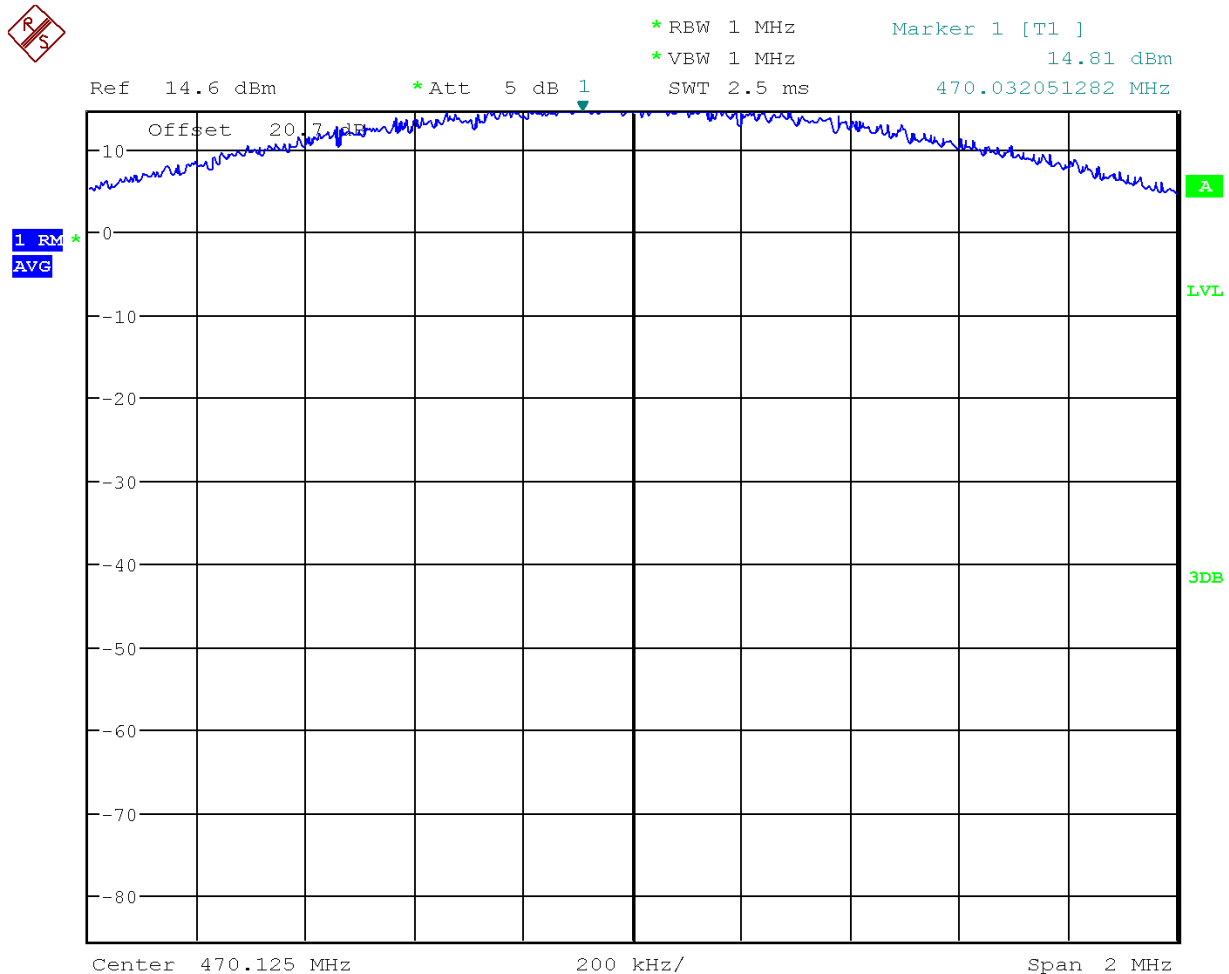


Test Information

EUT Name: AD2 G56 #64 (For G55 Band)
 Serial Number: **TU162030017**
 Test Description: RSS-210 Annex G Necessary Bandwidth
 Carrier Power Reference
 Operating Conditions: 470.125MHz (Low Frequency) at 35mW in Normal Mode
 Operator Name: Alex Stelmaszczyk
 Comment: R & S FSU Spectrum Analyzer
 Test Date: November 4, 2016 15:21:26 PM

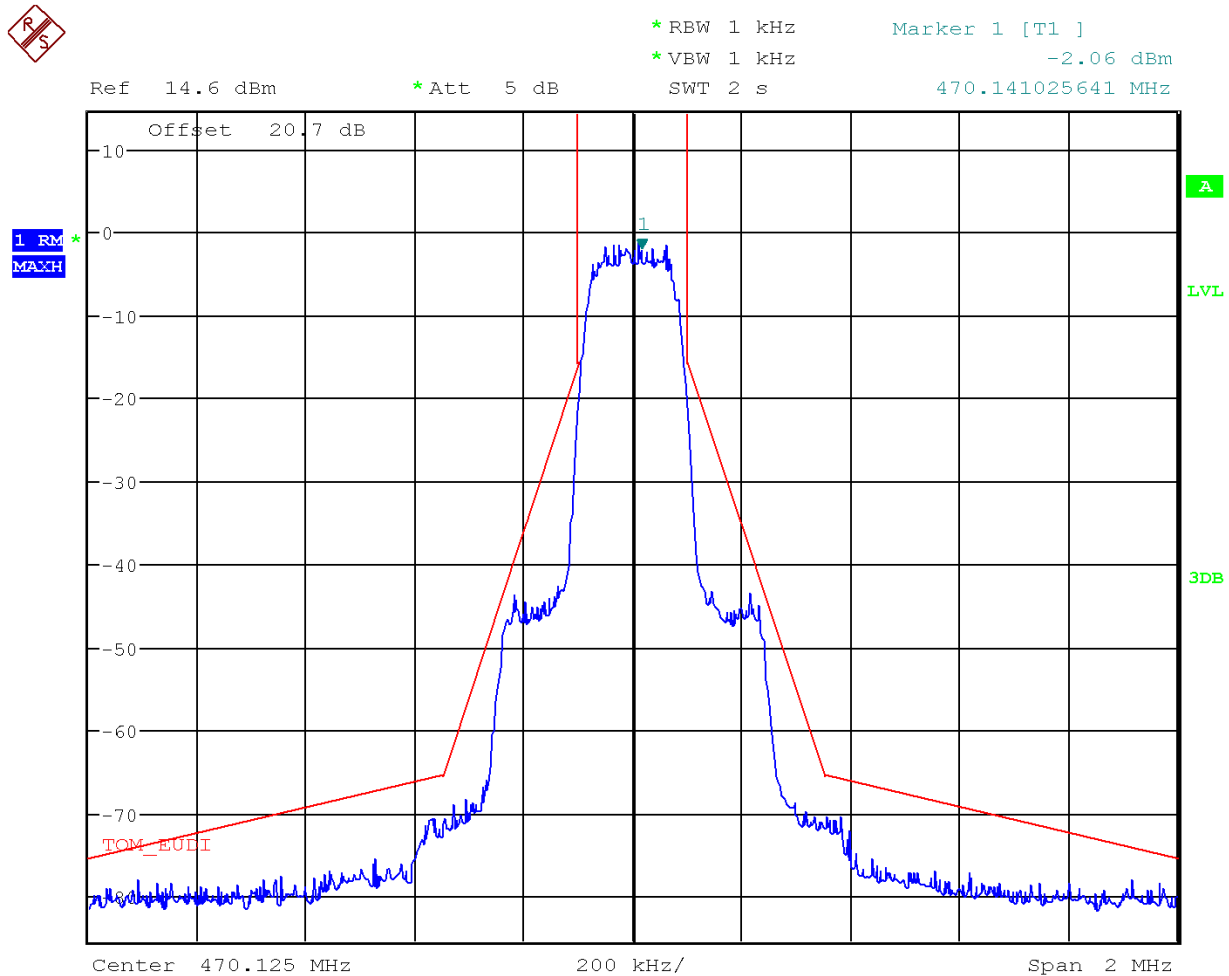


Test Information

EUT Name: AD2 G56 #64 (For G55 Band)
Serial Number: TU162030017
Test Description: RSS-210 Annex G Necessary Bandwidth

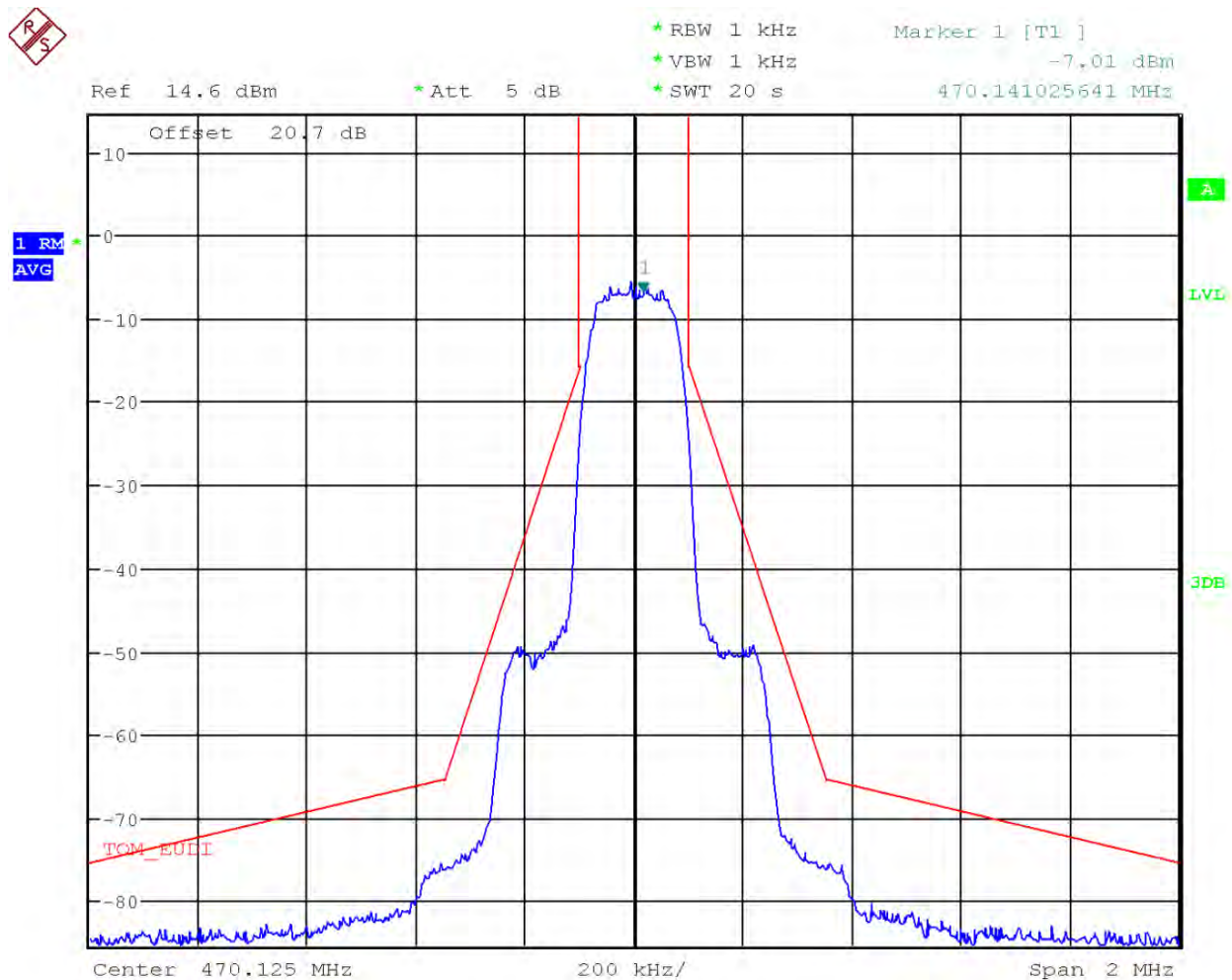
Operating Conditions: 470.125MHz (Low Frequency) at 35mW in Normal Mode

Operator Name: Alex Stelmaszczyk
Comment: R & S FSU Spectrum Analyzer
Test Date: November 4, 2016 15:25:52 PM



Test Information

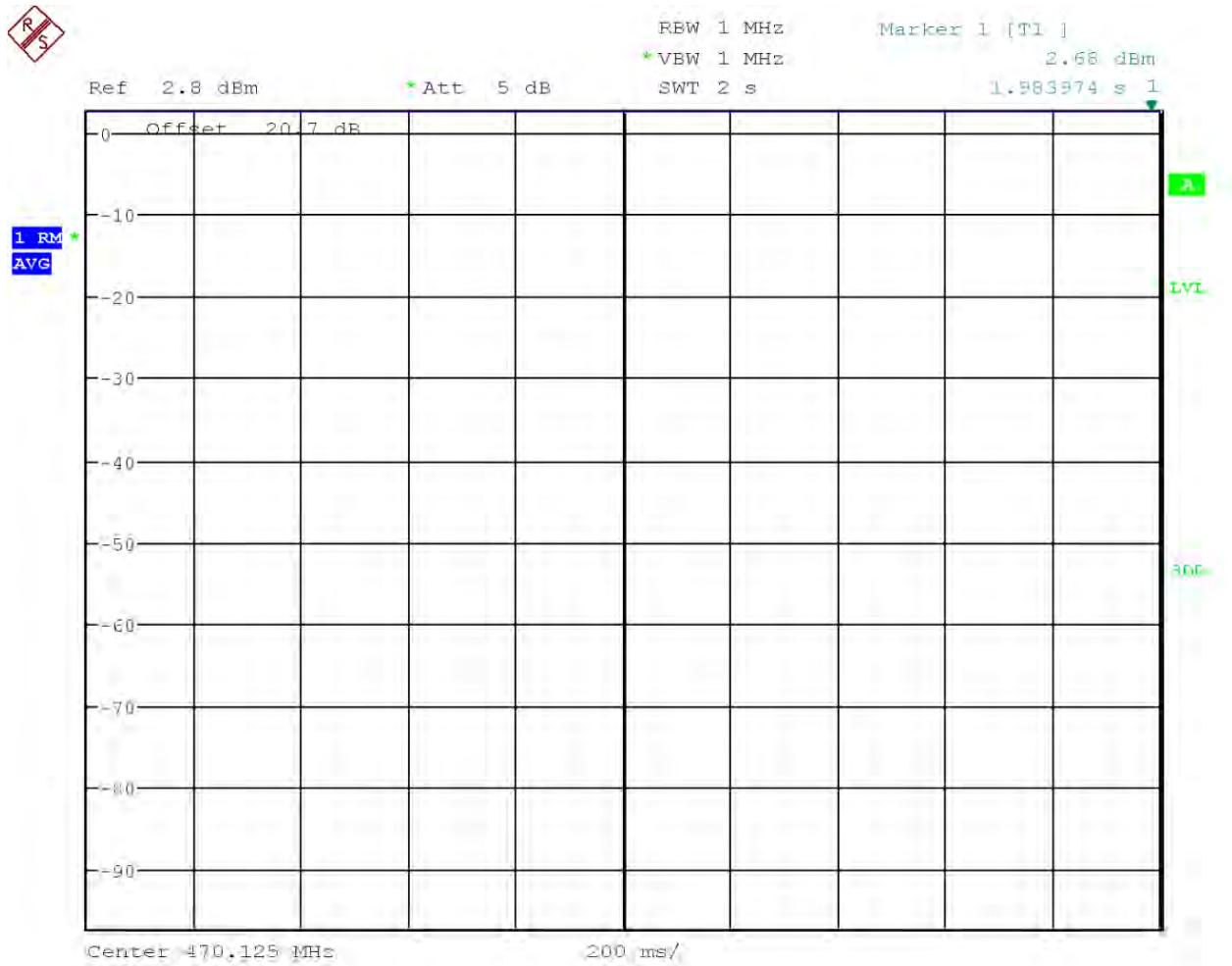
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Serial Number:	TU162030017
Test Description:	RSS-210 Annex G Necessary Bandwidth
	Noise Floor Reference
Operating Conditions:	470.125MHz (Low Frequency) at 35mW in Normal Mode
Operator Name:	Alex Stelmaszczyk
Comment:	R & S FSU Spectrum Analyzer
Test Date:	November 14, 2016 15:28:58 PM



Test Information

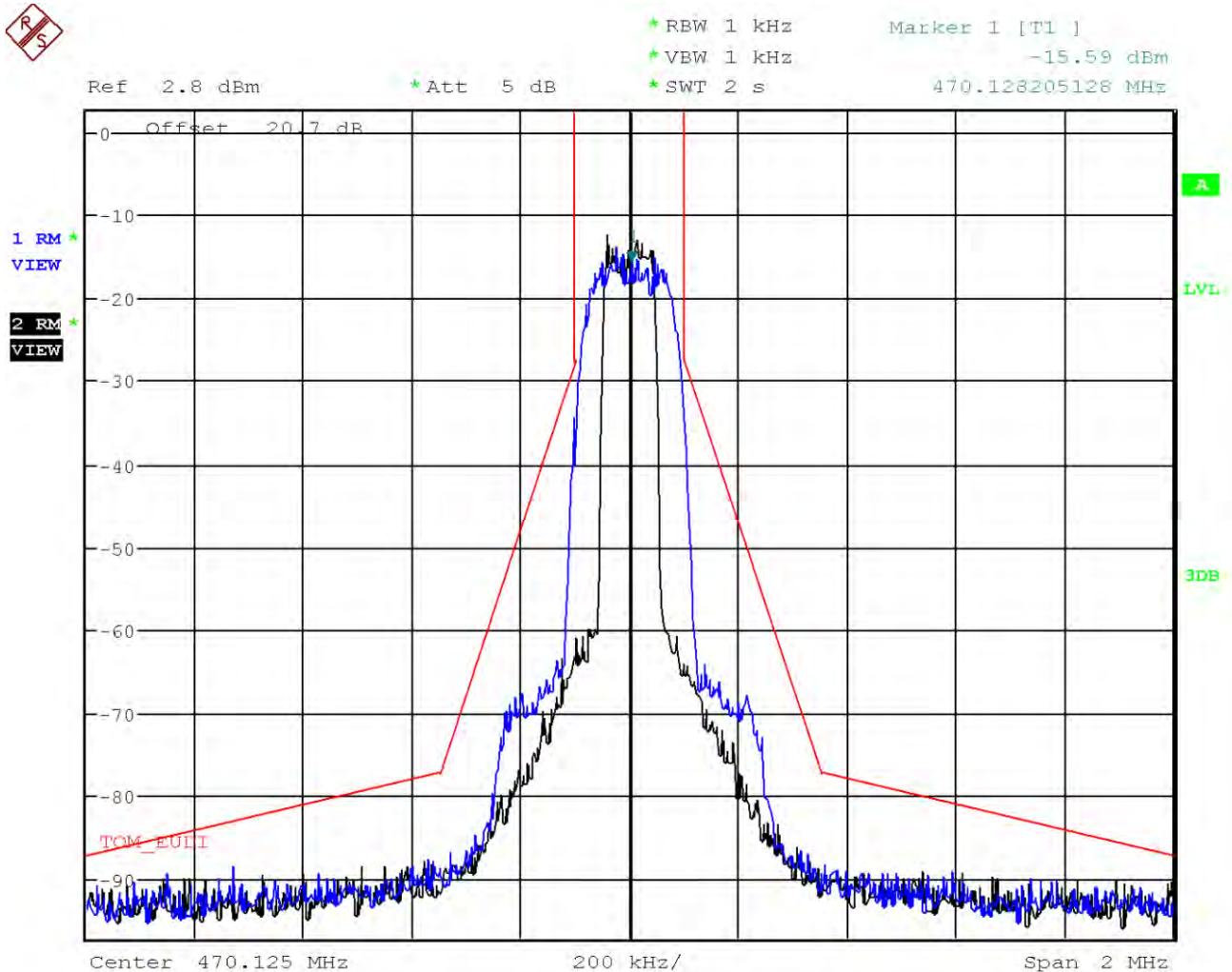
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Serial Number: TU162030017
Test Description: RSS-210 Annex G Necessary Bandwidth
Carrier Power Reference
Operating Conditions: 470.125MHz (Low Frequency) at 2mW in Normal Mode

Operator Name: Alex Stelmaszczyk
Comment: R & S FSU Spectrum Analyzer
Test Date: November 4, 2016 15:33:33 PM



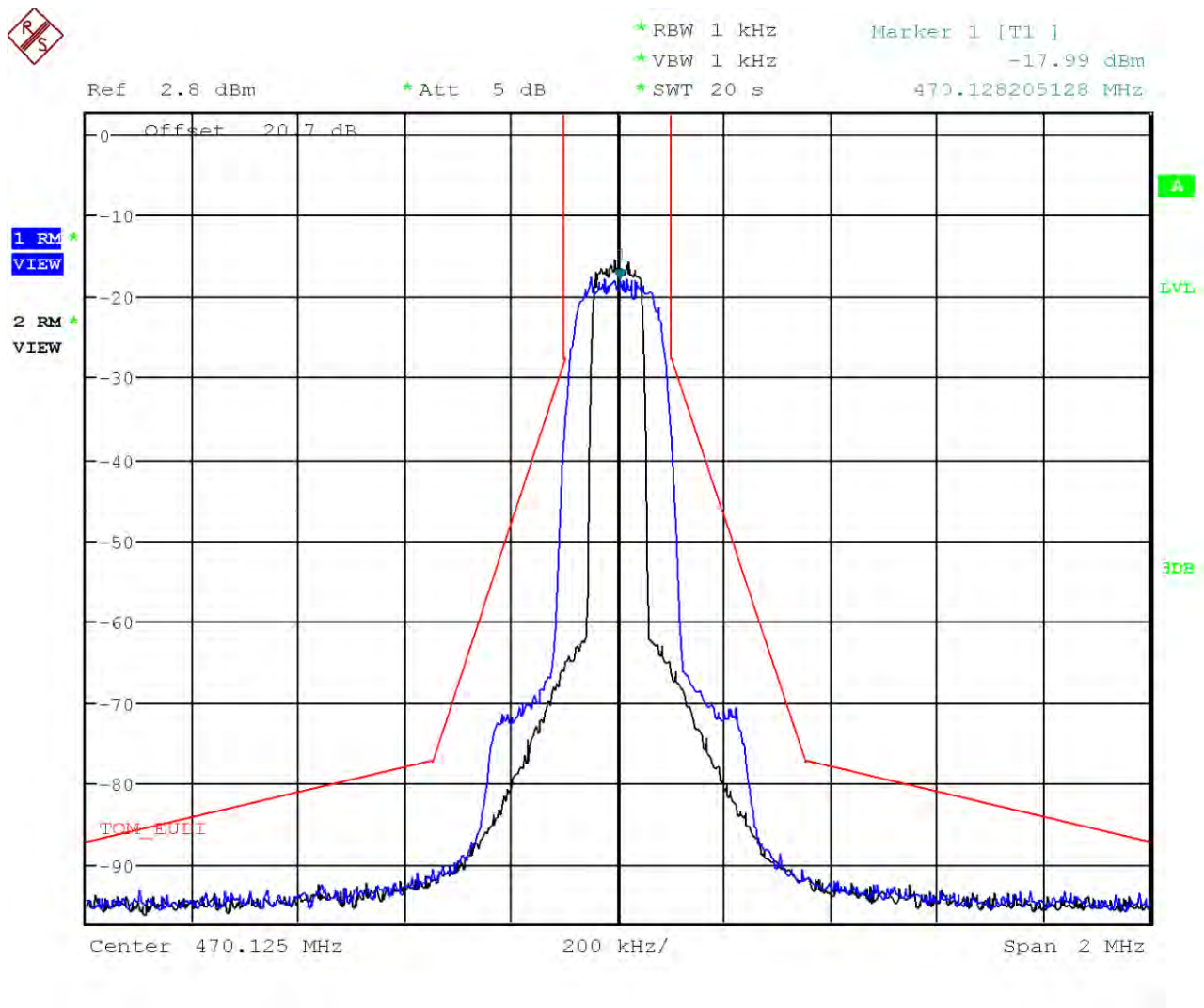
Test Information

EUT Name: AD2 G56 #64 (For G55 Band)
 Serial Number: TU162030017
 Test Description: RSS-210 Annex G Necessary Bandwidth
 Operating Conditions: 470.125MHz (Low Frequency) at 2mW in Normal Mode
 (Blue Trace) and High Density Mode (Black Trace)
 (Channel Bandwidth Options)
 Operator Name: Alex Stelmaszczyk
 Comment: R & S FSU Spectrum Analyzer
 Test Date: November 4, 2016 15:48:32 PM



Test Information

EUT Name: AD2 G56 #64 (For G55 Band)
 Serial Number: TU162030017
 Test Description: RSS-210 Annex G Necessary Bandwidth
 Noise Floor Reference
 Operating Conditions: 470.125MHz (Low Frequency) at 2mW in Normal Mode
 (Blue Trace) and High Density Mode (Black Trace)
 (Channel Bandwidth Options)
 Operator Name: Alex Stelmaszczyk
 Comment: R & S FSU Spectrum Analyzer
 Test Date: November 4, 2016 15:55:58 PM



Test Information

EUT Name: AD2 G56 #64 (For G55 Band)
 Serial Number: TU162030017
 Test Description: RSS-210 Annex G Necessary Bandwidth
 Carrier Power Reference
 Operating Conditions: 553.000MHz (Mid Frequency) at 35mW in Normal Mode
 Operator Name: Alex Stelmaszczyk
 Comment: R & S FSU Spectrum Analyzer
 Test Date: November 7, 2016 17:16:03 PM

