

## FCC AND IC CERTIFICATION TEST REPORT

### FOR

<b>Applicant</b>	:	Harman International Industries, Incorporated
<b>Address</b>	:	8500 Balboa Boulevard, Northridge, CA 91329, UNITED STATES
<b>Equipment under Test</b>	:	Wireless Adaptor and 120W Digital Amplifier
<b>Model No.</b>	:	ADAPT+AMP
<b>Trade Mark</b>	:	Harman Kardon
<b>FCC ID</b>	:	APIHKADAPTAMP
<b>IC</b>	:	6132A-HKADAPTAMP
<b>Manufacturer</b>	:	Harman International Industries, Incorporated
<b>Address</b>	:	8500 Balboa Boulevard, Northridge, CA 91329, UNITED STATES

**Issued By: Dongguan Dongdian Testing Service Co., Ltd.**

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# REPORT

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**TEST REPORT DECLARE**

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<b>Model No</b>	:	ADAPT+AMP
<b>Trade Mark</b>	:	Harman Kardon
<b>Manufacturer</b>	:	Harman International Industries, Incorporated
<b>Address</b>	:	8500 Balboa Boulevard, Northridge, CA 91329, UNITED STATES

**Test Standard Used:** FCC Rules and Regulations Part 15 Subpart C, RSS-247 Issue 2 February 2017.

**Test procedure used:** ANSI C63.4:2014, 789033 D02 General UNII Test Procedures New Rules v01, RSS-Gen Issue 4, Nov. 2014

**We Declare:**

The equipment described above is tested by Dongguan Dongdian Testing Service Co., Ltd and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Dongguan Dongdian Testing Service Co., Ltd is assumed of full responsibility for the accuracy and completeness of these tests.

**After test and evaluation, our opinion is that the equipment provided for test compliance with the requirement of the above FCC&IC standards.**

<b>Report No:</b>	DDT-RQ17090505-1E5		
<b>Date of Receipt:</b>	Aug. 10, 2017	<b>Date of Test:</b>	Aug. 10, 2017 ~ Oct. 20, 2017

*Prepared By:*

  
 Toby Ren/Engineer

*Approved By:*  
  
 Kevin Feng/EMC Manager

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Dongguan Dongdian Testing Service Co., Ltd.

## 1. Summary of test results

The EUT have been tested according to the applicable standards as referenced below.		
Description of Test Item	Standard	Results
6/26db Bandwidth and 99% Bandwidth	FCC 15.407 (e) RSS-247 Clause 6.2	PASS
Maximum Conducted Output Power	FCC 15.407 (a) RSS-247 Clause 6.2	PASS
Power Spectral Density	FCC 15.407 (a) RSS-247 Clause 6.2	PASS
Frequency Stability Measurement	FCC 15.407 (g)	PASS
Emissions in restricted frequency bands	FCC 15.407 (a) FCC 15.209 FCC 15.205 RSS-247 Clause 6.2 RSS-GEN Clause 8.9	PASS
Band Edge Compliance	FCC 15.407 (a) FCC 15.209 FCC 15.205 RSS-247 Clause 6.2 RSS-GEN Clause 8.9	PASS
Power Line Conducted Emission	FCC 15.207 RSS-GEN Clause 8.8	PASS
Antenna requirement	FCC 15.203 RSS-GEN Clause 8.3	PASS
Dynamic Frequency Selection	FCC 15.407 (h) RSS-247 Clause 6.3	PASS

## 2. General test information

### 2.1. Description of EUT

EUT* Name	: Wireless Adaptor and 120W Digital Amplifier
Model Number	: ADAPT+AMP
EUT function description	: Please reference user manual of this device
Power supply	: AC 100-240V,50/60Hz, 120W
Radio Technology	: IEEE802.11n/a/ac
FCC Operation frequency	: IEEE 802.11n HT20: 5180MHz-5240MHz, 5260MHz-5320MHz, 5500MHz-5700MHz, 5745MHz-5825MHz IEEE 802.11n HT40: 5190MHz-5230MHz, 5270MHz-5310MHz, 5510MHz-5670MHz, 5755MHz-5755MHz IEEE 802.11a: 5180MHz-5240MHz, 5260MHz-5320MHz, 5500MHz-5700MHz, 5745MHz-5825MHz IEEE 802.11ac HT20:5180MHz-5240MHz, 5260MHz-5320MHz,5500MHz-5700MHz, 5745MHz-5825MHz IEEE 802.11ac T40: 5190MHz-5230MHz, 5270MHz-5310MHz, 5510MHz-5670MHz, 5755MHz-5755MHz IEEE 802.11ac HT80:5210MHz, 5290MHz, 5530MHz, 5775MHz
Modulation	: IEEE 802.11n HT20, HT40: OFDM (64QAM, 16QAM, QPSK,BPSK) IEEE 802.11a: OFDM (64QAM, 16QAM, QPSK,BPSK) IEEE 802.11ac: OFDM (256QAM, 64QAM, 16QAM, QPSK,BPSK)
Transmitter rate	: IEEE 802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps IEEE 802.11n HT20: up to 150 Mbps, HT40: up to 300Mbps IEEE 802.11ac VHT20: up to 150 Mbps, VHT40: up to 300 Mbps VHT80: up to 886.7 Mbps
Antenna Type	: Integrated antenna 1: 5G band maximum PK gain 2.81dBi Integrated antenna 2: 5G band maximum PK gain 5.41dBi
Sample Type	: Series production

Note: EUT is the ab.of equipment under test.

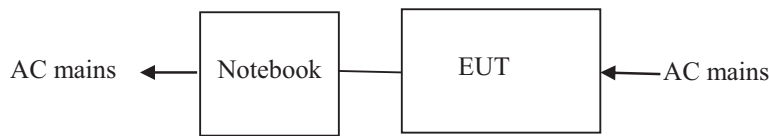
### 2.2. Accessories of EUT

Description of Accessories	Manufacturer	Model number	Serial No.	Other
Optical cable	Harman	N/A	N/A	Length: 1.5m
Audio cable	Harman	N/A	N/A	Length: 0.8m
AC cable	Harman	N/A	N/A	Length: 1.5m

### 2.3. Assistant equipment used for test

Description of Assistant equipment	Manufacturer	Model number or Type	EMC Compliance	SN:
Notebook	DELL	Latitude D610	FCC DOC	00045-534-136-300
Network Cable	N/A	N/A	N/A	Length: 1.5m
Cisco Aironet 802.11ac Dual Band Access Points	Cisco	AIR-CAP3702E-A-K 9	FCC ID:LDK102087 IC:2461B-102087	N/A

## 2.4. Block diagram of EUT configuration for test



EUT was connected to control to provided by manufacturer which has a standard LAN port connector to connect to Notebook, and the Notebook will run a special test software “SecureCRT. EXE” provided by manufacturer to control EUT work in Continuous TX mode (>98% duty cycle), and select test channel, wireless mode and data rate.

Tested mode, channel, and data rate information				
Mode	Setting Tx Power	data rate (Mbps) (see Note)	Channel	Frequency (MHz)
IEEE 802.11a	60	54	Low :CH36	5180
	60	54	Middle: CH40	5200
	54	54	High: CH48	5240
	54	54	Low :CH52	5260
	60	54	Middle: CH56	5280
	60	54	High: CH64	5320
	58	54	Low :CH100	5500
	60	54	Middle: CH116	5580
	58	54	High: CH140	5700
	56	54	Low :CH149	5745
	60	54	Middle: CH157	5785
IEEE 802.11n HT20	58	54	High: CH165	5825
	60	MCS 7	Low :CH36	5180
	60	MCS 7	Middle: CH40	5200
	54	MCS 7	High: CH48	5240
	54	MCS 7	Low :CH52	5260
	60	MCS 7	Middle: CH56	5280
	60	MCS 7	High: CH64	5320
	58	MCS 7	Low :CH100	5500
	60	MCS 7	Middle: CH116	5580
	58	MCS 7	High: CH140	5700
	56	MCS 7	Low :CH149	5745
IEEE 802.11n HT40	60	MCS 7	Middle: CH157	5785
	58	MCS 7	High: CH165	5825
	56	MCS 7	Low :CH36	5190
	52	MCS 7	Middle: CH44	5230
	50	MCS 7	High: CH52	5270
	56	MCS 7	Low :CH60	5310
	52	MCS 7	Middle: CH100	5510
	56	MCS 7	High: CH108	5550
56	MCS 7	Low :CH132	5670	
52	MCS 7	Middle: CH149	5755	
56	MCS 7	High: CH157	5795	

IEEE 802.11ac HT20	60	MCS 7	Low :CH36	5180
	60	MCS 7	Middle: CH40	5200
	54	MCS 7	High: CH48	5240
	54	MCS 7	Low :CH52	5260
	60	MCS 7	Middle: CH56	5280
	60	MCS 7	High: CH64	5320
	58	MCS 7	Low :CH100	5500
	60	MCS 7	Middle: CH116	5580
	58	MCS 7	High: CH140	5700
	56	MCS 7	Low :CH149	5745
	60	MCS 7	Middle: CH157	5785
IEEE 802.11ac HT40	58	MCS 7	High: CH165	5825
	56	MCS 8	Low :CH36	5190
	52	MCS 8	Middle: CH44	5230
	50	MCS 8	High: CH52	5270
	56	MCS 8	Low :CH60	5310
	52	MCS 8	Middle: CH100	5510
	56	MCS 8	High: CH108	5550
	56	MCS 8	Low :CH132	5670
	52	MCS 8	Middle: CH149	5755
IEEE 802.11ac HT80	56	MCS 8	High: CH159	5795
	50	MCS 9	CH36	5210
	50	MCS 9	CH60	5290
	54	MCS 9	CH108	5530
	52	MCS 9	CH149	5775

Note: According exploratory test, EUT will have maximum output power in those data rate, so those data rate were used for all test.

## 2.5. Deviations of test standard

No Deviation.

## 2.6. Test environment conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature range:	21-25°C
Humidity range:	40-75%
Pressure range:	86-106kPa

## 2.7. Test laboratory

Dongguan Dongdian Testing Service Co., Ltd

Add: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park, Dongguan City, Guangdong Province, China, 523808 Tel: +86-0769-89201699 <http://www.dgddt.com>

CNAS Accreditation No. L6451; A2LA Accreditation No. 3870.01

Designation Number: CN1182; Test Firm Registration Number: 540522

Industry Canada site registration number: 10288A-1

**2.8. Measurement uncertainty**

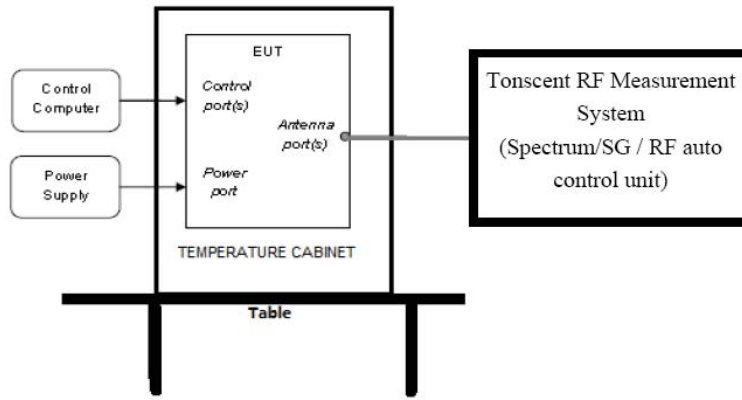
Test Item	Uncertainty
Bandwidth	1.1%
Peak Output Power(Conducted)( Spectrum analyzer)	0.86dB( $10 \text{ MHz} \leq f < 3.6\text{GHz}$ );
	1.38dB( $3.6\text{GHz} \leq f < 8\text{GHz}$ )
Peak Output Power(Conducted)(Power Sensor)	0.74dB
Power Spectral Density	0.74dB( $10 \text{ MHz} \leq f < 3.6\text{GHz}$ );
	1.38dB( $3.6\text{GHz} \leq f < 8\text{GHz}$ )
Frequencies Stability	$6.7 \times 10^{-8}$ (Antenna couple method)
	$5.5 \times 10^{-8}$ (Conducted method)
Conducted spurious emissions	0.86dB( $10 \text{ MHz} \leq f < 3.6\text{GHz}$ );
	1.40dB( $3.6\text{GHz} \leq f < 8\text{GHz}$ )
	1.66dB( $8\text{GHz} \leq f < 22\text{GHz}$ )
Uncertainty for radio frequency (RBW<20KHz)	$3 \times 10^{-8}$
Temperature	0.4°C
Humidity	2%
Uncertainty for Radiation Emission test (30MHz-1GHz)	4.70 dB (Antenna Polarize: V)
	4.84 dB (Antenna Polarize: H)
Uncertainty for Radiation Emission test (1GHz-40GHz)	4.10dB(1-6GHz)
	4.40dB (6GHz-18Gz)
	3.54dB (18GHz-26Gz)
	4.30dB (26GHz-40Gz)
Uncertainty for Power line conduction emission test	3.32dB (150KHz-30MHz)
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

### 3. Equipment used during test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
<b>RF Connected Test (Tonscent RF Measurement System)</b>					
Spectrum analyzer	R&S	FSU26	1166.1660.26	Oct. 23, 2017	1 Year
Wideband Radio Communication tester	R&S	CMW500	155523	Oct. 21, 2017	1 Year
Vector Signal Generator	Agilent	E8267D	MY52098743	Oct. 23, 2017	1 Year
Vector Signal Generator	Agilent	N5182A	MY48180737	Oct. 21, 2017	1 Year
Power Sensor	Agilent	U2021XA	MY55150010	Oct. 21, 2017	1 Year
Power Sensor	Agilent	U2021XA	MY55150011	Oct. 21, 2017	1 Year
DC Power Source	MATRIS	MPS-3005L-3	D813058W	Oct. 21, 2017	1 Year
Attenuator	Mini-Circuits	BW-S10W2	101109	Oct. 21, 2017	1 Year
RF Cable	Micable	C10-01-01-1	100309	Oct. 21, 2017	1 Year
Temp&Humi Programmable	ZHIXIANG	ZXGDJS-150L	ZX170110-A	Oct. 21, 2017	1Year
Test Software	JS Tonscend	JS1120-2	Ver.2.5	N/A	N/A
USB Data acquisition	Agilent	U2531A	TW55043503	N/A	N/A
Auto control Unit	JS Tonscend	JS0806-2	158060010	N/A	N/A
<b>Radiated Emission Test</b>					
EMI Test Receiver	R&S	ESU8	100316	Oct. 21, 2017	1 Year
Spectrum analyzer	R&S	FSU26	1166.1660.26	Oct. 21, 2017	1 Year
Spectrum analyzer	Agilent	E4447A	MY50180031	Jun. 16, 2017	1 Year
Trilog Broadband Antenna	Schwarzbeck	VULB9163	9163-462	Oct. 21, 2017	1 Year
Active Loop antenna	Schwarzbeck	FMZB-1519	1519-038	Oct. 21, 2017	1 Year
Broadband Horn antenna	Schwarzbeck	BBHA 9170	BBHA 9170 #790	Aug. 11, 2017	1 Year
Double Ridged Horn Antenna	R&S	HF907	100276	Oct. 21, 2017	1 Year
Pre-amplifier	A.H.	PAM-0118	360	Oct. 21, 2017	1 Year
RF Cable	HUBSER	CP-X2	W11.03	Oct. 21, 2017	1 Year
RF Cable	HUBSER	CP-X1	W12.02	Oct. 21, 2017	1 Year
MI Cable	HUBSER	C10-01-01-1M	1091629	Oct. 21, 2017	1 Year
Test software	Audix	E3	V 6.11111b	N/A	N/A
<b>Power Line Conducted Emissions Test</b>					
Test Receiver	R&S	ESU8	100316	Oct. 21, 2017	1 Year
LISN 1	R&S	ENV216	101109	Oct. 21, 2017	1 Year
LISN 2	R&S	ESH2-Z5	100309	Oct. 21, 2017	1 Year
Pulse Limiter	R&S	ESH3-Z2	101242	Oct. 21, 2017	1 Year
CE Cable 1	HUBSER	ESU8/RF2	W10.01	Oct. 21, 2017	1 Year
Test software	Audix	E3	V 6.11111b	N/A	N/A

## 4. On Time and Duty Cycle

### 4.1. Block diagram of test setup



### 4.2. Limits

None: for reporting purposes only.

### 4.3. Test Procedure

- (1) Set the Centre frequency of the spectrum analyzer to the transmitting frequency;
- (2) Set the span=0MHz, RBW=8MHz, VBW=50MHz, Sweep time=5ms;
- (3) Detector = peak;
- (4) Trace mode = Single hold.

### 4.4. Test Result

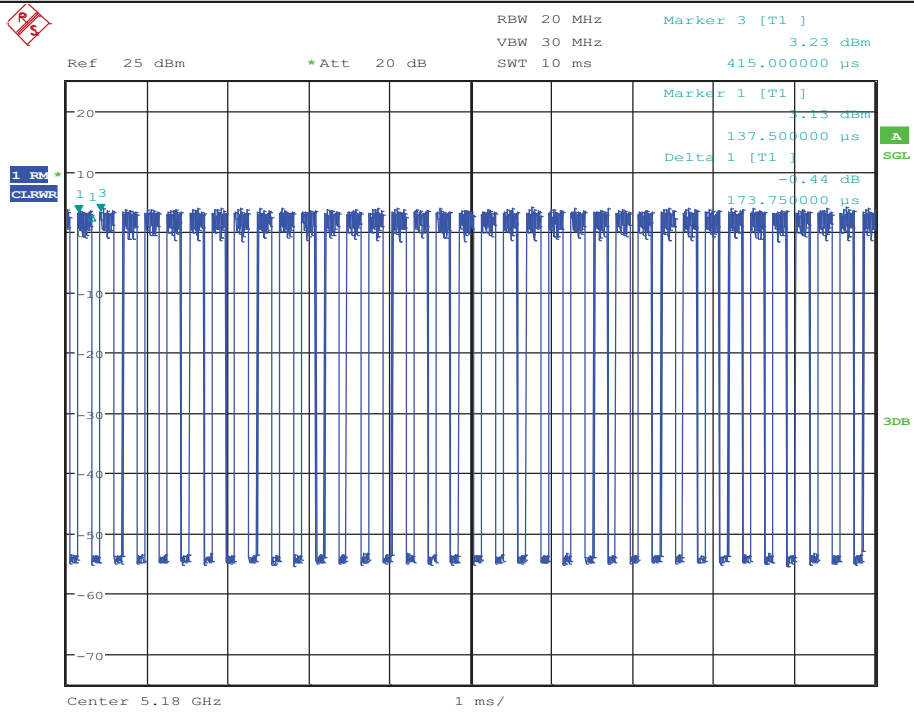
Test Mode	Test Channel	Ant	Duty Cycle[%]	10log(1/x) Factor[dB]
11N20MIMO	5180	Ant1	89.11	0.50
11N20MIMO	5180	Ant2	89.11	0.50
11N20MIMO	5200	Ant1	89.6	0.48
11N20MIMO	5200	Ant2	89.6	0.48
11N20MIMO	5240	Ant1	89.6	0.48
11N20MIMO	5240	Ant2	89.11	0.50
11N20MIMO	5260	Ant1	89.11	0.50
11N20MIMO	5260	Ant2	89.11	0.50
11N20MIMO	5280	Ant1	89.55	0.48
11N20MIMO	5280	Ant2	89.11	0.50
11N20MIMO	5320	Ant1	89.11	0.50
11N20MIMO	5320	Ant2	89.6	0.48
11N20MIMO	5500	Ant1	89.11	0.50

11N20MIMO	5500	Ant2	89.6	0.48
11N20MIMO	5580	Ant1	89.11	0.50
11N20MIMO	5580	Ant2	89.11	0.50
11N20MIMO	5700	Ant1	89.11	0.50
11N20MIMO	5700	Ant2	89.11	0.50
11N20MIMO	5745	Ant1	89.11	0.50
11N20MIMO	5745	Ant2	89.11	0.50
11N20MIMO	5785	Ant1	89.11	0.50
11N20MIMO	5785	Ant2	89.11	0.50
11N20MIMO	5825	Ant1	89.11	0.50
11N20MIMO	5825	Ant2	89.6	0.48
11N40MIMO	5190	Ant1	82.64	0.83
11N40MIMO	5190	Ant2	82.79	0.82
11N40MIMO	5230	Ant1	82.79	0.82
11N40MIMO	5230	Ant2	81.97	0.86
11N40MIMO	5270	Ant1	82.79	0.82
11N40MIMO	5270	Ant2	81.97	0.86
11N40MIMO	5310	Ant1	82.79	0.82
11N40MIMO	5310	Ant2	81.97	0.86
11N40MIMO	5510	Ant1	82.79	0.82
11N40MIMO	5510	Ant2	81.97	0.86
11N40MIMO	5550	Ant1	81.97	0.86
11N40MIMO	5550	Ant2	81.97	0.86
11N40MIMO	5670	Ant1	89.11	0.50
11N40MIMO	5670	Ant2	82.79	0.82
11N40MIMO	5755	Ant1	82.79	0.82
11N40MIMO	5755	Ant2	81.97	0.86
11N40MIMO	5795	Ant1	82.79	0.82
11N40MIMO	5795	Ant2	81.97	0.86
11AC20MIMO	5180	Ant1	88.04	0.55
11AC20MIMO	5180	Ant2	87.56	0.58
11AC20MIMO	5200	Ant1	88.04	0.55
11AC20MIMO	5200	Ant2	87.56	0.58
11AC20MIMO	5240	Ant1	87.56	0.58
11AC20MIMO	5240	Ant2	88.04	0.55
11AC20MIMO	5260	Ant1	87.56	0.58
11AC20MIMO	5260	Ant2	87.56	0.58
11AC20MIMO	5280	Ant1	87.56	0.58
11AC20MIMO	5280	Ant2	87.56	0.58
11AC20MIMO	5320	Ant1	87.56	0.58

11AC20MIMO	5320	Ant2	87.56	0.58
11AC20MIMO	5500	Ant1	87.62	0.57
11AC20MIMO	5500	Ant2	87.56	0.58
11AC20MIMO	5580	Ant1	87.56	0.58
11AC20MIMO	5580	Ant2	88.04	0.55
11AC20MIMO	5700	Ant1	87.56	0.58
11AC20MIMO	5700	Ant2	88.04	0.55
11AC20MIMO	5745	Ant1	88.04	0.55
11AC20MIMO	5745	Ant2	87.56	0.58
11AC20MIMO	5785	Ant1	88.04	0.55
11AC20MIMO	5785	Ant2	87.56	0.58
11AC20MIMO	5825	Ant1	88.04	0.55
11AC20MIMO	5825	Ant2	87.56	0.58
11AC40MIMO	5190	Ant1	80.62	0.94
11AC40MIMO	5190	Ant2	80.62	0.94
11AC40MIMO	5230	Ant1	79.84	0.98
11AC40MIMO	5230	Ant2	80.62	0.94
11AC40MIMO	5270	Ant1	79.84	0.98
11AC40MIMO	5270	Ant2	79.84	0.98
11AC40MIMO	5310	Ant1	80.62	0.94
11AC40MIMO	5310	Ant2	80.62	0.94
11AC40MIMO	5510	Ant1	80.62	0.94
11AC40MIMO	5510	Ant2	79.84	0.98
11AC40MIMO	5550	Ant1	80.62	0.94
11AC40MIMO	5550	Ant2	80.62	0.94
11AC40MIMO	5670	Ant1	80.62	0.94
11AC40MIMO	5670	Ant2	80.62	0.94
11AC40MIMO	5755	Ant1	80.62	0.94
11AC40MIMO	5755	Ant2	80	0.97
11AC40MIMO	5795	Ant1	79.84	0.98
11AC40MIMO	5795	Ant2	79.84	0.98
11AC80MIMO	5210	Ant1	71.11	1.48
11AC80MIMO	5210	Ant2	71.11	1.48
11AC80MIMO	5290	Ant1	71.43	1.46
11AC80MIMO	5290	Ant2	71.43	1.46
11AC80MIMO	5530	Ant1	71.43	1.46
11AC80MIMO	5530	Ant2	71.43	1.46
11AC80MIMO	5775	Ant1	71.11	1.48
11AC80MIMO	5775	Ant2	71.43	1.46
11AMIMO	5180	Ant1	90.37	0.44

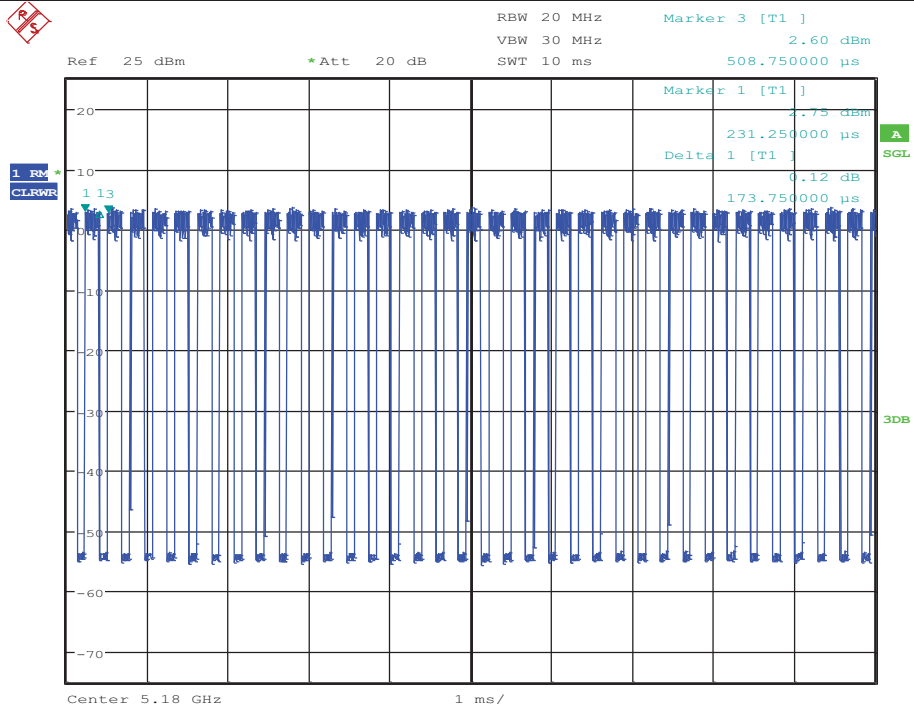
11AMIMO	5180	Ant2	89.91	0.46
11AMIMO	5200	Ant1	90.37	0.44
11AMIMO	5200	Ant2	90.37	0.44
11AMIMO	5240	Ant1	89.91	0.46
11AMIMO	5240	Ant2	89.91	0.46
11AMIMO	5260	Ant1	89.91	0.46
11AMIMO	5260	Ant2	89.91	0.46
11AMIMO	5280	Ant1	90.37	0.44
11AMIMO	5280	Ant2	90.37	0.44
11AMIMO	5320	Ant1	89.91	0.46
11AMIMO	5320	Ant2	89.91	0.46
11AMIMO	5500	Ant1	89.91	0.46
11AMIMO	5500	Ant2	89.91	0.46
11AMIMO	5580	Ant1	90.37	0.44
11AMIMO	5580	Ant2	89.91	0.46
11AMIMO	5700	Ant1	90.37	0.44
11AMIMO	5700	Ant2	90.37	0.44
11AMIMO	5745	Ant1	89.91	0.46
11AMIMO	5745	Ant2	90.37	0.44
11AMIMO	5785	Ant1	90.37	0.44
11AMIMO	5785	Ant2	89.91	0.46
11AMIMO	5825	Ant1	90.37	0.44
11AMIMO	5825	Ant2	89.91	0.46

