

1.1 Minimum emission bandwidth for the band 5.725-5.85 GHz

Description:

Measurement of the 6 dB bandwidth of the modulated signal.

Measurement:

Measurement parameter	
According to: KDB789033 D02, C.2.	
Detector:	Peak
Sweep time:	Auto
Resolution bandwidth:	100 kHz
Video bandwidth:	300 kHz
Span:	40 MHz
Measurement procedure:	Using marker to find -6dBc frequencies
Trace mode:	Max hold (allow trace to stabilize)
Used test setup:	See chapter 7.4 – A
Measurement uncertainty:	See chapter 9

Limits:

FCC	IC
Minimum Emission Bandwidth for the band 5.725-5.85 GHz	
The minimum 6 dB bandwidth shall be at least 500 kHz.	

Result: UFL port

OFDM / a – mode	6 dB bandwidth [MHz]		
Channel	5745 MHz	5785 MHz	5825 MHz
	15.0	14.5	15.2

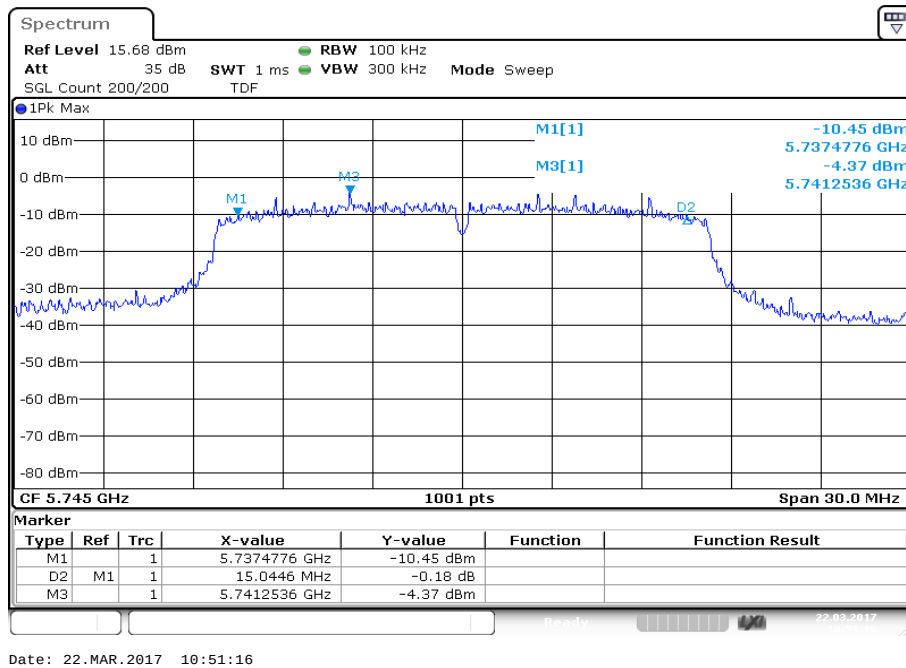
OFDM / n/ac HT20 – mode	6 dB bandwidth [MHz]		
Channel	5745 MHz	5785 MHz	5825 MHz
	15.4	15.2	15.0

OFDM / n/ac HT40 – mode	6 dB bandwidth [MHz]	
Channel	5755 MHz	5795 MHz
	35.1	35.1

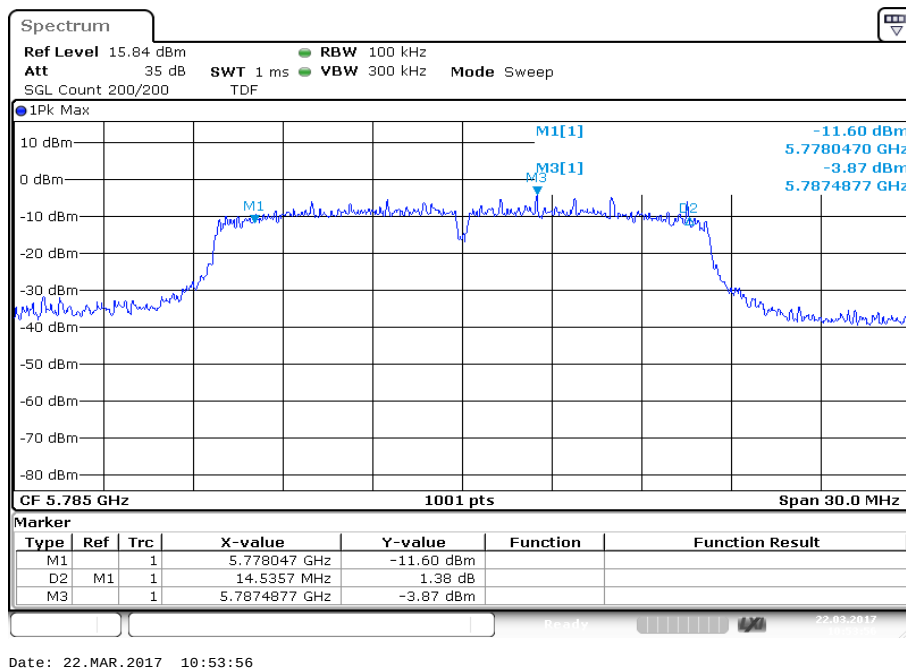
OFDM / ac HT80 – mode	6 dB bandwidth [MHz]
Channel	5775 MHz
	75.3

Plots: OFDM / a – mode, UFL port

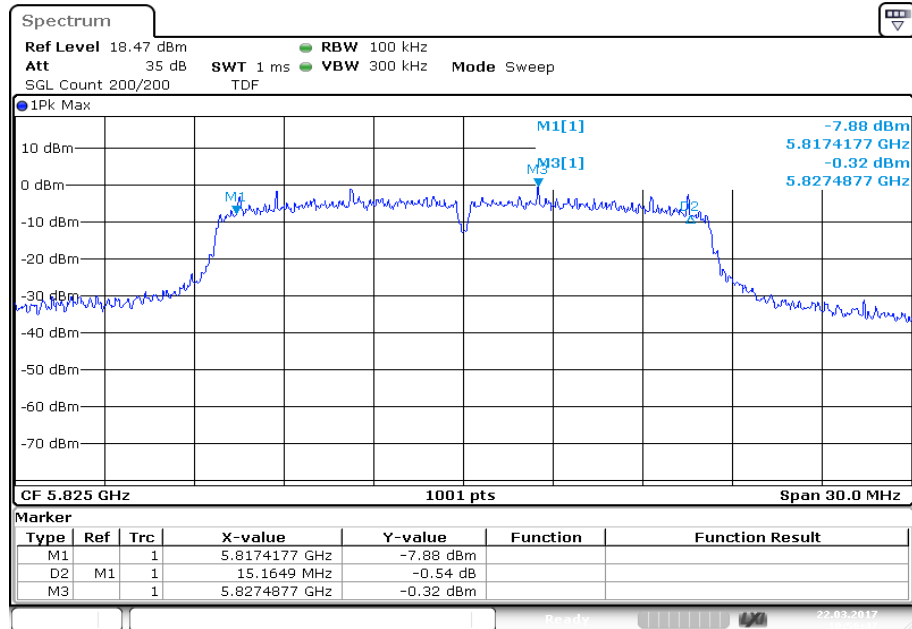
Plot 1: 5745 MHz



Plot 2: 5785 MHz



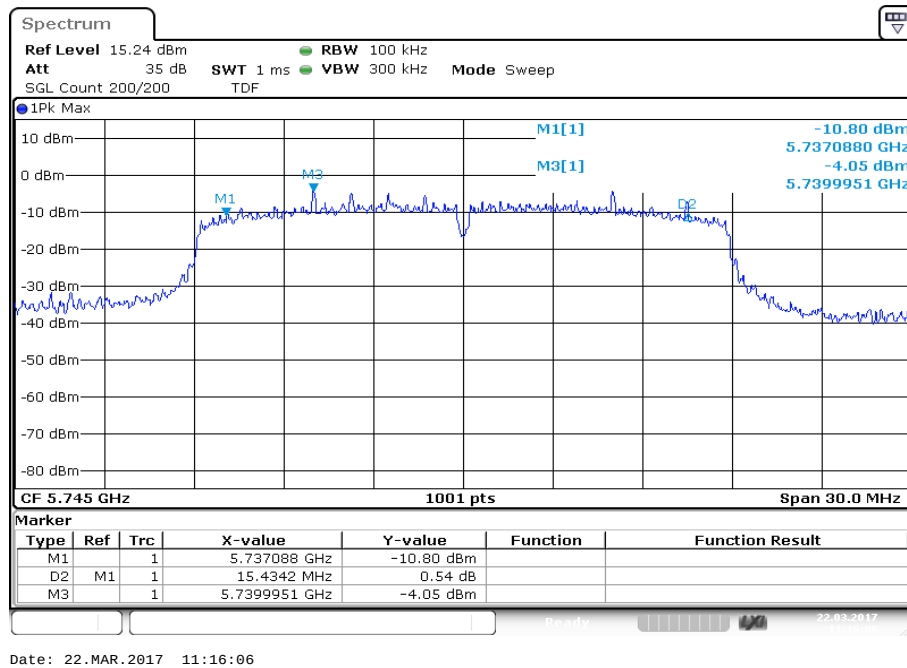
Plot 3: 5825 MHz



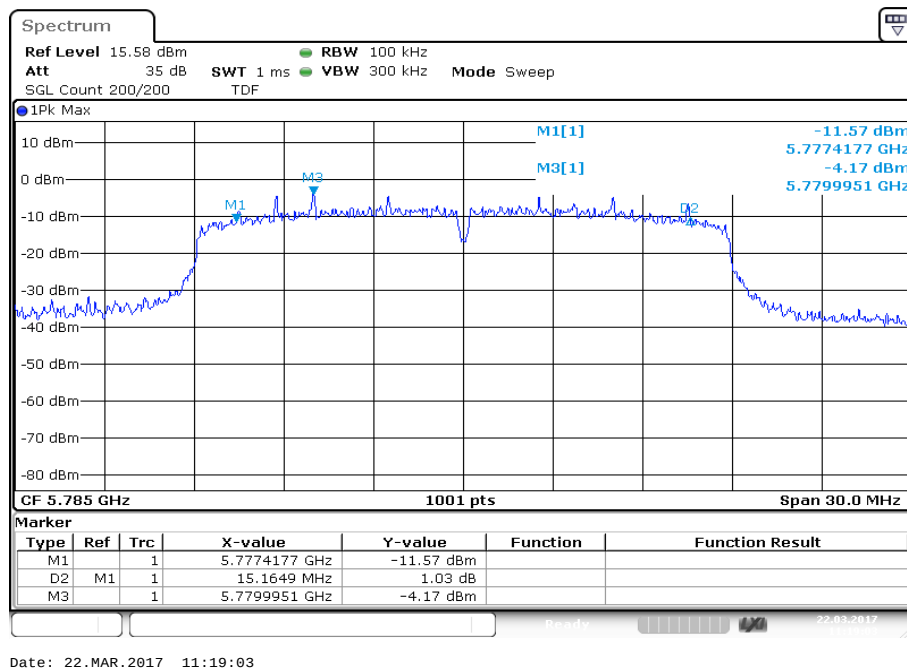
Date: 22.MAR.2017 10:56:47

Plots: OFDM / n/ac HT20 – mode, UFL port

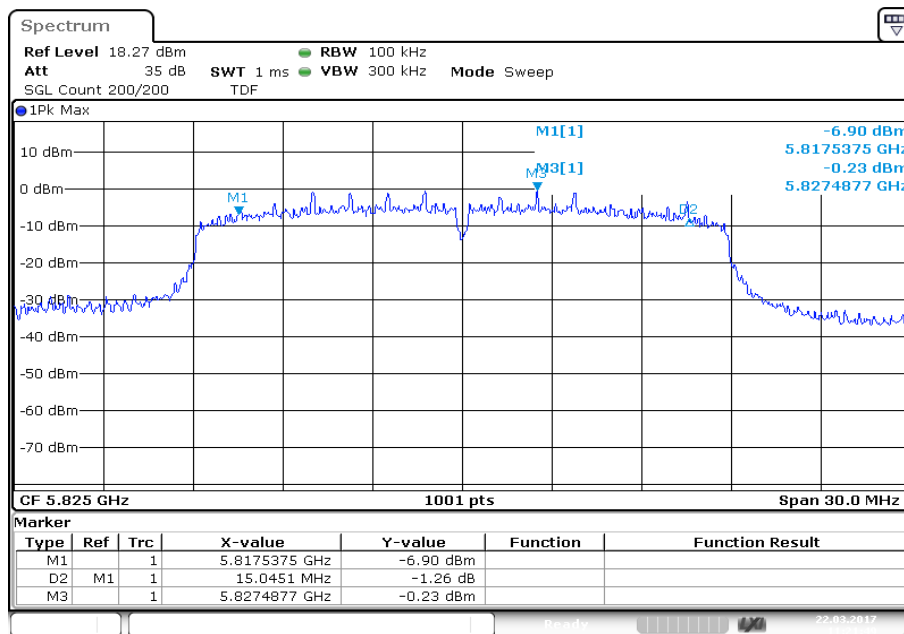
Plot 1: 5745 MHz



Plot 2: 5785 MHz



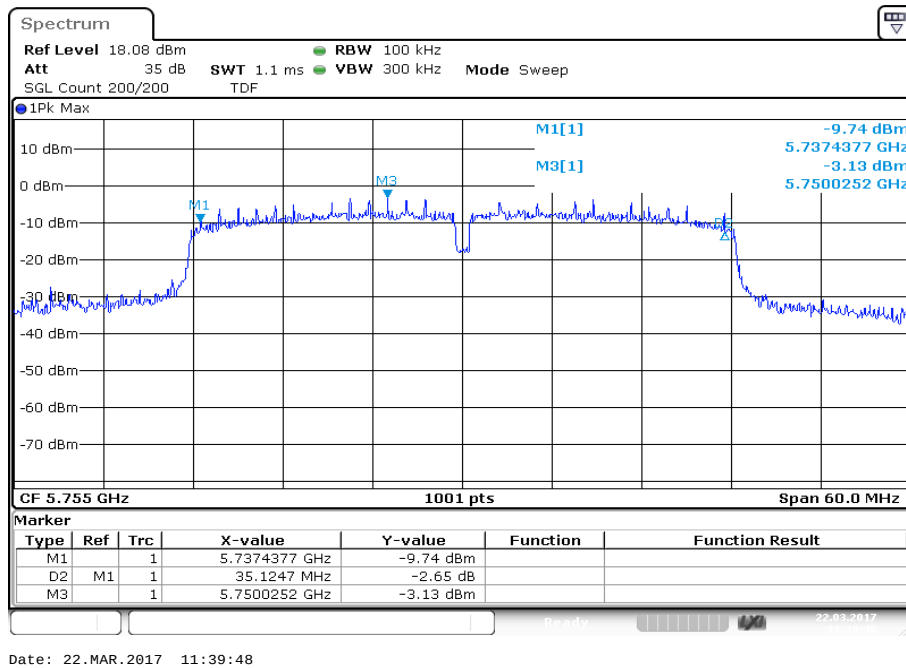
Plot 3: 5825 MHz



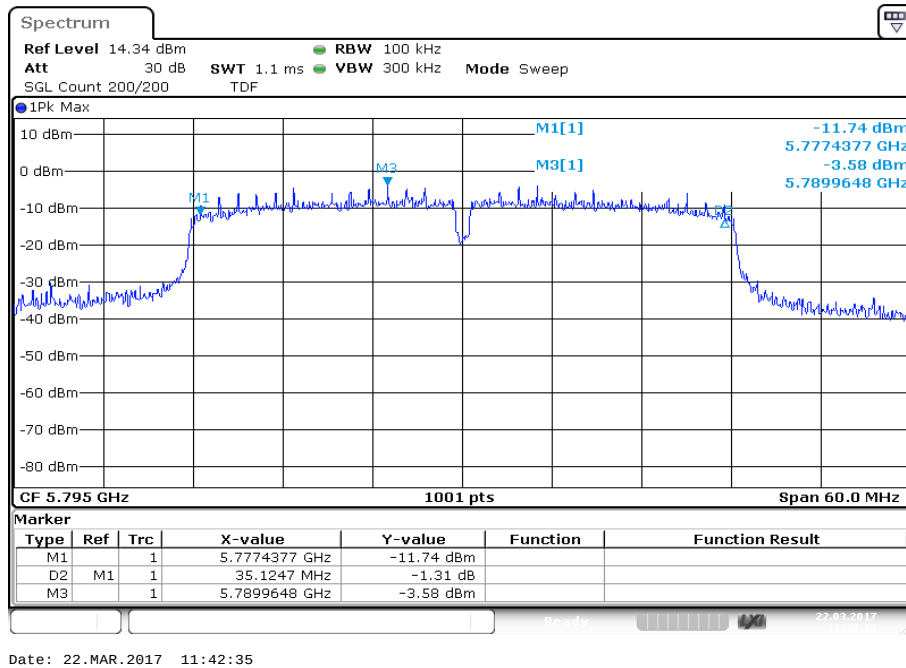
Date: 22.MAR.2017 11:21:49

Plots: OFDM / n/ac HT40 – mode, UFL port

Plot 1: 5755 MHz

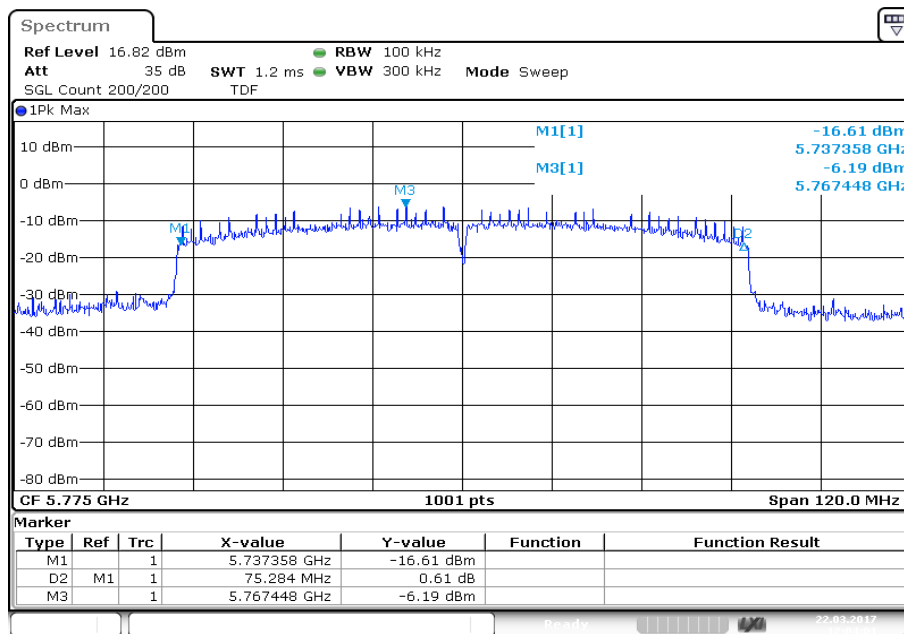


Plot 2: 5795 MHz



Plots: OFDM / ac HT80 – mode, UFL port

Plot 1: 5775 MHz



Result: MMCX port

OFDM / a – mode	6 dB bandwidth [MHz]		
Channel	5745 MHz	5785 MHz	5825 MHz
	14.2	14.5	15.1

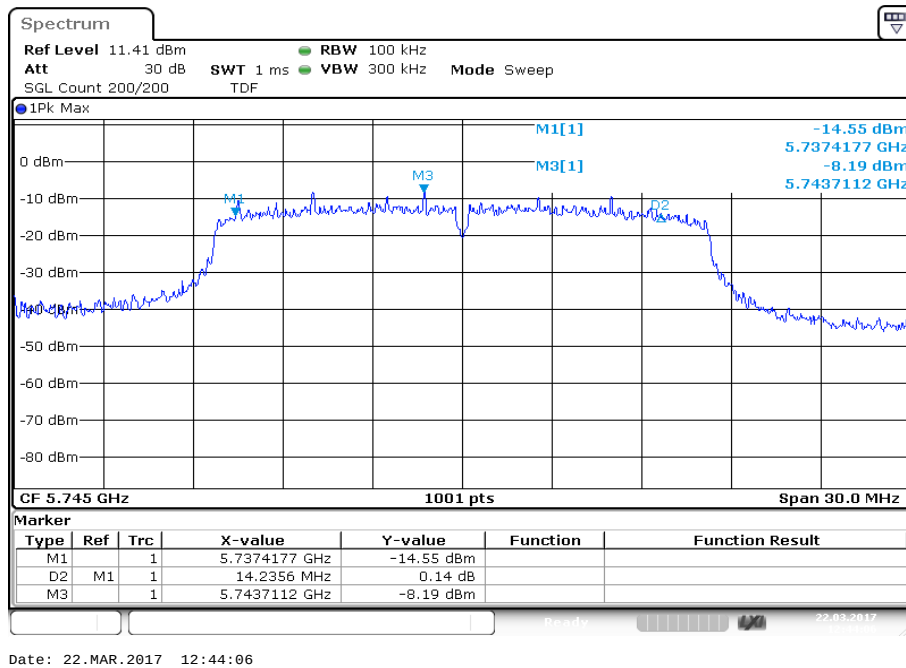
OFDM / n/ac HT20 – mode	6 dB bandwidth [MHz]		
Channel	5745 MHz	5785 MHz	5825 MHz
	15.1	15.3	15.4

OFDM / n/ac HT40 – mode	6 dB bandwidth [MHz]	
Channel	5755 MHz	5795 MHz
	33.2	34.0

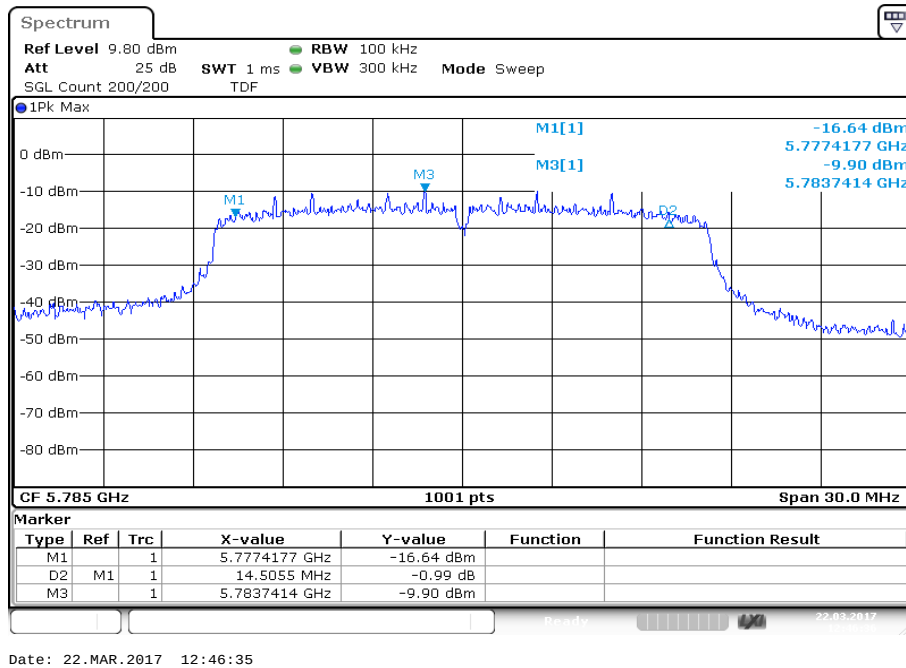
OFDM / ac HT80 – mode	6 dB bandwidth [MHz]
Channel	5775 MHz
	70.2

Plots: OFDM / a – mode, MMCX port

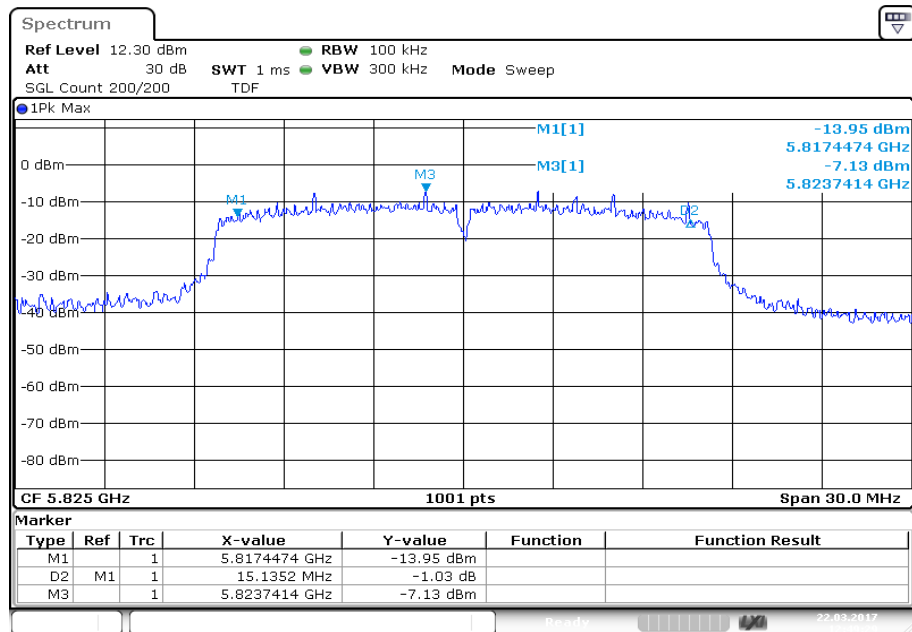
Plot 1: 5745 MHz



Plot 2: 5785 MHz



Plot 3: 5825 MHz

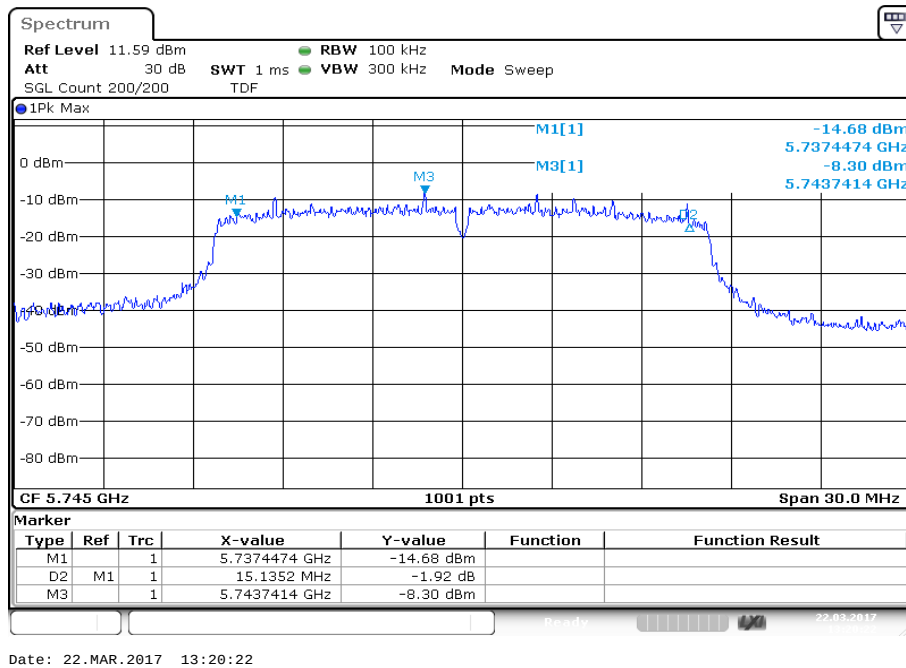


Annex B

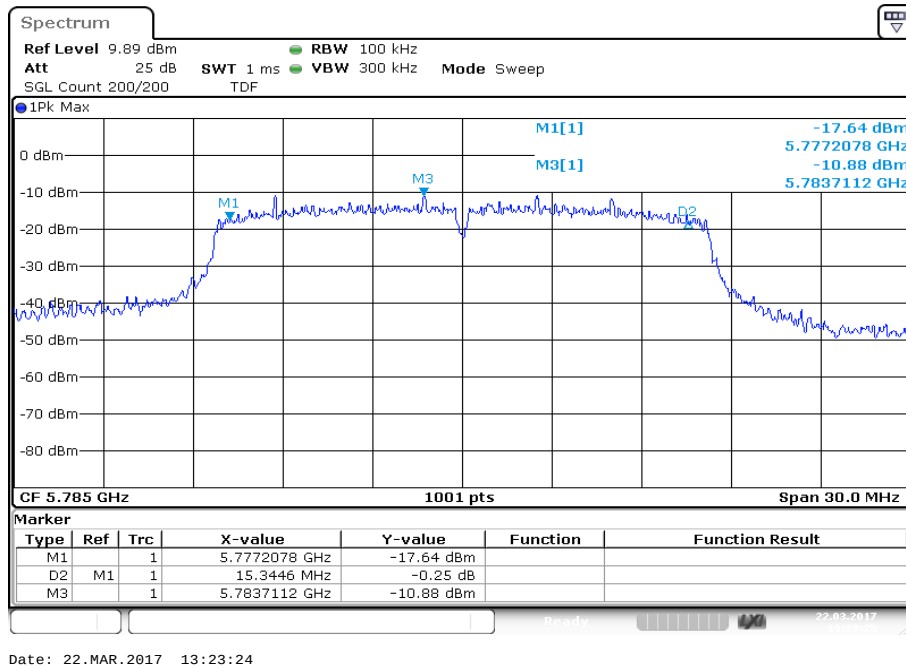
to test report no.: 1-3116/16-01-20

Plots: OFDM / n/ac HT20 – mode, MMCX port

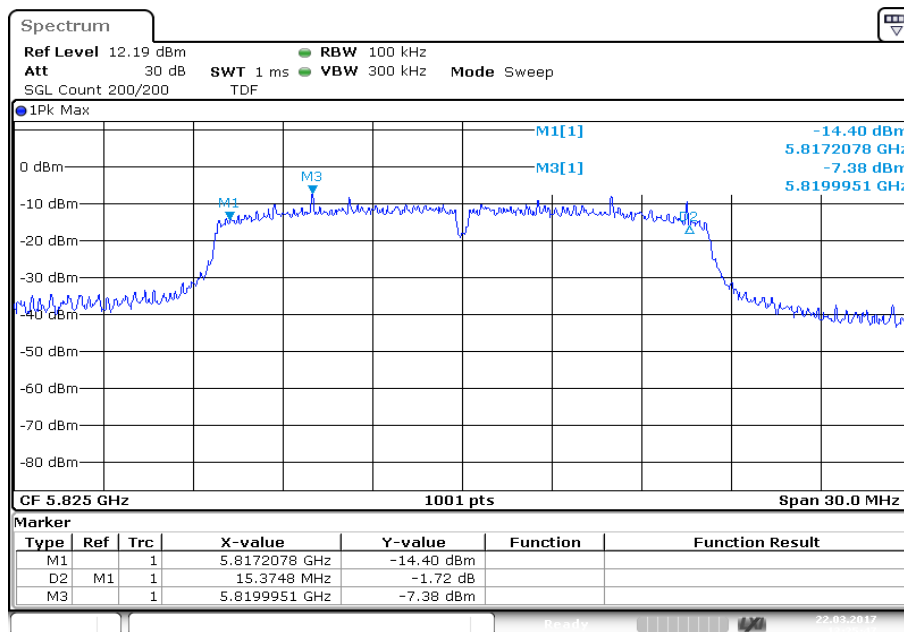
Plot 1: 5745 MHz



Plot 2: 5785 MHz



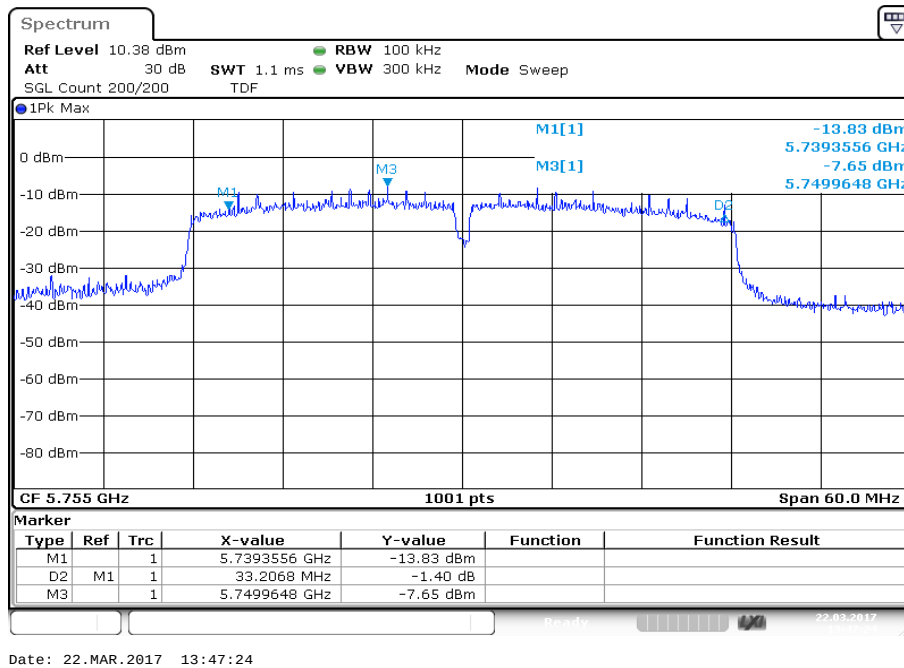
Plot 3: 5825 MHz



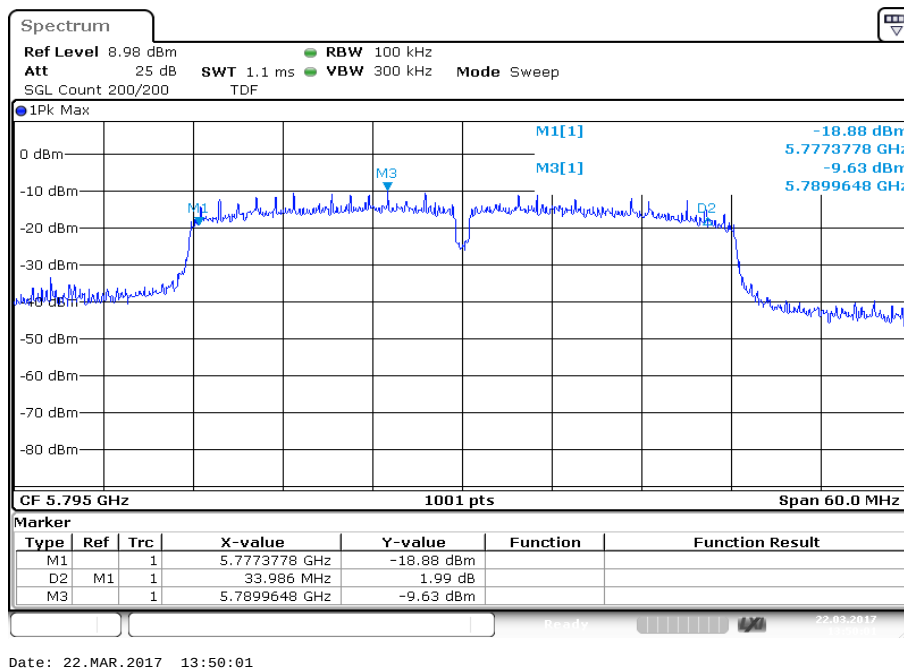
Date: 22.MAR.2017 13:25:47

Plots: OFDM / n/ac HT40 – mode, MMCX port

Plot 1: 5755 MHz

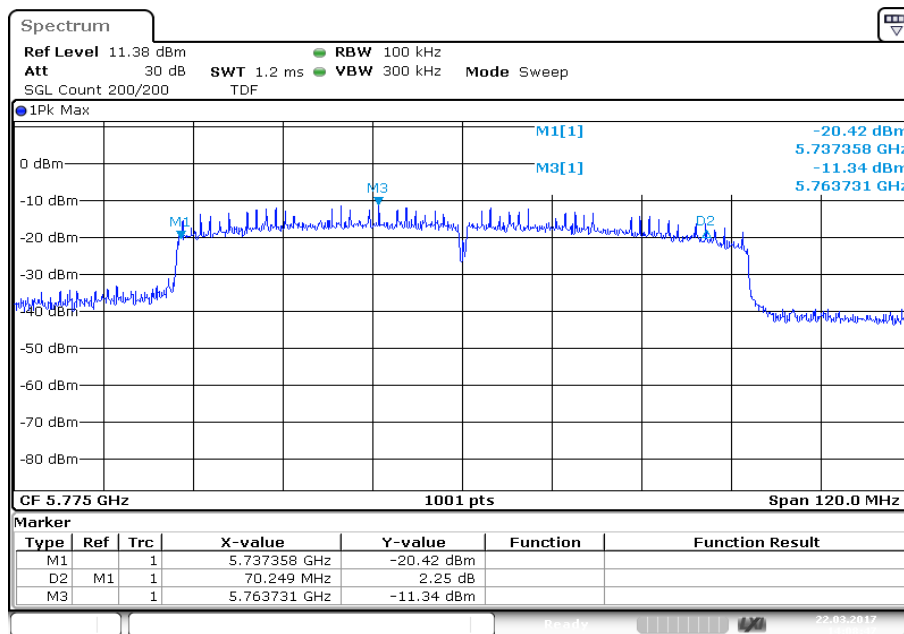


Plot 2: 5795 MHz



Plots: OFDM / ac HT80 – mode, MMCX port

Plot 1: 5775 MHz



1.2 Spectrum bandwidth – 26 dB bandwidth

Description:

Measurement of the 26 dB bandwidth of the modulated signal.