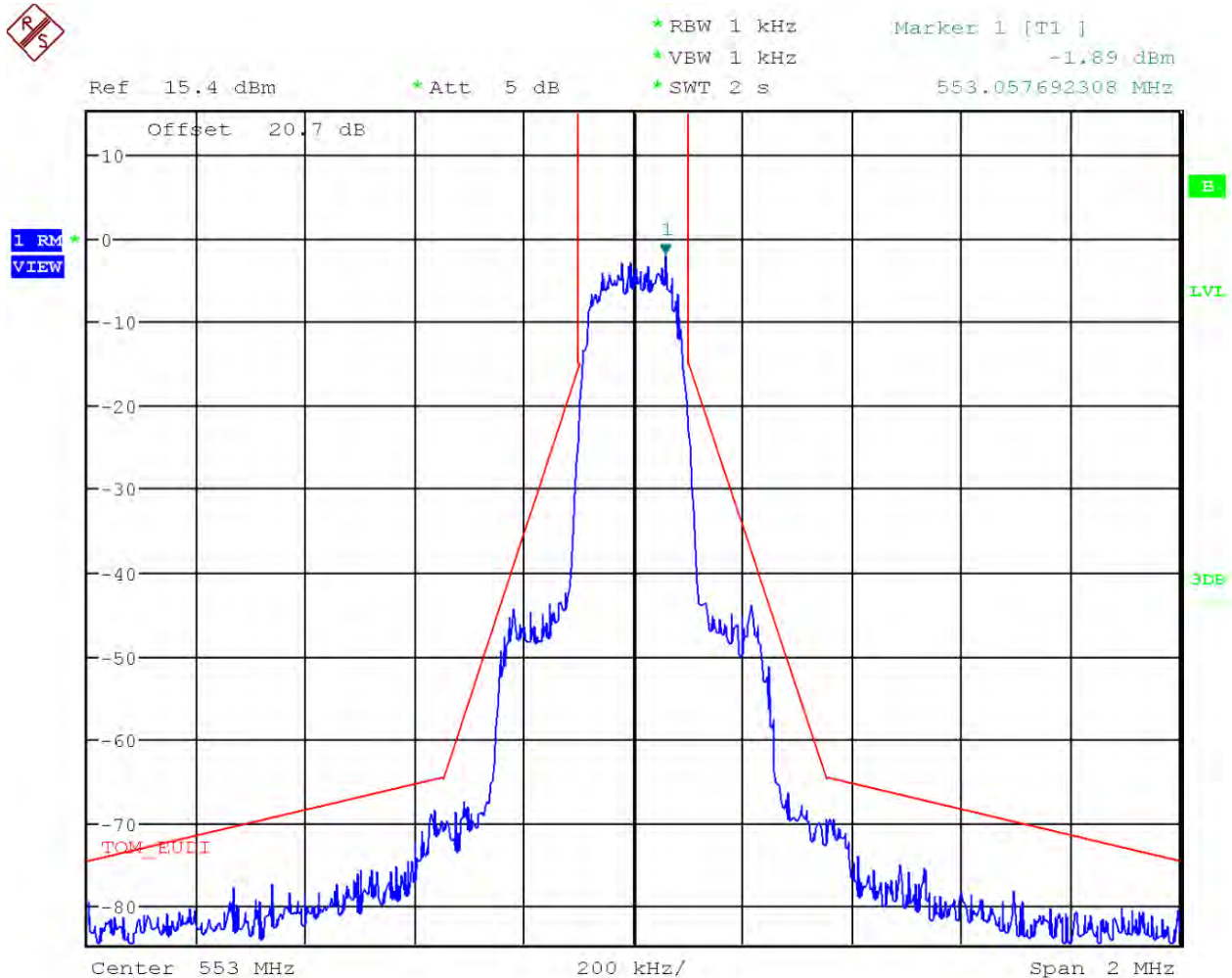


Test Information

EUT Name: AD2 G56 #64 (For G55 Band)
Serial Number: TU162030017
Test Description: RSS-210 Annex G Necessary Bandwidth

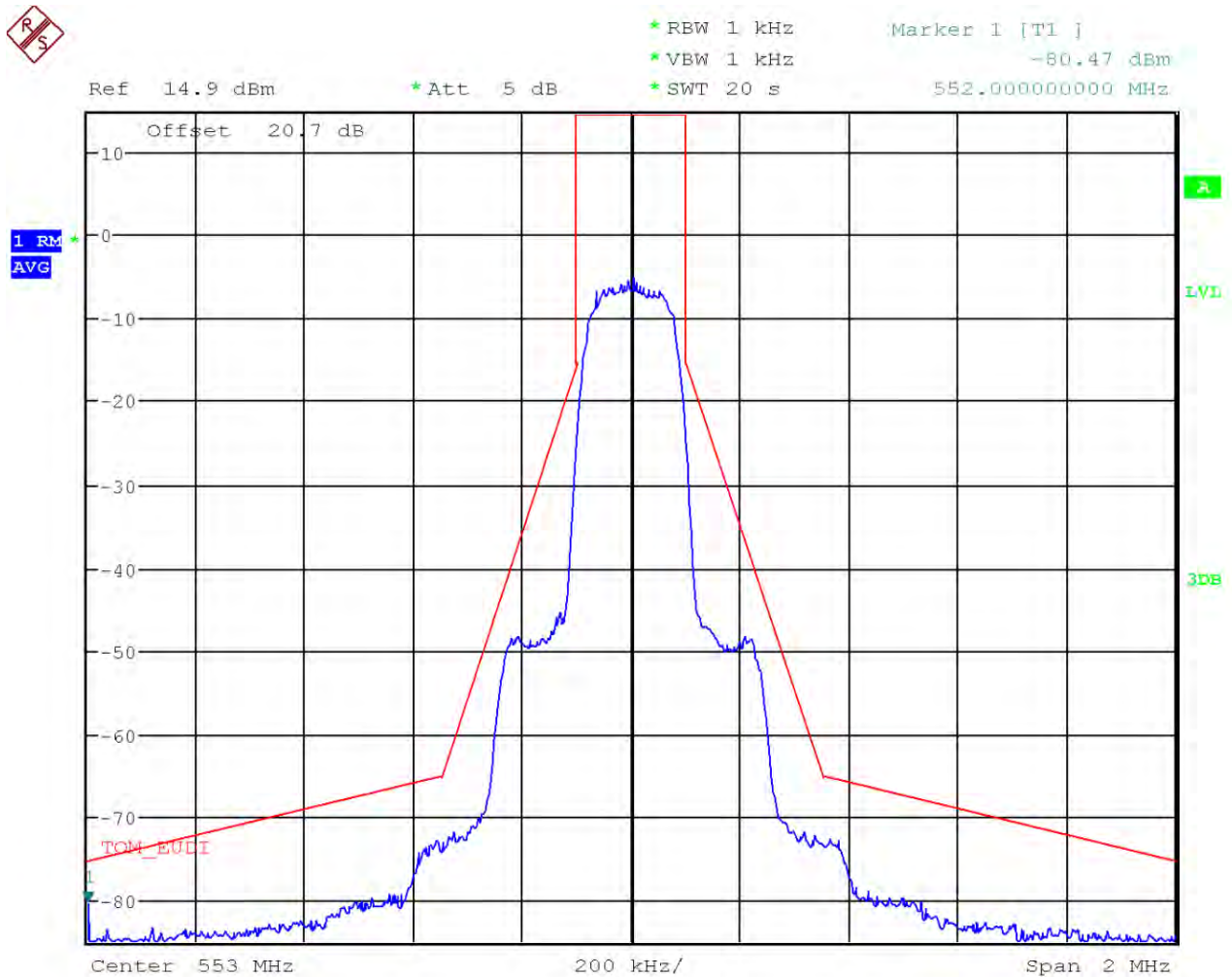
Operating Conditions: 553.000MHz (Mid Frequency) at 35mW in Normal Mode

Operator Name: Alex Stelmaszczyk
Comment: R & S FSU Spectrum Analyzer
Test Date: November 7, 2016 17:21:54 PM



Test Information

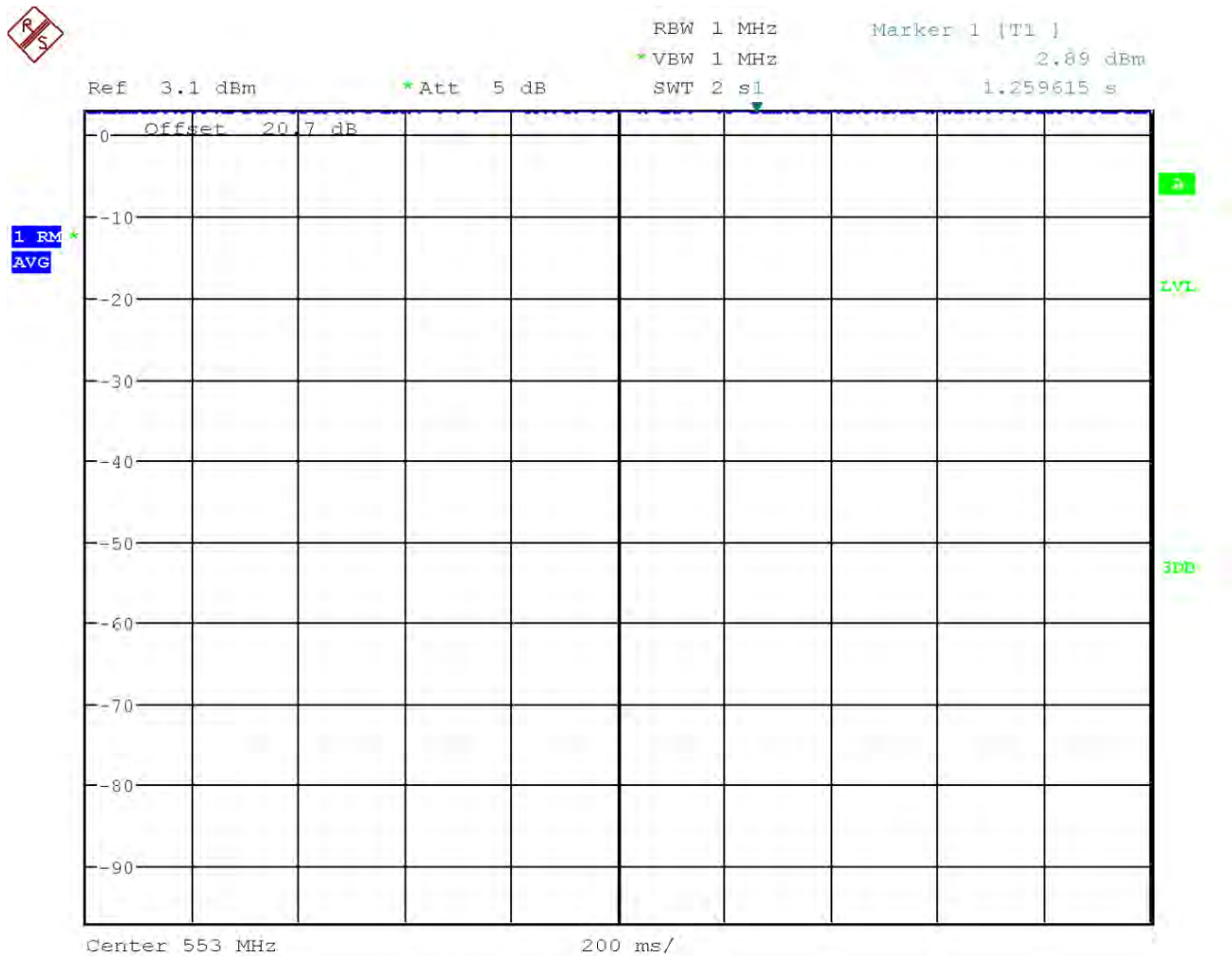
EUT Name:	AD2 G56 #64 (For G55 Band)
Serial Number:	TU162030017
Test Description:	RSS-210 Annex G Necessary Bandwidth Noise Floor Reference
Operating Conditions:	553.000MHz (Mid Frequency) at 35mW in Normal Mode
Operator Name:	Alex Stelmaszczyk
Comment:	R & S FSU Spectrum Analyzer
Test Date:	November 10, 2016 15:44:57 PM



Test Information

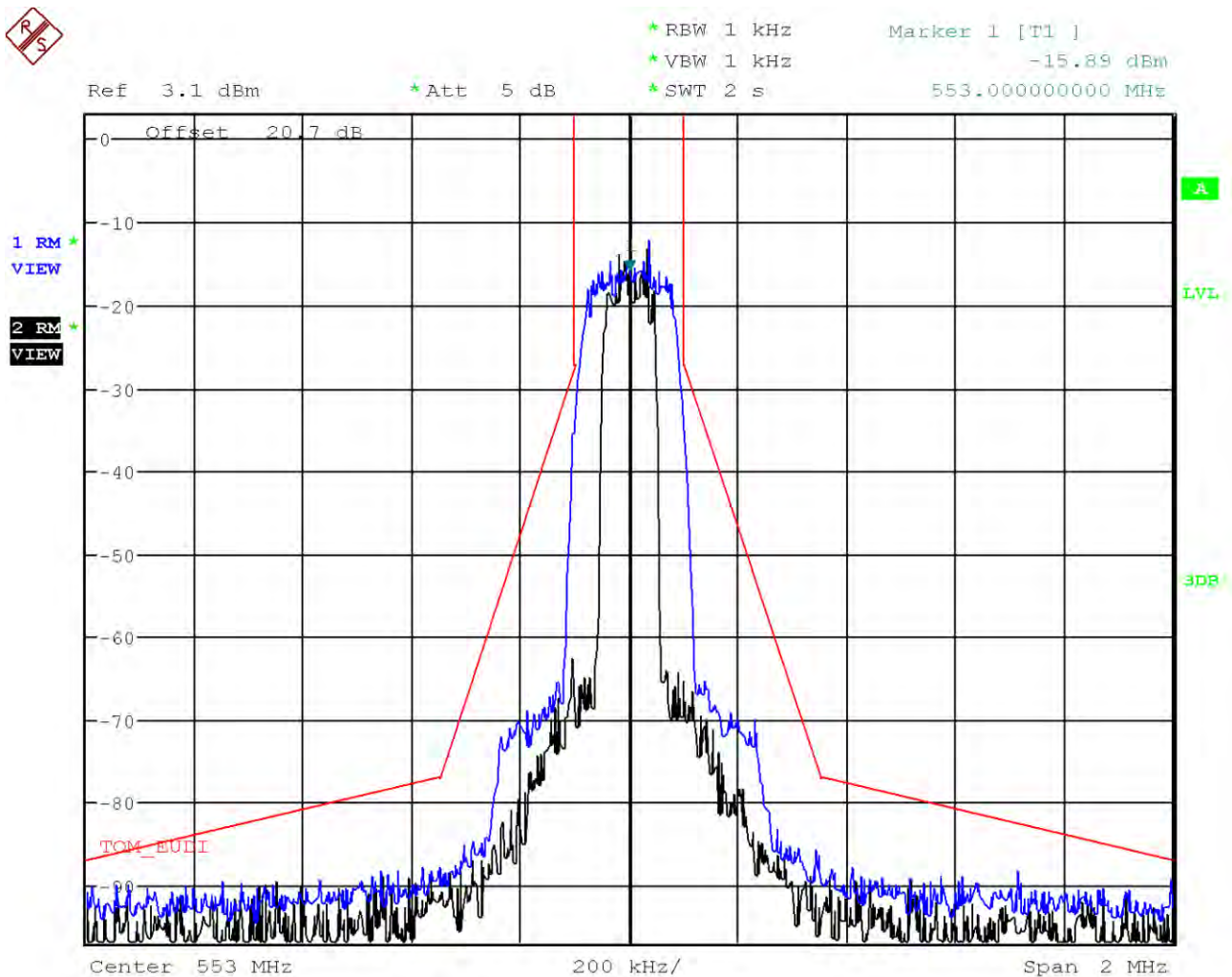
EUT Name: AD2 G56 #64 (For G55 Band)
Serial Number: TU162030017
Test Description: RSS-210 Annex G Necessary Bandwidth
Carrier Power Reference
Operating Conditions: 553.000MHz (Mid Frequency) at 2mW in Normal Mode

Operator Name: Alex Stelmaszczyk
Comment: R & S FSU Spectrum Analyzer
Test Date: November 10, 2016 15:49:13 PM



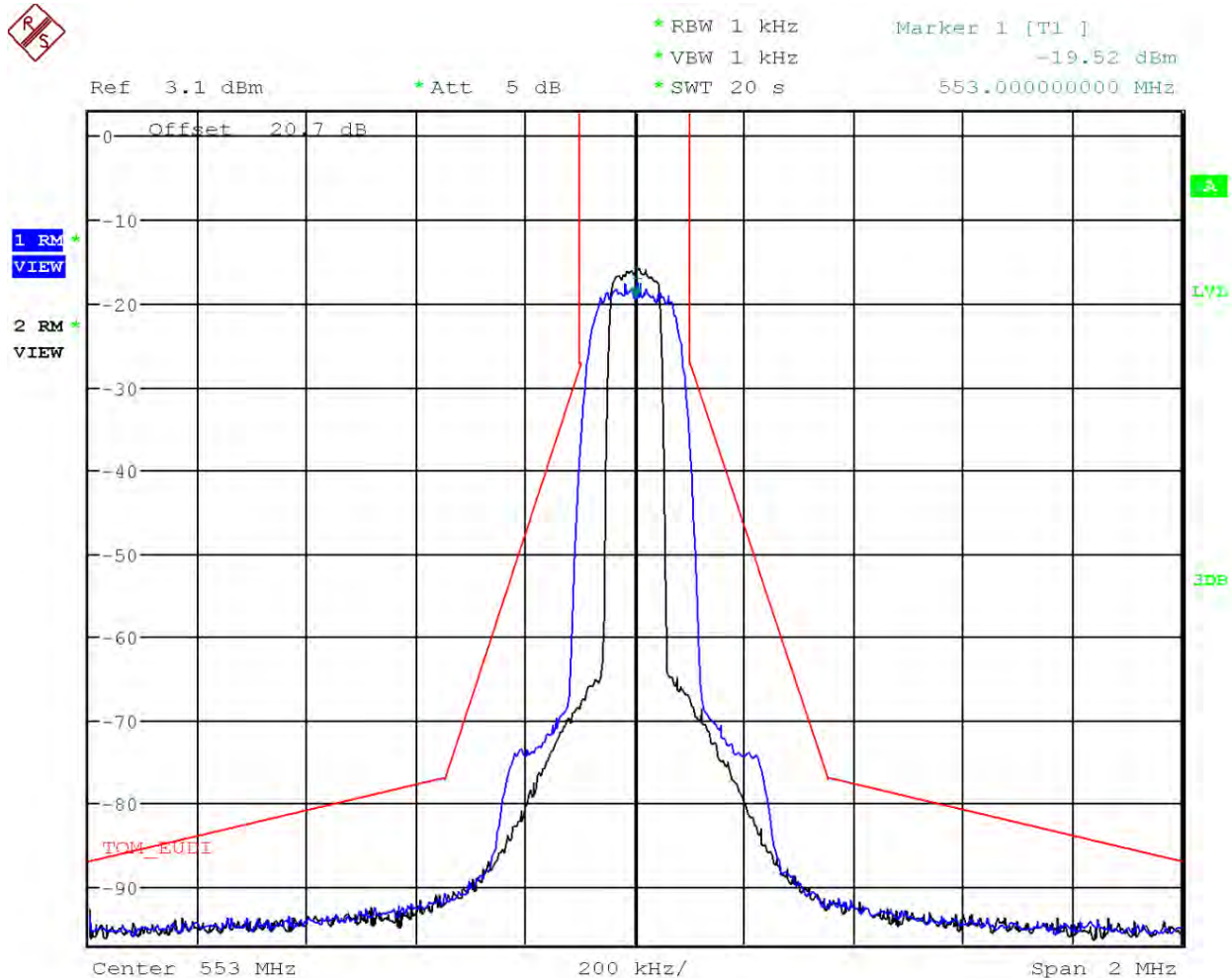
Test Information

EUT Name: AD2 G56 #64 (For G55 Band)
 Serial Number: TU162030017
 Test Description: RSS-210 Annex G Necessary Bandwidth
 Operating Conditions: 553.000MHz (Mid Frequency) at 2mW in Normal Mode
 (Blue Trace) and High Density Mode (Black Trace)
 (Channel Bandwidth Options)
 Operator Name: Alex Stelmaszczyk
 Comment: R & S FSU Spectrum Analyzer
 Test Date: November 10, 2016 15:59:42 PM



Test Information

EUT Name: AD2 G56 #64 (For G55 Band)
 Serial Number: TU162030017
 Test Description: RSS-210 Annex G Necessary Bandwidth
 Noise Floor Reference
 Operating Conditions: 553.000MHz (Mid Frequency) at 2mW in Normal Mode
 (Blue Trace) and High Density Mode (Black Trace)
 (Channel Bandwidth Options)
 Operator Name: Alex Stelmaszczyk
 Comment: R & S FSU Spectrum Analyzer
 Test Date: November 10, 2016 16:25:37 PM



Test Information

EUT Name: AD2 G56 #64 (For G55 Band)
 Serial Number: TU162030017
 Test Description: RSS-210 Annex G Necessary Bandwidth
 Carrier Power Reference
 Operating Conditions: 635.875MHz (High Frequency) at 35mW in Normal Mode

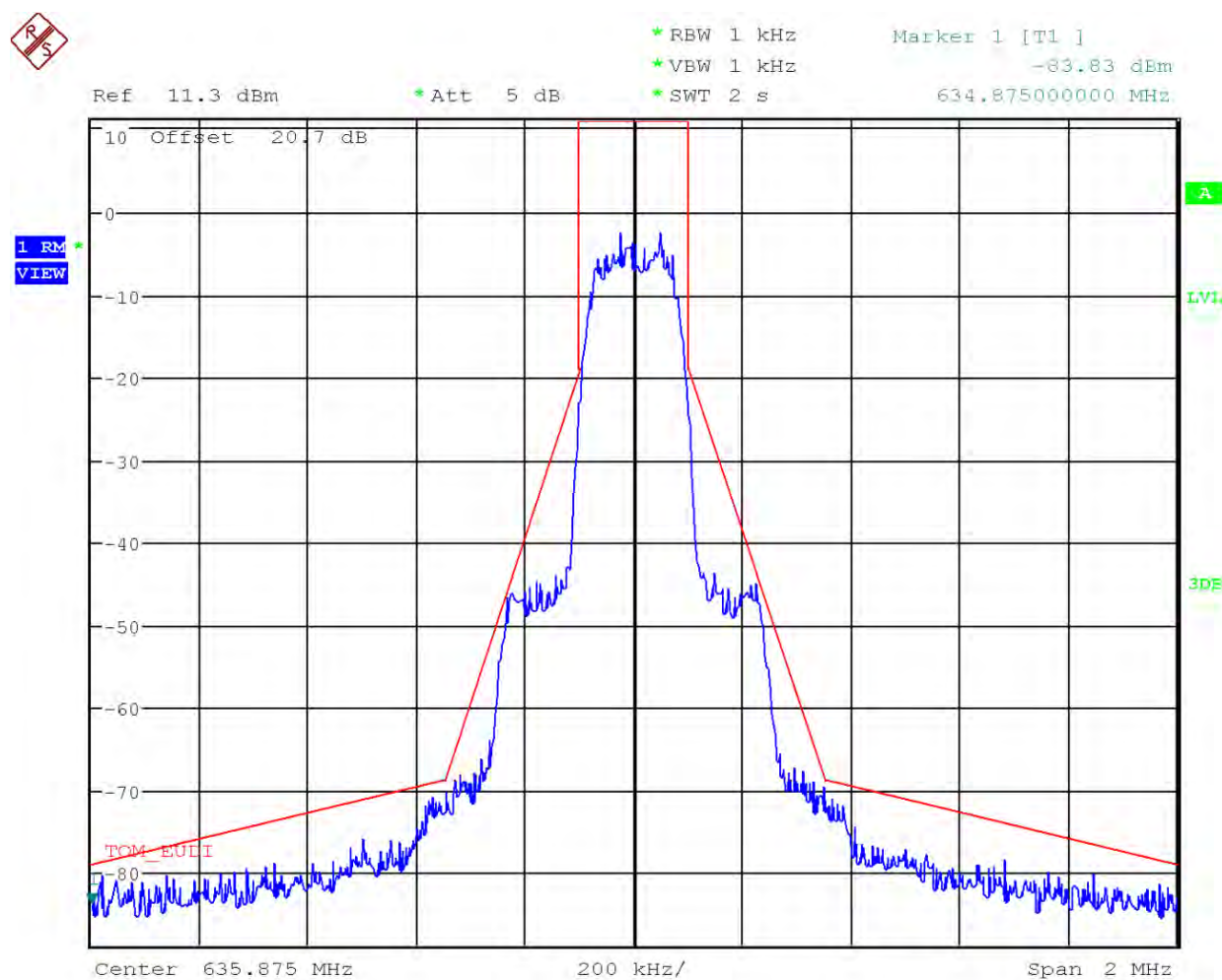
Operator Name: Alex Stelmaszczyk
 Comment: R & S FSU Spectrum Analyzer
 Test Date: November 10, 2016 16:40:21 PM



Appendix D

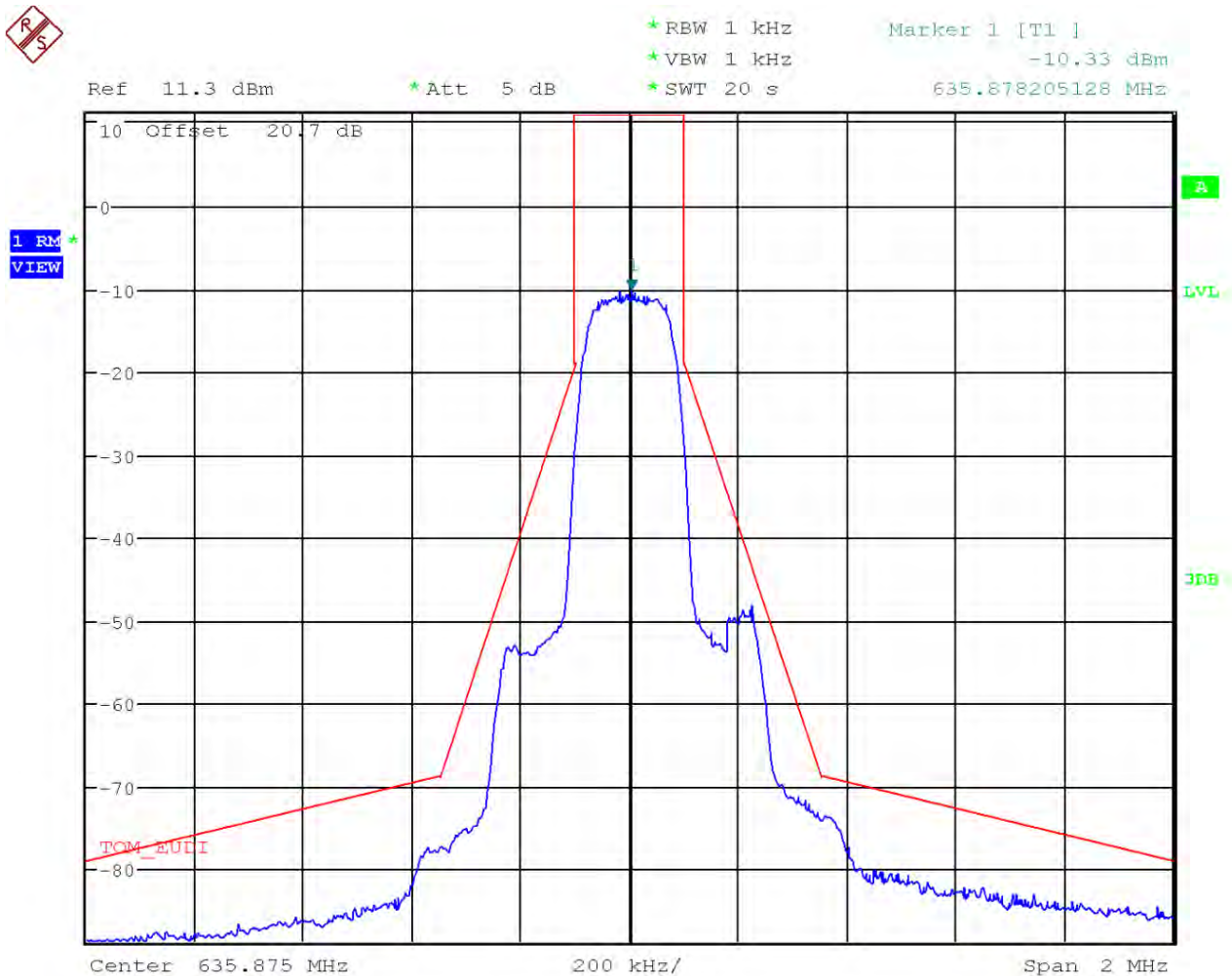
Test Information

EUT Name:	AD2 G56 #64 (For G55 Band)
Serial Number:	TU162030017
Test Description:	RSS-210 Annex G Necessary Bandwidth
Operating Conditions:	635.875MHz (High Frequency) at 35mW in Normal Mode
Operator Name:	Alex Stelmaszczyk
Comment:	R & S FSU Spectrum Analyzer
Test Date:	November 10, 2016 16:42:12 PM