### Duty Cycle\_11A\_5180\_Ant1



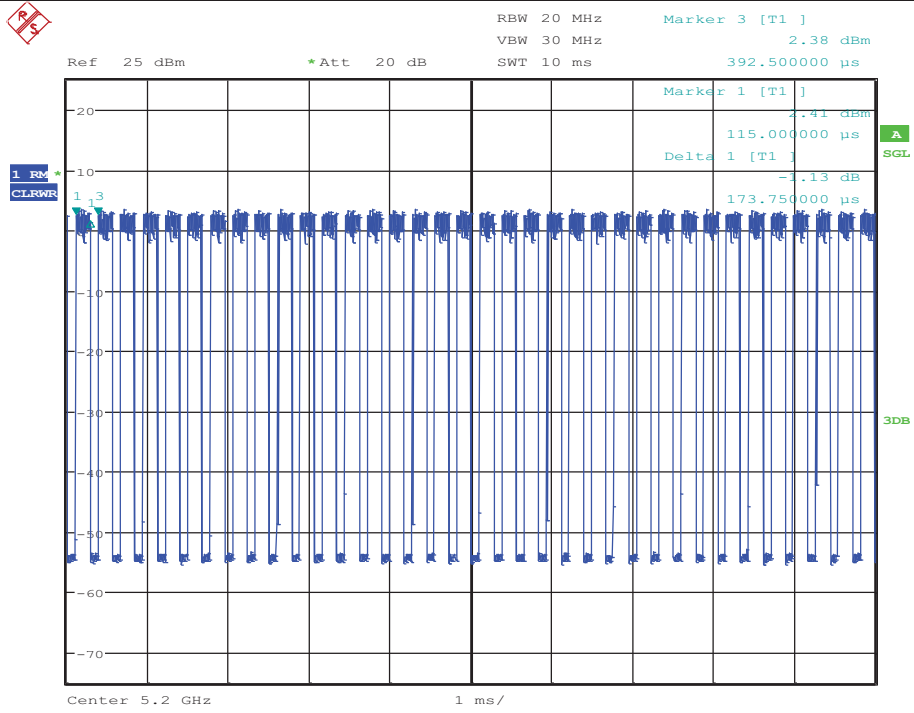
Date: 4.SEP.2017 17:23:00

### Duty Cycle\_11A\_5180\_Ant2



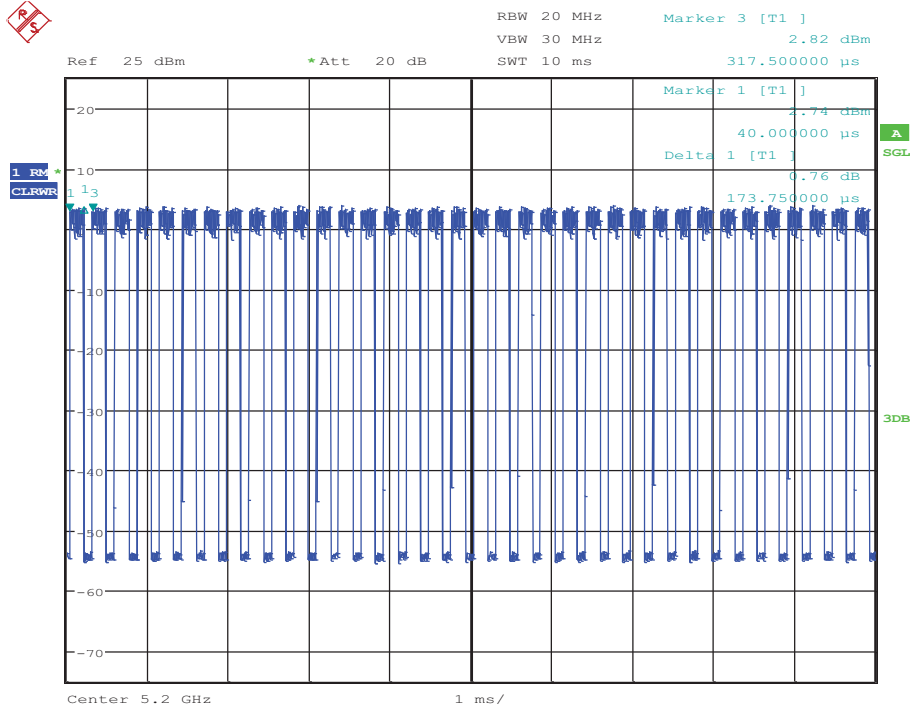
Date: 5.SEP.2017 11:21:01

### Duty Cycle\_11A\_5200\_Ant1

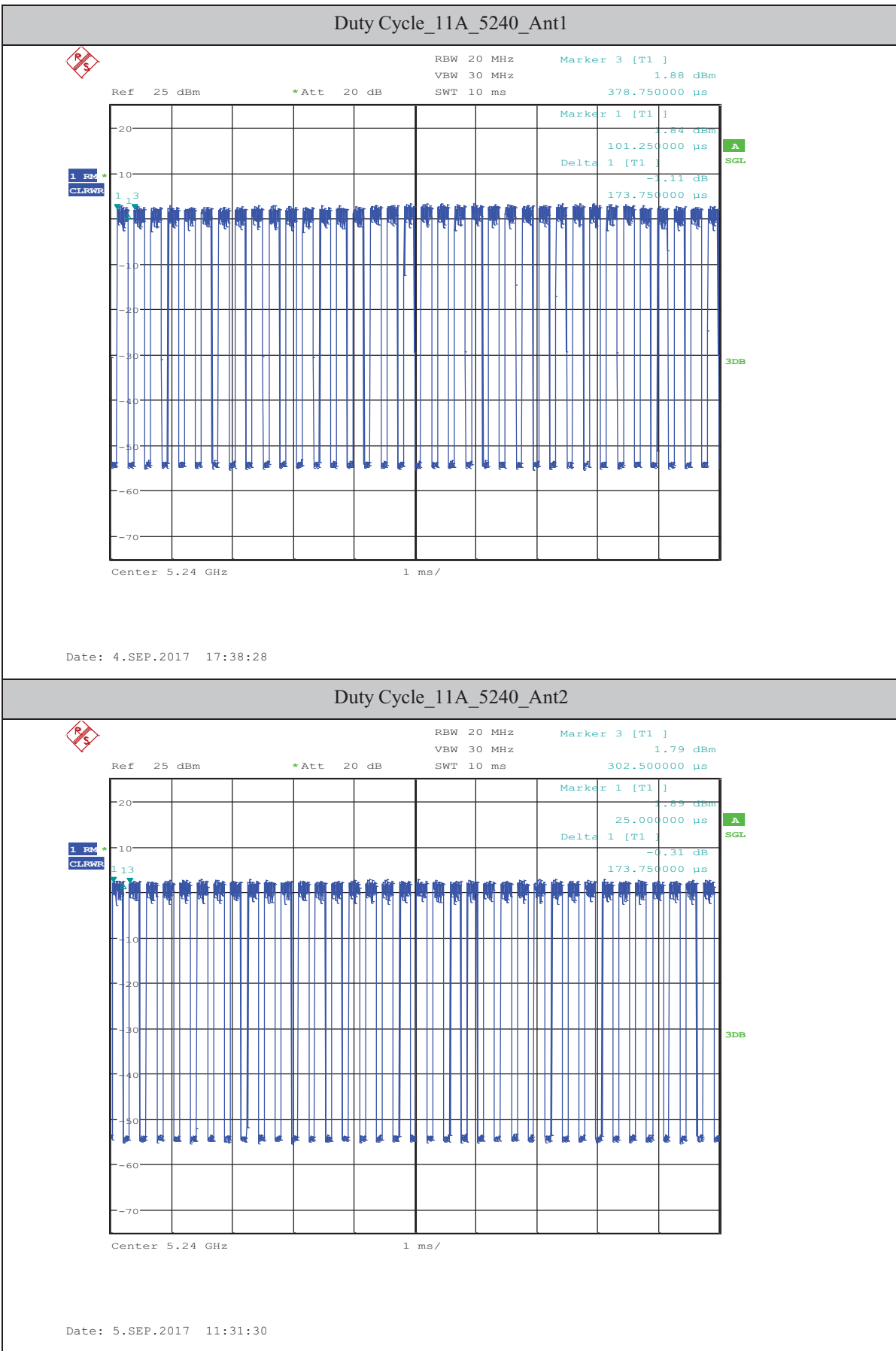


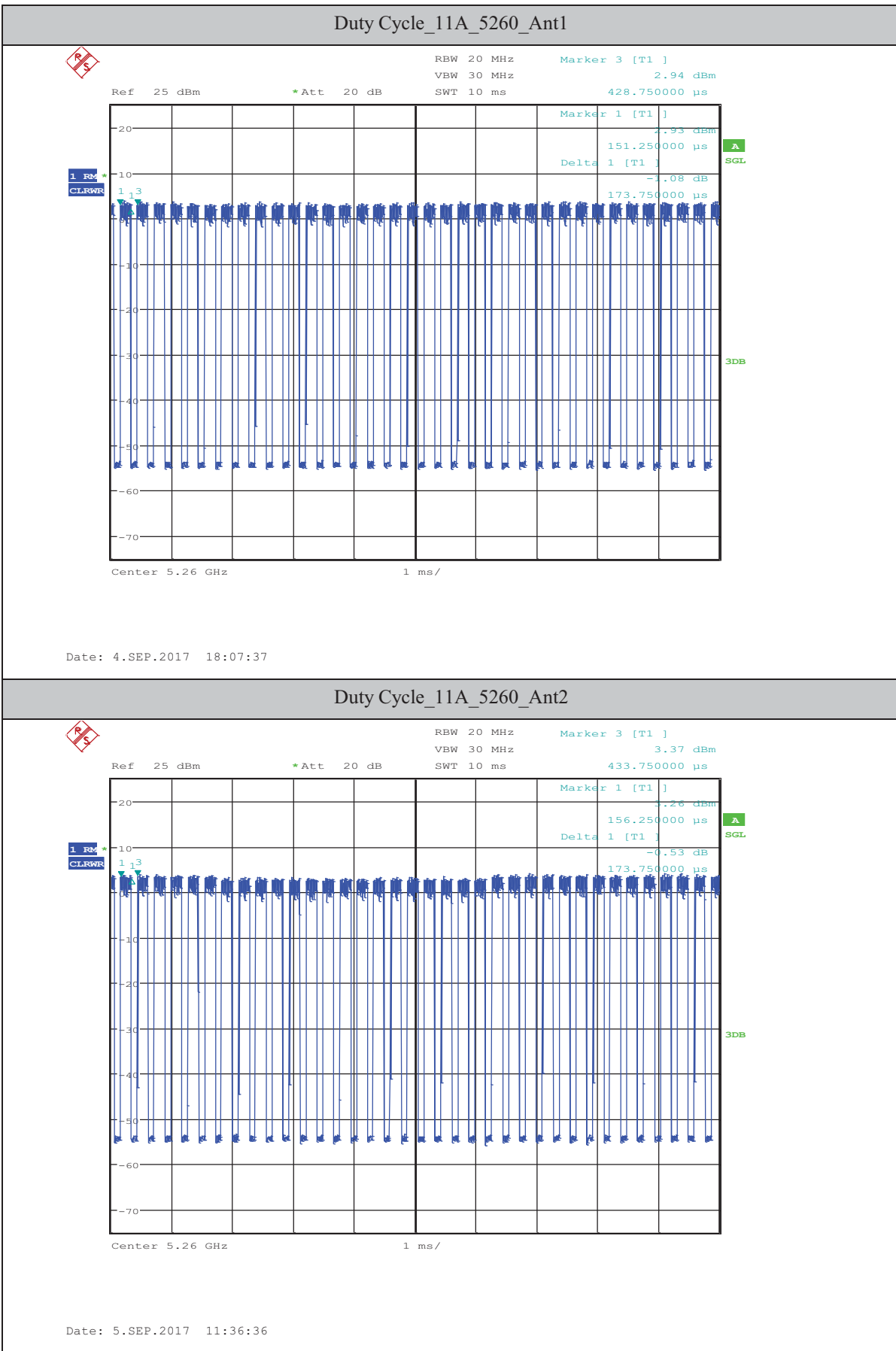
Date: 4.SEP.2017 17:33:38

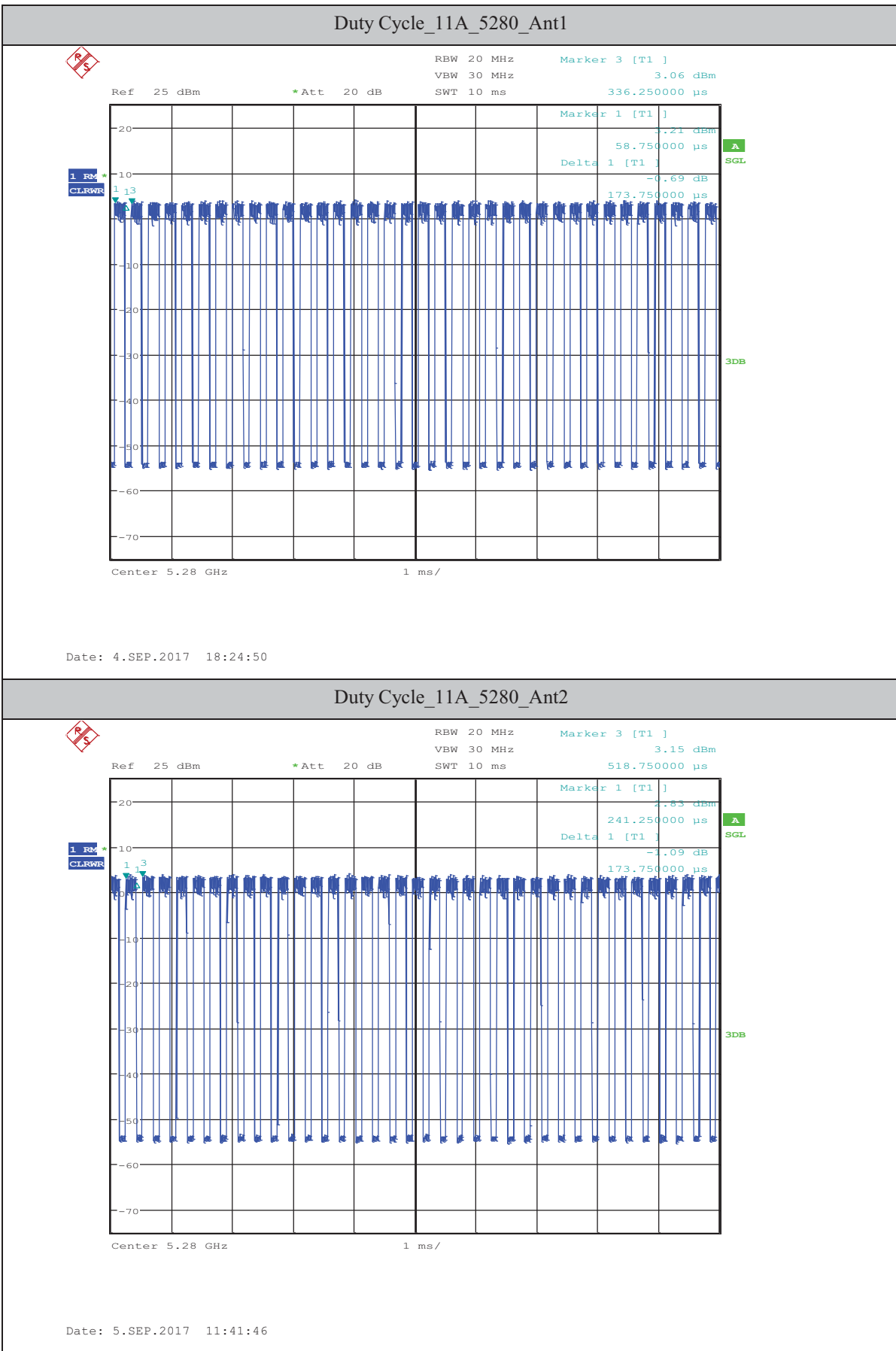
### Duty Cycle\_11A\_5200\_Ant2

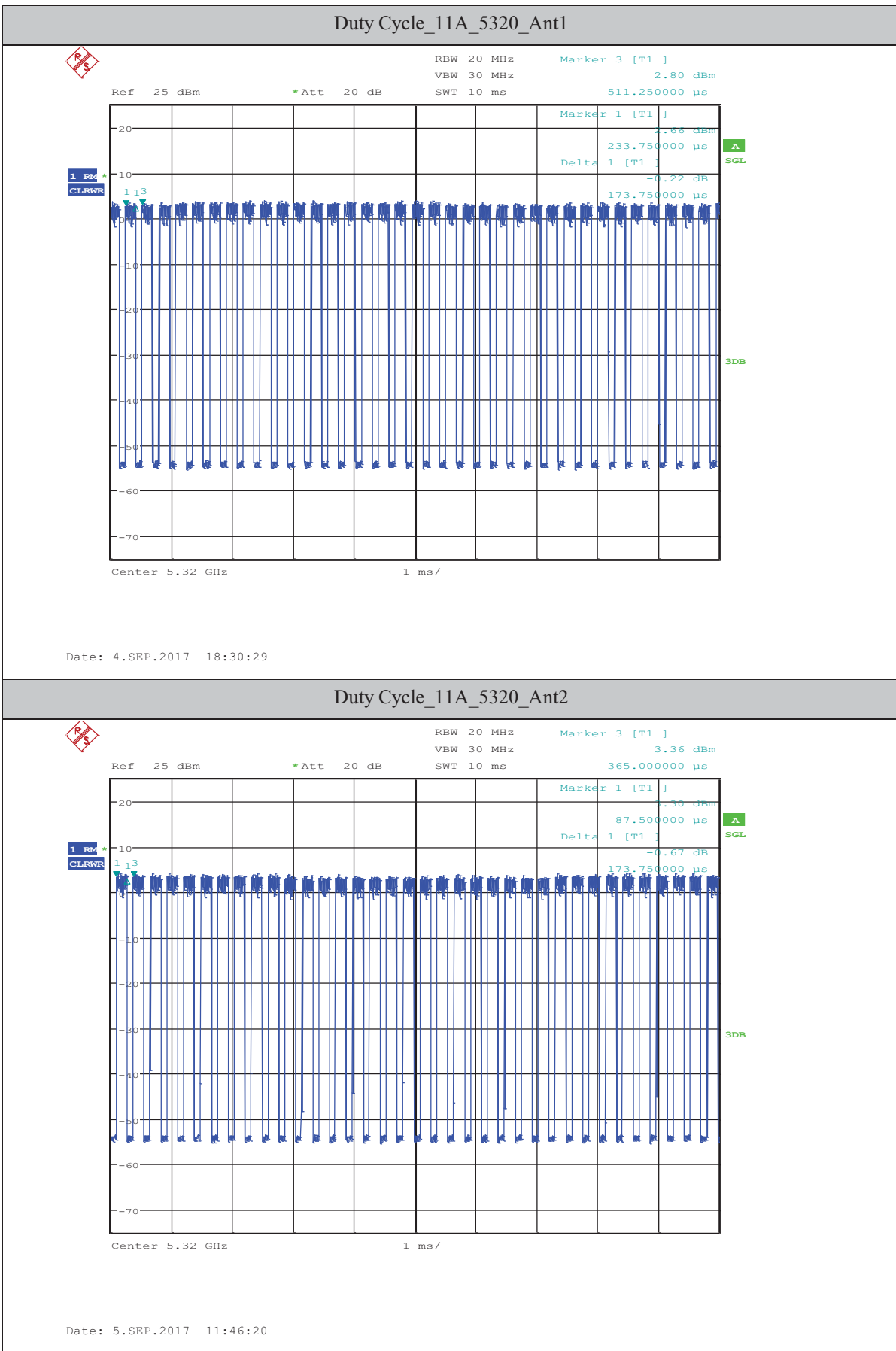


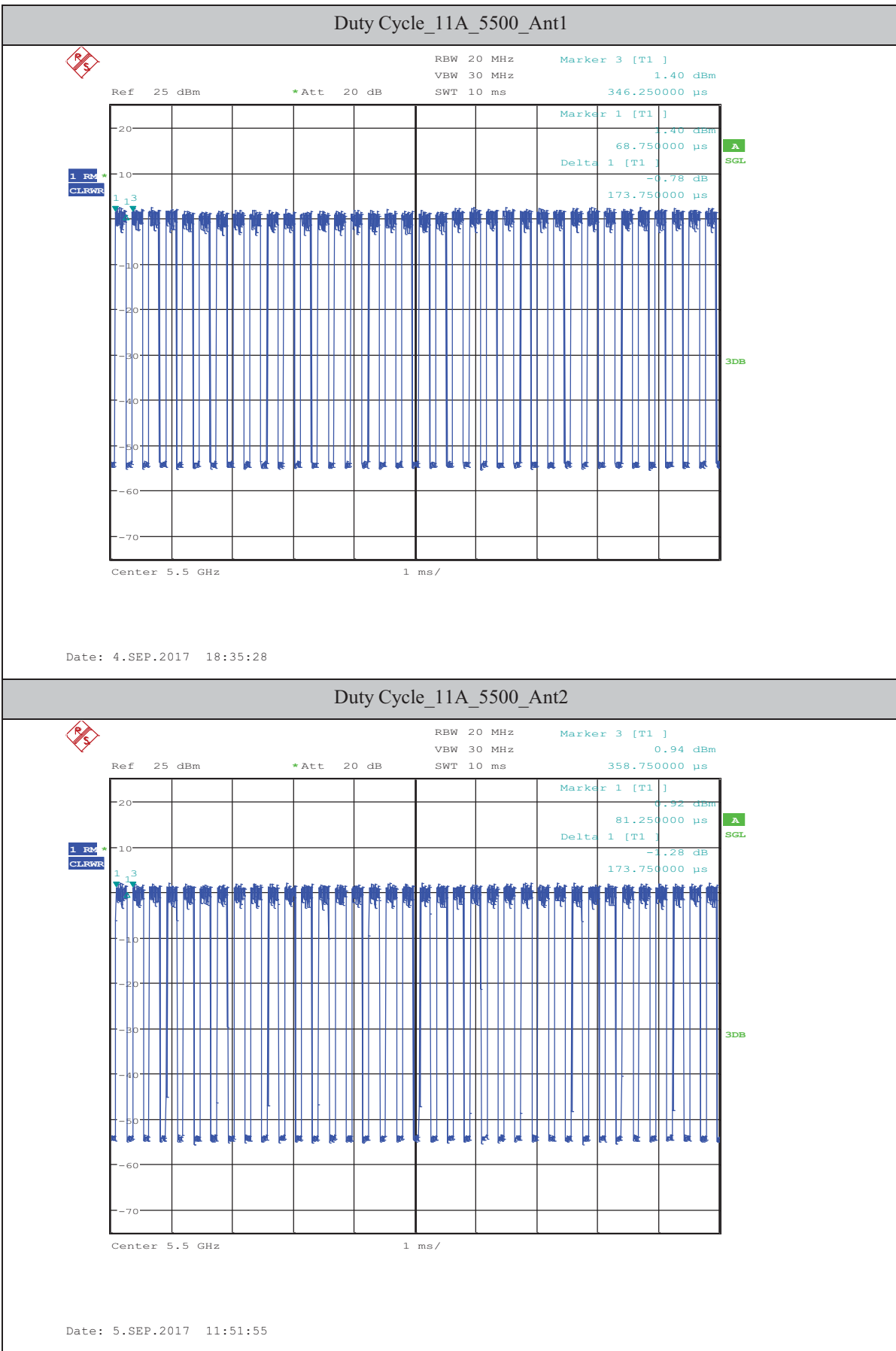
Date: 5.SEP.2017 11:26:22

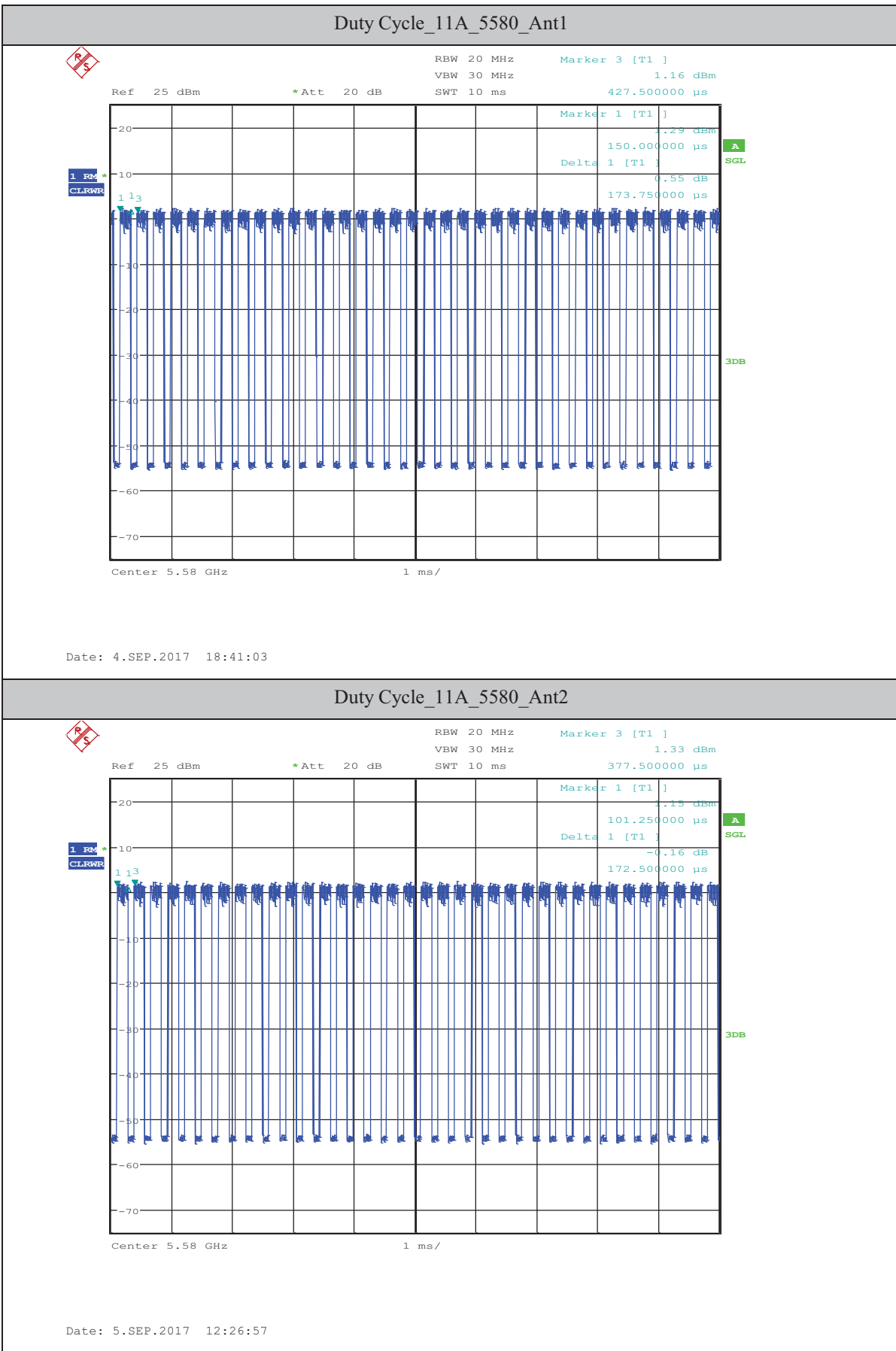


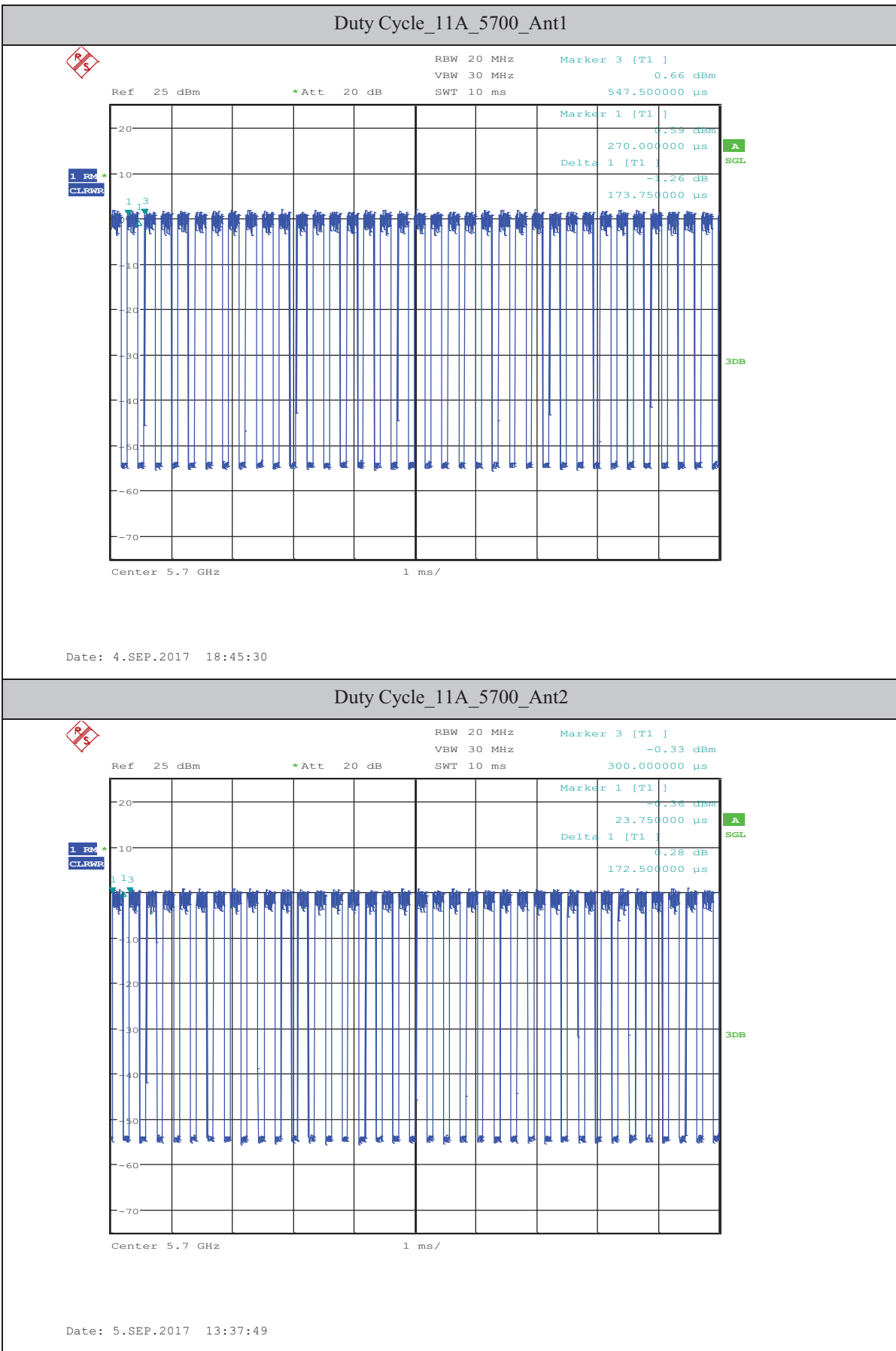


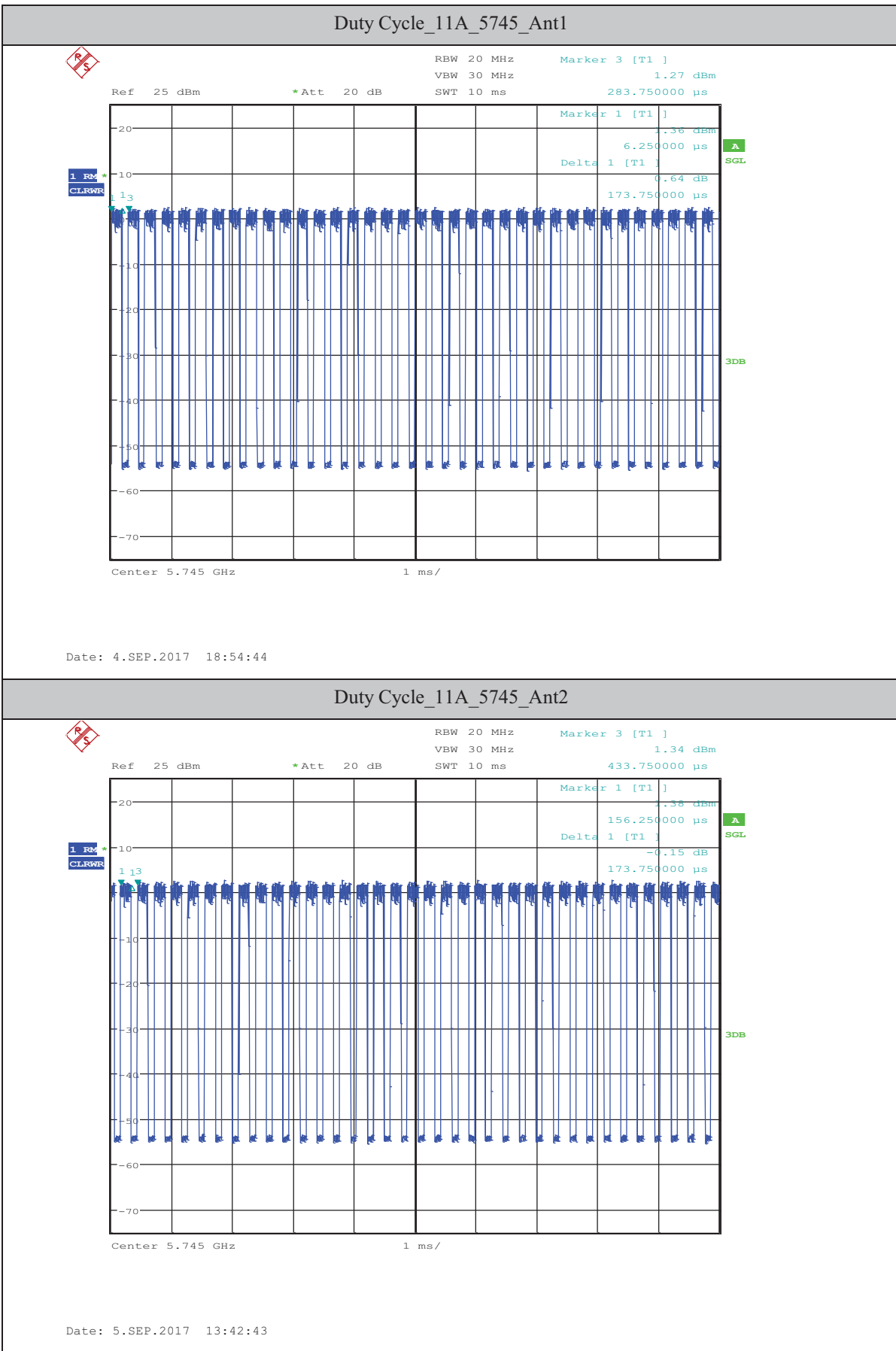




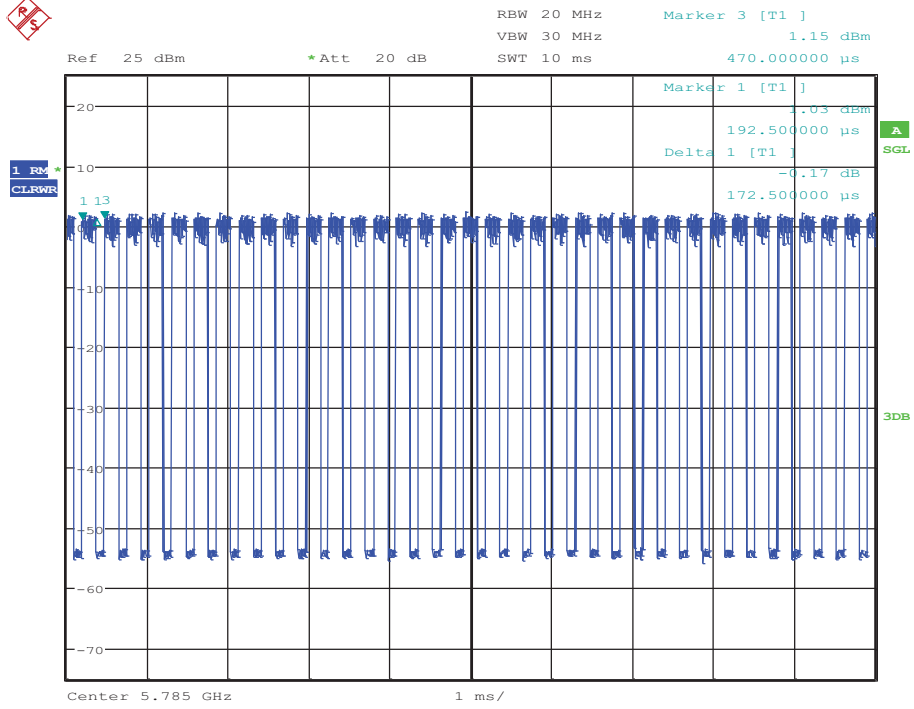






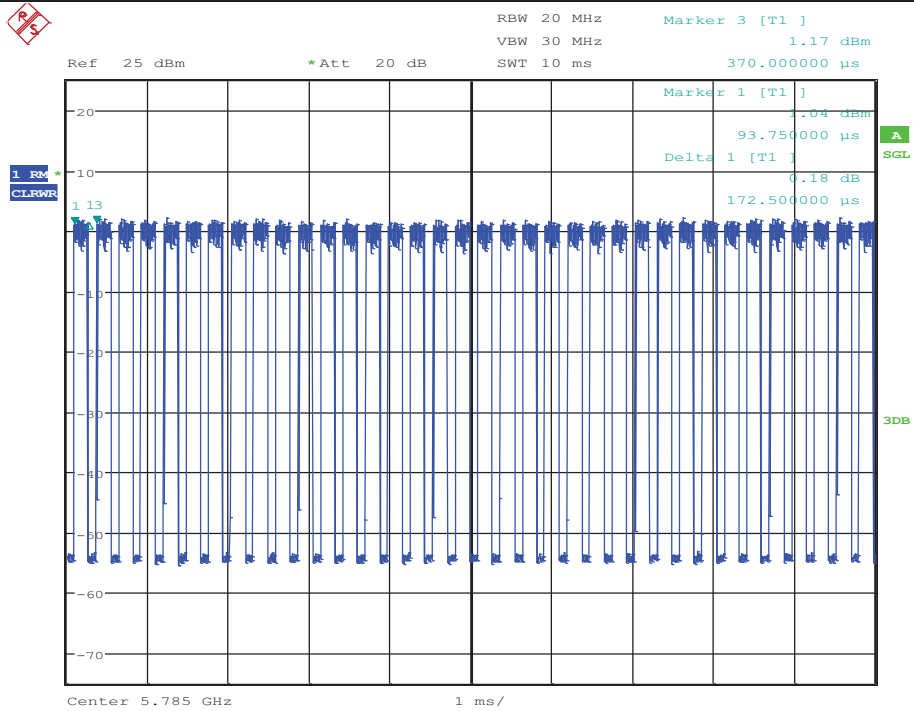


### Duty Cycle\_11A\_5785\_Ant1

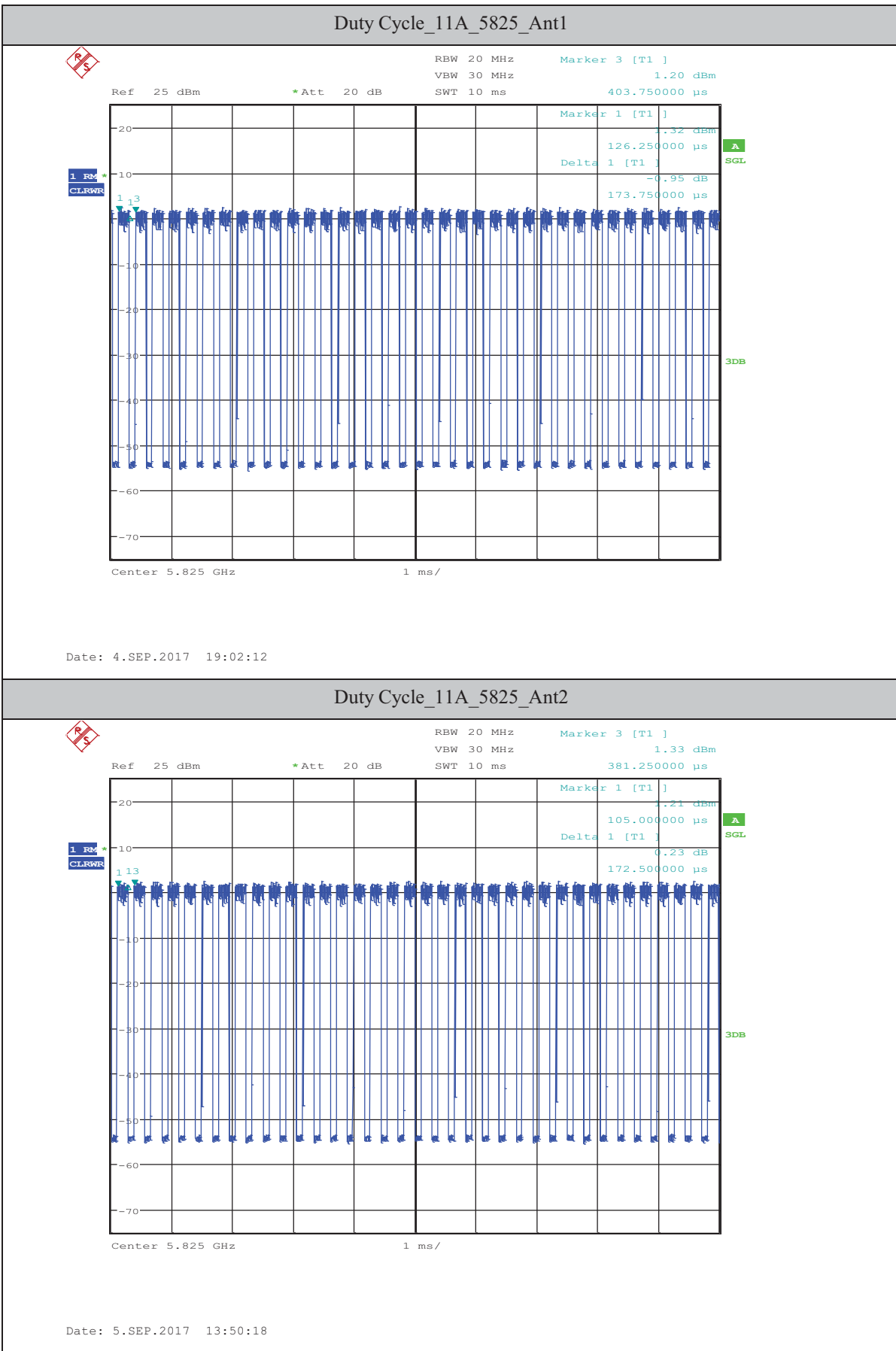


Date: 4.SEP.2017 18:58:43

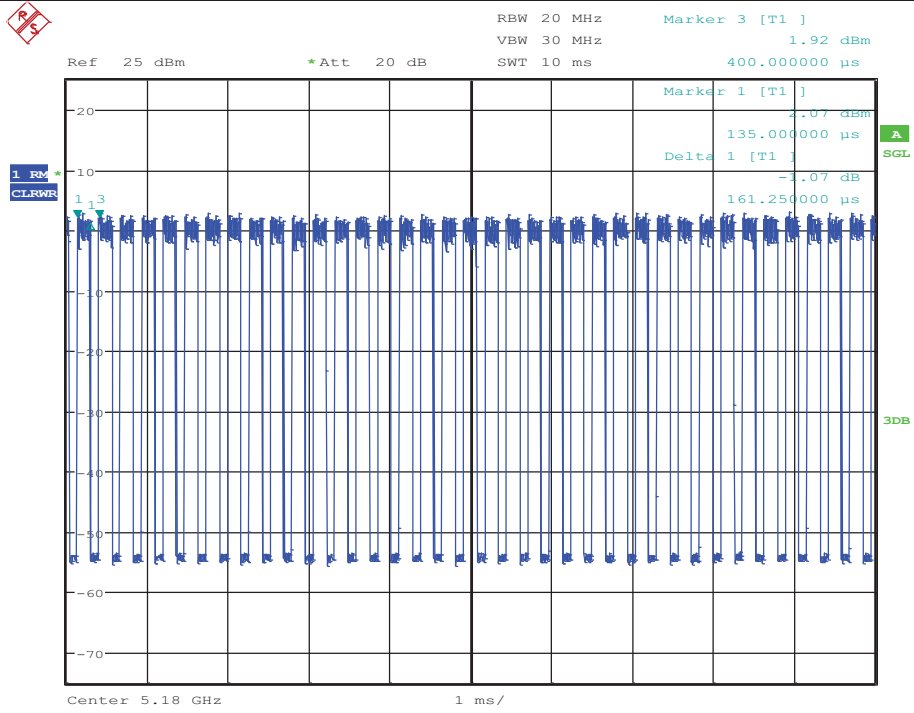
### Duty Cycle\_11A\_5785\_Ant2



Date: 5.SEP.2017 13:46:47

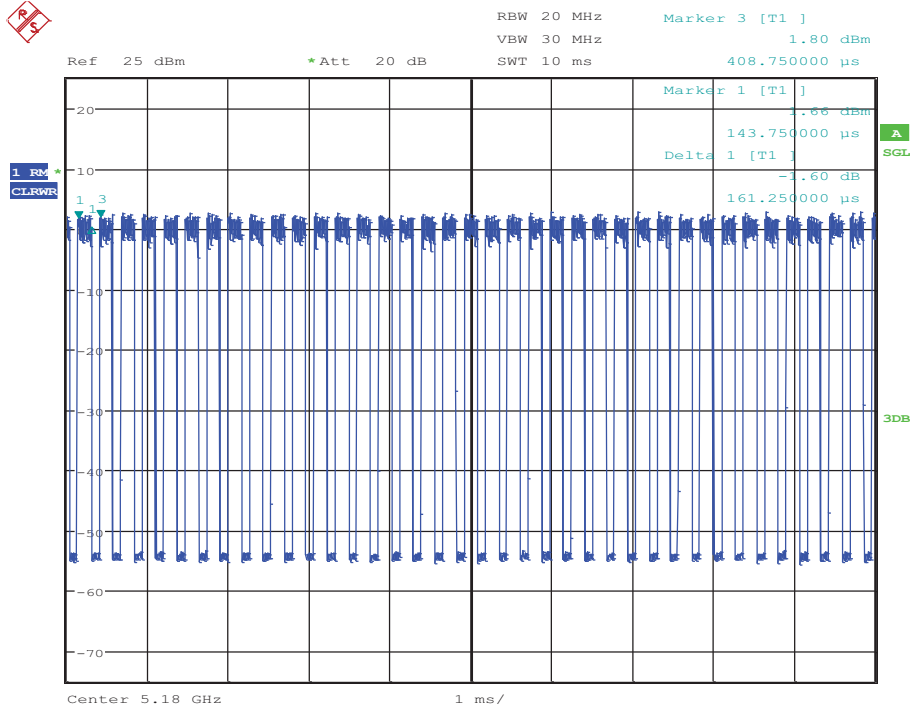


### Duty Cycle\_11N20\_5180\_Ant1

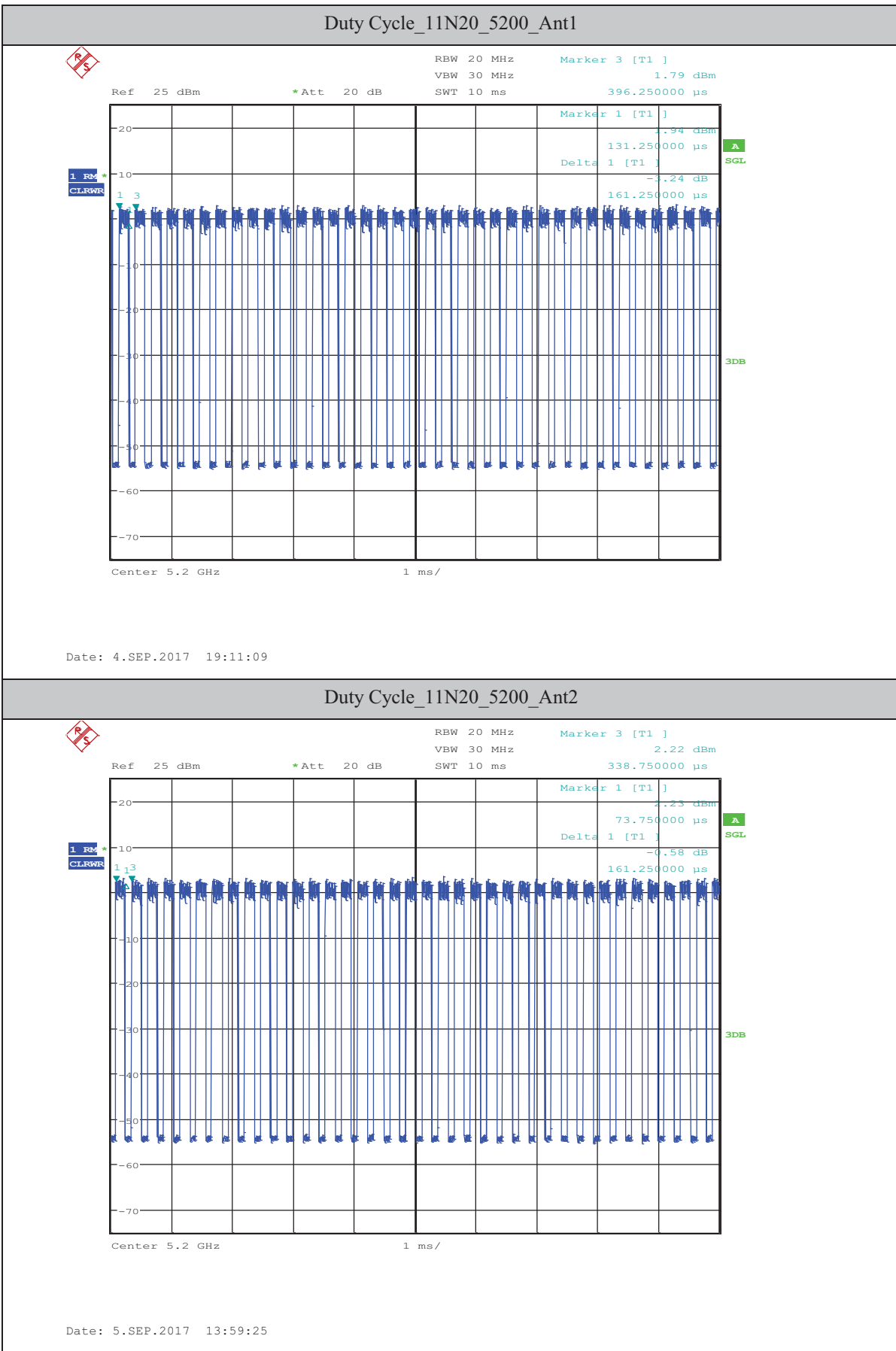


Date: 4.SEP.2017 19:06:09

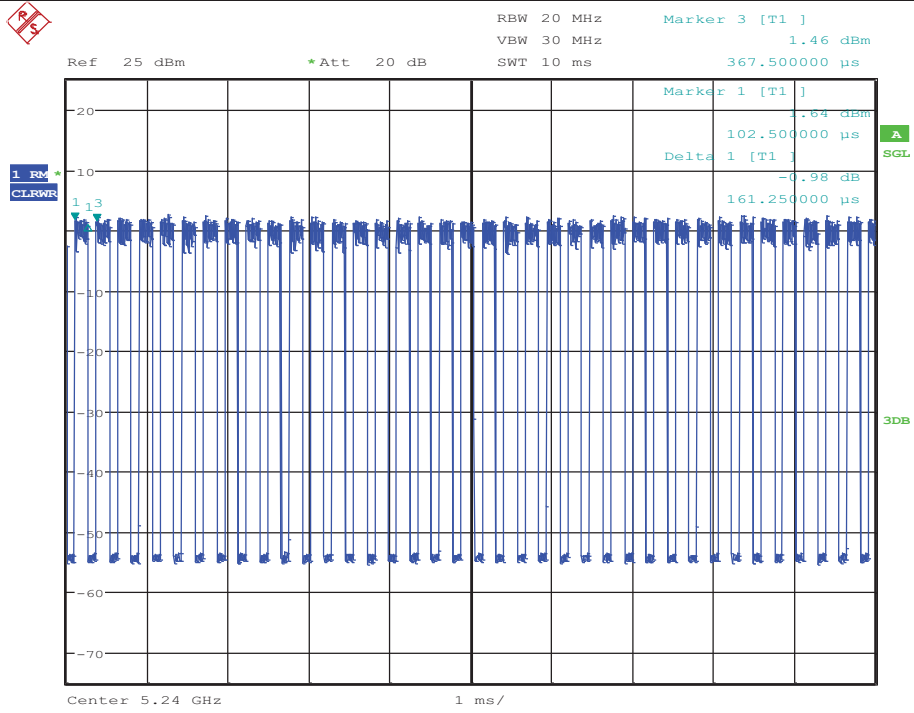
### Duty Cycle\_11N20\_5180\_Ant2



Date: 5.SEP.2017 13:54:22

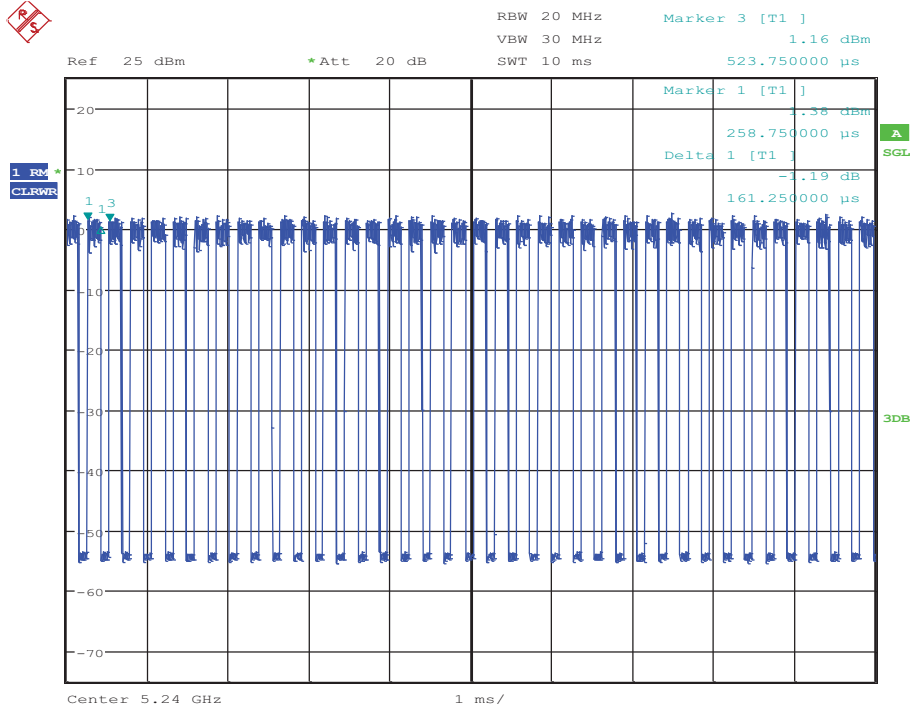


### Duty Cycle\_11N20\_5240\_Ant1



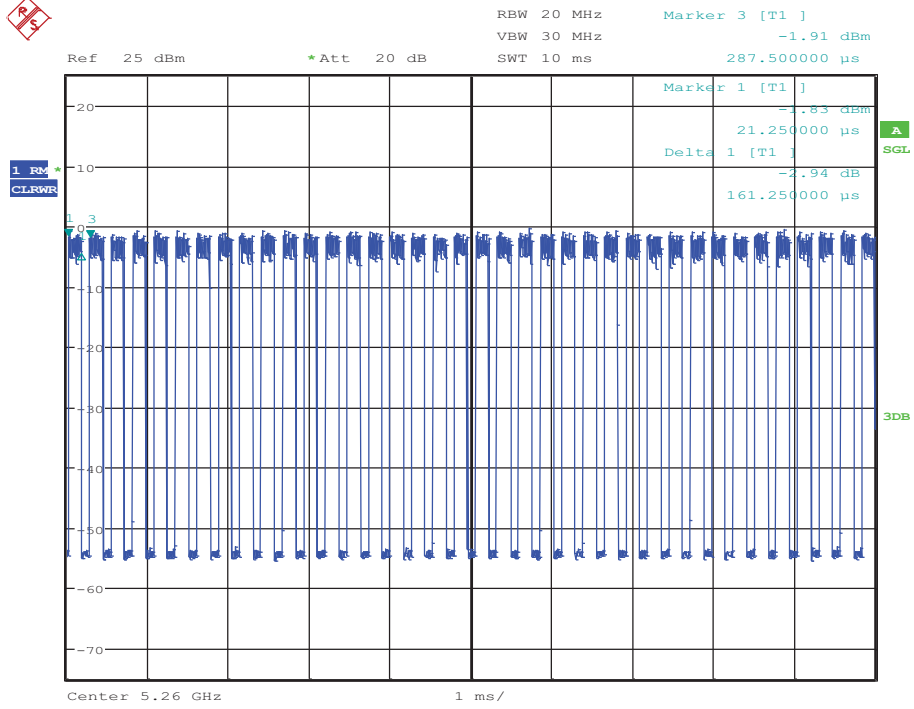
Date: 4.SEP.2017 19:15:35

### Duty Cycle\_11N20\_5240\_Ant2



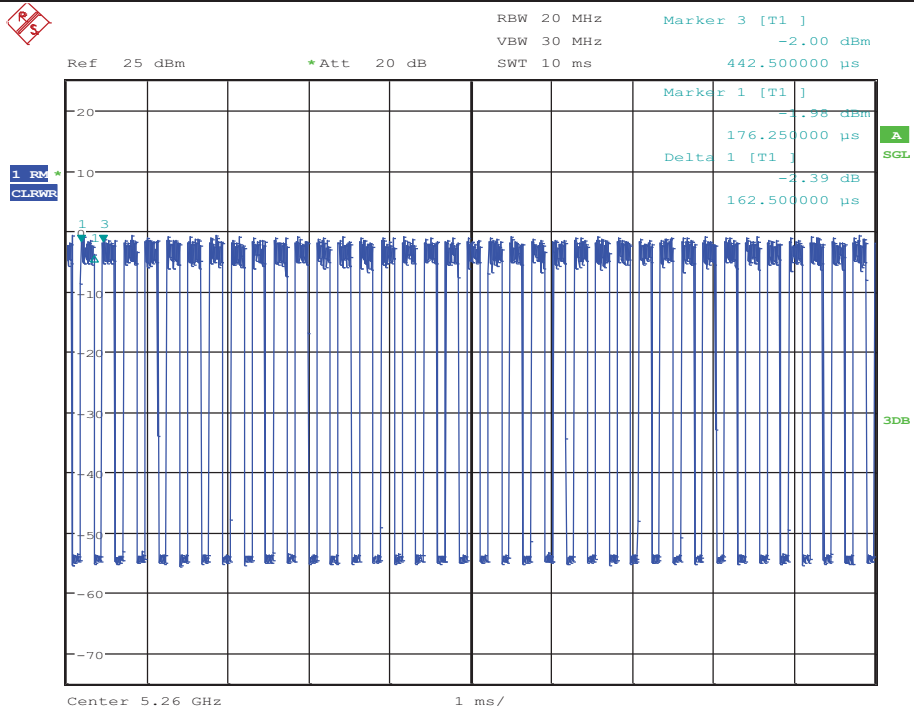
Date: 5.SEP.2017 14:03:52

### Duty Cycle\_11N20\_5260\_Ant1



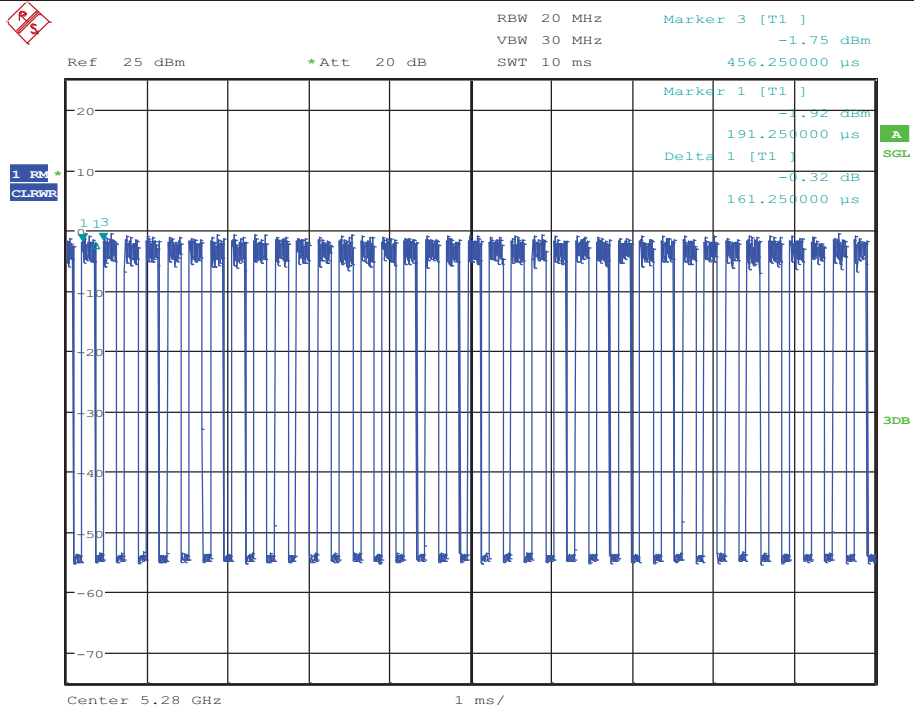
Date: 4.SEP.2017 19:20:33

### Duty Cycle\_11N20\_5260\_Ant2



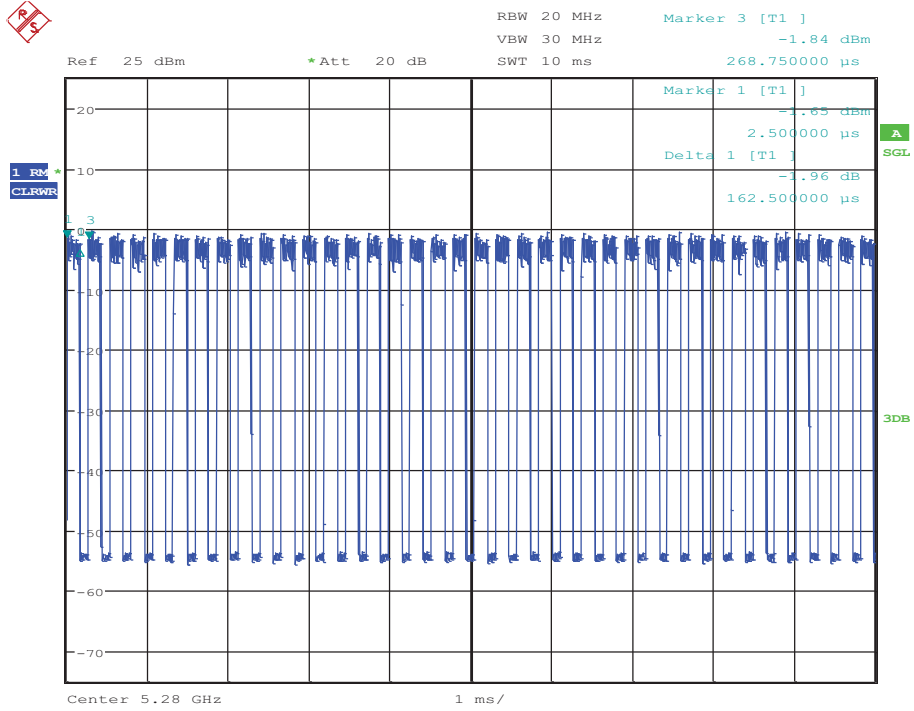
Date: 5.SEP.2017 14:08:52

### Duty Cycle\_11N20\_5280\_Ant1



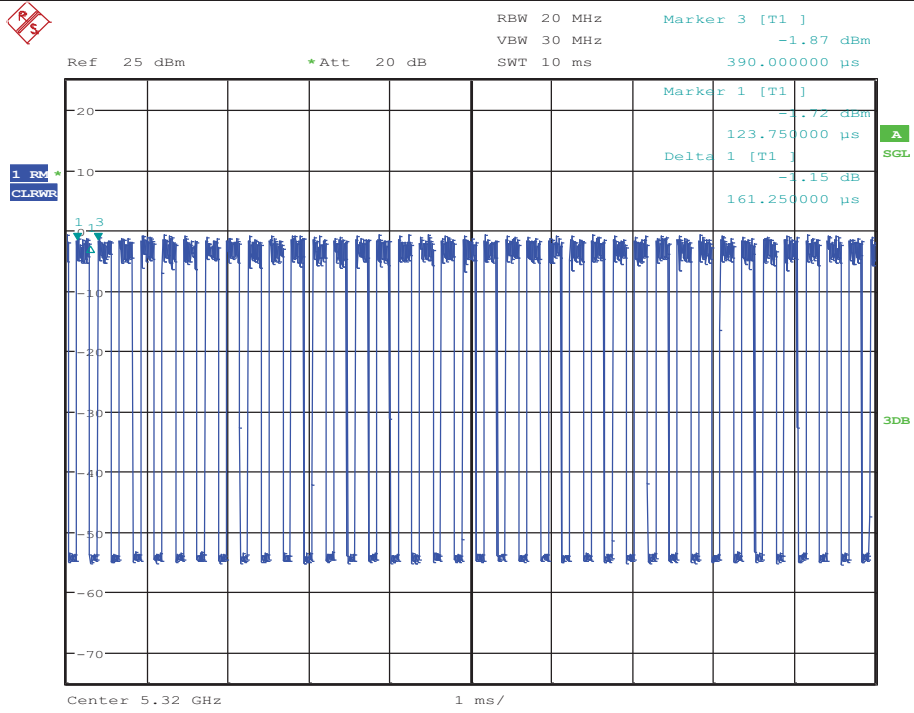
Date: 4.SEP.2017 19:25:55

### Duty Cycle\_11N20\_5280\_Ant2



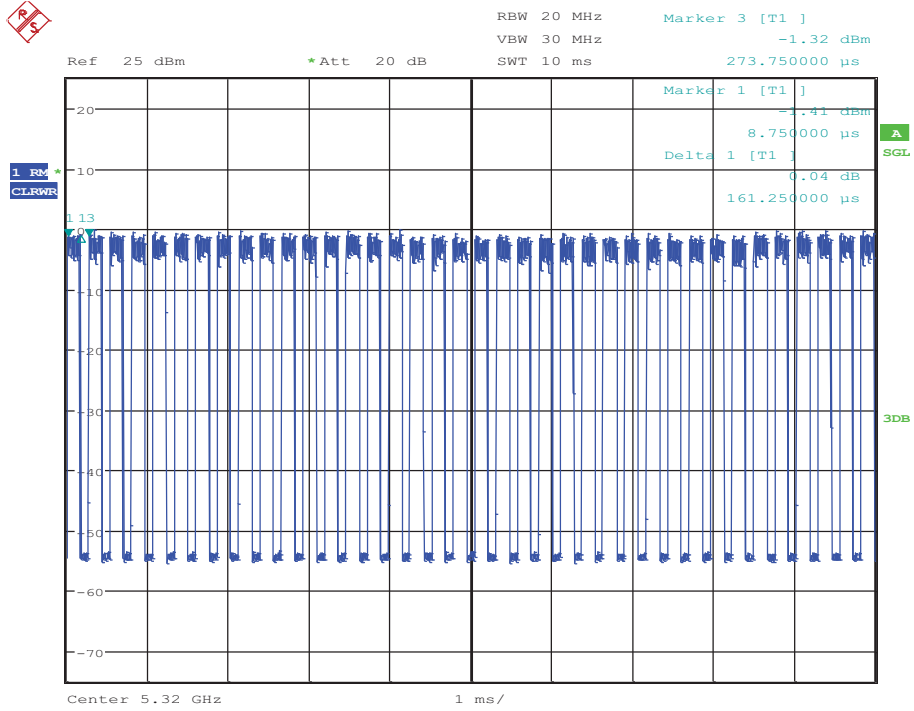
Date: 5.SEP.2017 14:15:00

### Duty Cycle\_11N20\_5320\_Ant1



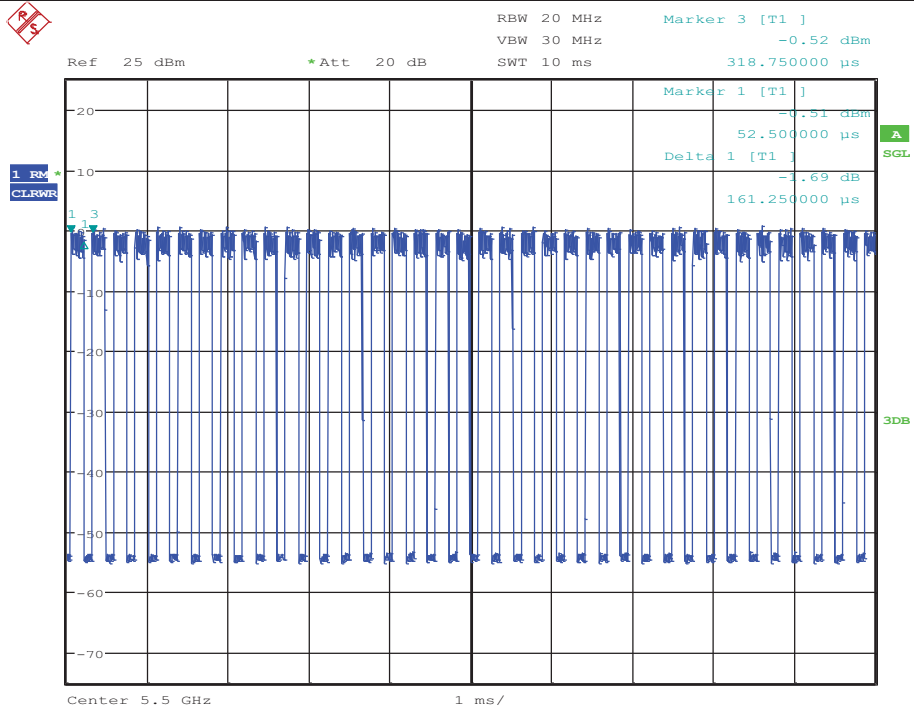
Date: 4.SEP.2017 19:30:21

### Duty Cycle\_11N20\_5320\_Ant2



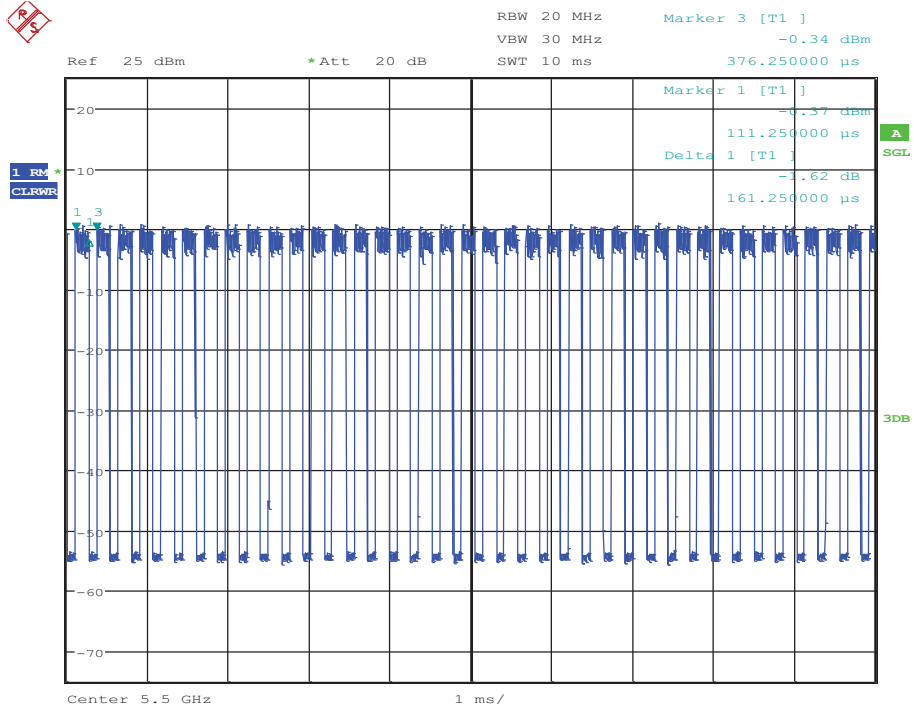
Date: 5.SEP.2017 14:19:33

### Duty Cycle\_11N20\_5500\_Ant1



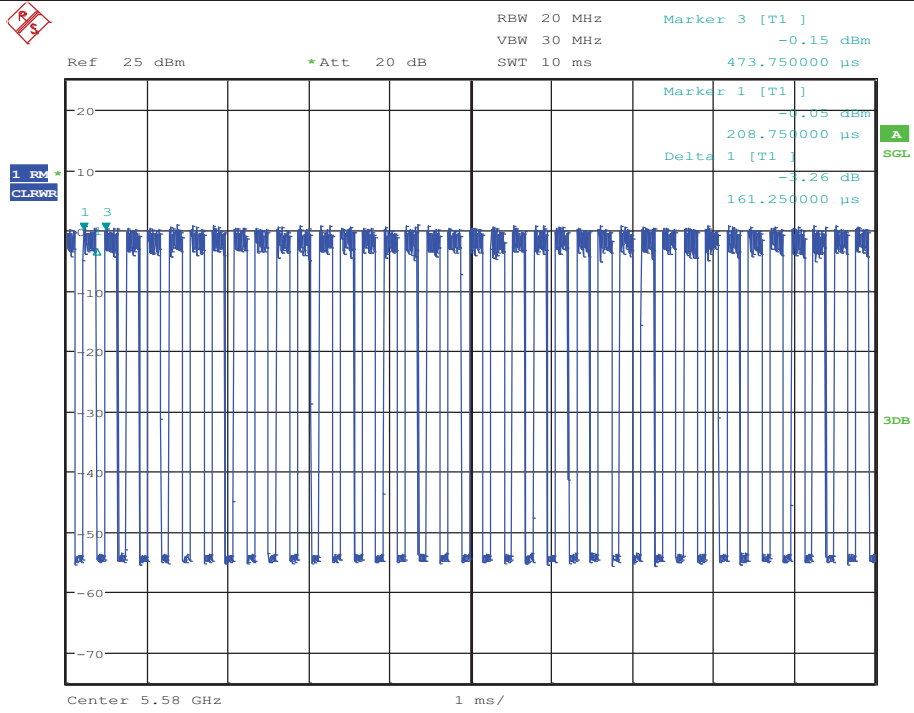
Date: 4.SEP.2017 19:43:11

### Duty Cycle\_11N20\_5500\_Ant2



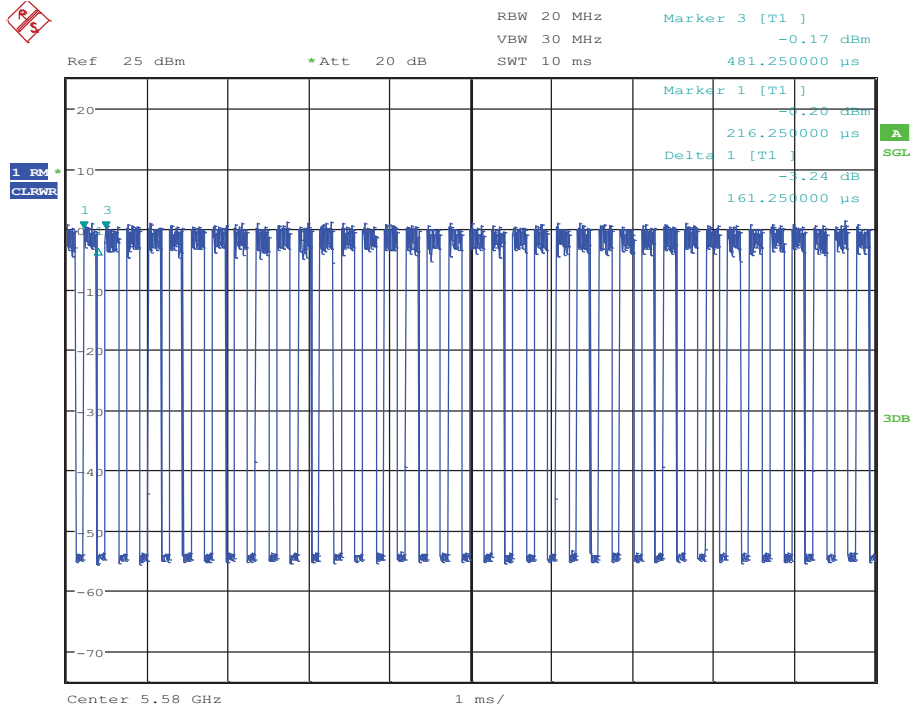
Date: 5.SEP.2017 14:24:35

### Duty Cycle\_11N20\_5580\_Ant1



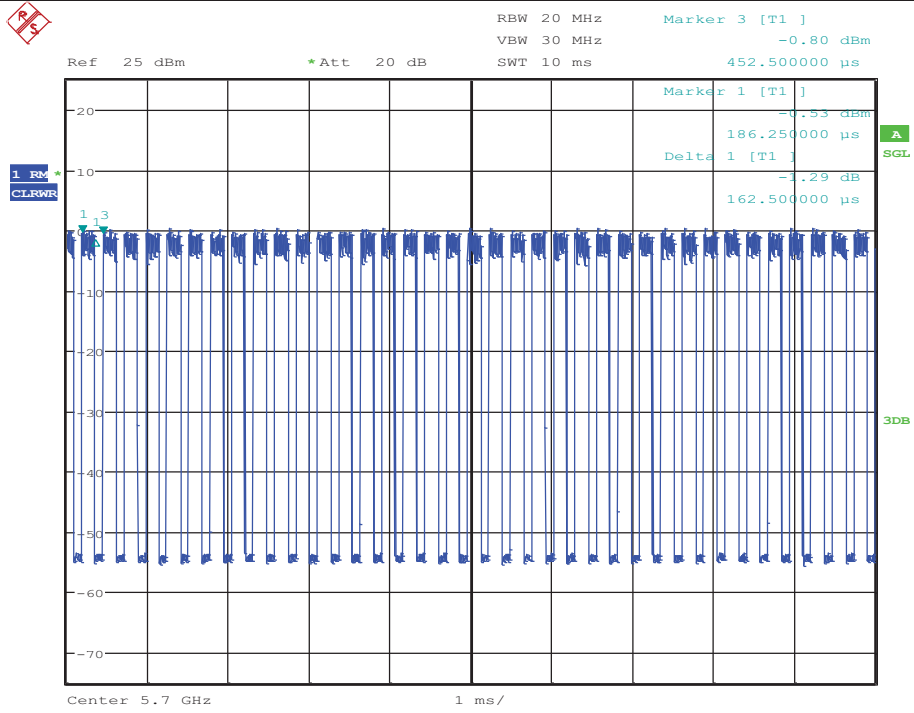
Date: 4.SEP.2017 19:48:10

### Duty Cycle\_11N20\_5580\_Ant2



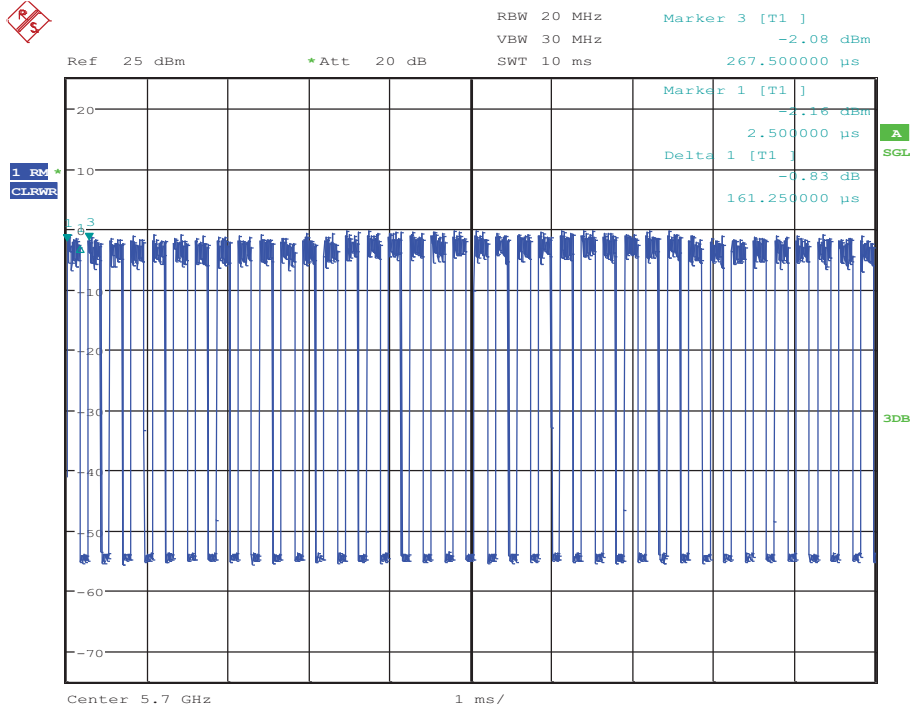
Date: 5.SEP.2017 14:29:39

### Duty Cycle\_11N20\_5700\_Ant1

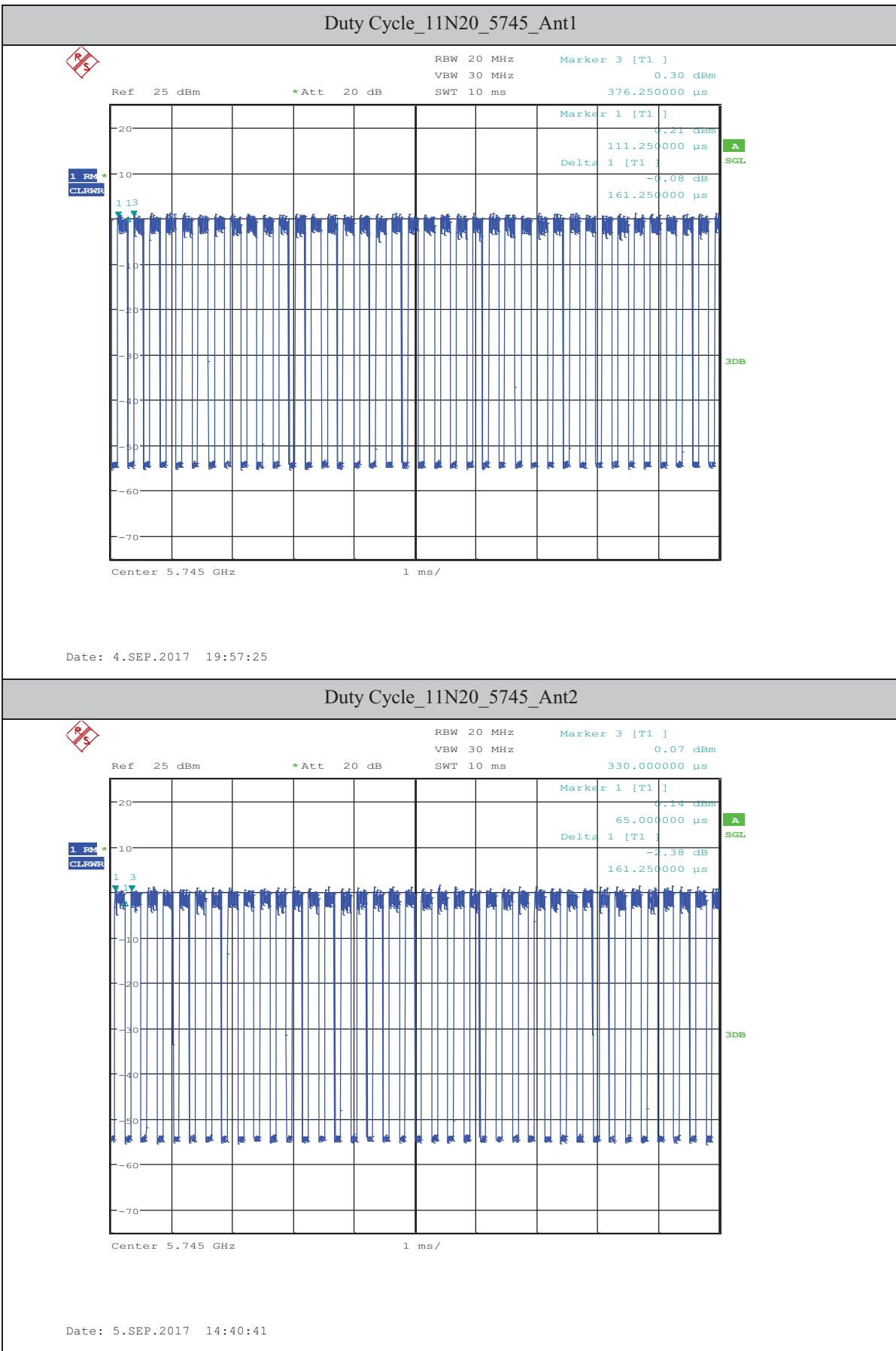


Date: 4.SEP.2017 19:52:35

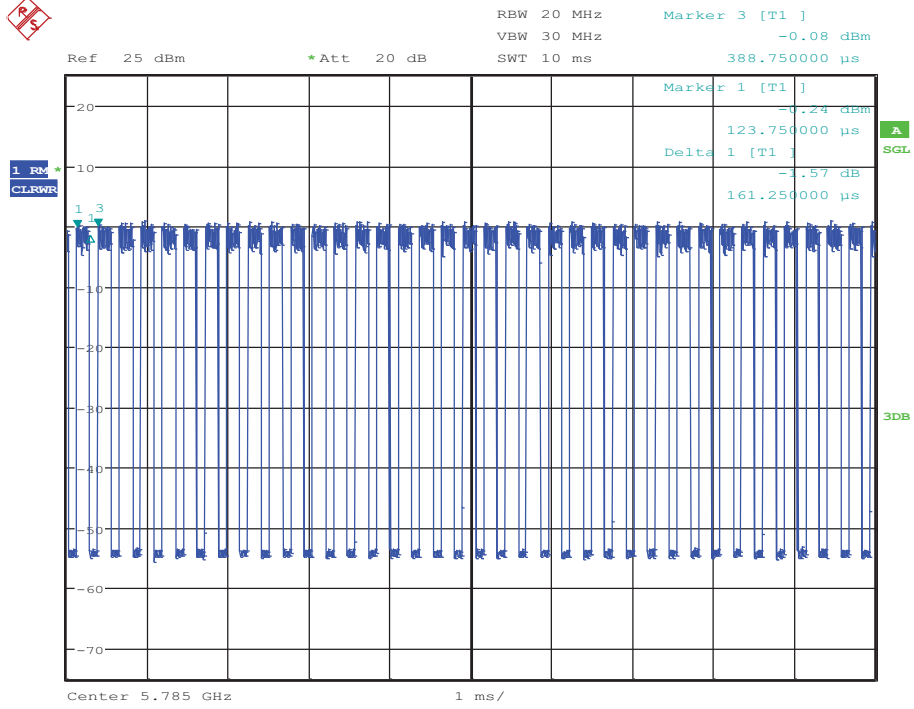
