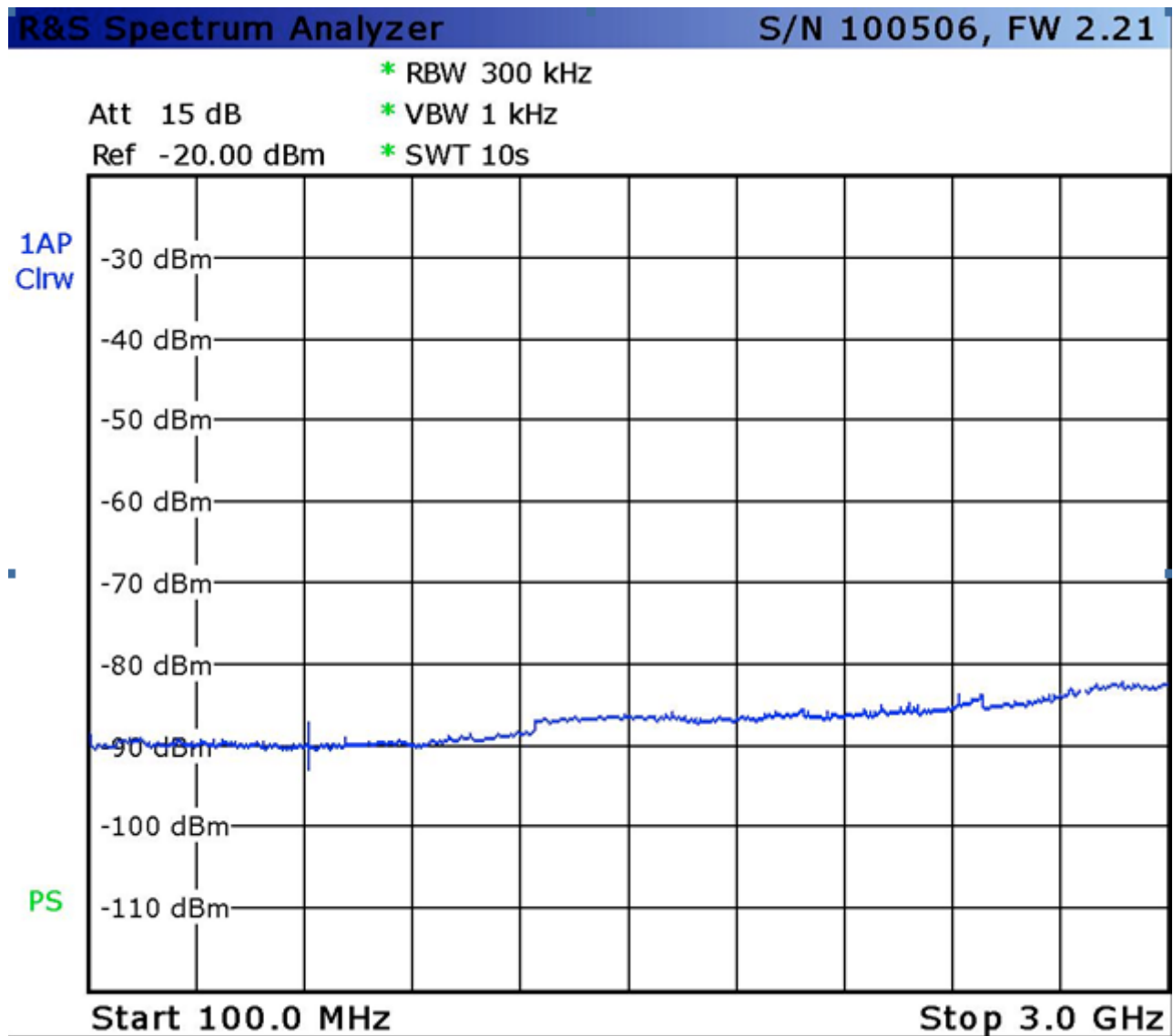
POWER METER R&S®NRVS power meter

1.3 MEASURE

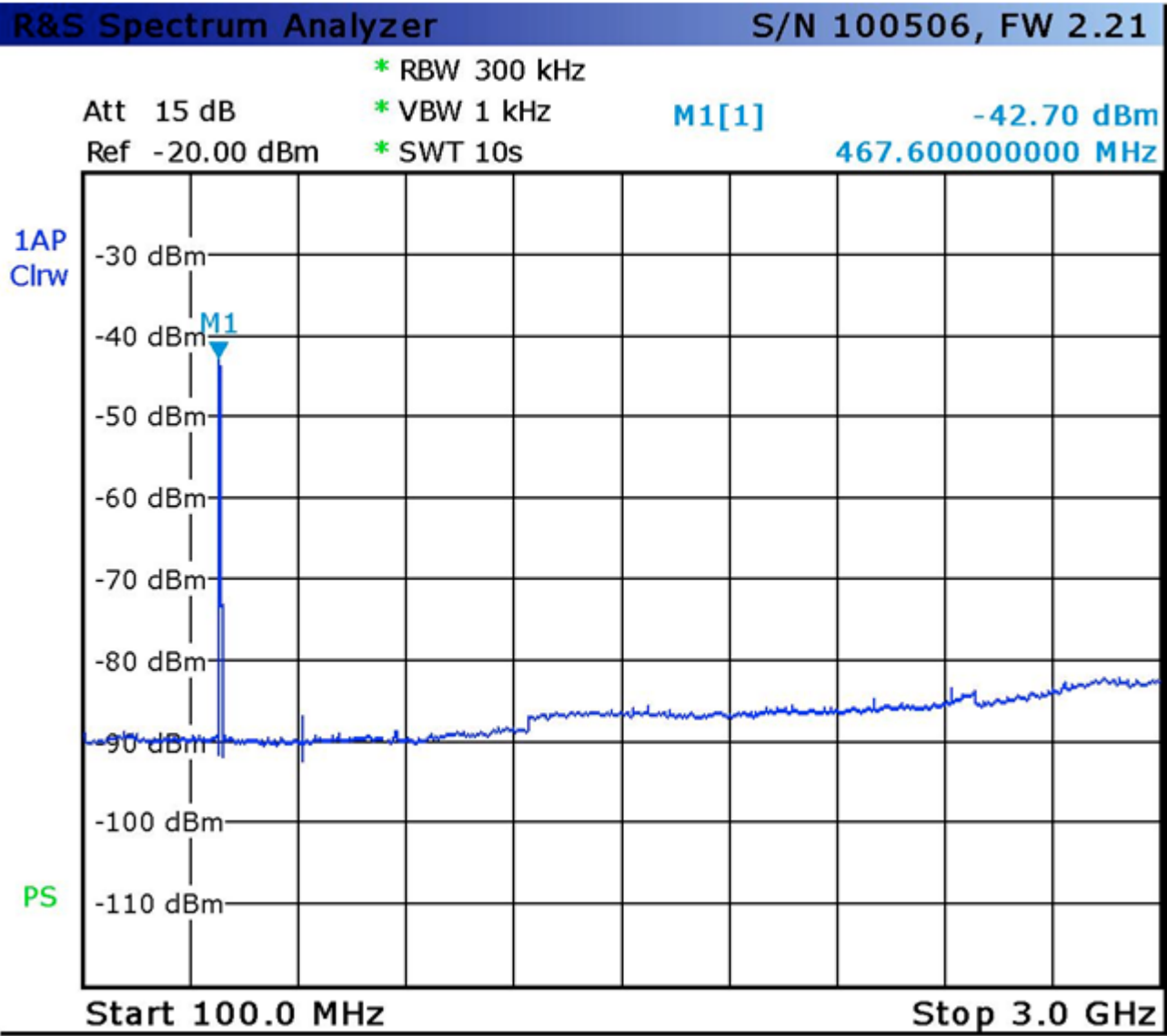
1.3.1 SPECTRUM measurement

This chapter shows the maximum power measurement details.

