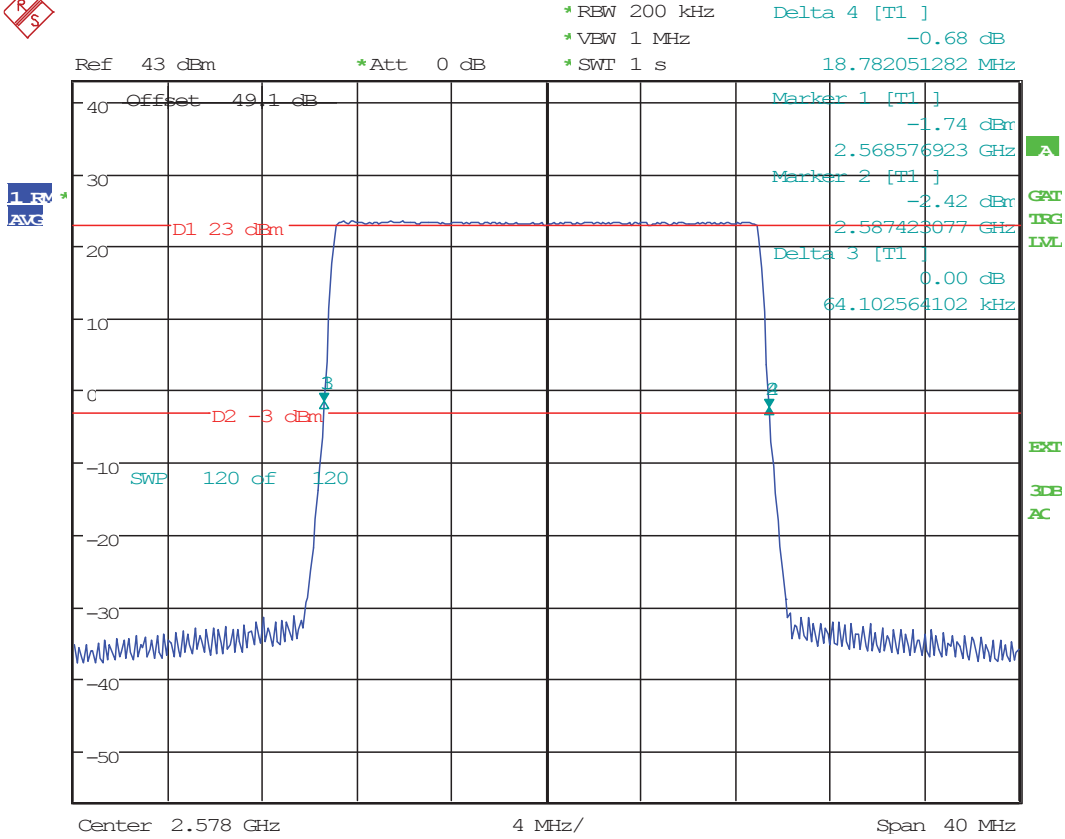


26dB BANDWIDTH; Test Eng:JY TDD B41 RRH Cast Fingu Fltr;20M
 BW;20W;2568-2588M;-48VDC;16QAM; FCCID-AS5BBTRX-15A.
 Date: 6.OCT.2015 14:33:34

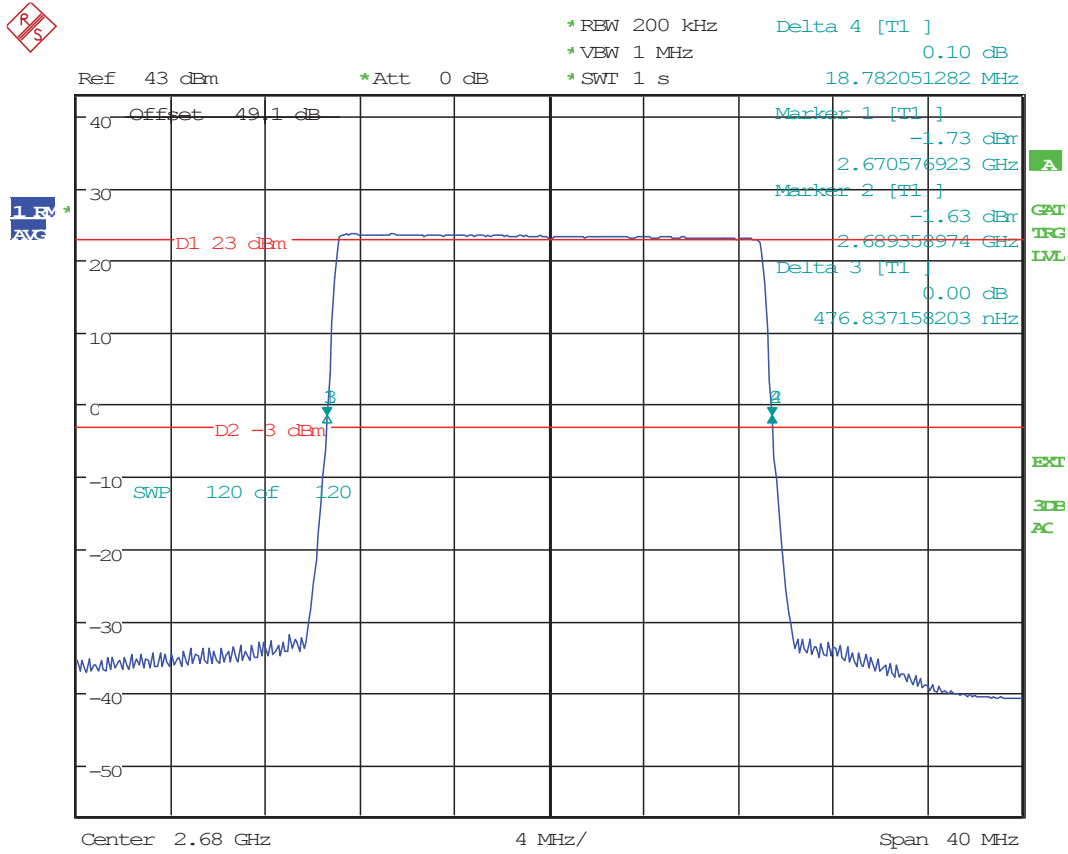


26dB BANDWIDTH; Test Eng:JY TDD B41 RRH Cast Fingu Fltr;20M
 BW;20W;2568-2588M;-48VDC;64QAM; FCCID-AS5BBTRX-15A.
 Date: 6.OCT.2015 14:48:14

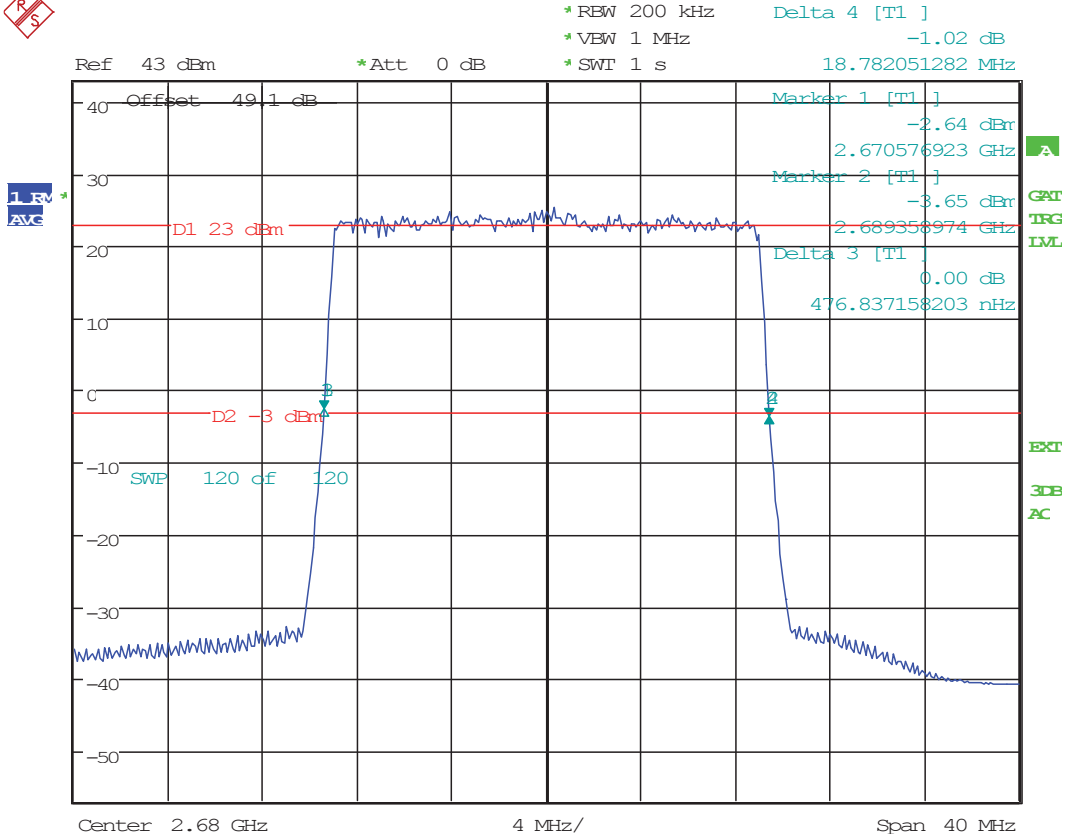
20 MHz Bandwidth 2670 – 2690 MHz (Higher)

8x20 watts (MIMO)

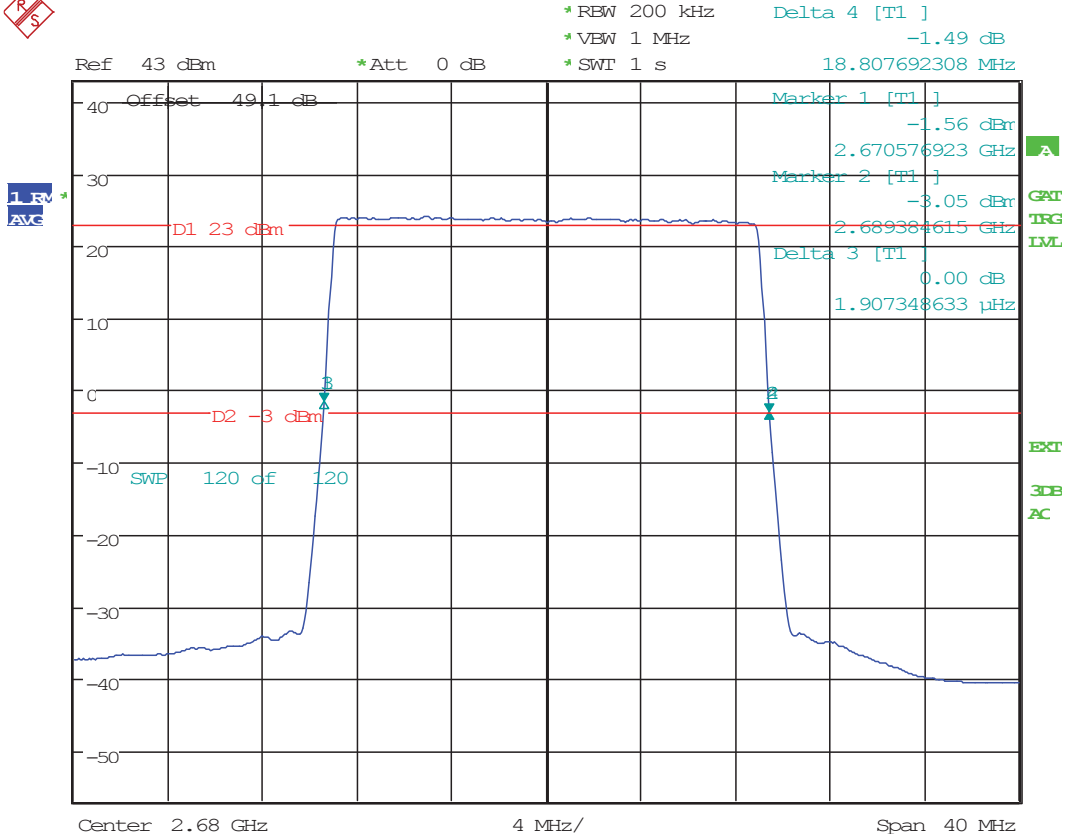
(26dB Bandwidth)



26dB BANDWIDTH; Test Eng:JY TDD B41 RRH Cast Fingu Fltr;20M
BW;20W;2670-2690M;-48VDC;QPSK; FCCID-AS5BBTRX-15A.
Date: 7.OCT.2015 12:14:59



26dB BANDWIDTH; Test Eng:JY TDD B41 RRH Cast Fingu Fltr;20M
 BW;20W;2670-2690M;-48VDC;16QAM; FCCID-AS5BBTRX-15A.
 Date: 7.OCT.2015 10:42:59

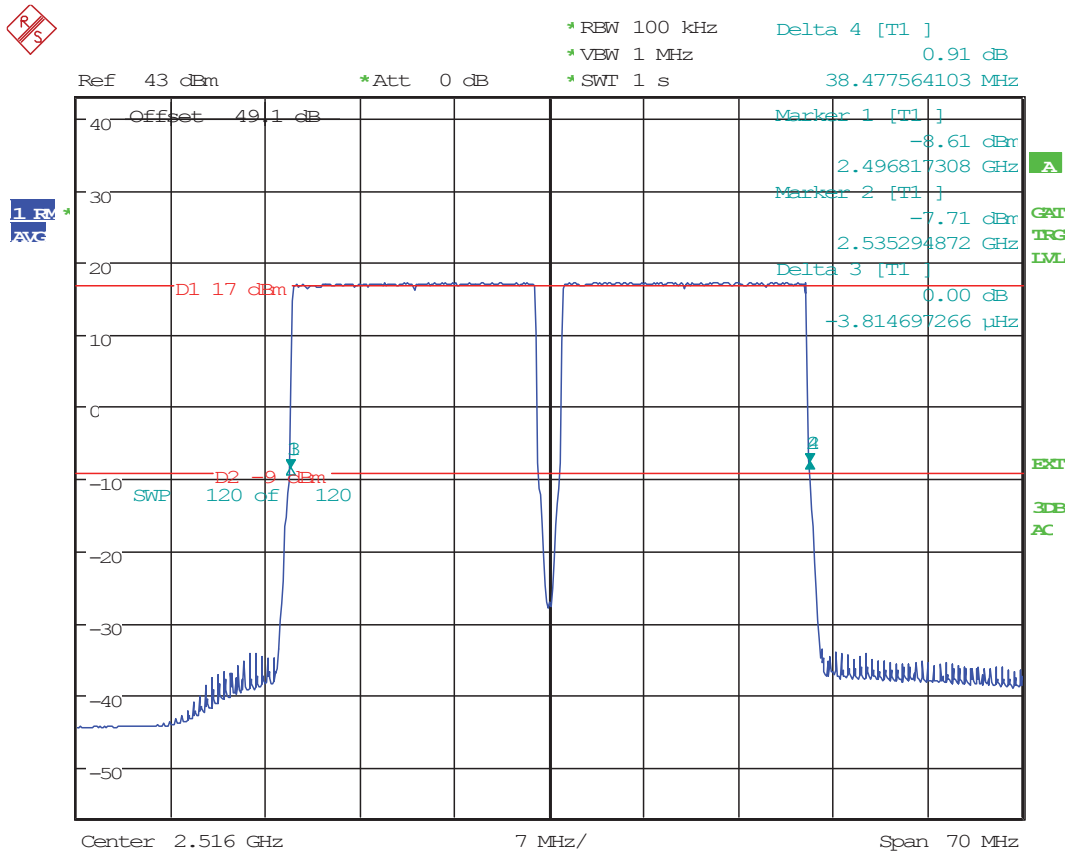


26dB BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingur Fltr
 20M BW;20W;2670-2690M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 28.DEC.2015 13:44:33

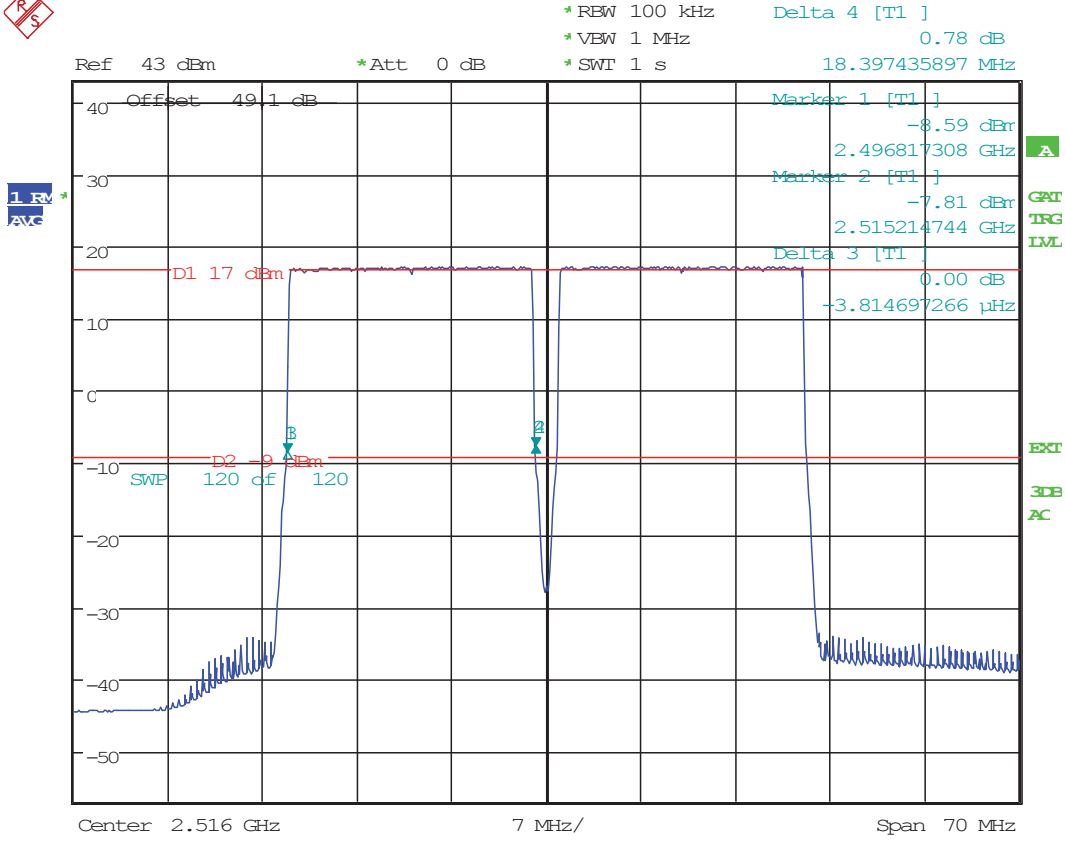
20+20 MHz Bandwidth 2496 – 2536 MHz (Lower)

8x20 watts (MIMO)

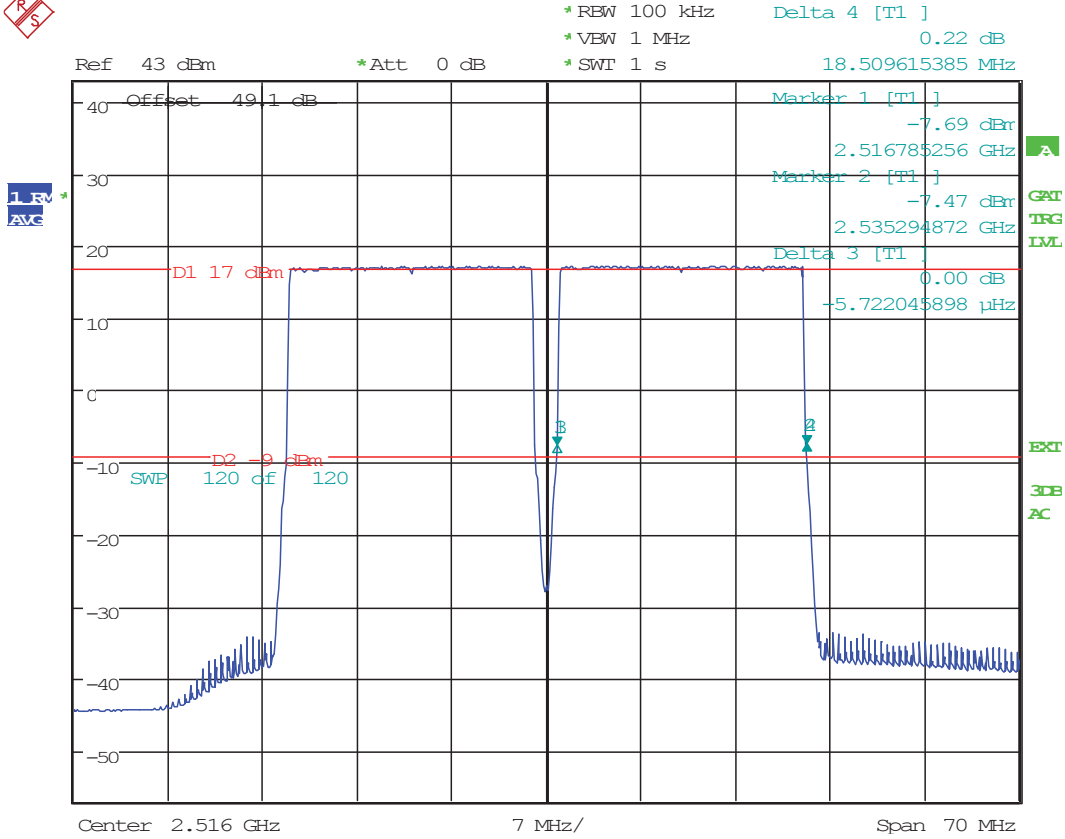
(26dB Bandwidth)



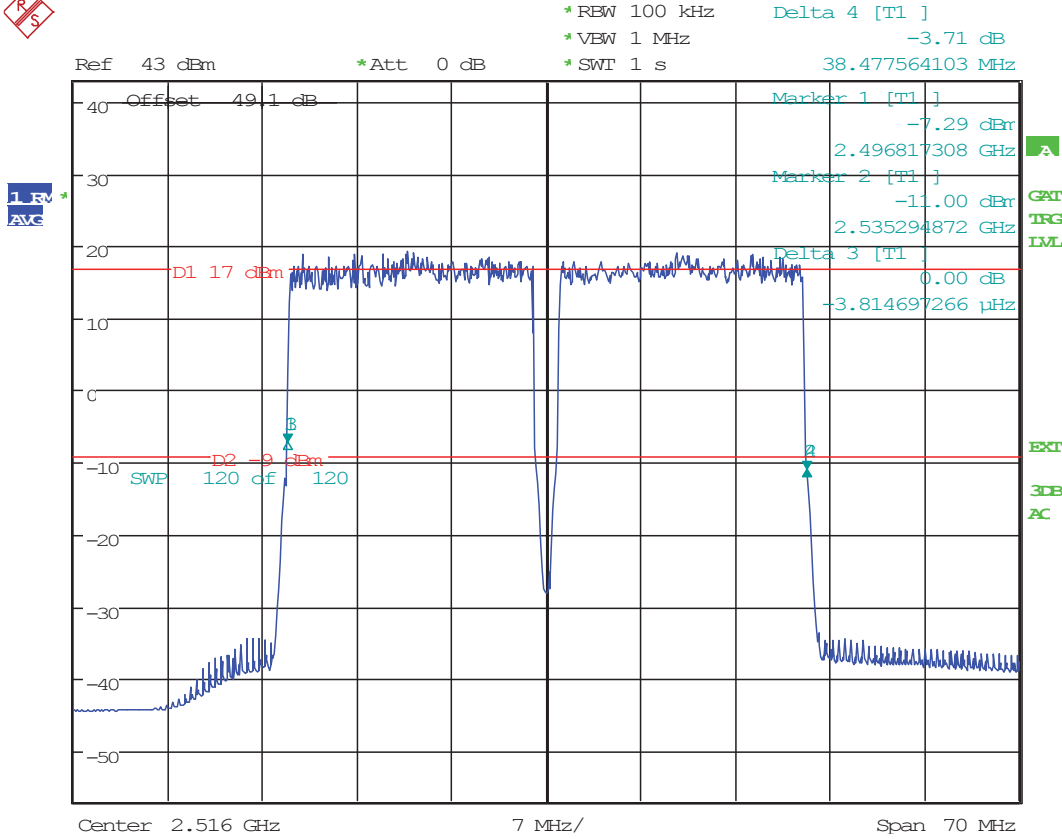
26dB BANDWIDTH; Test Eng: JY TDD B41 RRH Cast Fingu Fltr; 20+20
MHz BW; 20W; 2496-2536M; -48VDC; QPSK; FCCID-AS5BBTRX-15A.
Date: 8.OCT.2015 18:28:46



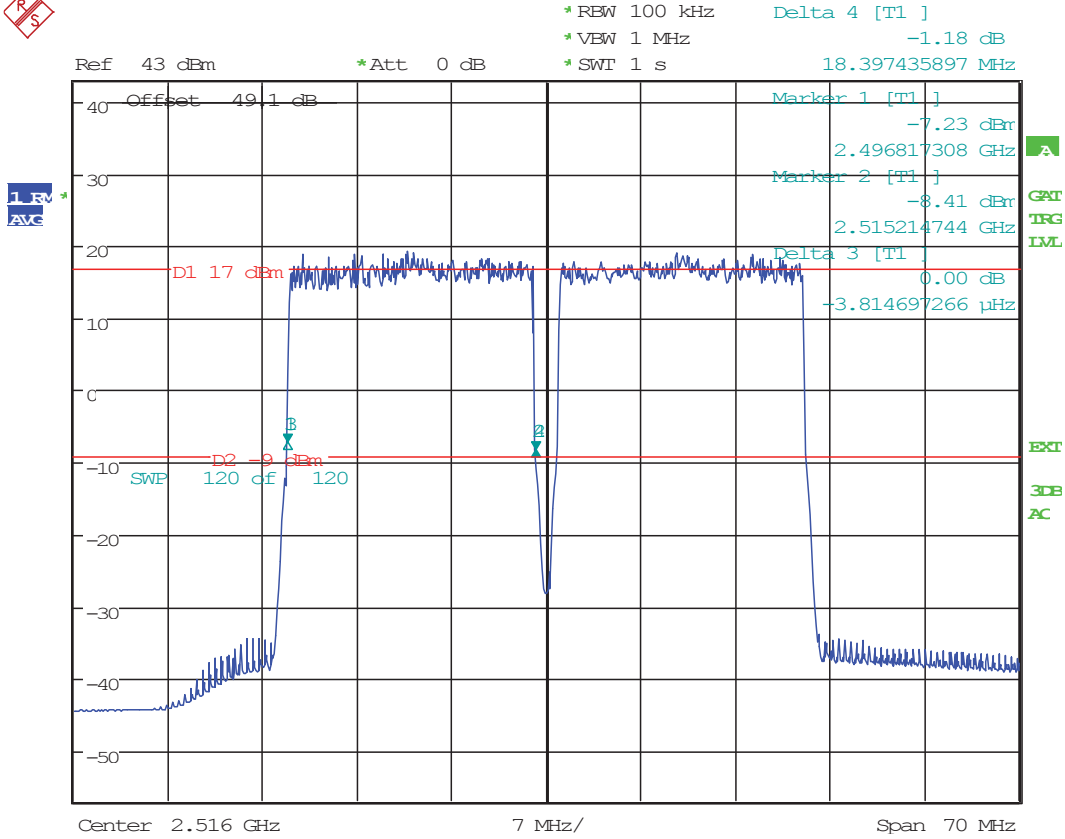
26dB BANDWIDTH; Test Eng: JY TDD B41 RRH Cast Fingu Fltr; 20+20
 MHz BW; 20W; 2496-2536M; -48VDC; QPSK; FCCID-AS5BBTRX-15A.
 Date: 8.OCT.2015 18:28:26



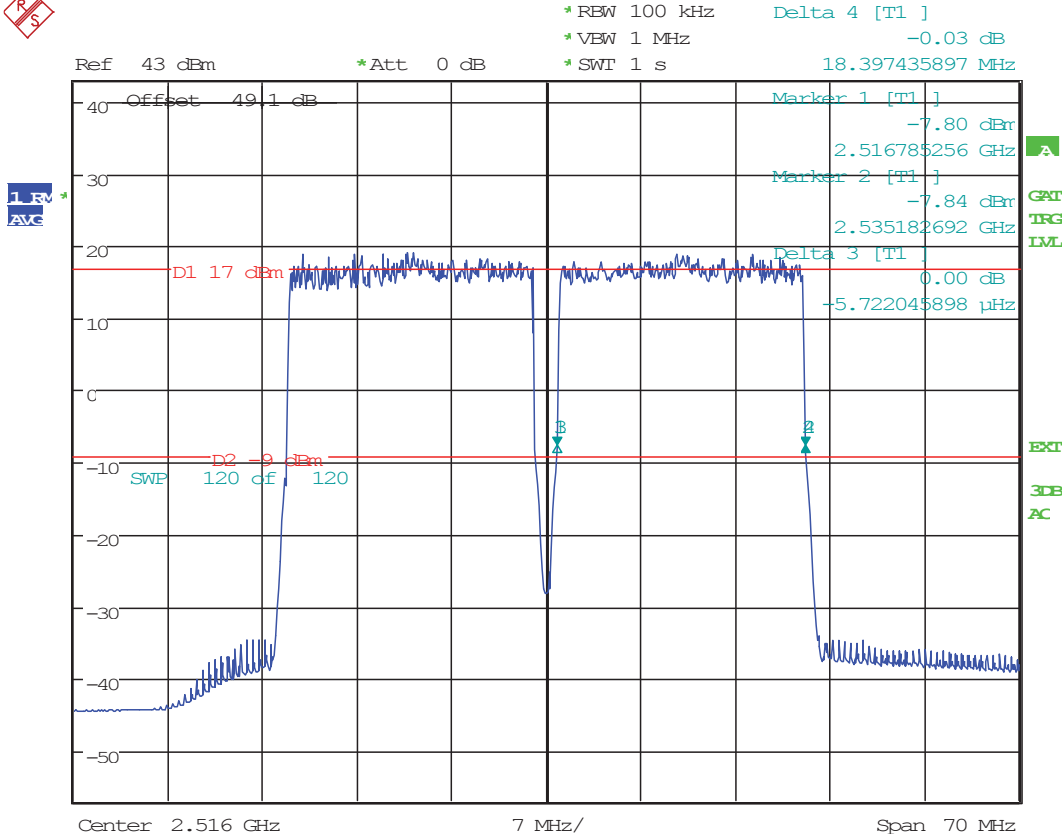
26dB BANDWIDTH; Test Eng: JY TDD B41 RRH Cast Fingu Fltr; 20+20
 MHz BW; 20W; 2496-2536M; -48VDC; QPSK; FCCID-AS5BBTRX-15A.
 Date: 8.OCT.2015 18:27:55



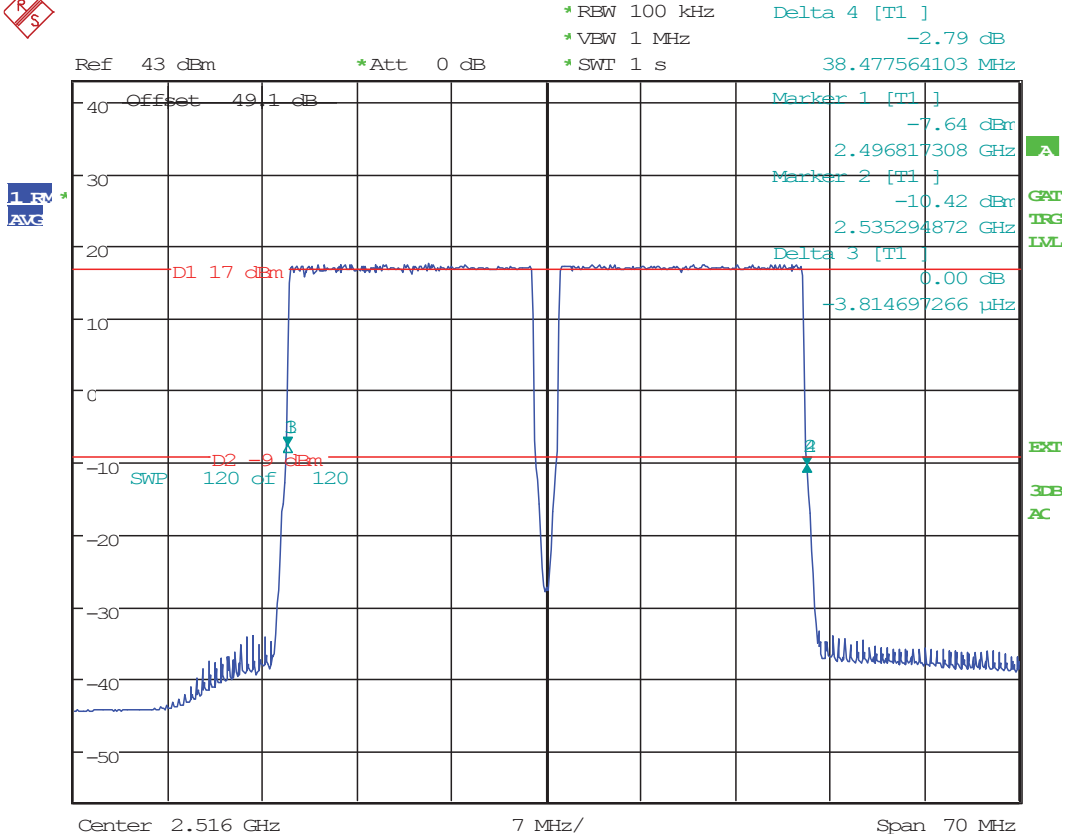
26dB BANDWIDTH; Test Eng: JY TDD B41 RRH Cast Fingu Fltr; 20+20
 MHz BW; 20W; 2496-2536M; -48VDC; 16QAM; FCCID-AS5BBTRX-15A.
 Date: 9.OCT.2015 09:33:32



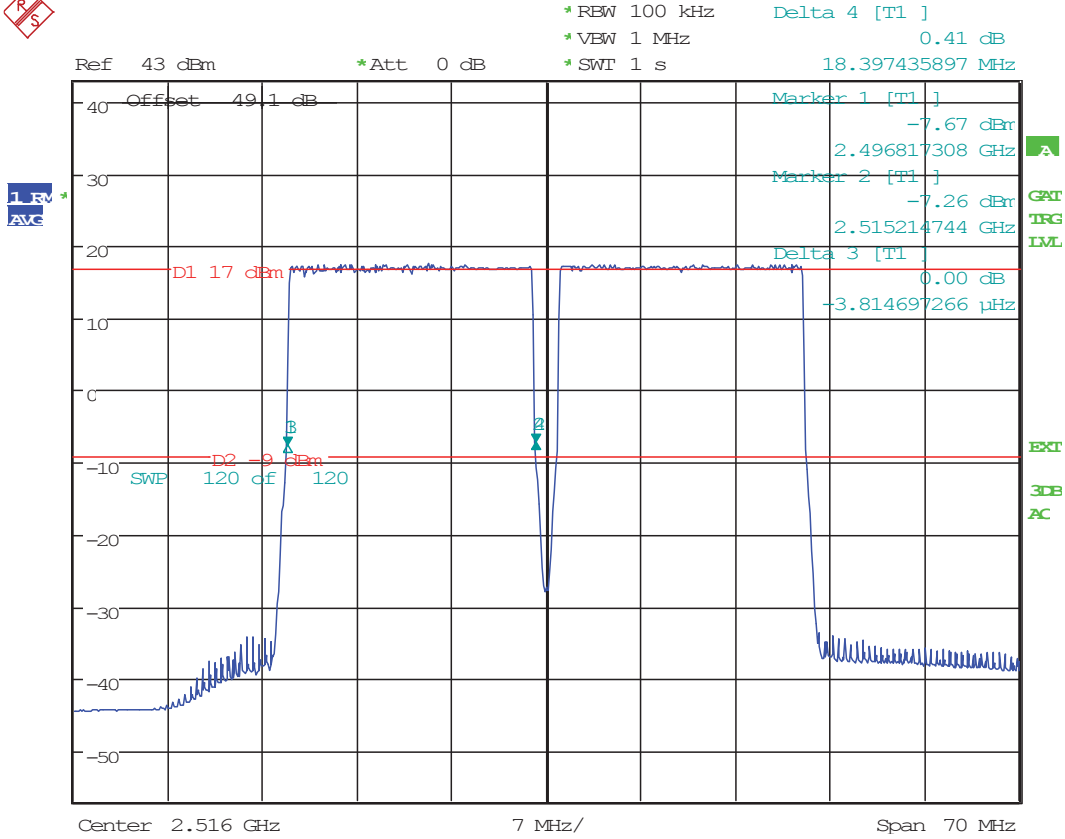
26dB BANDWIDTH; Test Eng: JY TDD B41 RRH Cast Fingu Fltr; 20+20
 MHz BW; 20W; 2496-2536M; -48VDC; 16QAM; FCCID-AS5BBTRX-15A.
 Date: 9.OCT.2015 09:35:03



26dB BANDWIDTH; Test Eng: JY TDD B41 RRH Cast Fingu Fltr; 20+20
 MHz BW; 20W; 2496-2536M; -48VDC; 16QAM; FCCID-AS5BBTRX-15A.
 Date: 9.OCT.2015 09:36:42



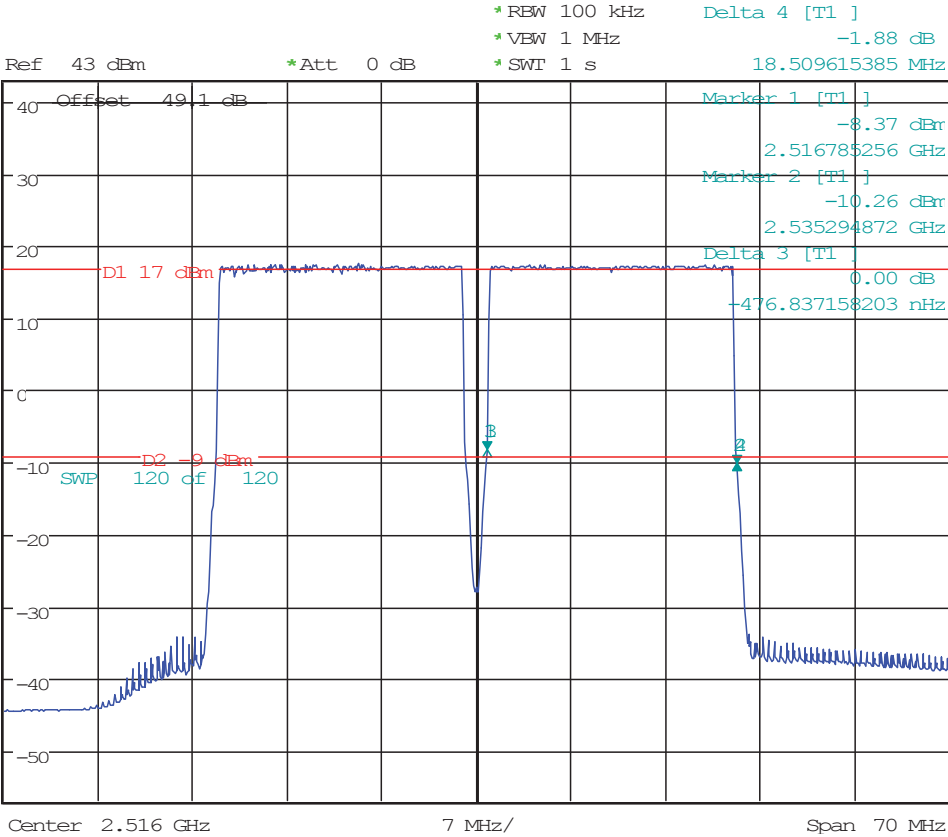
26dB BANDWIDTH;Test Eng:SEG: TDD B41 RRH Cast Fingu Fltr;20+
 20MHz BW; 20W; 2496-2536M;-48VDC; 64QAM; FCCID-AS5BBTRX-15A.
 Date: 9.OCT.2015 12:35:26



26dB BANDWIDTH; Test Eng: SEG: TDD B41 RRH Cast Fingu Fltr; 20+
 20MHz BW; 20W; 2496-2536M; -48VDC; 64QAM; FCCID-AS5BBTRX-15A.
 Date: 9.OCT.2015 12:37:00



1. RV
 AVC

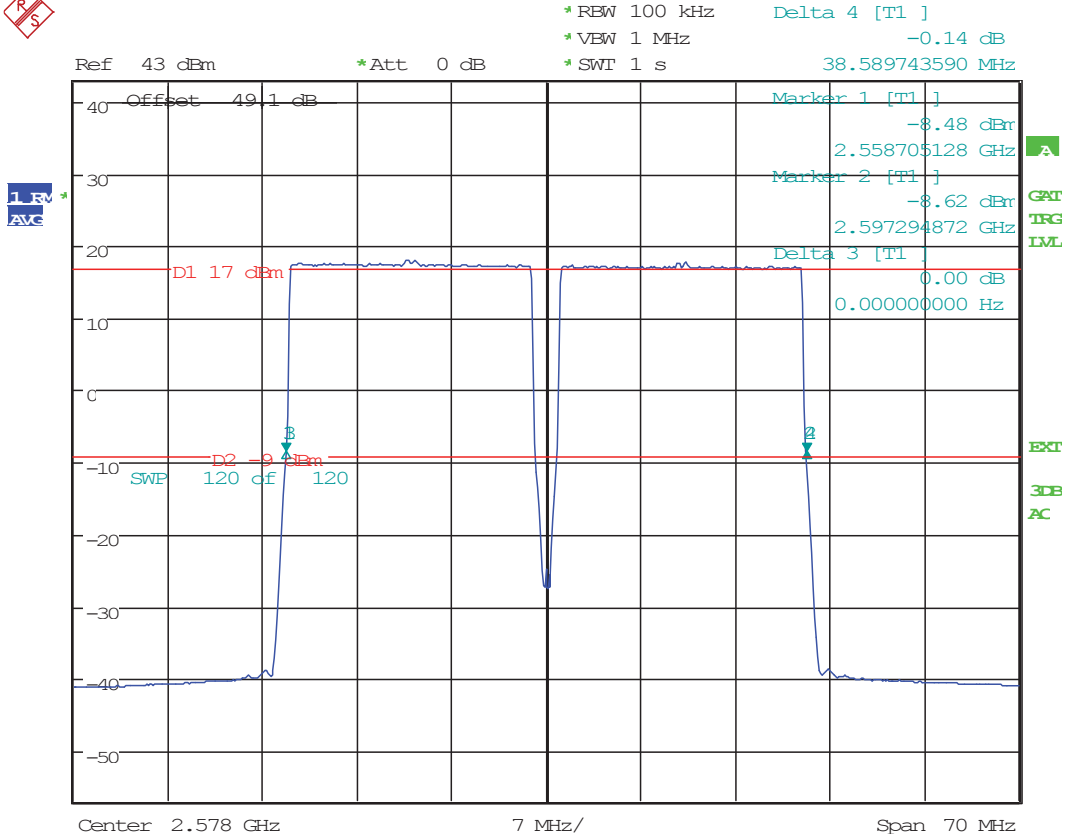


26dB BANDWIDTH; Test Eng: SEG: TDD B41 RRH Cast Fingu Fltr; 20+
 20MHz BW; 20W; 2496-2536M; -48VDC; 64QAM; FCCID-AS5BBTRX-15A.
 Date: 9.OCT.2015 12:39:06

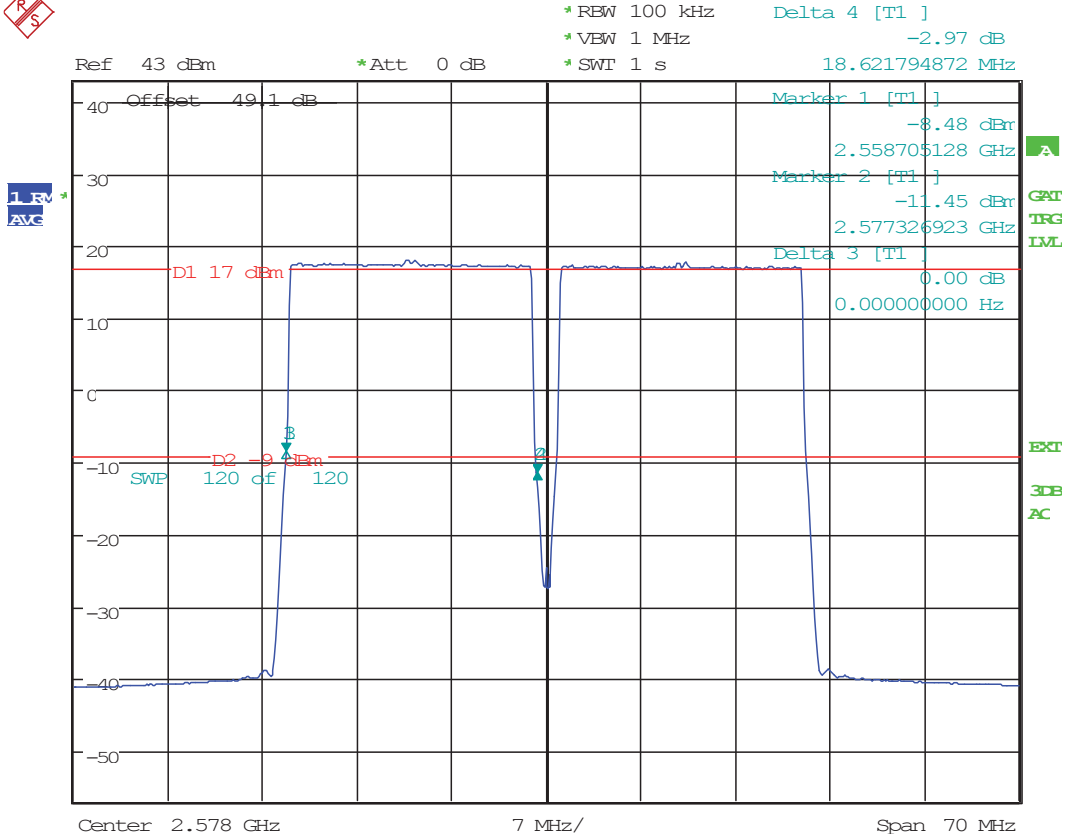
**20+20 MHz Bandwidth 2558 – 2598 MHz
(Middle)**

8x20 watts (MIMO)

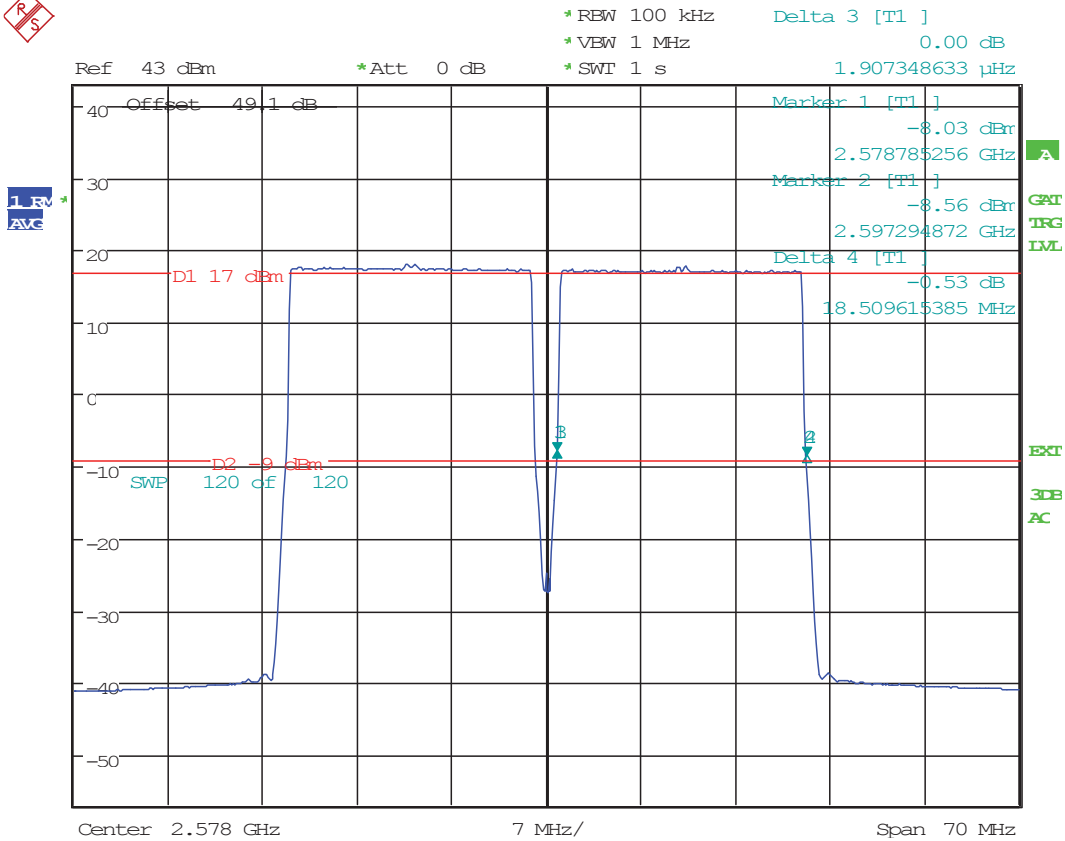
(26dB Bandwidth)



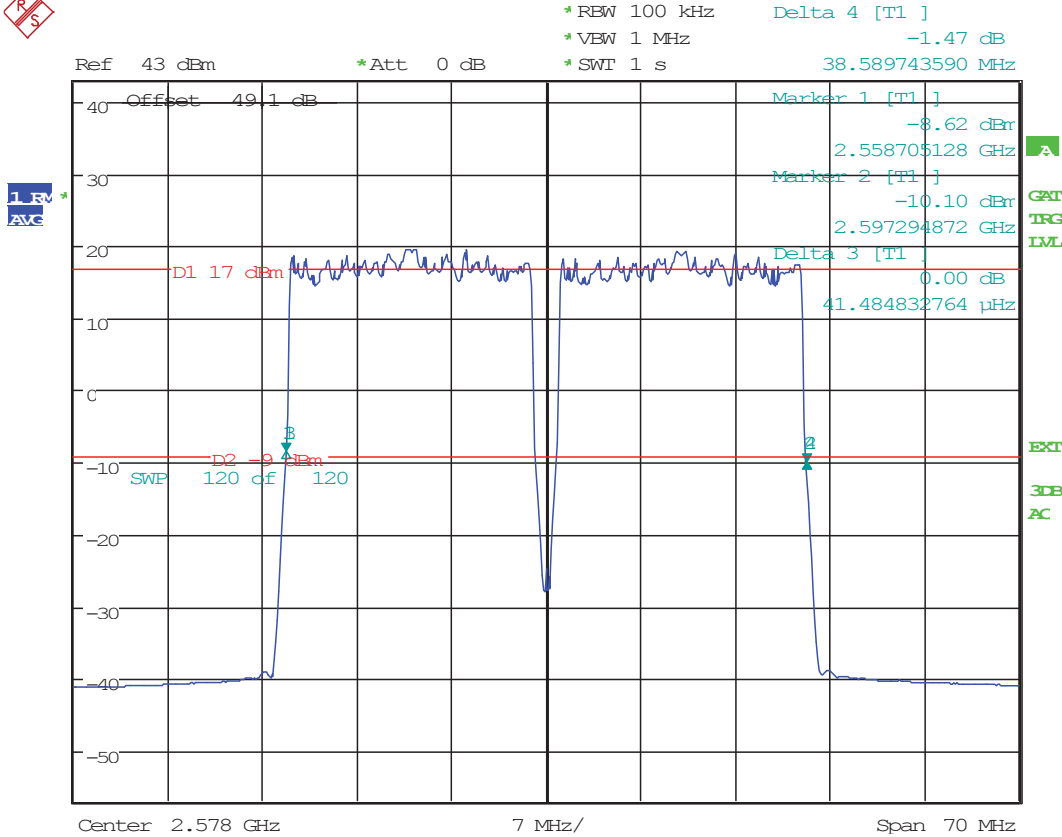
26dB BANDWIDTH: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2558-2598MHz; -48VDC;QPSK; FCCID:AS5BBTRX-15A
 Date: 23.NOV.2015 17:15:57



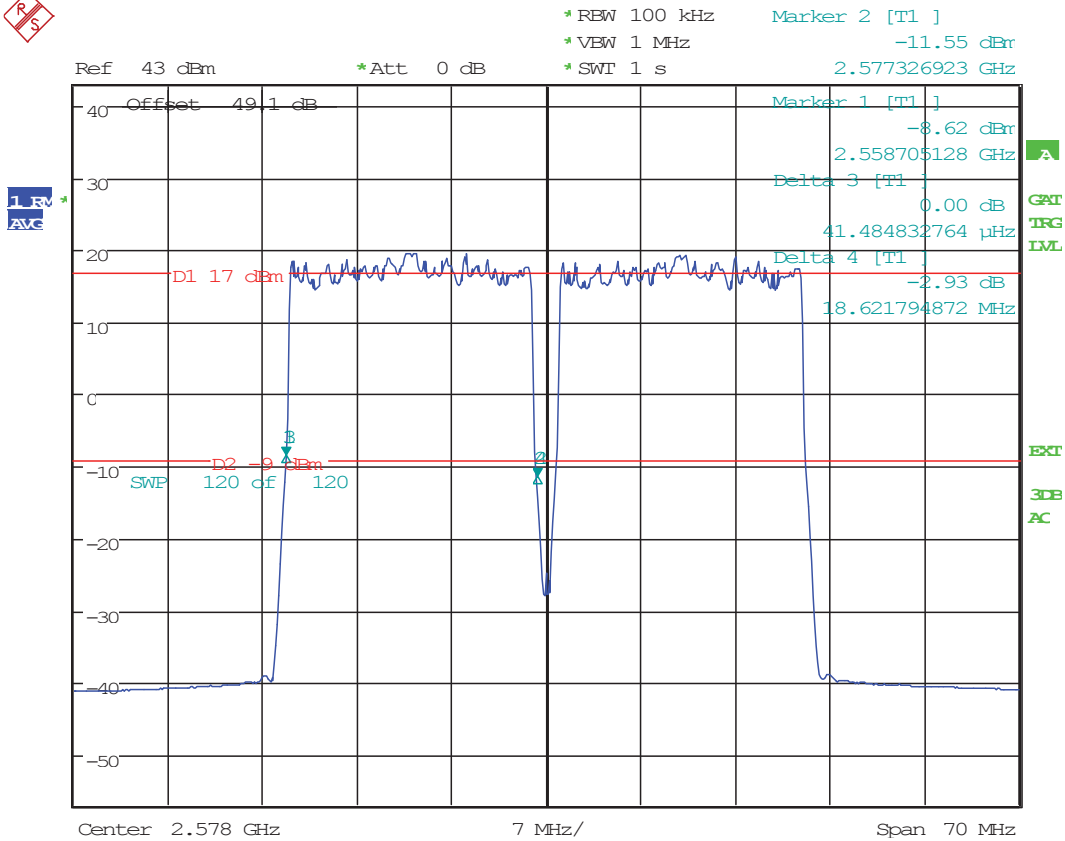
26dB BANDWIDTH: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2558-2598MHz; -48VDC;QPSK; FCCID:AS5BBTRX-15A
 Date: 23.NOV.2015 17:18:06



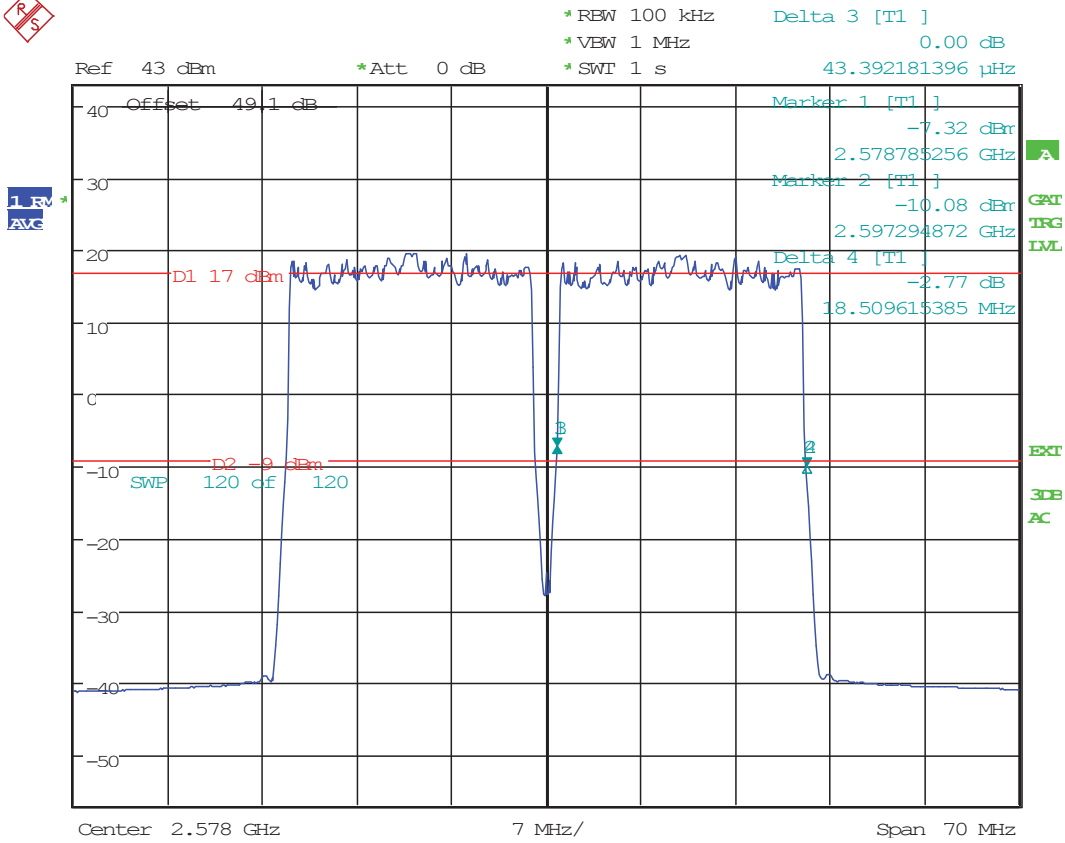
26dB BANDWIDTH: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2558-2598MHz; -48VDC;QPSK; FCCID:AS5BBTRX-15A
 Date: 23.NOV.2015 17:19:31



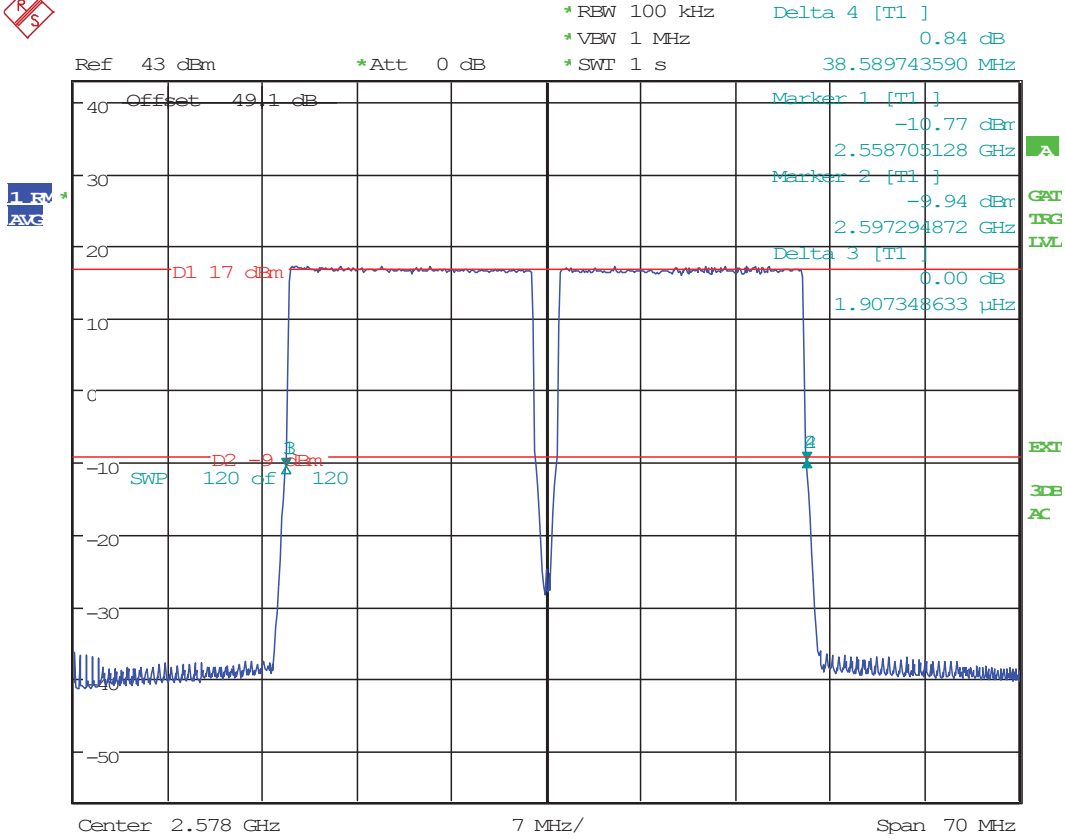
26dB BANDWIDTH: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2558-2598MHz; -48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 23.NOV.2015 11:00:14



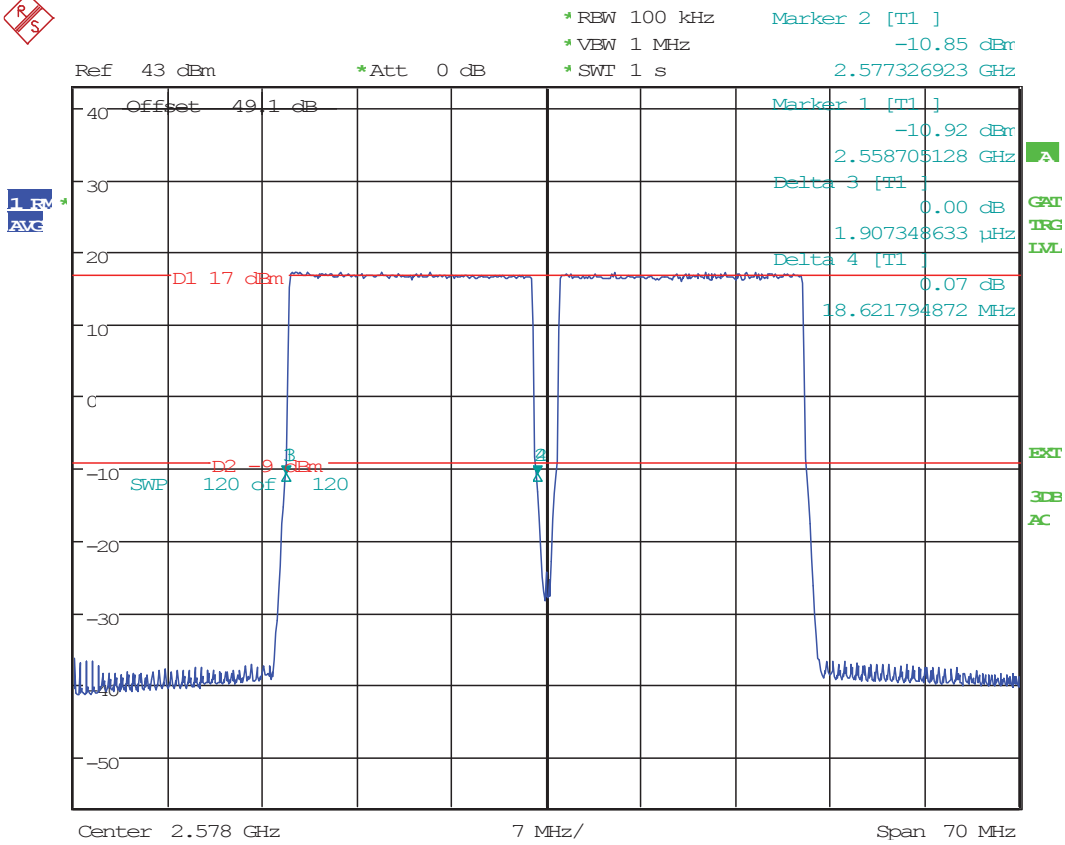
26dB BANDWIDTH: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2558-2598MHz; -48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 23.NOV.2015 11:04:10



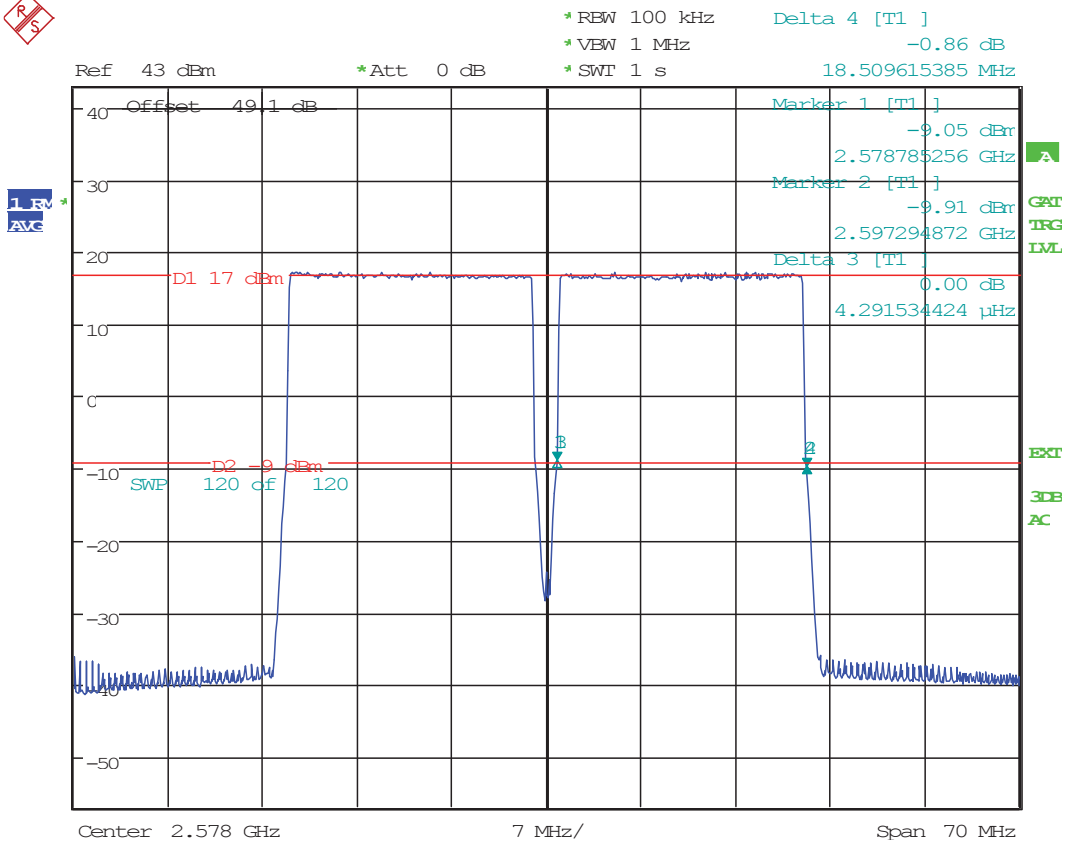
26dB BANDWIDTH: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
20+20M BW; 2558-2598MHz; -48VDC;16QAM;FCCID:AS5BBTRX-15A
Date: 23.NOV.2015 11:05:33



26dB BANDWIDTH; Test Eng: SEG: TDD B41 RRH Cast Fingur Fltr; 20+
 20MHz BW; 20W; 2558-2598M; -48VDC; 64QAM; FCCID-AS5BBTRX-15A.
 Date: 9.OCT.2015 14:32:30



26dB BANDWIDTH;Test Eng:SEG: TDD B41 RRH Cast Fingu Fltr;20+
 20MHz BW; 20W; 2558-2598M;-48VDC; 64QAM; FCCID-AS5BBTRX-15A.
 Date: 9.OCT.2015 14:33:24

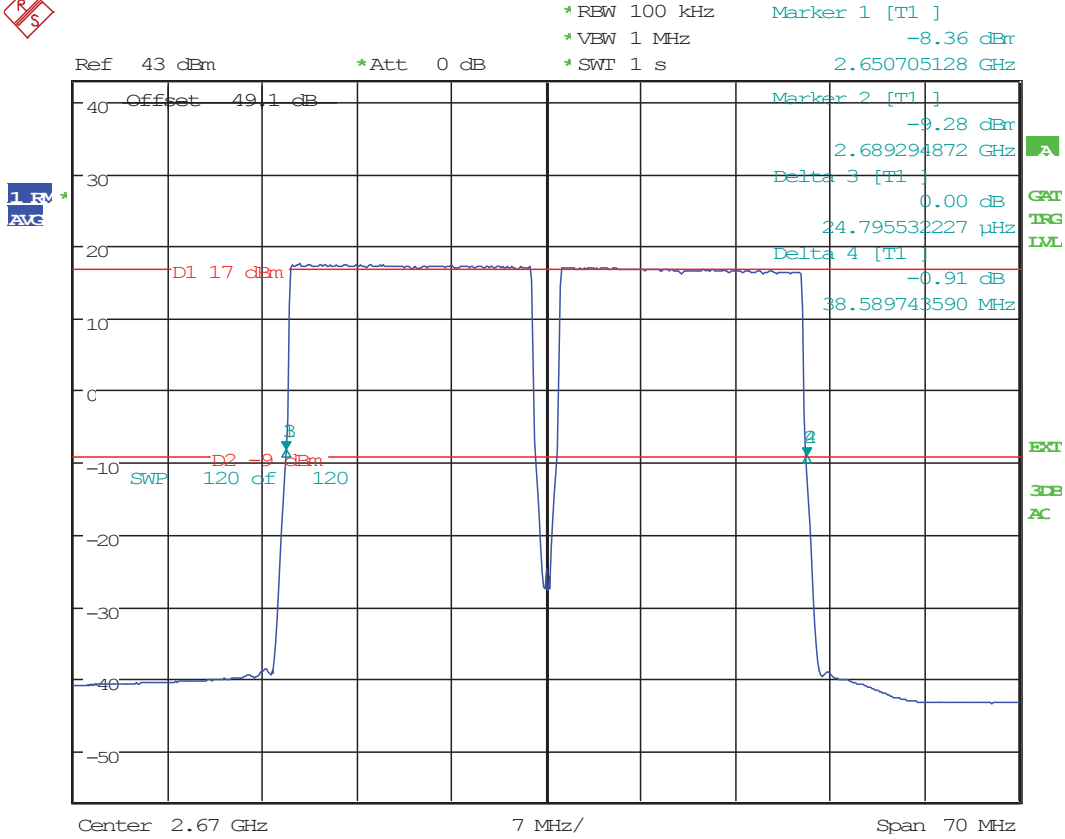


26dB BANDWIDTH; Test Eng: SEG: TDD B41 RRH Cast Fingu Fltr; 20+
 20MHz BW; 20W; 2558-2598M; -48VDC; 64QAM; FCCID-AS5BBTRX-15A.
 Date: 9.OCT.2015 14:34:12

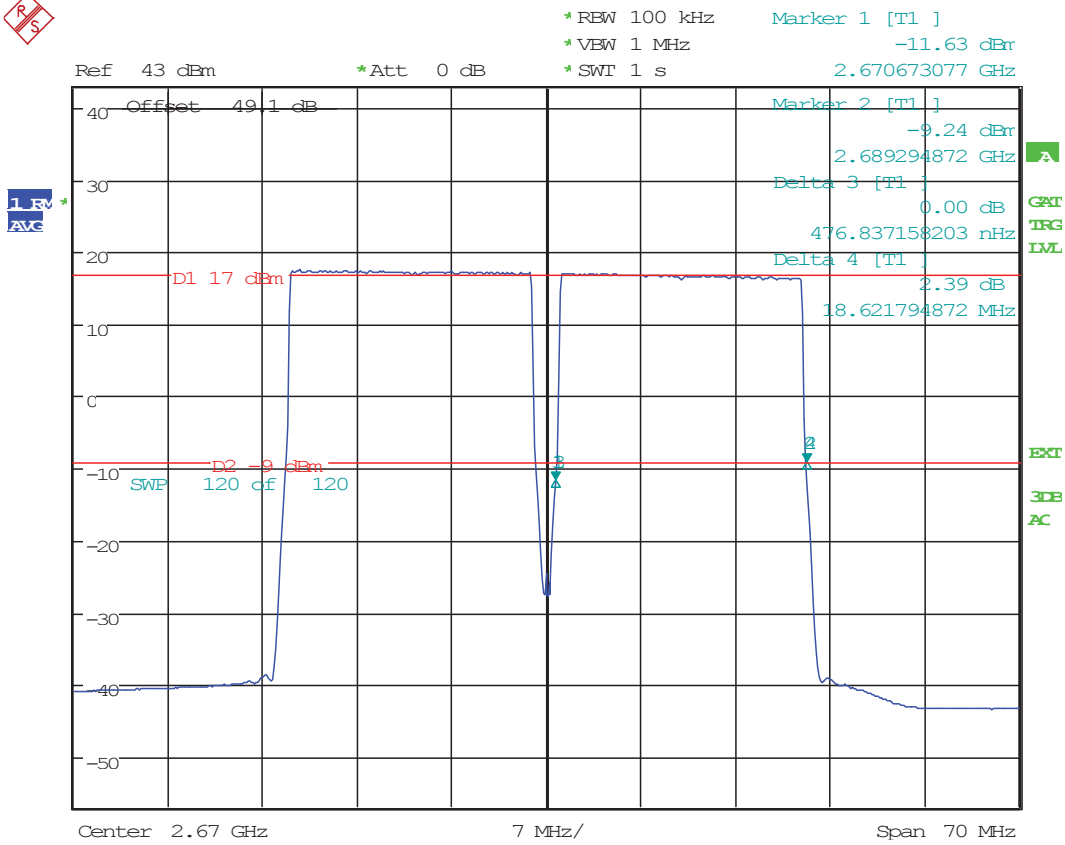
**20+20 MHz Bandwidth 2650 – 2690 MHz
(Higher)**

8x20 watts (MIMO)

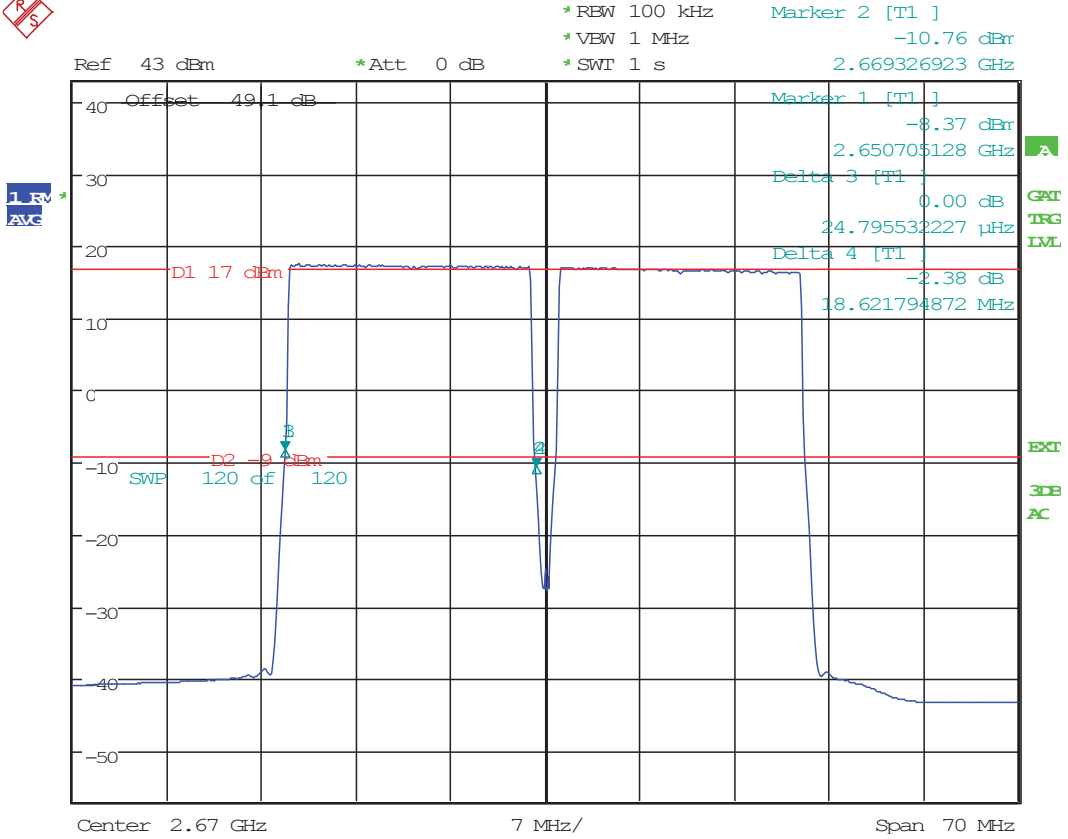
(26dB Bandwidth)