### Duty Cycle\_11N20\_5700\_Ant2



Date: 5.SEP.2017 14:35:46

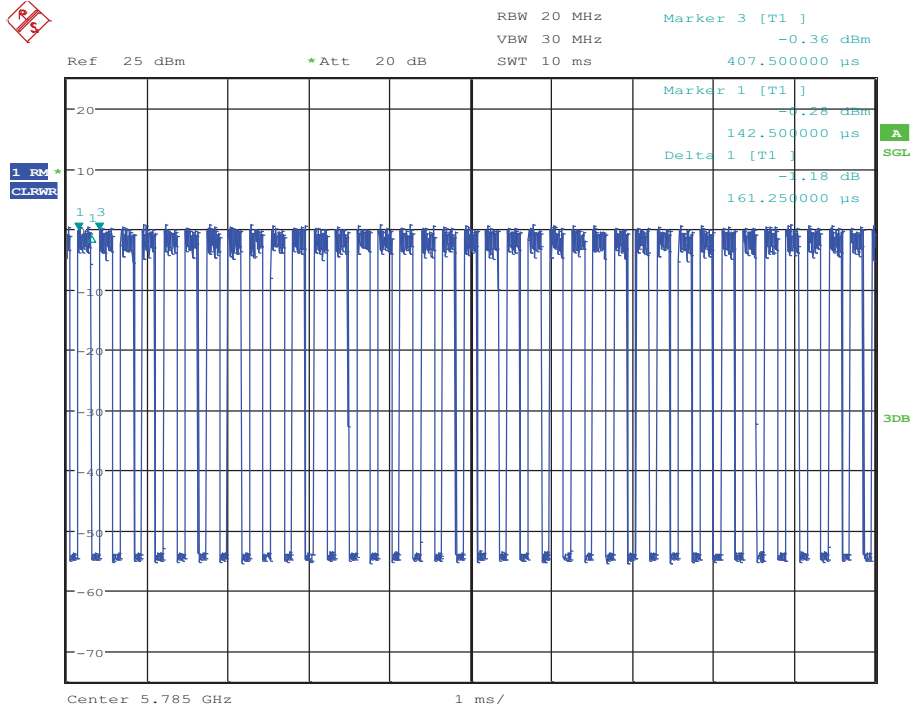


### Duty Cycle\_11N20\_5785\_Ant1



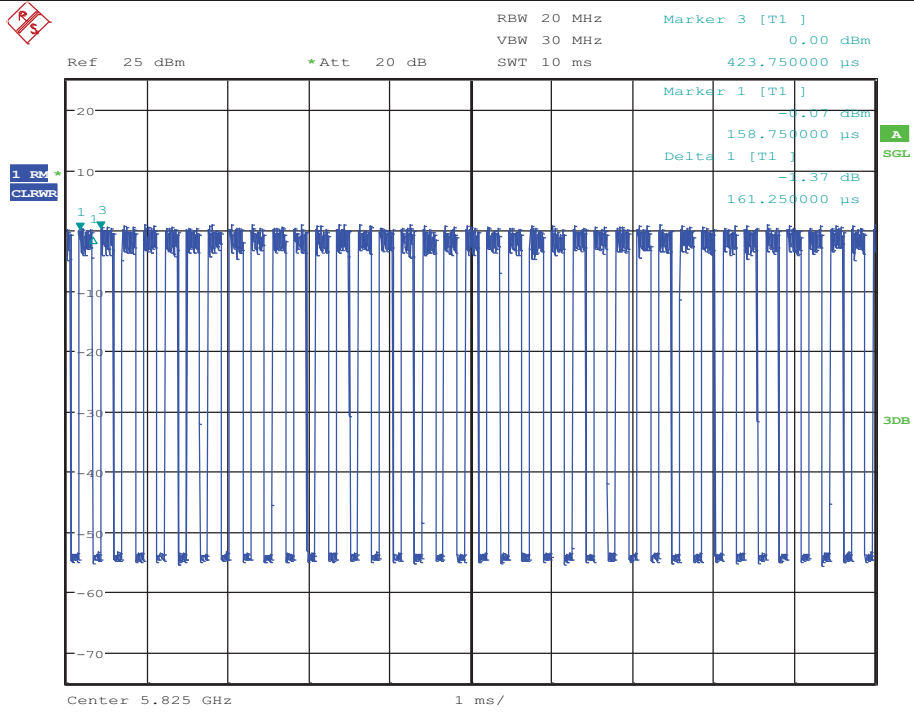
Date: 4.SEP.2017 20:01:18

### Duty Cycle\_11N20\_5785\_Ant2



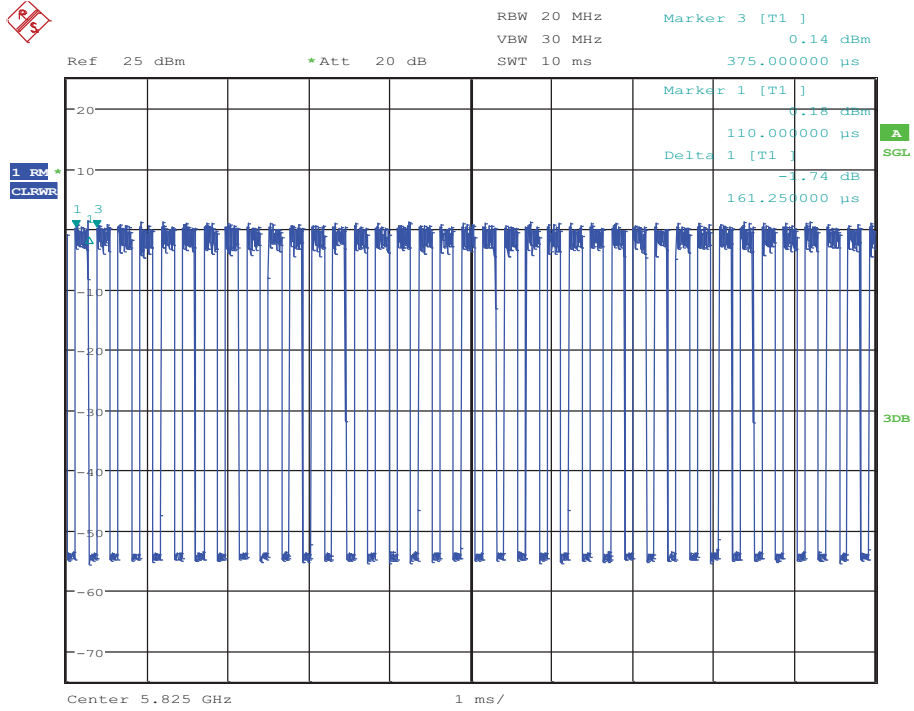
Date: 5.SEP.2017 14:44:36

### Duty Cycle\_11N20\_5825\_Ant1



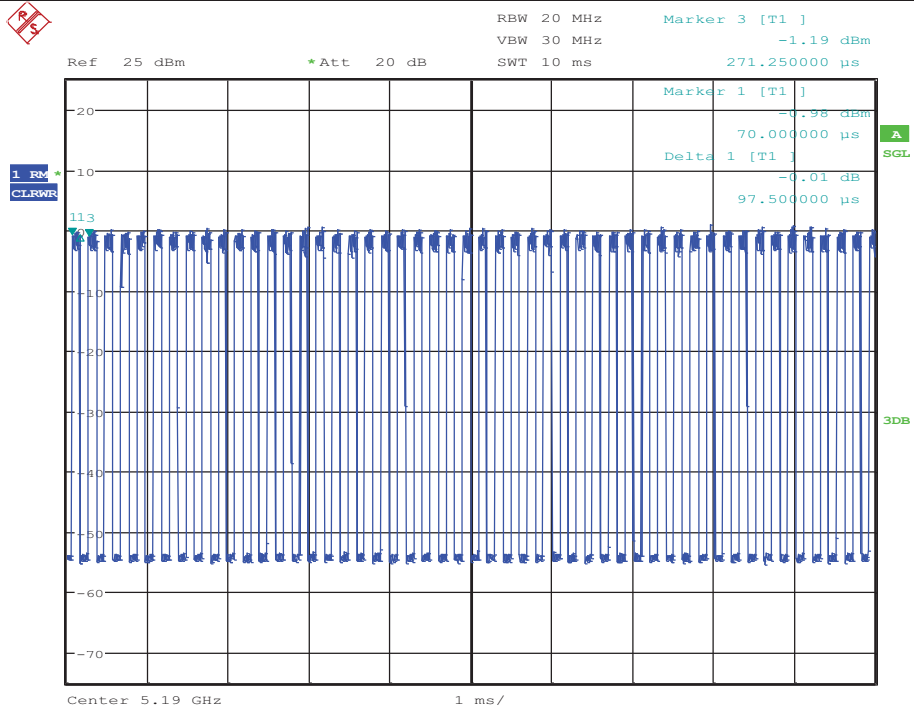
Date: 4.SEP.2017 20:05:40

### Duty Cycle\_11N20\_5825\_Ant2



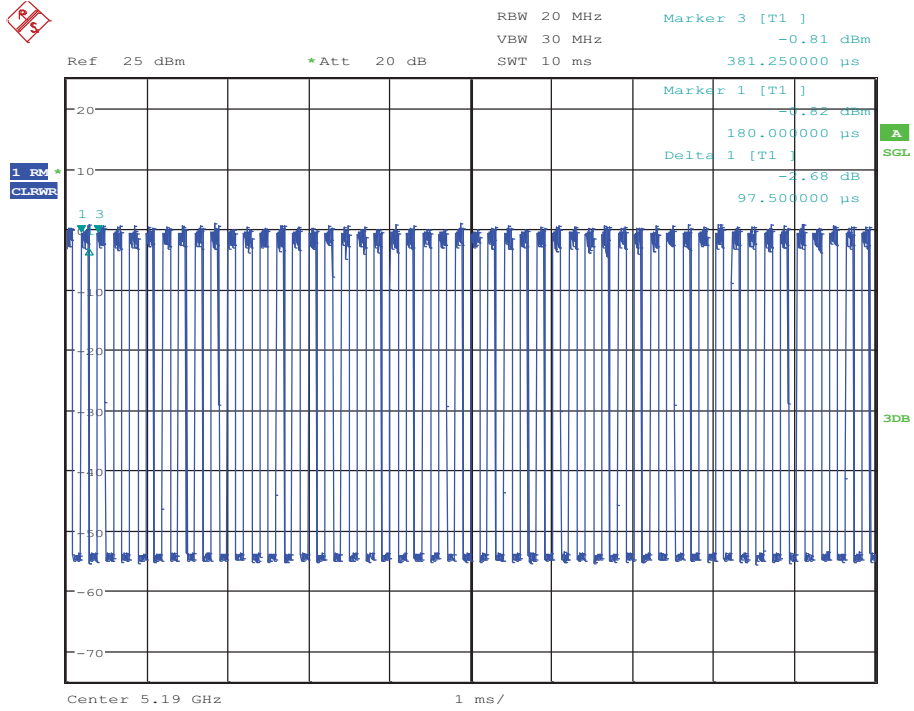
Date: 5.SEP.2017 14:49:02

### Duty Cycle\_11N40\_5190\_Ant1



Date: 4.SEP.2017 20:30:56

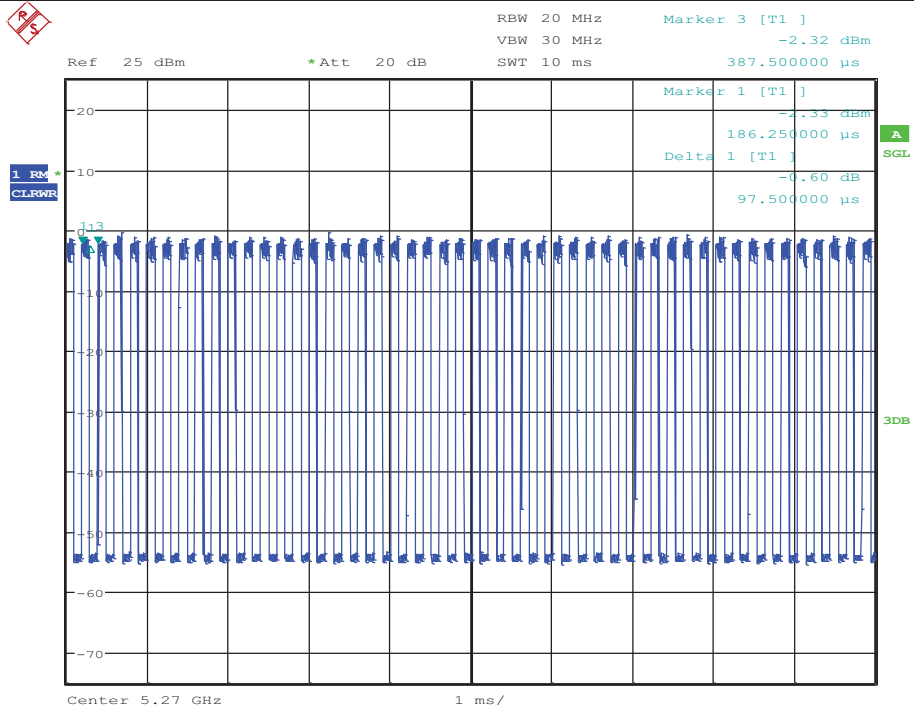
### Duty Cycle\_11N40\_5190\_Ant2



Date: 5.SEP.2017 15:00:22

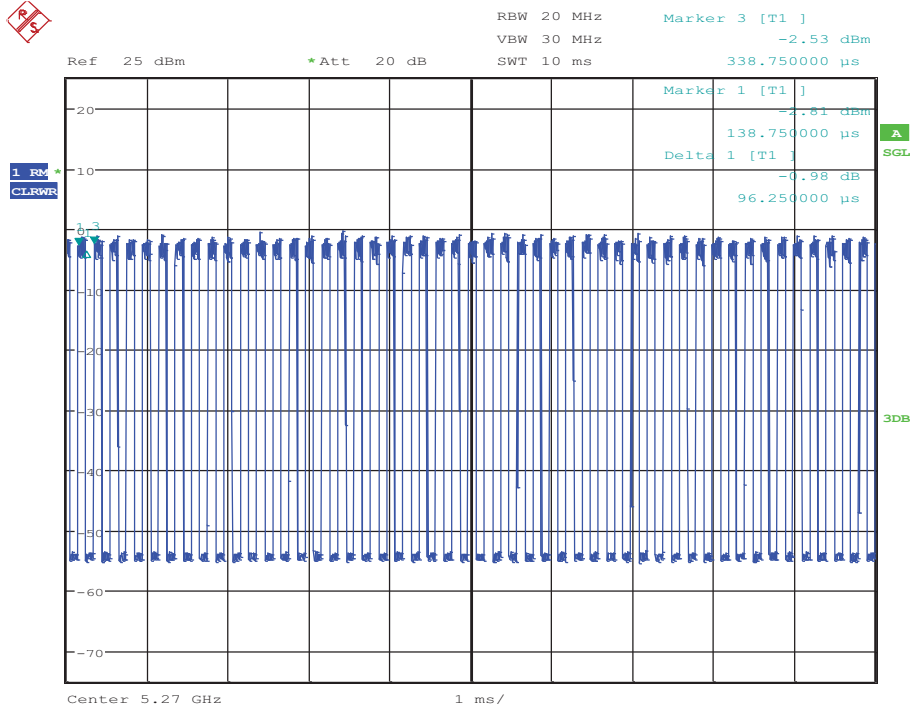


### Duty Cycle\_11N40\_5270\_Ant1

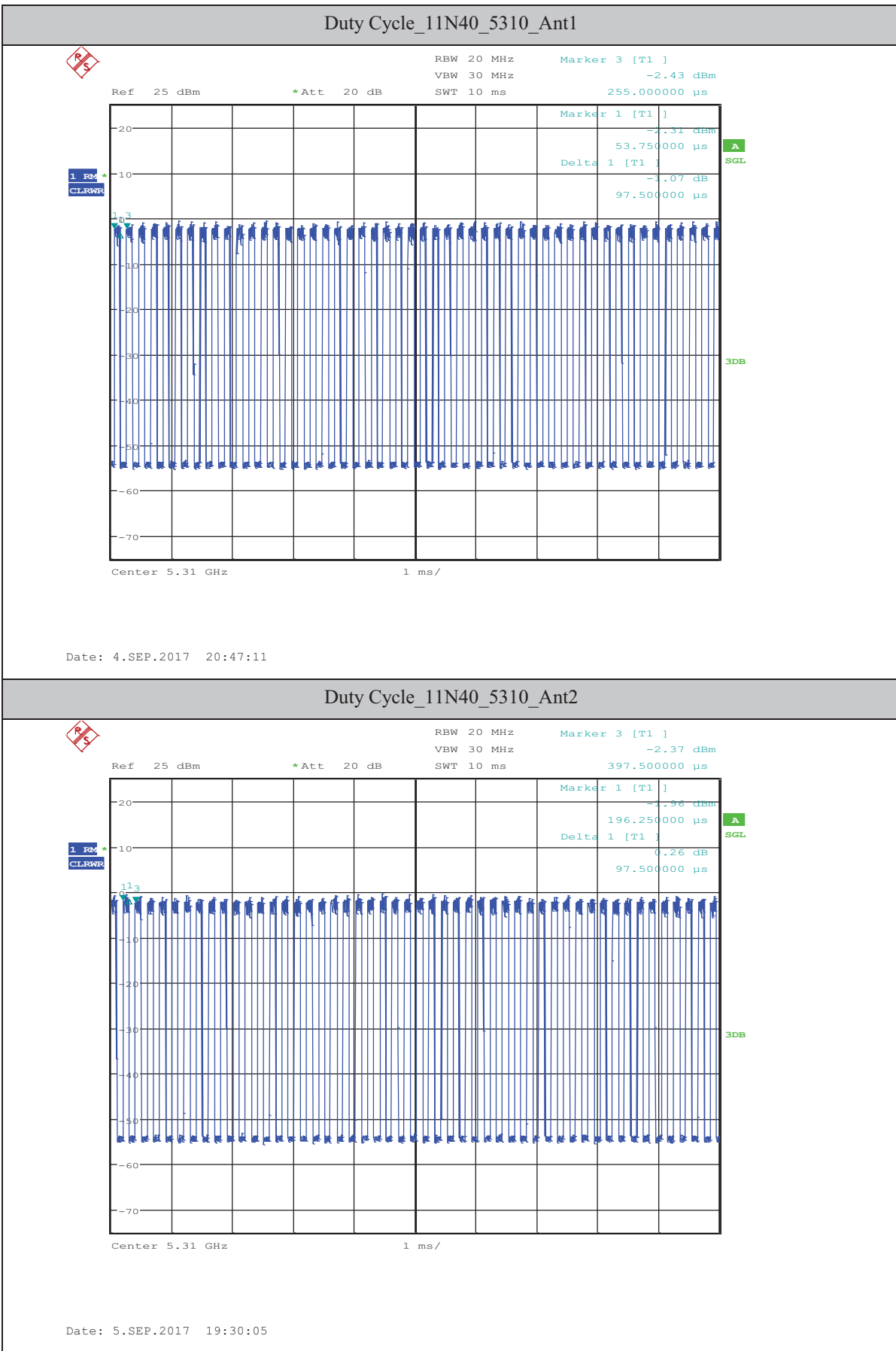


Date: 4.SEP.2017 20:40:13

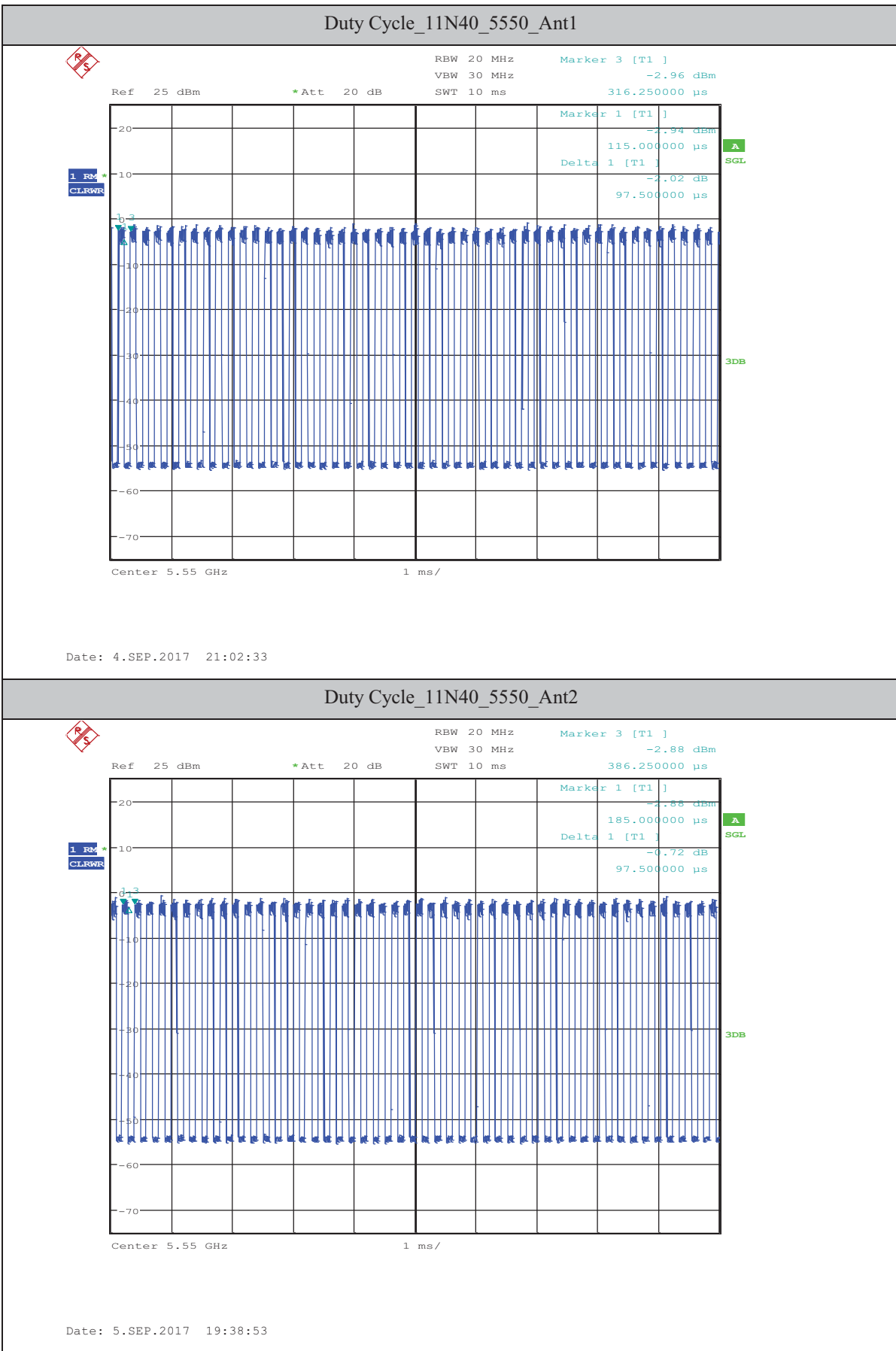
### Duty Cycle\_11N40\_5270\_Ant2



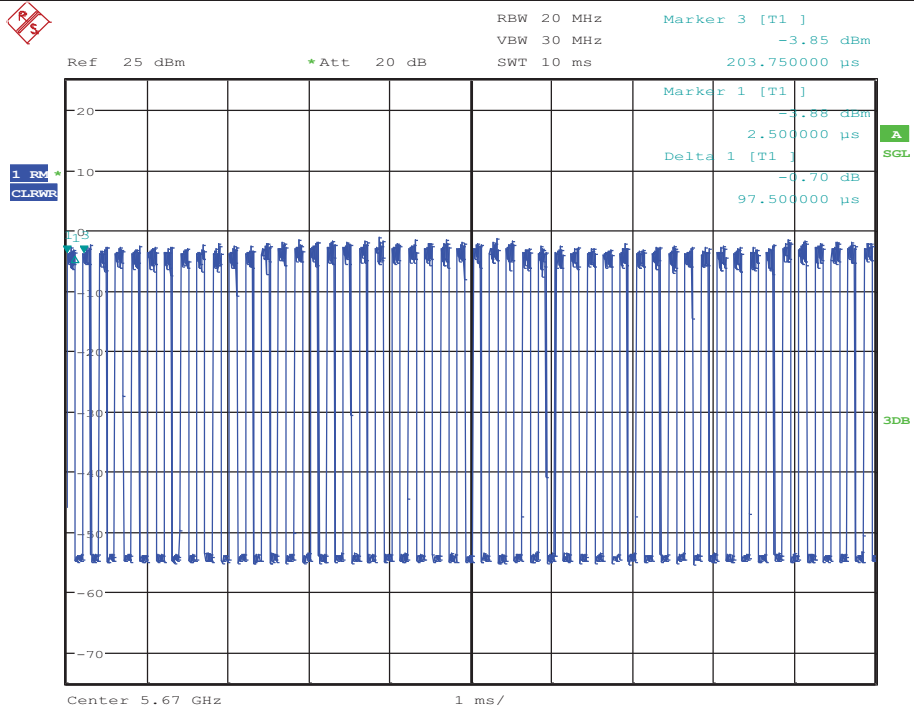
Date: 5.SEP.2017 19:23:58





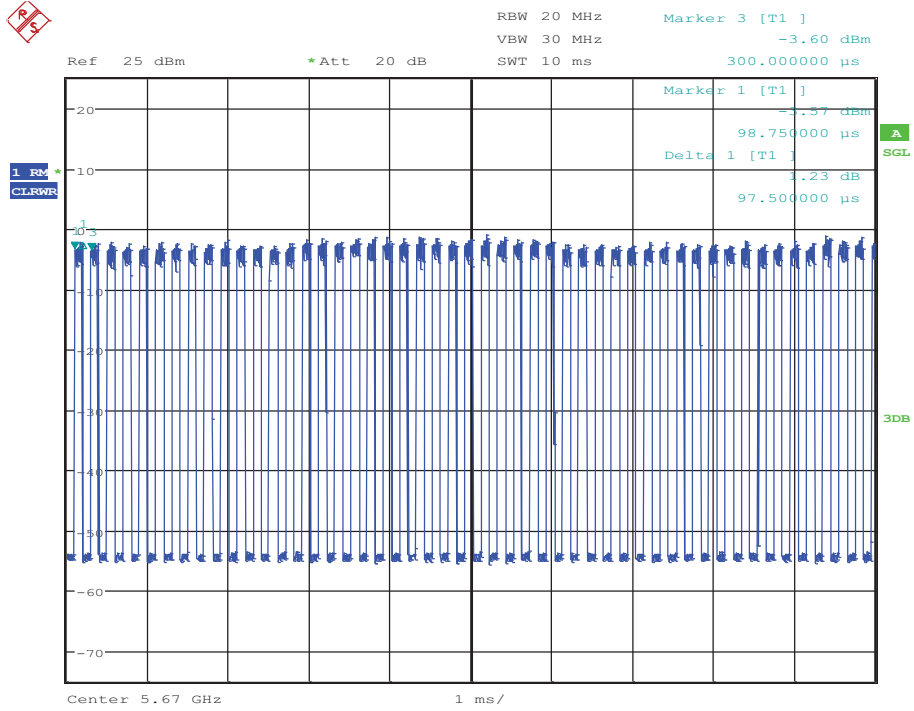


### Duty Cycle\_11N40\_5670\_Ant1



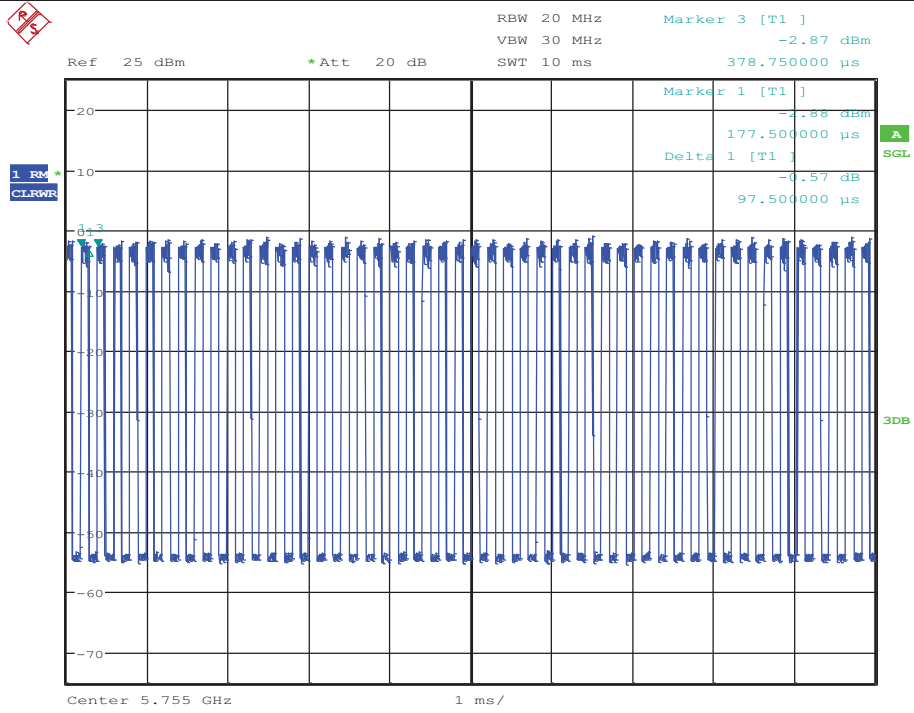
Date: 4.SEP.2017 21:06:38

### Duty Cycle\_11N40\_5670\_Ant2



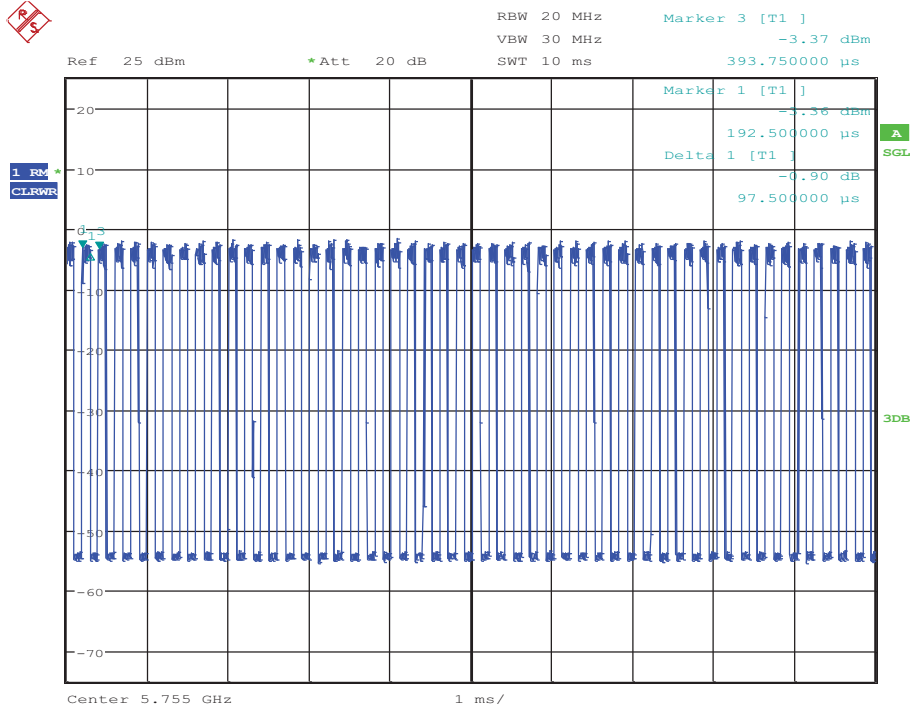
Date: 5.SEP.2017 19:42:47

### Duty Cycle\_11N40\_5755\_Ant1



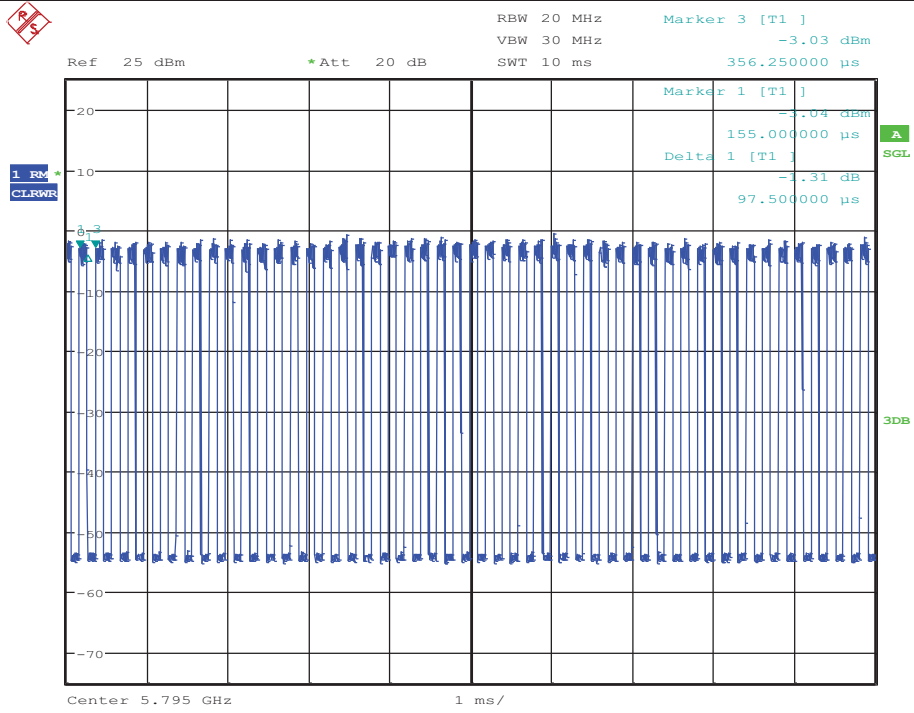
Date: 4.SEP.2017 21:11:06

### Duty Cycle\_11N40\_5755\_Ant2



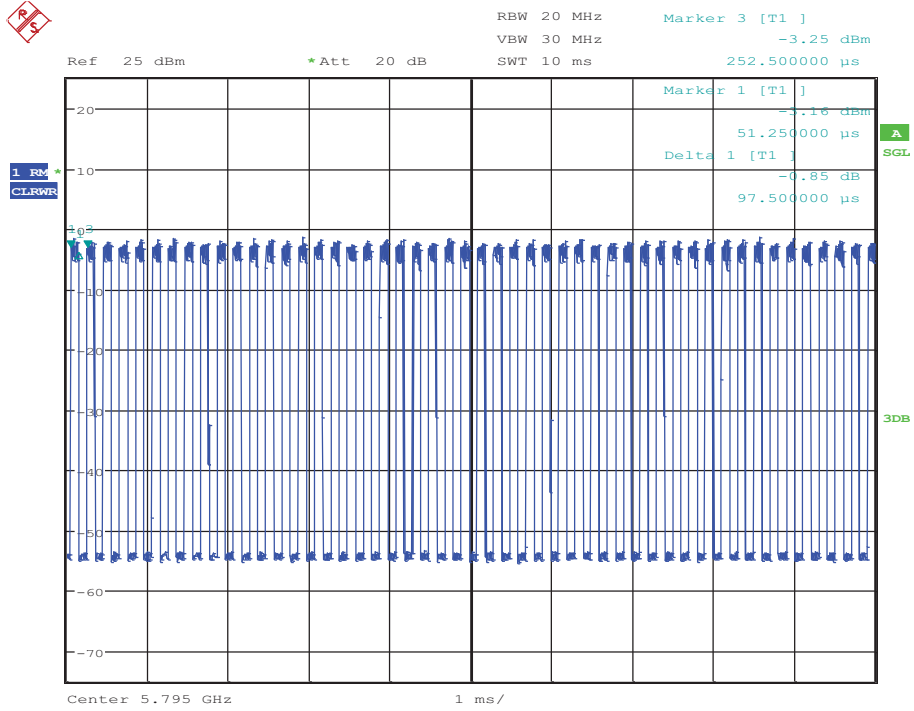
Date: 5.SEP.2017 19:47:21

### Duty Cycle\_11N40\_5795\_Ant1



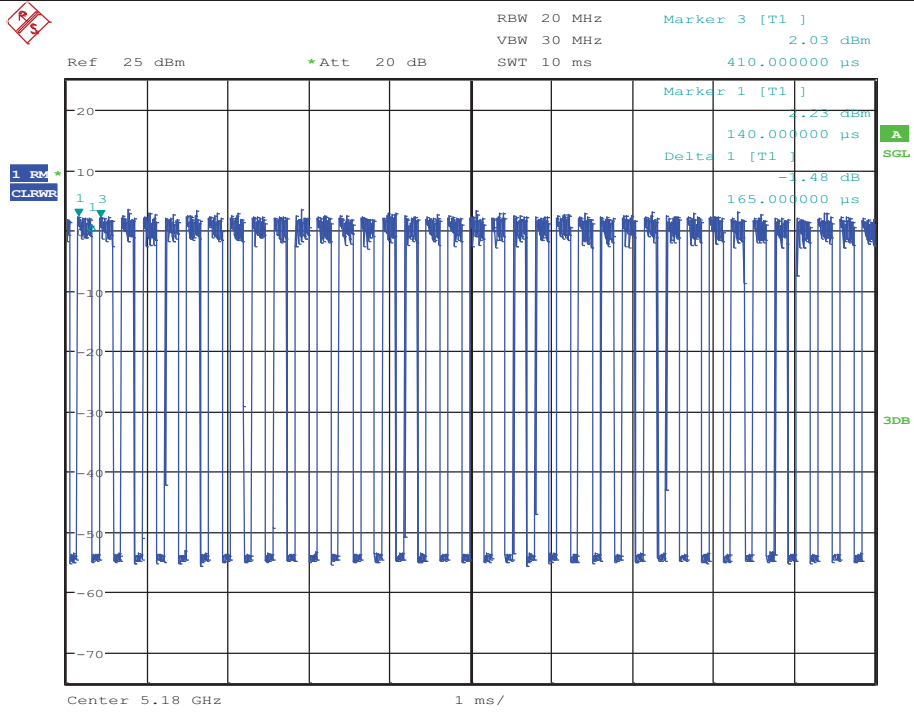
Date: 4.SEP.2017 21:15:30

### Duty Cycle\_11N40\_5795\_Ant2



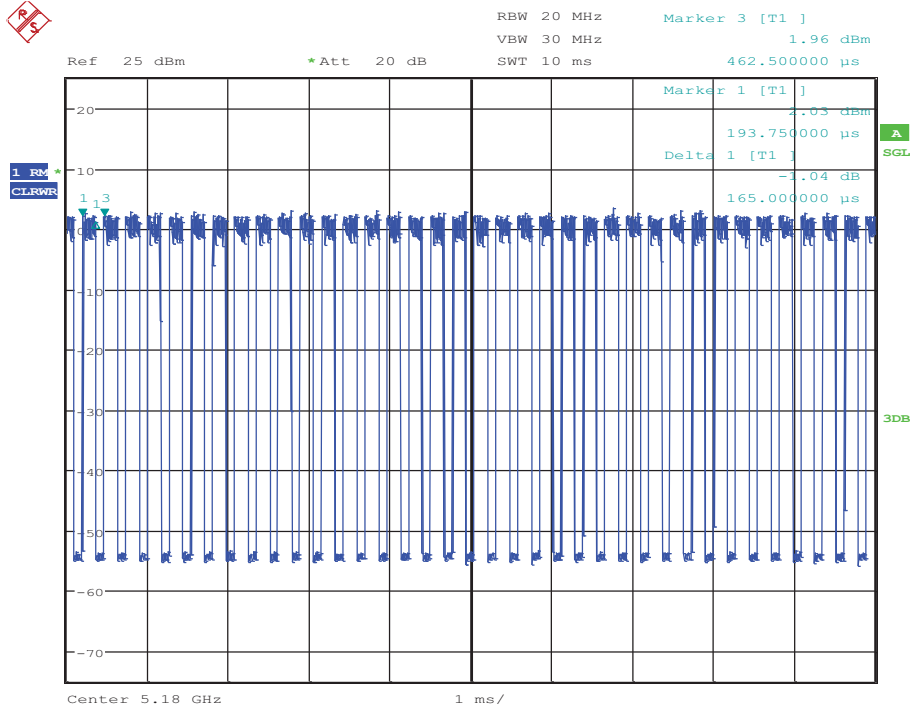
Date: 5.SEP.2017 19:51:45

### Duty Cycle\_11AC20\_5180\_Ant1

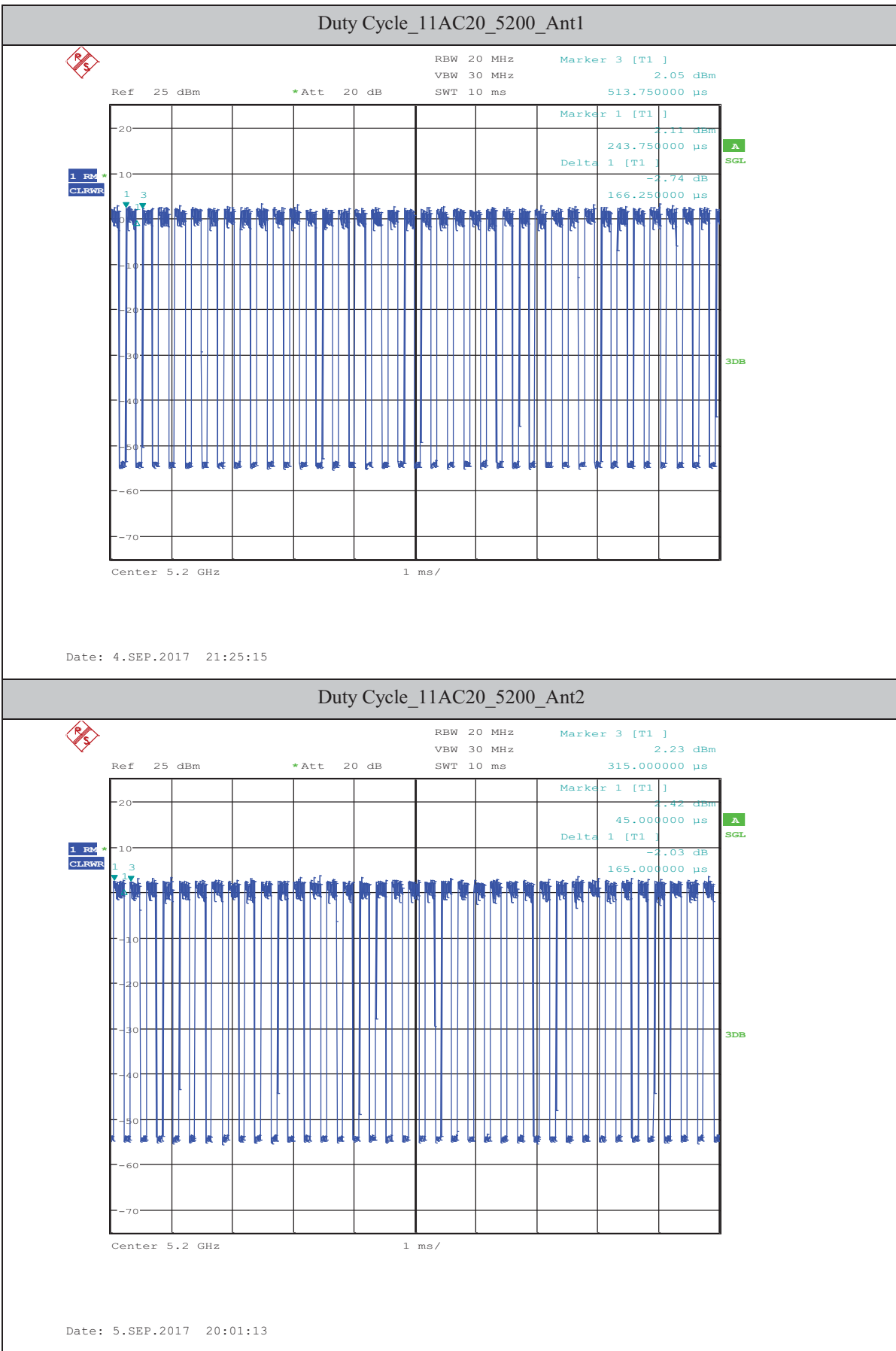


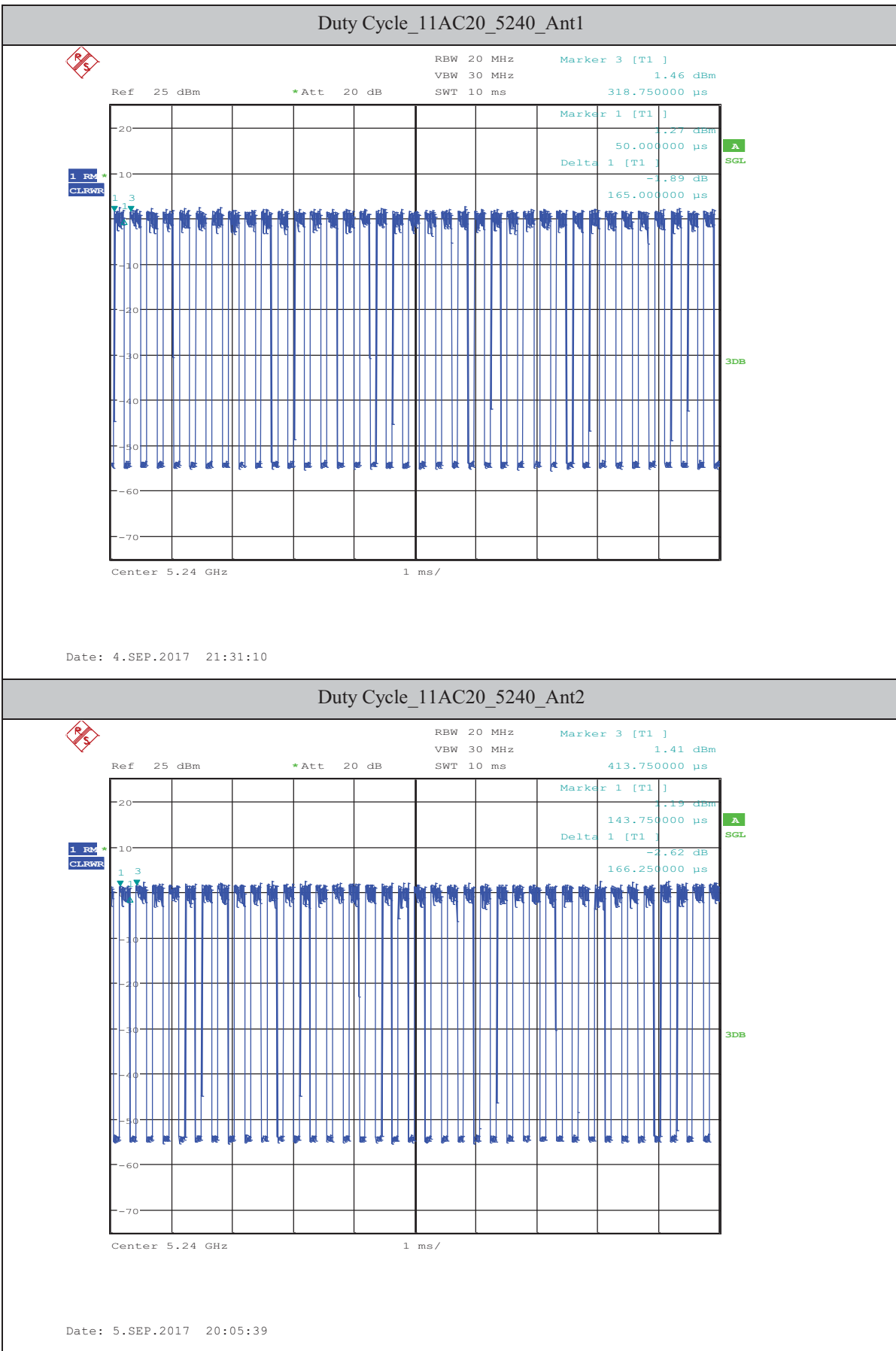
Date: 4.SEP.2017 21:20:15

### Duty Cycle\_11AC20\_5180\_Ant2

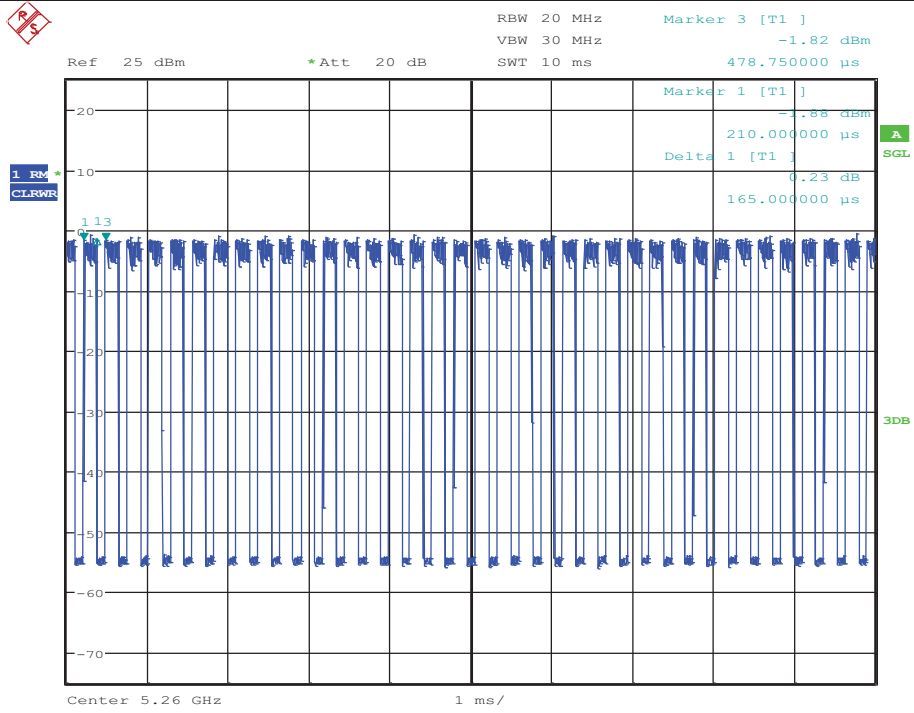


Date: 5.SEP.2017 19:56:13



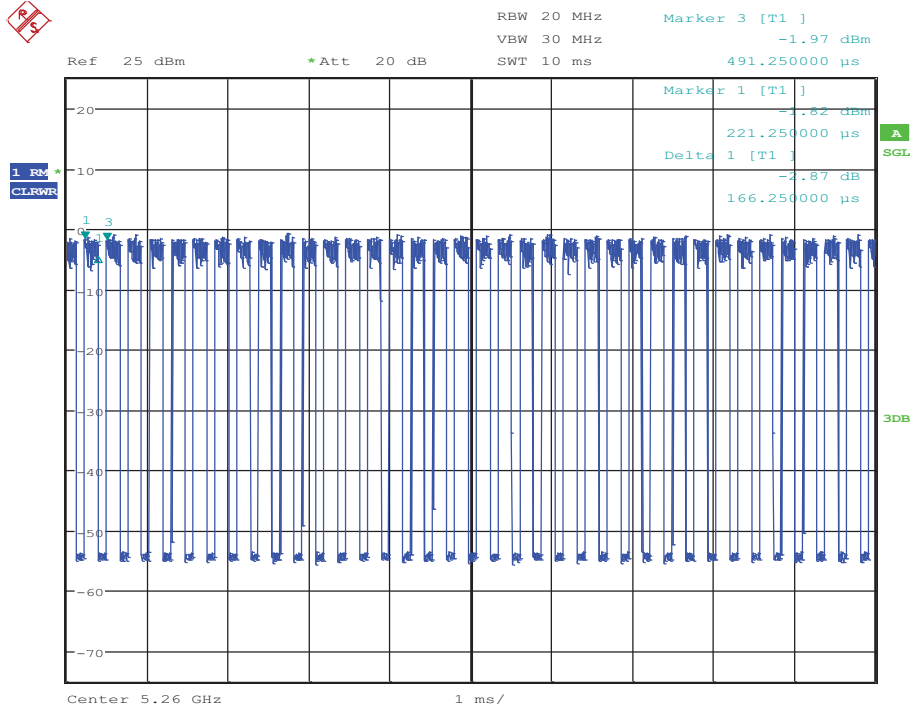


### Duty Cycle\_11AC20\_5260\_Ant1



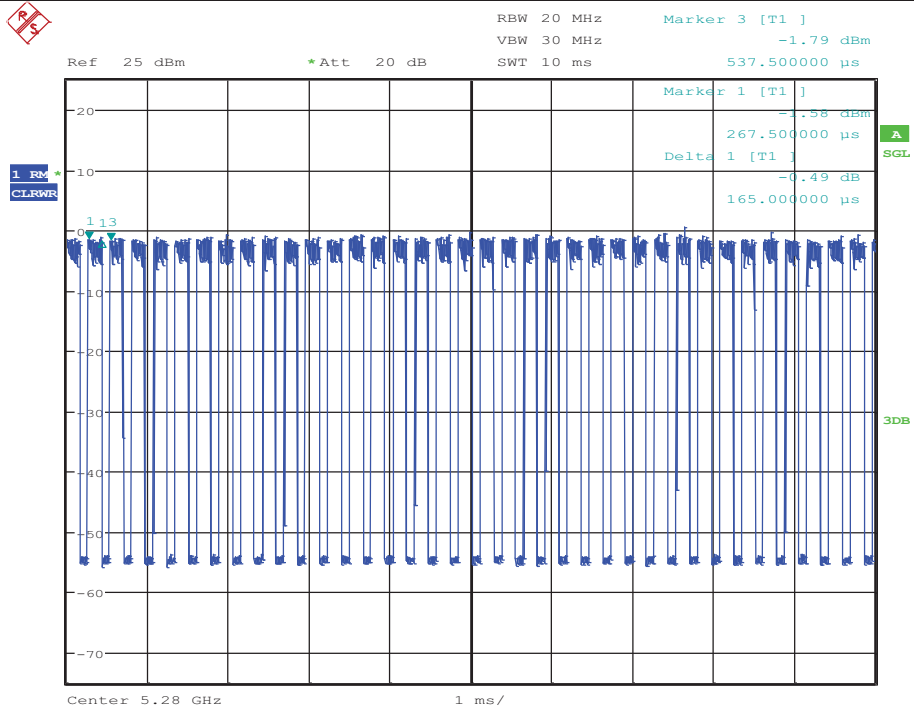
Date: 5.SEP.2017 08:46:05

### Duty Cycle\_11AC20\_5260\_Ant2



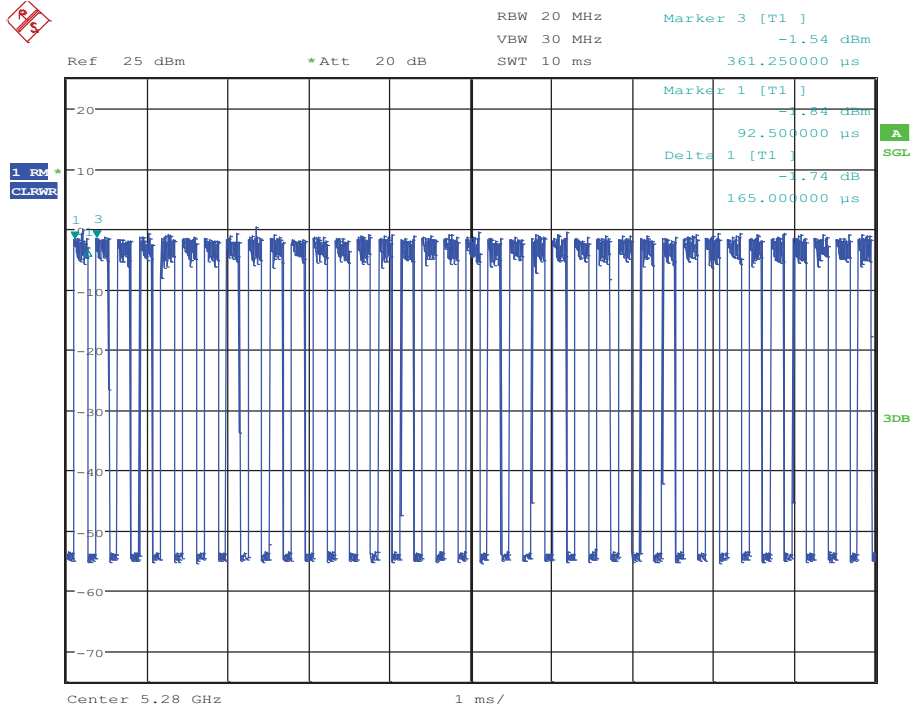
Date: 5.SEP.2017 20:10:39

### Duty Cycle\_11AC20\_5280\_Ant1



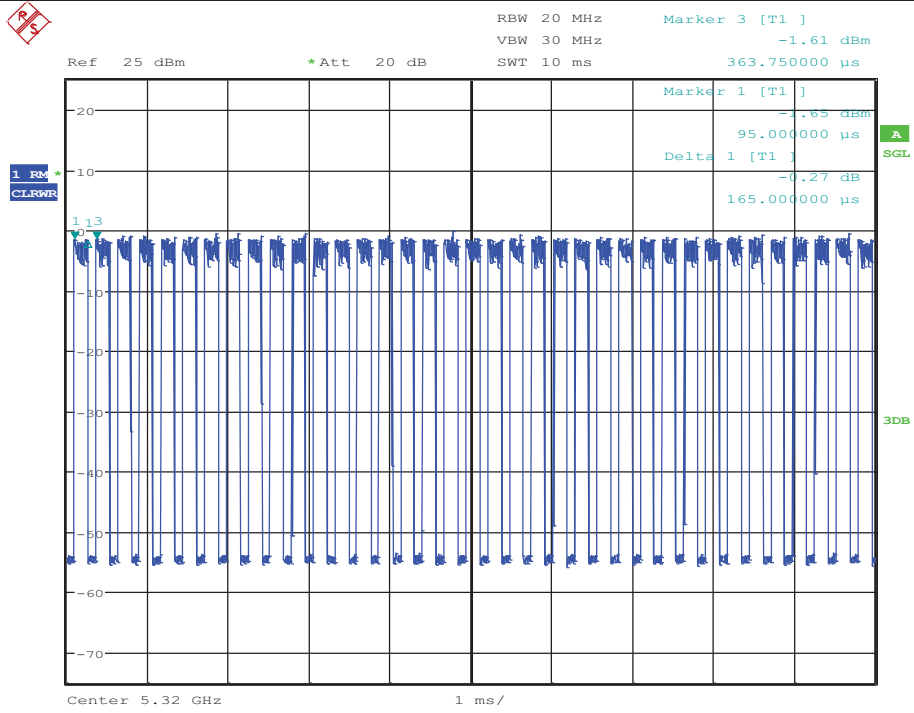
Date: 5.SEP.2017 08:51:22

### Duty Cycle\_11AC20\_5280\_Ant2



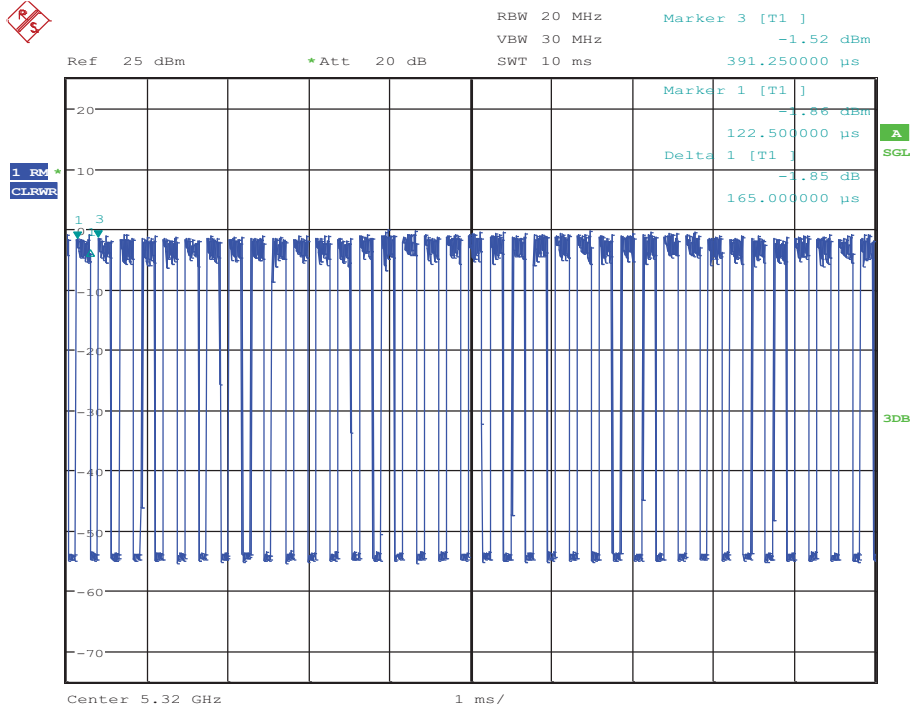
Date: 5.SEP.2017 20:16:13

### Duty Cycle\_11AC20\_5320\_Ant1



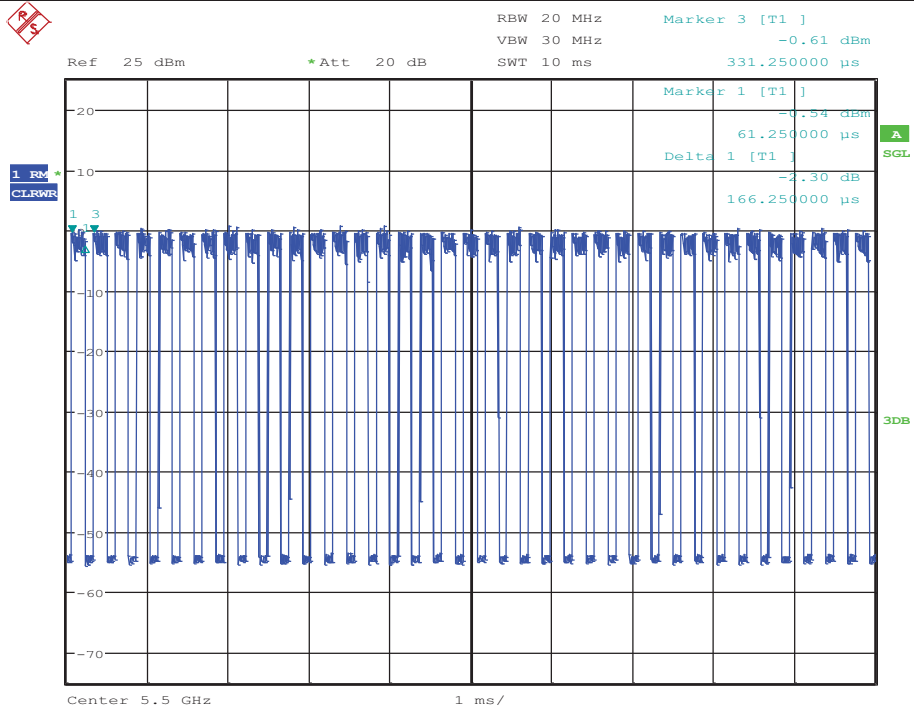
Date: 5.SEP.2017 08:55:50

### Duty Cycle\_11AC20\_5320\_Ant2



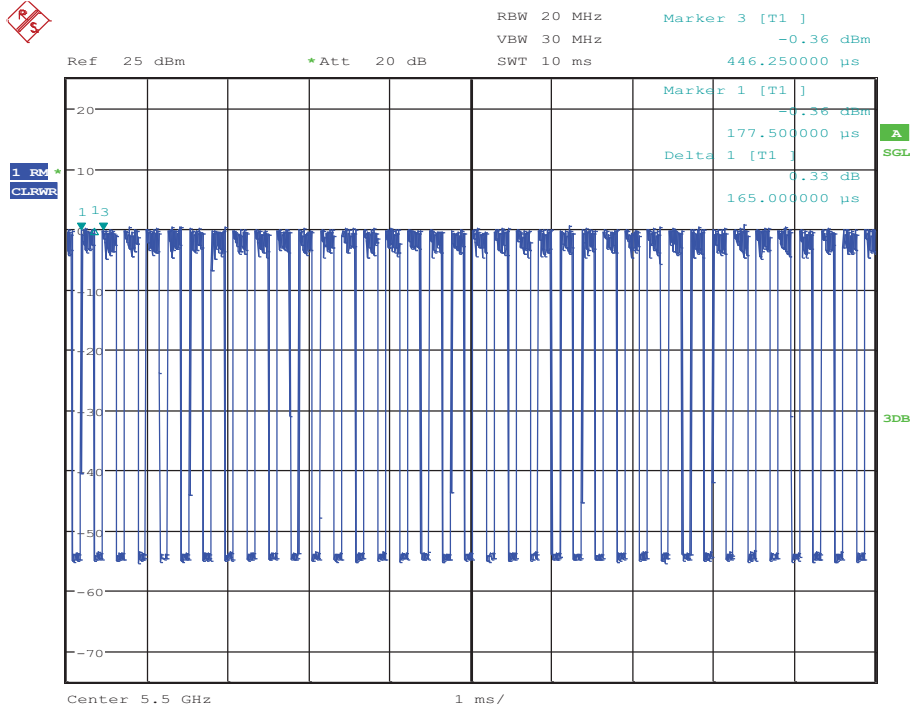
Date: 5.SEP.2017 20:20:40

### Duty Cycle\_11AC20\_5500\_Ant1

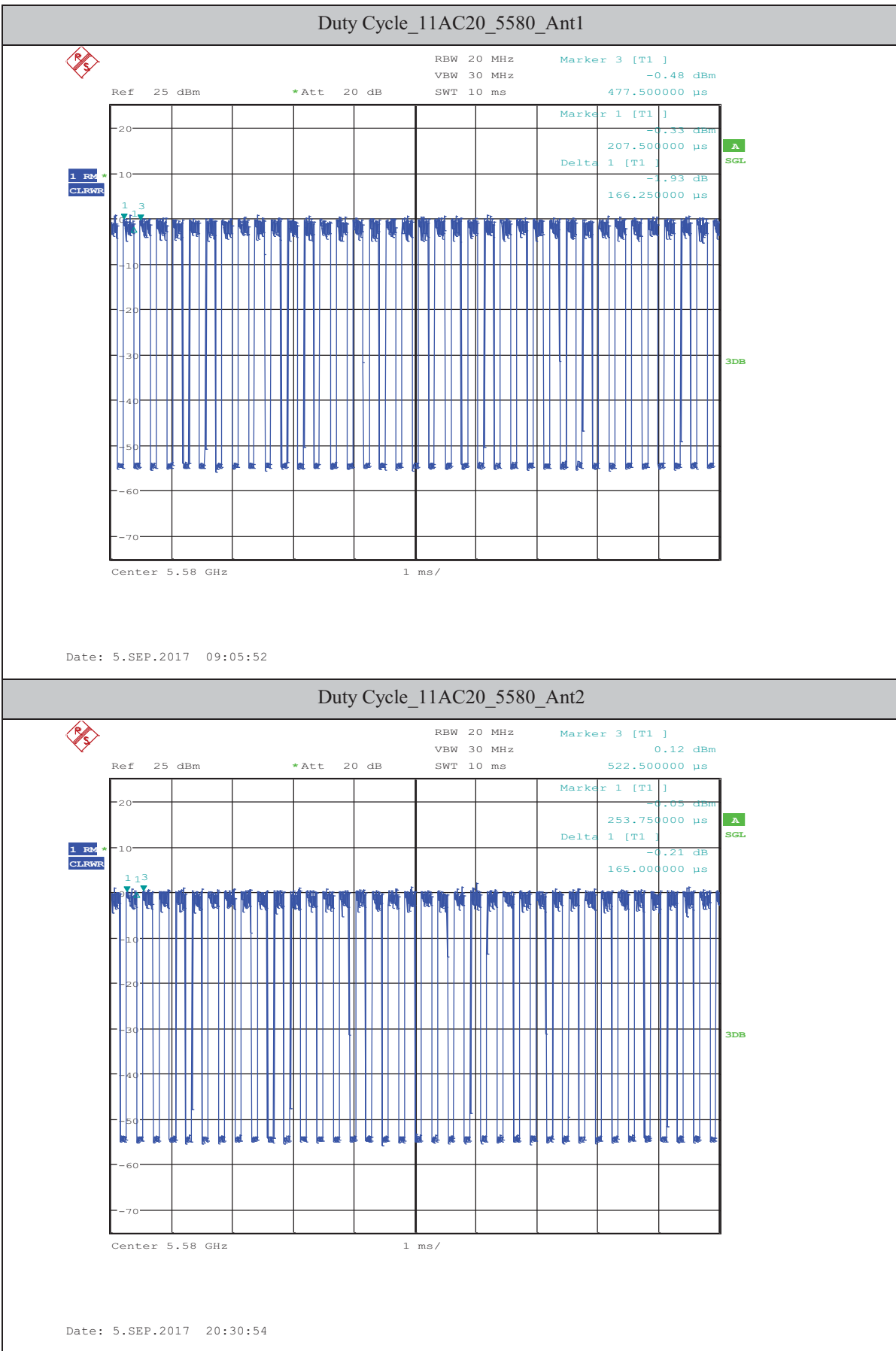