Test Information

EUT Name: AD2 G56 #64 (For G55 Band)
 Serial Number: TU162030017
 Test Description: RSS-210 Annex G Necessary Bandwidth
 Noise Floor Reference
 Operating Conditions: 635.875MHz (High Frequency) at 35mW in Normal Mode
 Operator Name: Alex Stelmaszczyk
 Comment: R & S FSU Spectrum Analyzer
 Test Date: November 10, 2016 16:47:09 PM



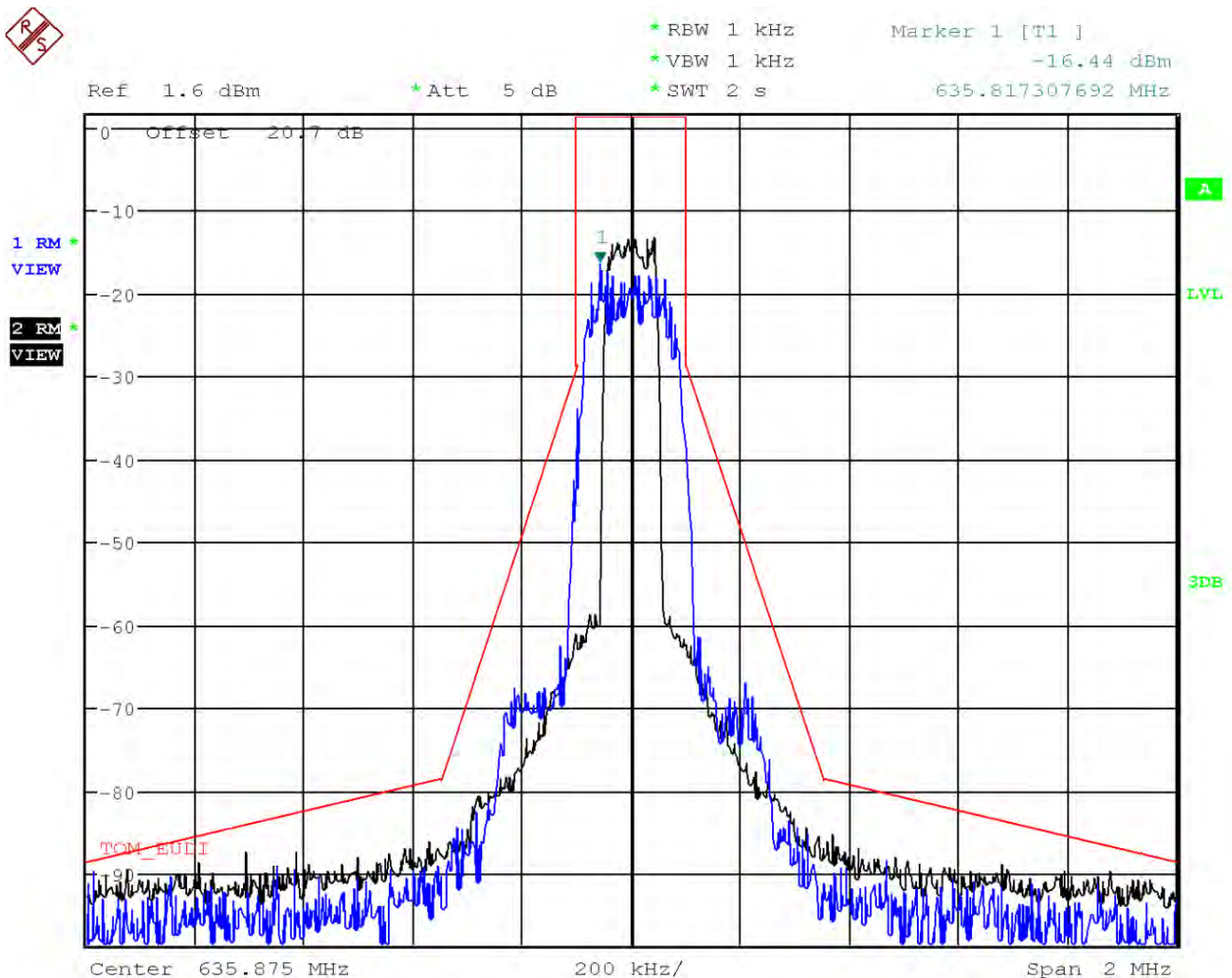
Test Information

EUT Name: AD2 G56 #64 (For G55 Band)
 Serial Number: TU162030017
 Test Description: RSS-210 Annex G Necessary Bandwidth
 Carrier Power Reference
 Operating Conditions: 635.875MHz (High Frequency) at 2mW in Normal Mode
 Operator Name: Alex Stelmaszczyk
 Comment: R & S FSU Spectrum Analyzer
 Test Date: November 10, 2016 17:02:15 PM



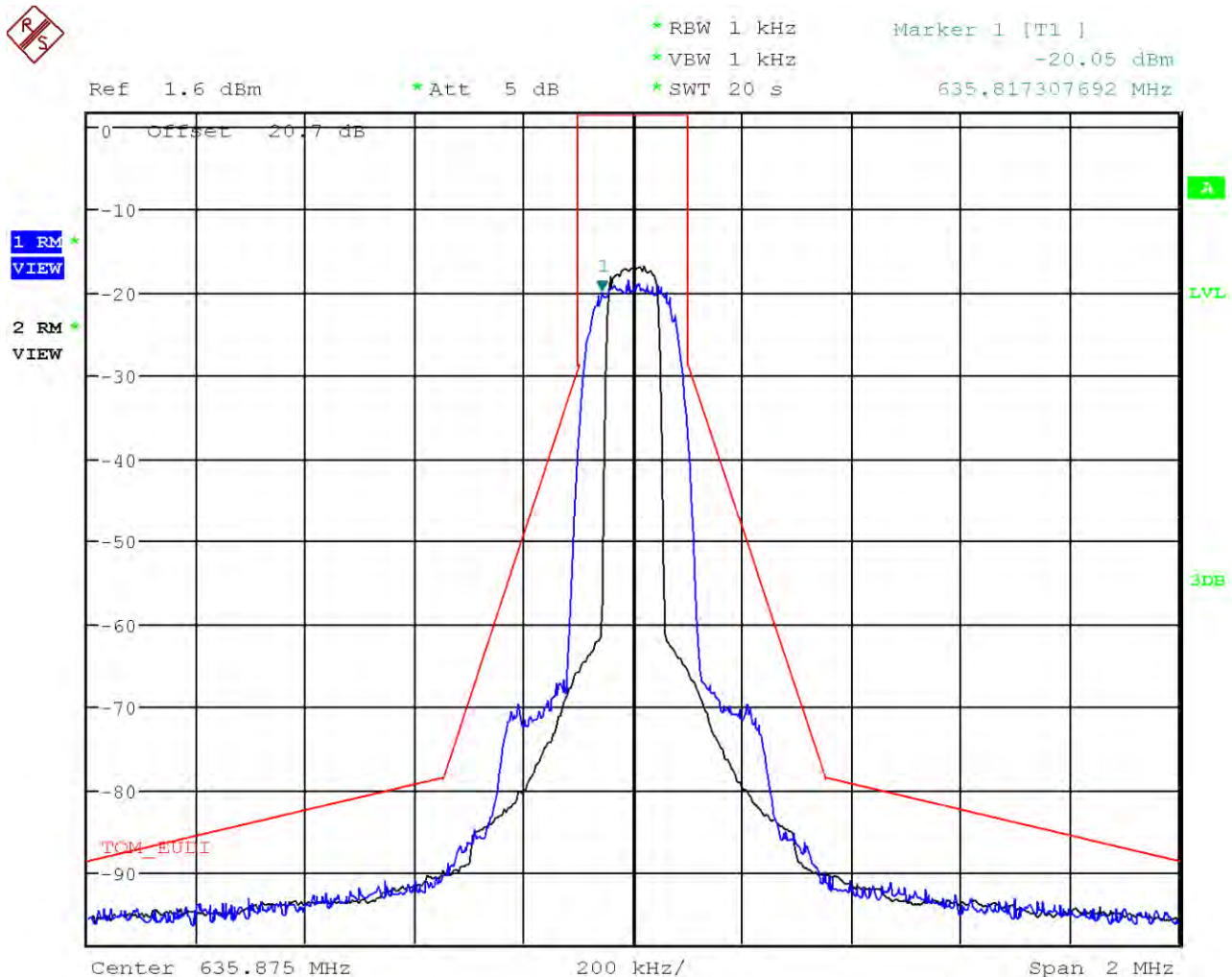
Test Information

EUT Name: AD2 G56 #64 (For G55 Band)
Serial Number: TU162030017
Test Description: RSS-210 Annex G Necessary Bandwidth
Operating Conditions: 635.875MHz (High Frequency) at 2mW in Normal Mode
(Blue Trace) and High Density Mode (Black Trace)
(Channel Bandwidth Options)
Operator Name: Alex Stelmaszczyk
Comment: R & S FSU Spectrum Analyzer
Test Date: November 10, 2016 17:08:31 PM



Test Information

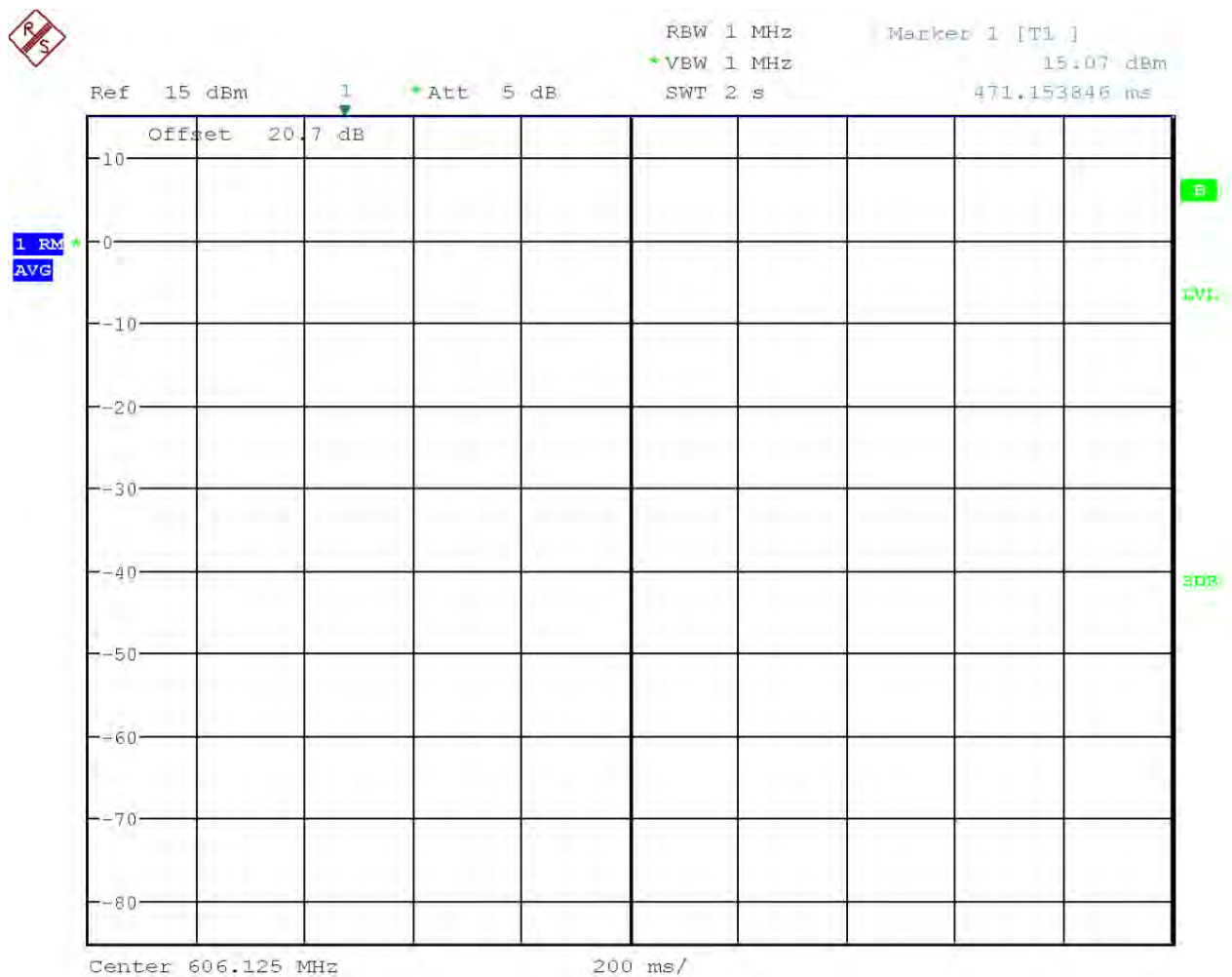
EUT Name: AD2 G56 #64 (For G55 Band)
Serial Number: TU162030017
Test Description: RSS-210 Annex G Necessary Bandwidth
Noise Floor Reference
Operating Conditions: 635.875MHz (Low Frequency) at 2mW in Normal Mode
(Blue Trace) and High Density Mode (Black Trace)
(Channel Bandwidth Options)
Operator Name: Alex Stelmaszczyk
Comment: R & S FSU Spectrum Analyzer
Test Date: November 10, 2016 17:18:43 PM



Test Information

EUT Name: AD2 K55 #150 (For K53 Band)
Serial Number: TU162080108
Test Description: RSS-210 Annex G Necessary Bandwidth
Carrier Power Reference
Operating Conditions: 606.125MHz (Low Frequency) at 35mW in Normal Mode

Operator Name: Alex Stelmaszczyk
Comment: R & S FSU Spectrum Analyzer
Test Date: November 22, 2016 16:54:49 PM

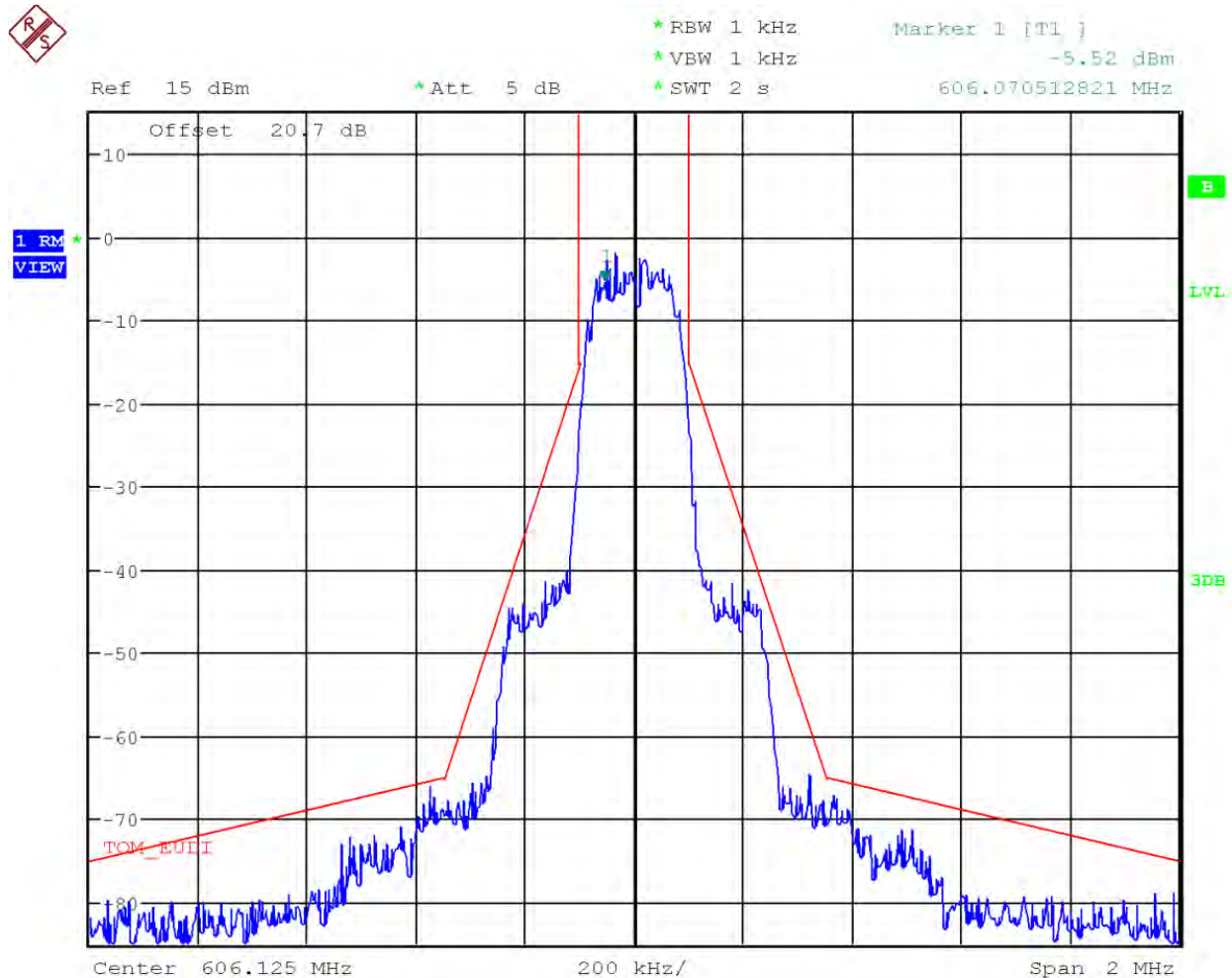


Test Information

EUT Name: AD2 K55 #150 (For K53 Band)
Serial Number: TU162080108
Test Description: RSS-210 Annex G Necessary Bandwidth

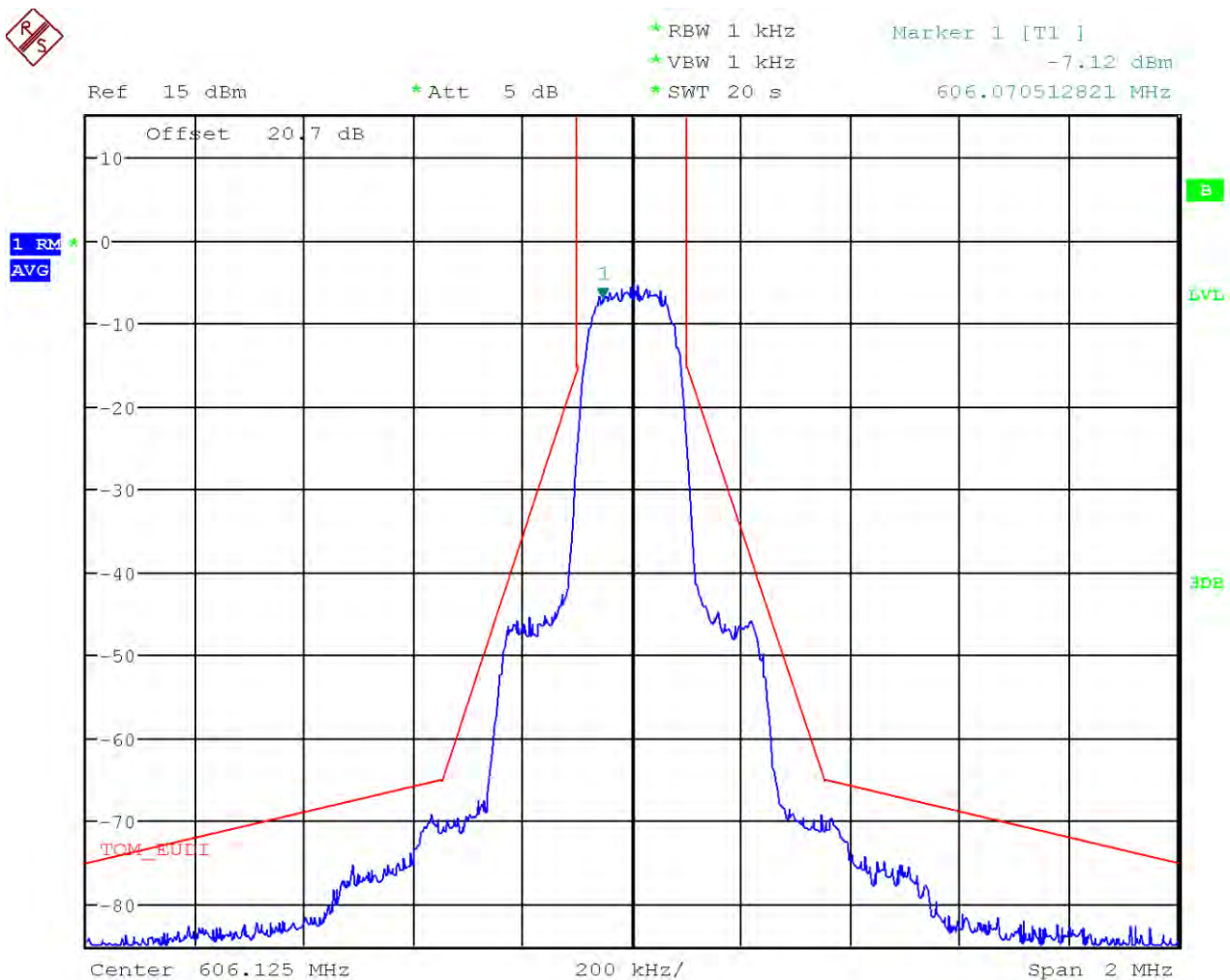
Operating Conditions: 606.125MHz (Low Frequency) at 35mW in Normal Mode

Operator Name: Alex Stelmaszczyk
Comment: R & S FSU Spectrum Analyzer
Test Date: November 22, 2016 16:56:44 PM



Test Information

EUT Name: AD2 K55 #150 (For K53 Band)
 Serial Number: TU162080108
 Test Description: RSS-210 Annex G Necessary Bandwidth
 Noise Floor Reference
 Operating Conditions: 606.125MHz (Low Frequency) at 35mW in Normal Mode
 Operator Name: Alex Stelmaszczyk
 Comment: R & S FSU Spectrum Analyzer
 Test Date: November 22, 2016 16:58:08 PM



Test Information

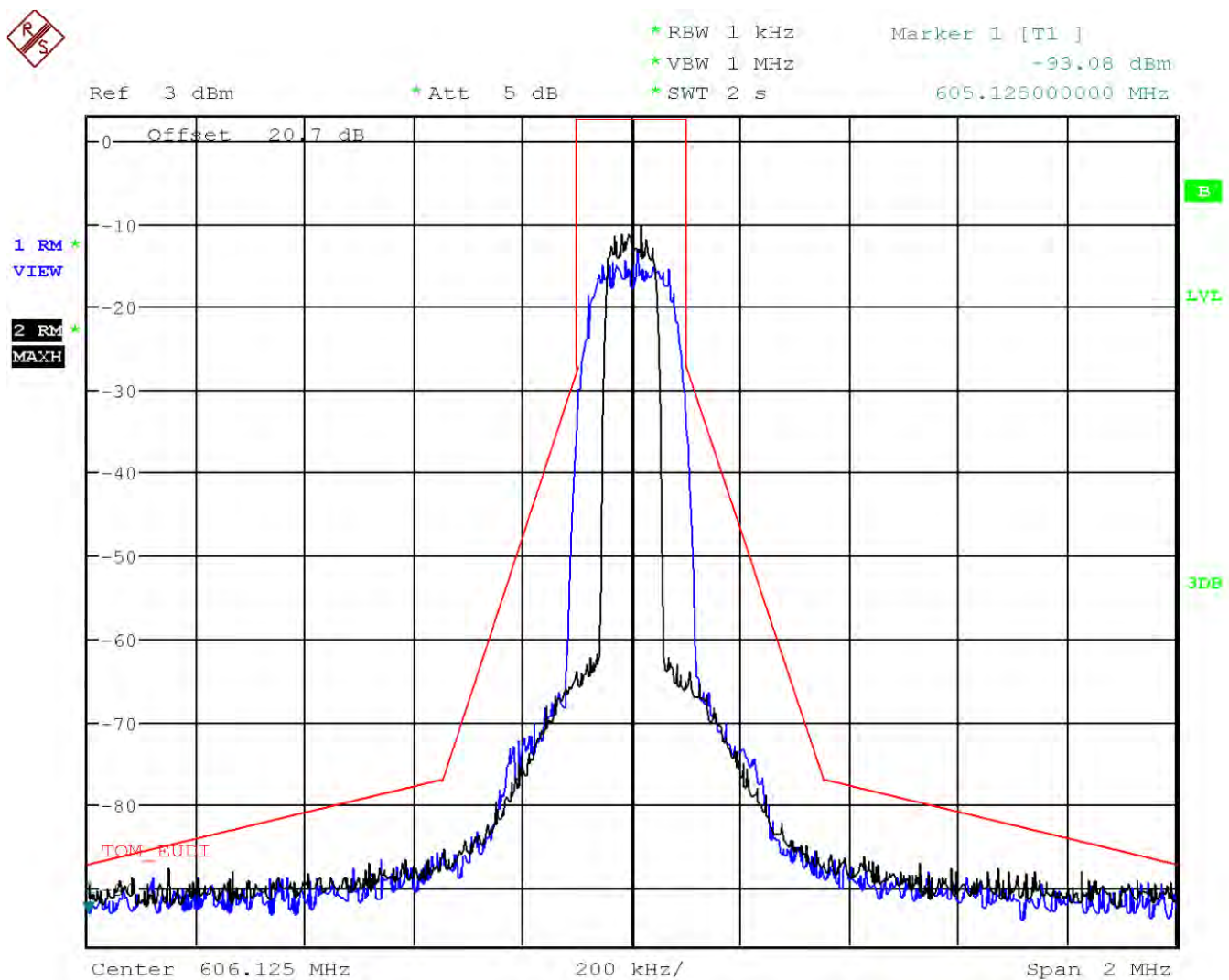
EUT Name: AD2 K55 #150 (For K53 Band)
Serial Number: TU162080108
Test Description: RSS-210 Annex G Necessary Bandwidth
Carrier Power Reference
Operating Conditions: 606.125MHz (Low Frequency) at 2mW in Normal Mode

Operator Name: Alex Stelmaszczyk
Comment: R & S FSU Spectrum Analyzer
Test Date: November 23, 2016 12:07:25 PM