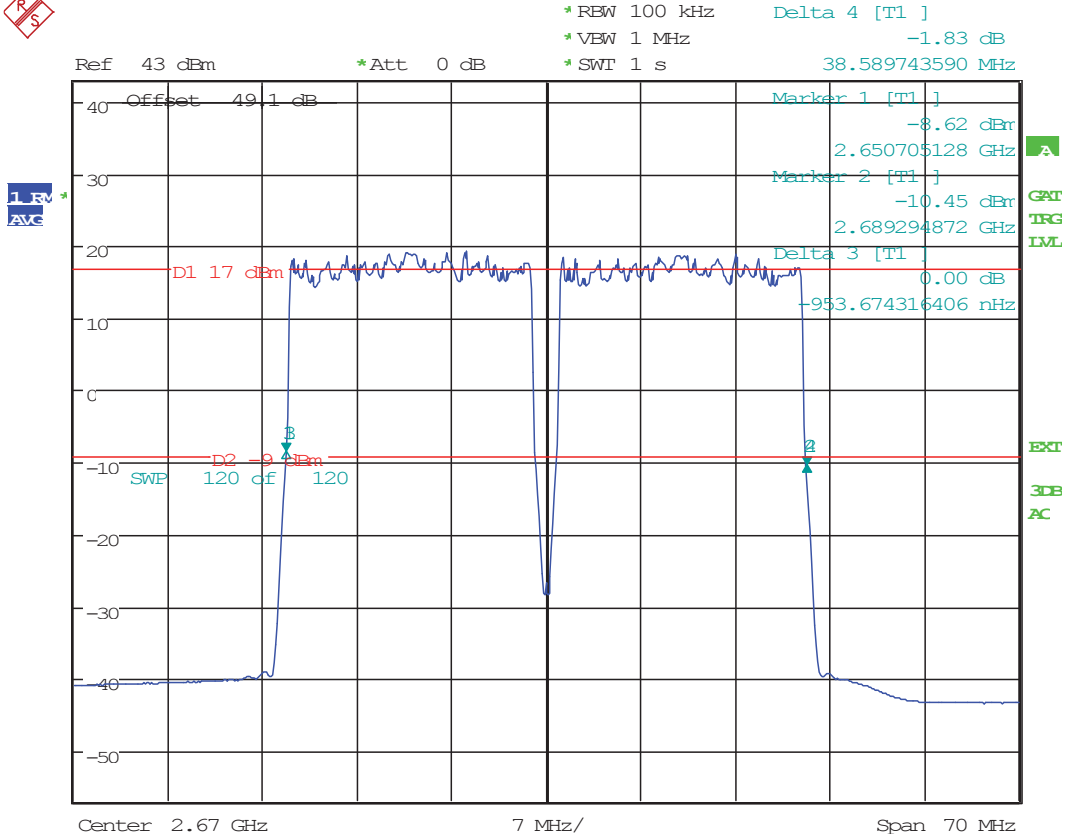
26dB BANDWIDTH: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2650-2690MHz; -48VDC;QPSK; FCCID:AS5BBTRX-15A
 Date: 25.NOV.2015 17:00:42



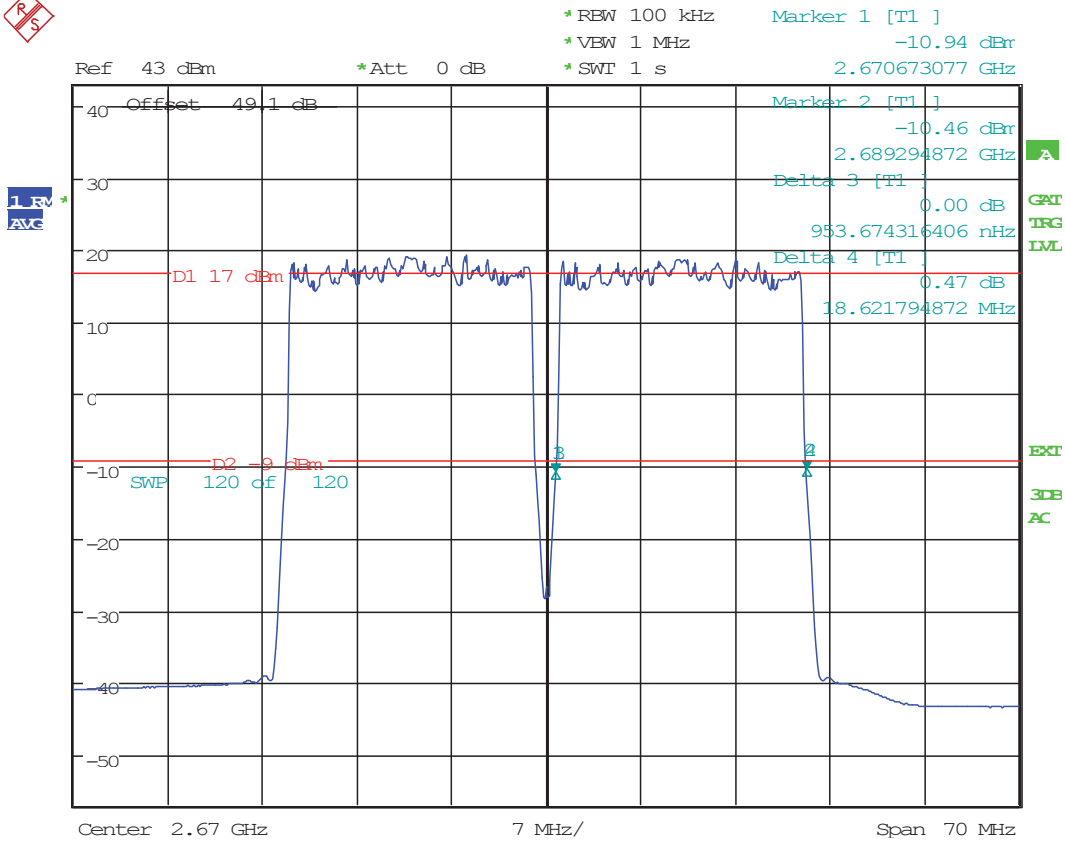
26dB BANDWIDTH: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2650-2690MHz; -48VDC;QPSK; FCCID:AS5BBTRX-15A
 Date: 25.NOV.2015 16:58:12



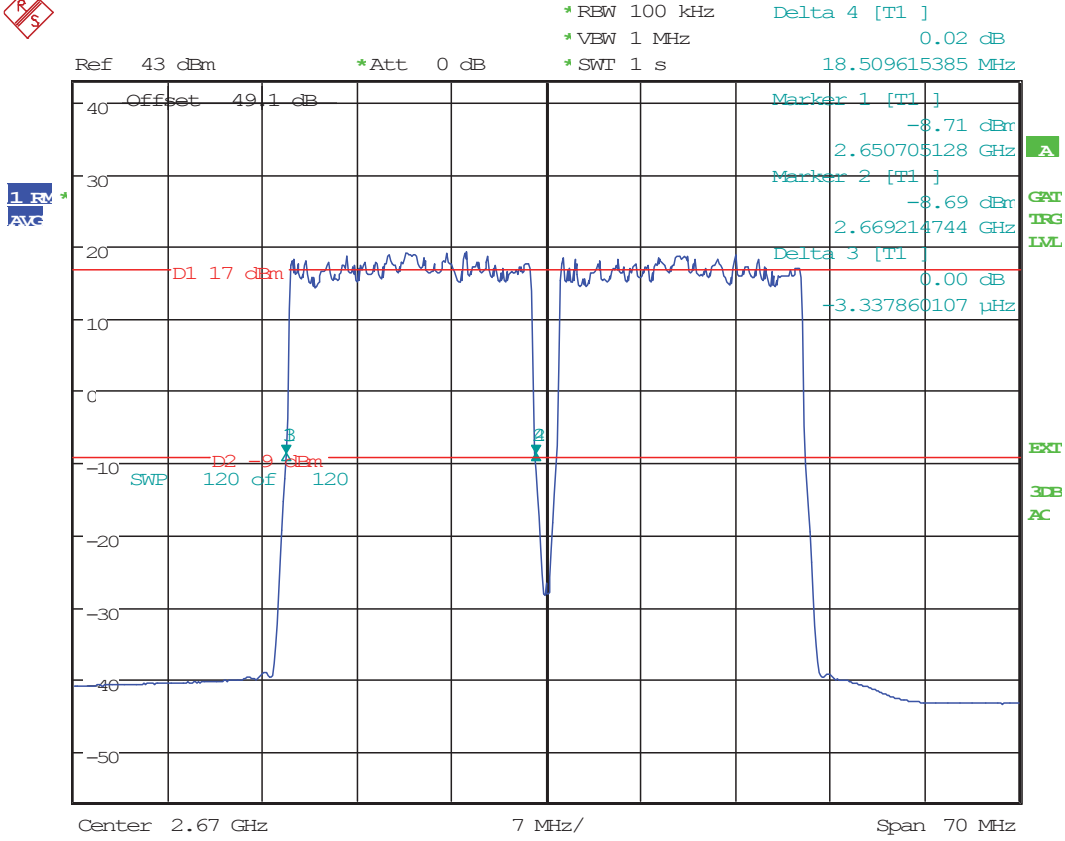
26dB BANDWIDTH: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2650-2690MHz; -48VDC;QPSK; FCCID:AS5BBTRX-15A
 Date: 25.NOV.2015 17:03:47



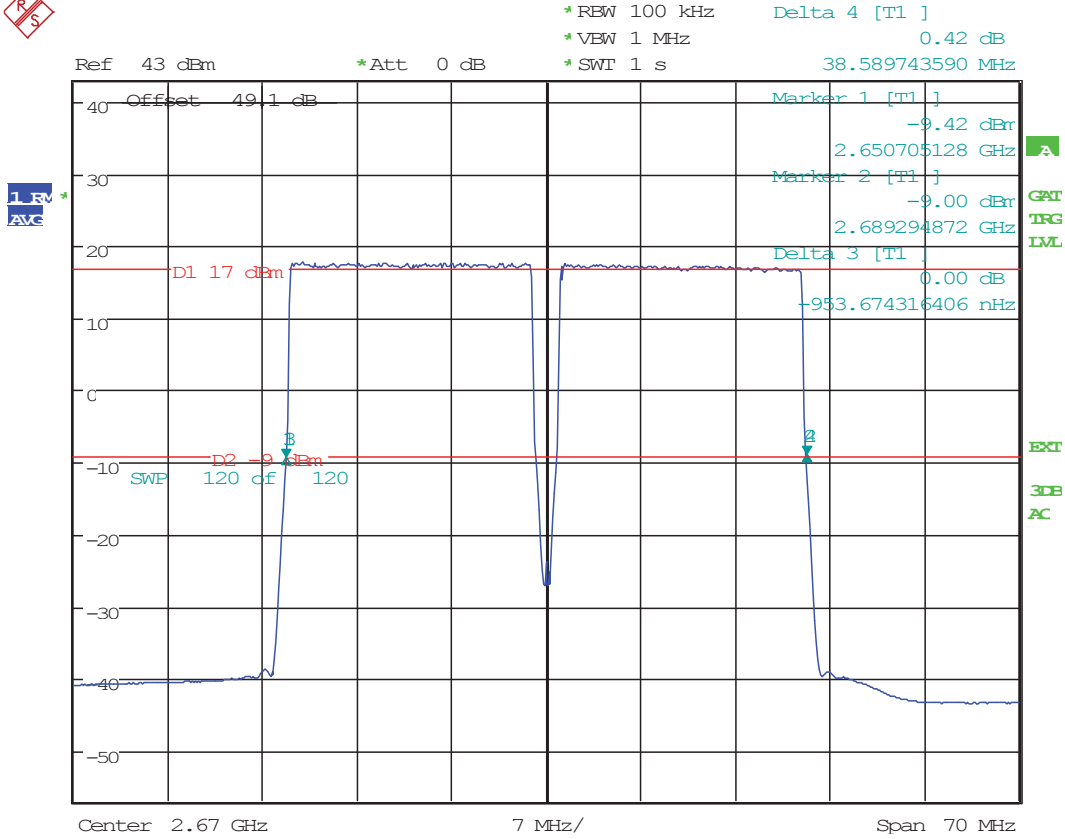
26dB BANDWIDTH: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2650-2690MHz; -48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 24.NOV.2015 17:55:21



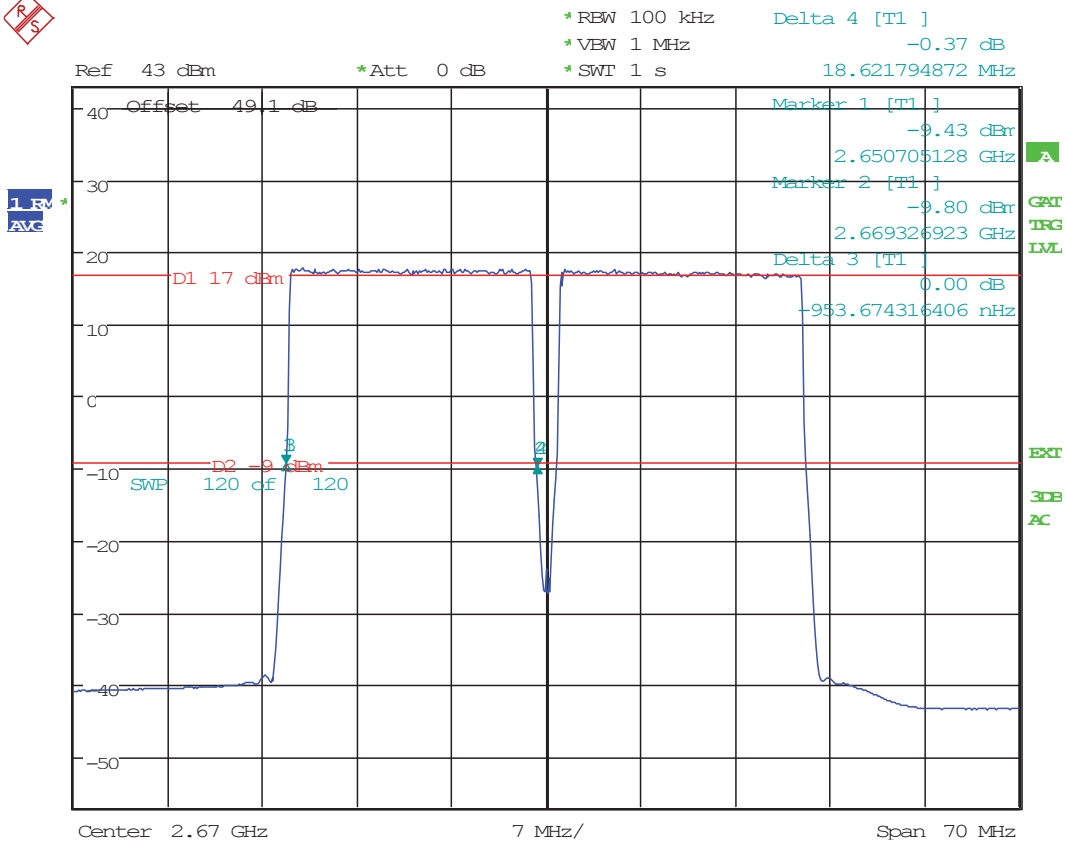
26dB BANDWIDTH: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2650-2690MHz; -48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 24.NOV.2015 17:56:49



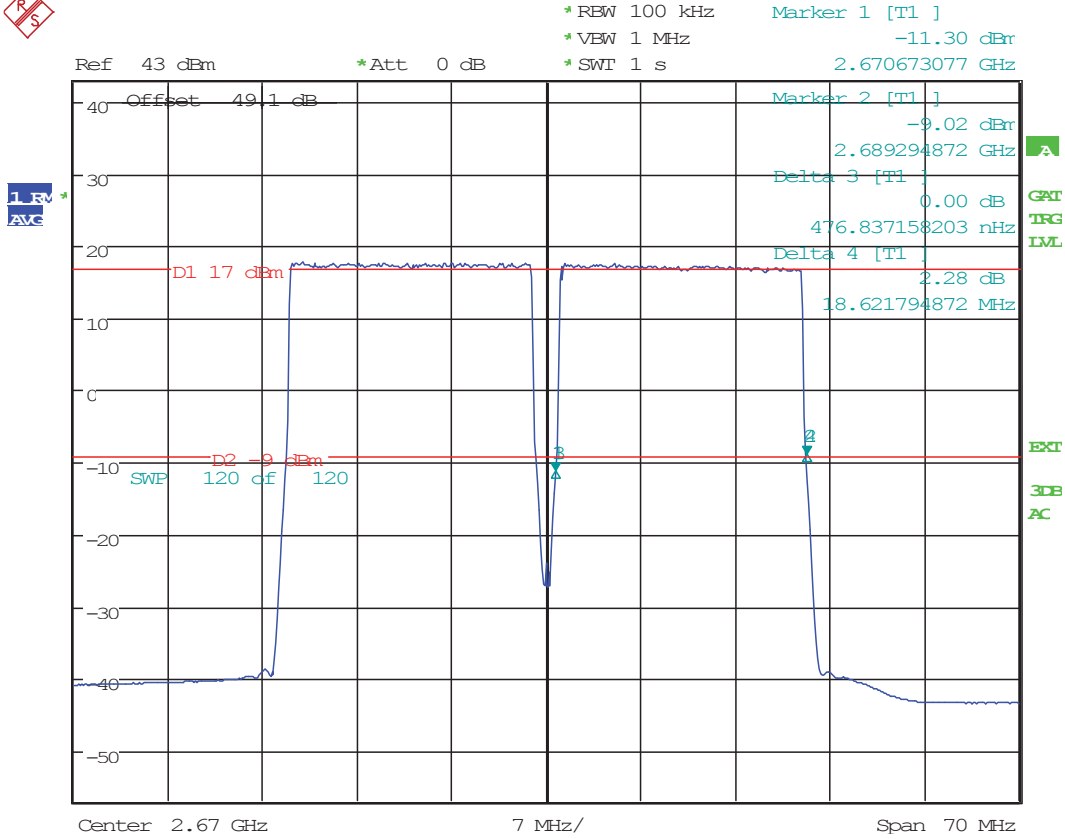
26dB BANDWIDTH: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2650-2690MHz; -48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 24.NOV.2015 17:57:44



26dB BANDWIDTH: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2650-2690MHz; -48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 24.NOV.2015 13:03:28

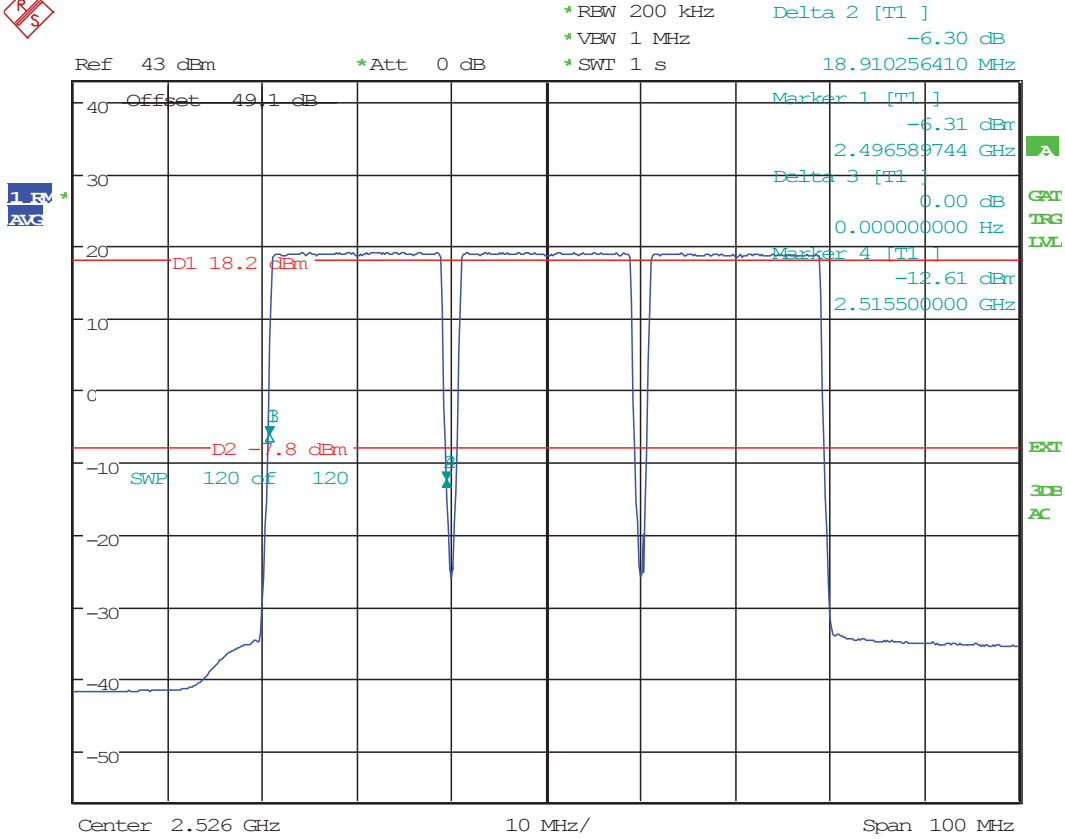


26dB BANDWIDTH: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2650-2690MHz; -48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 24.NOV.2015 13:06:01

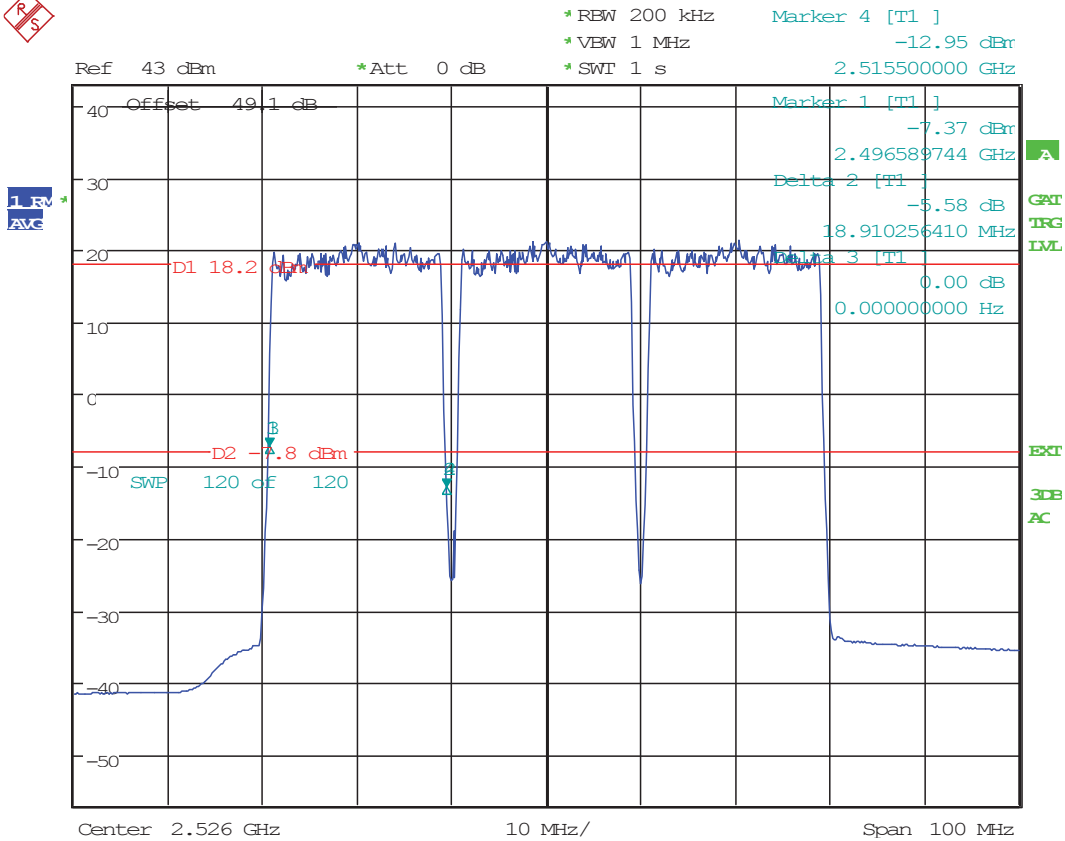


26dB BANDWIDTH: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2650-2690MHz; -48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 24.NOV.2015 13:07:18

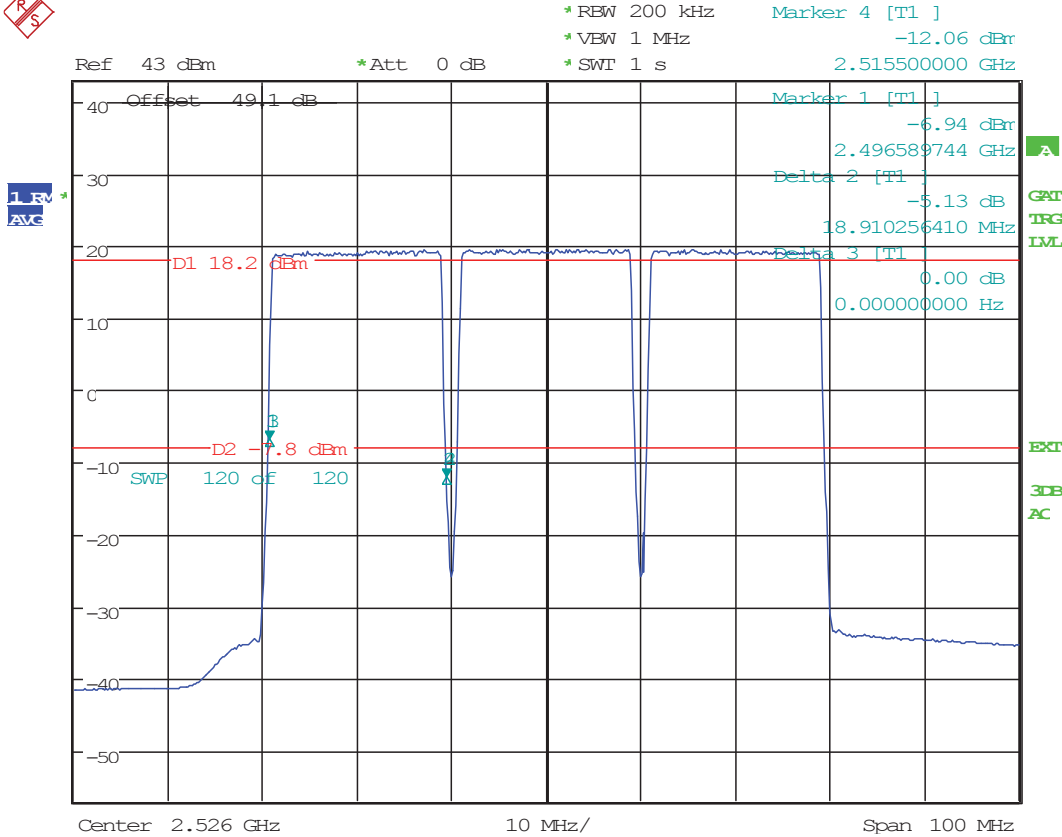
**20+20+20MHz Bandwidth,
2496-2516MHz, 2516-2536 & 2536-2556 MHz
60MHz (Lower)
8x20 watts (MIMO)
26dB Bandwidth**



26dB BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW;20W;2496-2556M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 11.DEC.2015 00:08:59

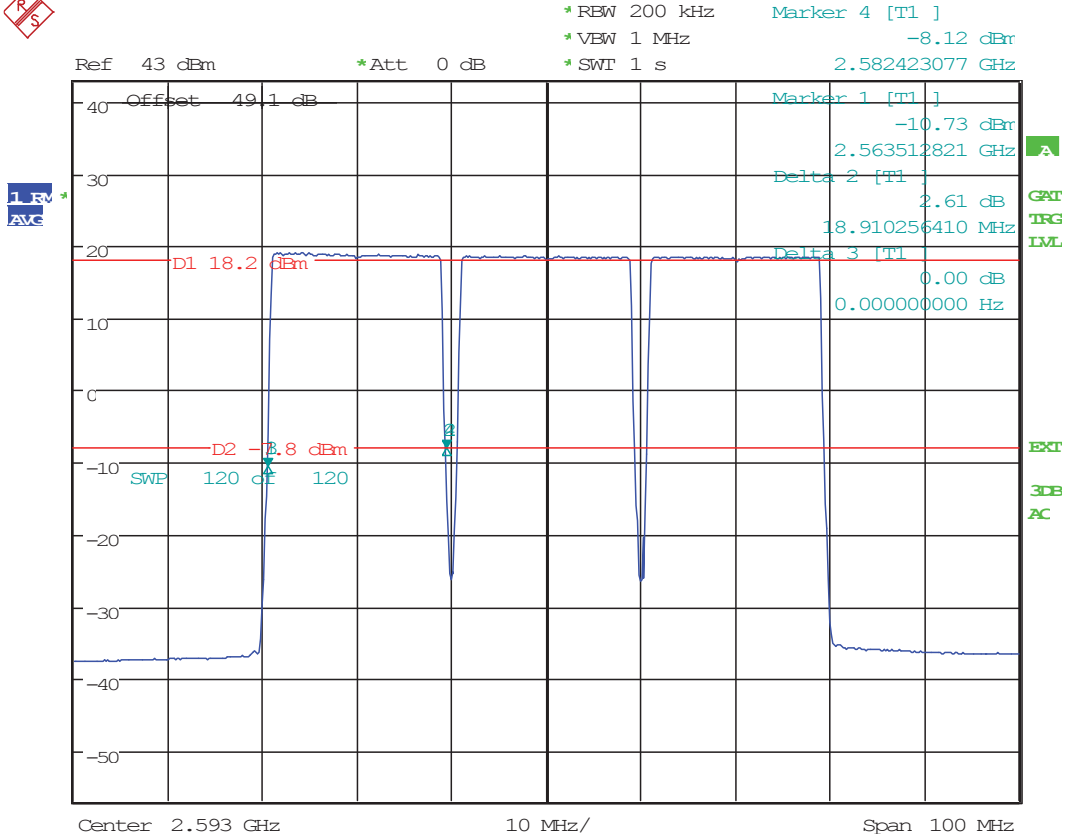


26dB BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW;20W;2496-2556M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 10.DEC.2015 10:24:09

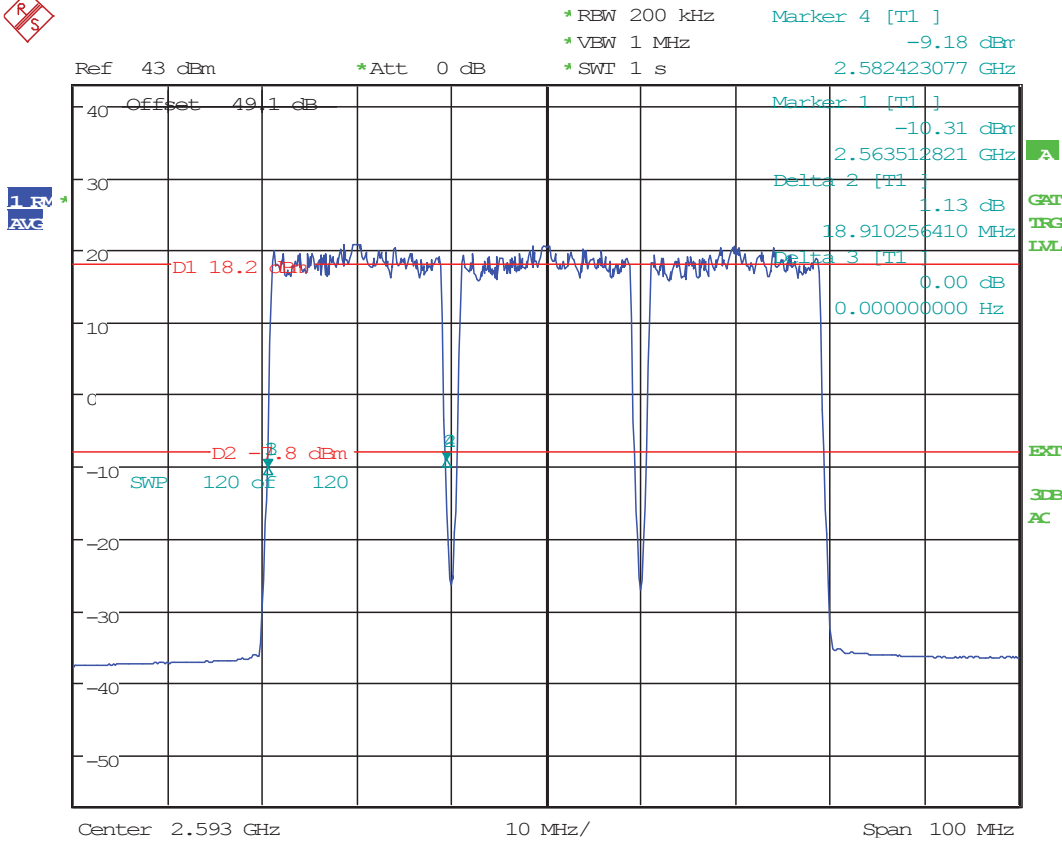


26dB BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingur Fltr
 20+20+20M BW;20W;2496-2556M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 9.DEC.2015 15:20:25

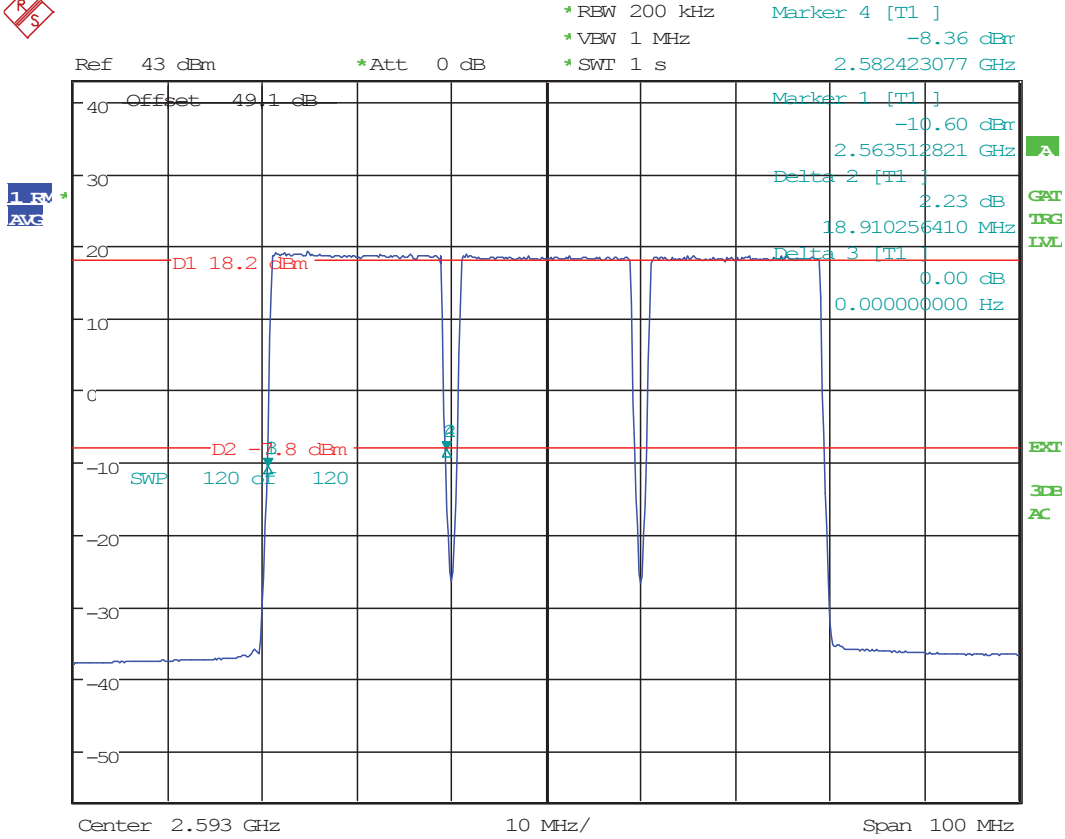
20+20+20MHz Bandwidth,
2563-2583MHz, 2583-2603 & 2603-2623 MHz
60MHz (Middle)
8x20 watts (MIMO)
26dB Bandwidth



26dB BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingur Fltr
 20+20+20M BW;20W;2563-2623M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 11.DEC.2015 20:16:02

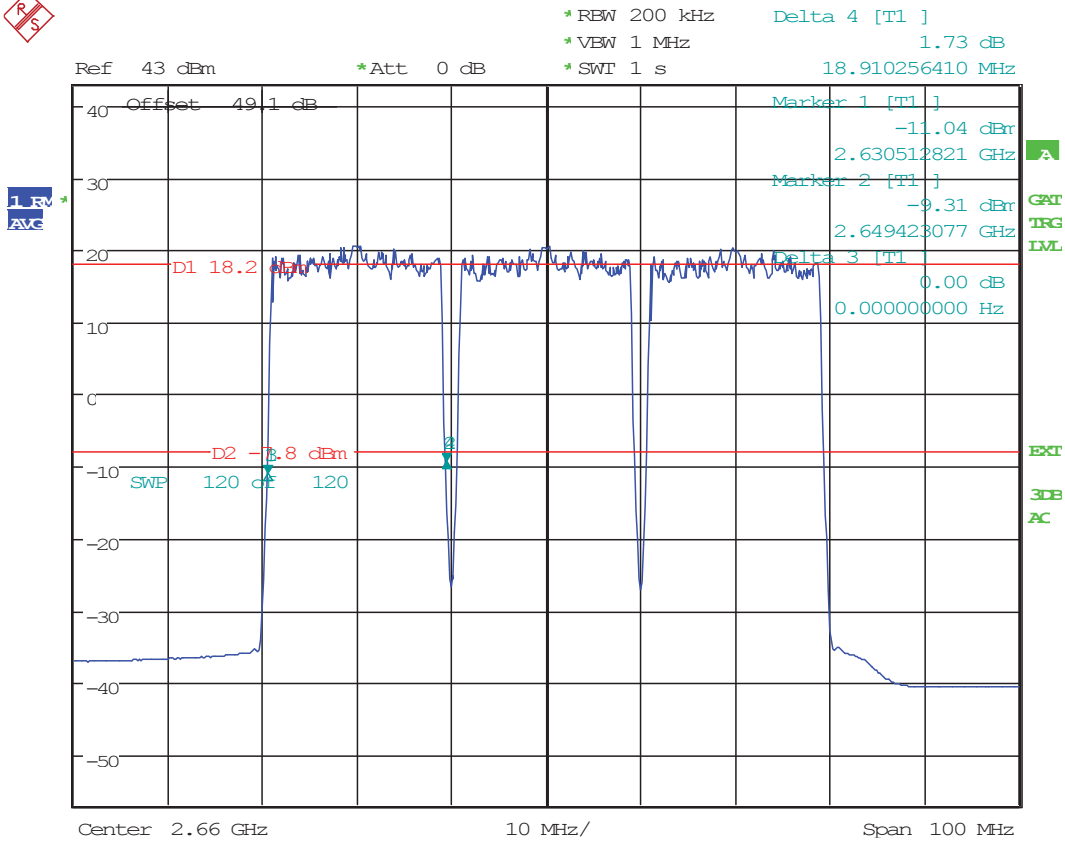


26dB BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingur Fltr
 20+20+20M BW;20W;2563-2623M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 14.DEC.2015 13:40:12

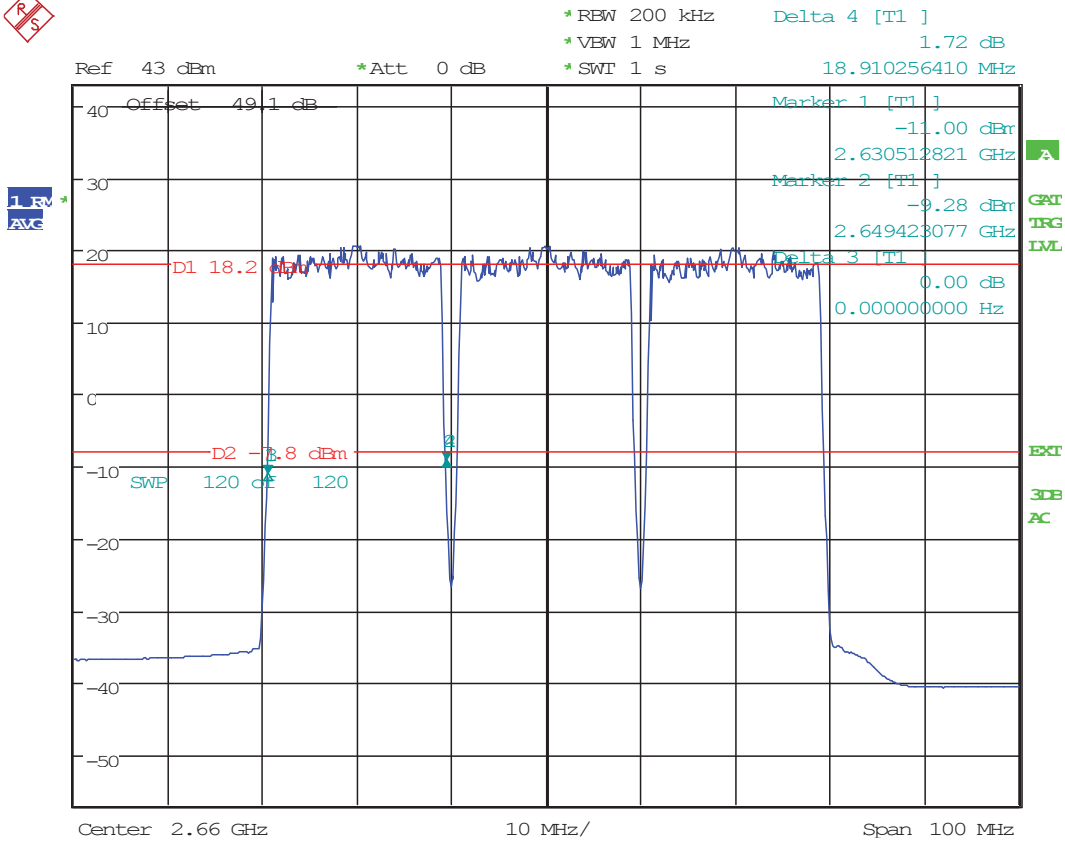


26dB BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingur Fltr
 20+20+20M BW;20W;2563-2623M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 14.DEC.2015 17:45:52

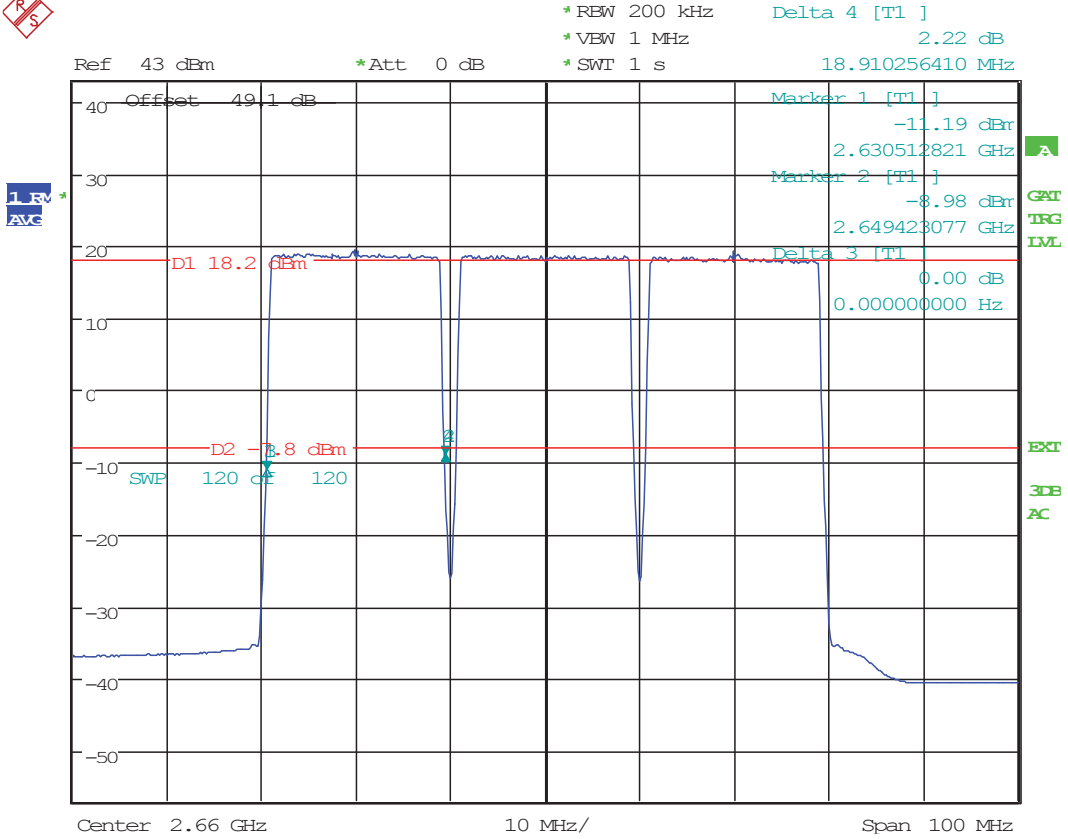
**20+20+20MHz Bandwidth,
2630-2650MHz, 2650-2670 & 2670-2690 MHz
60MHz (Higher)
8x20 watts (MIMO)
26dB Bandwidth**



26dB BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingur Fltr
 20+20+20M BW;20W;2630-2690M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 15.DEC.2015 12:13:15

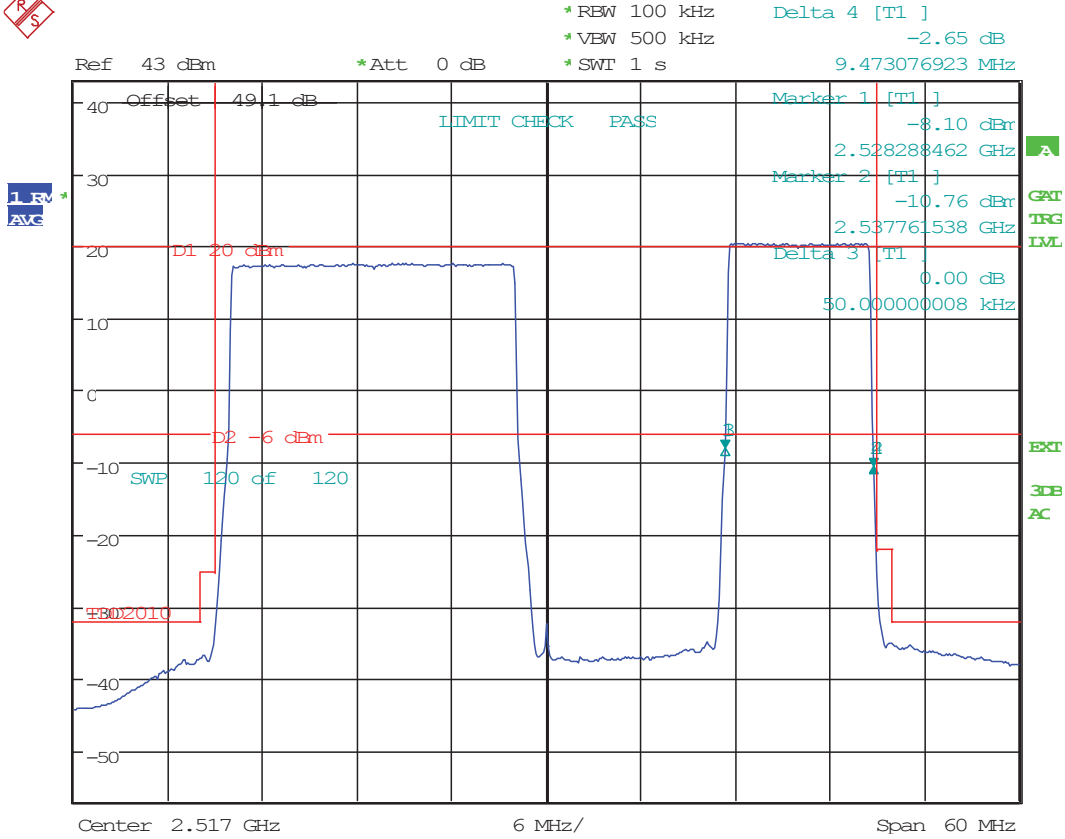


26dB BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingur Fltr
 20+20+20M BW;20W;2630-2690M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 15.DEC.2015 12:37:36

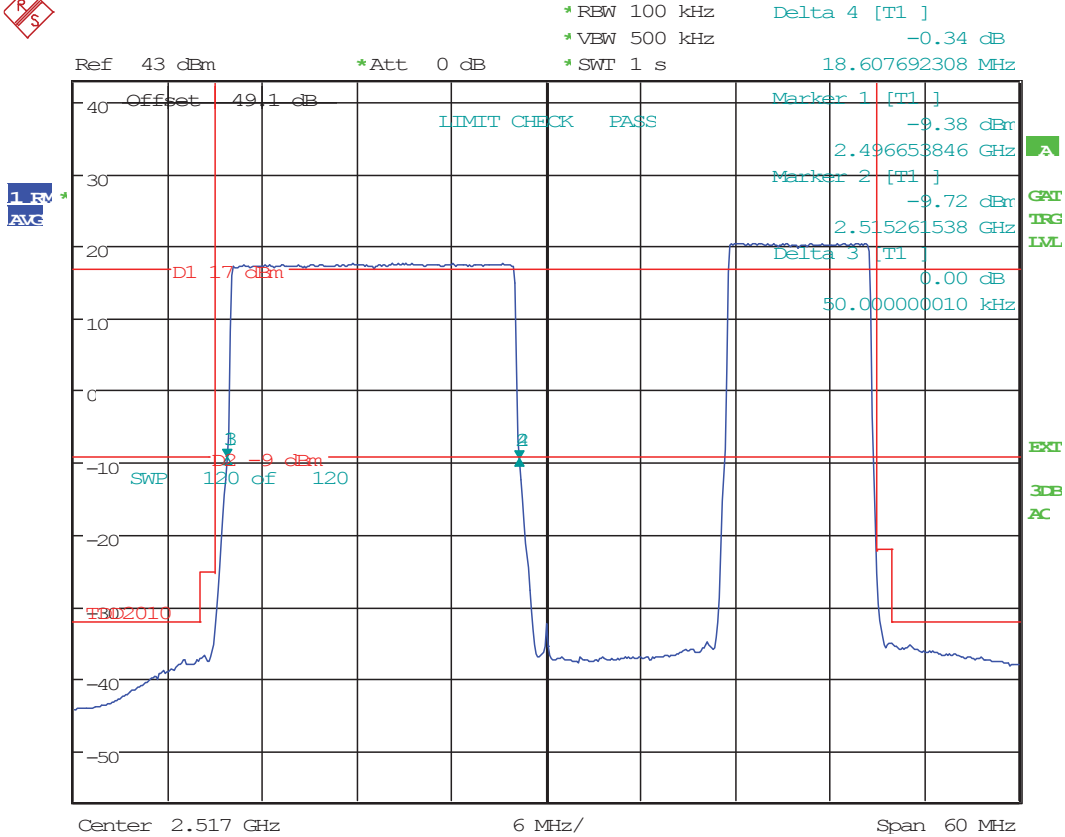


26dB BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW;20W;2630-2690M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 15.DEC.2015 17:43:49

**20+10MHz Bandwidth,
2496-2516MHz, 2528-2538 MHz
(Lower)
8x20 watts (MIMO)
26dB Bandwidth**



26dB BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2496-2538M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 17.DEC.2015 16:05:52

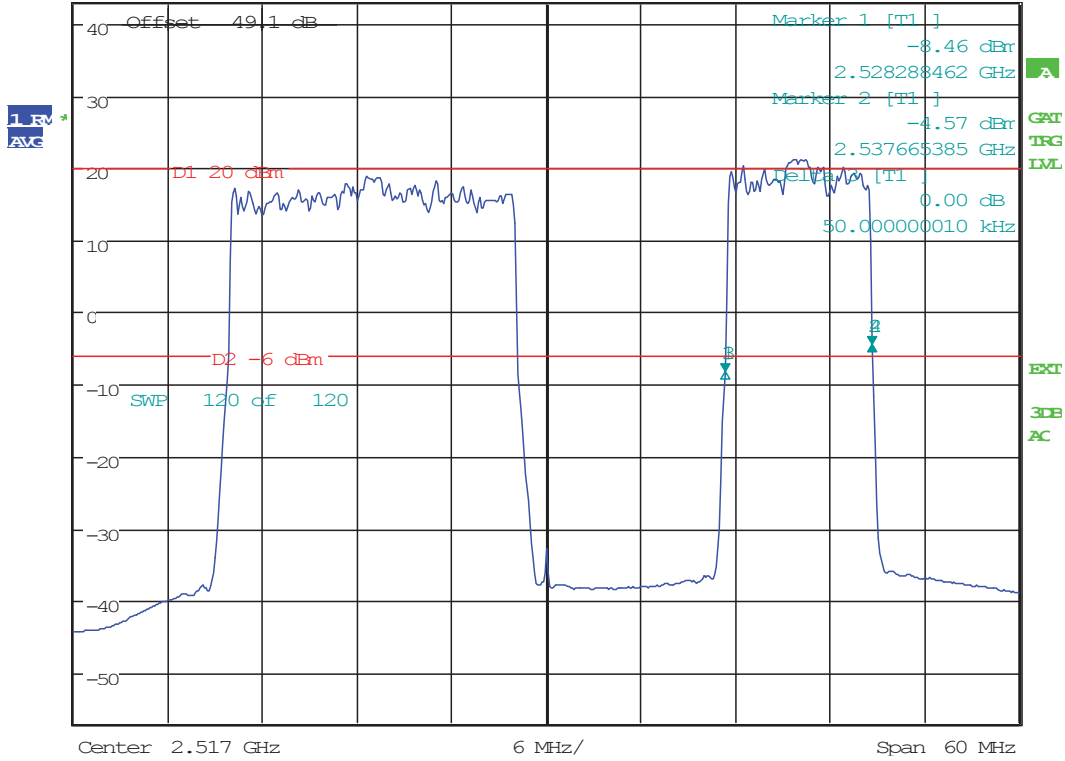


26dB BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2496-2538M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 17.DEC.2015 16:06:51

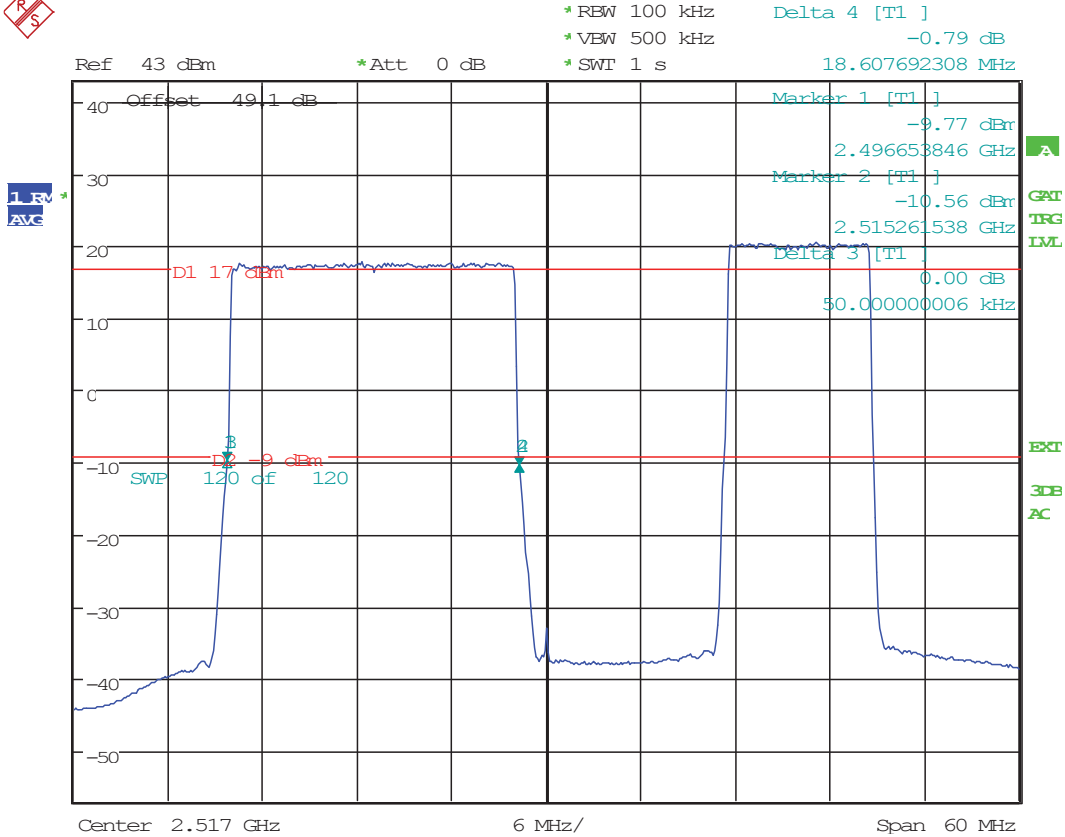


*RBW 100 kHz Delta 4 [T1]
*VBW 500 kHz 3.88 dB
*SWT 1 s 9.376923077 MHz

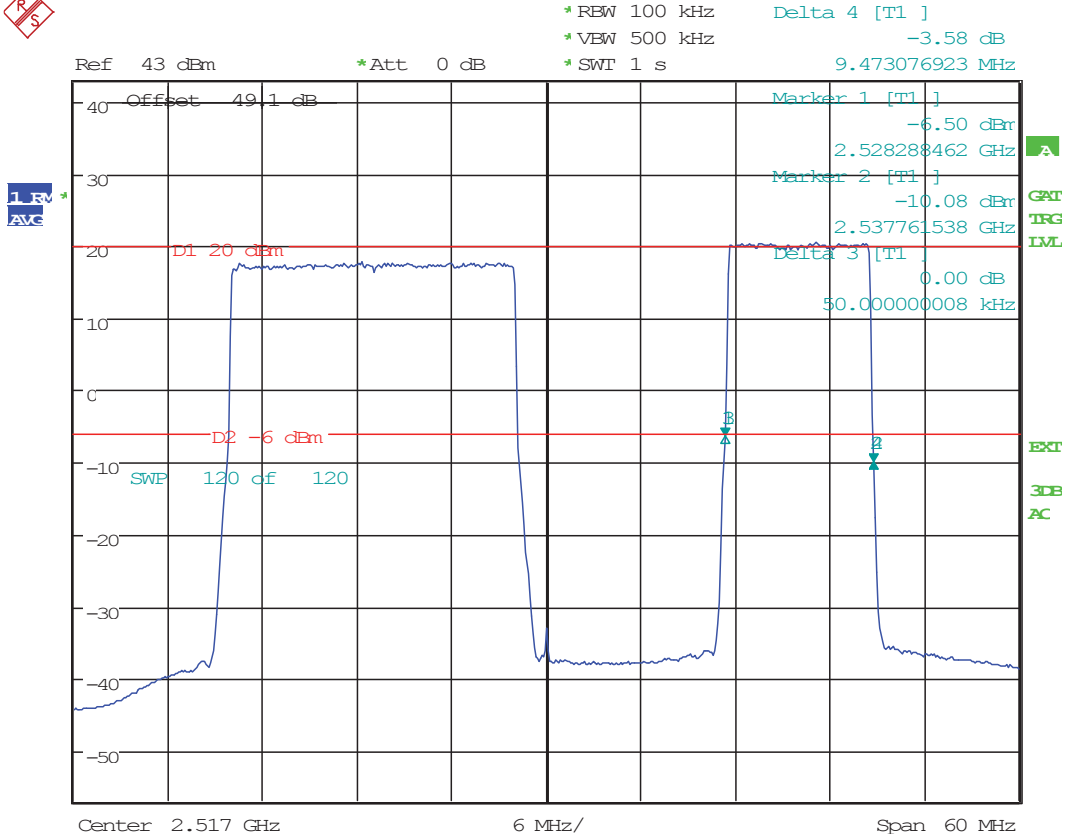
Ref 43 dBm *Att 0 dB



26dB BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10M BW NC;20W;2496-2538M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
Date: 18.DEC.2015 10:38:32



26dB BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2496-2538M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 18.DEC.2015 20:09:14



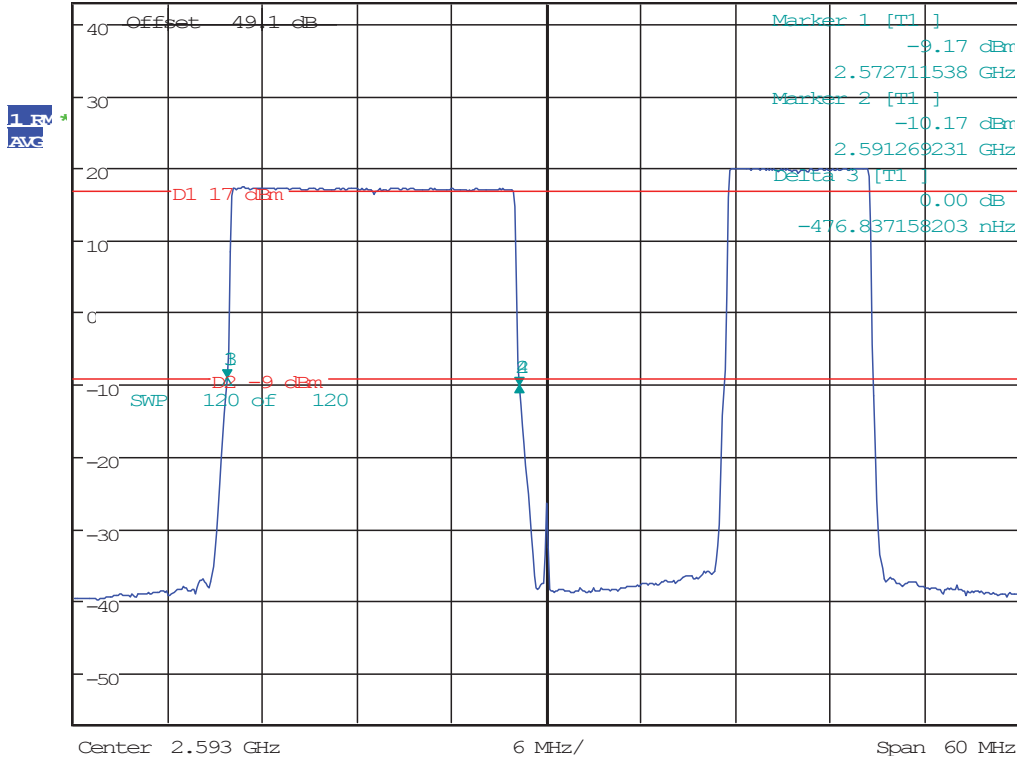
26dB BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2496-2538M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 18.DEC.2015 20:08:25

**20+10MHz Bandwidth,
2562-2582MHz, 2609-2619 MHz
(Middle)
8x20 watts (MIMO)
26dB Bandwidth**

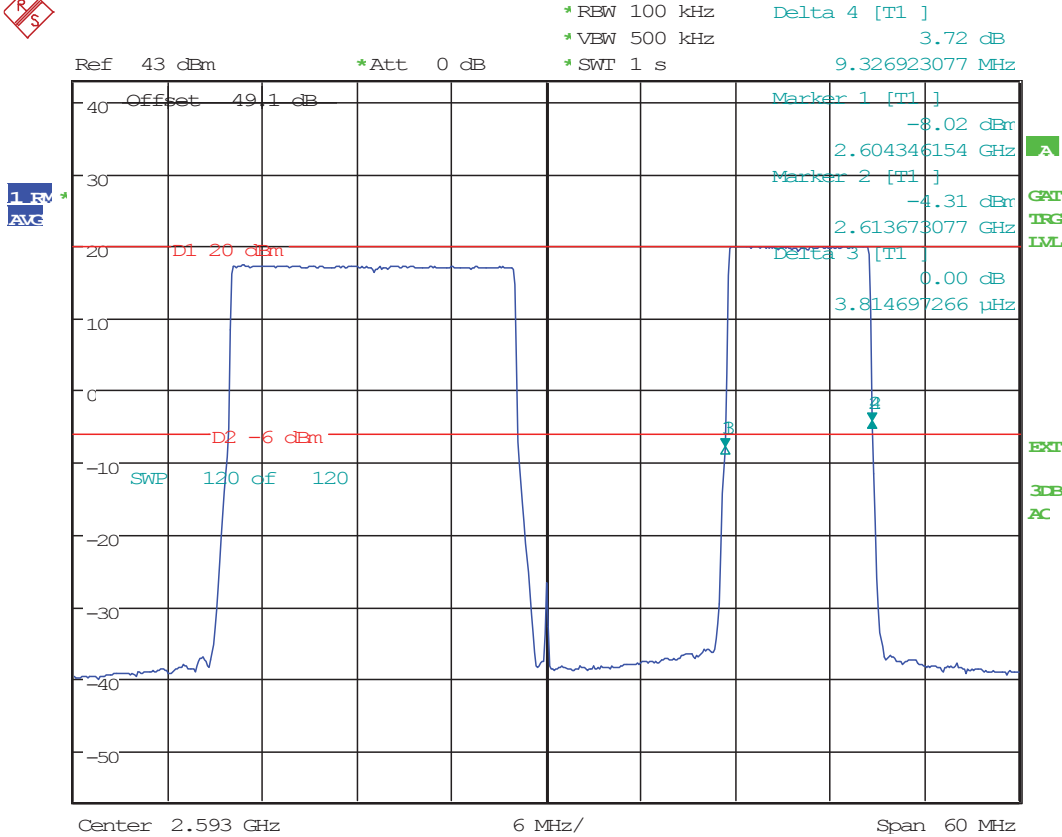


*RBW 100 kHz Delta 4 [T1]
*VBW 500 kHz -0.99 dB
*SWT 1 s 18.557692308 MHz

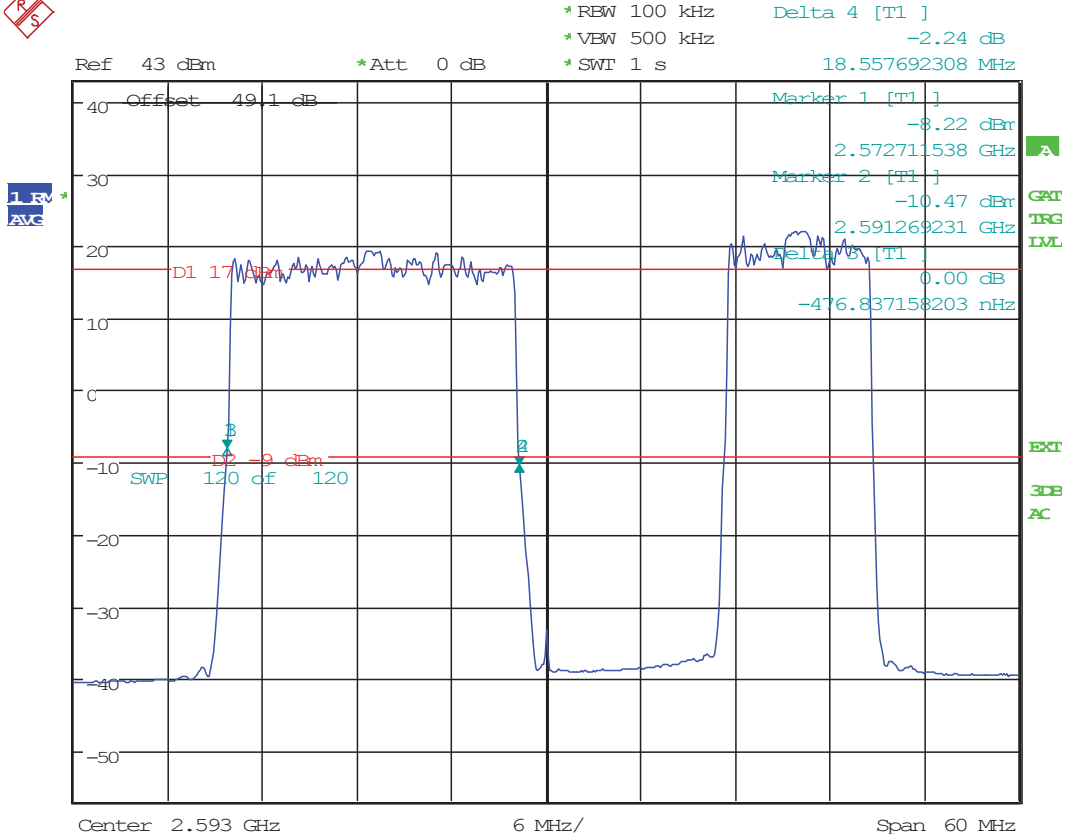
Ref 43 dBm *Att 0 dB



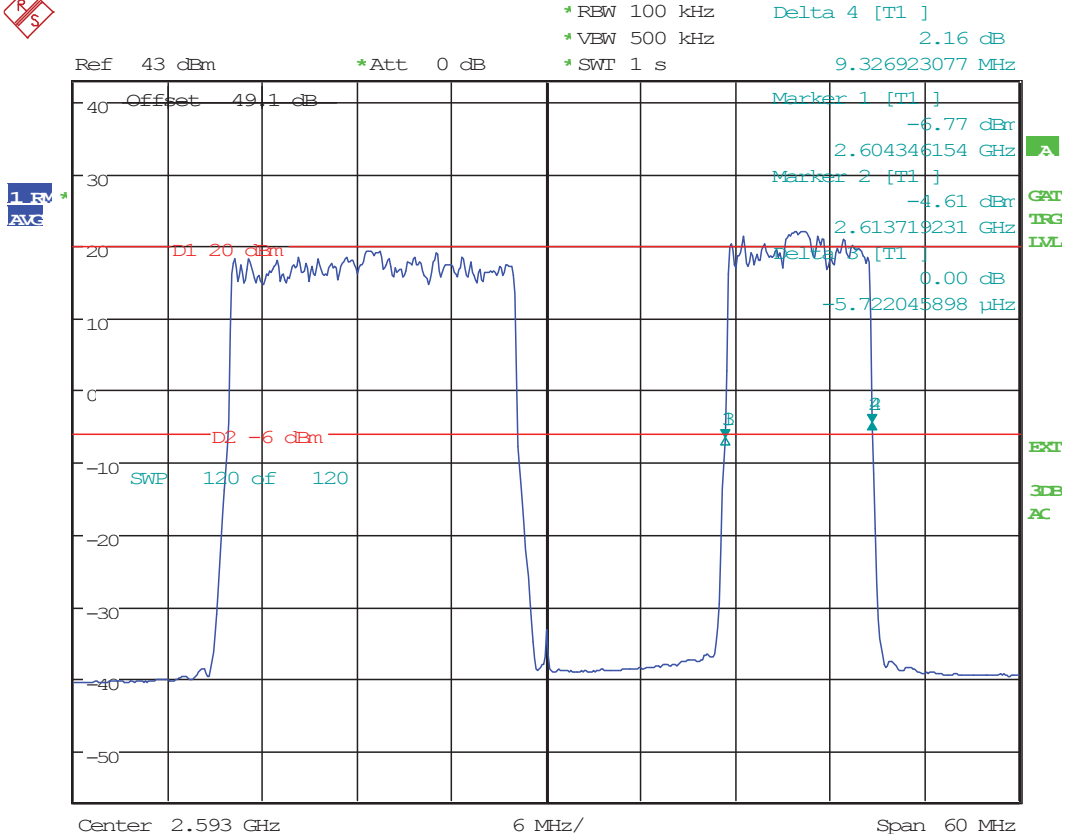
26dB BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10M BW NC;20W;2572-2614M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
Date: 21.DEC.2015 16:04:34



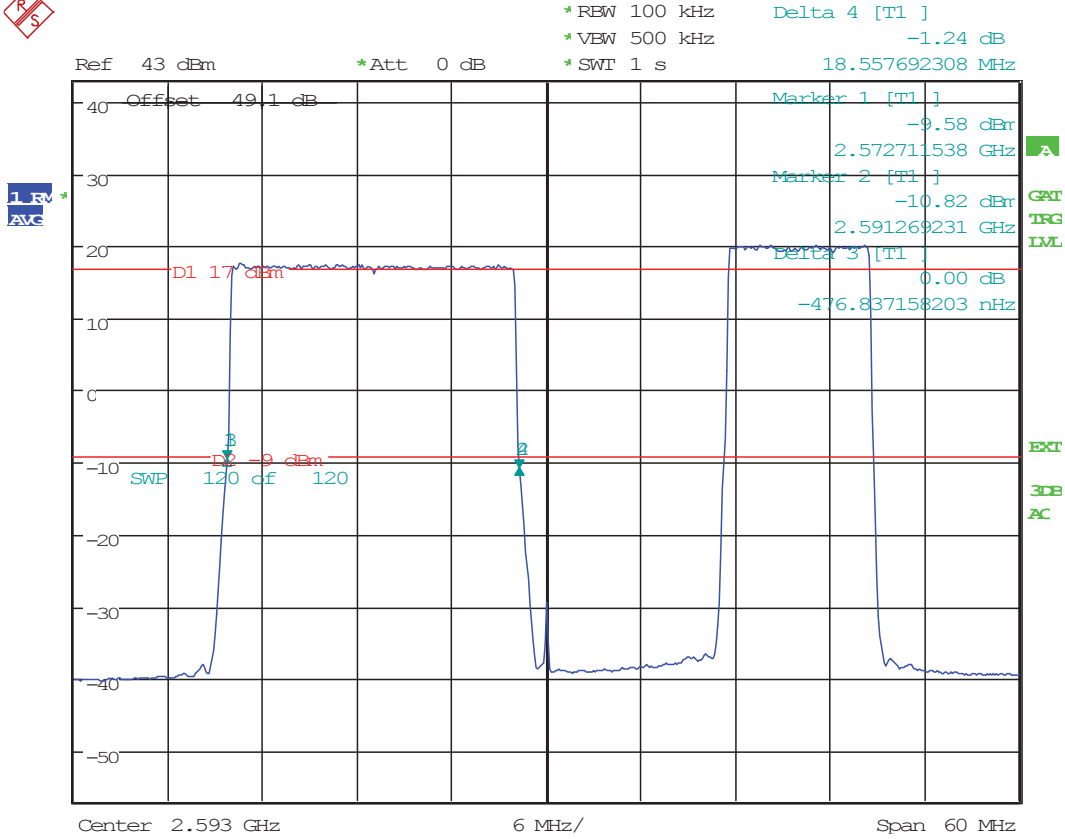
26dB BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingur Fltr
 20+10M BW NC;20W;2572-2614M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 21.DEC.2015 16:07:56



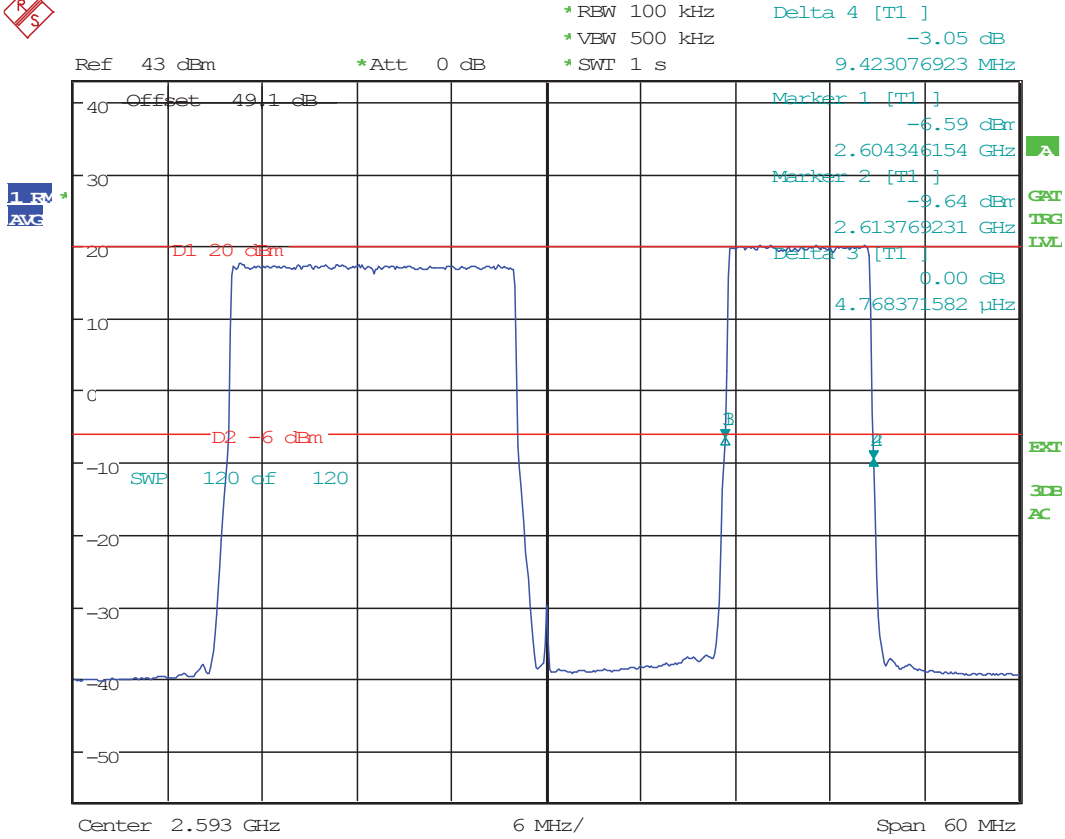
26dB BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2572-2614M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 21.DEC.2015 17:27:44