Date: 5.SEP.2017 09:00:51

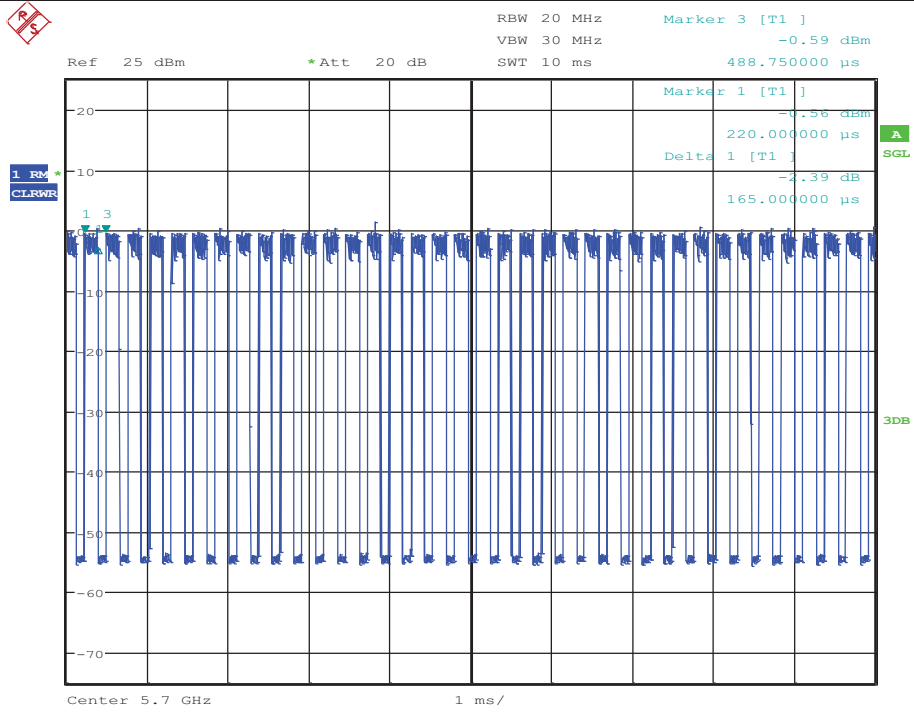
### Duty Cycle\_11AC20\_5500\_Ant2



Date: 5.SEP.2017 20:25:47

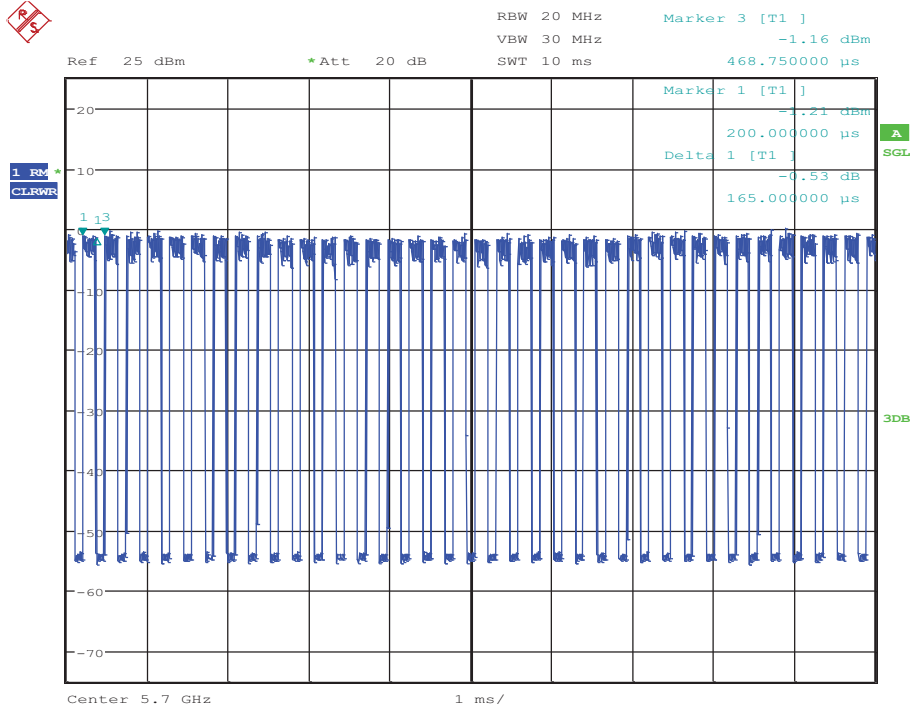


### Duty Cycle\_11AC20\_5700\_Ant1



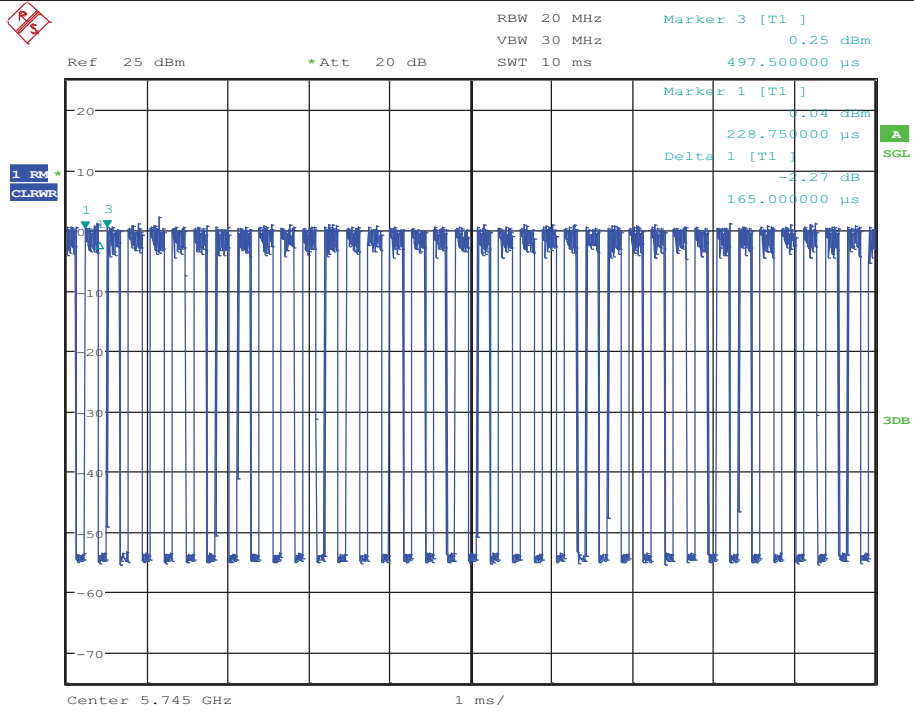
Date: 5.SEP.2017 09:10:19

### Duty Cycle\_11AC20\_5700\_Ant2



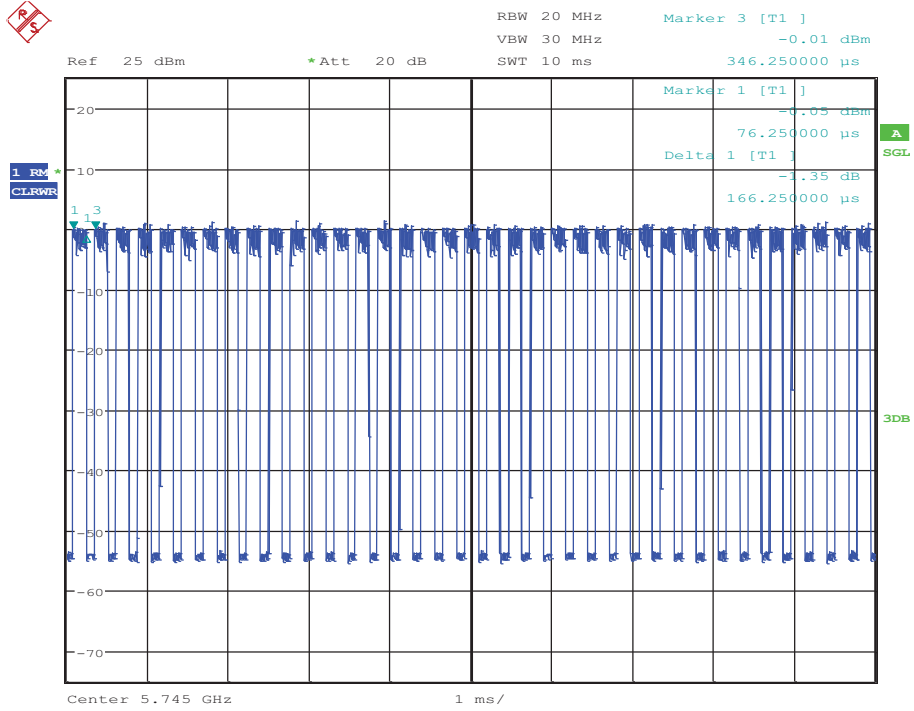
Date: 5.SEP.2017 20:35:22

### Duty Cycle\_11AC20\_5745\_Ant1

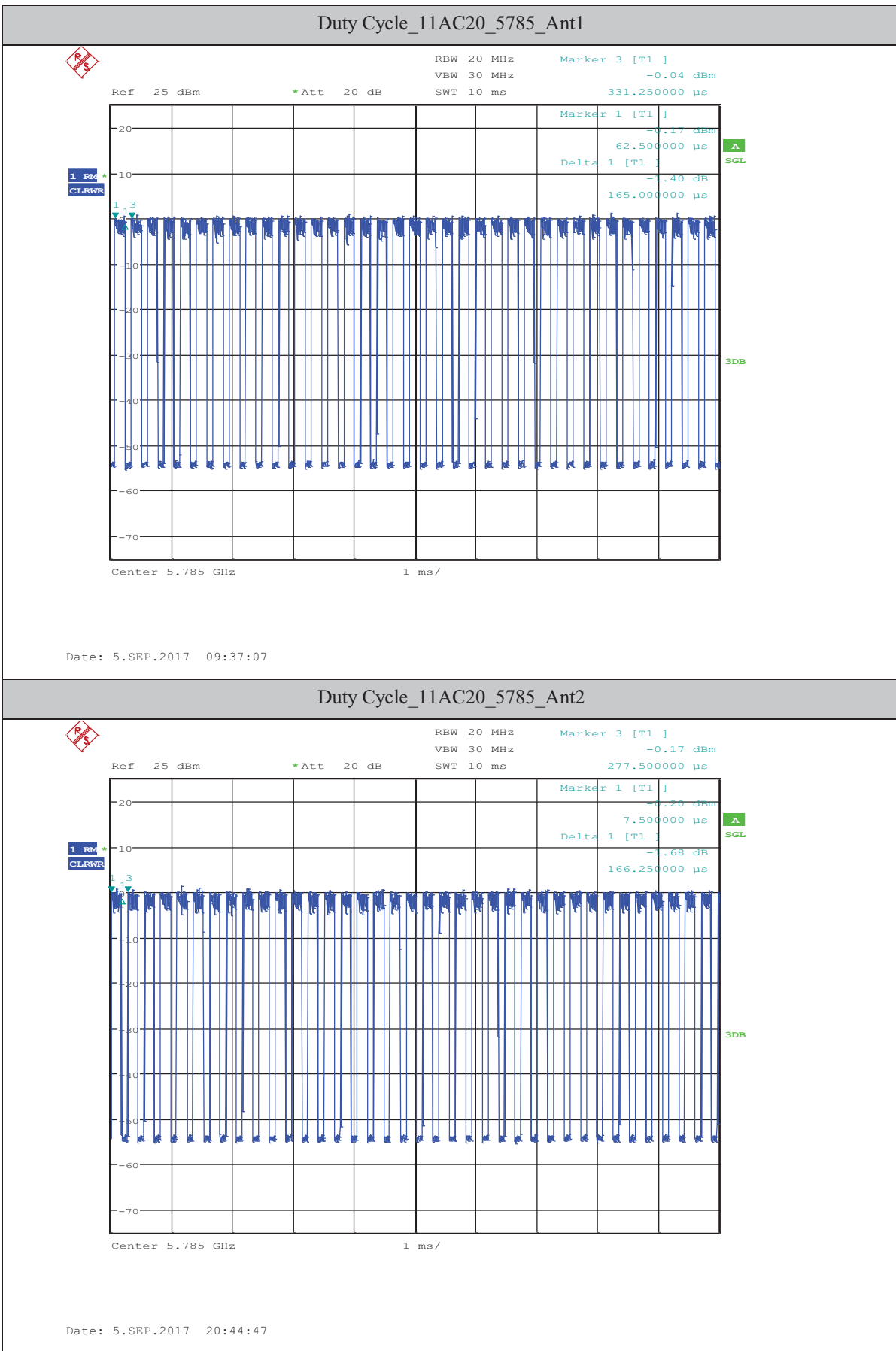


Date: 5.SEP.2017 09:33:03

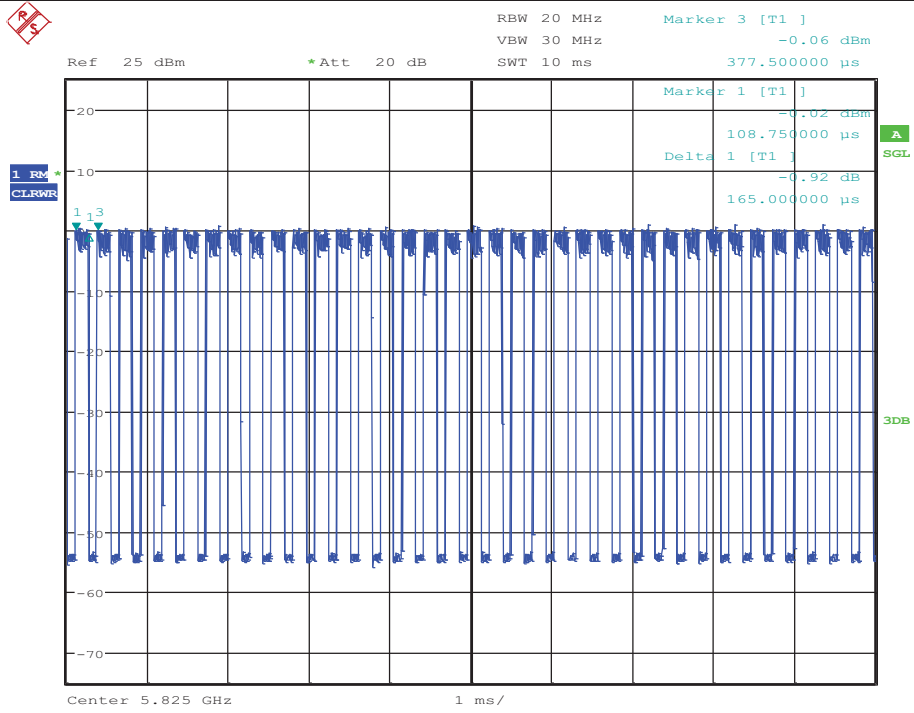
### Duty Cycle\_11AC20\_5745\_Ant2



Date: 5.SEP.2017 20:40:35

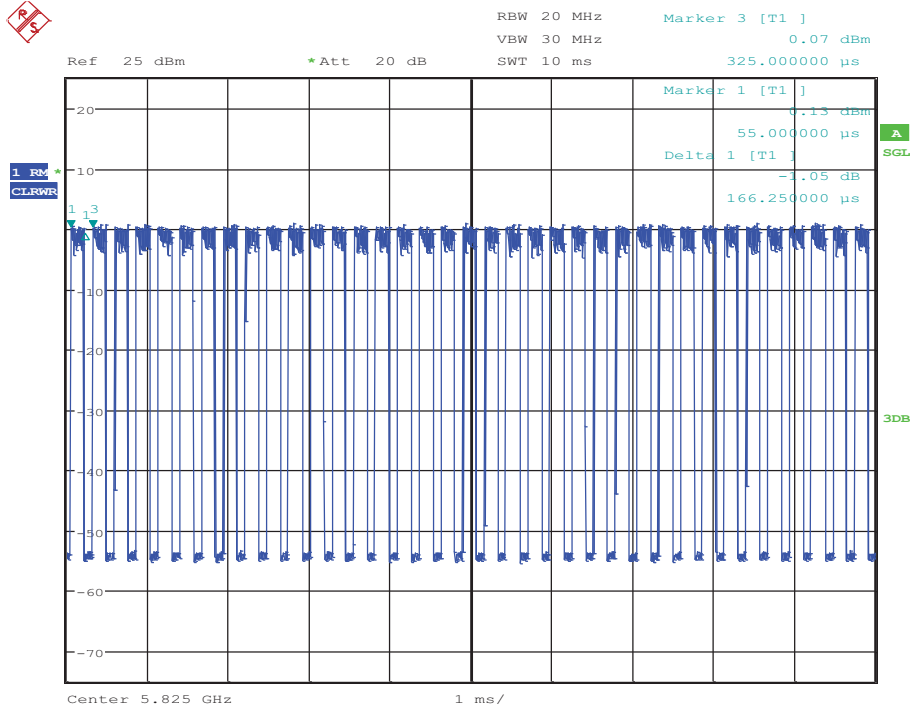


### Duty Cycle\_11AC20\_5825\_Ant1



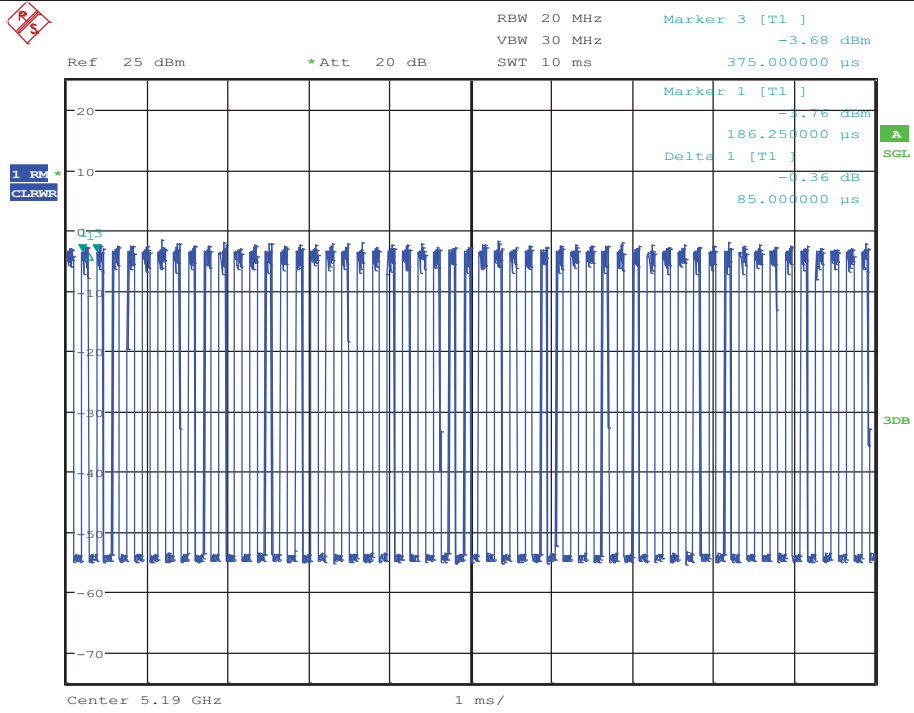
Date: 5.SEP.2017 09:40:44

### Duty Cycle\_11AC20\_5825\_Ant2



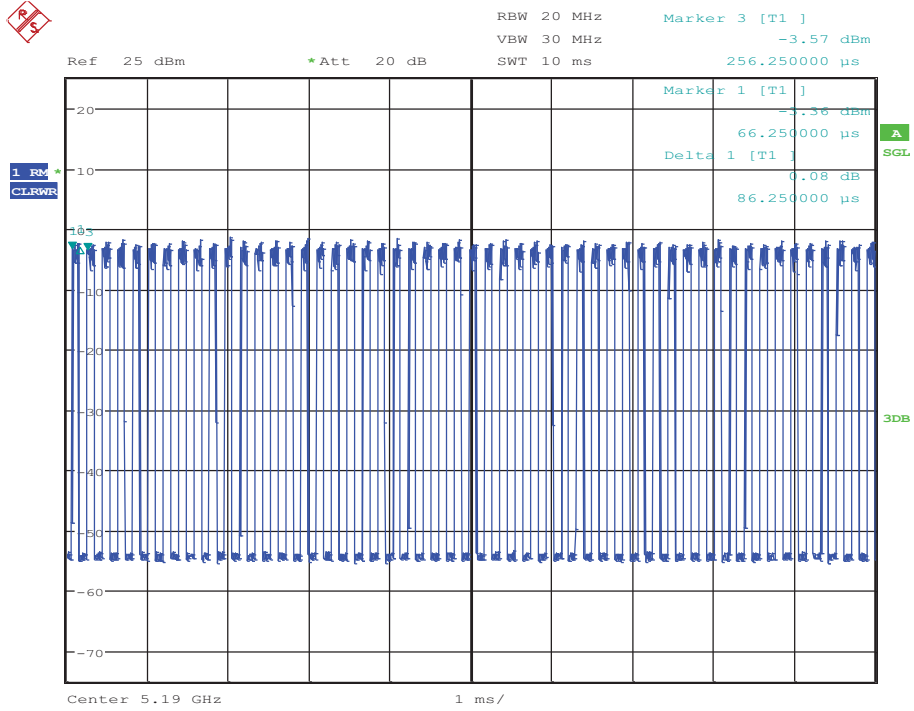
Date: 5.SEP.2017 20:48:31

### Duty Cycle\_11AC40\_5190\_Ant1

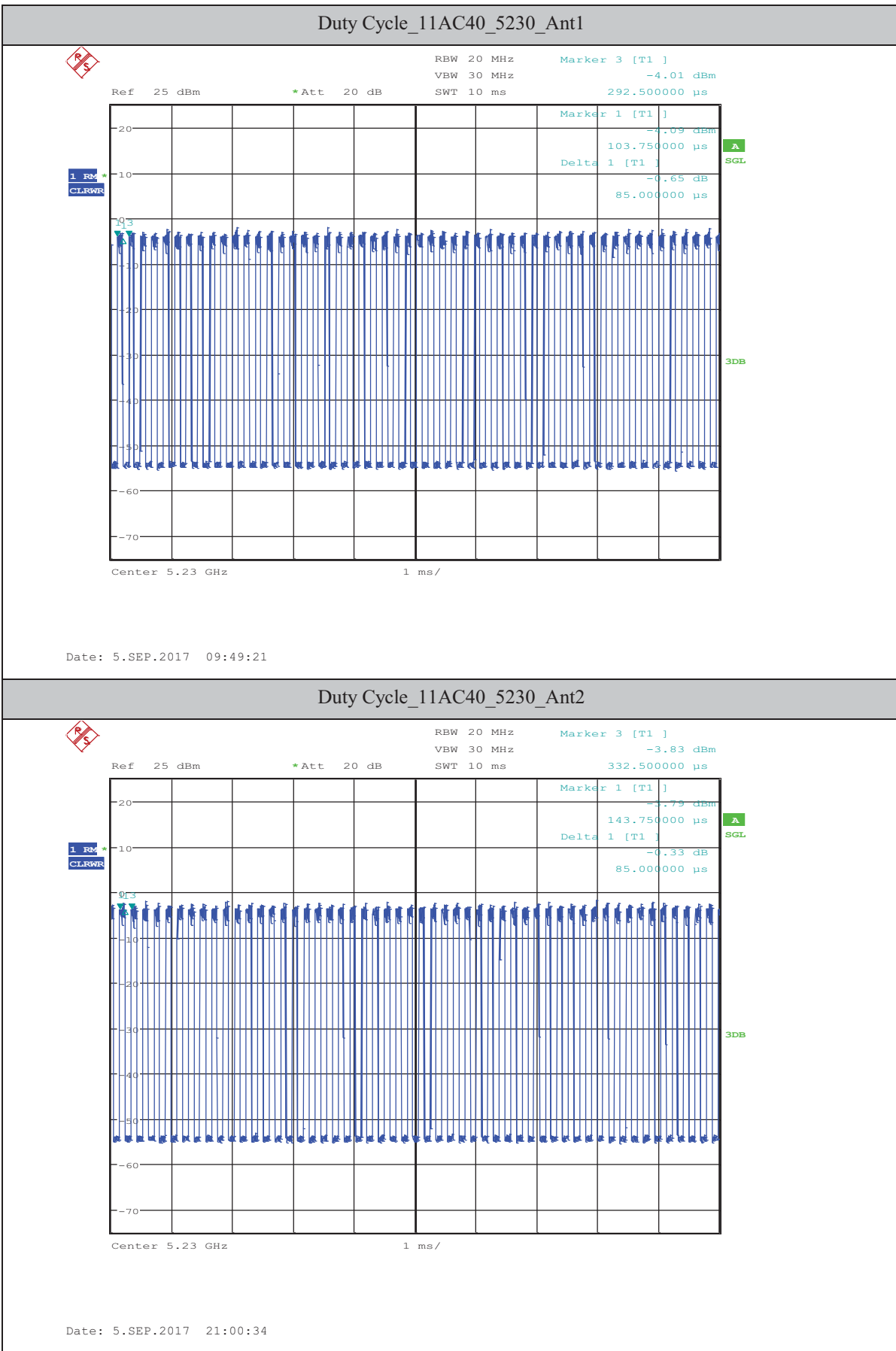


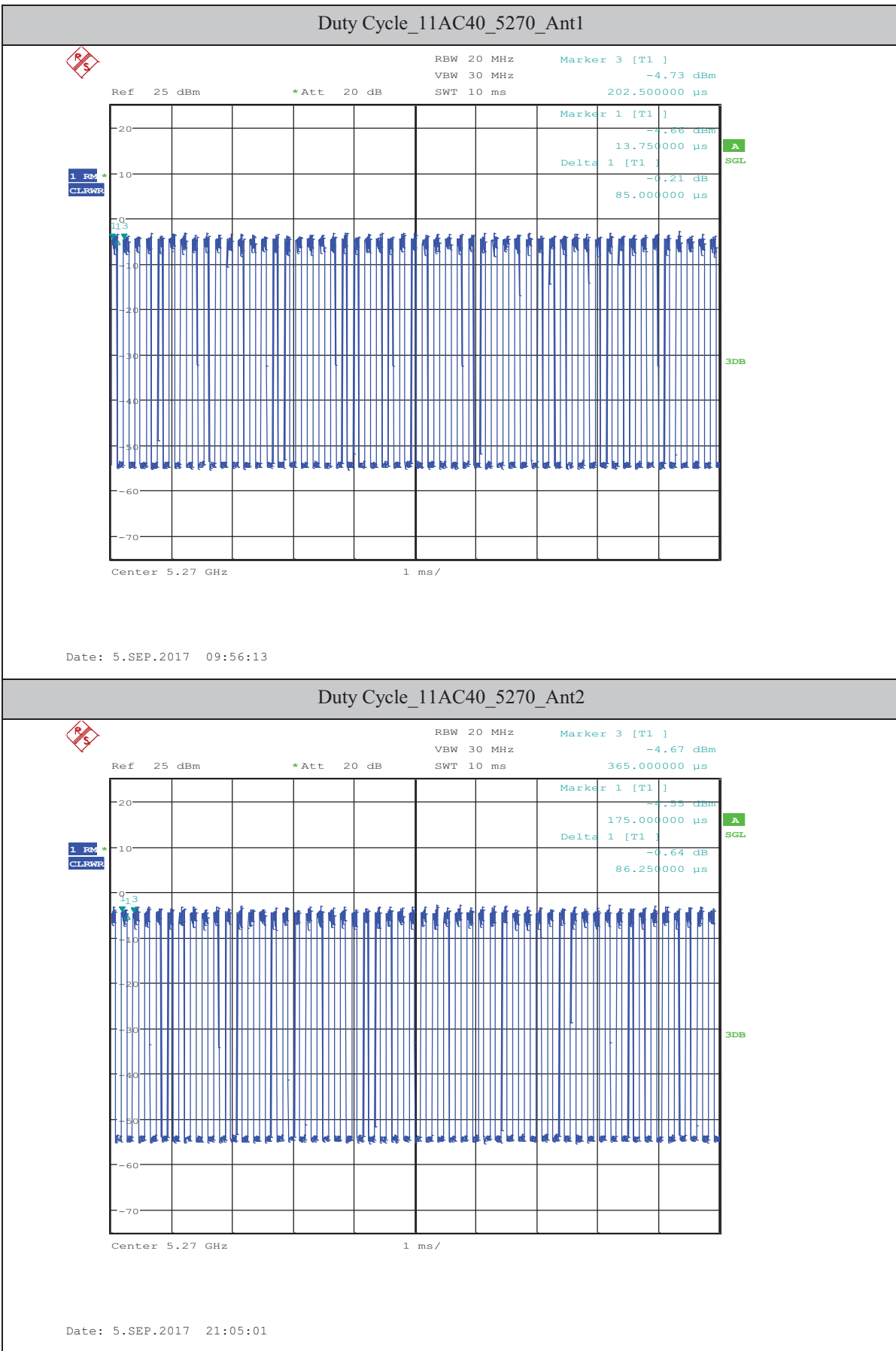
Date: 5.SEP.2017 09:44:52

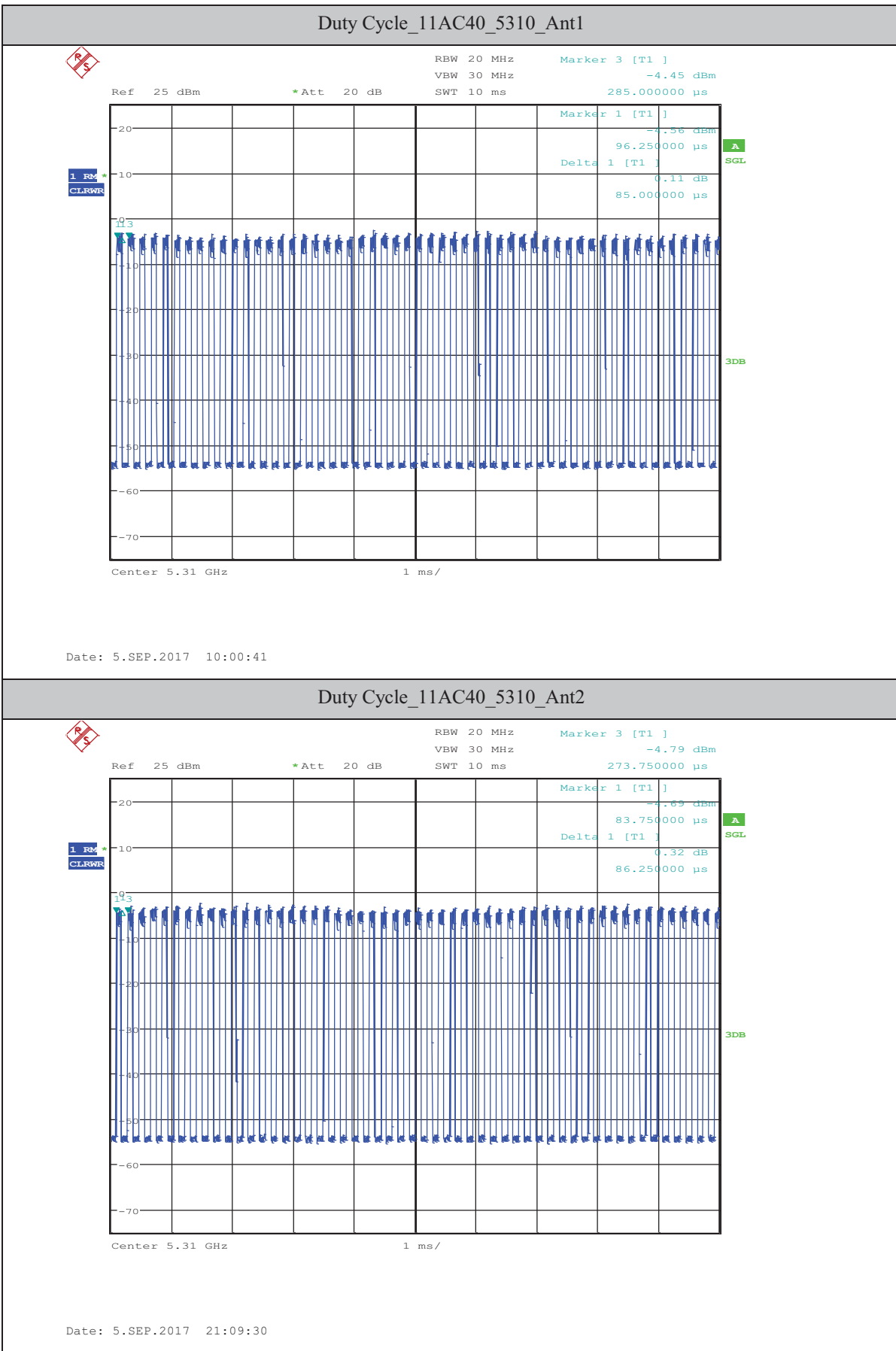
### Duty Cycle\_11AC40\_5190\_Ant2

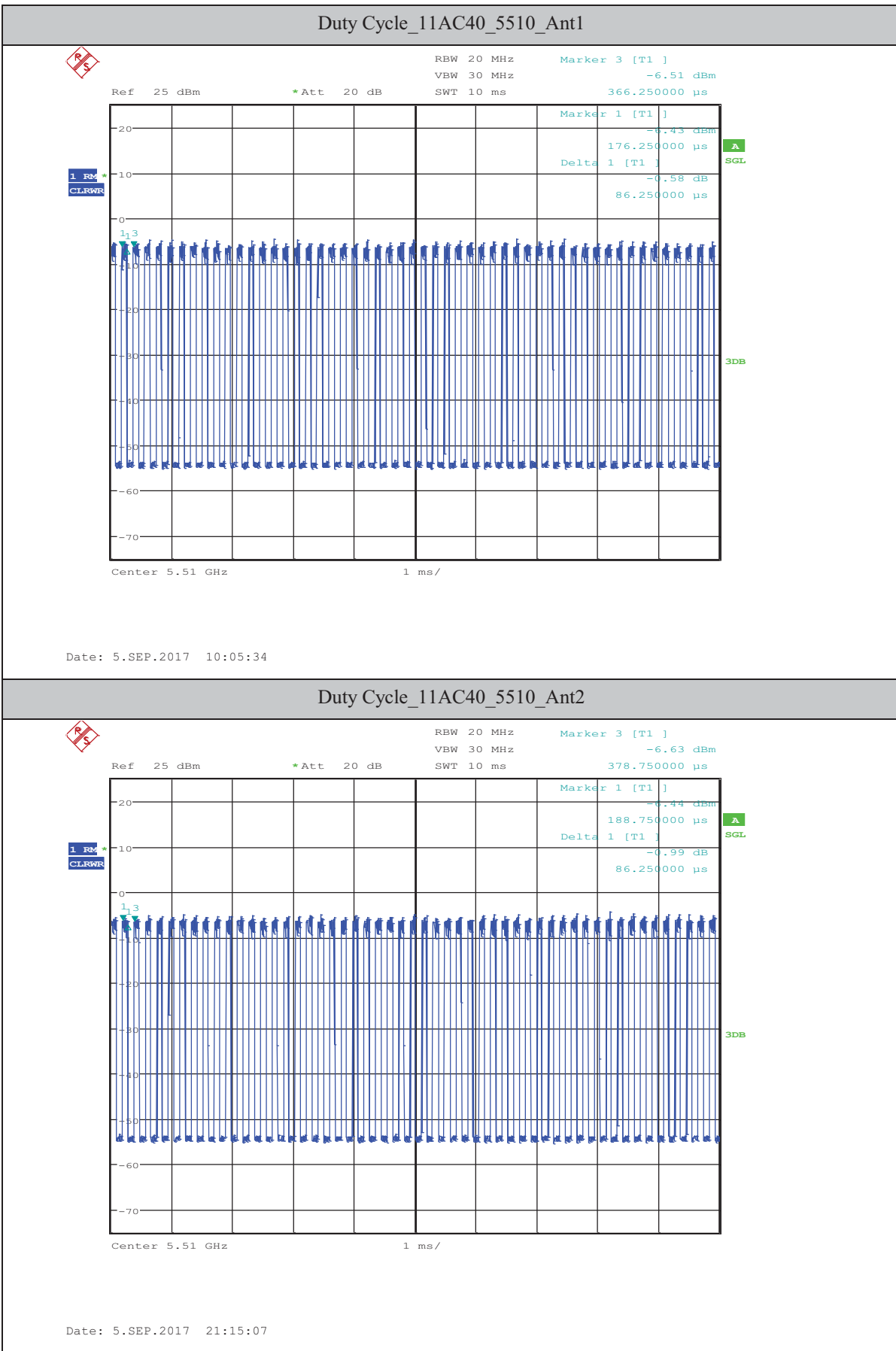


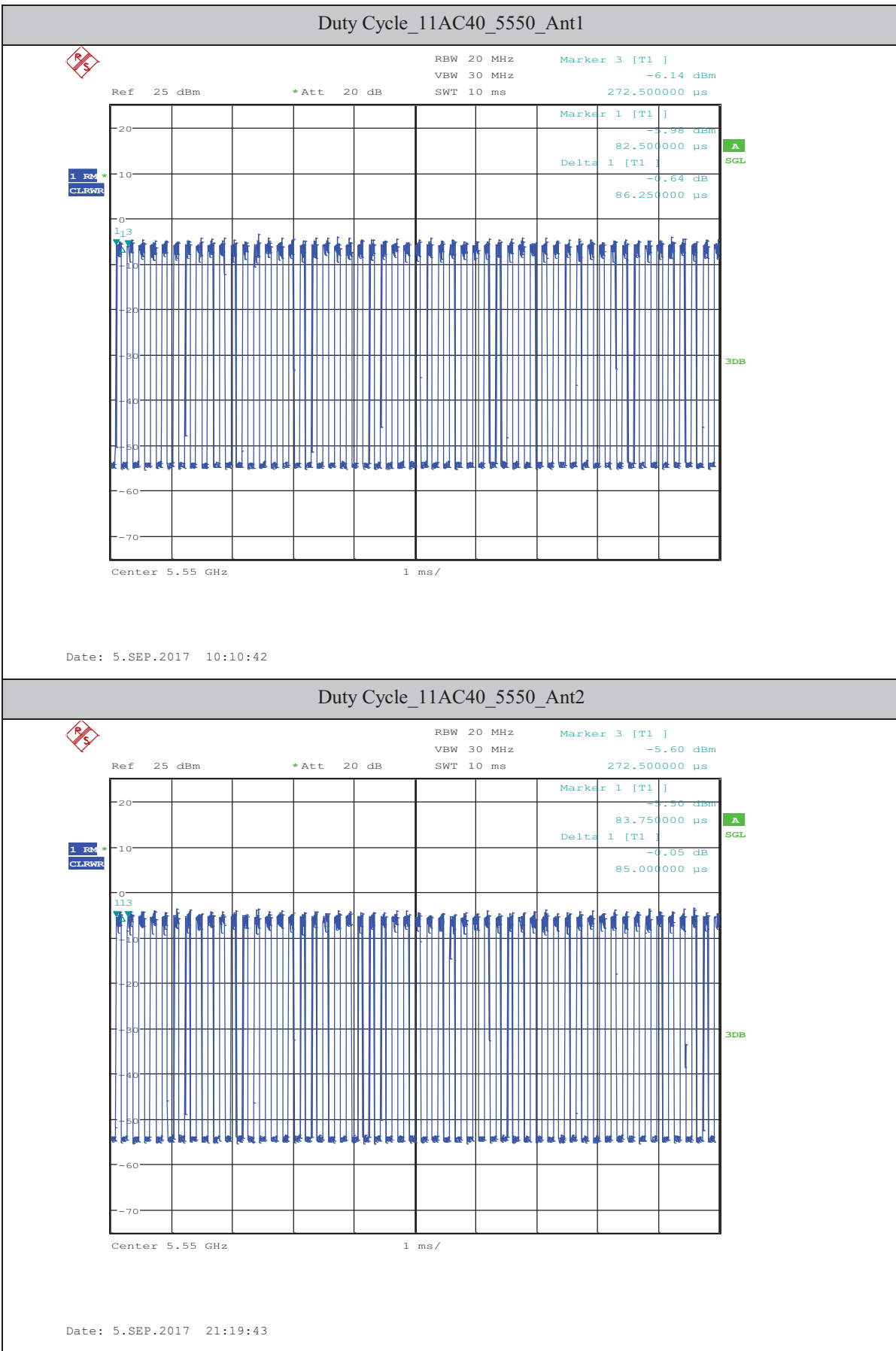
Date: 5.SEP.2017 20:56:08

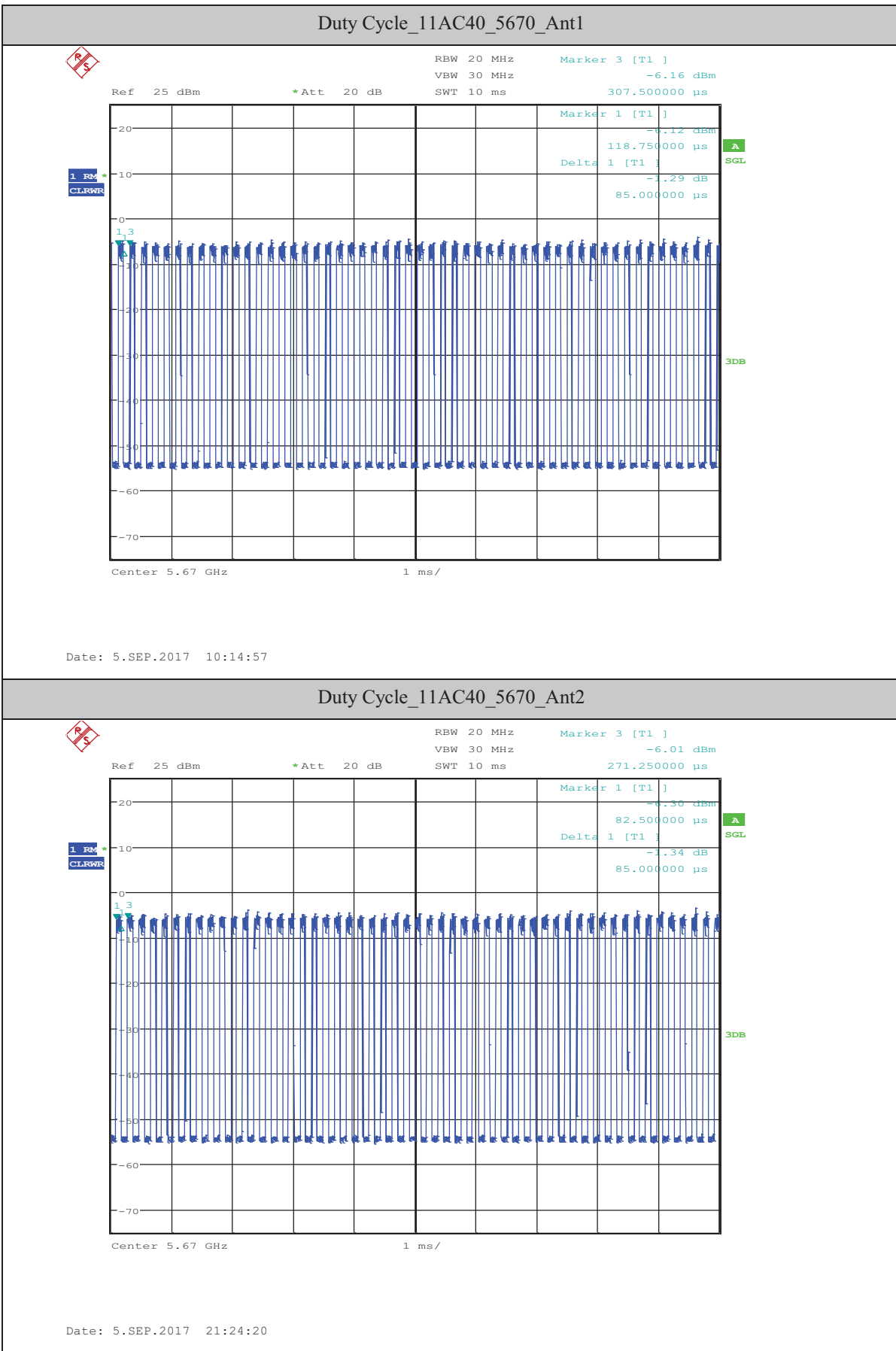




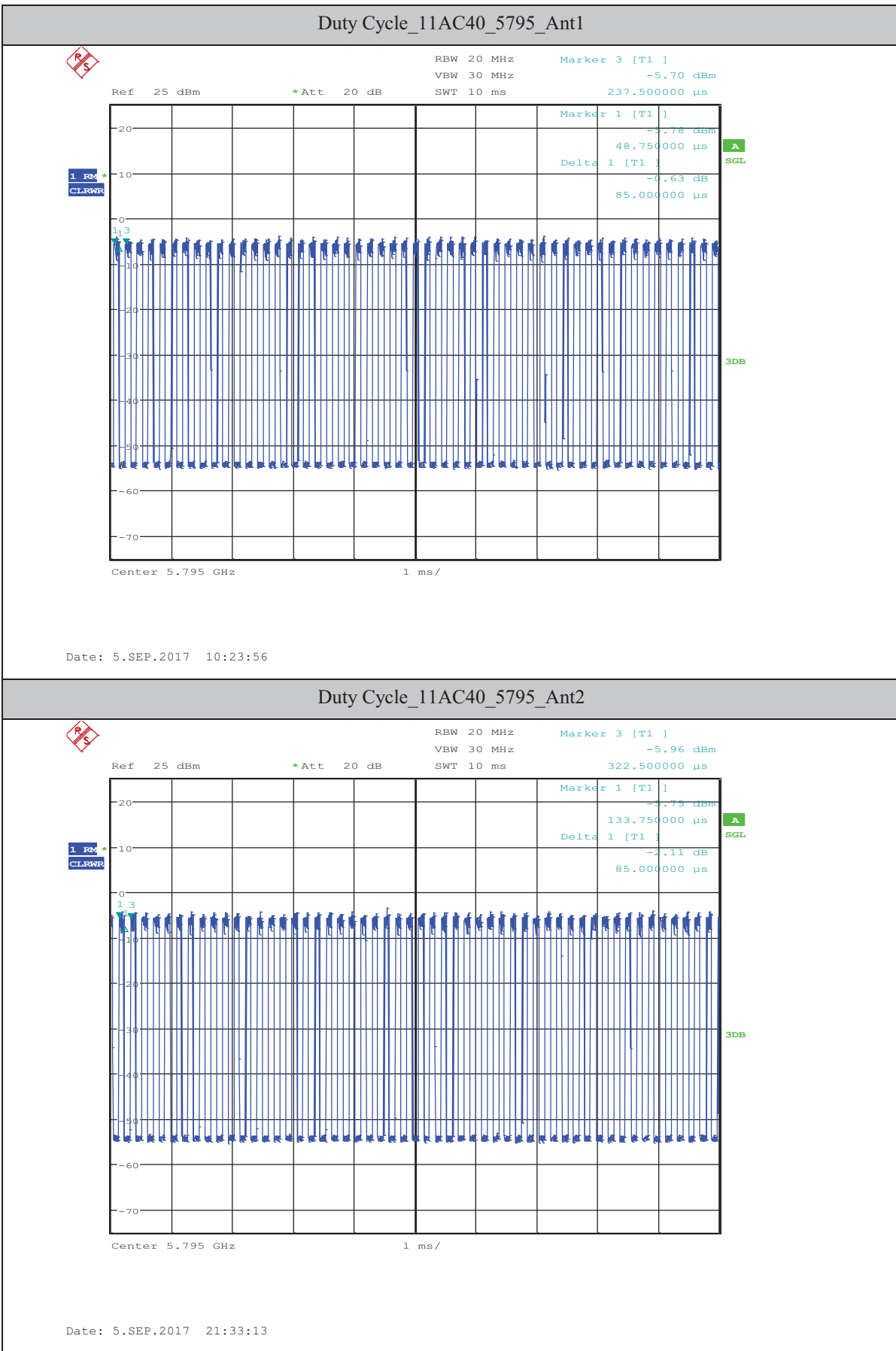


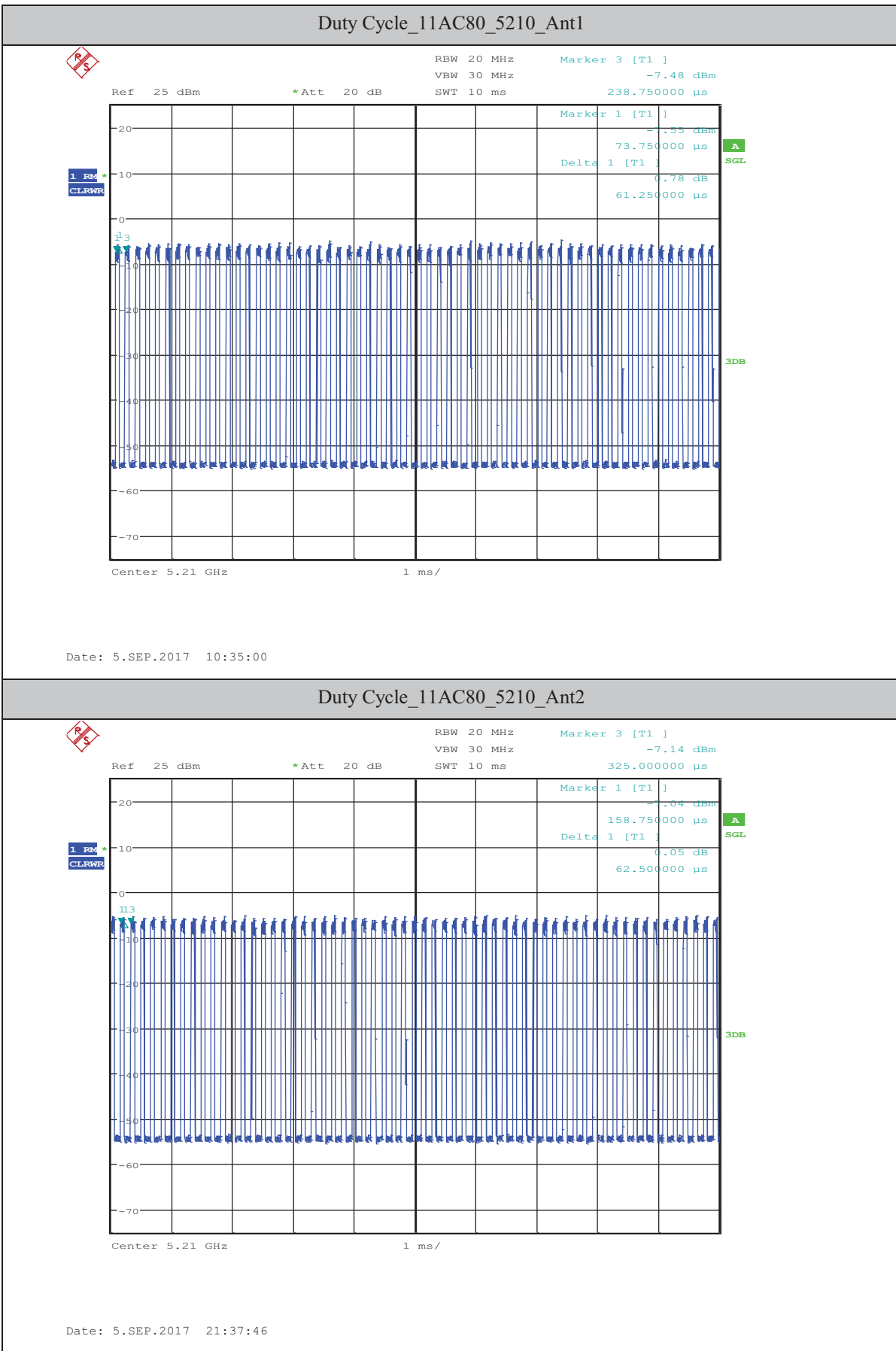




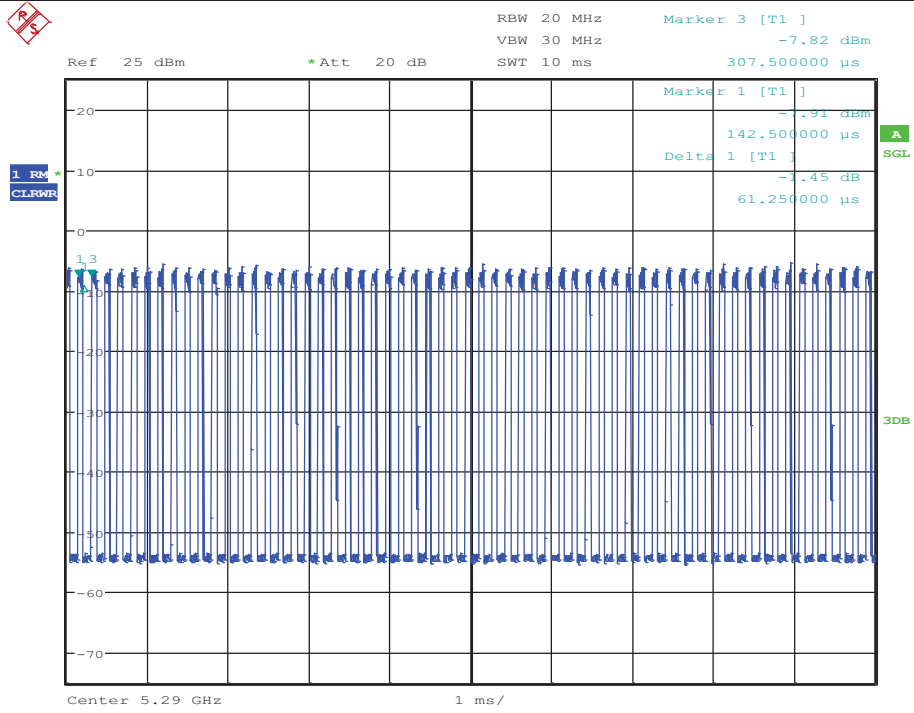




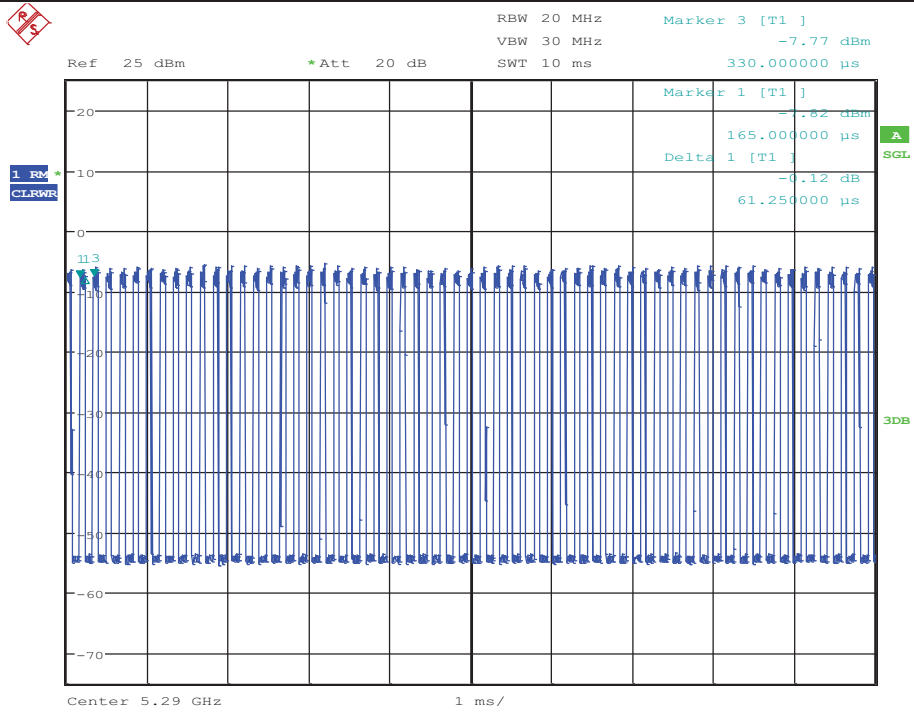




### Duty Cycle\_11AC80\_5290\_Ant1

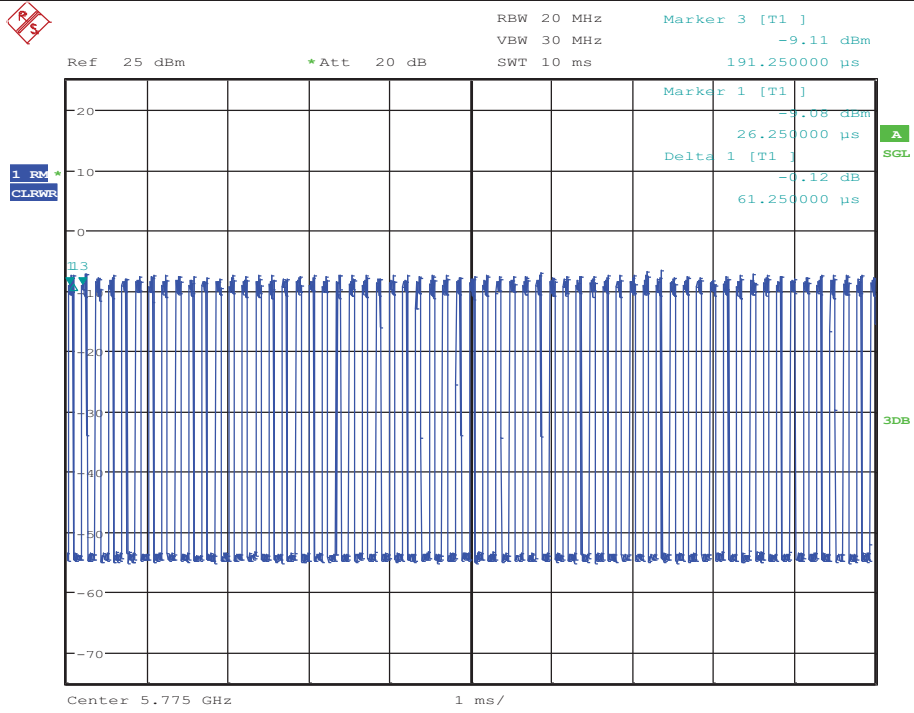


### Duty Cycle\_11AC80\_5290\_Ant2



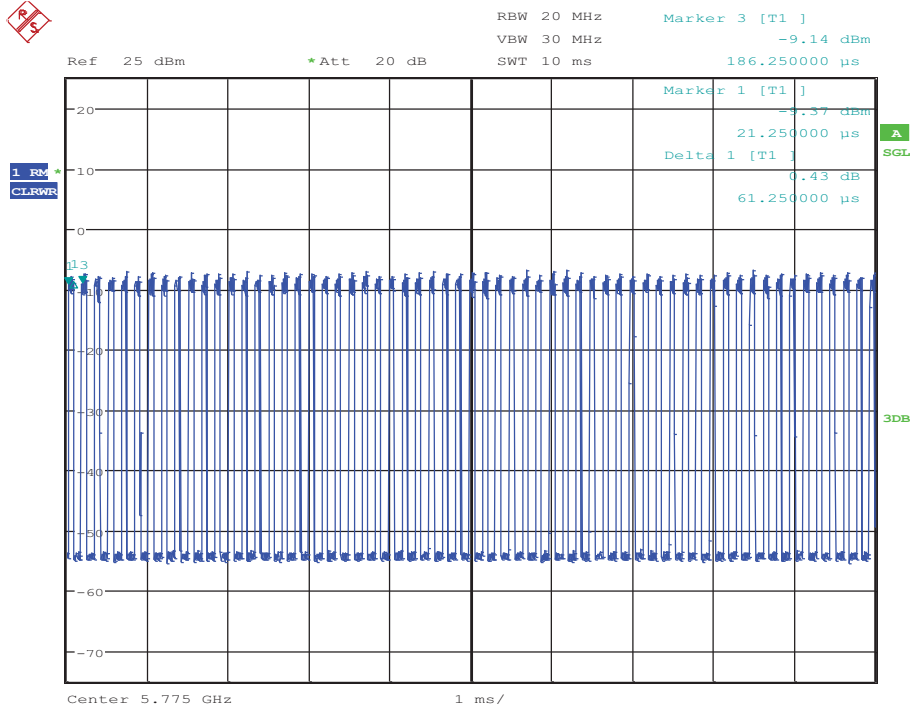


### Duty Cycle\_11AC80\_5775\_Ant1



Date: 5.SEP.2017 11:14:12

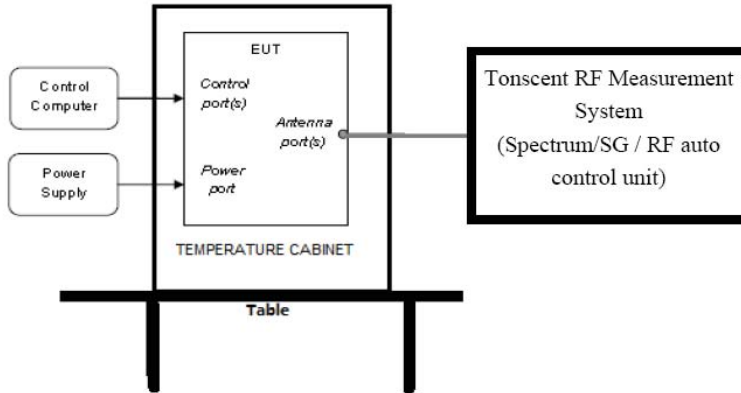
### Duty Cycle\_11AC80\_5775\_Ant2



Date: 5.SEP.2017 21:52:26

## 5. 26dB Bandwidth, 6dB Bandwidth and 99% Bandwidth

### 5.1. Block diagram of test setup



### 5.2. Limits

FCC Part15, Subpart E/ RSS-247		
Test Item	Limit	Frequency Range (MHz)
Bandwidth	26 dB Bandwidth	5150-5250
	26 dB Bandwidth	5250-5350
	26 dB Bandwidth	For FCC:5470-5725 For IC:5470-5600 5650-5725
	Minimum 500kHz 6dB Bandwidth	5725-5850

### 5.3. Test Procedure

- (1) Connect EUT's antenna output to spectrum analyzer by RF cable.

Center Frequency	The centre frequency of the channel under test
Detector	Peak
RBW	For 6dB Bandwidth: RBW=100kHz For 26dB Bandwidth: approximately 1% of the emission bandwidth.
VBW	For 6dB Bandwidth : VBW=300kHz For 26dB Bandwidth : >3RBW
Trace	Max hold
Sweep	Auto couple

- (2) Allow the trace to stabilize, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 26 dB and 6dB relative to the maximum level measured in the fundamental emission.