1.3.1.1 REFERENCE



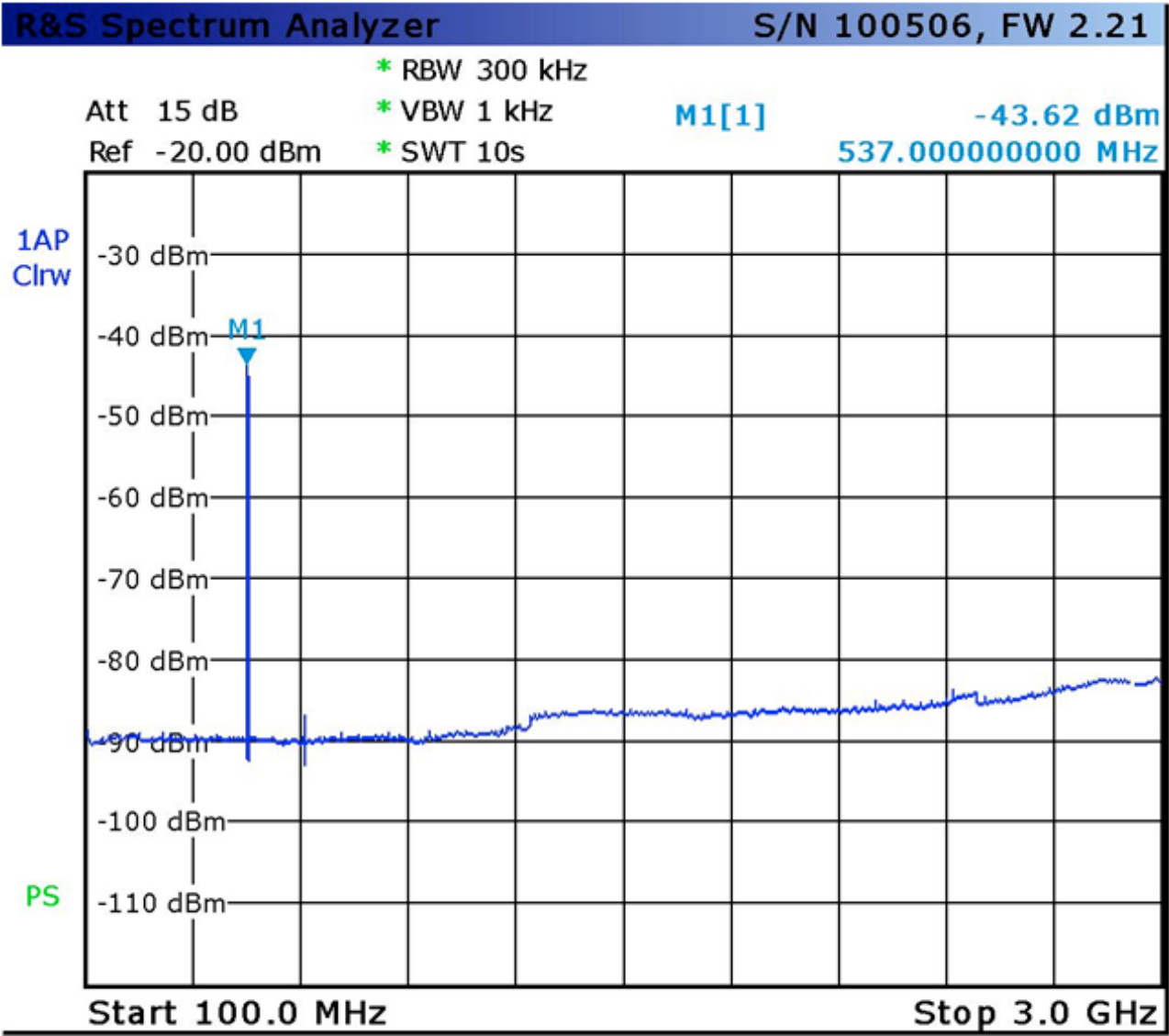
1.3.1.2 SPECTRUM at channel 14



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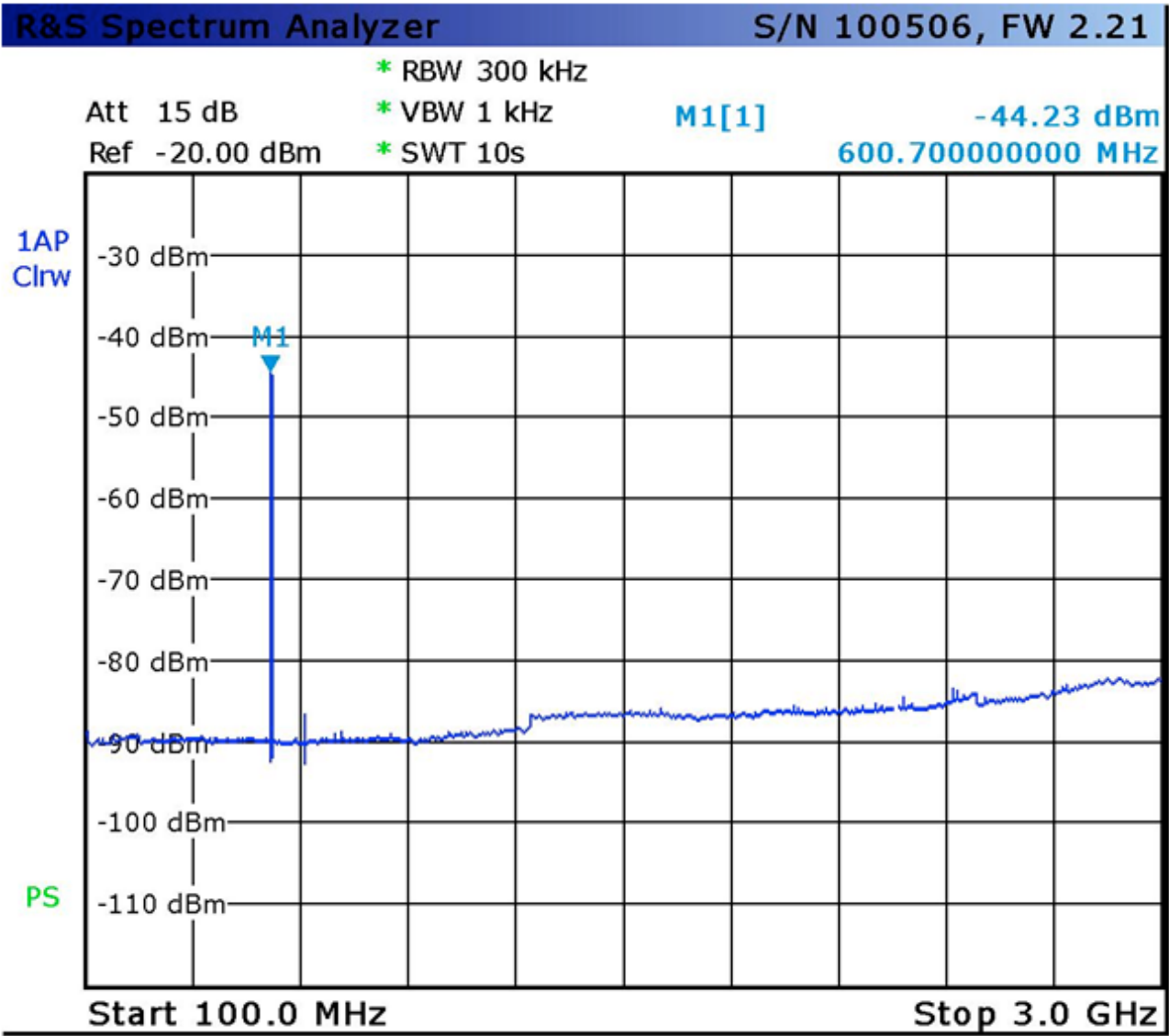