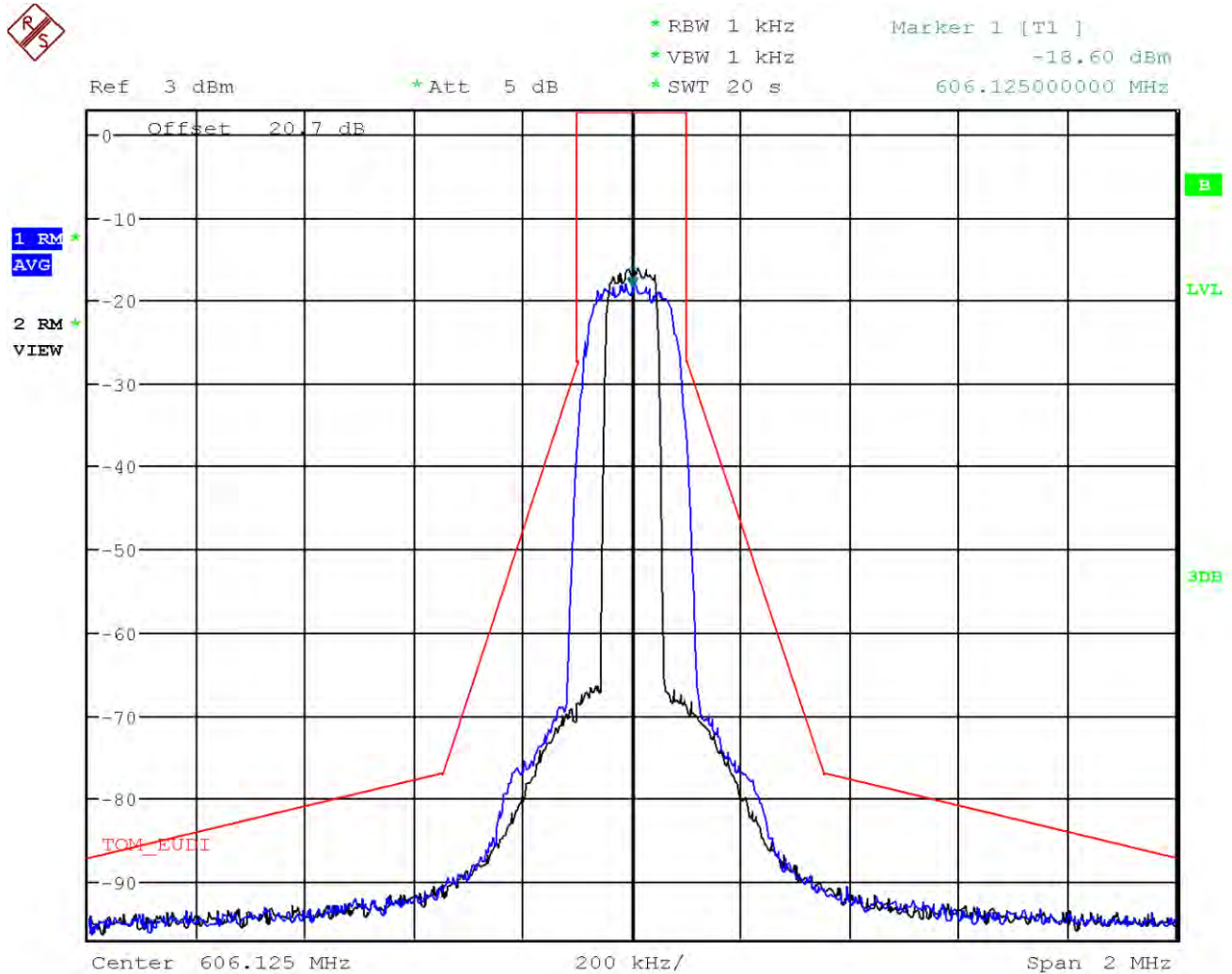
Test Information

EUT Name:	AD2 K55 #150 (For K53 Band)
Serial Number:	TU162080108
Test Description:	RSS-210 Annex G Necessary Bandwidth
Operating Conditions:	606.125MHz (Low Frequency) at 2mW in Normal Mode (Blue Trace) and High Density Mode (Black Trace) (Channel Bandwidth Options)
Operator Name:	Alex Stelmaszczyk
Comment:	R & S FSU Spectrum Analyzer
Test Date:	November 23, 2016 12:11:03 PM



Test Information

EUT Name: AD2 K55 #150 (For K53 Band)
 Serial Number: TU162080108
 Test Description: RSS-210 Annex G Necessary Bandwidth
 Noise Floor Reference
 Operating Conditions: 606.125MHz (Low Frequency) at 2mW in Normal Mode
 (Blue Trace) and High Density Mode (Black Trace)
 (Channel Bandwidth Options)
 Operator Name: Alex Stelmaszczyk
 Comment: R & S FSU Spectrum Analyzer
 Test Date: November 23, 2016 12:20:13 PM



Test Information

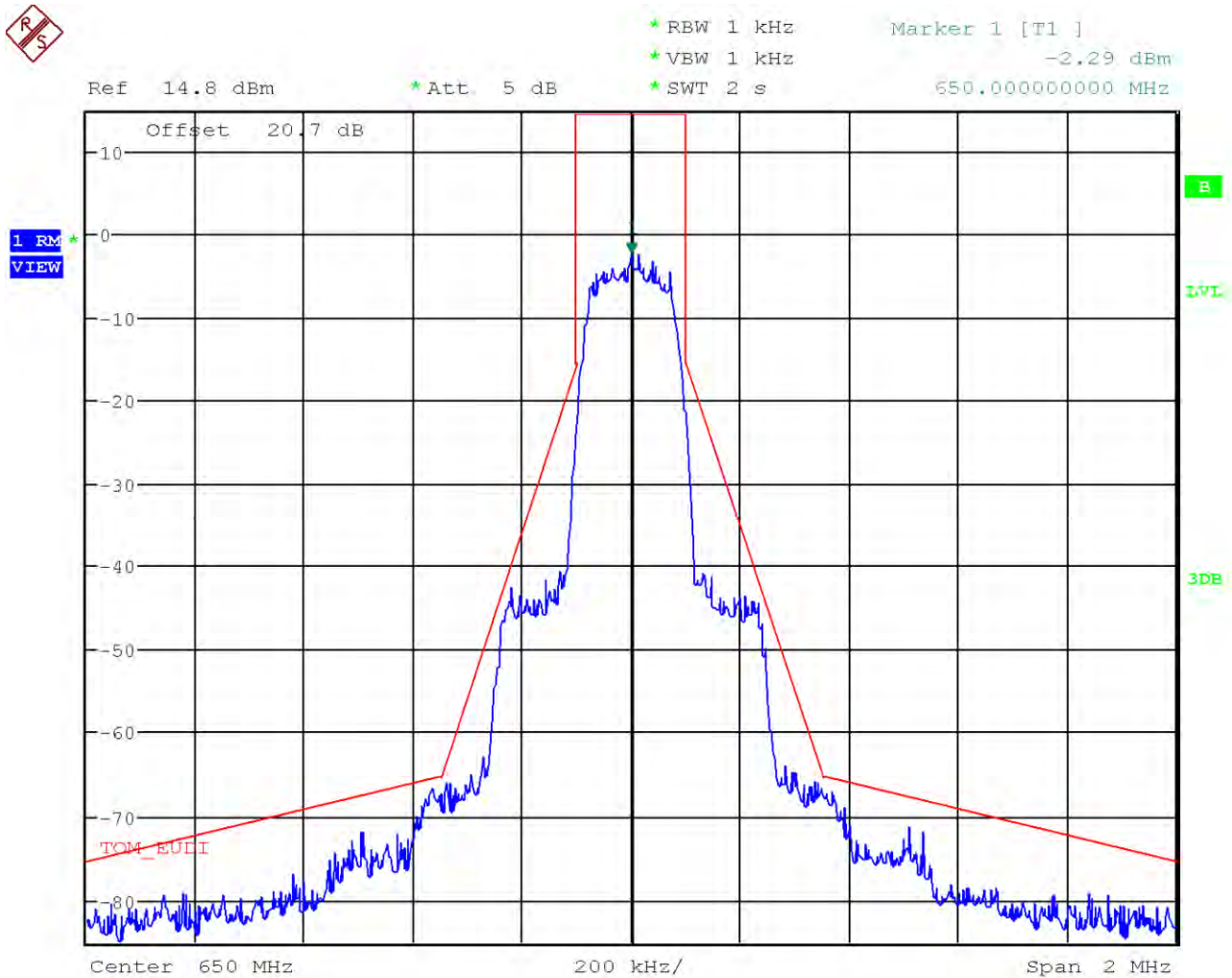
EUT Name: AD2 K55 #150 (For K53 Band)
 Serial Number: TU162080108
 Test Description: RSS-210 Annex G Necessary Bandwidth
 Carrier Power Reference
 Operating Conditions: 650.000MHz (Mid Frequency) at 35mW in Normal Mode

Operator Name: Alex Stelmaszczyk
 Comment: R & S FSU Spectrum Analyzer
 Test Date: November 22, 2016 17:00:04 PM



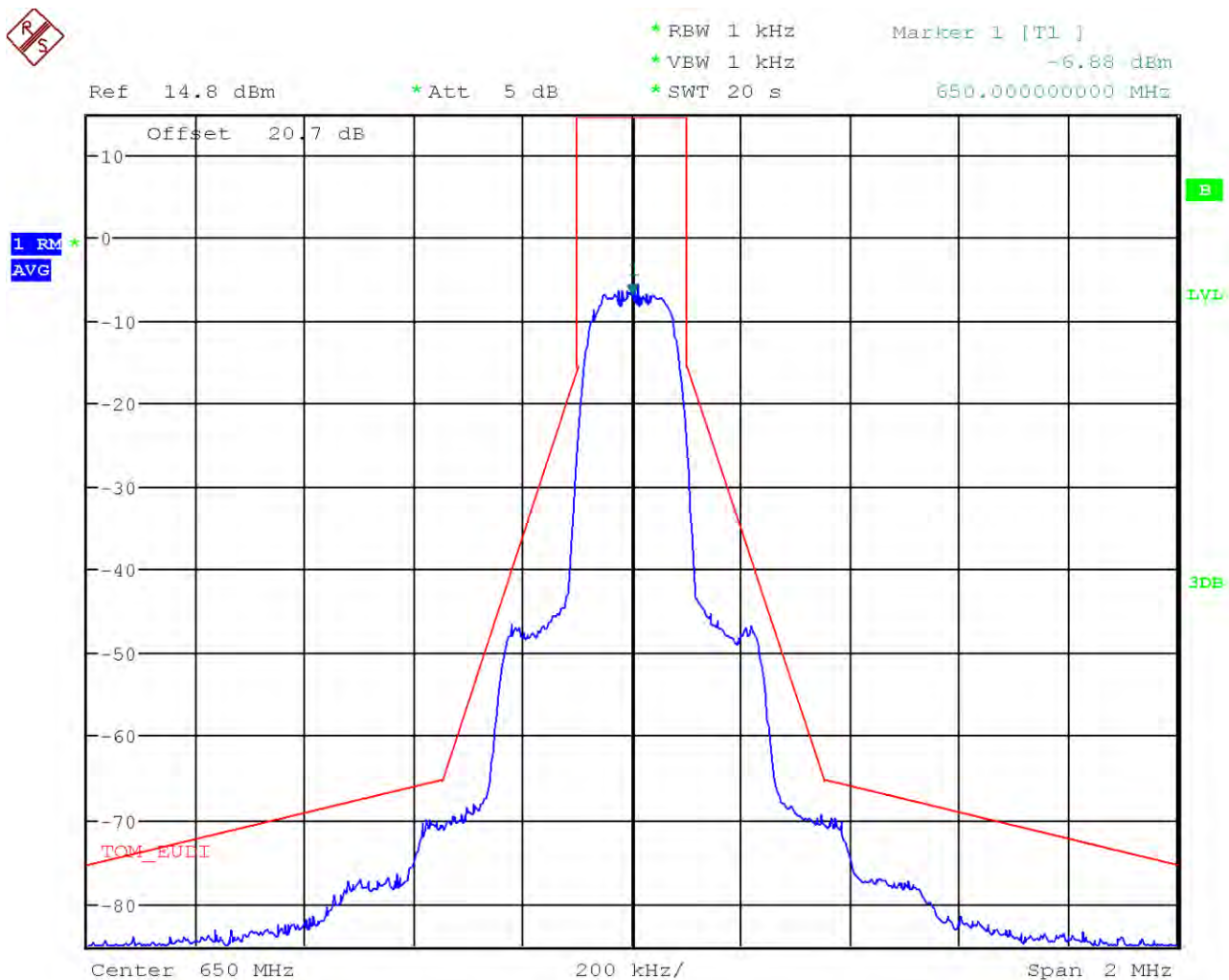
Test Information

EUT Name: AD2 K55 #150 (For K53 Band)
Serial Number: TU162080108
Test Description: RSS-210 Annex G Necessary Bandwidth
Operating Conditions: 650.000MHz (Mid Frequency) at 35mW in Normal Mode
Operator Name: Alex Stelmaszczyk
Comment: R & S FSU Spectrum Analyzer
Test Date: November 22, 2016 17:01:49 PM



Test Information

EUT Name:	AD2 K55 #150 (For K53 Band)
Serial Number:	TU162080108
Test Description:	RSS-210 Annex G Necessary Bandwidth
Operating Conditions:	Noise Floor Reference
	650.000MHz (Mid Frequency) at 35mW in Normal Mode
Operator Name:	Alex Stelmaszczyk
Comment:	R & S FSU Spectrum Analyzer
Test Date:	November 22, 2016 17:04:17 PM



Test Information

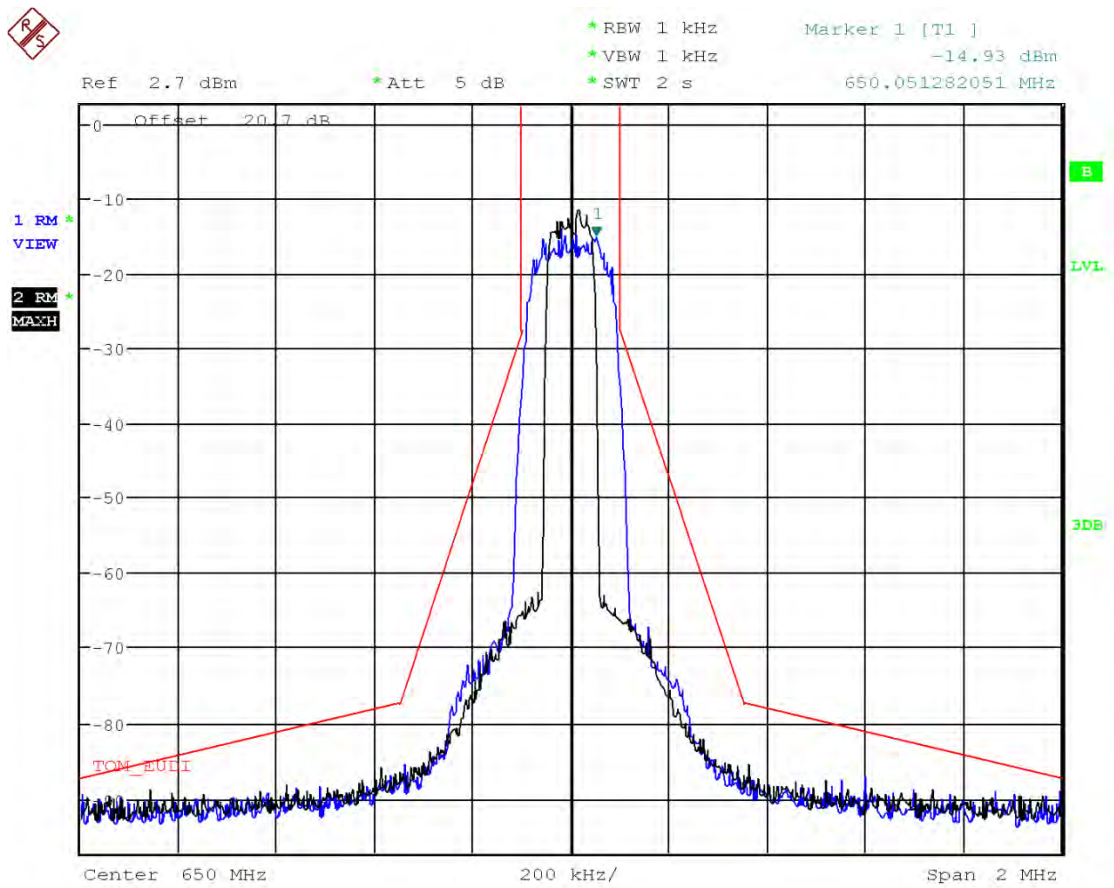
EUT Name: AD2 K55 #150 (For K53 Band)
Serial Number: TU162080108
Test Description: RSS-210 Annex G Necessary Bandwidth
Carrier Power Reference
Operating Conditions: 650.000MHz (Mid Frequency) at 2mW in Normal Mode

Operator Name: Alex Stelmaszczyk
Comment: R & S FSU Spectrum Analyzer
Test Date: November 23, 2016 11:45:04 AM



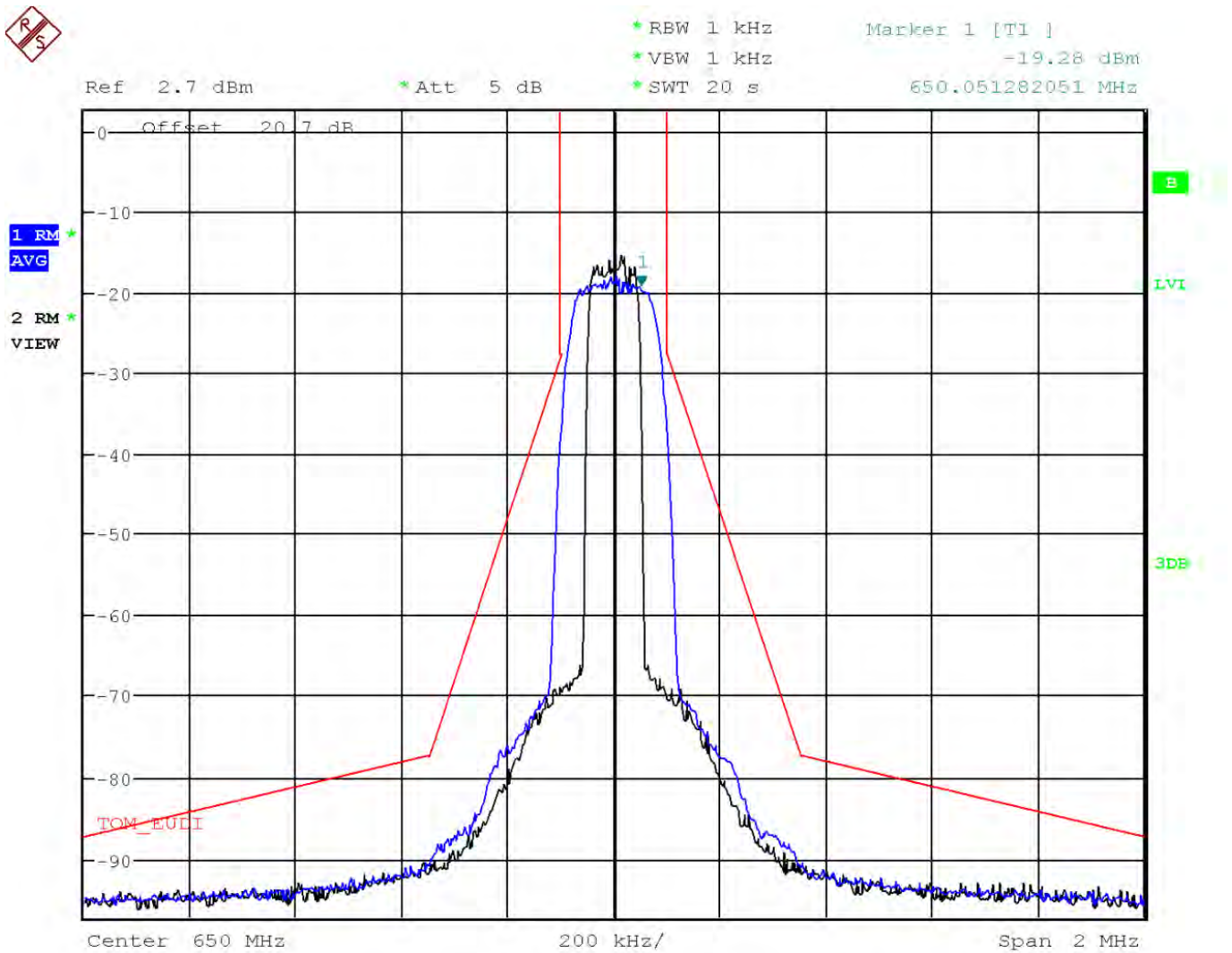
Test Information

EUT Name: AD2 K55 #150 (For K53 Band)
 Serial Number: TU162080108
 Test Description: RSS-210 Annex G Necessary Bandwidth
 Operating Conditions: 650.000MHz (Mid Frequency) at 2mW in Normal Mode
 (Blue Trace) and High Density Mode (Black Trace)
 (Channel Bandwidth Options)
 Operator Name: Alex Stelmaszczyk
 Comment: R & S FSU Spectrum Analyzer
 Test Date: November 23, 2016 11:54:13 AM



Test Information

EUT Name: AD2 K55 #150 (For K53 Band)
 Serial Number: TU162080108
 Test Description: RSS-210 Annex G Necessary Bandwidth
 Noise Floor Reference
 Operating Conditions: 650.000MHz (Low Frequency) at 2mW in Normal Mode
 (Blue Trace) and High Density Mode (Black Trace)
 (Channel Bandwidth Options)
 Operator Name: Alex Stelmaszczyk
 Comment: R & S FSU Spectrum Analyzer
 Test Date: November 23, 2016 12:00:15 PM



Test Information

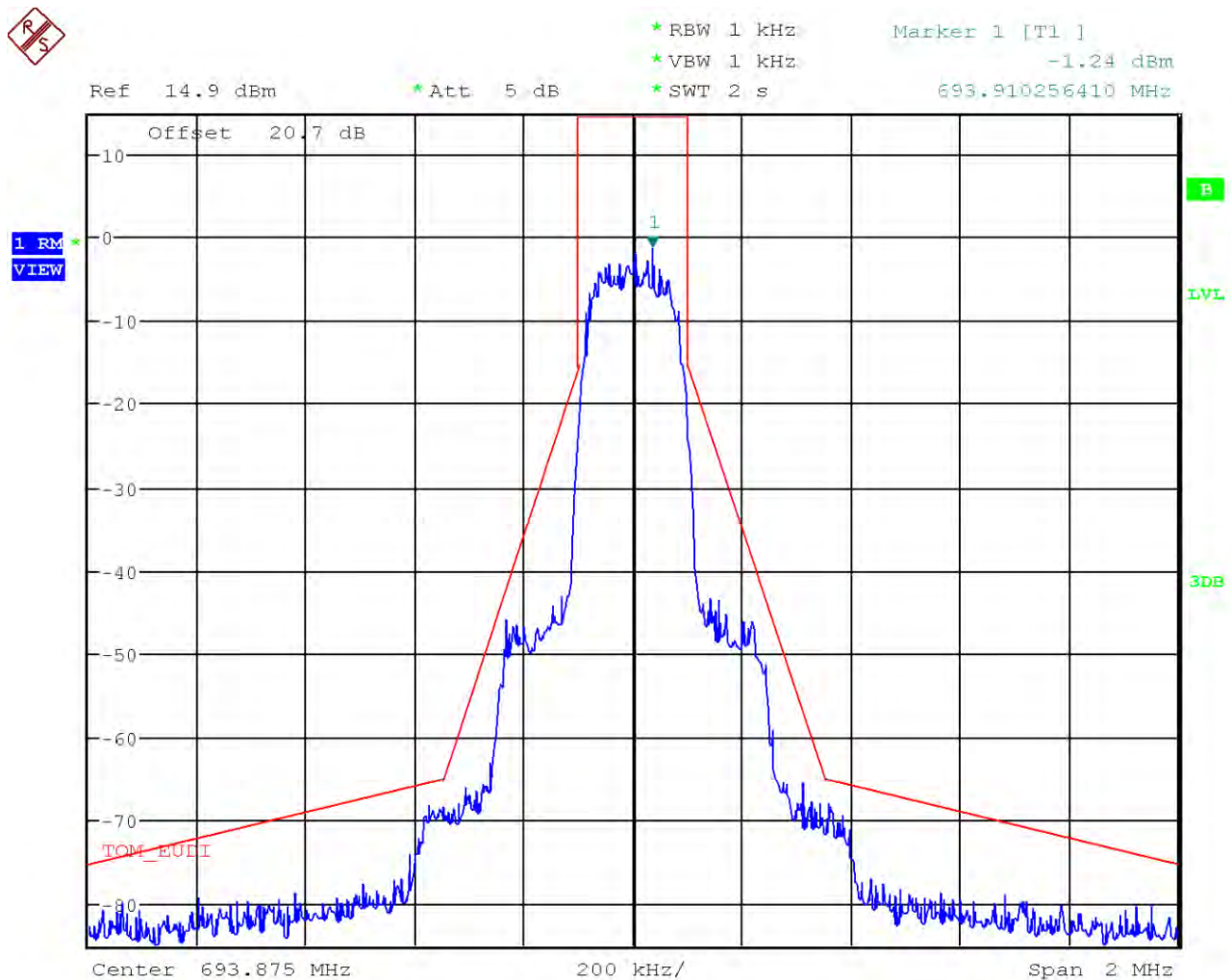
EUT Name: AD2 K55 #150 (For K53 Band)
Serial Number: TU162080108
Test Description: RSS-210 Annex G Necessary Bandwidth
Carrier Power Reference
Operating Conditions: 693.875MHz (High Frequency) at 35mW in Normal Mode

Operator Name: Alex Stelmaszczyk
Comment: R & S FSU Spectrum Analyzer
Test Date: November 22, 2016 17:06:54 PM



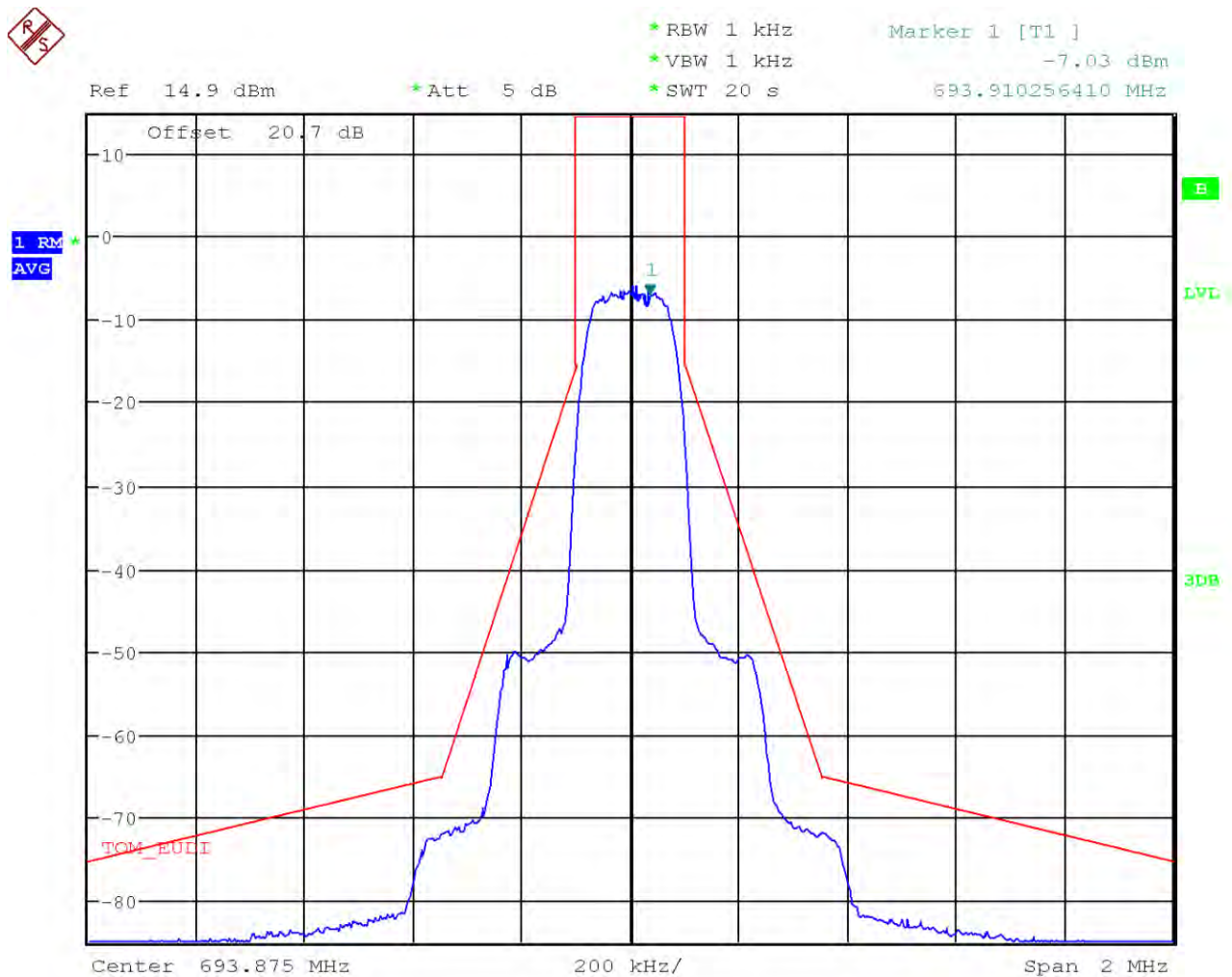
Test Information

EUT Name: AD2 K55 #150 (For K53 Band)
Serial Number: TU162080108
Test Description: RSS-210 Annex G Necessary Bandwidth
Operating Conditions: 693.875MHz (High Frequency) at 35mW in Normal Mode
Operator Name: Alex Stelmaszczyk
Comment: R & S FSU Spectrum Analyzer
Test Date: November 22, 2016 17:07:57 PM