## 5.4. Test Result

Test Mode	Test Channel	Ant	26dB(5150-5250, 5250-5350,5470-5725) or 6dB(5725-5850) bandwidth Result [MHz]	Limit[MHz]	Verdict
11N20MIMO	5180	Ant1	21.680	---	PASS
11N20MIMO	5180	Ant2	21.520	---	PASS
11N20MIMO	5200	Ant1	21.560	---	PASS
11N20MIMO	5200	Ant2	21.480	---	PASS
11N20MIMO	5240	Ant1	18.960	---	PASS
11N20MIMO	5240	Ant2	18.920	---	PASS
11N20MIMO	5260	Ant1	18.960	---	PASS
11N20MIMO	5260	Ant2	19.000	---	PASS
11N20MIMO	5280	Ant1	21.600	---	PASS
11N20MIMO	5280	Ant2	21.360	---	PASS
11N20MIMO	5320	Ant1	21.520	---	PASS
11N20MIMO	5320	Ant2	21.600	---	PASS
11N20MIMO	5500	Ant1	21.600	---	PASS
11N20MIMO	5500	Ant2	21.560	---	PASS
11N20MIMO	5580	Ant1	19.040	---	PASS
11N20MIMO	5580	Ant2	19.000	---	PASS
11N20MIMO	5700	Ant1	21.480	---	PASS
11N20MIMO	5700	Ant2	21.640	---	PASS
11N20MIMO	5745	Ant1	17.720	0.5	PASS
11N20MIMO	5745	Ant2	17.840	0.5	PASS
11N20MIMO	5785	Ant1	17.760	0.5	PASS
11N20MIMO	5785	Ant2	17.720	0.5	PASS
11N20MIMO	5825	Ant1	17.760	0.5	PASS
11N20MIMO	5825	Ant2	17.760	0.5	PASS
11N40MIMO	5190	Ant1	40.080	---	PASS
11N40MIMO	5190	Ant2	40.160	---	PASS
11N40MIMO	5230	Ant1	40.000	---	PASS
11N40MIMO	5230	Ant2	40.160	---	PASS
11N40MIMO	5270	Ant1	40.400	---	PASS
11N40MIMO	5270	Ant2	40.160	---	PASS
11N40MIMO	5310	Ant1	40.480	---	PASS
11N40MIMO	5310	Ant2	40.080	---	PASS
11N40MIMO	5510	Ant1	39.840	---	PASS
11N40MIMO	5510	Ant2	40.320	---	PASS
11N40MIMO	5550	Ant1	40.000	---	PASS
11N40MIMO	5550	Ant2	40.240	---	PASS

11N40MIMO	5670	Ant1	40.160	---	PASS
11N40MIMO	5670	Ant2	40.000	---	PASS
11N40MIMO	5755	Ant1	36.640	0.5	PASS
11N40MIMO	5755	Ant2	36.560	0.5	PASS
11N40MIMO	5795	Ant1	36.640	0.5	PASS
11N40MIMO	5795	Ant2	36.560	0.5	PASS
11AC20MIMO	5180	Ant1	21.600	---	PASS
11AC20MIMO	5180	Ant2	21.520	---	PASS
11AC20MIMO	5200	Ant1	21.560	---	PASS
11AC20MIMO	5200	Ant2	21.400	---	PASS
11AC20MIMO	5240	Ant1	18.880	---	PASS
11AC20MIMO	5240	Ant2	18.880	---	PASS
11AC20MIMO	5260	Ant1	18.920	---	PASS
11AC20MIMO	5260	Ant2	18.760	---	PASS
11AC20MIMO	5280	Ant1	21.480	---	PASS
11AC20MIMO	5280	Ant2	21.360	---	PASS
11AC20MIMO	5320	Ant1	21.680	---	PASS
11AC20MIMO	5320	Ant2	21.720	---	PASS
11AC20MIMO	5500	Ant1	21.480	---	PASS
11AC20MIMO	5500	Ant2	21.520	---	PASS
11AC20MIMO	5580	Ant1	18.960	---	PASS
11AC20MIMO	5580	Ant2	18.880	---	PASS
11AC20MIMO	5700	Ant1	21.560	---	PASS
11AC20MIMO	5700	Ant2	21.720	---	PASS
11AC20MIMO	5745	Ant1	17.760	0.5	PASS
11AC20MIMO	5745	Ant2	17.800	0.5	PASS
11AC20MIMO	5785	Ant1	17.760	0.5	PASS
11AC20MIMO	5785	Ant2	17.800	0.5	PASS
11AC20MIMO	5825	Ant1	17.800	0.5	PASS
11AC20MIMO	5825	Ant2	17.760	0.5	PASS
11AC40MIMO	5190	Ant1	40.320	---	PASS
11AC40MIMO	5190	Ant2	39.920	---	PASS
11AC40MIMO	5230	Ant1	40.080	---	PASS
11AC40MIMO	5230	Ant2	39.920	---	PASS
11AC40MIMO	5270	Ant1	40.320	---	PASS
11AC40MIMO	5270	Ant2	39.920	---	PASS
11AC40MIMO	5310	Ant1	40.560	---	PASS
11AC40MIMO	5310	Ant2	40.080	---	PASS
11AC40MIMO	5510	Ant1	40.080	---	PASS
11AC40MIMO	5510	Ant2	40.000	---	PASS

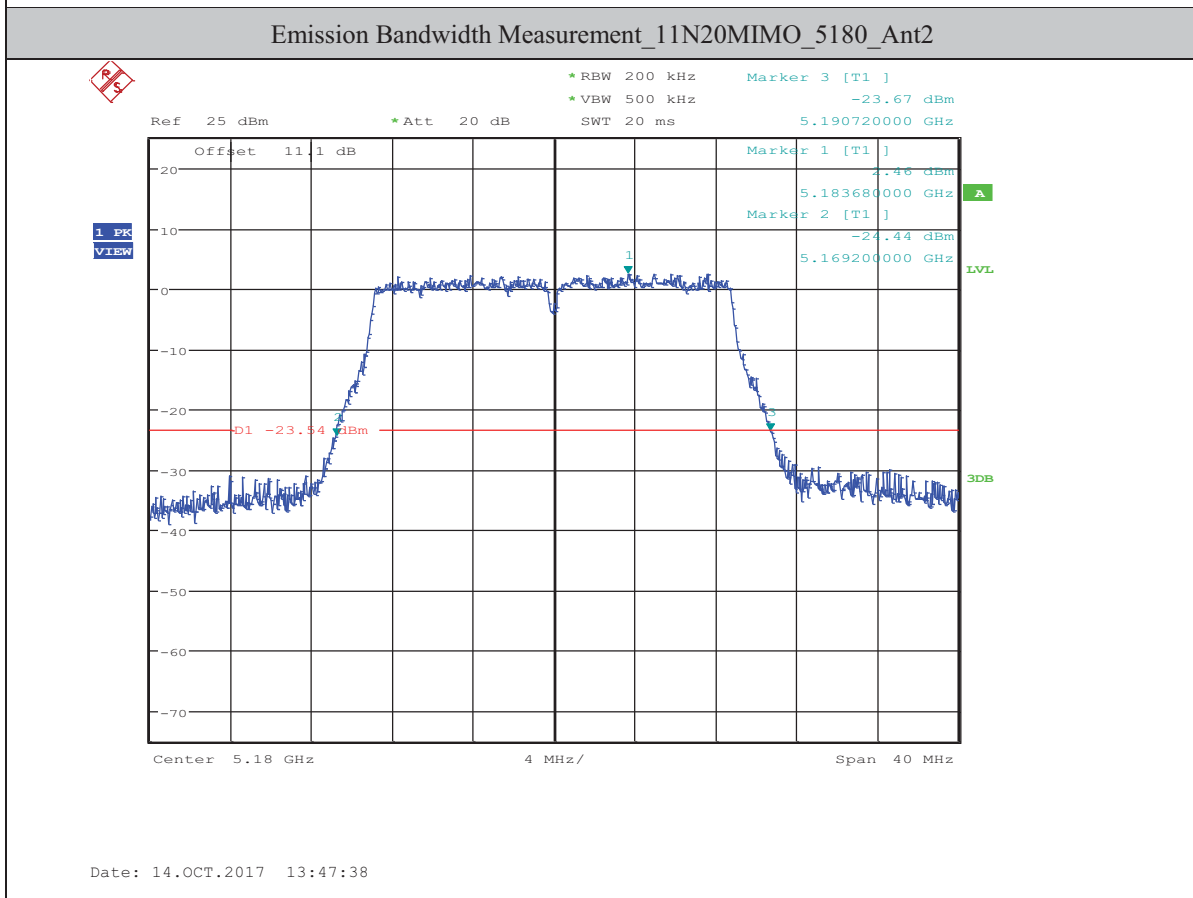
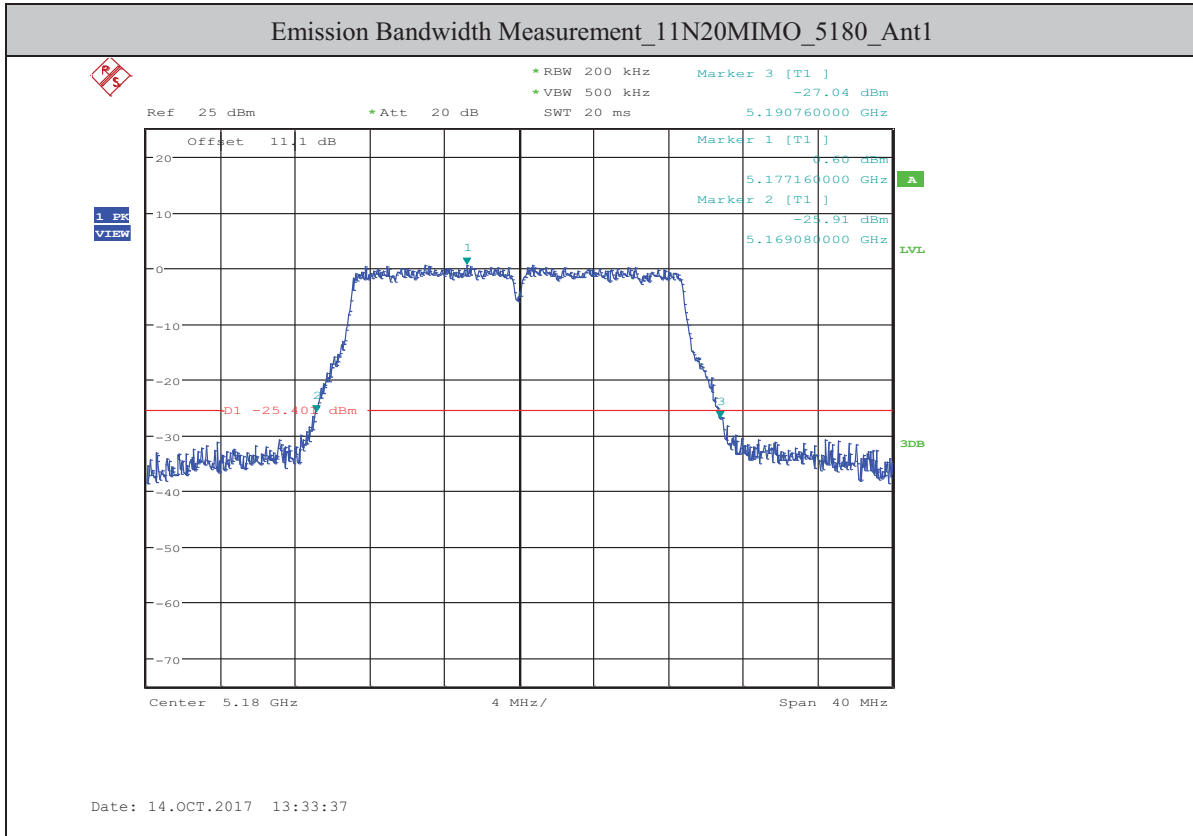
11AC40MIMO	5550	Ant1	40.560	---	PASS
11AC40MIMO	5550	Ant2	40.160	---	PASS
11AC40MIMO	5670	Ant1	40.160	---	PASS
11AC40MIMO	5670	Ant2	40.080	---	PASS
11AC40MIMO	5755	Ant1	36.560	0.5	PASS
11AC40MIMO	5755	Ant2	36.640	0.5	PASS
11AC40MIMO	5795	Ant1	36.560	0.5	PASS
11AC40MIMO	5795	Ant2	36.640	0.5	PASS
11AC80MIMO	5210	Ant1	82.720	---	PASS
11AC80MIMO	5210	Ant2	81.600	---	PASS
11AC80MIMO	5290	Ant1	82.560	---	PASS
11AC80MIMO	5290	Ant2	82.240	---	PASS
11AC80MIMO	5530	Ant1	82.880	---	PASS
11AC80MIMO	5530	Ant2	81.760	---	PASS
11AC80MIMO	5775	Ant1	76.160	0.5	PASS
11AC80MIMO	5775	Ant2	76.640	0.5	PASS
11AMIMO	5180	Ant1	21.120	---	PASS
11AMIMO	5180	Ant2	21.280	---	PASS
11AMIMO	5200	Ant1	20.840	---	PASS
11AMIMO	5200	Ant2	21.280	---	PASS
11AMIMO	5240	Ant1	18.360	---	PASS
11AMIMO	5240	Ant2	18.520	---	PASS
11AMIMO	5260	Ant1	18.560	---	PASS
11AMIMO	5260	Ant2	18.600	---	PASS
11AMIMO	5280	Ant1	21.040	---	PASS
11AMIMO	5280	Ant2	21.320	---	PASS
11AMIMO	5320	Ant1	21.080	---	PASS
11AMIMO	5320	Ant2	21.240	---	PASS
11AMIMO	5500	Ant1	21.040	---	PASS
11AMIMO	5500	Ant2	21.360	---	PASS
11AMIMO	5580	Ant1	18.360	---	PASS
11AMIMO	5580	Ant2	18.640	---	PASS
11AMIMO	5700	Ant1	21.000	---	PASS
11AMIMO	5700	Ant2	21.320	---	PASS
11AMIMO	5745	Ant1	16.480	0.5	PASS
11AMIMO	5745	Ant2	16.480	0.5	PASS
11AMIMO	5785	Ant1	16.480	0.5	PASS
11AMIMO	5785	Ant2	16.480	0.5	PASS
11AMIMO	5825	Ant1	16.480	0.5	PASS
11AMIMO	5825	Ant2	16.480	0.5	PASS

Test Mode	Test Channel	Ant	99%OBW[MHz]	Limit[MHz]	Verdict
11N20MIMO	5180	Ant1	17.810	---	PASS
11N20MIMO	5180	Ant2	17.795	---	PASS
11N20MIMO	5200	Ant1	17.800	---	PASS
11N20MIMO	5200	Ant2	17.790	---	PASS
11N20MIMO	5240	Ant1	17.450	---	PASS
11N20MIMO	5240	Ant2	17.455	---	PASS
11N20MIMO	5260	Ant1	17.440	---	PASS
11N20MIMO	5260	Ant2	17.450	---	PASS
11N20MIMO	5280	Ant1	17.790	---	PASS
11N20MIMO	5280	Ant2	17.805	---	PASS
11N20MIMO	5320	Ant1	17.835	---	PASS
11N20MIMO	5320	Ant2	17.805	---	PASS
11N20MIMO	5500	Ant1	17.830	---	PASS
11N20MIMO	5500	Ant2	17.830	---	PASS
11N20MIMO	5580	Ant1	17.450	---	PASS
11N20MIMO	5580	Ant2	17.455	---	PASS
11N20MIMO	5700	Ant1	17.820	---	PASS
11N20MIMO	5700	Ant2	17.855	---	PASS
11N20MIMO	5745	Ant1	17.660	---	PASS
11N20MIMO	5745	Ant2	17.685	---	PASS
11N20MIMO	5785	Ant1	17.690	---	PASS
11N20MIMO	5785	Ant2	17.690	---	PASS
11N20MIMO	5825	Ant1	17.665	---	PASS
11N20MIMO	5825	Ant2	17.670	---	PASS
11N40MIMO	5190	Ant1	36.400	---	PASS
11N40MIMO	5190	Ant2	36.430	---	PASS
11N40MIMO	5230	Ant1	36.420	---	PASS
11N40MIMO	5230	Ant2	36.550	---	PASS
11N40MIMO	5270	Ant1	36.460	---	PASS
11N40MIMO	5270	Ant2	36.500	---	PASS
11N40MIMO	5310	Ant1	36.400	---	PASS
11N40MIMO	5310	Ant2	36.440	---	PASS
11N40MIMO	5510	Ant1	36.450	---	PASS
11N40MIMO	5510	Ant2	36.510	---	PASS
11N40MIMO	5550	Ant1	36.460	---	PASS
11N40MIMO	5550	Ant2	36.510	---	PASS
11N40MIMO	5670	Ant1	36.470	---	PASS
11N40MIMO	5670	Ant2	36.470	---	PASS

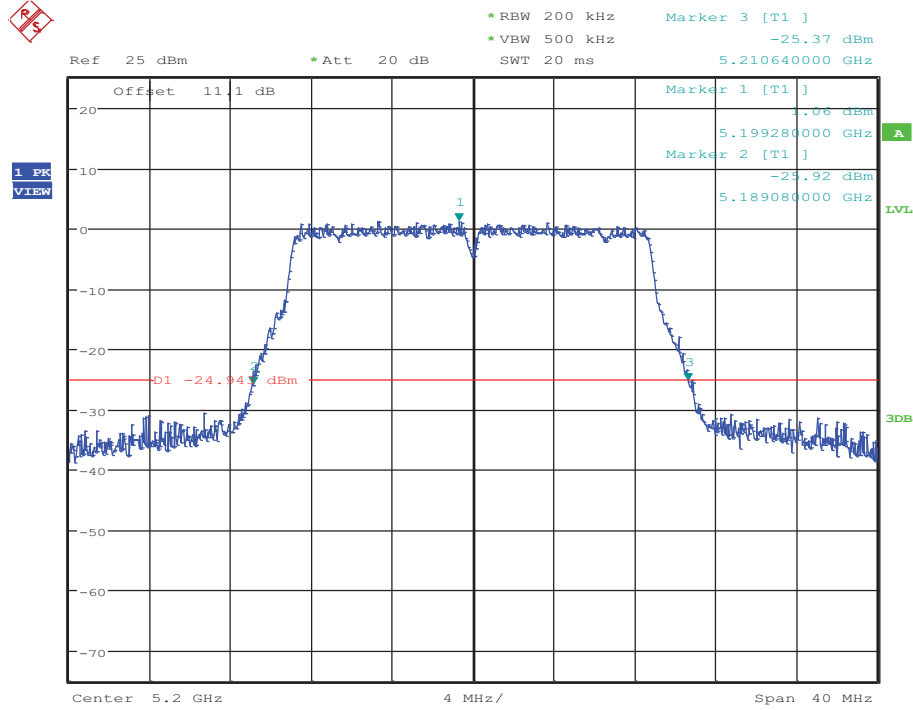
11N40MIMO	5755	Ant1	36.210	---	PASS
11N40MIMO	5755	Ant2	36.240	---	PASS
11N40MIMO	5795	Ant1	36.240	---	PASS
11N40MIMO	5795	Ant2	36.260	---	PASS
11AC20MIMO	5180	Ant1	17.815	---	PASS
11AC20MIMO	5180	Ant2	17.815	---	PASS
11AC20MIMO	5200	Ant1	17.795	---	PASS
11AC20MIMO	5200	Ant2	17.785	---	PASS
11AC20MIMO	5240	Ant1	17.445	---	PASS
11AC20MIMO	5240	Ant2	17.450	---	PASS
11AC20MIMO	5260	Ant1	17.445	---	PASS
11AC20MIMO	5260	Ant2	17.395	---	PASS
11AC20MIMO	5280	Ant1	17.800	---	PASS
11AC20MIMO	5280	Ant2	17.795	---	PASS
11AC20MIMO	5320	Ant1	17.815	---	PASS
11AC20MIMO	5320	Ant2	17.810	---	PASS
11AC20MIMO	5500	Ant1	17.815	---	PASS
11AC20MIMO	5500	Ant2	17.785	---	PASS
11AC20MIMO	5580	Ant1	17.455	---	PASS
11AC20MIMO	5580	Ant2	17.425	---	PASS
11AC20MIMO	5700	Ant1	17.825	---	PASS
11AC20MIMO	5700	Ant2	17.855	---	PASS
11AC20MIMO	5745	Ant1	17.650	---	PASS
11AC20MIMO	5745	Ant2	17.690	---	PASS
11AC20MIMO	5785	Ant1	17.690	---	PASS
11AC20MIMO	5785	Ant2	17.670	---	PASS
11AC20MIMO	5825	Ant1	17.680	---	PASS
11AC20MIMO	5825	Ant2	17.680	---	PASS
11AC40MIMO	5190	Ant1	36.400	---	PASS
11AC40MIMO	5190	Ant2	36.340	---	PASS
11AC40MIMO	5230	Ant1	36.400	---	PASS
11AC40MIMO	5230	Ant2	36.340	---	PASS
11AC40MIMO	5270	Ant1	36.420	---	PASS
11AC40MIMO	5270	Ant2	36.350	---	PASS
11AC40MIMO	5310	Ant1	36.430	---	PASS
11AC40MIMO	5310	Ant2	36.350	---	PASS
11AC40MIMO	5510	Ant1	36.460	---	PASS
11AC40MIMO	5510	Ant2	36.420	---	PASS
11AC40MIMO	5550	Ant1	36.510	---	PASS
11AC40MIMO	5550	Ant2	36.440	---	PASS

11AC40MIMO	5670	Ant1	36.410	---	PASS
11AC40MIMO	5670	Ant2	36.360	---	PASS
11AC40MIMO	5755	Ant1	36.220	---	PASS
11AC40MIMO	5755	Ant2	36.260	---	PASS
11AC40MIMO	5795	Ant1	36.240	---	PASS
11AC40MIMO	5795	Ant2	36.220	---	PASS
11AC80MIMO	5210	Ant1	76.060	---	PASS
11AC80MIMO	5210	Ant2	76.000	---	PASS
11AC80MIMO	5290	Ant1	76.120	---	PASS
11AC80MIMO	5290	Ant2	76.240	---	PASS
11AC80MIMO	5530	Ant1	76.340	---	PASS
11AC80MIMO	5530	Ant2	76.100	---	PASS
11AC80MIMO	5775	Ant1	75.760	---	PASS
11AC80MIMO	5775	Ant2	75.920	---	PASS
11AMIMO	5180	Ant1	16.575	---	PASS
11AMIMO	5180	Ant2	16.690	---	PASS
11AMIMO	5200	Ant1	16.550	---	PASS
11AMIMO	5200	Ant2	16.685	---	PASS
11AMIMO	5240	Ant1	16.445	---	PASS
11AMIMO	5240	Ant2	16.485	---	PASS
11AMIMO	5260	Ant1	16.490	---	PASS
11AMIMO	5260	Ant2	16.495	---	PASS
11AMIMO	5280	Ant1	16.570	---	PASS
11AMIMO	5280	Ant2	16.700	---	PASS
11AMIMO	5320	Ant1	16.570	---	PASS
11AMIMO	5320	Ant2	16.715	---	PASS
11AMIMO	5500	Ant1	16.575	---	PASS
11AMIMO	5500	Ant2	16.755	---	PASS
11AMIMO	5580	Ant1	16.460	---	PASS
11AMIMO	5580	Ant2	16.500	---	PASS
11AMIMO	5700	Ant1	16.580	---	PASS
11AMIMO	5700	Ant2	16.750	---	PASS
11AMIMO	5745	Ant1	16.420	---	PASS
11AMIMO	5745	Ant2	16.490	---	PASS
11AMIMO	5785	Ant1	16.445	---	PASS
11AMIMO	5785	Ant2	16.490	---	PASS
11AMIMO	5825	Ant1	16.450	---	PASS
11AMIMO	5825	Ant2	16.475	---	PASS

### 5.5. Original test data

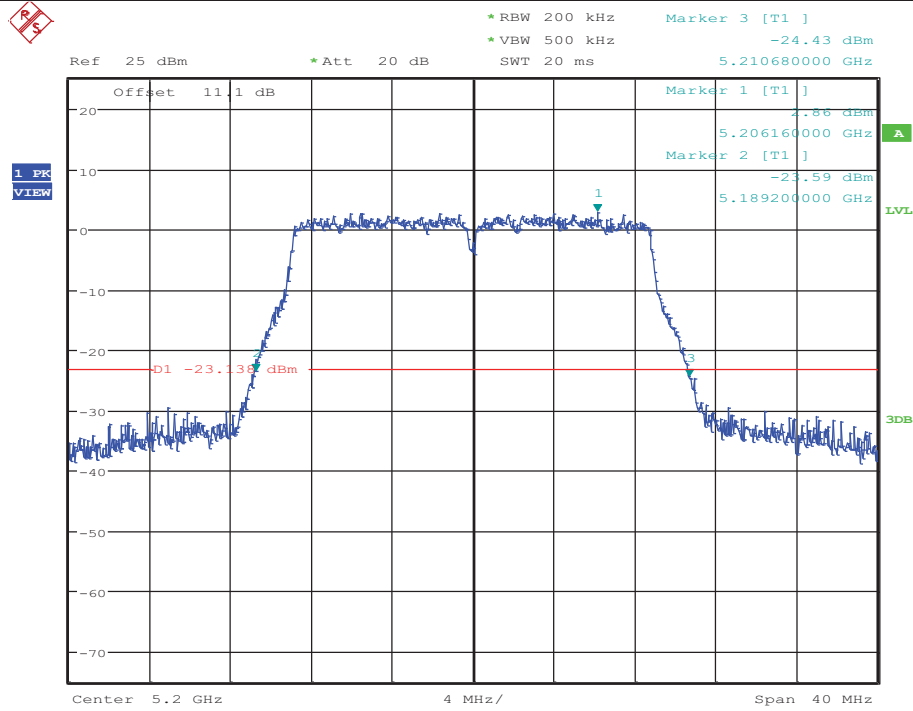


### Emission Bandwidth Measurement\_11N20MIMO\_5200\_Ant1



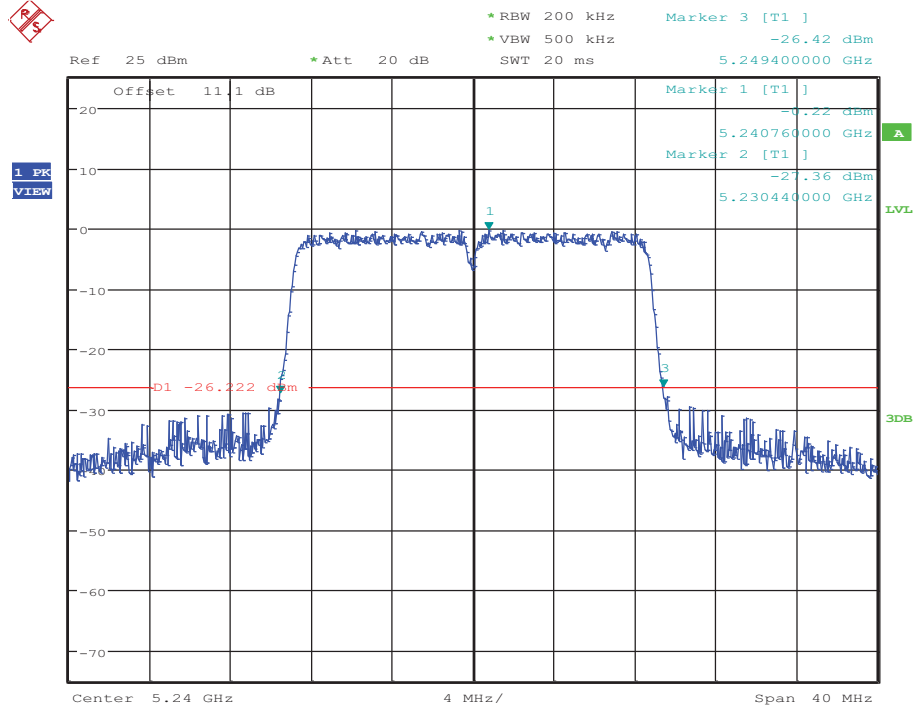
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### Emission Bandwidth Measurement\_11N20MIMO\_5200\_Ant2



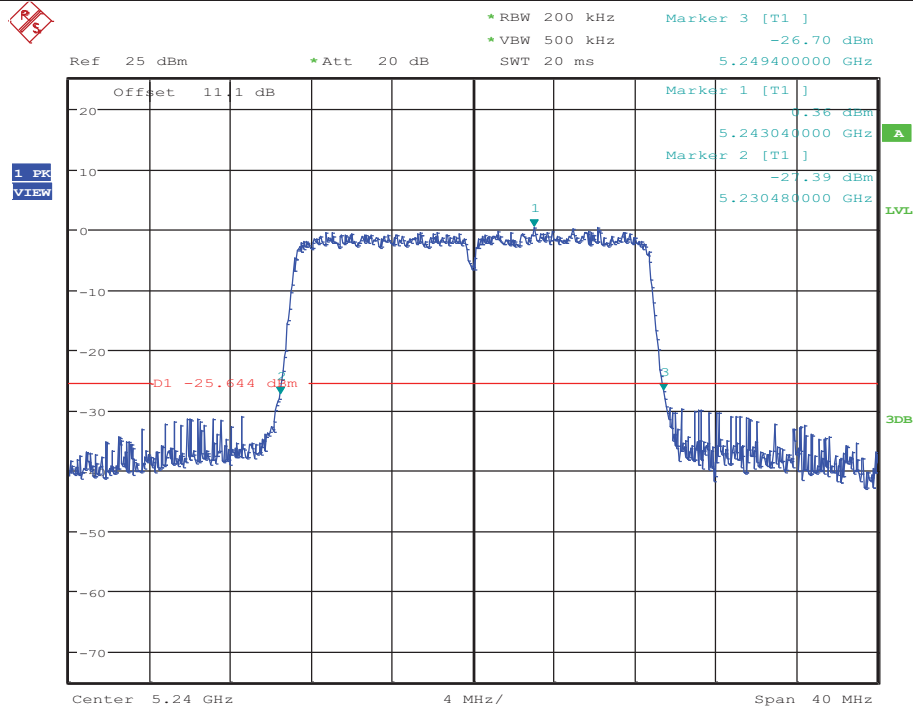
Date: 14.OCT.2017 14:01:55

### Emission Bandwidth Measurement\_11N20MIMO\_5240\_Ant1



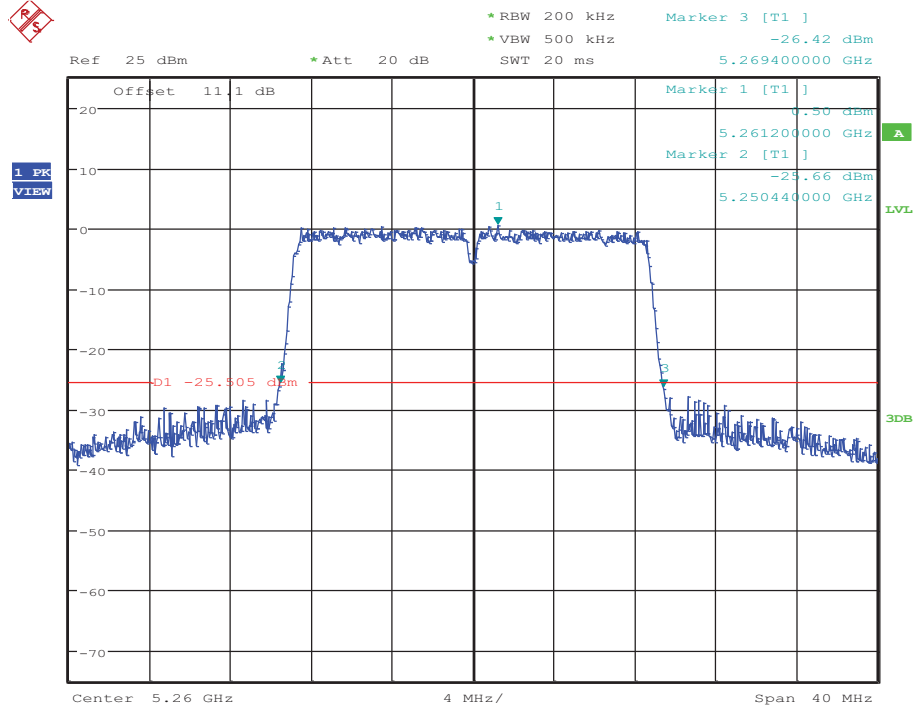
Date: 14.OCT.2017 14:07:06

### Emission Bandwidth Measurement\_11N20MIMO\_5240\_Ant2



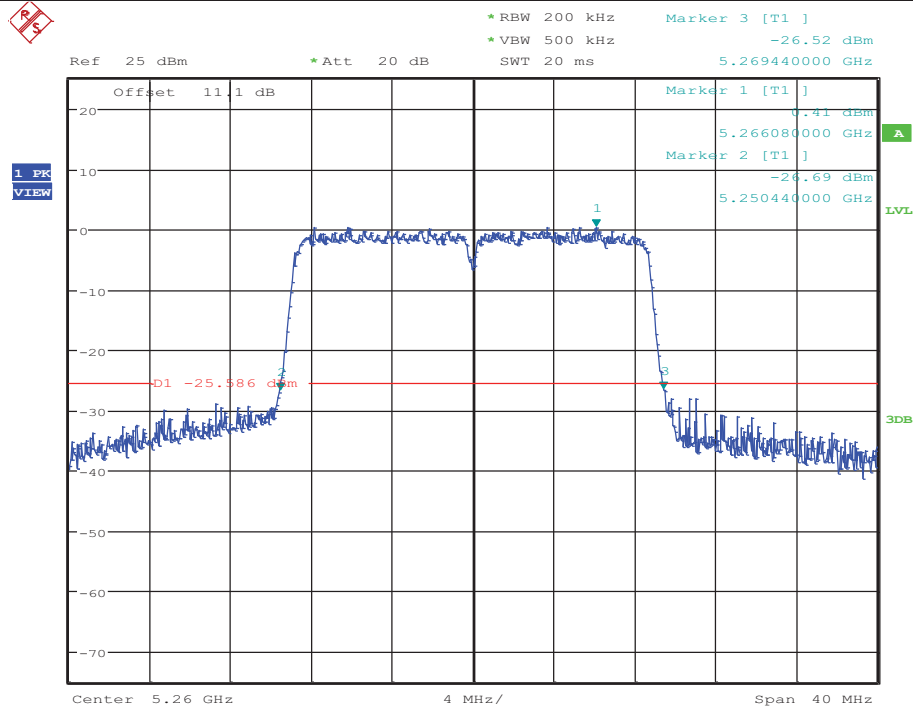
Date: 14.OCT.2017 14:13:43

### Emission Bandwidth Measurement\_11N20MIMO\_5260\_Ant1



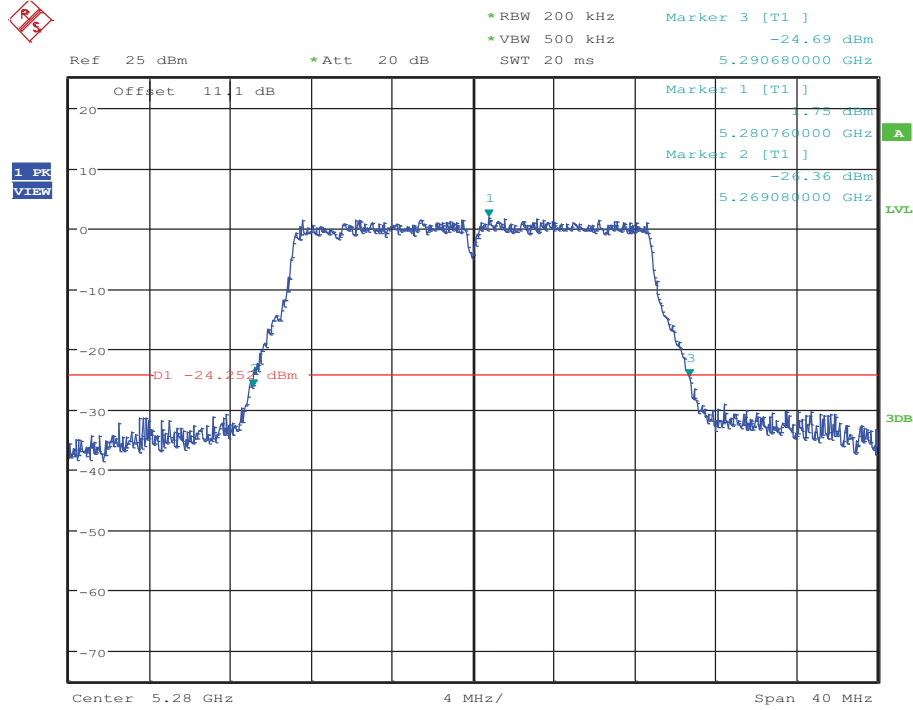
Date: 14.OCT.2017 14:22:16

### Emission Bandwidth Measurement\_11N20MIMO\_5260\_Ant2



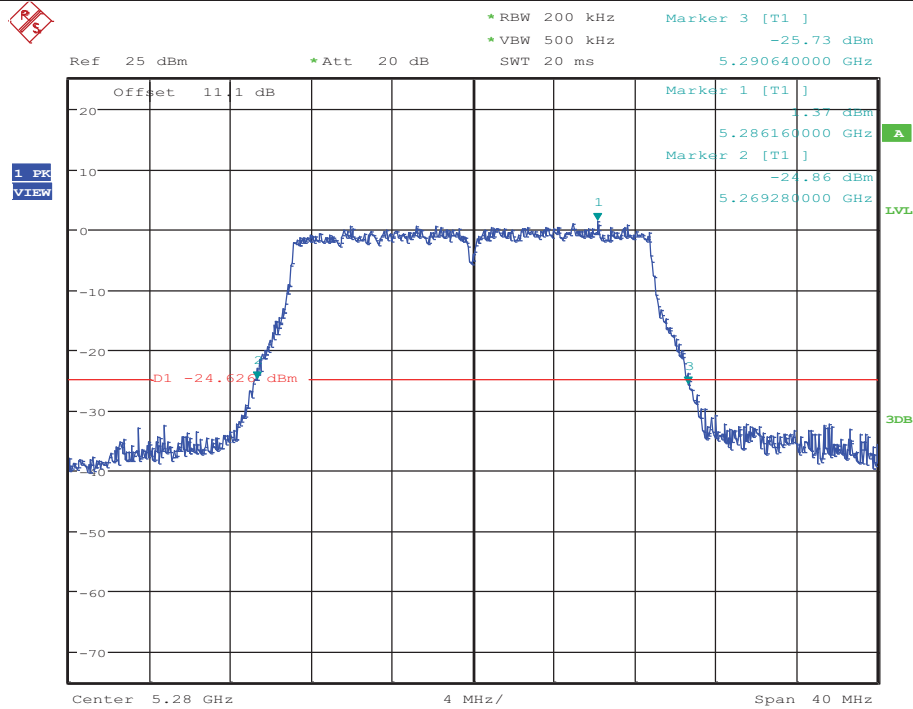
Date: 14.OCT.2017 16:12:11

### Emission Bandwidth Measurement\_11N20MIMO\_5280\_Ant1



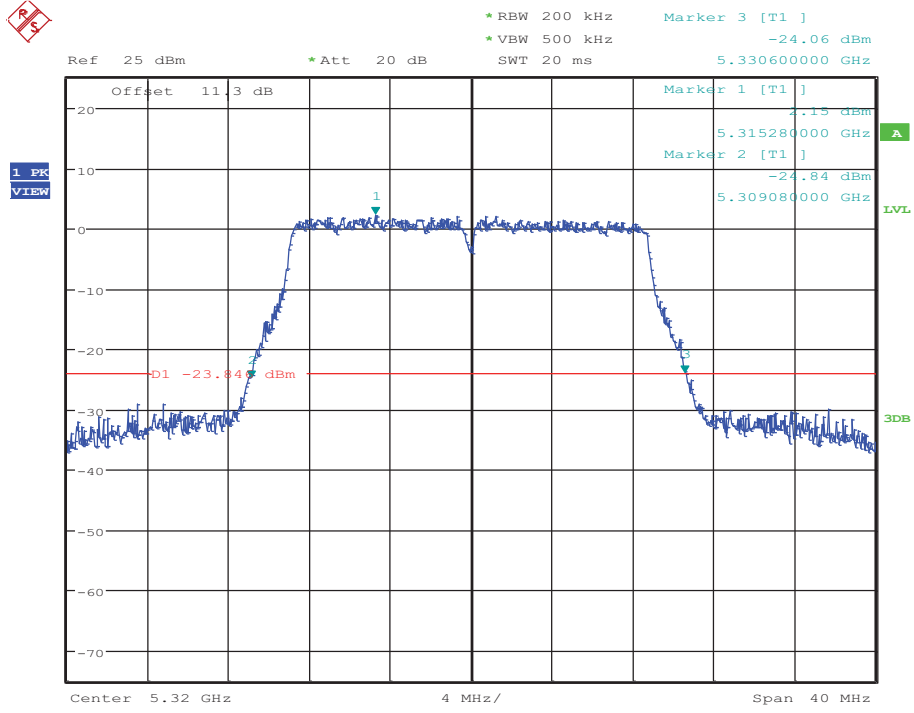
Date: 16.OCT.2017 17:35:31

### Emission Bandwidth Measurement\_11N20MIMO\_5280\_Ant2



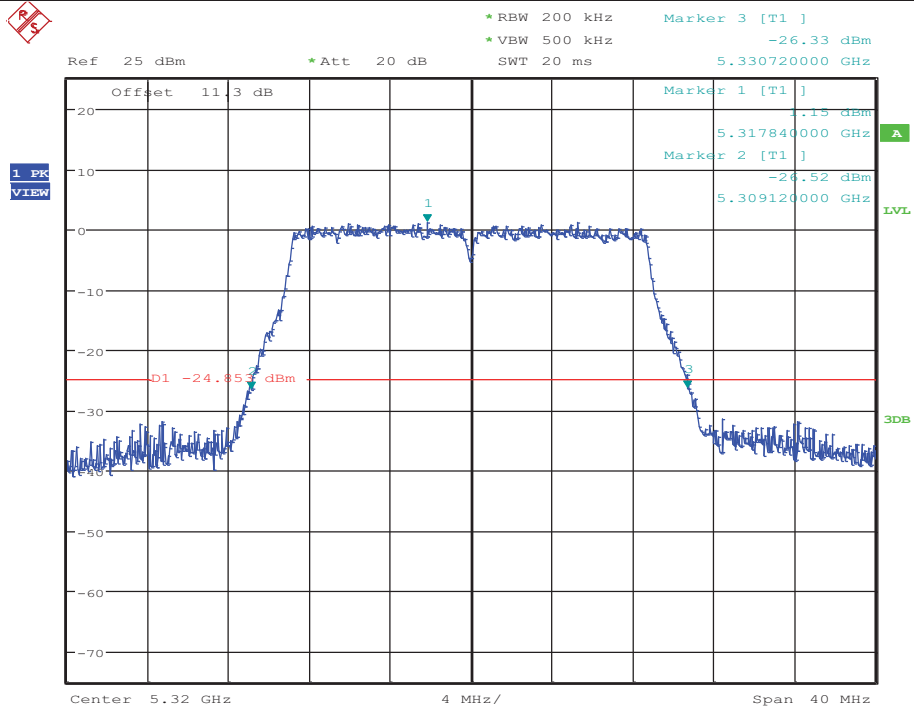
Date: 16.OCT.2017 17:39:54

### Emission Bandwidth Measurement\_11N20MIMO\_5320\_Ant1



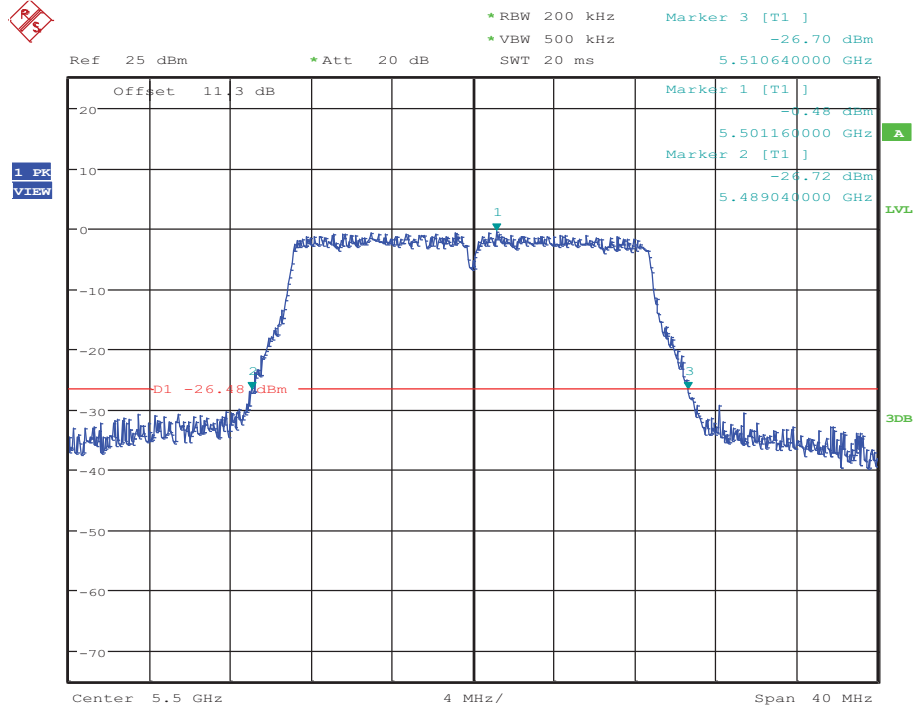
Date: 16.OCT.2017 17:45:07

### Emission Bandwidth Measurement\_11N20MIMO\_5320\_Ant2



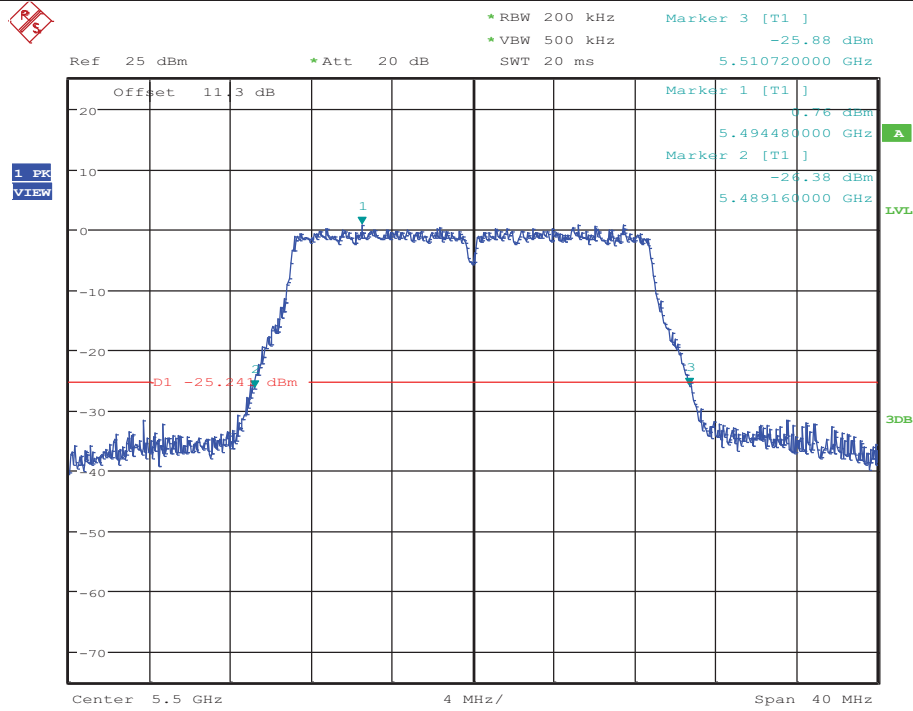
Date: 16.OCT.2017 17:51:21

### Emission Bandwidth Measurement\_11N20MIMO\_5500\_Ant1



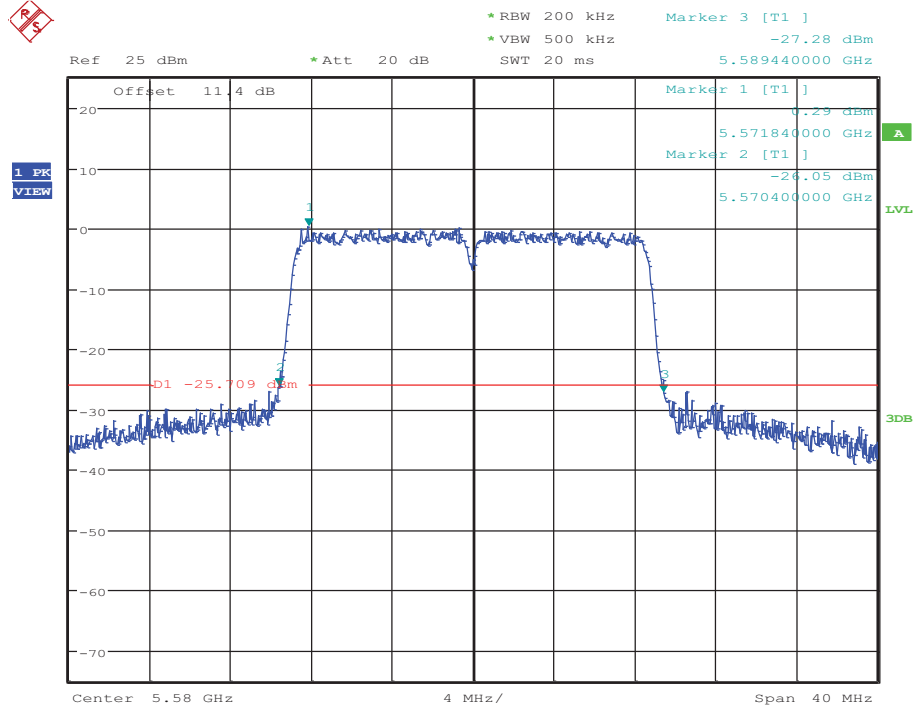
Date: 16.OCT.2017 17:57:03

### Emission Bandwidth Measurement\_11N20MIMO\_5500\_Ant2



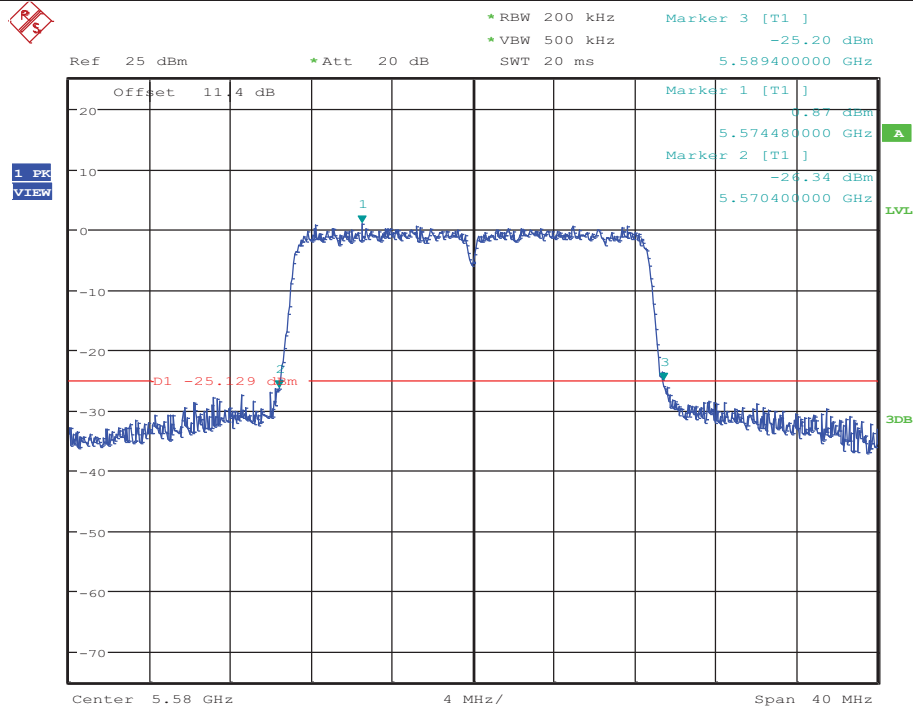
Date: 16.OCT.2017 18:02:40

### Emission Bandwidth Measurement\_11N20MIMO\_5580\_Ant1



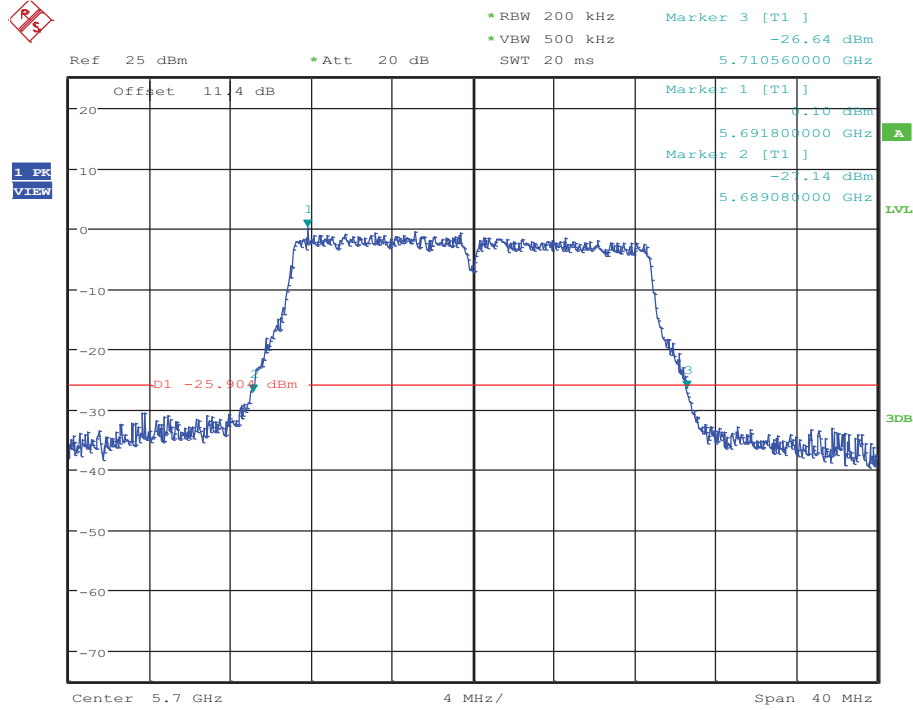
Date: 16.OCT.2017 18:10:22

### Emission Bandwidth Measurement\_11N20MIMO\_5580\_Ant2



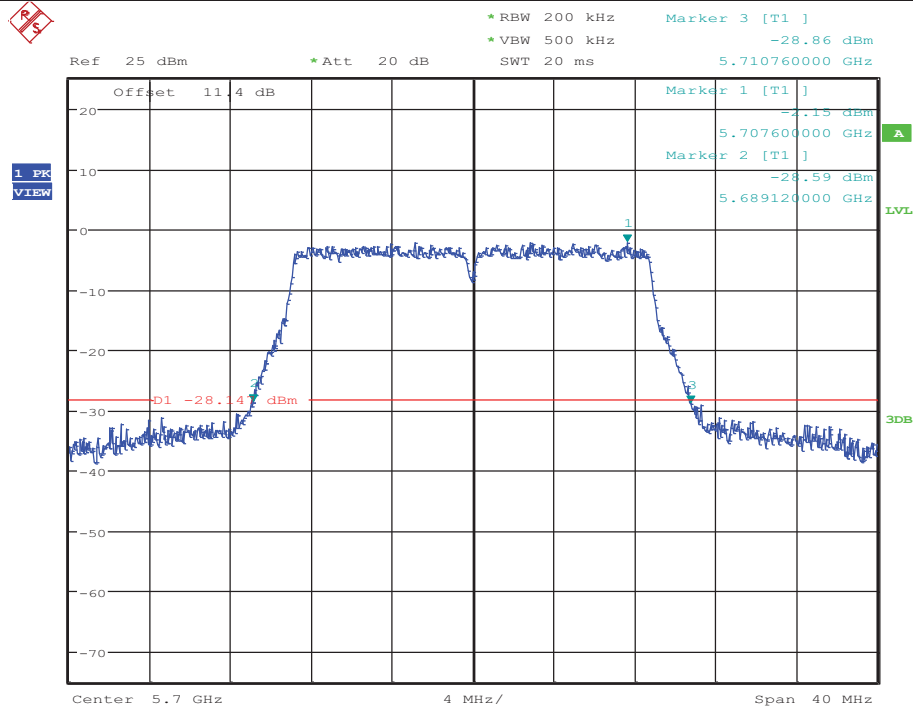
Date: 16.OCT.2017 18:14:45

### Emission Bandwidth Measurement\_11N20MIMO\_5700\_Ant1



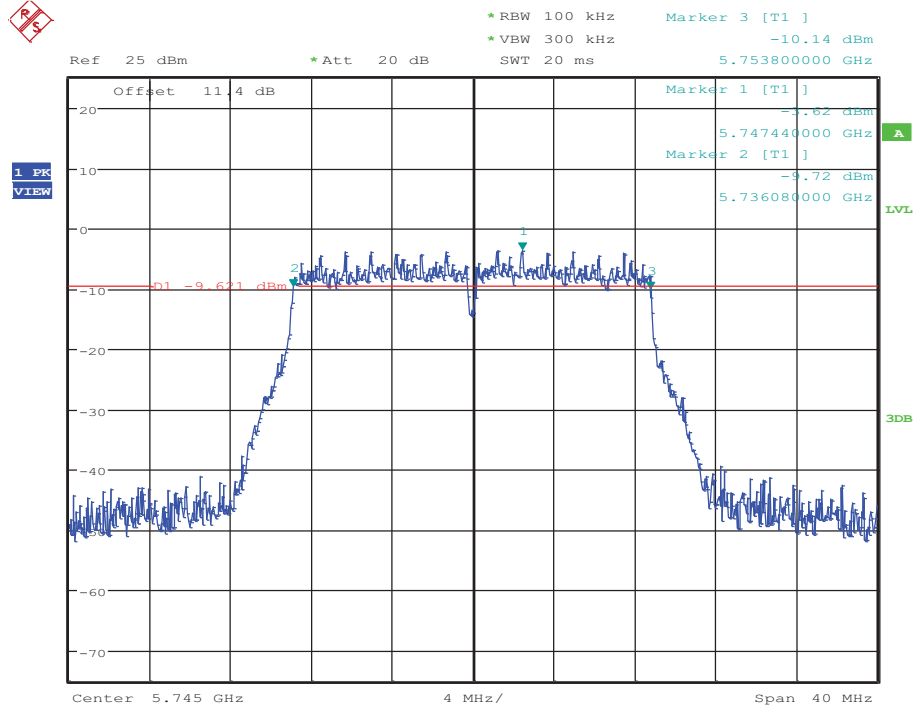
Date: 16.OCT.2017 18:51:30

### Emission Bandwidth Measurement\_11N20MIMO\_5700\_Ant2



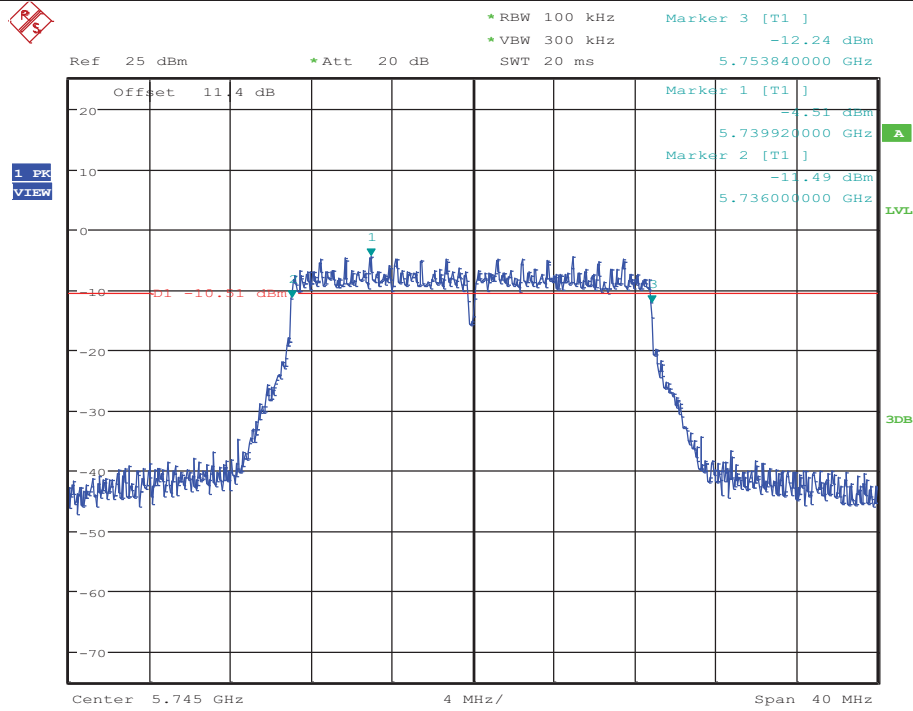
Date: 16.OCT.2017 18:58:17

### Emission Bandwidth Measurement\_11N20MIMO\_5745\_Ant1



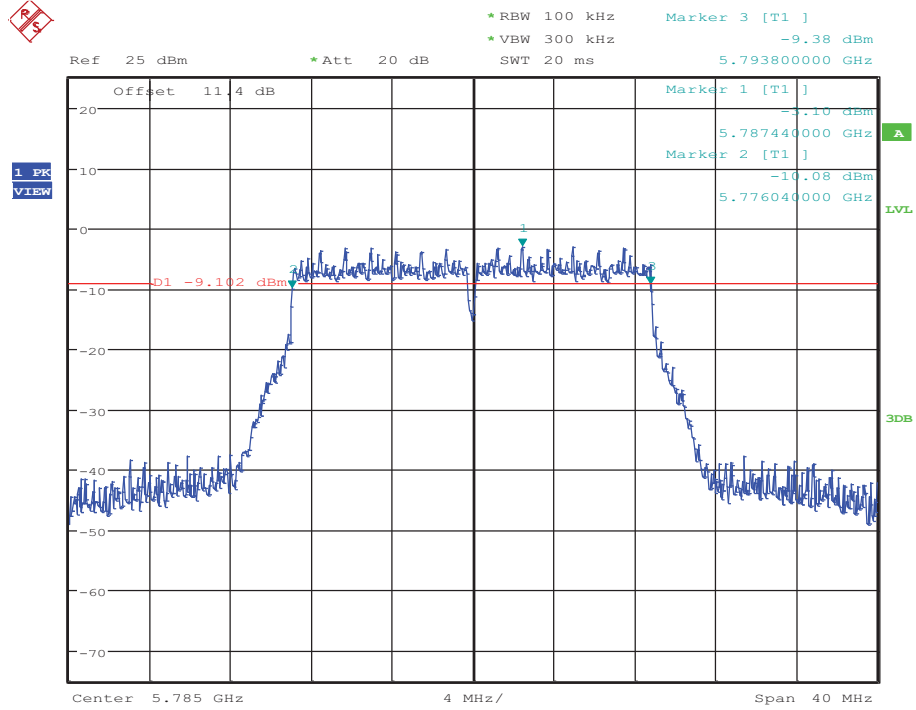
Date: 16.OCT.2017 19:03:46

### Emission Bandwidth Measurement\_11N20MIMO\_5745\_Ant2



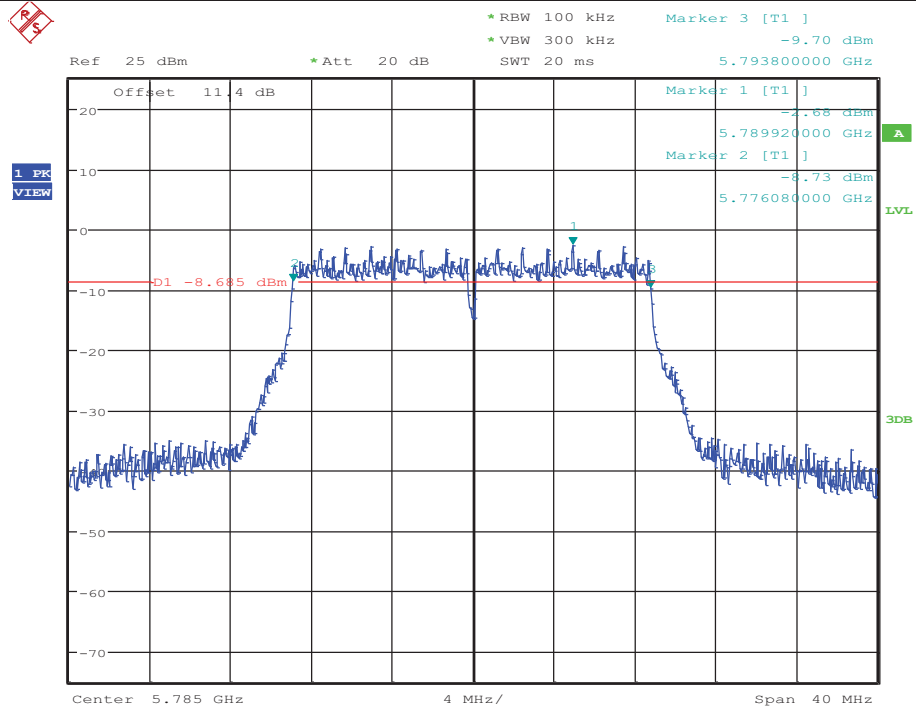
Date: 16.OCT.2017 19:07:36

### Emission Bandwidth Measurement\_11N20MIMO\_5785\_Ant1



Date: 16.OCT.2017 19:12:05

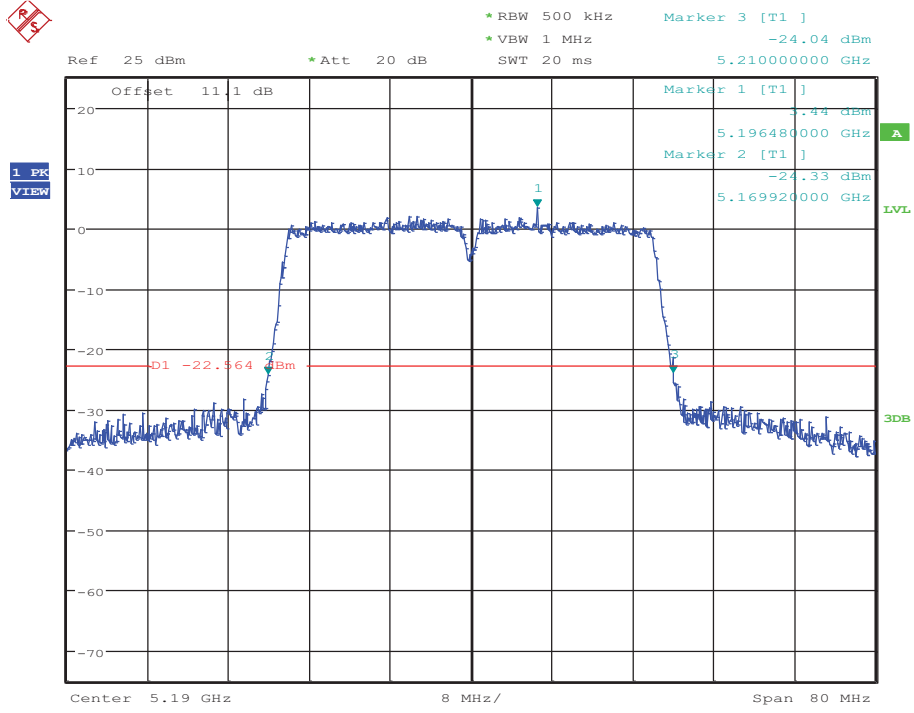
### Emission Bandwidth Measurement\_11N20MIMO\_5785\_Ant2



Date: 16.OCT.2017 19:15:32

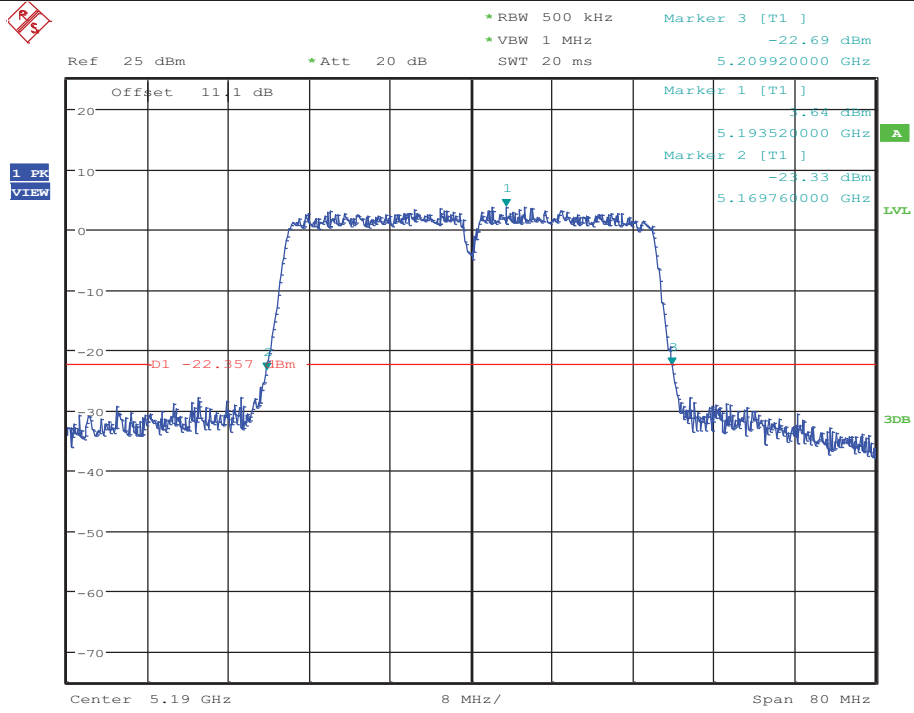


### Emission Bandwidth Measurement\_11N40MIMO\_5190\_Ant1



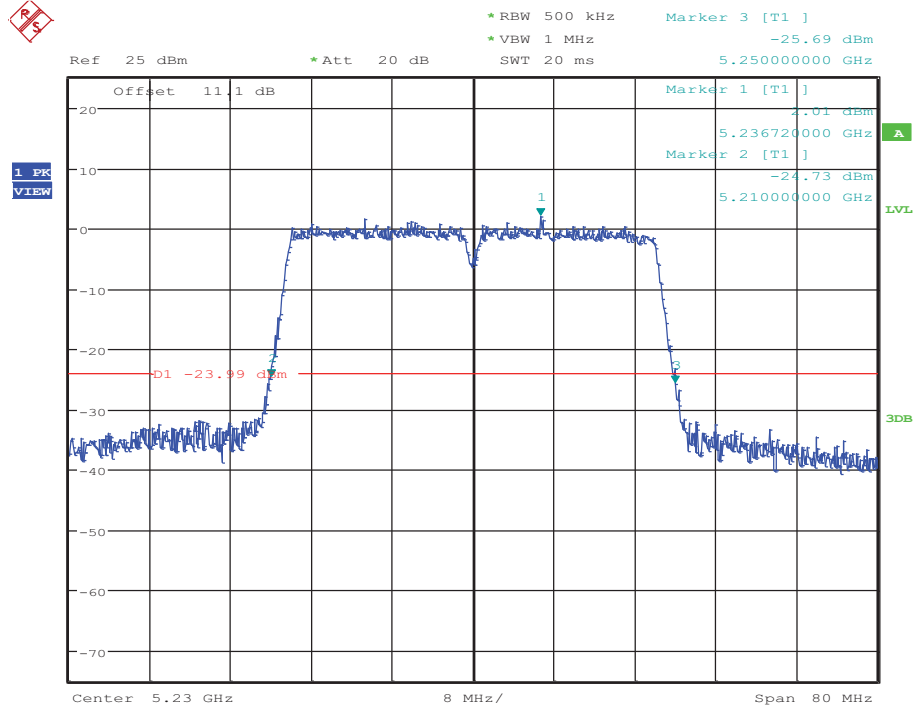
Date: 16.OCT.2017 19:29:01

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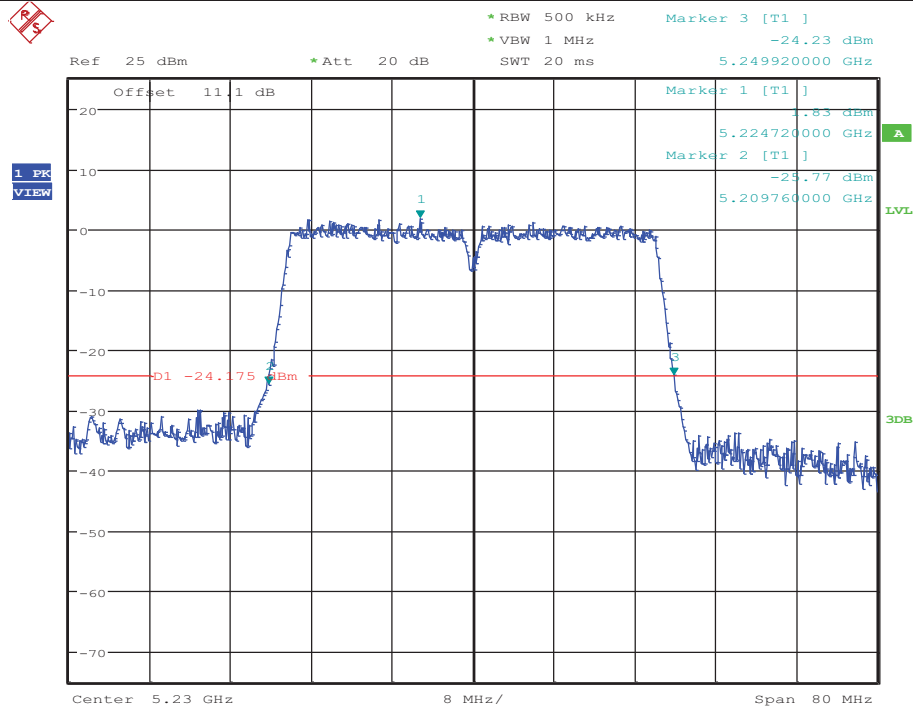
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### Emission Bandwidth Measurement\_11N40MIMO\_5230\_Ant1