Measurement:

Measurement parameter	
According to: KDB789033 D02, C.1.	
Detector:	Peak
Sweep time:	Auto
Resolution bandwidth:	1% EBW
Video bandwidth:	≥ RBW
Span:	> complete signal!
Trace-Mode:	Max hold
Used test setup:	see chapter 7.4 – A
Measurement uncertainty:	see chapter 9

Limits:

Spectrum Bandwidth – 26 dB Bandwidth
-/-

Result: OFDM / a – mode, UFL port

OFDM / a – mode Channel	26 dB bandwidth [MHz]			
	5180 MHz	5240 MHz	5260 MHz	5320 MHz
	20.4	20.1	20.1	19.5
Channel	5500 MHz	5600 MHz	5700 MHz	5745 MHz
	19.7	20.0	21.2	22.5
Channel	5785 MHz	5825 MHz		
	20.3	20.3		

Result: OFDM / n/ac HT20 – mode, UFL port

OFDM / n/ac HT20 – mode Channel	26 dB bandwidth [MHz]			
	5180 MHz	5240 MHz	5260 MHz	5320 MHz
	20.9	23.4	20.4	20.9
Channel	5500 MHz	5600 MHz	5700 MHz	5745 MHz
	20.7	21.1	23.2	22.3
Channel	5785 MHz	5825 MHz		
	20.5	22.7		

Result: OFDM / n/ac HT40 – mode, UFL port

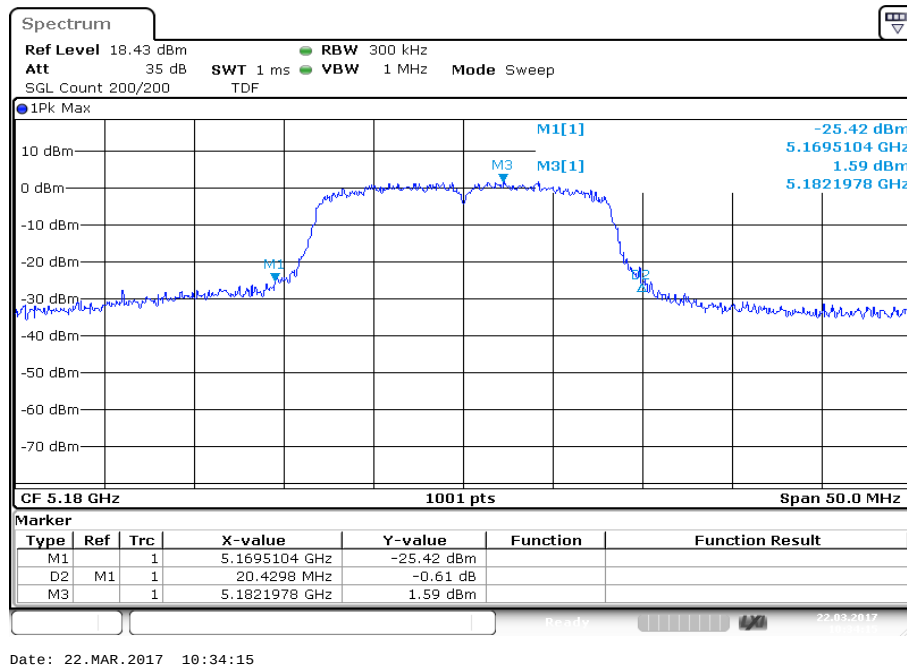
OFDM / n/ac HT40 – mode Channel	26 dB bandwidth [MHz]			
	5190 MHz	5230 MHz	5270 MHz	5310 MHz
	42.1	50.5	41.3	41.6
Channel	5510 MHz	5590 MHz	5670 MHz	5755 MHz
	48.4	50.2	60.2	57.0
Channel	5795 MHz			
	44.9			

Result: OFDM / ac HT80 – mode, UFL port

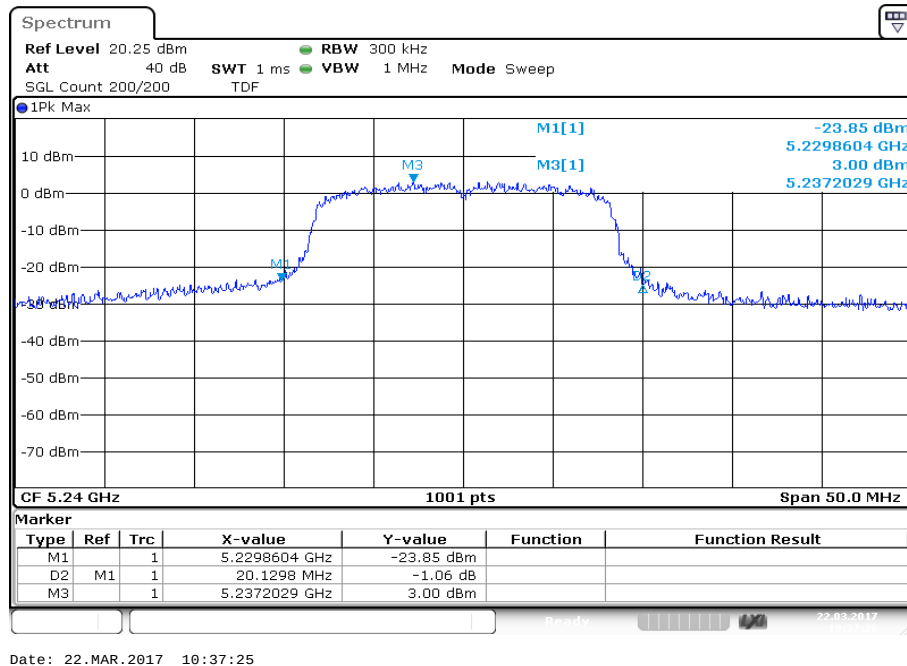
OFDM / ac HT80 – mode Channel	26 dB bandwidth [MHz]			
	5210 MHz	5290 MHz	5530 MHz	5610 MHz
	83.3	89.3	129.3	123.3
Channel	5775 MHz			
	174.4			