26dB BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2572-2614M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 21.DEC.2015 17:29:01

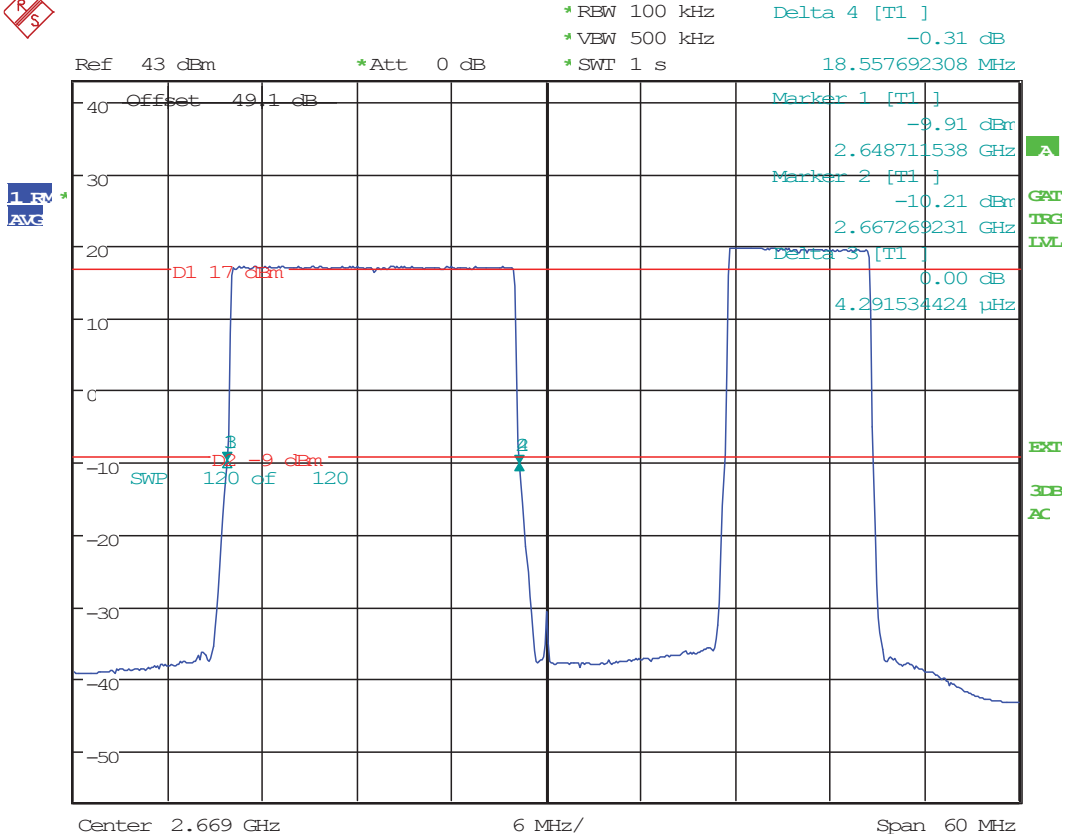


26dB BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2572-2614M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 22.DEC.2015 11:57:35



26dB BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingur Fltr
 20+10M BW NC;20W;2572-2614M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 22.DEC.2015 11:58:38

**20+10MHz Bandwidth,
2648-2668MHz, 2680-2690 MHz
(Higher)
8x20 watts (MIMO)
26dB Bandwidth**

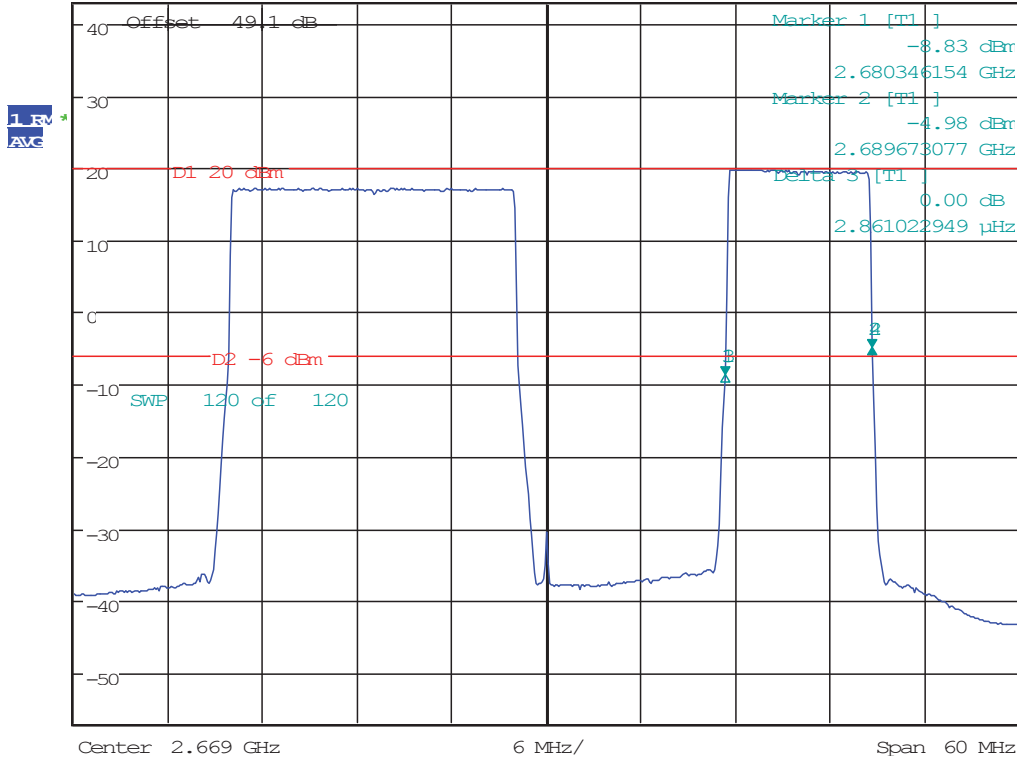


26dB BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2658-2685M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 22.DEC.2015 16:10:18

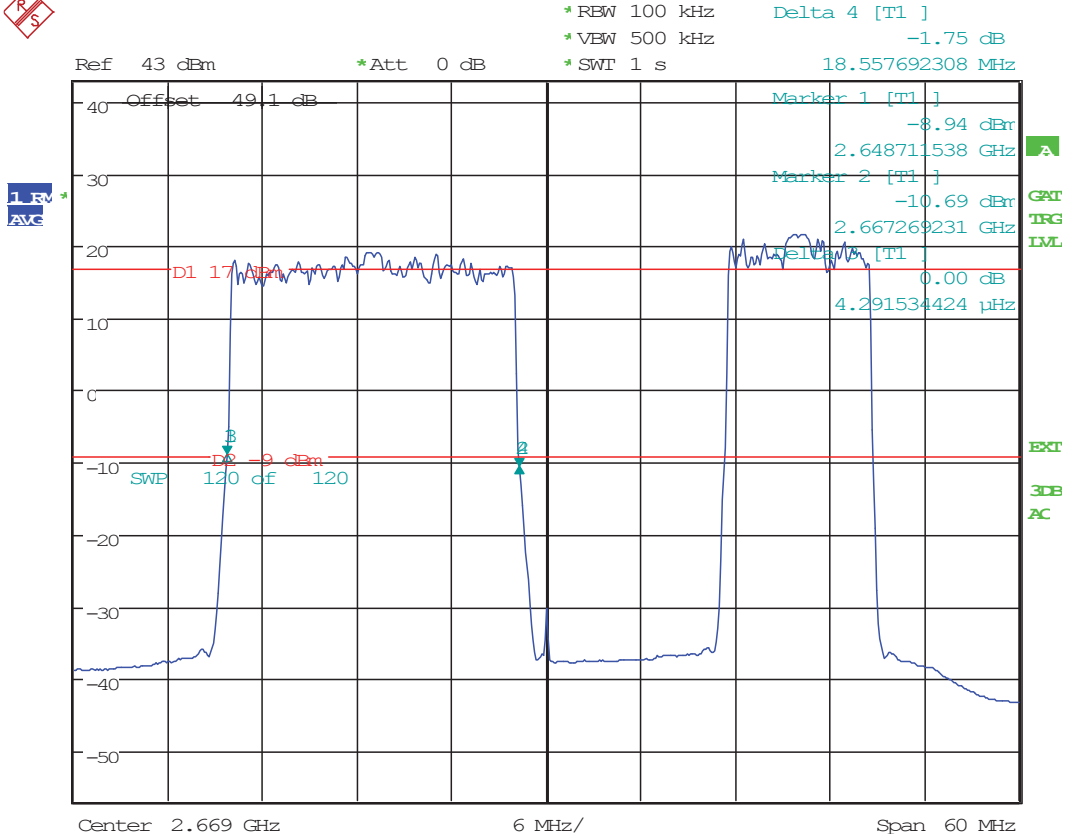


*RBW 100 kHz Delta 4 [T1] 3.85 dB
*VBW 500 kHz
*SWI 1 s 9.326923077 MHz

Ref 43 dBm *Att 0 dB



26dB BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10M BW NC;20W;2658-2685M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
Date: 22.DEC.2015 16:17:39

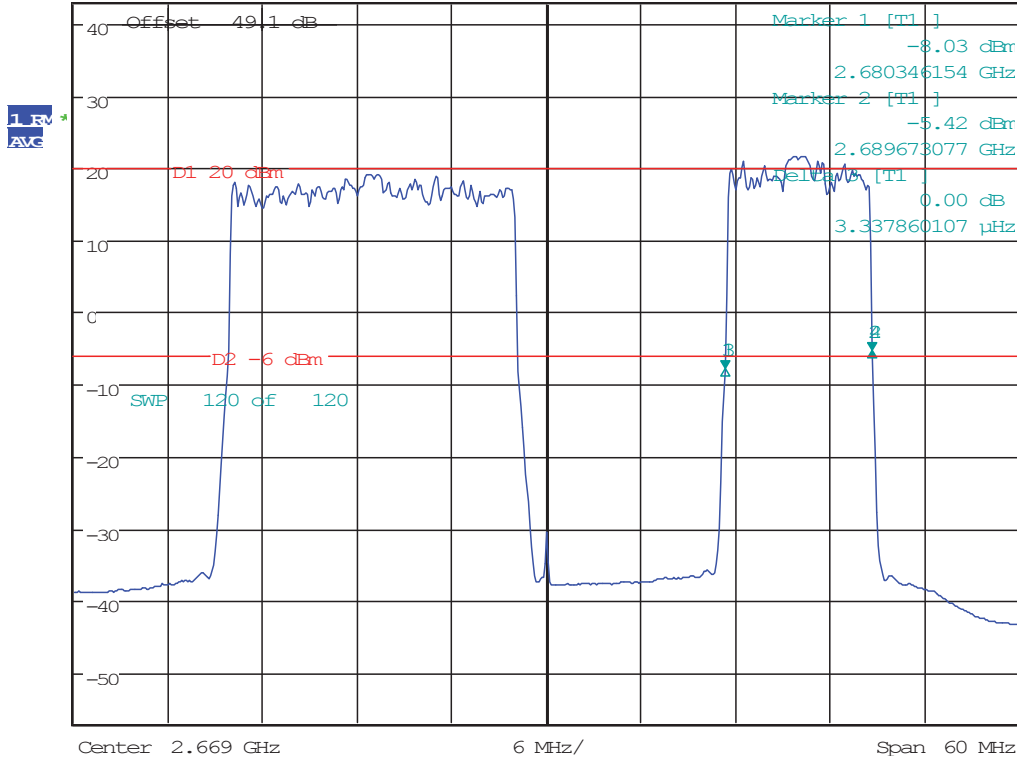


26dB BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2658-2685M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 24.DEC.2015 11:01:10

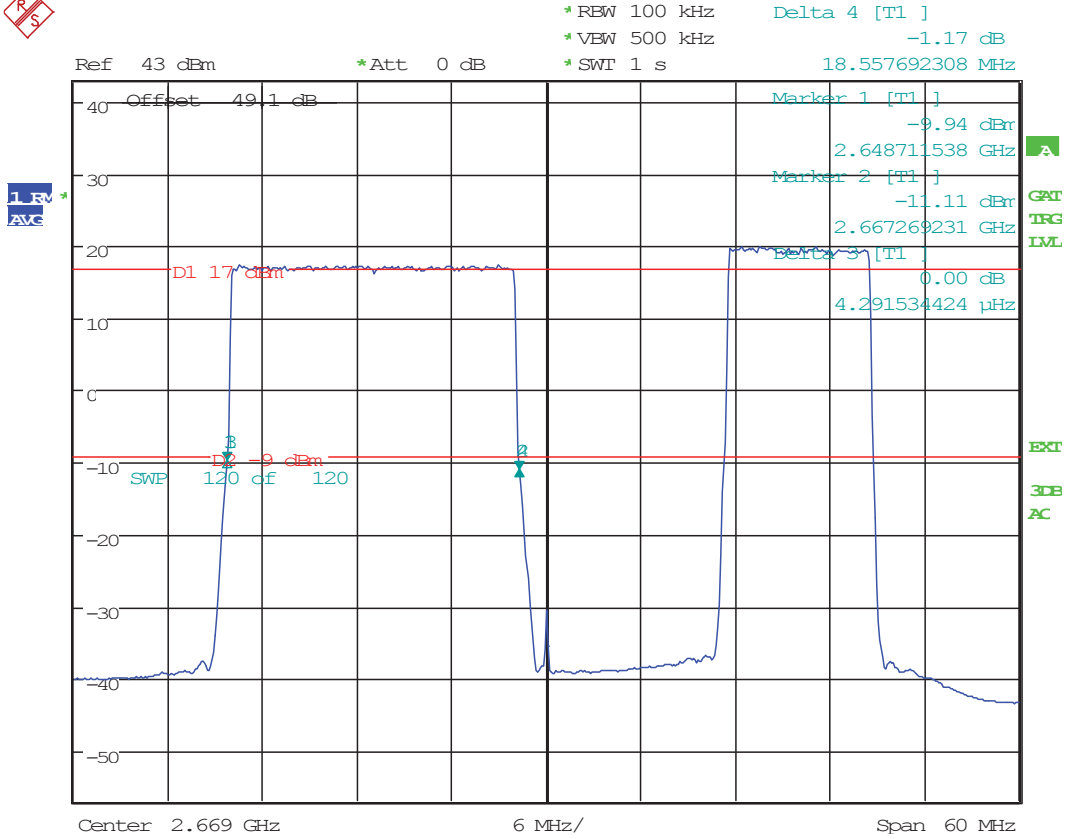


*RBW 100 kHz Delta 4 [T1]
*VBW 500 kHz 2.62 dB
*SWI 1 s 9.326923077 MHz

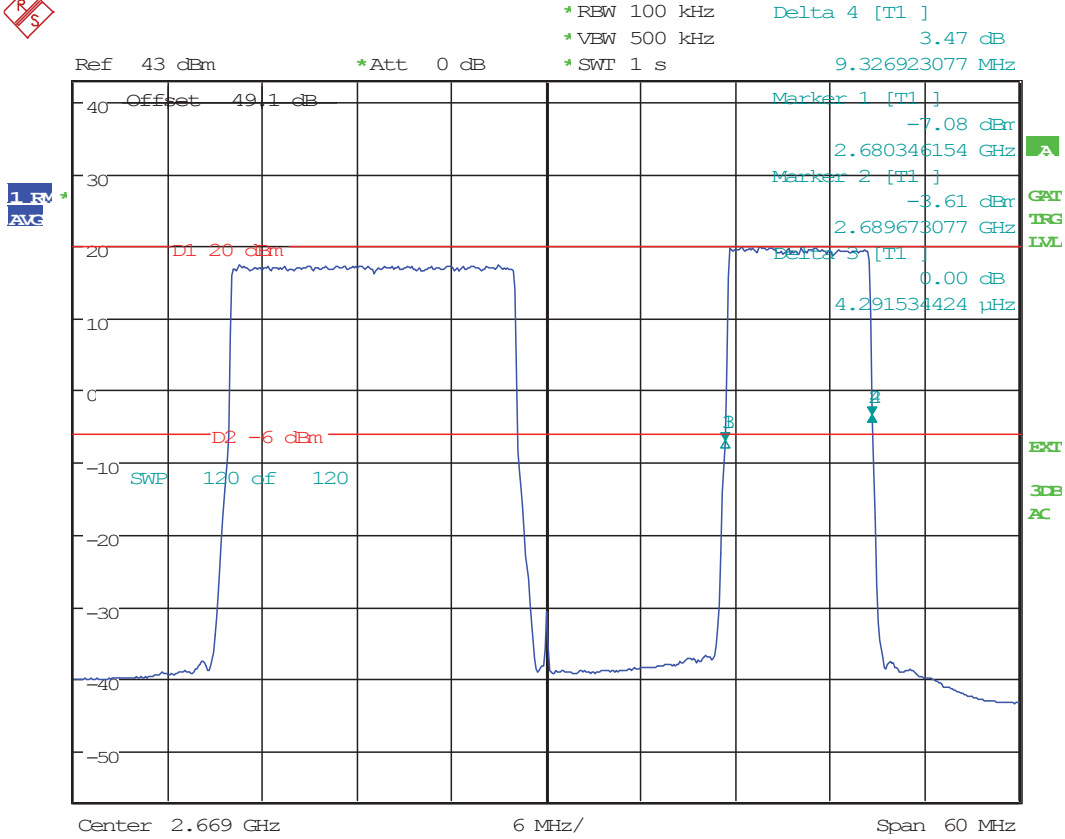
Ref 43 dBm *Att 0 dB



26dB BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingur Fltr
20+10M BW NC;20W;2658-2685M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
Date: 24.DEC.2015 11:02:07



26dB BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2658-2685M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 28.DEC.2015 10:28:45



26dB BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingur Fltr
 20+10M BW NC;20W;2658-2685M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 28.DEC.2015 10:29:36

3. MEASUREMENT OF SPECTRUM MASK/OCCUPIED BANDWIDTH, (1MHz ADJACENT TO CHANNEL EDGE)

Section 27.53 (m) (v)

MEASUREMENT OF SPECTRUM MASK OCCUPIED BANDWIDTH (1MHz ADJACENT TO CHANNEL EDGE)

The Spectrum mask close to the center of the carrier frequency (Occupied bandwidth) of the Long Term Evolution (LTE) were measured using a Rohde & Schwarz ESU Spectrum Analyzer/Receiver and. The RF power level was measured using RF power meter as shown in the test setup in Figure A. The RF output from the LTE EAC port to spectrum analyzer was reduced (to an amplitude usable by the spectrum analyzer) by using a calibrated attenuator. This attenuation was offset on the display and the signal for single carrier was adjusted to the corrected RF power level for a 200 kHz resolution bandwidth for 20MHz wide transmit signal. While adjusting the corrected RF power level in the spectrum analyzer, the attenuator and resolution BW of spectrum analyzer were considered.

The measurements were made on a “TD-RRH8X20 (BC41) in RRH enclosure”.

The reference line on the spectrum analyzer display corresponds to level measured by the RF power meter. Occupied Bandwidth plots were made at antenna terminals for an output of 20 watts (43 dBm) for 20MHz signal carrier, 10 (40dBm) watts/carrier for dual carriers and 6.6 watts/carrier (38.2 dBm) for 3 carriers.

Reference signal derived from GPS and frame trigger from the RRH were input into analyzer. This enables analyzer to measure power and occupied BW only during cycle of the transmitter providing accurate measurements. Reference, trigger and duty cycle wave forms are provided in Measurement: (2) Modulation characteristics (response to FCC Section 2.1047)

The frequencies and blocks used were tabulated on the bottom of each plot. The output signals at RF filter were plotted for first, middle and last channels of each frequency band. The TD-RRH8X20 (BC41) is capable of operating in the band of 2496 MHz to 2690MHz. The Base station presently tested was configured to operate at 20 MHz and 60 MHz blocks of composite carrier. Blocks and bands listed in Table below Plots were provided for composite carriers. These frequencies were chosen to show the occupied bandwidth in the blocks in the frequency band in which this radio can be operated. All tests were performed for QPSK, 16QAM and 64QAM modulations.

Block edge requirements:

FCC Section 27.53 (m) (v) (6): *Based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 MHz or 1 percent of emission bandwidth, as specified).*

Pursuant to FCC OET RULES 662911 D01 and D02 for Eight antenna MIMO mode of operations, the FCC limit of -13dBm shall be 9dB more stringent, therefore all channel edge and out of band spurious emissions shall be -22dBm. Further limits are adjusted for lower resolution BW using 10 log (200kHz/1% of channel BW)

FCC, OET Measurement Guidance for Certification of Licensed Digital Transmitters dated June 7, 2013 has been used for all measurements

The list of blocks and bands, tested for QPSK, 16QAM and 64QAM are listed below:

Blocks	Bandwidth (MHz)	Frequency (MHz)	Power (Watts)
Lower	20	2496-2516	20
Middle	20	2568-2588	20
Higher	20	2660-2680	20

Blocks	Bandwidth Contiguous (MHz)	Frequency (MHz)	Power (Watts)
Lower	20+20	2496-2516 and 2516-2536	20
Middle	20+20	2558-2578 and 2578-2598	20
Higher	20+20	2650-2670 and 270-2690	20

Blocks	Bandwidth Contiguous (MHz)	Frequency (MHz)	Power (Watts)
Lower	20+20+20	2496-2516, 2516-2536 and 2536-2546	20
Middle	20+20+20	2563-2583, 2583-2603 and 2603-2623	20
Higher	20+20+20	2630-2650, 2650-2670 and 2670-2690	20

Blocks	Bandwidth Non-contiguous (MHz)	Frequency (MHz)	Power (Watts)
Lower	20+10	2496-2516 and 2528-2538	20
Middle	20+10	2562-2582 and 2604-2614	20
Higher	20+10	2648-2668 and 2680-2690	20

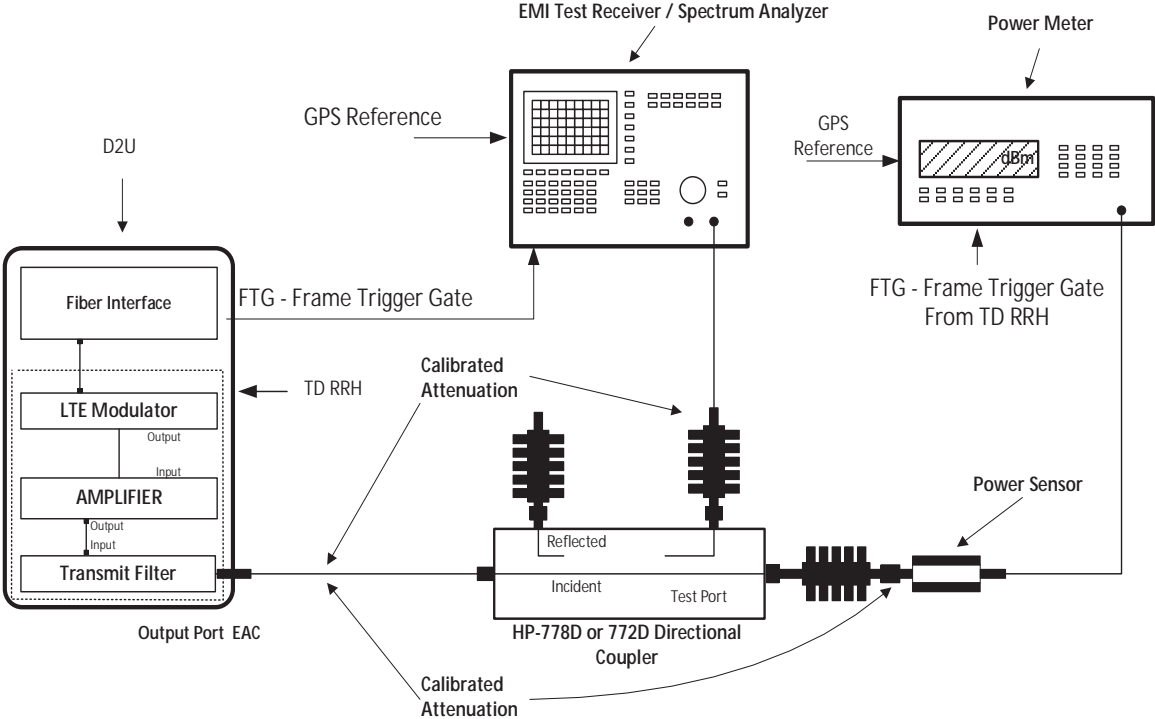
Blocks	Bandwidth Non-contiguous (MHz)	Frequency (MHz)	Power (Watts)
Lower	20+20	2496-2516 and 2536-2556	20
Middle	20+20	2563-2583 and 2603-2623	20
Higher	20+20	2630-2650 and 2670-2690	20

Measurement uncertainty:

Frequency: 100 Hz

Amplitude: 0.5 dB

Figure A. TEST CONFIGURATION FOR SPECTRUM MASK (OCCUPIED BANDWIDTH)



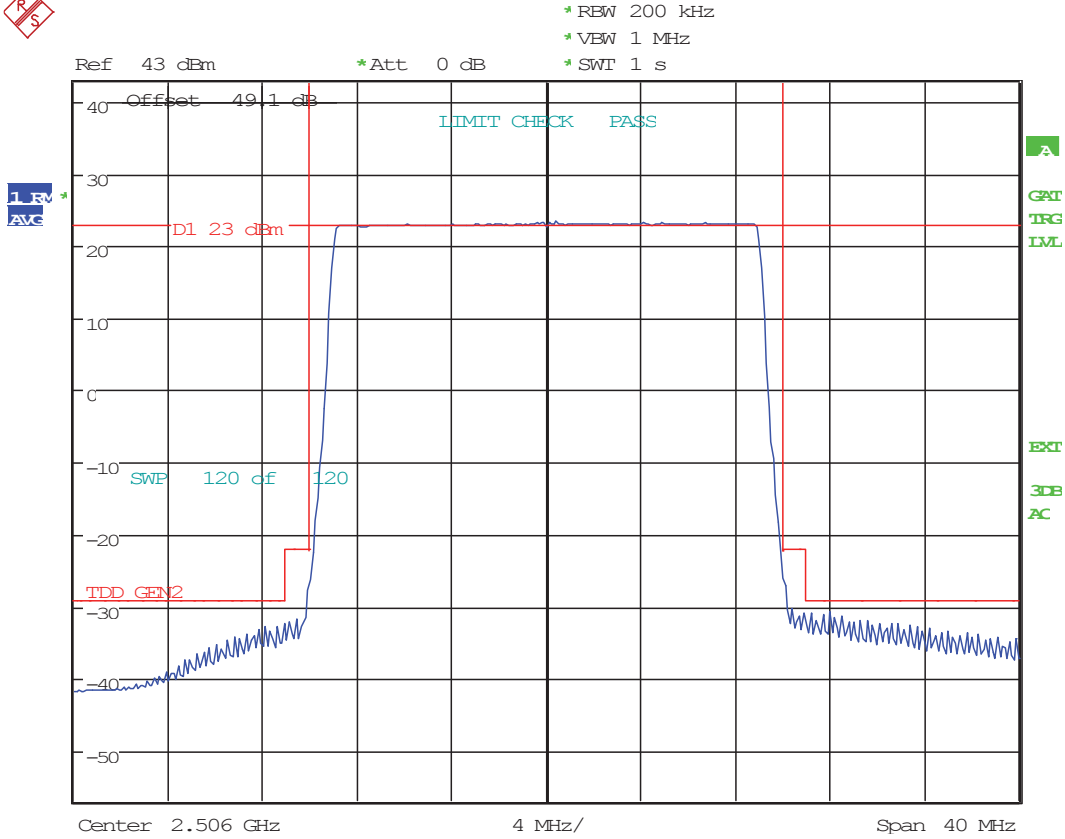
All components are calibrated over the frequency range of interest

**20 MHz Bandwidth (2496 – 2516 MHz)
(Lower)**

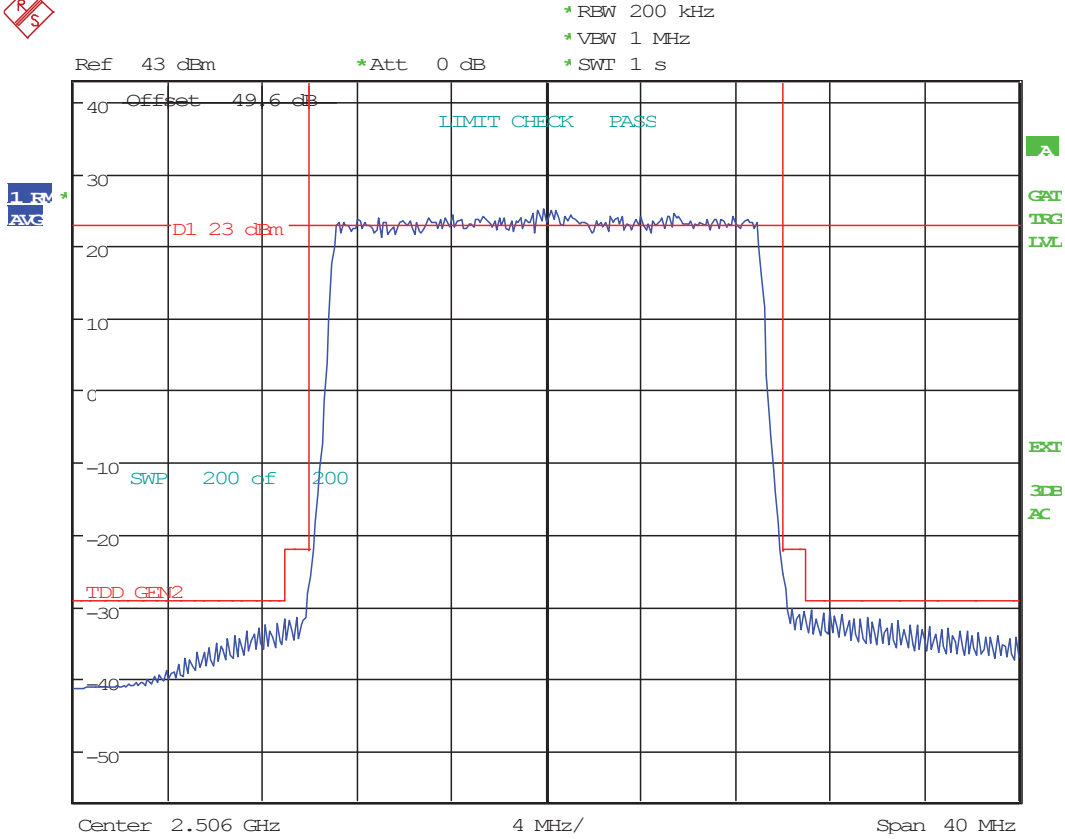
8x20watts (MIMO)

SPECTRUM MASK/OCCUPIED BANDWIDTH

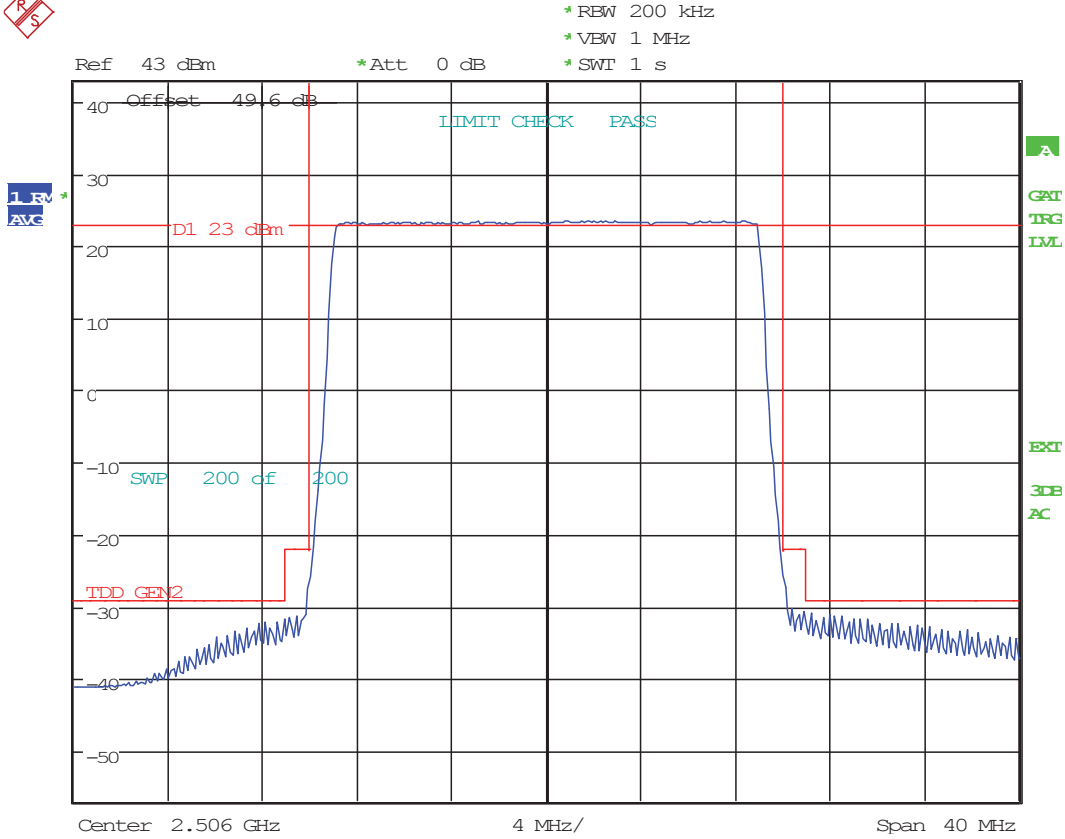
(QPSK, 16QAM and 64QAM Modulations)



OCCUPIED BANDWIDTH; Test Eng:JY TDD B41 RRH Cast Fingu Fltr;
20M BW;20W;2496-2516M;-48VDC;QPSK;FCCID-AS5BBTRX-15A.
Date: 5.OCT.2015 14:17:32



OCCUPIED BANDWIDTH; Test Eng:JY TDD B41 RRH Cast Fingu Fltr;
20M BW;20W;2496-2516M;-48VDC;16QAM;FCCID-AS5BBTRX-15A.
Date: 5.OCT.2015 10:09:00



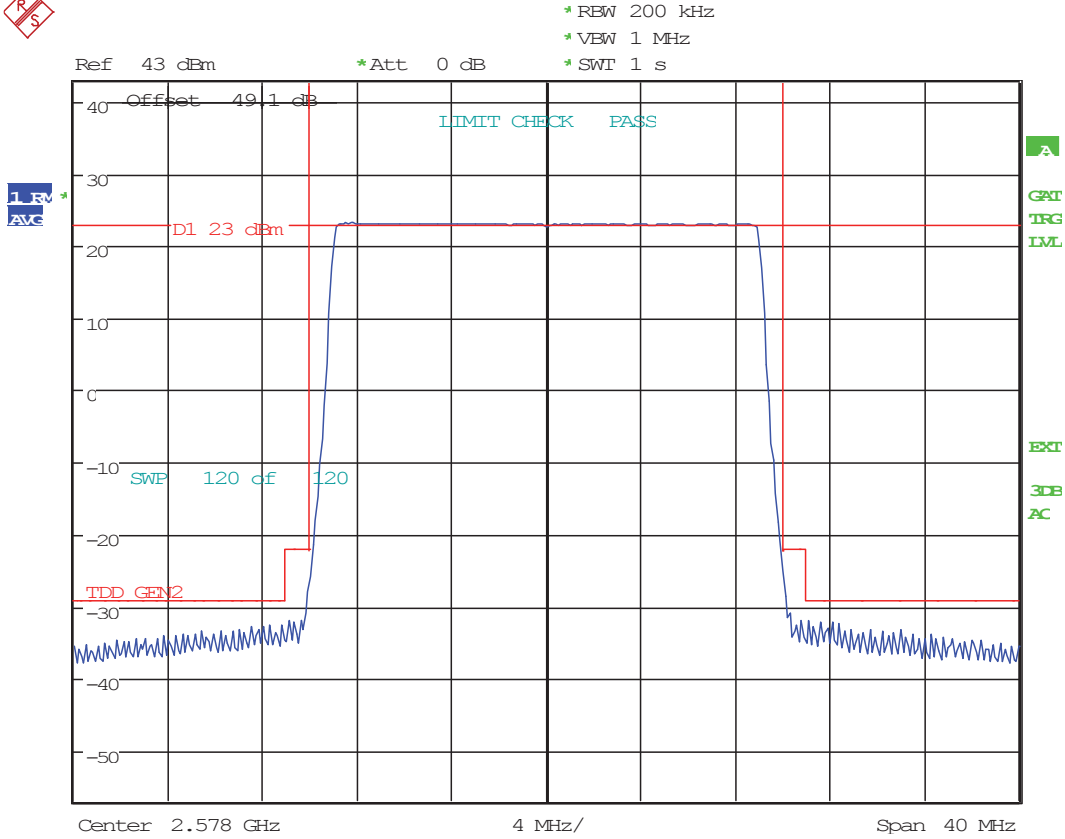
OCCUPIED BANDWIDTH; Test Eng:JY TDD B41 RRH Cast Fingu Fltr;
20M BW;20W;2496-2516M;-48VDC;64QAM;FCCID-AS5BBTRX-15A.
Date: 29.SEP.2015 15:35:25

**20 MHz Bandwidth (2568 – 2588 MHz)
(Middle)**

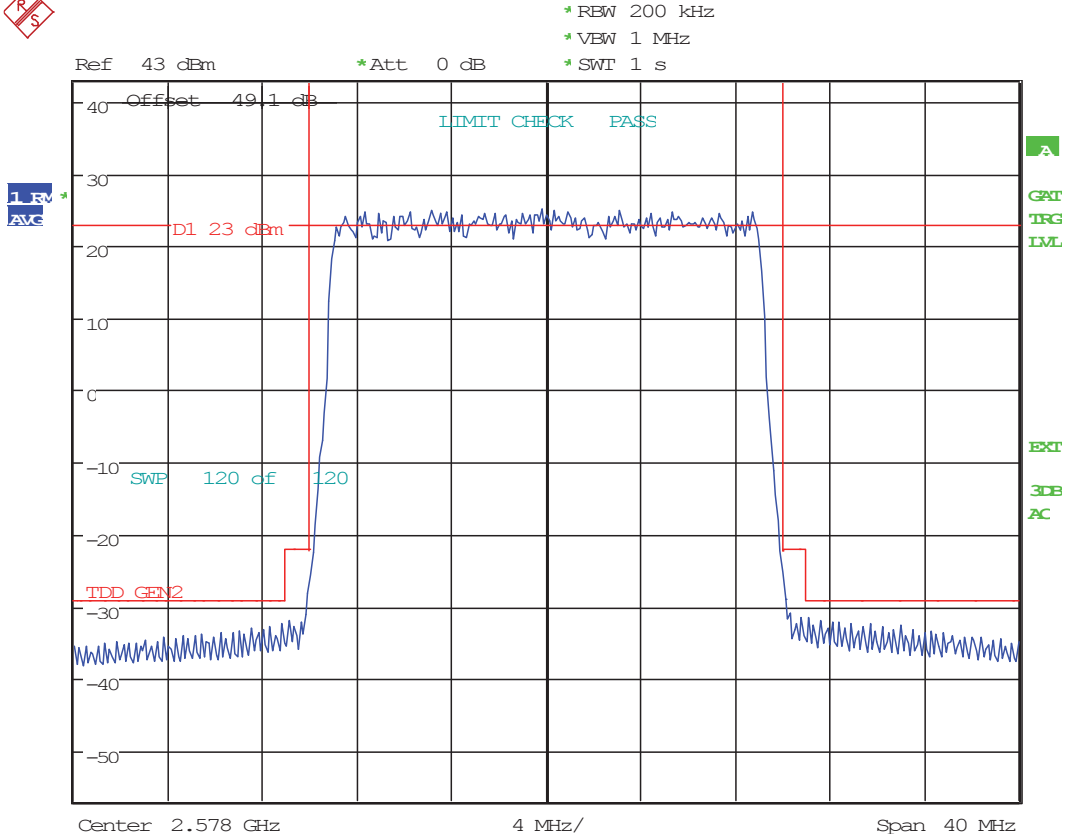
8x20 watts (MIMO)

SPECTRUM MASK/OCCUPIED BANDWIDTH

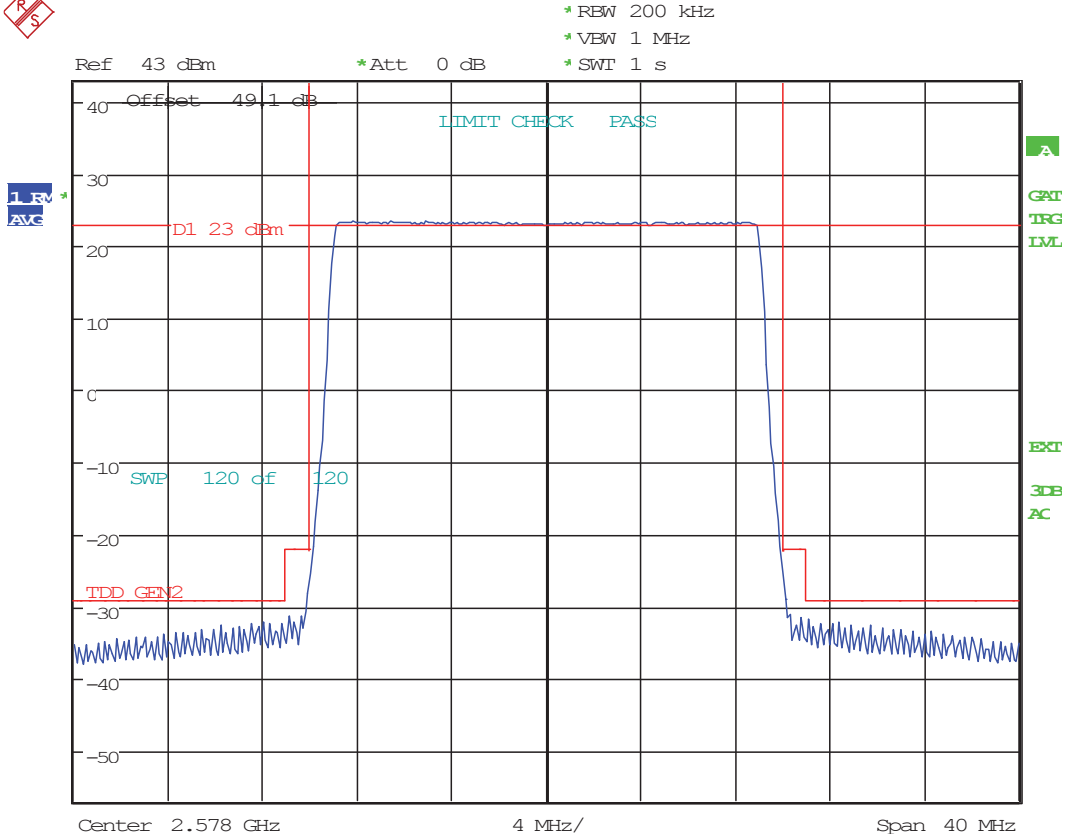
(QPSK, 16QAM and 64QAM Modulations)



OCCUPIED BANDWIDTH; Test Eng:JY TDD B41 RRH Cast Fingu Fltr;
20M BW;20W;2568-2588M;-48VDC;QPSK;FCCID-AS5BBTRX-15A.
Date: 6.OCT.2015 12:07:52



OCCUPIED BANDWIDTH; Test Eng:JY TDD B41 RRH Cast Fingu Fltr;
20M BW;20W;2568-2588M;-48VDC;16QAM;FCCID-AS5BBTRX-15A.
Date: 6.OCT.2015 14:30:05



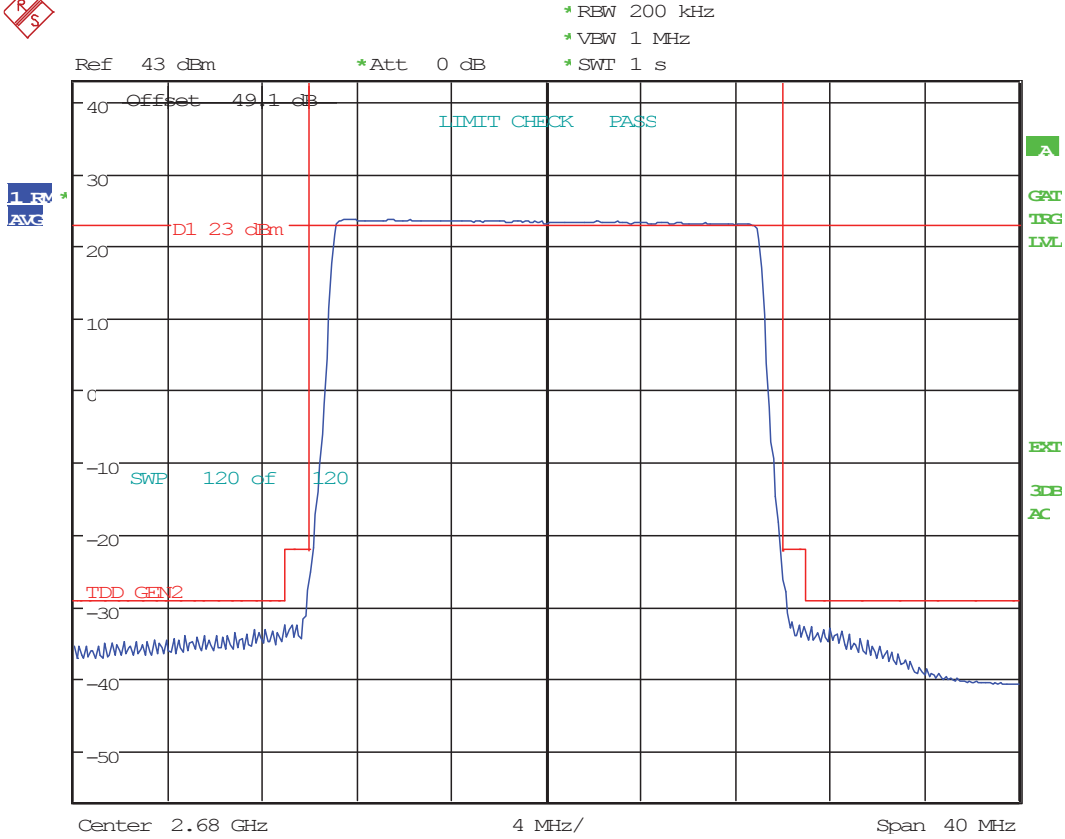
OCCUPIED BANDWIDTH; Test Eng:JY TDD B41 RRH Cast Fingu Fltr;
20M BW;20W;2568-2588M;-48VDC;64QAM;FCCID-AS5BBTRX-15A.
Date: 6.OCT.2015 14:52:13

**20 MHz Bandwidth (2670 – 2690 MHz)
(Higher)**

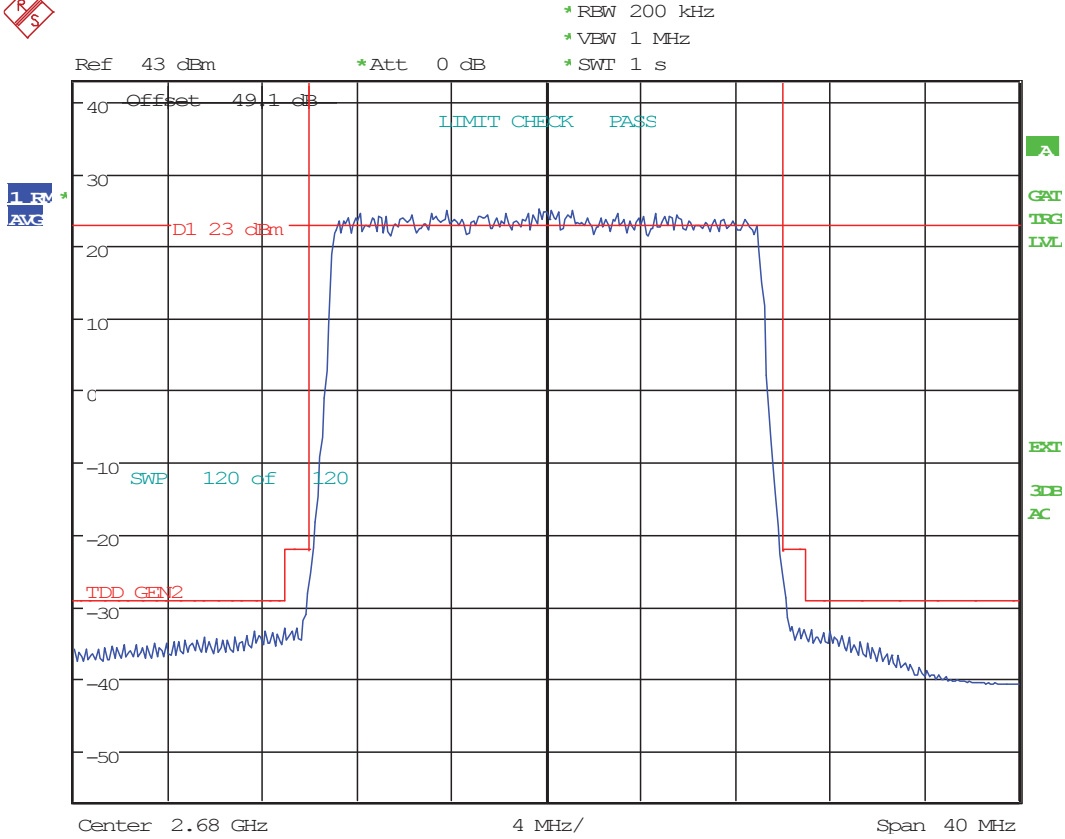
8x20 watts (MIMO)

SPECTRUM MASK/OCCUPIED BANDWIDTH

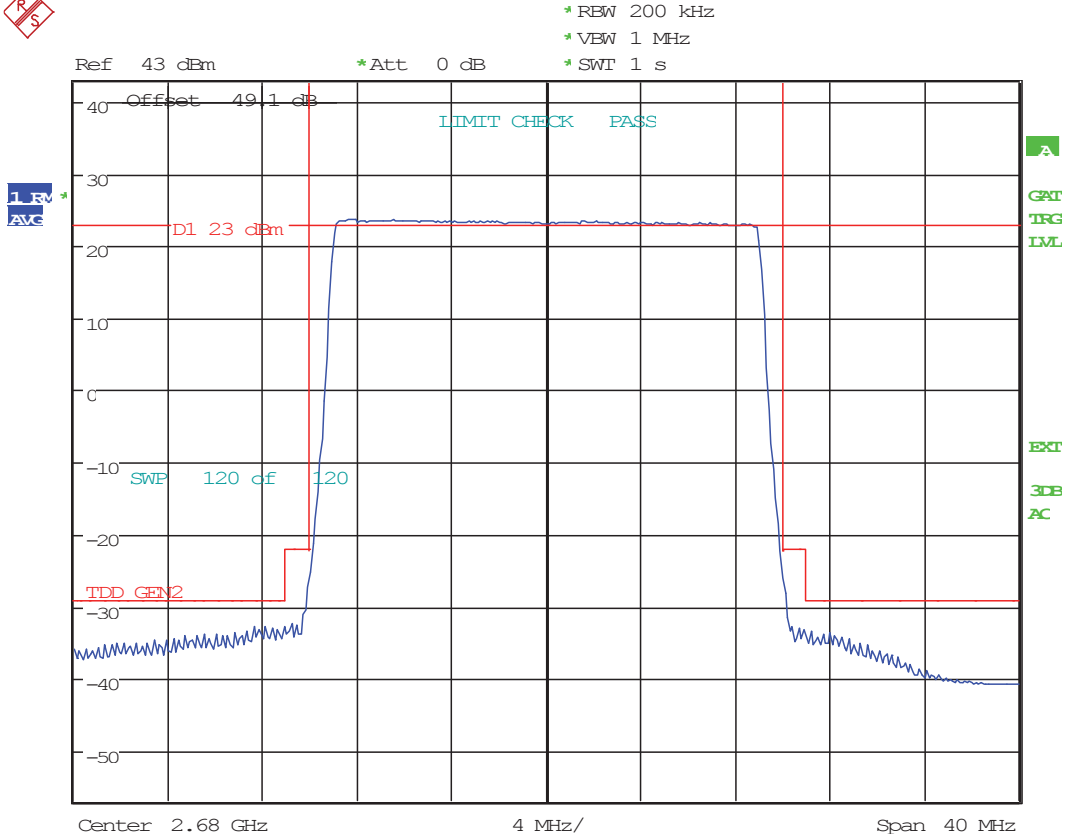
(QPSK, 16QAM and 64QAM Modulations)



OCCUPIED BANDWIDTH; Test Eng:JY TDD B41 RRH Cast Fingu Fltr;
20M BW;20W;2670-2690M;-48VDC;QPSK;FCCID-AS5BBTRX-15A.
Date: 7.OCT.2015 12:09:10



OCCUPIED BANDWIDTH; Test Eng:JY TDD B41 RRH Cast Fingu Fltr;
20M BW;20W;2670-2690M;-48VDC;16QAM;FCCID-AS5BBTRX-15A.
Date: 7.OCT.2015 10:35:07



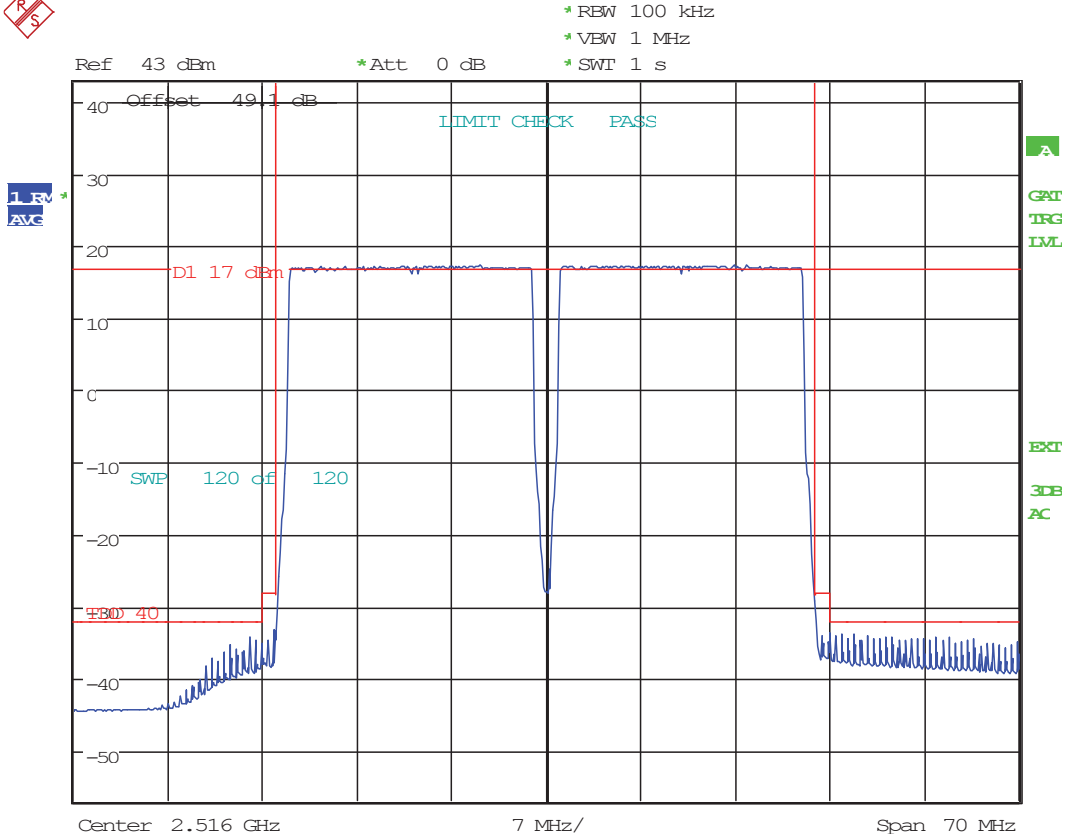
OCCUPIED BANDWIDTH; Test Eng:JY TDD B41 RRH Cast Fingu Fltr;
20M BW;20W;2670-2690M;-48VDC;64QAM;FCCID-AS5BBTRX-15A.
Date: 7.OCT.2015 07:59:31

**20+20 MHz Bandwidth (2496 – 2536 MHz)
(Lower)**

8x20 watts (MIMO)

SPECTRUM MASK/OCCUPIED BANDWIDTH

(QPSK, 16QAM and 64QAM Modulations)



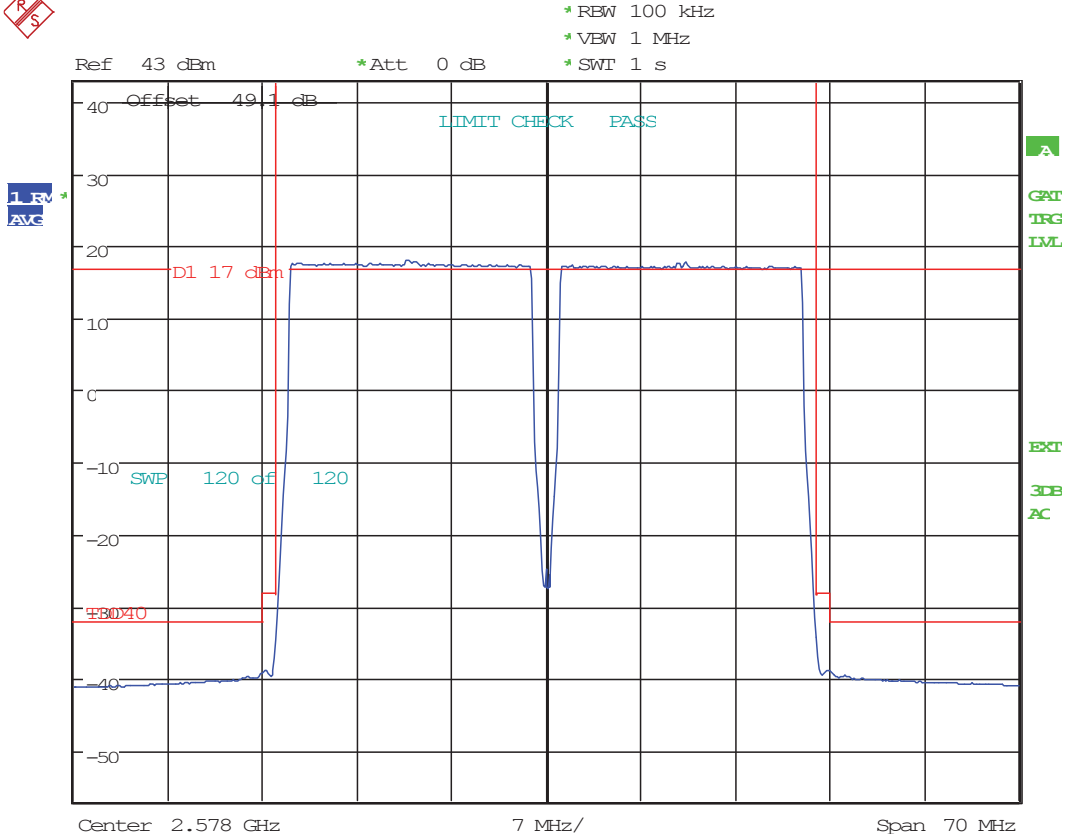
OCCUPIED BANDWIDTH; Test Eng:SEG TDD B41 RRH Cast Fingu Fltr
;20+20M BW;20W;2496-2536;-48VDC;QPSK; FCCID-AS5BBTRX-15A.
Date: 8.OCT.2015 18:17:58

**20+20 MHz Bandwidth (2558 – 2598 MHz)
(Middle)**

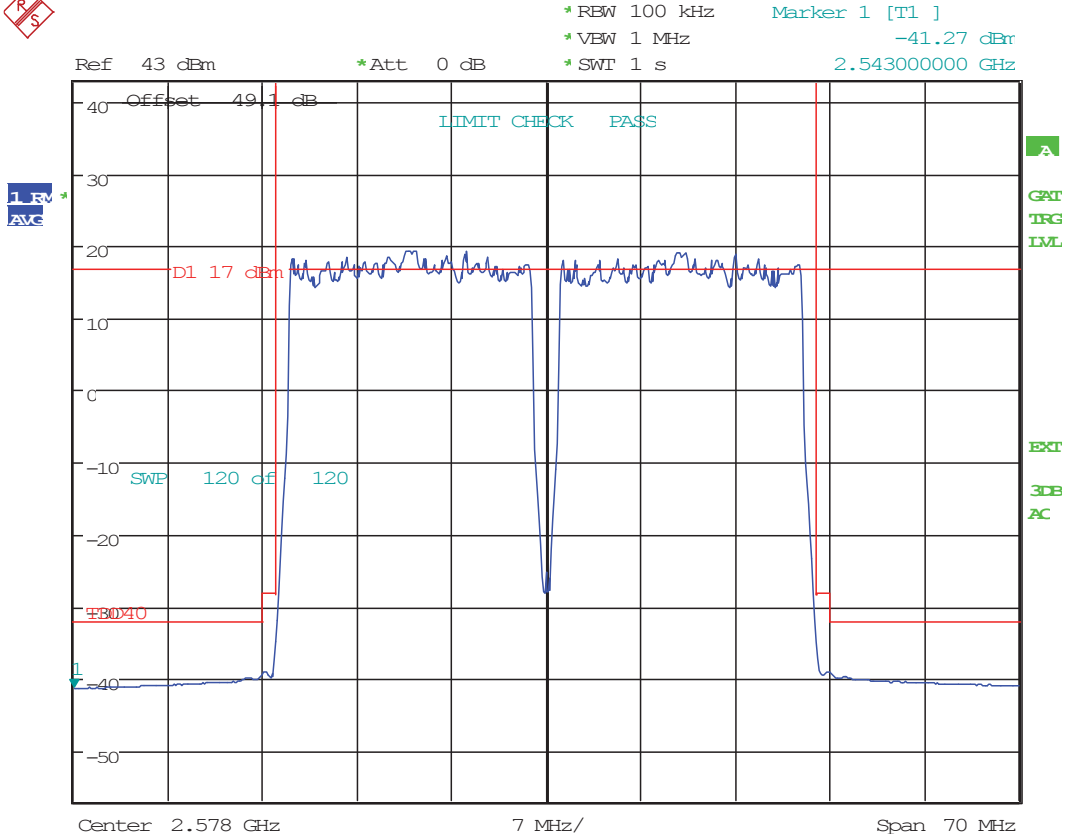
8x20 watts (MIMO)

SPECTRUM MASK/OCCUPIED BANDWIDTH

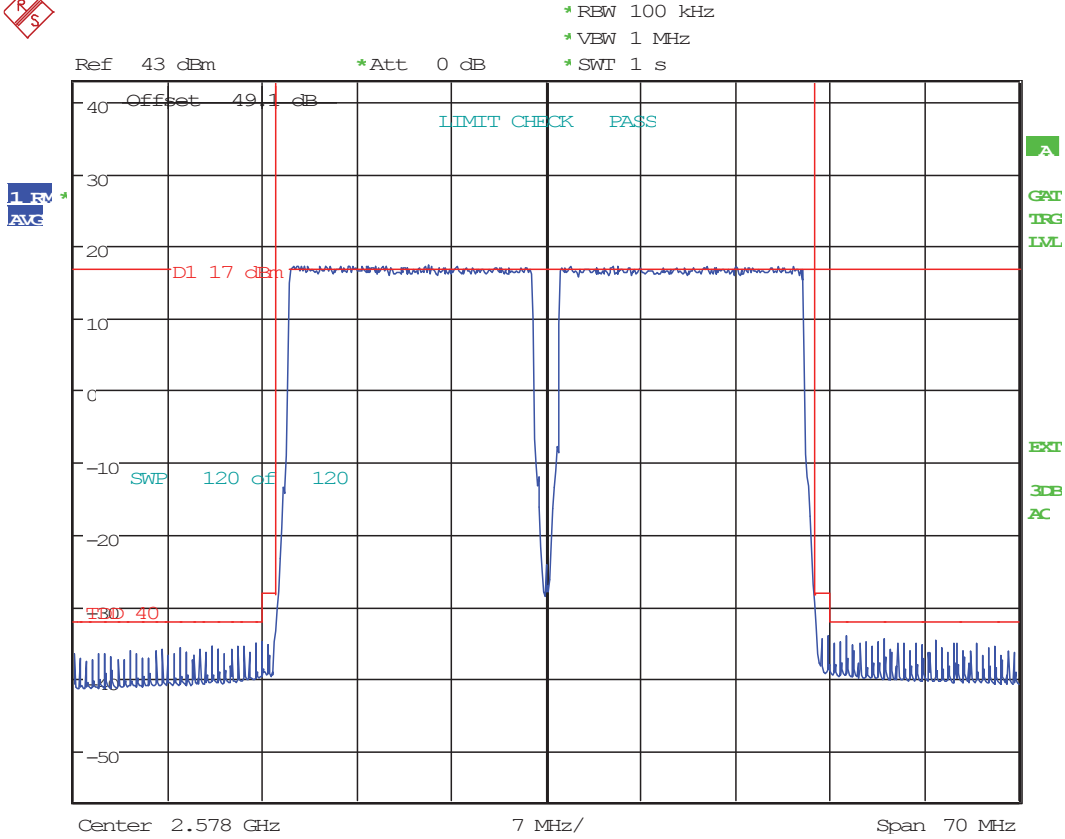
(QPSK, 16QAM and 64QAM Modulations)



OCCUPIED BANDWIDTH: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
20+20M BW; 2558-2598MHz; -48VDC;QPSK; FCCID:AS5BBTRX-15A
Date: 23.NOV.2015 17:10:36



OCCUPIED BANDWIDTH: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
20+20M BW; 2558-2598MHz; -48VDC;16QAM;FCCID:AS5BBTRX-15A
Date: 20.NOV.2015 17:27:59



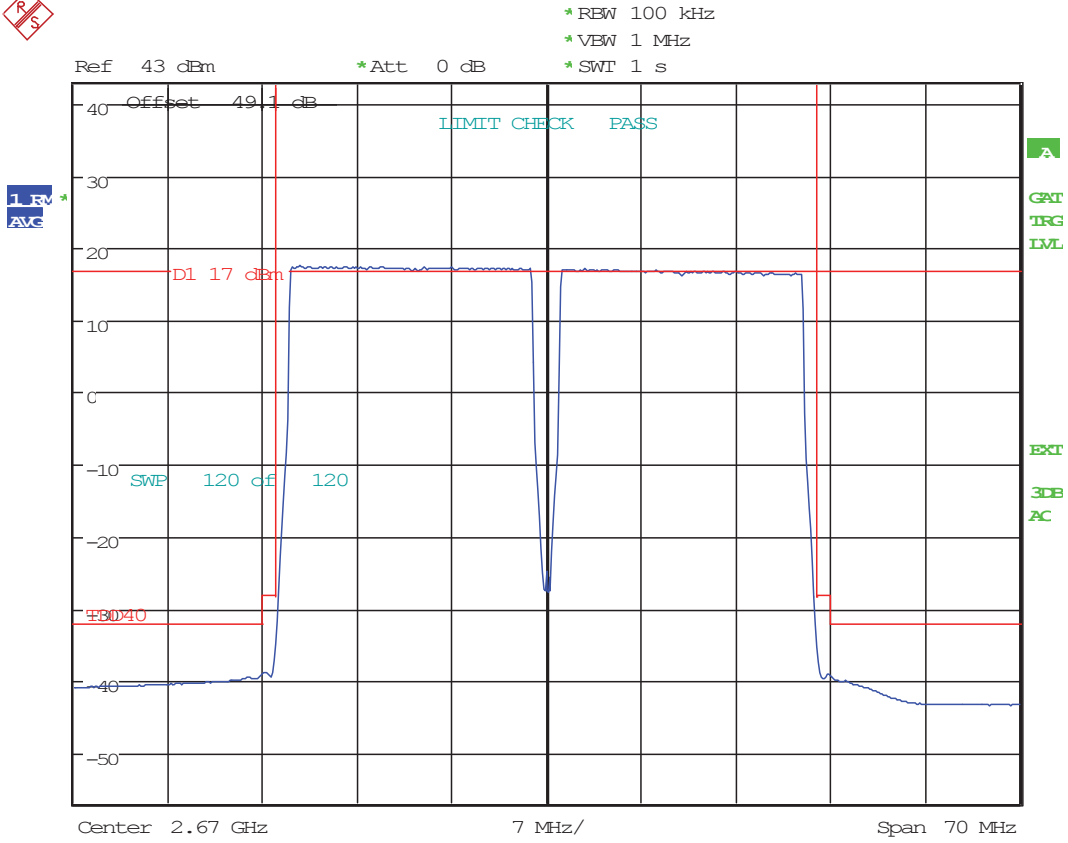
OCCUPIED BANDWIDTH; Test Eng:SEG TDD B41 RRH Cast Fingu Fltr
;20+20M BW;20W;2558-2598;-48VDC;64QAM; FCCID-AS5BBTRX-15A.
Date: 9.OCT.2015 14:24:21

**20+20 MHz Bandwidth (2650 – 2690 MHz)
(Higher)**

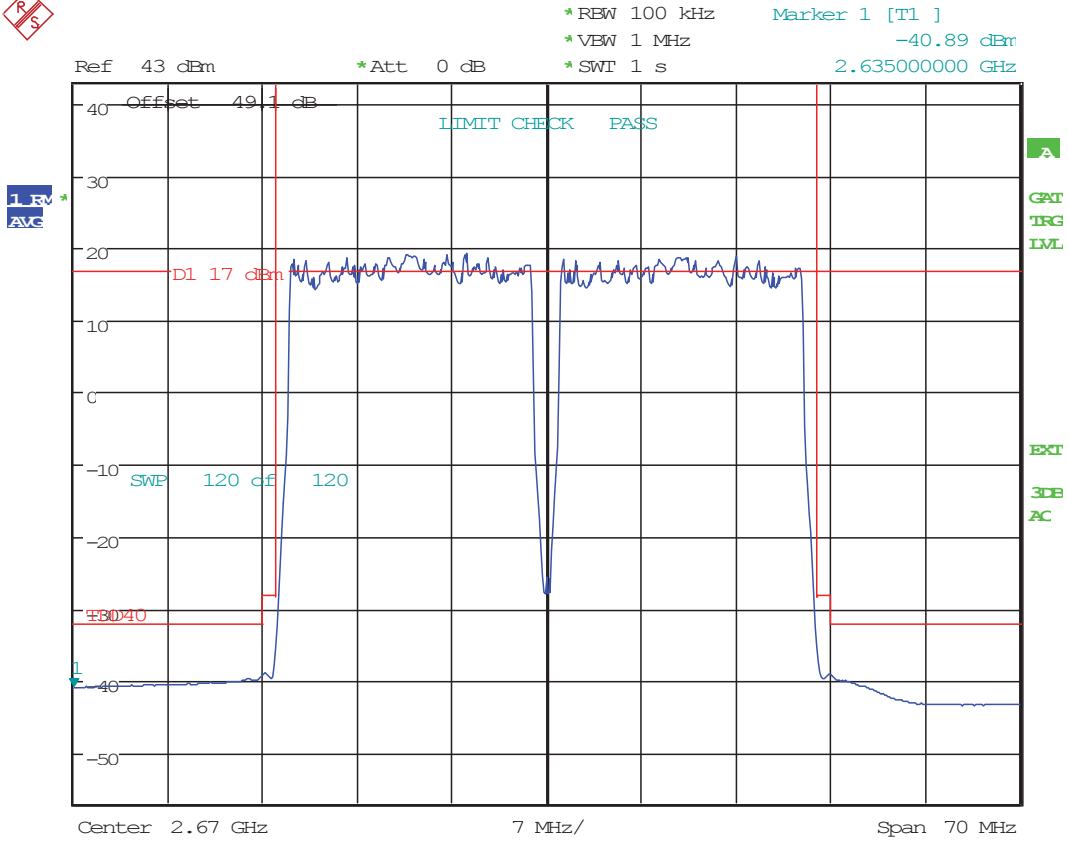
8x20 watts (MIMO)

SPECTRUM MASK/OCCUPIED BANDWIDTH

(QPSK, 16QAM and 64QAM Modulations)



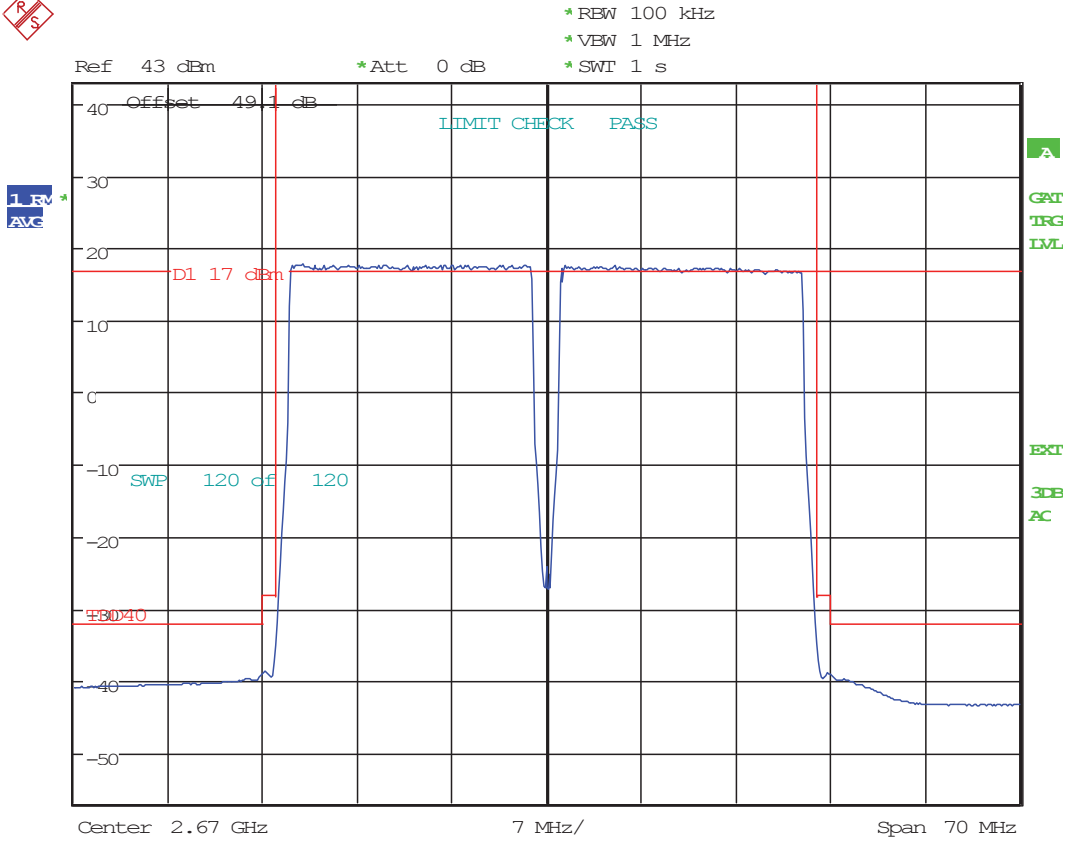
OCCUPIED BANDWIDTH: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
20+20M BW; 2650-2690MHz; -48VDC;QPSK; FCCID:AS5BBTRX-15A
Date: 25.NOV.2015 16:42:24



