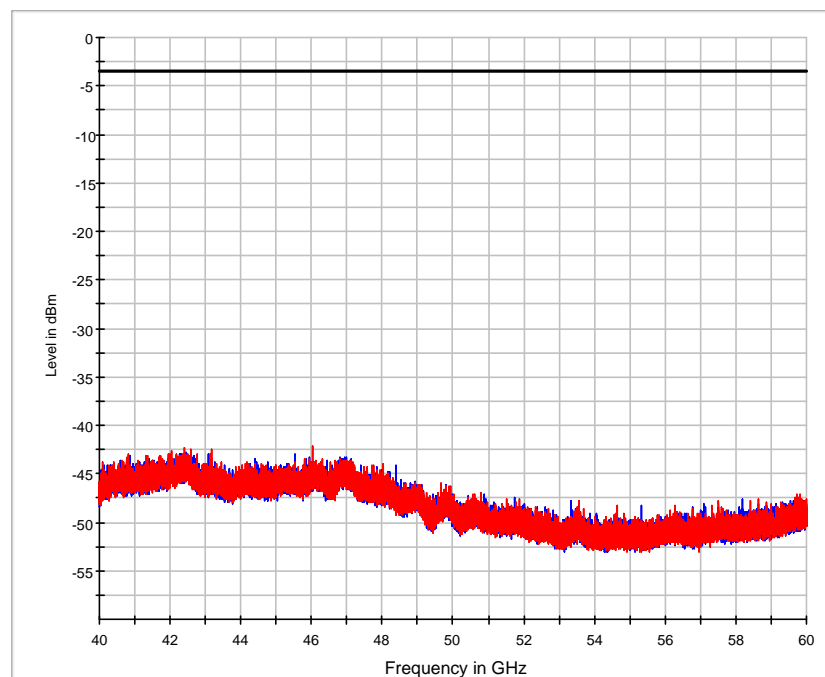
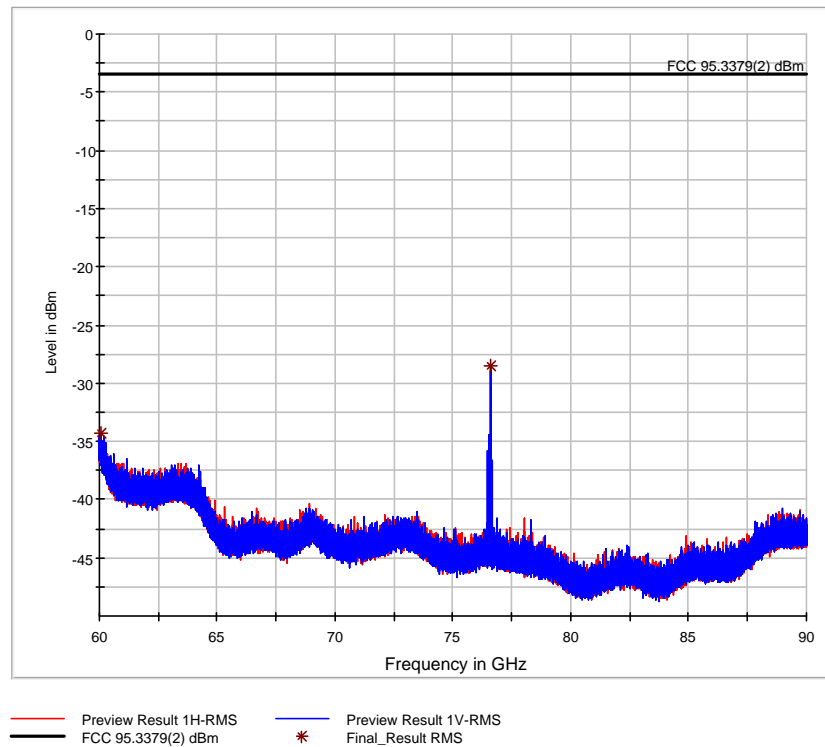


- Preview Result 1V-PK+
- Preview Result 1H-PK+
- FCC Part 15C Electric Field Strength 3m PK
- Preview Result 2H-AVG
- Preview Result 2V-AVG
- FCC Part 15C Electric Field Strength 3m AV

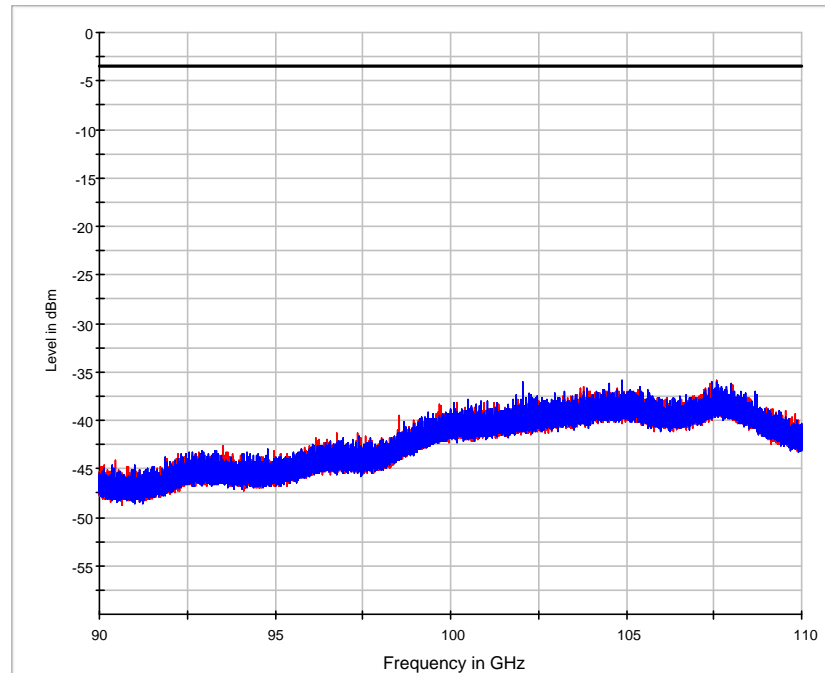


- Preview Result 1V-RMS
- Preview Result 1H-RMS
- FCC 95.3379(2) dBm
- \* Final\_Result RMS

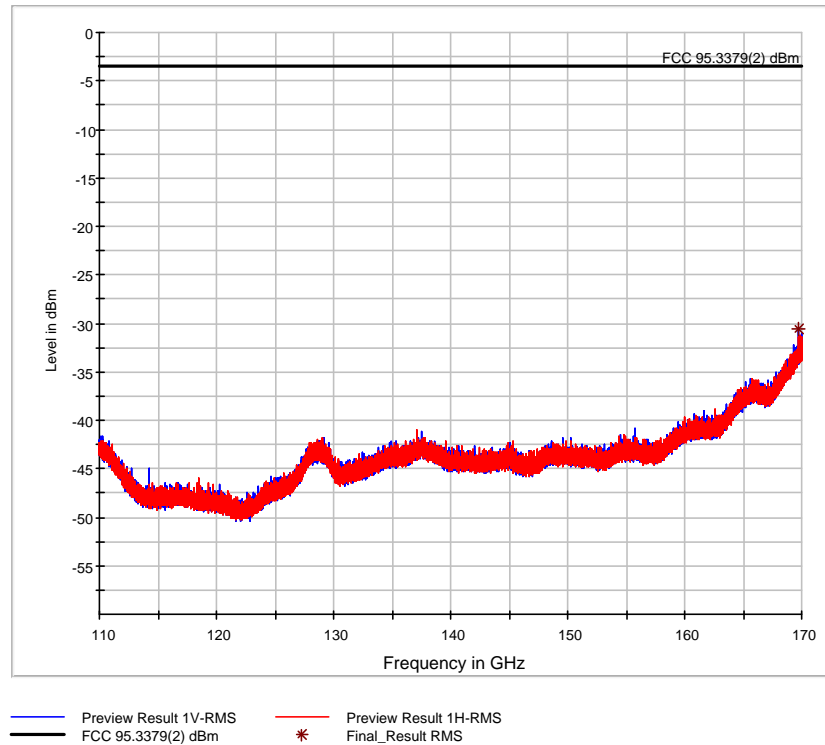


**Final Results:**

Frequency MHz	RMS dBm	Limit dBm	Margin dB	Meas. Time ms	Bandwidth kHz	Height cm	Pol	Azimuth deg	Corr. dB
60060.937500	-34.23	-1.69	32.54	5.0	1000.000	150.0	V	163.0	-63.0
76593.750000	-28.49	-1.69	26.80	5.0	1000.000	150.0	V	313.0	-62.9