Plots: OFDM / a – mode, UFL port

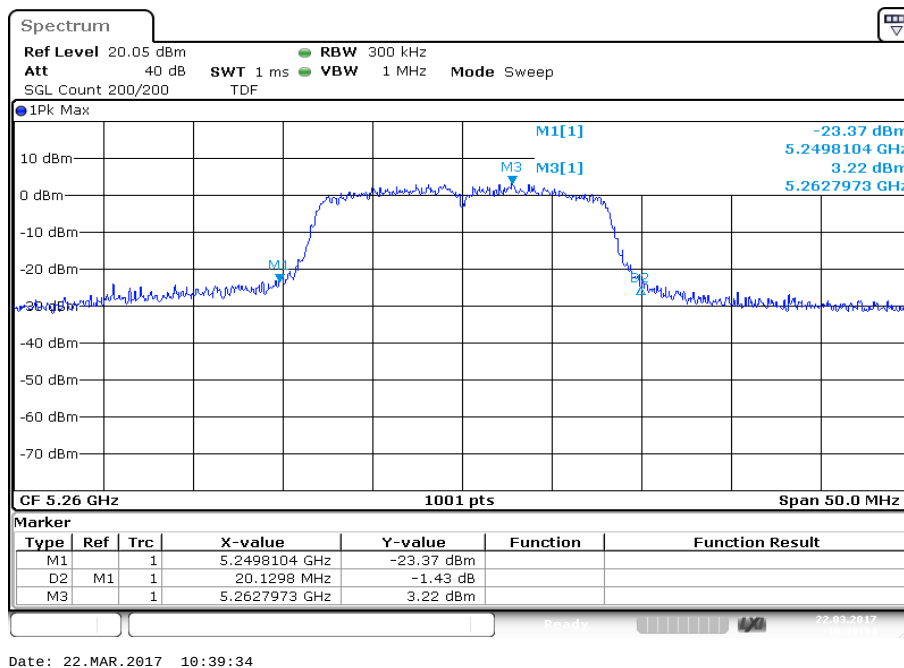
Plot 1: 5180 MHz



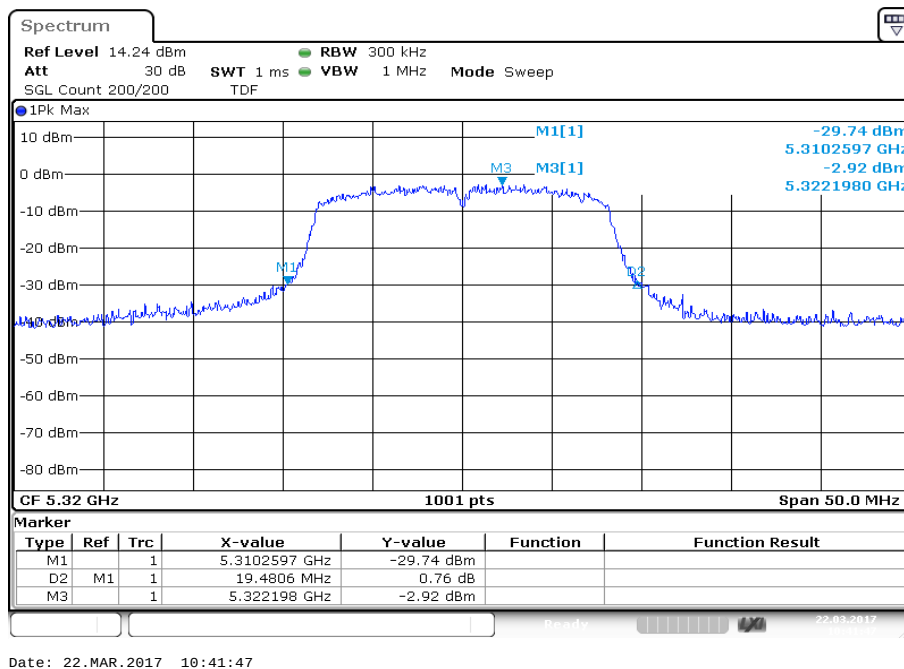
Plot 2: 5240 MHz



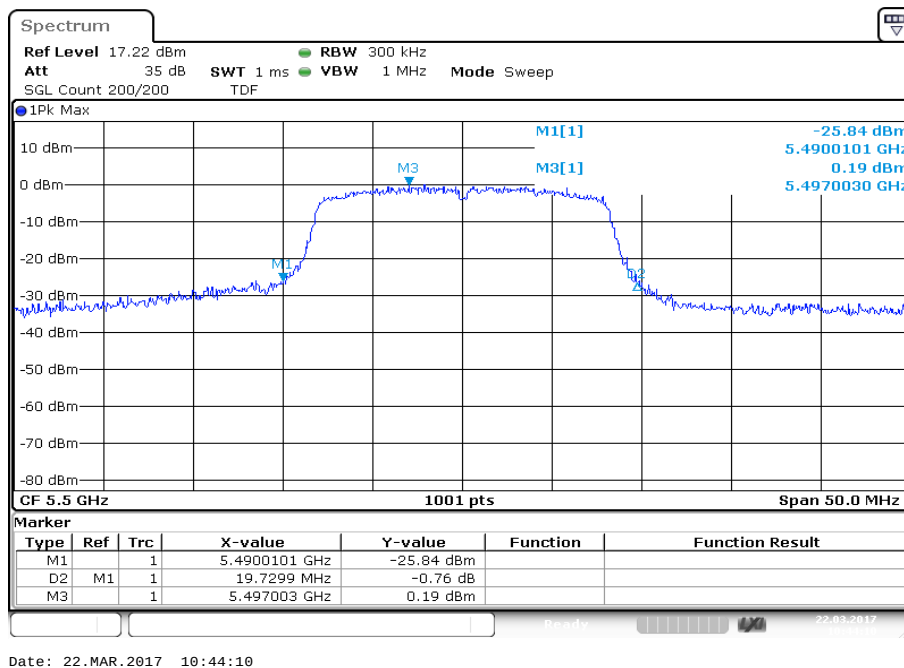
Plot 3: 5260 MHz



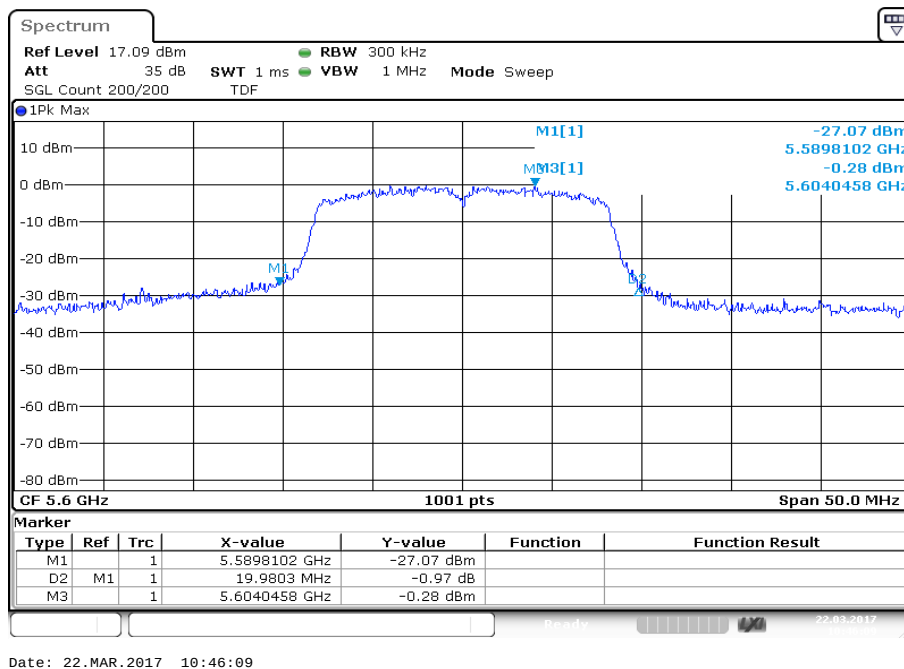
Plot 4: 5320 MHz



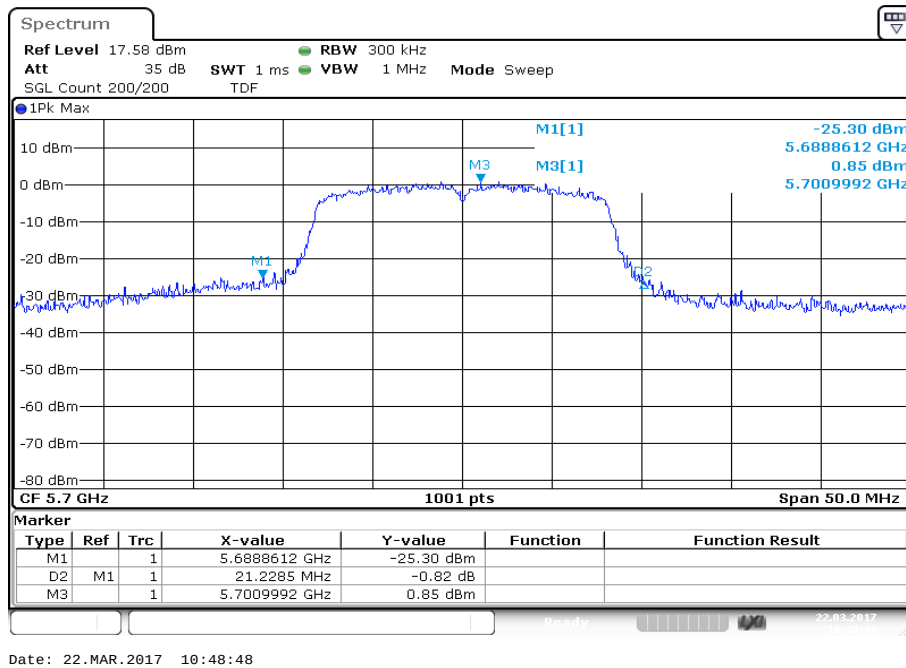
Plot 5: 5500 MHz



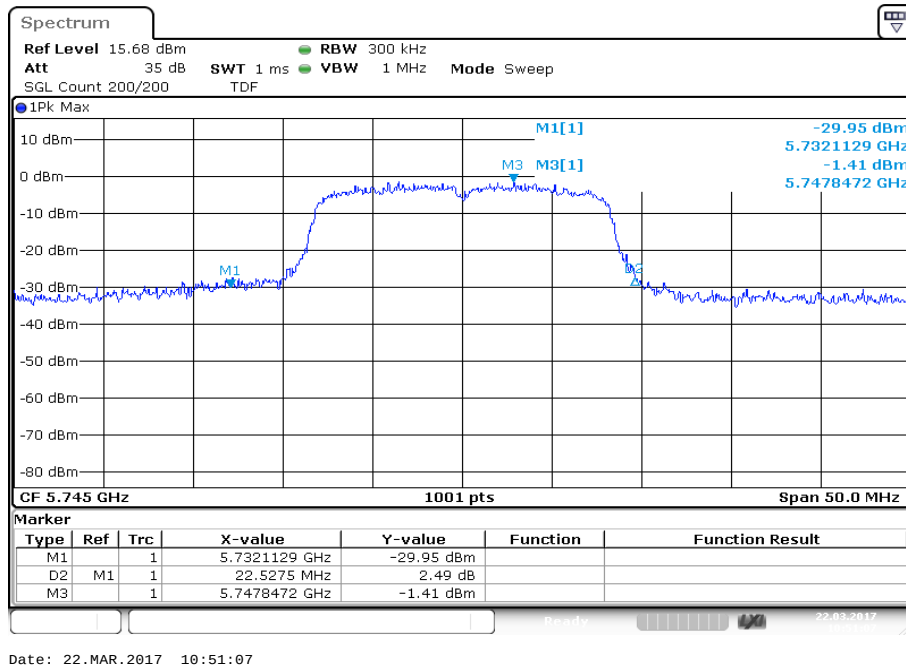
Plot 6: 5600 MHz



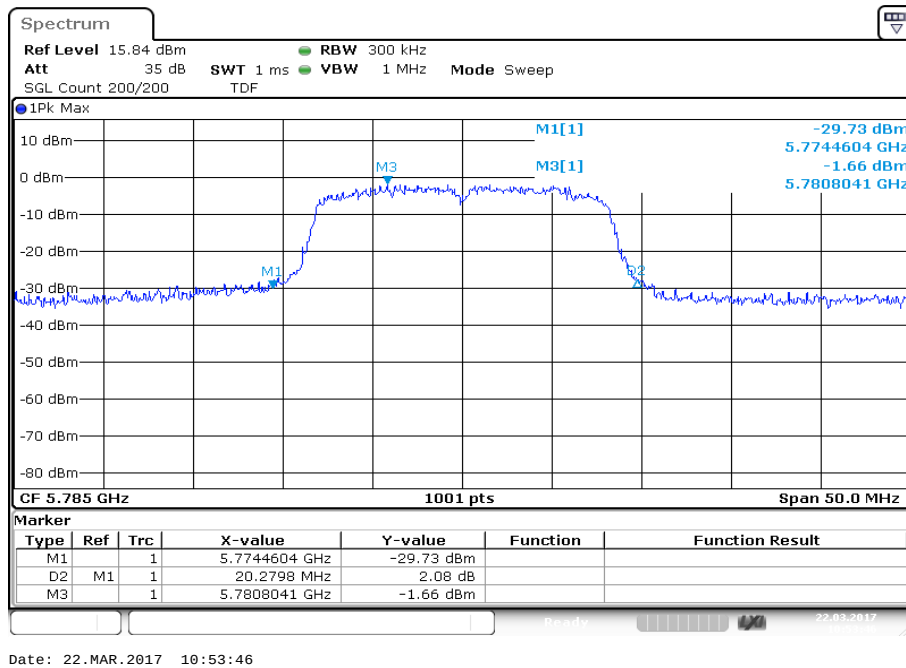
Plot 7: 5700 MHz



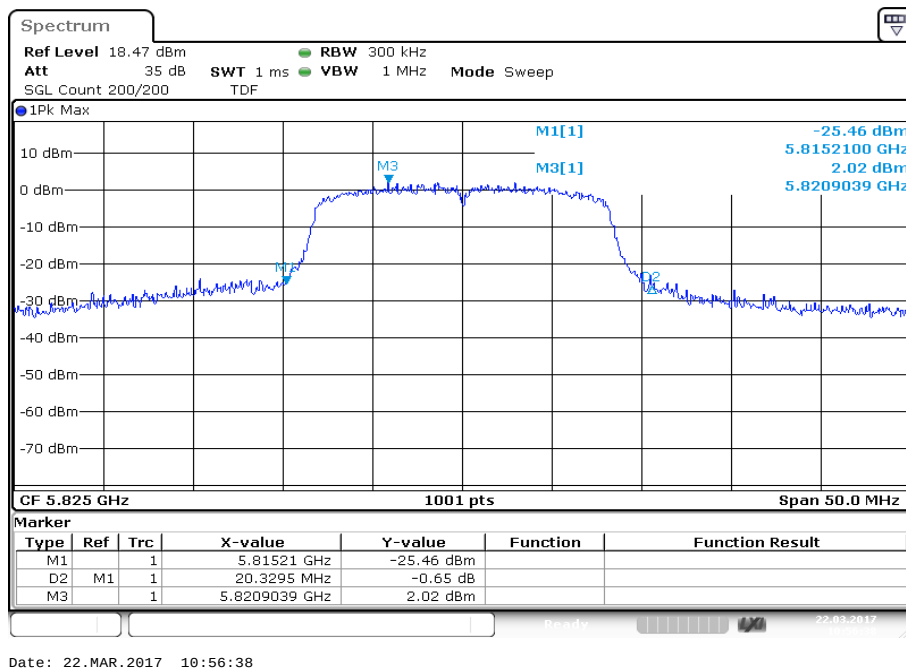
Plot 8: 5745 MHz



Plot 9: 5785 MHz

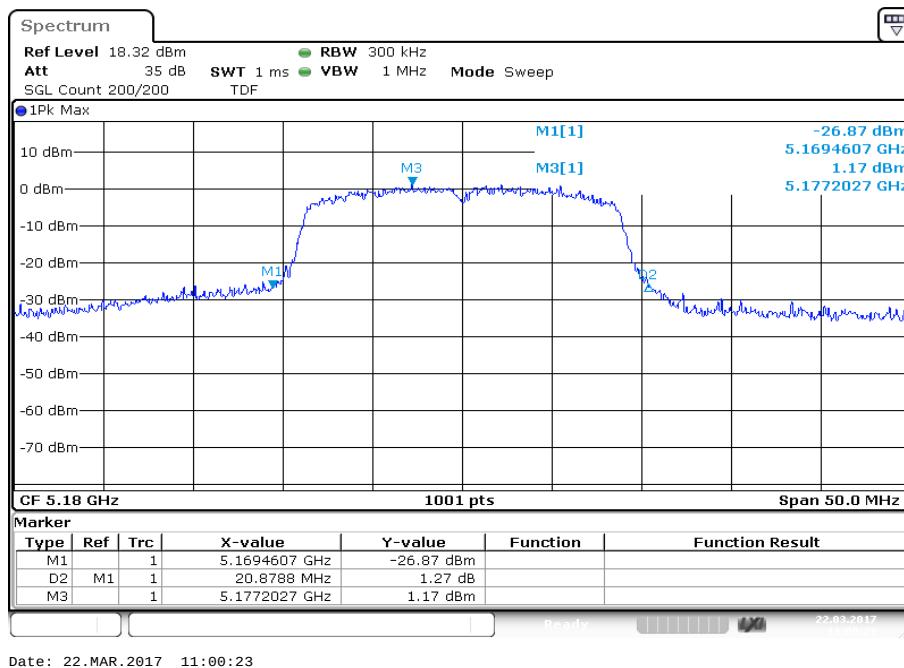


Plot 10: 5825 MHz

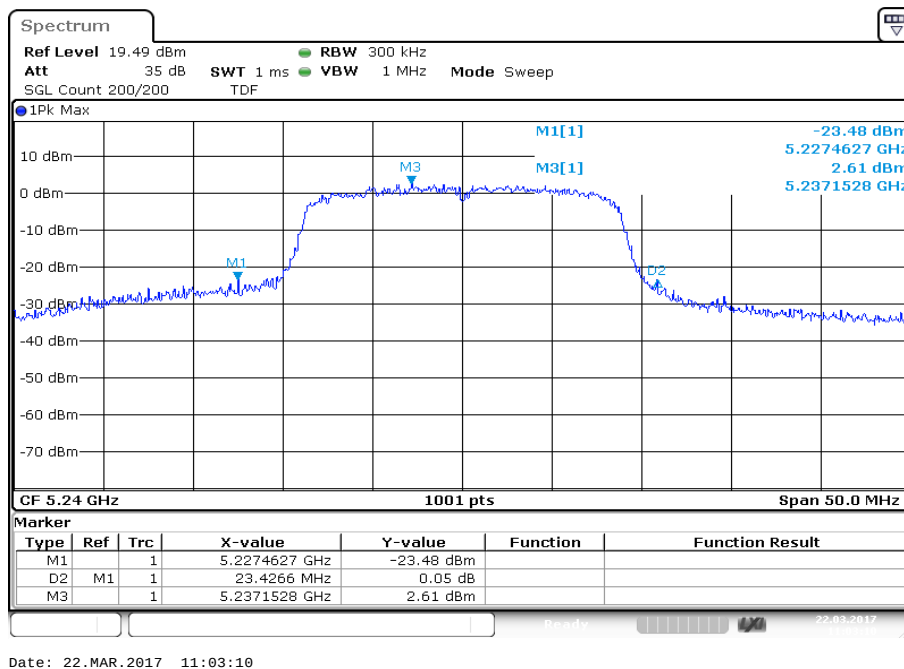


Plots: OFDM / n/ac HT20 – mode, UFL port

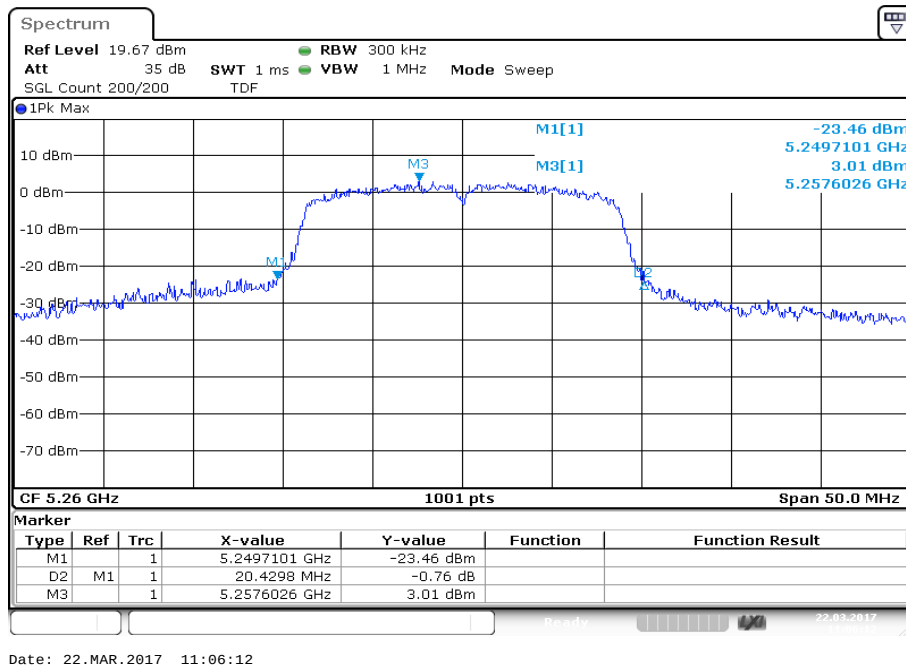
Plot 1: 5180 MHz



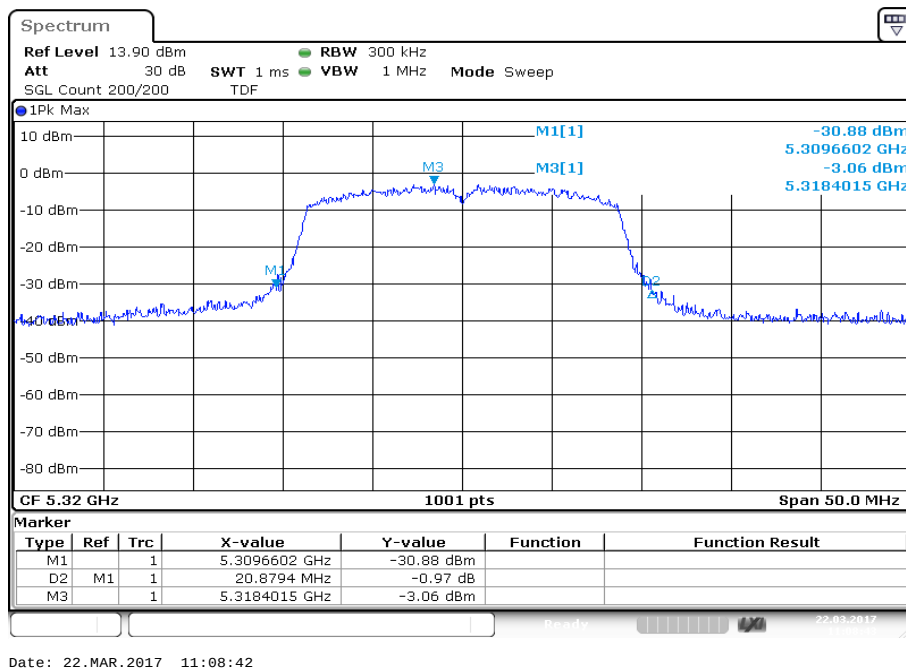
Plot 2: 5240 MHz



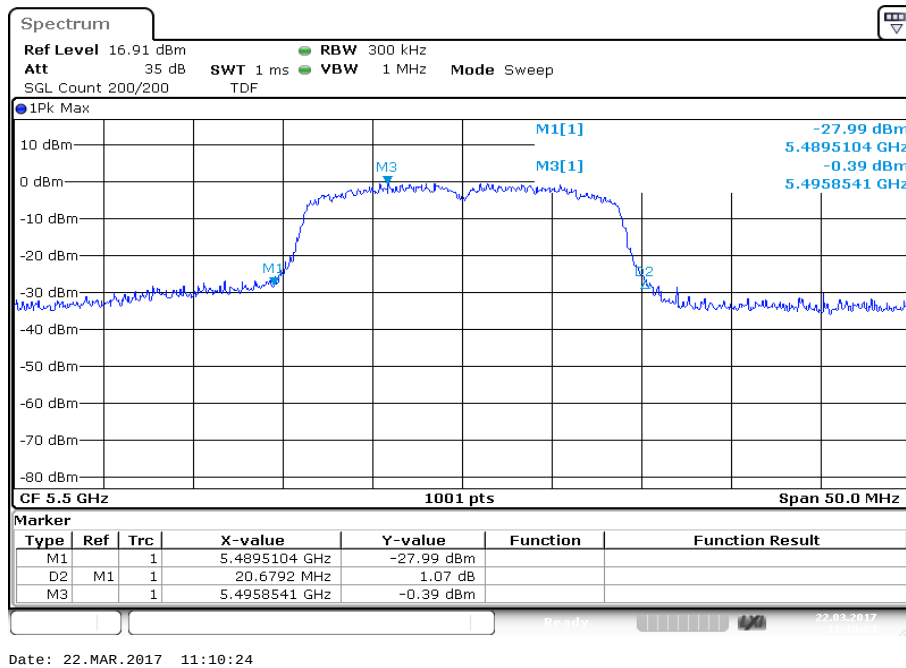
Plot 3: 5260 MHz



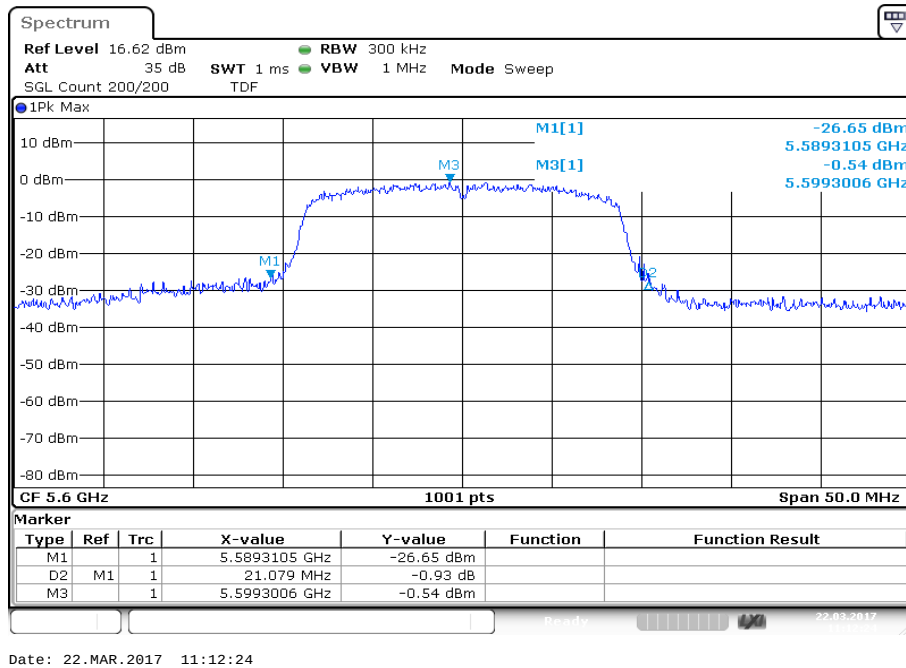
Plot 4: 5320 MHz



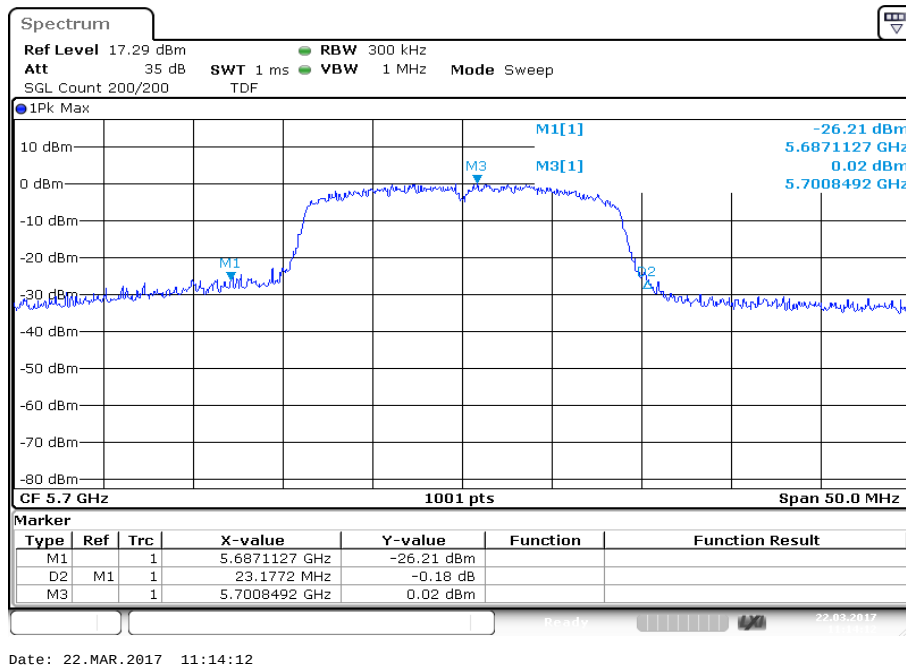
Plot 5: 5500 MHz



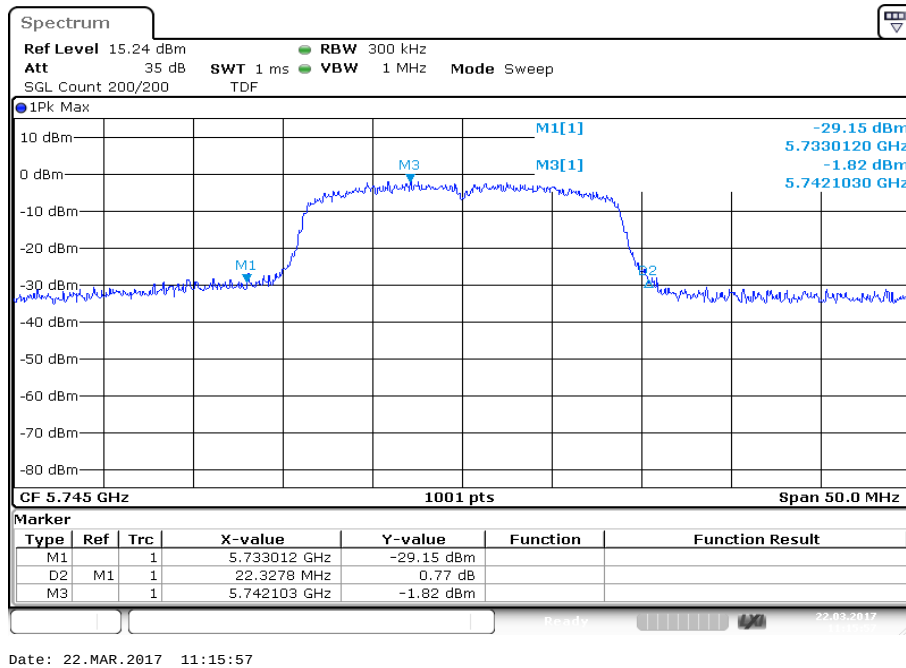
Plot 6: 5600 MHz



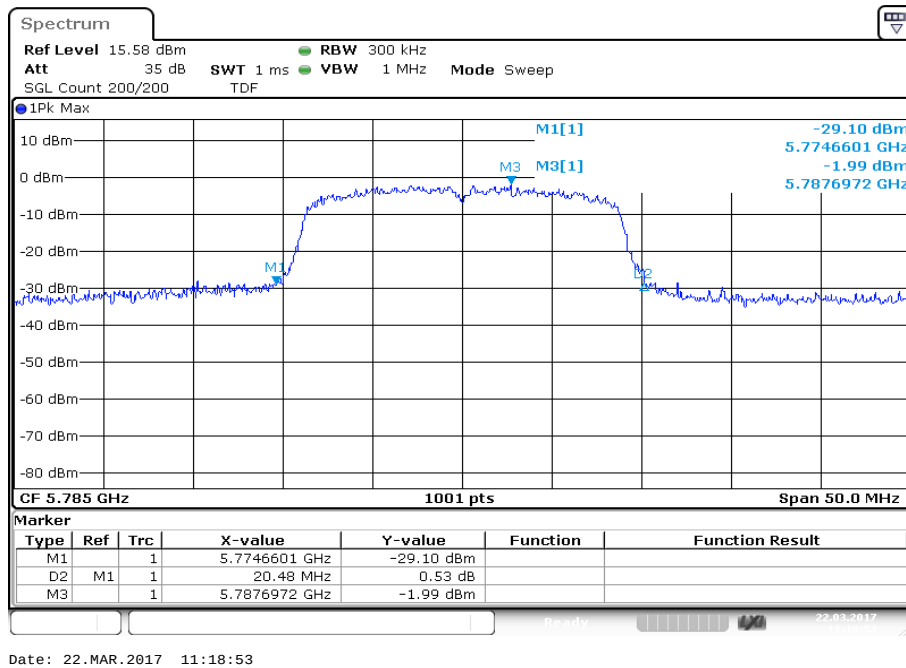
Plot 7: 5700 MHz



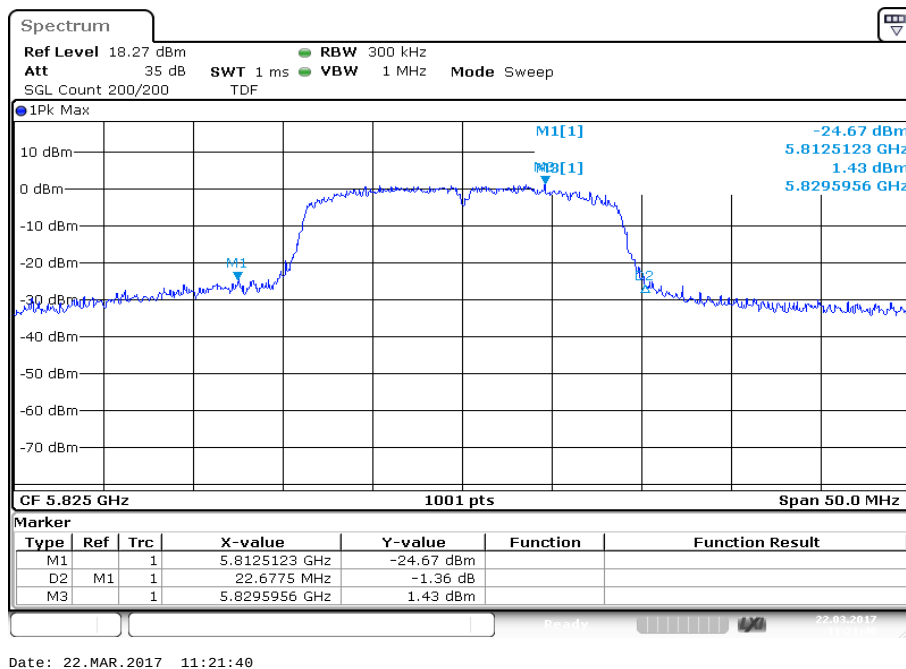
Plot 8: 5745 MHz



Plot 9: 5785 MHz

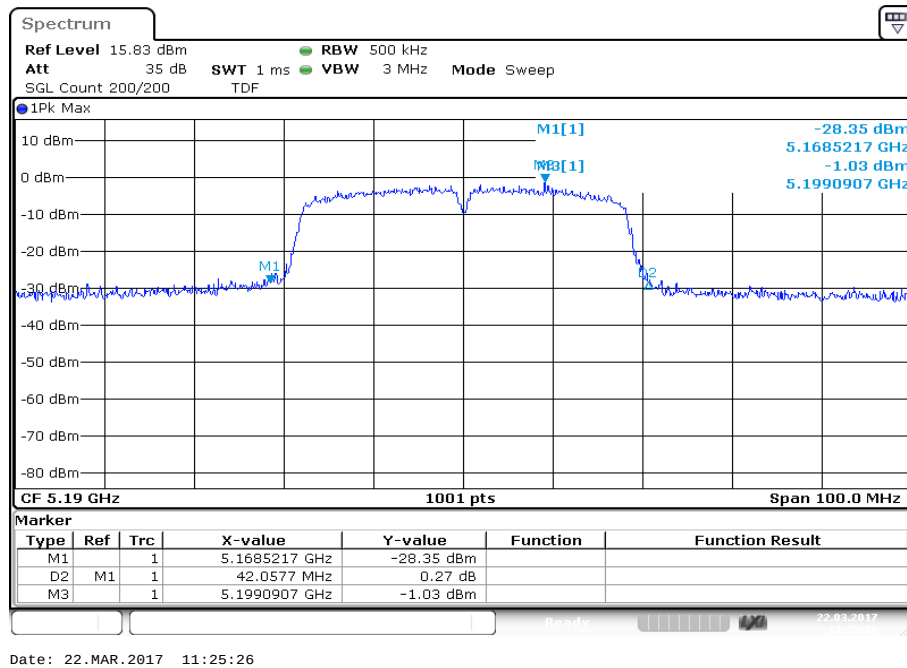


Plot 10: 5825 MHz

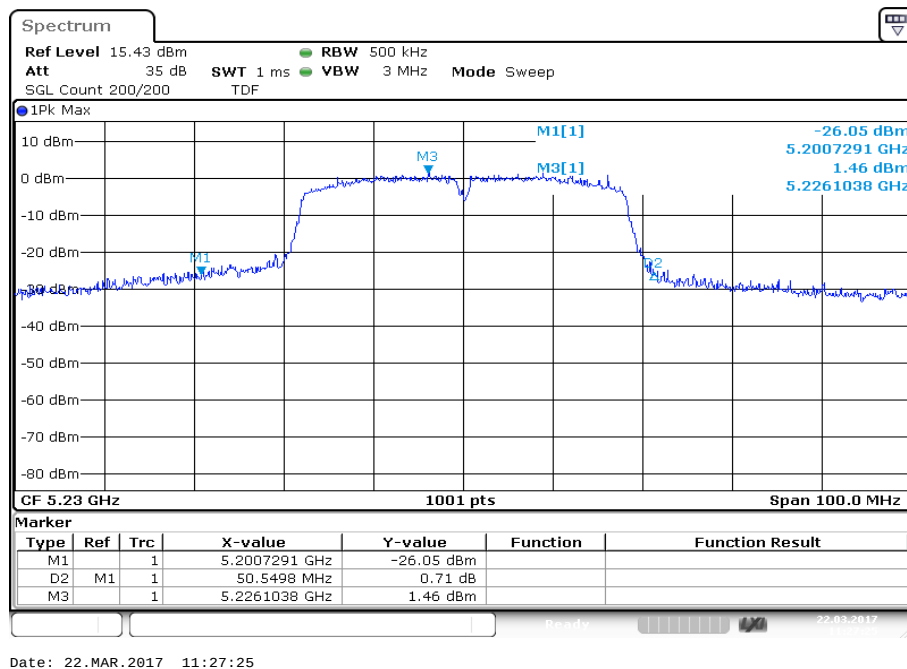


Plots: OFDM / n/ac HT40 – mode, UFL port

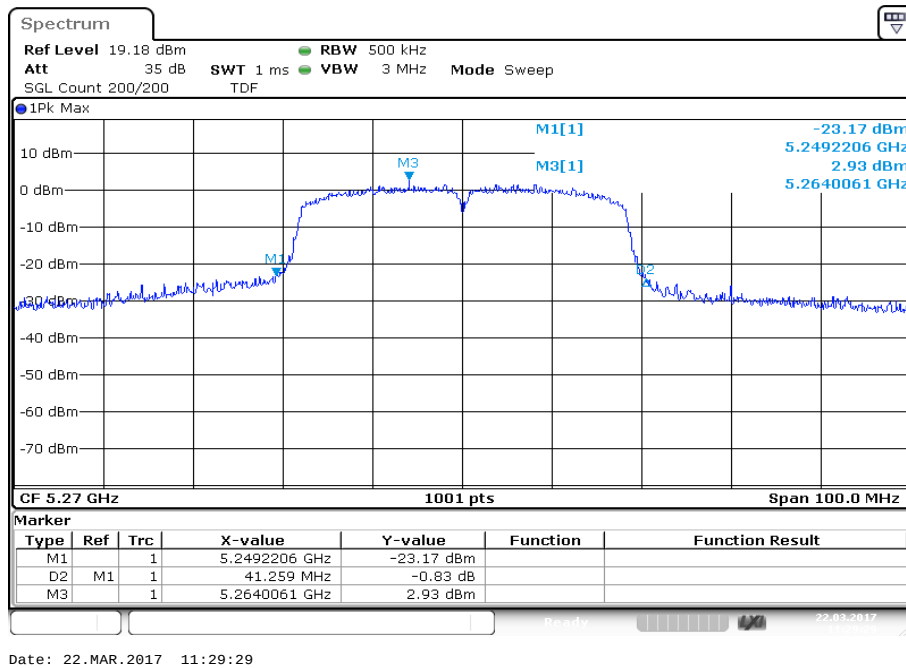
Plot 1: 5190 MHz



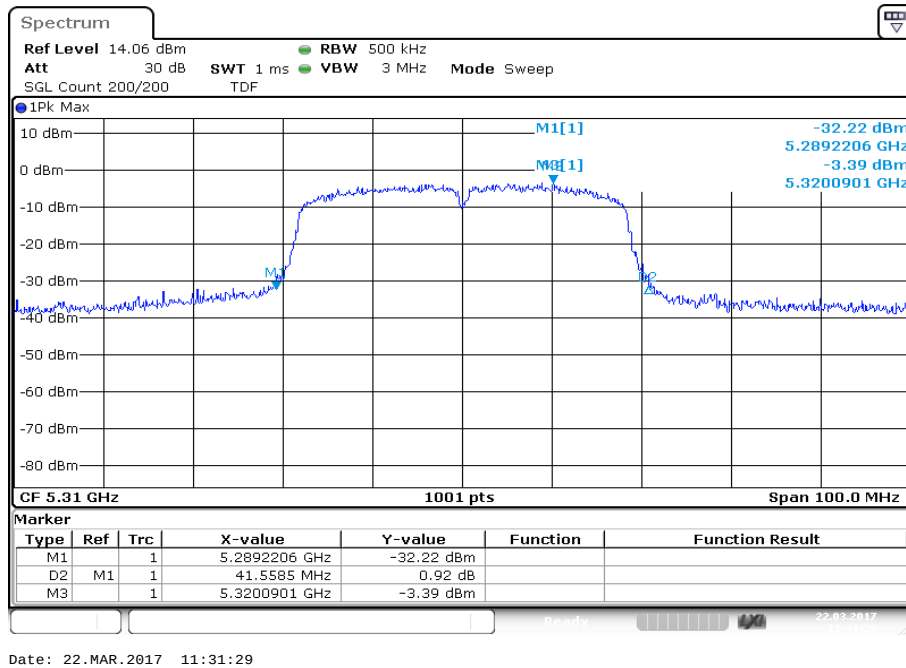
Plot 2: 5230 MHz



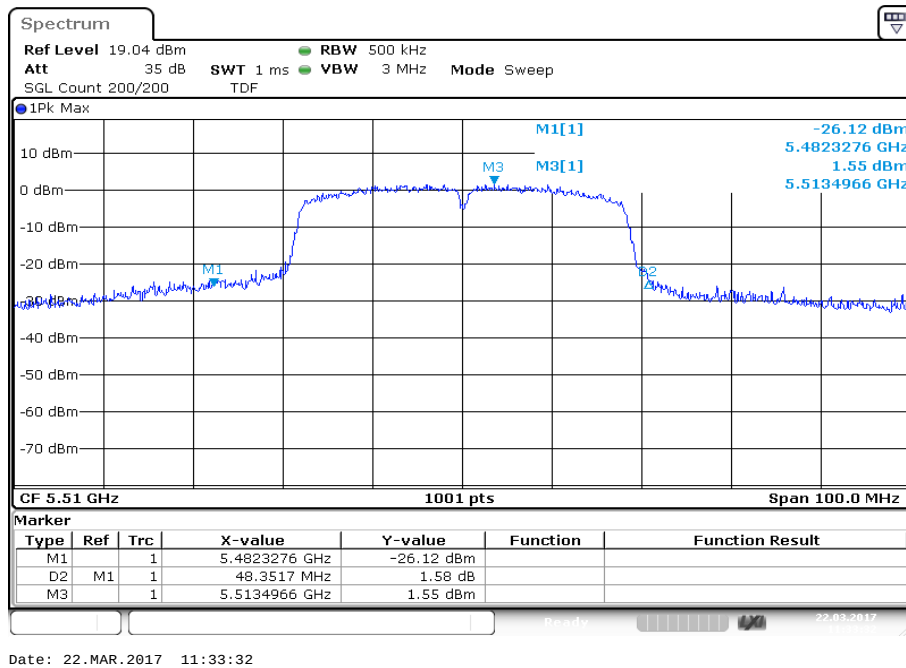
Plot 3: 5270 MHz



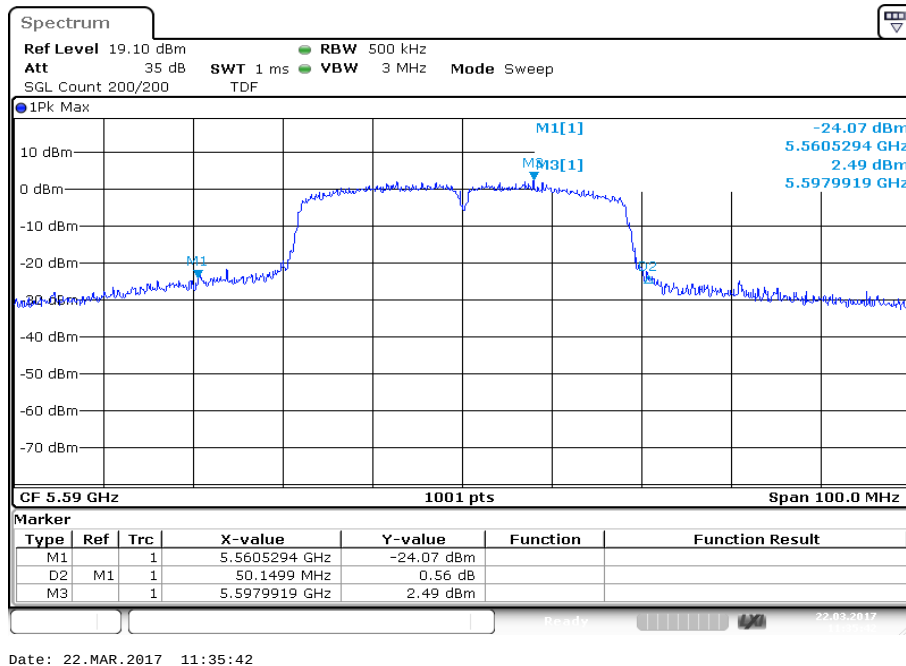
Plot 4: 5310 MHz



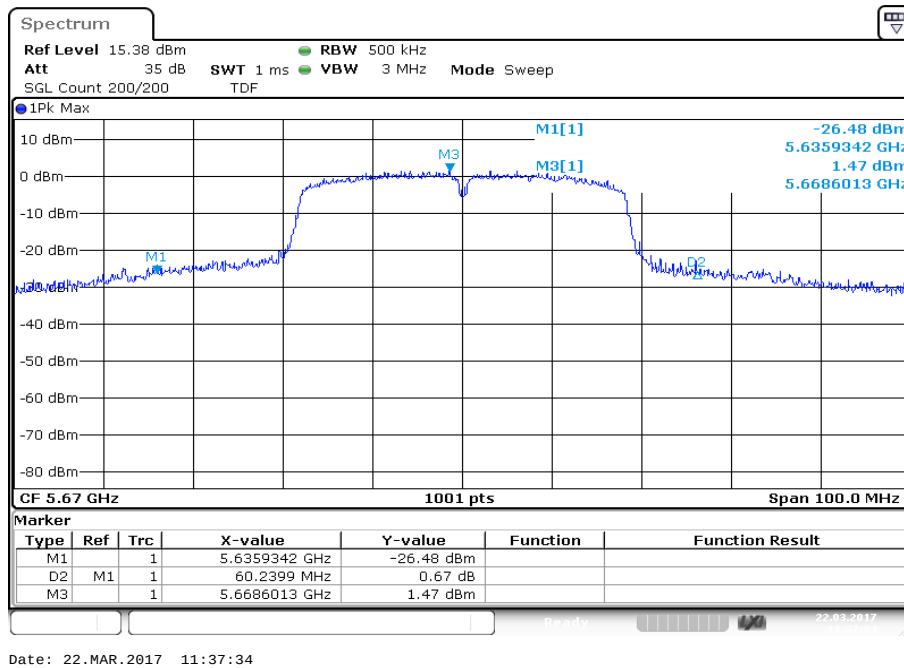