OCCUPIED BANDWIDTH: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr

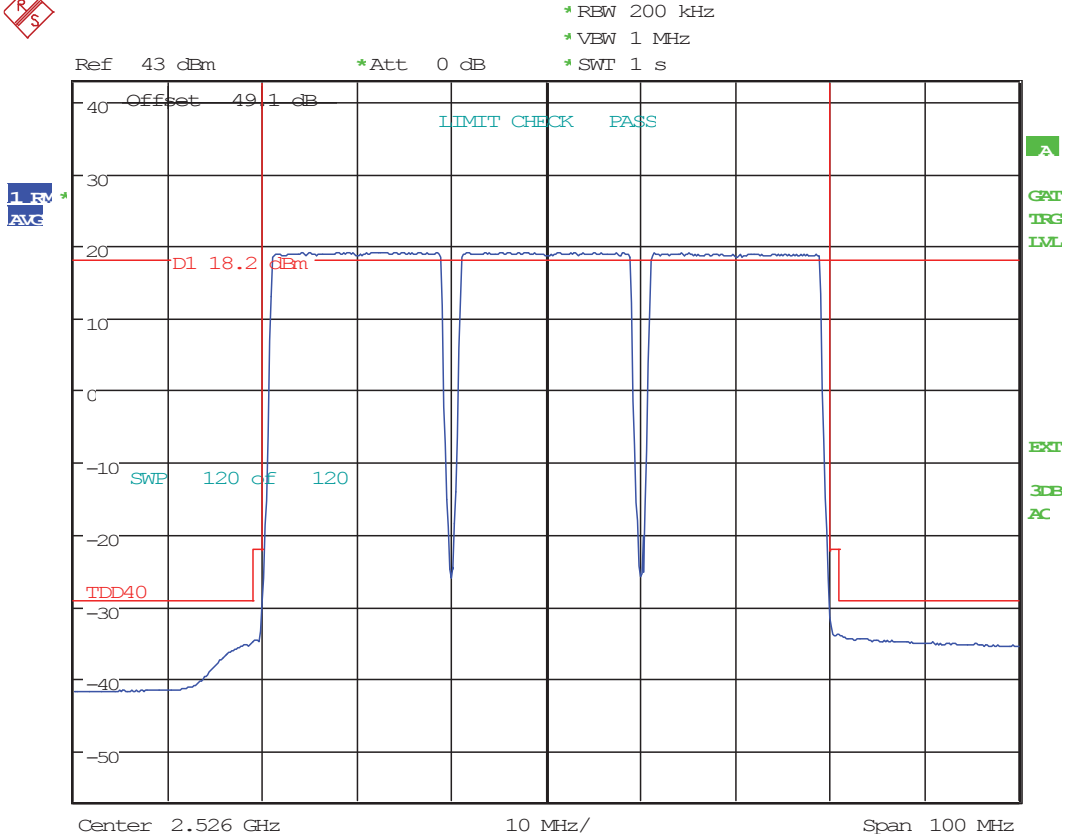
20+20M BW; 2650-2690MHz; -48VDC;16QAM;FCCID:AS5BBTRX-15A

Date: 24.NOV.2015 17:41:37

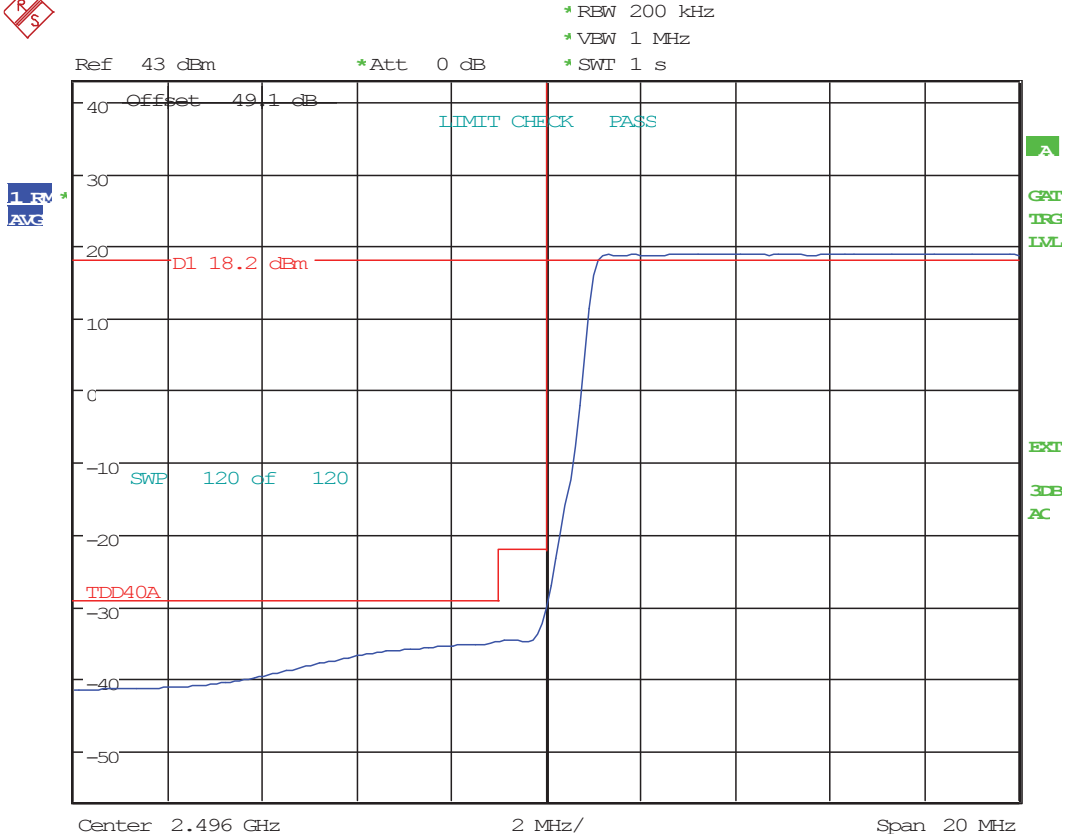


OCCUPIED BANDWIDTH: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
20+20M BW; 2650-2690MHz; -48VDC;64QAM;FCCID:AS5BBTRX-15A
Date: 24.NOV.2015 12:40:00

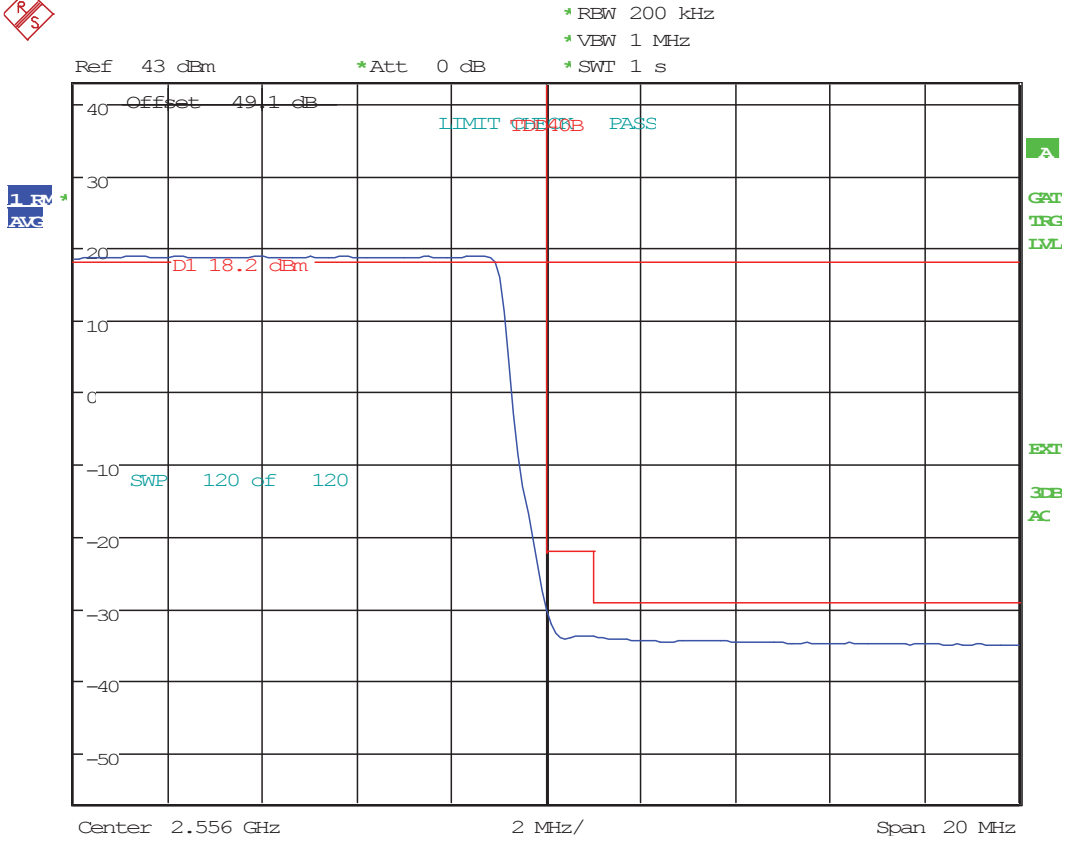
20+20+20MHz Bandwidth,
2496-2516MHz, 2516-2536 & 2536-2556 MHz
60MHz (Lower)
8x20 watts (MIMO)



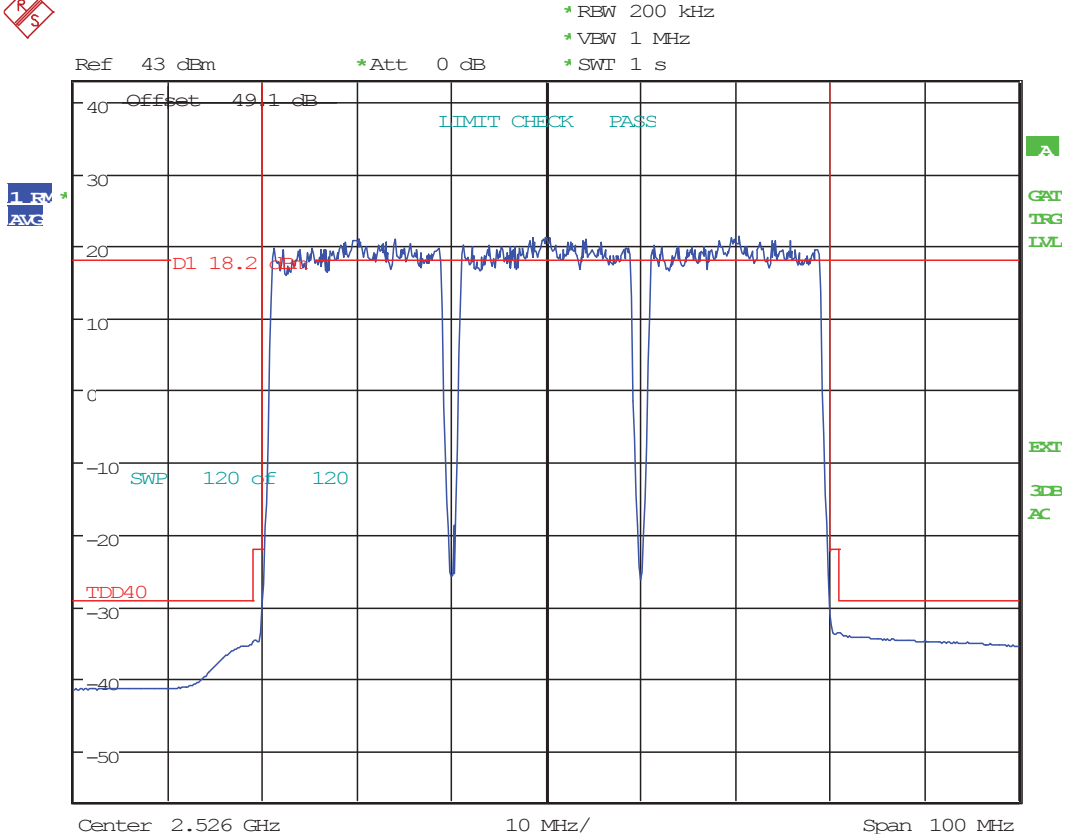
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20+20M BW;20W;2496-2556M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
Date: 10.DEC.2015 23:23:44



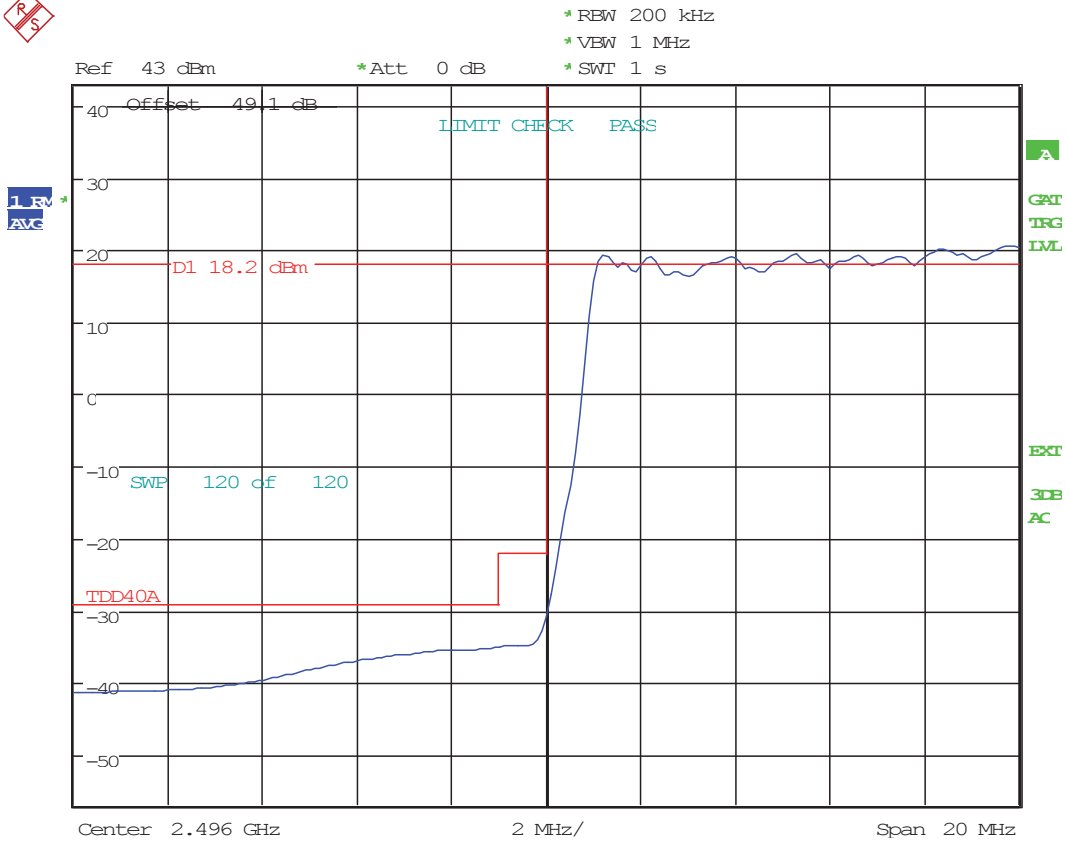
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20+20M BW;20W;2496-2556M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
Date: 10.DEC.2015 23:42:44



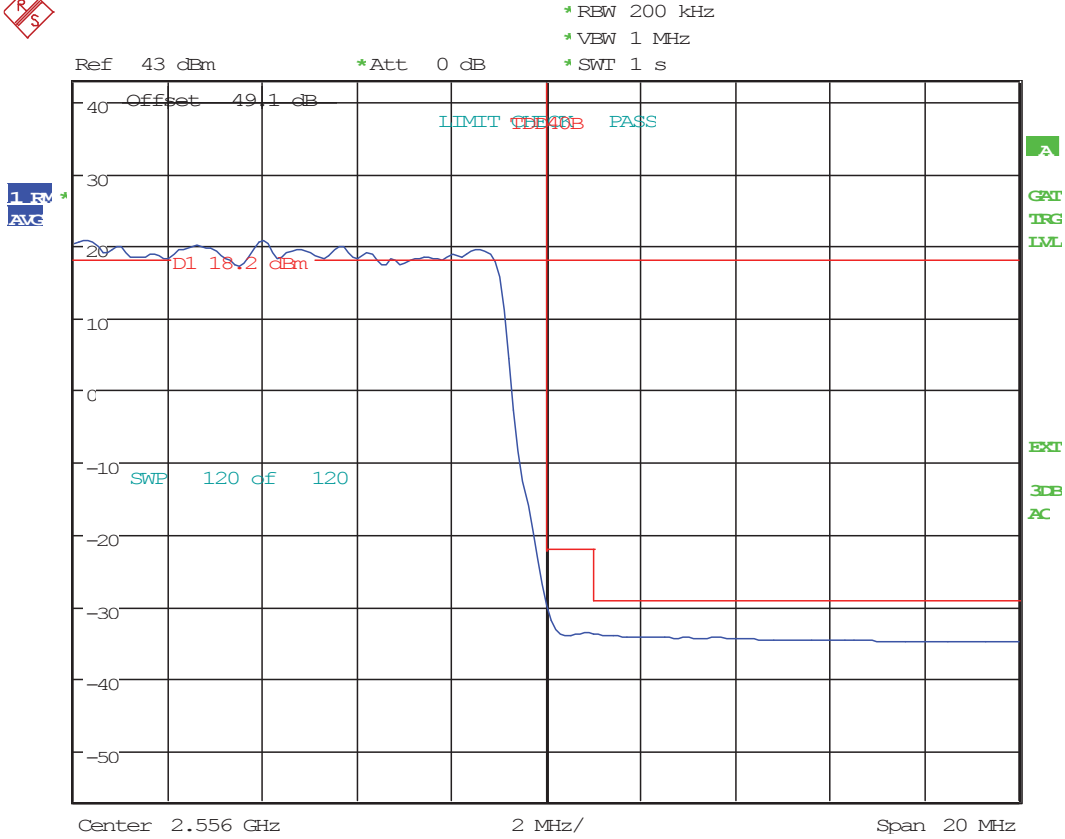
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20+20M BW;20W;2496-2556M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
Date: 10.DEC.2015 23:55:20



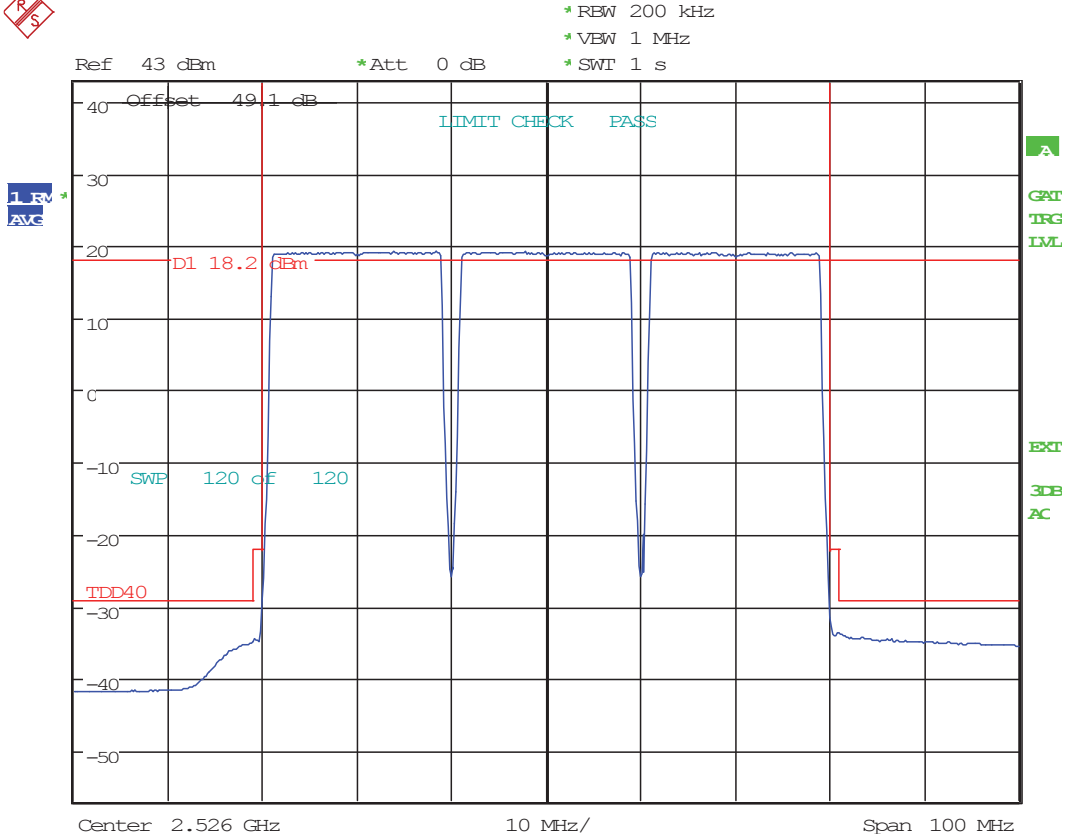
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20+20M BW;20W;2496-2556M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
Date: 10.DEC.2015 09:45:54



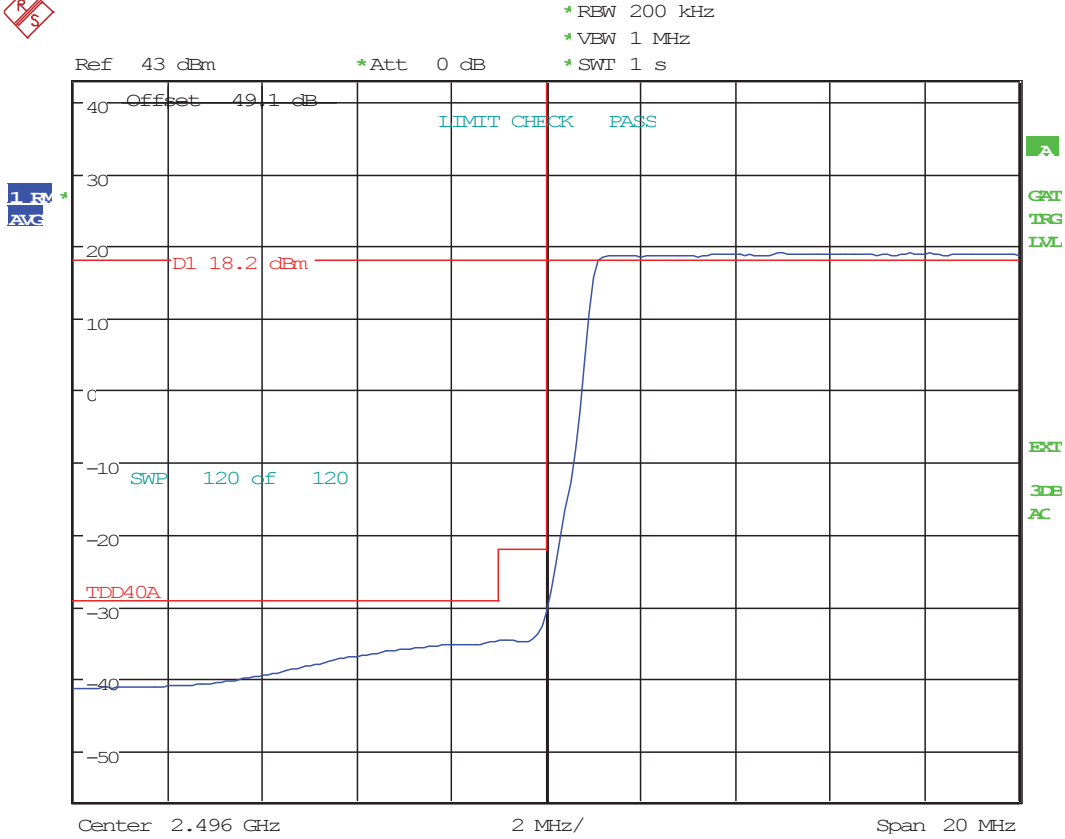
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20+20M BW;20W;2496-2556M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
Date: 10.DEC.2015 10:00:36



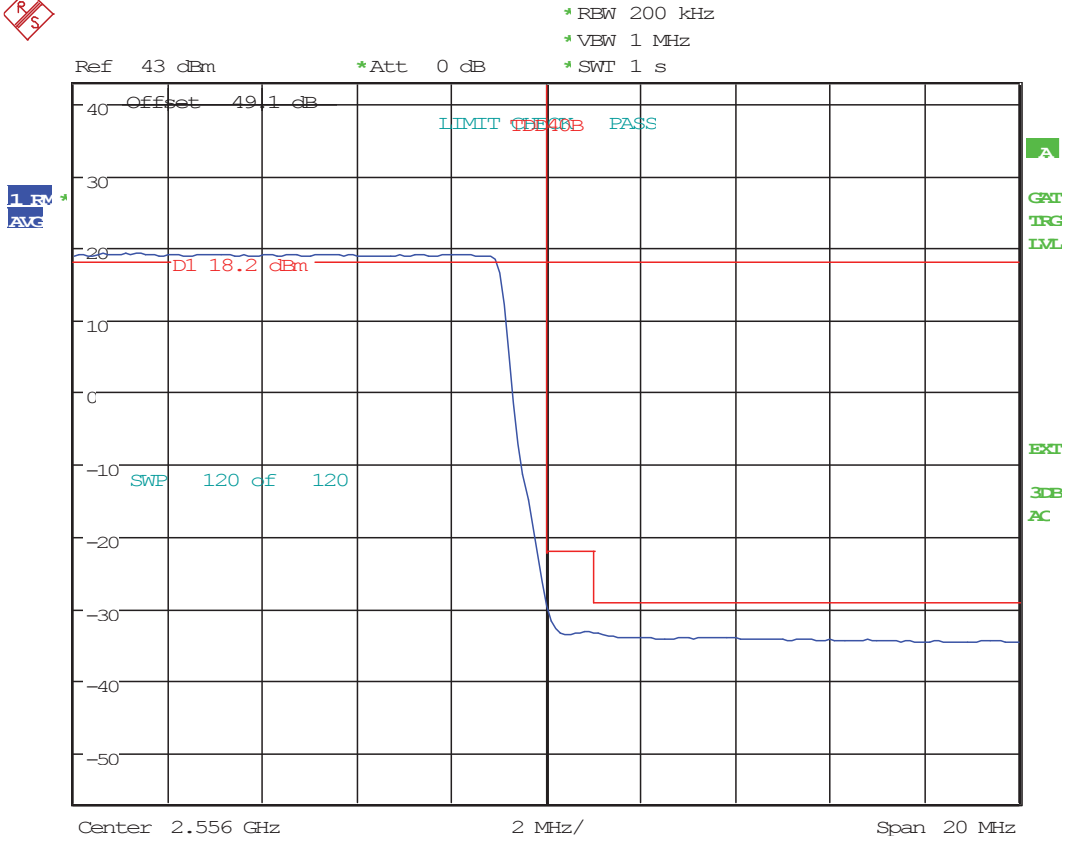
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW;20W;2496-2556M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 10.DEC.2015 10:12:20



OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20+20M BW;20W;2496-2556M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
Date: 11.DEC.2015 09:56:49

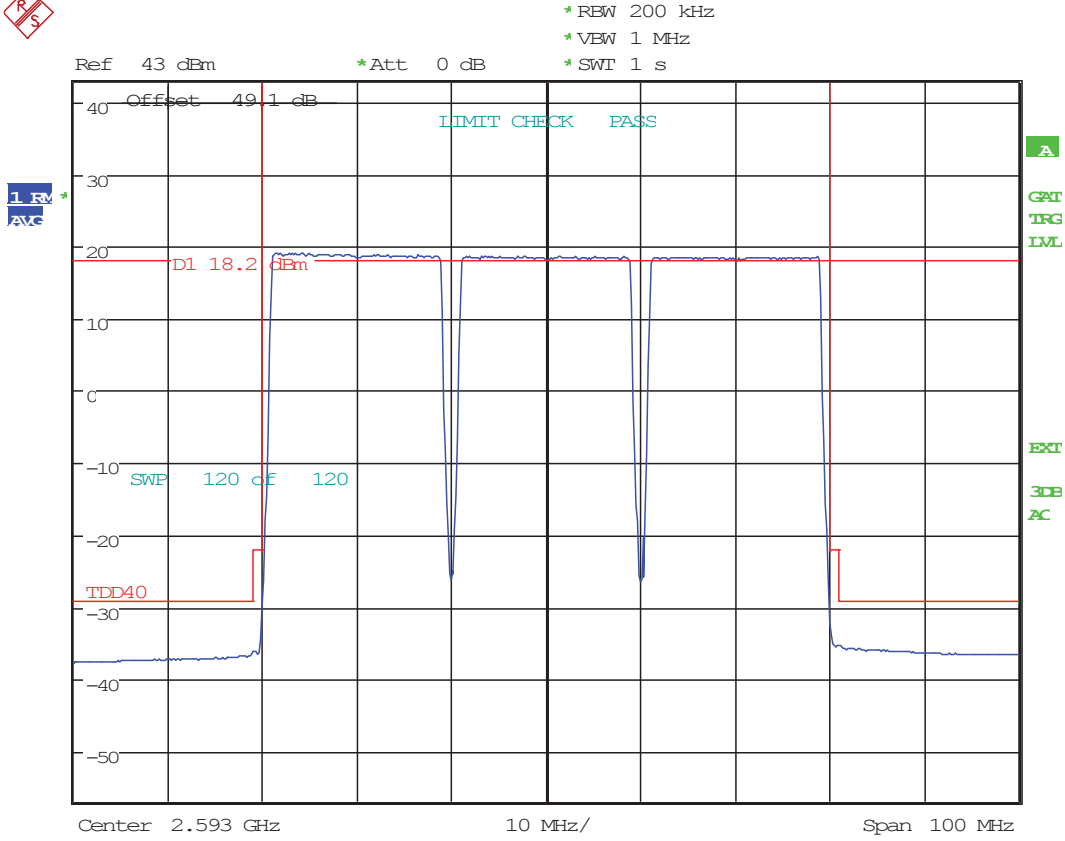


OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20+20M BW;20W;2496-2556M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
Date: 9.DEC.2015 15:35:54

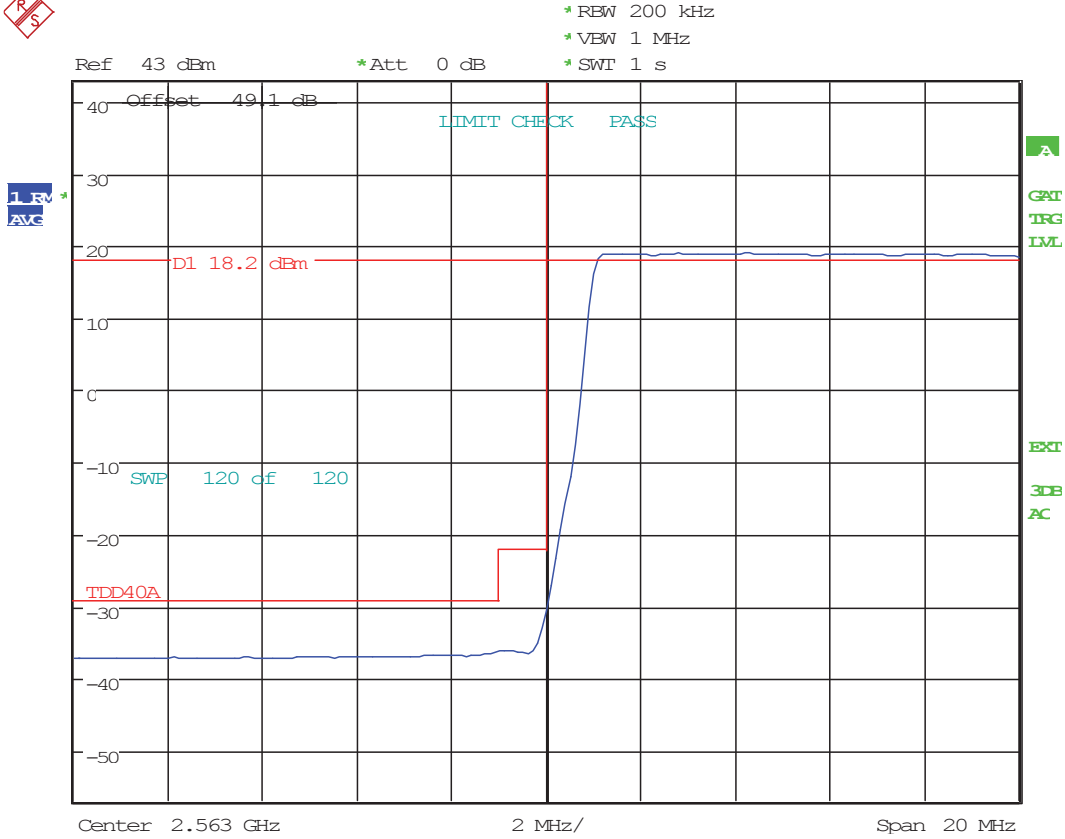


OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20+20M BW;20W;2496-2556M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
Date: 9.DEC.2015 15:50:34

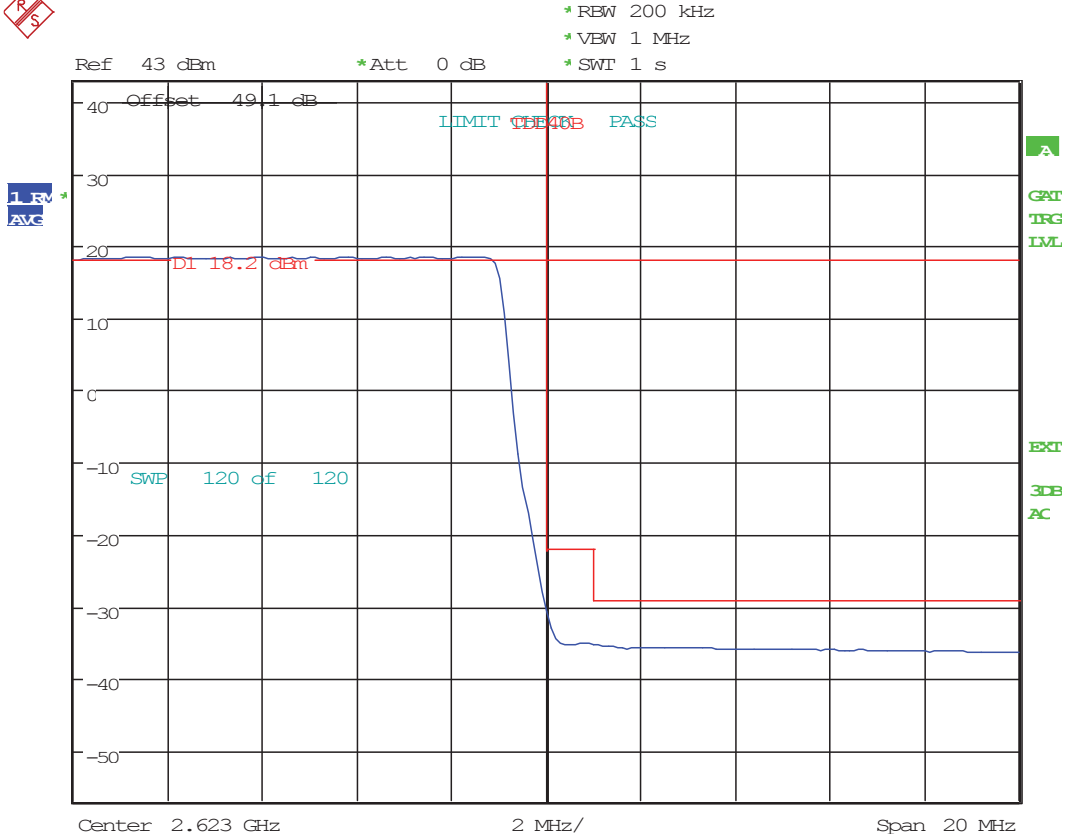
20+20+20MHz Bandwidth,
2563-2583MHz, 2583-2603 & 2603-2623 MHz
60MHz (Middle)
8x20 watts (MIMO)



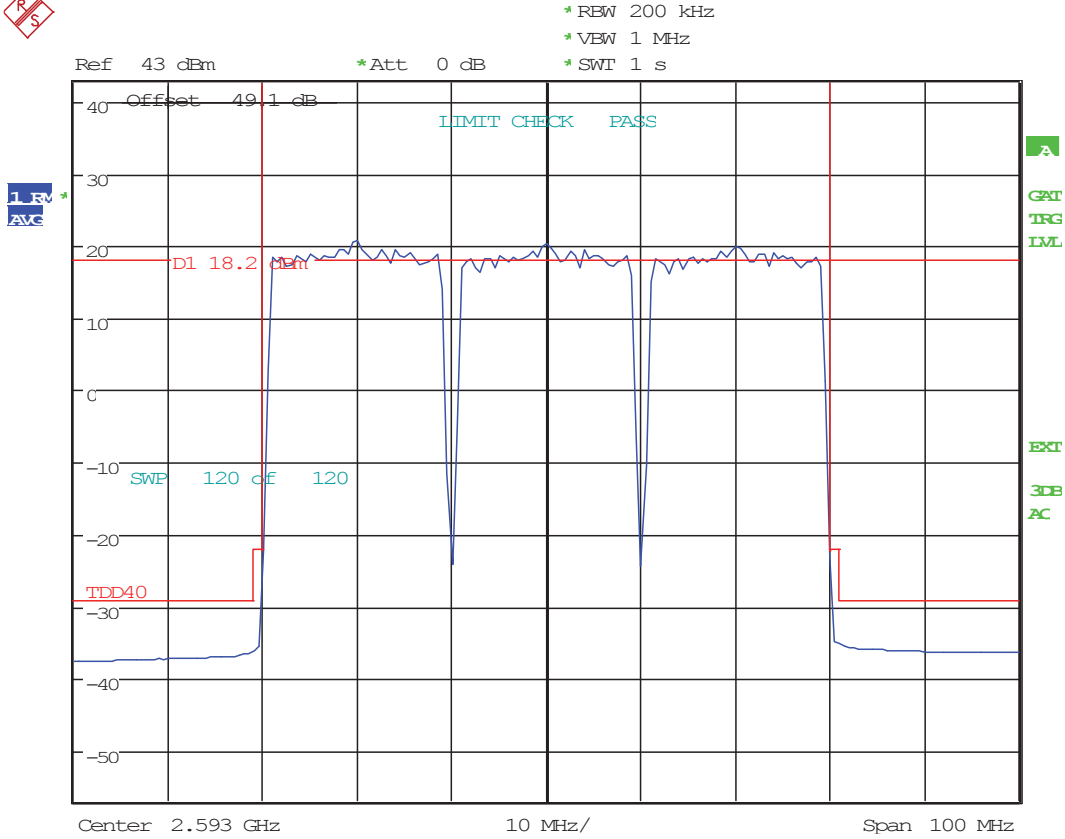
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20+20M BW;20W;2563-2623M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
Date: 11.DEC.2015 19:35:25



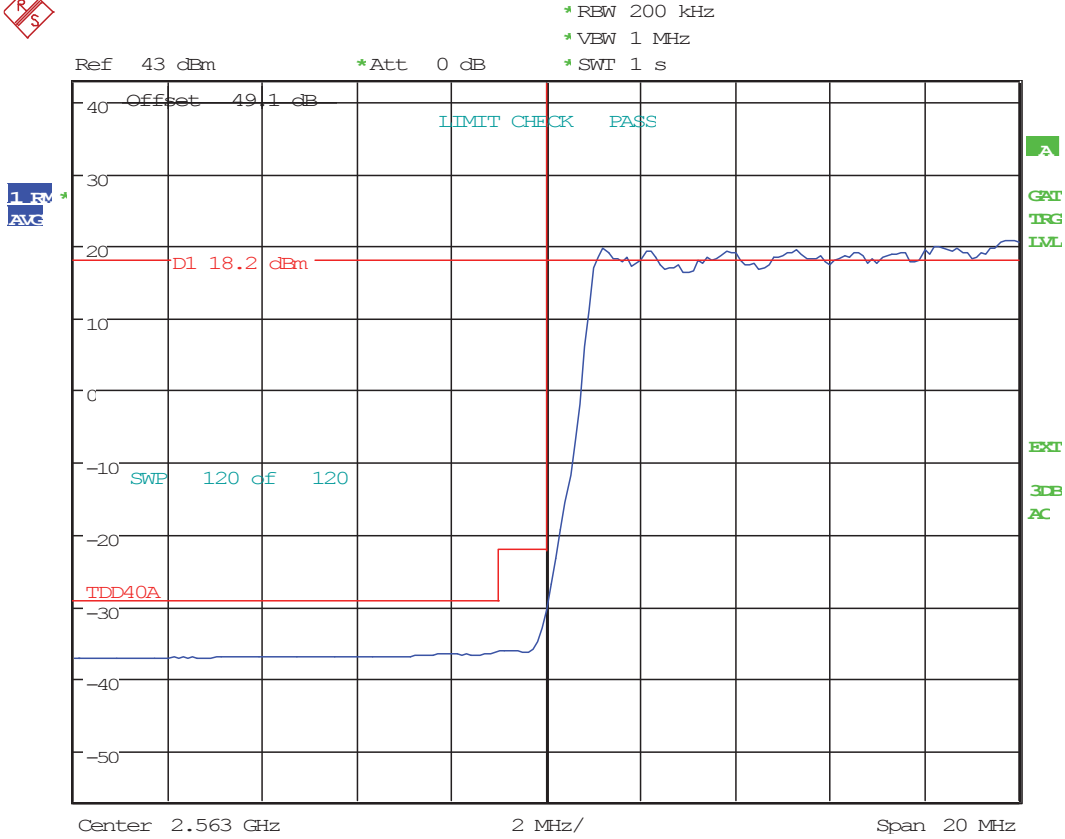
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW;20W;2563-2623M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 11.DEC.2015 19:49:30



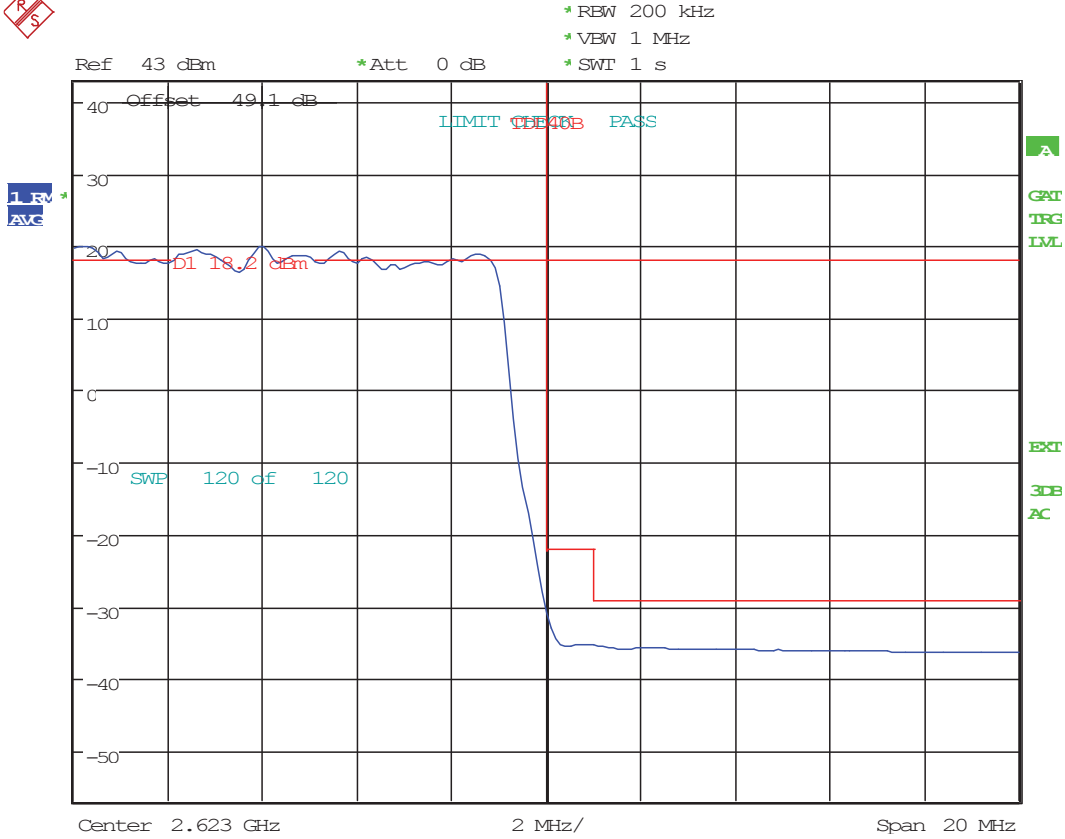
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20+20M BW;20W;2563-2623M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
Date: 11.DEC.2015 20:01:18



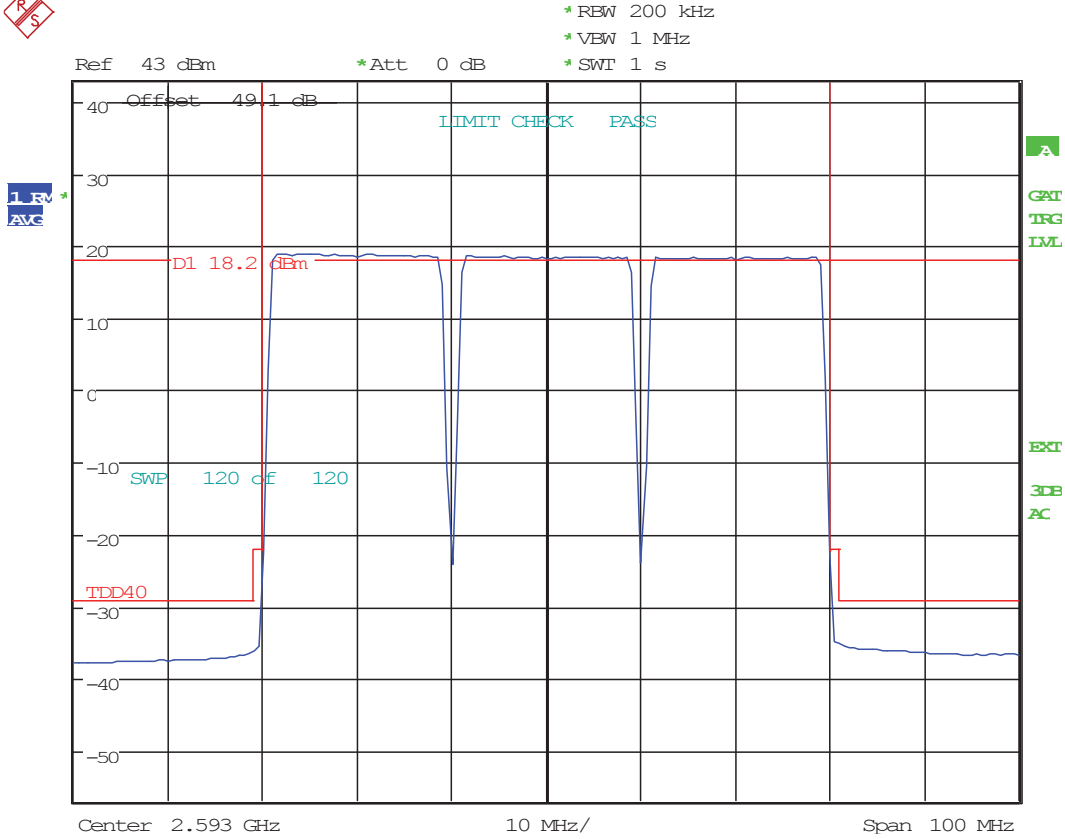
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20+20M BW;20W;2563-2623M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
Date: 14.DEC.2015 12:50:55



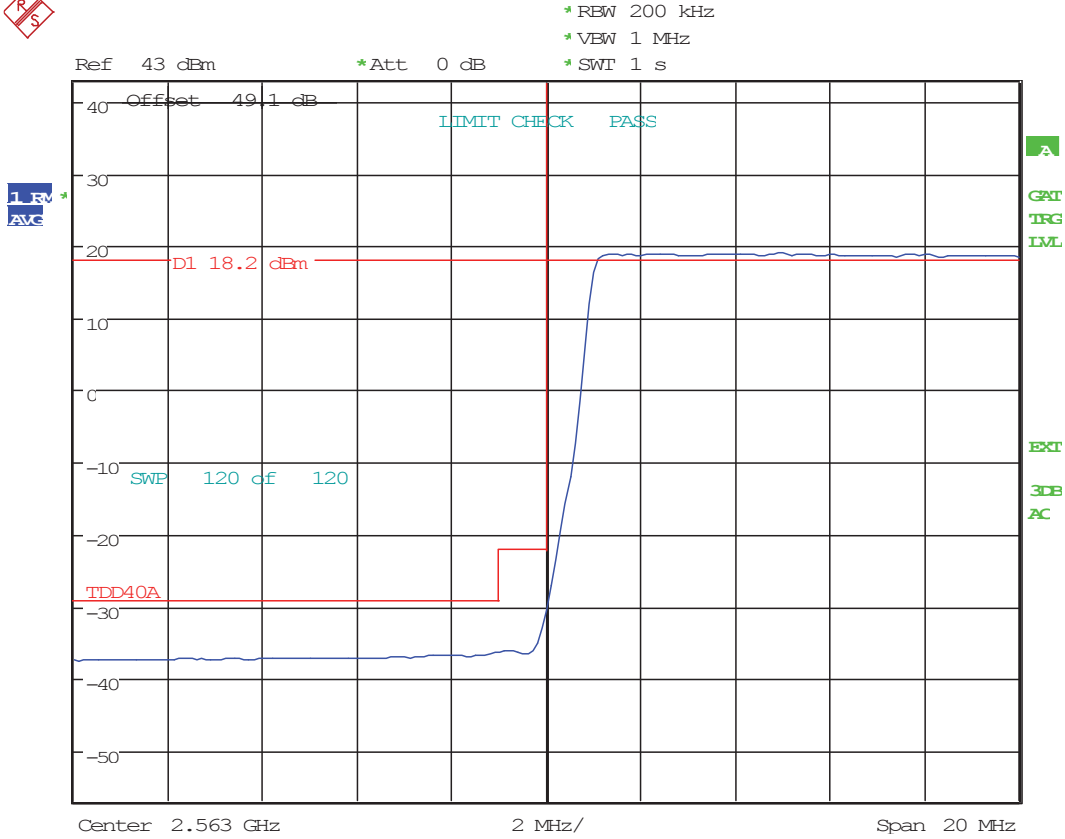
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20+20M BW;20W;2563-2623M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
Date: 14.DEC.2015 13:07:00



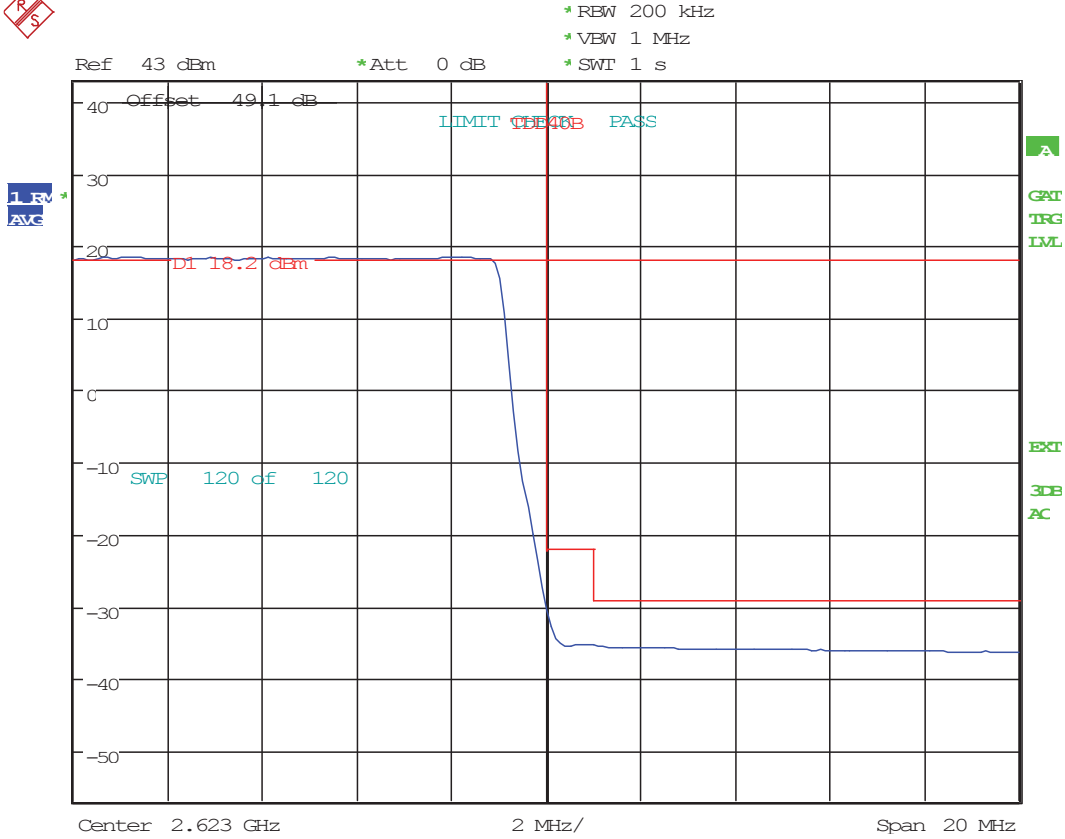
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW;20W;2563-2623M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 14.DEC.2015 13:25:48



OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20+20M BW;20W;2563-2623M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
Date: 14.DEC.2015 17:04:29

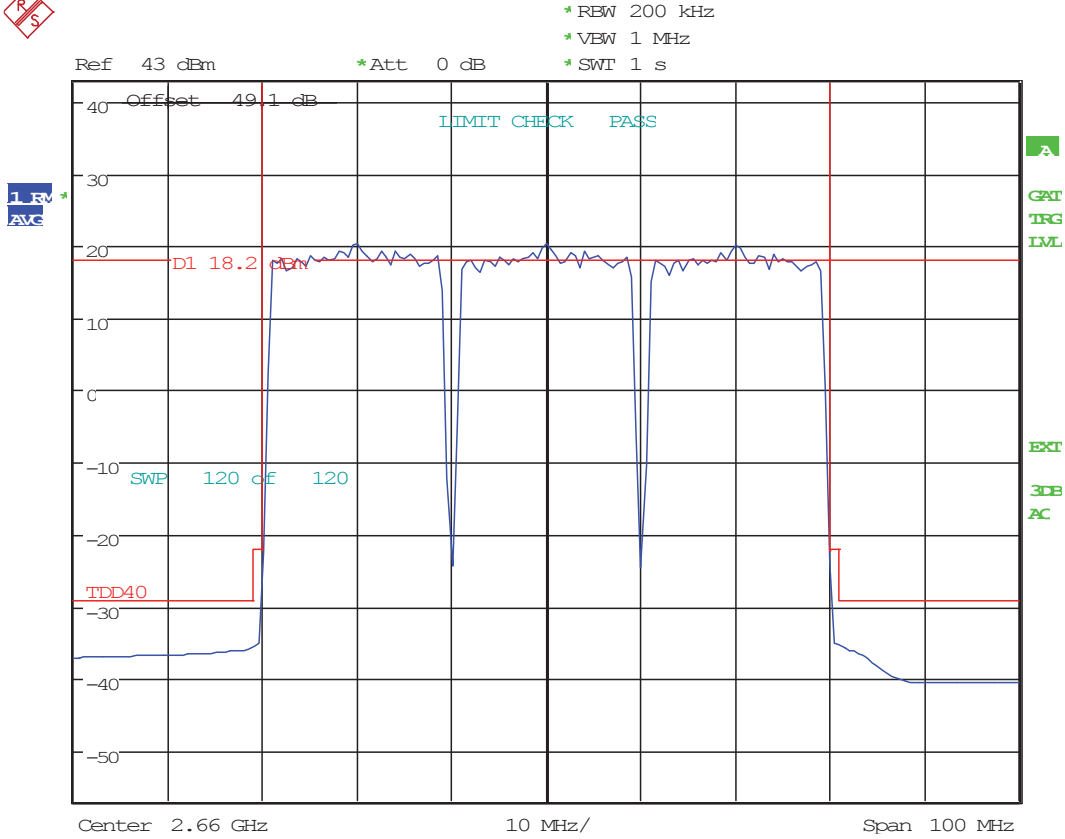


OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20+20M BW;20W;2563-2623M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
Date: 14.DEC.2015 17:21:51

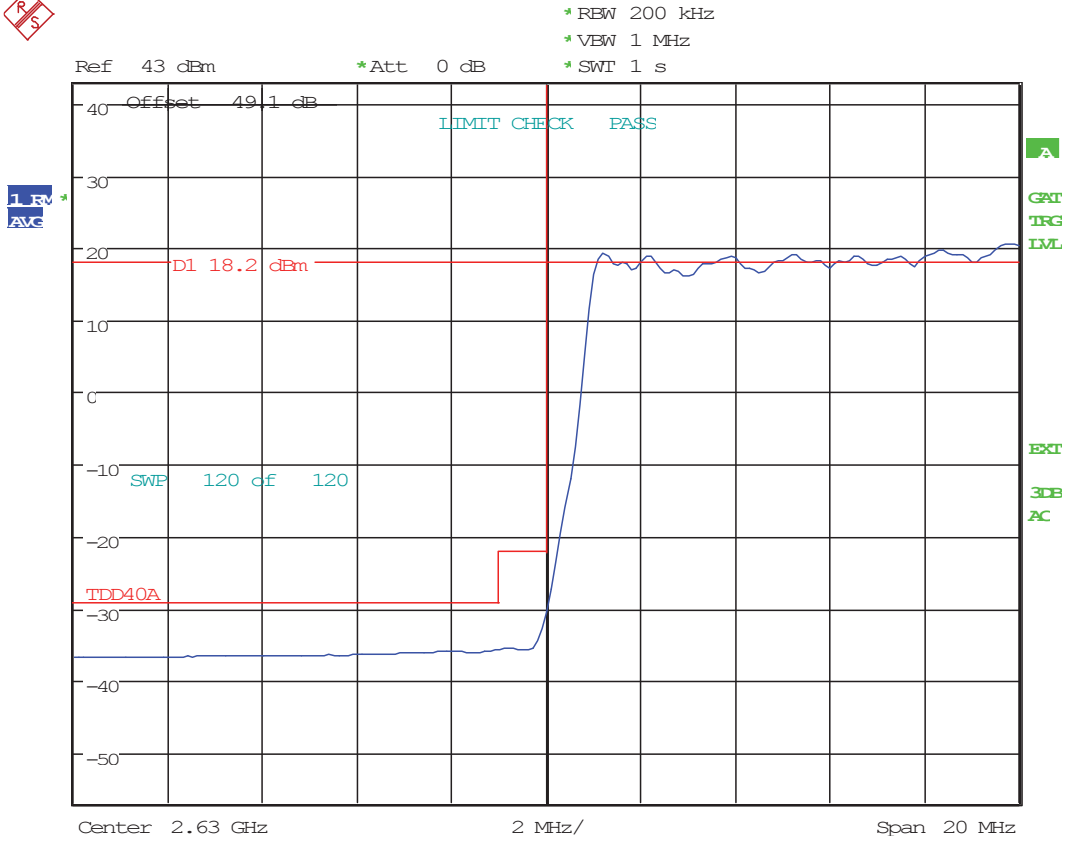


OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20+20M BW;20W;2563-2623M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
Date: 14.DEC.2015 17:33:54

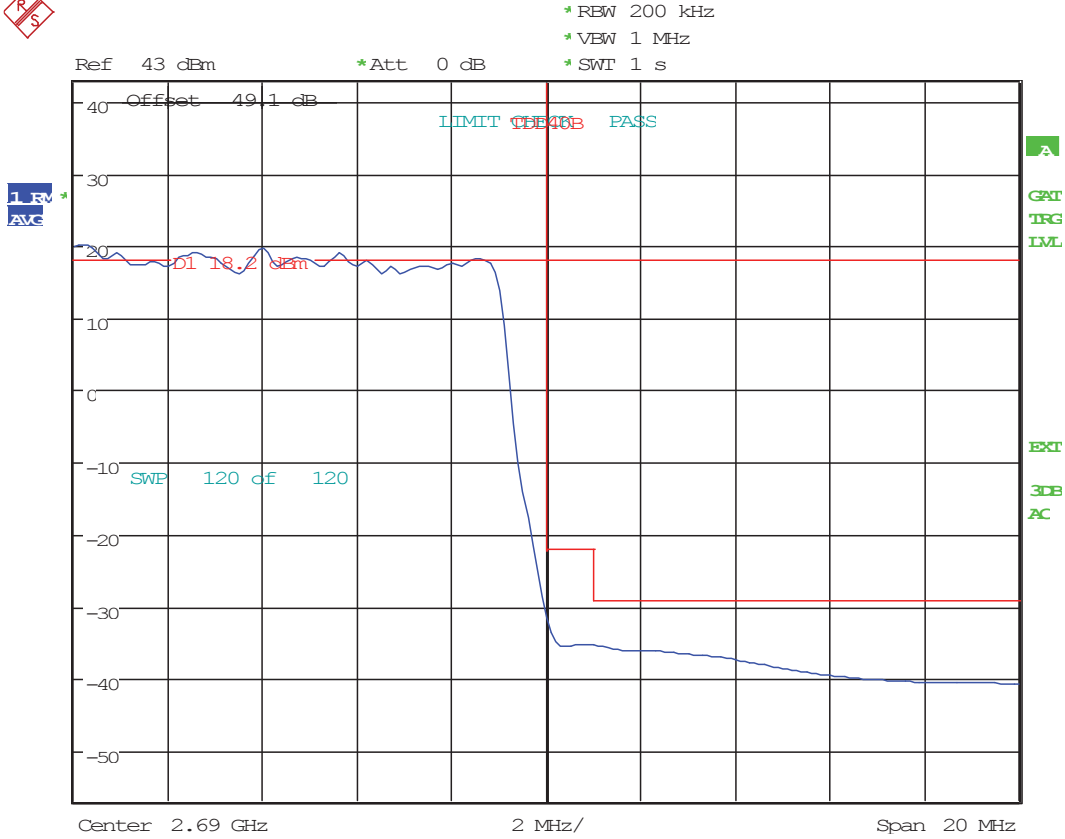
20+20+20MHz Bandwidth,
2630-2650MHz, 2650-2670 & 2670-2690 MHz
60MHz (Higher)
8x20 watts (MIMO)



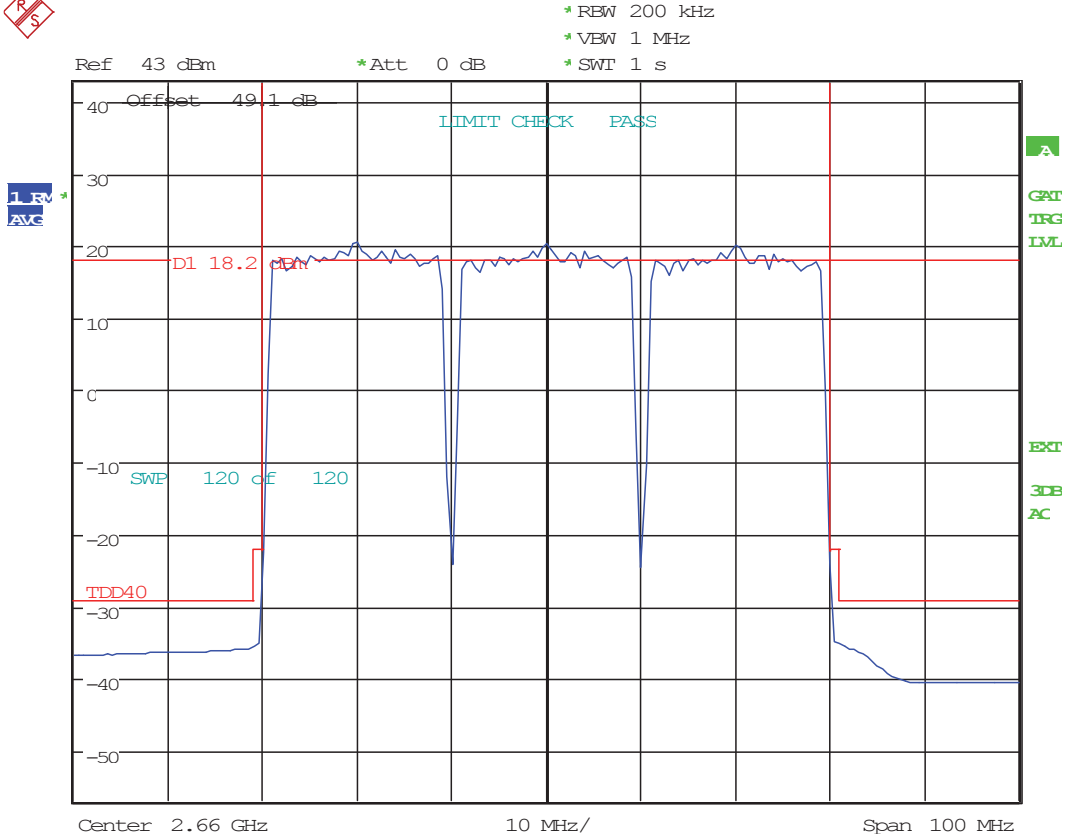
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20+20M BW;20W;2630-2690M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
Date: 15.DEC.2015 11:28:37



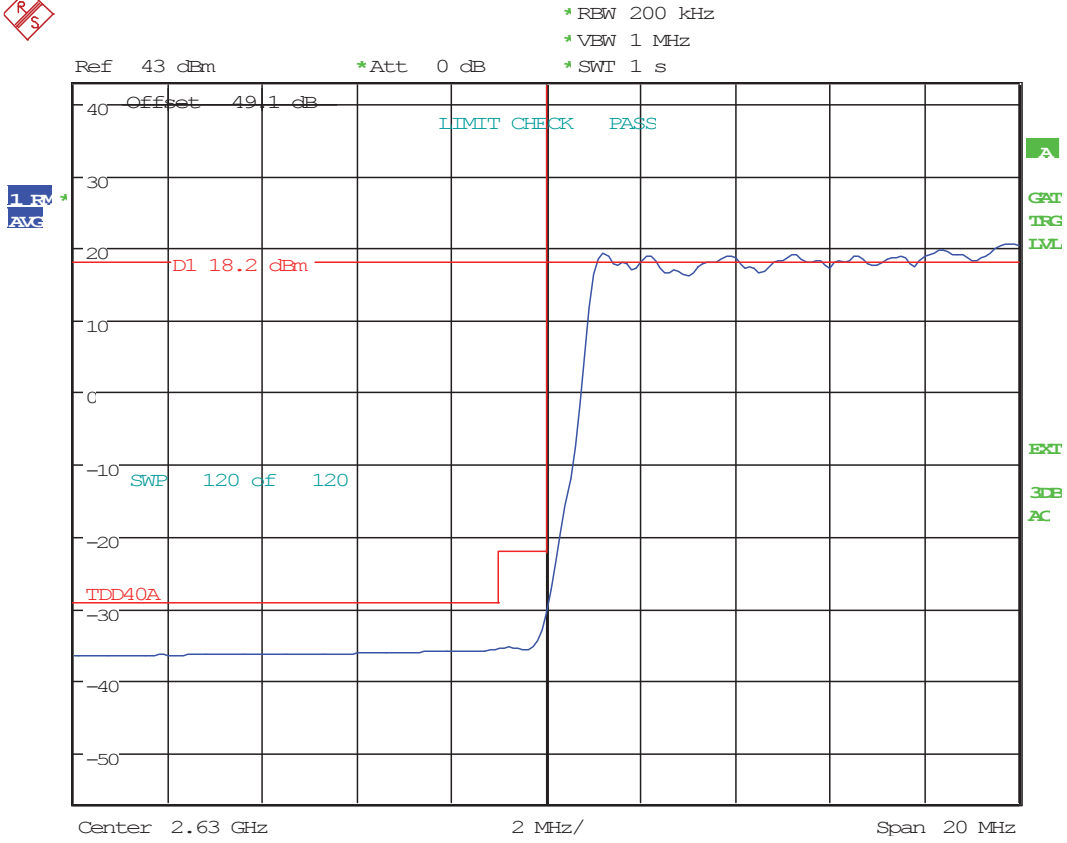
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20+20M BW;20W;2630-2690M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
Date: 15.DEC.2015 11:43:20



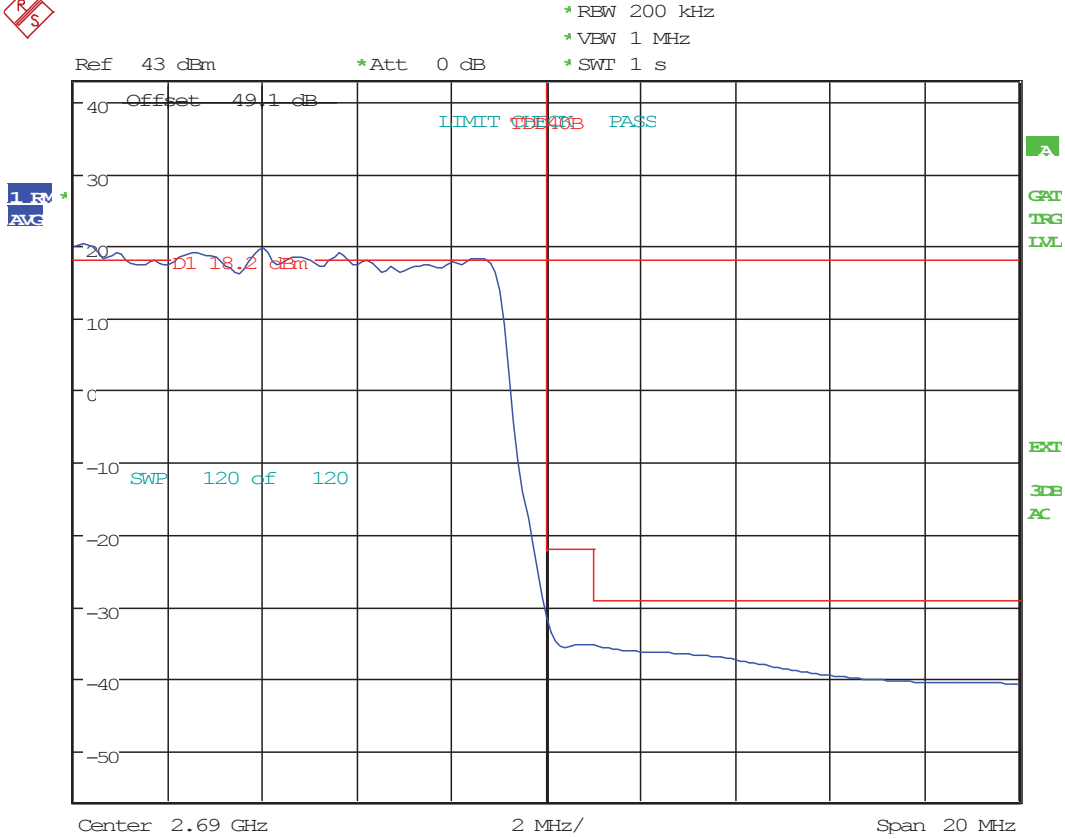
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW;20W;2630-2690M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 15.DEC.2015 12:01:15



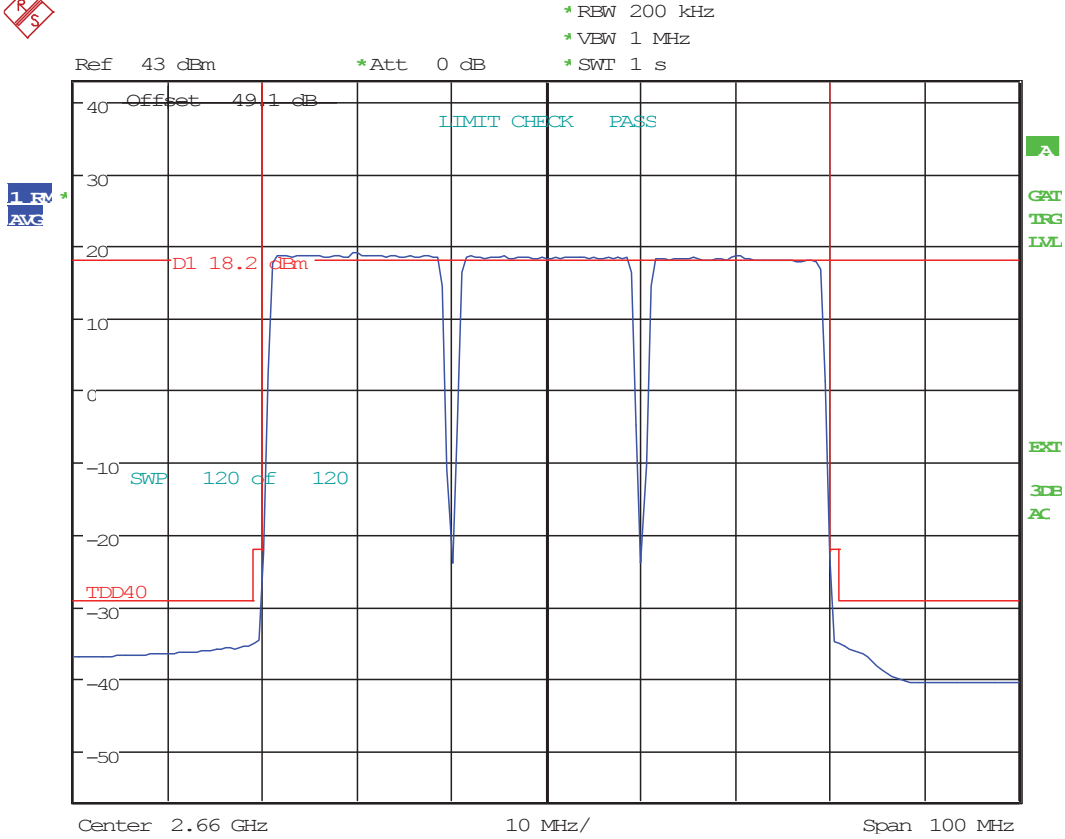
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20+20M BW;20W;2630-2690M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
Date: 15.DEC.2015 12:49:30



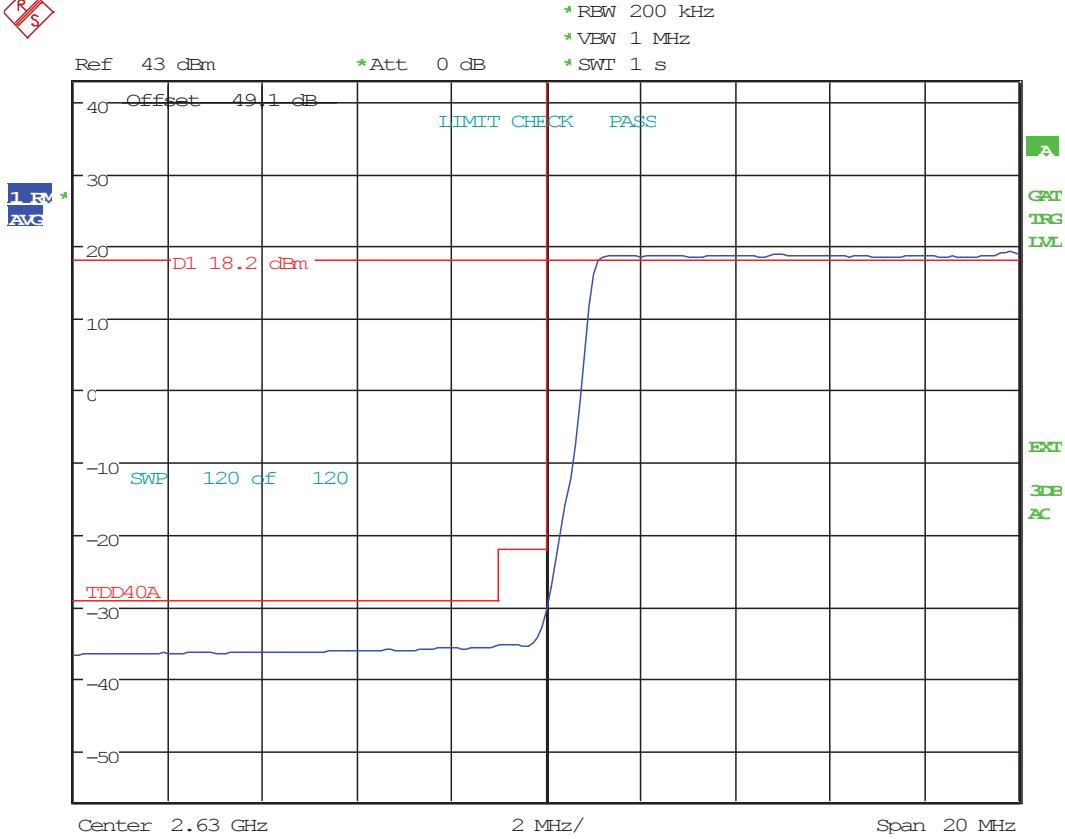
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20+20M BW;20W;2630-2690M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
Date: 15.DEC.2015 13:05:37