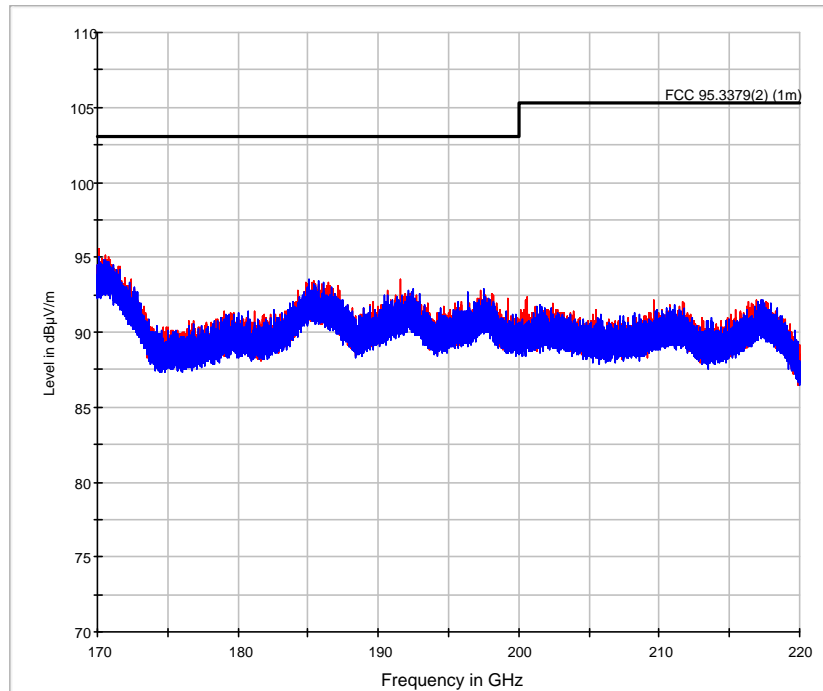


— Preview Result 1H-RMS      — Preview Result 1V-RMS  
— FCC 95.3379(2) dBm      \* Final\_Result RMS

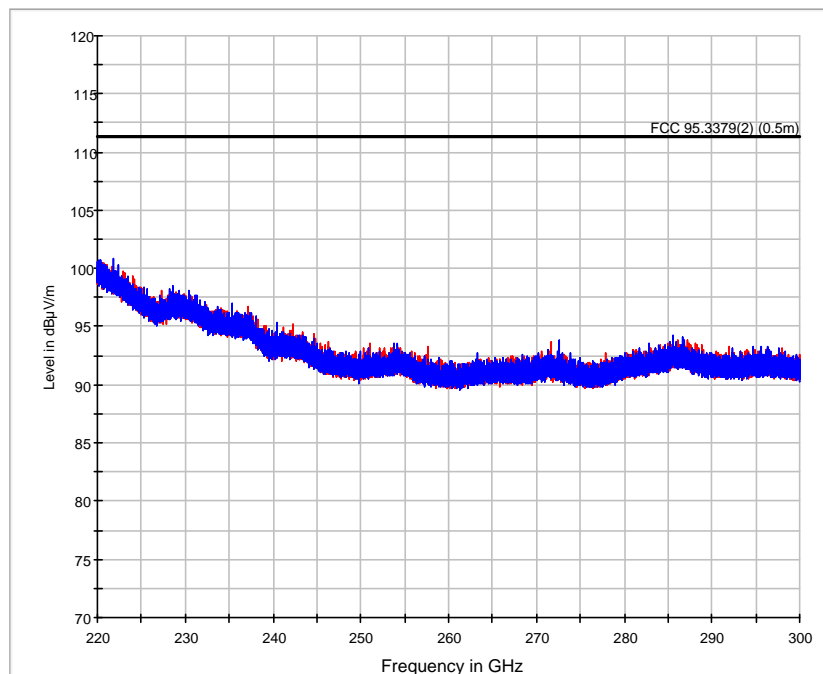


**Final Results:**

Frequency MHz	RMS dBm	Limit dBm	Margin dB	Meas. Time ms	Bandwidth kHz	Height cm	Pol	Azimuth deg	Corr. dB
169670.000000	-30.55	-1.69	28.86	20.0	1000.000	150.0	V	201.0	-73.9



— Preview Result 1H-RMS    — Preview Result 1V-RMS    — FCC 95.3379(2) (1m)



— Preview Result 1H-RMS    — Preview Result 1V-RMS  
 — FCC 95.3379(2) (0.5m)    \* Final\_Result RMS



## 10.4 Frequency Stability

Date of Test	2020-10-15 and 2020-10-16
Operator	Alex Fink
Test Site	Non shielded room

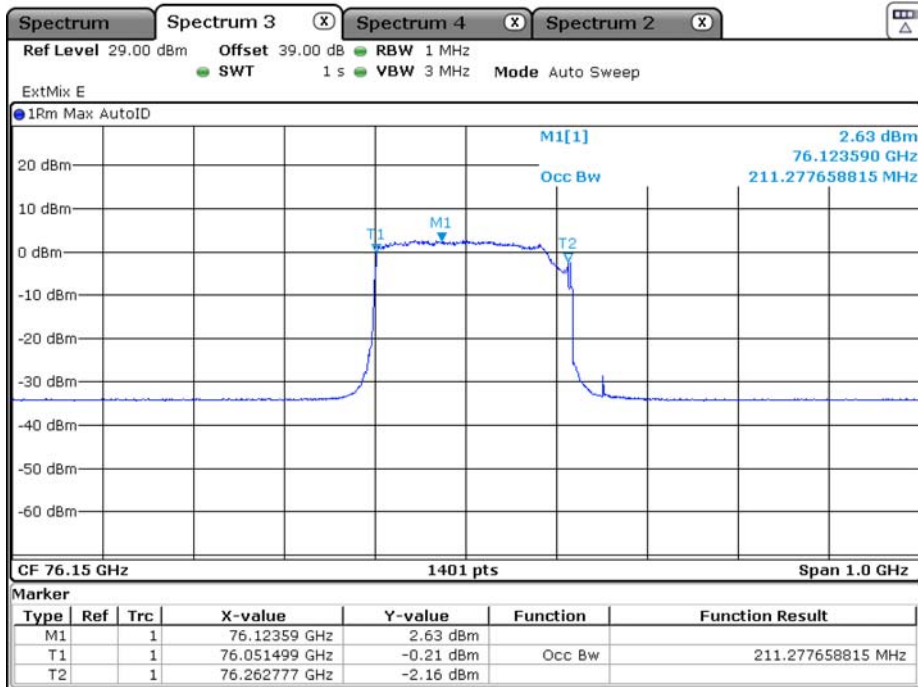
<b>Prüfergebnis / Test Result</b>	
<input checked="" type="checkbox"/>	<b>Erfüllt / Passed</b>
<input type="checkbox"/>	<b>Nicht erfüllt / Not passed</b>

Barometric pressure:	976 hPa
Relative humidity:	44 %
Ambient temperature:	22 °C

Specifications:	CFR 47, Part 95, Subpart M, §95.3379(b) RSS-251, Issue 2, Section 11
Description:	b) Fundamental emissions must be contained within the frequency bands specified in this section during all conditions of operation. Equipment is presumed to operate over the temperature range -20 °C to 50 °C with a input voltage variation of 85 % to 115 % of rated input voltage unless justification is presented to demonstrate otherwise.
Operation mode:	Transmitting continuously on lowest and highest frequency with modulation 175 MHz, 300 MHz and 425 MHz.
Comment :	See plots of tests for details.