Plot 5: 5510 MHz



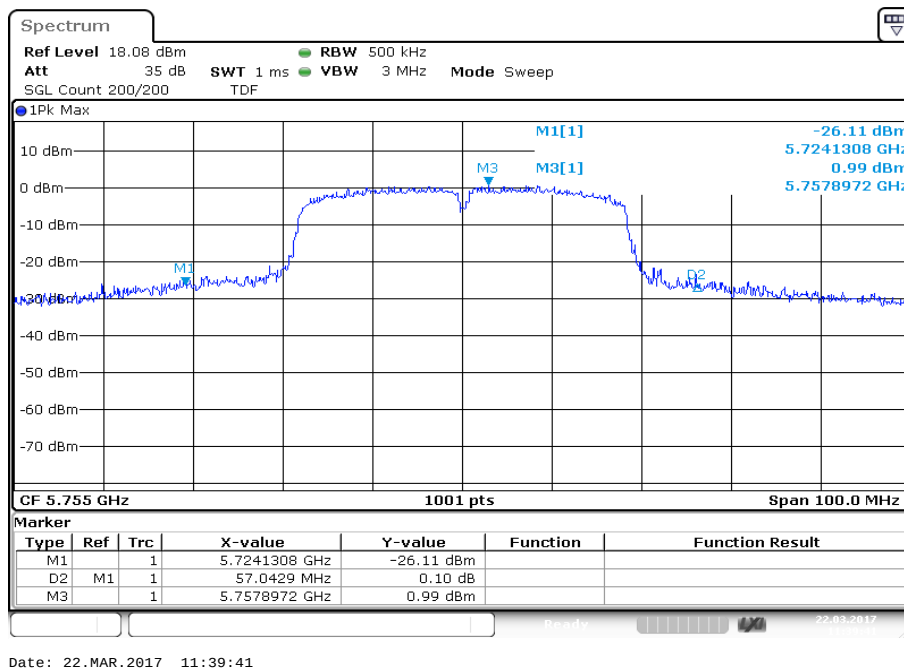
Plot 6: 5590 MHz



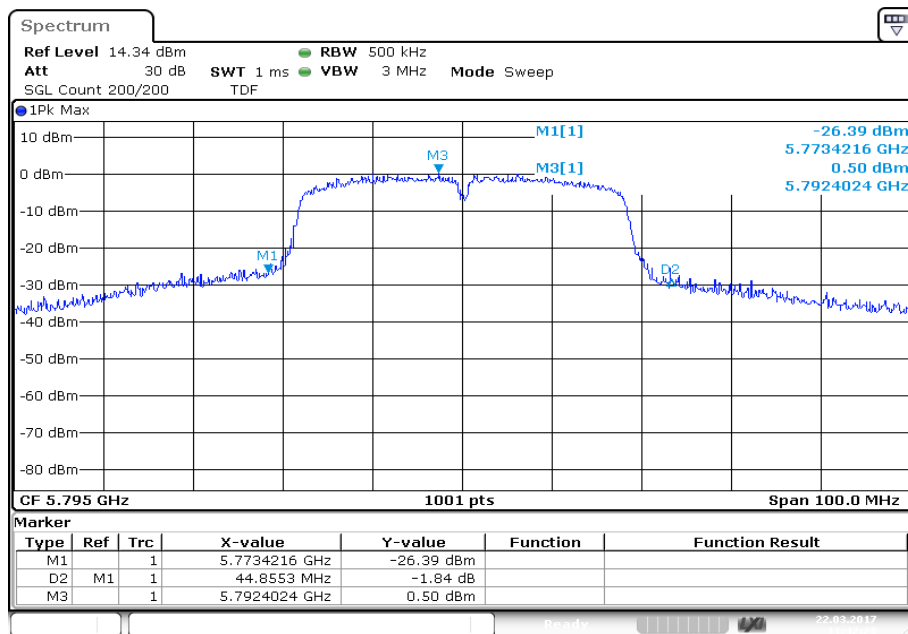
Plot 7: 5670 MHz



Plot 8: 5755 MHz



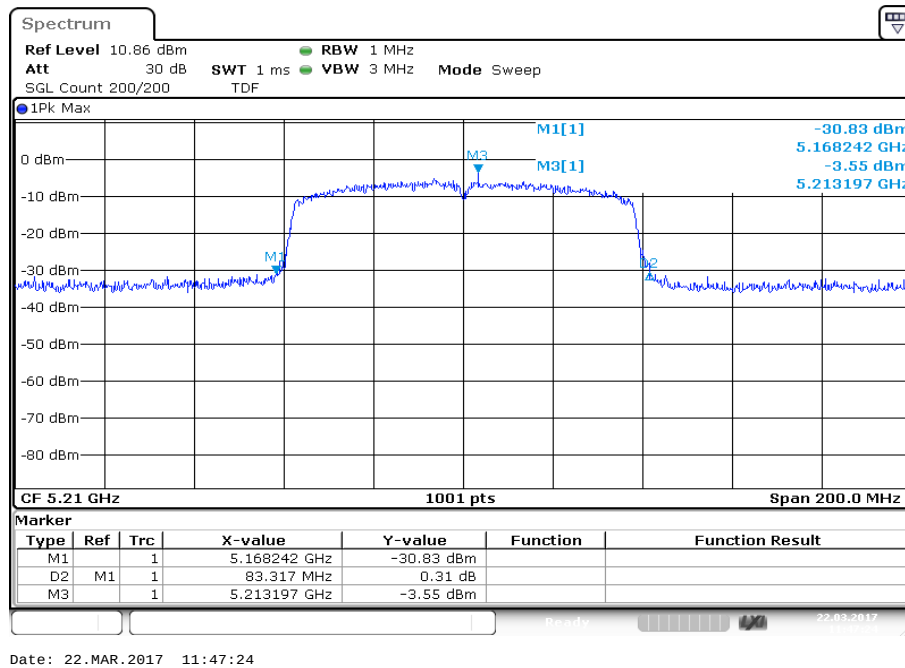
Plot 9: 5795 MHz



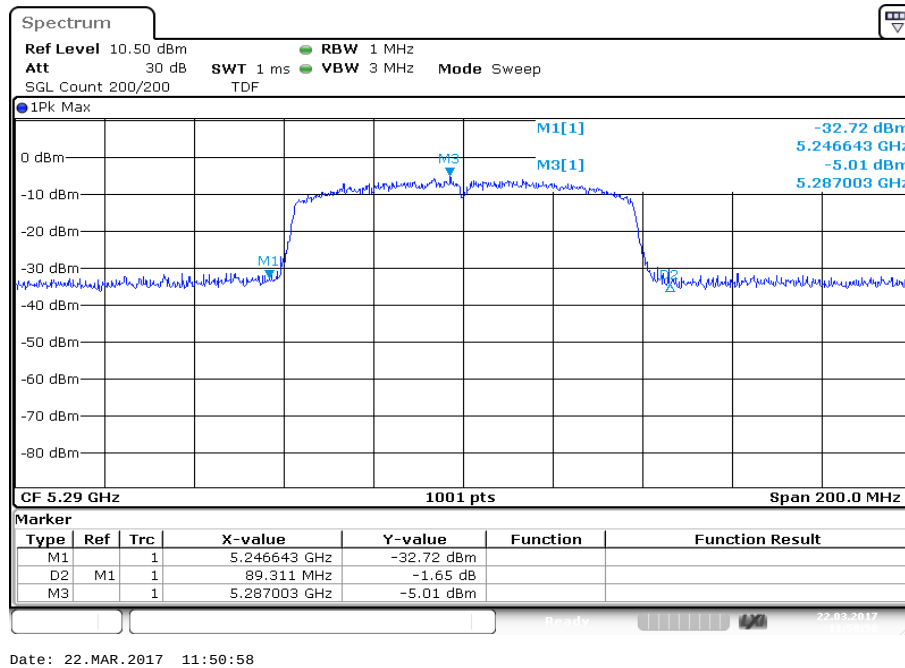
Date: 22.MAR.2017 11:42:28

Plots: OFDM / ac HT80 – mode, UFL port

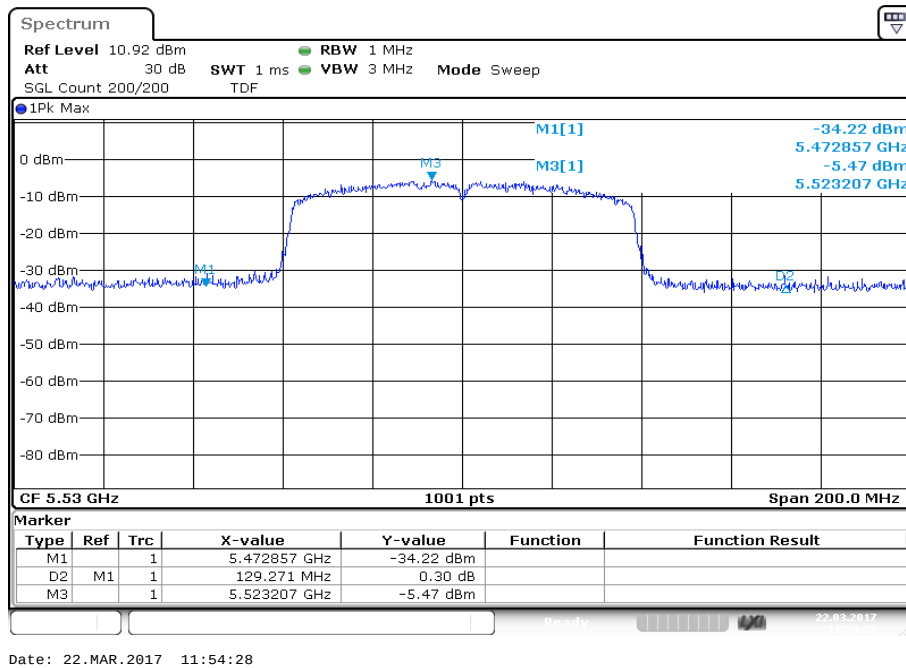
Plot 1: 5210 MHz



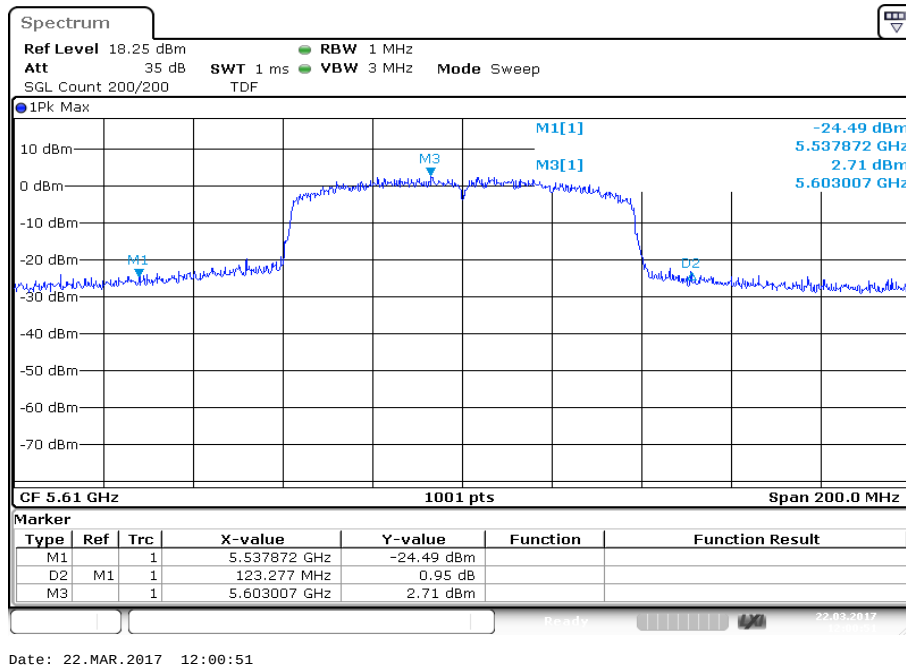
Plot 2: 5290 MHz



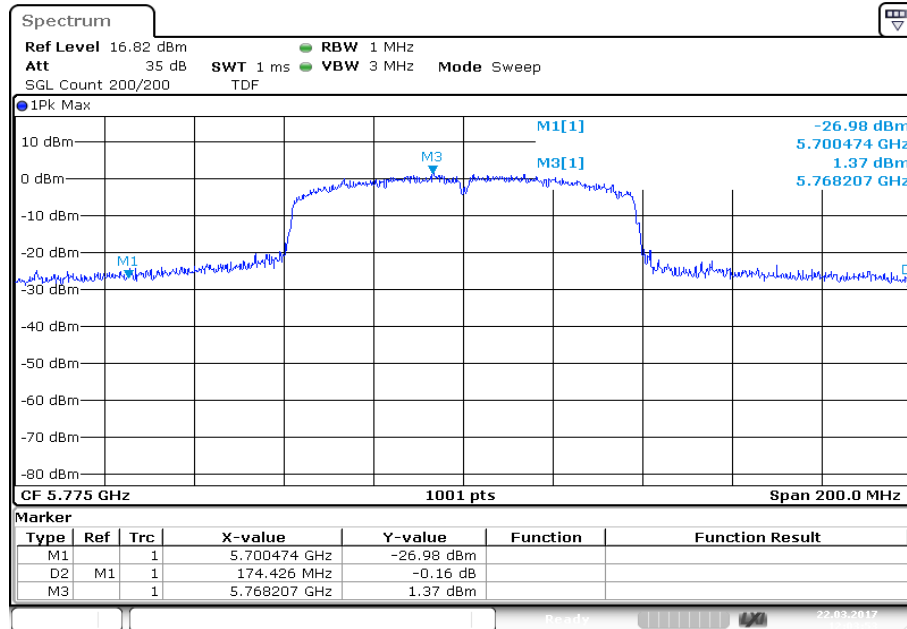
Plot 3: 5530 MHz



Plot 4: 5610 MHz



Plot 5: 5775 MHz



Date: 22.MAR.2017 12:03:53

Result: OFDM / a – mode, MMCX port

OFDM / a – mode Channel	26 dB bandwidth [MHz]			
	5180 MHz	5240 MHz	5260 MHz	5320 MHz
	20.4	22.0	21.8	19.3
Channel	5500 MHz	5600 MHz	5700 MHz	5745 MHz
	19.7	20.5	22.4	20.6
Channel	5785 MHz	5825 MHz		
	20.0	24.4		

Result: OFDM / n/ac HT20 – mode, MMCX port

OFDM / n/ac HT20 – mode Channel	26 dB bandwidth [MHz]			
	5180 MHz	5240 MHz	5260 MHz	5320 MHz
	20.1	20.7	19.6	20.4
Channel	5500 MHz	5600 MHz	5700 MHz	5745 MHz
	21.2	20.0	22.2	20.4
Channel	5785 MHz	5825 MHz		
	19.8	26.0		

Result: OFDM / n/ac HT40 – mode, MMCX port

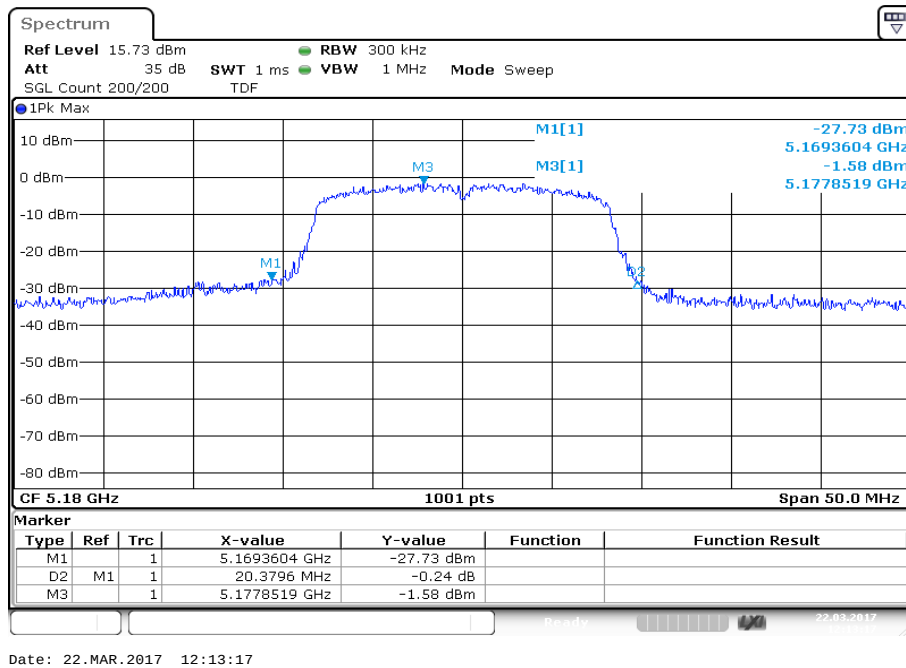
OFDM / n/ac HT40 – mode Channel	26 dB bandwidth [MHz]			
	5190 MHz	5230 MHz	5270 MHz	5310 MHz
	41.6	42.8	48.9	41.1
Channel	5510 MHz	5590 MHz	5670 MHz	5755 MHz
	54.7	53.4	42.9	57.2
Channel	5795 MHz			
	54.6			

Result: OFDM / ac HT80 – mode, MMCX port

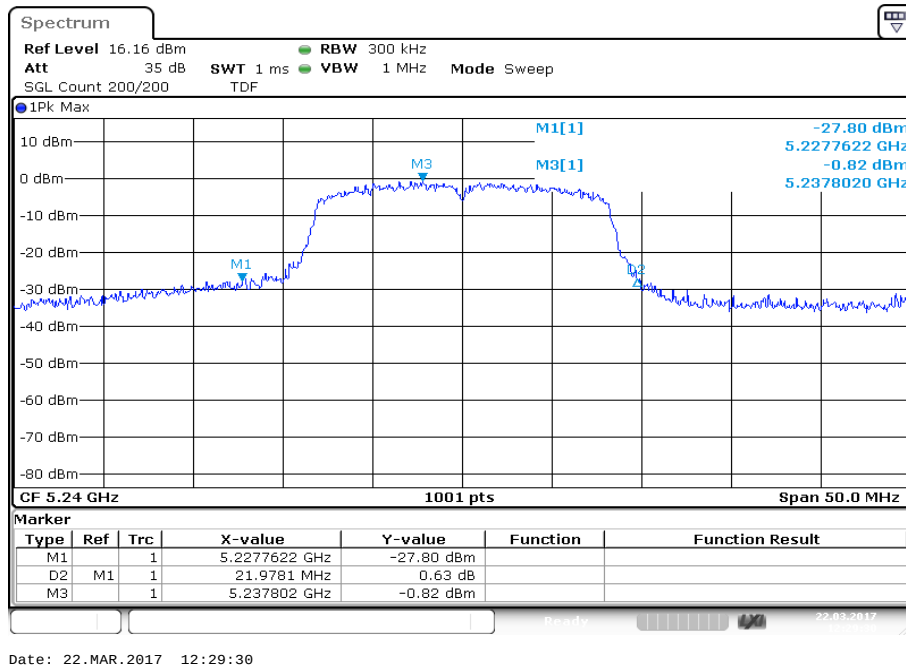
OFDM / ac HT80 – mode Channel	26 dB bandwidth [MHz]			
	5210 MHz	5290 MHz	5530 MHz	5610 MHz
	83.3	81.7	124.7	105.5
Channel	5775 MHz			
	141.9			