1.3.1.3 SPECTRUM at channel 25



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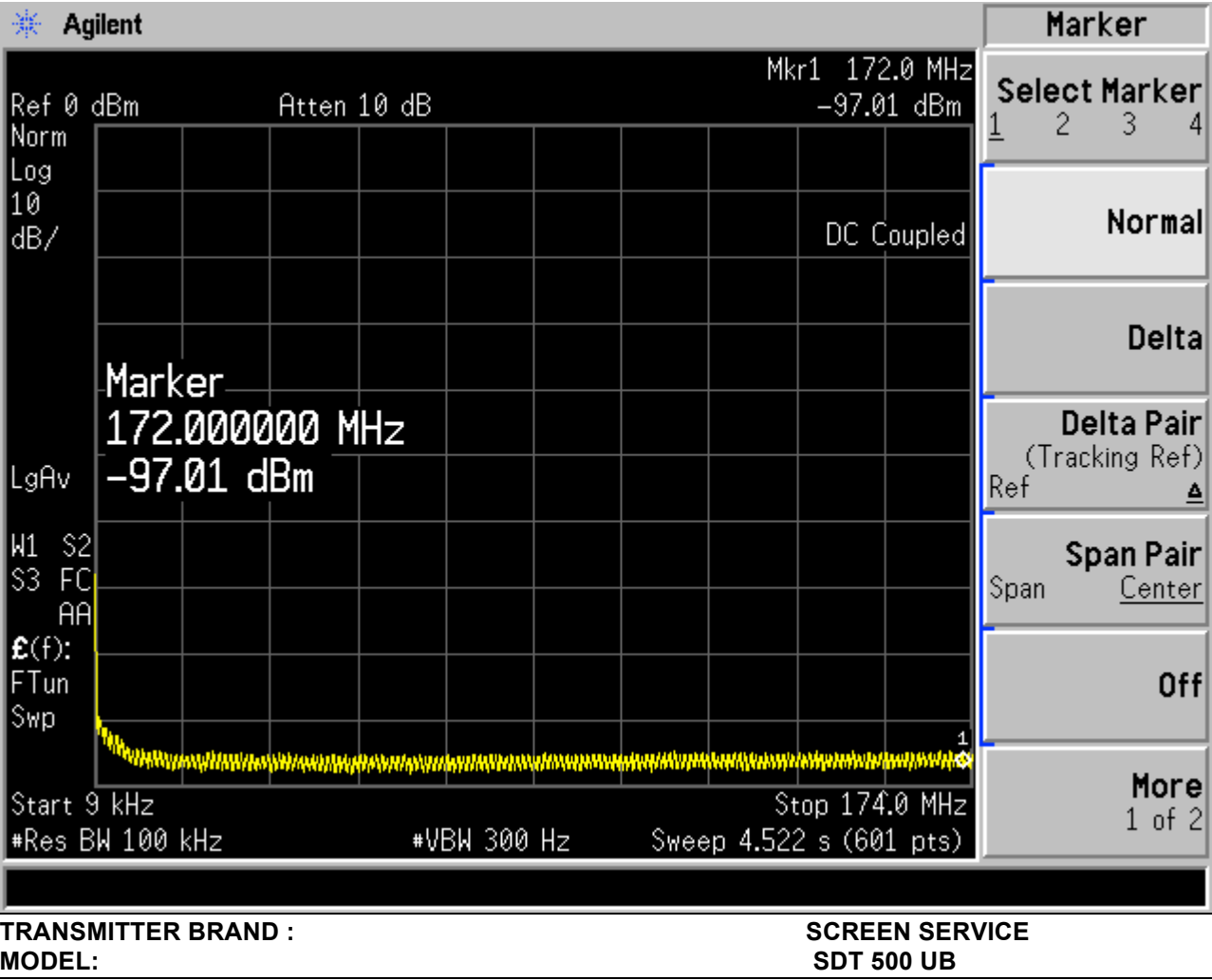
1.3.1.4 SPECTRUM at channel 36