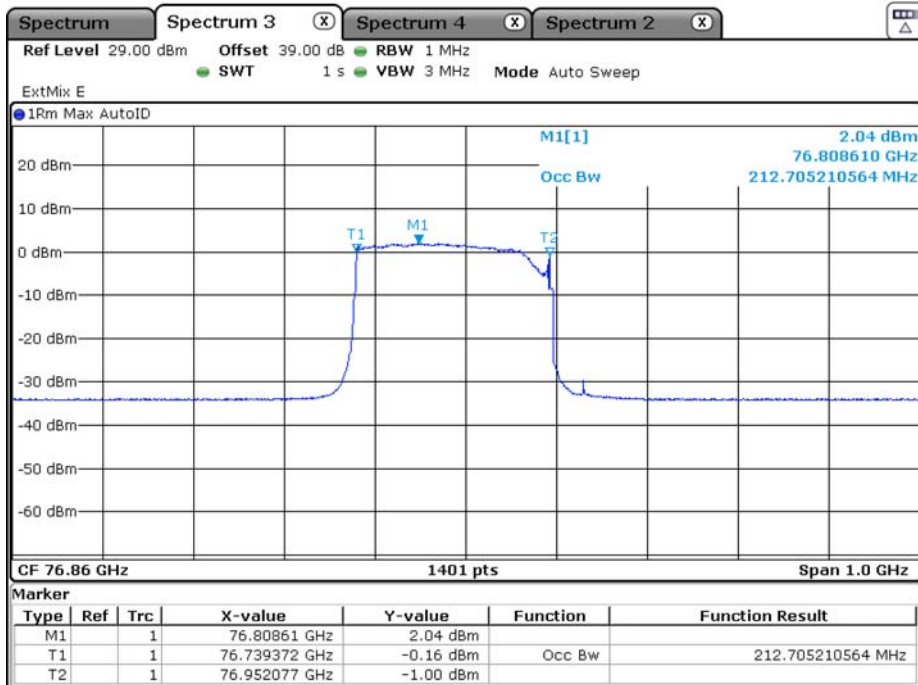
All emissions are within the 76 – 77 GHz frequency band.  
 See plots for details