Plots: OFDM / a – mode, MMCX port

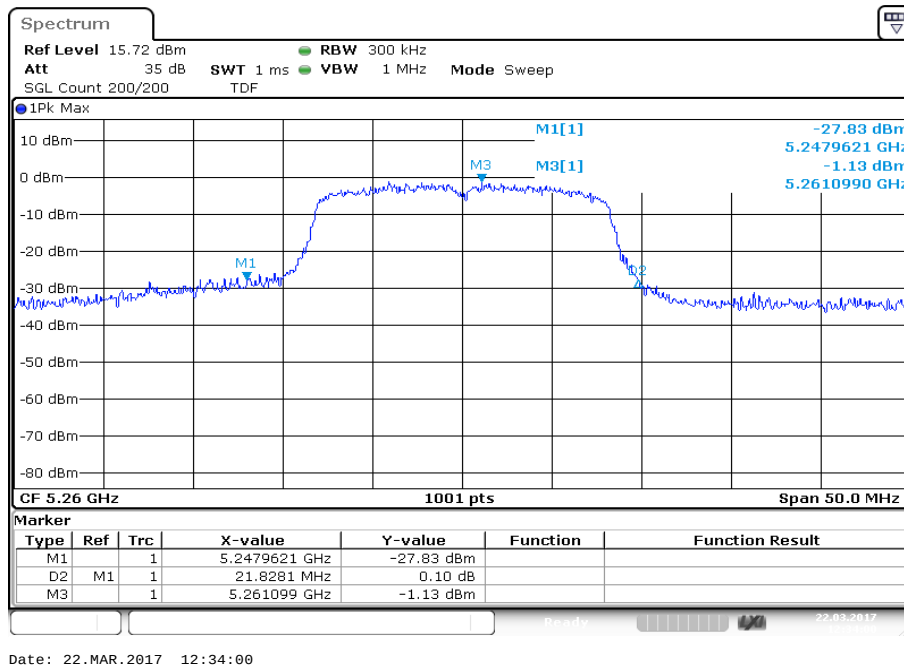
Plot 1: 5180 MHz



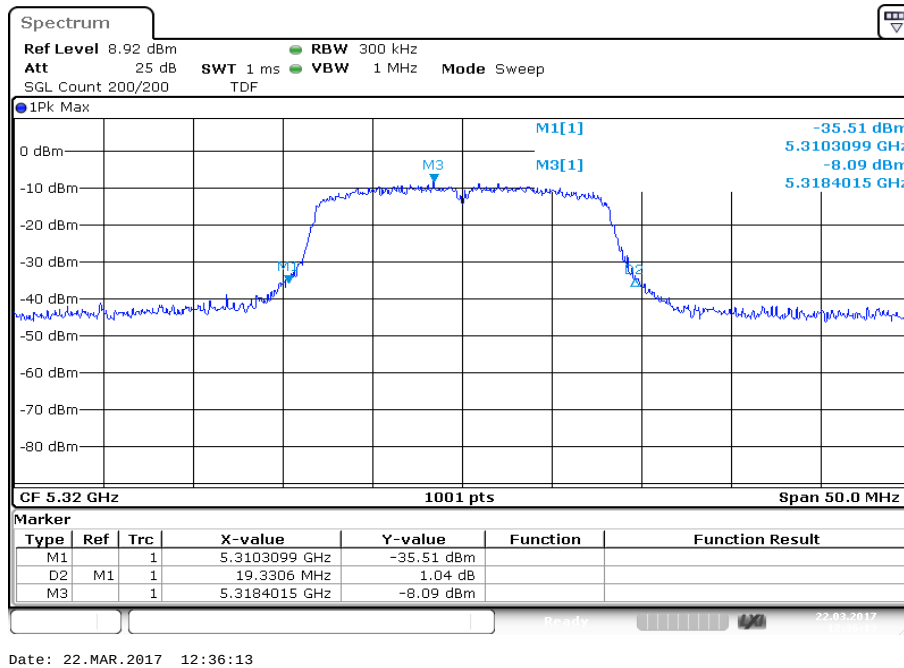
Plot 2: 5240 MHz



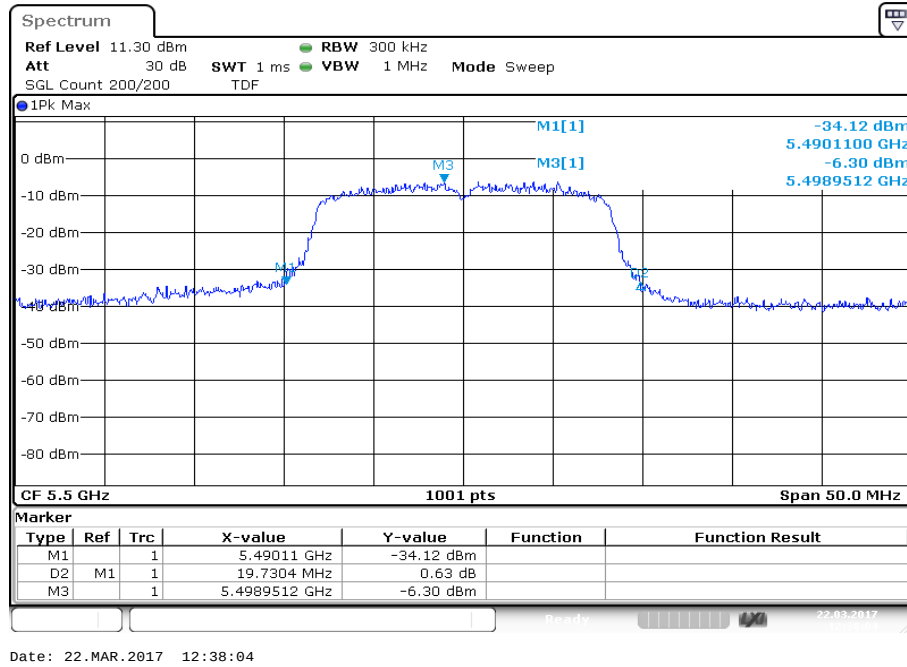
Plot 3: 5260 MHz



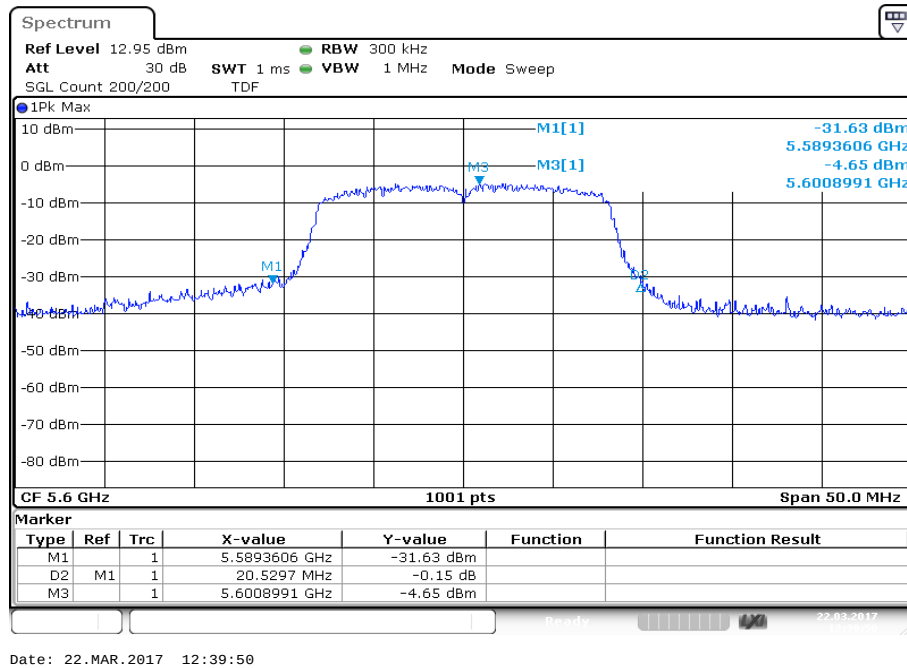
Plot 4: 5320 MHz



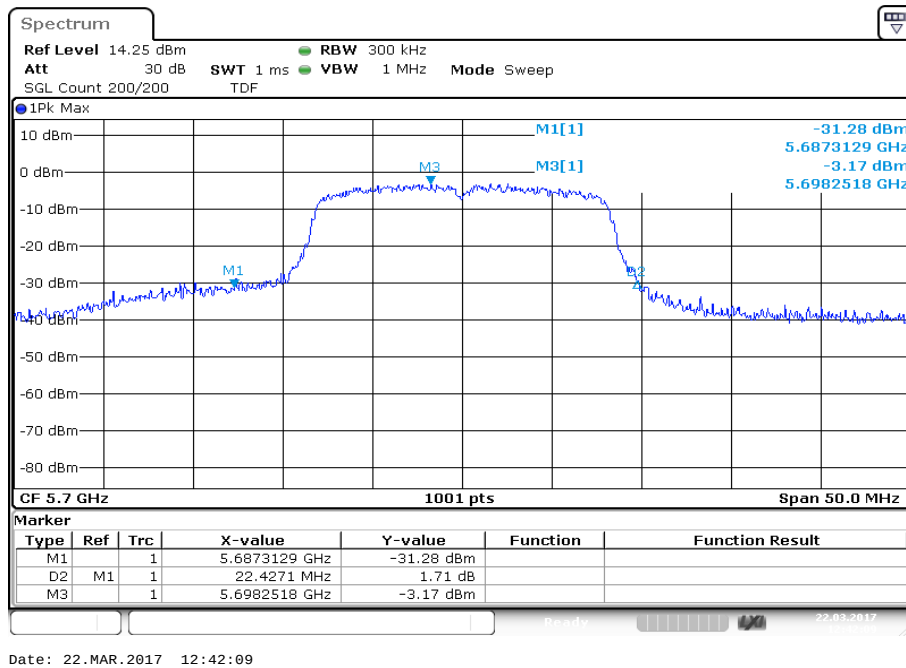
Plot 5: 5500 MHz



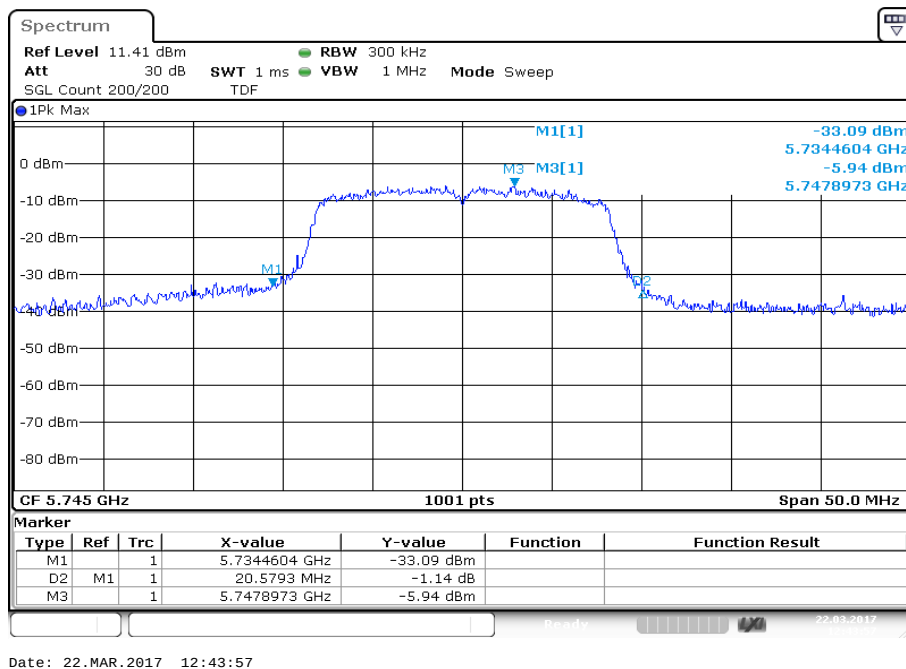
Plot 6: 5600 MHz



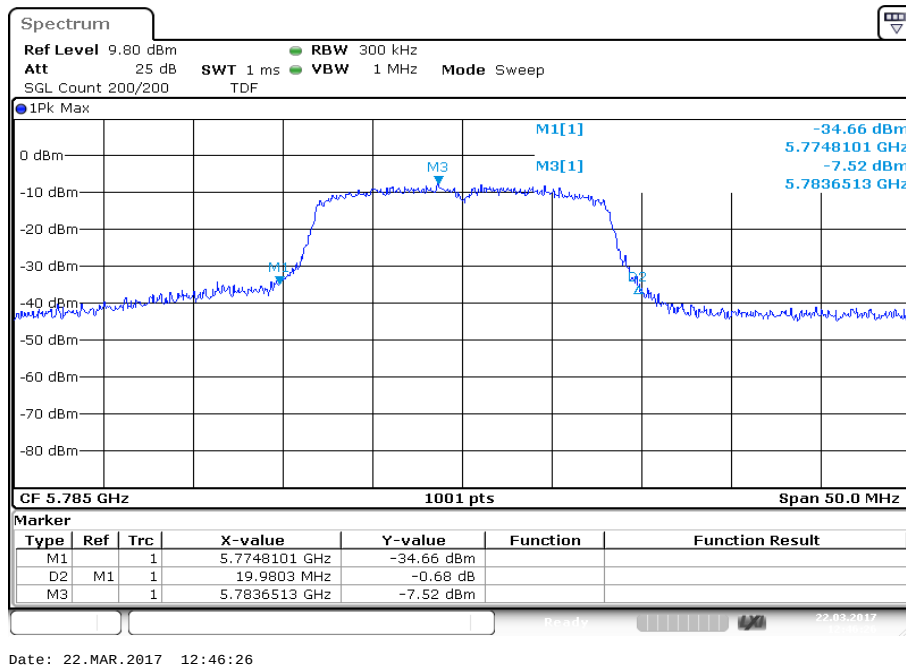
Plot 7: 5700 MHz



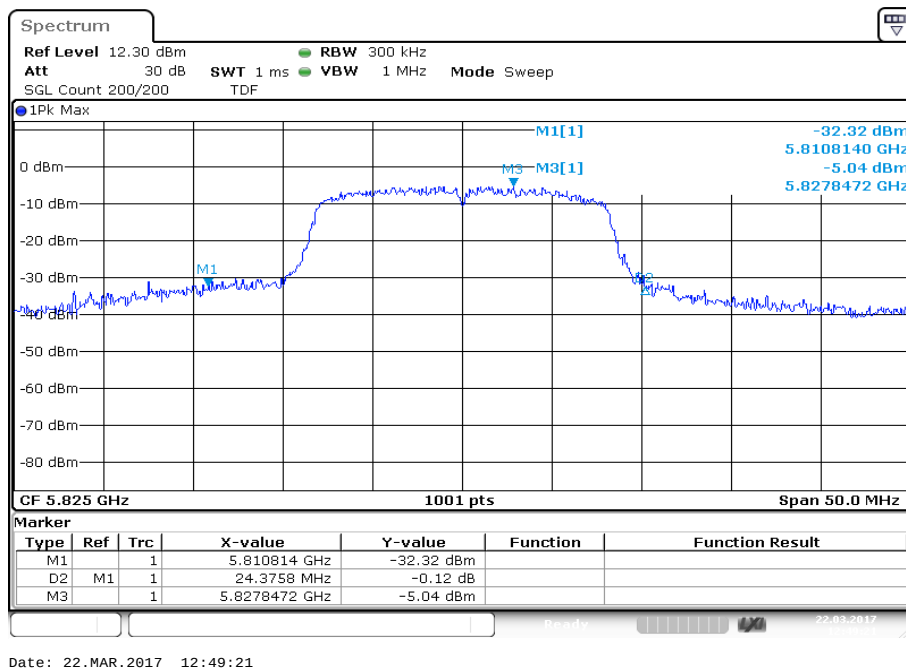
Plot 8: 5745 MHz



Plot 9: 5785 MHz

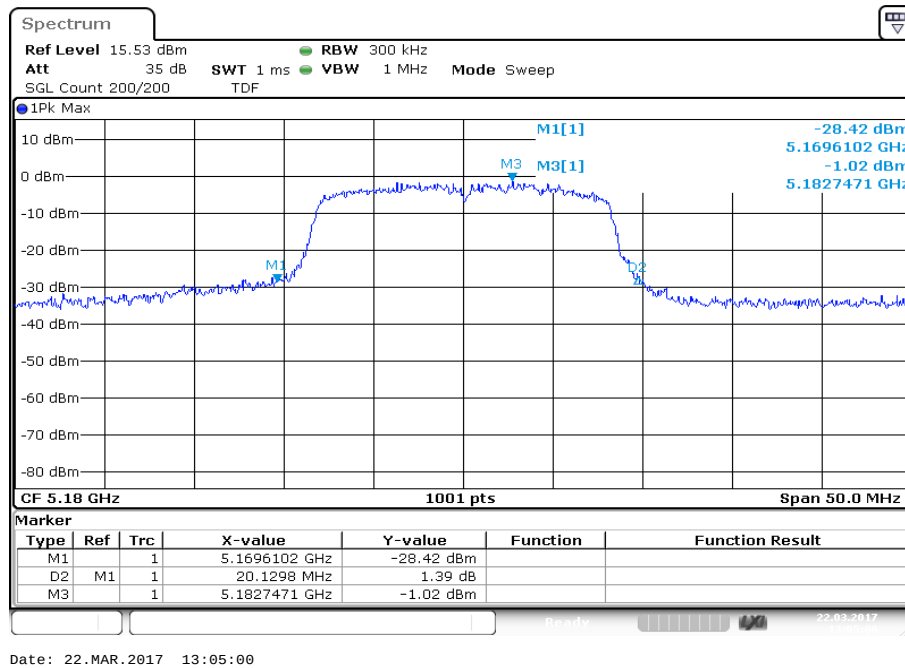


Plot 10: 5825 MHz

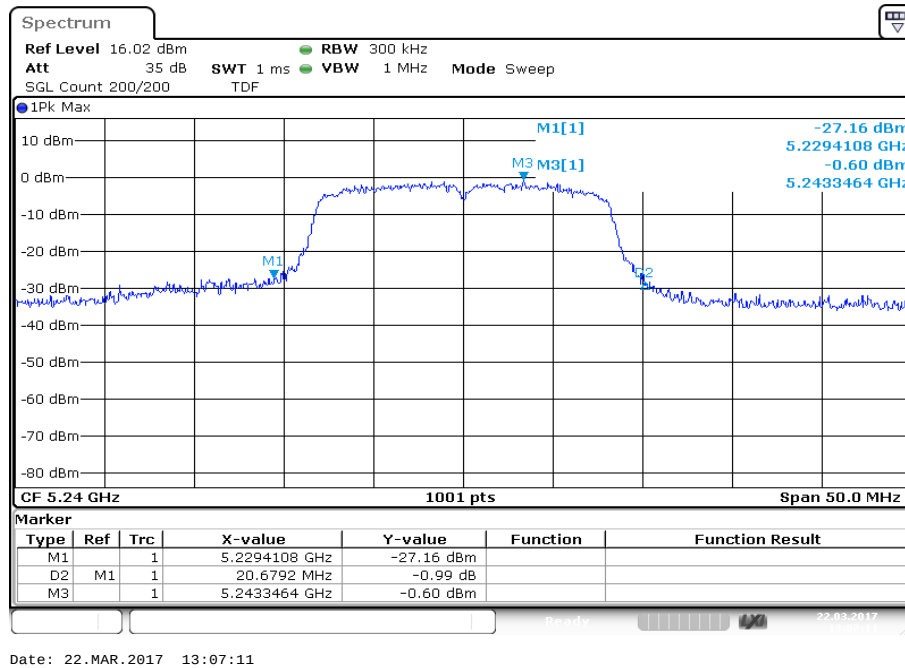


Plots: OFDM / n/ac HT20 – mode, MMCX port

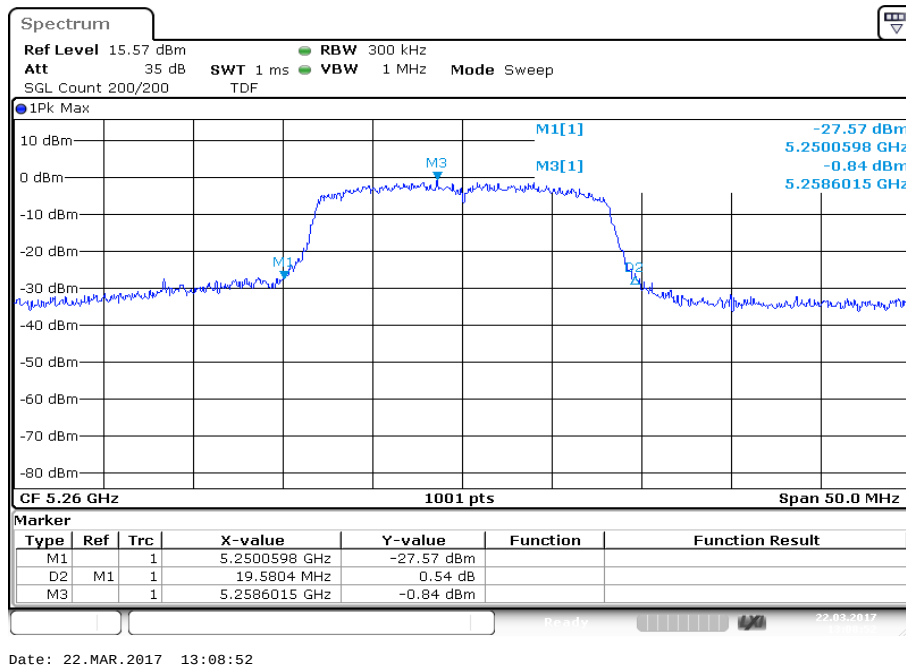
Plot 1: 5180 MHz



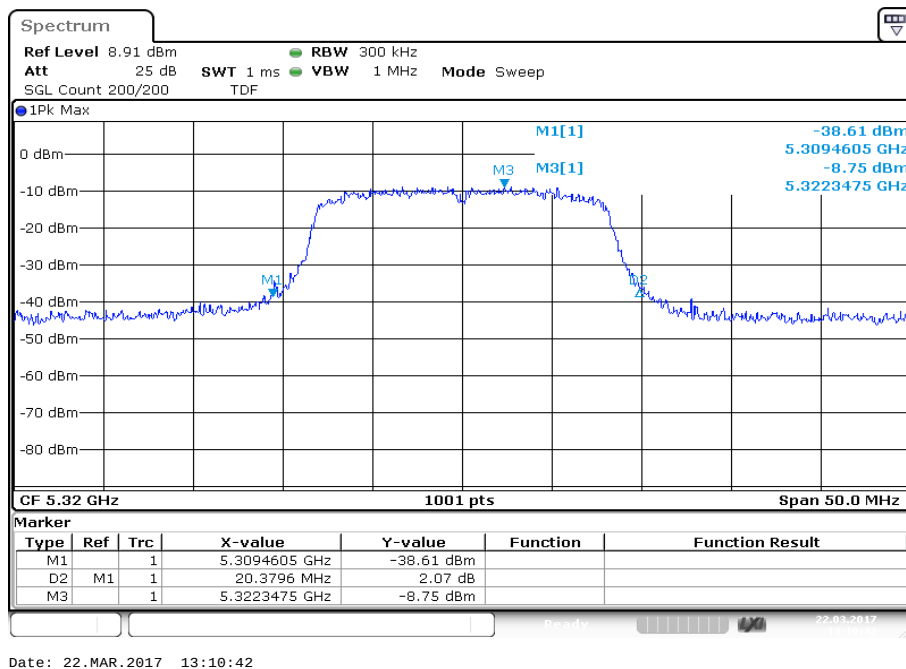
Plot 2: 5240 MHz



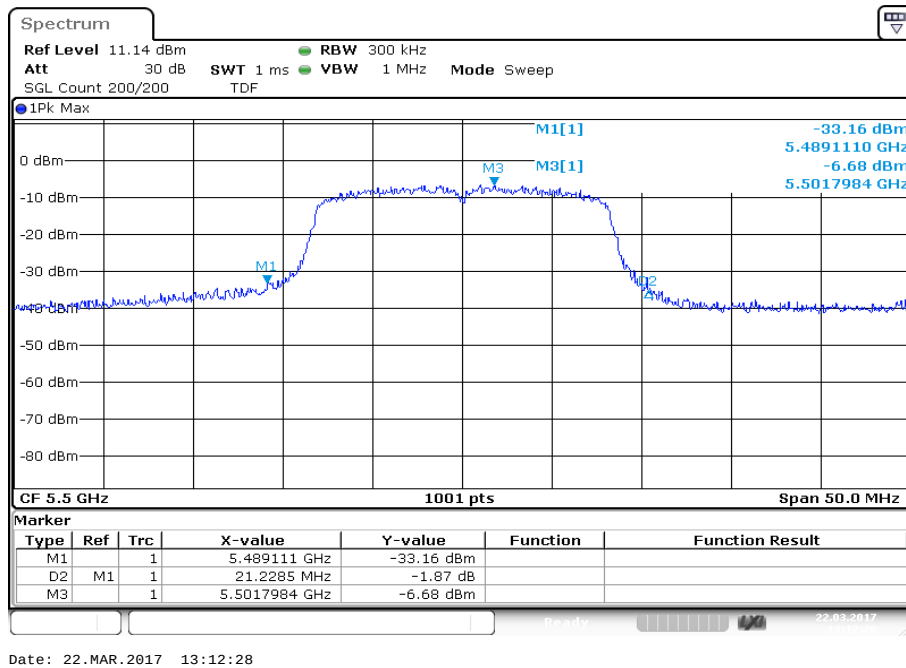
Plot 3: 5260 MHz



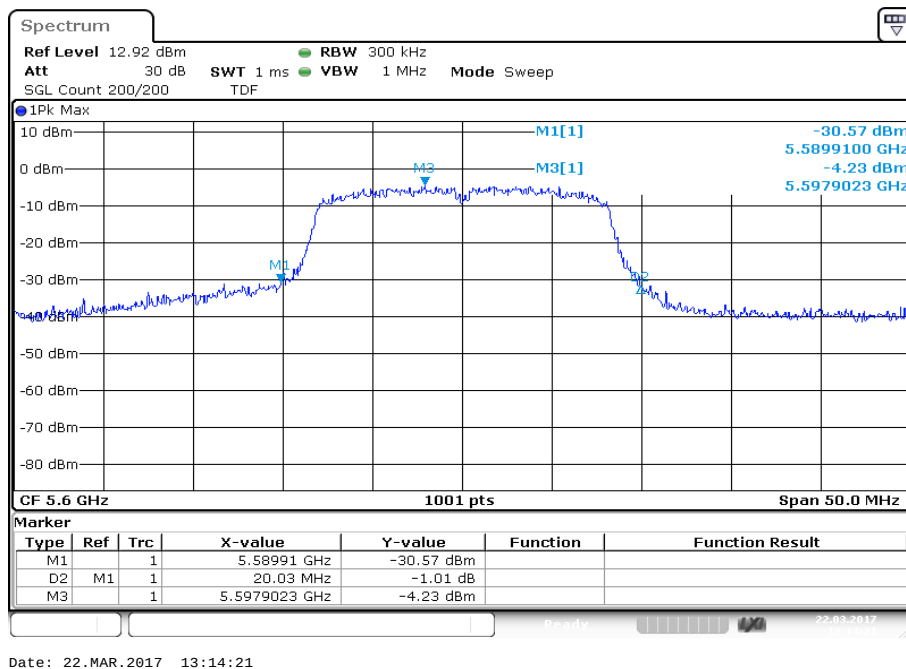
Plot 4: 5320 MHz



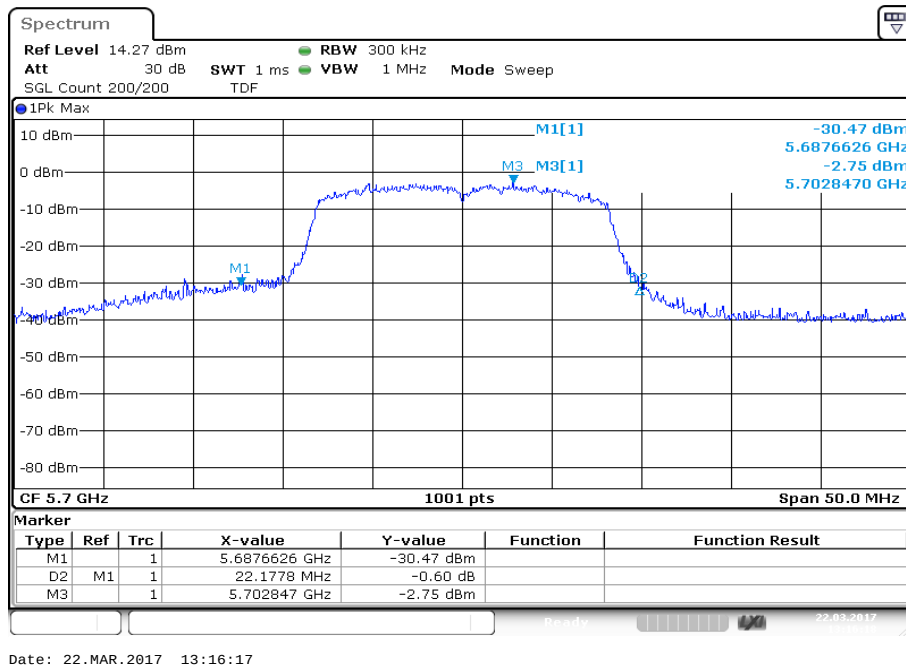
Plot 5: 5500 MHz



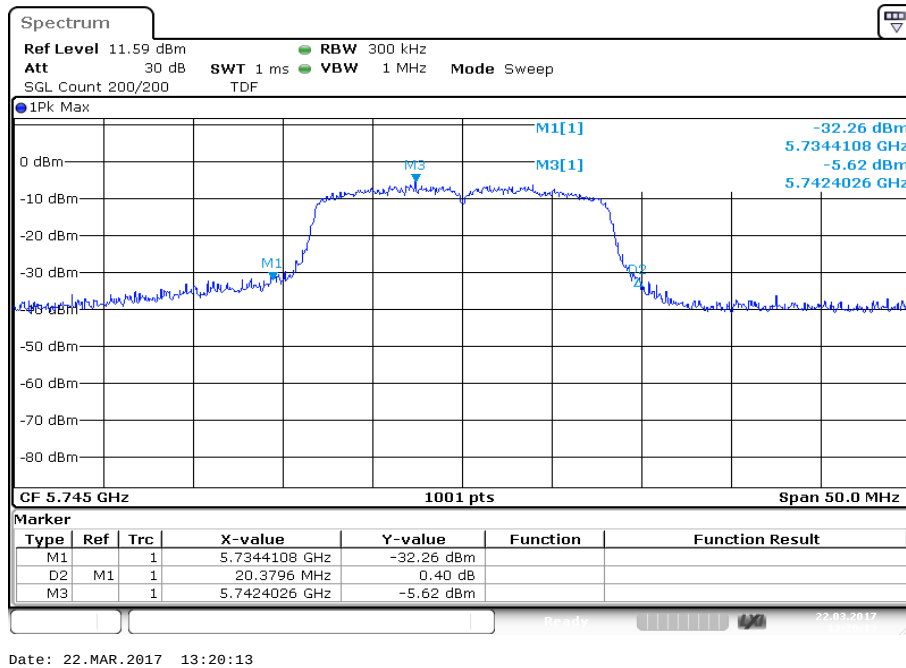
Plot 6: 5600 MHz



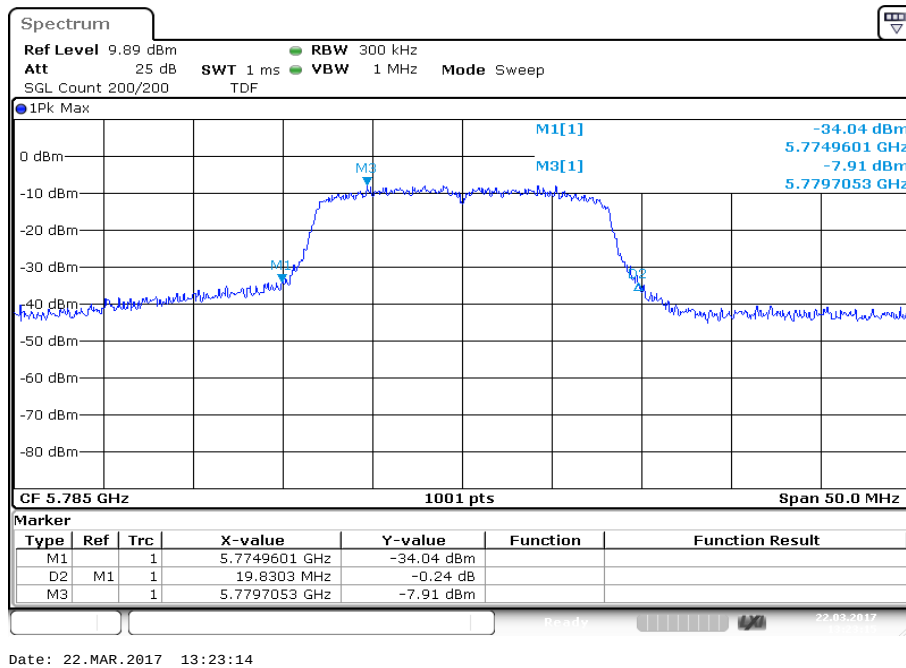
Plot 7: 5700 MHz



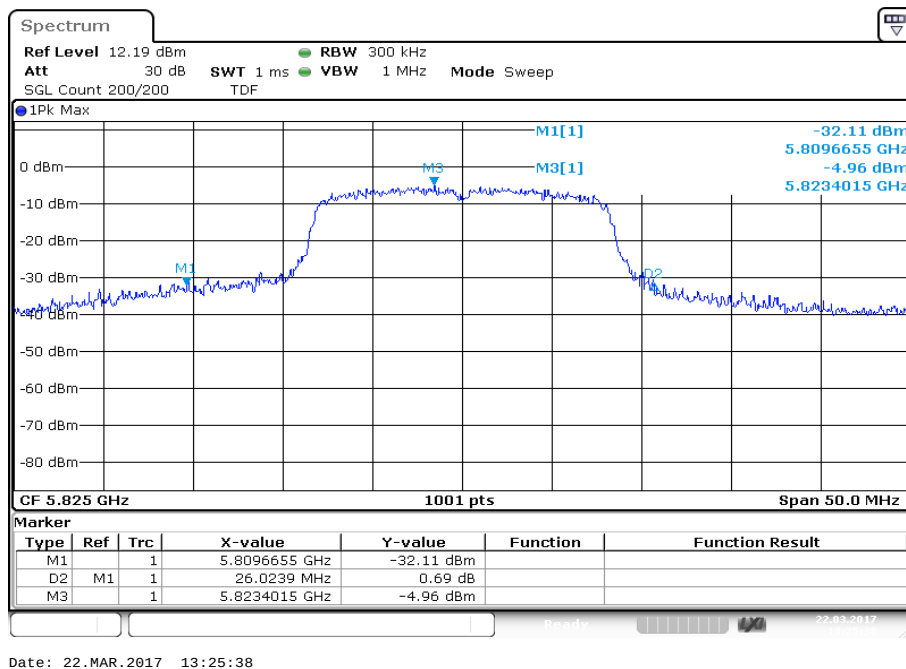
Plot 8: 5745 MHz



Plot 9: 5785 MHz



Plot 10: 5825 MHz

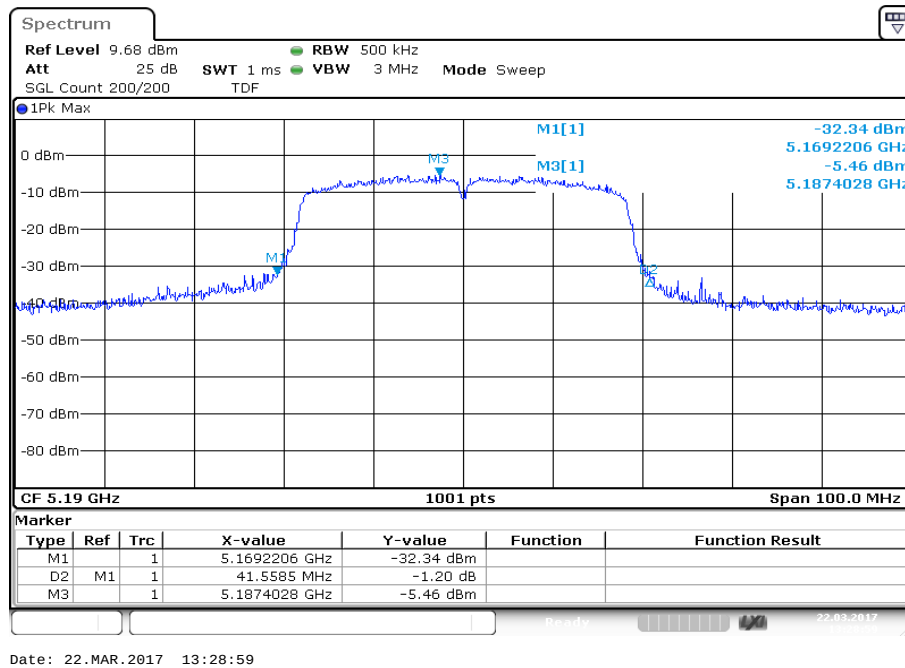


Annex B

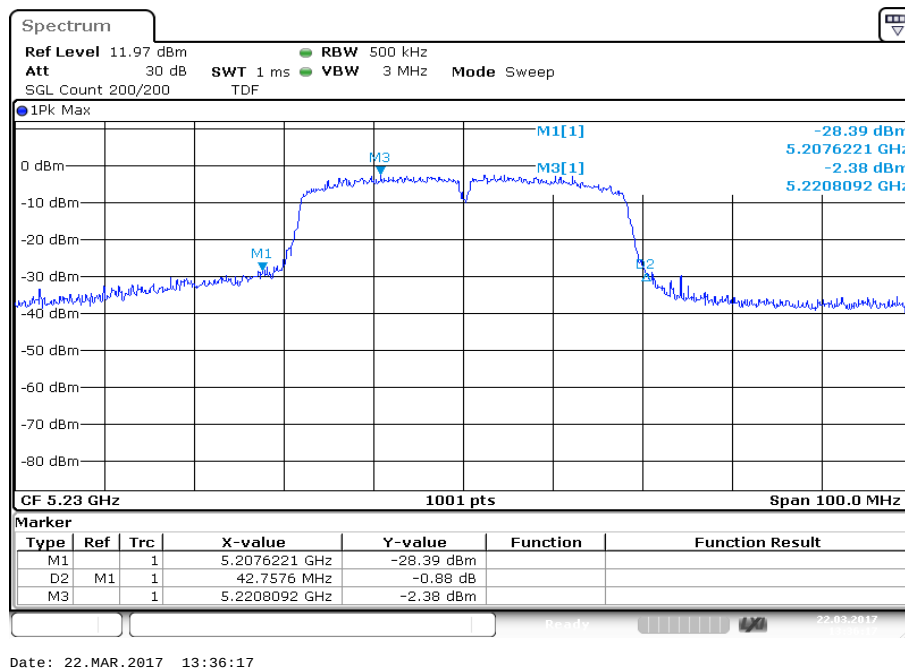
to test report no.: 1-3116/16-01-20

Plots: OFDM / n/ac HT40 – mode, MMCX port

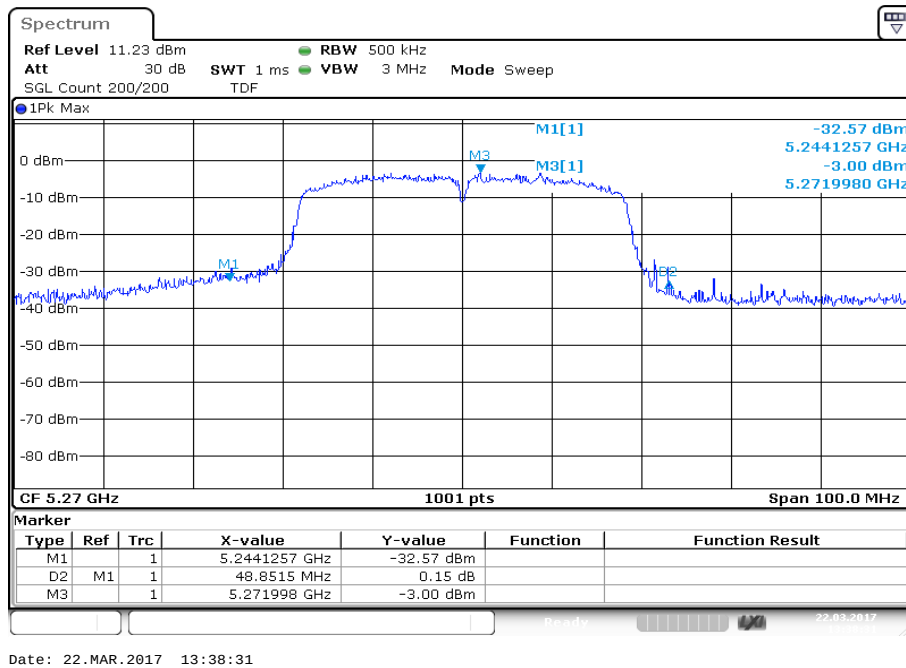
Plot 1: 5190 MHz



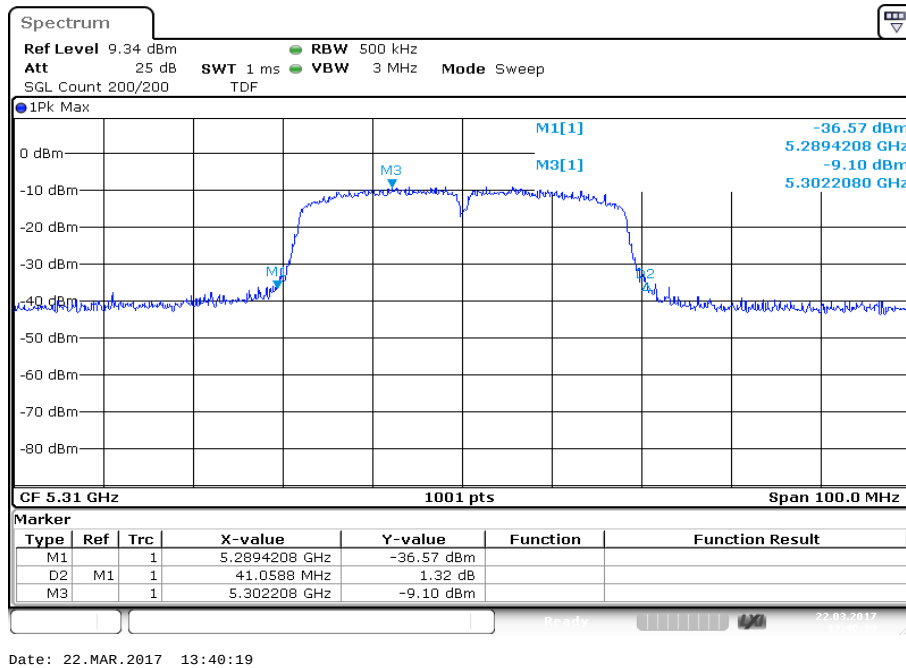
Plot 2: 5230 MHz



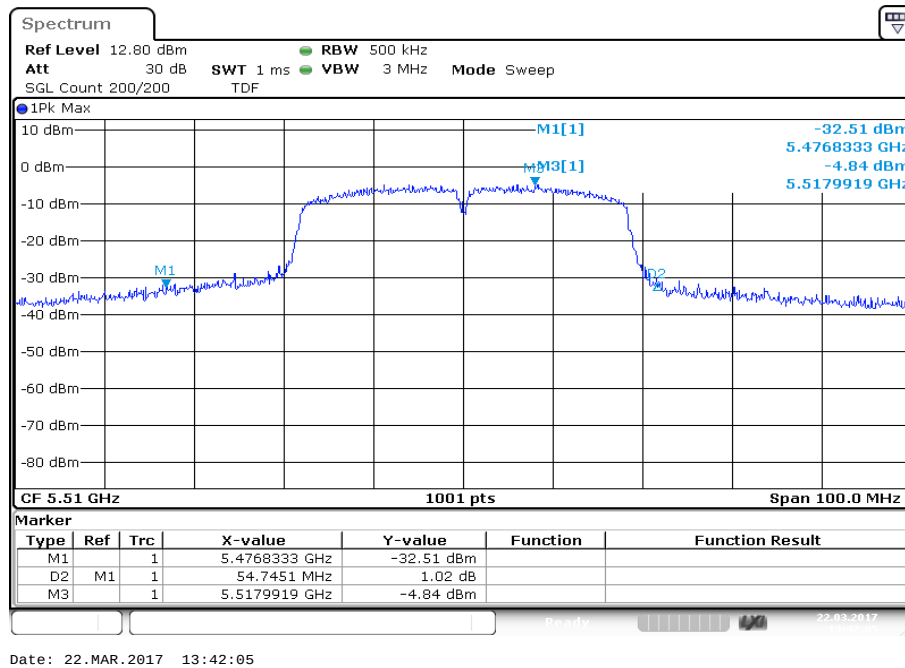
Plot 3: 5270 MHz



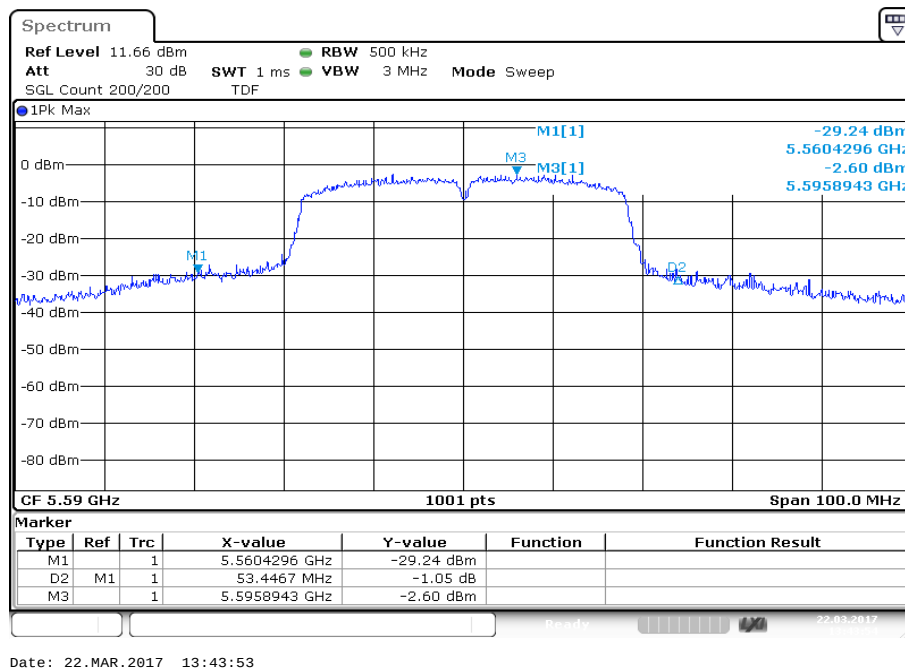
Plot 4: 5310 MHz



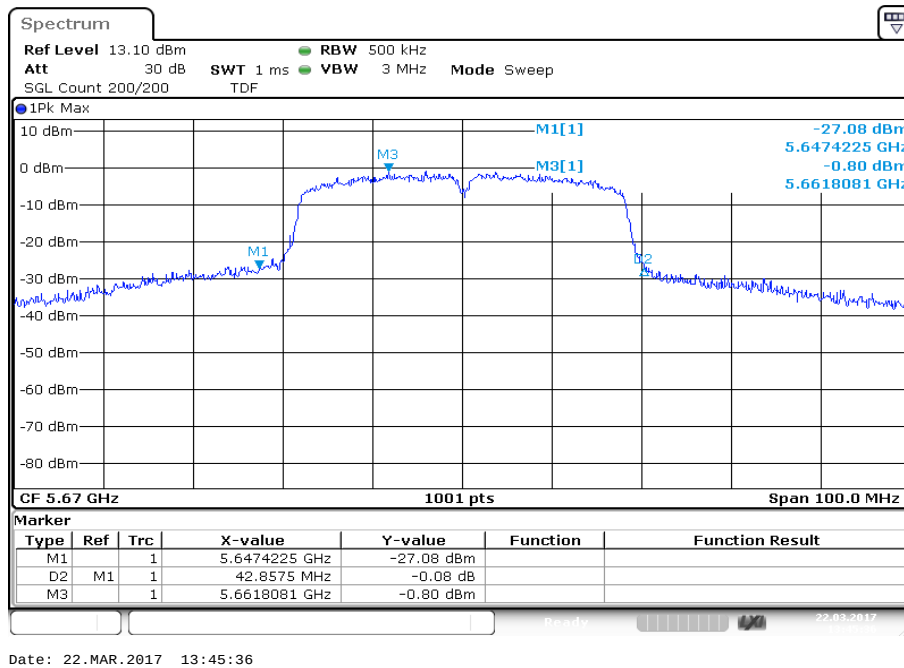
Plot 5: 5510 MHz



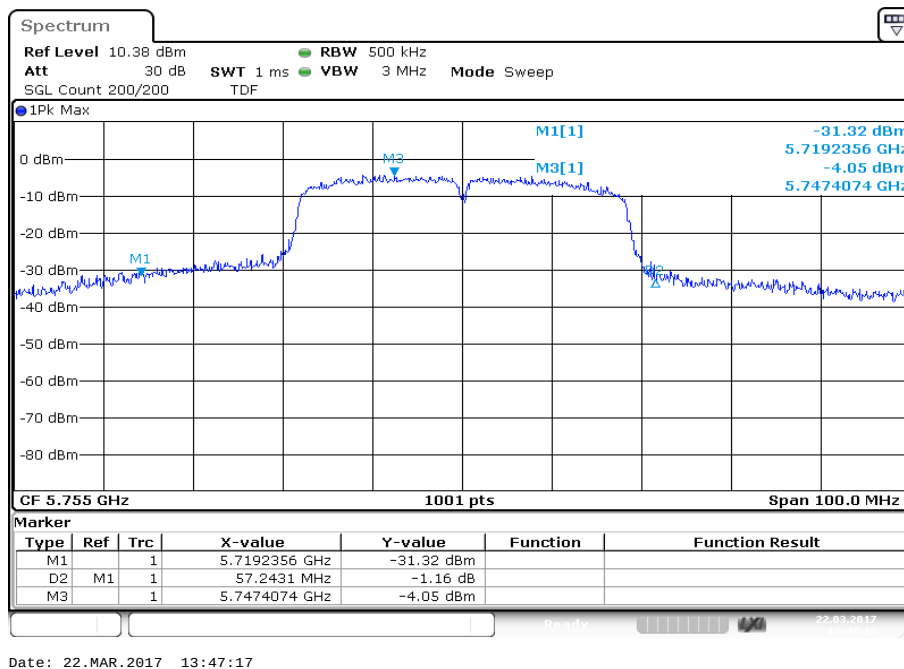
Plot 6: 5590 MHz



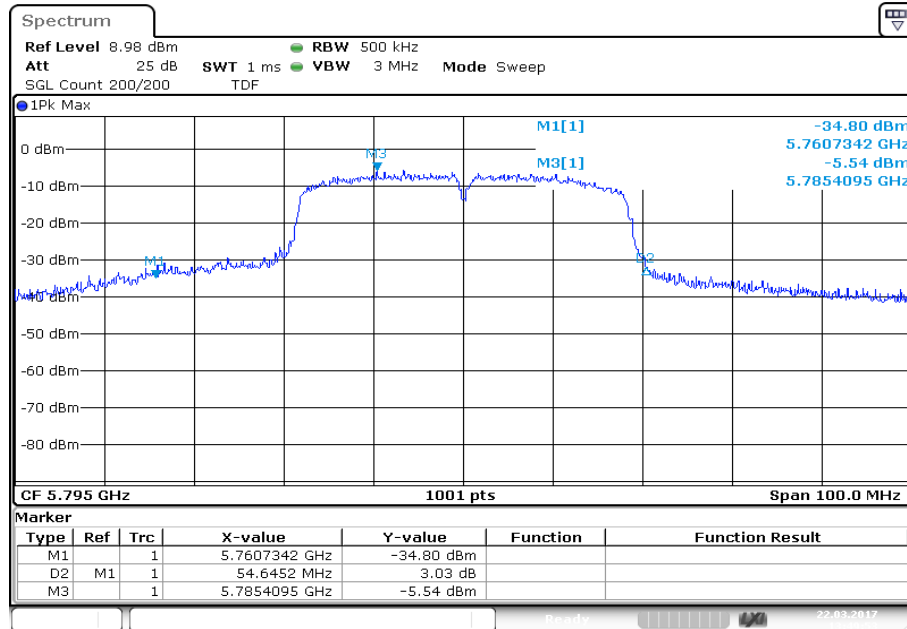
Plot 7: 5670 MHz



Plot 8: 5755 MHz



Plot 9: 5795 MHz



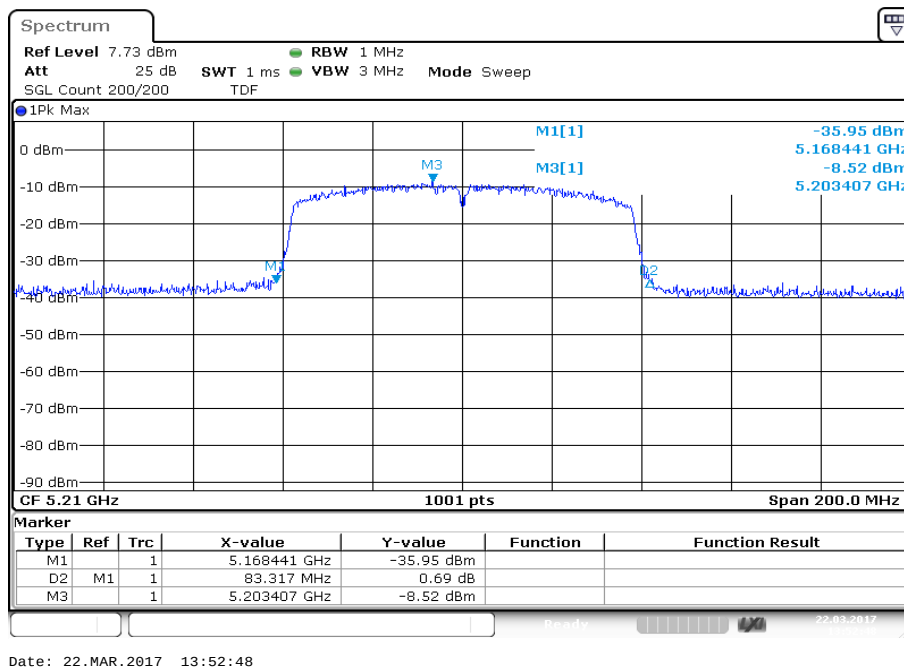
Date: 22.MAR.2017 13:49:53

Annex B

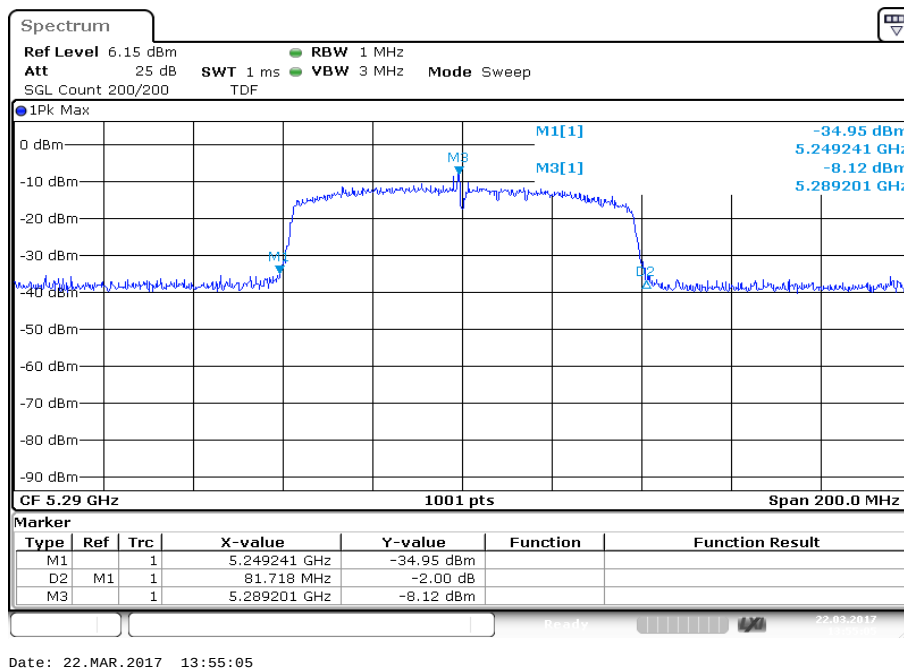