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1.3.1.5 HARMONICS DETECTION



OUTPUT POWER MEASURE:

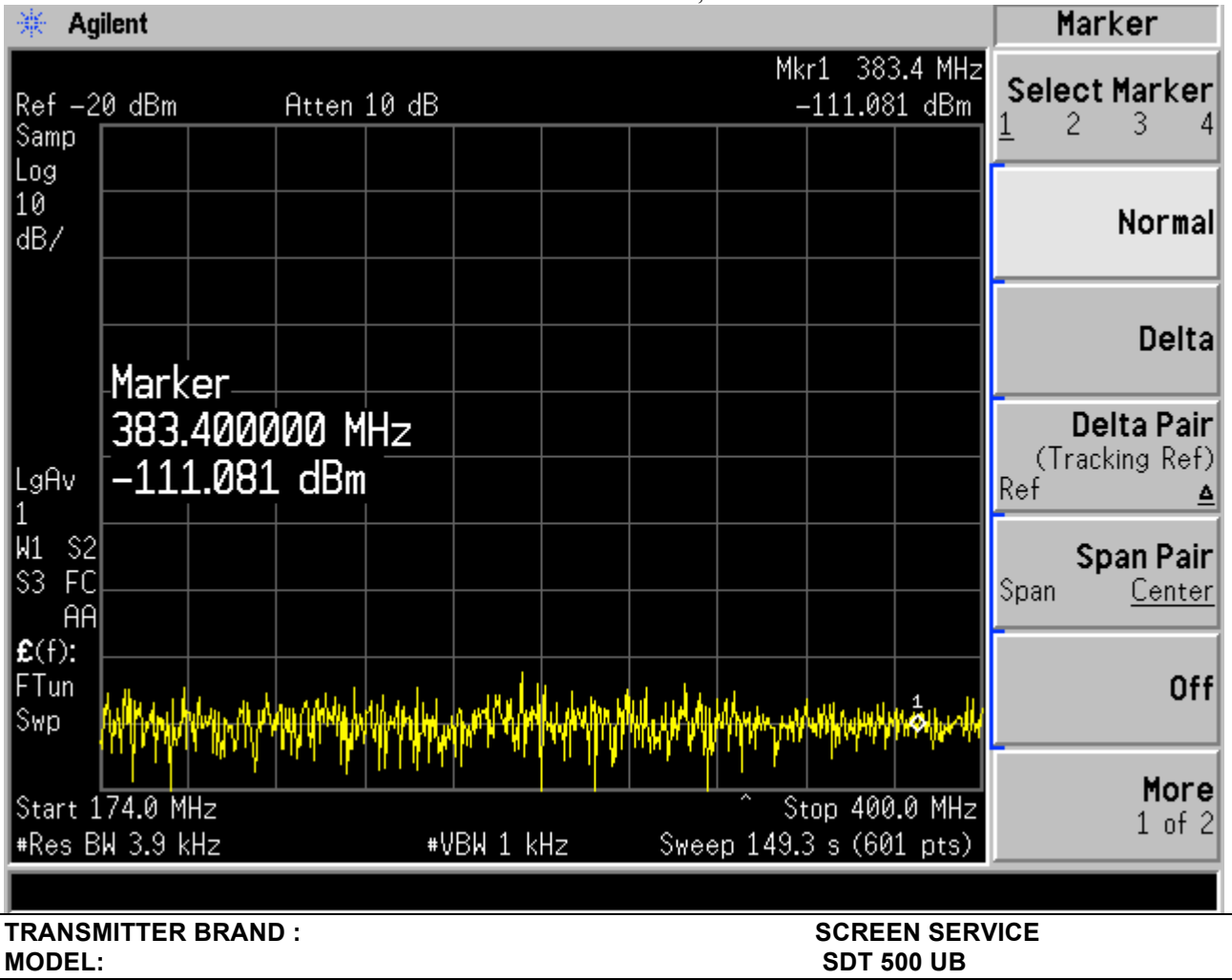
DIGITAL 20.1 W rms

SPURIOUS EMISSION
MEASURE / LIMIT [dBm]:

N.D. / -36

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TRANSMITTER BRAND :
MODEL:

SCREEN SERVICE
SDT 500 UB

OUTPUT POWER MEASURE:

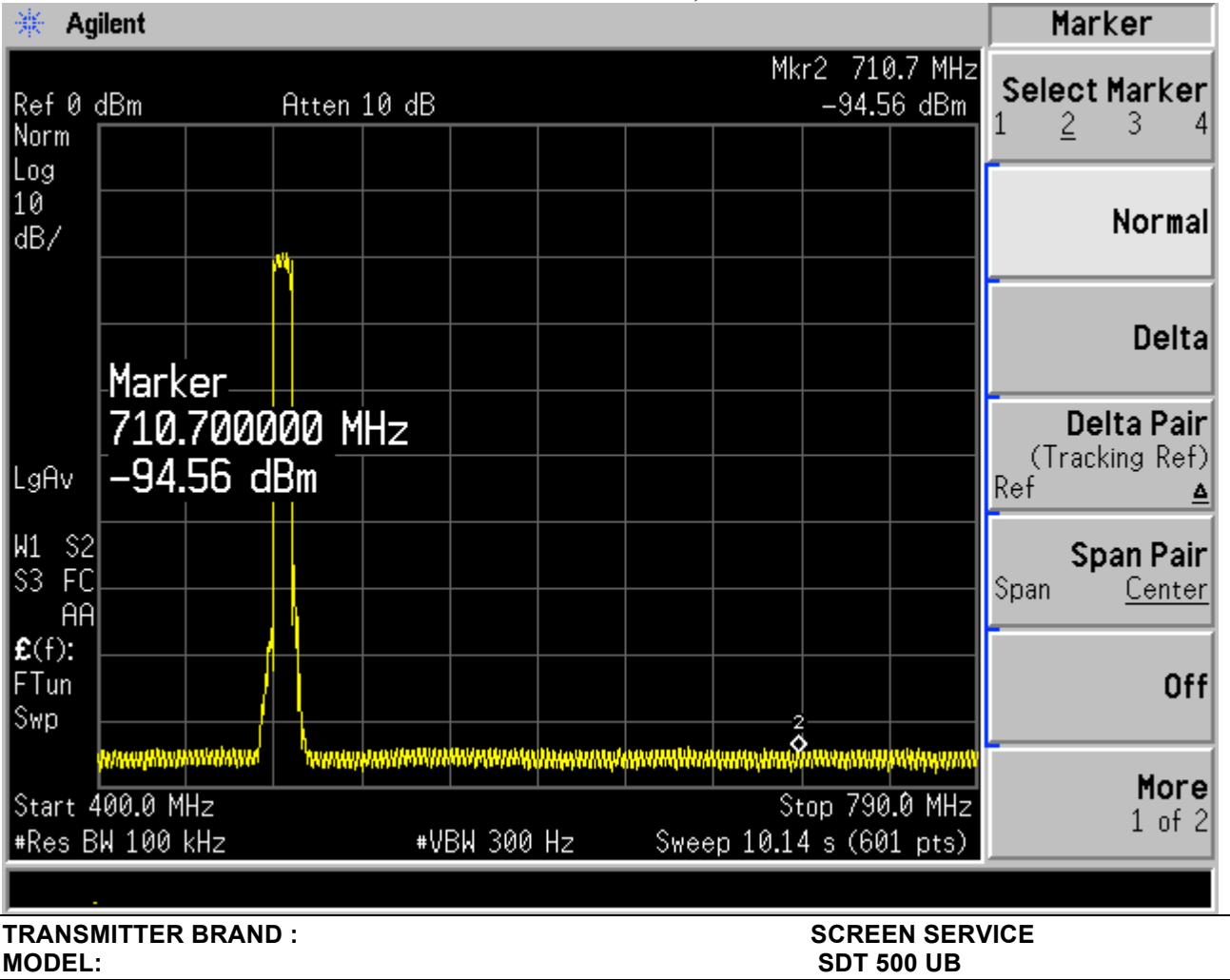
DIGITAL 20.1 W rms

SPURIOUS EMISSION
MEASURE / LIMIT [dBm]:

N.D. / -66

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OUTPUT POWER MEASURE:

DIGITAL 20.1 W rms

SPURIOUS EMISSION

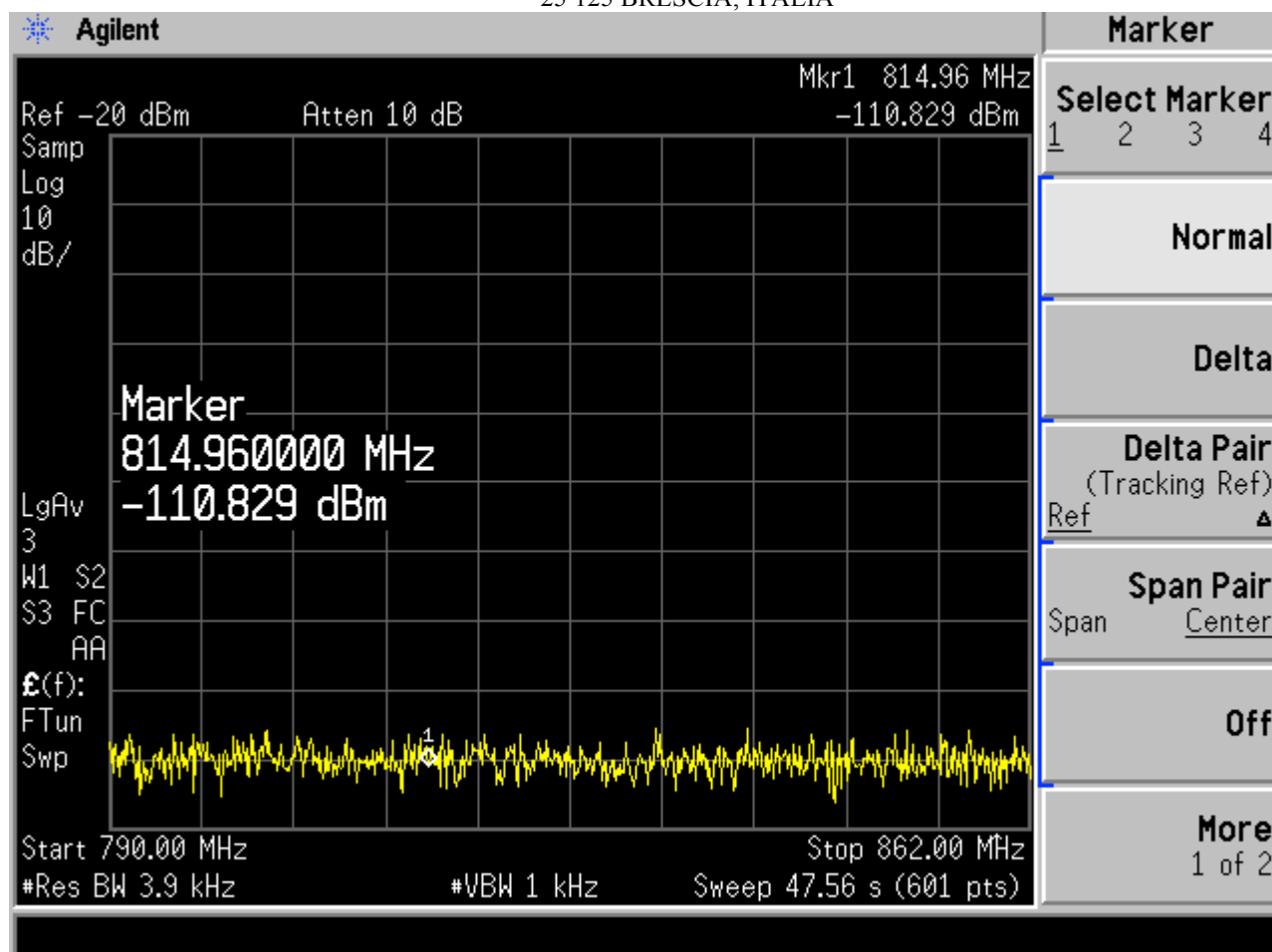
MEASURE / LIMIT [dBm]:

N.D. / -36

The REFERENCE LEVEL 0 dBm correspond to the equipment output power nominal level.