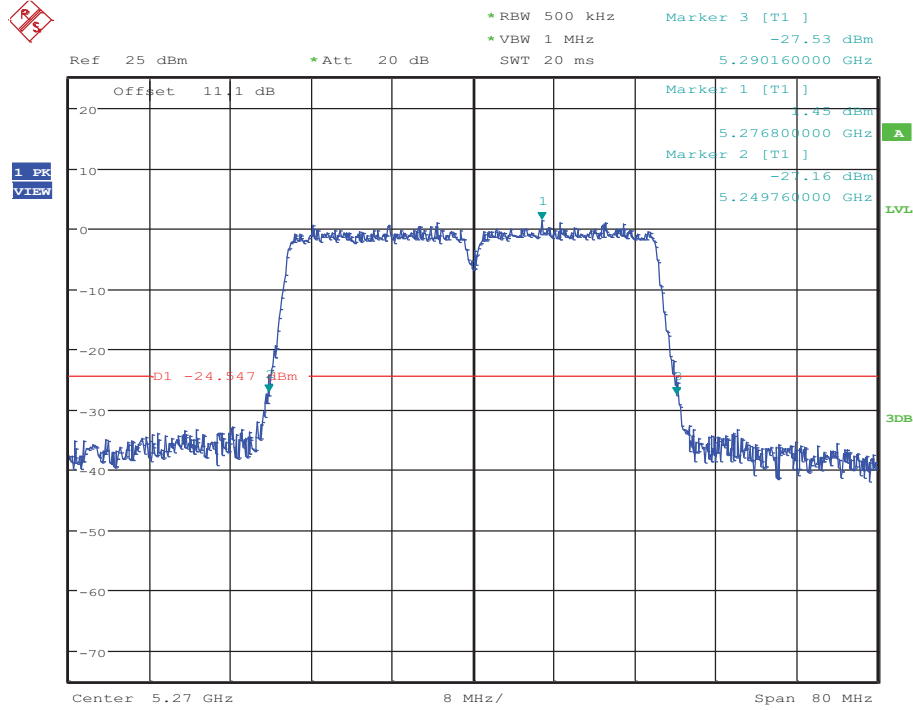
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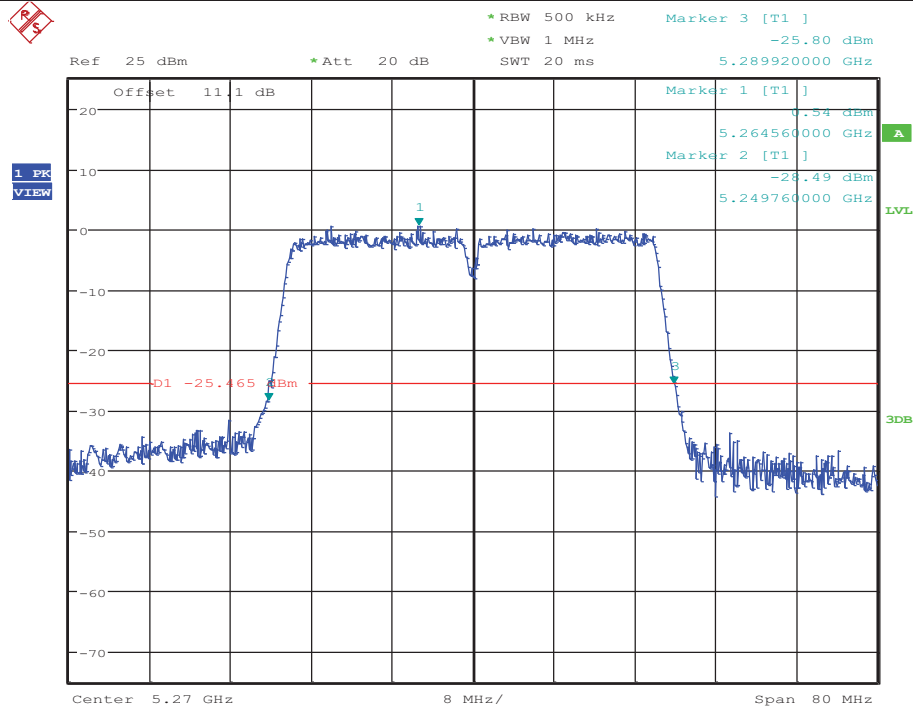
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### Emission Bandwidth Measurement\_11N40MIMO\_5270\_Ant1



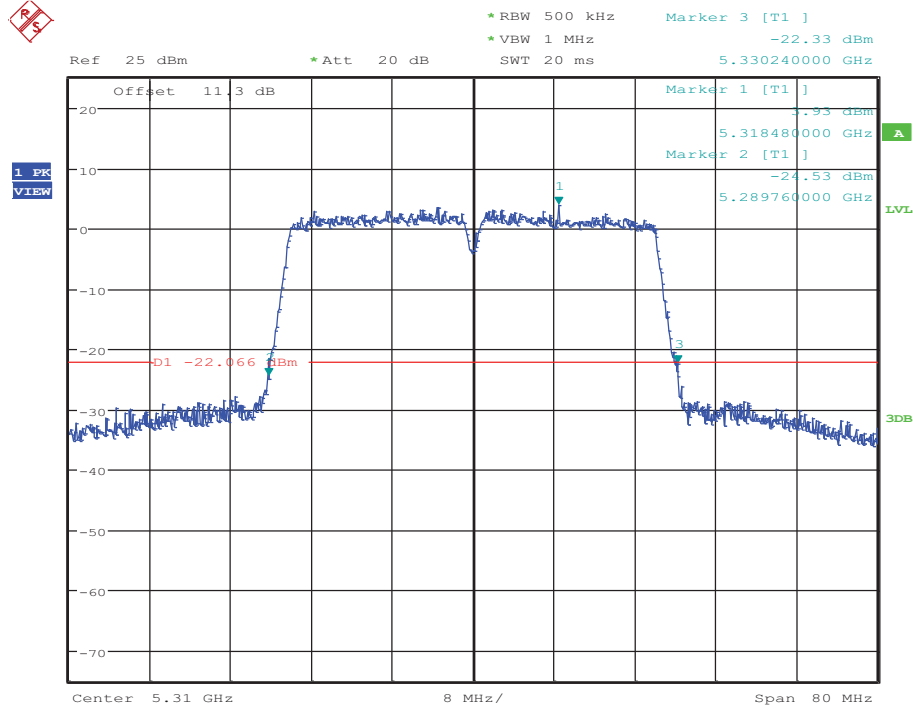
Date: 16.OCT.2017 19:54:29

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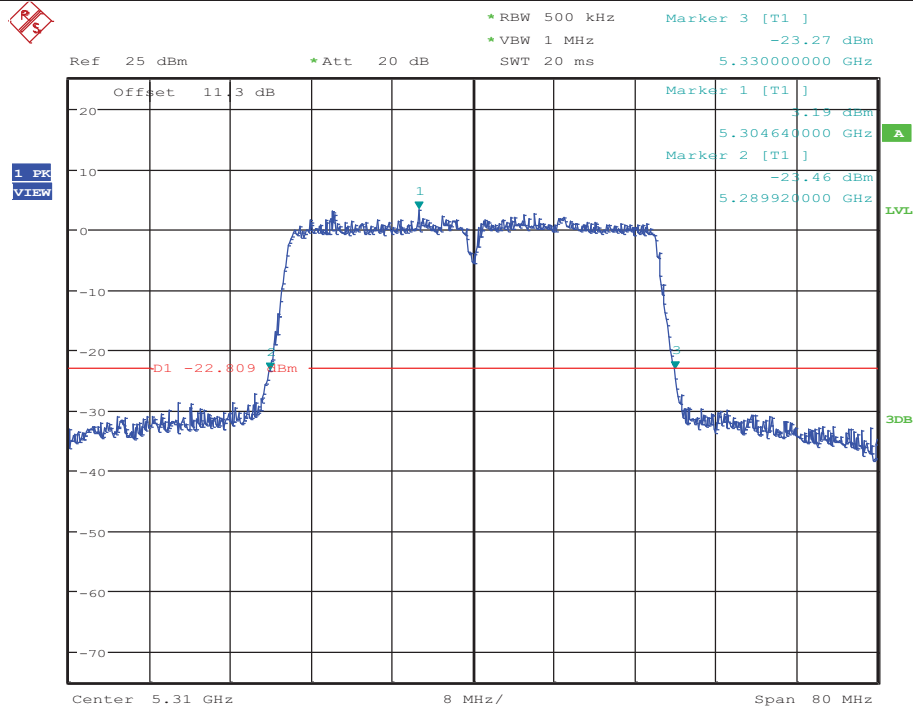
Date: 16.OCT.2017 19:58:46

### Emission Bandwidth Measurement\_11N40MIMO\_5310\_Ant1



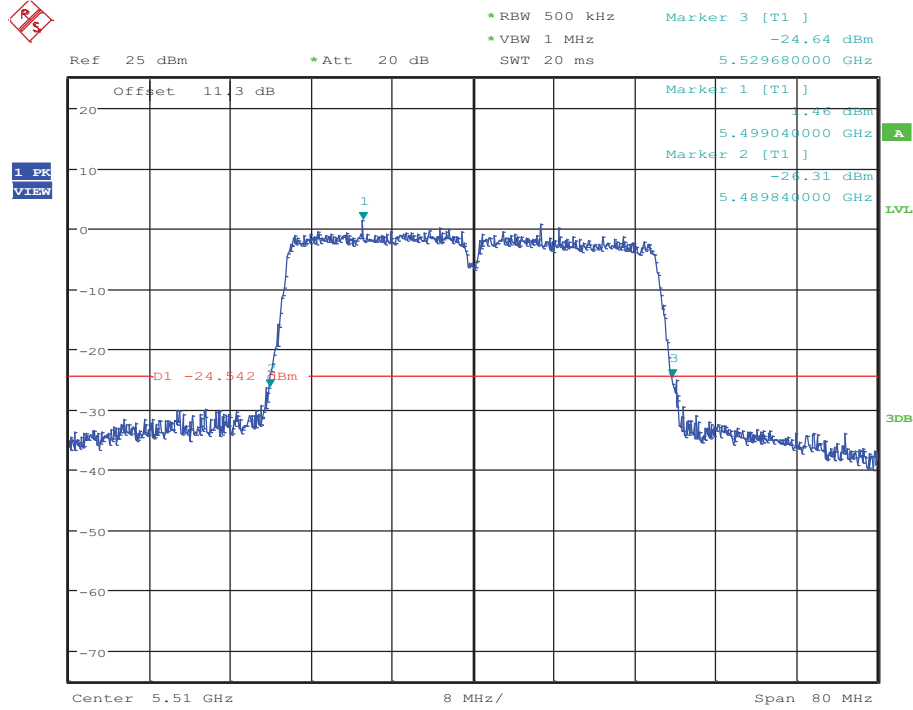
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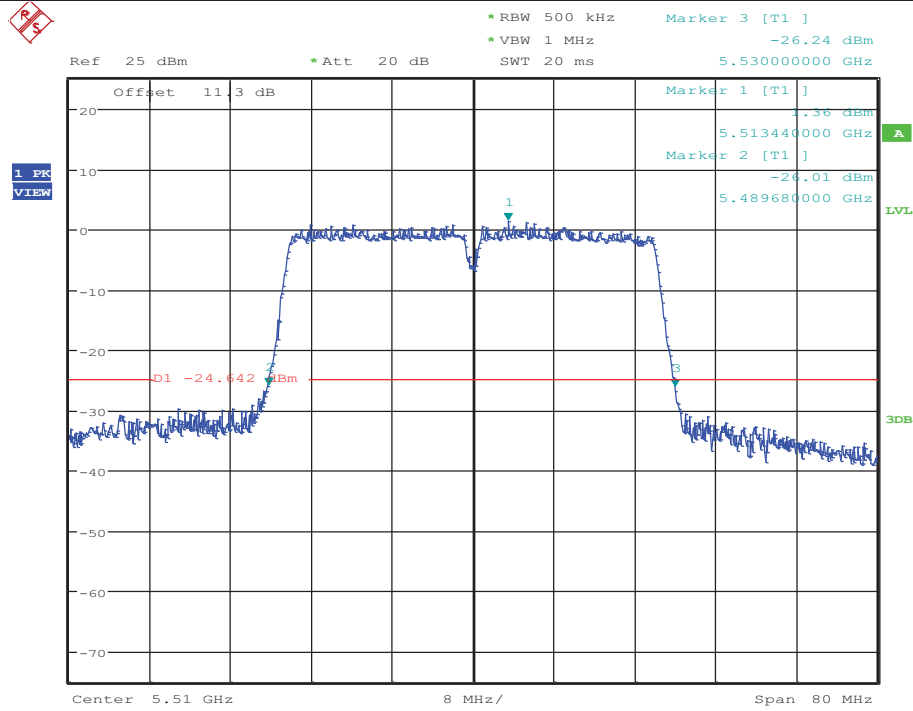


Date: 16.OCT.2017 20:08:10

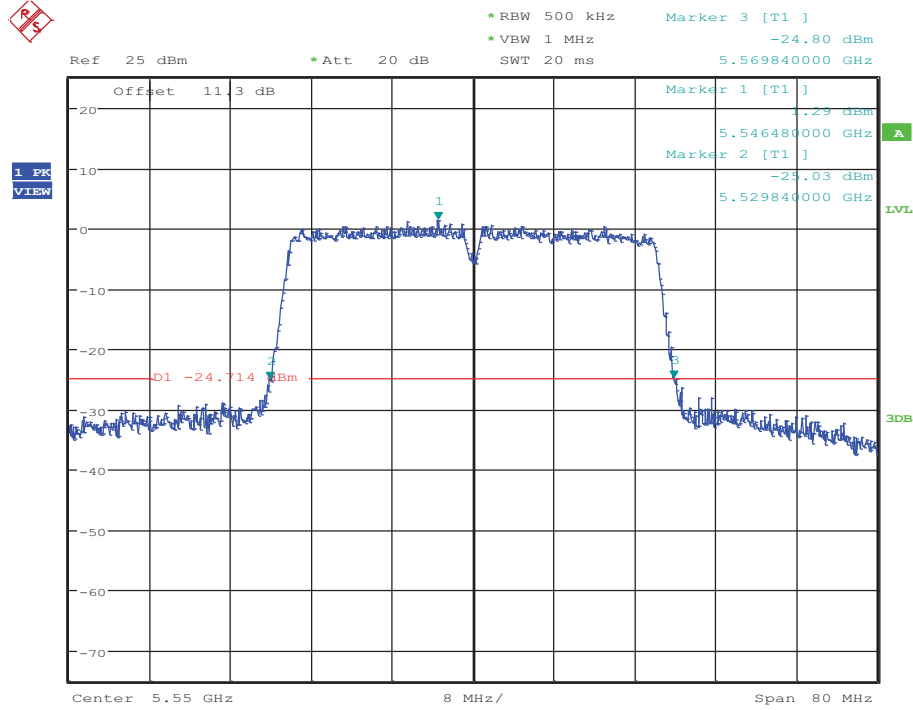
### Emission Bandwidth Measurement\_11N40MIMO\_5510\_Ant1



### Emission Bandwidth Measurement\_11N40MIMO\_5510\_Ant2

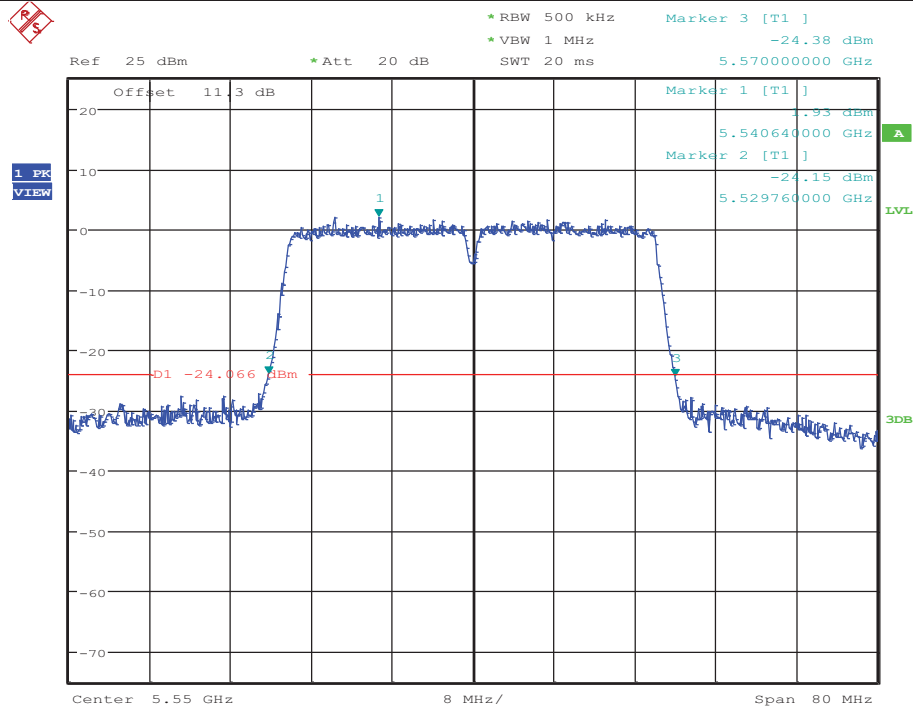


### Emission Bandwidth Measurement\_11N40MIMO\_5550\_Ant1



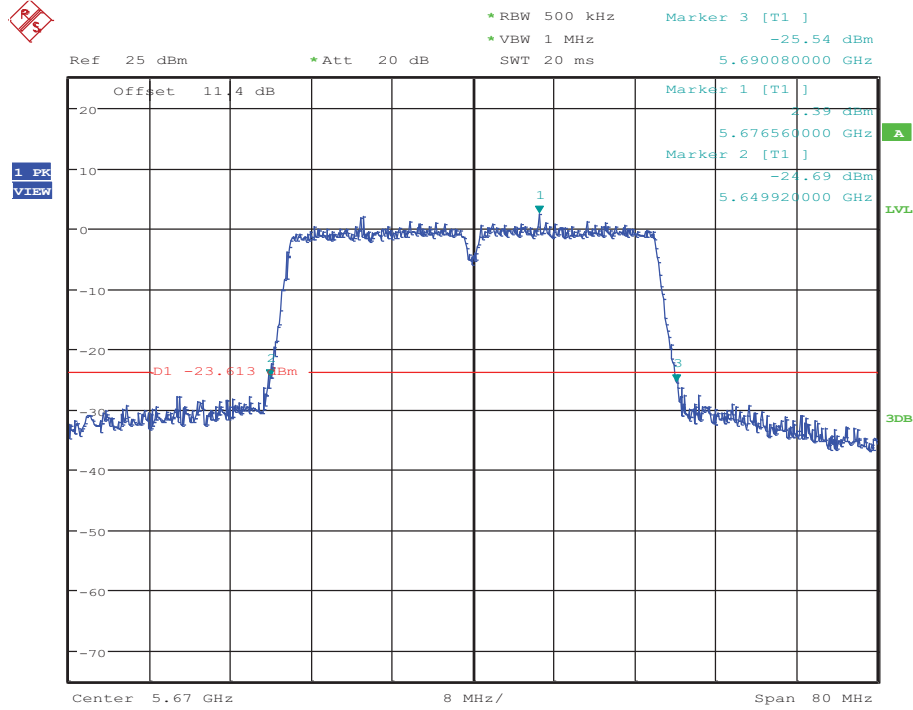
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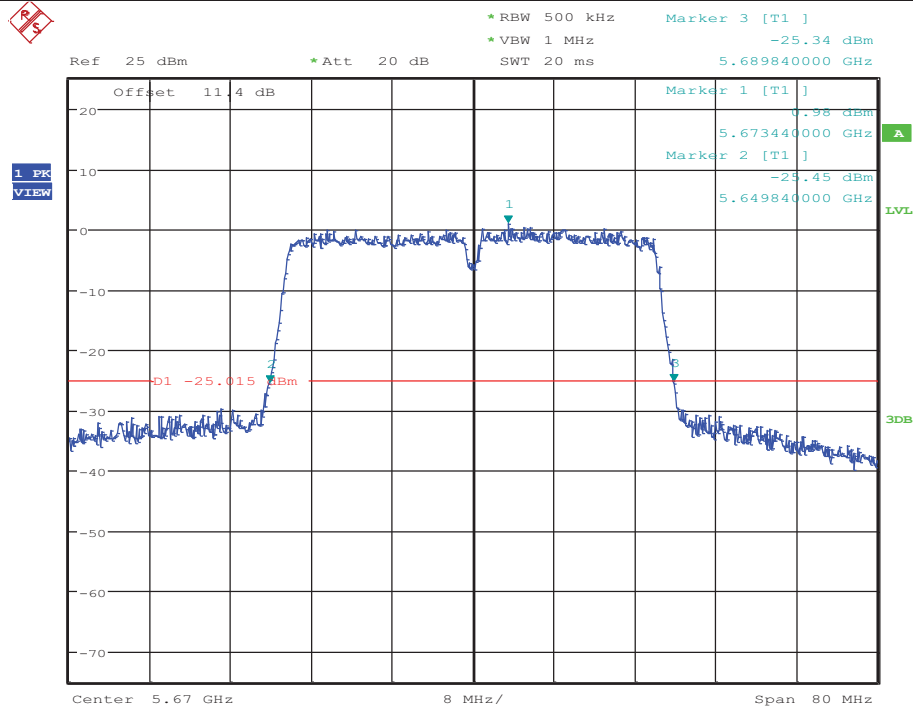
Date: 16.OCT.2017 20:34:02

### Emission Bandwidth Measurement\_11N40MIMO\_5670\_Ant1



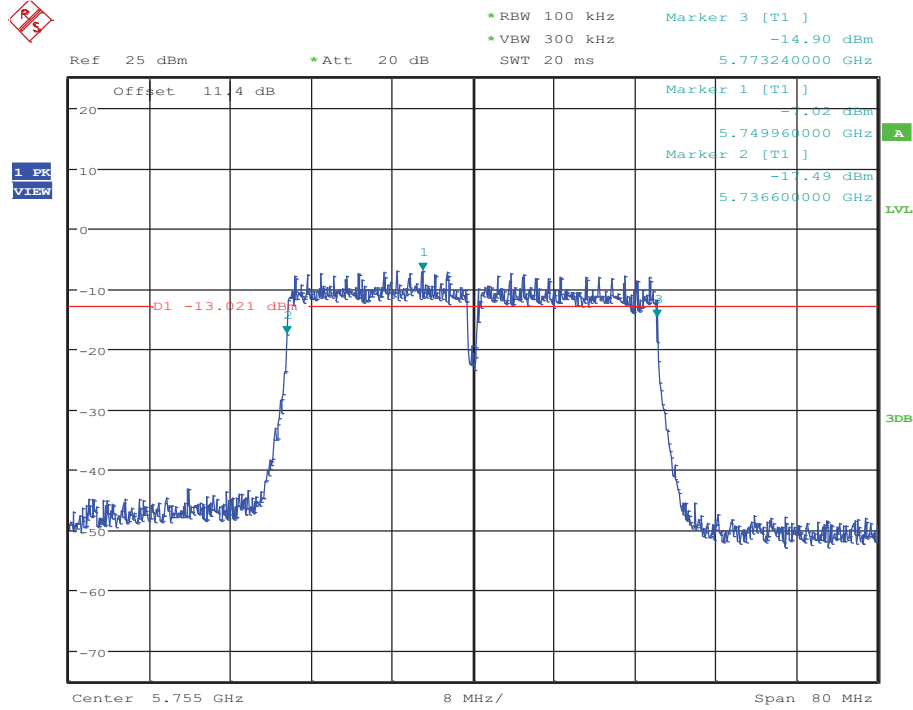
Date: 17.OCT.2017 08:52:26

### Emission Bandwidth Measurement\_11N40MIMO\_5670\_Ant2



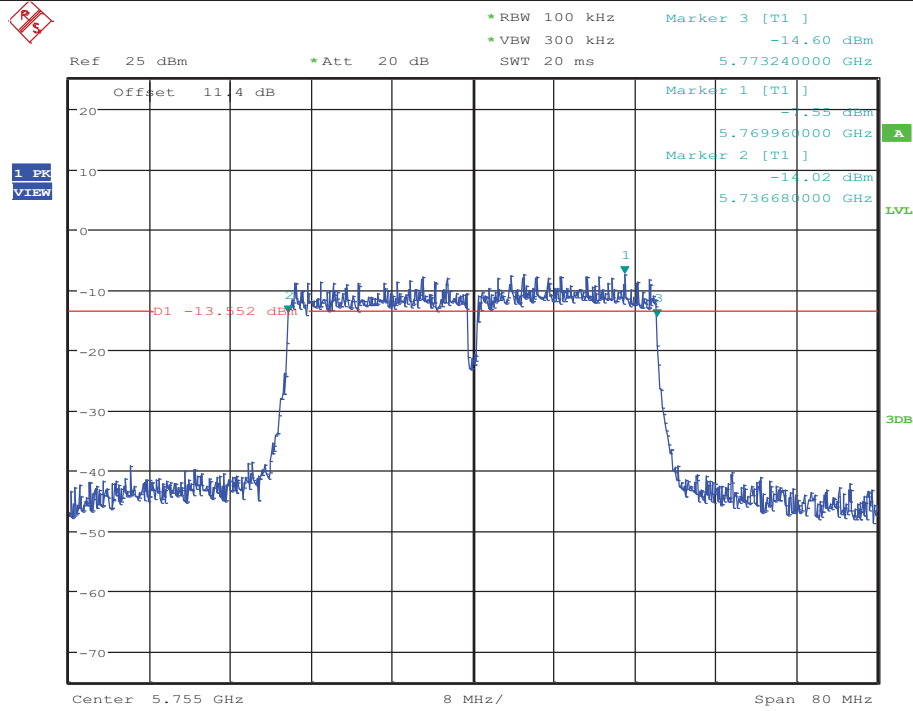
Date: 17.OCT.2017 11:43:30

### Emission Bandwidth Measurement\_11N40MIMO\_5755\_Ant1



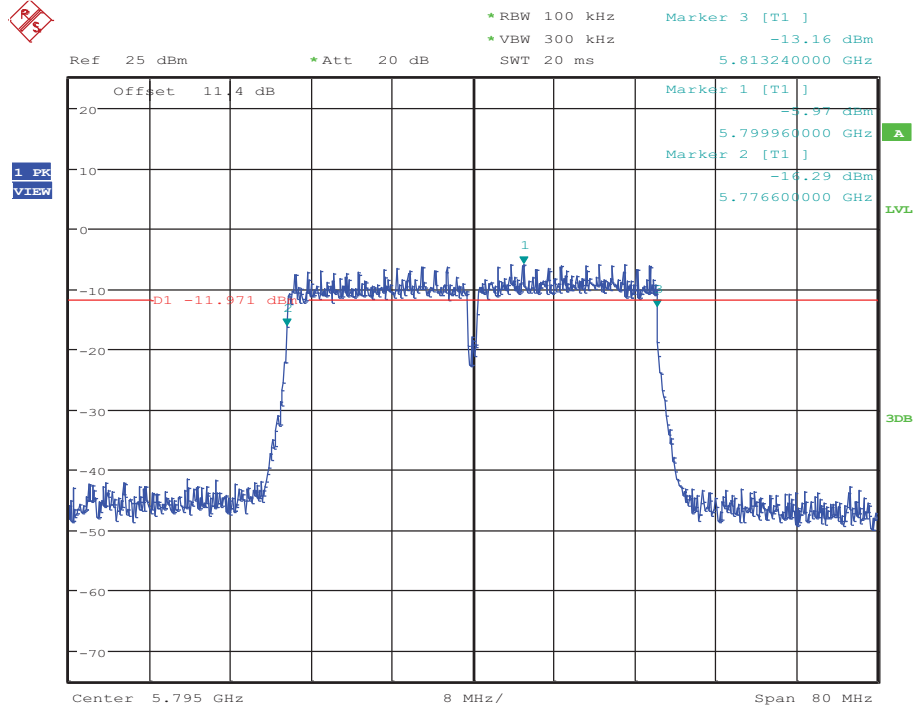
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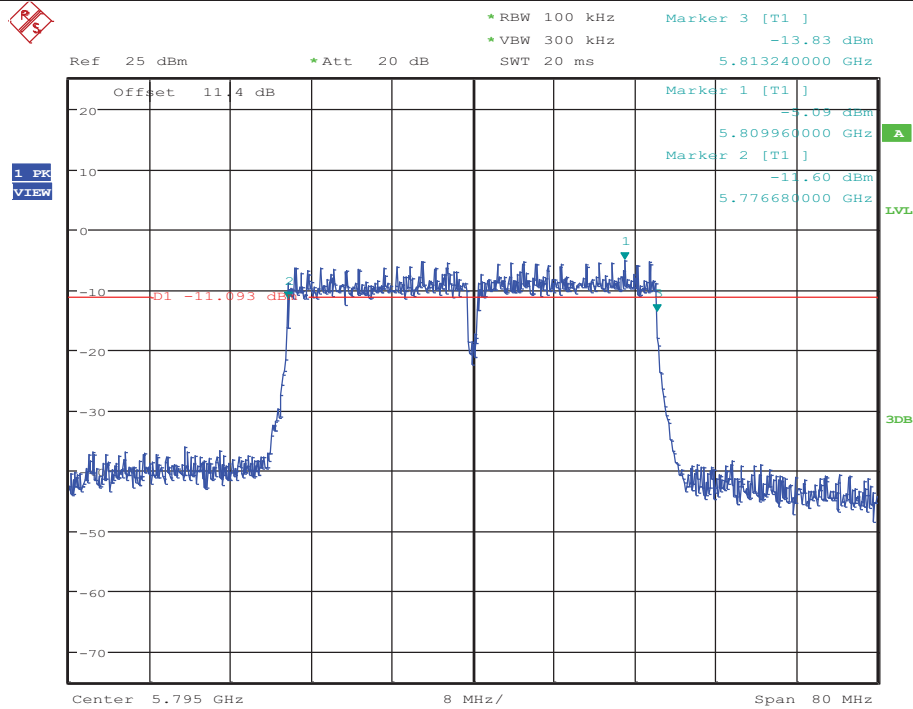
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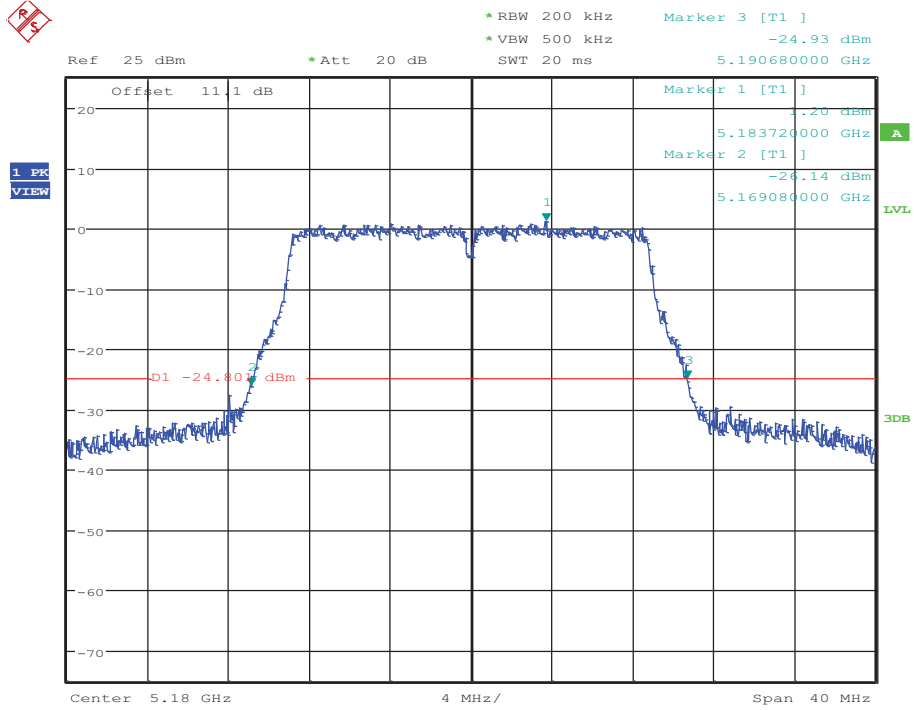
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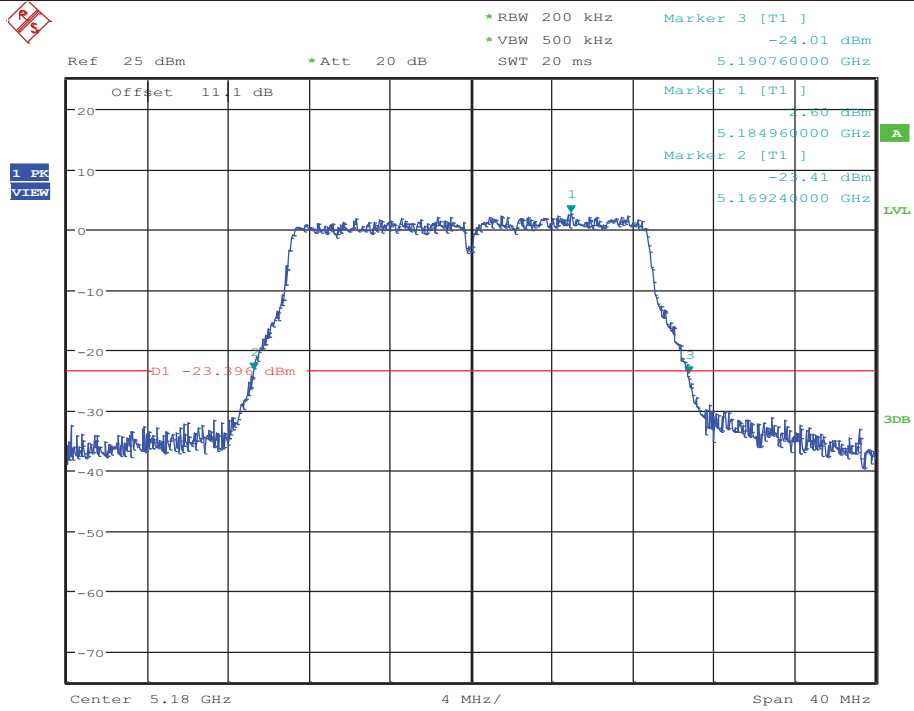
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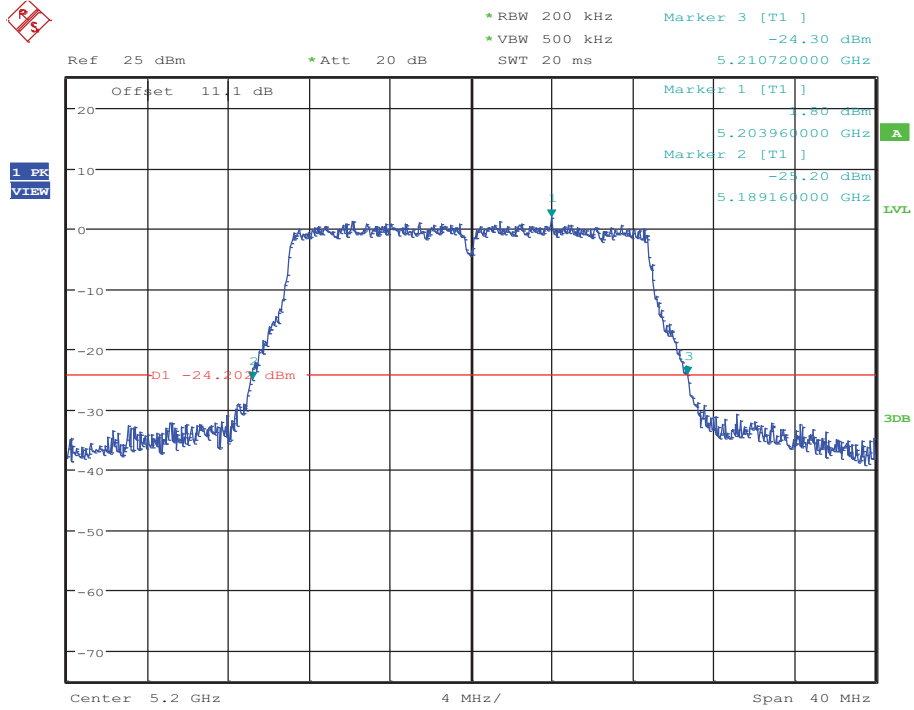
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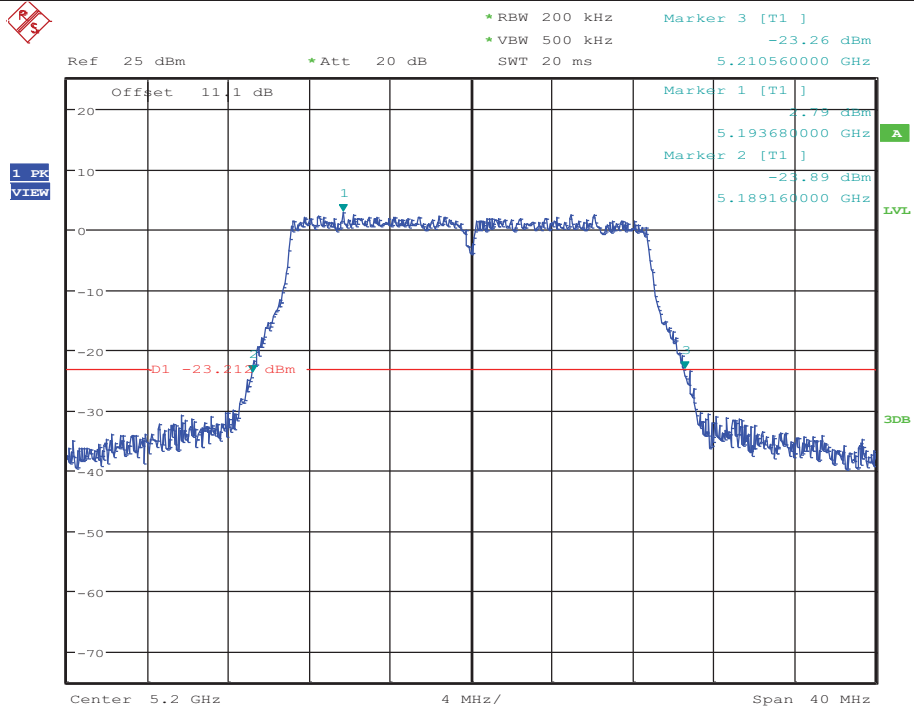
Date: 17.OCT.2017 14:22:01

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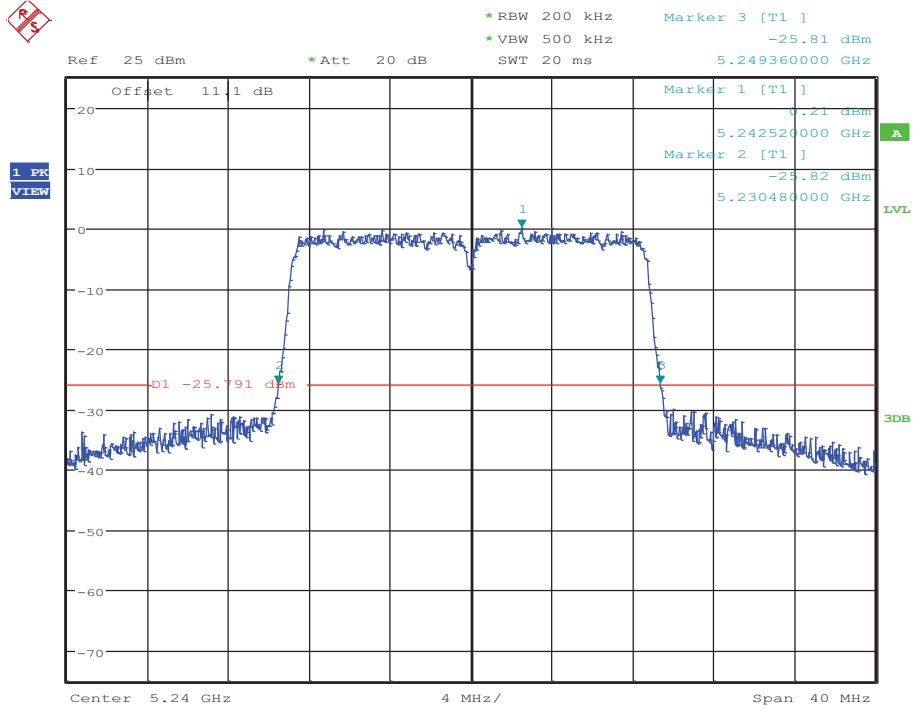
Date: 17.OCT.2017 09:17:54

### Emission Bandwidth Measurement\_11AC20MIMO\_5200\_Ant2



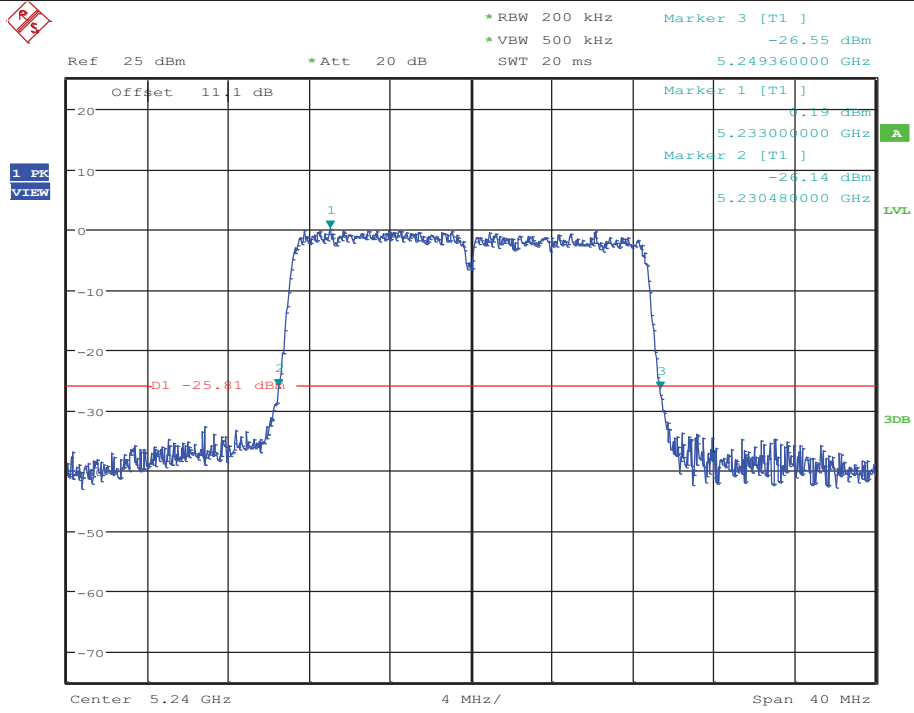
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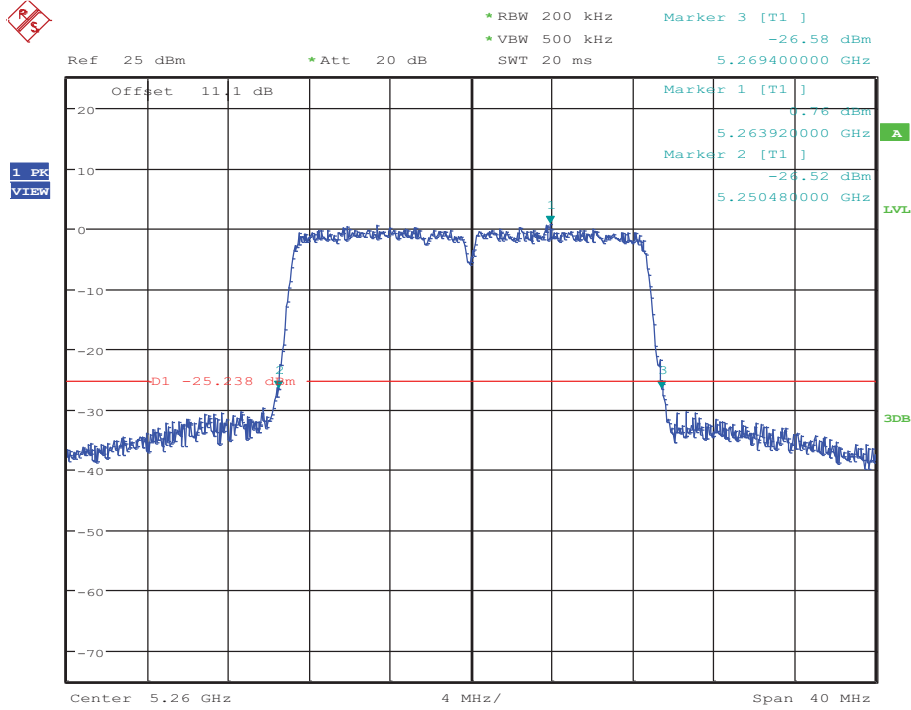
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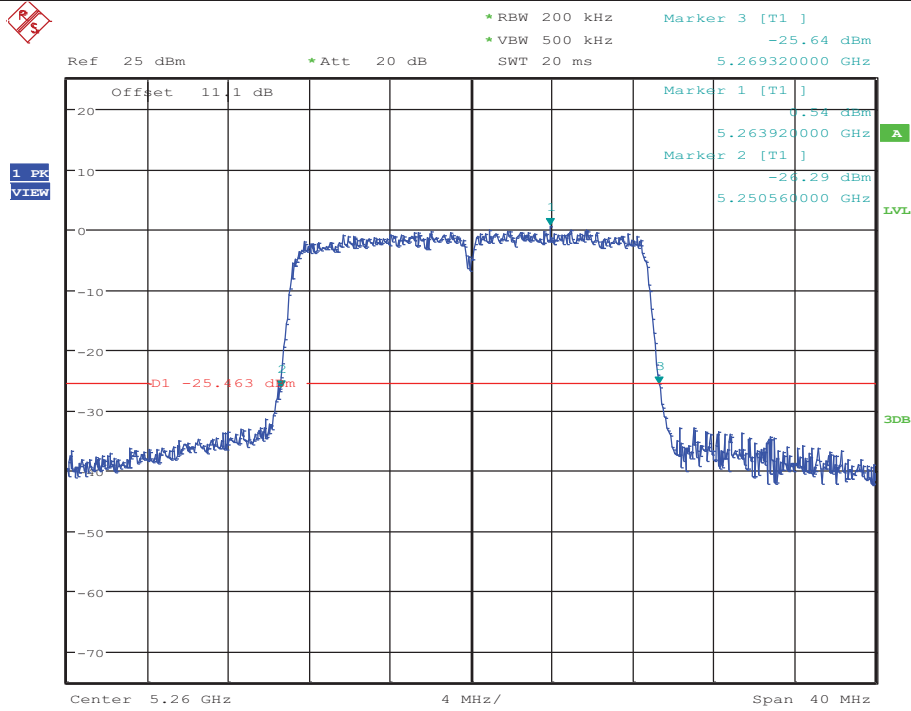
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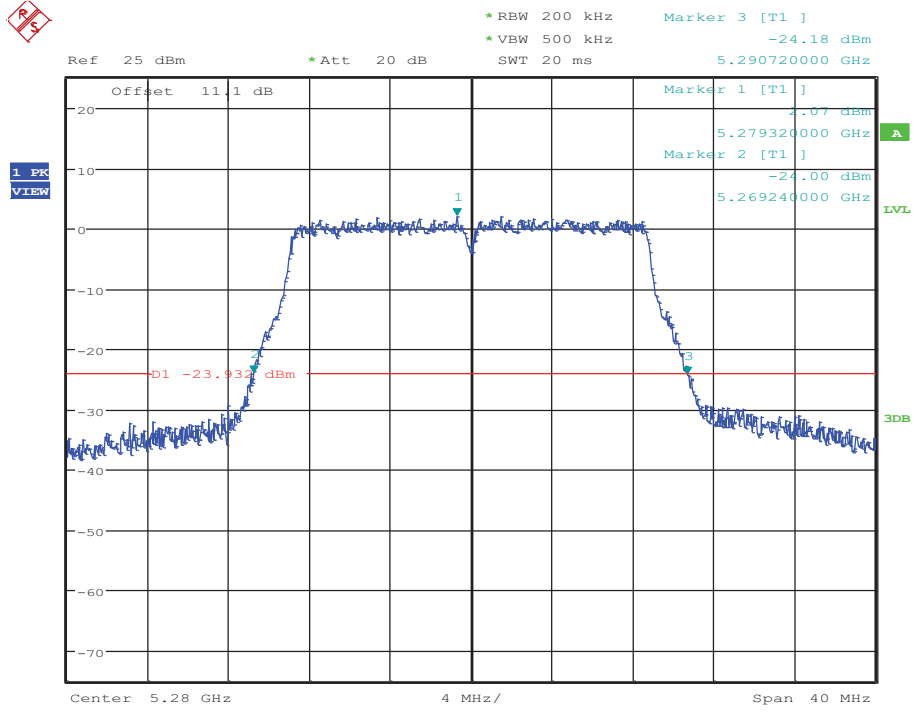
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### Emission Bandwidth Measurement\_11AC20MIMO\_5260\_Ant2



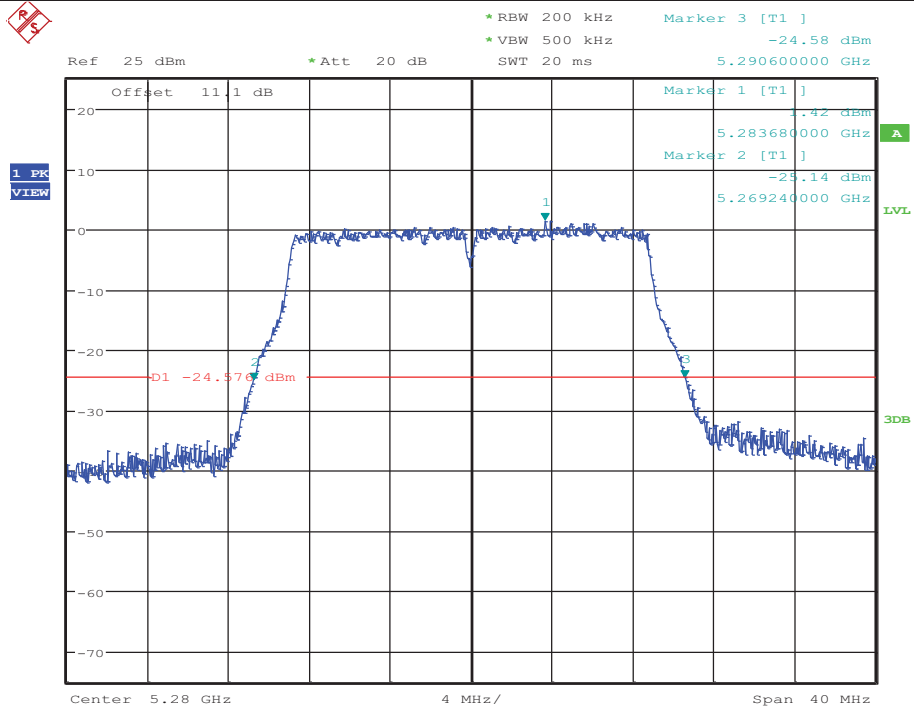
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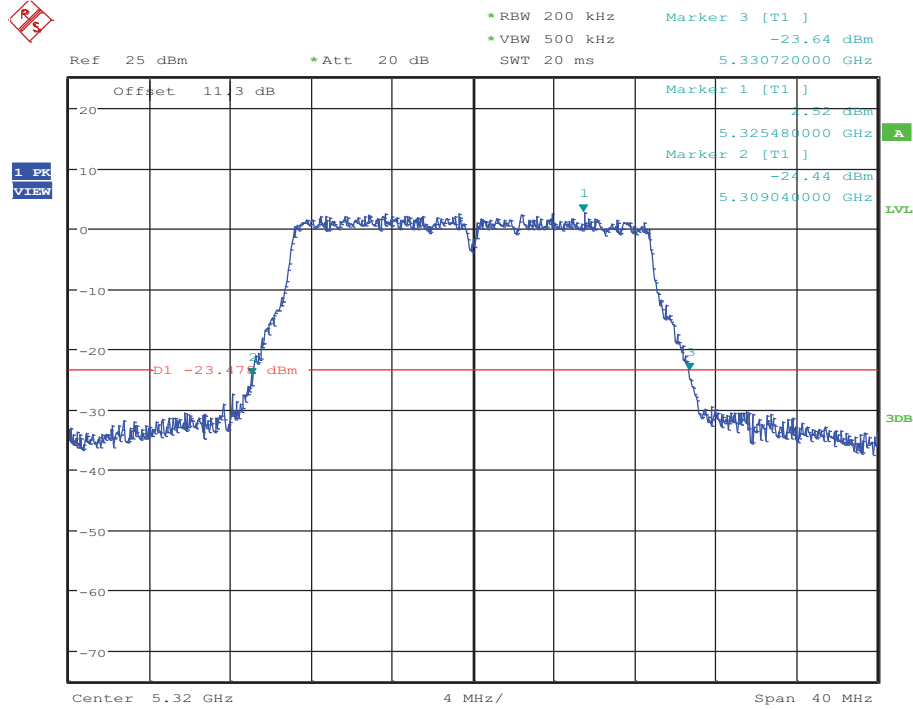
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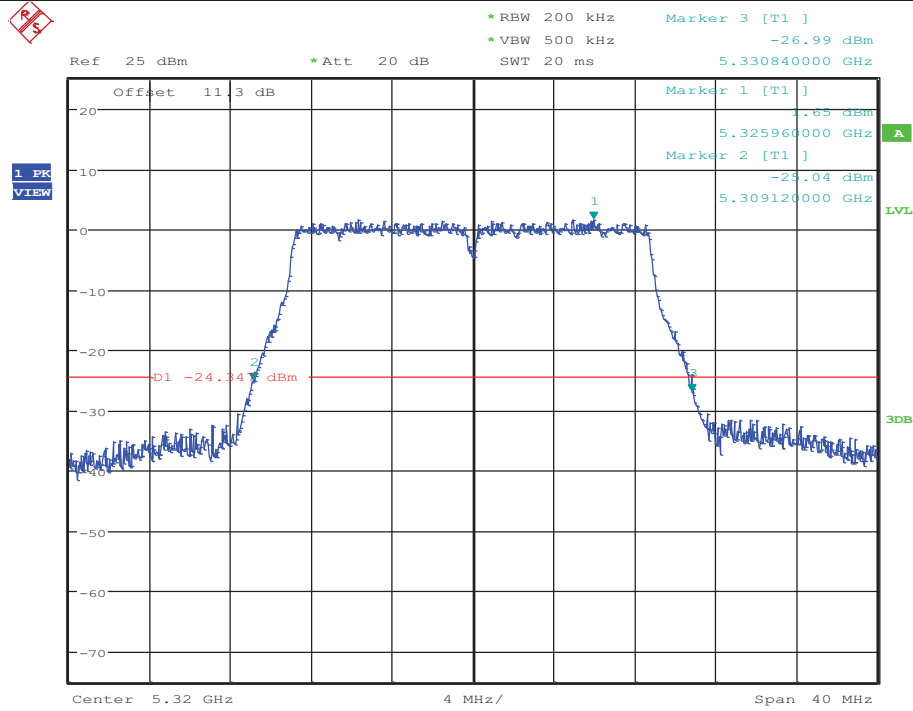
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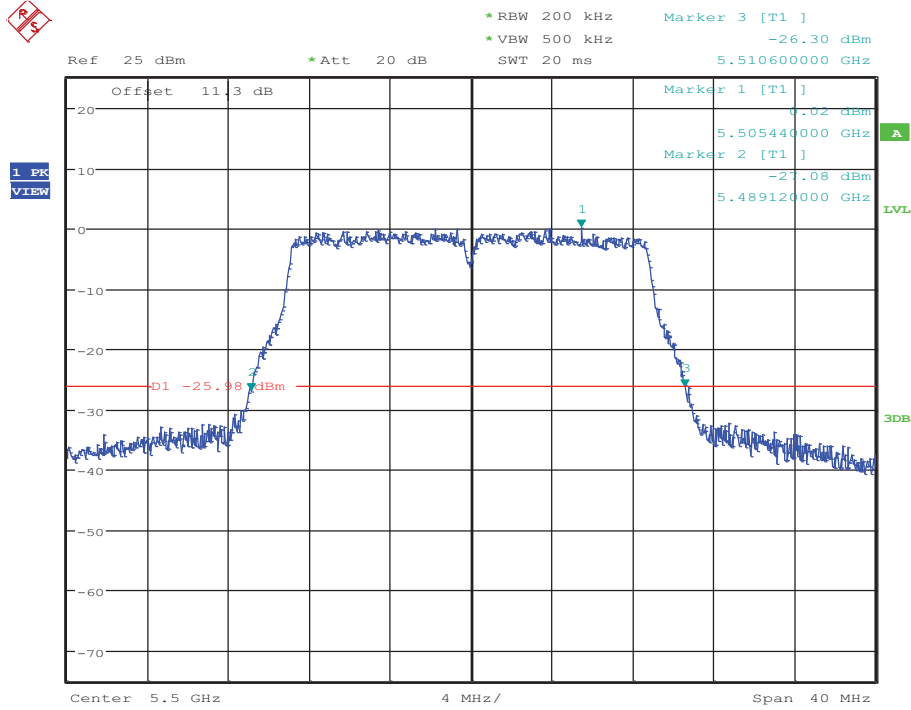
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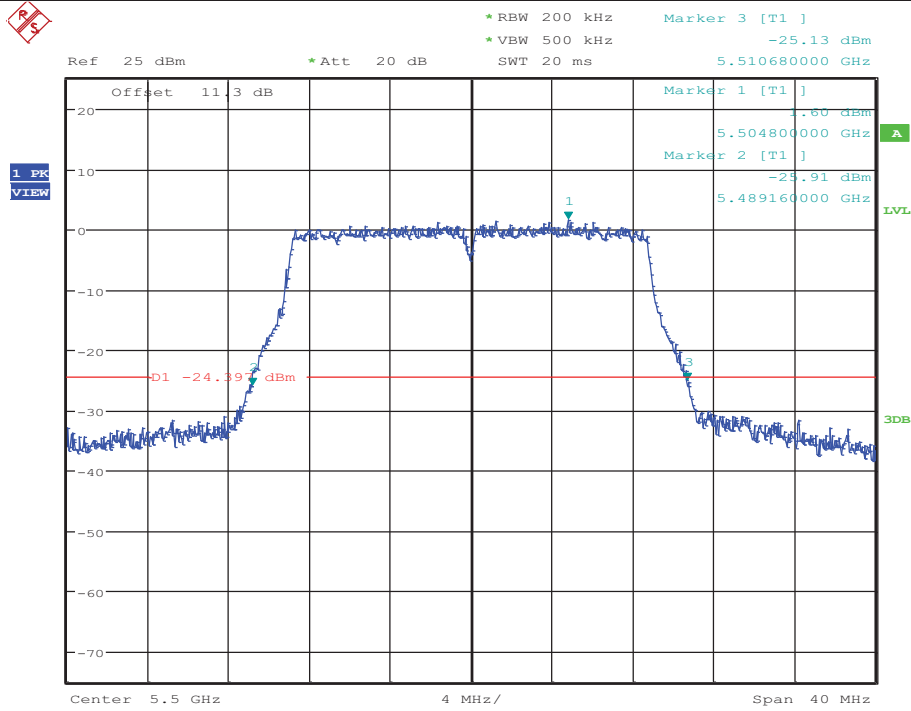
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### Emission Bandwidth Measurement\_11AC20MIMO\_5500\_Ant1