Test Information

EUT Name: AD2 K55 #150 (For K53 Band)
 Serial Number: TU162080108
 Test Description: RSS-210 Annex G Necessary Bandwidth
 Noise Floor Reference
 Operating Conditions: 693.875MHz (High Frequency) at 35mW in Normal Mode
 Operator Name: Alex Stelmaszczyk
 Comment: R & S FSU Spectrum Analyzer
 Test Date: November 22, 2016 17:11:50 PM



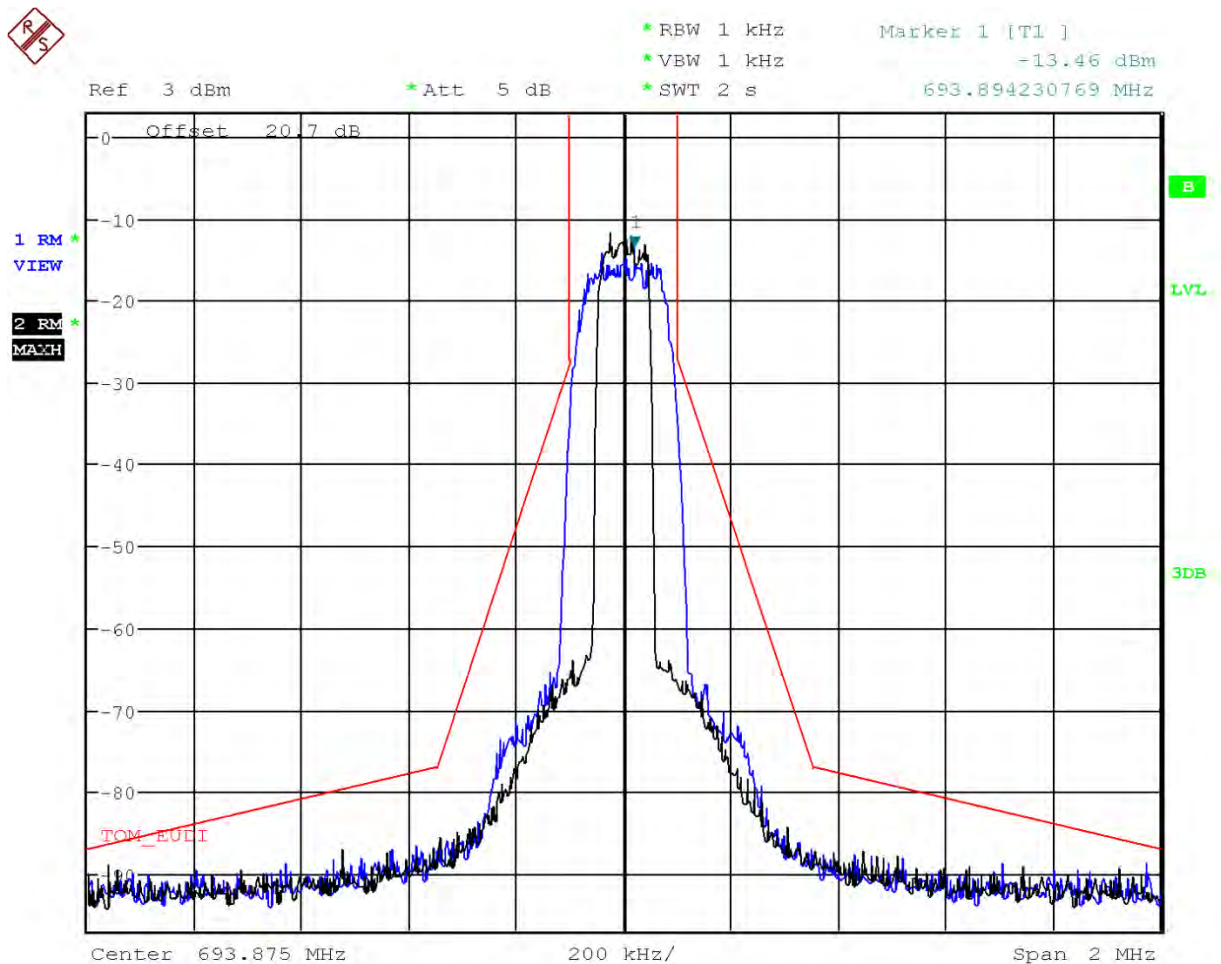
Test Information

EUT Name: AD2 K55 #150 (For K53 Band)
 Serial Number: TU162080108
 Test Description: RSS-210 Annex G Necessary Bandwidth
 Carrier Power Reference
 Operating Conditions: 693.875MHz (High Frequency)at 2mW in Normal Mode
 Operator Name: Alex Stelmaszczyk
 Comment: R & S FSU Spectrum Analyzer
 Test Date: November 23, 2016 11:32:31 AM



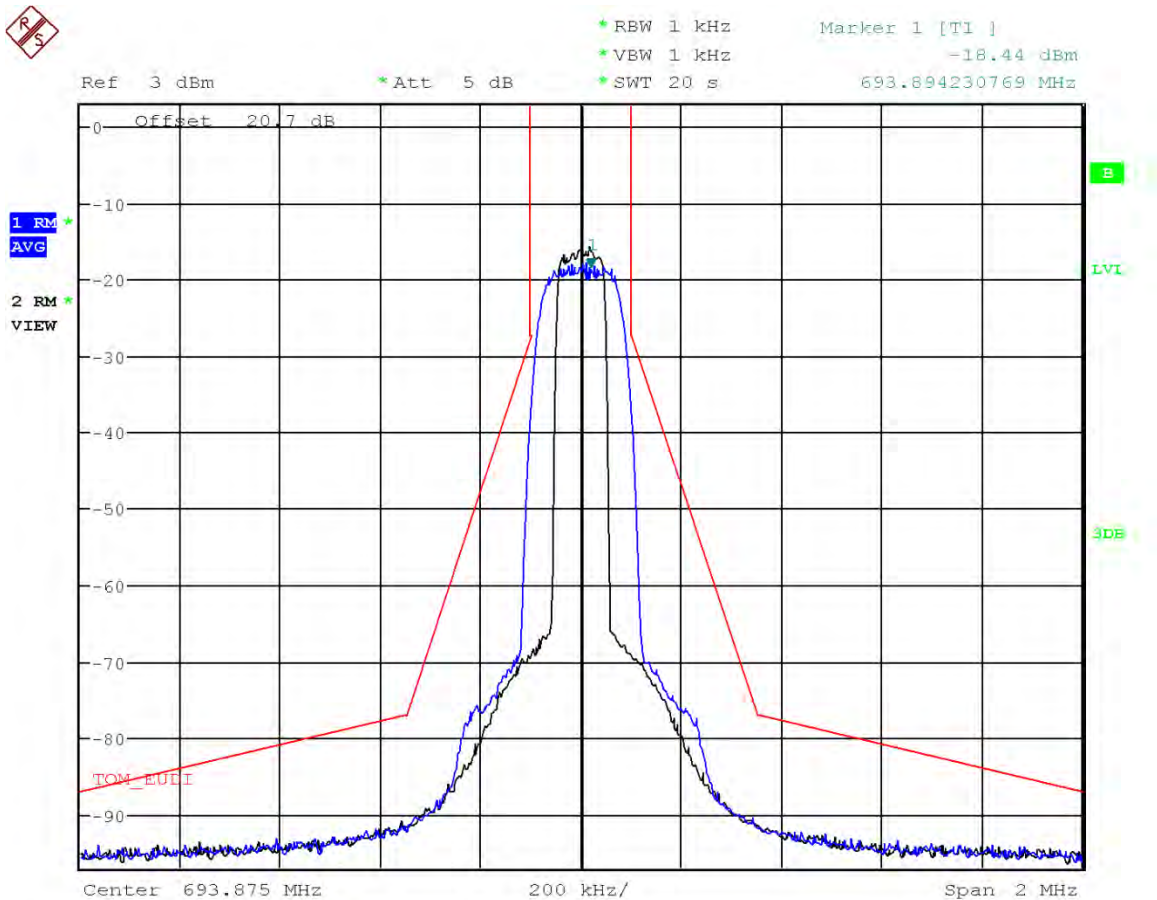
Test Information

EUT Name: AD2 K55 #150 (For K53 Band)
Serial Number: TU162080108
Test Description: RSS-210 Annex G Necessary Bandwidth
Operating Conditions: 693.875MHz (High Frequency) at 2mW in Normal Mode (Blue Trace) and High Density Mode (Black Trace) (Channel Bandwidth Options)
Operator Name: Alex Stelmaszczyk
Comment: R & S FSU Spectrum Analyzer
Test Date: November 23, 2016 11:35:13 AM



Test Information

EUT Name: AD2 K55 #150 (For K53 Band)
Serial Number: TU162080108
Test Description: RSS-210 Annex G Necessary Bandwidth
Noise Floor Reference
Operating Conditions: 693.875MHz (High Frequency) at 2mW in Normal Mode
(Blue Trace) and High Density Mode (Black Trace)
(Channel Bandwidth Options)
Operator Name: Alex Stelmaszczyk
Comment: R & S FSU Spectrum Analyzer
Test Date: November 23, 2016 11:42:23 AM



E. FIELD STRENGTH OF SPURIOUS EMISSIONS – 25 MHz TO 10,000 MHz

E.1. PURPOSE:

This test was performed to determine if the AD2 (EUT) meets the radiated RF emission requirements of the FCC Part 74.861(e)(6)(iii) over the frequency range from 30MHz to 10GHz, and the RSS-210 Annex G specifications, over the frequency range from 25MHz to 4GHz.

E.2. REQUIREMENTS:

As stated in paragraph 74.861 for low power auxiliary stations operating in the bands allocated for TV broadcasting, the mean power of emissions shall be attenuated by at least $43 + 10 \log(P)$ dB below the mean output power on any frequency removed from the operating frequency by more than 250 percent of the authorized bandwidth.

As stated in the RSS-210, Annex G, Section G3.4 specifications for Category 1 Equipment, the transmitter unwanted emissions shall meet the requirements in sections 8.3 and 8.4 of ETSI EN 300 422-1 v1.4.2 (2011-08), Electromagnetic compatibility and radio spectrum matters (ERM); Wireless microphones in the 25 MHz to 3 GHz frequency range; Part 1: Technical characteristics and methods of measurement.

Table 3: Limits for RSS-210 Spurious Emissions (from EN 300 422-1)

State	Frequency		
	47 MHz to 74 MHz 87,5 MHz to 137 MHz 174 MHz to 230 MHz 470 MHz to 862 MHz	Other Frequencies below 1 000 MHz	Frequencies above 1 000 MHz
Operation	4 nW	250nW	1uW
Standby	2nW	2nW	20nW

E.3. MEASUREMENT UNCERTAINTY:

All measurements are an estimate of their true value. The measurement uncertainty characterizes, with a specified confidence level, the spread of values which may be possible for a given measurement system.

Values of Expanded Measurement Uncertainty (95% Confidence):

Measurement Type	U_{lab}
Radiated disturbance (electric field strength on an open area test site or alternative test site) (30 MHz – 1000 MHz)	4.12 dB
Radiated disturbance (electric field strength on an open area test site or alternative test site) (1 GHz – 12.75 GHz)	4.55 dB

U_{lab} = Determined for Shure EMC Laboratory

- Compliance is deemed to occur if no measured disturbance exceeds the disturbance limit;
- Non-compliance is deemed to occur if any measured disturbance exceeds the disturbance limit.

Appendix E

E.4. TEST SETUP AND INSTRUMENTATION:

Photographs of the test setup are shown in Figures E-1 through E-8 on pages 109 - 113. The test instrumentation can be determined from Table 10-1.

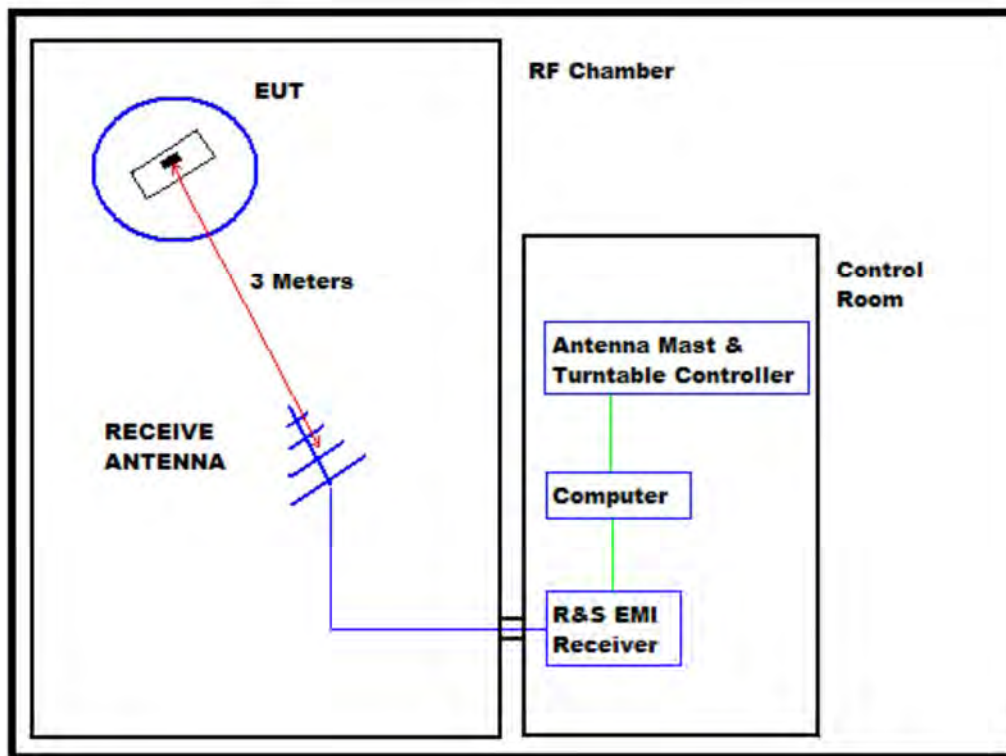
E.5. EUT OPERATION:

The EUT was powered up and the frequency of the transmitter was selected using the front panel controls. The EUT was checked for proper operation after it was setup on the table. Testing was conducted with the EUT set to the Low, Mid and High frequency within the operating frequency range, and powered with 2 "AA" batteries.

E.6. SPECIFIC TEST PROCEDURES:

All tests were performed in a 28ft. x 20ft. x 18.5ft. 3m semi-anechoic test chamber. The walls and ceiling of the shielded chamber are lined with ferrite tiles. Anechoic absorber material is installed over the ferrite tile. The floor of the chamber is used as the ground plane. The chamber complies with ANSI C63.4-2009 for site attenuation.

The shielded enclosure prevents emissions from other sources, such as radio and TV stations from interfering with the measurements. All power lines and signal lines entering the enclosure pass through filters on the enclosure wall. The power line filters prevent extraneous signals from entering the enclosure on these leads.



BLOCK DIAGRAM OF SHIELDED ENCLOSURE

Appendix E

Preliminary radiated measurements were performed to determine the frequencies where the significant emissions might be found. The broadband measuring antenna was positioned at a 3 meter distance from the EUT. The frequency range from 30MHz to 1GHz was investigated using a peak detector function with the BiConiLog antenna at horizontal and vertical polarization, and with several different orientations of the EUT with respect to the antenna. The maximum levels measured for each antenna polarization were then automatically plotted. The resultant field strength (FS) is a summation in decibels (dB) of the EMI receiver measurement (ERM), the antenna correction factor (AF), and the cable loss factor (CF). If an external pre-amplifier is used, the total is reduced by its gain (-PA).

Formula 1: $FS (dB\mu V/m) = MTR (dB\mu V) + AF (dB/m) + CF (dB) + (-PA (dB))$

To convert the Field Strength $dB\mu V/m$ term to $\mu V/m$, the $dB\mu V/m$ is first divided by 20. The Base 10 AntiLog is taken of this quotient. The result is the Field Strength value in $\mu V/m$ terms.

Formula 2: $FS (\mu V/m) = \text{AntiLog} [(FS (dB\mu V/m))/20]$

Final radiated RF emissions were performed on all significant broadband and narrowband emissions found in the preliminary sweeps using the following methods:

1) Measurements of all significant broadband and narrowband signals from 30MHz to 1GHz were made using a peak detector and a BiConiLog antenna. Measurements above 1GHz were made using a peak detector and a broadband double ridged waveguide antenna.

2) Narrow band emissions in close proximity to the limits prescribed by the applied regulatory standard were selected for closer investigation. To ensure that maximum or worst case, emission levels were measured, the following steps were taken:

- i. The EUT was rotated so that all of its sides were exposed to the receiving antenna.
- ii. Since the measuring antenna is linearly polarized, both horizontal and vertical field components were measured.
- iii. The measuring antenna was raised and lowered from 1 to 4 meters for each antenna polarization to maximize the readings.

E.7. RESULTS:

The plots of the peak preliminary radiated voltage levels are presented on pages 114 through 208.

The maximized peak radiated voltage level results are presented on pages 117, 121, 126, 130, 135, 139, 144, 148, 153, 157, 162, 166, 170, 174, 178, 182, 186, 190, 195, 199, 204 and 209.

The matched peak power levels are presented on pages 118, 122, 127, 131, 136, 140, 145, 149, 154, 158, 163, 165, 171, 175, 179, 183, 187, 191, 196, 200, 205 and 210.

All emissions measured from the AD2 were within both the FCC "Code of Federal Regulations" Title 47 Part 74, Subpart H and ISED Canada RSS-210, Annex G, Section G3.4 specification limits.

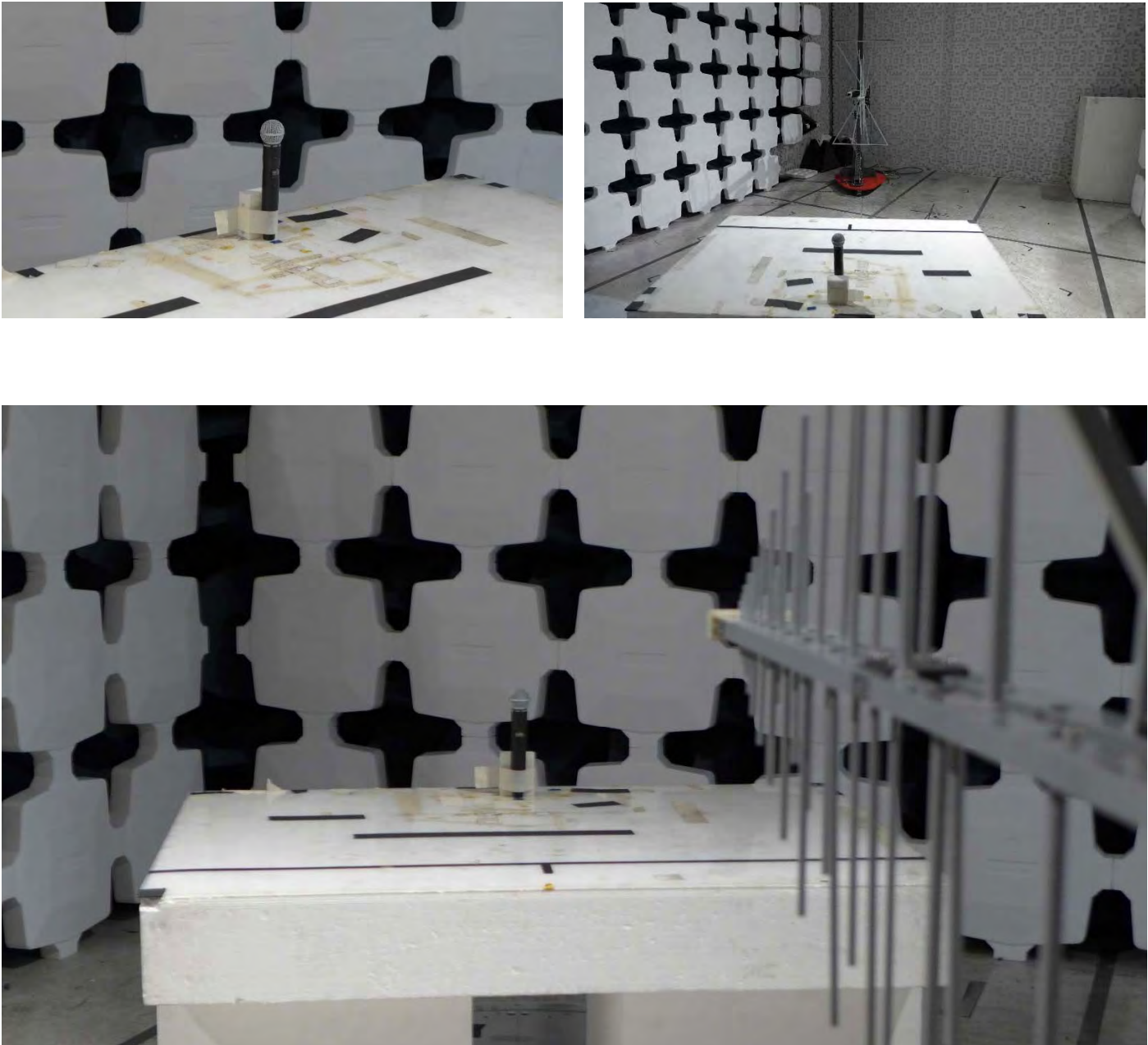


Figure E-1 - Test Setup for Spurious Emissions 30MHz to 1GHz

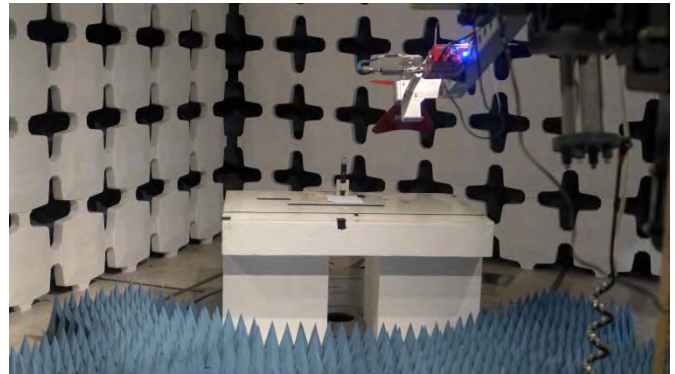
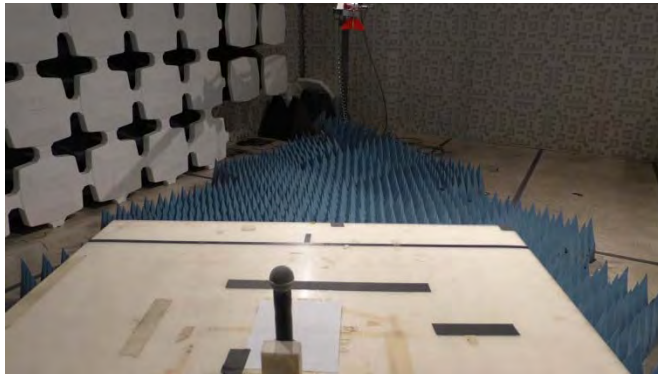
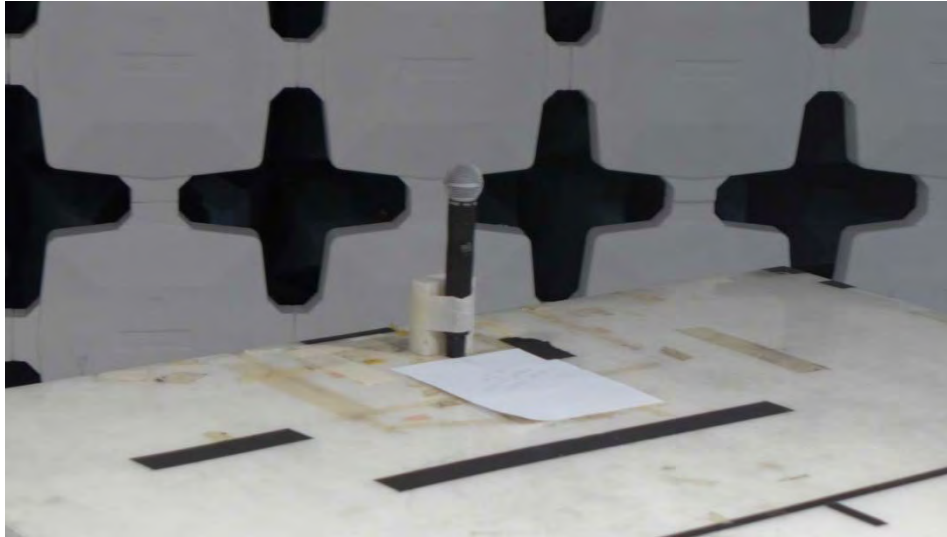