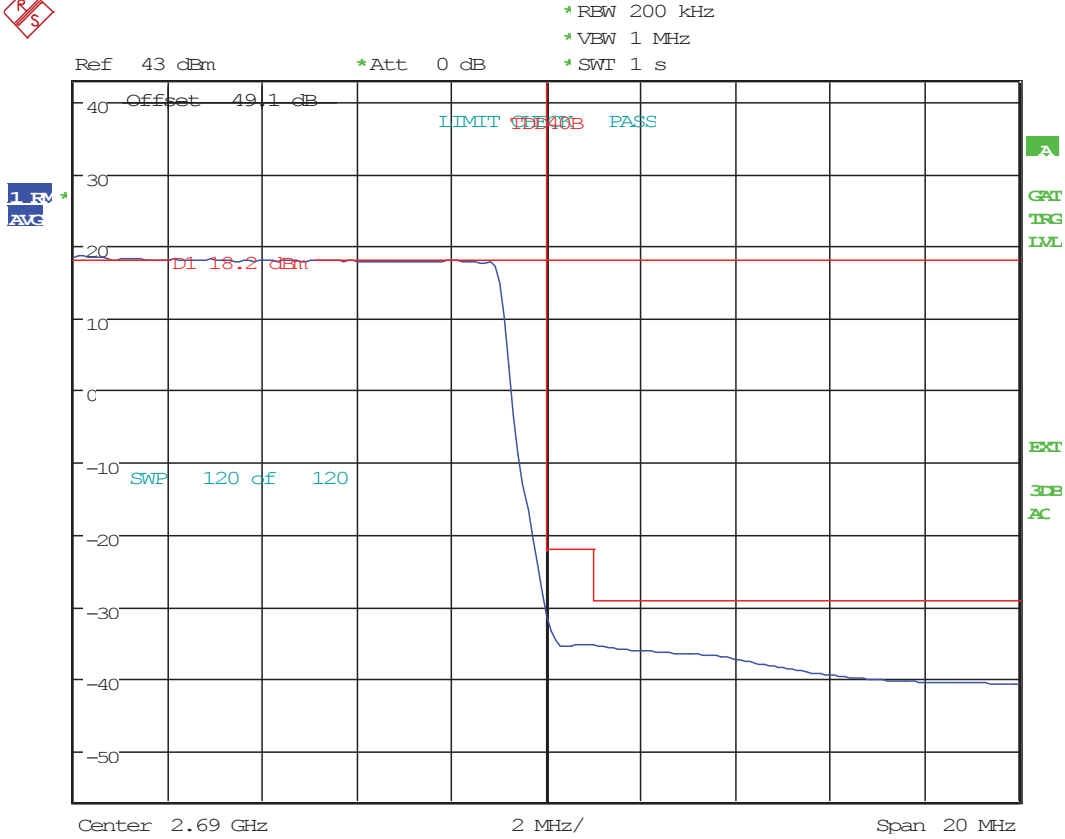
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20+20M BW;20W;2630-2690M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
Date: 15.DEC.2015 14:19:08



OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20+20M BW;20W;2630-2690M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
Date: 15.DEC.2015 16:23:45

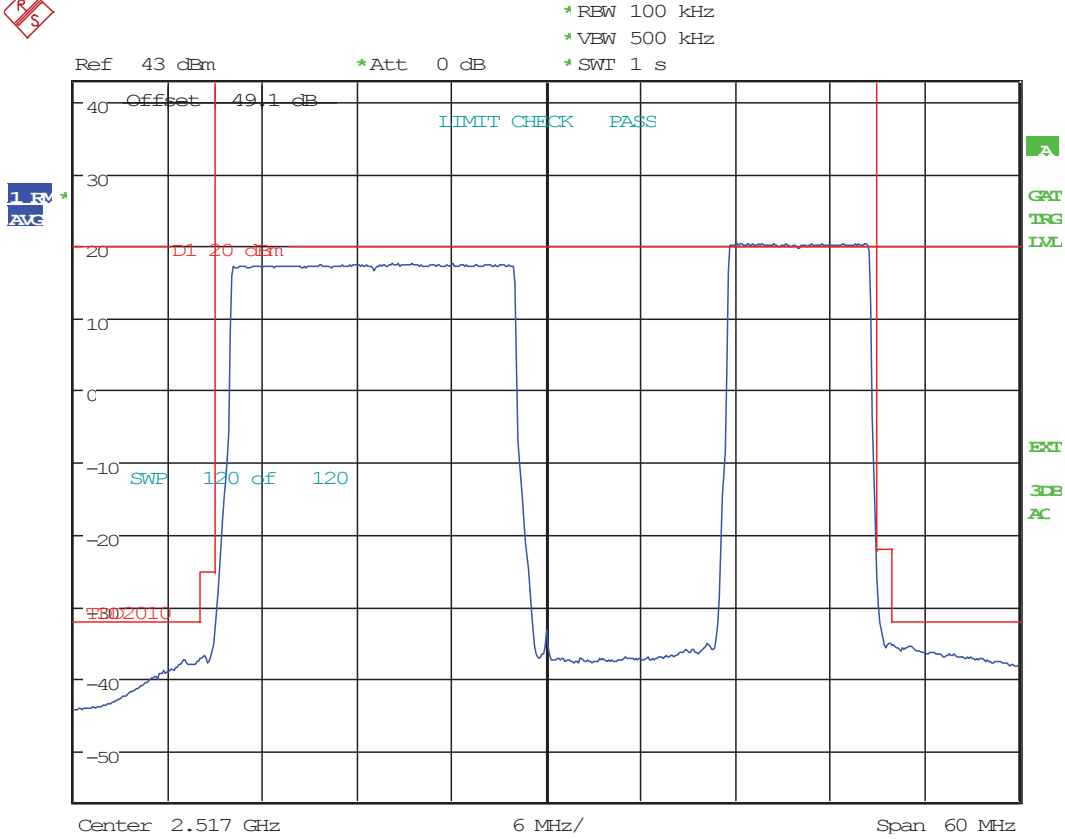


OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20+20M BW;20W;2630-2690M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
Date: 15.DEC.2015 16:40:45

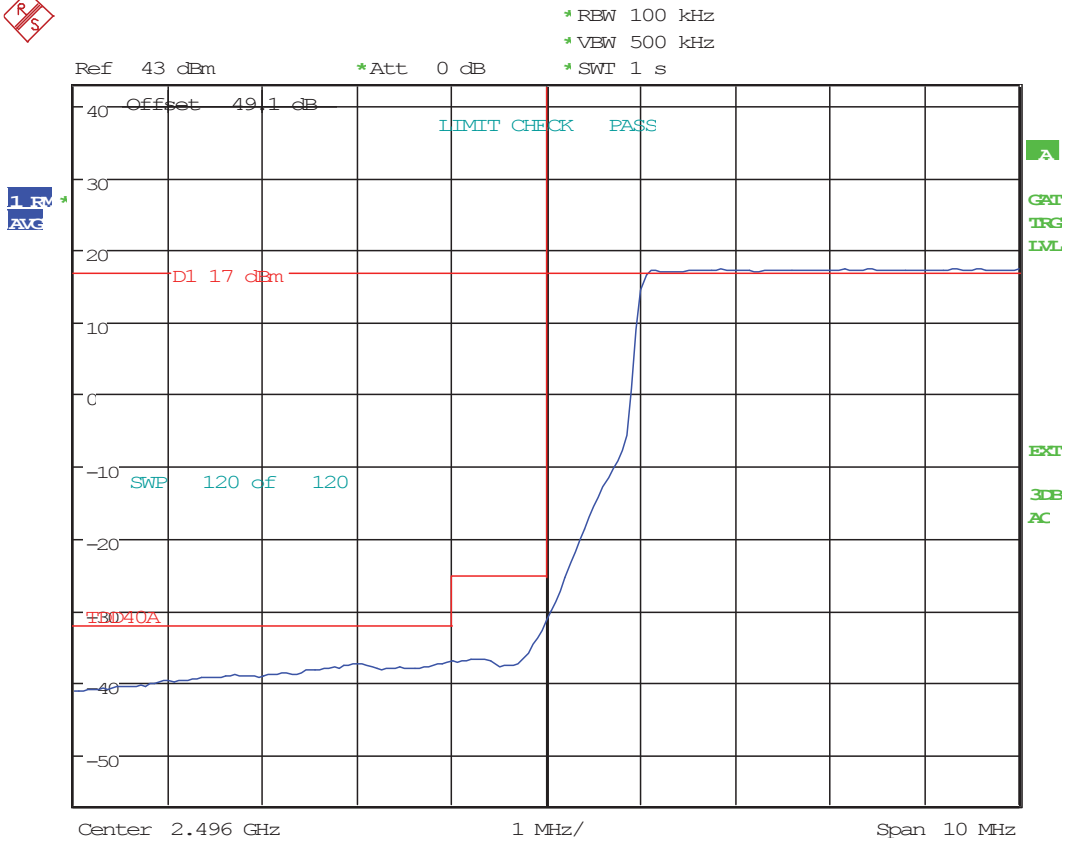


OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW;20W;2630-2690M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 15.DEC.2015 16:53:13

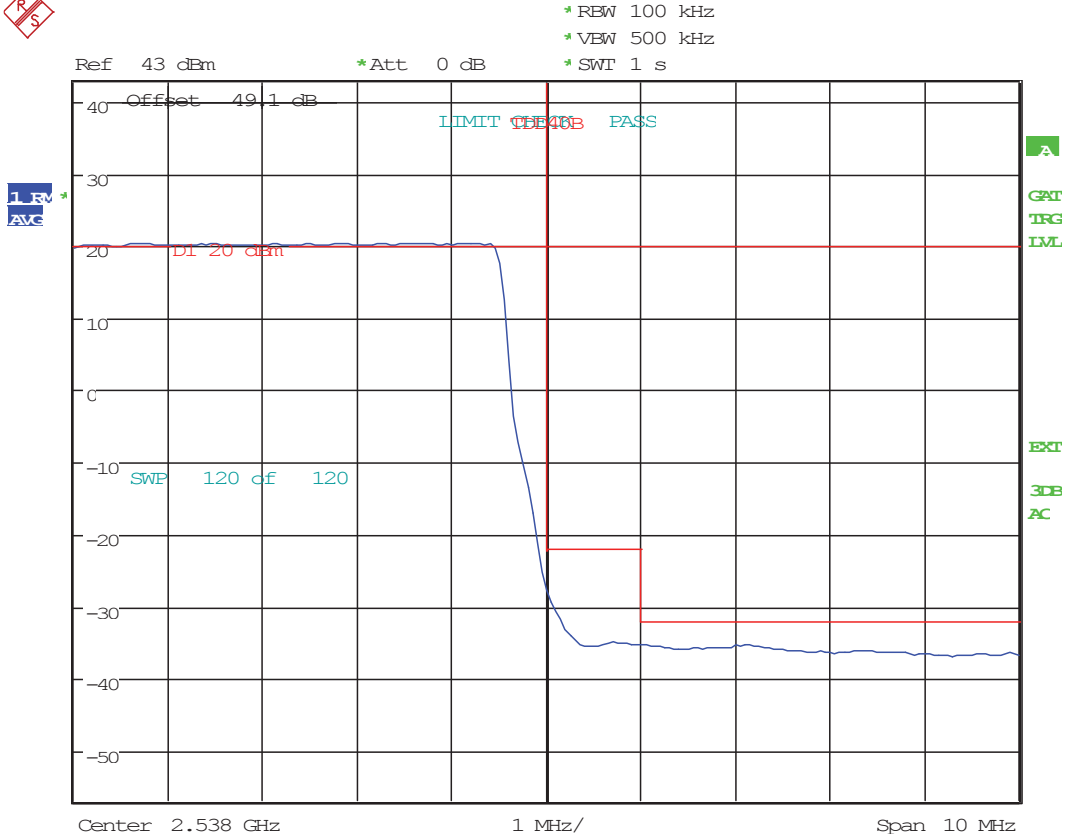
**20+10MHz Bandwidth,
2496-2516MHz, 2528-2538 MHz
(Lower)
8x20 watts (MIMO)**



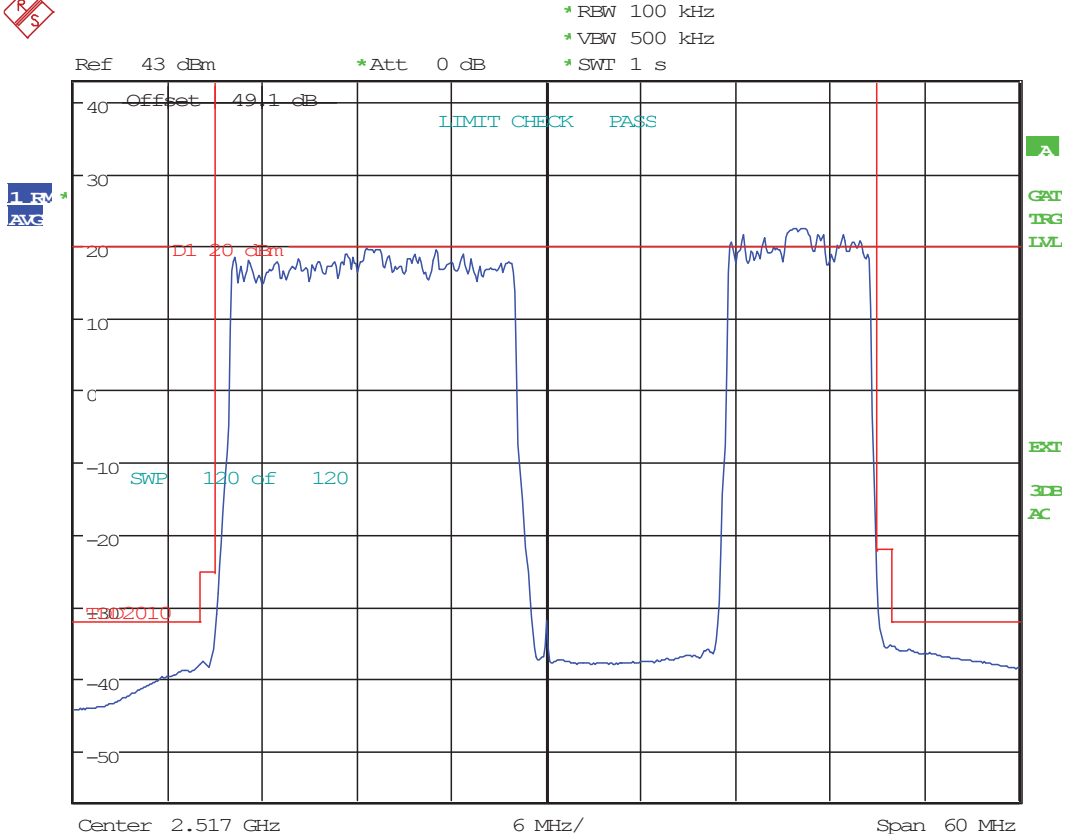
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10M BW;20W;2496-2538M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
Date: 17.DEC.2015 14:04:49



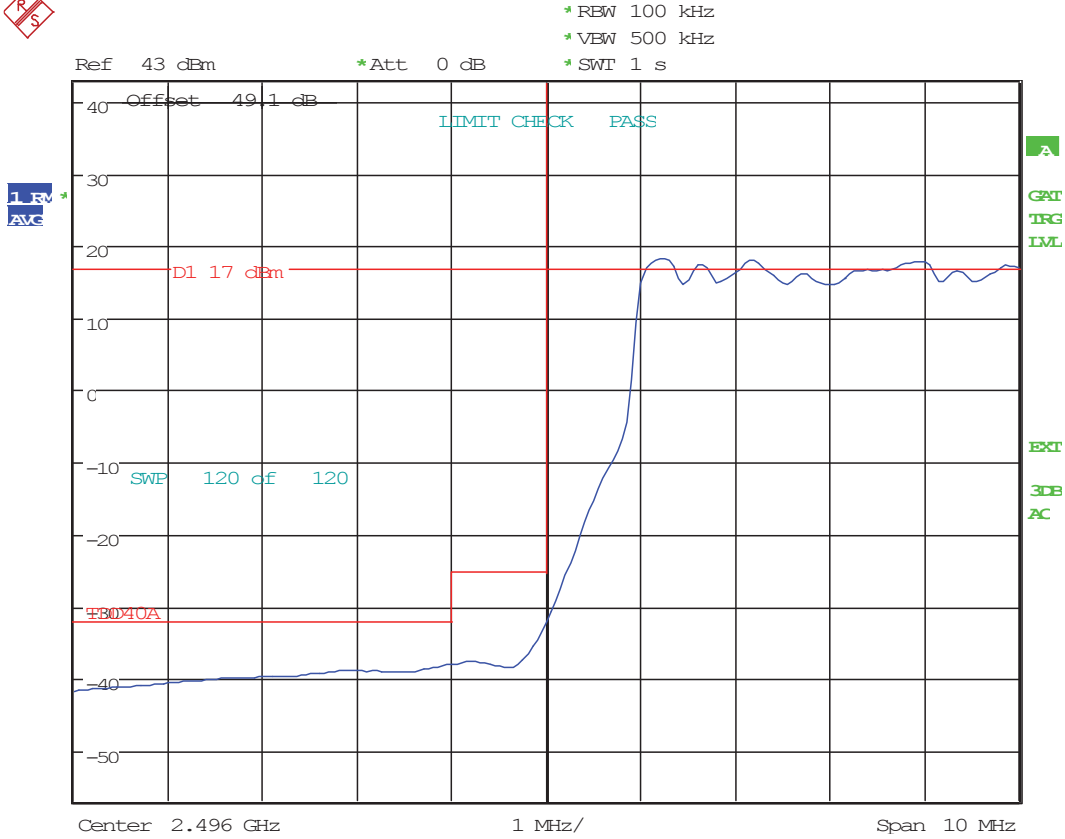
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10M BW NC;20W;2496-2538M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
Date: 17.DEC.2015 14:17:10



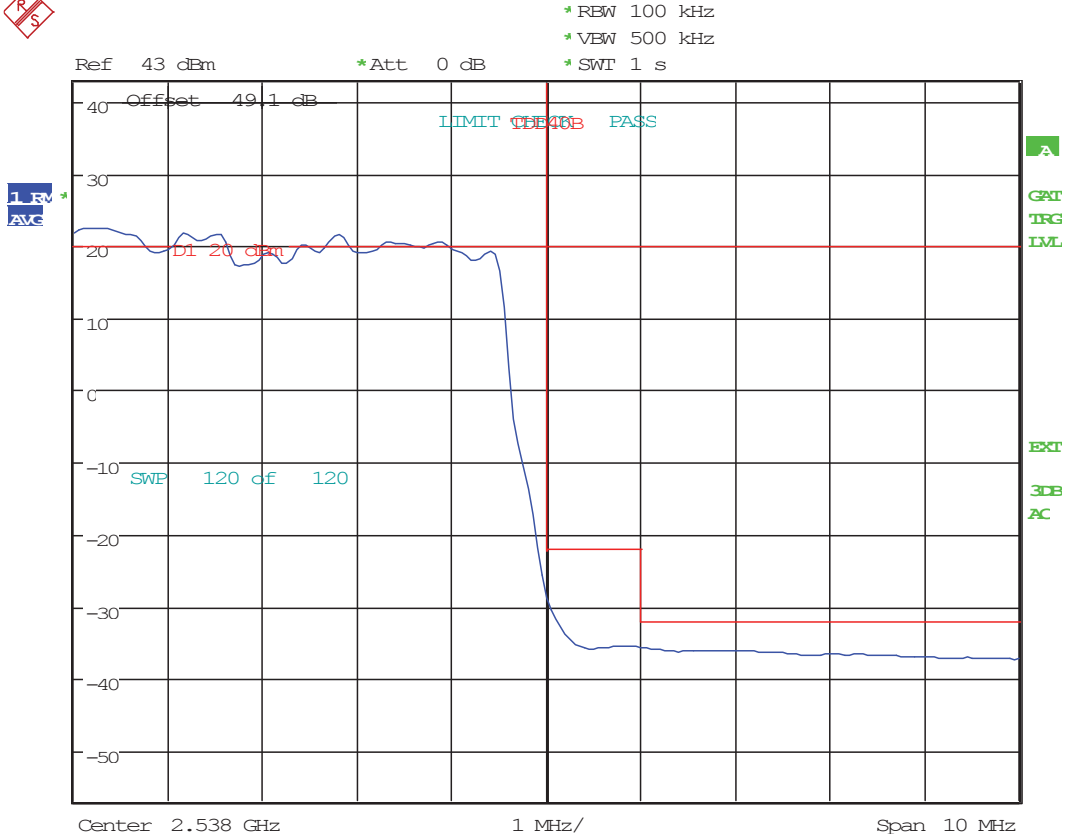
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2496-2538M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 17.DEC.2015 15:53:13



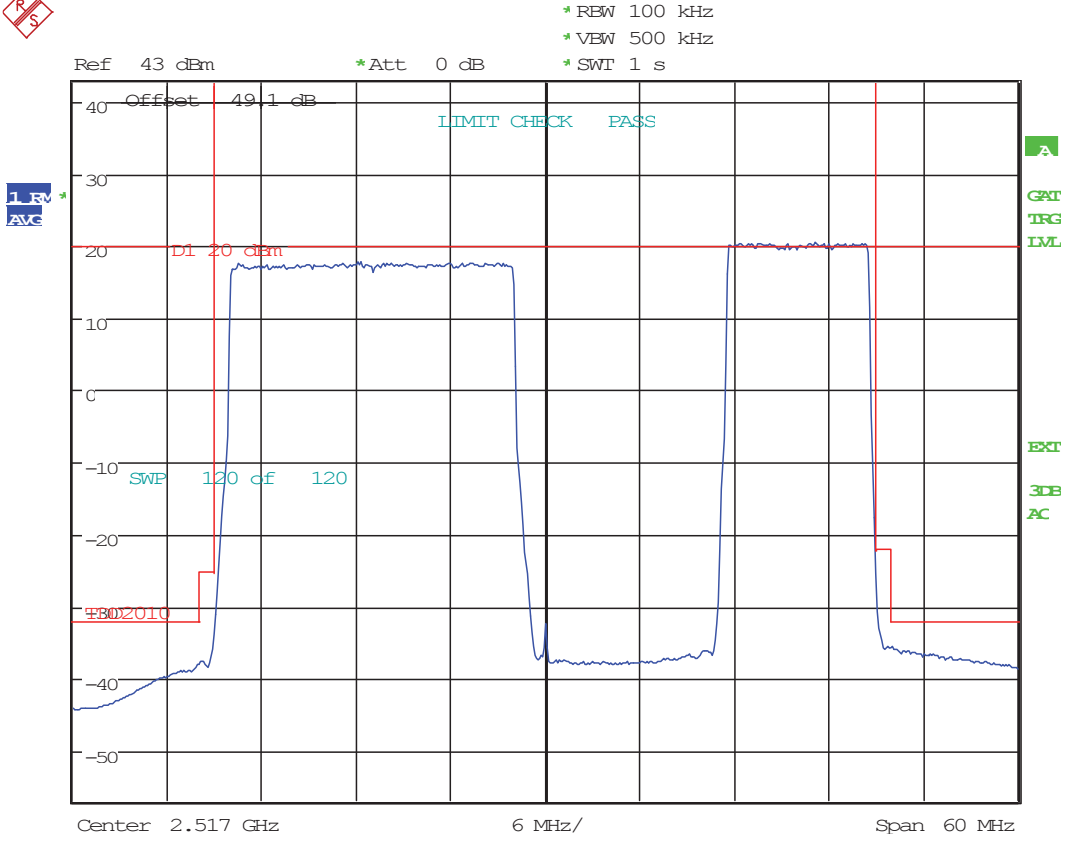
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10M BW;20W;2496-2538M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
Date: 18.DEC.2015 09:52:51



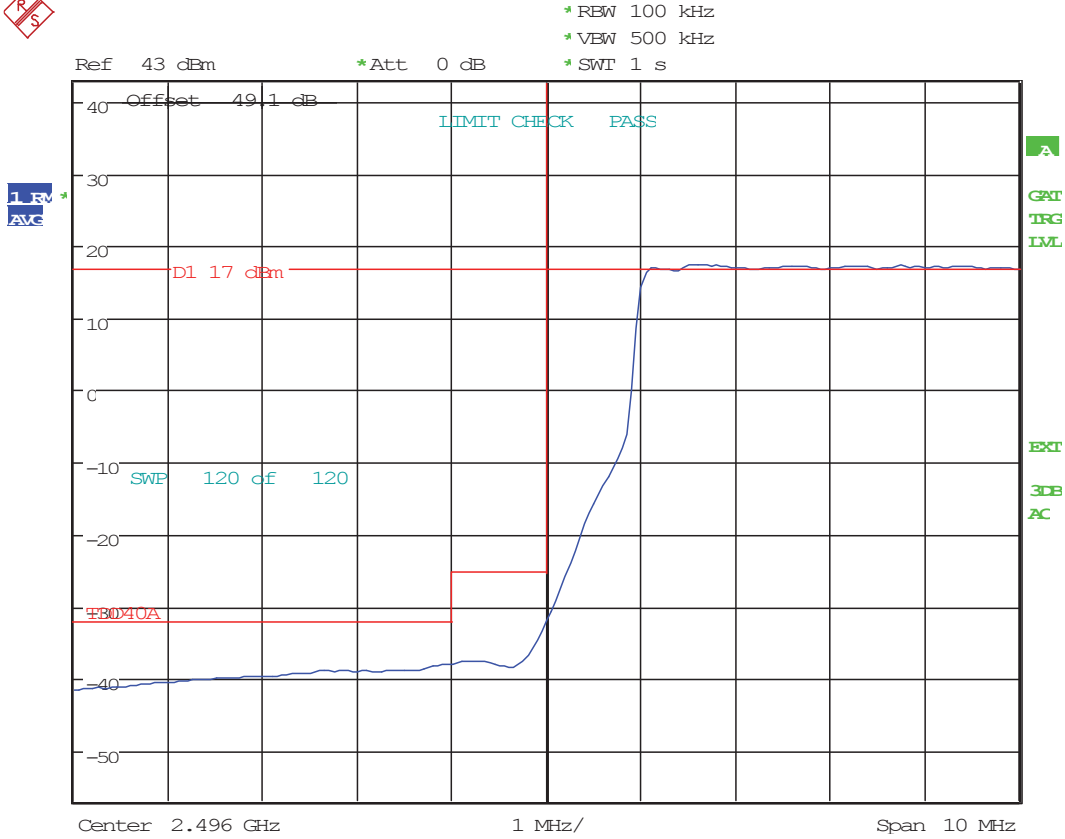
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW;20W;2496-2538M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 18.DEC.2015 10:06:18



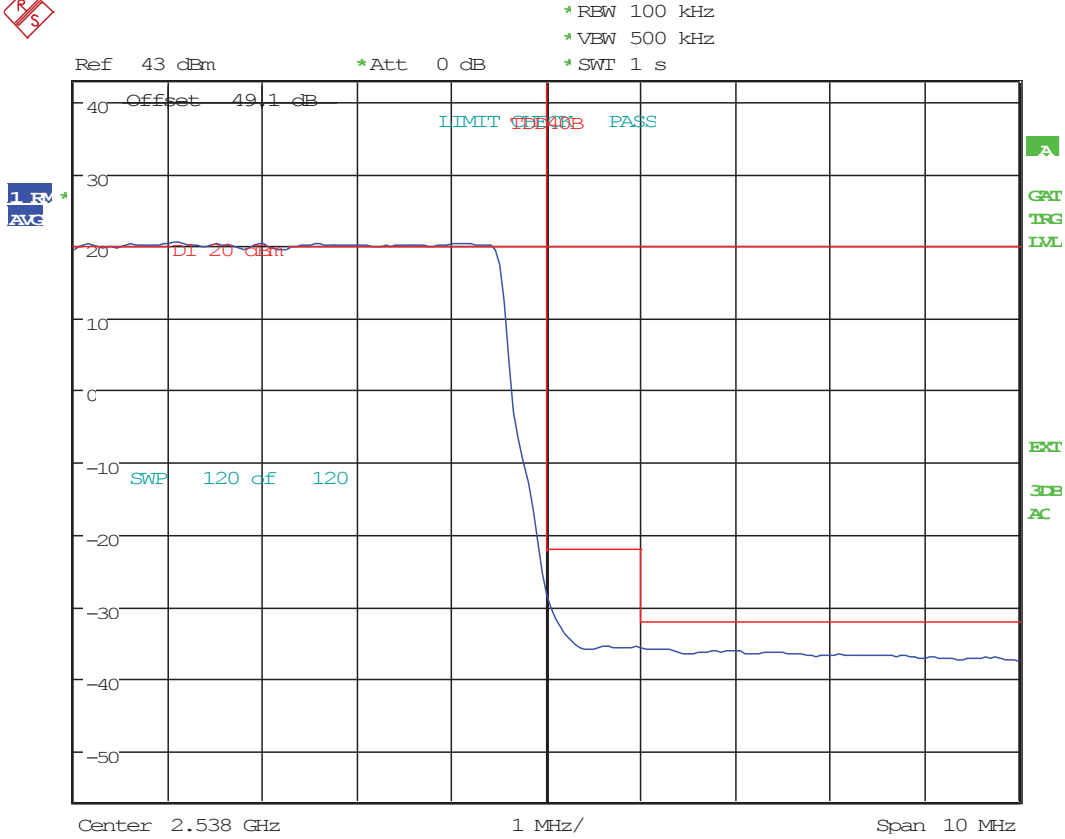
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW;20W;2496-2538M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 18.DEC.2015 10:18:08



OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10M BW;20W;2496-2538M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
Date: 18.DEC.2015 19:30:45

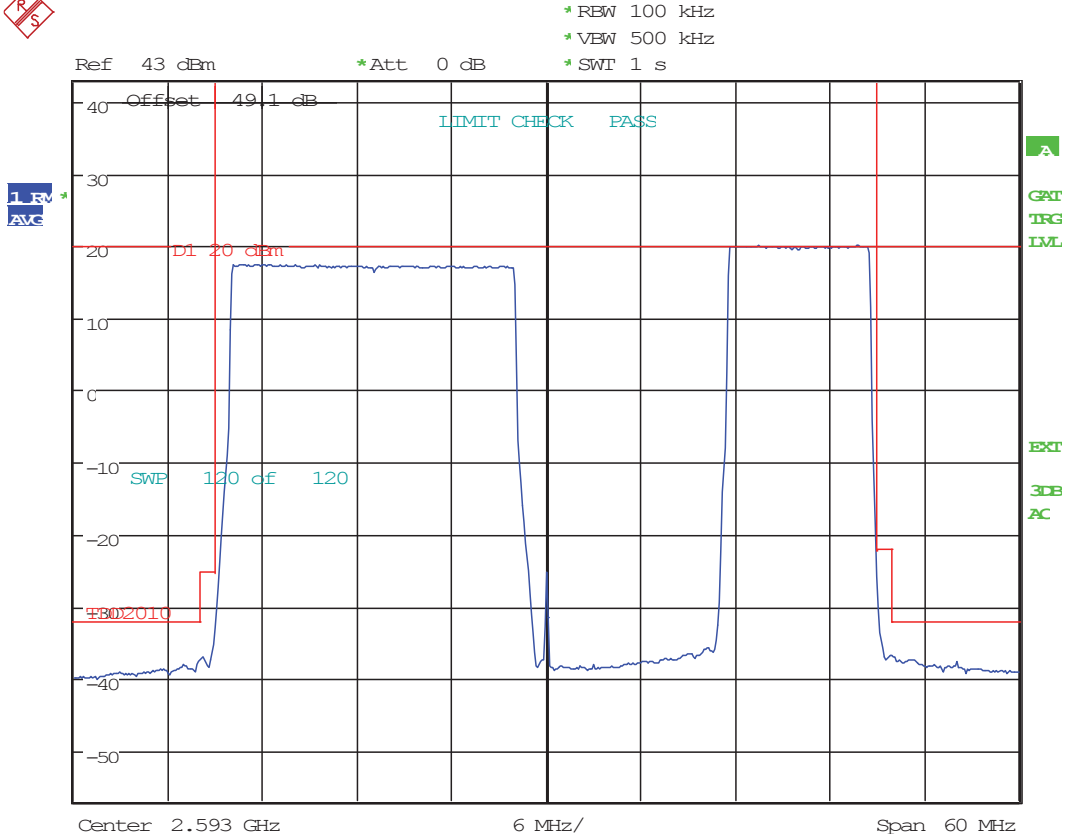


OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10M BW;20W;2496-2538M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
Date: 18.DEC.2015 19:44:18

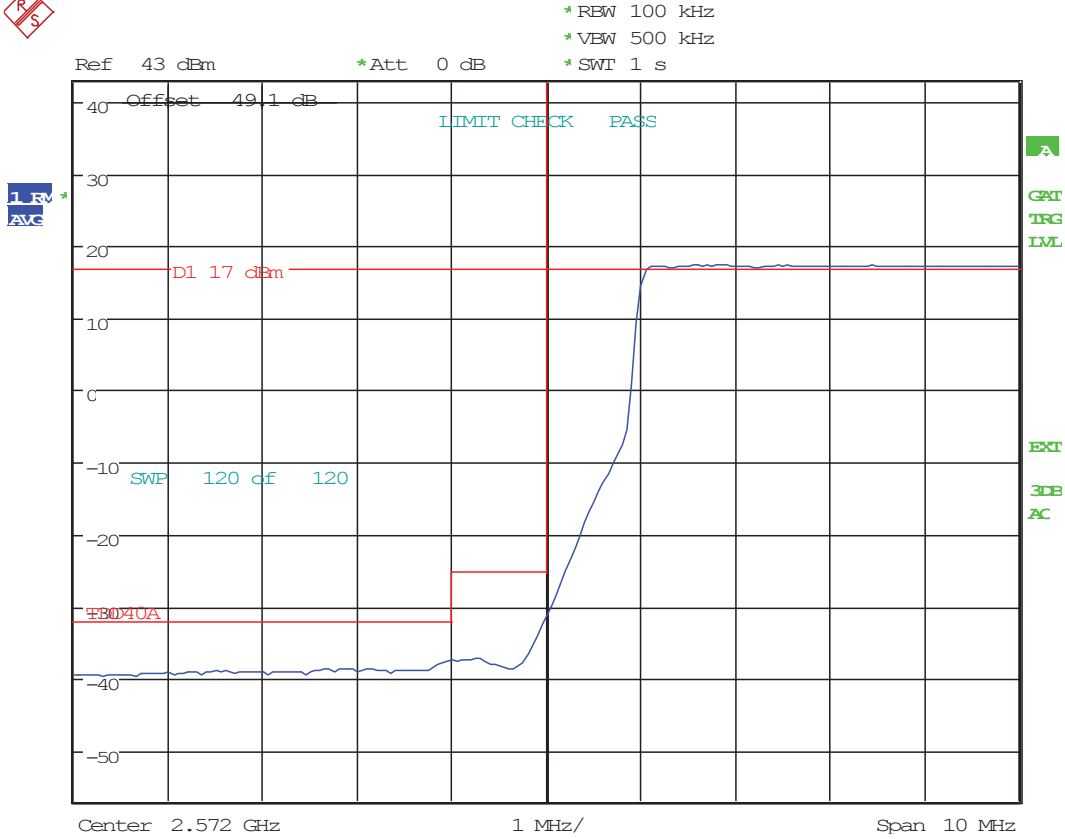


OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW;20W;2496-2538M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 18.DEC.2015 19:55:57

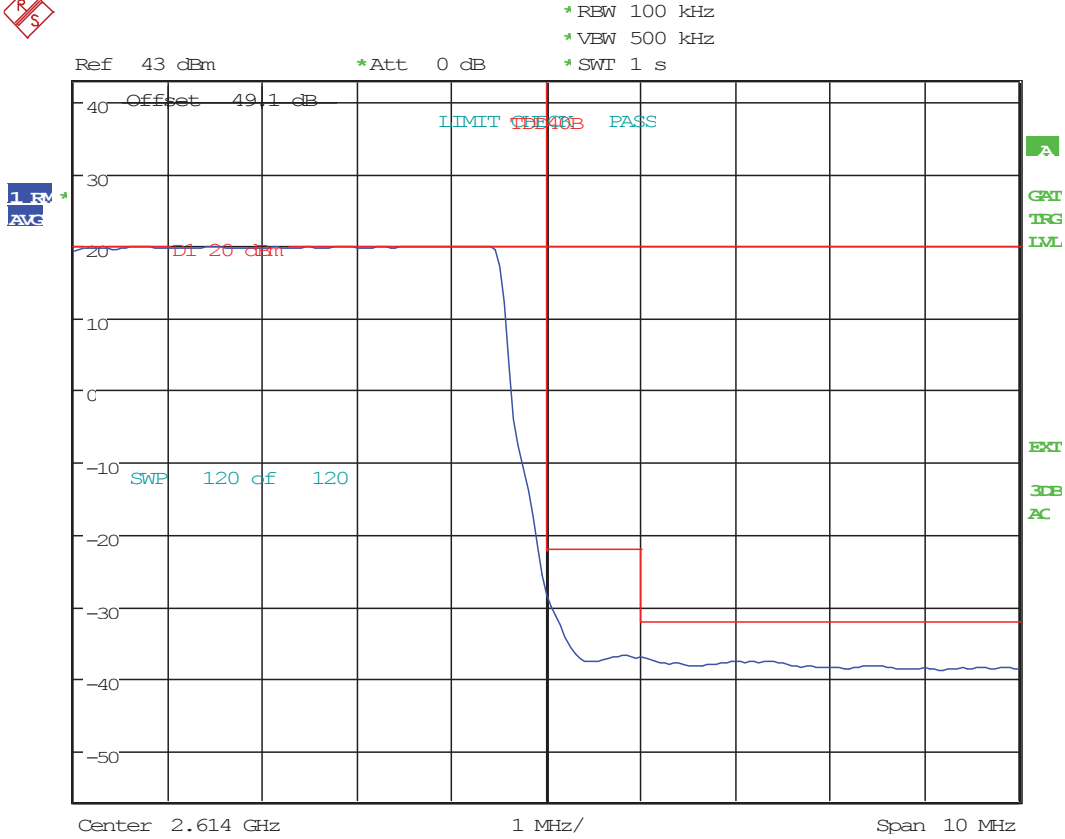
**20+10MHz Bandwidth,
2562-2582MHz, 2609-2619 MHz
(Middle)
8x20 watts (MIMO)**



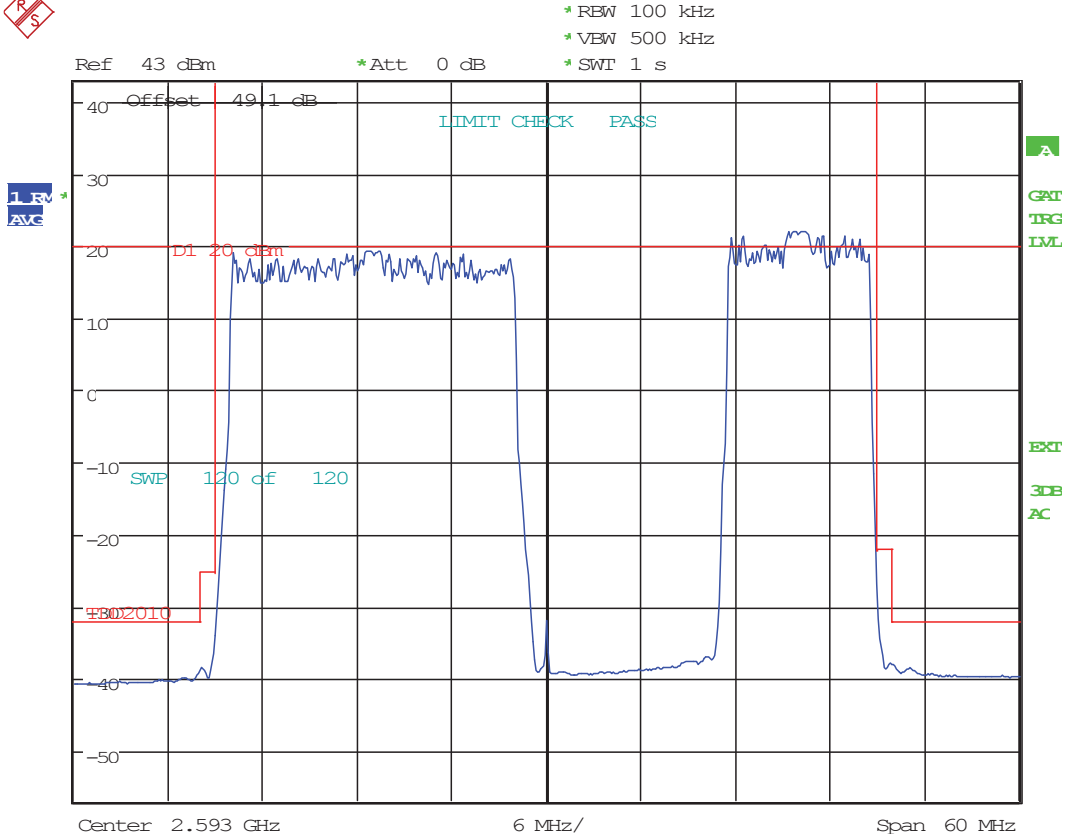
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10M BW;20W;2572-2614M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
Date: 21.DEC.2015 15:27:37



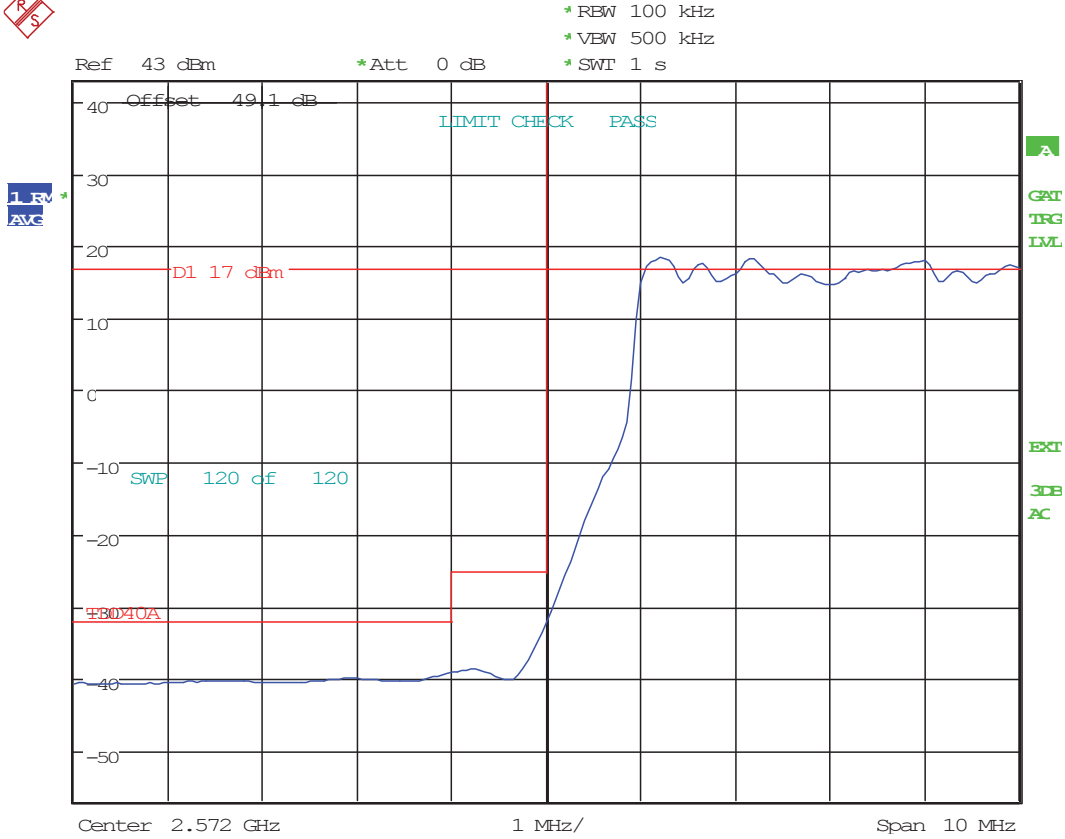
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10M BW;20W;2572-2614M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
Date: 21.DEC.2015 15:39:49



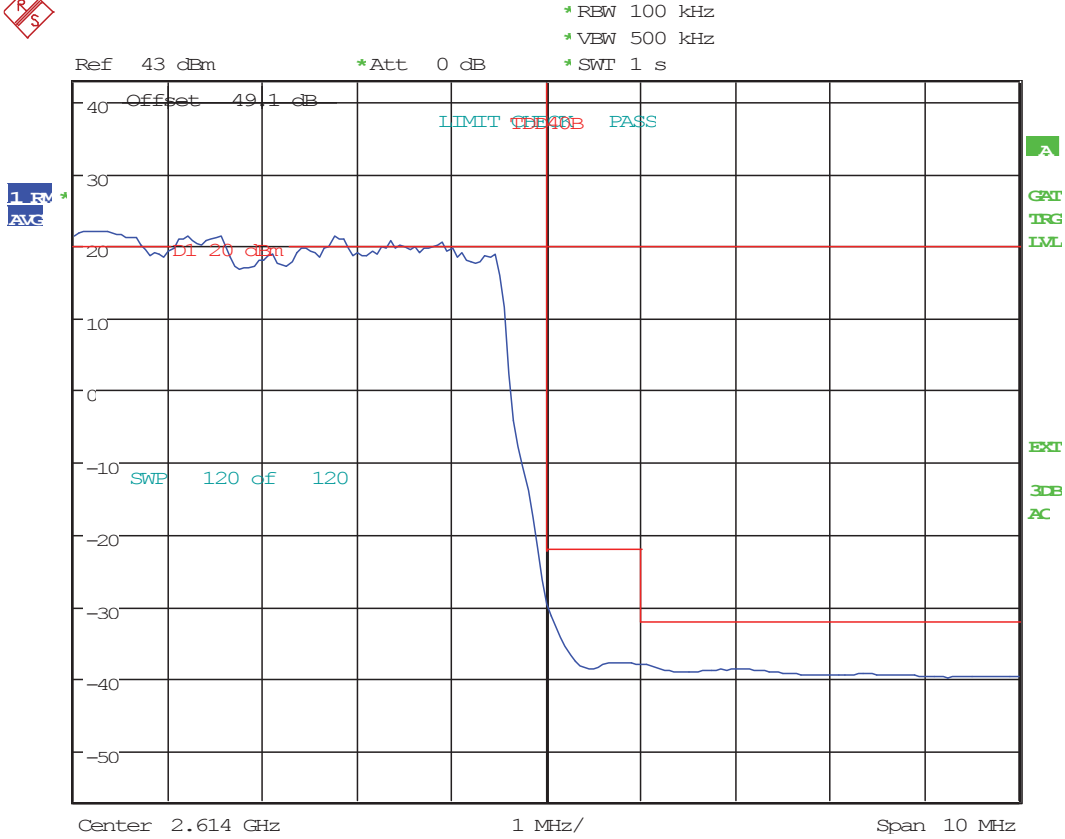
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10M BW;20W;2572-2614M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
Date: 21.DEC.2015 15:51:33



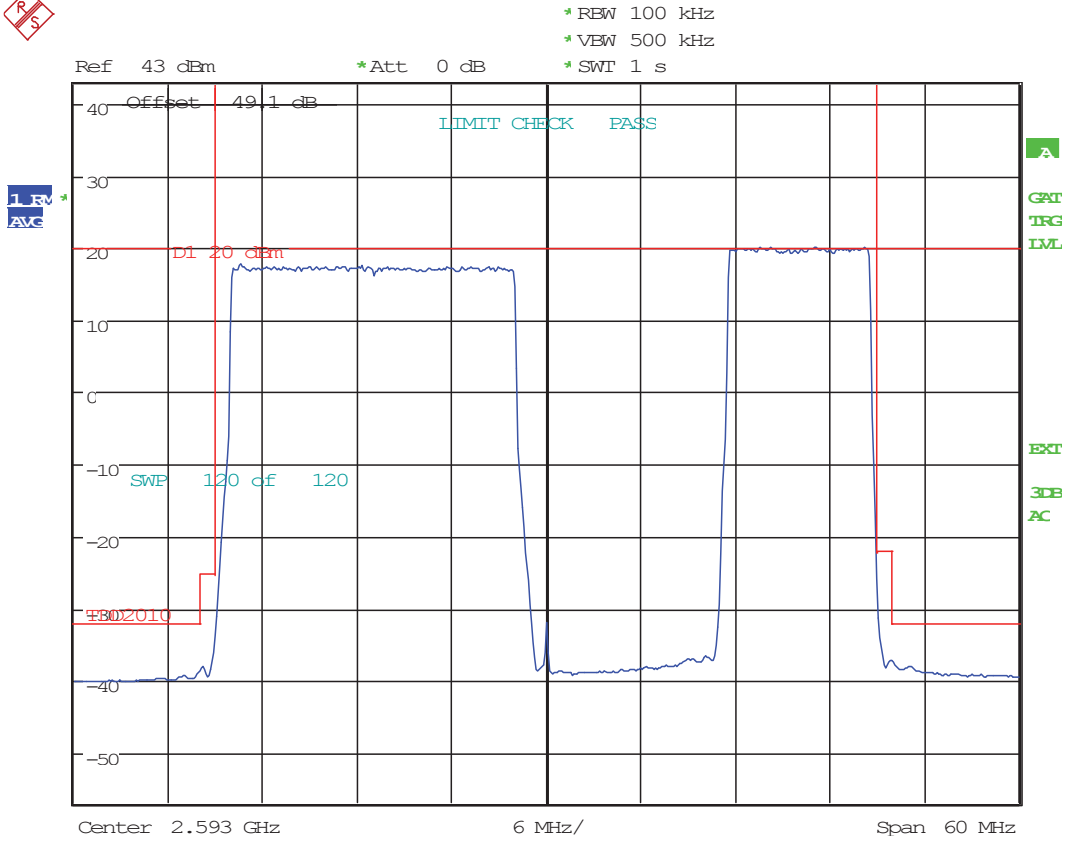
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10M BW;20W;2572-2614M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
Date: 21.DEC.2015 16:44:02



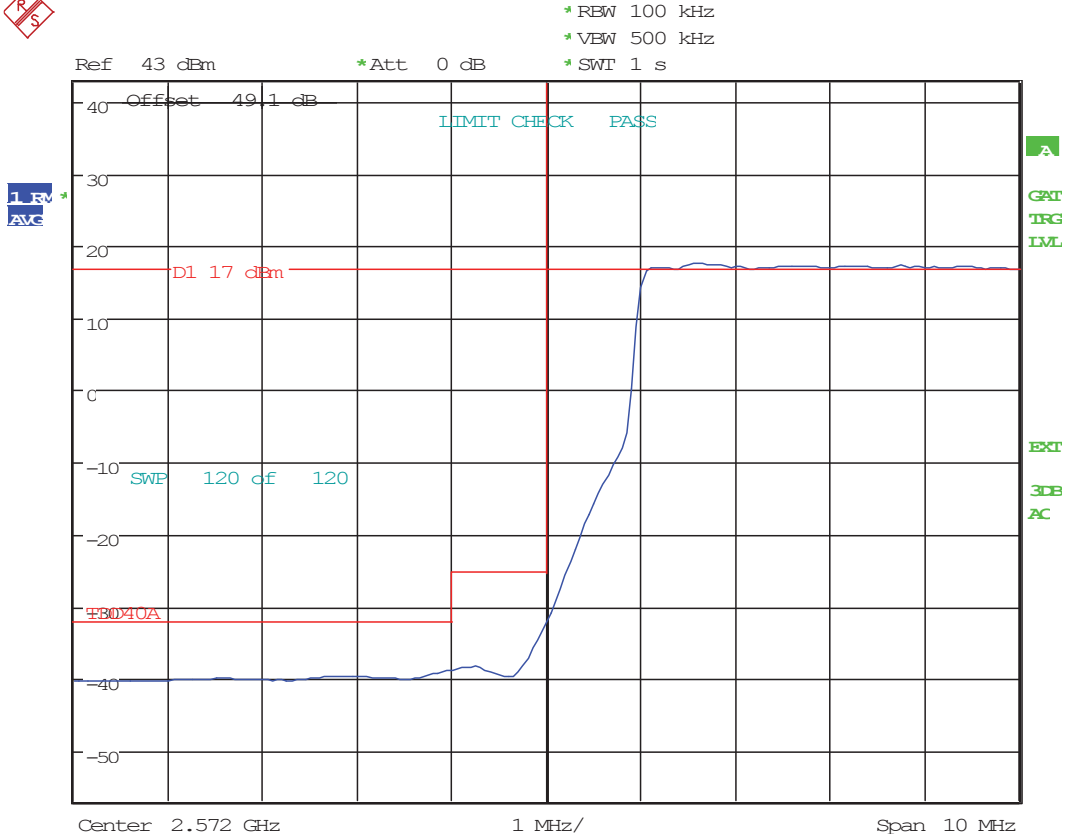
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10M BW;20W;2572-2614M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
Date: 21.DEC.2015 16:56:22



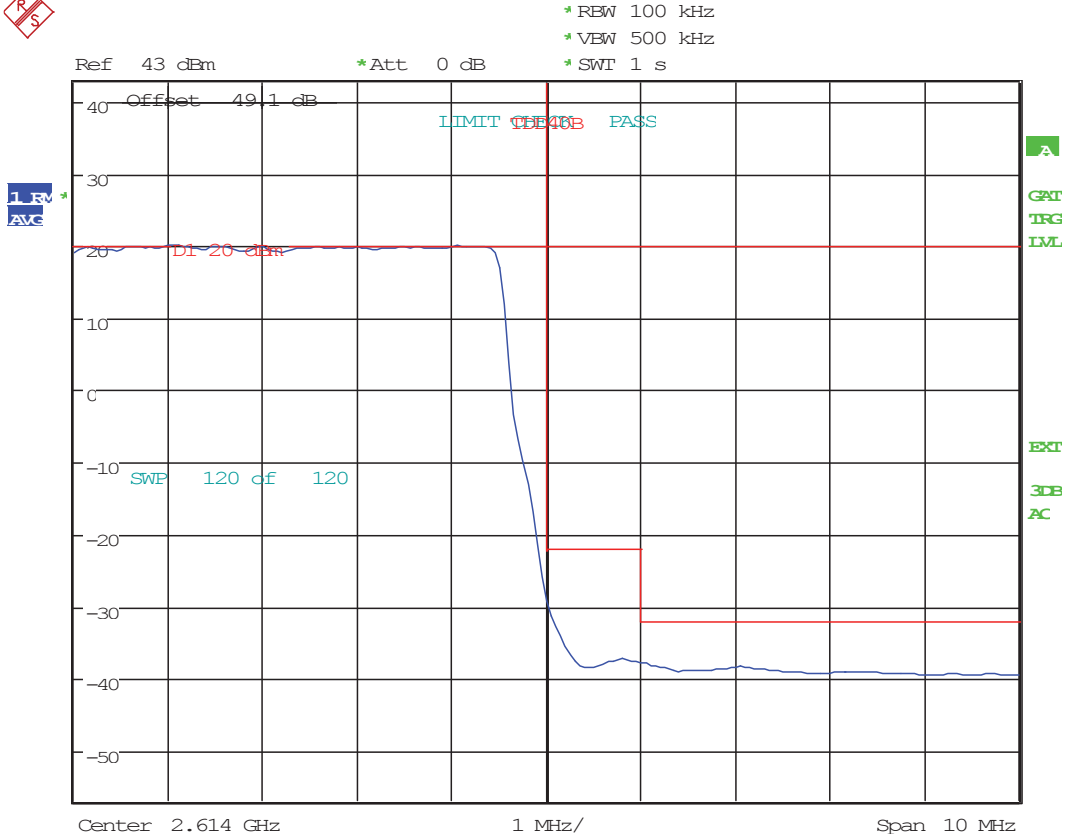
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW;20W;2572-2614M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 21.DEC.2015 17:08:46



OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10M BW;20W;2572-2614M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
Date: 22.DEC.2015 11:12:57

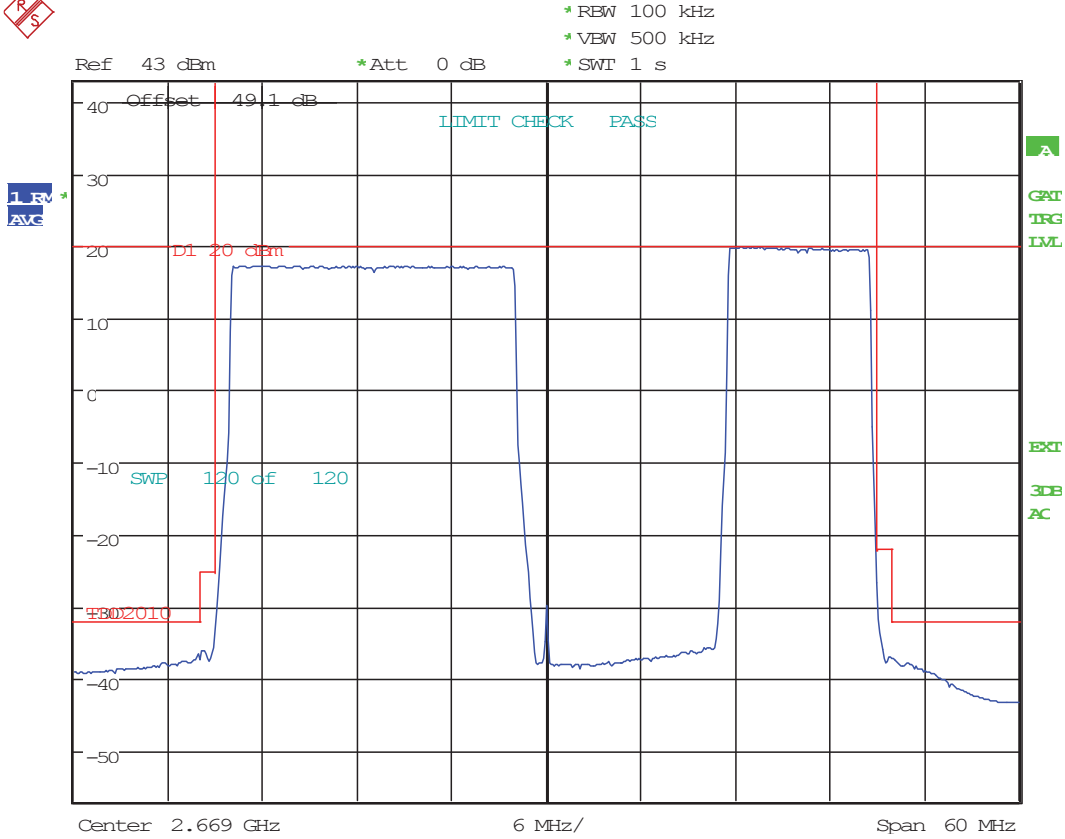


OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW;20W;2572-2614M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 22.DEC.2015 11:25:54

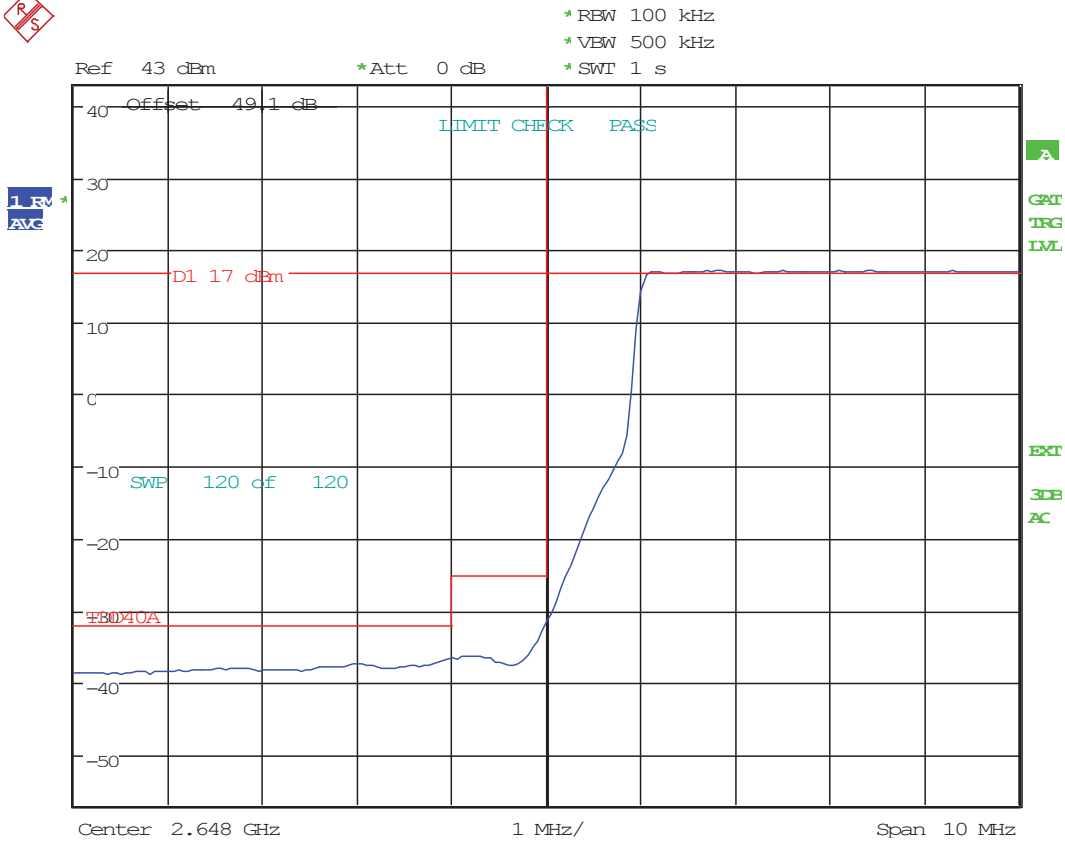


OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10M BW;20W;2572-2614M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
Date: 22.DEC.2015 11:44:11

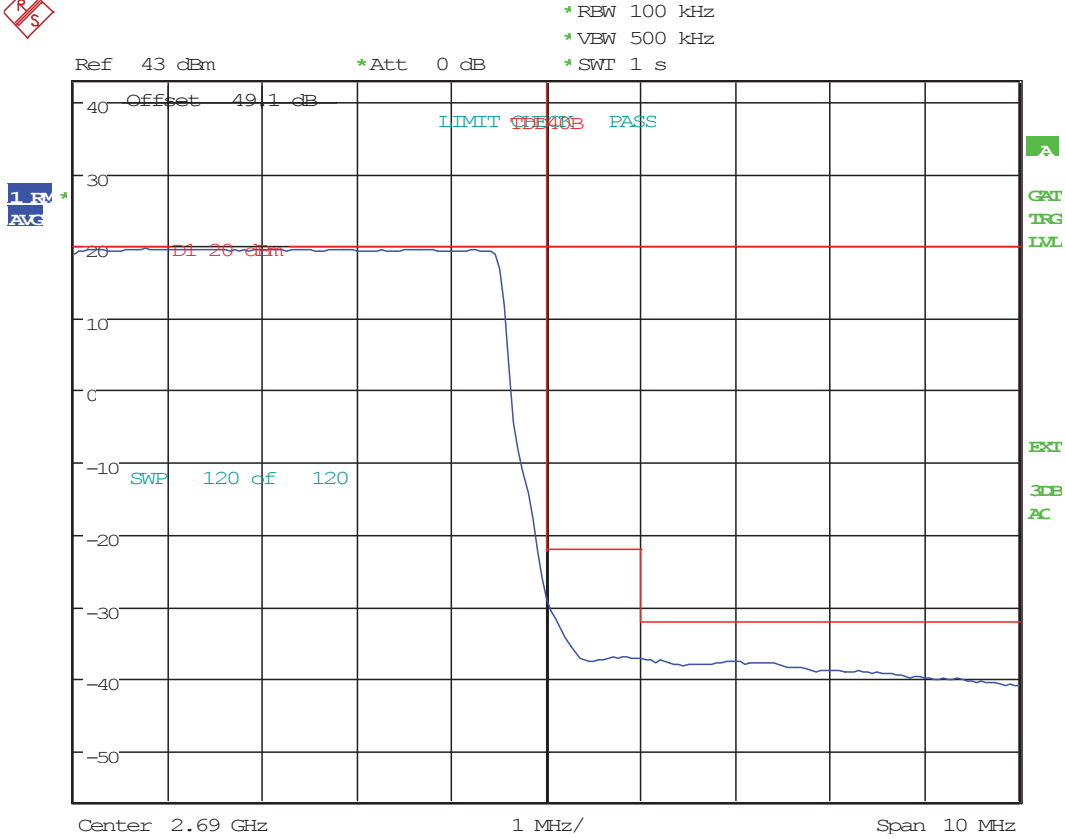
**20+10MHz Bandwidth,
2648-2668MHz, 2680-2690 MHz
(Higher)
8x20 watts (MIMO)**



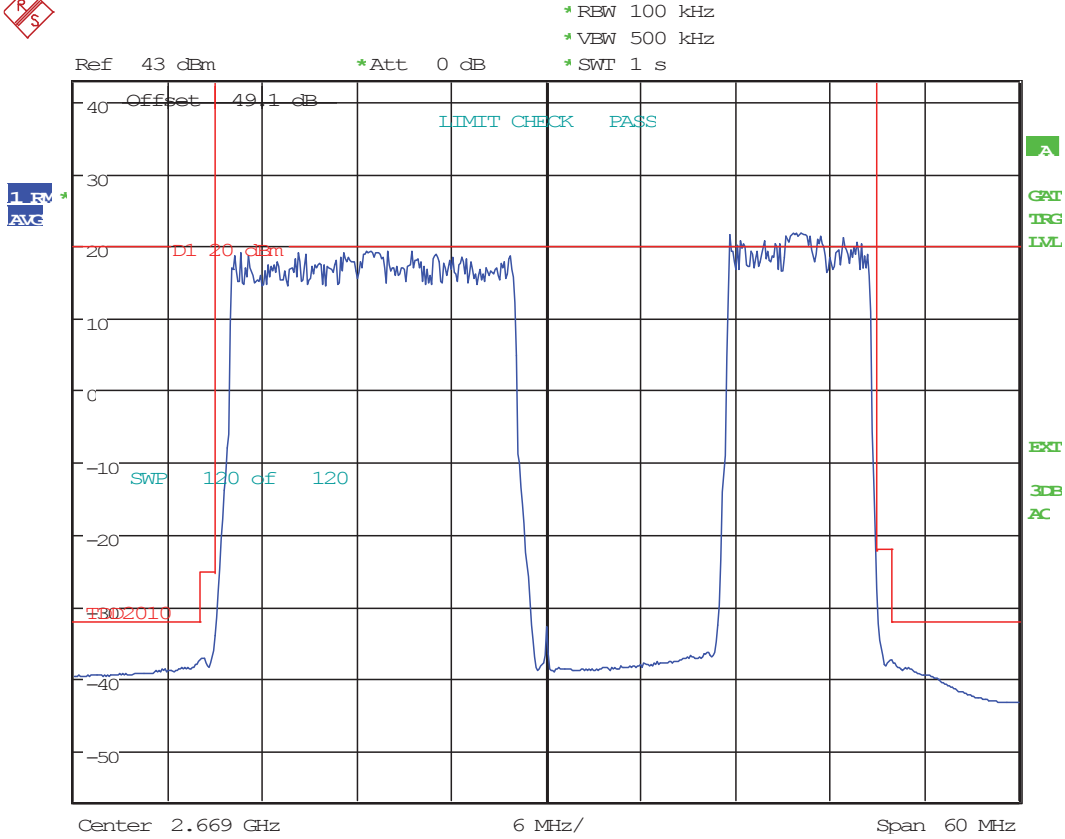
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10M BW;20W;2658-2685M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
Date: 22.DEC.2015 15:15:01



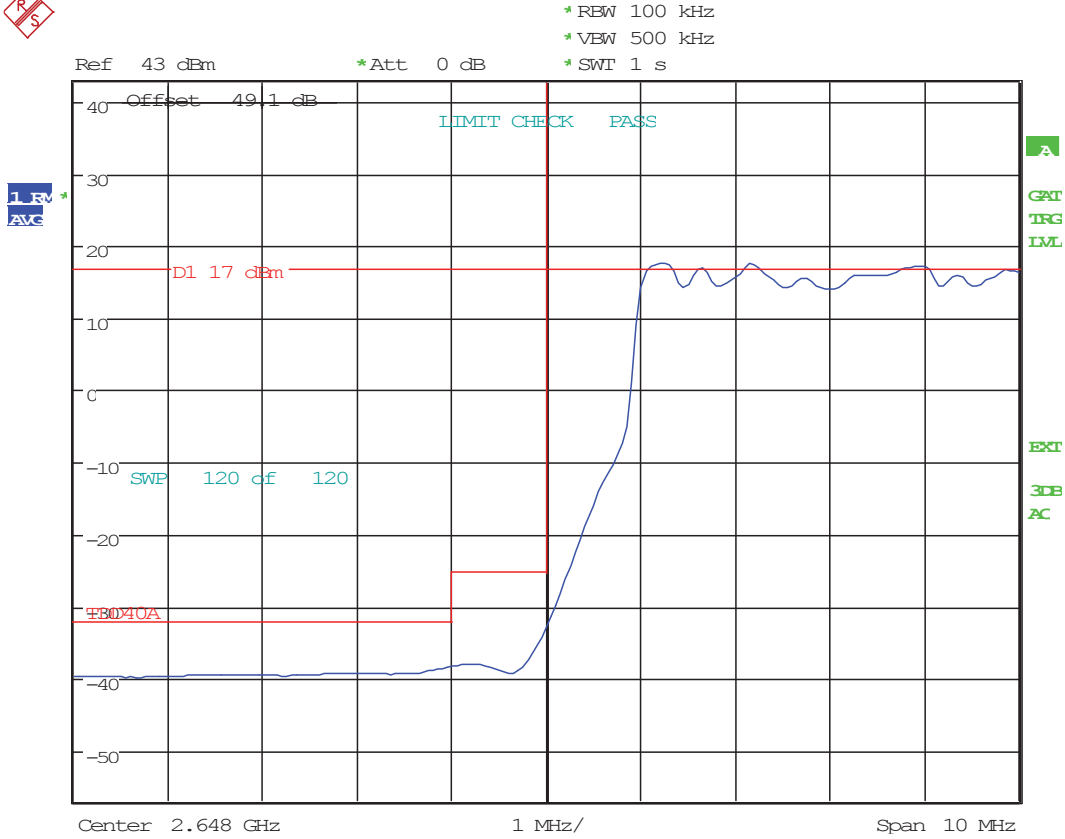
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10M BW;20W;2658-2685M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
Date: 22.DEC.2015 15:27:39



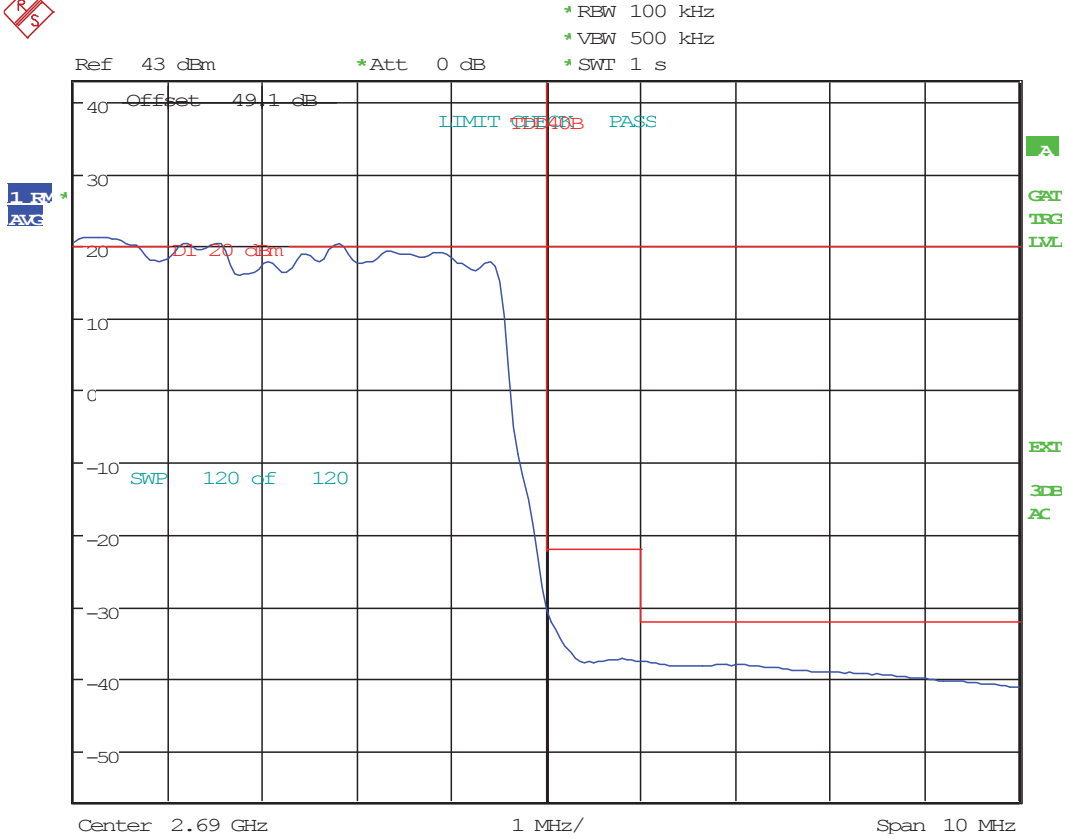
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW;20W;2658-2685M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 22.DEC.2015 15:41:55



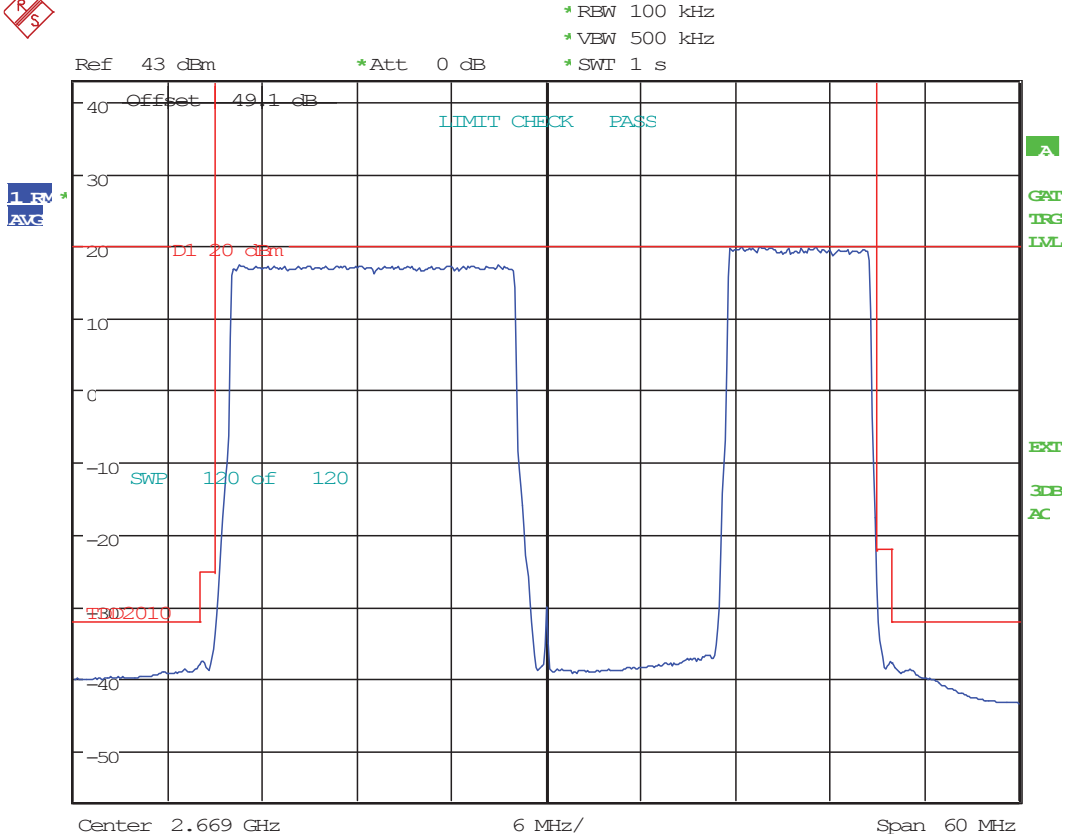
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10M BW;20W;2658-2685M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
Date: 24.DEC.2015 11:53:32



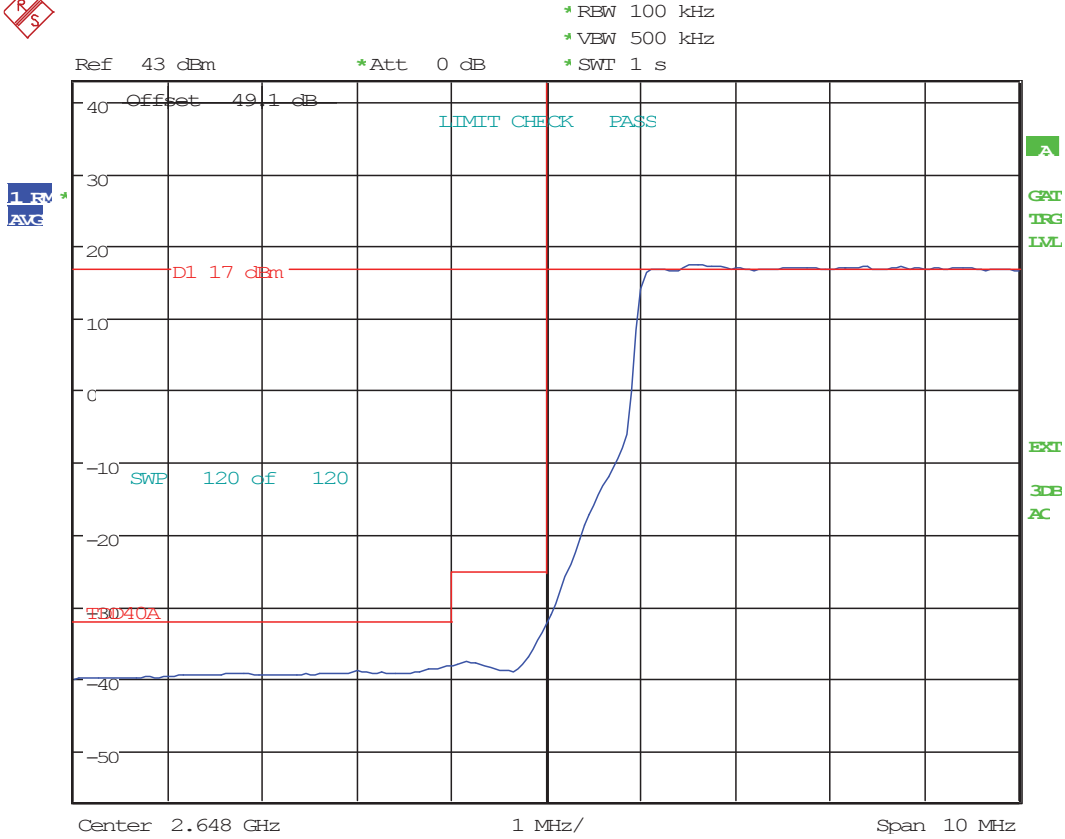
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10M BW;20W;2658-2685M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
Date: 24.DEC.2015 10:37:07



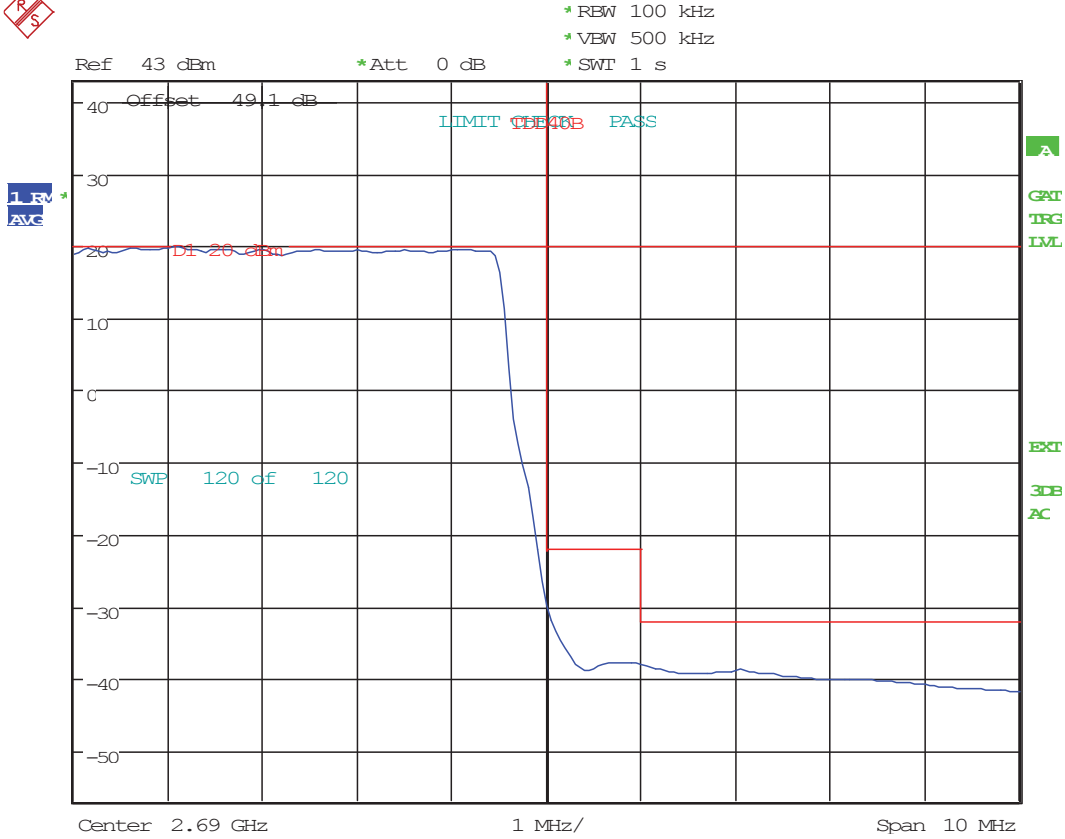
OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10M BW;20W;2658-2685M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
Date: 24.DEC.2015 10:49:09



OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10M BW;20W;2658-2685M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
Date: 24.DEC.2015 14:11:22



OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10M BW;20W;2658-2685M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
Date: 28.DEC.2015 09:58:41



OCCUPIED BANDWIDTH: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10M BW;20W;2658-2685M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
Date: 28.DEC.2015 10:14:45

4. FCC Section 2.1051

4.1 Spurious Emissions at Antenna Port – FCC 27.53 (M)(V)

Spurious Emissions at Transmit Antenna Terminals

Spurious Emissions at the transmit-antenna terminals were investigated over the frequency range of 9 kHz to the 27 GHz. The test setup is as described in Figure A. Measurements were made using a Rohde & Schwarz ESU (20Hz to 40 GHz) EMI Test receiver. The RF output from the transmitter was reduced (to an amplitude usable by the receivers) using calibrated attenuators. The RF power level was continuously monitored via RF Power Meter as shown in the test setup in Figure A. The required emission limitation is specified in 27.53 (m) (v). Measurements were made at antenna terminals for an output of 20 watts (43 dBm) for 20MHz signal carrier, 10 watts/carrier for dual carriers and 6.6 watts/carrier (38.2 dBm) for 3 carriers. The measured spurious emission levels were plotted for the frequency range 9 kHz to 27 GHz. The measurements were made using following receiver parameters:

The list of blocks and bands, tested for QPSK, 16QAM and 64QAM are listed below:

Blocks	Bandwidth (MHz)	Frequency (MHz)	Power (Watts)
Lower	20	2496-2516	20
Middle	20	2568-2588	20
Higher	20	2660-2680	20

Blocks	Bandwidth Contiguous (MHz)	Frequency (MHz)	Power (Watts)
Lower	20+20	2496-2516 and 2516-2536	20
Middle	20+20	2558-2578 and 2578-2598	20
Higher	20+20	2650-2670 and 270-2690	20

Blocks	Bandwidth Contiguous (MHz)	Frequency (MHz)	Power (Watts)
Lower	20+20+20	2496-2516, 2516-2536 and 2536-2546	20
Middle	20+20+20	2563-2583, 2583-2603 and 2603-2623	20
Higher	20+20+20	2630-2650, 2650-2670 and 2670-2690	20

Blocks	Bandwidth Non-contiguous (MHz)	Frequency (MHz)	Power (Watts)
Lower	20+10	2496-2516 and 2528-2538	20
Middle	20+10	2562-2582 and 2604-2614	20
Higher	20+10	2648-2668 and 2680-2690	20

Blocks	Bandwidth Non-contiguous (MHz)	Frequency (MHz)	Power (Watts)
Lower	20+20	2496-2516 and 2536-2556	20
Middle	20+20	2563-2583 and 2603-2623	20
Higher	20+20	2630-2650 and 2670-2690	20

FCC Section 27.53(m)(v) Based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater

Pursuant to FCC OET RULES 662911 D01 and D02 for two antenna MIMO mode of operations, the FCC limit of -13dBm and Eight MIMO the limit shall be 9dB more stringent, therefore all channel edge and out of band spurious emissions shall be -22dBm.