to test report no.: 1-3116/16-01-20

Plots: OFDM / ac HT80 – mode, MMCX port

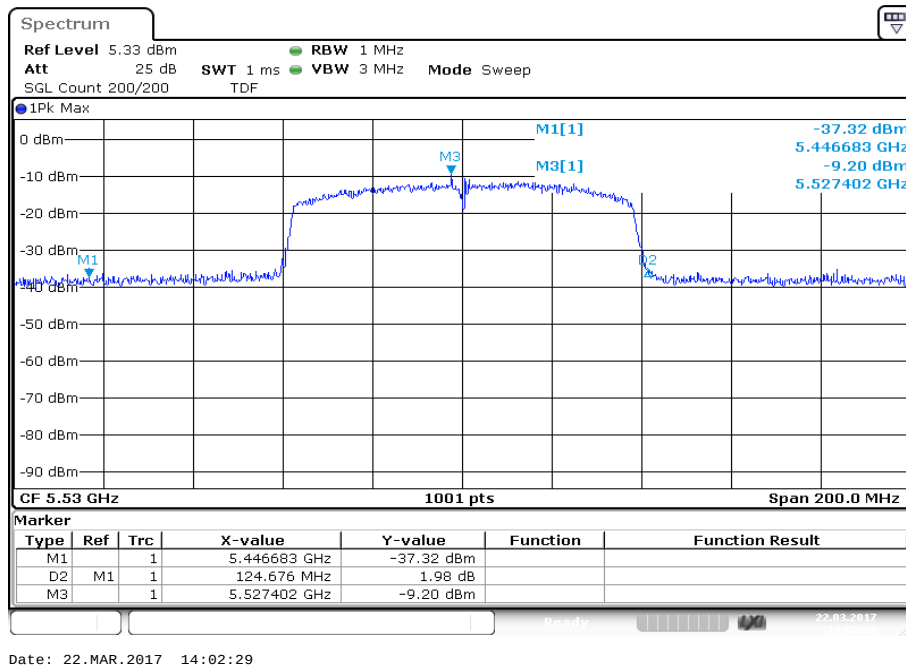
Plot 1: 5210 MHz



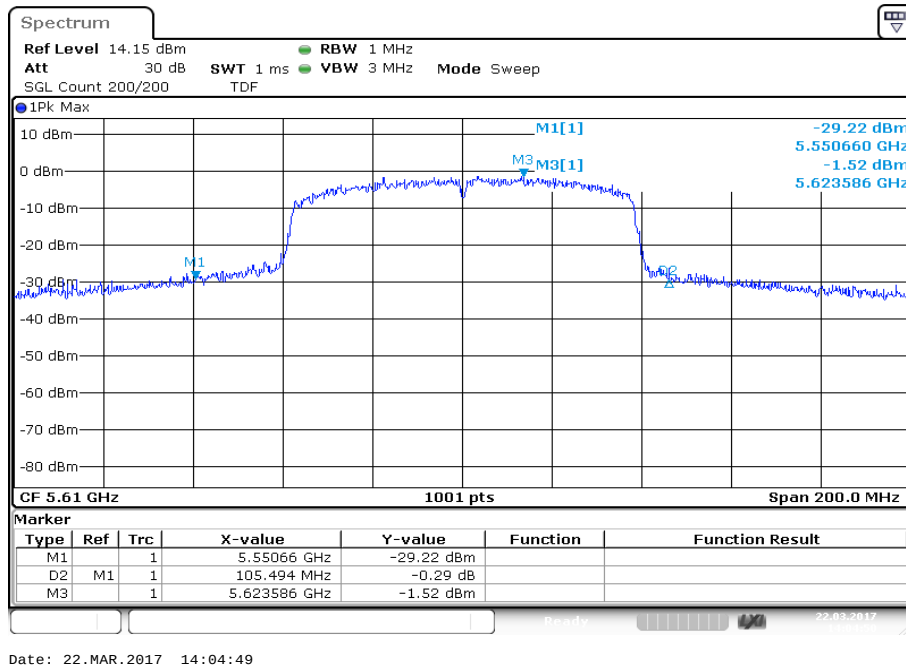
Plot 2: 5290 MHz



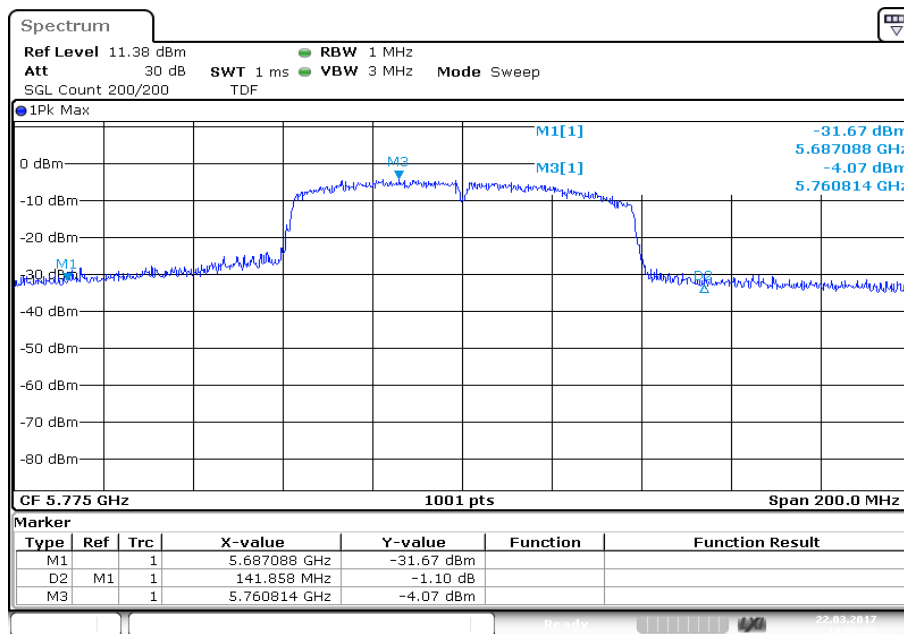
Plot 3: 5530 MHz



Plot 4: 5610 MHz



Plot 5: 5775 MHz



Date: 22.MAR.2017 14:08:39

1.3 Occupied bandwidth – 99% emission bandwidth

Description:

Measurement of the 99% bandwidth of the modulated signal acc. RSS-GEN.

Measurement:

Measurement parameter	
Detector:	Peak
Sweep time:	Auto
Resolution bandwidth:	300 kHz / 500 kHz
Video bandwidth:	1 MHz / 3 MHz
Span:	50 MHz / 100 MHz
Measurement procedure:	Measurement of the 99% bandwidth using the integration function of the analyzer
Trace – mode:	Max hold (allow trace to stabilize)
Test setup:	See sub clause 7.4 – A
Measurement uncertainty:	See sub clause 9

Usage:

-/-	IC
Occupied Bandwidth – 99% emission bandwidth	
OBW is necessary for Emission Designator	

Result: OFDM / a – mode, UFL port

OFDM / a – mode Channel	99% bandwidth [kHz]			
	5180 MHz	5240 MHz	5260 MHz	5320 MHz
	16434	16434	16434	16334
Channel	5500 MHz	5600 MHz	5700 MHz	5745 MHz
	16434	16434	16434	16434
Channel	5785 MHz	5825 MHz		
	16384	16484		

Result: OFDM / n/ac HT20 – mode, UFL port

OFDM / n/ac HT20 – mode Channel	99% bandwidth [kHz]			
	5180 MHz	5240 MHz	5260 MHz	5320 MHz
	17483	17483	17483	17483
Channel	5500 MHz	5600 MHz	5700 MHz	5745 MHz
	17483	17582	17532	17532
Channel	5785 MHz	5825 MHz		
	17483	17532		

Result: OFDM / n/ac HT40 – mode, UFL port

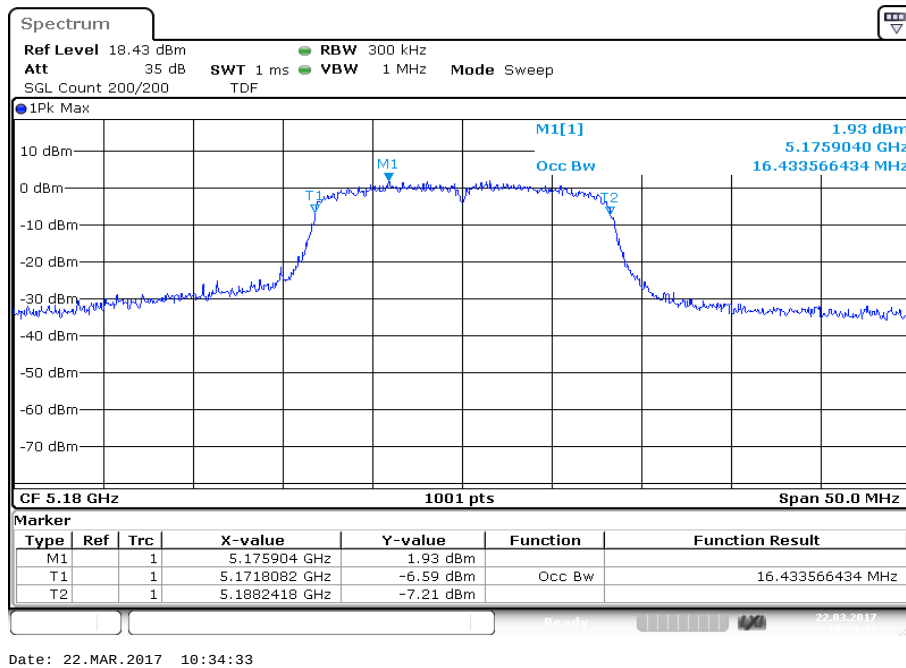
OFDM / n/ac HT40 – mode Channel	99% bandwidth [kHz]			
	5190 MHz	5230 MHz	5270 MHz	5310 MHz
	36064	36064	36164	35964
Channel	5510 MHz	5590 MHz	5670 MHz	5755 MHz
	36164	36164		
Channel	5795 MHz			

Result: OFDM / ac HT80 – mode, UFL port

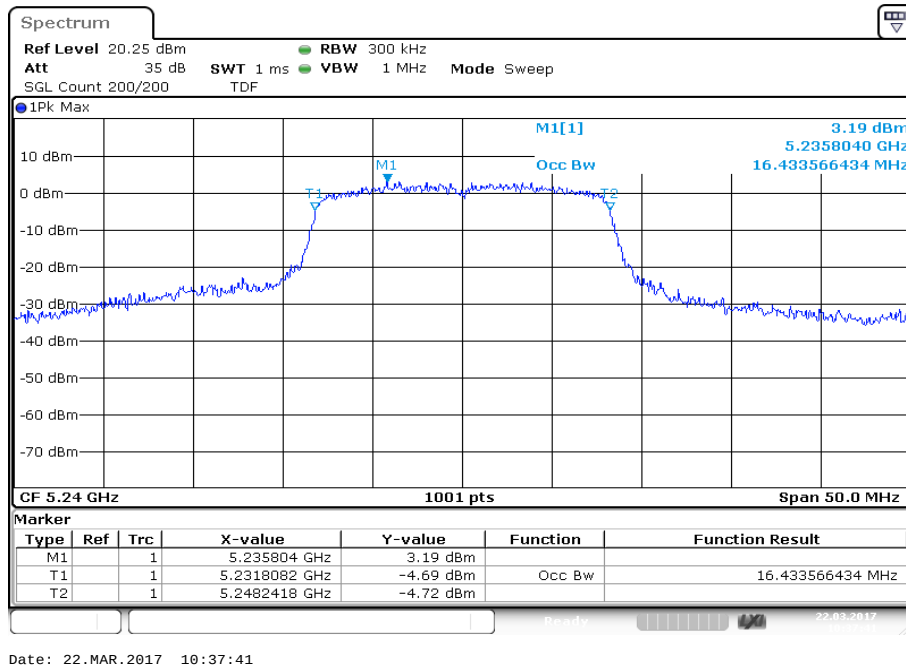
OFDM / ac HT80 – mode Channel	99% bandwidth [kHz]			
	5210 MHz	5290 MHz	5530 MHz	5610 MHz
	75125	75125	75125	75525
Channel	5775 MHz			
	75924			