Figure E-2 - Test Setup for Spurious Emissions 1GHz to 10GHz

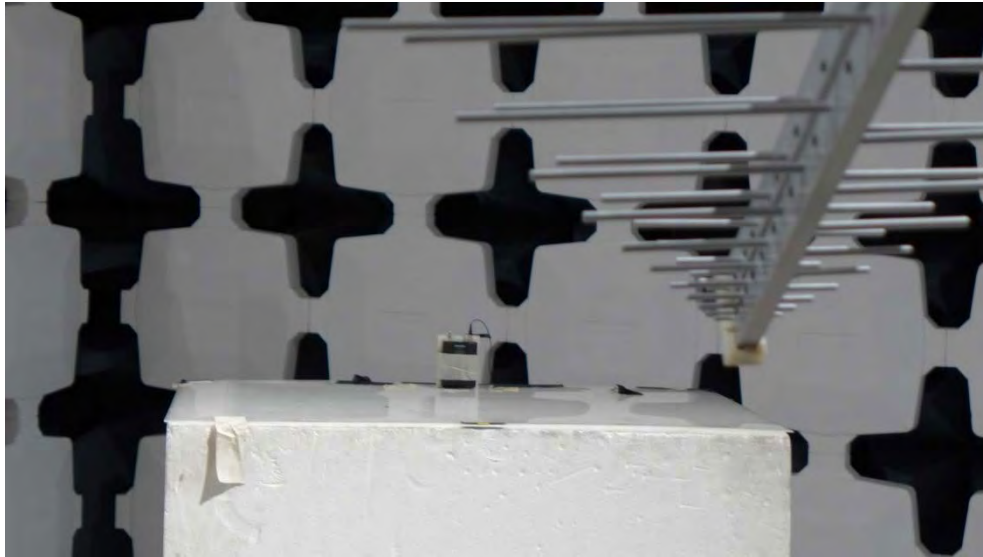


Figure E-3 - Test Setup for Spurious Emissions 25MHz to 1GHz

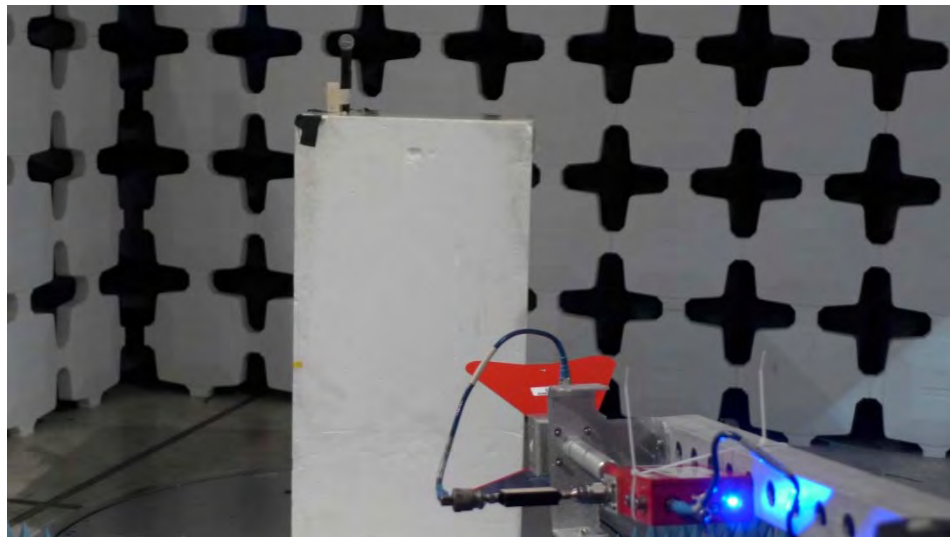


Figure E-4 - Test Setup for Spurious Emissions 1GHz to 4GHz



Figure E-5 - Test Setup for Spurious Emissions Matching 30MHz to 10GHz

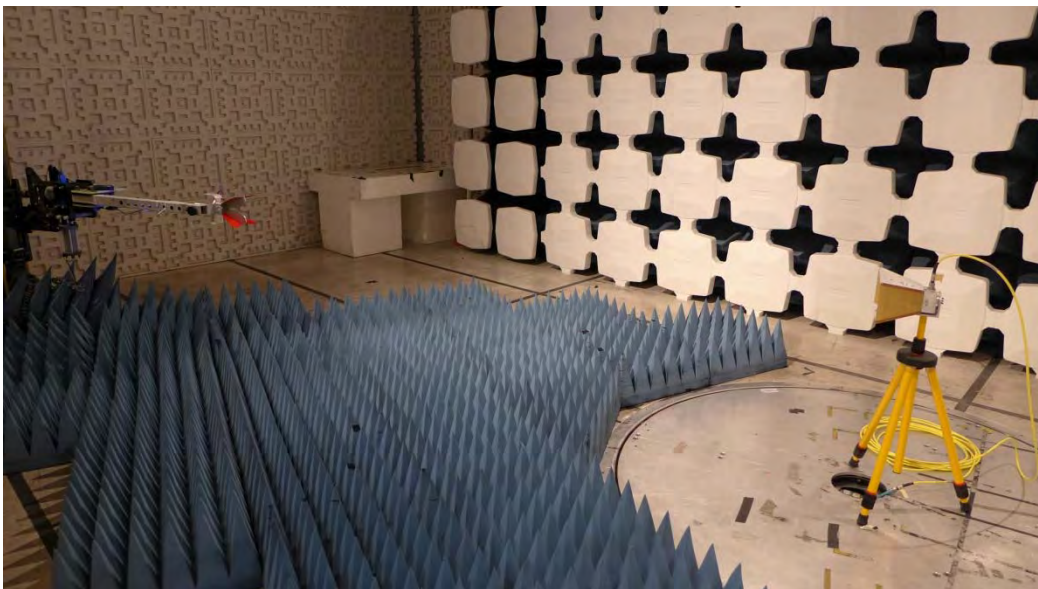


Figure E-6 - Test Setup for Spurious Emissions Matching 1GHz to 10GHz



Figure E-7 - Test Setup for Spurious Emissions Matching 25MHz to 1GHz

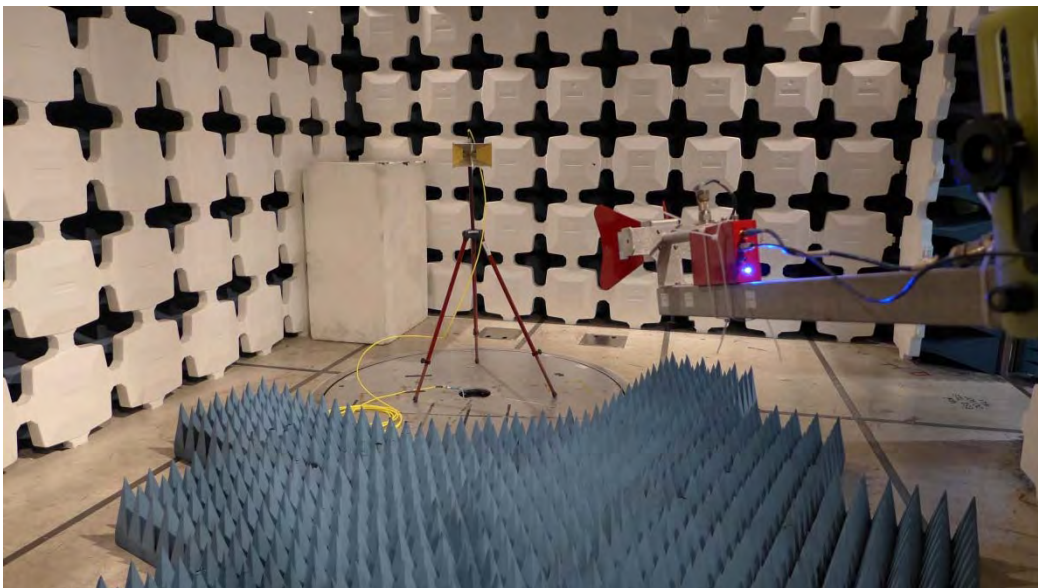


Figure E-8 - Test Setup for Spurious Emissions Matching 1GHz to 4GHz

Test Information

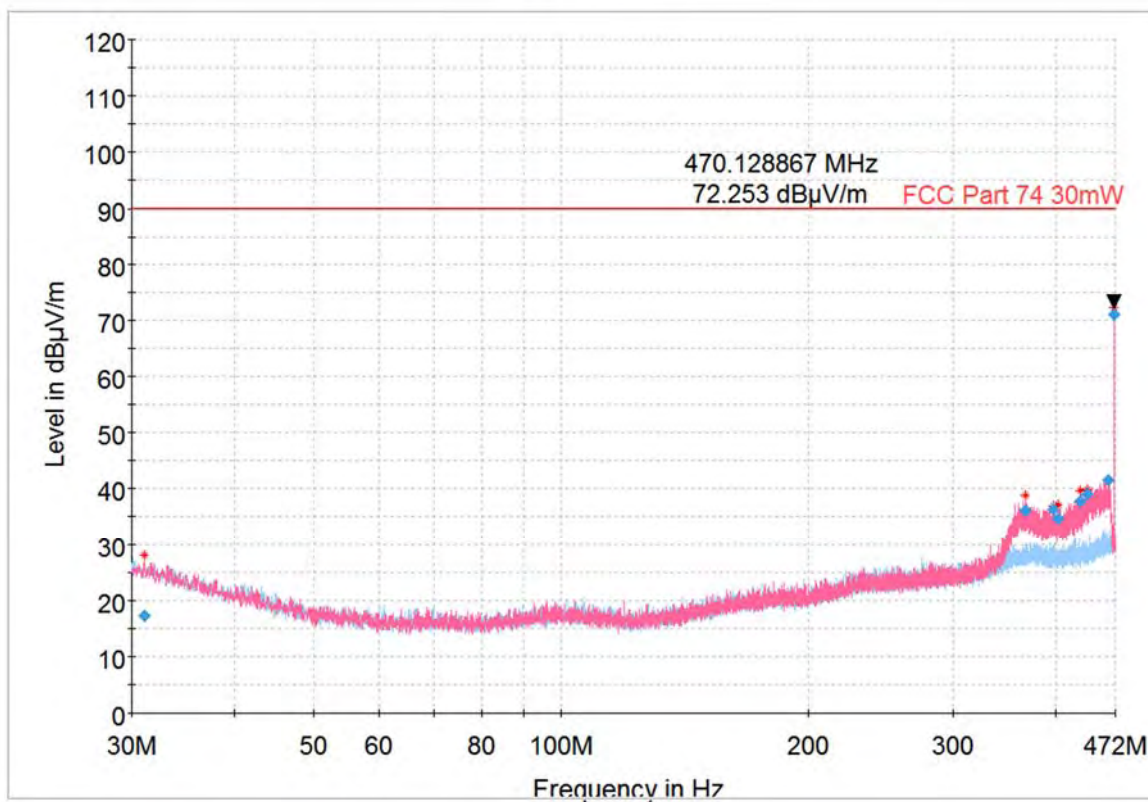
EUT Name: AD2 G55 #55
Serial Number: TU162030005
Test Description: Radiated RF Emissions 30MHz to 472MHz
Operating Conditions: 470.125MHz L @ 35mW
Operator Name: Alex Stelmaszczyk
Comment: FCC pt. 74
Description: FCC Table, 3m, AAs, No Audio Input, w/ L23-27-02 Tuned Notch
Test Date & Time: November 3, 2016 9:57:24 AM

EMI Auto Test Template: Axient Digital COMPLIANCE TEST FCC 74 Transmitter 30MHz to 1000MHz 34790

Hardware Setup: Electric Field Strength 34790 2016 06 03
Level Unit: dBμV/m

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamplifier
30 MHz - 1 GHz	30 kHz	PK+	120 kHz	0.02 s	20 dB

Full Spectrum



Test Information

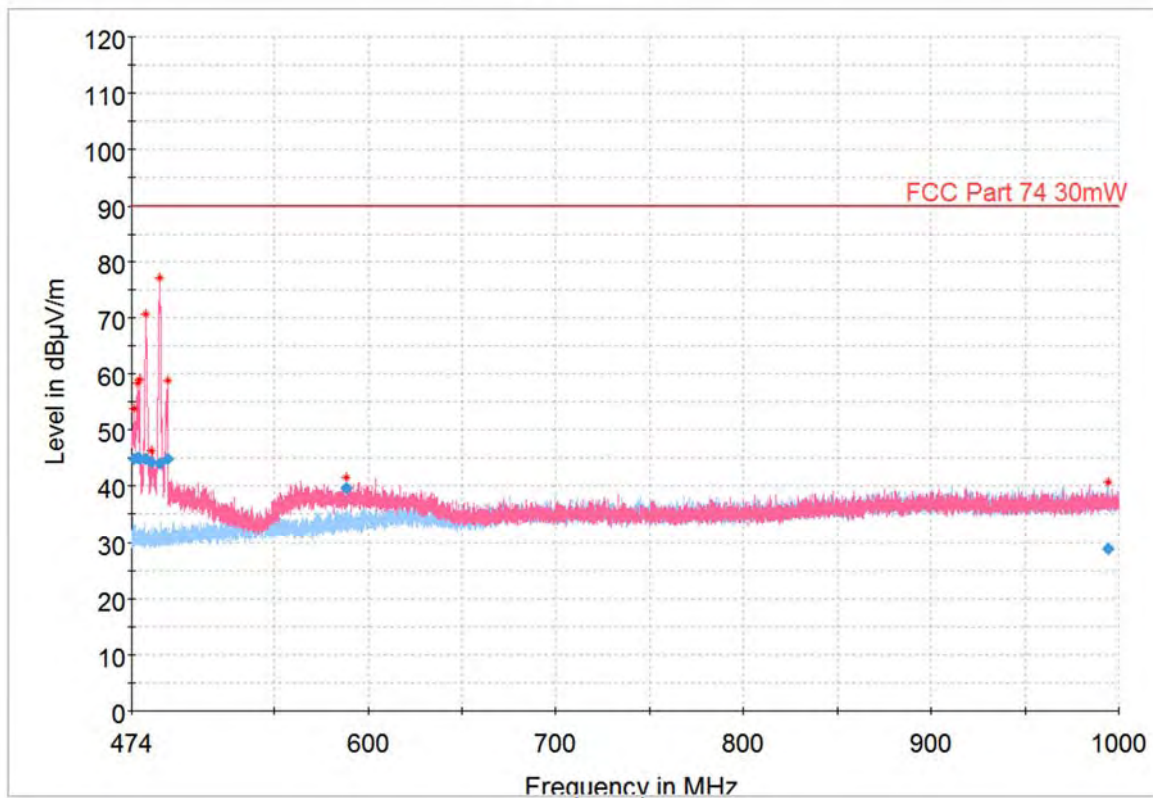
EUT Name: AD2 G55 #55
 Serial Number: TU162030005
 Test Description: Radiated RF Emissions 474 - 1000MHz
 Operating Conditions: 470.125MHz L @ 35mW
 Operator Name: Alex Stelmaszczyk
 Comment: FCC pt. 74
 Description: FCC Table, 3m, AAs, No Audio Input, w/o L23-27-02 Tuned Notch
 Test Date & Time: November 3, 2016 10:42:16 AM

EMI Auto Test Template: Axient Digital COMPLIANCE TEST FCC 74 Transmitter 30MHz to 1000MHz 34790

Hardware Setup: Electric Field Strength 34790 2016 06 03
 Level Unit: dBμV/m

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamplifier
30 MHz - 1 GHz	30 kHz	PK+	120 kHz	0.02 s	20 dB

Full Spectrum



Test Information

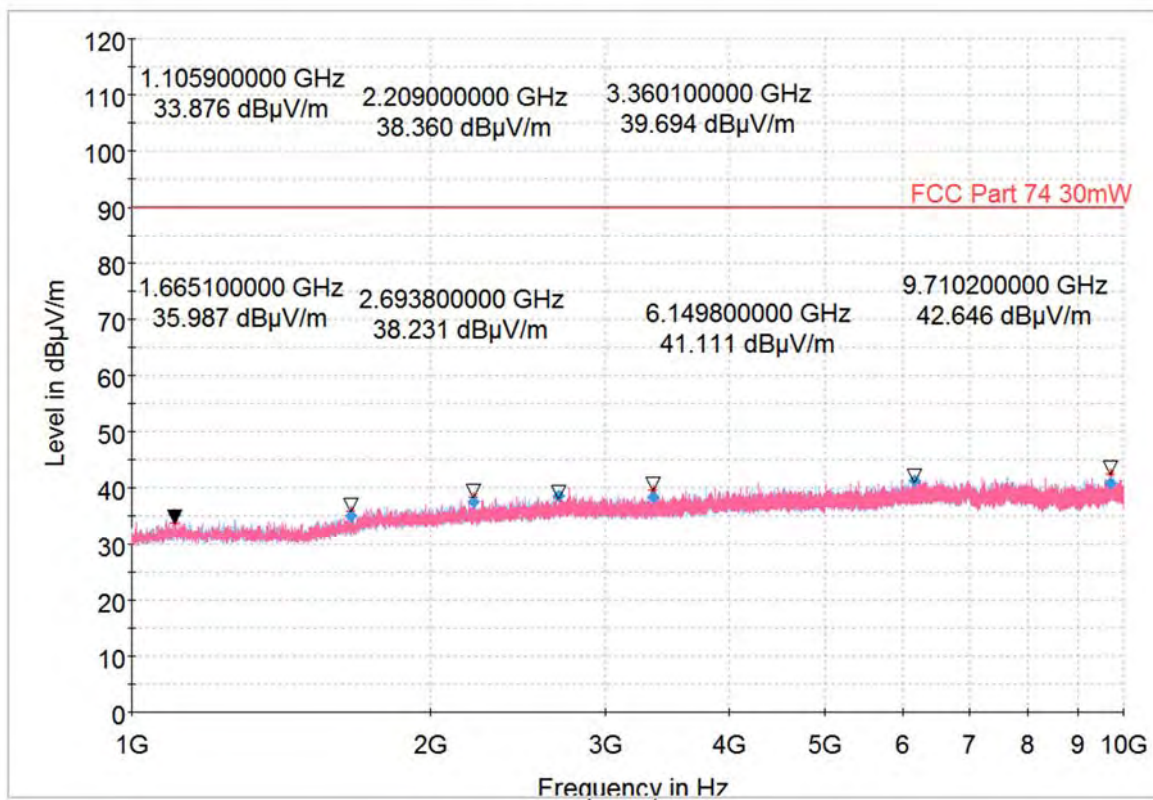
EUT Name: AD2 G55 #55
Serial Number: TU162030005
Test Description: Radiated RF Emissions 1GHz to 10GHz
Operating Conditions: 470.125MHz L @ 35mW
Operator Name: Alex Stelmaszczyk
Comment: FCC pt. 74
Description: FCC Table, Bore Site, 3m, AAs, No Audio Input, w/ L23-11-57 940MHz HPF
Test Date & Time: December 5, 2016 11:45:23 AM

EMI Auto Test Template: Axient Digital COMPLIANCE TEST FCC 74 1GHz to 10GHz 3117-PA 206583 FCC

Hardware Setup: Electric Field Strength 10GHz 3117-PA 206583 2016 03 24
Level Unit: dBμV/m

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
1 GHz - 10 GHz	250 kHz	PK+	1 MHz	1 s	20 dB

Full Spectrum



Test Information

EUT Name: AD2 G55 #55
Serial Number: TU162030005
Test Description: FCC pt.74 & RSS-210 Spurious Radiated Emissions
Operating Conditions: 470.125MHz L @ 35mW
Operator Name: Alex Stelmaszczyk
Comment: Horizontal and Vertical Antennae 30MHz – 10GHz
Test Date: November 3, 2016 & December 5, 2016

Frequency MHz	Max Peak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measure Time (ms)	Bandwidth (kHz)	Height (cm)	Polarity	Azimuth (deg)	Correction (dB)
31.105	17.16	84.38	61.930	20	120.00	233.000	V	29.00	16.40
367.526	36.20	84.38	51.090	20	120.00	147.000	V	202.00	18.20
396.919	36.25	84.38	53.030	20	120.00	125.000	V	49.00	17.80
402.459	34.74	84.38	52.790	20	120.00	124.000	V	305.00	17.70
428.404	37.78	84.38	50.400	20	120.00	118.000	V	87.00	18.30
435.785	38.95	84.38	50.130	20	120.00	111.000	V	52.00	18.50
463.469	41.42	84.38	48.190	20	120.00	100.000	V	39.00	19.70
470.144	70.92	84.38	17.720	20	120.00	111.000	V	66.00	20.10
475.210	44.84	84.38	45.160	20	120.00	100.000	V	78.00	20.40
477.349	45.02	84.38	44.980	20	120.00	100.000	V	217.00	20.40
478.243	44.87	84.38	45.130	20	120.00	111.000	V	328.00	20.40
481.574	44.79	84.38	45.210	20	120.00	111.000	V	205.00	20.50
484.520	44.28	84.38	45.720	20	120.00	100.000	V	202.00	20.50
488.833	44.11	84.38	45.890	20	120.00	119.000	V	217.00	20.60
493.059	44.79	84.38	45.210	20	120.00	111.000	V	195.00	20.60
588.387	39.63	84.38	50.370	20	120.00	178.000	V	319.00	22.50
994.109	28.92	84.38	61.080	20	120.00	261.000	H	161.00	26.50
1105.900	35.24	84.38	54.760	1000	1000.00	386.000	V	313.00	-19.60
1665.100	35.12	84.38	54.880	1000	1000.00	316.000	V	197.00	-16.90
2209.000	37.60	84.38	52.400	1000	1000.00	191.000	V	248.00	-13.80
2693.800	38.58	84.38	51.420	1000	1000.00	255.000	H	-7.00	-12.00
3360.100	38.43	84.38	51.570	1000	1000.00	349.000	H	28.00	-10.80
6149.800	41.23	84.38	48.770	1000	1000.00	150.000	H	251.00	-5.10
9710.200	40.91	84.38	49.090	1000	1000.00	310.000	H	184.00	-1.10

Appendix E

Test Information

EUT Name: AD2 G55 #55
 Serial Number: TU162030005
 Test Description: FCC pt.74 & RSS-210 Radiated Emissions Matching
 Operating Conditions: 470.125MHz L @ 35mW
 Operator Name: Alex Stelmaszczyk, Tom Braxton & Mudassar Khan
 Comment: Horizontal and Vertical Antennae 30MHz – 10GHz
 Test Date: May 5 – 10, 2017

Frequency MHz	Max Peak (dBμV/m)	Matched Power from Sig Gen	Limit (dBm)	Margin (dBm)	Polarity	Cable Loss (dB)	Cable 2 Loss (dB)	Antenna Gain (dB)	ERP / EIRP Total (dBm)	Status
475.210	44.84	-52.6	-13.0	45.2	V	1.22	1.27		-55.09	PASS
477.349	45.02	-52.0	-13.0	45.0	V	0.95	1.27		-54.22	PASS
478.243	44.87	-52.9	-13.0	45.1	V	0.95	1.27		-55.12	PASS
481.574	44.79	-53.2	-13.0	45.2	V	1.00	1.27		-55.47	PASS
493.059	44.79	-53.9	-13.0	45.2	V	1.05	1.28		-56.23	PASS
940.264	58.23	-36.5	-13.0	20.2	V	1.05	1.28		-38.83	PASS
1105.900	35.24	-59.5	-13.0	54.8	V	2.10	2.02	1.90	-61.72	PASS
1665.100	35.12	-79.3	-13.0	54.9	V	2.25	2.44	5.50	-78.49	PASS
2209.000	37.60	-72.3	-13.0	52.4	V	2.45	2.85	5.00	-72.60	PASS
2693.800	38.58	-71.6	-13.0	51.4	H	3.00	3.10	6.00	-71.70	PASS
3360.100	38.43	-63.4	-13.0	51.6	H	3.10	3.41	7.60	-62.31	PASS

Test Information

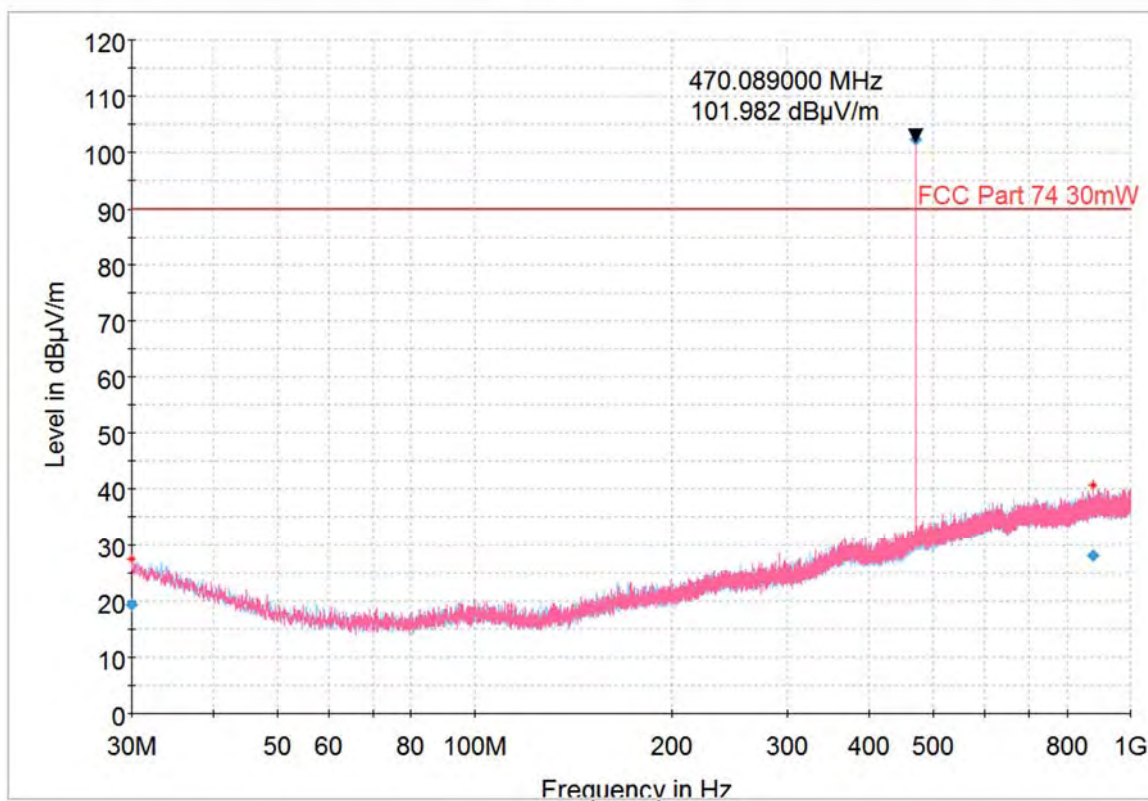
EUT Name: AD2 G55 #55
Serial Number: TU162030005
Test Description: Radiated RF Emissions 30MHz to 1GHz
Operating Conditions: 470.125MHz L @ 2mW
Operator Name: Alex Stelmaszczyk
Comment: FCC pt. 74
Description: FCC Table, 3m, AAs, No Audio Input
Test Date & Time: November 4, 2016 11:21:33 AM

EMI Auto Test Template: Axient Digital COMPLIANCE TEST FCC 74 Transmitter 30MHz to 1000MHz 34790

Hardware Setup: Electric Field Strength 34790 2016 06 03
Level Unit: dBμV/m

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamplifier
30 MHz - 1 GHz	30 kHz	PK+	120 kHz	0.02 s	20 dB