The tests were performed in following modulation configurations:

- A. QPSK
- B. 16 QAM
- C. 64 QAM

RESULTS:

The magnitude of spurious emissions is within the specification limits of FCC Part 27.53(m) (v).

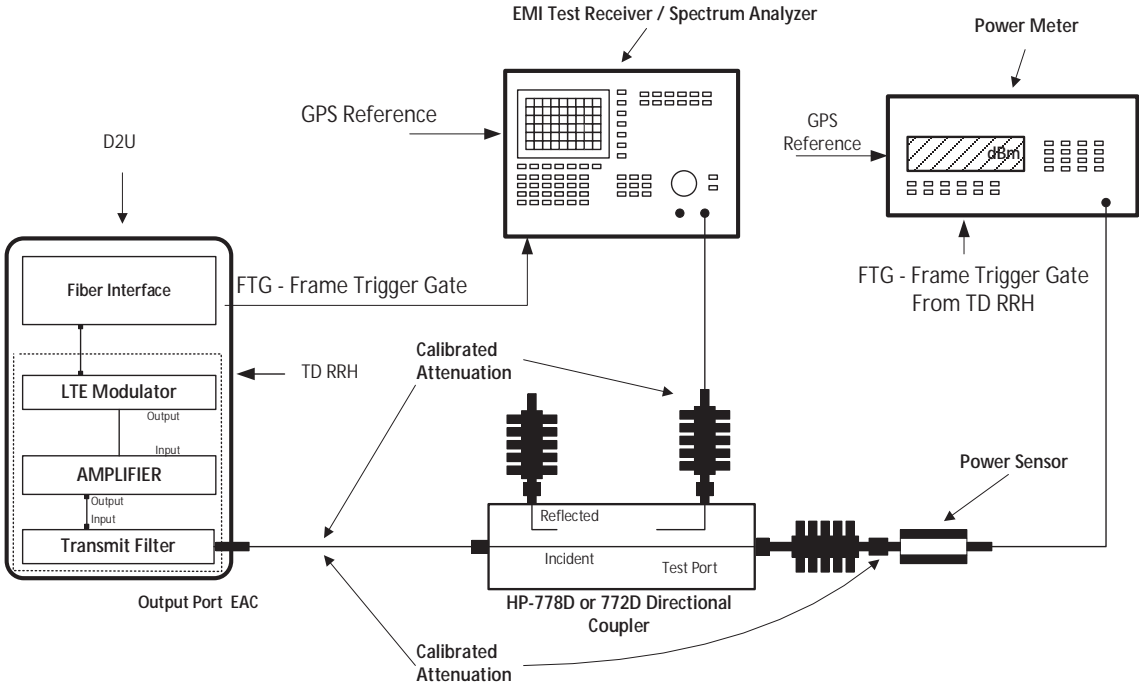
Measurement uncertainty:

9 kHz to 20 MHz: Frequency = 10 Hz, Amplitude = 0.5 dB

20 MHz to 1 GHz: Frequency = 100Hz, Amplitude = 0.5 dB

1 GHz to 10 GHz: Frequency = 10 kHz, Amplitude = 0.5 dB

Figure A. TEST CONFIGURATION FOR ANTENNA CONDUCTED SPURIOUS

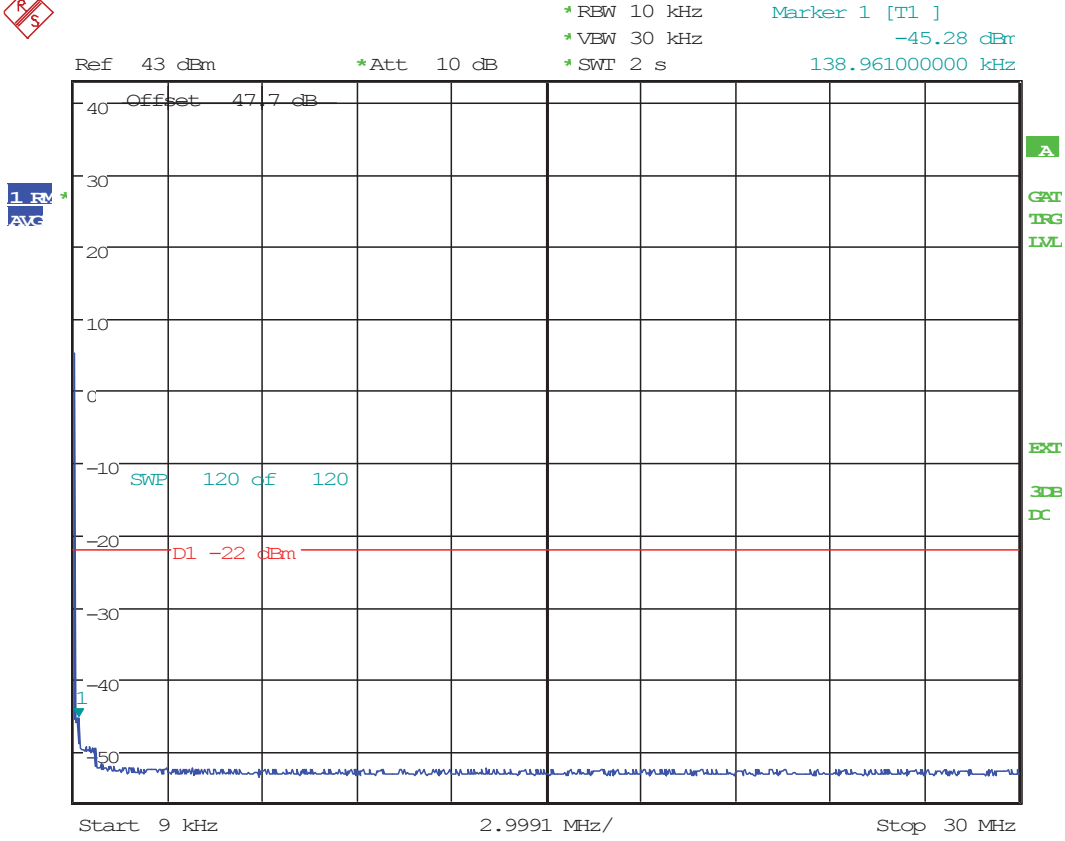


All components are calibrated over the frequency range of interest

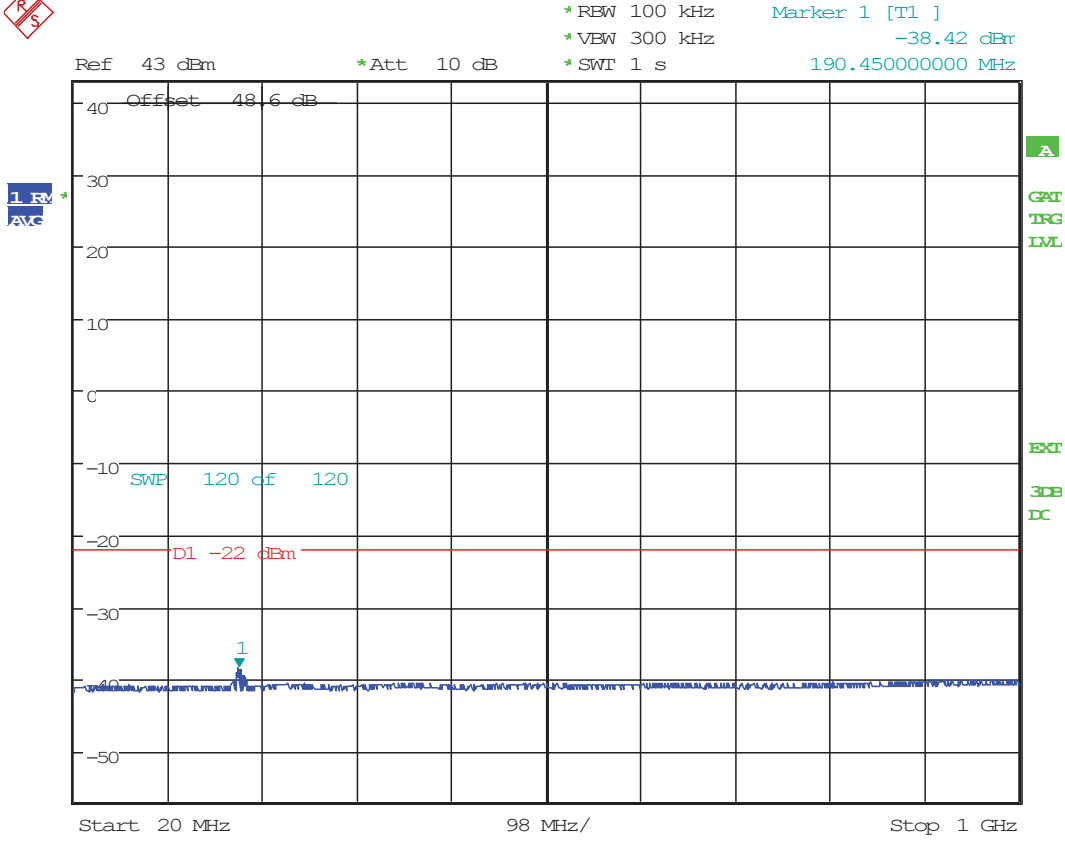
**Transmit Port
Antenna Conducted Spurious Emissions**

**20 MHz BW
QPSK Modulation
8x20 watts (MIMO)**

**Bandwidth 2496 – 2516 MHz
(Lower)**



TX Spurious; Test Eng: JY; TDD B41 RRH Cast Fingu Fltr; 20MHz BW
 ; 20W; 2496-2516MHz; -48VDC; QPSK; FCCID-ASBBTRX-15A.
 Date: 5.OCT.2015 15:00:45

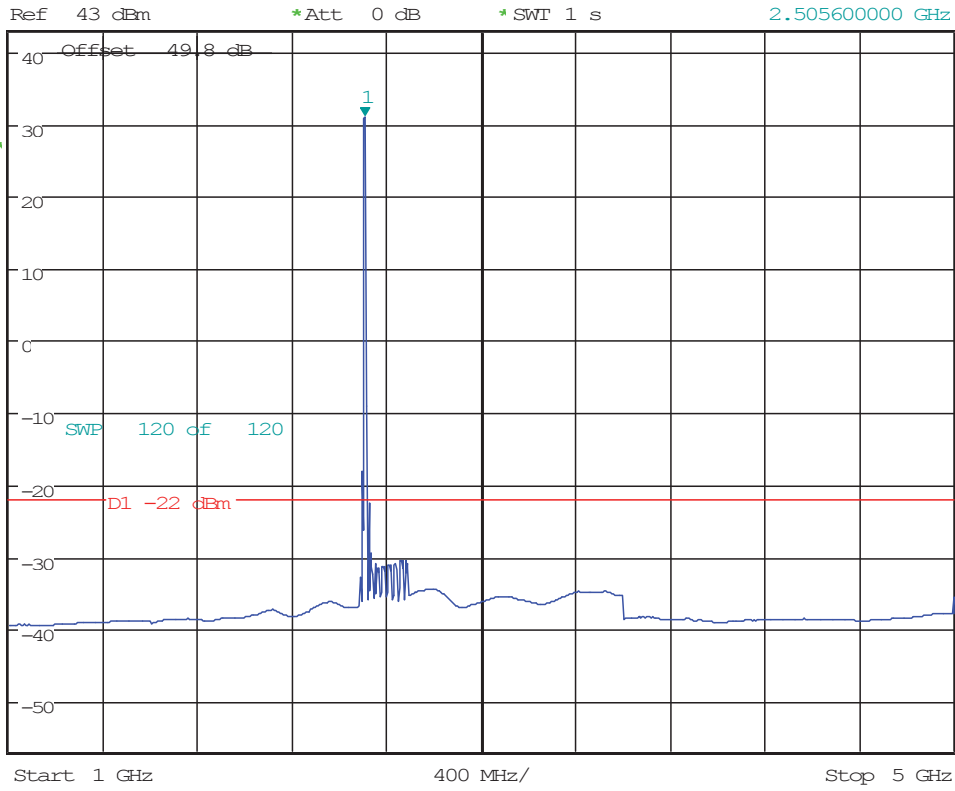


TX Spurious; Test Eng: JY; TDD B41 RRH Cast Fingu Filter; 20
 MHz BW; 20W; 2496-2516MHz; -48VDC; QPSK; FCCID-ASBBTRX-15A.
 Date: 5.OCT.2015 15:09:20

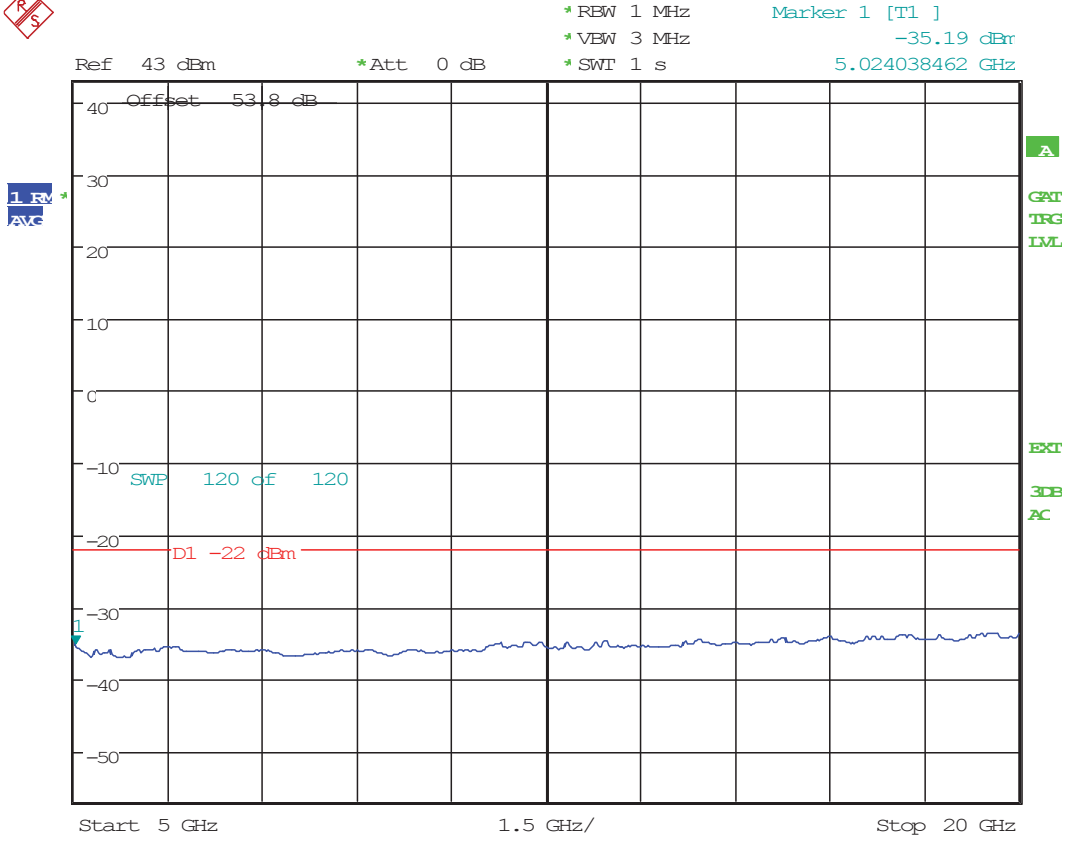


1. RV
AVE

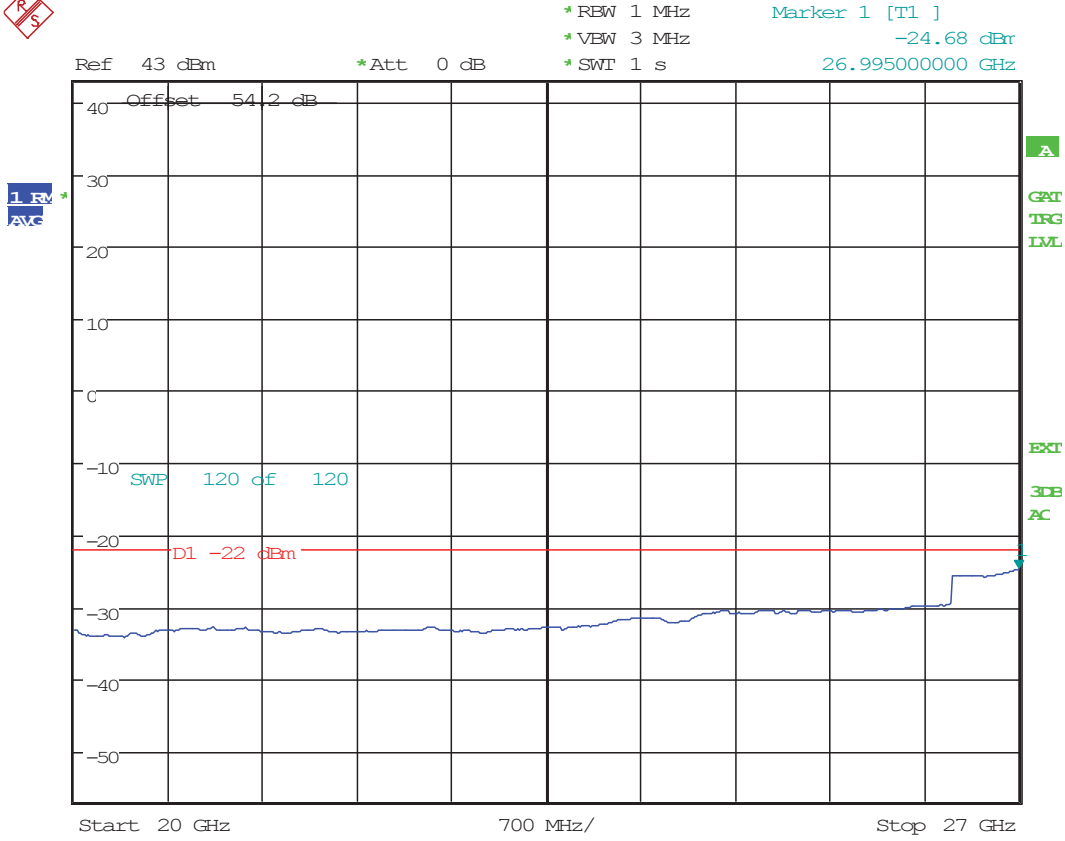
* RBW 1 MHz
* VBW 3 MHz
* SWI 1 s
Marker 1 [T1]
31.15 dBm
2.505600000 GHz



TX Spurious; Test Eng:JY; TDD B41 RRH Cast Fingu Filter; 20
MHz BW;20W;2496-2516M;-48VDC;QPSK; FCCID-ASBBTRX-15A.
Date: 5.OCT.2015 15:45:12



TX Spurious; Test Eng:JY; TDD B41 RRH Cast Fingu Filter; 20
 MHz BW;20W;2496-2516MHz;-48VDC;QPSK; FCCID-ASBBTRX-15A.
 Date: 6.OCT.2015 07:41:02

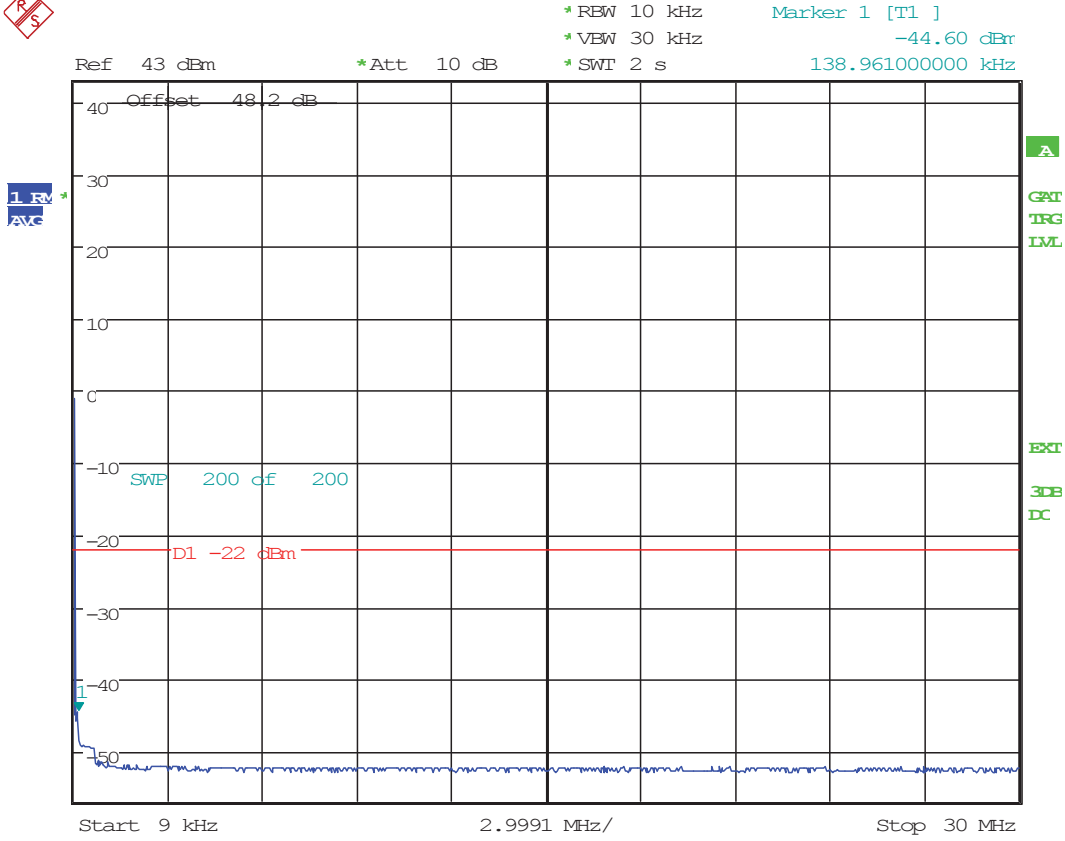


TX Spurious; Test Eng:JY; TDD B41 RRH Cast Fingu Filter; 20
 MHz BW;20W;2496-2516MHz;-48VDC;QPSK; FCCID-ASBBTRX-15A.
 Date: 6.OCT.2015 07:55:43

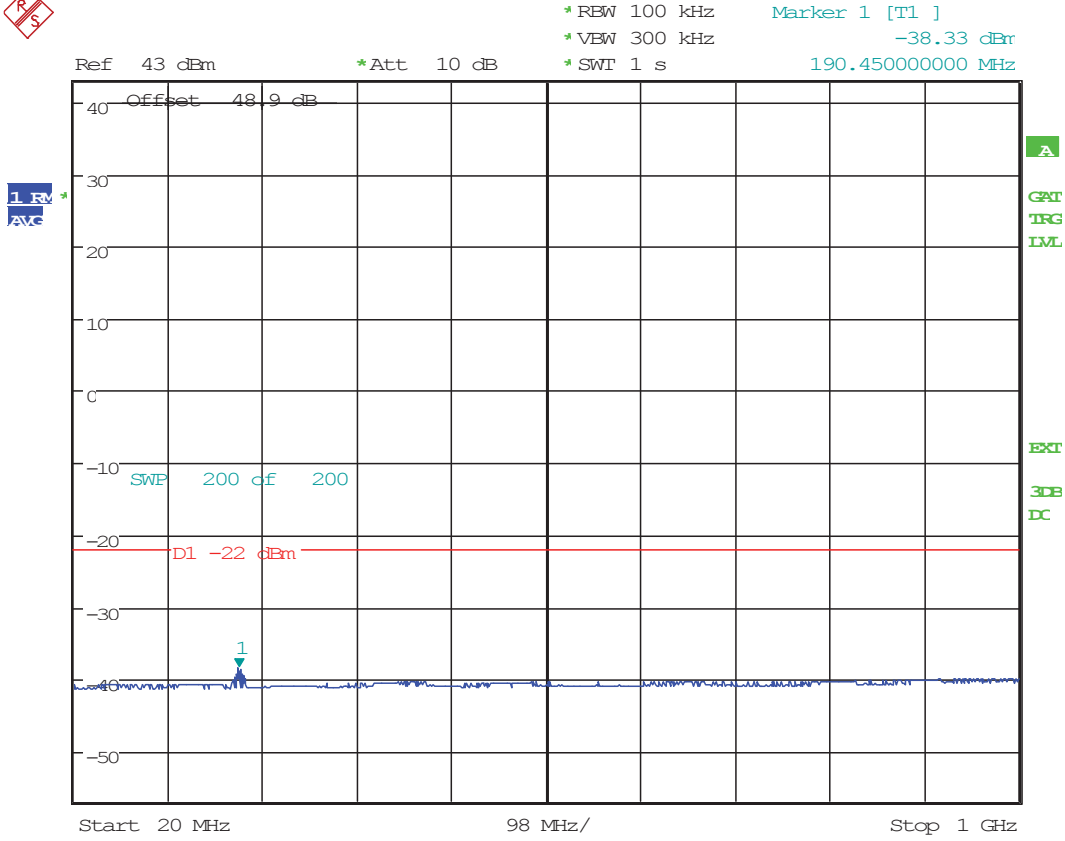
**Transmit Port
Antenna Conducted Spurious Emissions**

**20 MHz BW
16QAM Modulation
8x20 watts (MIMO)**

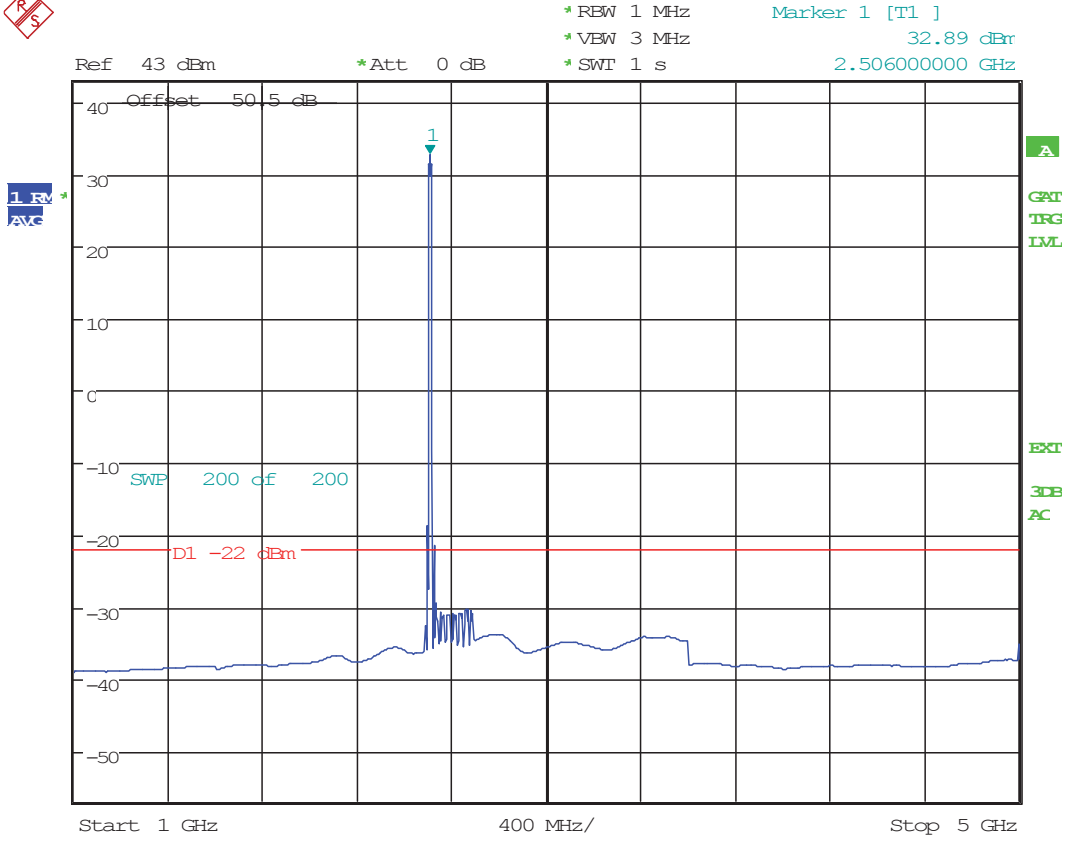
**Bandwidth 2496 – 2516 MHz
(Lower)**



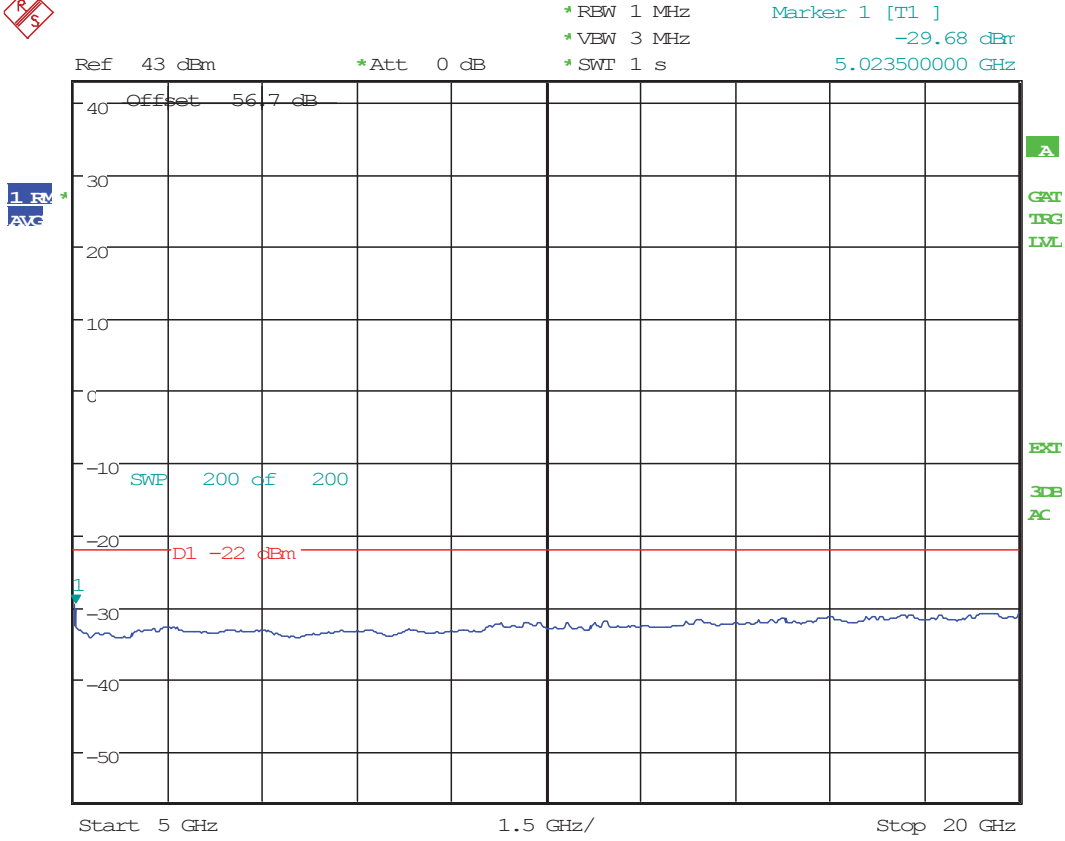
TX Spurious; Test Eng: JY; TDD B41 RRH Cast Fingu Fltr; 20MHz BW
 ; 20W; 2496-2516MHz; -48VDC; 16QAM; FCCID-ASBBTRX-15A.
 Date: 5.OCT.2015 11:03:58



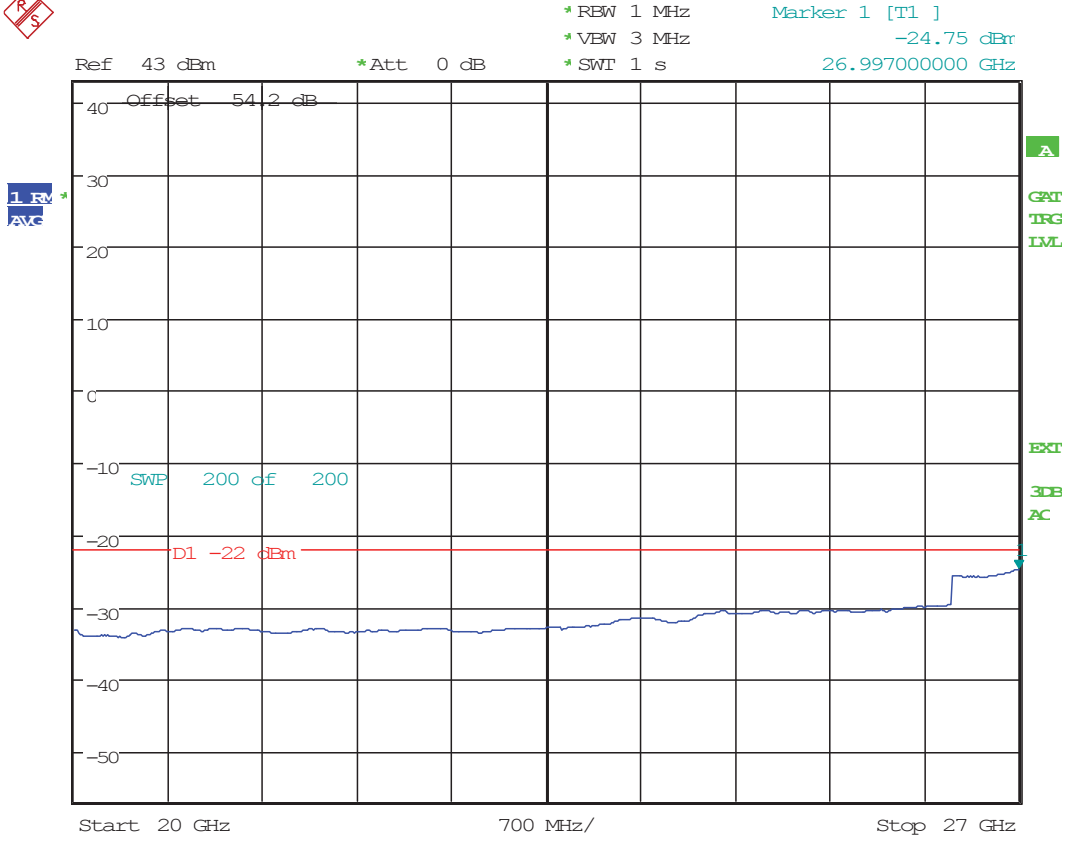
TX Spurious; Test Eng: JY; TDD B41 RRH Cast Fingu Filter; 20
 MHz BW; 20W; 2496-2516MHz; -48VDC; 16QAM; FCCID-ASBBTRX-15A.
 Date: 5.OCT.2015 11:18:13



TX Spurious; Test Eng:JY; TDD B41 RRH Cast Fingu Filter; 20
 MHz BW;20W;2496-2516M;-48VDC;16QAM; FCCID-ASBBTRX-15A.
 Date: 5.OCT.2015 11:29:41



TX Spurious; Test Eng:JY; TDD B41 RRH Cast Fingu Filter; 20
MHz BW;20W;2496-2516MHz;-48VDC;16QAM; FCCID-ASBBTRX-15A.
Date: 5.OCT.2015 11:47:22

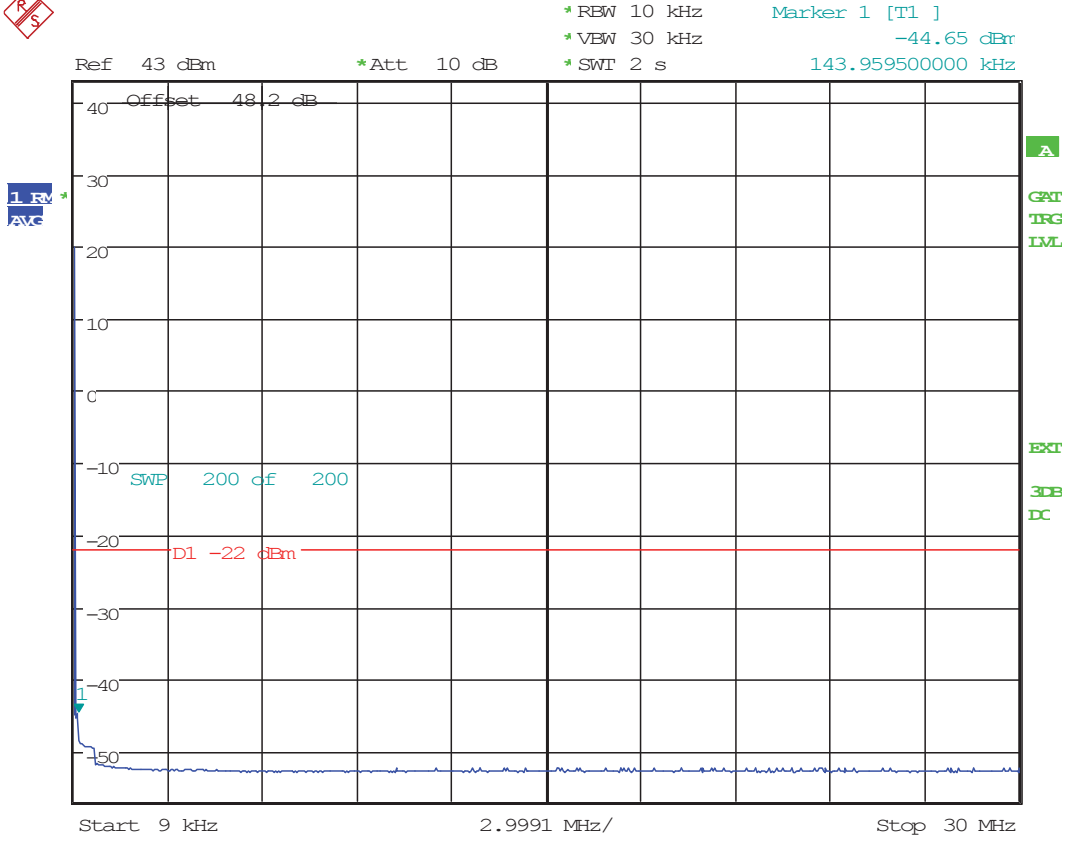


TX Spurious; Test Eng:JY; TDD B41 RRH Cast Fingu Filter; 20
 MHz BW;20W;2496-2516MHz;-48VDC;16QAM; FCCID-ASBBTRX-15A.
 Date: 5.OCT.2015 13:05:43

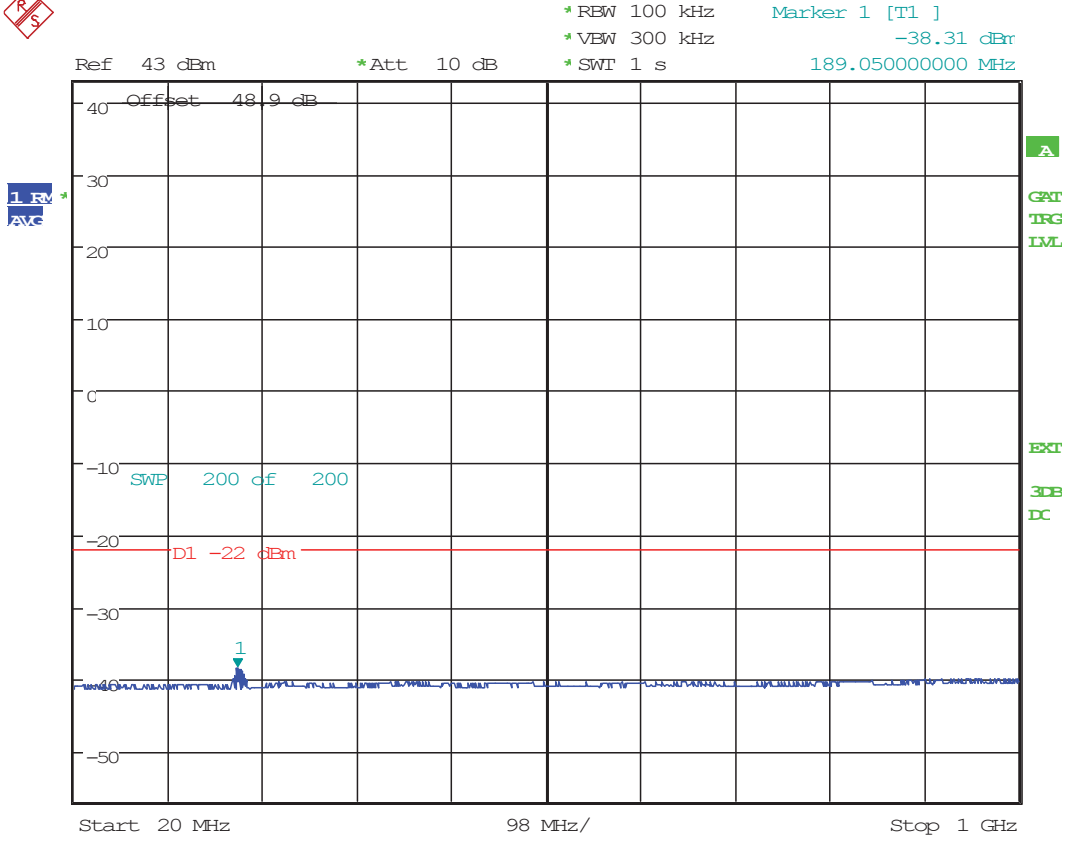
**Transmit Port
Antenna Conducted Spurious Emissions**

**20 MHz BW
64QAM Modulation
8x20 watts (MIMO)**

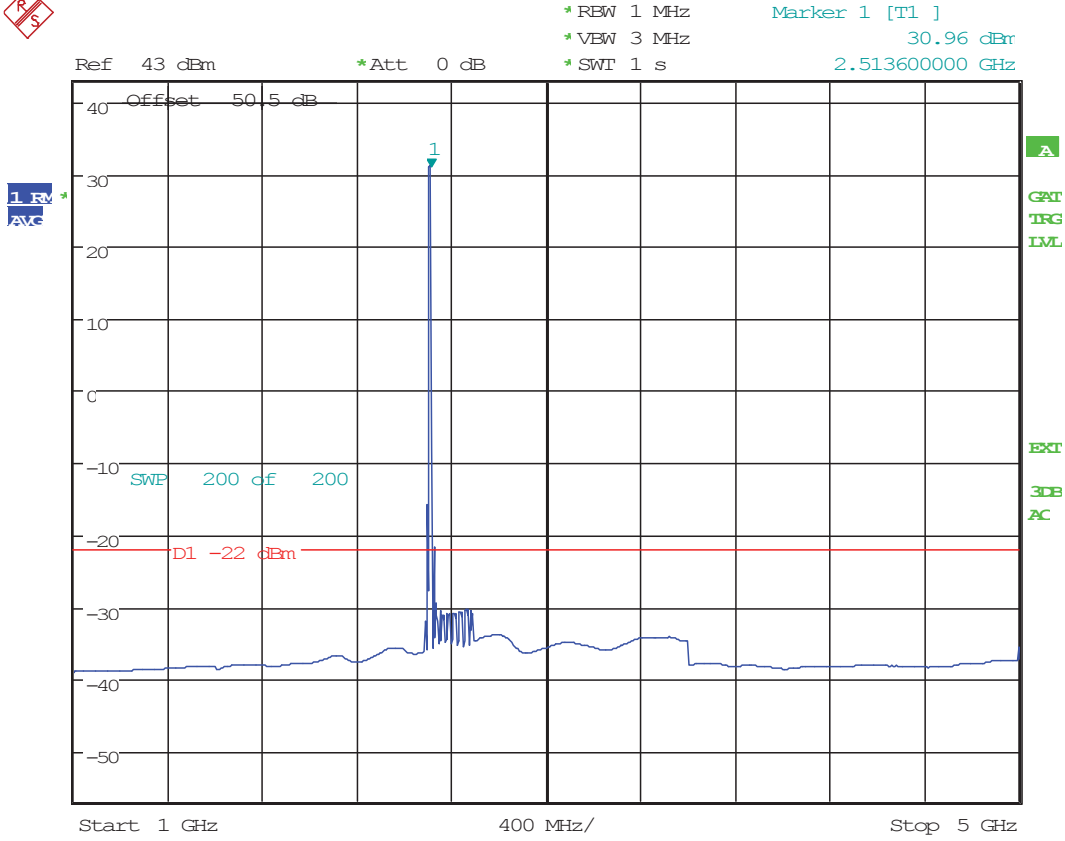
**Bandwidth 2496 – 2516 MHz
(Lower)**



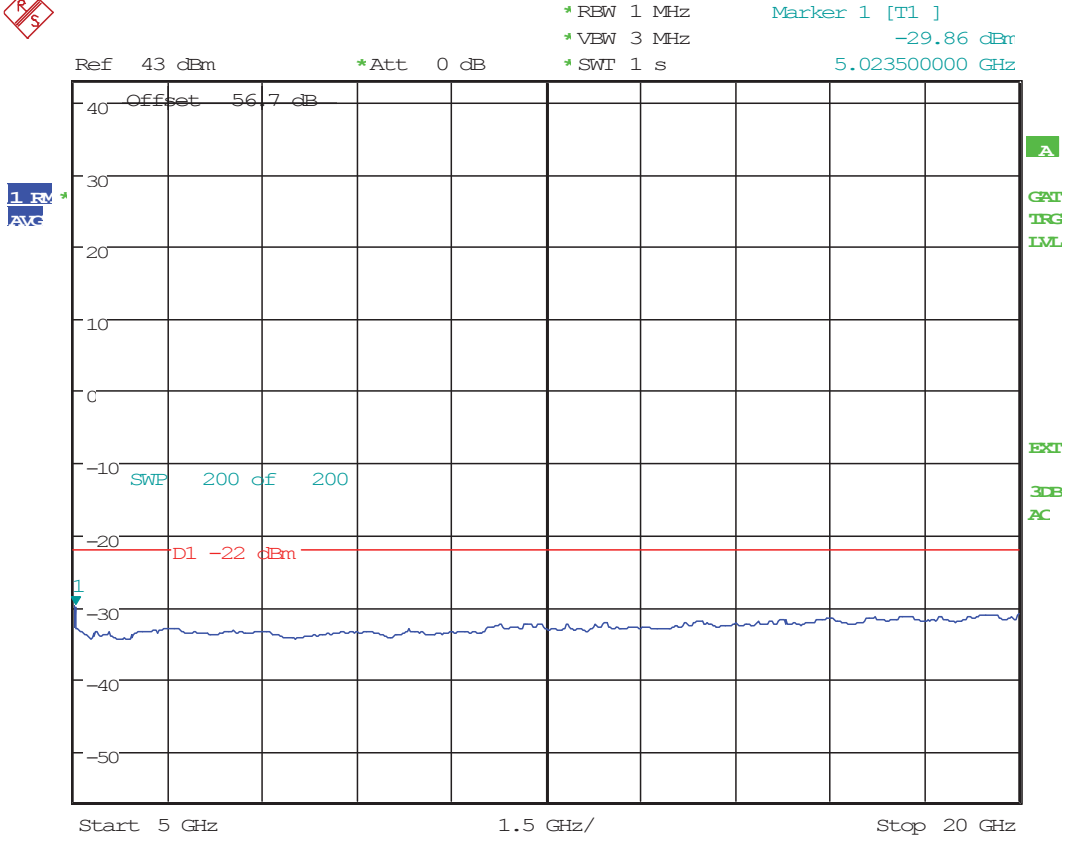
TX Spurious; Test Eng: JY; TDD B41 RRH Cast Fingu Fltr; 20MHz BW
 ; 20W; 2496-2516MHz; -48VDC; 64QAM; FCCID-ASBBTRX-15A.
 Date: 30.SEP.2015 07:51:10



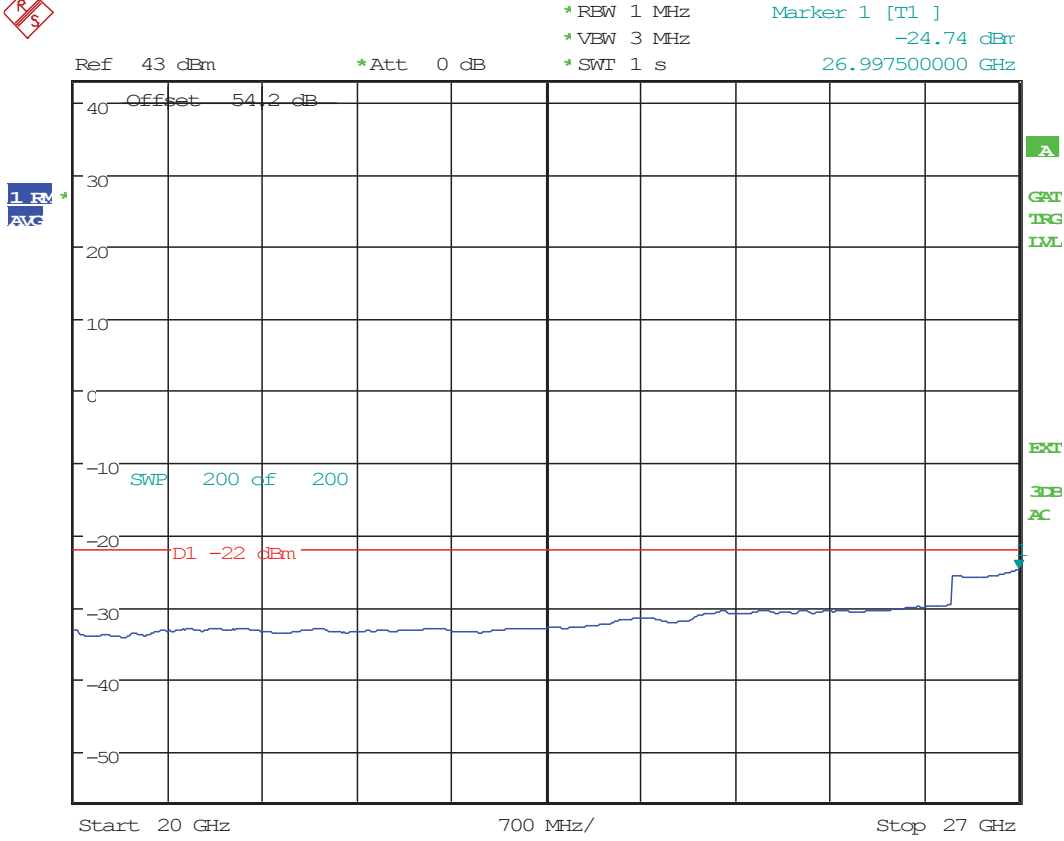
TX Spurious; Test Eng: JY; TDD B41 RRH Cast Fingu Filter; 20
 MHz BW; 20W; 2496-2516MHz; -48VDC; 64QAM; FCCID-ASBBTRX-15A.
 Date: 30.SEP.2015 08:03:55



TX Spurious; Test Eng:JY; TDD B41 RRH Cast Fingu Filter; 20
MHz BW;20W;2496-2516M;-48VDC;64QAM; FCCID-ASBBTRX-15A.
Date: 30.SEP.2015 09:44:02



TX Spurious; Test Eng:JY; TDD B41 RRH Cast Fingu Filter; 20
 MHz BW;20W;2496-2516MHz;-48VDC;64QAM; FCCID-ASBBTRX-15A.
 Date: 30.SEP.2015 08:41:53

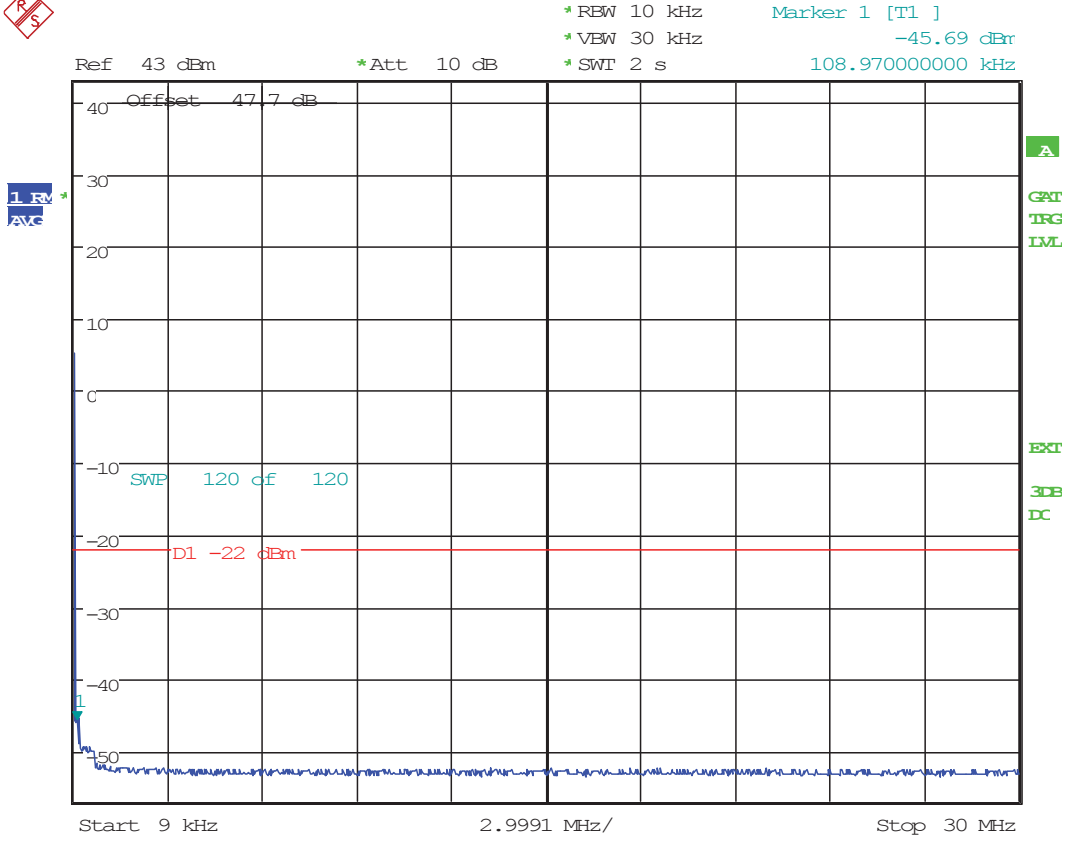


TX Spurious; Test Eng:JY; TDD B41 RRH Cast Fingu Filter; 20
MHz BW;20W;2496-2516MHz;-48VDC;64QAM; FCCID-ASBBTRX-15A.
Date: 5.OCT.2015 13:20:42

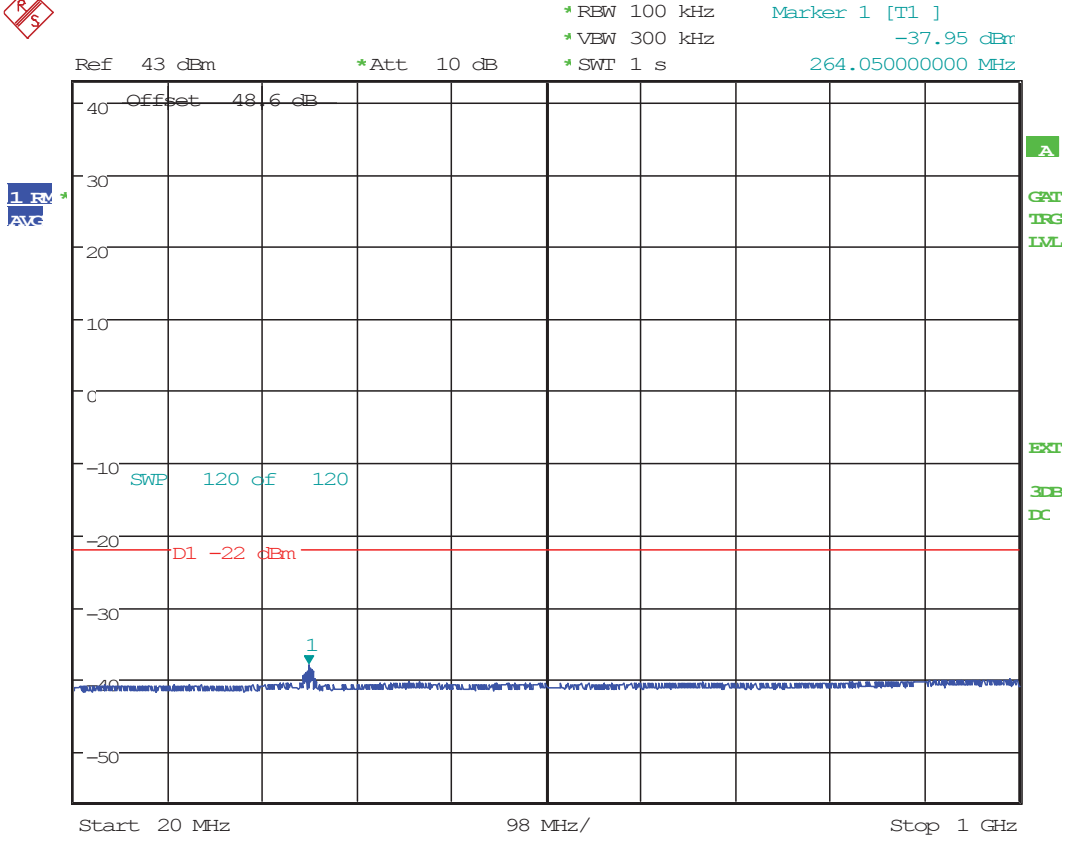
**Transmit Port
Antenna Conducted Spurious Emissions**

**20 MHz BW
QPSK Modulation
8x20 watts (MIMO)**

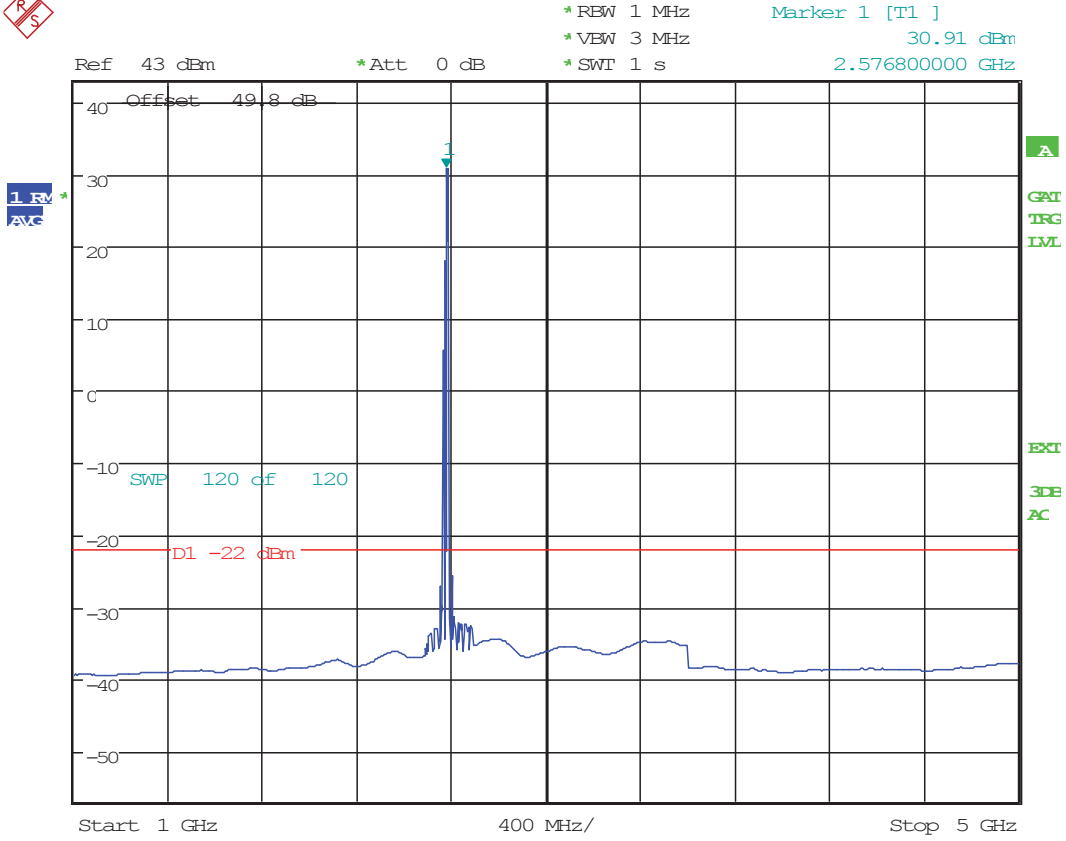
**Bandwidth 2568 – 2588 MHz
(Middle)**



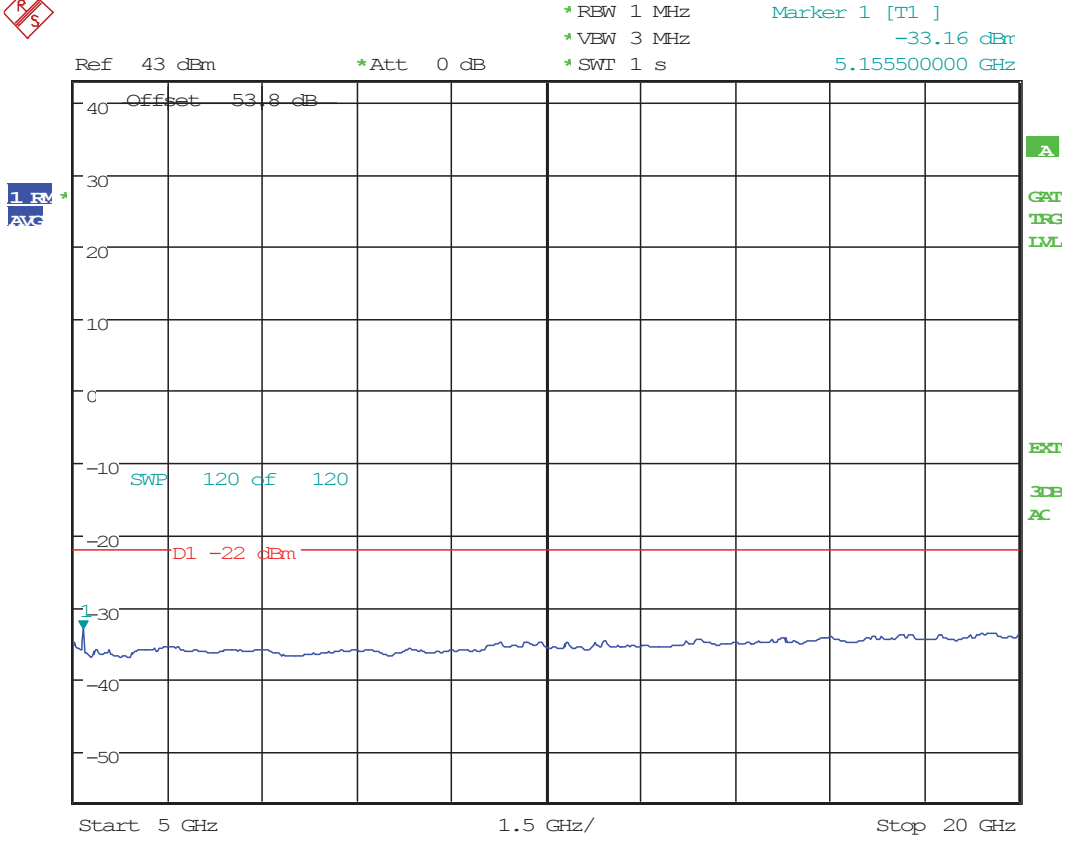
TX Spurious; Test Eng: JY; TDD B41 RRH Cast Fingu Fltr; 20MHz BW
 ; 20W; 2568-2588MHz; -48VDC; QPSK; FCCID-ASBBTRX-15A.
 Date: 6.OCT.2015 12:29:11



TX Spurious; Test Eng: JY; TDD B41 RRH Cast Fingu Filter; 20
 MHz BW; 20W; 2568-2588MHz; -48VDC; QPSK; FCCID-ASBBTRX-15A.
 Date: 6.OCT.2015 12:36:03



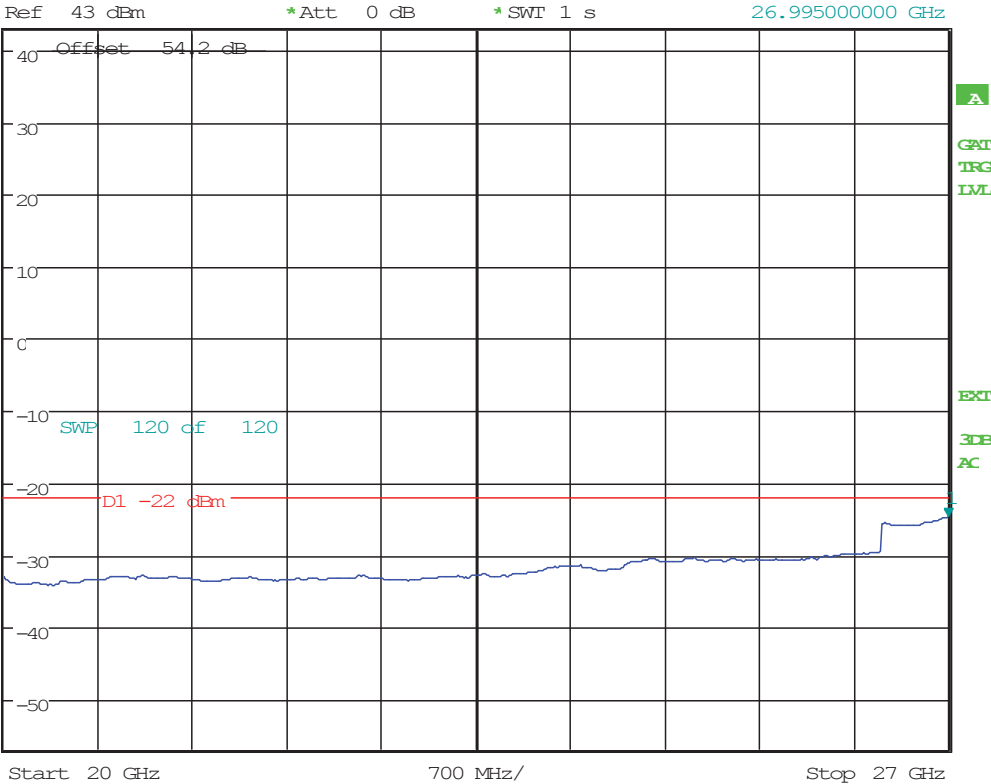
TX Spurious; Test Eng:JY; TDD B41 RRH Cast Fingu Filter; 20
 MHz BW;20W;2568-2588M;-48VDC;QPSK; FCCID-ASBBTRX-15A.
 Date: 6.OCT.2015 12:43:30



TX Spurious; Test Eng:JY; TDD B41 RRH Cast Fingu Filter; 20
 MHz BW;20W;2568-2588MHz;-48VDC;QPSK; FCCID-ASBBTRX-15A.
 Date: 6.OCT.2015 13:29:10



*REW 1 MHz Marker 1 [T1]
*VEW 3 MHz -24.72 dBm
*SWT 1 s 26.995000000 GHz

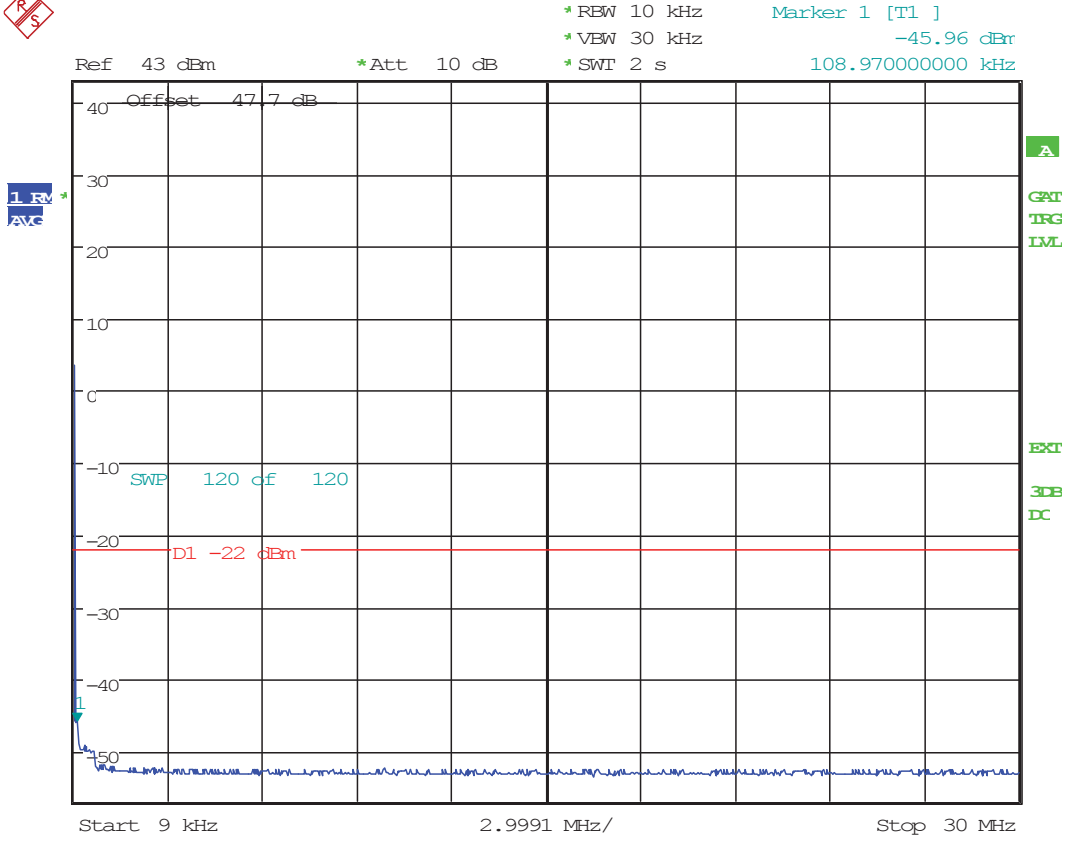


TX Spurious; Test Eng:JY; TDD B41 RRH Cast Fingu Filter; 20
MHz BW;20W;2568-2588MHz;-48VDC;QPSK; FCCID-ASBBTRX-15A.
Date: 6.OCT.2015 13:36:05