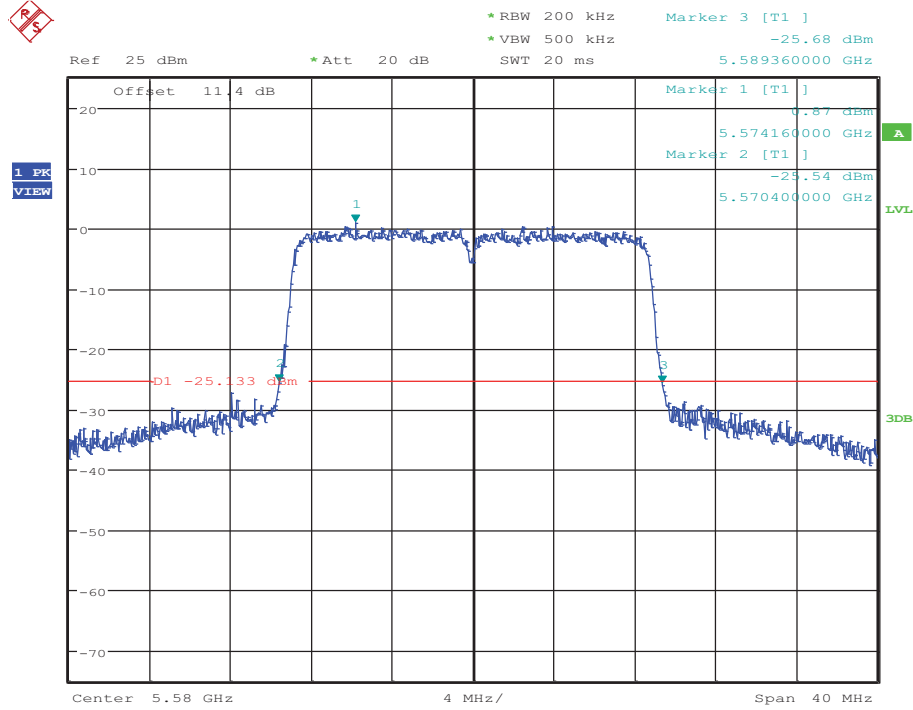
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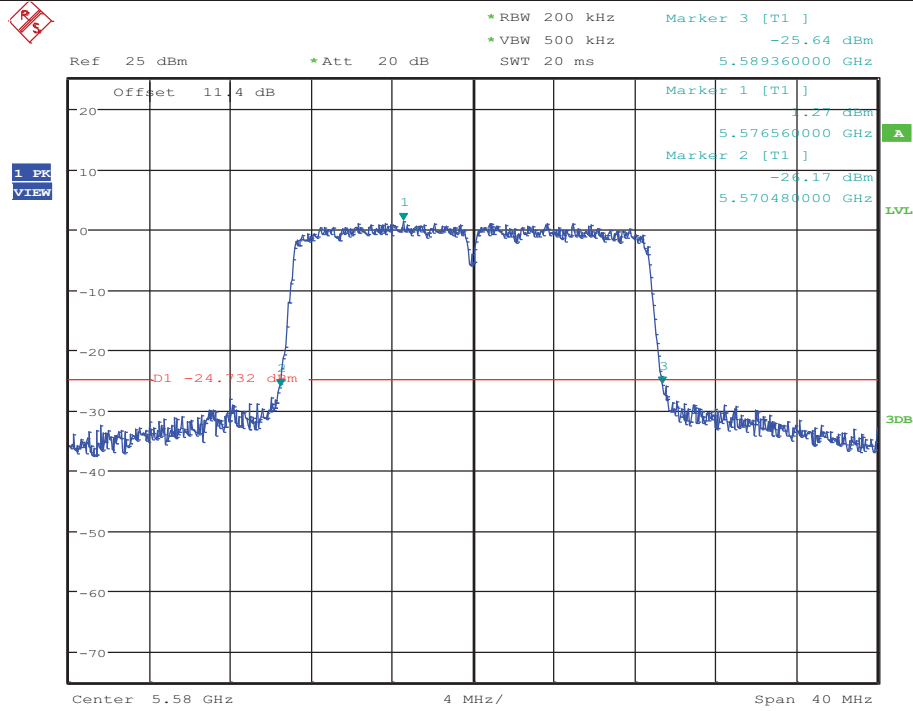
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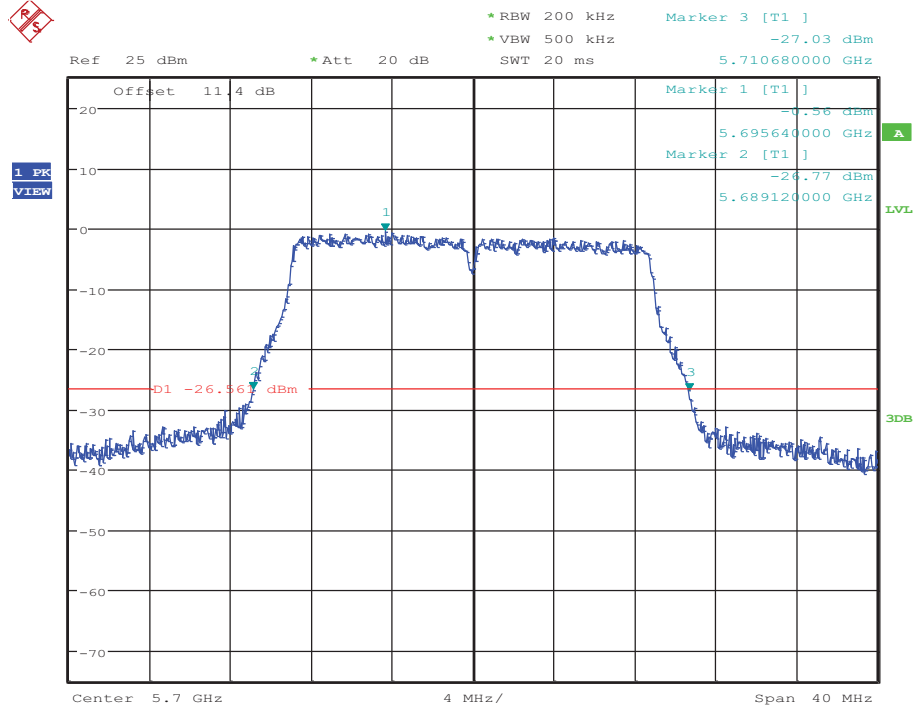
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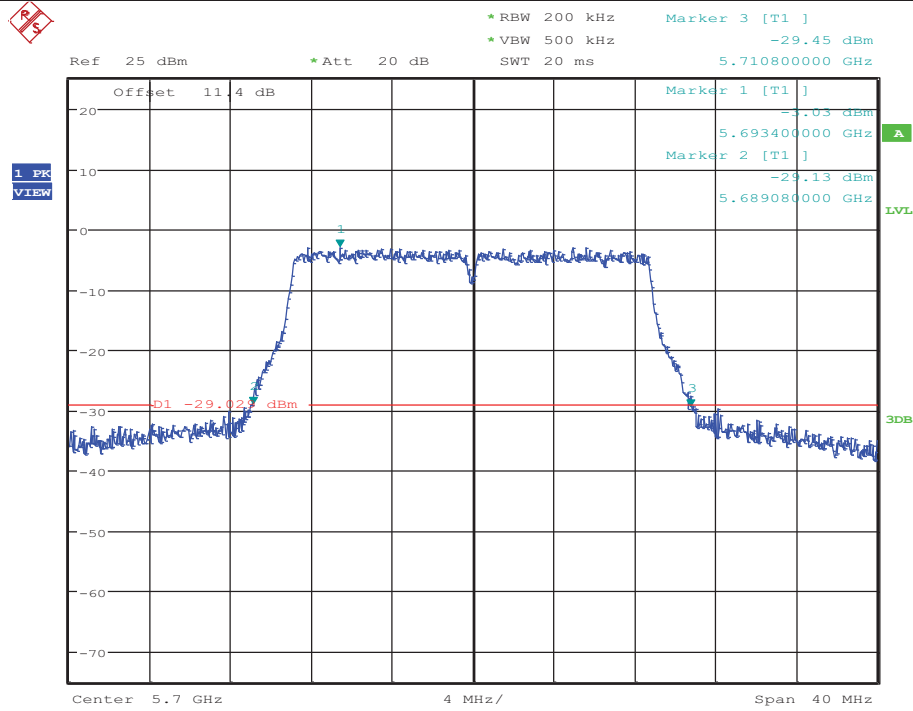
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### Emission Bandwidth Measurement\_11AC20MIMO\_5700\_Ant1



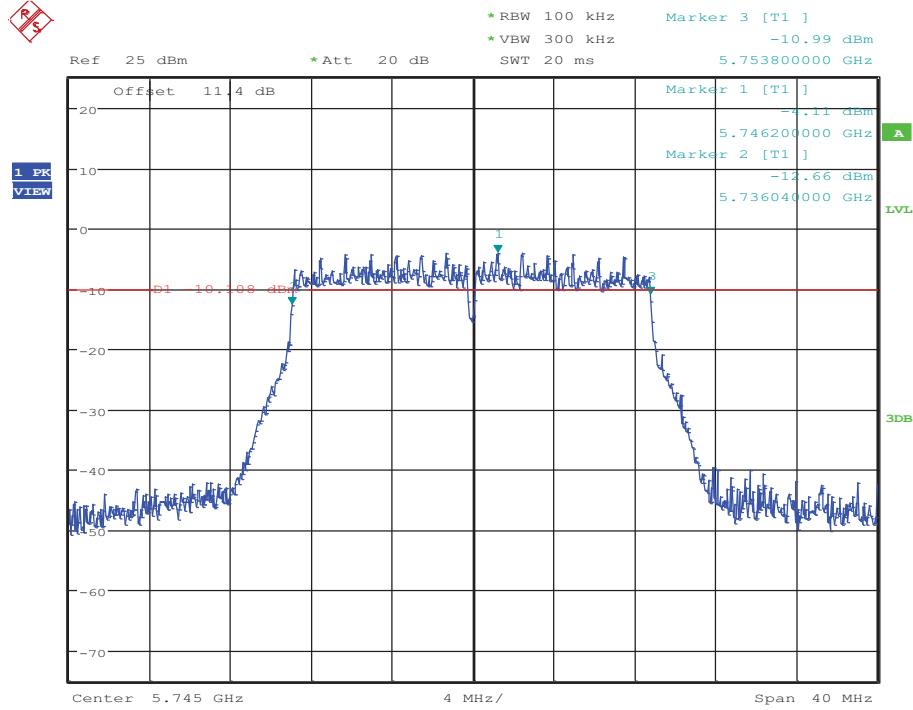
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### Emission Bandwidth Measurement\_11AC20MIMO\_5700\_Ant2



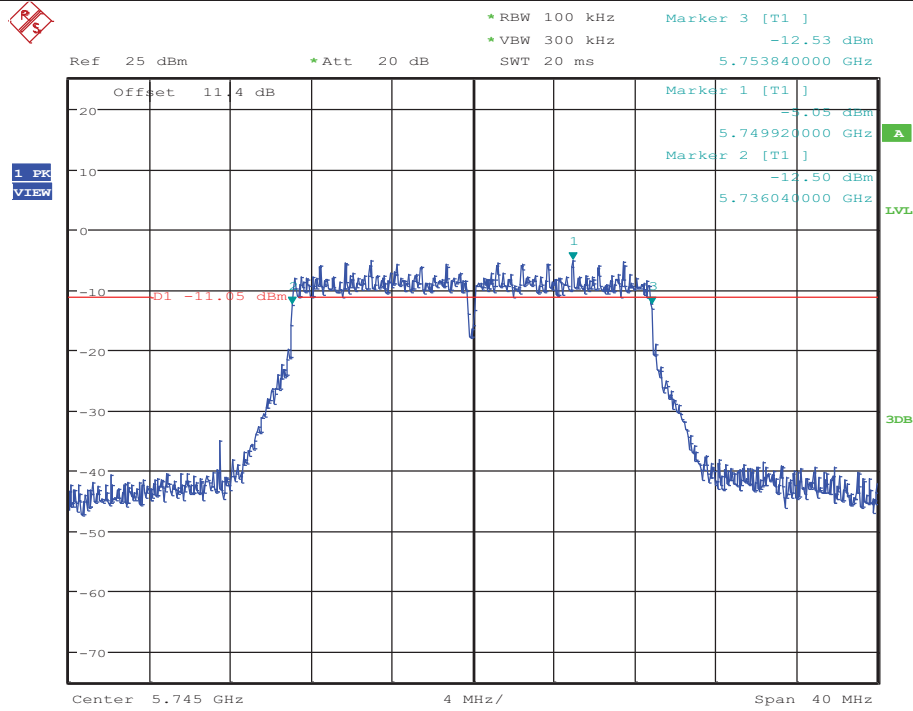
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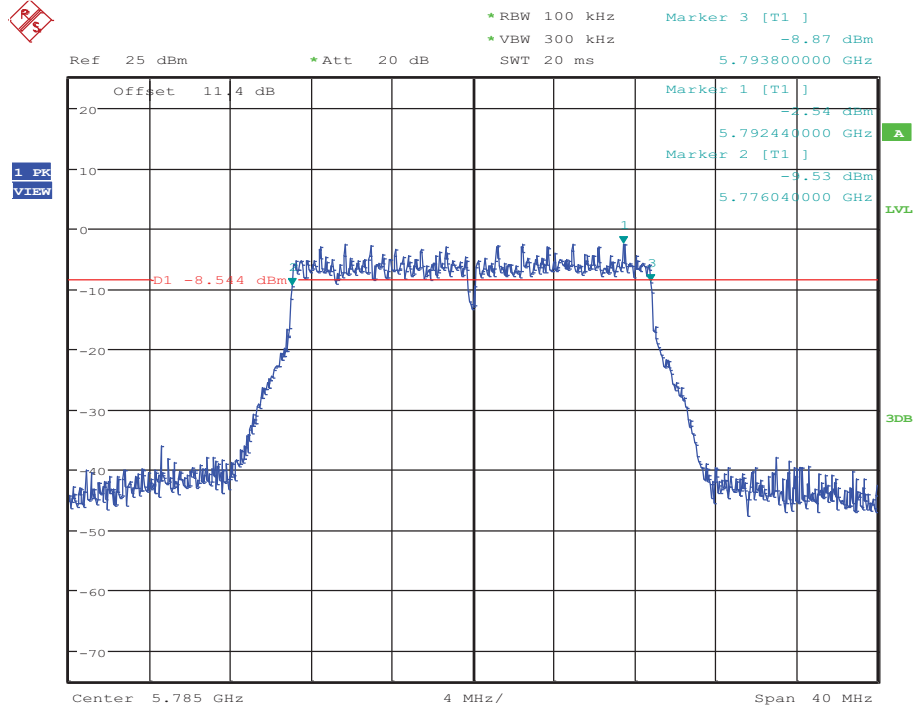
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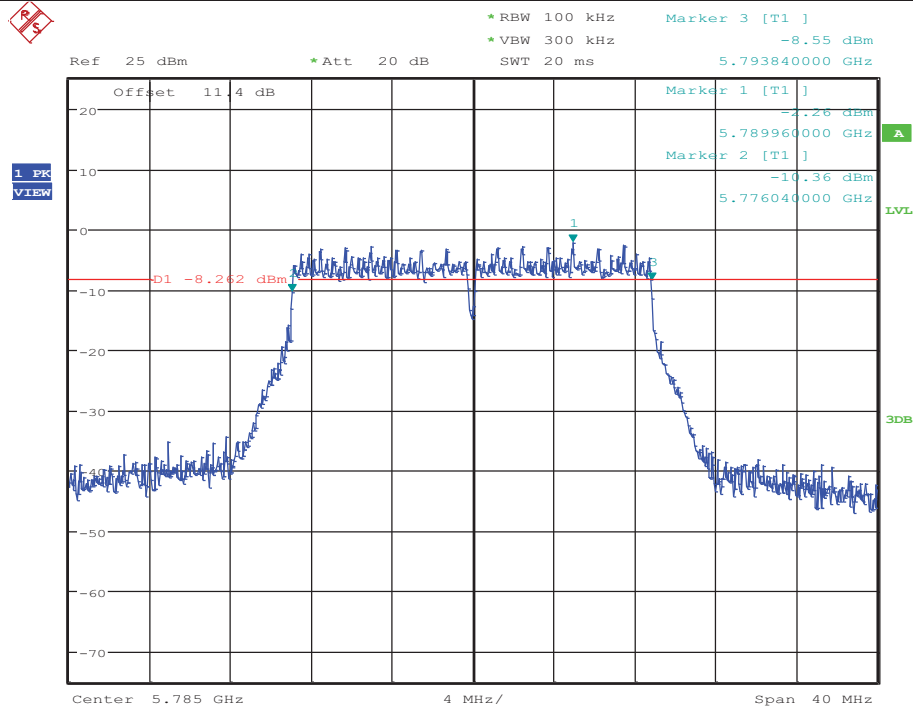
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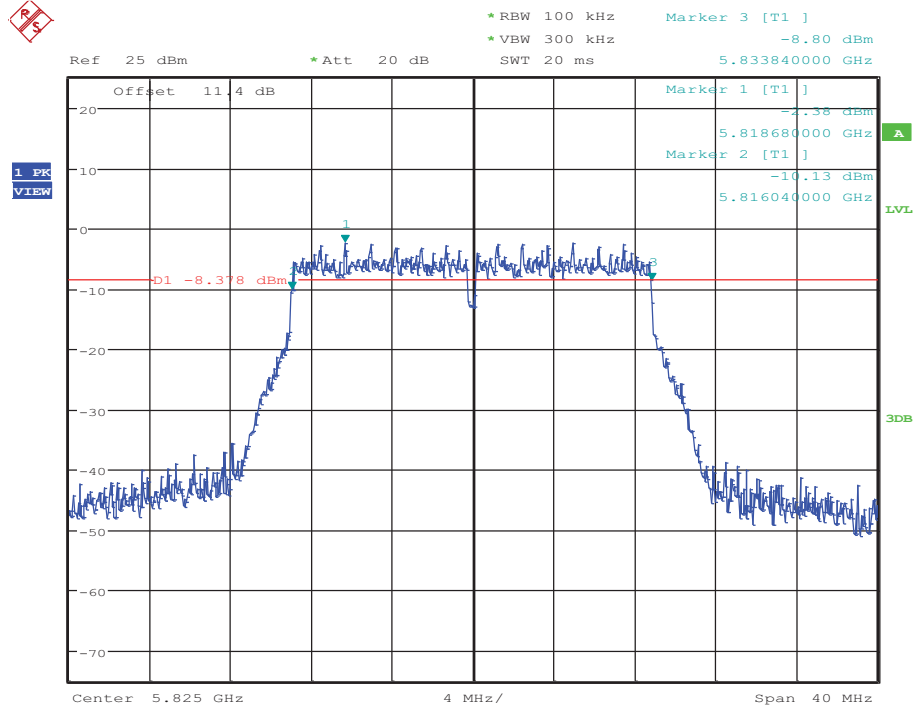
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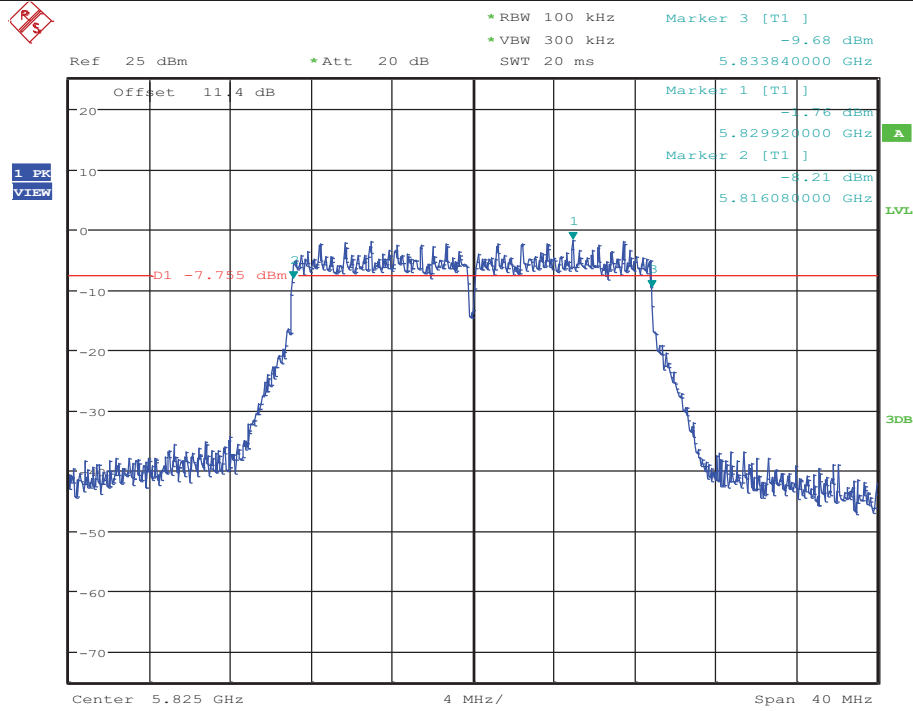
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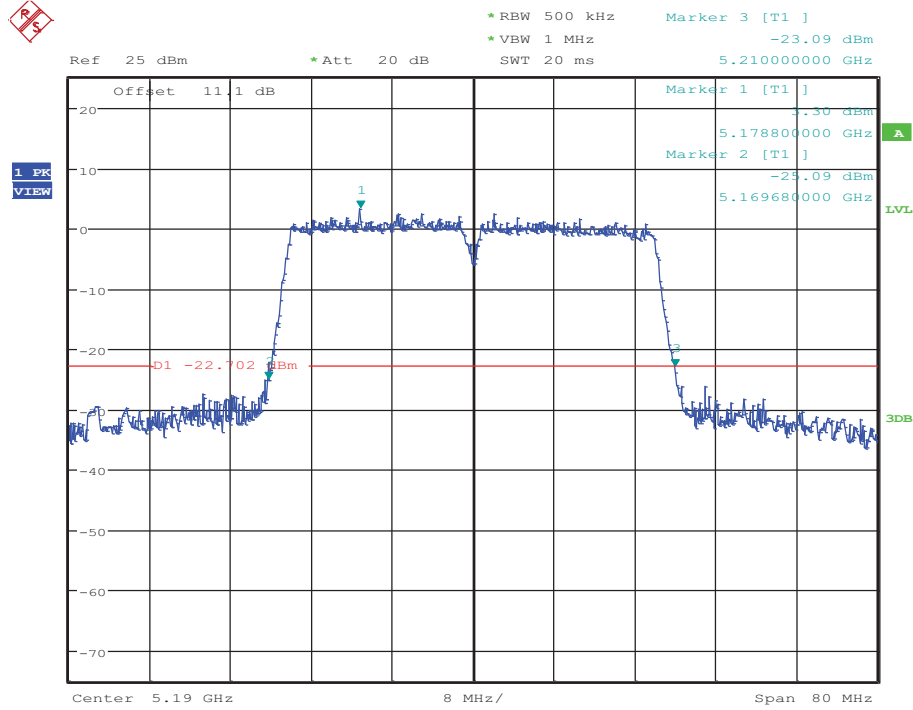
Date: 17.OCT.2017 10:13:47

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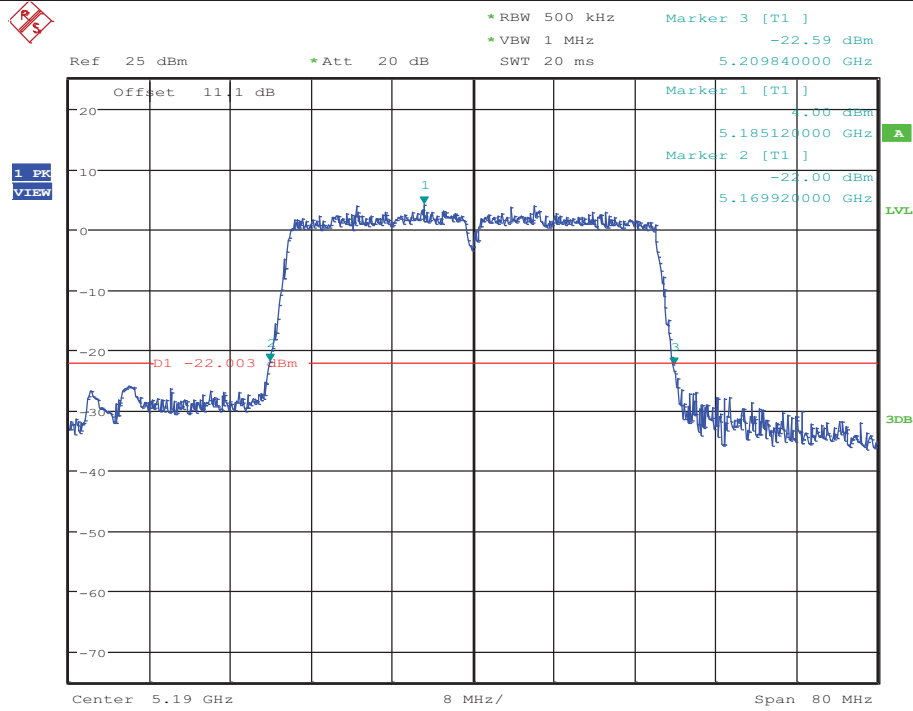
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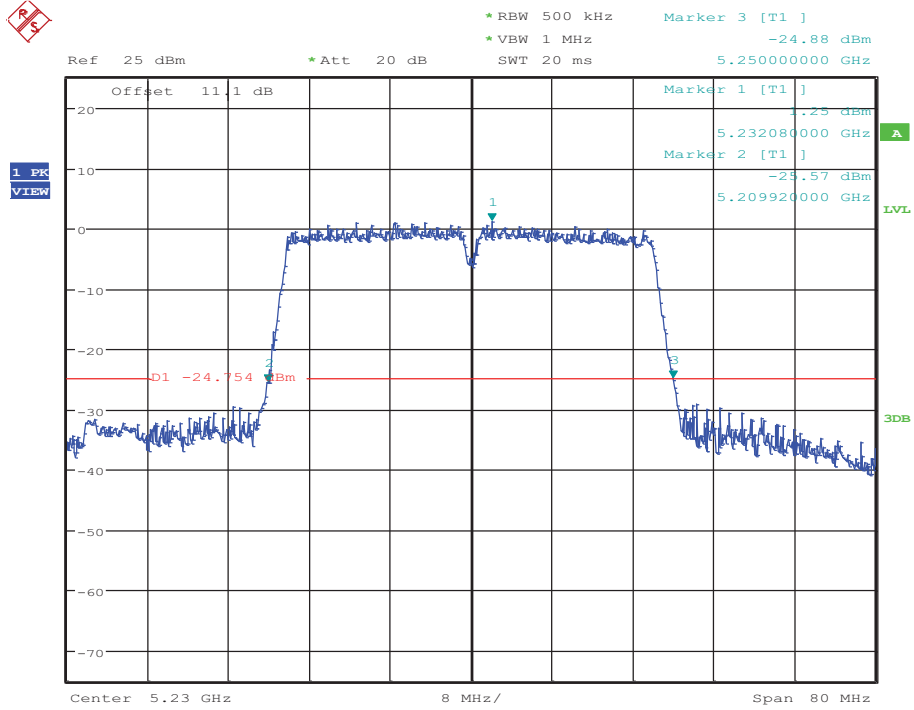
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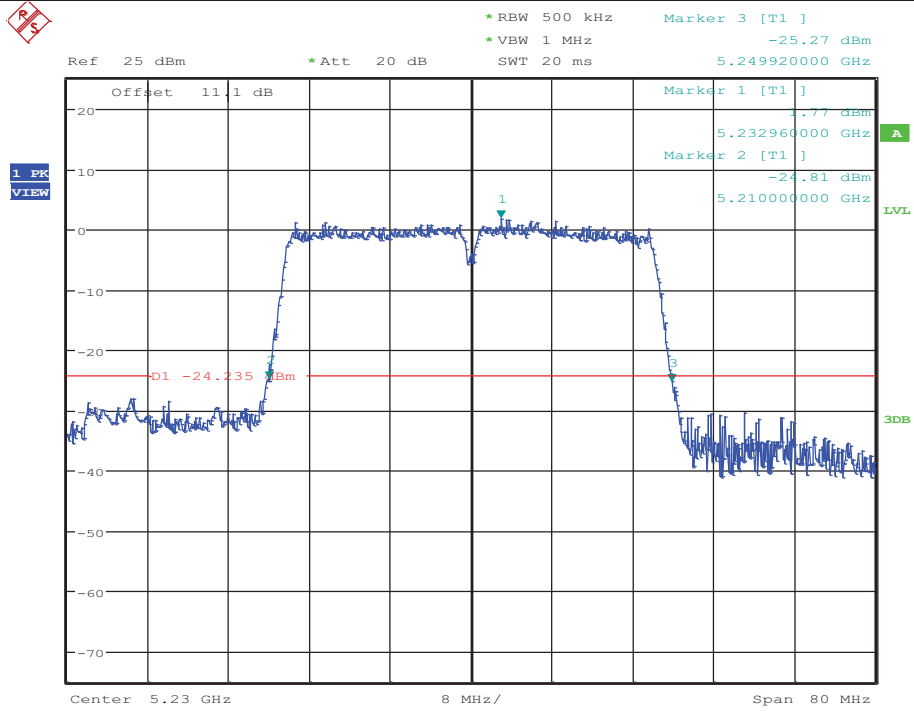
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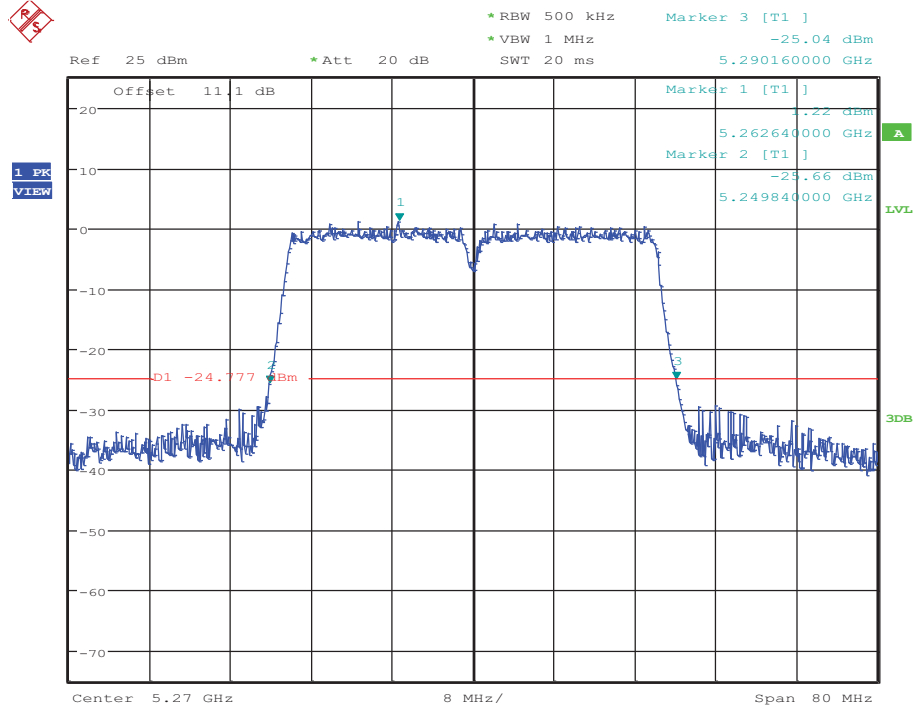
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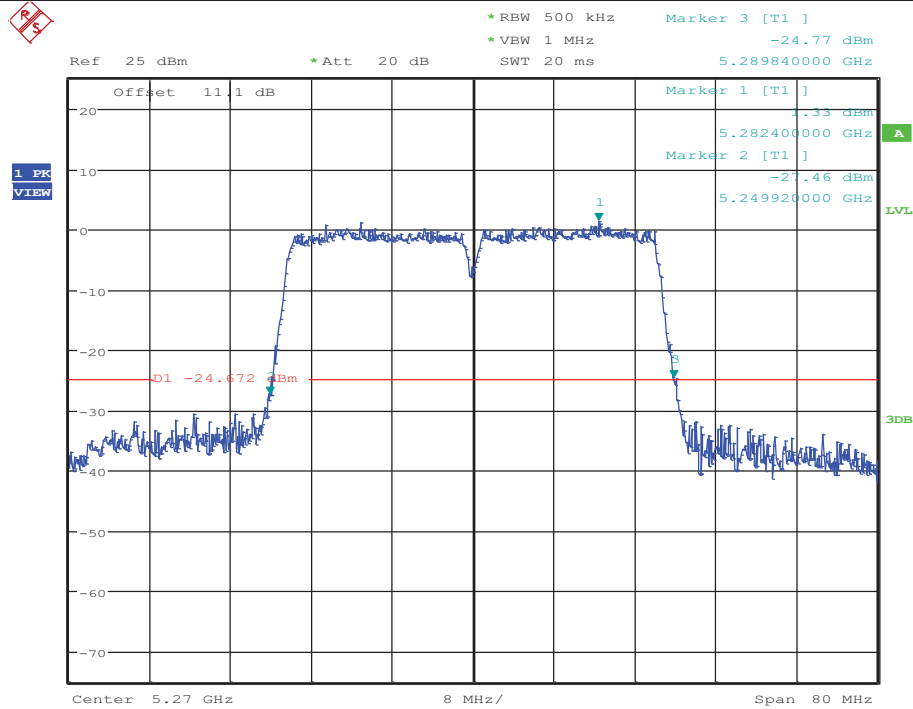
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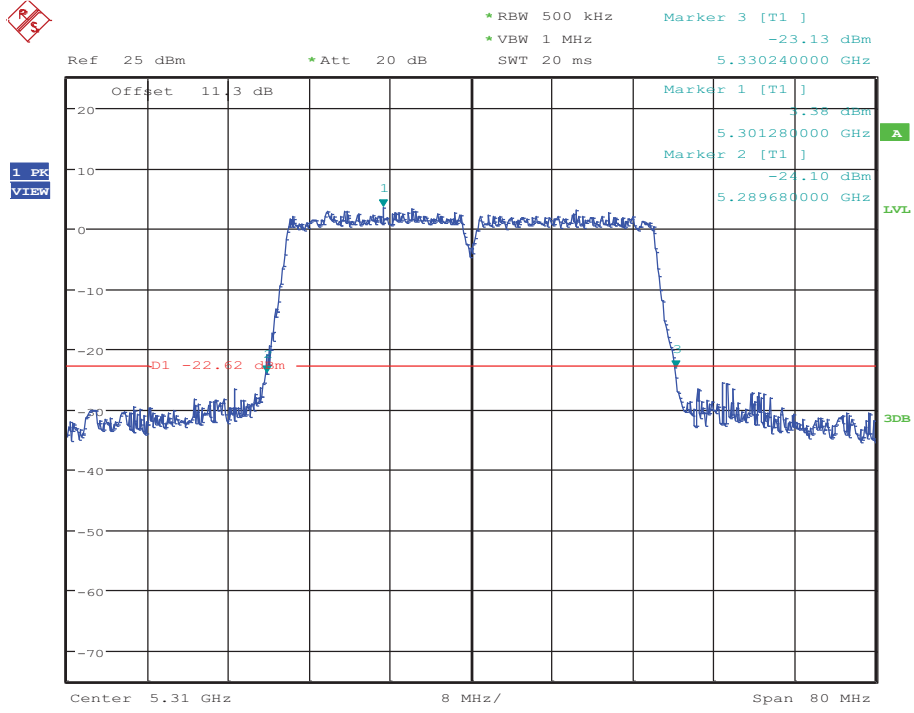
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### Emission Bandwidth Measurement\_11AC40MIMO\_5270\_Ant2



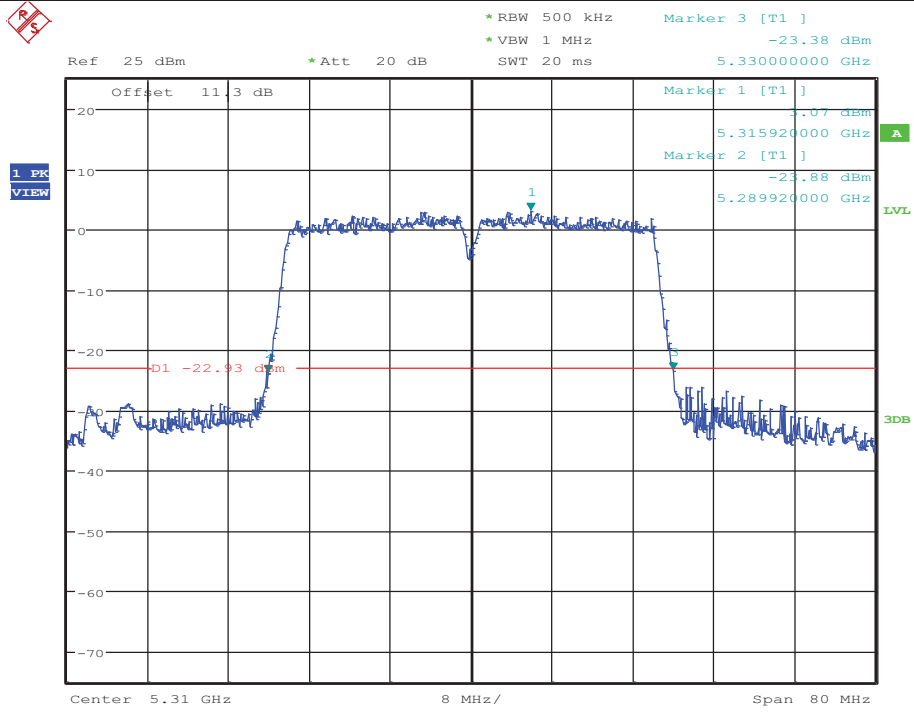
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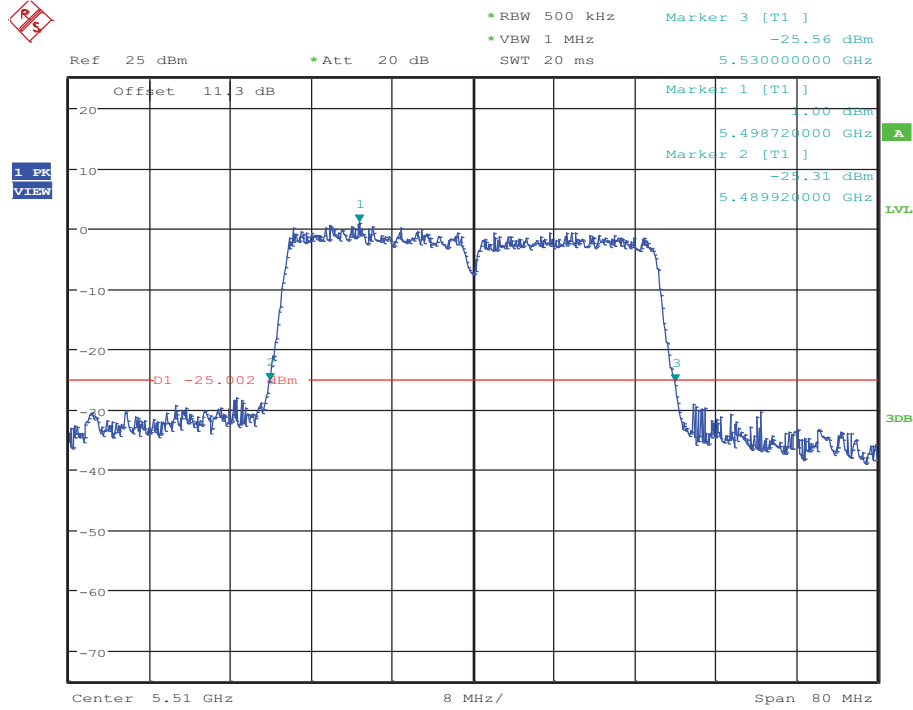
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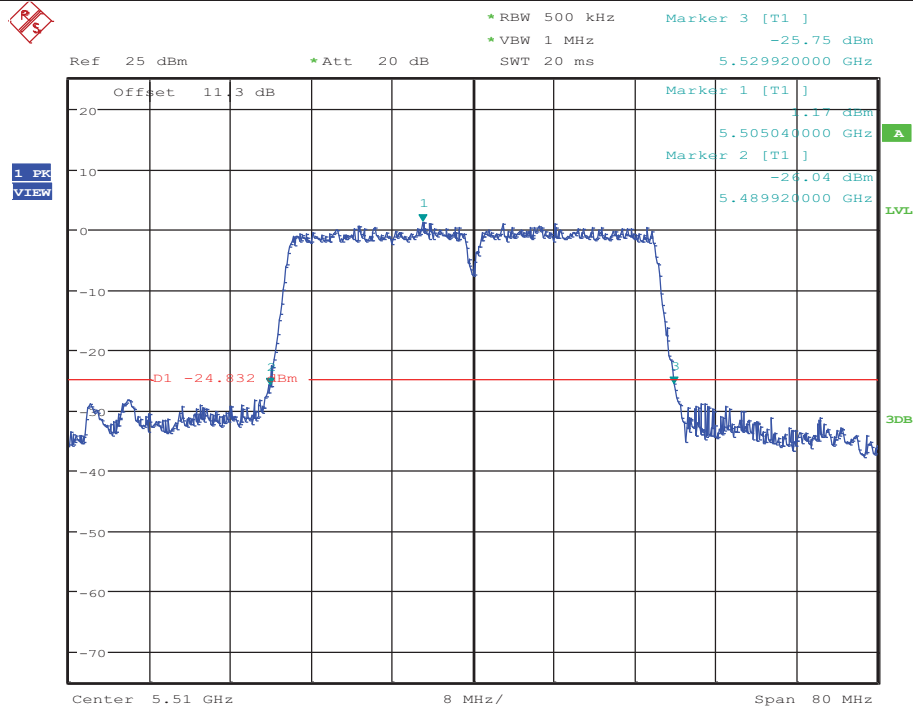
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### Emission Bandwidth Measurement\_11AC40MIMO\_5510\_Ant1



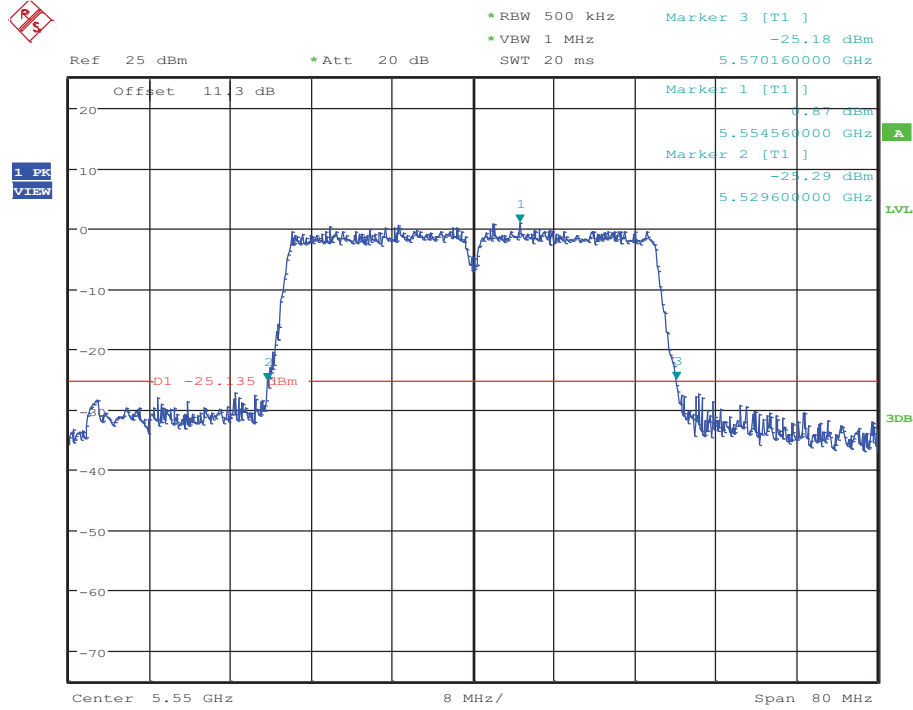
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### Emission Bandwidth Measurement\_11AC40MIMO\_5510\_Ant2



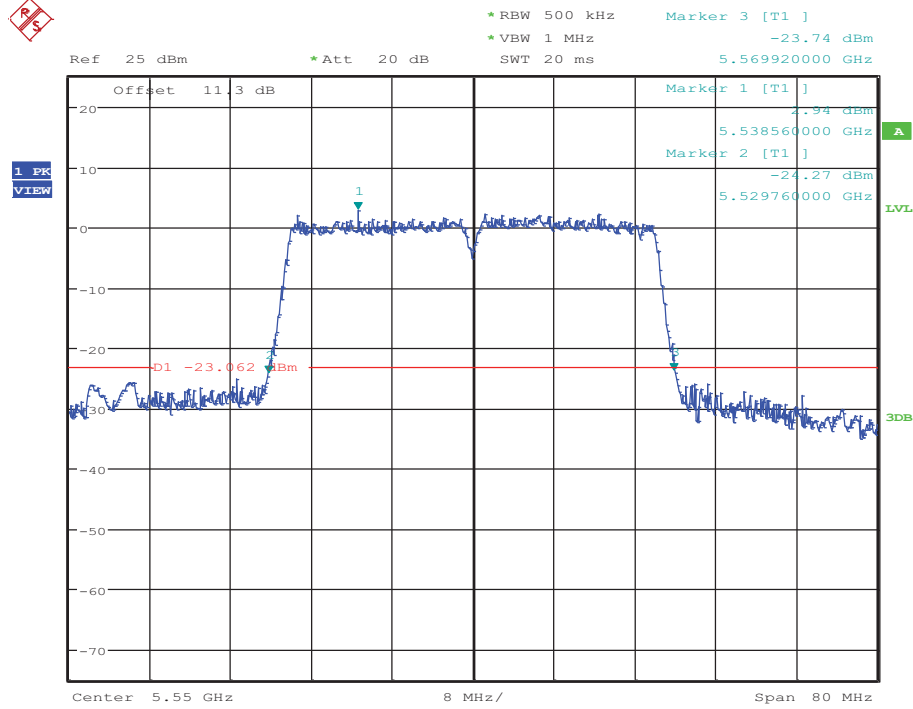
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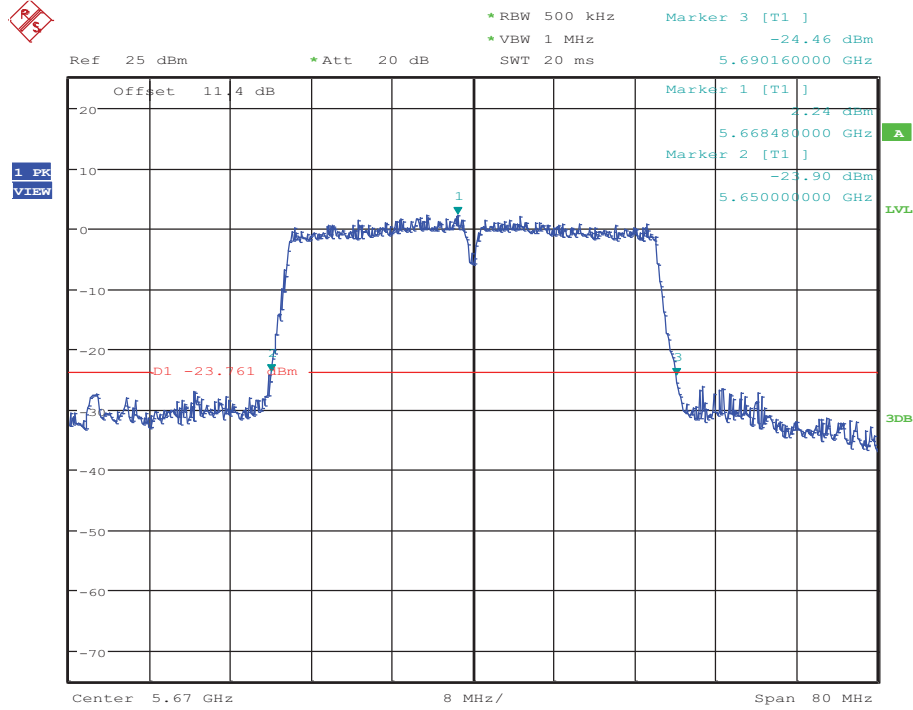
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### Emission Bandwidth Measurement\_11AC40MIMO\_5550\_Ant2

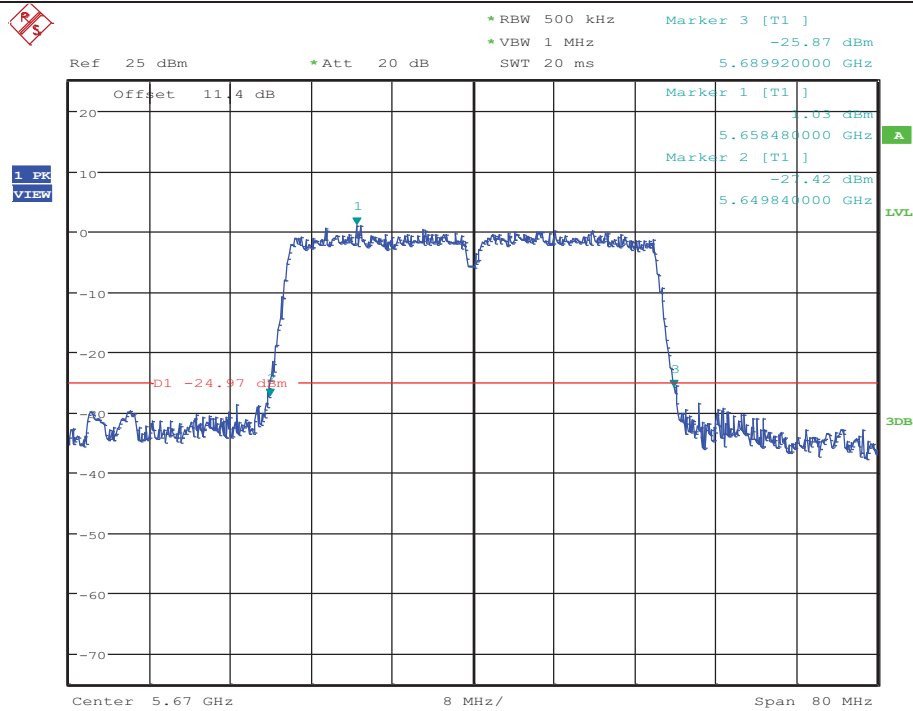


Date: 17.OCT.2017 17:23:15

### Emission Bandwidth Measurement\_11AC40MIMO\_5670\_Ant1

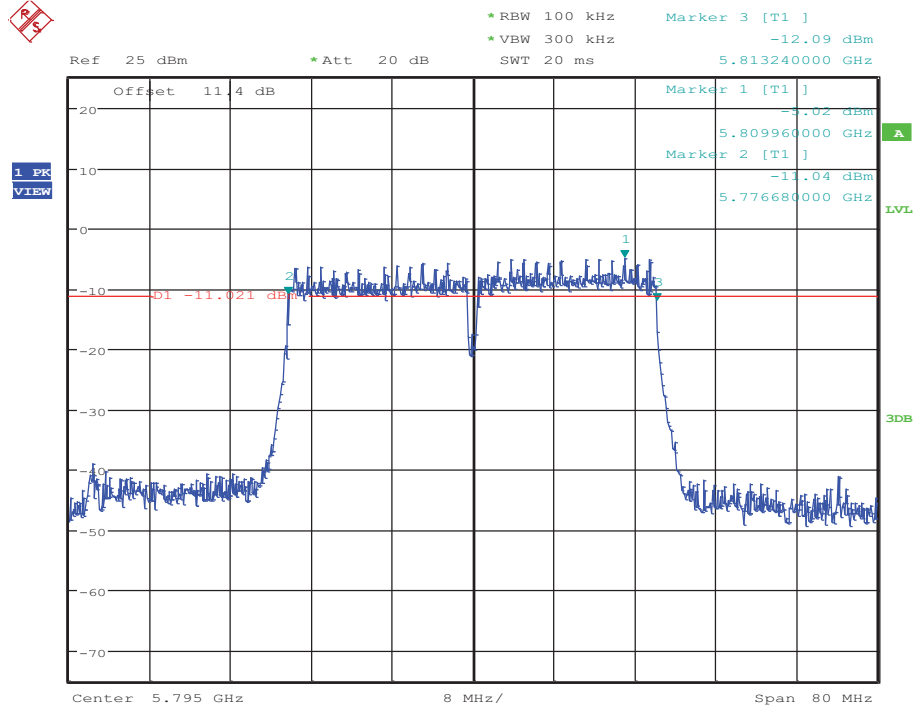


### Emission Bandwidth Measurement\_11AC40MIMO\_5670\_Ant2



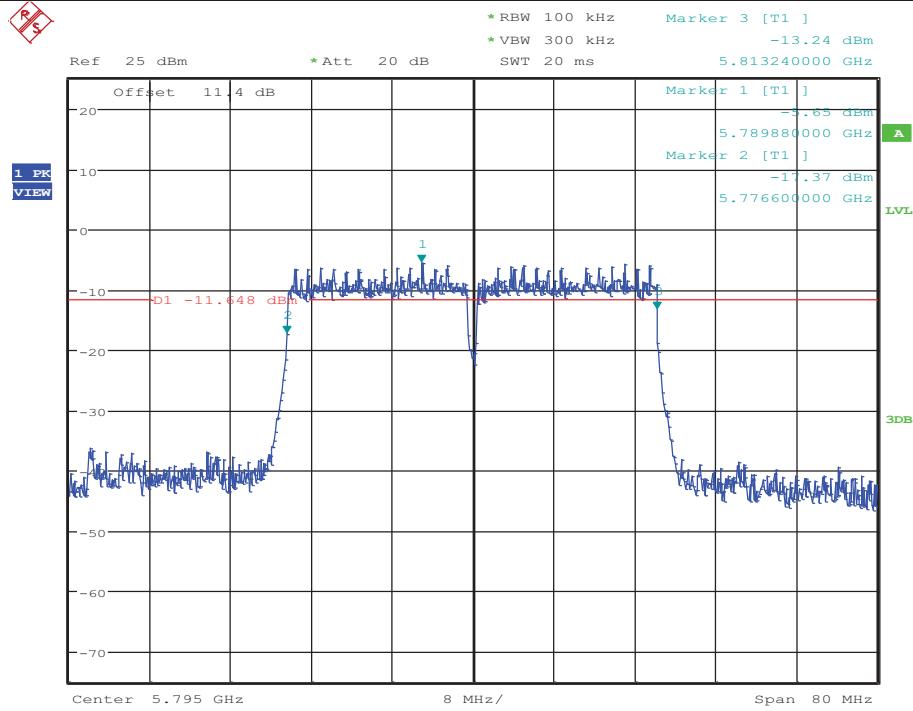


### Emission Bandwidth Measurement\_11AC40MIMO\_5795\_Ant1



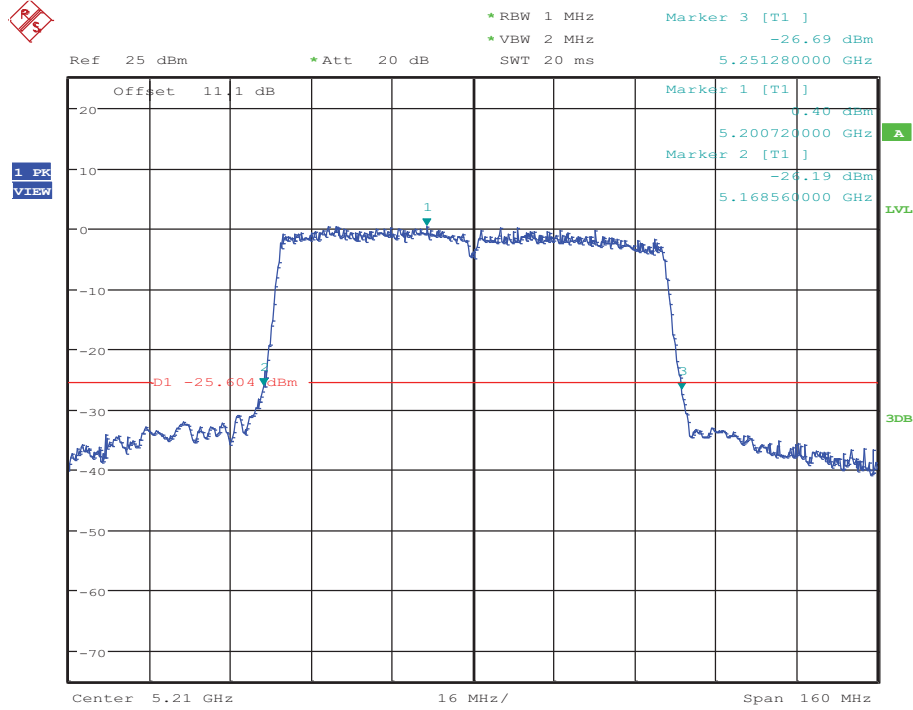
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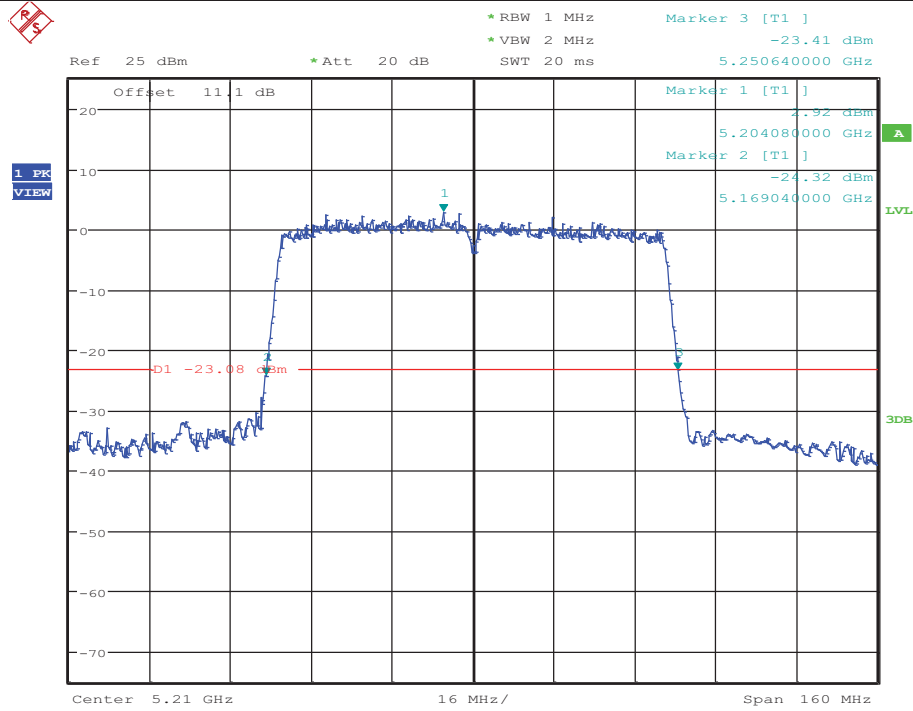
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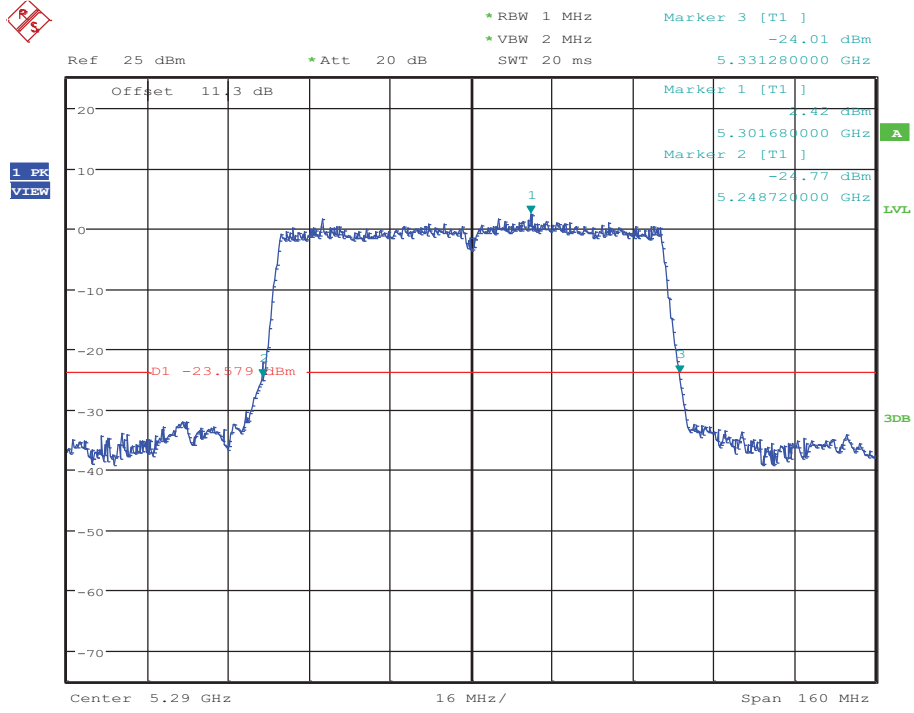
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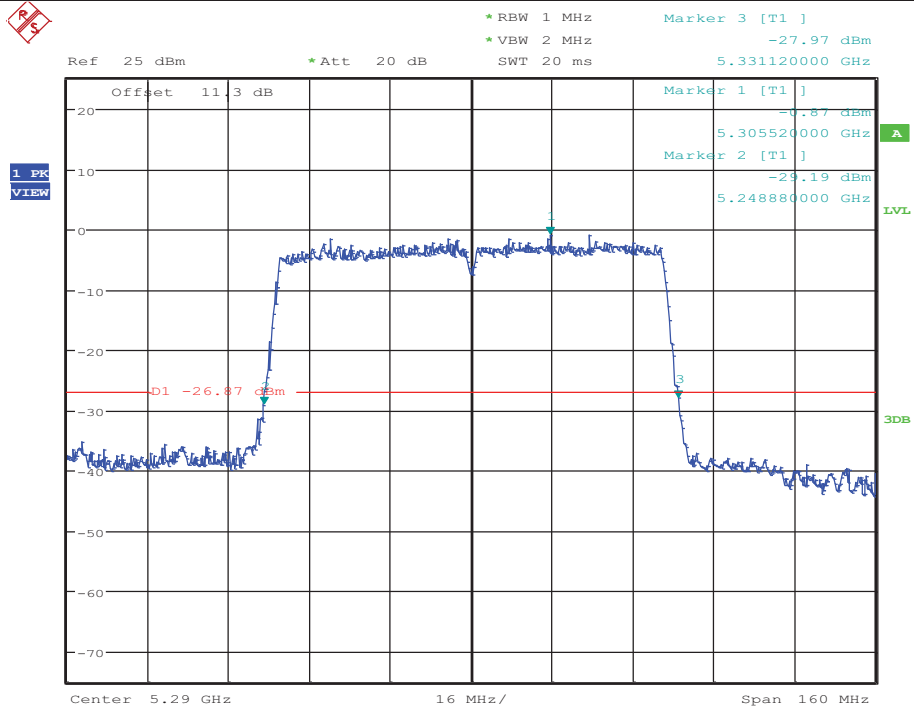
Date: 17.OCT.2017 17:42:59