Plots taken during test



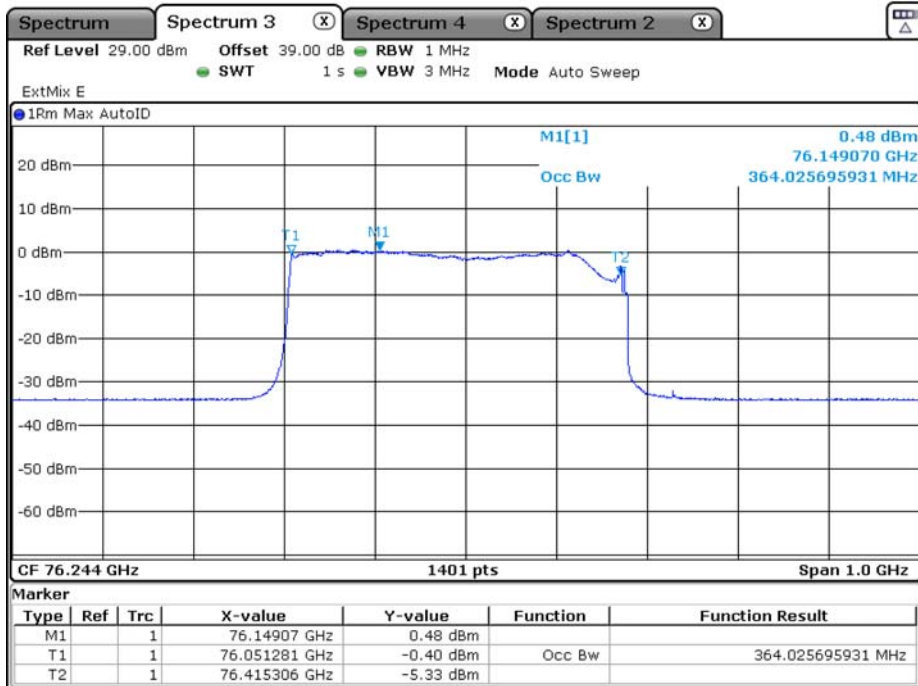
Date: 16.OCT.2020 08:54:04

175 MHz, 20 °C, 9.2 V – Lowest channel



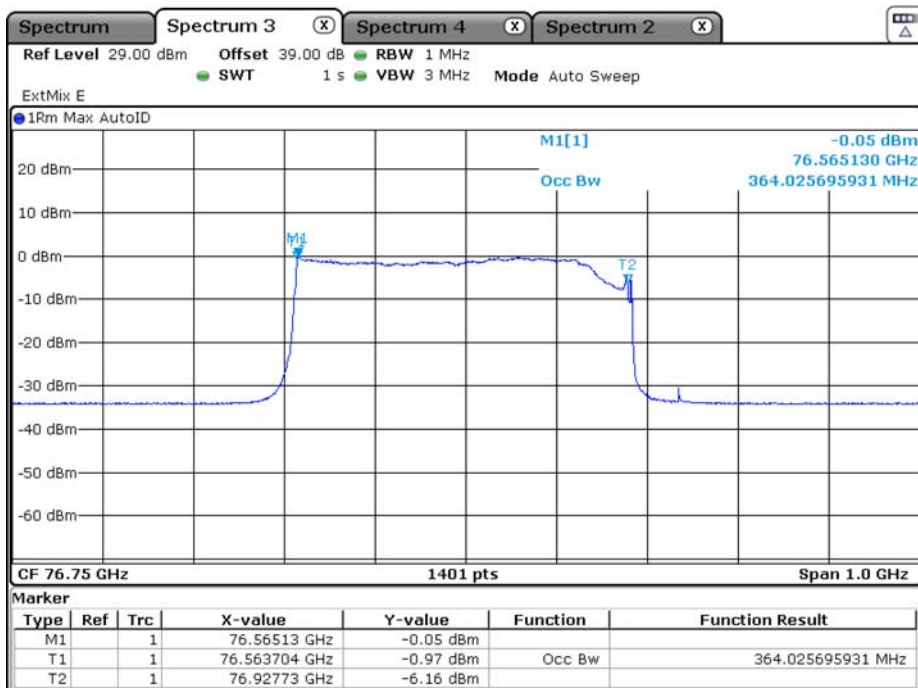
Date: 16.OCT.2020 09:02:44

175 MHz, 20 °C, 9.2 V – Highest channel



Date: 16.OCT.2020 08:47:47

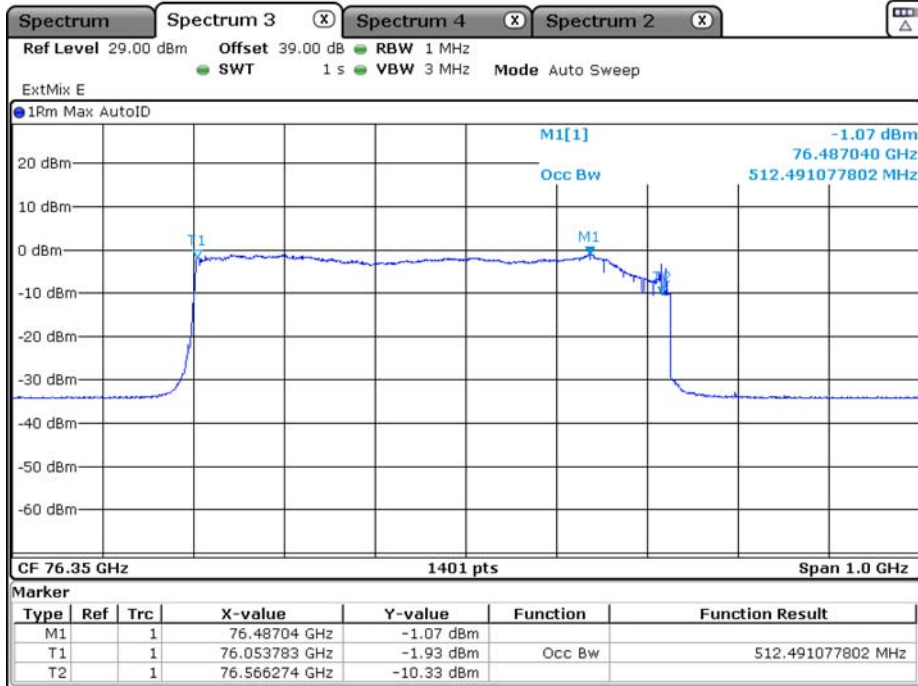
300 MHz, 20 °C, 9.2 V – Lowest channel



Date: 16.OCT.2020 09:08:43

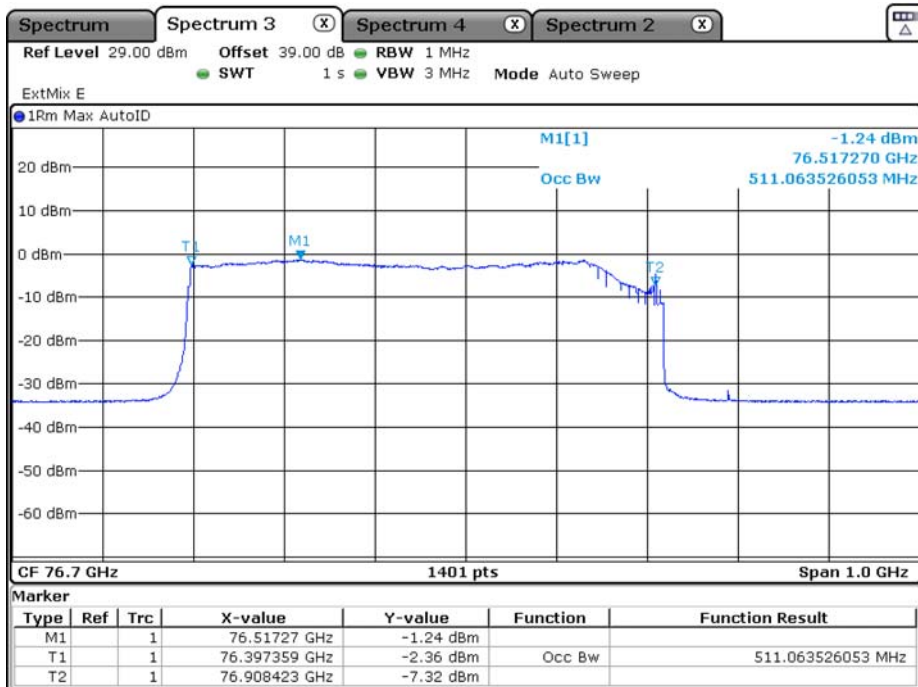
300 MHz, 20 °C, 9.2 V – Highest channel





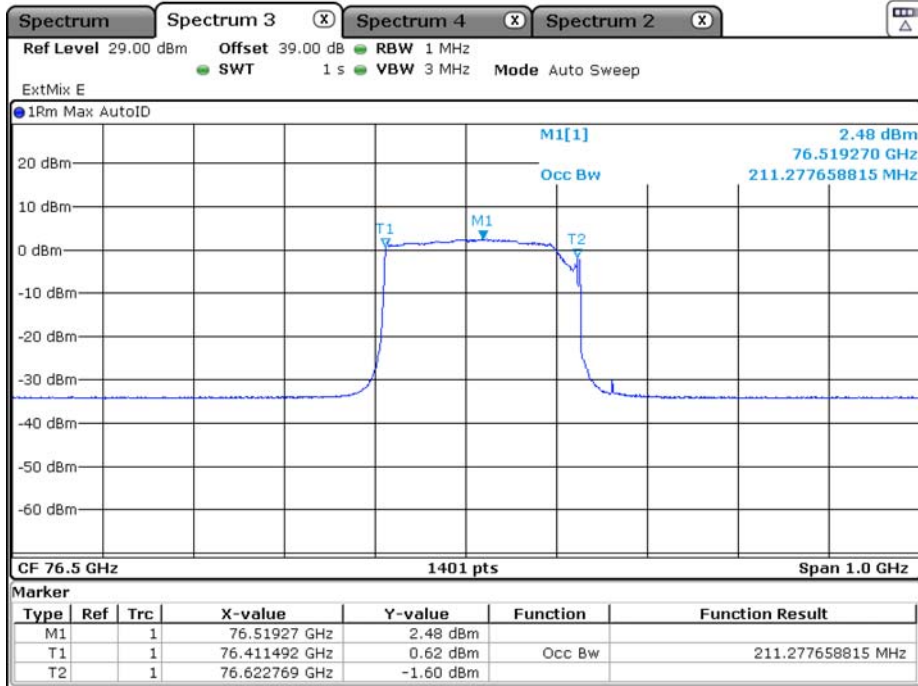
Date: 16.OCT.2020 08:44:20

425 MHz, 20 °C, 9.2 V – Lowest channel



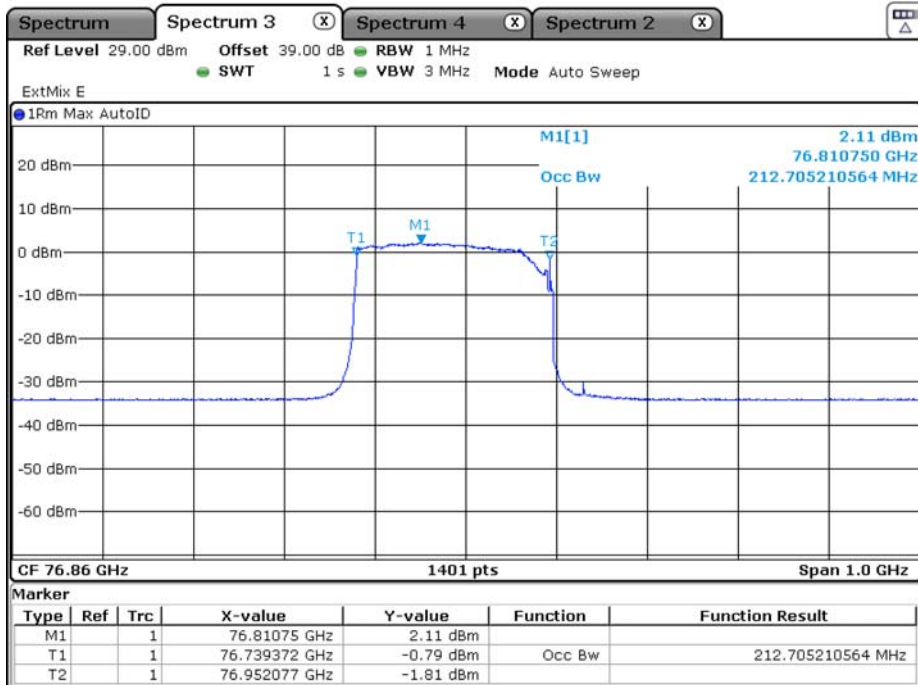
Date: 16.OCT.2020 08:35:17

425 MHz, 20 °C, 9.2 V – Highest channel



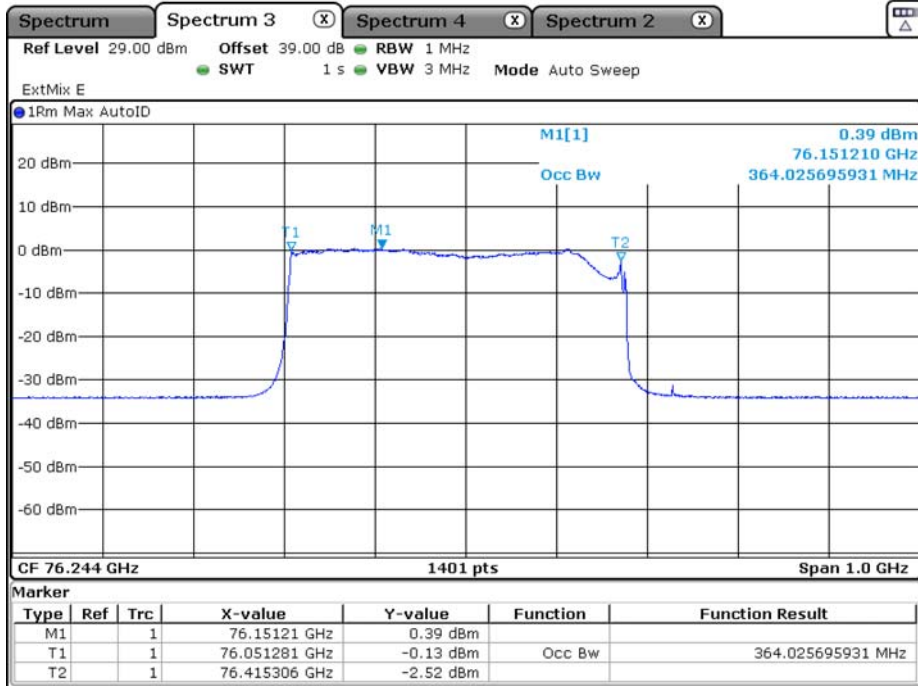
Date: 16.OCT.2020 08:58:02

175 MHz, 20 °C, 17.0 V – Lowest channel



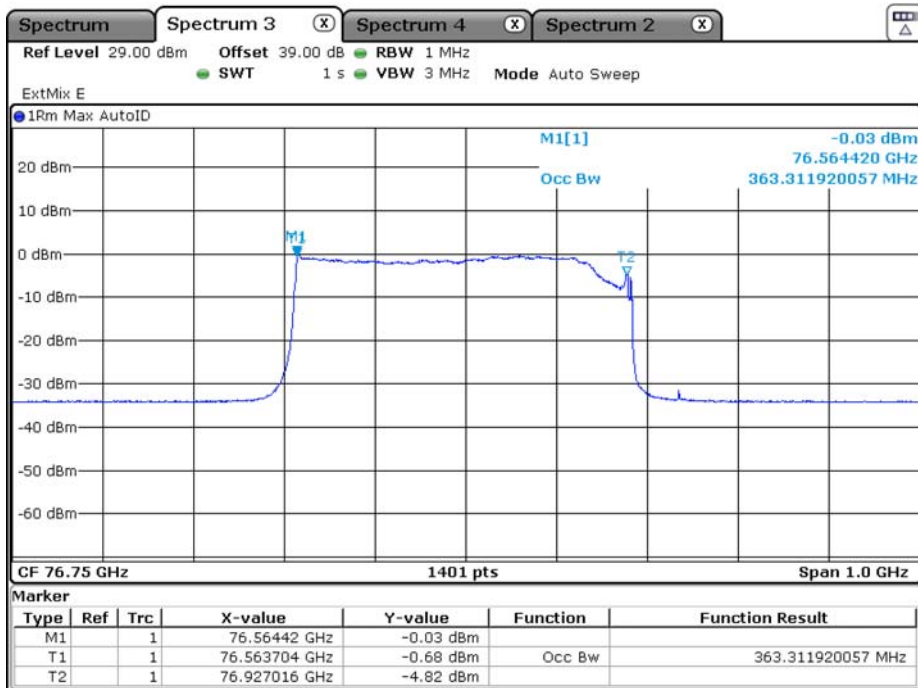
Date: 16.OCT.2020 09:01:18