Plots: OFDM / a – mode, UFL port

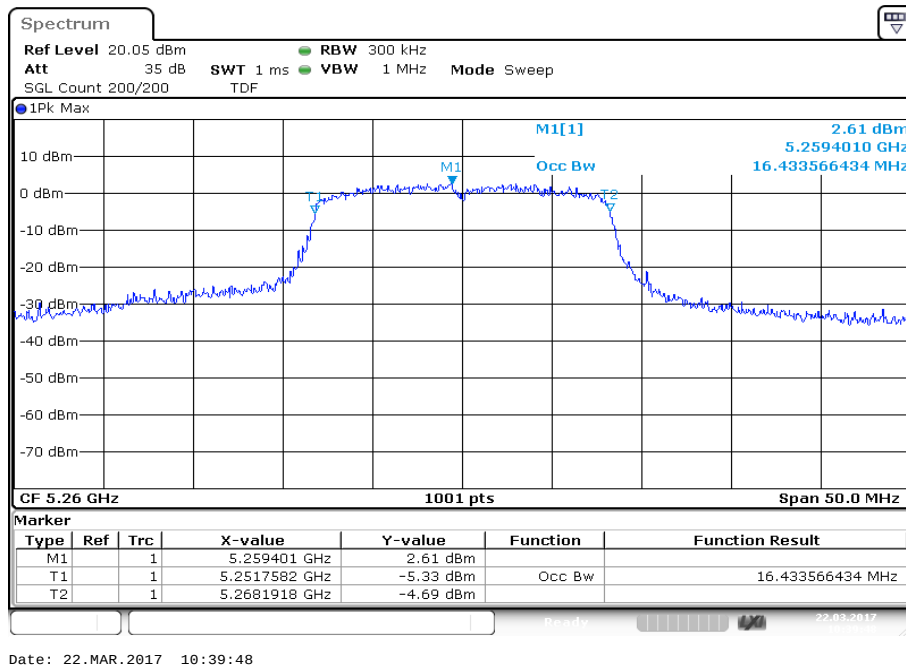
Plot 1: 5180 MHz



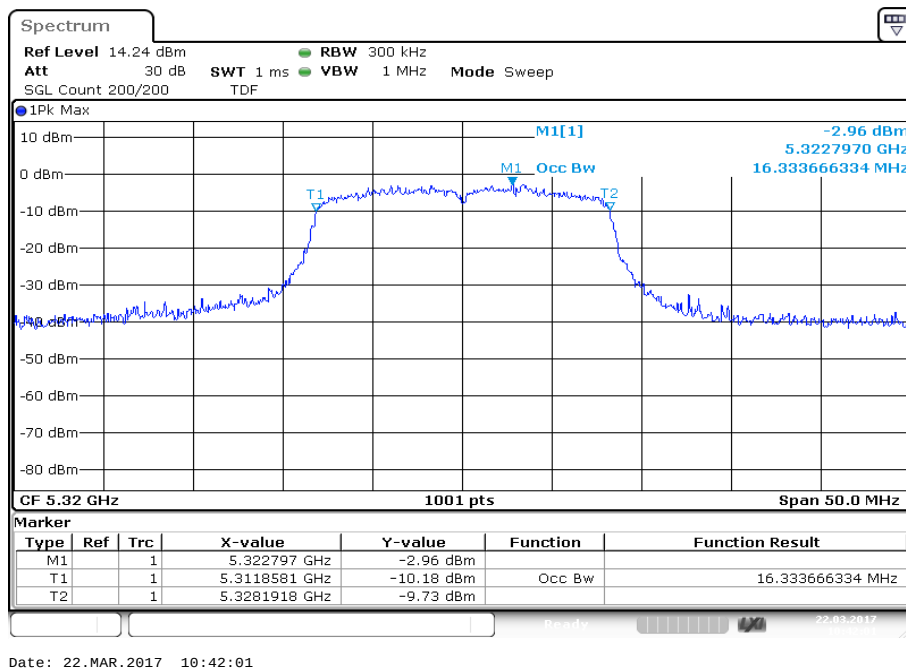
Plot 2: 5240 MHz



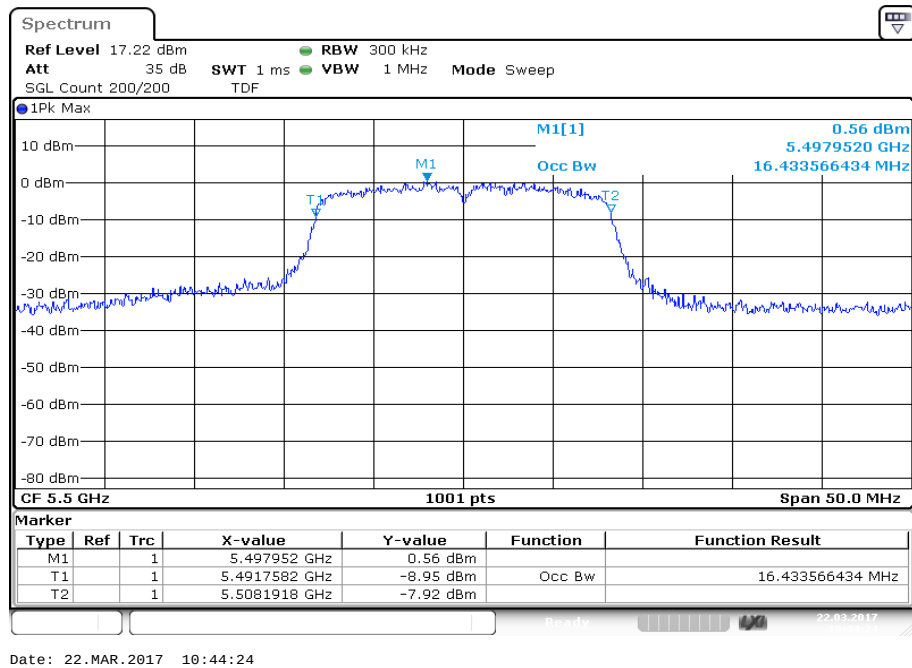
Plot 3: 5260 MHz



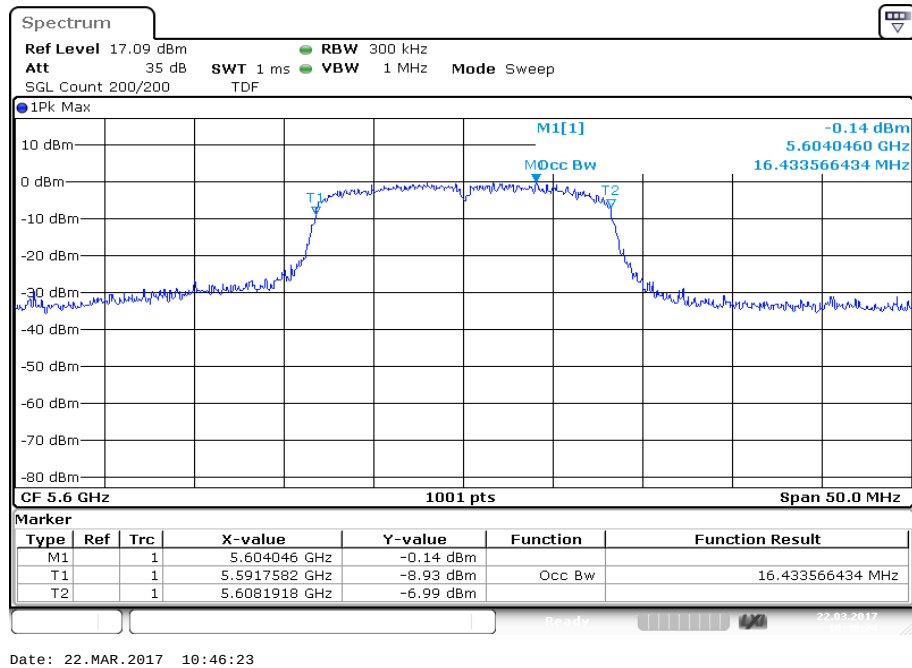
Plot 4: 5320 MHz



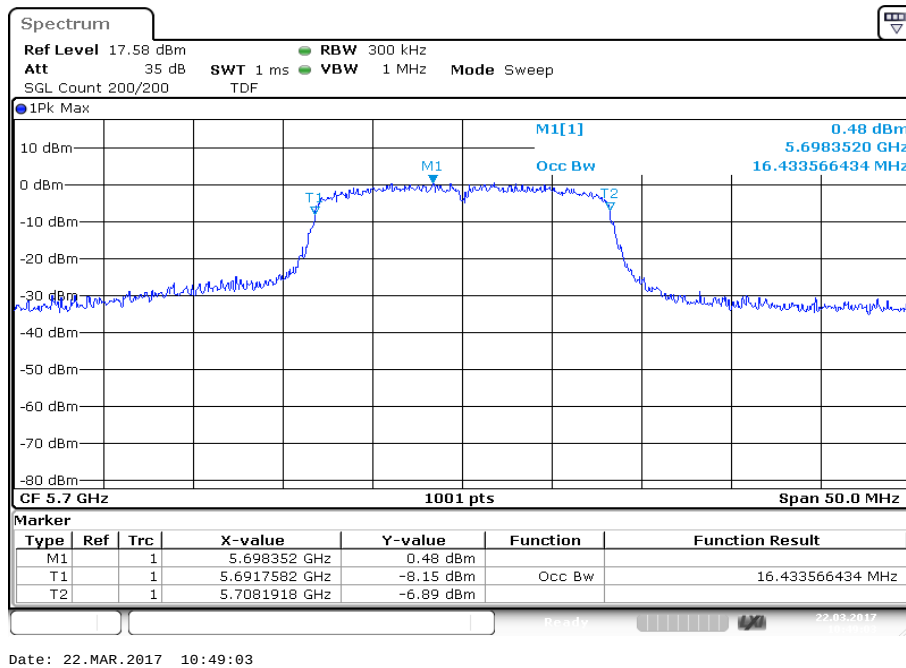
Plot 5: 5500 MHz



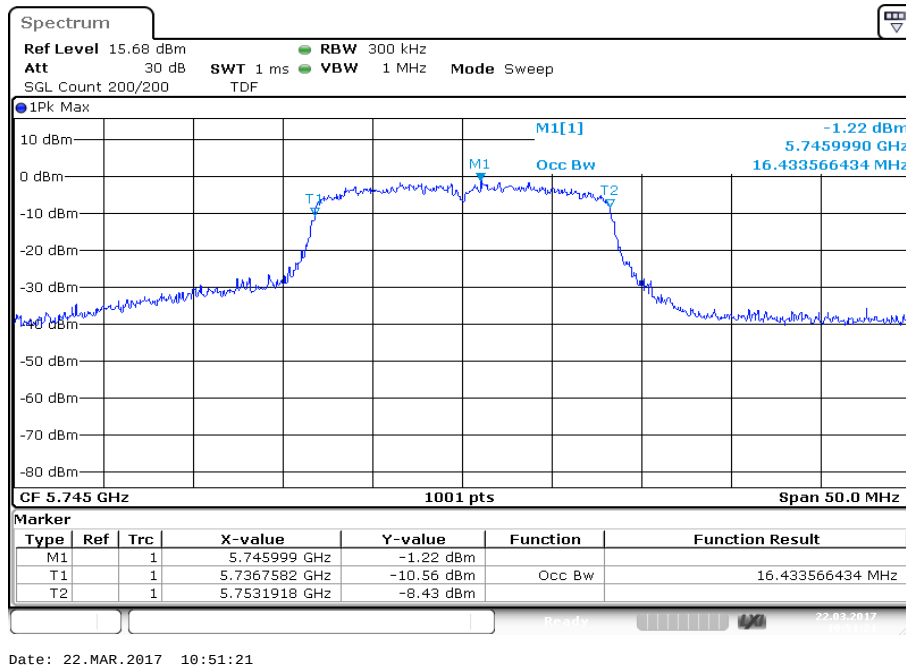
Plot 6: 5600 MHz



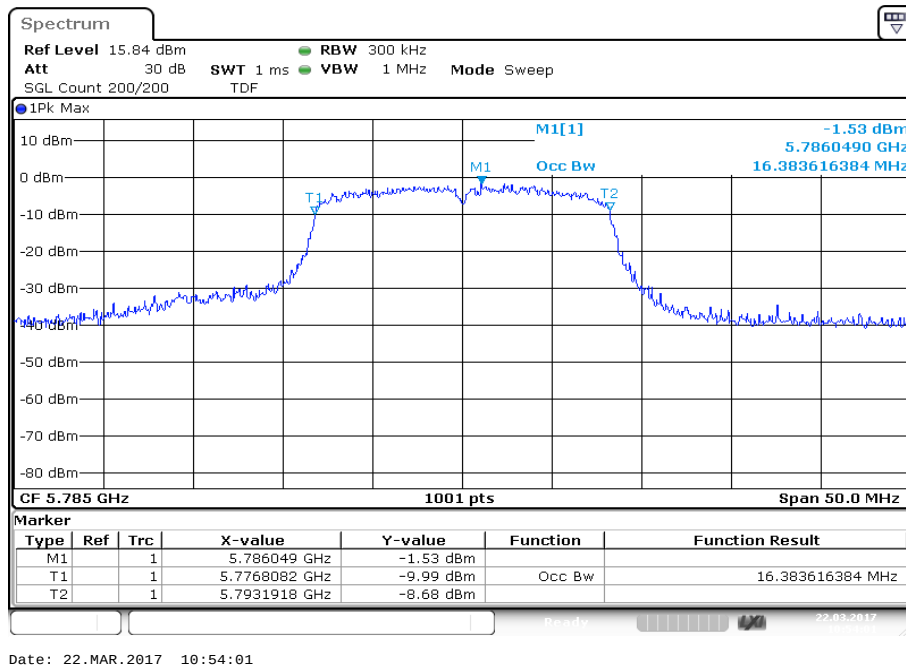
Plot 7: 5700 MHz



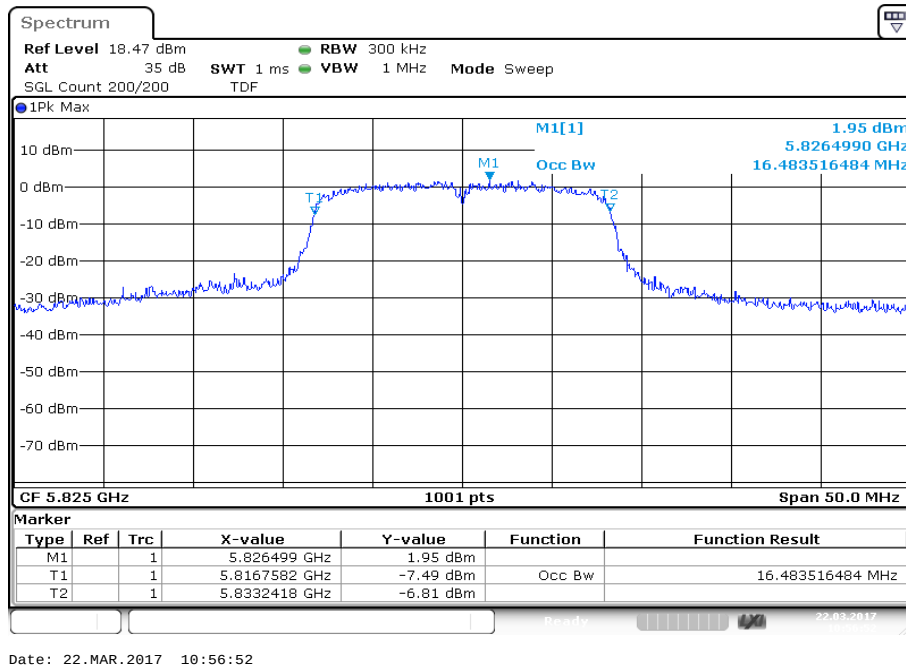
Plot 8: 5745 MHz



Plot 9: 5785 MHz

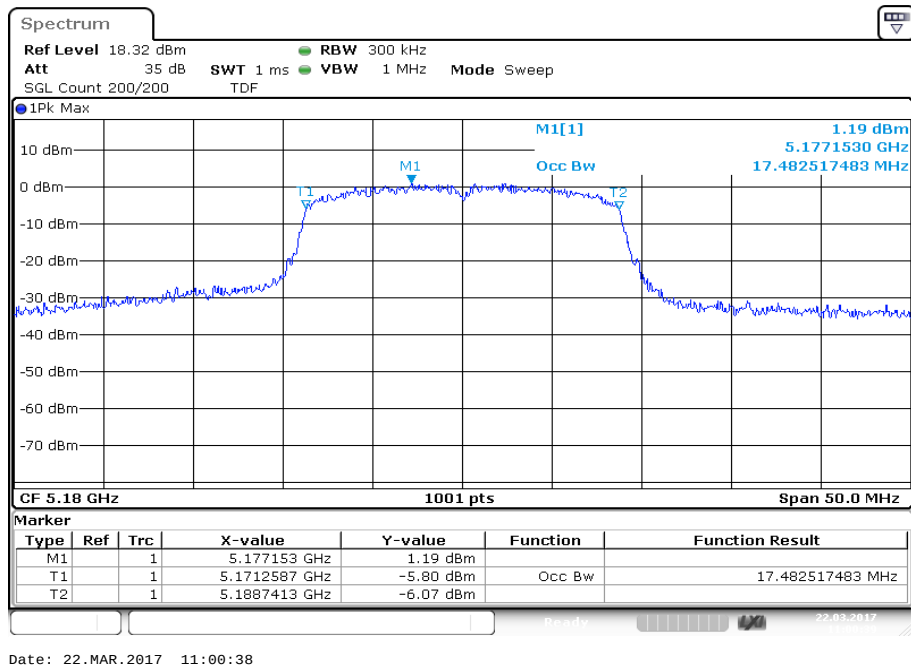


Plot 10: 5825 MHz

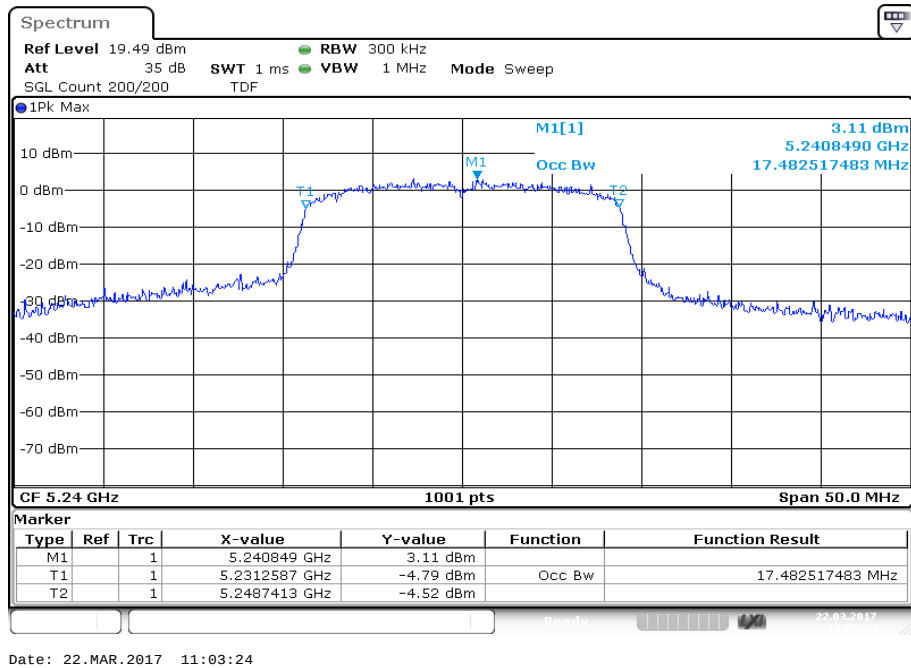


Plots: OFDM / n/ac HT20 – mode, UFL port

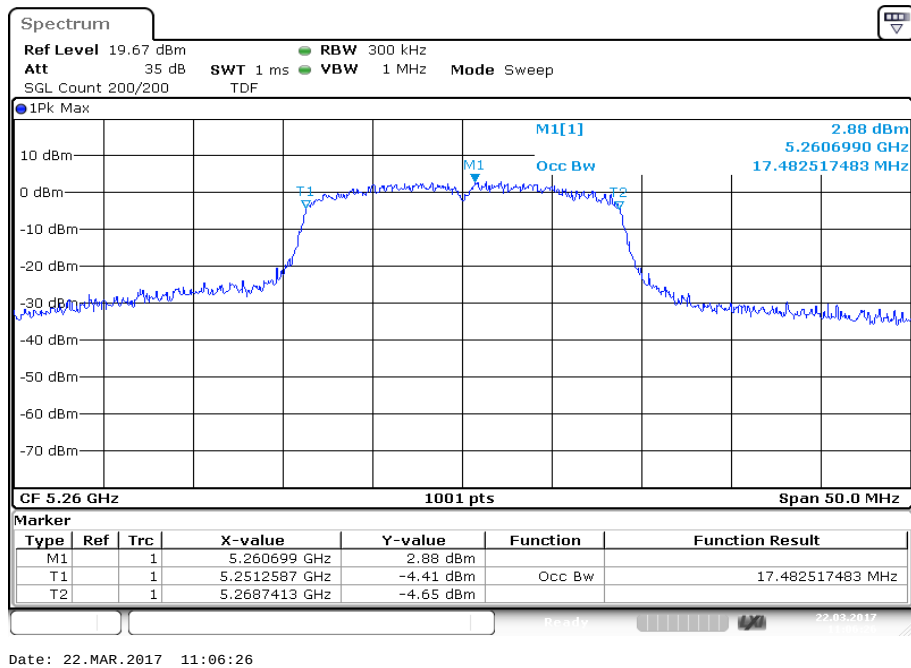
Plot 1: 5180 MHz



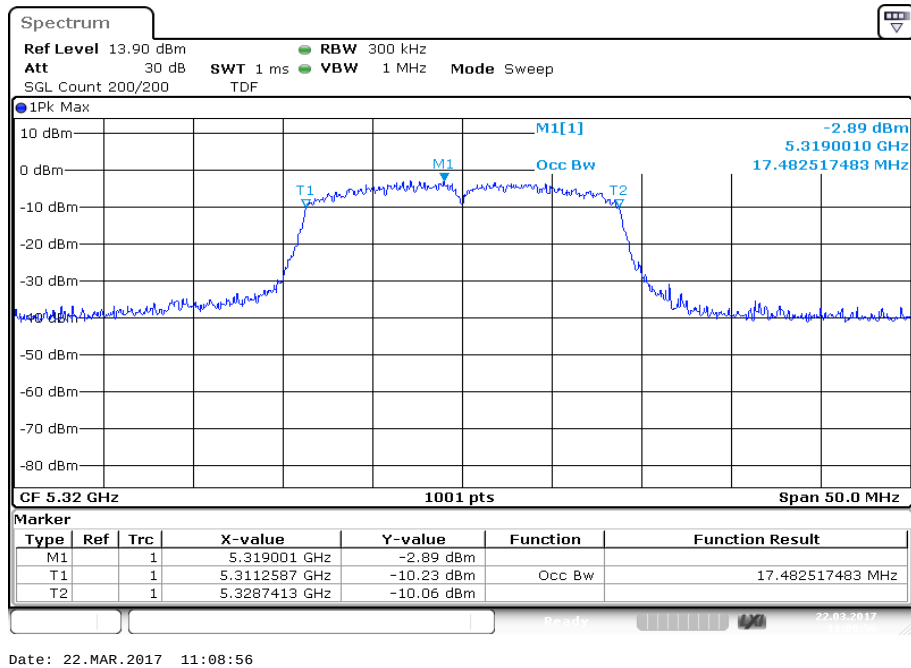
Plot 2: 5240 MHz



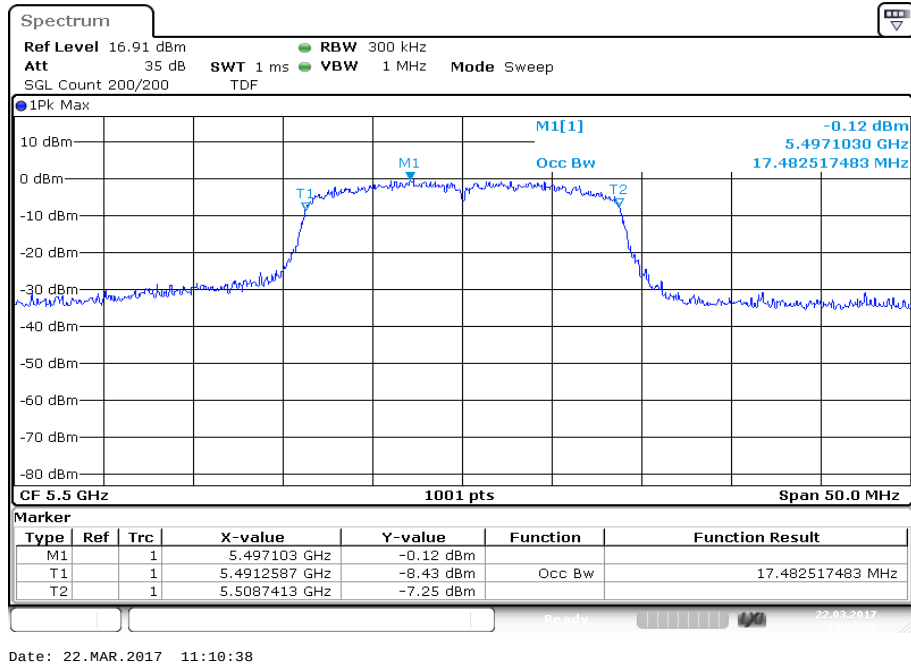
Plot 3: 5260 MHz



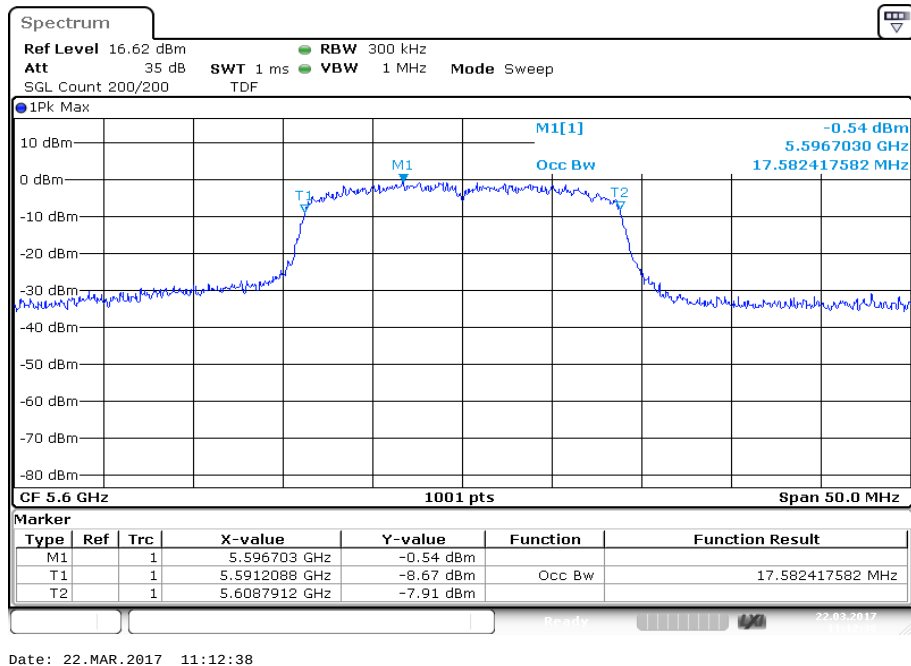
Plot 4: 5320 MHz



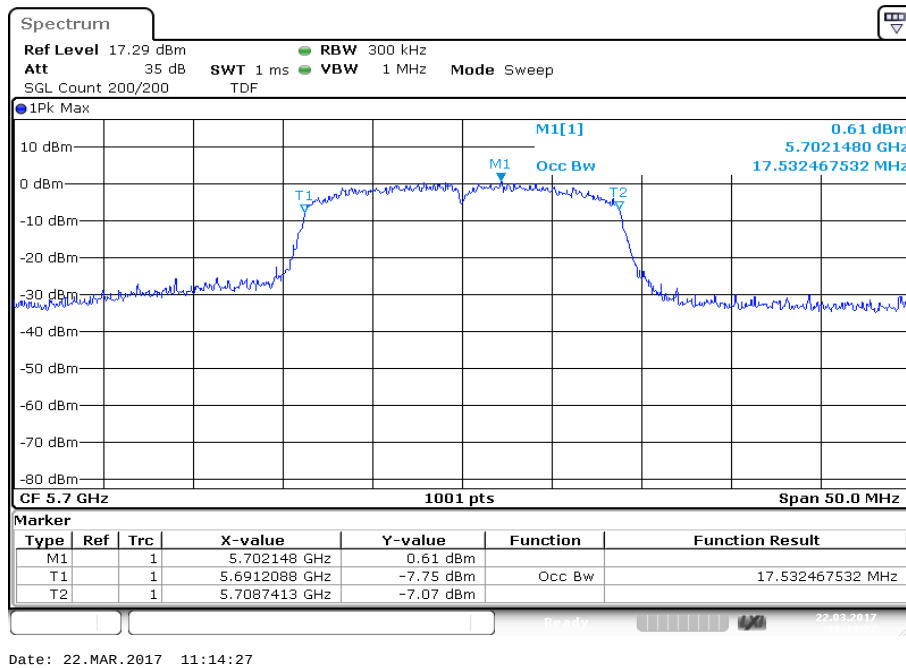
Plot 5: 5500 MHz



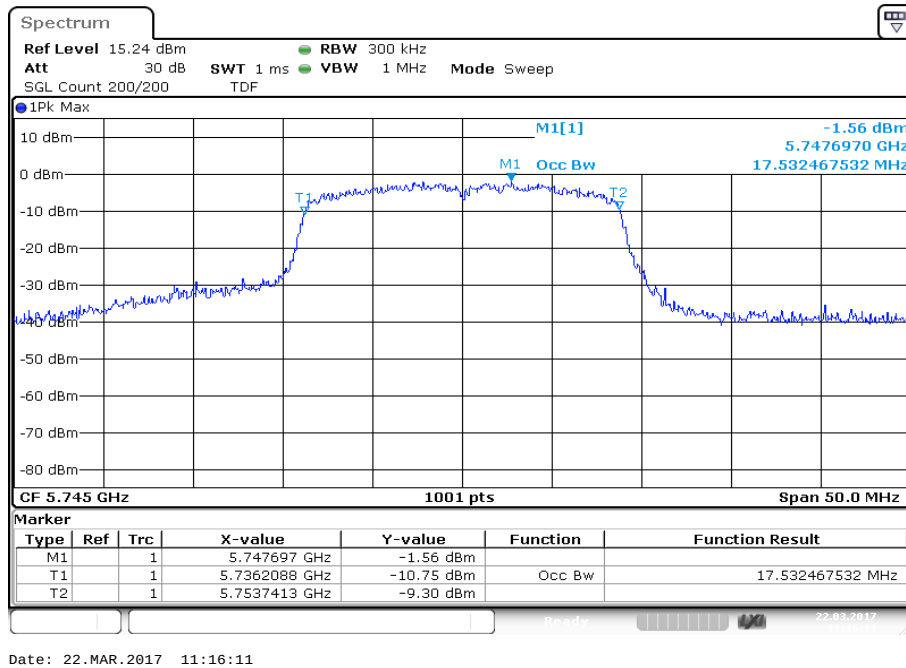
Plot 6: 5600 MHz



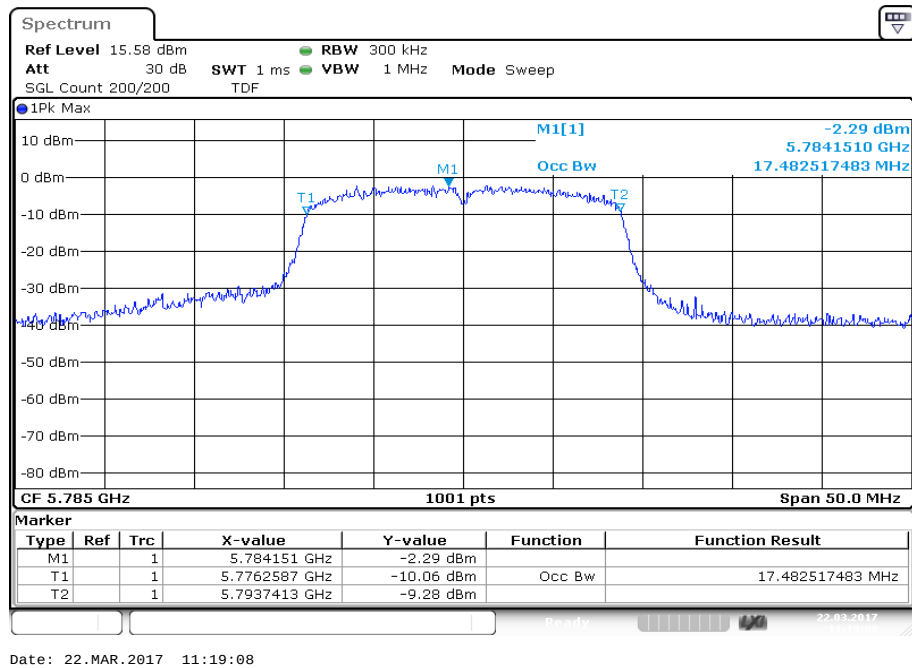
Plot 7: 5700 MHz



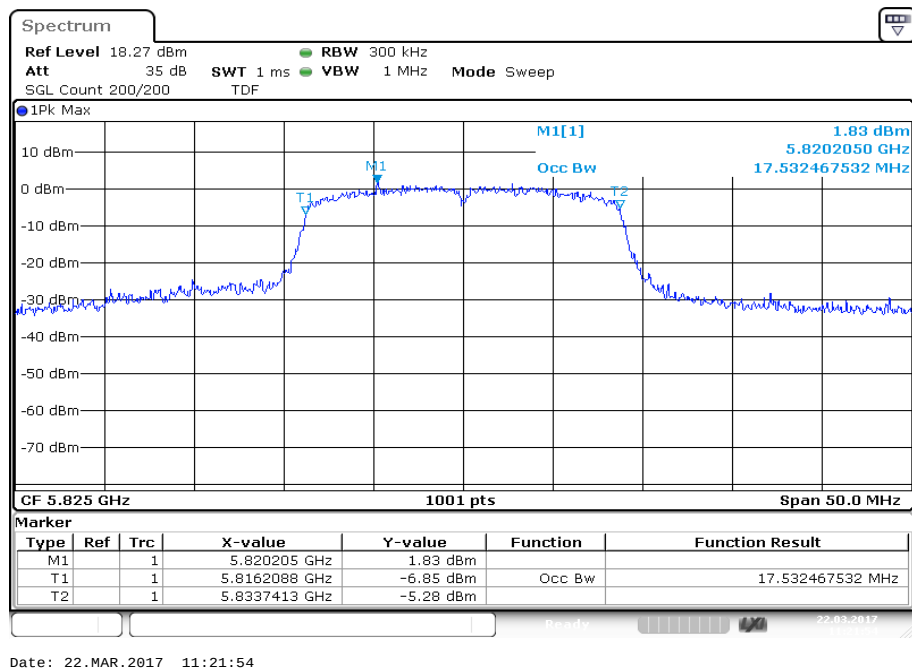
Plot 8: 5745 MHz



Plot 9: 5785 MHz

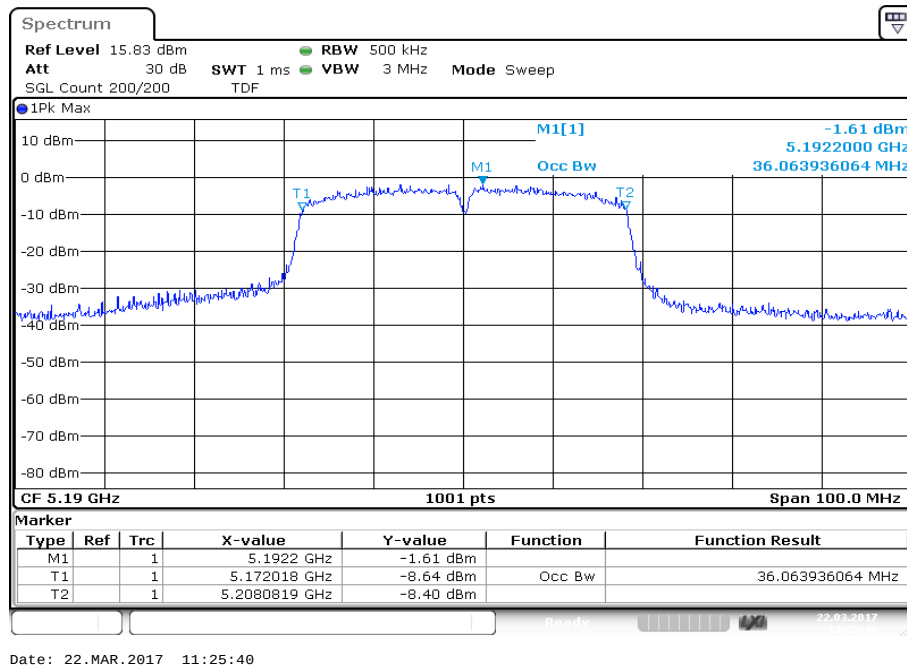


Plot 10: 5825 MHz

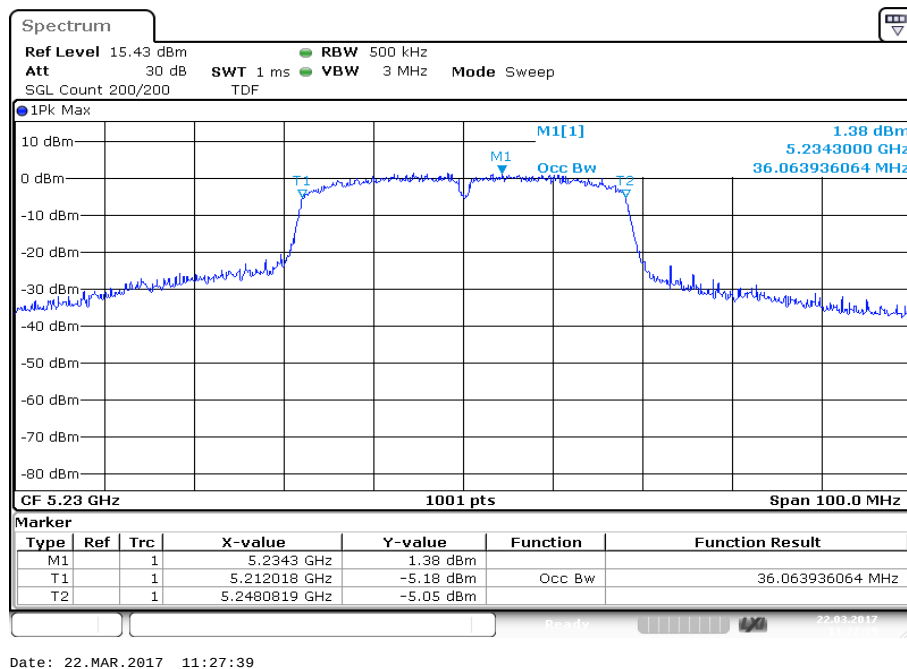


Plots: OFDM / n/ac HT40 – mode, UFL port

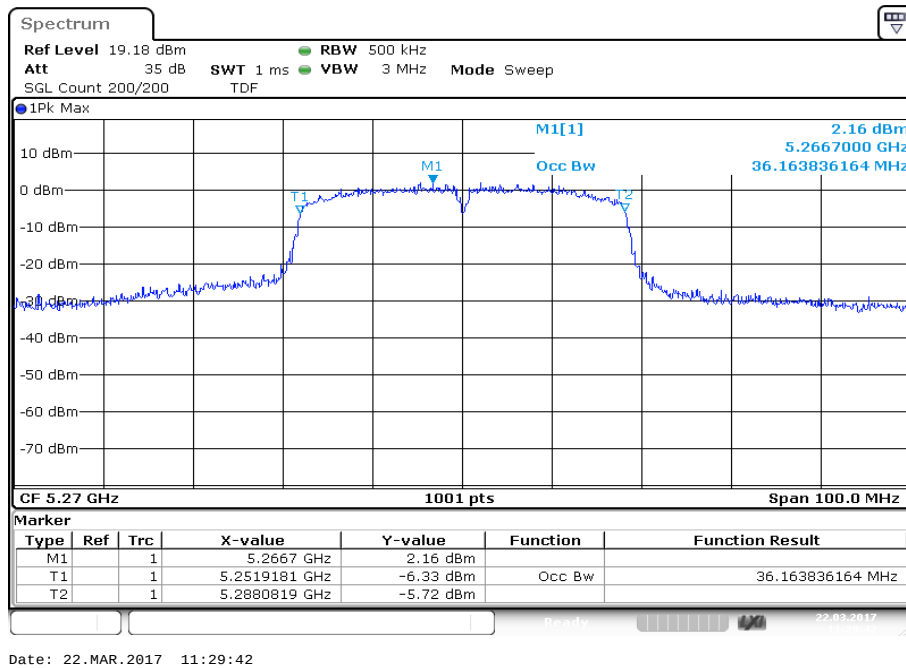
Plot 1: 5190 MHz



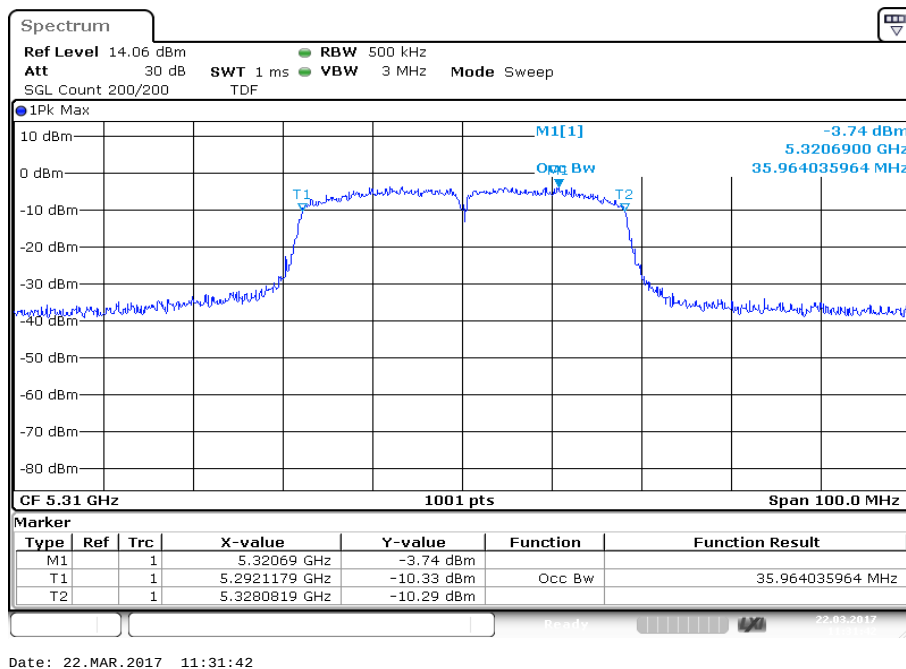
Plot 2: 5230 MHz



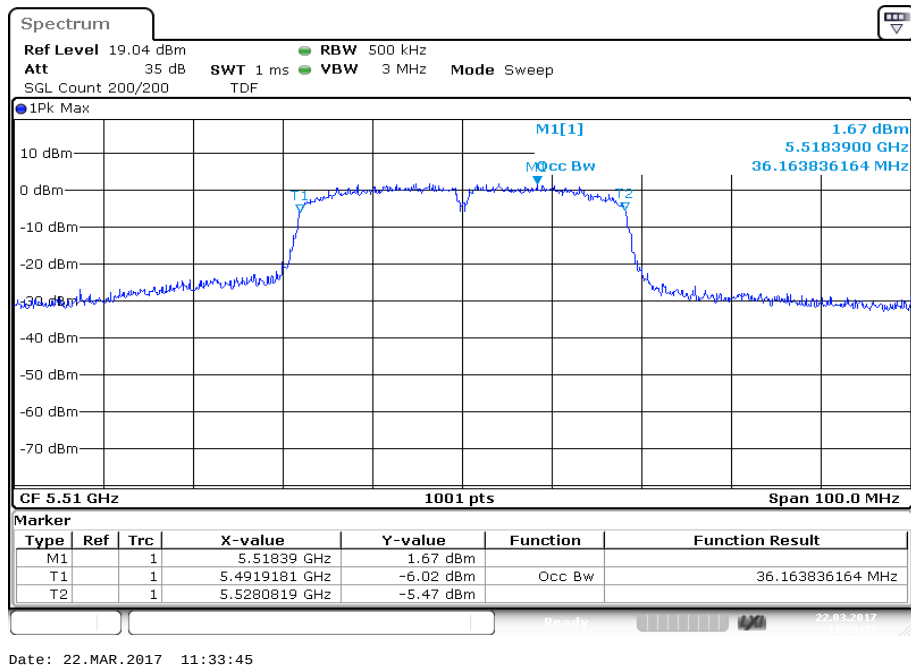
Plot 3: 5270 MHz



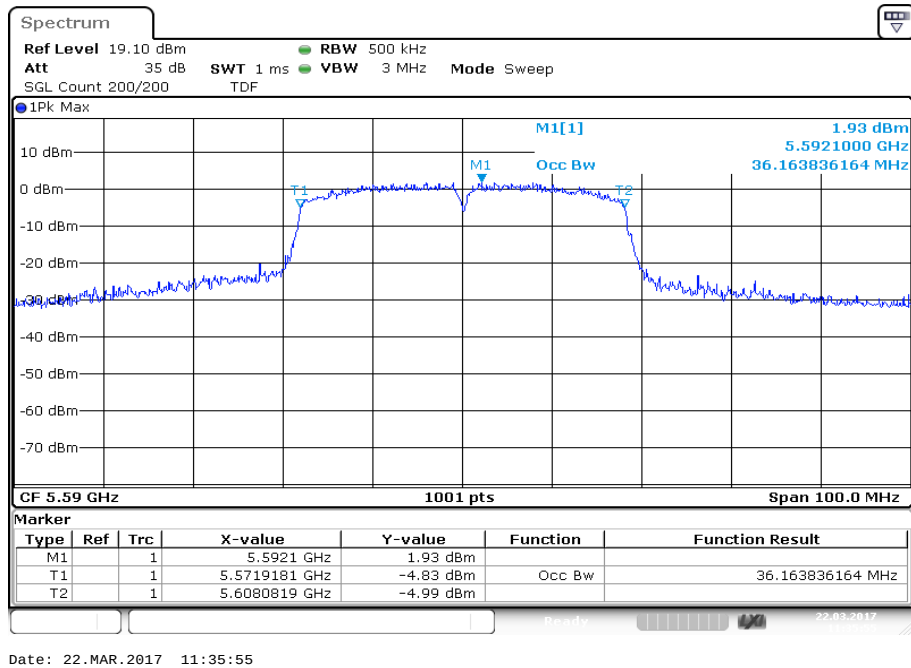
Plot 4: 5310 MHz



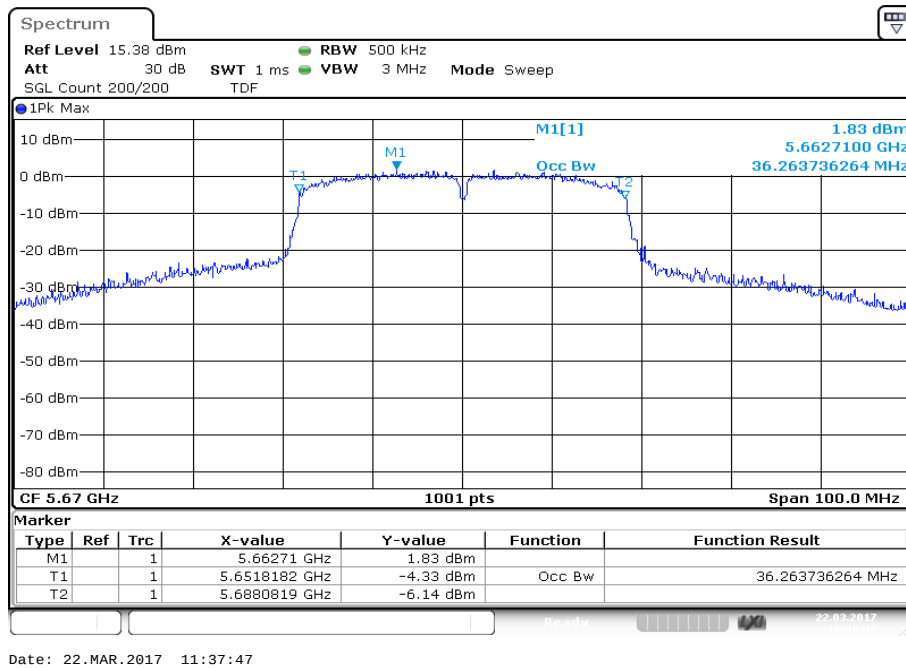
Plot 5: 5510 MHz



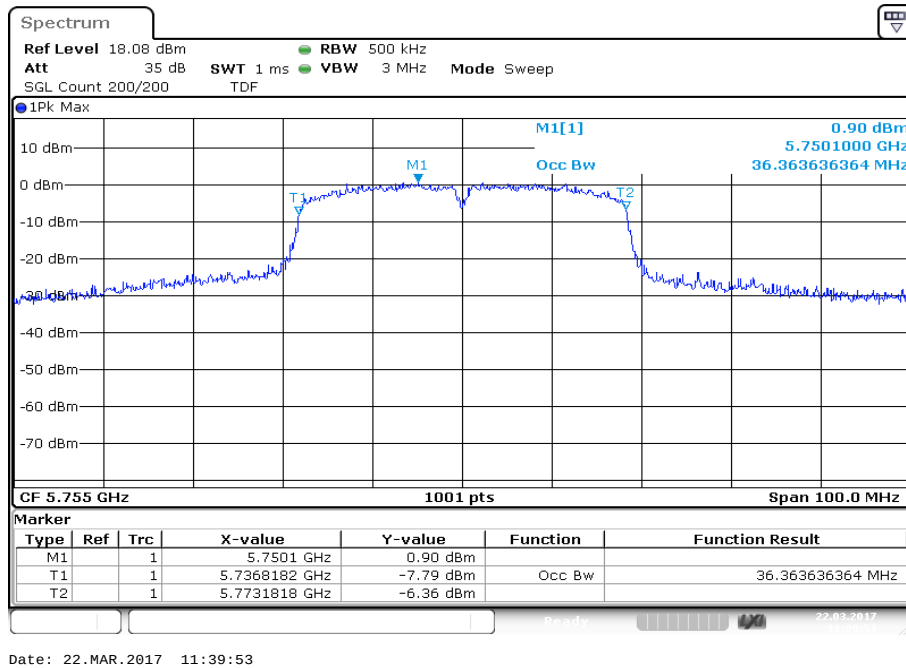
Plot 6: 5590 MHz



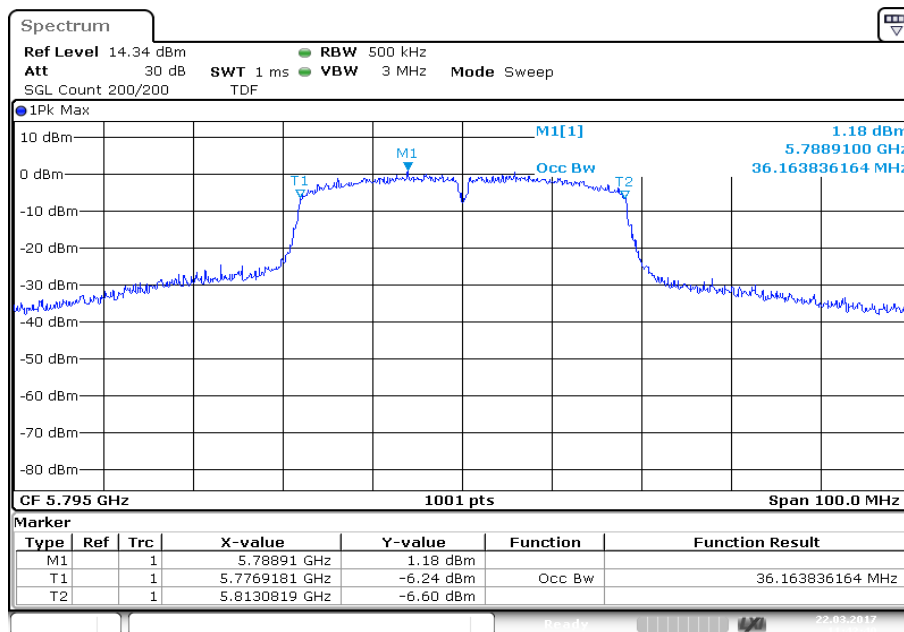
Plot 7: 5670 MHz



Plot 8: 5755 MHz



Plot 9: 5795 MHz



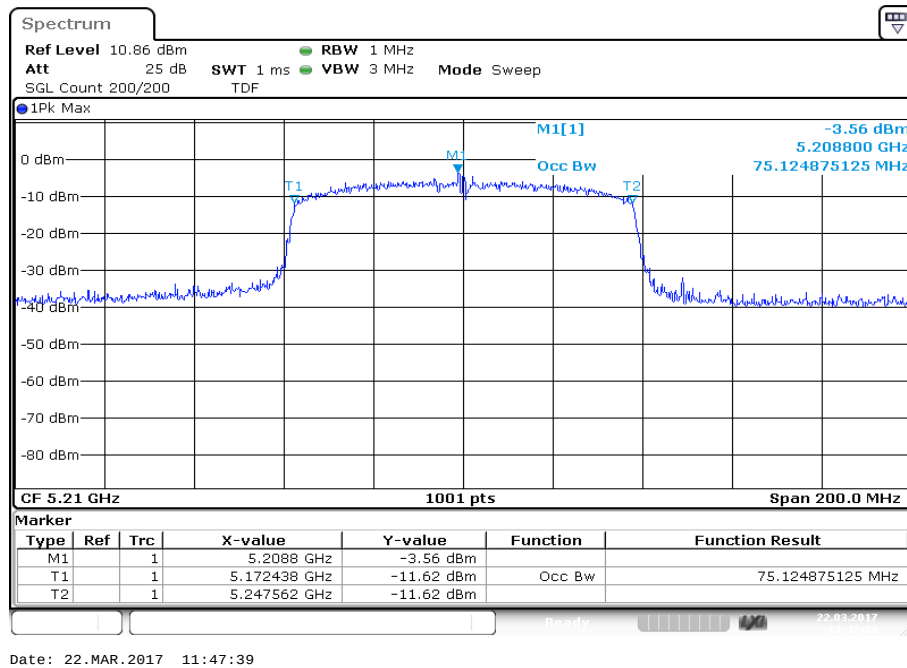
Date: 22.MAR.2017 11:42:40

Annex B

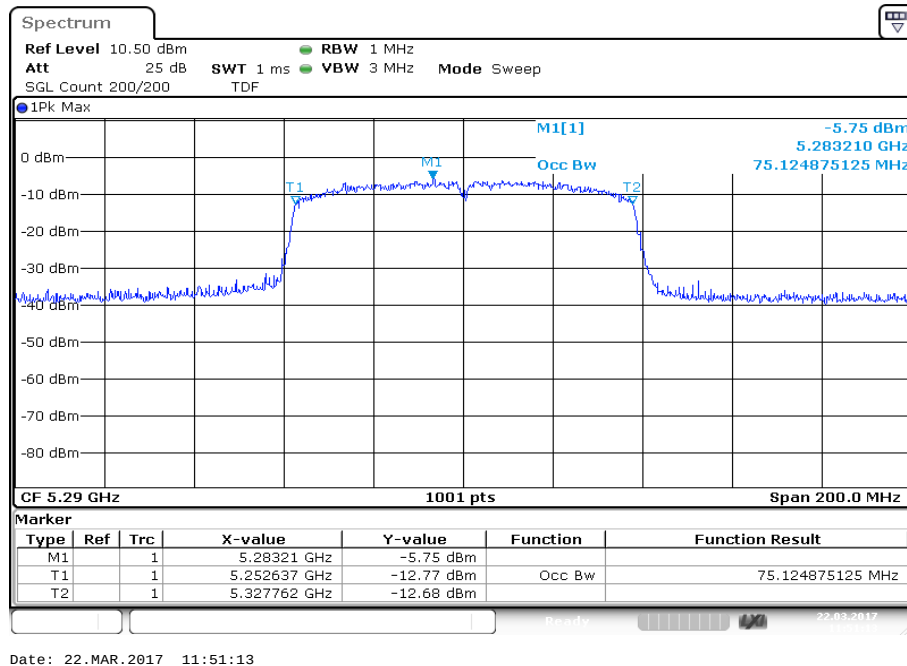
to test report no.: 1-3116/16-01-20

Plots: OFDM / ac HT80 – mode, UFL port

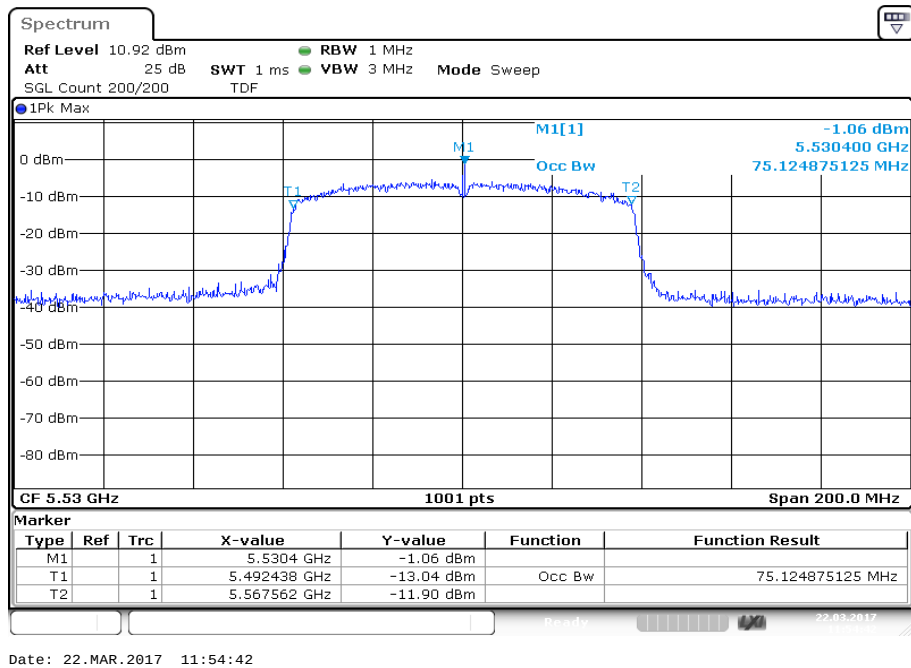
Plot 1: 5210 MHz



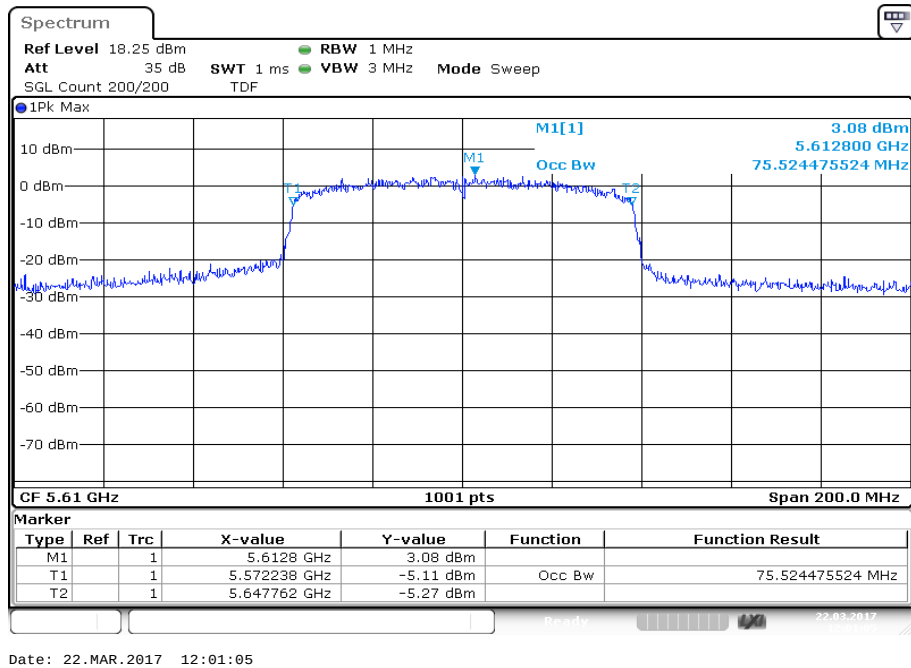
Plot 2: 5290 MHz



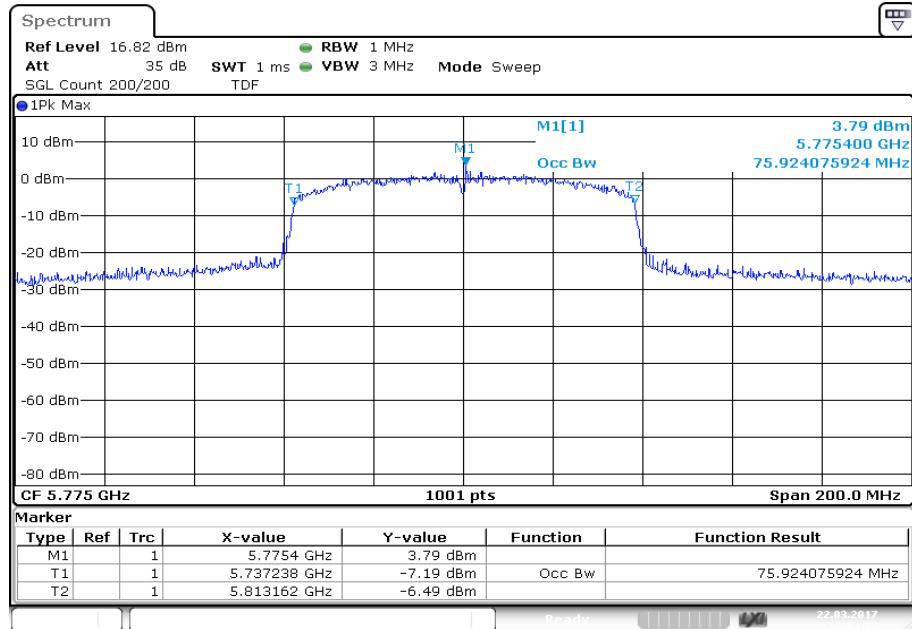
Plot 3: 5530 MHz



Plot 4: 5610 MHz



Plot 5: 5775 MHz



Result: OFDM / a – mode, MMCX port

OFDM / a – mode Channel	99% bandwidth [kHz]			
	5180 MHz	5240 MHz	5260 MHz	5320 MHz
	16384	16434	16384	16334
Channel	5500 MHz	5600 MHz	5700 MHz	5745 MHz
	16434	16384	16384	16484
Channel	5785 MHz	5825 MHz		
	16334	16533		

Result: OFDM / n/ac HT20 – mode, MMCX port

OFDM / n/ac HT20 – mode Channel	99% bandwidth [kHz]			
	5180 MHz	5240 MHz	5260 MHz	5320 MHz
	16384	16533	16334	16384
Channel	5500 MHz	5600 MHz	5700 MHz	5745 MHz
	16384	16384	16384	16434
Channel	5785 MHz	5825 MHz		
	16434	16533		

Result: OFDM / n/ac HT40 – mode, MMCX port

OFDM / n/ac HT40 – mode Channel	99% bandwidth [kHz]			
	5190 MHz	5230 MHz	5270 MHz	5310 MHz
	35964	36064	35964	35964
Channel	5510 MHz	5590 MHz	5670 MHz	5755 MHz
	36264	36264	35964	36264
Channel	5795 MHz			
	36164			

Result: OFDM / ac HT80 – mode, MMCX port

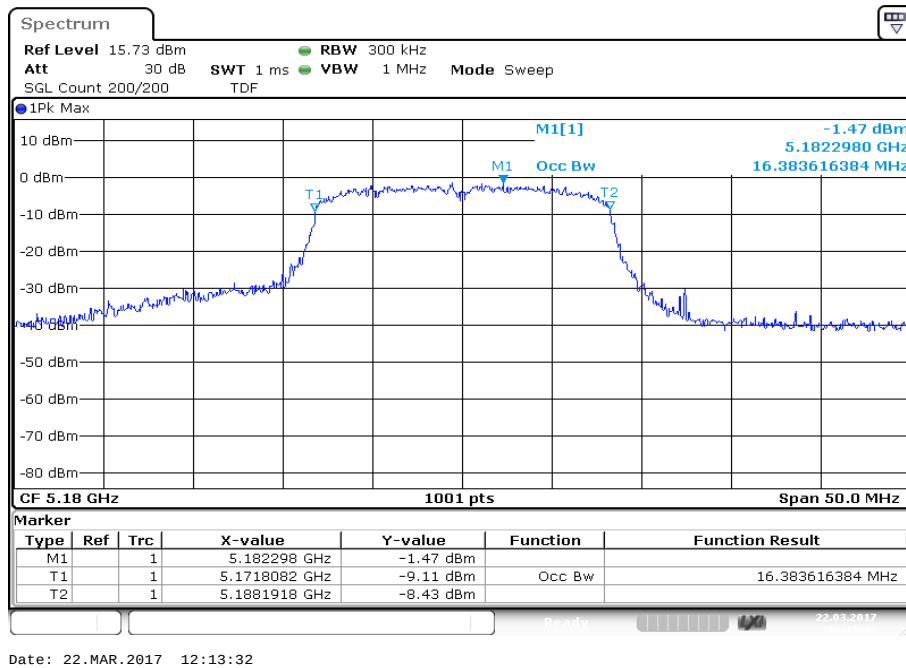
OFDM / ac HT80 – mode Channel	99% bandwidth [kHz]			
	5210 MHz	5290 MHz	5530 MHz	5610 MHz
	75125	75924	74925	75524
Channel	5775 MHz			
	76324			