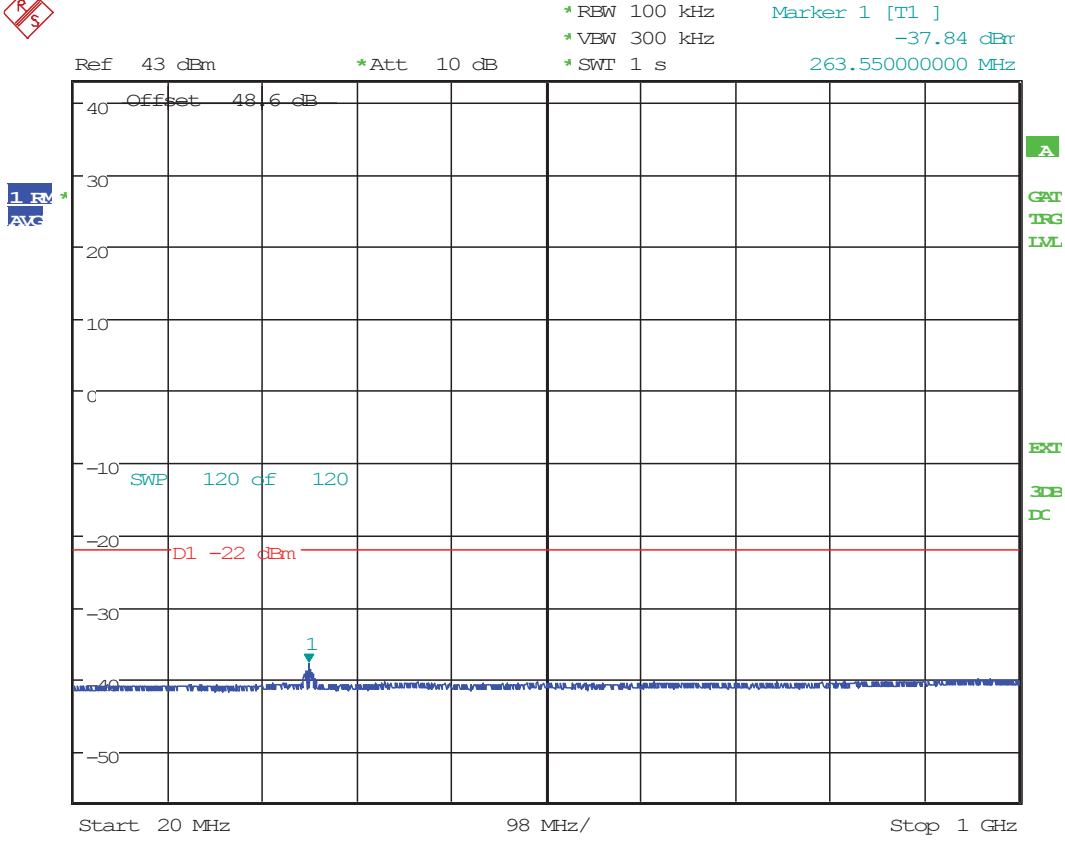
**Transmit Port
Antenna Conducted Spurious Emissions**

**20 MHz BW
16QAM Modulation
8x20 watts (MIMO)**

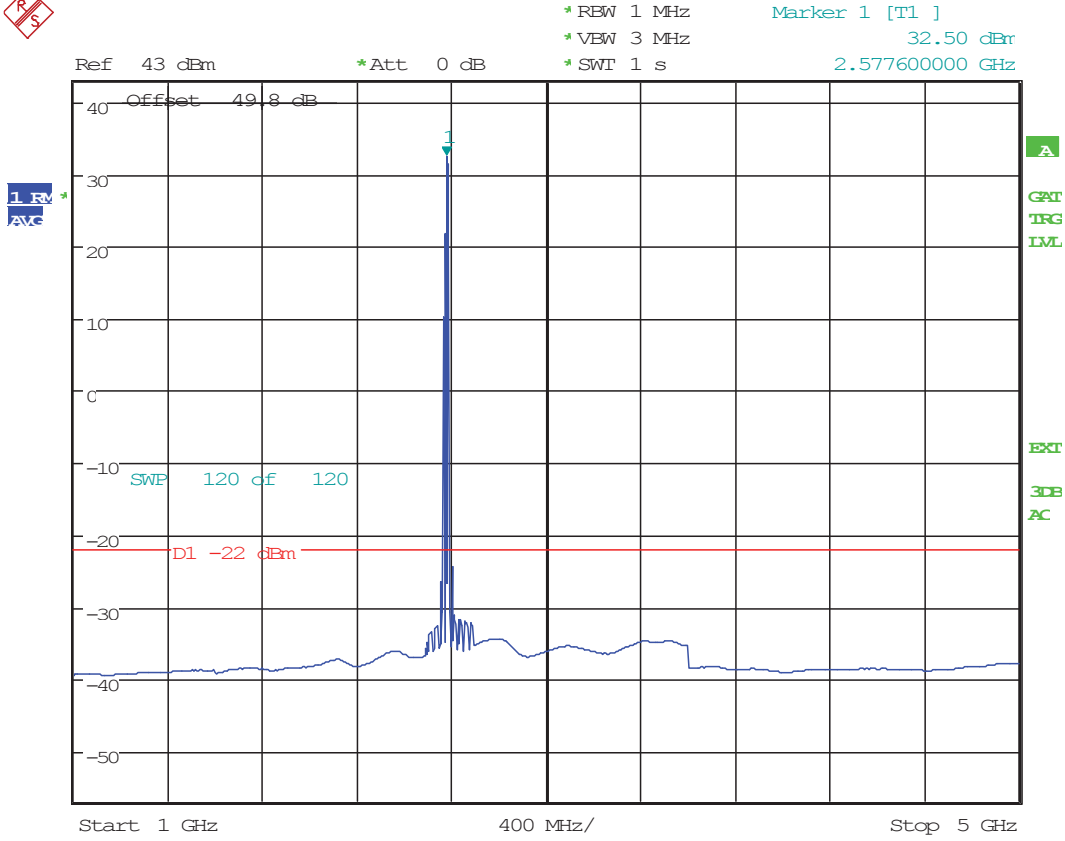
**Bandwidth 2568 – 2588 MHz
(Middle)**



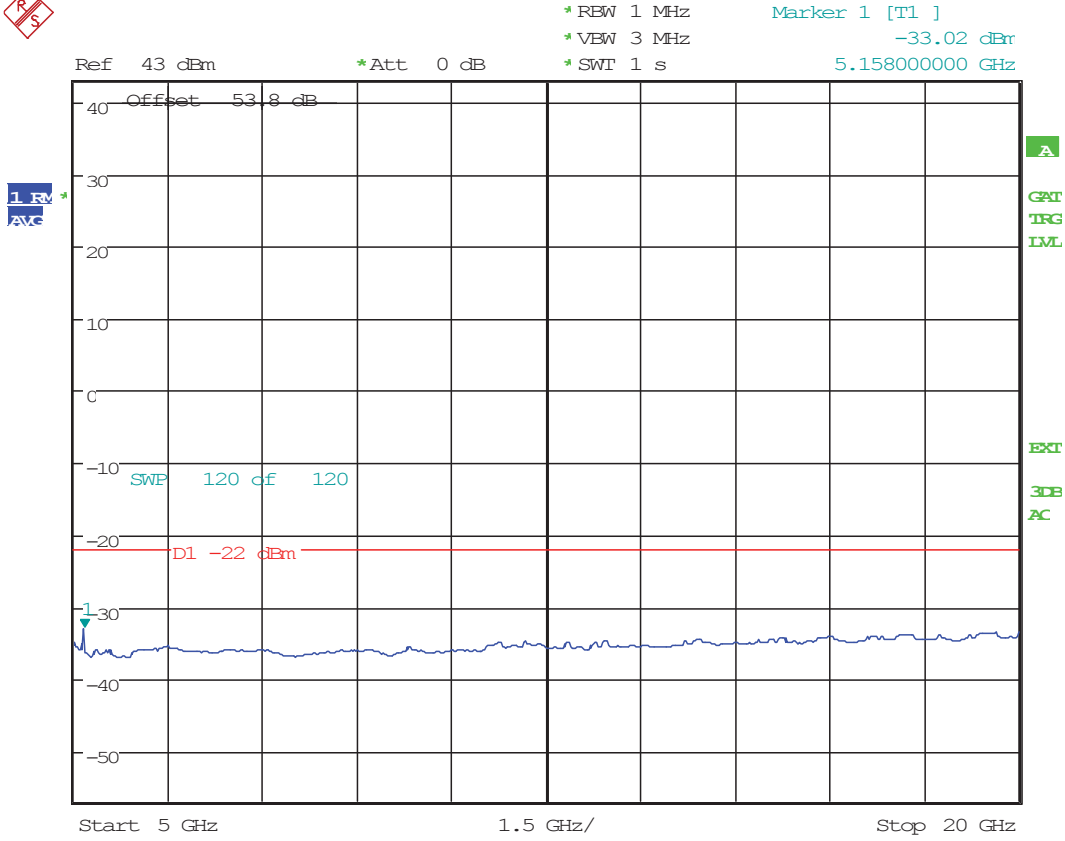
TX Spurious; Test Eng: JY; TDD B41 RRH Cast Fingu Fltr; 20MHz BW
 ; 20W; 2568-2588MHz; -48VDC; 16QAM; FCCID-ASBBTRX-15A.
 Date: 6.OCT.2015 14:25:43



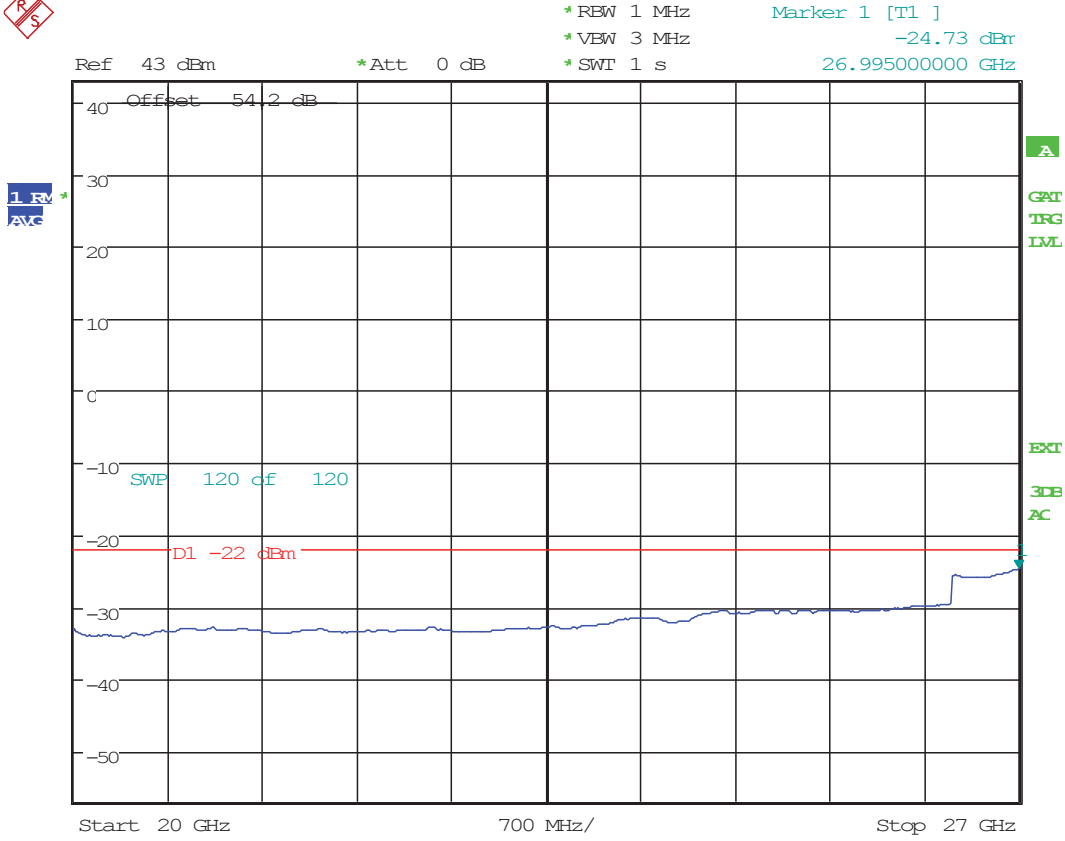
TX Spurious; Test Eng: JY; TDD B41 RRH Cast Fingu Filter; 20
 MHz BW; 20W; 2568-2588MHz; -48VDC; 16QAM; FCCID-ASBBTRX-15A.
 Date: 6.OCT.2015 14:06:49



TX Spurious; Test Eng:JY; TDD B41 RRH Cast Fingu Filter; 20
MHz BW;20W;2568-2588M;-48VDC;16QAM; FCCID-ASBBTRX-15A.
Date: 6.OCT.2015 13:59:57



TX Spurious; Test Eng:JY; TDD B41 RRH Cast Fingu Filter; 20
 MHz BW;20W;2568-2588MHz;-48VDC;16QAM; FCCID-ASBBTRX-15A.
 Date: 6.OCT.2015 13:52:28

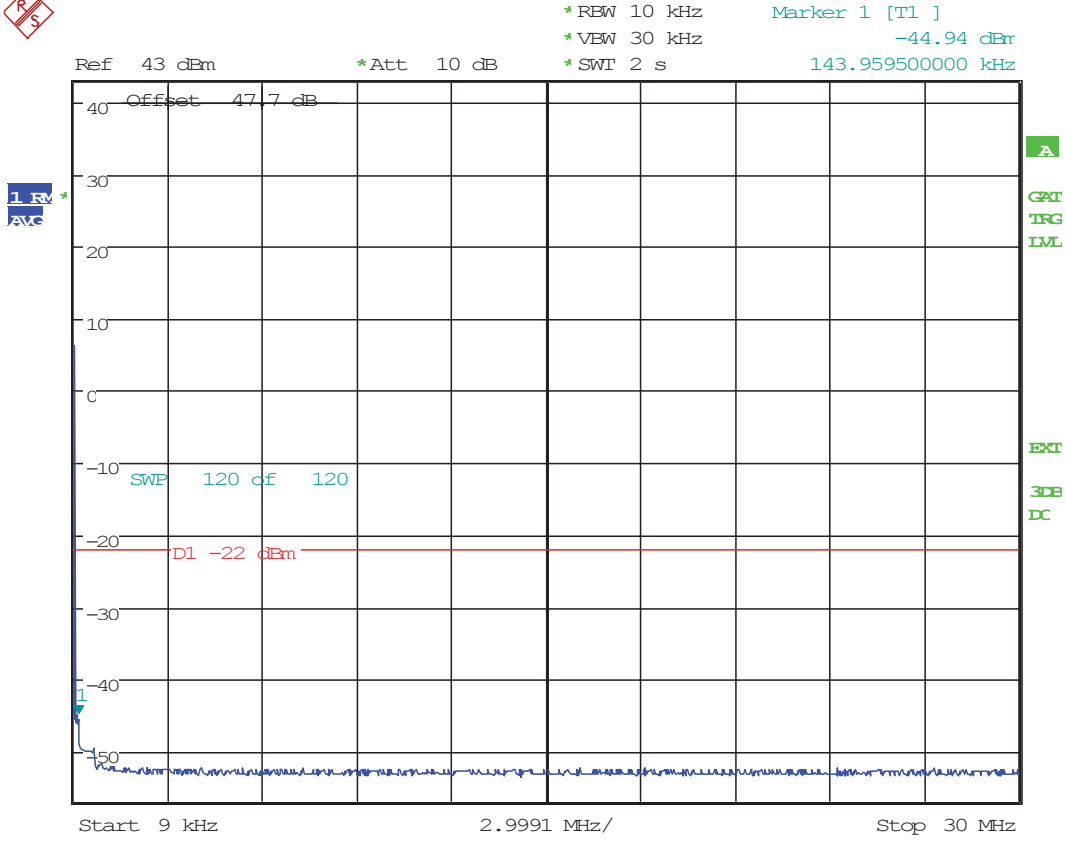


TX Spurious; Test Eng:JY; TDD B41 RRH Cast Fingu Filter; 20
 MHz BW;20W;2568-2588MHz;-48VDC;16QAM; FCCID-ASBBTRX-15A.
 Date: 6.OCT.2015 13:45:12

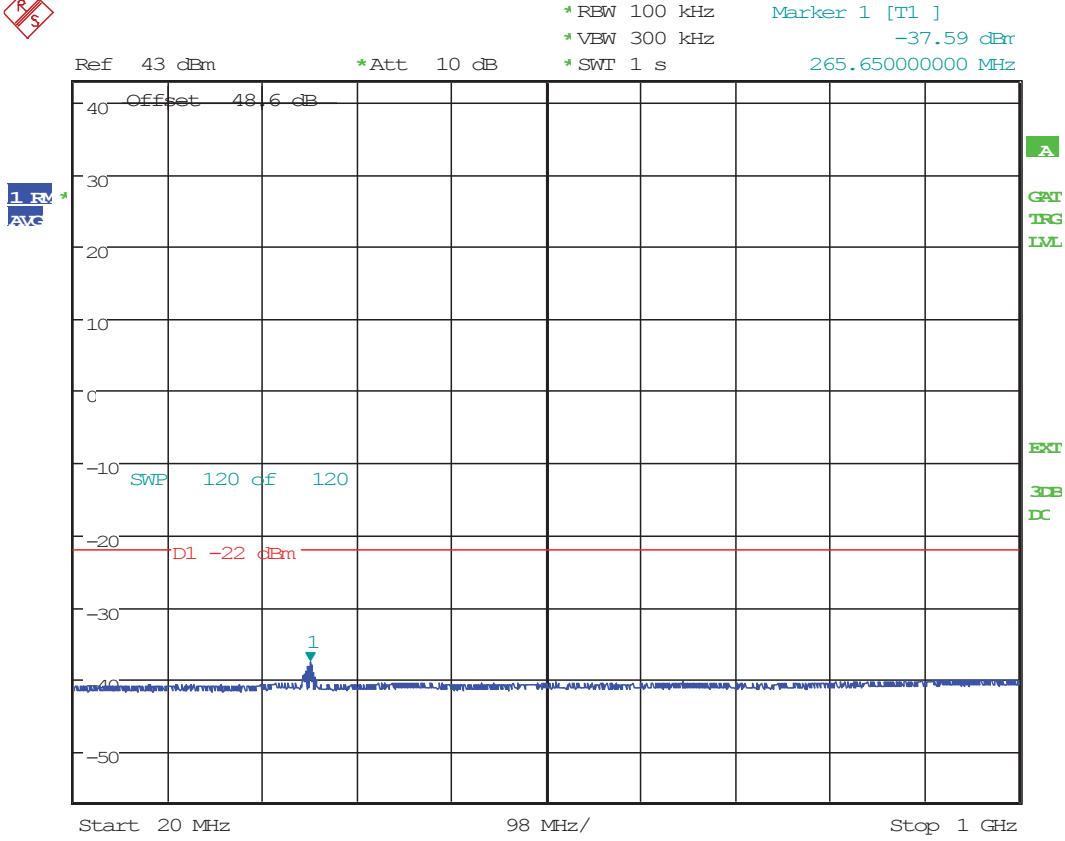
**Transmit Port
Antenna Conducted Spurious Emissions**

**20 MHz BW
64QAM Modulation
8x20 watts (MIMO)**

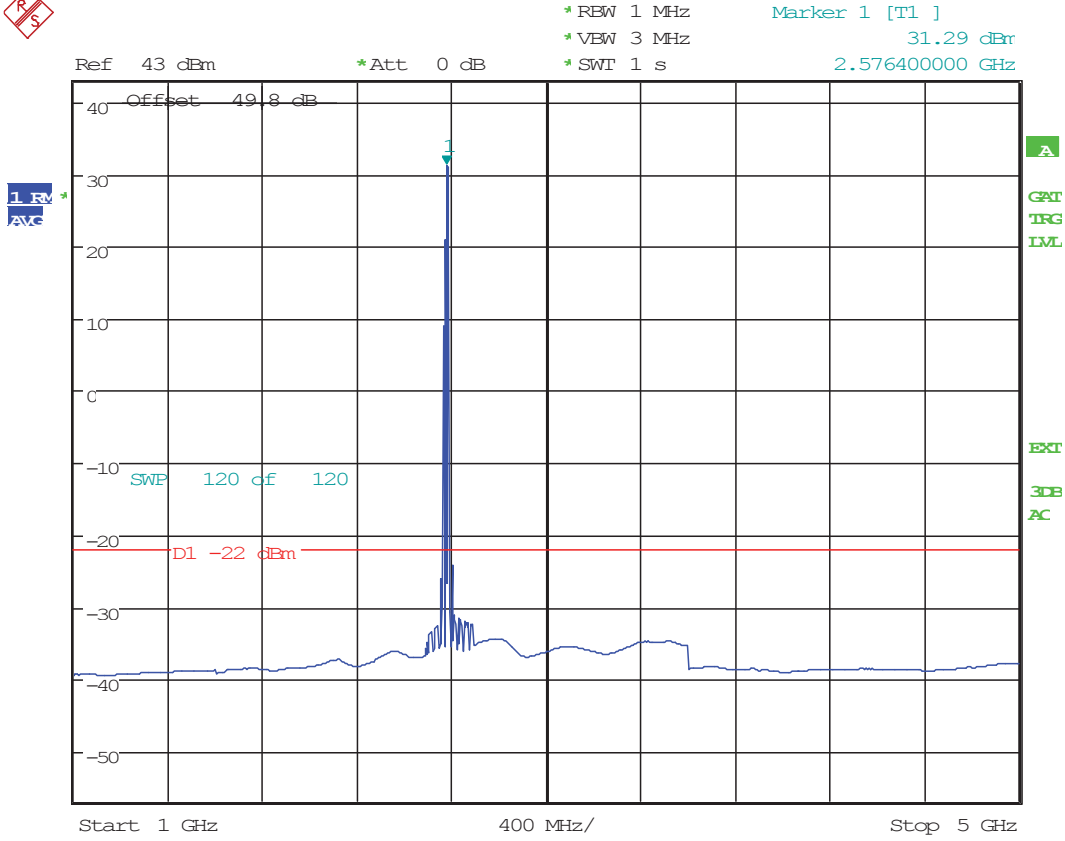
**Bandwidth 2568 – 2588 MHz
(Middle)**



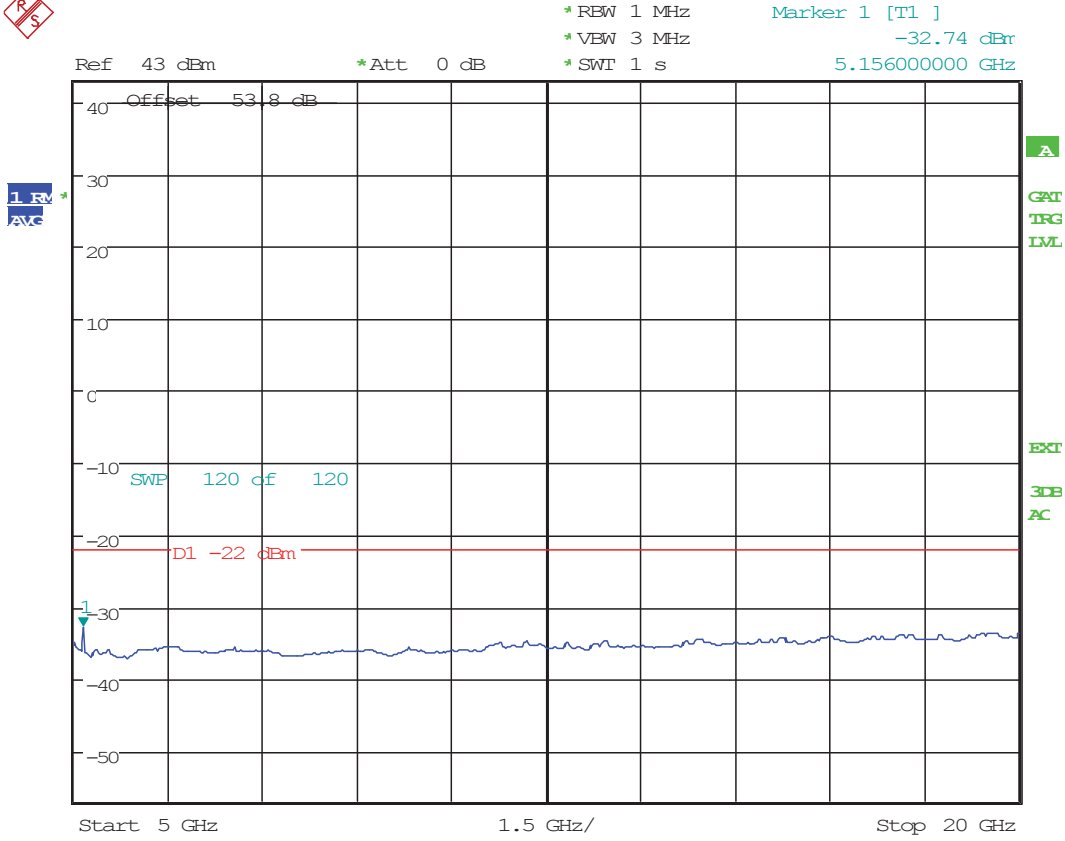
TX Spurious; Test Eng: JY; TDD B41 RRH Cast Fingu Fltr; 20MHz BW
 ; 20W; 2568-2588MHz; -48VDC; 64QAM; FCCID-ASBBTRX-15A.
 Date: 6.OCT.2015 15:06:39



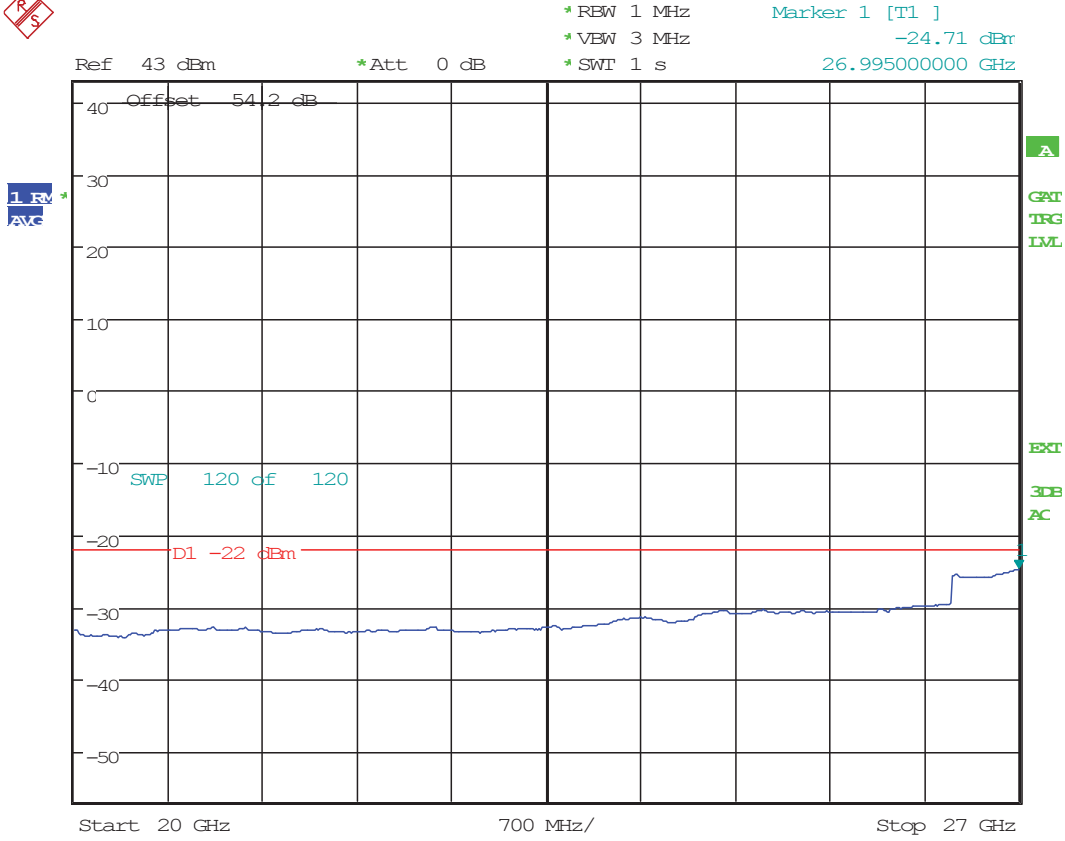
TX Spurious; Test Eng: JY; TDD B41 RRH Cast Fingu Filter; 20
 MHz BW; 20W; 2568-2588MHz; -48VDC; 64QAM; FCCID-ASBBTRX-15A.
 Date: 6.OCT.2015 15:13:34



TX Spurious; Test Eng:JY; TDD B41 RRH Cast Fingu Filter; 20
MHz BW;20W;2568-2588M;-48VDC;64QAM; FCCID-ASBBTRX-15A.
Date: 6.OCT.2015 15:21:00



TX Spurious; Test Eng:JY; TDD B41 RRH Cast Fingu Filter; 20
 MHz BW;20W;2568-2588MHz;-48VDC;64QAM; FCCID-ASBBTRX-15A.
 Date: 6.OCT.2015 15:28:18

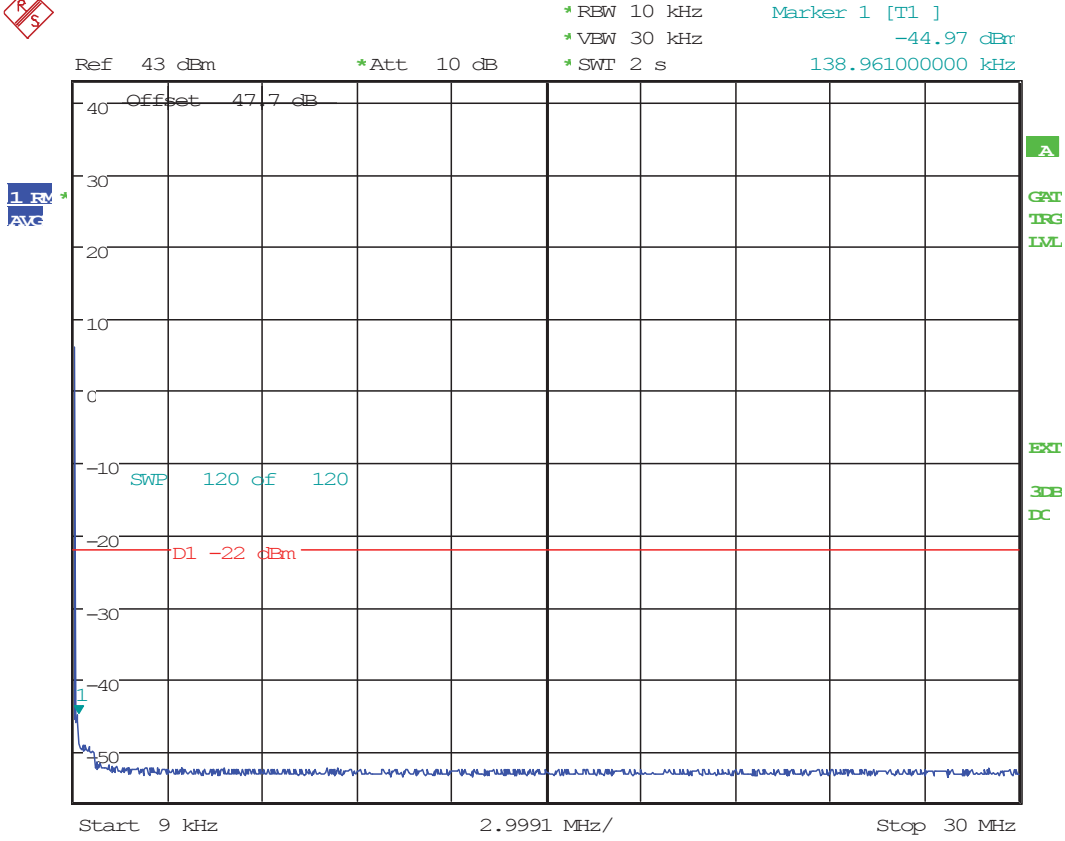


TX Spurious; Test Eng:JY; TDD B41 RRH Cast Fingu Filter; 20
MHz BW;20W;2568-2588MHz;-48VDC;64QAM; FCCID-ASBBTRX-15A.
Date: 6.OCT.2015 15:35:13

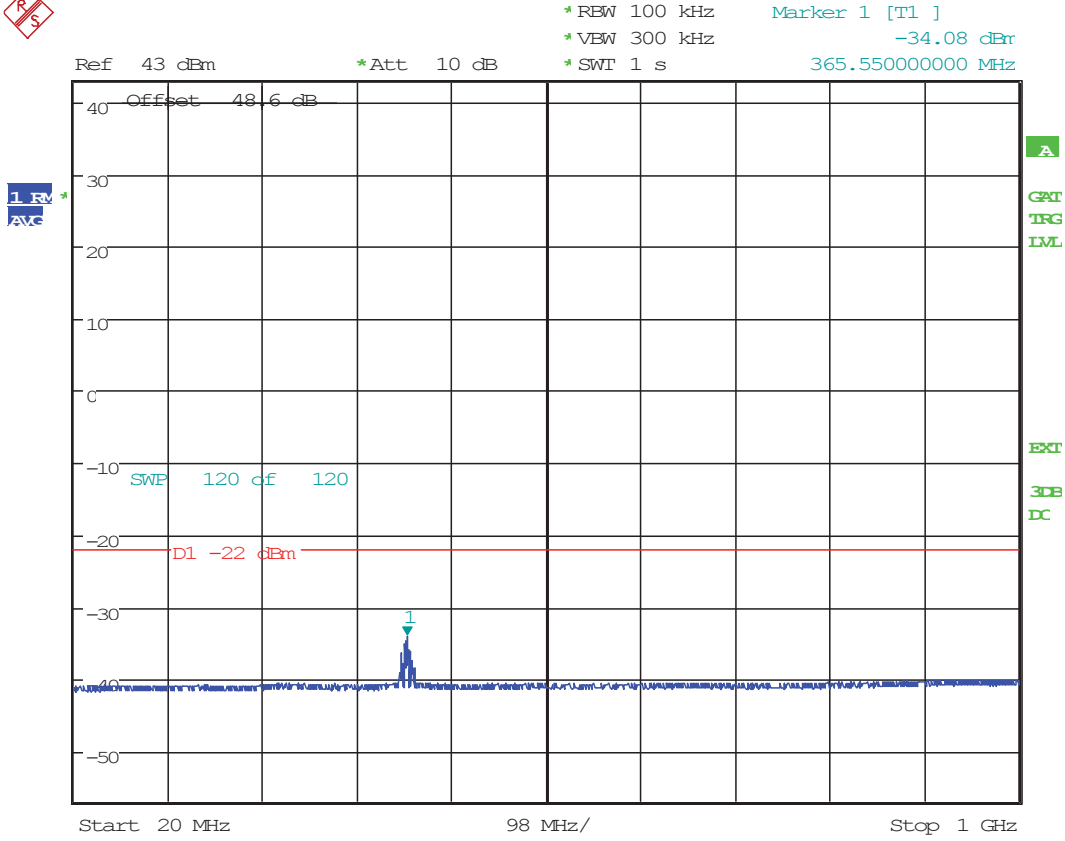
**Transmit Port
Antenna Conducted Spurious Emissions**

**20 MHz BW
QPSK Modulation
8x20 watts (MIMO)**

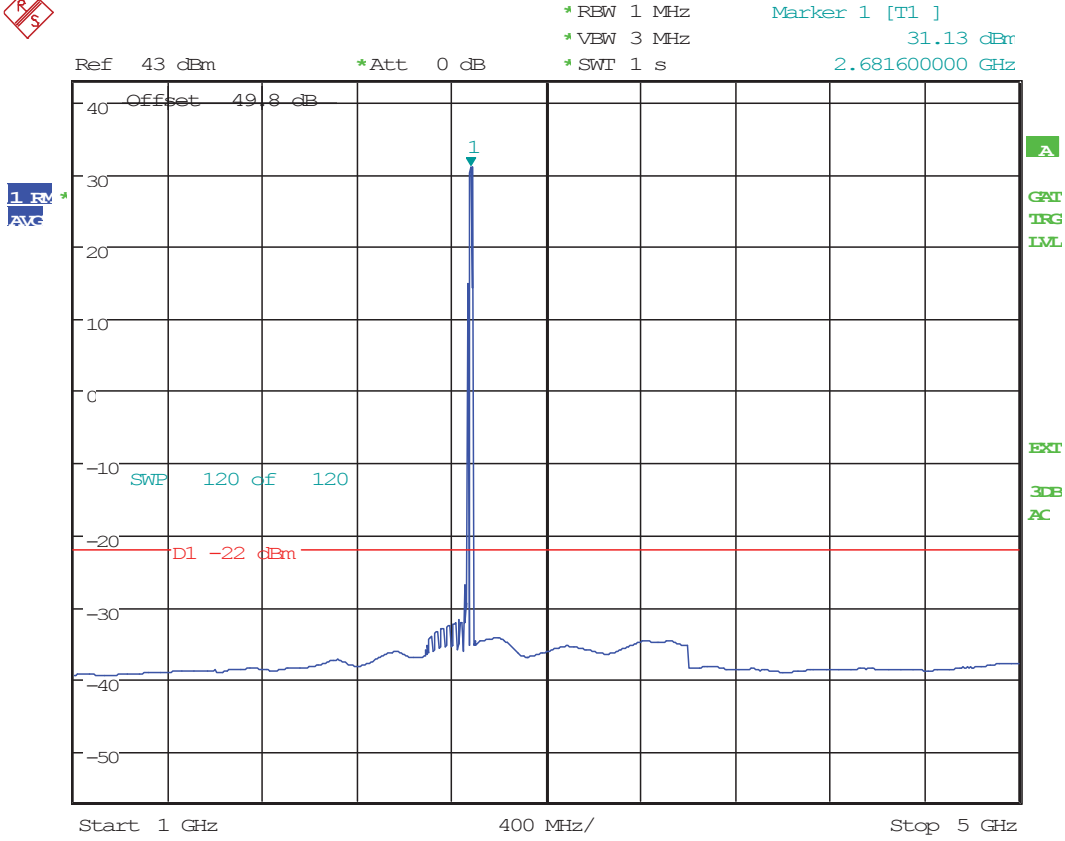
**Bandwidth 2670 – 2690 MHz
(Higher)**



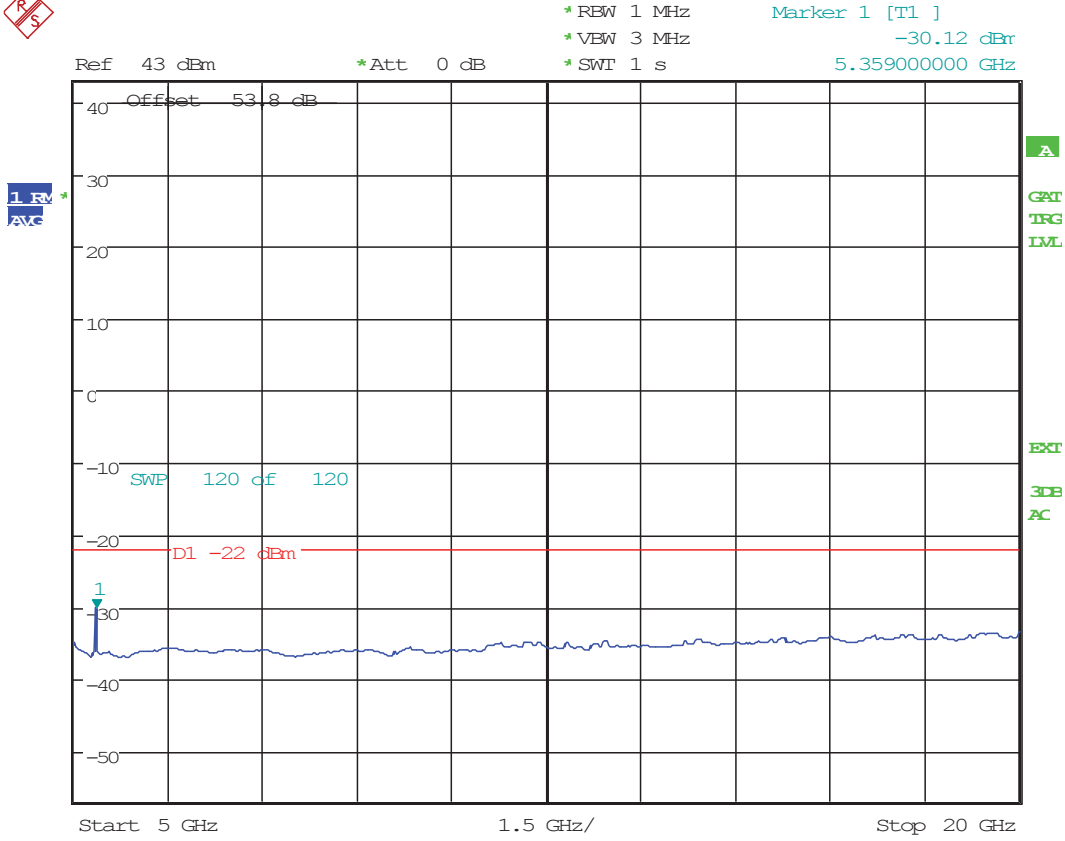
TX Spurious; Test Eng: JY; TDD B41 RRH Cast Fingu Fltr; 20MHz BW
; 20W; 2670-2690MHz; -48VDC; QPSK; FCCID-ASBBTRX-15A.
Date: 7.OCT.2015 12:28:28



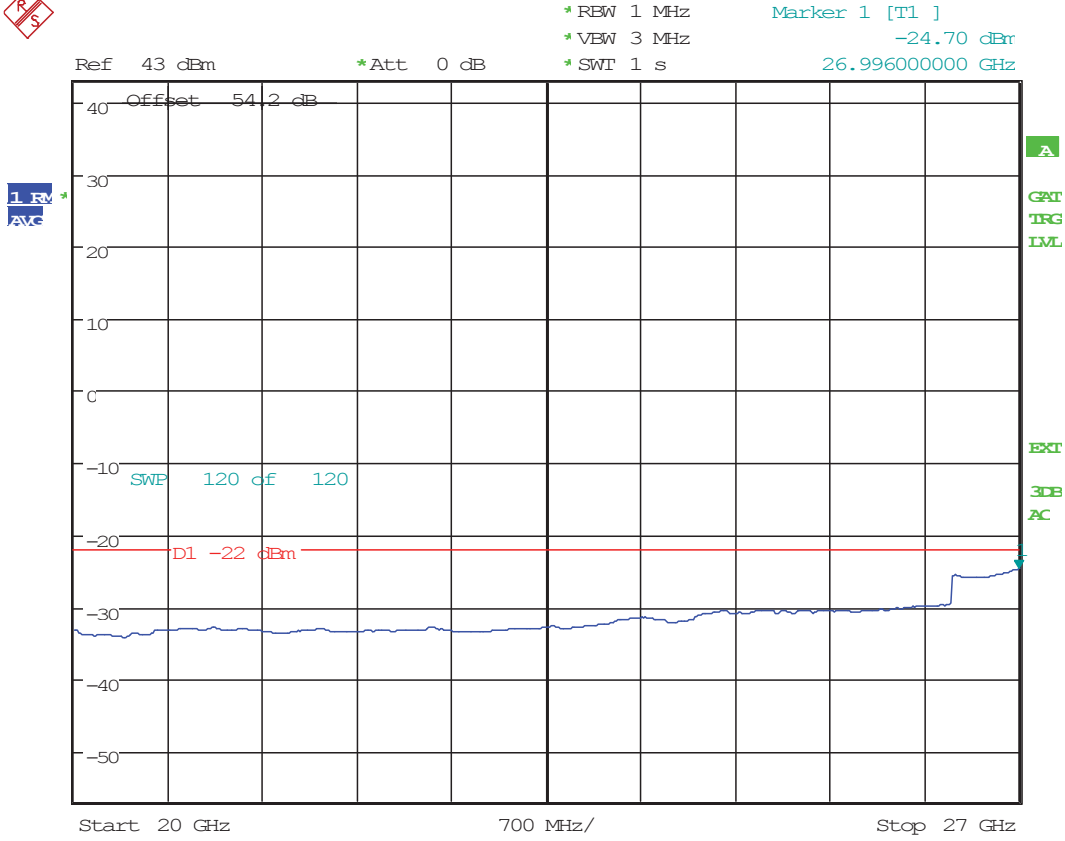
TX Spurious; Test Eng: JY; TDD B41 RRH Cast Fingu Filter; 20
 MHz BW; 20W; 2670-2690MHz; -48VDC; QPSK; FCCID-ASBBTRX-15A.
 Date: 7.OCT.2015 12:35:17



TX Spurious; Test Eng:JY; TDD B41 RRH Cast Fingu Filter; 20
MHz BW;20W;2670-2690M;-48VDC;QPSK; FCCID-ASBBTRX-15A.
Date: 7.OCT.2015 12:50:17



TX Spurious; Test Eng:JY; TDD B41 RRH Cast Fingu Filter; 20
 MHz BW;20W;2670-2690MHz;-48VDC;QPSK; FCCID-ASBBTRX-15A.
 Date: 7.OCT.2015 13:12:08

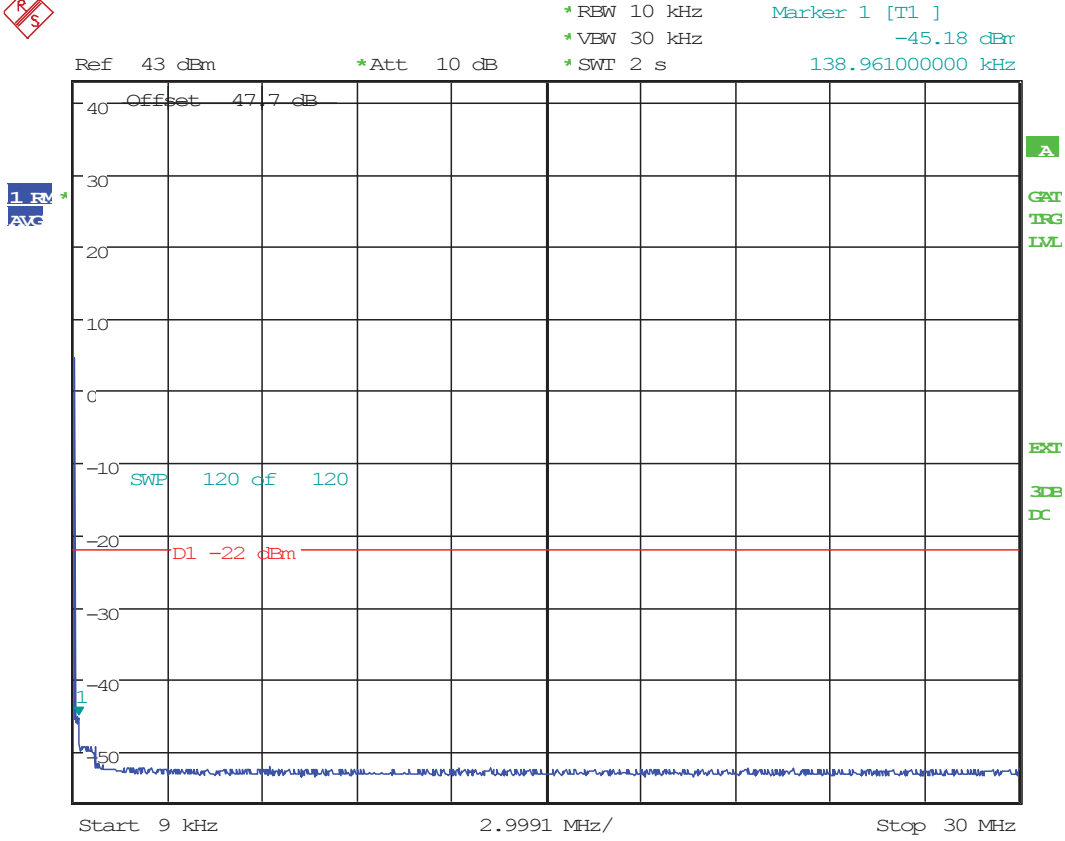


TX Spurious; Test Eng:JY; TDD B41 RRH Cast Fingu Filter; 20
 MHz BW;20W;2670-2690MHz;-48VDC;QPSK; FCCID-ASBBTRX-15A.
 Date: 7.OCT.2015 14:00:11

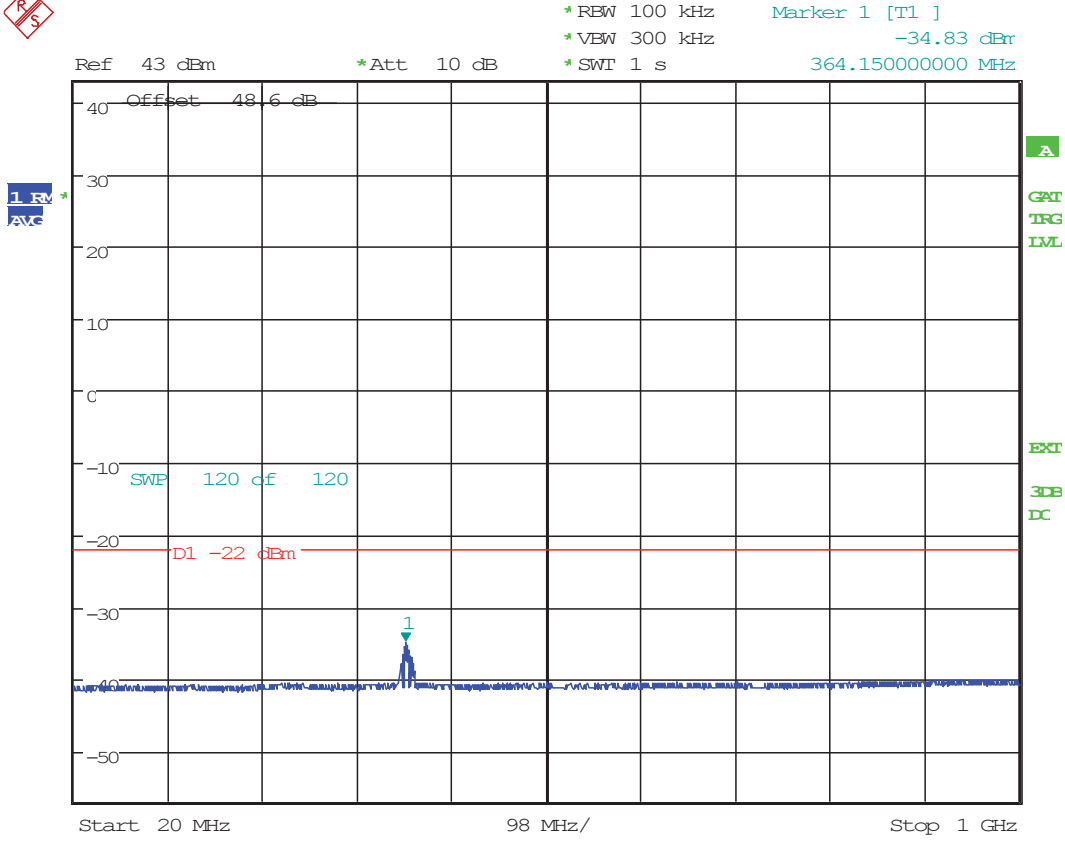
**Transmit Port
Antenna Conducted Spurious Emissions**

**20 MHz BW
16QAM Modulation
8x20 Watts (MIMO)**

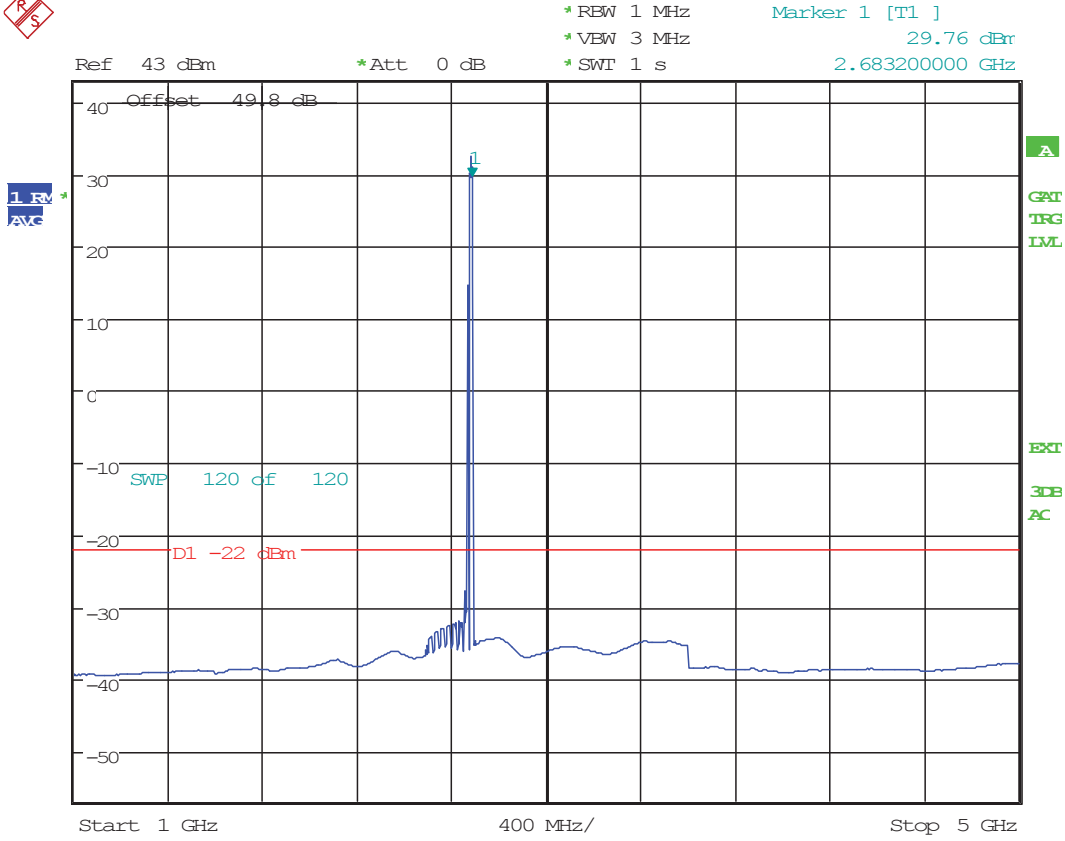
**Bandwidth 2670 – 2690 MHz
(Higher)**



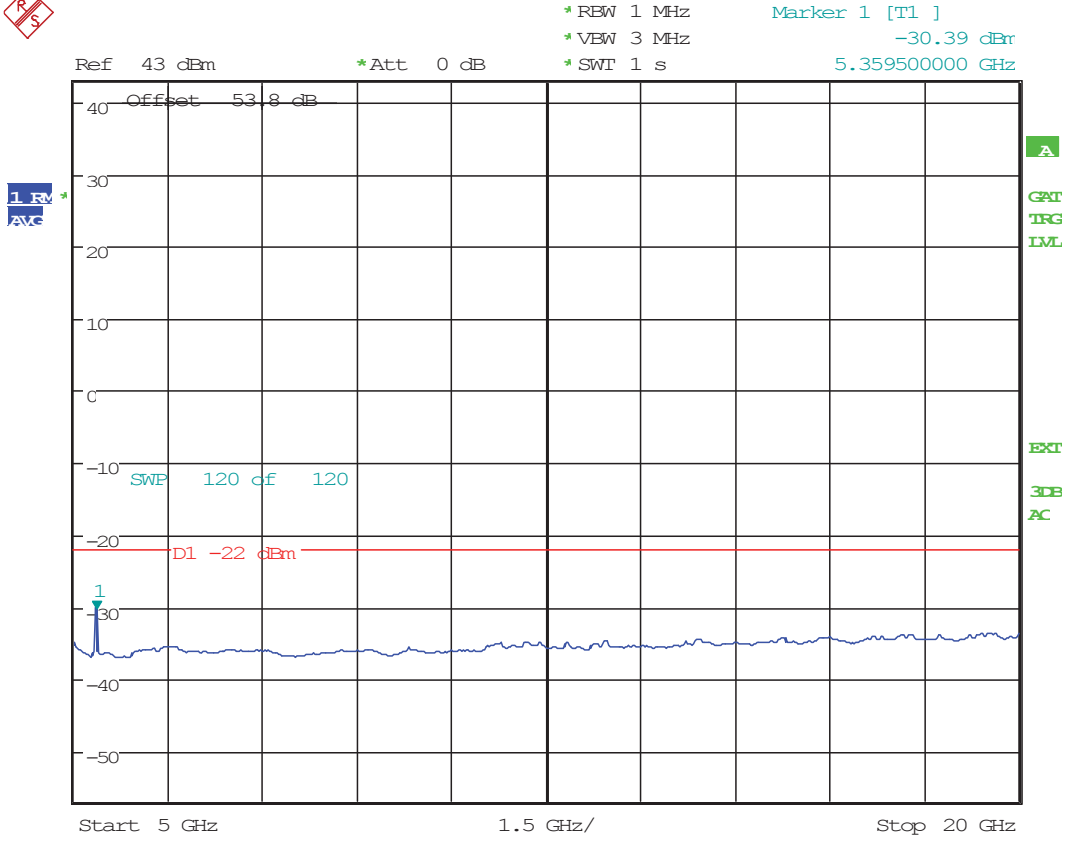
TX Spurious; Test Eng: JY; TDD B41 RRH Cast Fingu Fltr; 20MHz BW
 ; 20W; 2670-2690MHz; -48VDC; 16QAM; FCCID-ASBBTRX-15A.
 Date: 7.OCT.2015 10:57:45



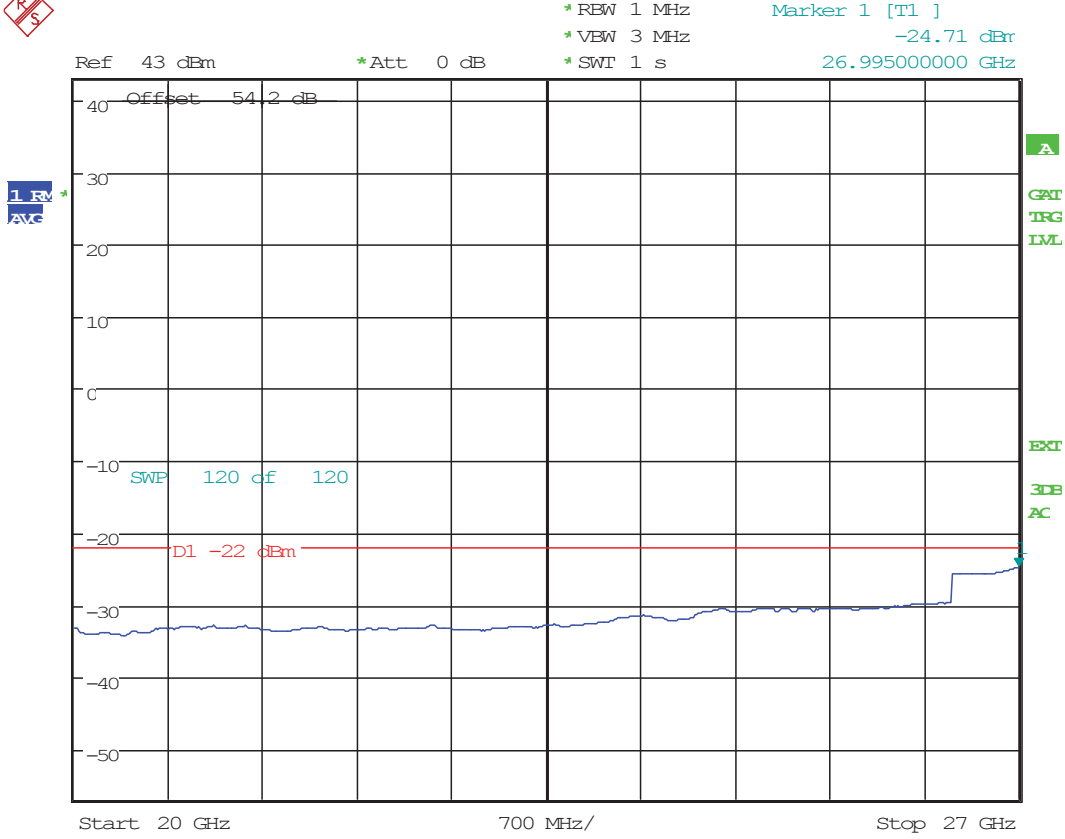
TX Spurious; Test Eng: JY; TDD B41 RRH Cast Fingu Filter; 20
 MHz BW; 20W; 2670-2690MHz; -48VDC; 16QAM; FCCID-ASBBTRX-15A.
 Date: 7.OCT.2015 11:21:29



TX Spurious; Test Eng:JY; TDD B41 RRH Cast Fingu Filter; 20
MHz BW;20W;2670-2690M;-48VDC;16QAM; FCCID-ASBBTRX-15A.
Date: 7.OCT.2015 11:14:03



TX Spurious; Test Eng:JY; TDD B41 RRH Cast Fingu Filter; 20
 MHz BW;20W;2670-2690MHz;-48VDC;16QAM; FCCID-ASBBTRX-15A.
 Date: 7.OCT.2015 11:29:55

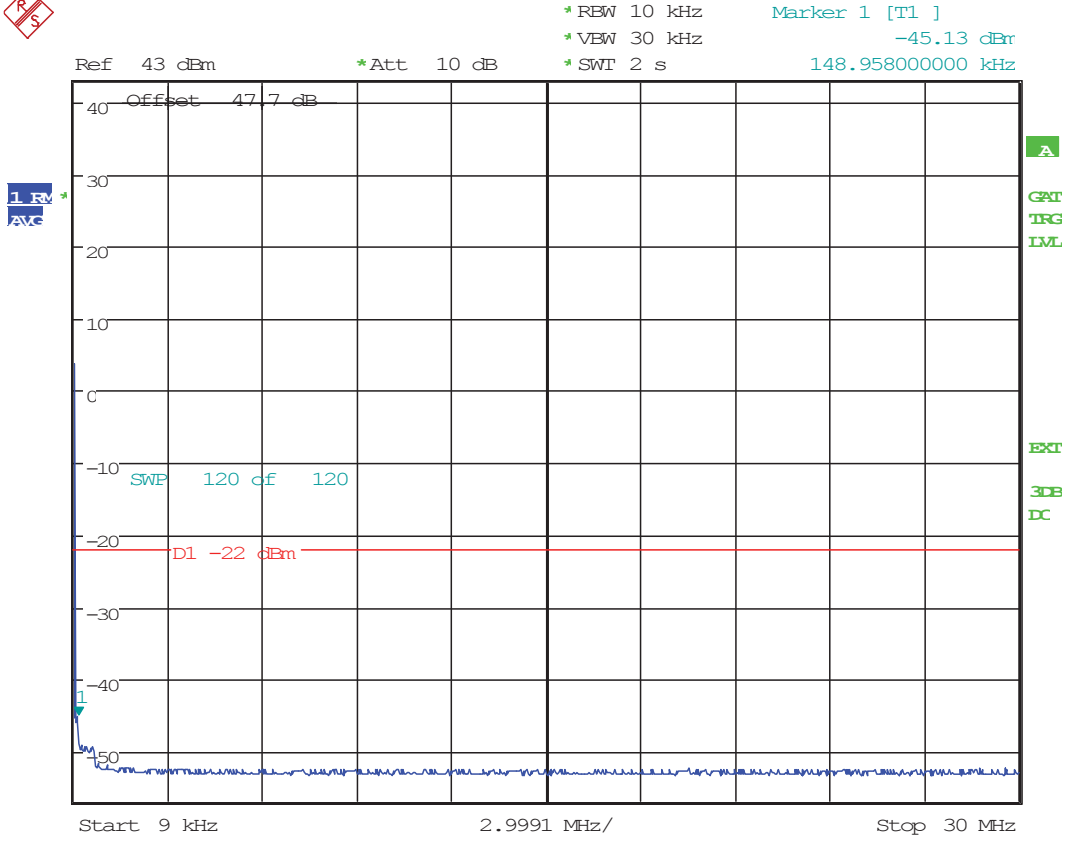


TX Spurious; Test Eng:JY; TDD B41 RRH Cast Fingu Filter; 20
MHz BW;20W;2670-2690MHz;-48VDC;16QAM; FCCID-ASBBTRX-15A.
Date: 7.OCT.2015 11:39:38

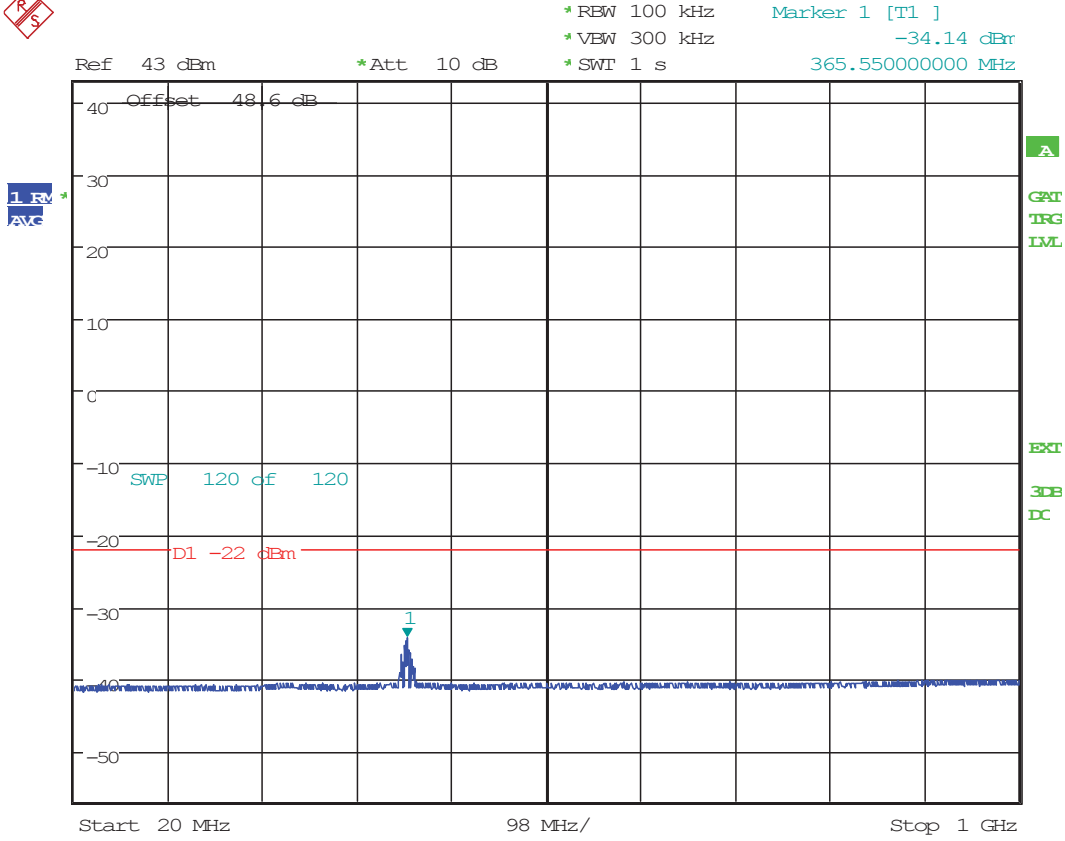
**Transmit Port
Antenna Conducted Spurious Emissions**

**20 MHz BW
64QAM Modulation
8x20 Watts (MIMO)**

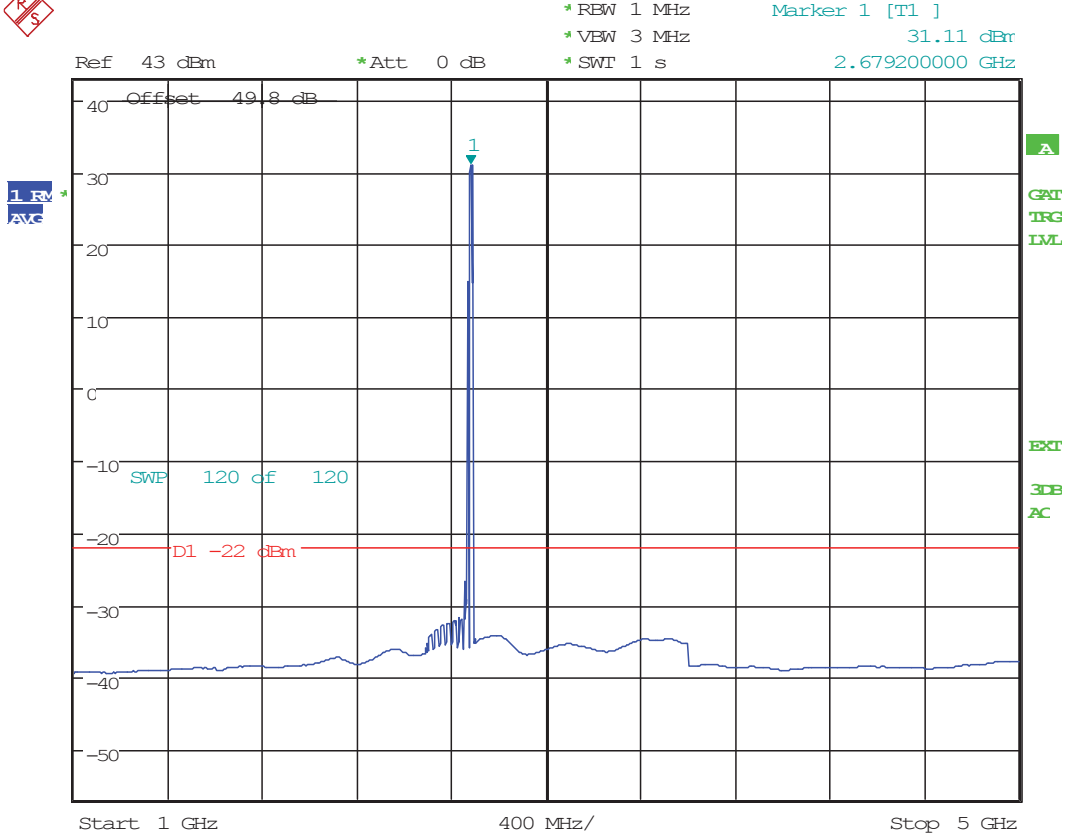
**Bandwidth 2670 – 2690 MHz
(Higher)**



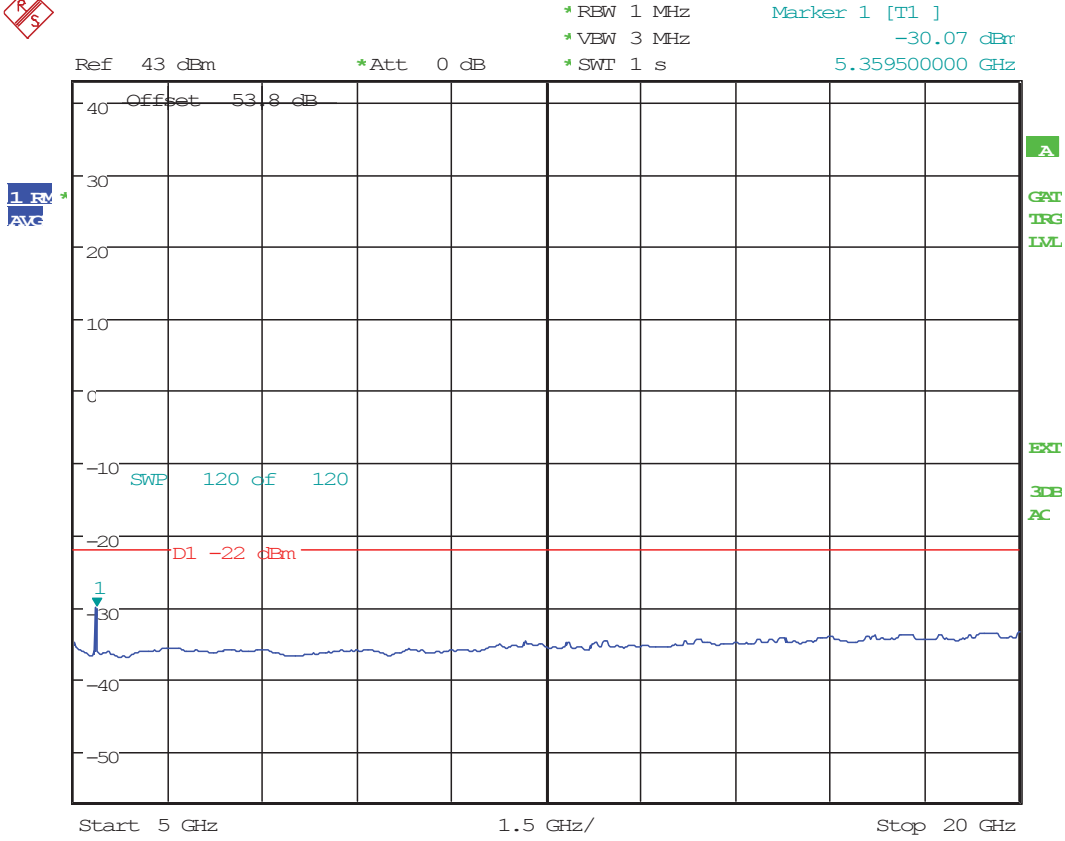
TX Spurious; Test Eng: JY; TDD B41 RRH Cast Fingu Fltr; 20MHz BW
 ; 20W; 2670-2690MHz; -48VDC; 64QAM; FCCID-ASBBTRX-15A.
 Date: 7.OCT.2015 14:49:02



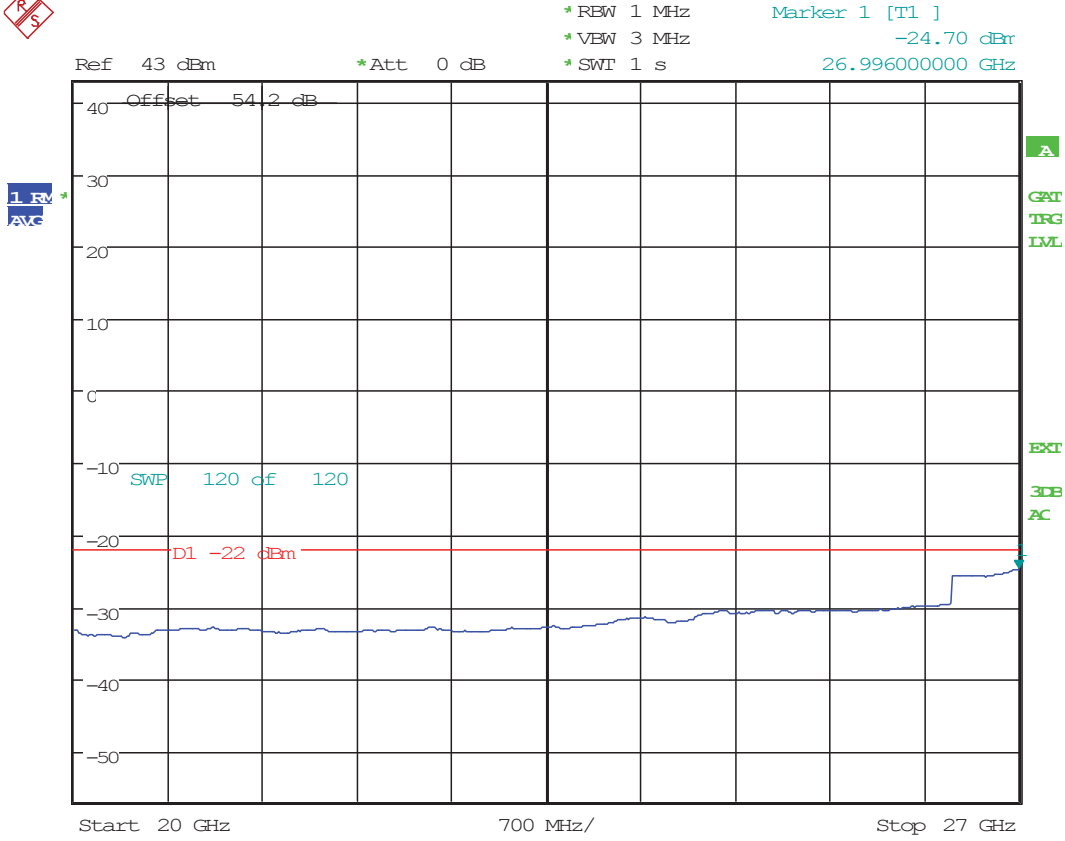
TX Spurious; Test Eng: JY; TDD B41 RRH Cast Fingu Filter; 20
 MHz BW; 20W; 2670-2690MHz; -48VDC; 64QAM; FCCID-ASBBTRX-15A.
 Date: 7.OCT.2015 14:29:37



TX Spurious; Test Eng:JY; TDD B41 RRH Cast Fingu Filter; 20
MHz BW;20W;2670-2690M;-48VDC;64QAM; FCCID-ASBBTRX-15A.
Date: 7.OCT.2015 14:22:36



TX Spurious; Test Eng:JY; TDD B41 RRH Cast Fingu Filter; 20
 MHz BW;20W;2670-2690MHz;-48VDC;64QAM; FCCID-ASBBTRX-15A.
 Date: 7.OCT.2015 14:15:27

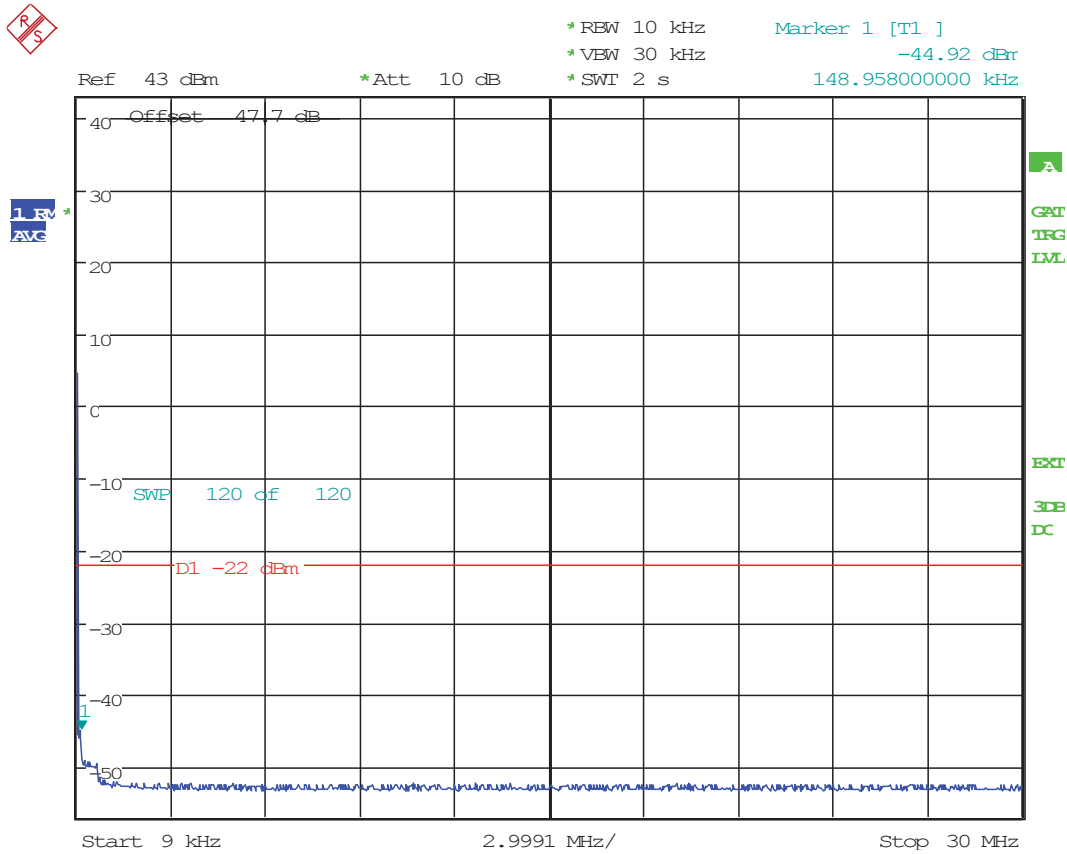


TX Spurious; Test Eng:JY; TDD B41 RRH Cast Fingu Filter; 20
 MHz BW;20W;2670-2690MHz;-48VDC;64QAM; FCCID-ASBBTRX-15A.
 Date: 7.OCT.2015 14:06:44

Transmit Port Antenna Conducted Spurious Emissions

20+20 MHz BW
QPSK Modulation
8x20 watts (MIMO)

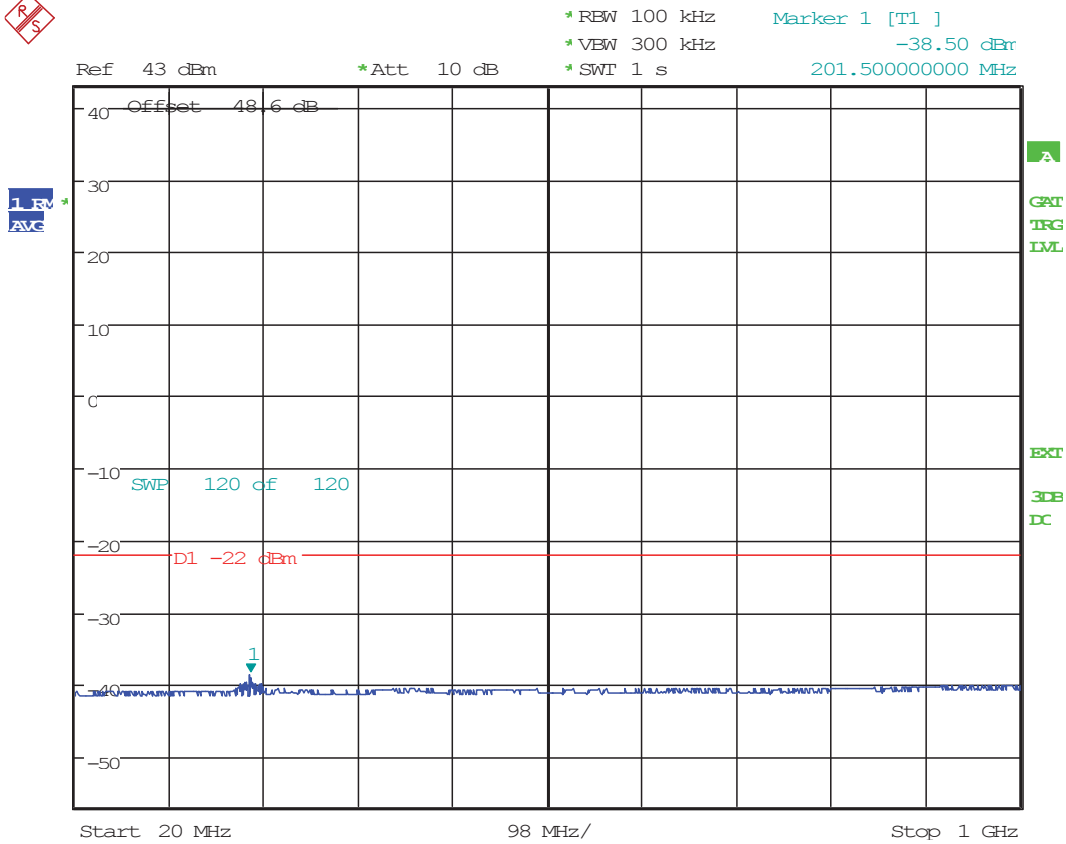
Bandwidth 2496 – 2536 MHz
(Lower)



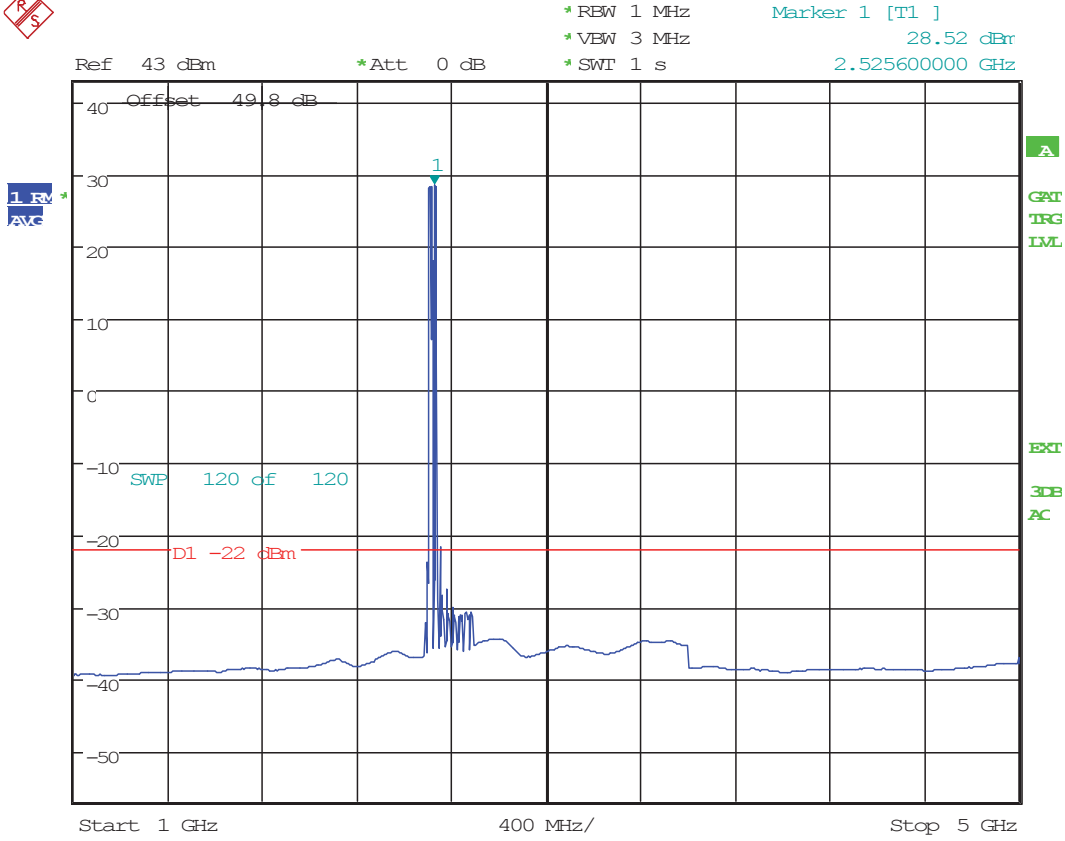
TX Spurious; Test Eng: JY; TDD B41 RRH Cast Fingu Fltr; 20+20MHz

BW; 20W; 2496-2536MHz; -48VDC; QPSK; FCCID-ASBBTRX-15A.