175 MHz, 20 °C, 17.0 V – Highest channel



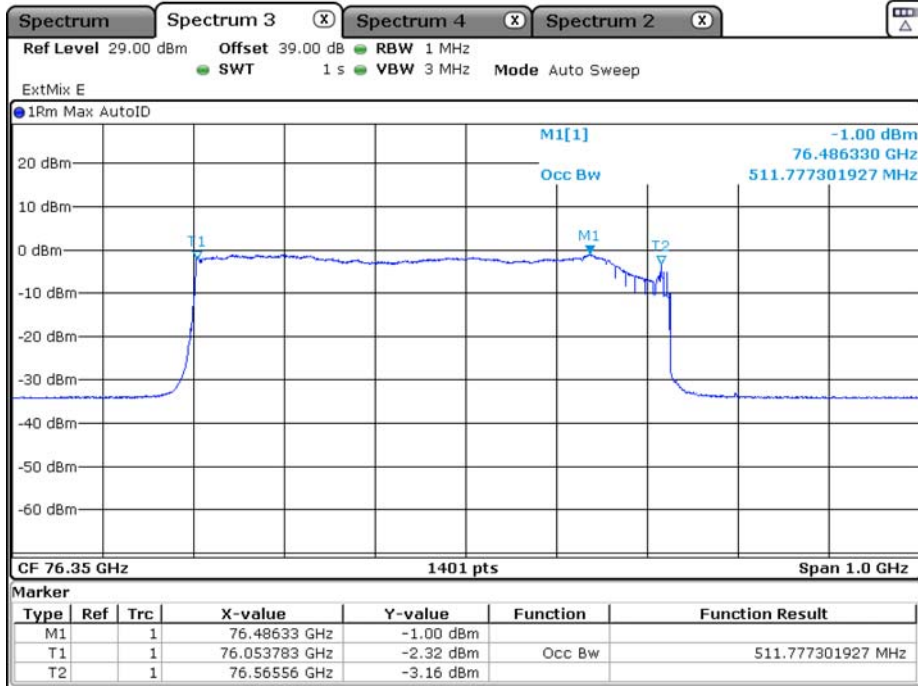
Date: 16.OCT.2020 08:48:50

300 MHz, 20 °C, 17.0 V – Lowest channel



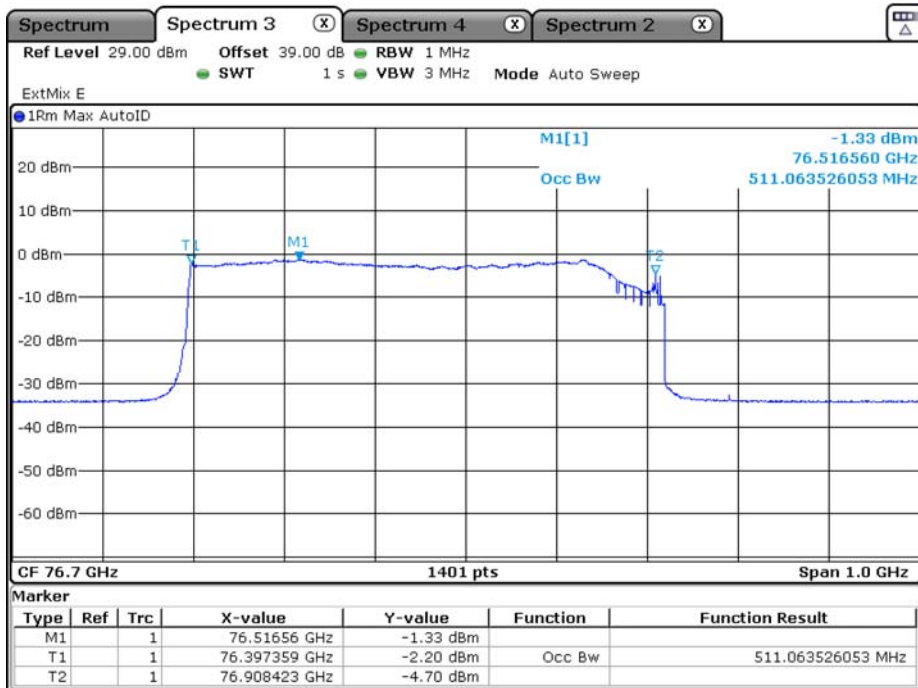
Date: 16.OCT.2020 09:09:56

300 MHz, 20 °C, 17.0 V – Highest channel



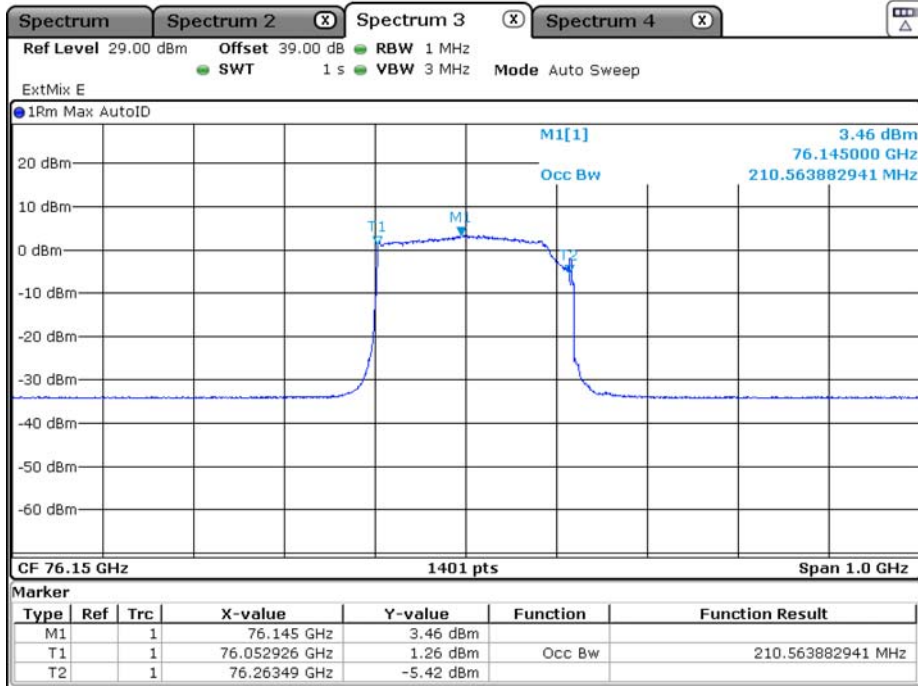
Date: 16.OCT.2020 08:43:13

425 MHz, 20 °C, 17.0 V – Lowest channel



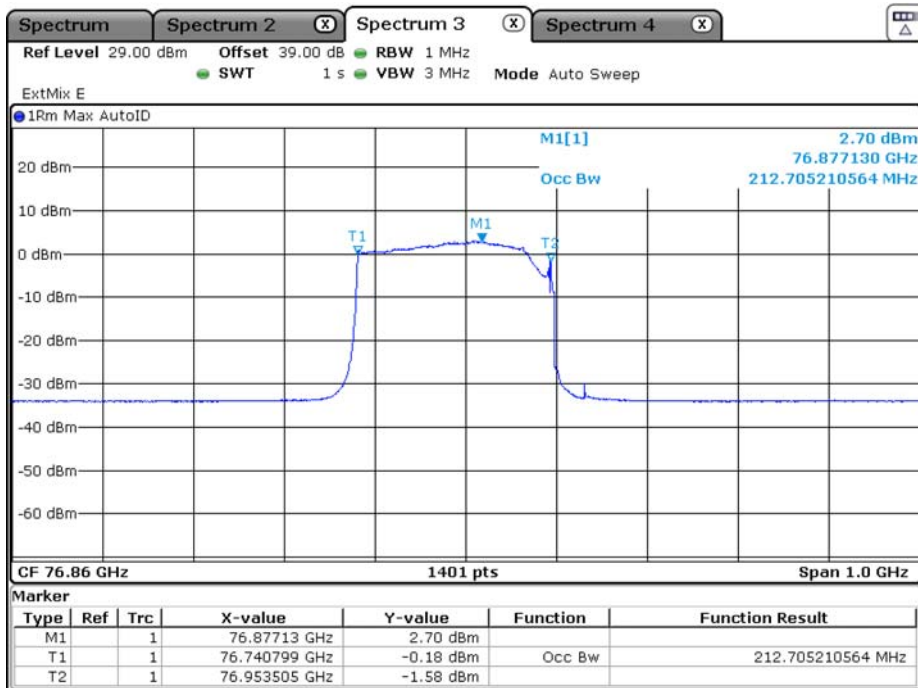
Date: 16.OCT.2020 08:34:17

425 MHz, 20 °C, 17.0 V – Highest channel



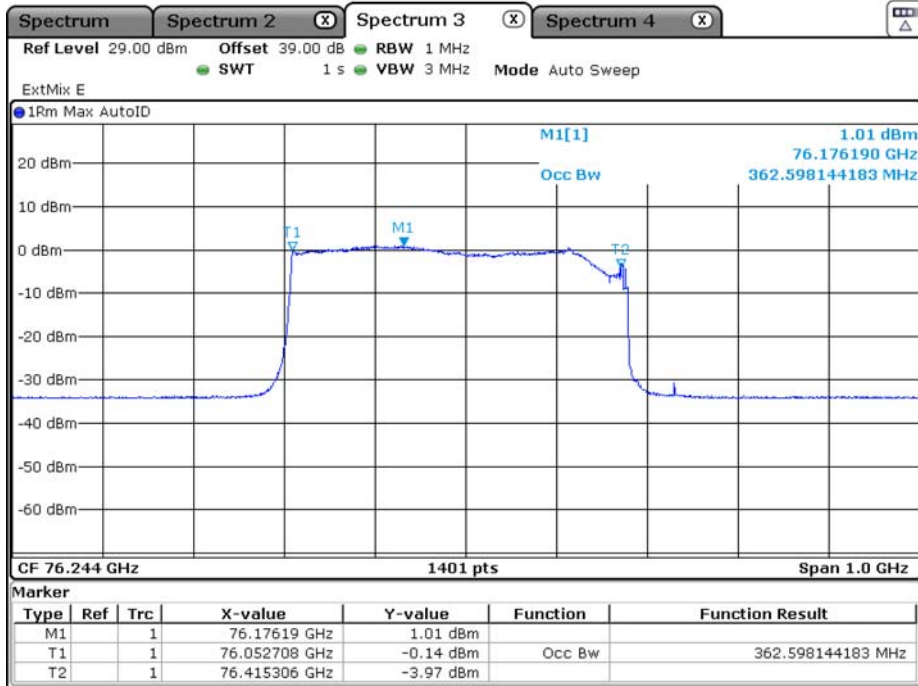
Date: 15.OCT.2020 11:28:08

175 MHz, -40 °C, 12.0 V – Lowest channel



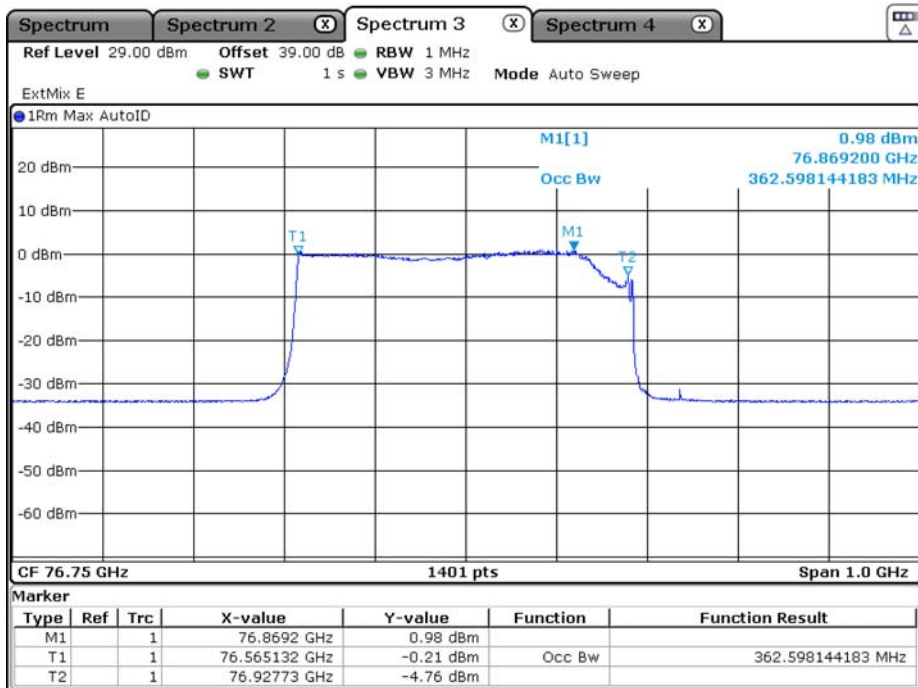
Date: 15.OCT.2020 11:18:46

175 MHz, -40 °C, 12.0 V – Highest channel



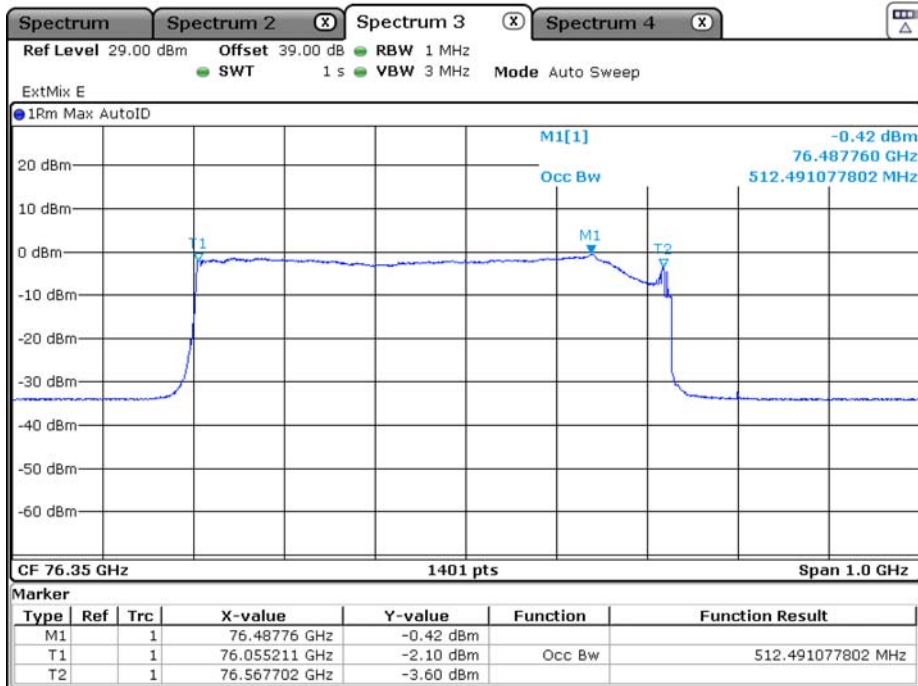
Date: 15.OCT.2020 11:42:15

300 MHz, -40 °C, 12.0 V – Lowest channel



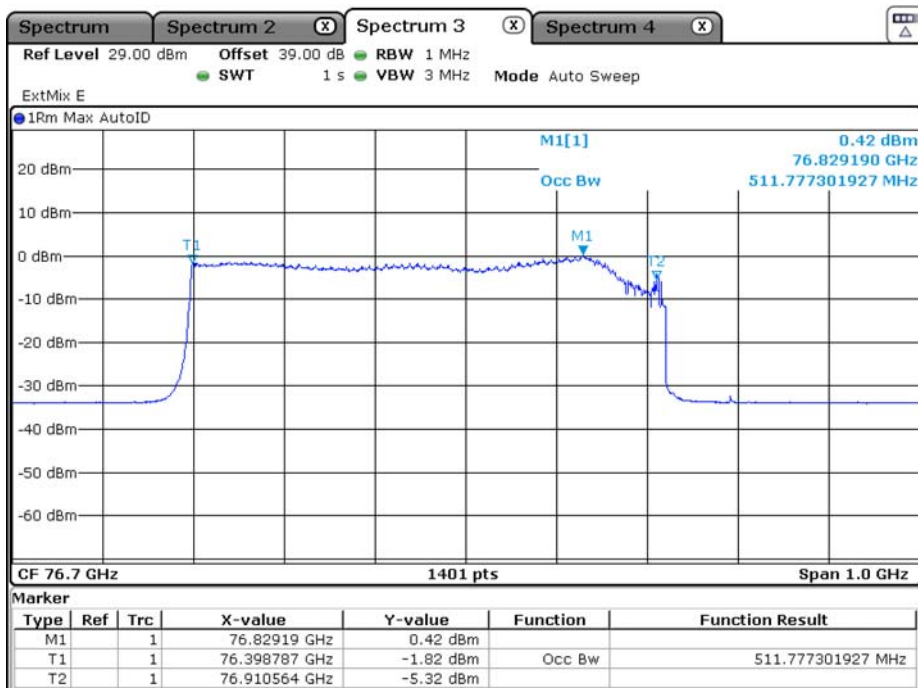