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TRANSMITTER BRAND :
MODEL:

SCREEN SERVICE
SDT 500 UB

OUTPUT POWER MEASURE:

DIGITAL 20.1 W rms

SPURIOUS EMISSION

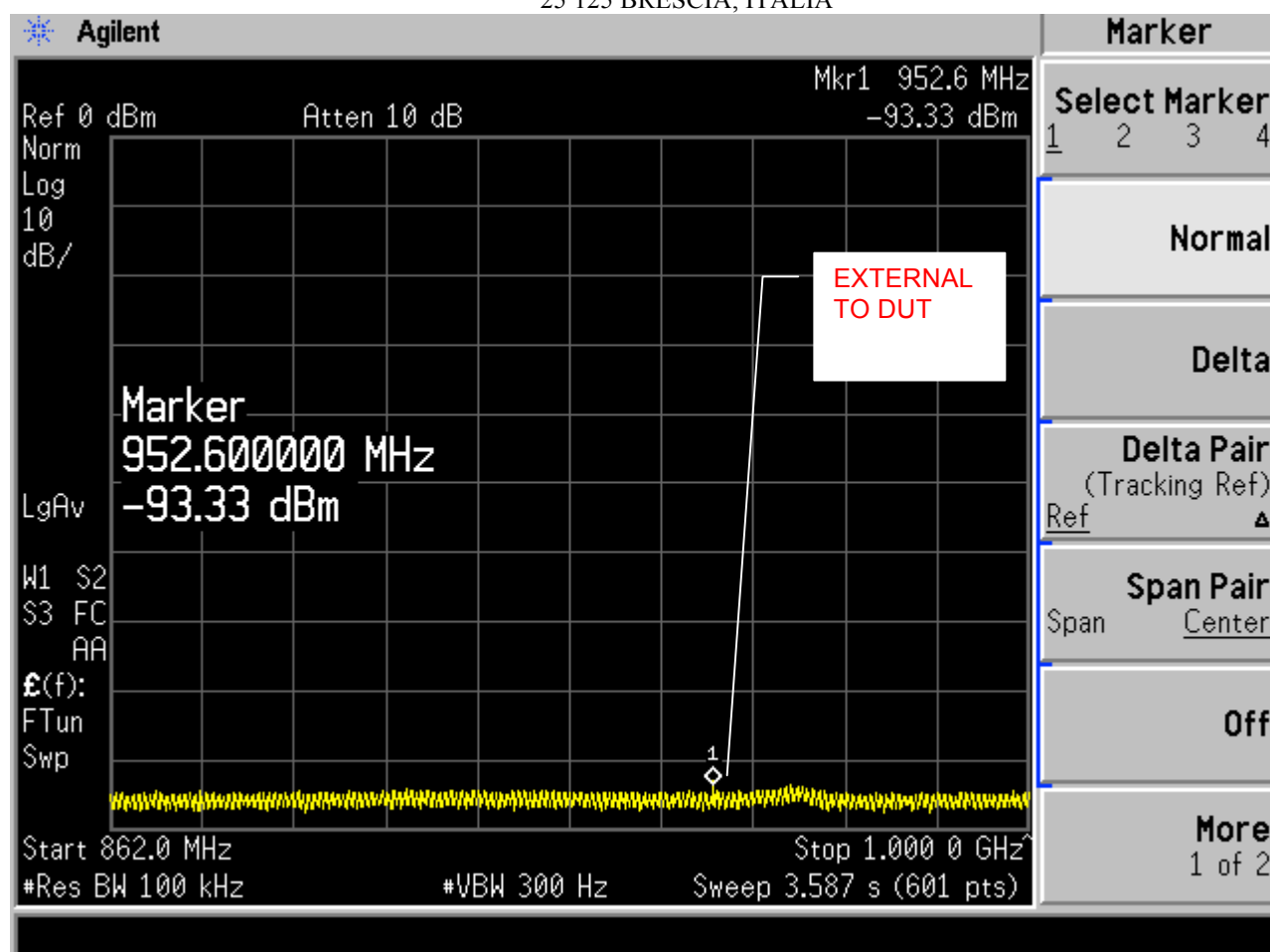
MEASURE / LIMIT [dBm]:

N.D. / -60

The REFERENCE LEVEL -20 dBm has been used to have the necessary reading dynamic.

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TRANSMITTER BRAND :
MODEL:

SCREEN SERVICE
DTT 501 UB

OUTPUT POWER MEASURE:

DIGITAL 20.1 W rms

SPURIOUS EMISSION

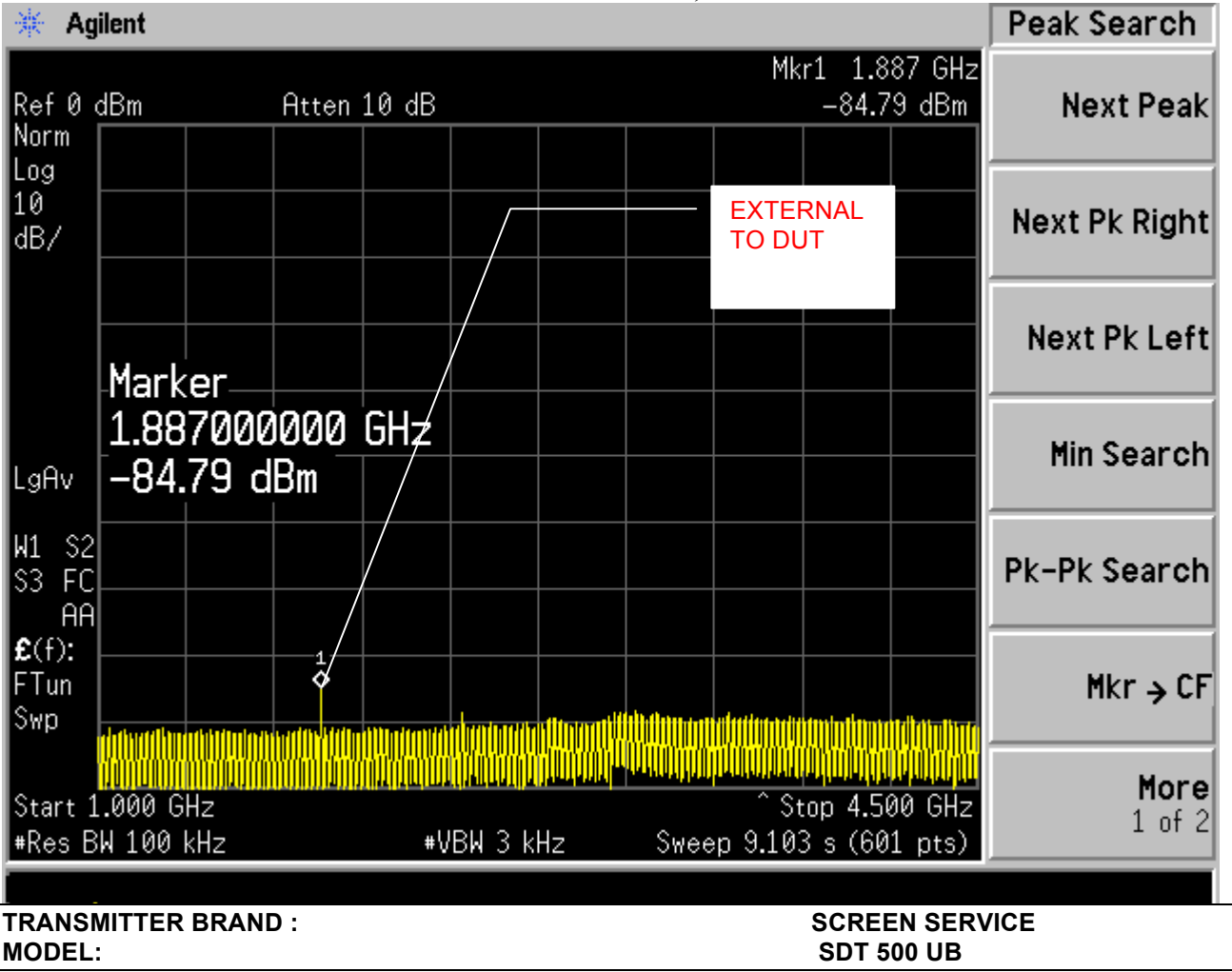
MEASURE / LIMIT [dBm]:

N.D. / -36

The REFERENCE LEVEL 0 dBm correspond to the equipment output power nominal level.

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OUTPUT POWER MEASURE:

DIGITAL 20.1 W rms

SPURIOUS EMISSION
MEASURE / LIMIT [dBm]:

N.D. / -30

The REFERENCE LEVEL 0 dBm correspond to the equipment output power nominal level.

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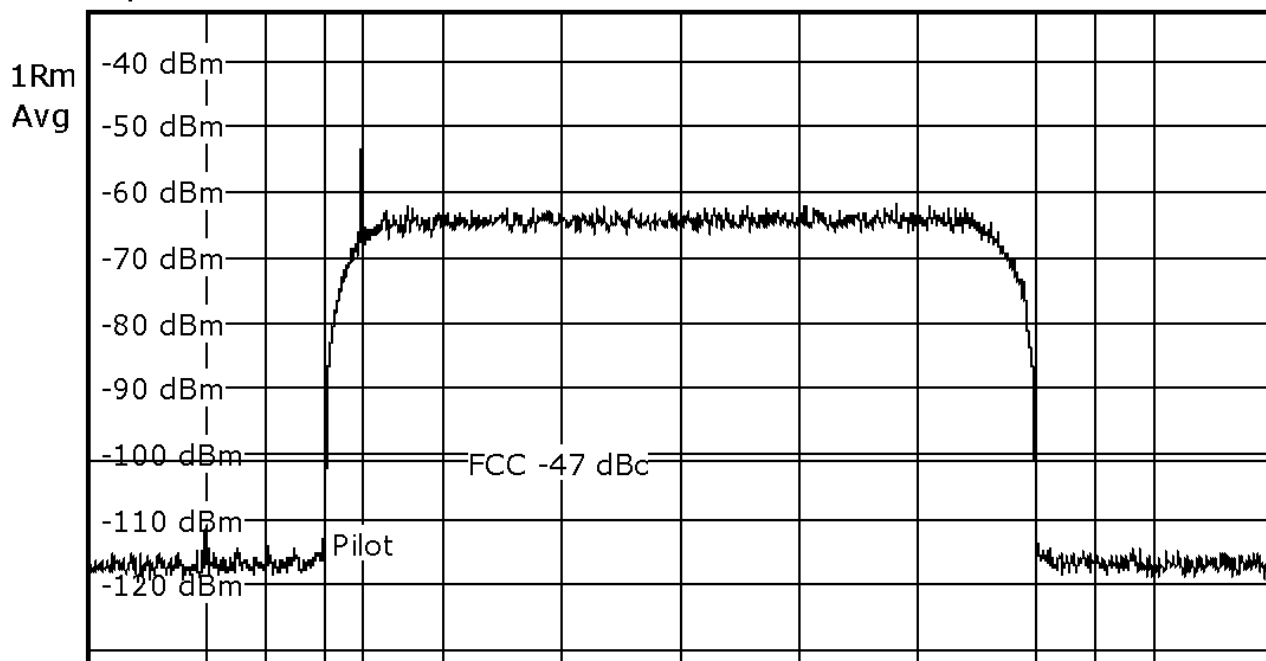
1.3.2 OCCUPIED BANDWIDTH

THE PICTURES BELOW GIVES THE EVIDENCE OF THE SPECTRUM OCCUPANCY AS PER 2.1049 FCC REQUIREMENTS.

BELOW MEASUREMENTS WERE DONE USING THE RECOMMENDED FULL MASK OUTPUT FILTER: COMTECH CL6X30C.

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R&S ETL Digital Spectrum**S/N 100688, FW 2.21****Ch: 14 UHF4/5 RF 473.000000 MHz ATSC/ATSC Mobile DTV (RF Laye***** RBW 10 kHz***** Att 0 dB****VBW 100 kHz****ExpLvl -32.50 dBm****SWT 100ms****CF 473.0 MHz****Span 10.0 MHz****PS**