Full Spectrum



Test Information

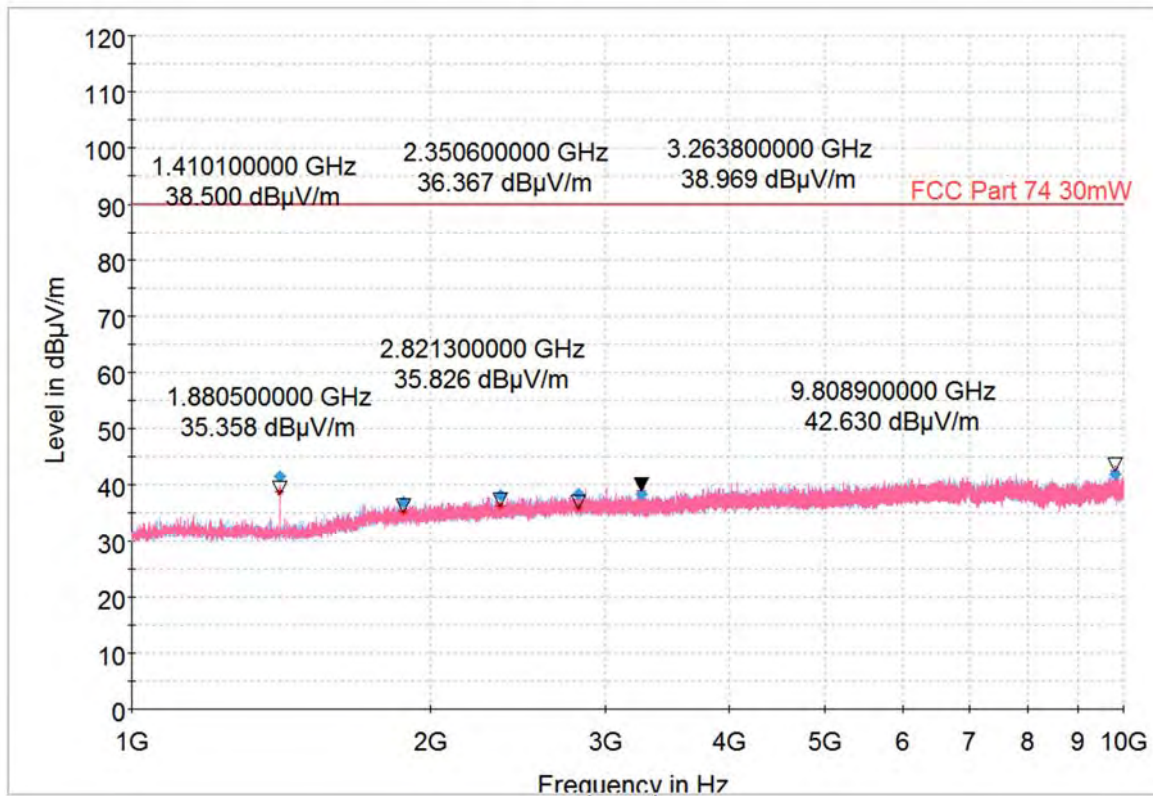
EUT Name: AD2 G55 #55
Serial Number: TU162030005
Test Description: Radiated RF Emissions 1GHz to 10GHz
Operating Conditions: 470.125MHz L @ 2mW
Operator Name: Alex Stelmaszczyk
Comment: FCC pt. 74
Description: FCC Table, Bore Site, 3m, AAs, No Audio Input, w/ L23-11-57 940MHz HPF
Test Date & Time: November 4, 2016 1:32:56 PM

EMI Auto Test Template: Axient Digital COMPLIANCE TEST FCC 74 1GHz to 10GHz 3117-PA 206583 FCC

Hardware Setup: Electric Field Strength 10GHz 3117-PA 206583 2016 03 24
Level Unit: dB μ V/m

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
1 GHz - 10 GHz	250 kHz	PK+	1 MHz	1 s	20 dB

Full Spectrum



Appendix E

Test Information

EUT Name: AD2 G55 #55
 Serial Number: TU162030005
 Test Description: FCC pt.74 & RSS-210 Spurious Radiated Emissions
 Operating Conditions: 470.125MHz L @ 2mW
 Operator Name: Alex Stelmaszczyk
 Comment: Horizontal and Vertical Antennae 30MHz – 10GHz
 Test Date: November 4, 2016 & December 2, 2016

Frequency MHz	Max Peak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measure Time (ms)	Bandwidth (kHz)	Height (cm)	Polarity	Azimuth (deg)	Correction (dB)
30.000	19.35	84.38	70.650	20	120.00	200.000	V	320.00	17.00
470.154	102.39	84.38	-12.390	20	120.00	111.000	V	49.00	20.10
878.103	27.94	84.38	62.060	20	120.00	192.000	V	186.00	25.70
1410.400	51.72	84.38	38.280	1000	1000.00	342.000	V	346.00	-19.10
1880.500	37.09	84.38	52.910	1000	1000.00	321.000	V	201.00	-15.20
2350.600	39.27	84.38	50.730	1000	1000.00	311.000	H	139.00	-13.20
2821.300	38.97	84.38	51.030	1000	1000.00	379.000	V	327.00	-11.70
3263.800	38.98	84.38	51.020	1000	1000.00	248.000	H	122.00	-11.10
7610.500	41.02	84.38	48.980	1000	1000.00	395.000	H	45.00	-2.80

Appendix E

Test Information

EUT Name: AD2 G55 #55
 Serial Number: TU162030005
 Test Description: FCC pt.74 & RSS-210 Radiated Emissions Matching
 Operating Conditions: 470.125MHz L @ 2mW
 Operator Name: Alex Stelmaszczyk, Tom Braxton & Mudassar Khan
 Comment: Horizontal and Vertical Antennae 30MHz – 10GHz
 Test Date: May 5 – 10, 2017

Frequency MHz	Max Peak (dBμV/m)	Matched Power from Sig Gen	Limit (dBm)	Margin (dBm)	Polarity	Cable Loss (dB)	Cable 2 Loss (dB)	Antenna Gain (dB)	ERP / EIRP Total (dBm)	Status
1410.400	51.72	-35.4	-13.0	38.3	V	2.10	2.18	3.90	-35.78	PASS
1880.500	37.09	-45.5	-13.0	52.9	V	2.25	2.63	5.40	-44.98	PASS
2350.600	39.27	-64.1	-13.0	50.7	H	2.55	2.00	5.40	-63.25	PASS
2821.300	38.97	-38.6	-13.0	51.0	V	2.70	3.15	6.70	-37.75	PASS
3263.800	38.98	-35.5	-13.0	51.0	H	3.20	3.44	7.60	-34.54	PASS
7610.500	41.02	-54.8	-13.0	49.0	H	5.20	3.97	11.90	-52.07	PASS

Test Information

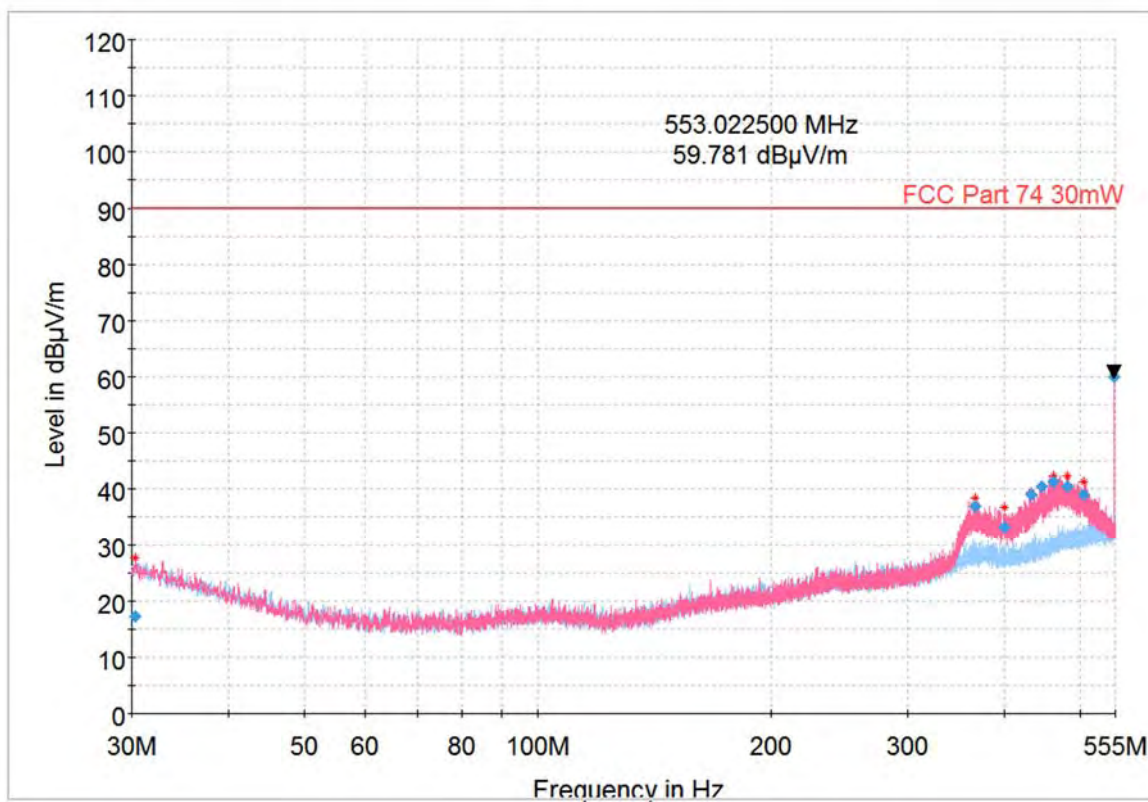
EUT Name: AD2 G55 #55
Serial Number: TU162030005
Test Description: Radiated RF Emissions 30MHz to 555MHz
Operating Conditions: 553.000MHz M @ 35mW
Operator Name: Alex Stelmaszczyk
Comment: FCC pt. 74
Description: FCC Table, 3m, AAs, No Audio Input, w/ L23-27-02 Tuned Notch
Test Date & Time: November 3, 2016 11:13:33 AM

EMI Auto Test Template: Axient Digital COMPLIANCE TEST FCC 74 Transmitter 30MHz to 1000MHz 34790

Hardware Setup: Electric Field Strength 34790 2016 06 03
Level Unit: dB μ V/m

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 1 GHz	30 kHz	PK+	120 kHz	0.02 s	20 dB

Full Spectrum



Test Information

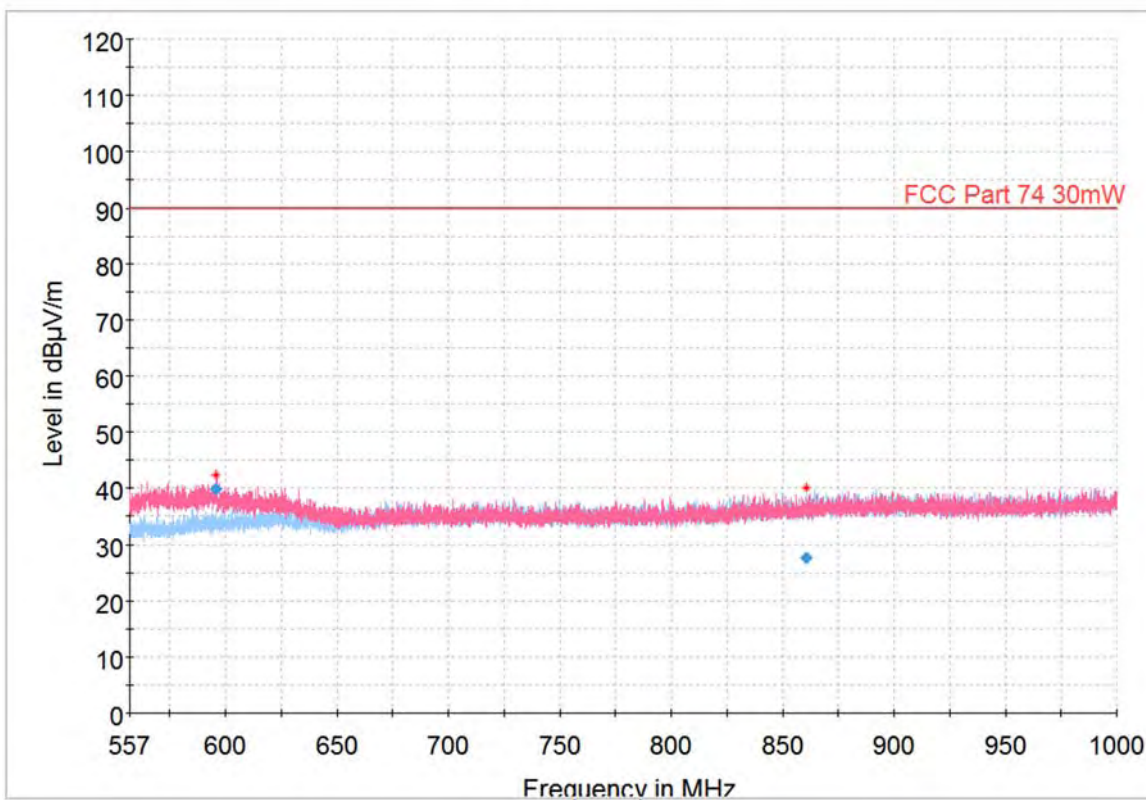
EUT Name: AD2 G55 #55
Serial Number: TU162030005
Test Description: Radiated RF Emissions 557 - 1000MHz
Operating Conditions: 553.000MHz M @ 35mW
Operator Name: Alex Stelmaszczyk
Comment: FCC pt. 74
Description: FCC Table, 3m, AAs, No Audio Input, w/o L23-27-02 Tuned Notch
Test Date & Time: November 3, 2016 11:50:23 AM

EMI Auto Test Template: Axient Digital COMPLIANCE TEST FCC 74 Transmitter 30MHz to 1000MHz 34790

Hardware Setup: Electric Field Strength 34790 2016 06 03
Level Unit: dBμV/m

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 1 GHz	30 kHz	PK+	120 kHz	0.02 s	20 dB

Full Spectrum



Test Information

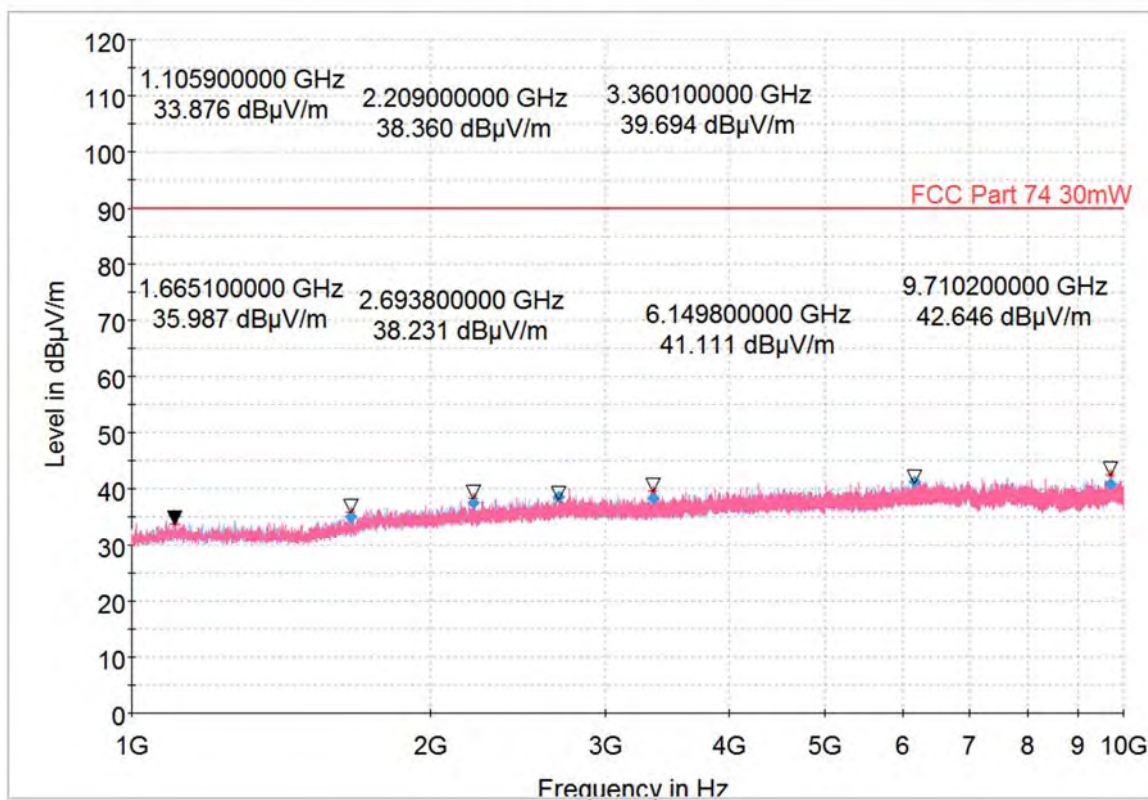
EUT Name: AD2 G55 #55
Serial Number: TU162030005
Test Description: Radiated RF Emissions 1GHz to 10GHz
Operating Conditions: 553.000MHz M @ 35mW
Operator Name: Alex Stelmaszczyk
Comment: FCC pt. 74
Description: FCC Table, Bore Site, 3m, AAs, No Audio Input, w/ L23-11-57 940MHz HPF
Test Date & Time: December 5, 2016 11:45:23 AM

EMI Auto Test Template: Axient Digital COMPLIANCE TEST FCC 74 1GHz to 10GHz 3117-PA 206583 FCC

Hardware Setup: Electric Field Strength 10GHz 3117-PA 206583 2016 03 24
Level Unit: dBμV/m

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
1 GHz - 10 GHz	250 kHz	PK+	1 MHz	1 s	20 dB

Full Spectrum



Test Information

EUT Name: AD2 G55 #55
Serial Number: TU162030005
Test Description: FCC pt.74 & RSS-210 Spurious Radiated Emissions
Operating Conditions: 553.000MHz M @ 35mW
Operator Name: Alex Stelmaszczyk
Comment: Horizontal and Vertical Antennae 30MHz – 10GHz
Test Date: November 3, 2016 & December 5, 2016

Frequency MHz	Max Peak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measure Time (ms)	Bandwidth (kHz)	Height (cm)	Polarity	Azimuth (deg)	Correction (dB)
30.315	17.19	84.38	72.810	20	120.00	372.000	V	259.00	16.80
365.930	37.02	84.38	52.980	20	120.00	142.000	V	211.00	18.10
398.935	33.20	84.38	56.800	20	120.00	142.000	V	307.00	17.70
432.045	39.07	84.38	50.930	20	120.00	100.000	V	346.00	18.40
445.818	40.46	84.38	49.540	20	120.00	100.000	V	22.00	18.80
461.410	41.26	84.38	48.740	20	120.00	111.000	V	45.00	19.60
482.043	40.54	84.38	49.460	20	120.00	111.000	V	135.00	20.50
505.458	39.04	84.38	50.960	20	120.00	111.000	V	207.00	20.90
553.023	60.05	84.38	29.950	20	120.00	111.000	V	183.00	22.10
595.969	39.78	84.38	50.220	20	120.00	169.000	V	69.00	22.80
860.883	27.60	84.38	62.400	20	120.00	221.000	H	10.00	25.50
1105.900	35.24	84.38	54.760	1000	1000.00	386.000	V	313.00	-19.60
1665.100	35.12	84.38	54.880	1000	1000.00	316.000	V	197.00	-16.90
2209.000	37.60	84.38	52.400	1000	1000.00	191.000	V	248.00	-13.80
2693.800	38.58	84.38	51.420	1000	1000.00	255.000	H	-7.00	-12.00
3360.100	38.43	84.38	51.570	1000	1000.00	349.000	H	28.00	-10.80
6149.800	41.23	84.38	48.770	1000	1000.00	150.000	H	251.00	-5.10
9710.200	40.91	84.38	49.090	1000	1000.00	310.000	H	184.00	-1.10

Appendix E

Test Information

EUT Name: AD2 G55 #55
 Serial Number: TU162030005
 Test Description: FCC pt.74 & RSS-210 Radiated Emissions Matching
 Operating Conditions: 553.000MHz M @ 35mW
 Operator Name: Alex Stelmaszczyk, Tom Braxton & Mudassar Khan
 Comment: Horizontal and Vertical Antennae 30MHz – 10GHz
 Test Date: May 5 – 10, 2017

Frequency MHz	Max Peak (dBμV/m)	Matched Power from Sig Gen	Limit (dBm)	Margin (dBm)	Polarity	Cable Loss (dB)	Cable 2 Loss (dB)	Antenna Gain (dB)	ERP / EIRP Total (dBm)	Status
445.818	40.46	-56.5	-13.0	49.5	V	1.45	1.23		-59.18	PASS
461.410	41.26	-57.6	-13.0	48.7	V	1.45	1.26		-60.31	PASS
482.043	40.54	-58.3	-13.0	49.5	V	1.00	1.27		-60.57	PASS
1105.900	35.24	-57.4	-13.0	54.8	V	2.10	2.02	1.90	-59.62	PASS
1665.100	35.12	-77.4	-13.0	54.9	V	2.25	2.44	5.50	-76.59	PASS
2209.000	37.60	-76.2	-13.0	52.4	V	2.45	2.85	5.00	-76.50	PASS
2693.800	38.58	-46.9	-13.0	51.4	H	3.00	3.10	6.00	-47.00	PASS
3360.100	38.43	-70.9	-13.0	51.6	H	3.10	3.41	7.60	-69.81	PASS
6149.800	41.23	-70.9	-13.0	48.8	H	5.05	5.20	10.50	-70.65	PASS
9710.200	40.91	-70.5	-13.0	49.1	H	6.00	4.08	13.20	-67.38	PASS

Test Information

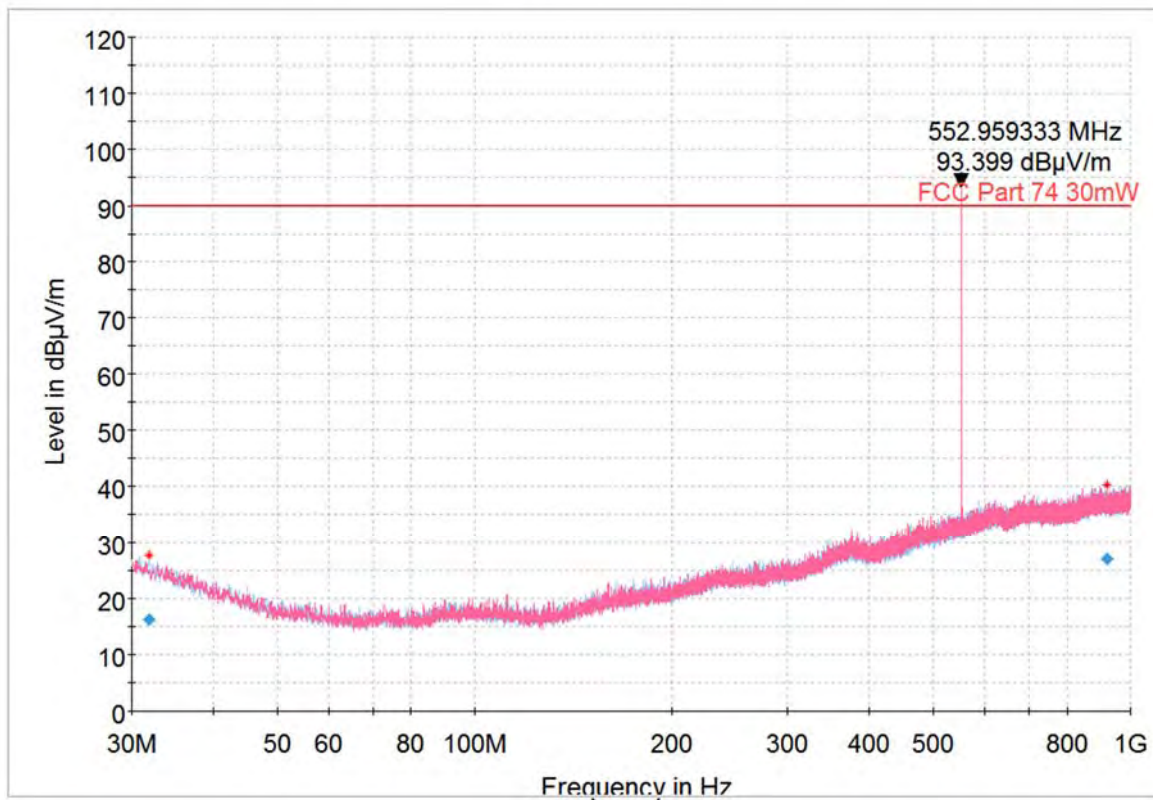
EUT Name: AD2 G55 #55
Serial Number: TU162030005
Test Description: Radiated RF Emissions 30MHz to 1GHz
Operating Conditions: 553.000MHz M @ 2mW
Operator Name: Alex Stelmaszczyk
Comment: FCC pt. 74
Description: FCC Table, 3m, AAs, No Audio Input
Test Date & Time: November 4, 2016 10:49:55 AM

EMI Auto Test Template: Axient Digital COMPLIANCE TEST FCC 74 Transmitter 30MHz to 1000MHz 34790

Hardware Setup: Electric Field Strength 34790 2016 06 03
Level Unit: dBμV/m

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 1 GHz	30 kHz	PK+	120 kHz	0.02 s	20 dB

Full Spectrum



Test Information

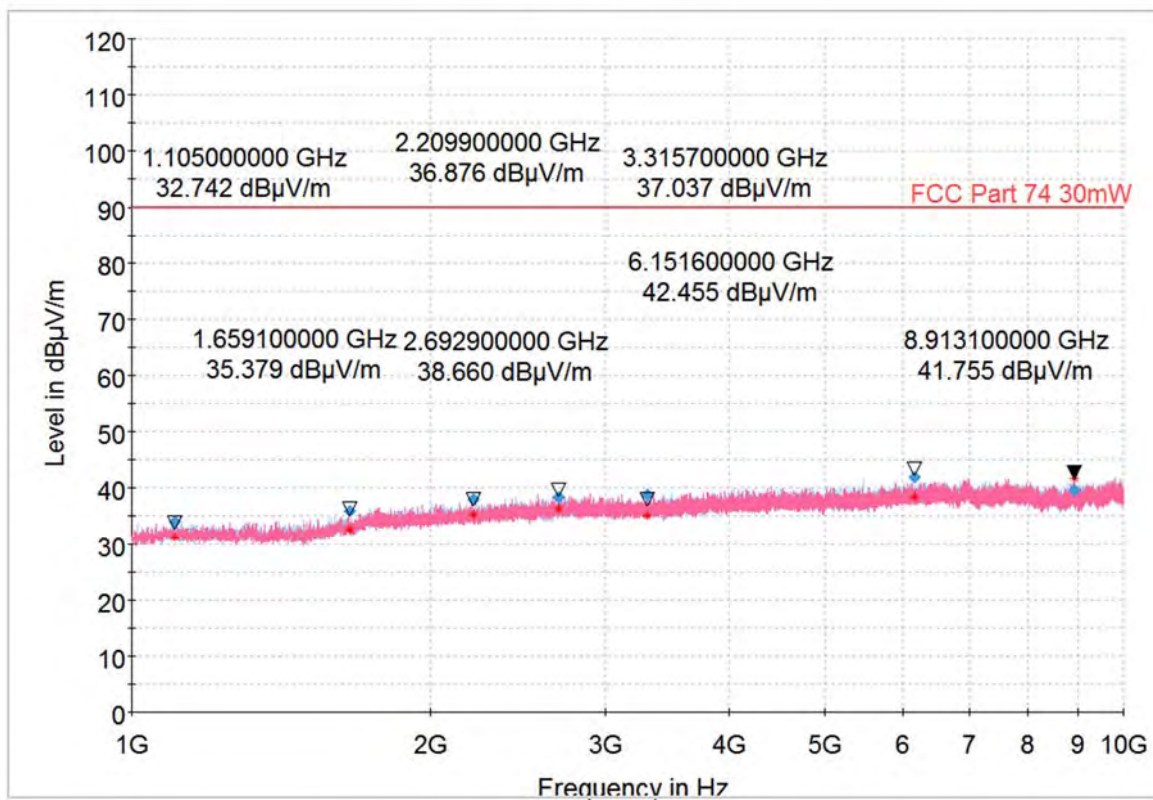
EUT Name: AD2 G55 #55
Serial Number: TU162030005
Test Description: Radiated RF Emissions 1GHz to 10GHz
Operating Conditions: 553.000MHz M @ 2mW
Operator Name: Alex Stelmaszczyk
Comment: FCC pt. 74
Description: FCC Table, Bore Site, 3m, AAs, No Audio Input, w/ L23-11-57 940MHz HPF
Test Date & Time: December 02, 2016 2:25:32 PM

EMI Auto Test Template: Axient Digital COMPLIANCE TEST FCC 74 1GHz to 10GHz 3117-PA 206583 FCC

Hardware Setup: Electric Field Strength 10GHz 3117-PA 206583 2016 03 24
Level Unit: dBμV/m