### Emission Bandwidth Measurement\_11AC80MIMO\_5290\_Ant1



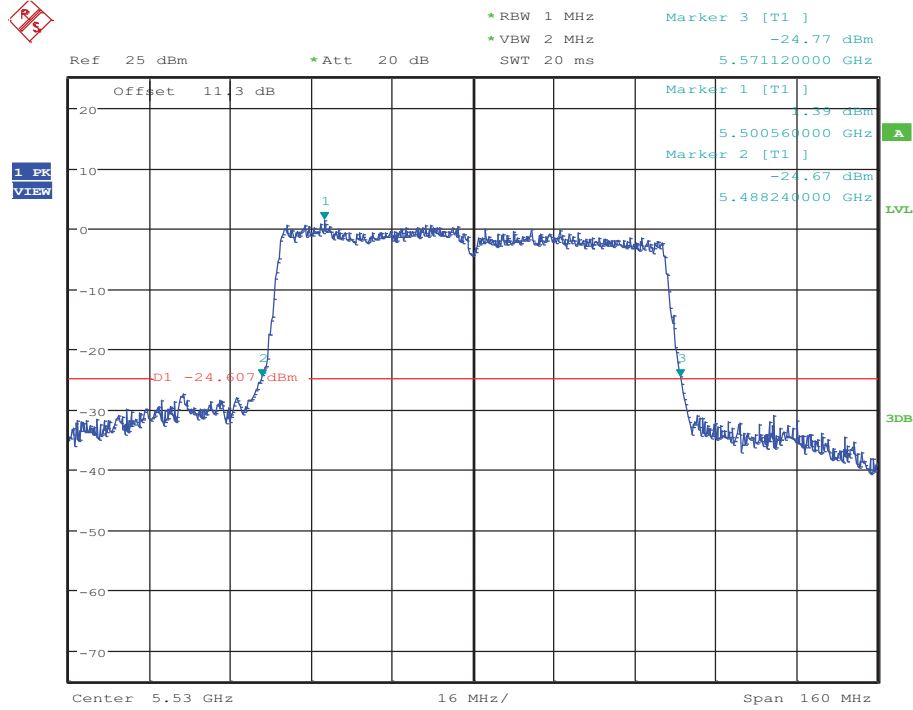
Date: 17.OCT.2017 11:22:21

### Emission Bandwidth Measurement\_11AC80MIMO\_5290\_Ant2



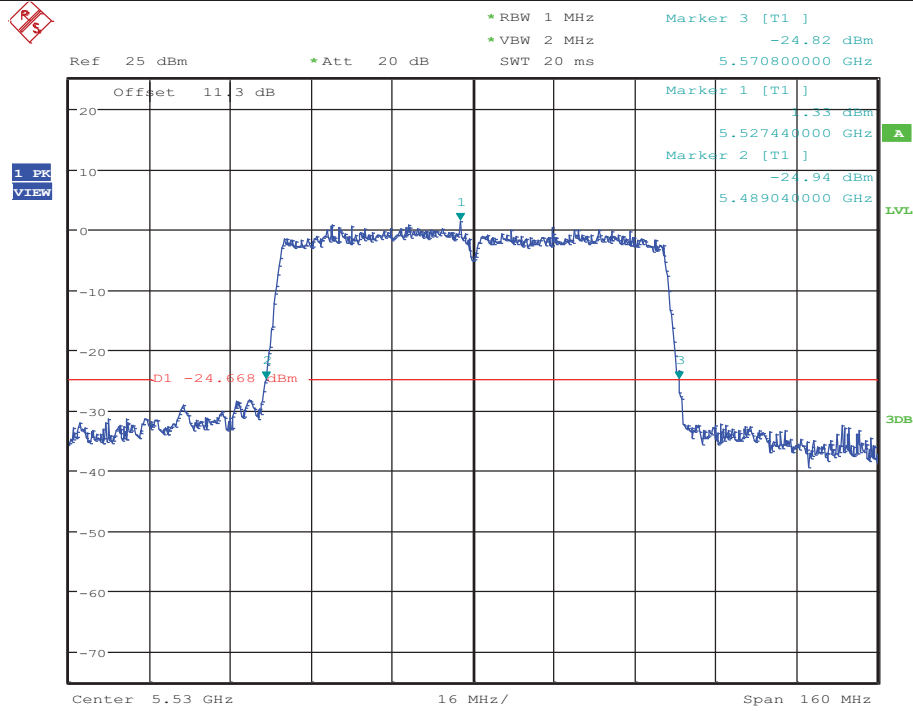
Date: 17.OCT.2017 18:47:14

### Emission Bandwidth Measurement\_11AC80MIMO\_5530\_Ant1



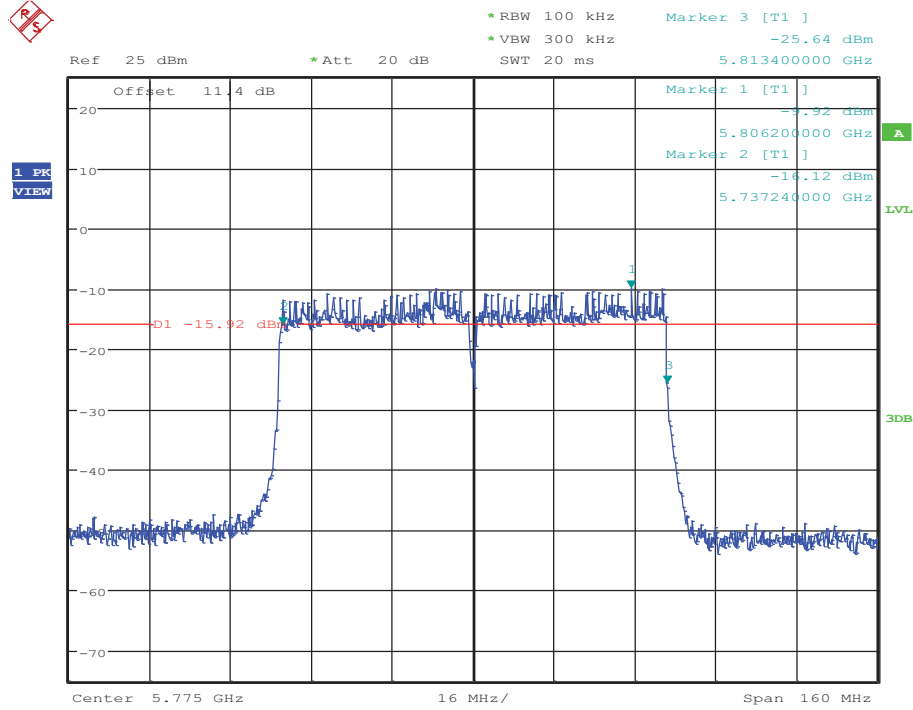
Date: 17.OCT.2017 11:27:48

### Emission Bandwidth Measurement\_11AC80MIMO\_5530\_Ant2



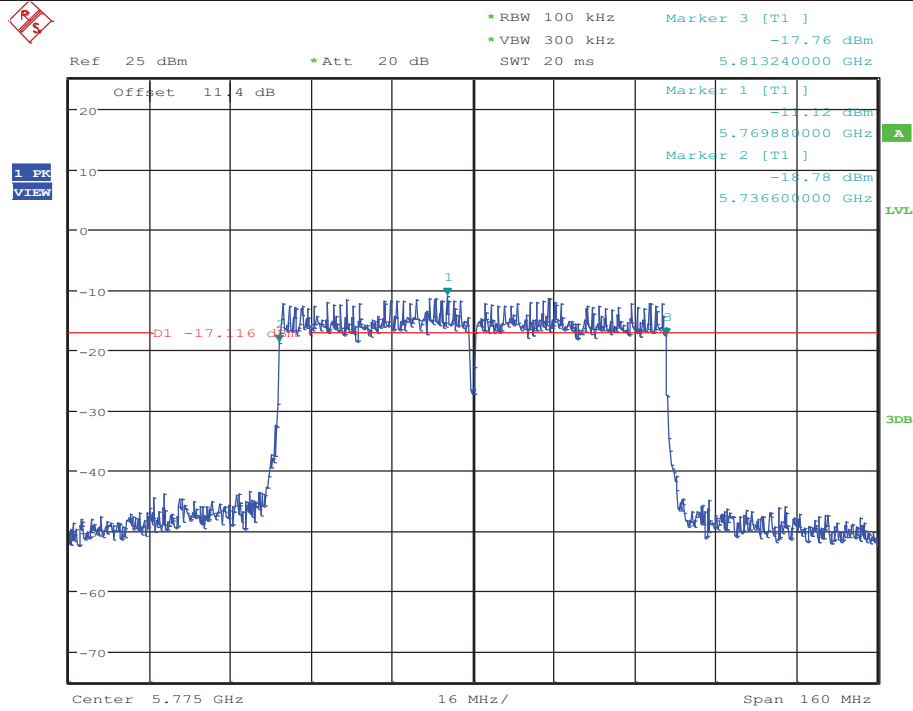
Date: 17.OCT.2017 18:52:55

### Emission Bandwidth Measurement\_11AC80MIMO\_5775\_Ant1



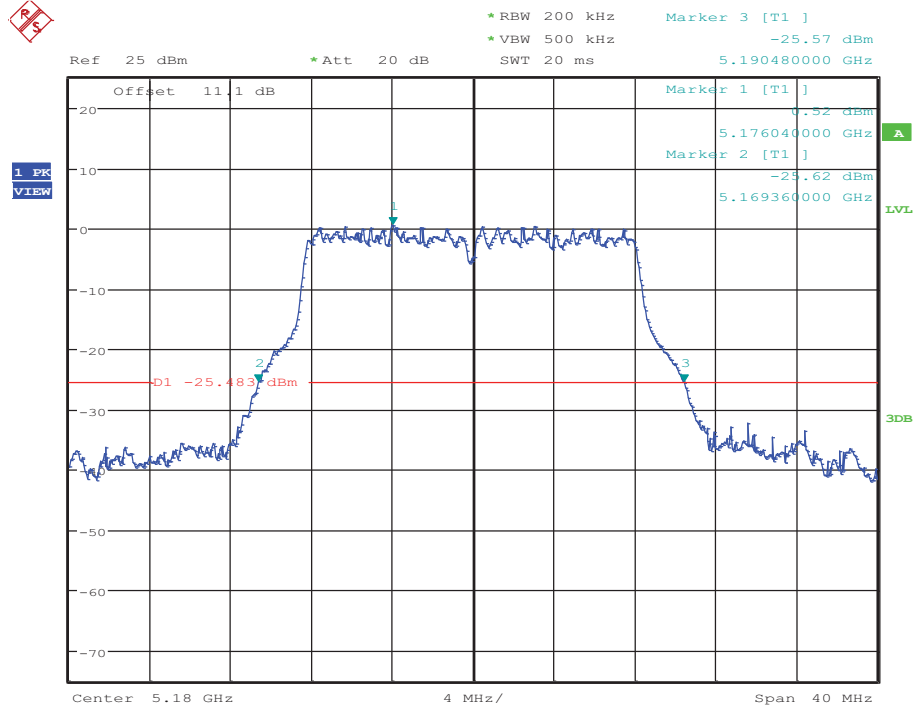
Date: 17.OCT.2017 11:35:31

### Emission Bandwidth Measurement\_11AC80MIMO\_5775\_Ant2



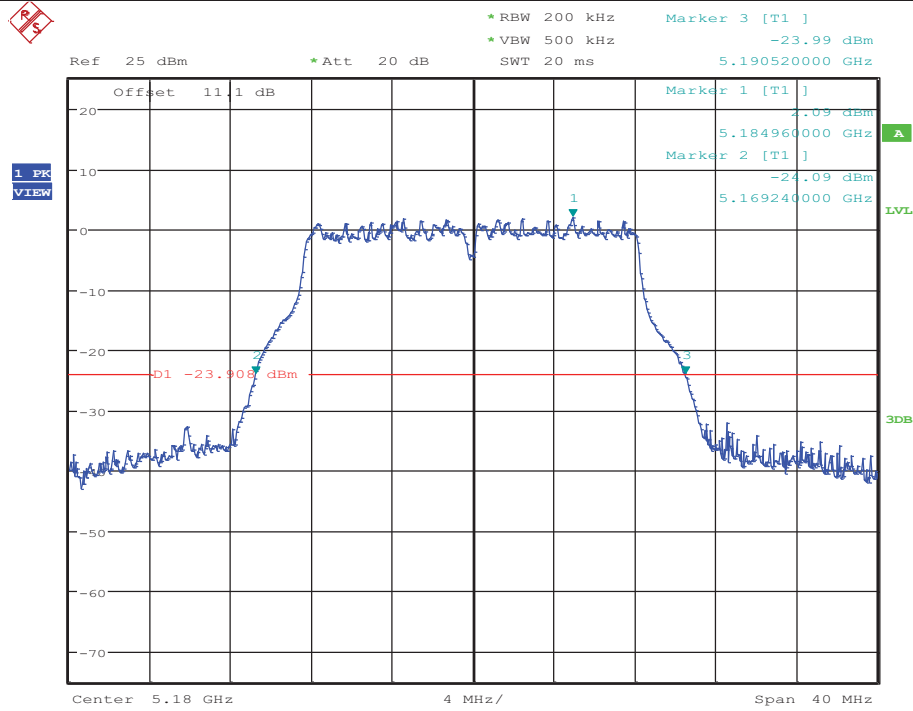
Date: 17.OCT.2017 18:58:58

### Emission Bandwidth Measurement\_11AMIMO\_5180\_Ant1



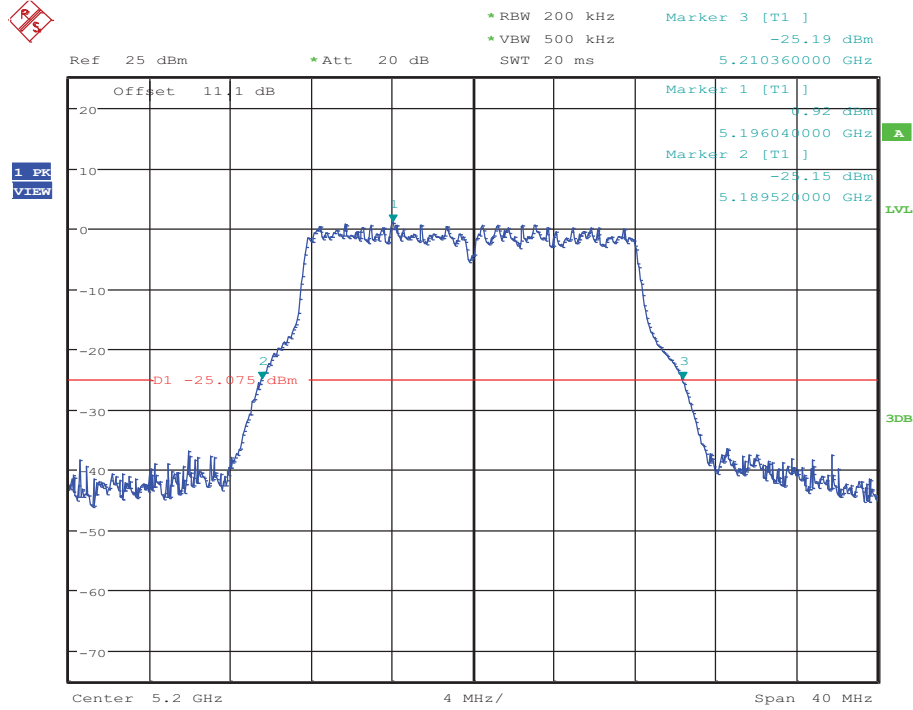
Date: 13.OCT.2017 19:34:08

### Emission Bandwidth Measurement\_11AMIMO\_5180\_Ant2



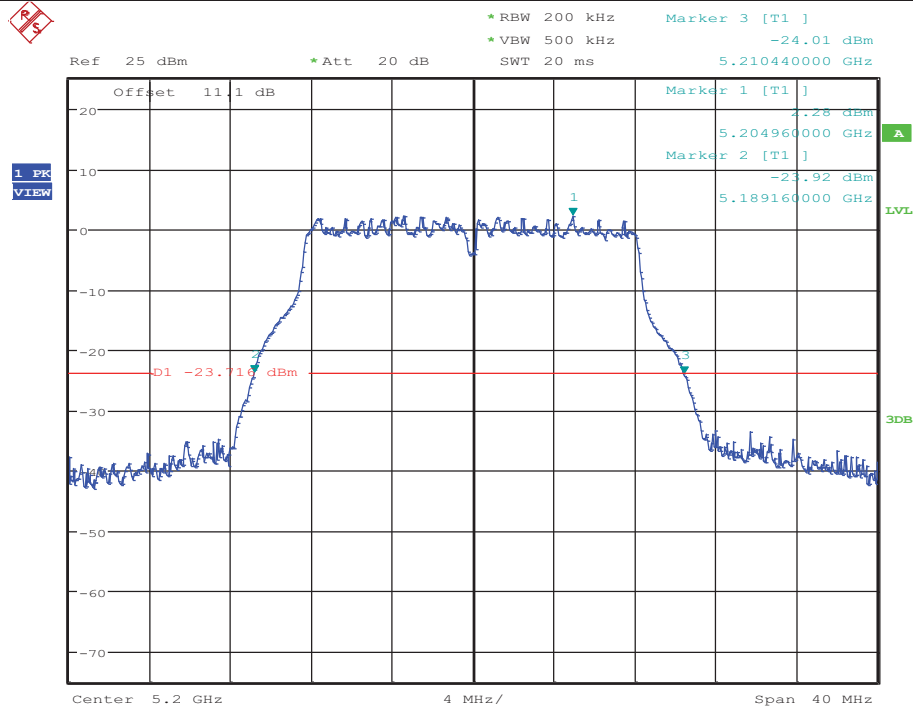
Date: 13.OCT.2017 19:40:09

### Emission Bandwidth Measurement\_11AMIMO\_5200\_Ant1



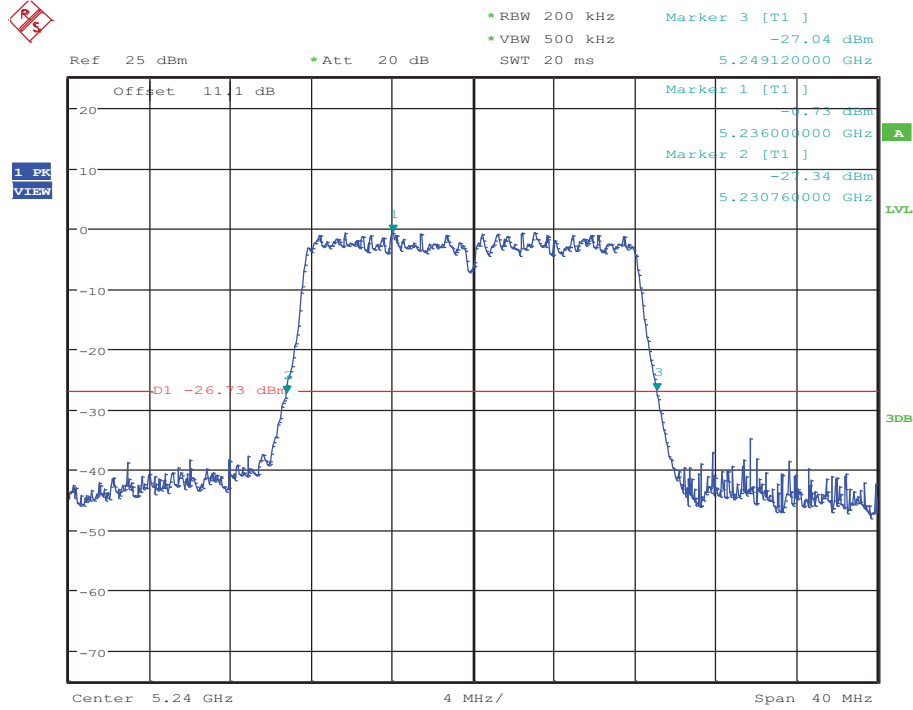
Date: 13.OCT.2017 19:46:59

### Emission Bandwidth Measurement\_11AMIMO\_5200\_Ant2



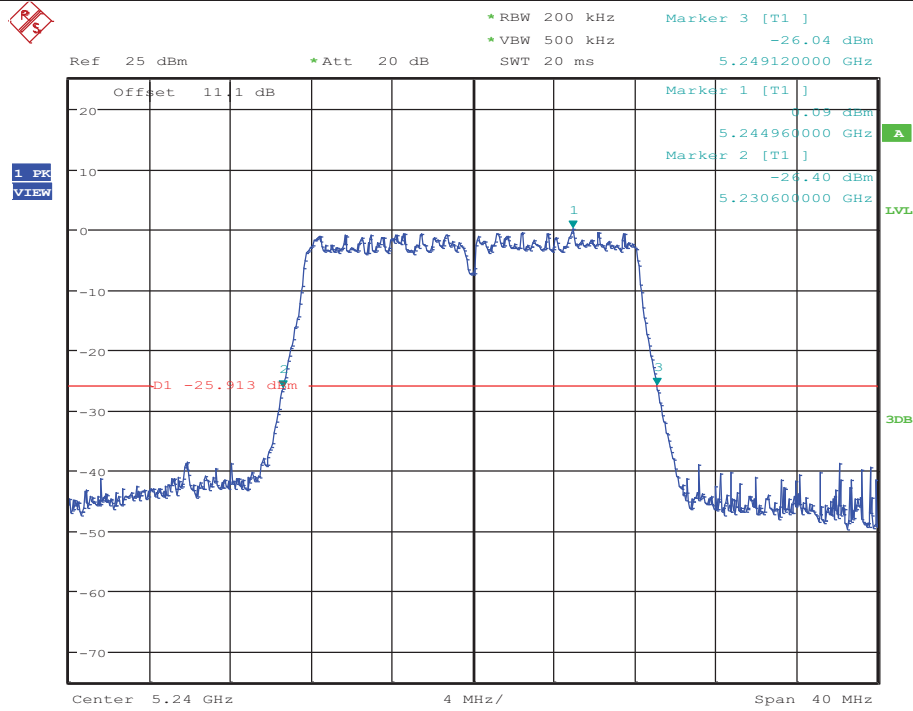
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### Emission Bandwidth Measurement\_11AMIMO\_5240\_Ant1



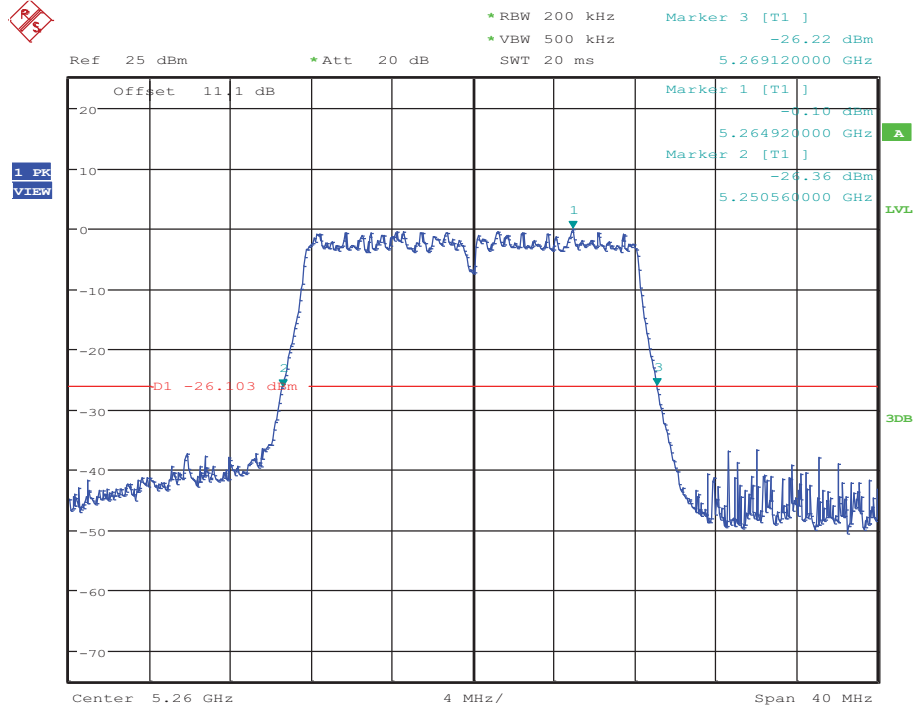
Date: 14.OCT.2017 09:23:46

### Emission Bandwidth Measurement\_11AMIMO\_5240\_Ant2



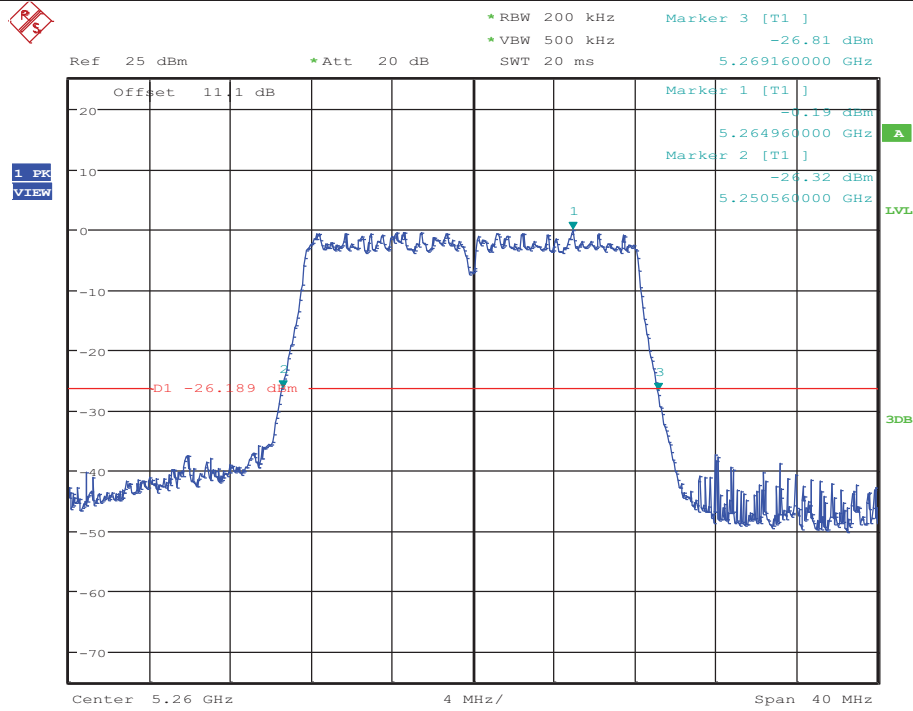
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### Emission Bandwidth Measurement\_11AMIMO\_5260\_Ant1



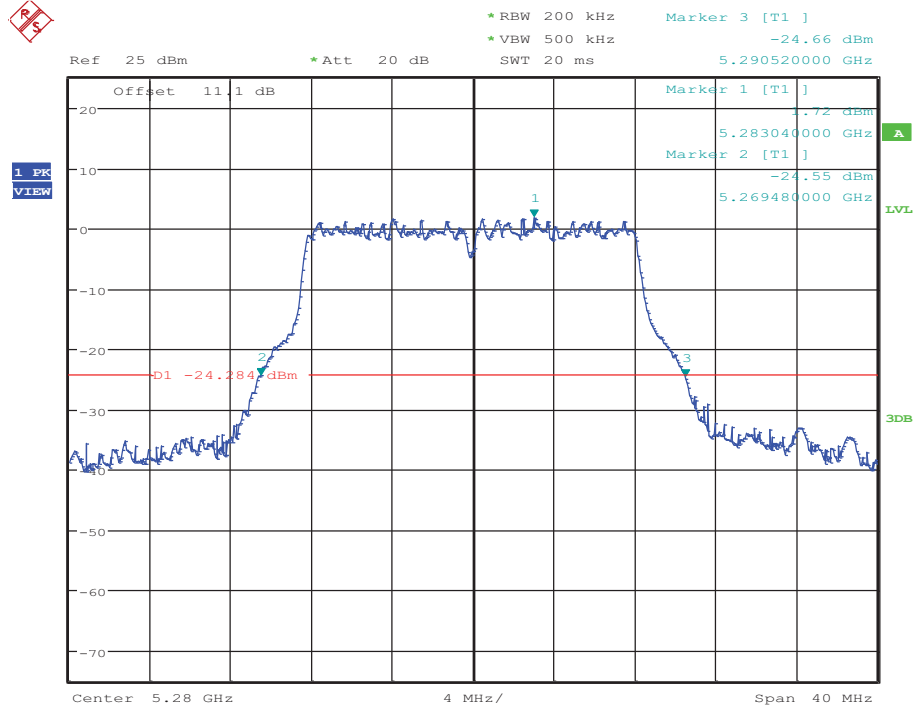
Date: 14.OCT.2017 09:41:44

### Emission Bandwidth Measurement\_11AMIMO\_5260\_Ant2



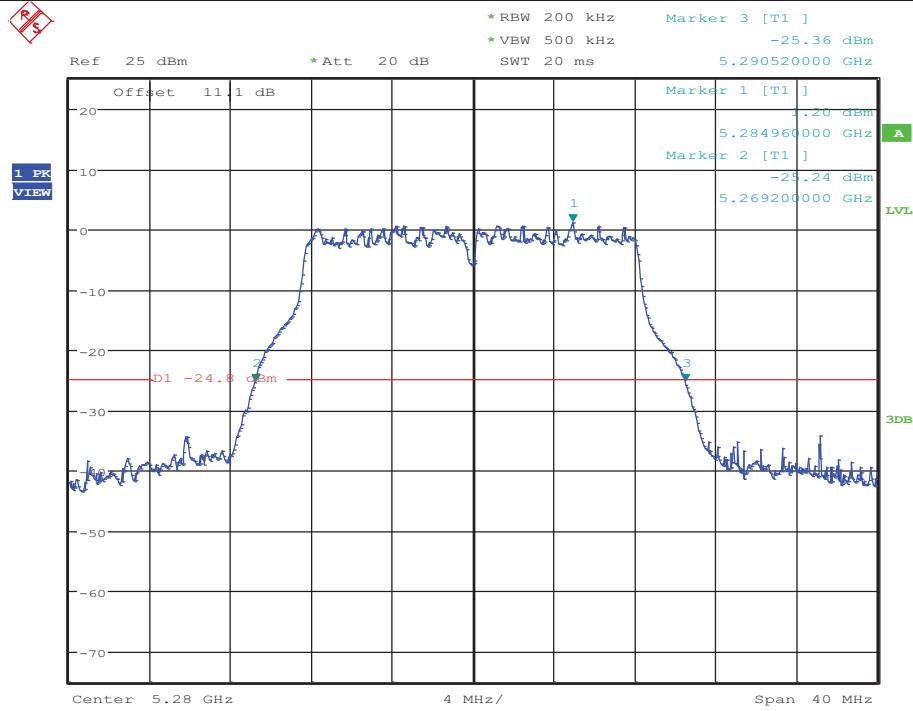
Date: 14.OCT.2017 09:57:30

### Emission Bandwidth Measurement\_11AMIMO\_5280\_Ant1



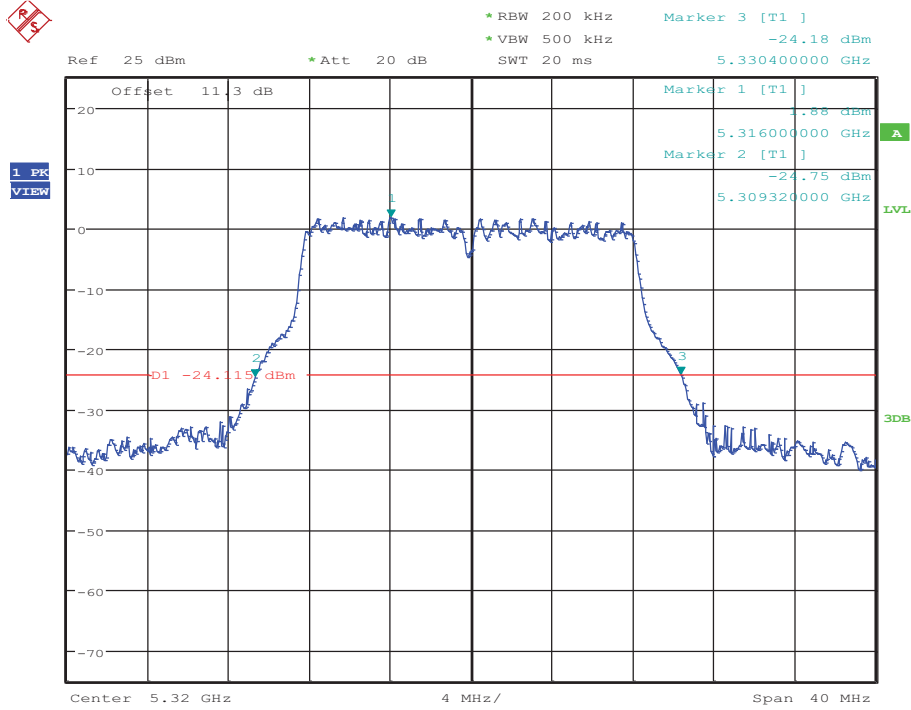
Date: 14.OCT.2017 10:04:07

### Emission Bandwidth Measurement\_11AMIMO\_5280\_Ant2



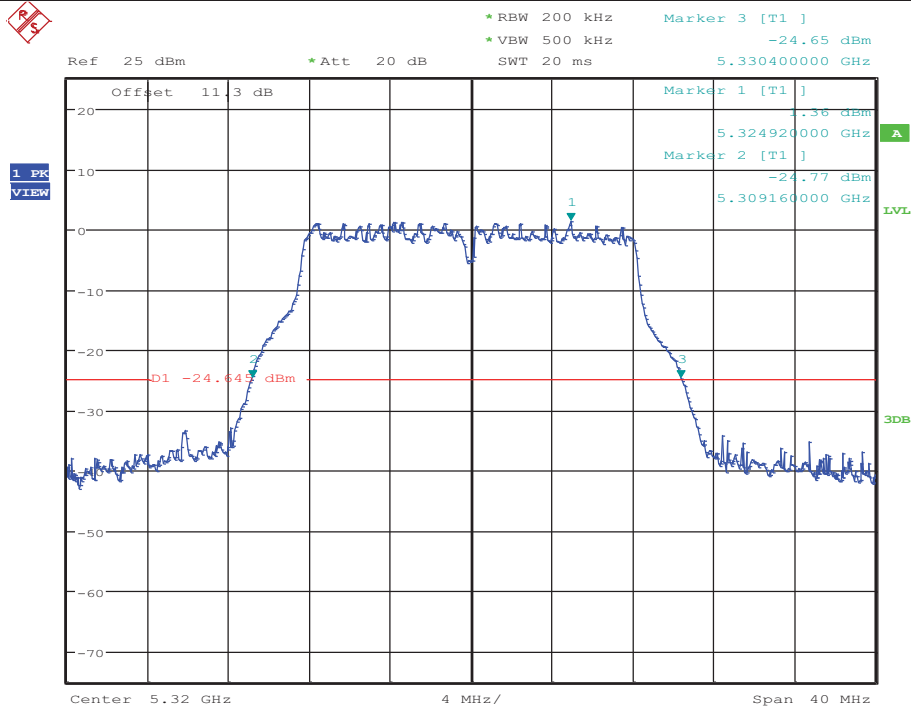
Date: 14.OCT.2017 10:09:15

### Emission Bandwidth Measurement\_11AMIMO\_5320\_Ant1



Date: 14.OCT.2017 10:28:15

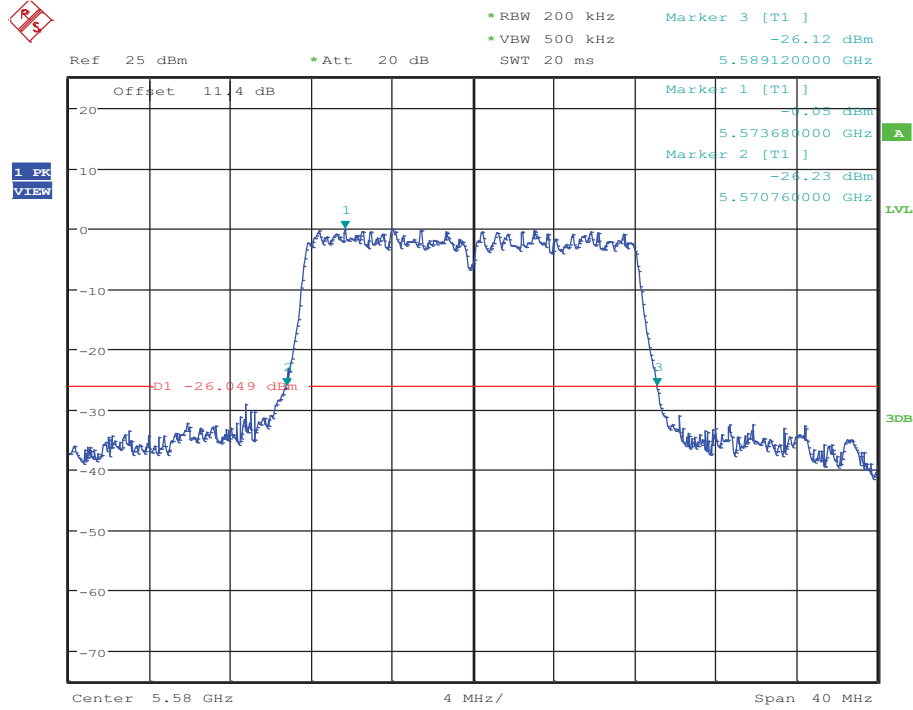
### Emission Bandwidth Measurement\_11AMIMO\_5320\_Ant2



Date: 14.OCT.2017 10:33:11

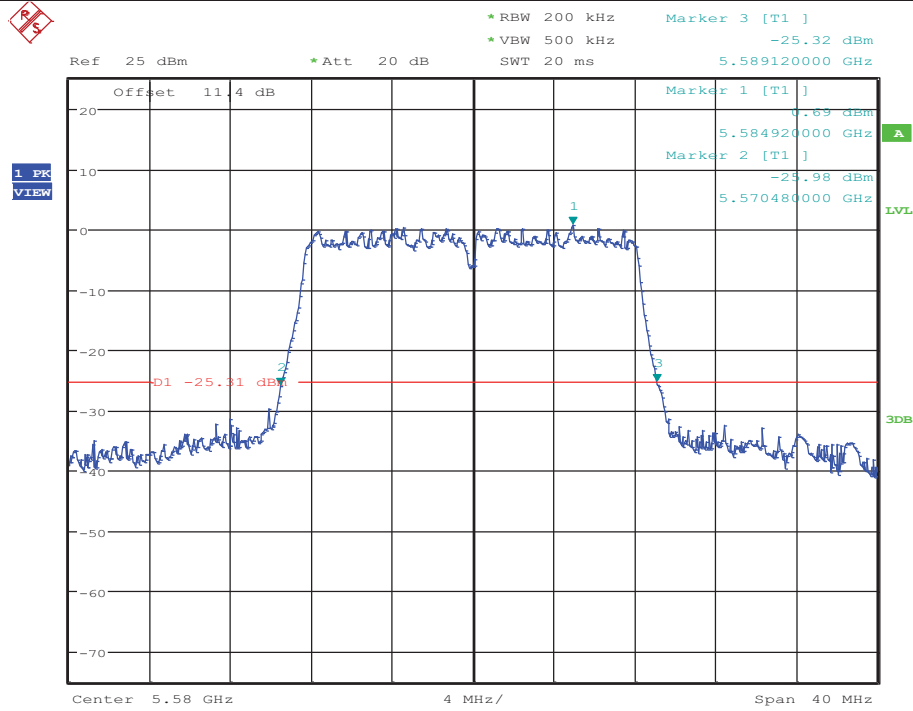


### Emission Bandwidth Measurement\_11AMIMO\_5580\_Ant1



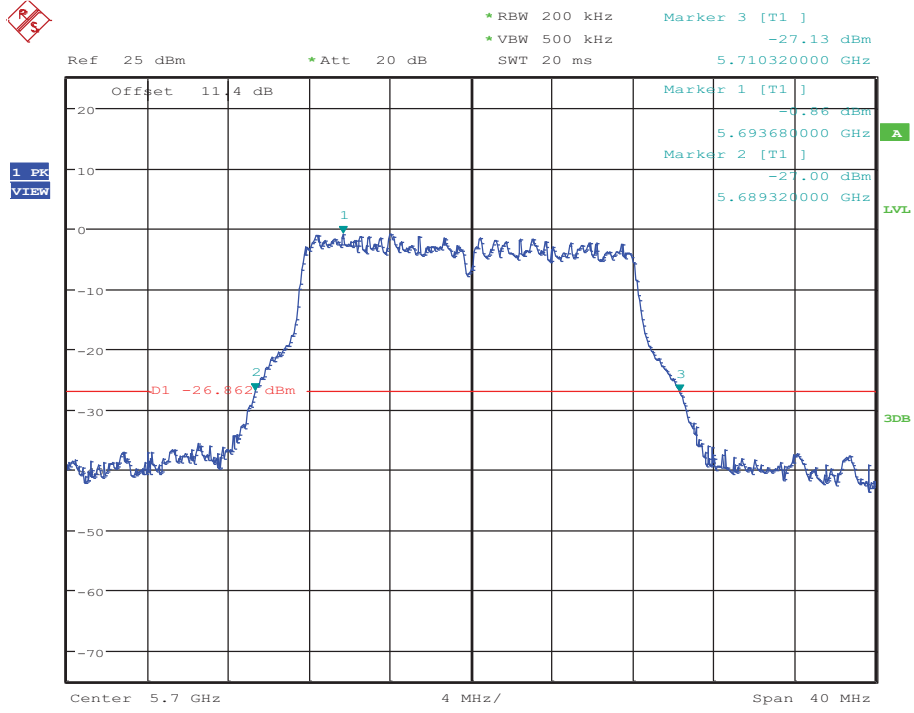
Date: 14.OCT.2017 10:59:29

### Emission Bandwidth Measurement\_11AMIMO\_5580\_Ant2



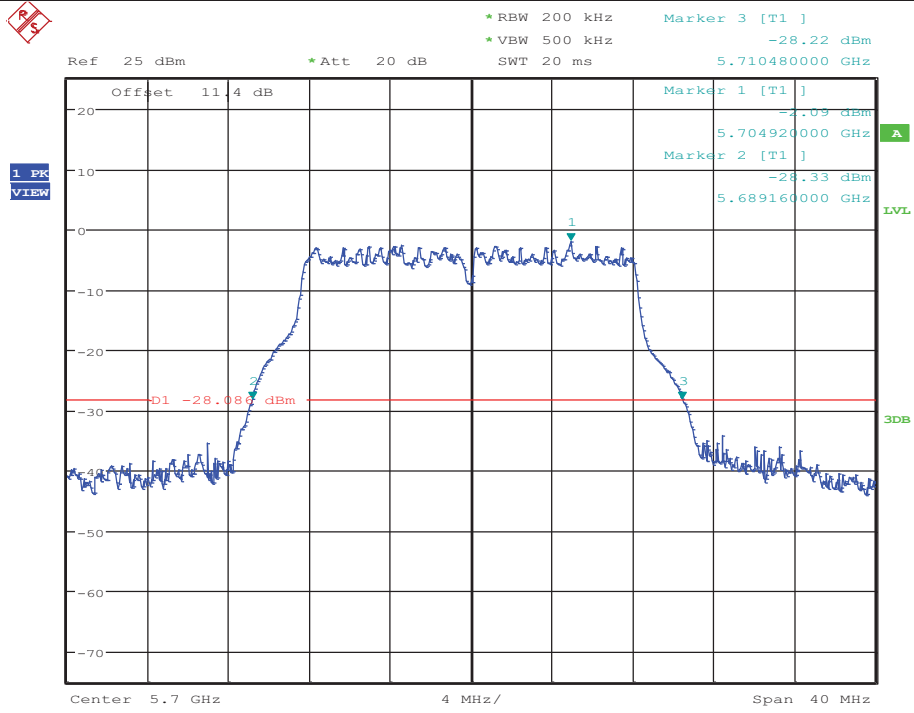
Date: 14.OCT.2017 11:52:06

### Emission Bandwidth Measurement\_11AMIMO\_5700\_Ant1



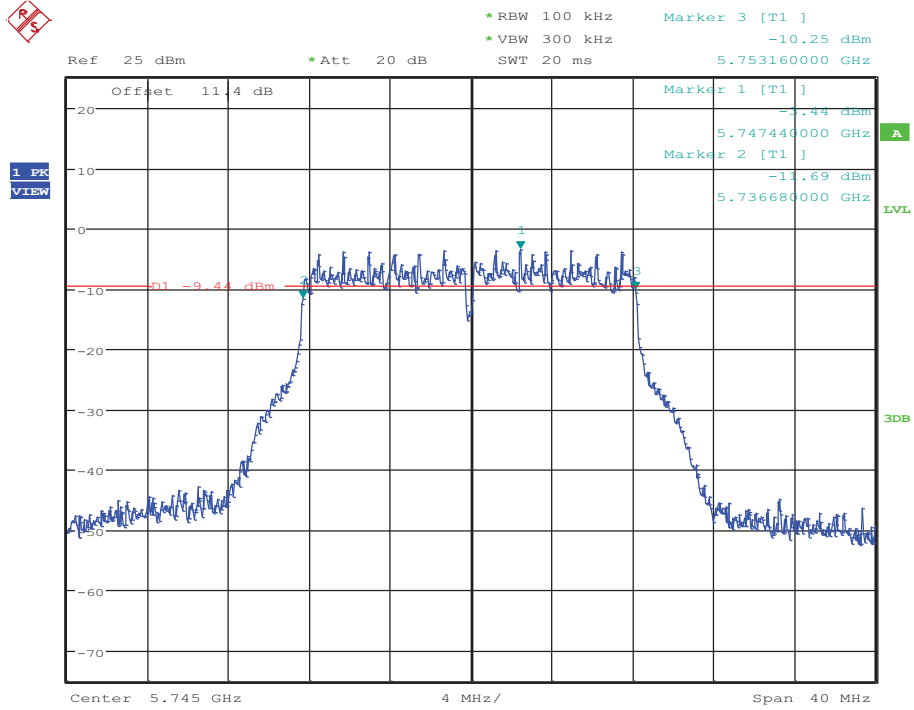
Date: 14.OCT.2017 11:08:22

### Emission Bandwidth Measurement\_11AMIMO\_5700\_Ant2



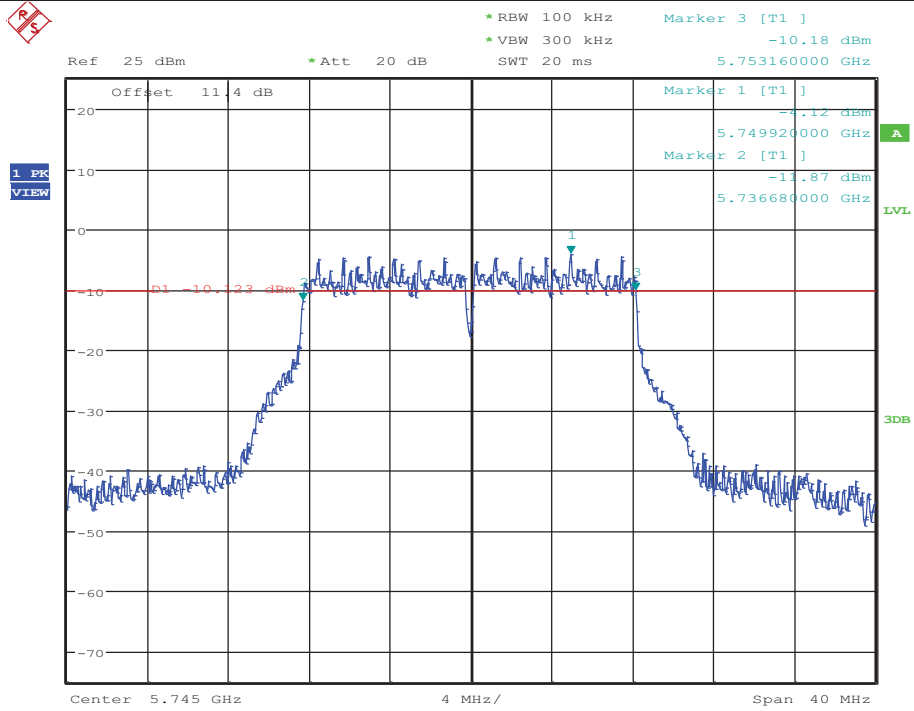
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### Emission Bandwidth Measurement\_11AMIMO\_5745\_Ant1



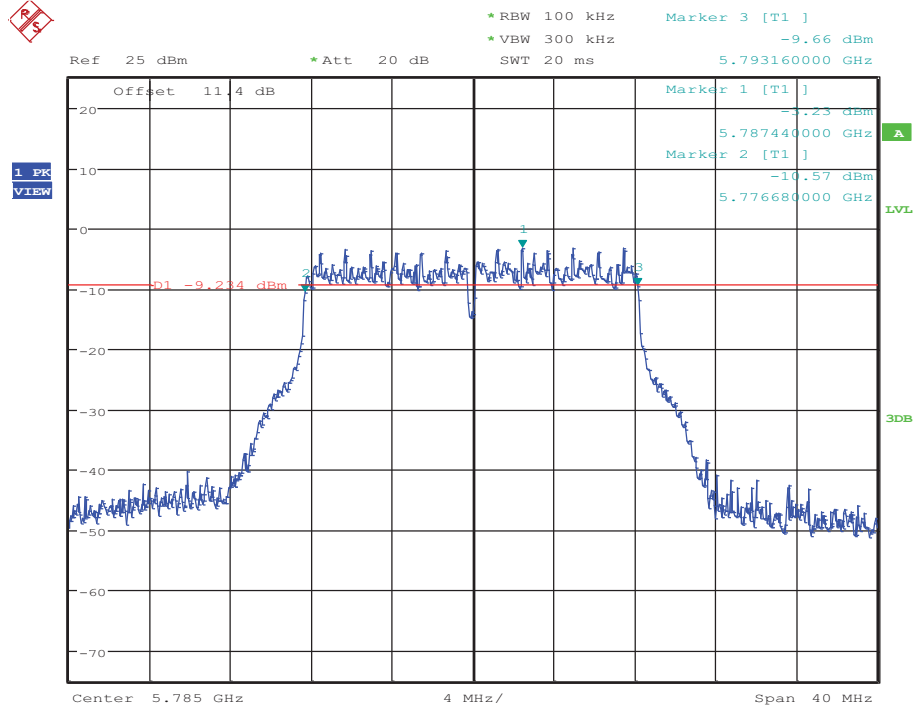
Date: 14.OCT.2017 11:19:38

### Emission Bandwidth Measurement\_11AMIMO\_5745\_Ant2



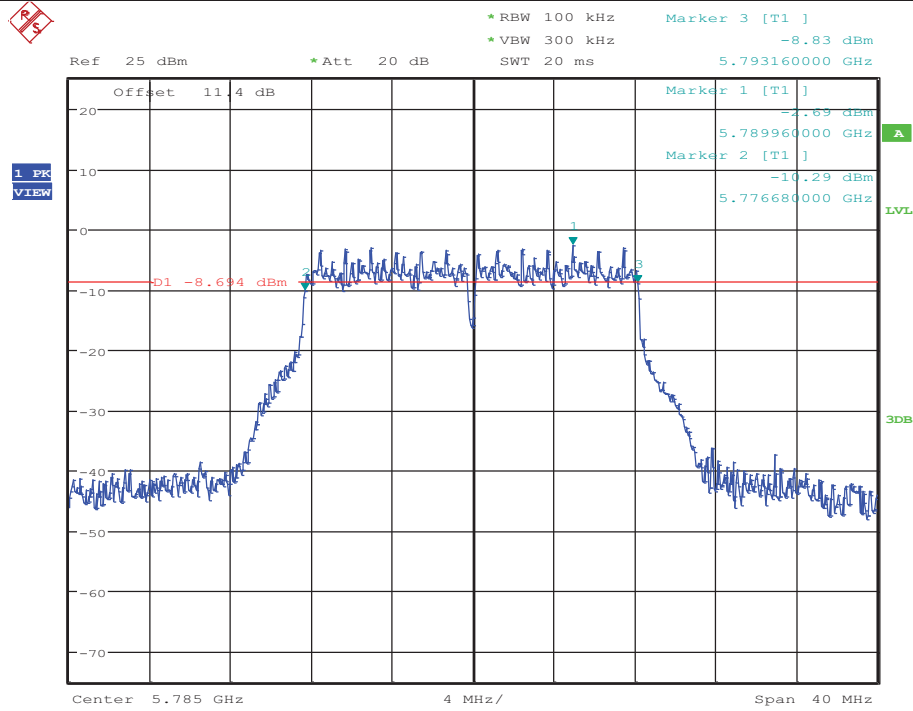
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### Emission Bandwidth Measurement\_11AMIMO\_5785\_Ant1



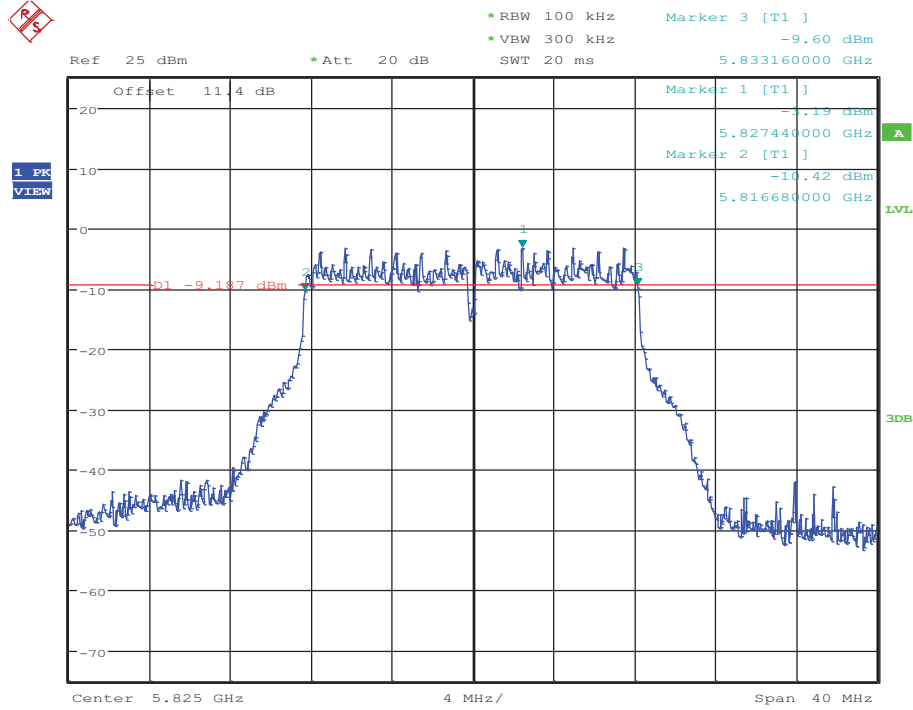
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### Emission Bandwidth Measurement\_11AMIMO\_5785\_Ant2



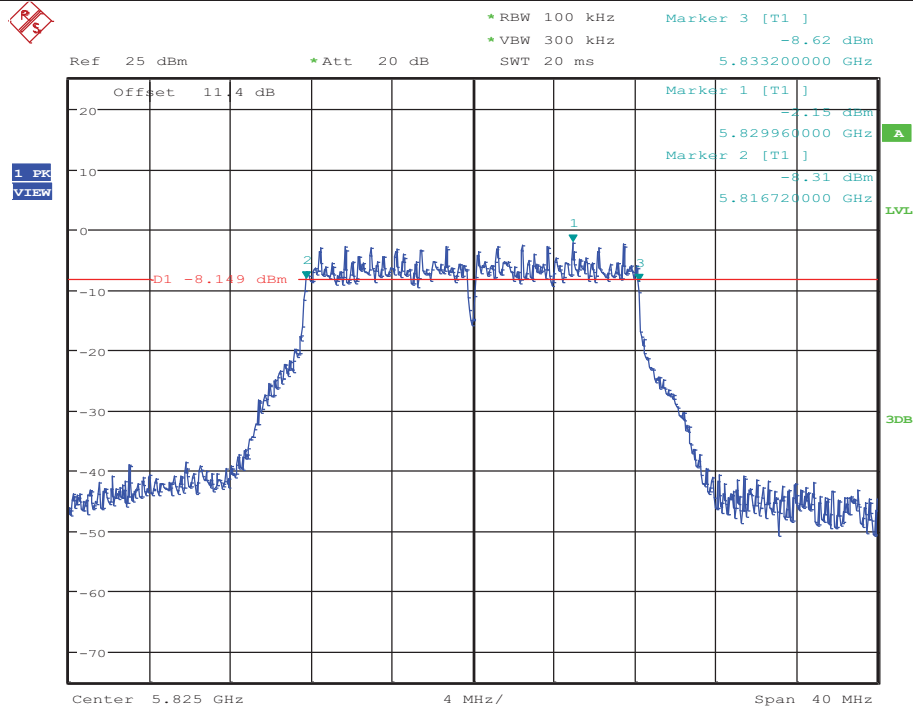
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### Emission Bandwidth Measurement\_11AMIMO\_5825\_Ant1



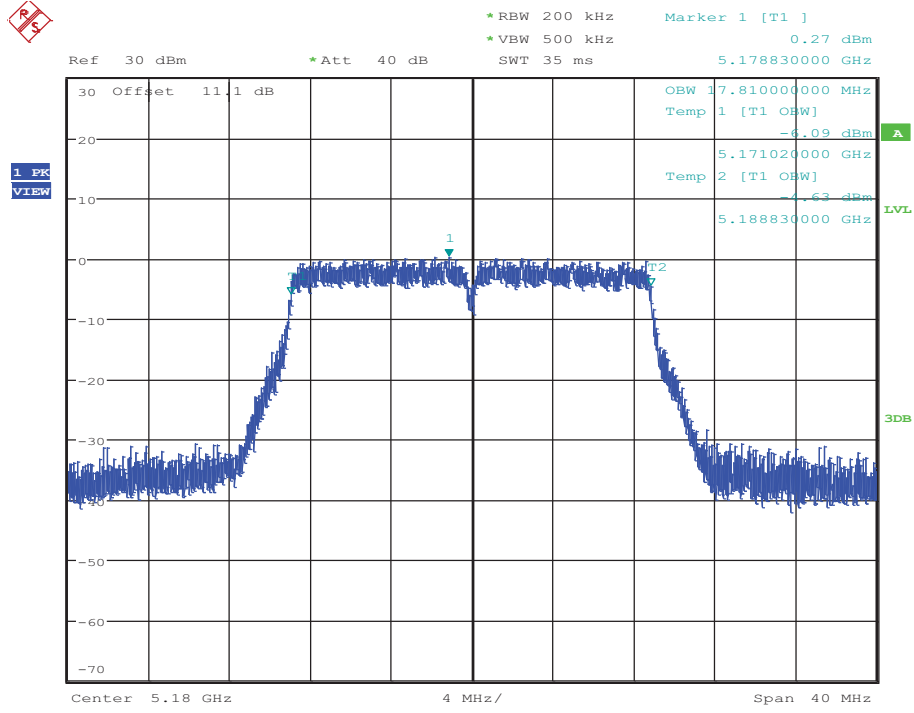
Date: 14.OCT.2017 11:43:45

### Emission Bandwidth Measurement\_11AMIMO\_5825\_Ant2



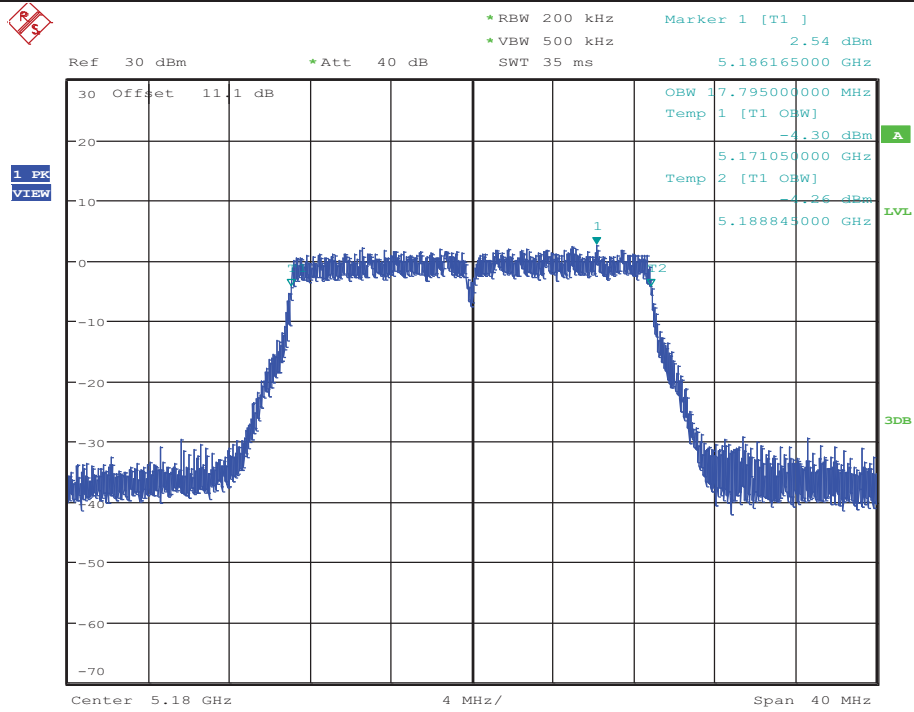
Date: 14.OCT.2017 13:26:45

### Occupied Bandwidth Measurement\_11N20MIMO\_5180\_Ant1



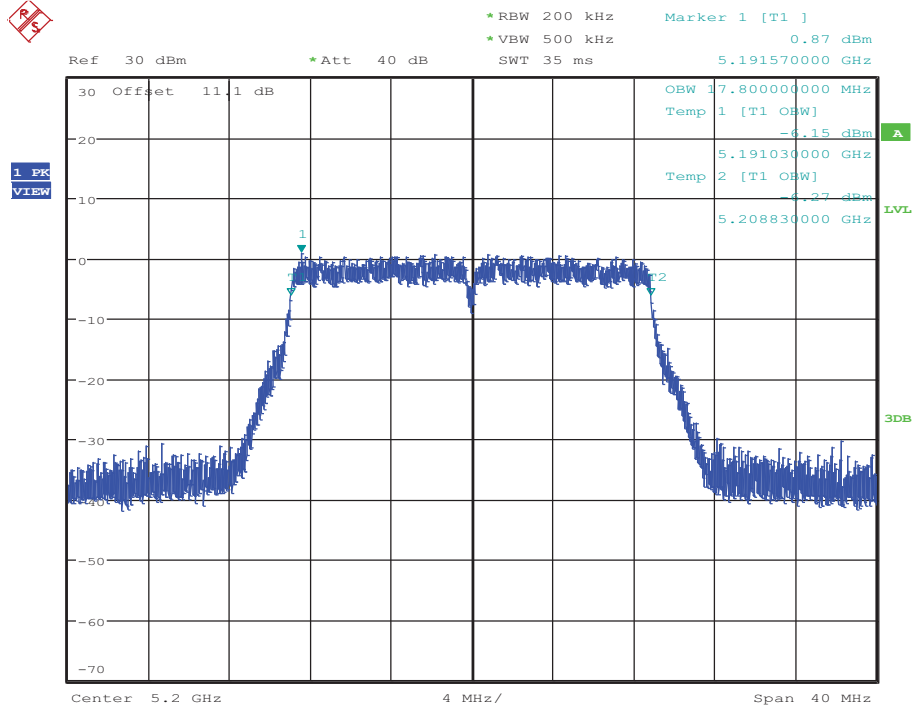
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### Occupied Bandwidth Measurement\_11N20MIMO\_5180\_Ant2



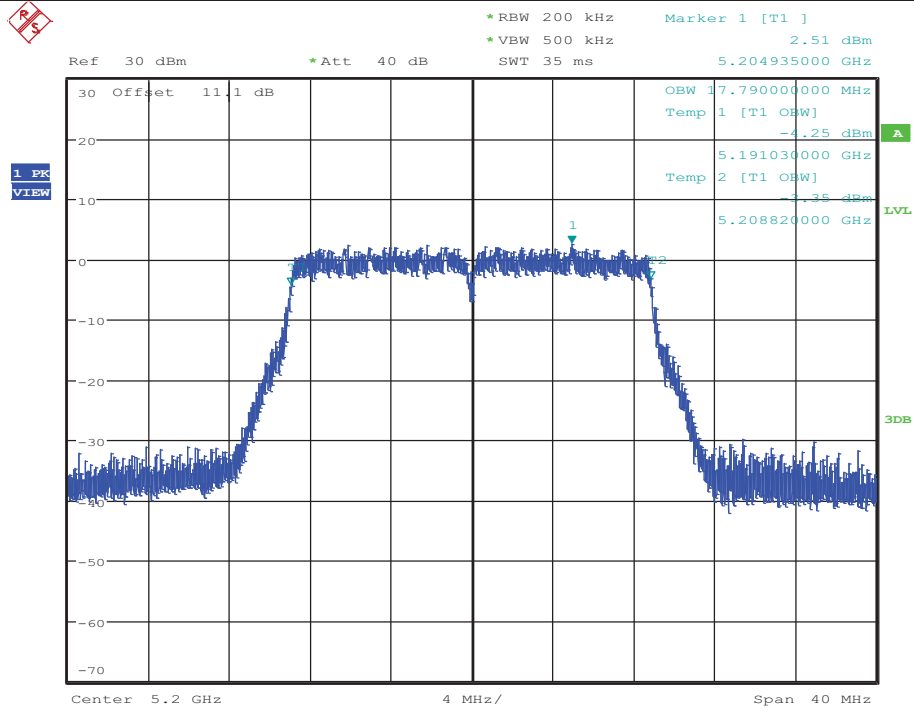
Date: 14.OCT.2017 13:47:57

### Occupied Bandwidth Measurement\_11N20MIMO\_5200\_Ant1



Date: 14.OCT.2017 13:55:19

### Occupied Bandwidth Measurement\_11N20MIMO\_5200\_Ant2



Date: 14.OCT.2017 14:02:14