Shoulder Attenuation (FCC 500kHz)		Result	Unit
Lower		62.6	dB
Upper		62.4	dB

Lvl -37.1dBm

Date: 19.AUG.2011 19:54:08

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R&S ETL Digital Spectrum

S/N 100688, FW 2.21

Ch: 25 UHF4/5 RF 539.000000 MHz ATSC/ATSC Mobile DTV (RF Laye

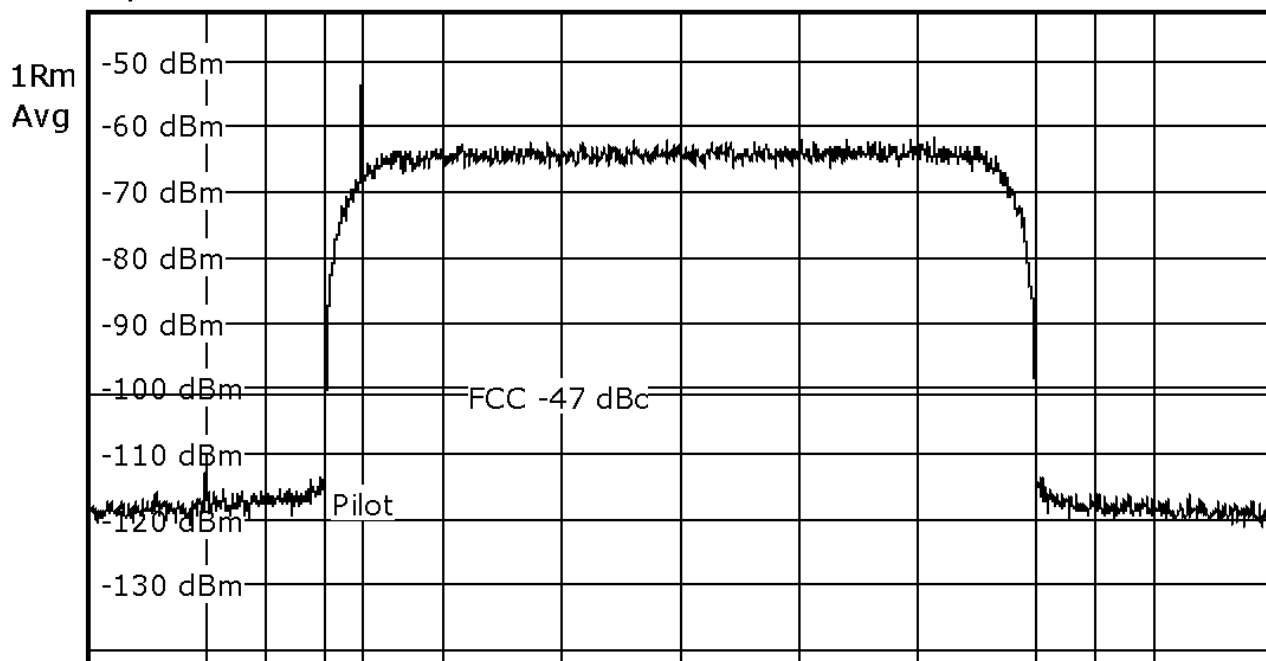
* RBW 10 kHz

* Att 5 dB

VBW 100 kHz

ExpLvl -42.50 dBm

SWT 100ms



CF 539.0 MHz

Span 10.0 MHz

PSPA

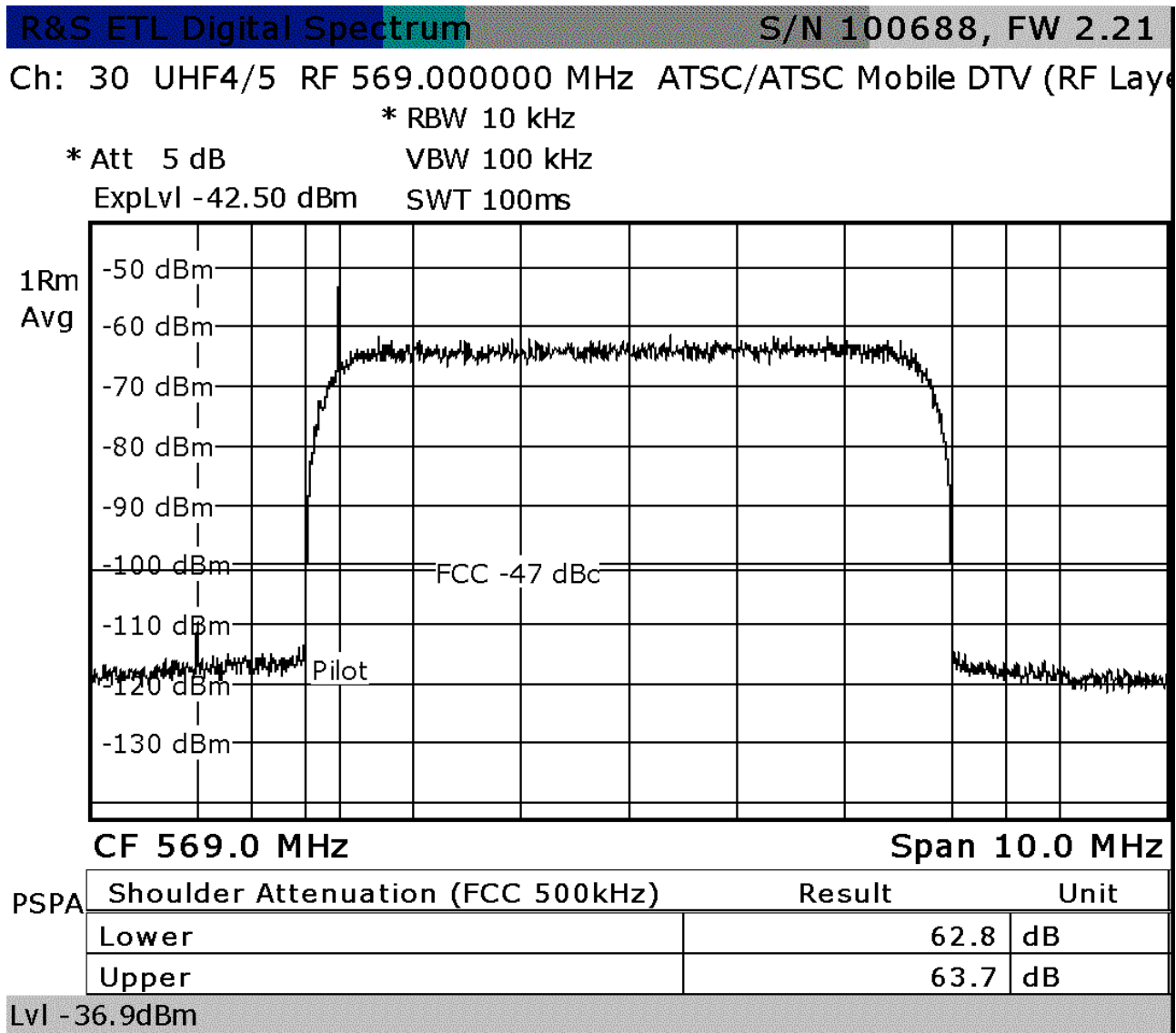
Shoulder Attenuation (FCC 500kHz)	Result	Unit
Lower	62.8	dB
Upper	63.3	dB

Lvl -37.1dBm

Date: 19.AUG.2011 19:56:44

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Date: 19.AUG.2011 19:55:43