Annex B

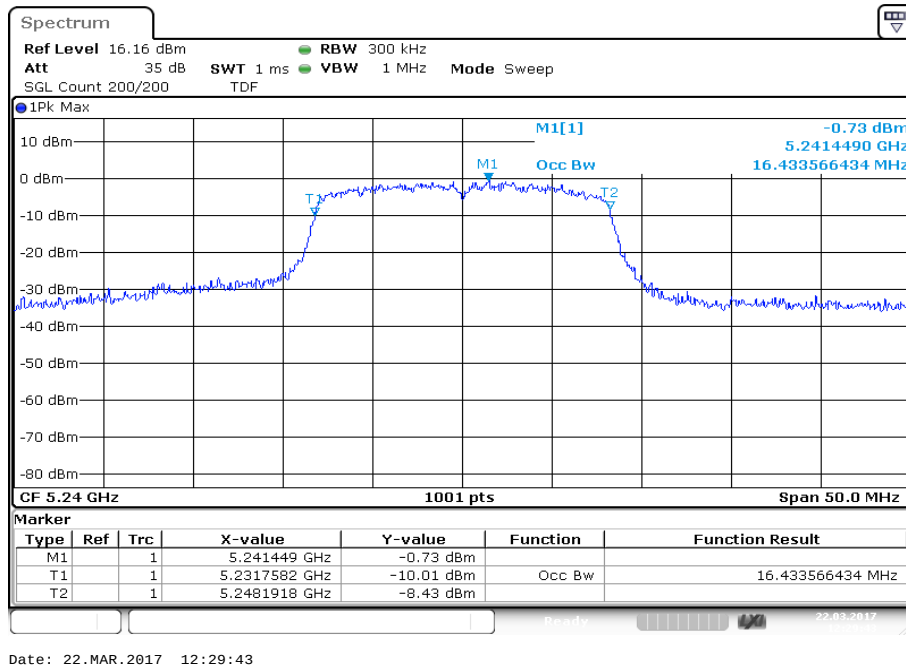
to test report no.: 1-3116/16-01-20

Plots: OFDM / a – mode, MMCX port

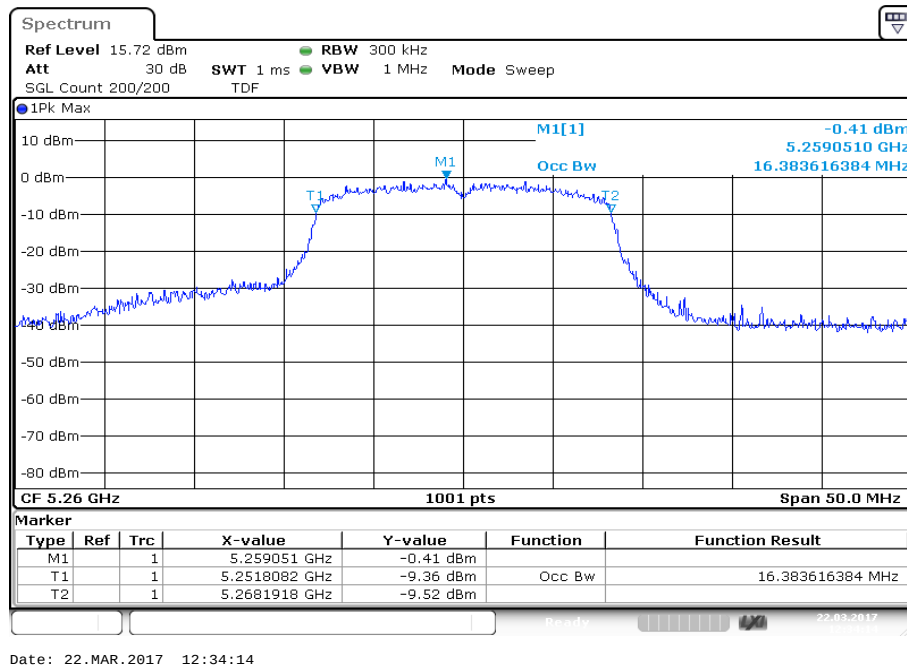
Plot 1: 5180 MHz



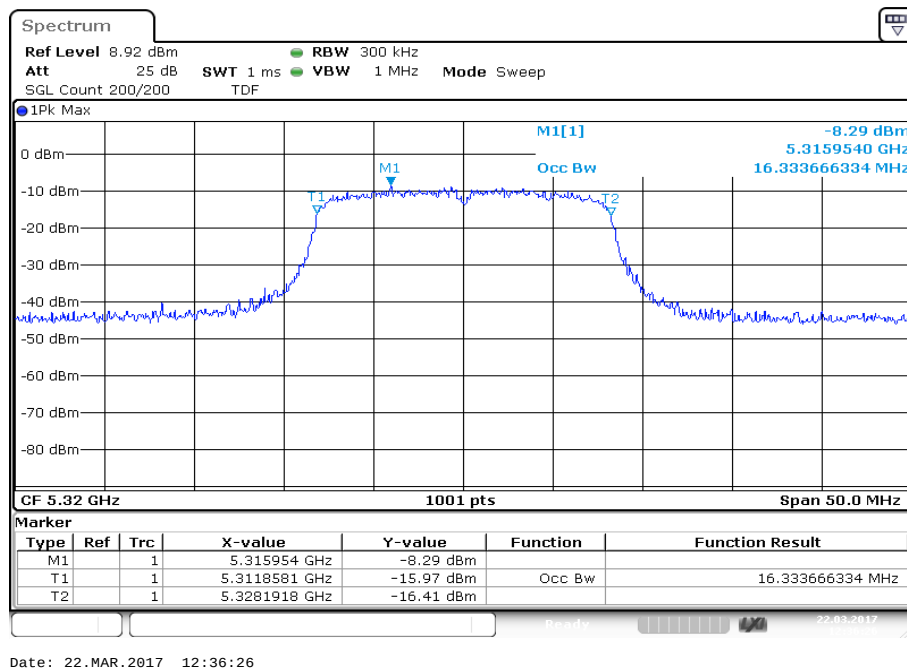
Plot 2: 5240 MHz



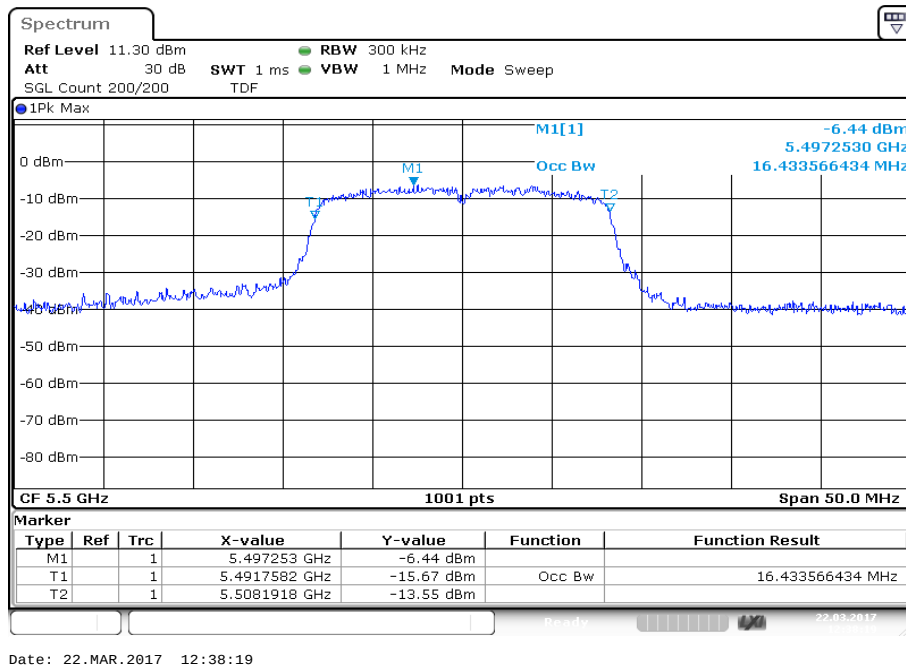
Plot 3: 5260 MHz



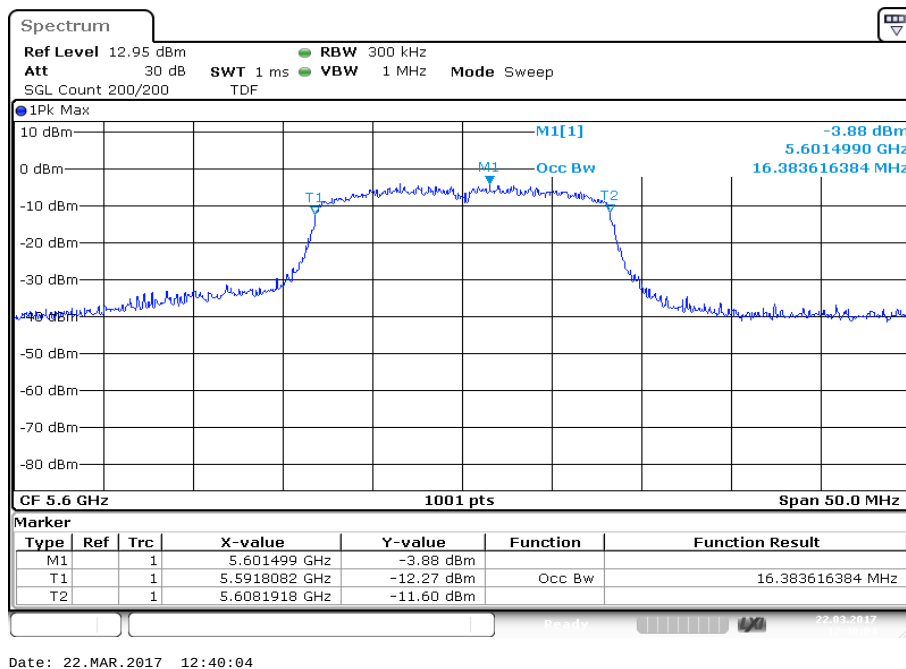
Plot 4: 5320 MHz



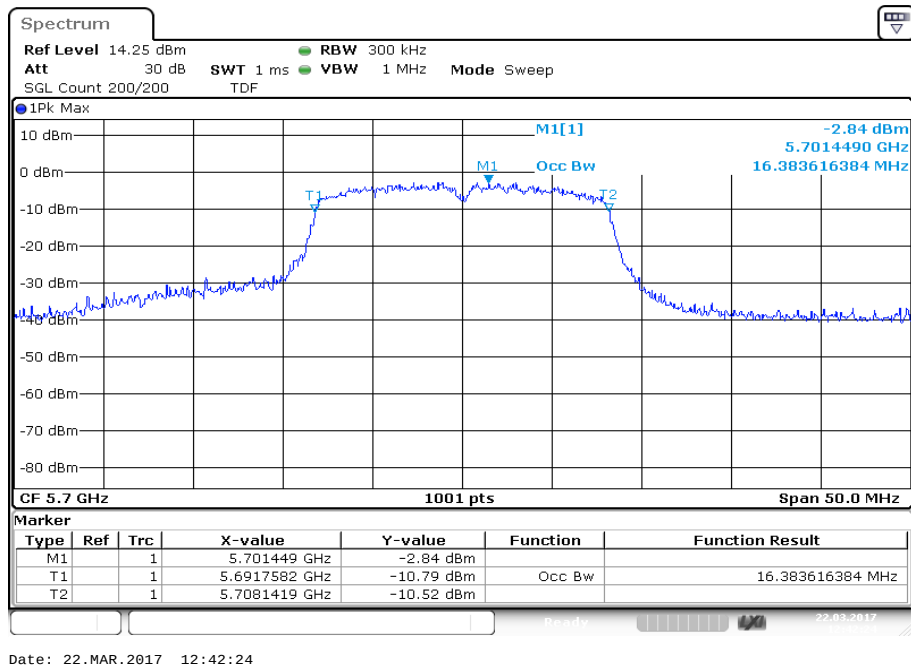
Plot 5: 5500 MHz



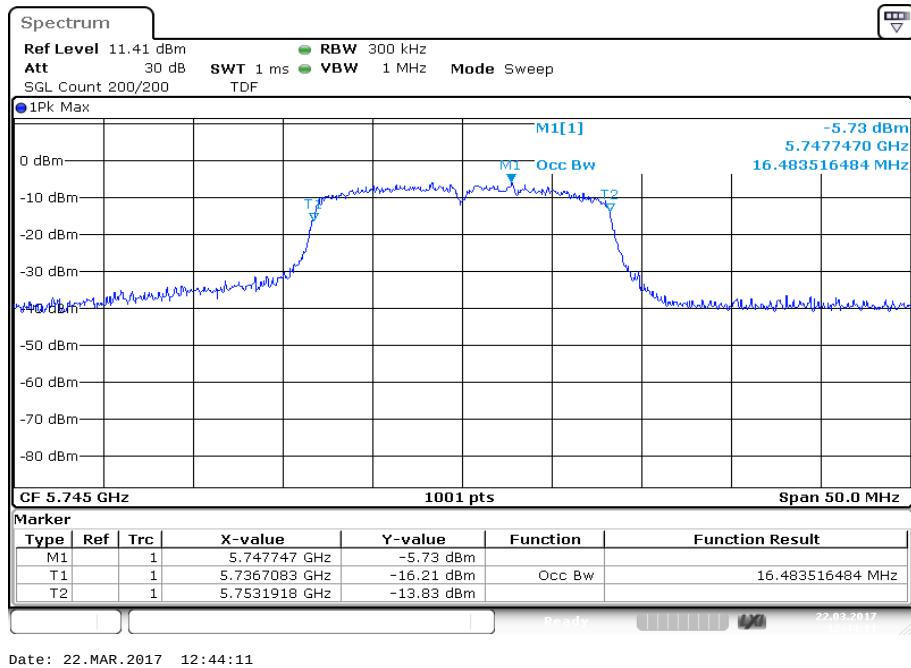
Plot 6: 5600 MHz



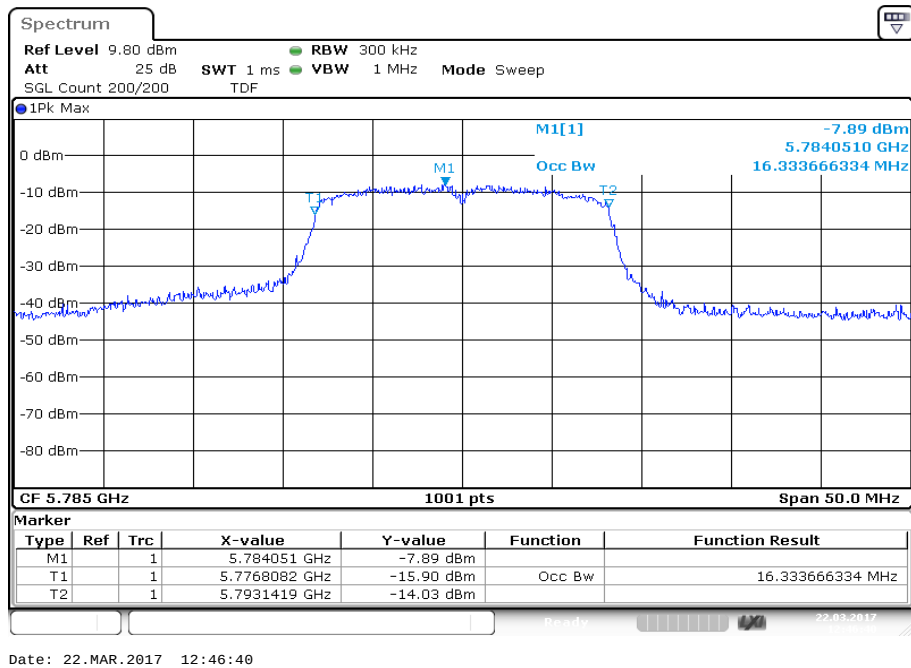
Plot 7: 5700 MHz



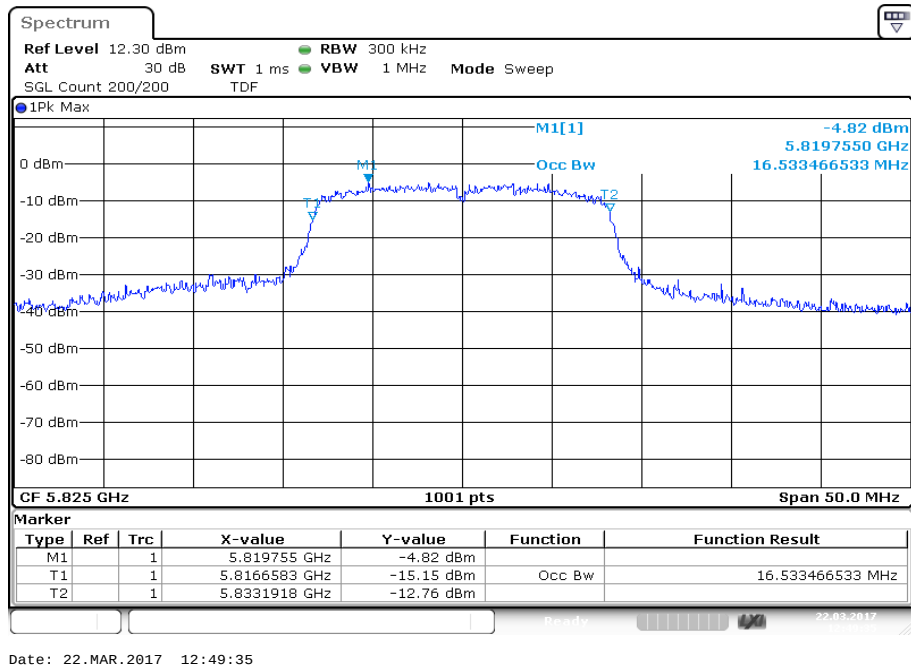
Plot 8: 5745 MHz



Plot 9: 5785 MHz

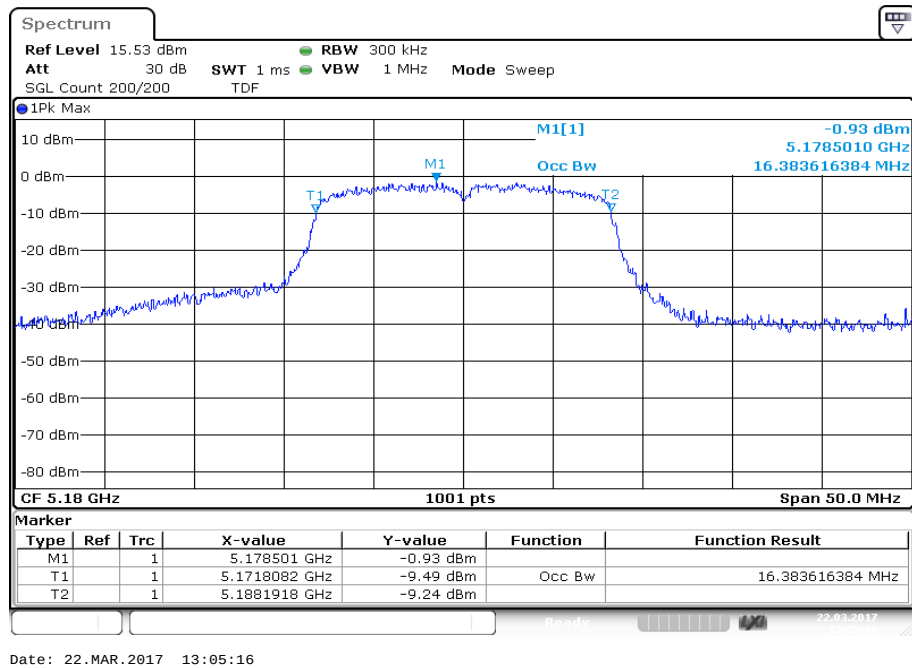


Plot 10: 5825 MHz

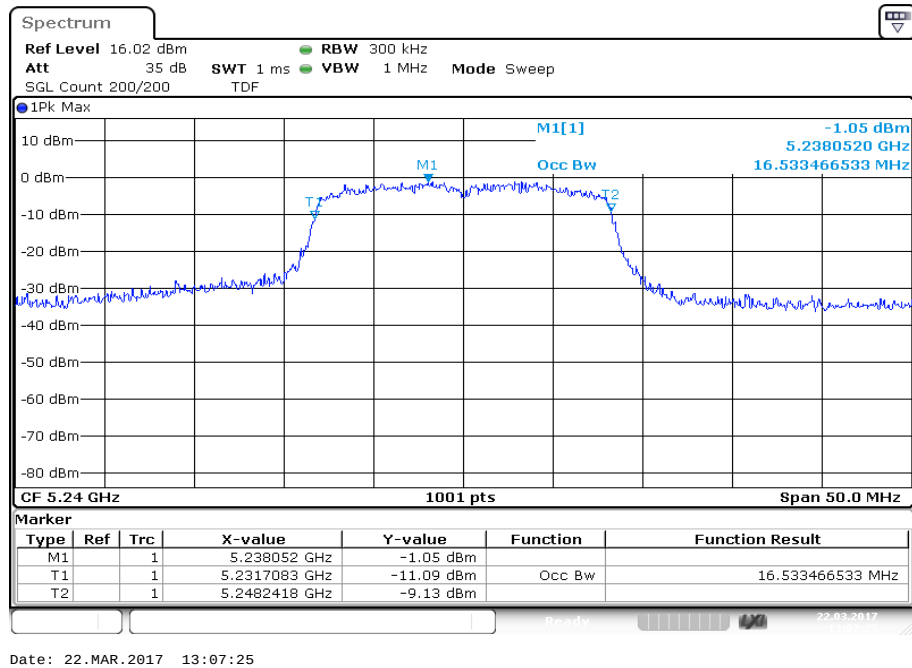


Plots: OFDM / n/ac HT20 – mode, MMCX port

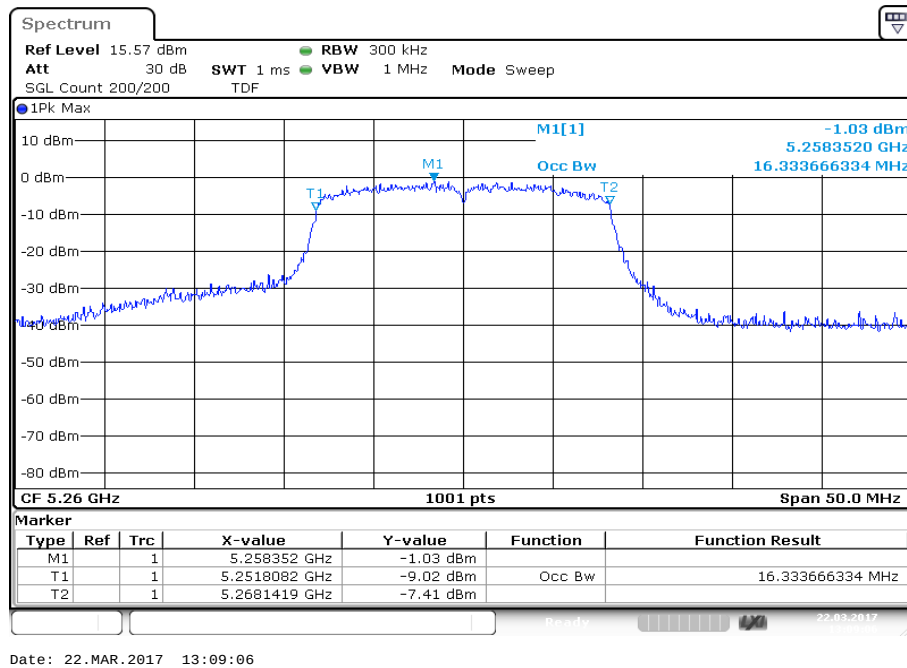
Plot 1: 5180 MHz



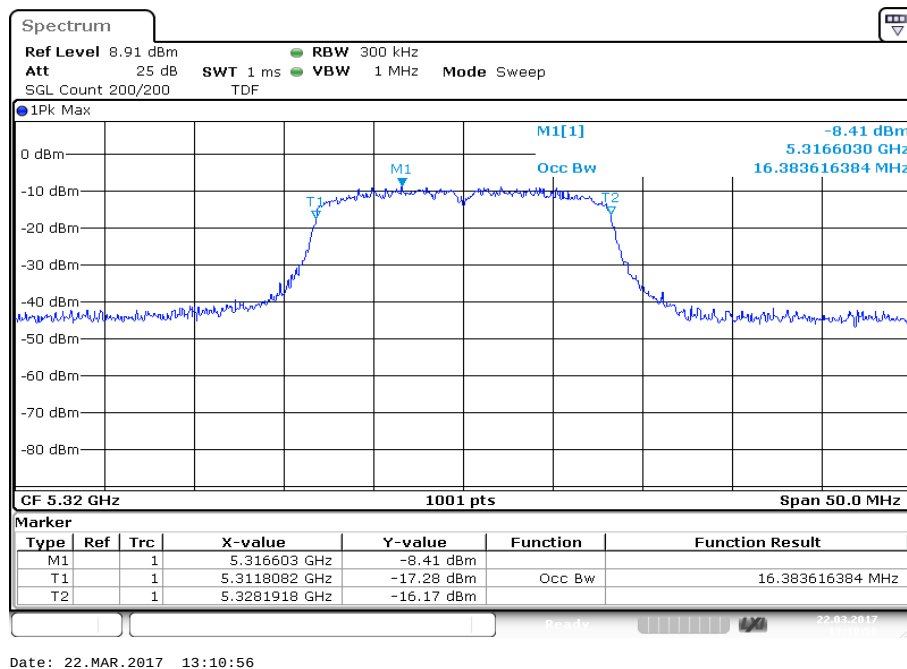
Plot 2: 5240 MHz



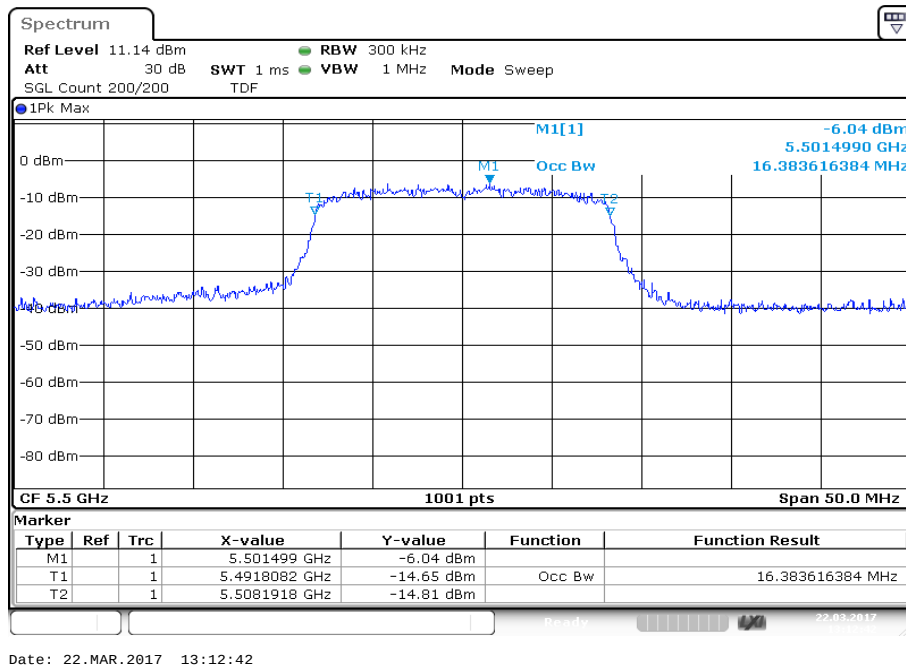
Plot 3: 5260 MHz



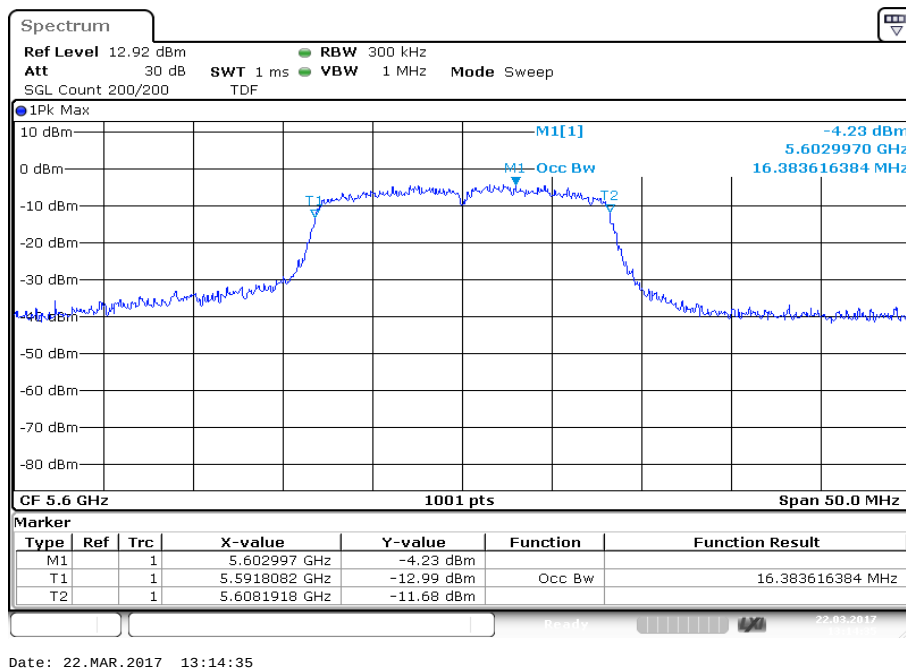
Plot 4: 5320 MHz



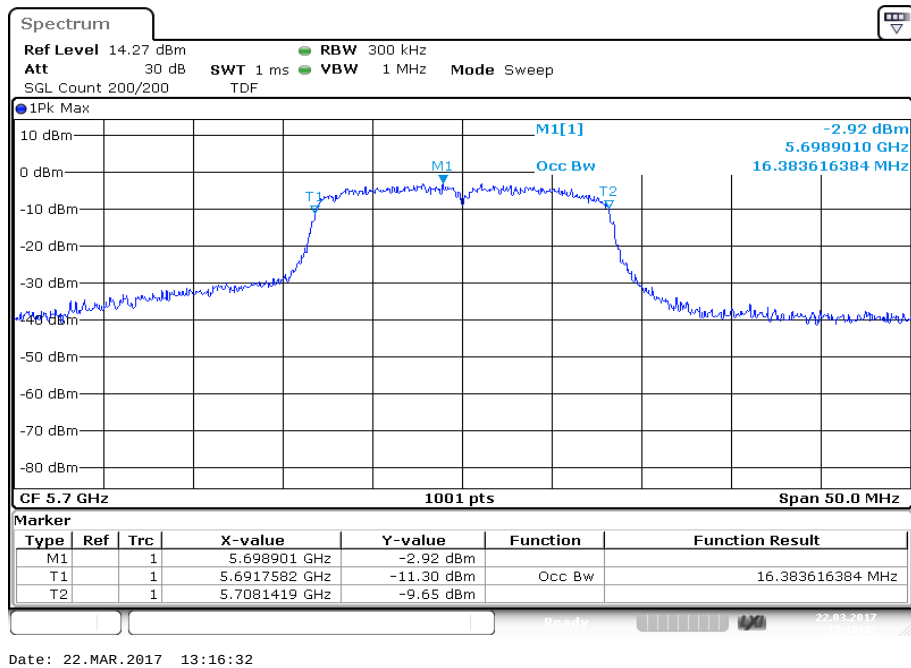
Plot 5: 5500 MHz



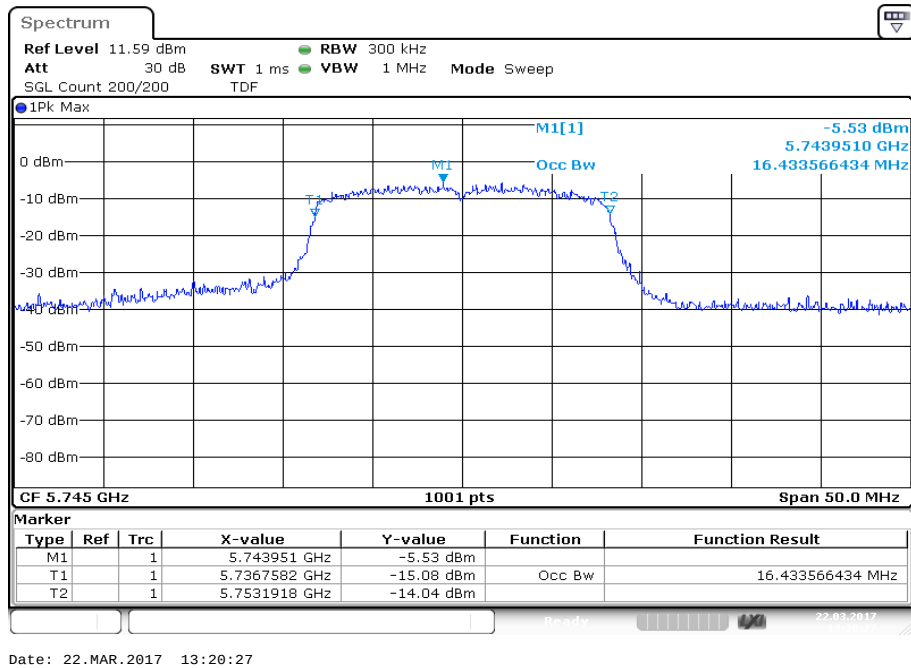
Plot 6: 5600 MHz



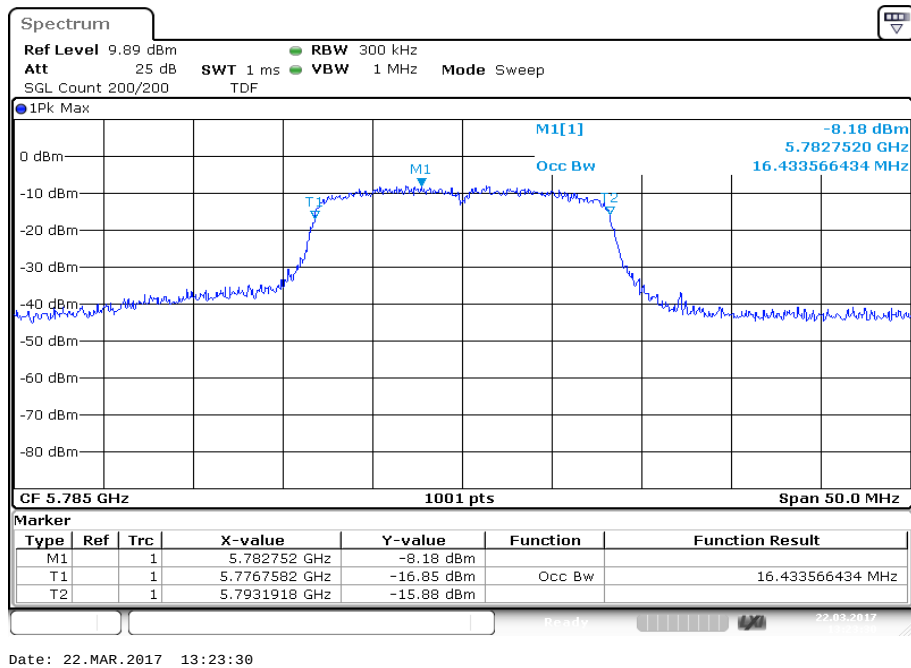
Plot 7: 5700 MHz



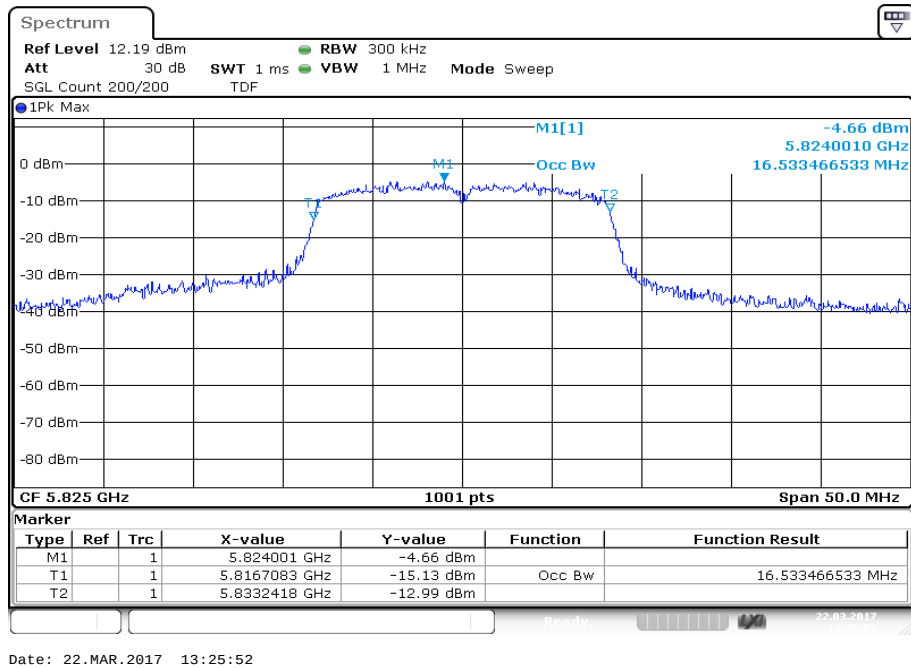
Plot 8: 5745 MHz



Plot 9: 5785 MHz

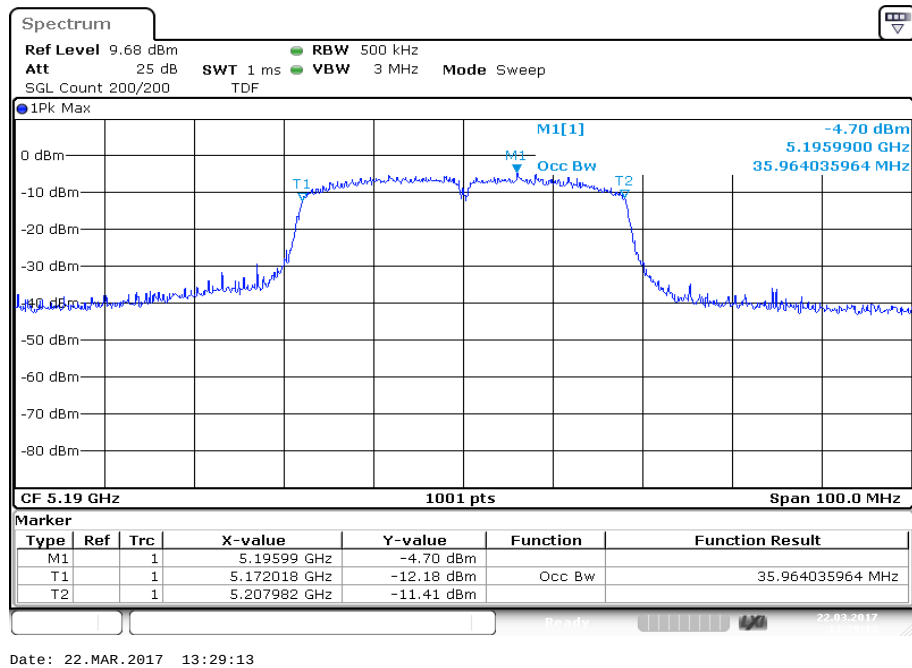


Plot 10: 5825 MHz

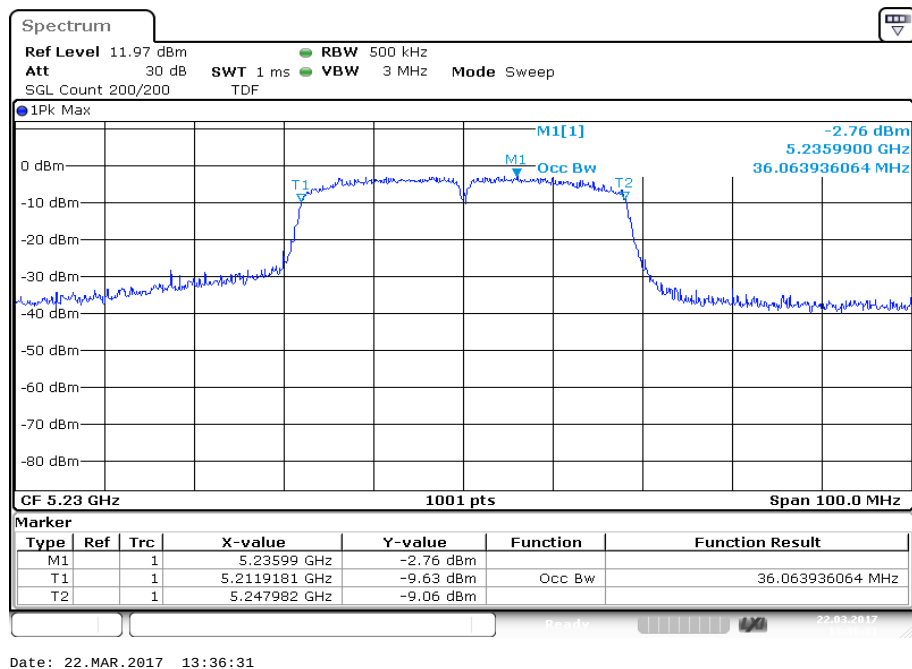


Plots: OFDM / n/ac HT40 – mode, MMCX port

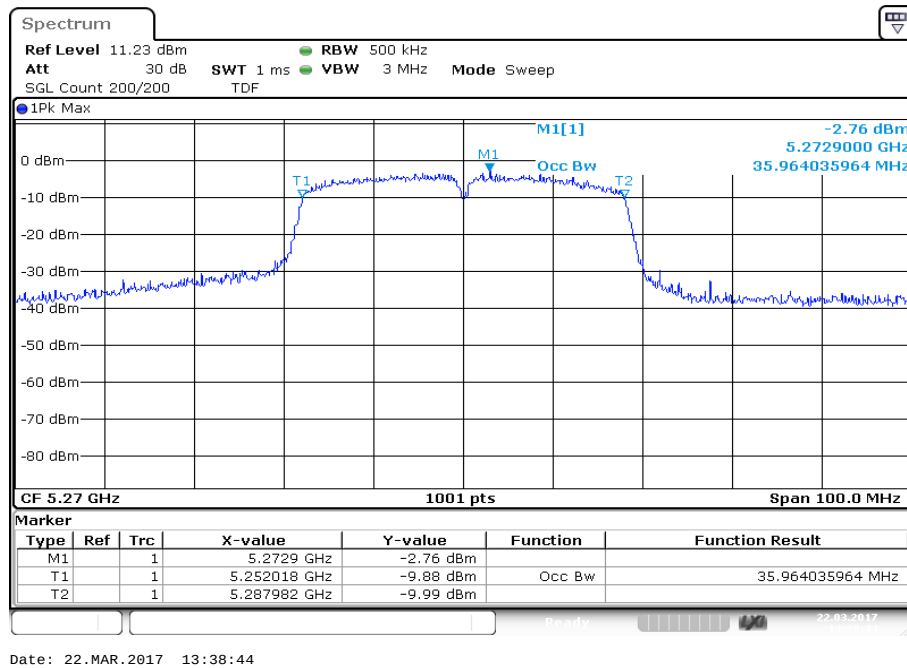
Plot 1: 5190 MHz



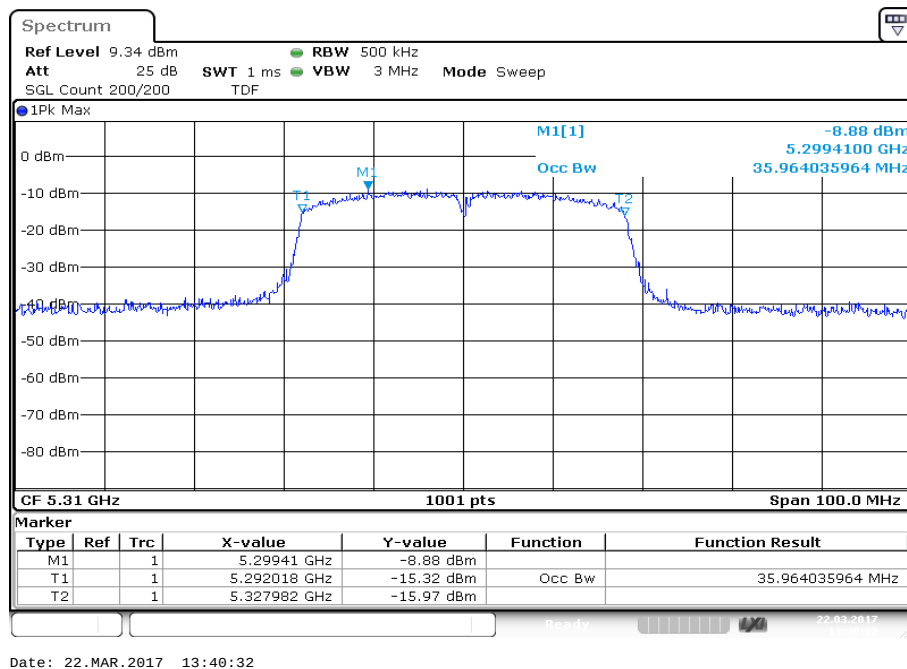
Plot 2: 5230 MHz



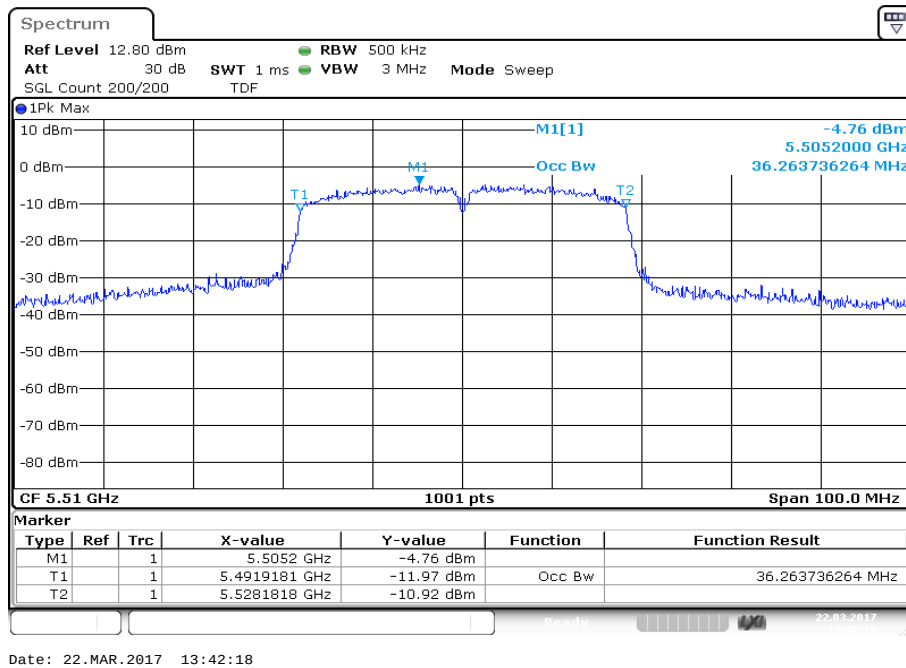
Plot 3: 5270 MHz



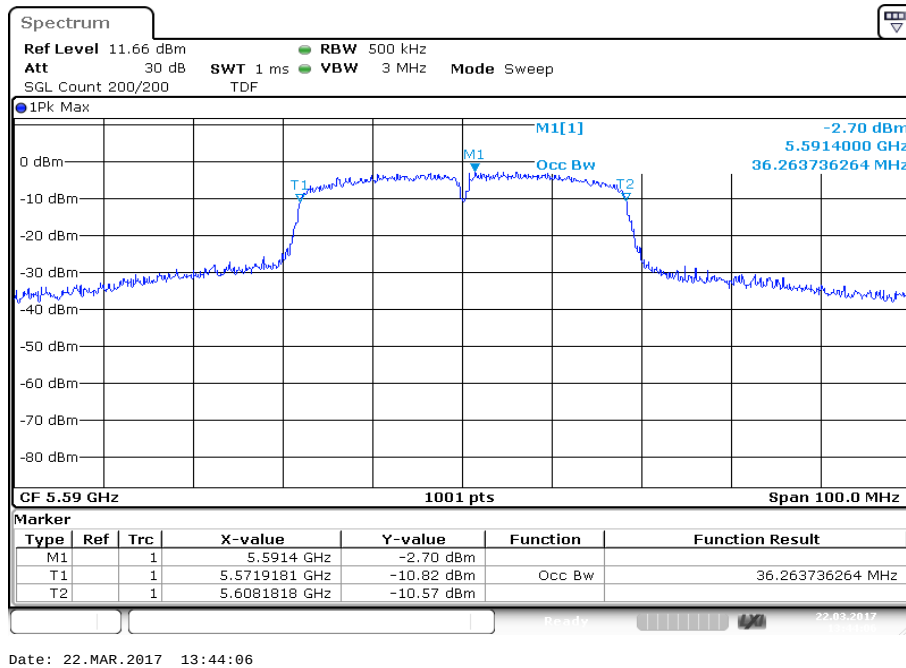
Plot 4: 5310 MHz



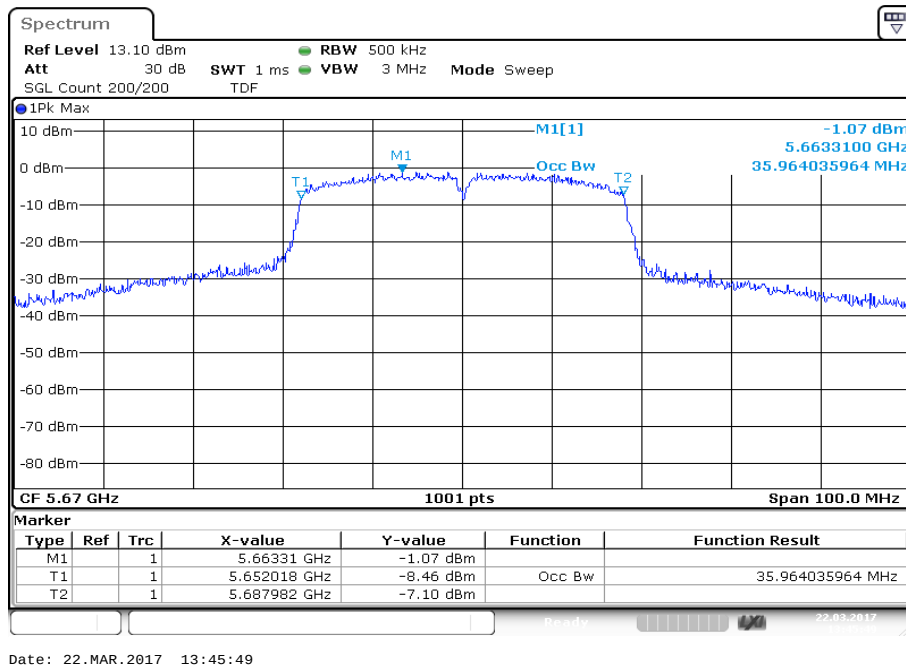
Plot 5: 5510 MHz



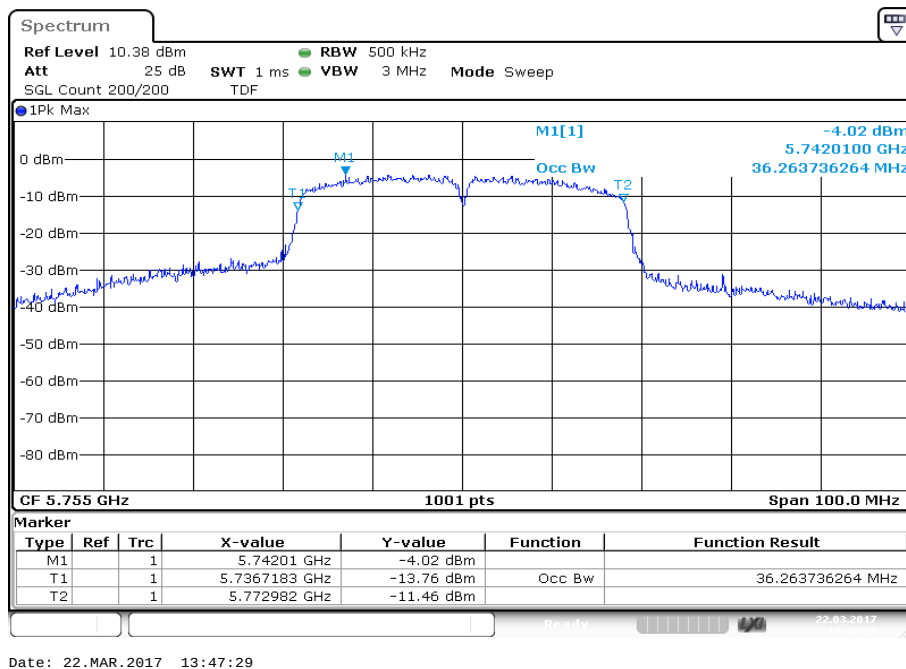
Plot 6: 5590 MHz



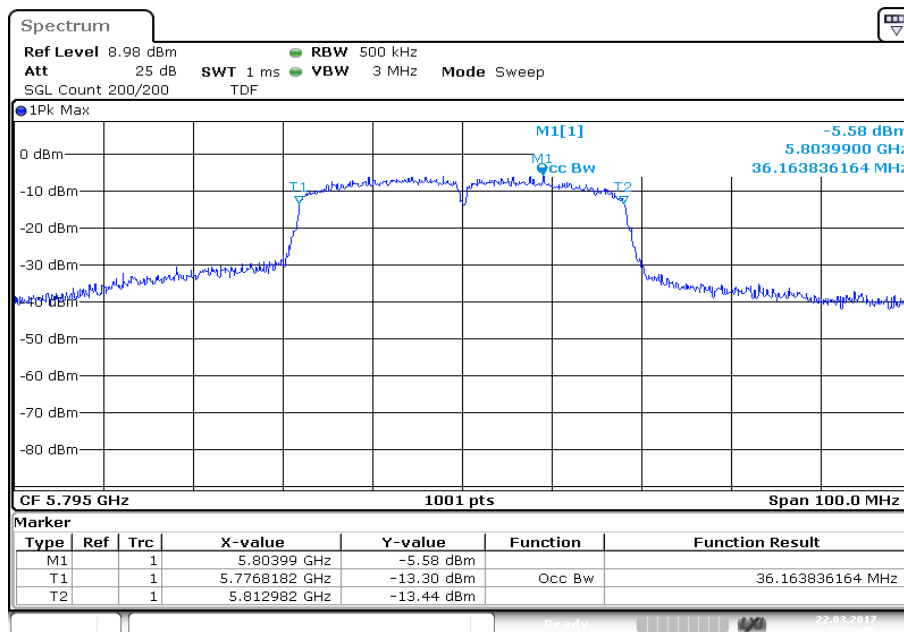
Plot 7: 5670 MHz



Plot 8: 5755 MHz



Plot 9: 5795 MHz



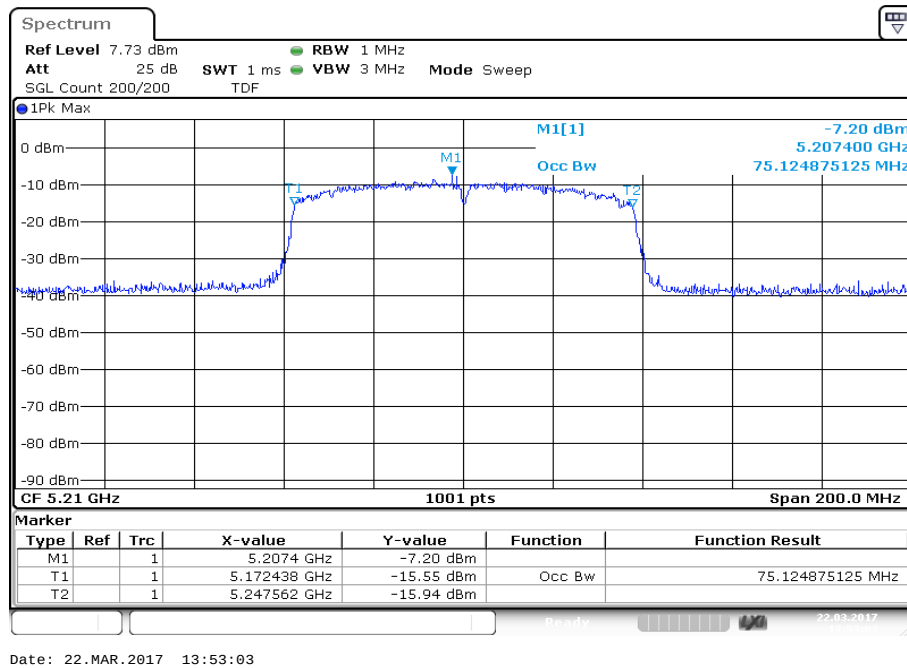
Date: 22.MAR.2017 13:50:06

Annex B

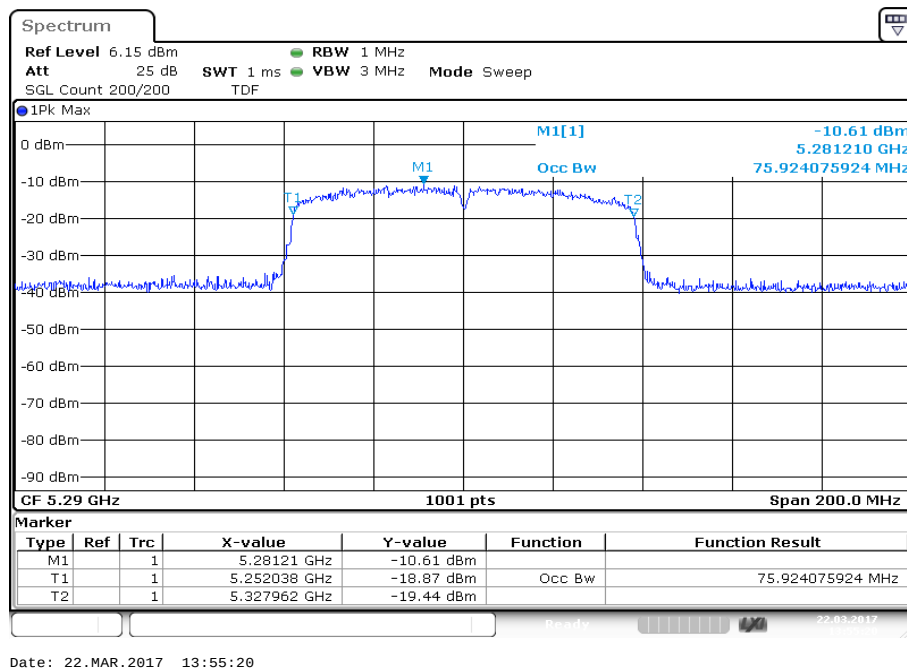
to test report no.: 1-3116/16-01-20

Plots: OFDM / ac HT80 – mode, MMCX port

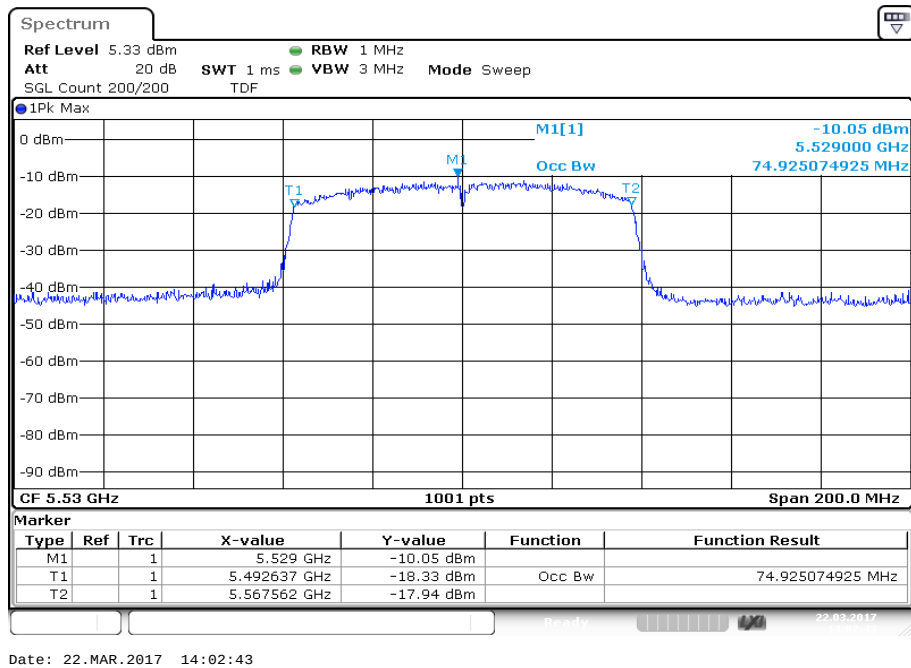
Plot 1: 5210 MHz



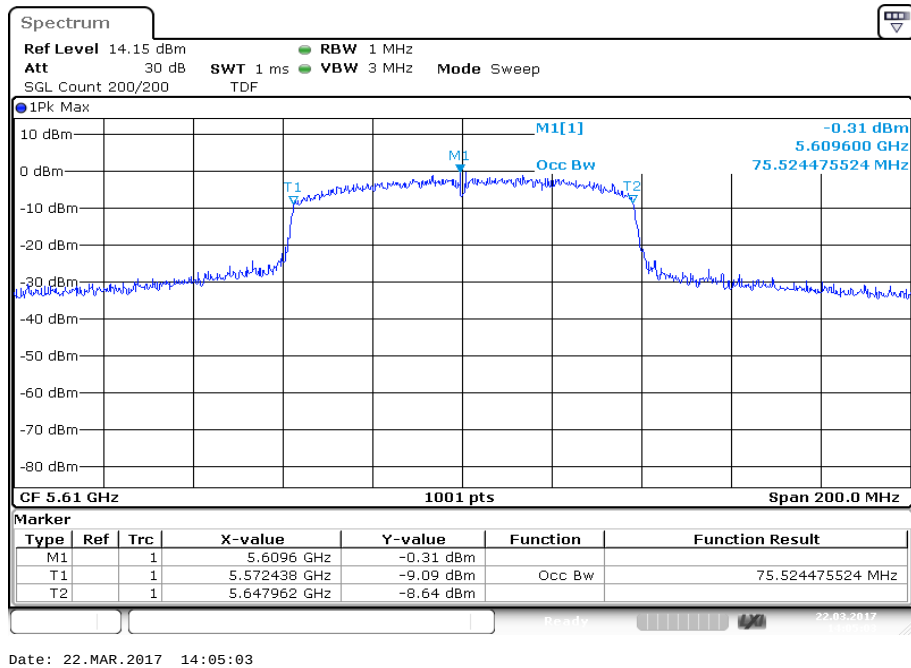
Plot 2: 5290 MHz



Plot 3: 5530 MHz



Plot 4: 5610 MHz



Plot 5: 5775 MHz