Date: 15.OCT.2020 12:56:44

300 MHz, -40 °C, 12.0 V – Highest channel



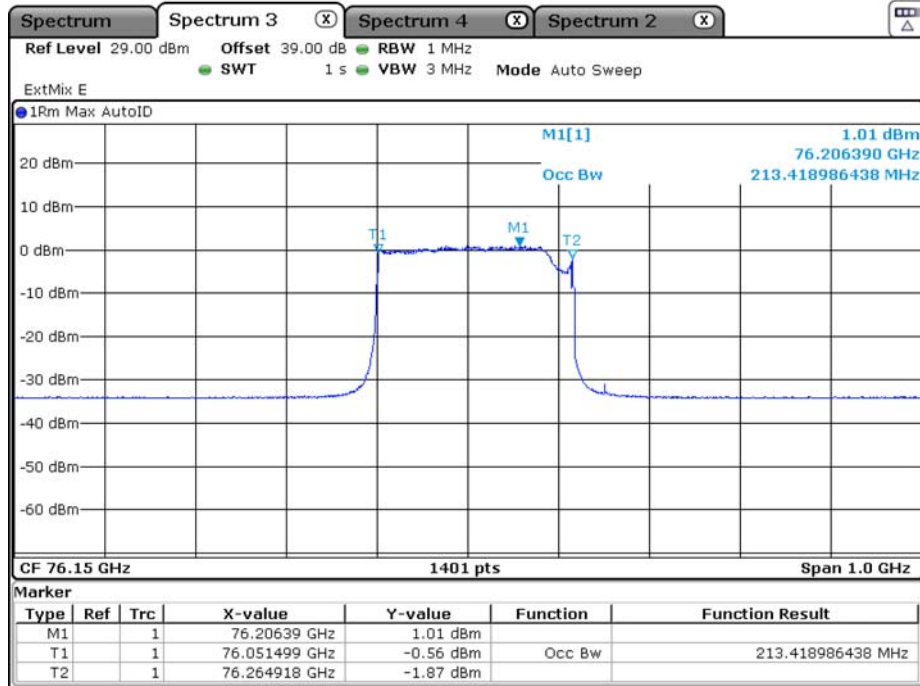
Date: 15.OCT.2020 13:31:40

425 MHz, -40 °C, 12.0 V – Lowest channel



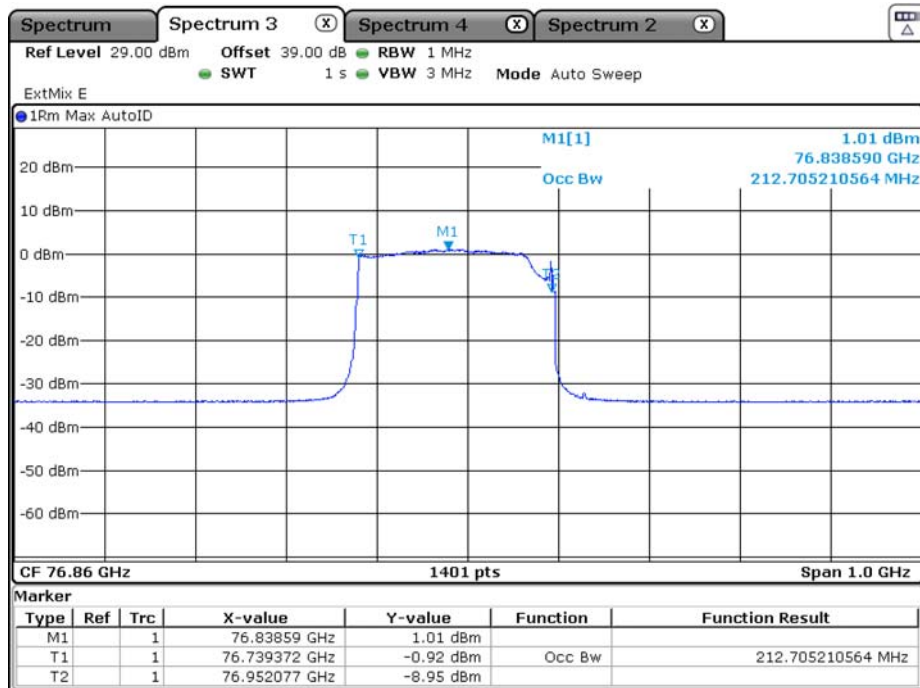
Date: 15.OCT.2020 15:05:47

425 MHz, -40 °C, 12.0 V – Highest channel



Date: 16.OCT.2020 10:27:10

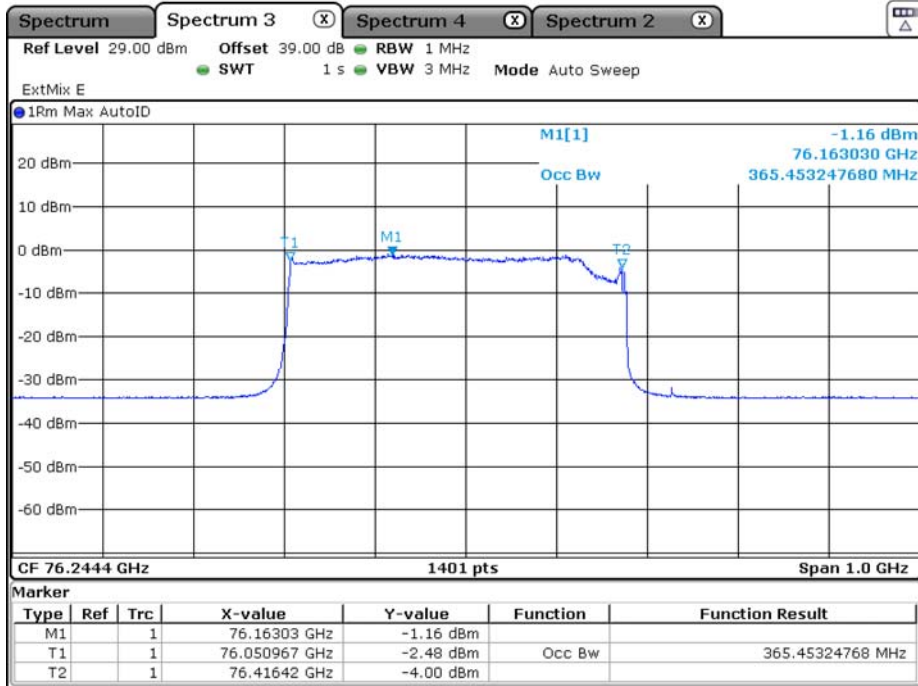
175 MHz, 85 °C, 12.0 V – Lowest channel



Date: 16.OCT.2020 11:33:07

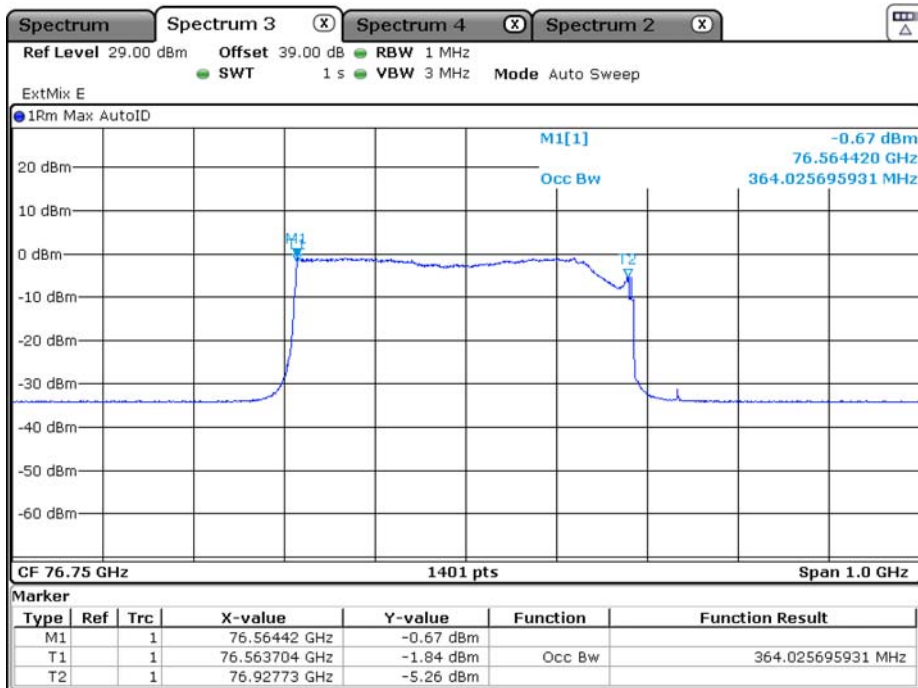
175 MHz, 85 °C, 12.0 V – Highest channel





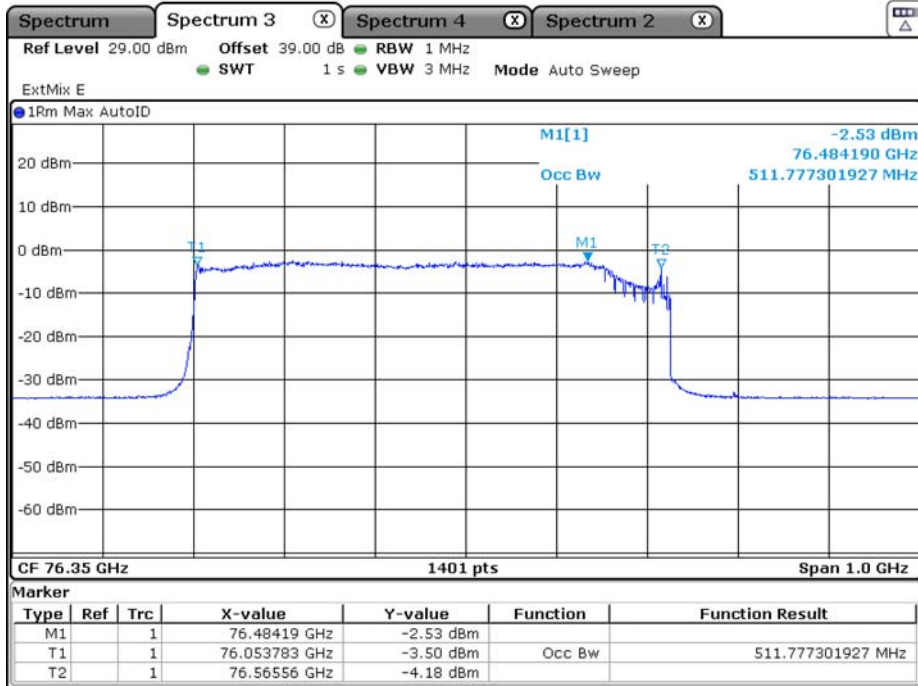
Date: 16.OCT.2020 11:55:15

300 MHz, 85 °C, 12.0 V – Lowest channel



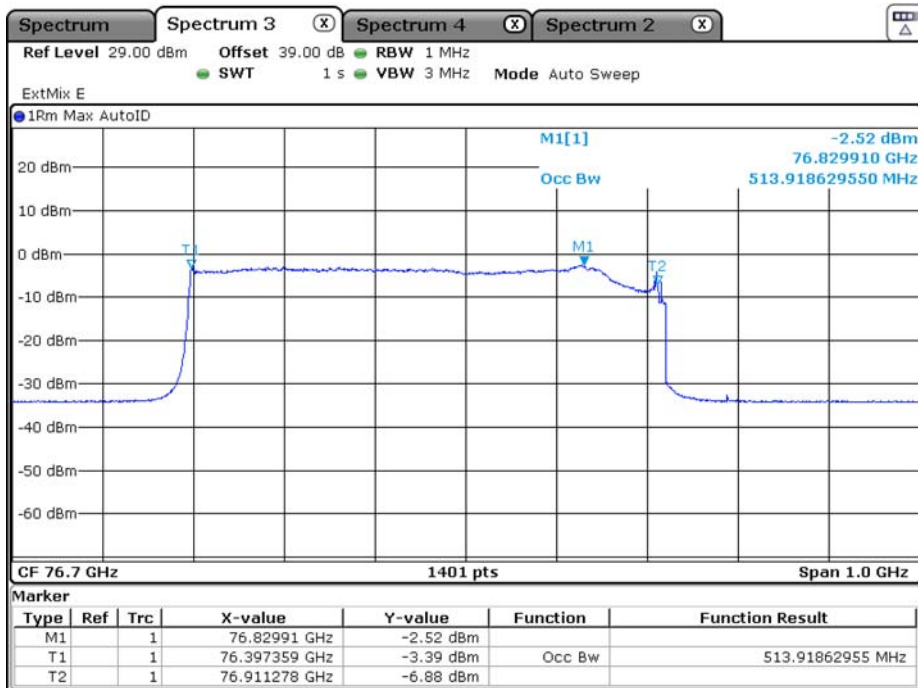
Date: 16.OCT.2020 12:47:17

300 MHz, 85 °C, 12.0 V – Highest channel



Date: 16.OCT.2020 13:23:56

425 MHz, 85 °C, 12.0 V – Lowest channel



Date: 16.OCT.2020 14:09:52

425 MHz, 85 °C, 12.0 V – Highest channel