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
1 GHz - 10 GHz	250 kHz	PK+	1 MHz	1 s	20 dB

Full Spectrum



Test Information

EUT Name: AD2 G55 #55
Serial Number: TU162030005
Test Description: FCC pt.74 & RSS-210 Spurious Radiated Emissions
Operating Conditions: 553.000MHz M @ 2mW
Operator Name: Alex Stelmaszczyk
Comment: Horizontal and Vertical Antennae 30MHz – 10GHz
Test Date: November 4, 2016 & December 02, 2016

Frequency MHz	Max Peak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measure Time (ms)	Bandwidth (kHz)	Height (cm)	Polarity	Azimuth (deg)	Correction (dB)
31.875	16.24	84.38	73.760	20	120.00	298.000	H	33.00	16.00
552.992	95.08	84.38	-5.080	20	120.00	100.000	V	154.00	22.10
920.622	27.07	84.38	62.930	20	120.00	302.000	V	192.00	26.00
1105.000	34.09	84.38	55.910	1000	1000.00	195.000	H	248.00	-19.60
1659.100	35.82	84.38	54.180	1000	1000.00	384.000	H	31.00	-16.90
2209.900	37.96	84.38	52.040	1000	1000.00	350.000	V	186.00	-13.80
2692.900	38.34	84.38	51.660	1000	1000.00	234.000	V	353.00	-12.00
3315.700	38.88	84.38	51.120	1000	1000.00	134.000	V	-9.00	-10.90
6151.600	42.02	84.38	47.980	1000	1000.00	229.000	V	289.00	-5.10
8913.100	39.70	84.38	50.300	1000	1000.00	166.000	V	-4.00	-2.10

Appendix E

Test Information

EUT Name: AD2 G55 #55
 Serial Number: TU162030005
 Test Description: FCC pt.74 & RSS-210 Radiated Emissions Matching
 Operating Conditions: 553.000MHz M @ 2mW
 Operator Name: Alex Stelmaszczyk, Tom Braxton & Mudassar Khan
 Comment: Horizontal and Vertical Antennae 30MHz – 10GHz
 Test Date: May 5 – 10, 2017

Frequency MHz	Max Peak (dBμV/m)	Matched Power from Sig Gen	Limit (dBm)	Margin (dBm)	Polarity	Cable Loss (dB)	Cable 2 Loss (dB)	Antenna Gain (dB)	ERP / EIRP Total (dBm)	Status
1105.000	34.09	-78.4	-13.0	67.6	H	2.10	2.02	1.90	-80.62	PASS
1659.100	35.82	-70.4	-13.0	56.6	H	2.25	2.44	5.50	-69.59	PASS
2209.900	37.96	-57.9	-13.0	45.2	V	2.45	2.85	5.00	-58.20	PASS
2692.900	38.34	-45.9	-13.0	33.0	V	3.00	3.10	6.00	-46.00	PASS
3315.700	38.88	-71.2	-13.0	57.3	V	3.30	3.40	7.60	-70.30	PASS
6151.600	42.02	-60.8	-13.0	47.6	V	5.05	5.20	10.50	-60.55	PASS
8913.100	39.70	-98.9	-13.0	82.4	V	5.50	3.98	13.00	-95.38	PASS

Test Information

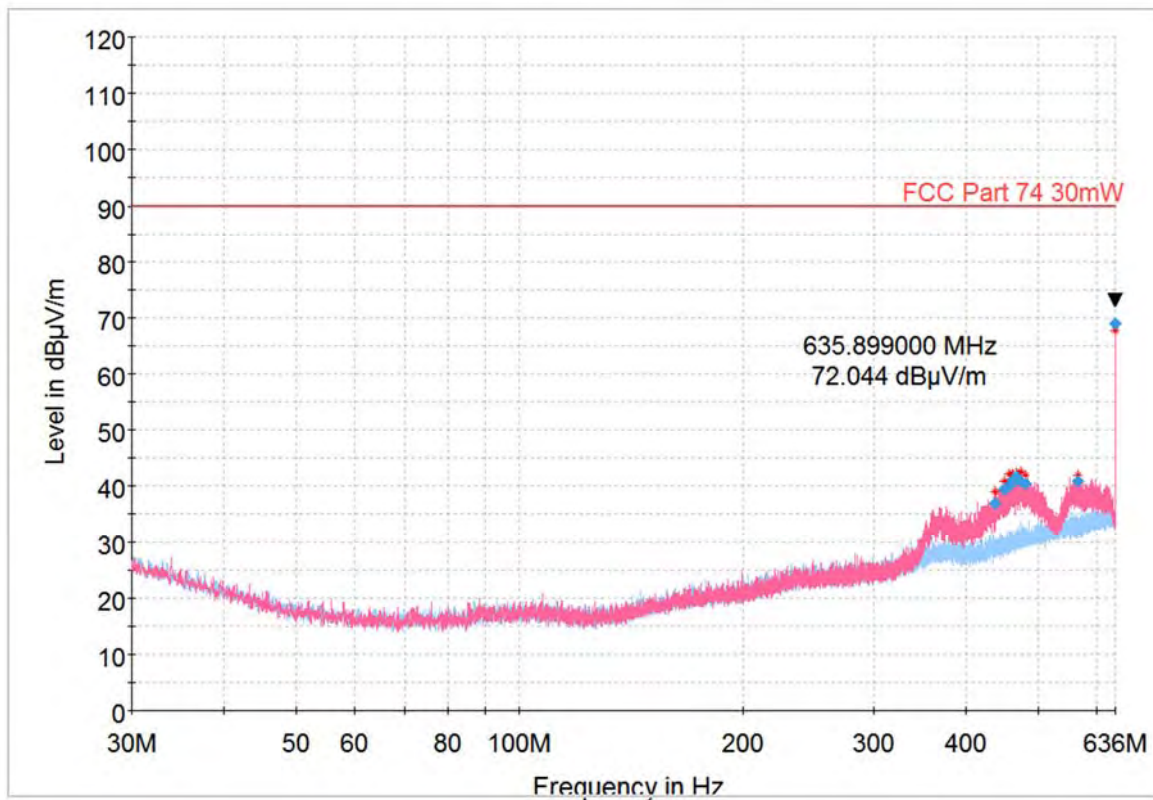
EUT Name:	AD2 G55 #55
Serial Number:	TU162030005
Test Description:	Radiated RF Emissions 30MHz to 636MHz
Operating Conditions:	635.875MHz H @ 35mW
Operator Name:	Alex Stelmaszczyk
Comment:	FCC pt. 74
Description:	FCC Table, 3m, AAs, No Audio Input, w L23-26-01 Tuned Notch
Test Date & Time	November 3, 2016 2:21:36 PM

EMI Auto Test Template: Axient Digital COMPLIANCE TEST FCC 74 Transmitter 30MHz to 1000MHz 34790

Hardware Setup:	Electric Field Strength 34790 2016 06 03
Level Unit:	dB μ V/m

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 1 GHz	30 kHz	PK+	120 kHz	0.02 s	20 dB

Full Spectrum



Test Information

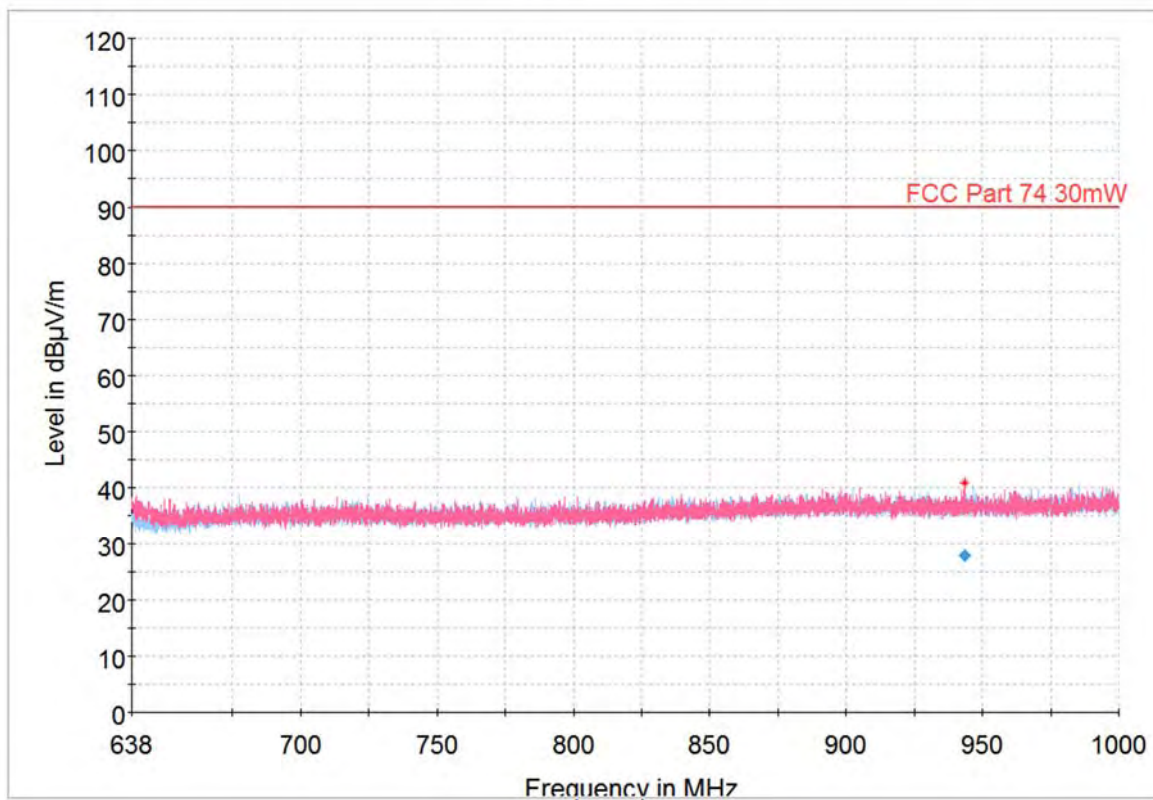
EUT Name: AD2 G55 #55
 Serial Number: TU162030005
 Test Description: Radiated RF Emissions 638 - 1000MHz
 Operating Conditions: 635.875MHz H @ 35mW
 Operator Name: Alex Stelmaszczyk
 Comment: FCC pt. 74
 Description: FCC Table, 3m, AAs, No Audio Input, w/o L23-26-01 Tuned Notch
 Test Date & Time: November 3, 2016 2:54:36 PM

EMI Auto Test Template: Axient Digital COMPLIANCE TEST FCC 74 Transmitter 30MHz to 1000MHz 34790

Hardware Setup: Electric Field Strength 34790 2016 06 03
 Level Unit: dBμV/m

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamplifier
30 MHz - 1 GHz	30 kHz	PK+	120 kHz	0.02 s	20 dB

Full Spectrum



Test Information

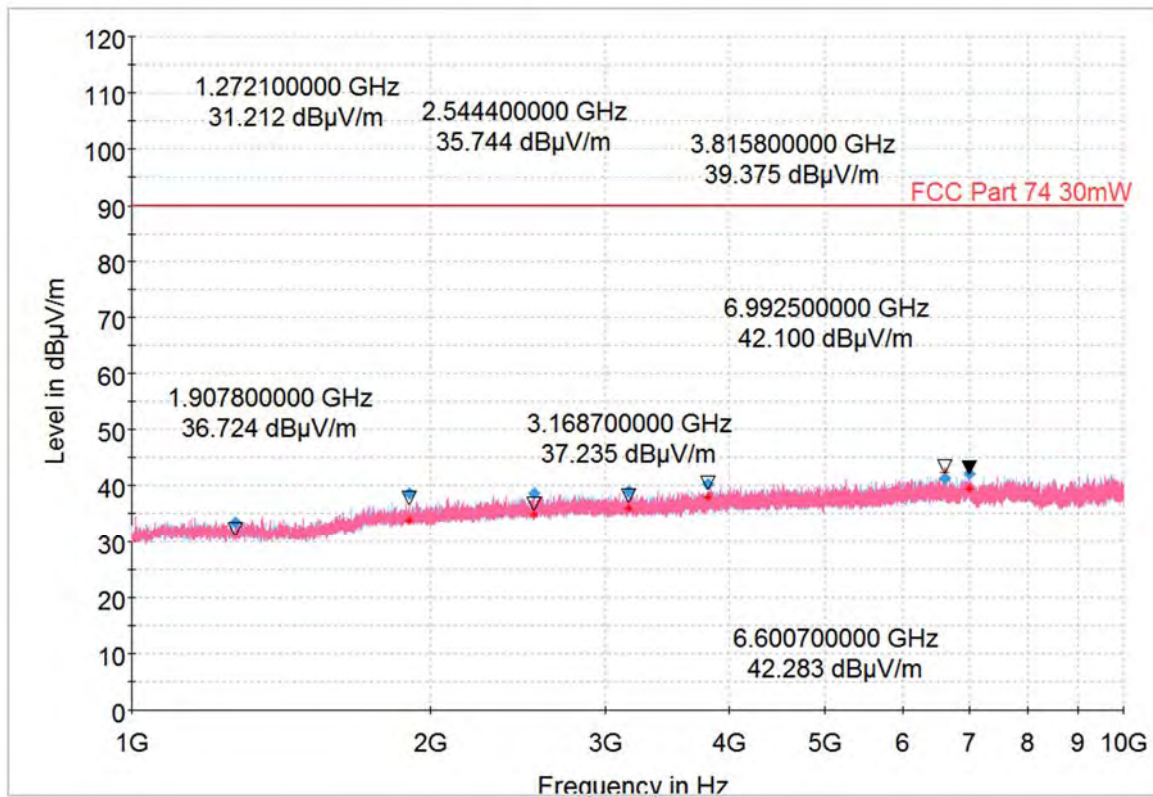
EUT Name: AD2 G55 #55
Serial Number: TU162030005
Test Description: Radiated RF Emissions 1GHz to 10GHz
Operating Conditions: 635.875MHz H @ 35mW
Operator Name: Alex Stelmaszczyk
Comment: FCC pt. 74
Description: FCC Table, Bore Site, 3m, AAs, No Audio Input, w/ L23-11-57 940MHz HPF
Test Date & Time: December 2, 2016 4:29:41 PM

EMI Auto Test Template: Axient Digital COMPLIANCE TEST FCC 74 1GHz to 10GHz 3117-PA 206583 FCC

Hardware Setup: Electric Field Strength 10GHz 3117-PA 206583 2016 03 24
Level Unit: dBμV/m

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
1 GHz - 10 GHz	250 kHz	PK+	1 MHz	1 s	20 dB

Full Spectrum



Test Information

EUT Name: AD2 G55 #55
Serial Number: TU162030005
Test Description: FCC pt.74 & RSS-210 Spurious Radiated Emissions
Operating Conditions: 635.875MHz H @ 35mW
Operator Name: Alex Stelmaszczyk
Comment: Horizontal and Vertical Antennae 30MHz – 10GHz
Test Date: November 3, 2016 & December 2, 2016

Frequency MHz	Max Peak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measure Time (ms)	Bandwidth (kHz)	Height (cm)	Polarity	Azimuth (deg)	Correction (dB)
438.080	37.03	84.38	52.970	20	120.00	127.000	V	209.00	18.60
451.231	39.35	84.38	50.650	20	120.00	119.000	V	227.00	19.00
457.371	40.12	84.38	49.880	20	120.00	111.000	V	351.00	19.40
462.886	41.02	84.38	48.980	20	120.00	100.000	V	48.00	19.70
467.108	41.74	84.38	48.260	20	120.00	100.000	V	87.00	19.90
469.835	41.16	84.38	48.840	20	120.00	111.000	V	350.00	20.10
475.087	40.98	84.38	49.020	20	120.00	100.000	V	24.00	20.40
480.521	40.58	84.38	49.420	20	120.00	111.000	V	32.00	20.50
567.138	40.80	84.38	49.200	20	120.00	100.000	V	197.00	22.00
635.859	69.00	84.38	21.000	20	120.00	142.000	V	182.00	23.40
943.335	27.73	84.38	62.270	20	120.00	293.000	V	39.00	26.10
1272.100	33.43	84.38	56.570	1000	1000.00	334.000	H	192.00	-19.20
1907.800	38.56	84.38	51.440	1000	1000.00	157.000	V	325.00	-15.10
2544.400	38.56	84.38	51.440	1000	1000.00	292.000	H	29.00	-12.60
3168.700	39.06	84.38	50.940	1000	1000.00	327.000	V	174.00	-11.20
3815.800	40.31	84.38	49.690	1000	1000.00	124.000	H	218.00	-9.10
6600.700	41.37	84.38	48.630	1000	1000.00	215.000	H	14.00	-4.30
6992.500	42.07	84.38	47.930	1000	1000.00	300.000	V	51.00	-3.50

Appendix E

Test Information

EUT Name: AD2 G55 #55
 Serial Number: TU162030005
 Test Description: FCC pt.74 & RSS-210 Radiated Emissions Matching
 Operating Conditions: 635.875MHz H @ 35mW
 Operator Name: Alex Stelmaszczyk, Tom Braxton & Mudassar Khan
 Comment: Horizontal and Vertical Antennae 30MHz – 10GHz
 Test Date: May 5 – 10, 2017

Frequency MHz	Max Peak (dBμV/m)	Matched Power from Sig Gen	Limit (dBm)	Margin (dBm)	Polarity	Cable Loss (dB)	Cable 2 Loss (dB)	Antenna Gain (dB)	ERP / EIRP Total (dBm)	Status
462.886	41.02	-57.2	-13.0	49.0	V	1.45	1.26		-59.91	PASS
467.108	41.74	-56.1	-13.0	48.3	V	1.45	1.26		-58.81	PASS
469.835	41.16	-57.3	-13.0	48.8	V	1.45	1.26		-60.01	PASS
1272.100	33.43	-77.5	-13.0	56.6	H	2.10	2.64	3.90	-78.34	PASS
1907.800	38.56	-67.3	-13.0	51.4	V	2.30	2.64	5.40	-66.84	PASS
2544.400	38.56	-36.9	-13.0	51.4	H	2.60	-2.64	7.00	-29.86	PASS
3168.700	39.06	-67.4	-13.0	50.9	V	3.05	3.44	7.00	-66.89	PASS
3815.800	40.31	-75.1	-13.0	49.7	H	3.65	4.03	8.40	-74.38	PASS
6600.700	41.37	-66.8	-13.0	48.6	H	4.70	5.47	10.60	-66.37	PASS
6992.500	42.07	-69.3	-13.0	47.9	V	5.15	5.52	10.90	-69.07	PASS

Test Information

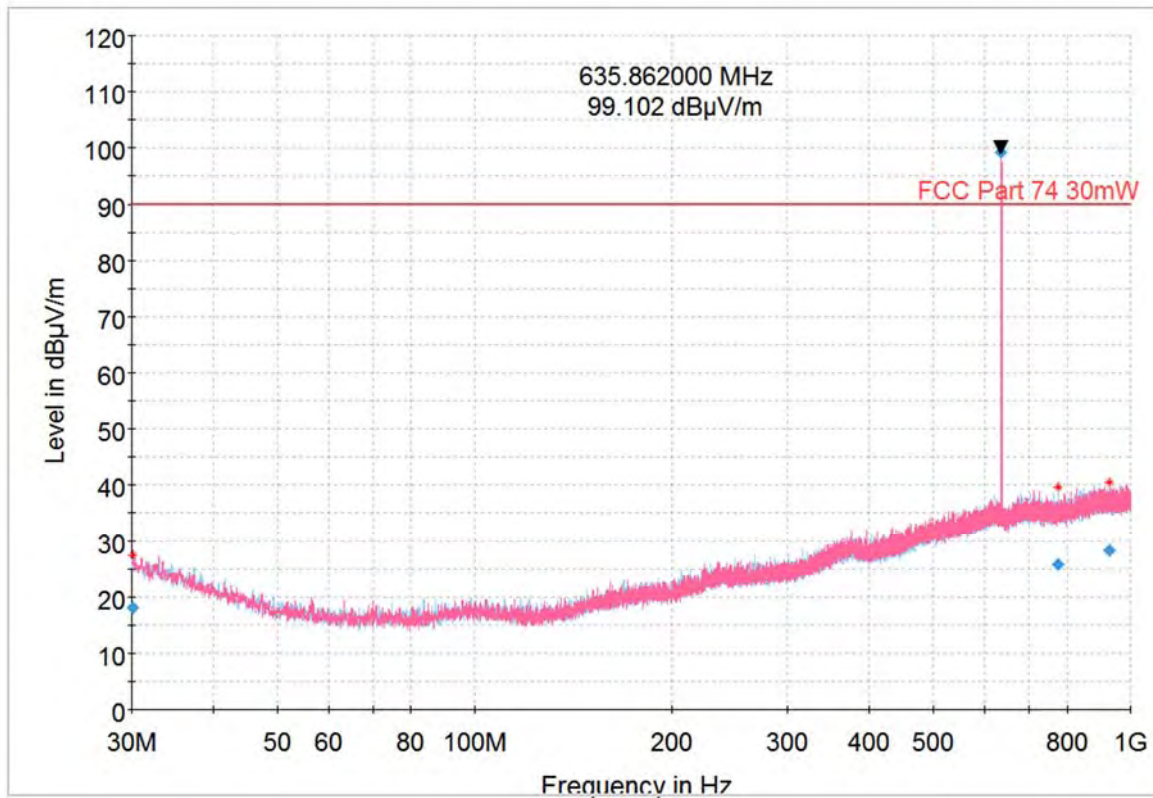
EUT Name: AD2 G55 #55
Serial Number: TU162030005
Test Description: Radiated RF Emissions 30MHz to 1GHz
Operating Conditions: 635.875MHz H @ 2mW
Operator Name: Alex Stelmaszczyk
Comment: FCC pt. 74
Description: FCC Table, 3m, AAs, No Audio Input
Test Date & Time: November 3, 2016 9:57:35 AM

EMI Auto Test Template: Axient Digital COMPLIANCE TEST FCC 74 Transmitter 30MHz to 1000MHz 34790

Hardware Setup: Electric Field Strength 34790 2016 06 03
Level Unit: dBμV/m

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamplifier
30 MHz - 1 GHz	30 kHz	PK+	120 kHz	0.02 s	20 dB

Full Spectrum



Test Information

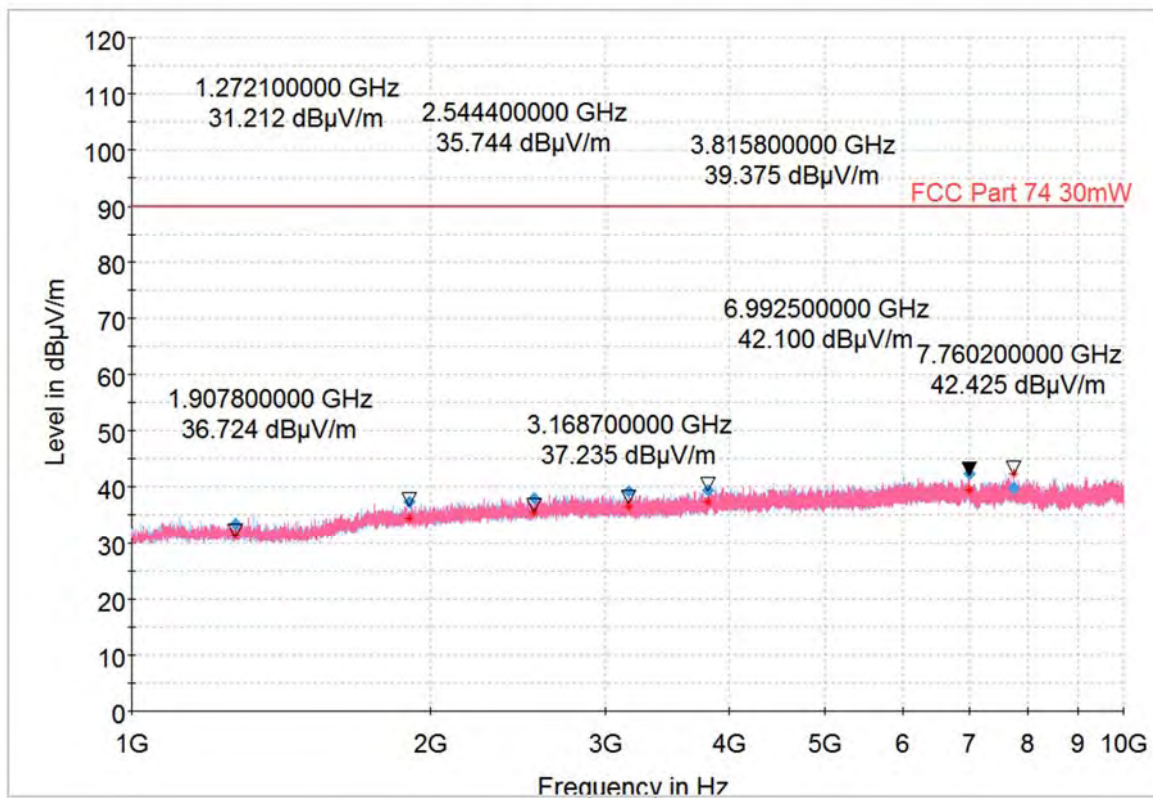
EUT Name: AD2 G55 #55
Serial Number: TU162030005
Test Description: Radiated RF Emissions 1GHz to 10GHz
Operating Conditions: 635.875MHz H @ 2mW
Operator Name: Alex Stelmaszczyk
Comment: FCC pt. 74
Description: FCC Table, Bore Site, 3m, AAs, No Audio Input, w/ L23-11-57 940MHz HPF
Test Date & Time: December 02, 2016 3:46:19 PM

EMI Auto Test Template: Axient Digital COMPLIANCE TEST FCC 74 1GHz to 10GHz 3117-PA 206583 FCC

Hardware Setup: Electric Field Strength 10GHz 3117-PA 206583 2016 03 24
Level Unit: dB μ V/m

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
1 GHz - 10 GHz	250 kHz	PK+	1 MHz	1 s	20 dB

Full Spectrum





Test Information

EUT Name: AD2 G55 #55
Serial Number: TU162030005
Test Description: FCC pt.74 & RSS-210 Spurious Radiated Emissions
Operating Conditions: 635.875MHz H @ 2mW
Operator Name: Alex Stelmaszczyk
Comment: Horizontal and Vertical Antennae 30MHz – 10GHz
Test Date: November 3, 2016 & December 02, 2016

Frequency MHz	Max Peak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measure Time (ms)	Bandwidth (kHz)	Height (cm)	Polarity	Azimuth (deg)	Correction (dB)
30.162	18.06	84.38	71.940	20	120.00	302.000	H	105.00	16.90
635.894	99.32	84.38	-9.320	20	120.00	135.000	V	125.00	23.40
776.092	25.82	84.38	64.180	20	120.00	400.000	H	157.00	24.70
930.645	28.20	84.38	61.800	20	120.00	300.000	V	10.00	26.00
1272.100	33.41	84.38	56.590	1000	1000.00	180.000	V	140.00	-19.20
1907.800	37.45	84.38	52.550	1000	1000.00	250.000	H	97.00	-15.10
2544.400	37.99	84.38	52.010	1000	1000.00	251.000	V	259.00	-12.60
3168.700	39.33	84.38	50.670	1000	1000.00	303.000	H	305.00	-11.20
3815.800	39.44	84.38	50.560	1000	1000.00	140.000	V	74.00	-9.10
6992.500	42.27	84.38	47.730	1000	1000.00	400.000	H	51.00	-3.50
7760.200	39.78	84.38	50.220	1000	1000.00	127.000	V	26.00	-3.10