## 10.5 SAR Evaluation

Date of Test	2020-10-14
Operator	Alex Fink
Test Site	Non shielded room

<b>Test Result</b>	
<input checked="" type="checkbox"/>	<b>Passed</b>
<input type="checkbox"/>	<b>Not Passed</b>

Barometric pressure:	974 hPa
Relative humidity:	45 %
Ambient temperature:	21 °C

Specifications:	CFR 47, Part 1, Section 1310(d)(4) RSS-102, Issue 5, (4) Table 4) KDB 447498
Description:	SAR evaluation is required if the separation distance between the user and/or bystander and the antenna and/or radiating element of the device is less than or equal to 20 cm, except when the device operates at or below the applicable output power level for the specified separation distance.  Output power level shall be the higher of the maximum conducted or equivalent isotropically radiated power (e.i.r.p.) source-based, time-averaged output power.
Operation mode:	Transmitting continuously on lowest and highest frequency with modulation 175 MHz, 300 MHz and 425 MHz.
Comment :	For test results see chapter 10.1 of this test report

Maximum <i>EIRP</i> (worst case):	26.25 dBm = 421.7 mW (Peak) 18.68 dBm = 73.8 mW (Average)
Frequency:	76 GHz to 77 GHz (> 5800 MHz)
Minimum separation distance <i>r</i> :	20 cm (declared by applicant)
Power density $S = \frac{EIRP}{4\pi r^2}$ :	0.0839 mW/cm <sup>2</sup> (Peak) 0.0147 mW/cm <sup>2</sup> (Average)
FCC Limit	1.0 mW/cm <sup>2</sup>
ISED Limit:	1.0 mW/cm <sup>2</sup>



## 11 Revision History

Revision History			
<i>Edition</i>	<i>Date</i>	<i>Issued by</i>	<i>Modifications</i>
1	2020-10-22	Alex Fink	First Edition
2	2020-11-09	Alex Fink	Page 6/7, HW version and marking plate corrected.
3	2020-11-27	Alex Fink	Section 10.5, ISED Limit corrected from 100 mW/cm <sup>2</sup> to 1 mW/cm <sup>2</sup>