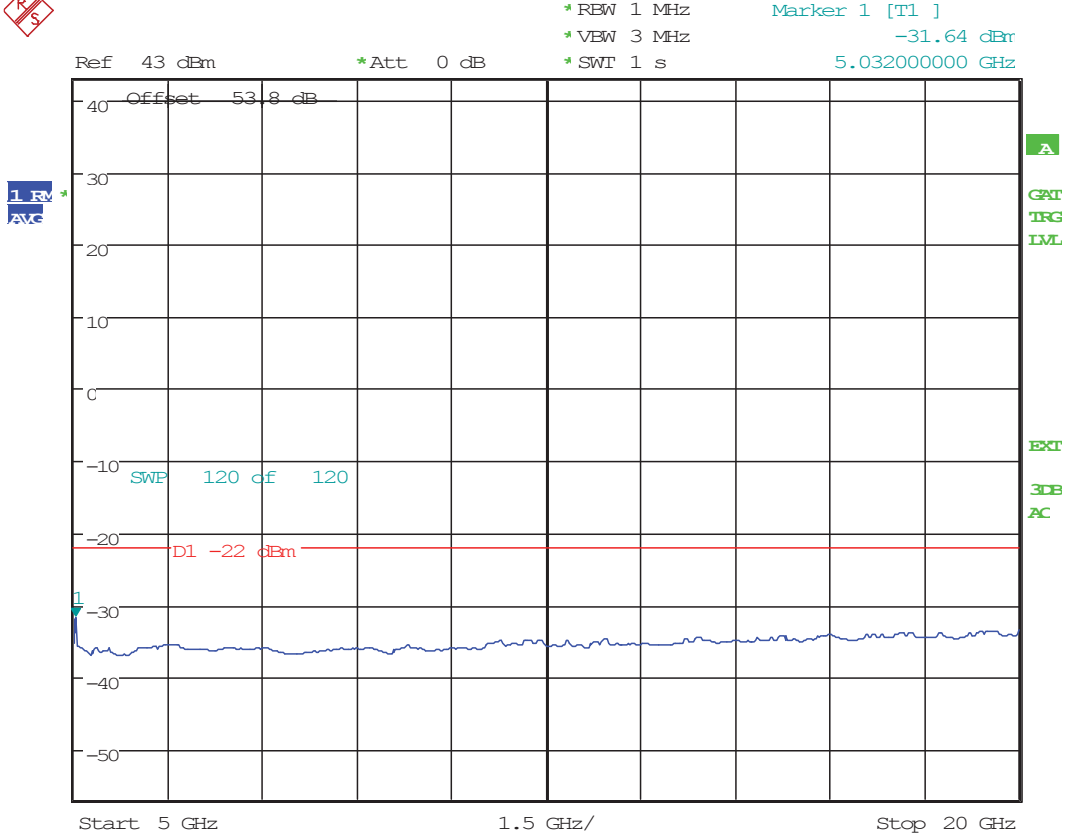
Date: 8.OCT.2015 16:52:25



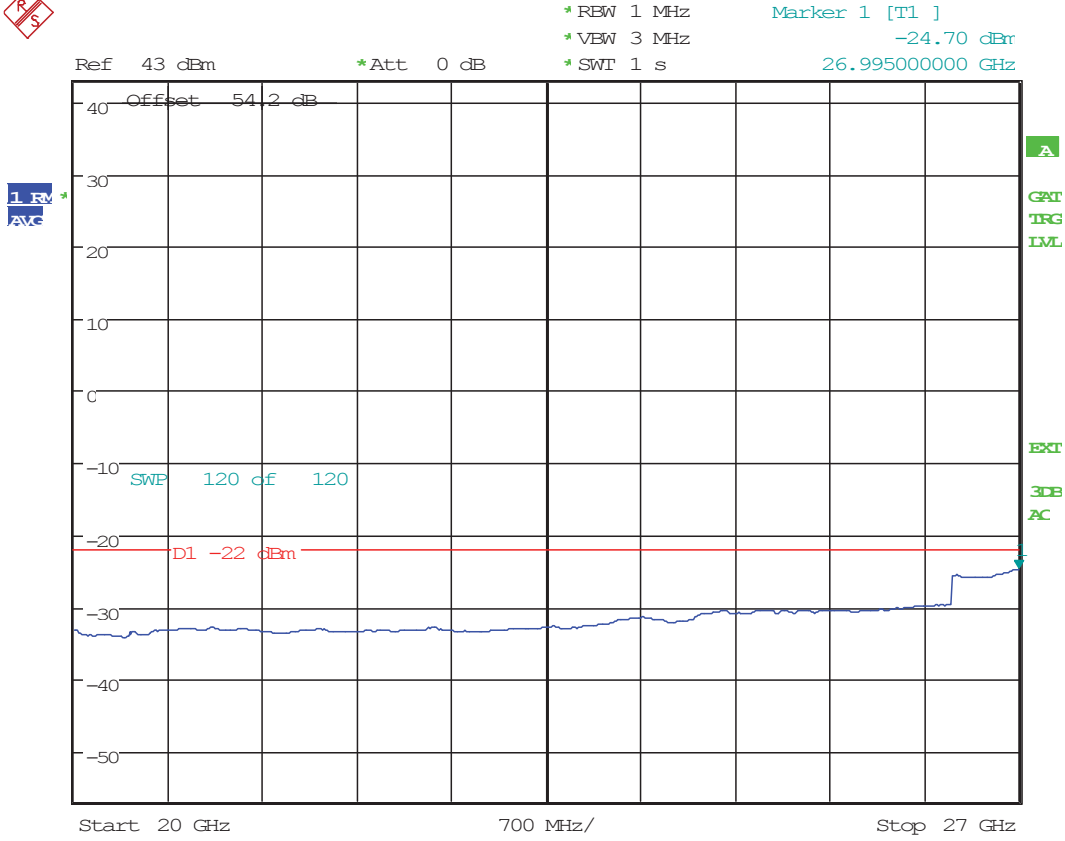
TX Spurious; Test Eng: JY; TDD B41 RRH Cast Fingu Fltr; 20+20MHz
BW; 20W; 2496-2536MHz; -48VDC; QPSK; FCCID-ASBBTRX-15A.
Date: 8.OCT.2015 17:04:51



TX Spurious; Test Eng: JY; TDD B41 RRH Cast Fingu Fltr; 20+20MHz
BW; 20W; 2496-2536M; -48VDC; QPSK; FCCID-ASBBTRX-15A.
Date: 8.OCT.2015 17:15:27



TX Spurious; Test Eng: JY; TDD B41 RRH Cast Fingu Fltr; 20+20MHz
BW; 20W; 2496-2536MHz; -48VDC; QPSK; FCCID-ASBBTRX-15A.
Date: 8.OCT.2015 17:56:04

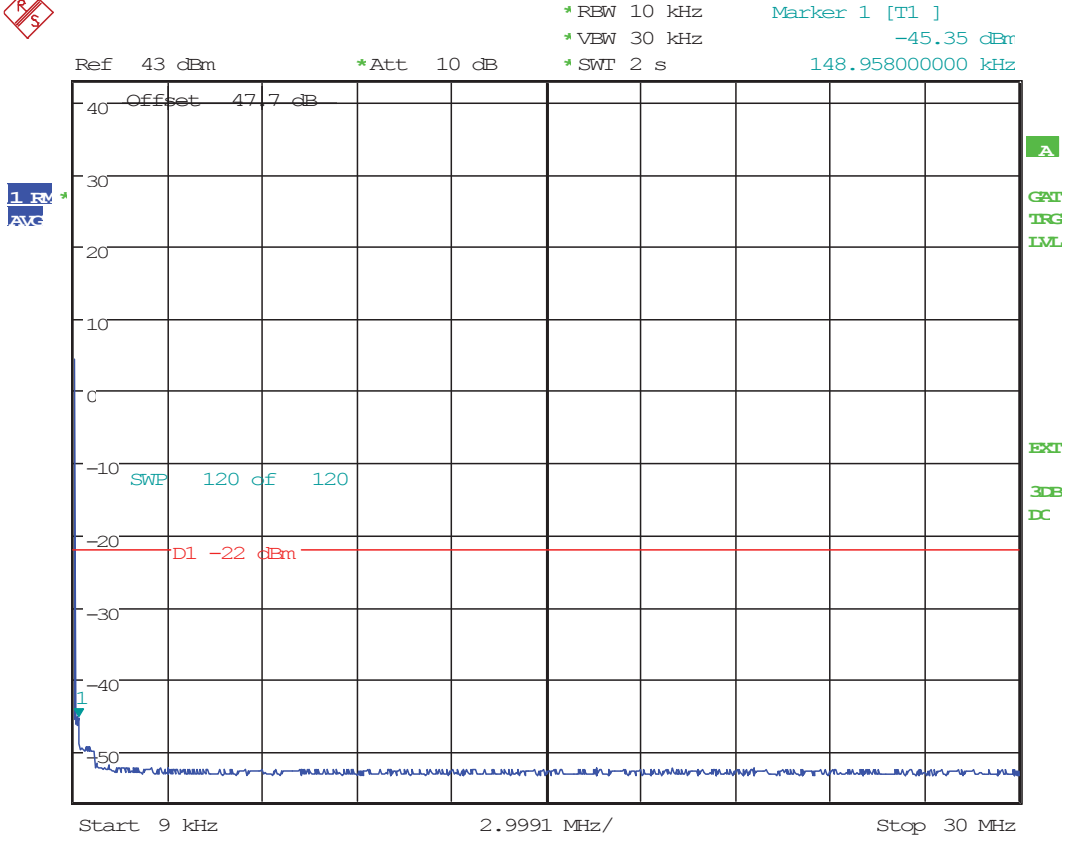


TX Spurious; Test Eng: JY; TDD B41 RRH Cast Fingu Fltr; 20+20MHz
 BW; 20W; 2496-2536MHz; -48VDC; QPSK; FCCID-ASBBTRX-15A.
 Date: 8.OCT.2015 17:43:41

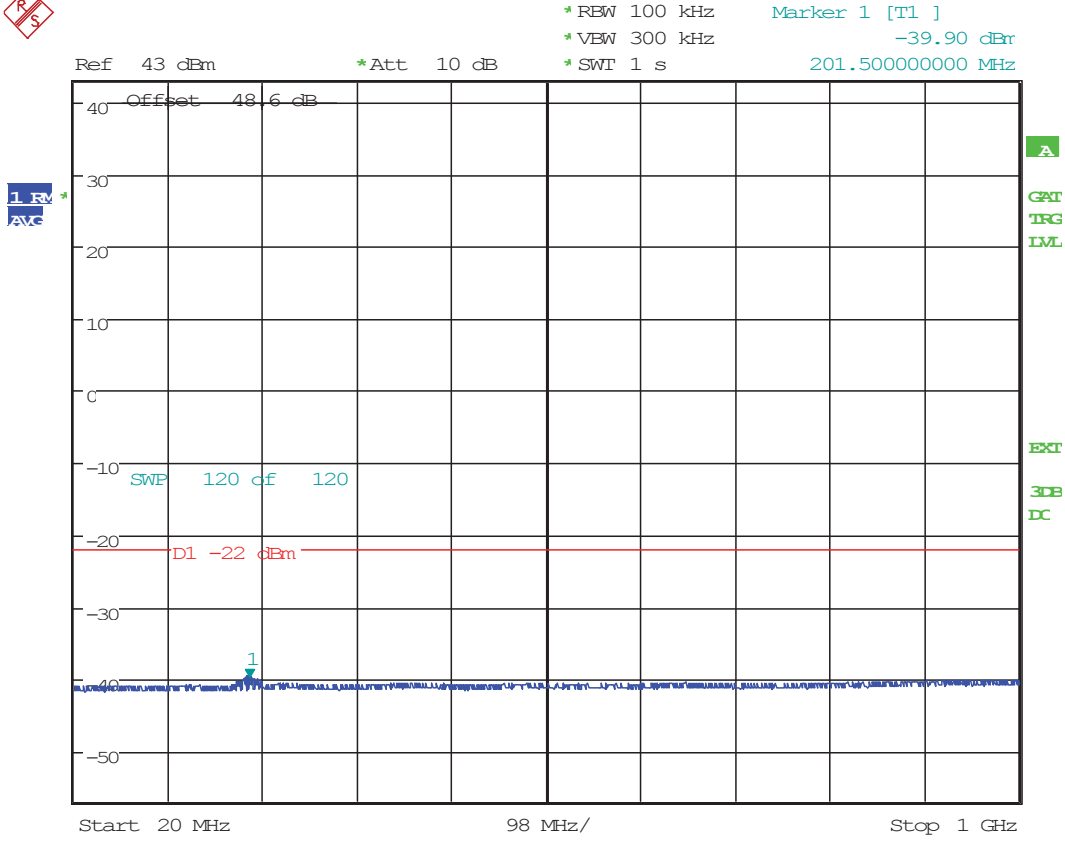
**Transmit Port
Antenna Conducted Spurious Emissions**

**20+20 MHz BW
16QAM Modulation
8x20 watts (MIMO)**

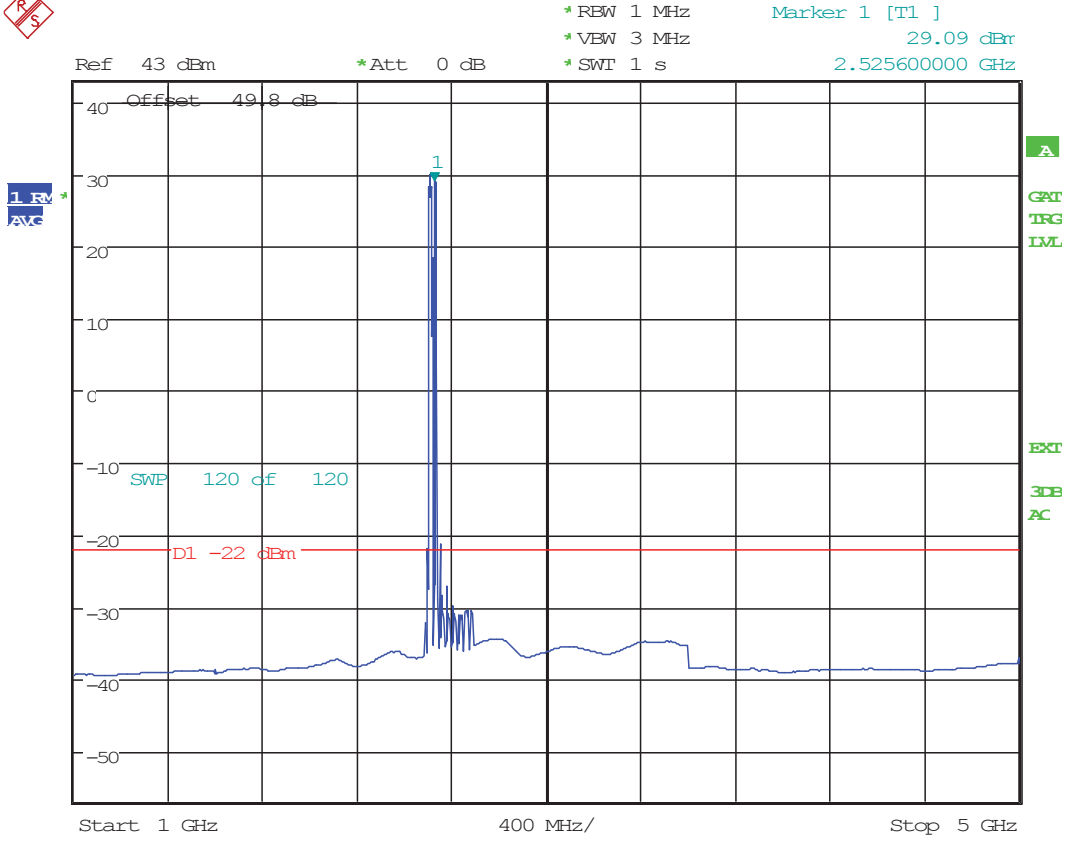
**Bandwidth 2496 – 2536 MHz
(Lower)**



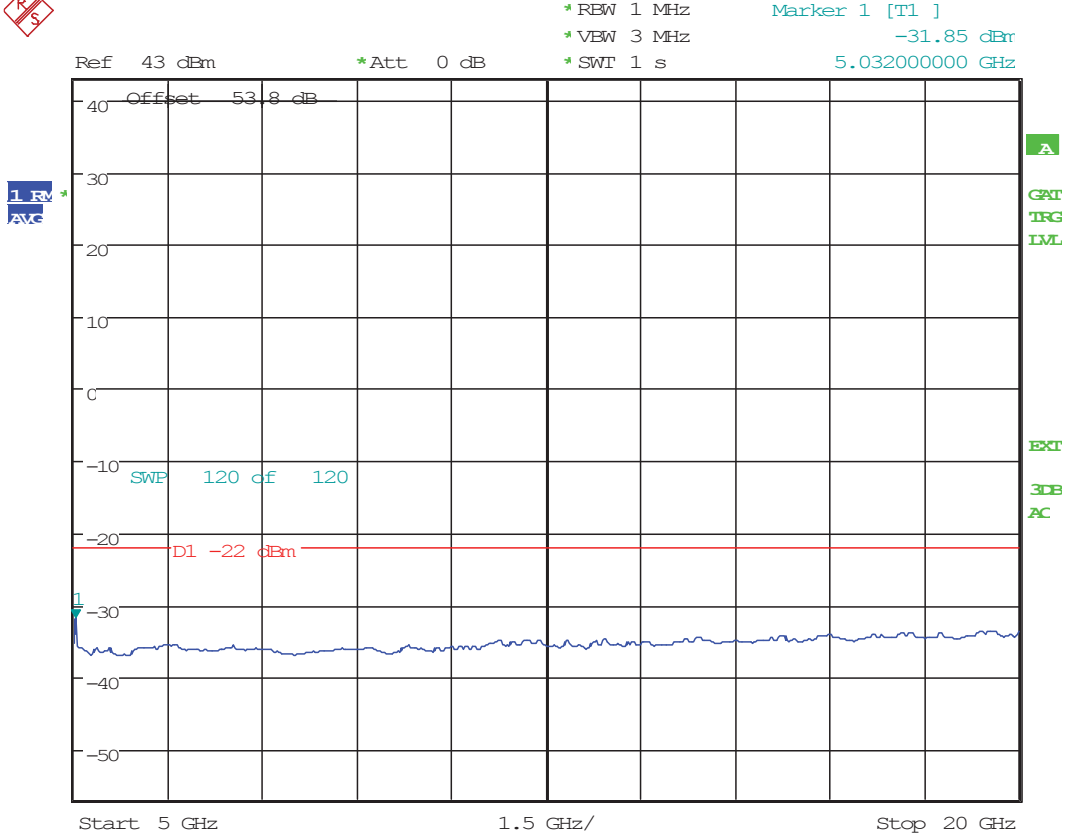
TX Spurious; Test Eng: SEG; TDD B41 RRH Cast Fingu Fltr; 20+20MH
 z BW; 20W; 2496-2536MHz; -48VDC; 16QAM; FCCID-ASBBTRX-15A.
 Date: 9.OCT.2015 10:03:24



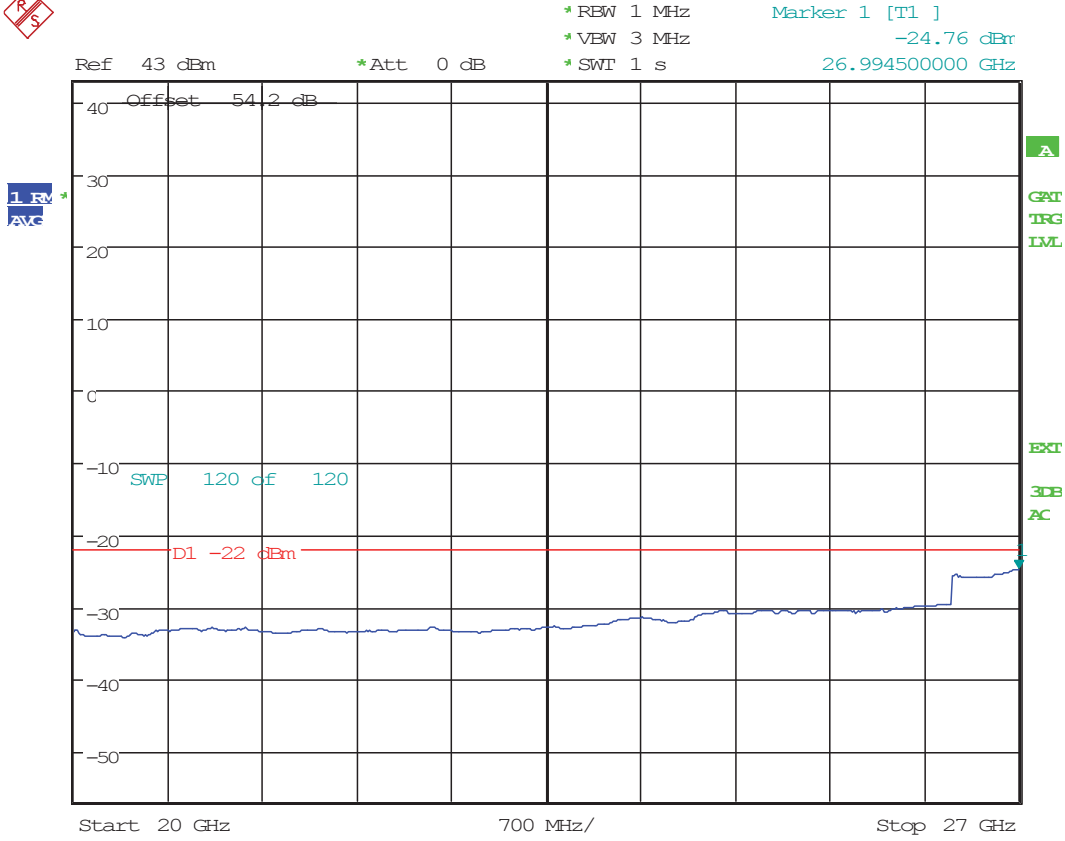
TX Spurious;Test Eng:SEG;TDD B41 RRH Cast Fingu Fltr;20+20MH
 zBW;20W;2496-2536MHz;-48VDC;16QAM; FCCID-ASBBTRX-15A.
 Date: 9.OCT.2015 10:12:30



TX Spurious; Test Eng: SEG; TDD B41 RRH Cast Fingu Fltr; 20+20MH
 zBW; 20W; 2496-2536M; -48VDC; 16QAM; FCCID-ASBBTRX-15A.
 Date: 9.OCT.2015 10:20:03



TX Spurious; Test Eng: SEG; TDD B41 RRH Cast Fingu Fltr; 20+20MH
 zBW; 20W; 2496-2536MHz; -48VDC; 16QAM; FCCID-ASBBTRX-15A.
 Date: 9.OCT.2015 10:28:11

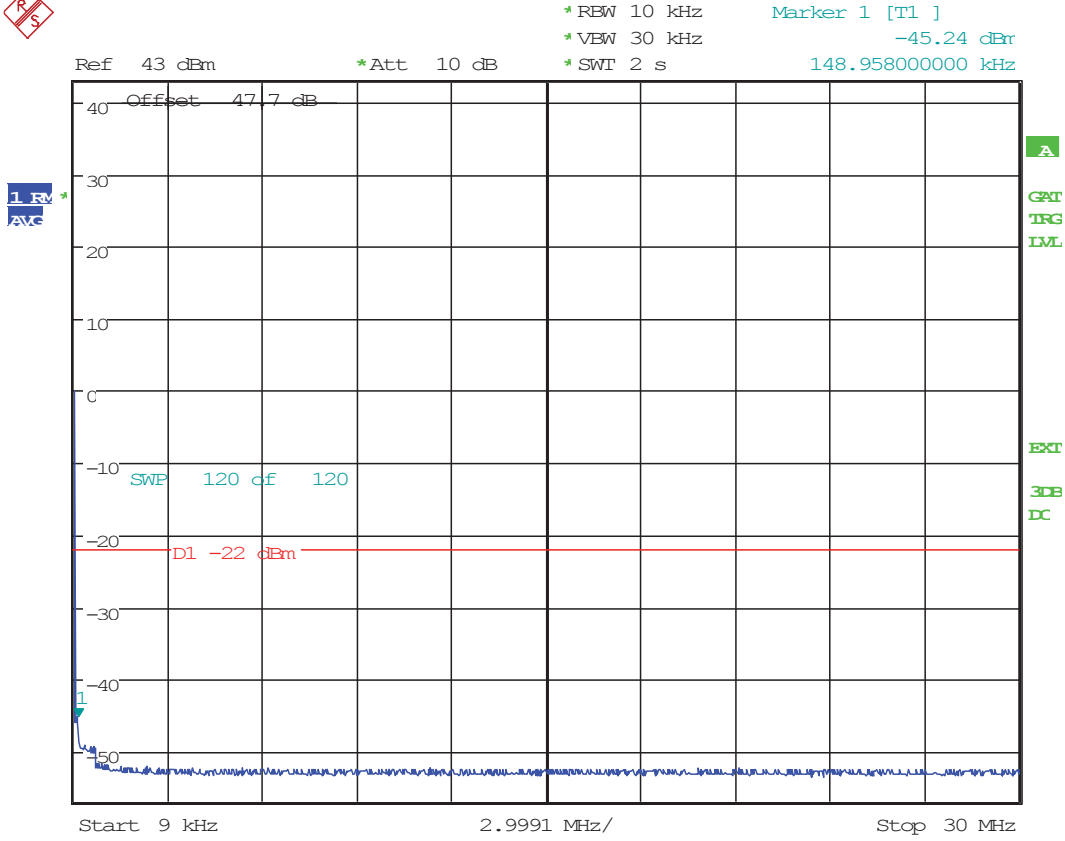


TX Spurious; Test Eng: SEG; TDD B41 RRH Cast Fingu Fltr; 20+20MH
 zBW; 20W; 2496-2536MHz; -48VDC; 16QAM; FCCID-ASBBTRX-15A.
 Date: 9.OCT.2015 10:35:41

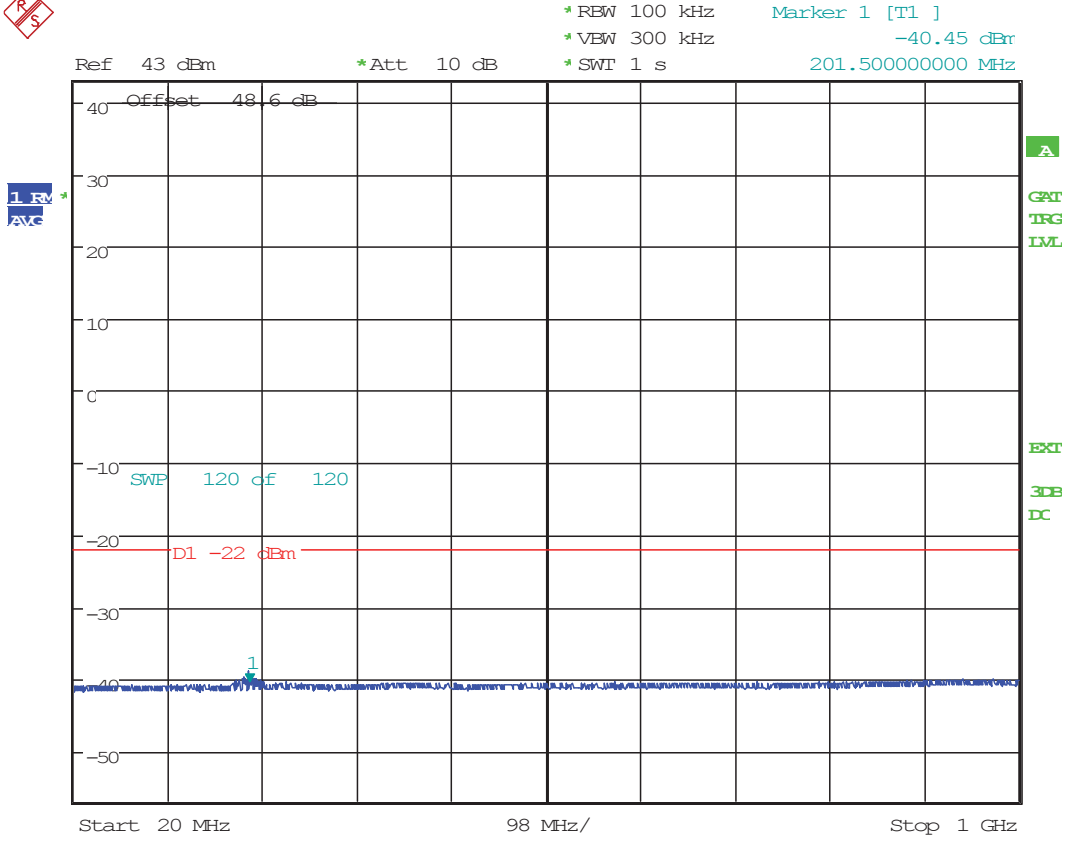
**Transmit Port
Antenna Conducted Spurious Emissions**

**20+20 MHz BW
64QAM Modulation
8x20 watts (MIMO)**

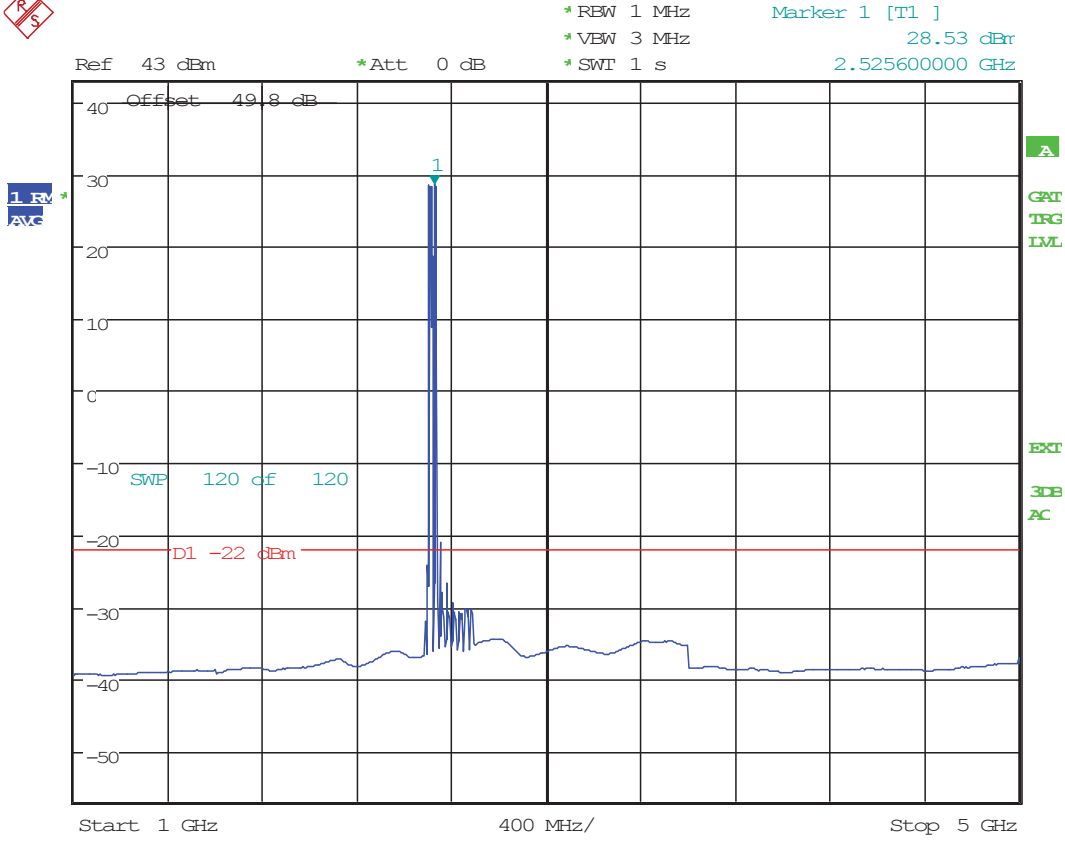
**Bandwidth 2496 – 2536 MHz
(Lower)**



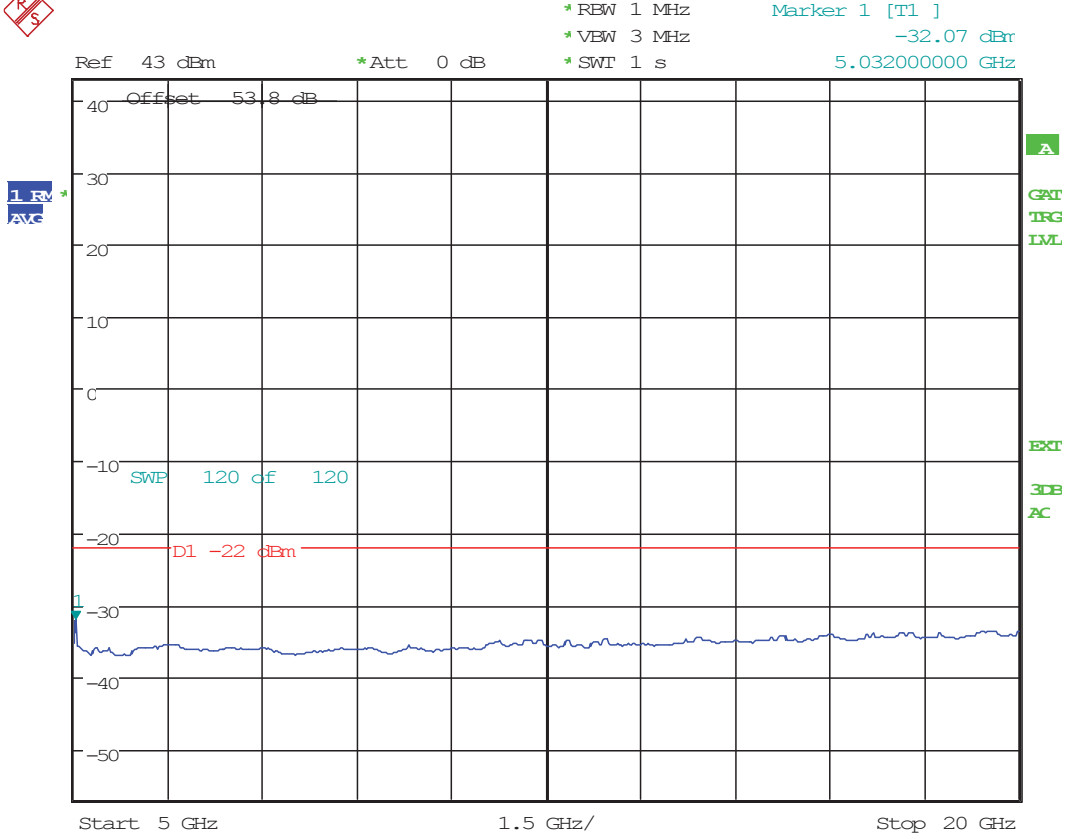
TX Spurious; Test Eng: SEG; TDD B41 RRH Cast Fingu Fltr; 20+20MH
 z BW; 20W; 2496-2536MHz; -48VDC; 64QAM; FCCID-ASBBTRX-15A.
 Date: 9.OCT.2015 12:23:49



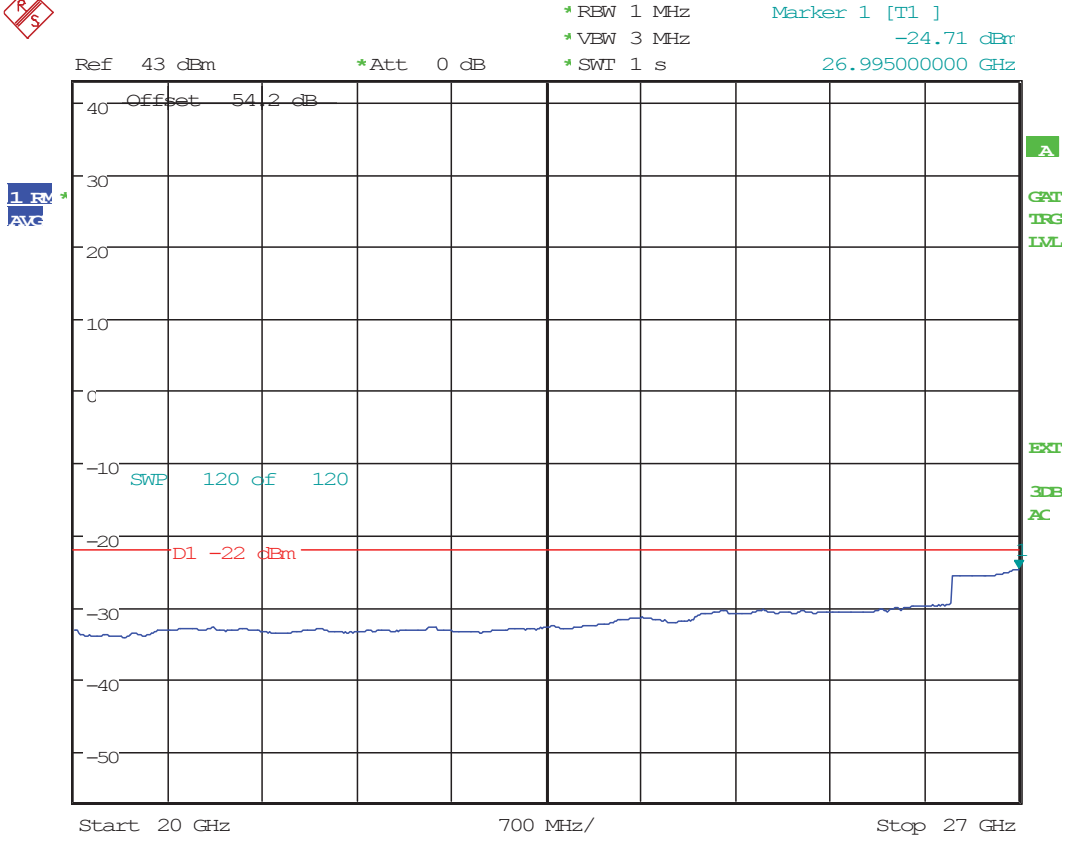
TX Spurious;Test Eng:SEG;TDD B41 RRH Cast Fingu Fltr;20+20MH
 zBW;20W;2496-2536MHz;-48VDC;64QAM; FCCID-ASBBTRX-15A.
 Date: 9.OCT.2015 12:08:57



TX Spurious; Test Eng: SEG; TDD B41 RRH Cast Fingu Fltr; 20+20MH
zBW; 20W; 2496-2536M; -48VDC; 64QAM; FCCID-ASBBTRX-15A.
Date: 9.OCT.2015 11:45:17



TX Spurious; Test Eng: SEG; TDD B41 RRH Cast Fingu Fltr; 20+20MH
 zBW; 20W; 2496-2536MHz; -48VDC; 64QAM; FCCID-ASBBTRX-15A.
 Date: 9.OCT.2015 11:53:49

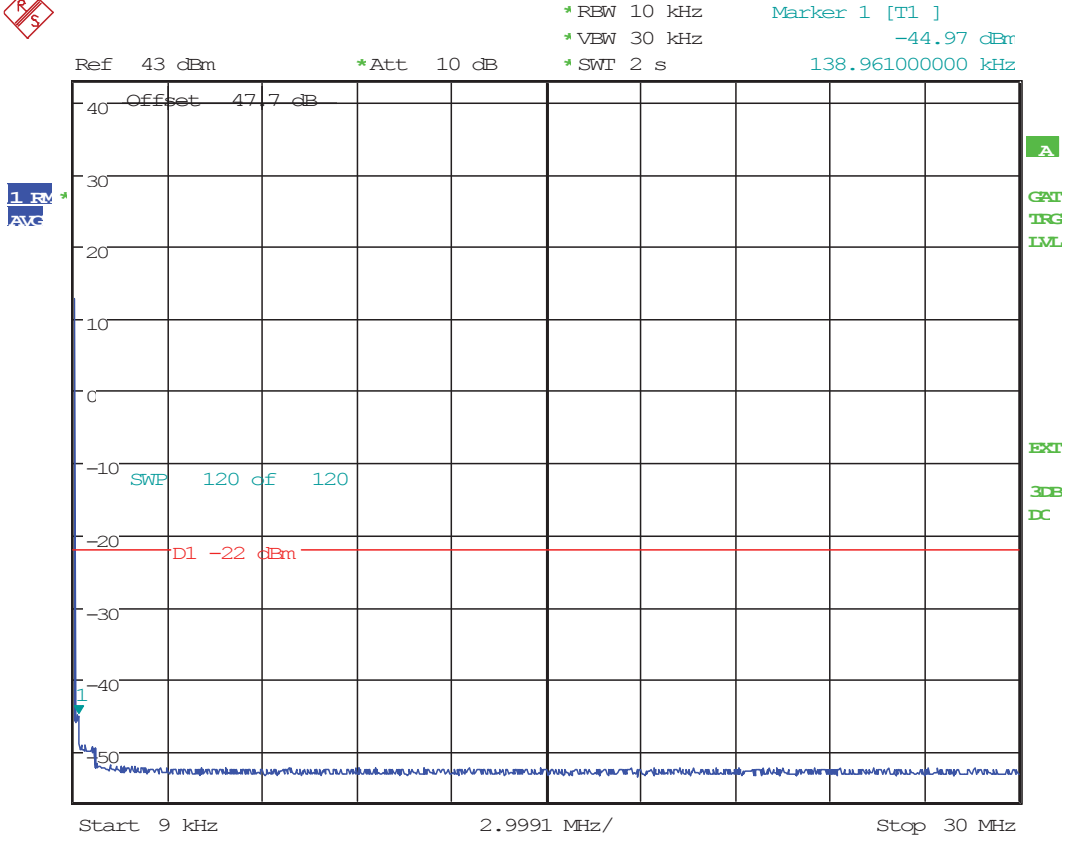


TX Spurious; Test Eng: SEG; TDD B41 RRH Cast Fingu Fltr; 20+20MH
zBW; 20W; 2496-2536MHz; -48VDC; 64QAM; FCCID-ASBBTRX-15A.
Date: 9.OCT.2015 12:01:25

**Transmit Port
Antenna Conducted Spurious Emissions**

**20+20 MHz BW
QPSK Modulation
8x20 watts (MIMO)**

**Bandwidth 2558 – 2598 MHz
(Middle)**

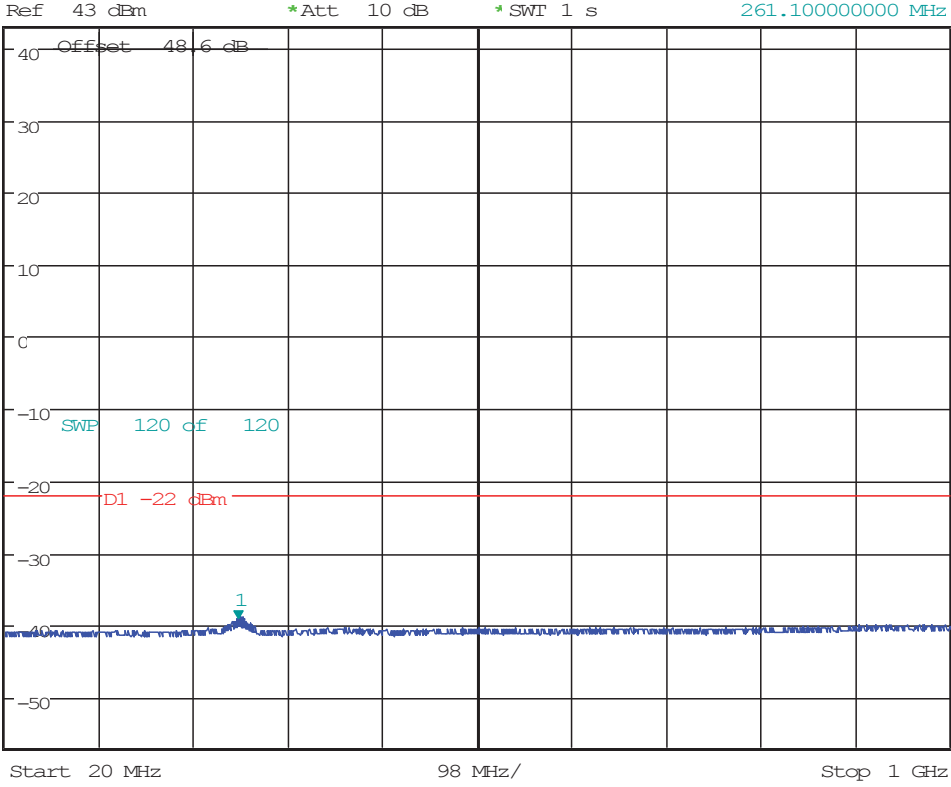


TX SPURIOUS: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2558-2598MHz; -48VDC;QPSK; FCCID:AS5BBTRX-15A
 Date: 23.NOV.2015 16:15:53

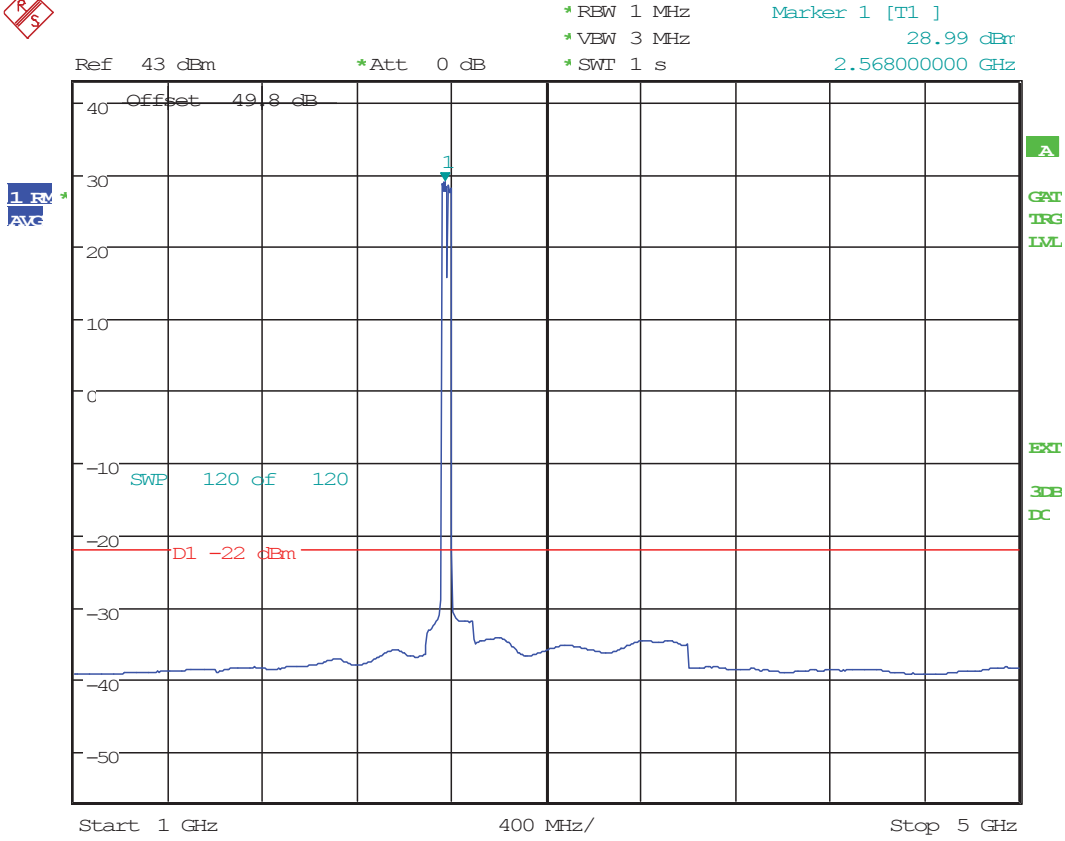


1. RV
 /AVE

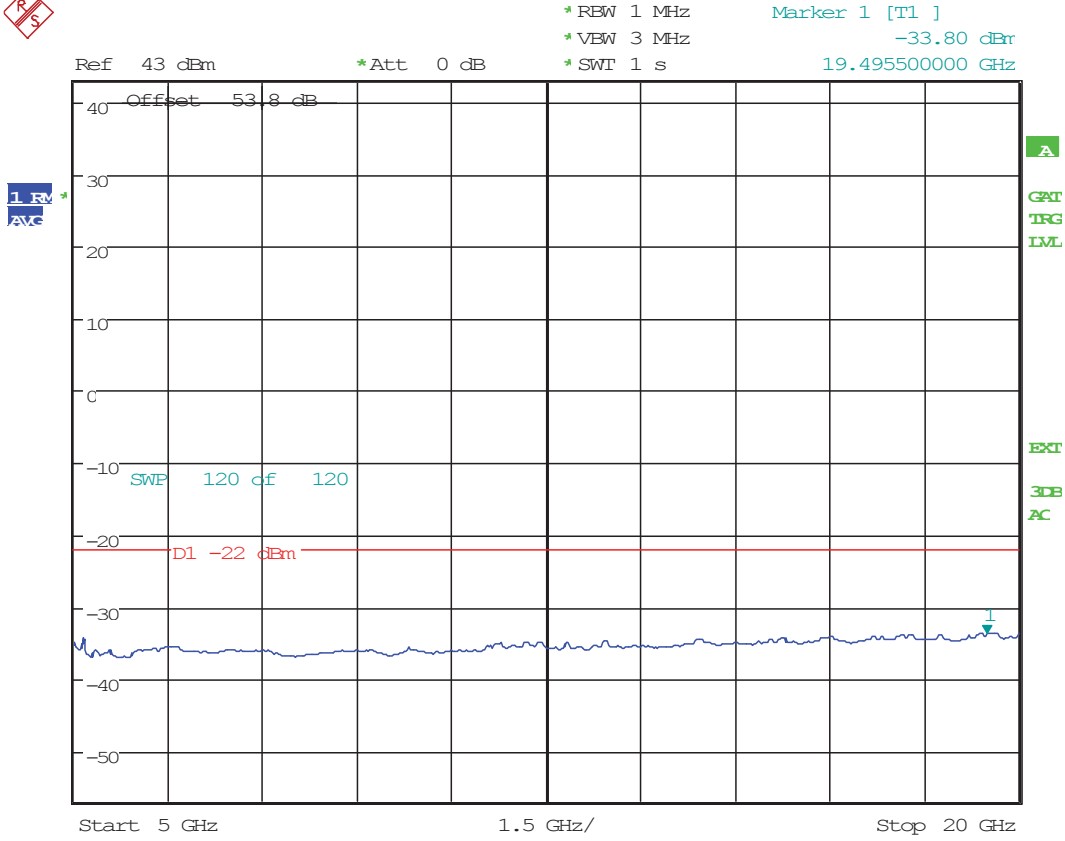
* RBW 100 kHz Marker 1 [T1]
 * VBW 300 kHz -39.31 dBm
 * SWI 1 s 261.10000000 MHz



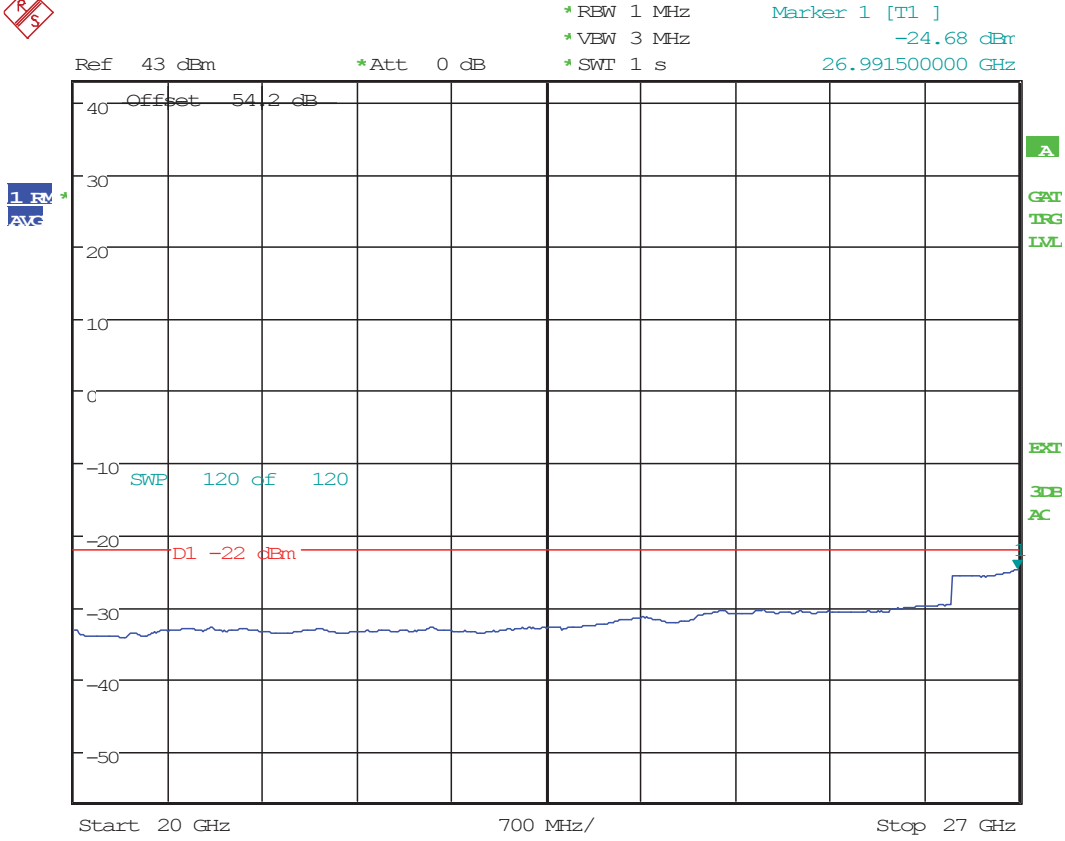
TX SPURIOUS: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2558-2598MHz; -48VDC;QPSK; FCCID:AS5BBTRX-15A
 Date: 23.NOV.2015 15:50:40



TX SPURIOUS: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2558-2598MHz; -48VDC;QPSK; FCCID:AS5BBTRX-15A
 Date: 23.NOV.2015 16:29:21



TX SPURIOUS: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2558-2598MHz; -48VDC;QPSK; FCCID:AS5BBTRX-15A
 Date: 23.NOV.2015 16:42:52

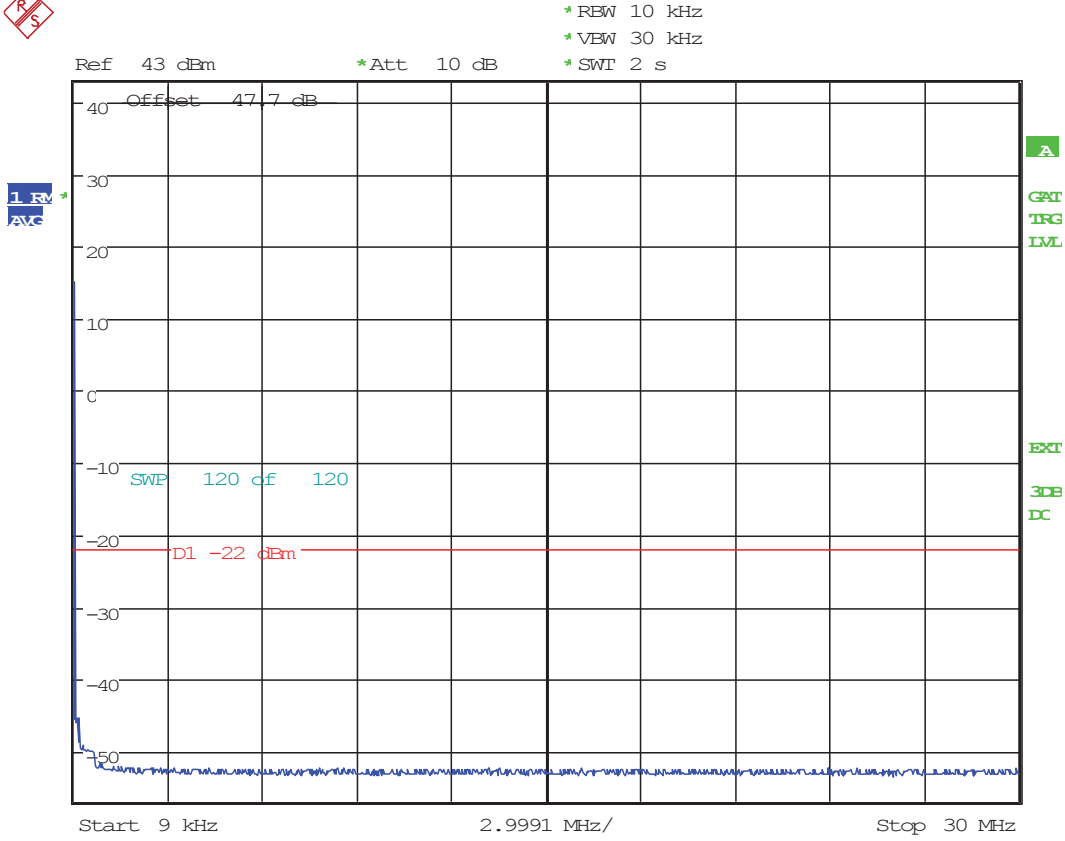


TX SPURIOUS: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2558-2598MHz; -48VDC;QPSK; FCCID:AS5BBTRX-15A
 Date: 23.NOV.2015 16:56:30

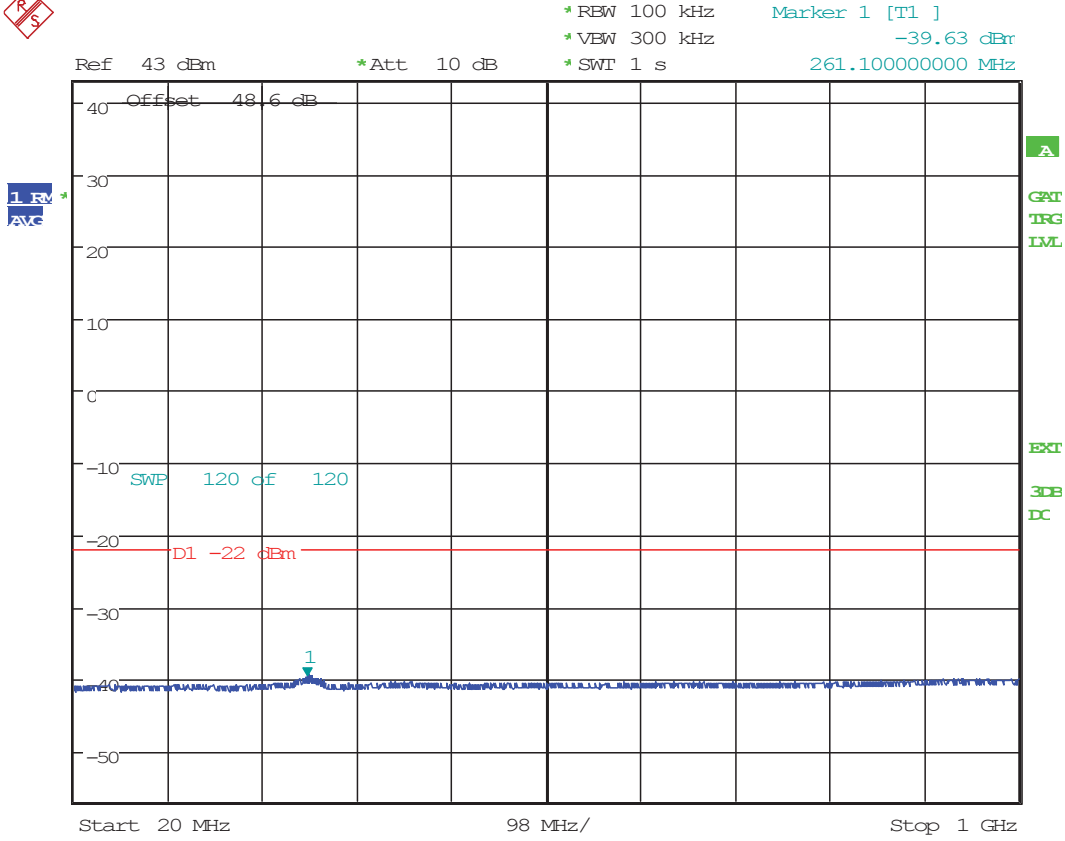
**Transmit Port
Antenna Conducted Spurious Emissions**

**20+20 MHz BW
16QAM Modulation
8x20 watts (MIMO)**

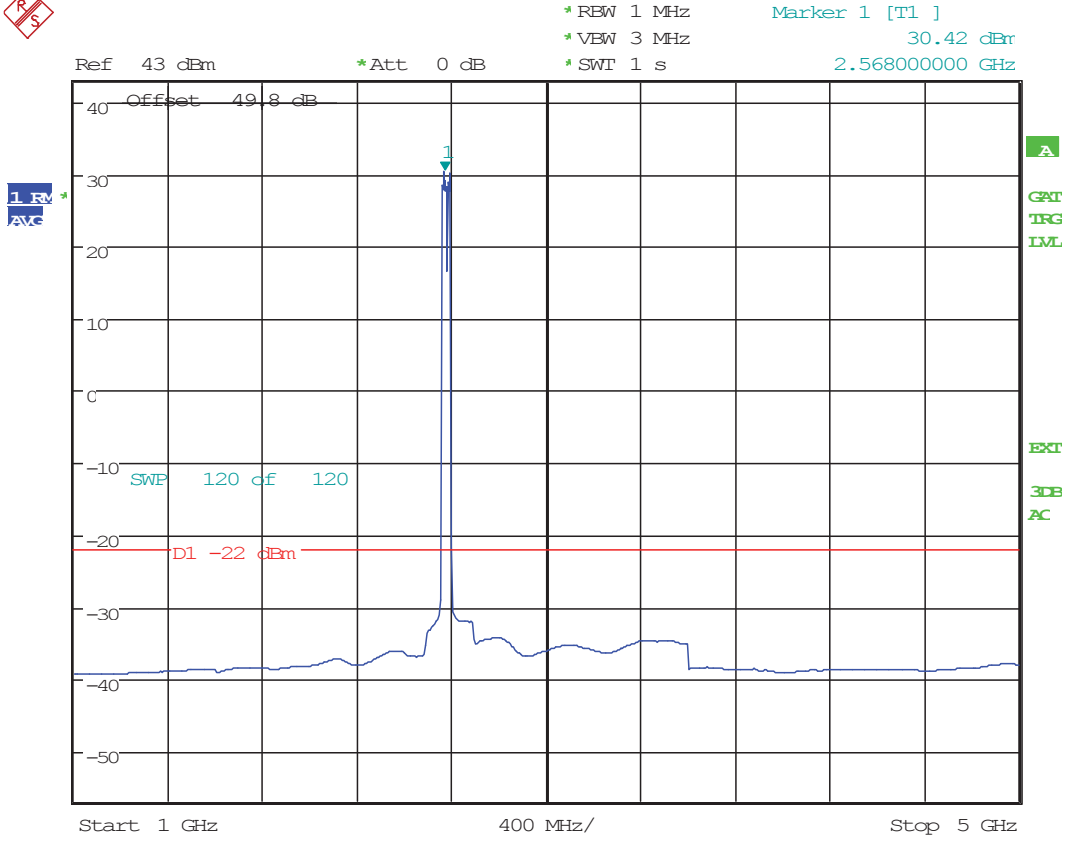
**Bandwidth 2558 – 2598 MHz
(Middle)**



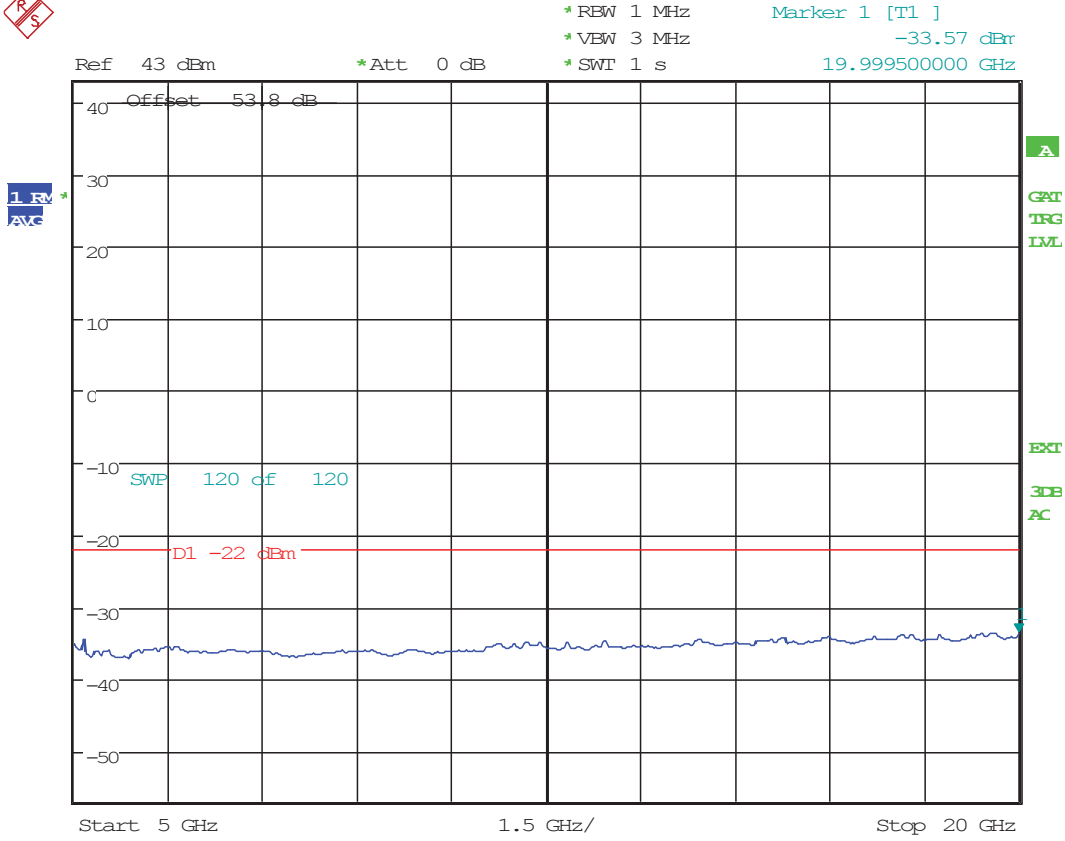
TX SPURIOUS: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2558-2598MHz; -48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 23.NOV.2015 13:09:44



TX SPURIOUS: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2558-2598MHz; -48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 23.NOV.2015 14:34:28



TX SPURIOUS: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2558-2598MHz; -48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 23.NOV.2015 13:47:49

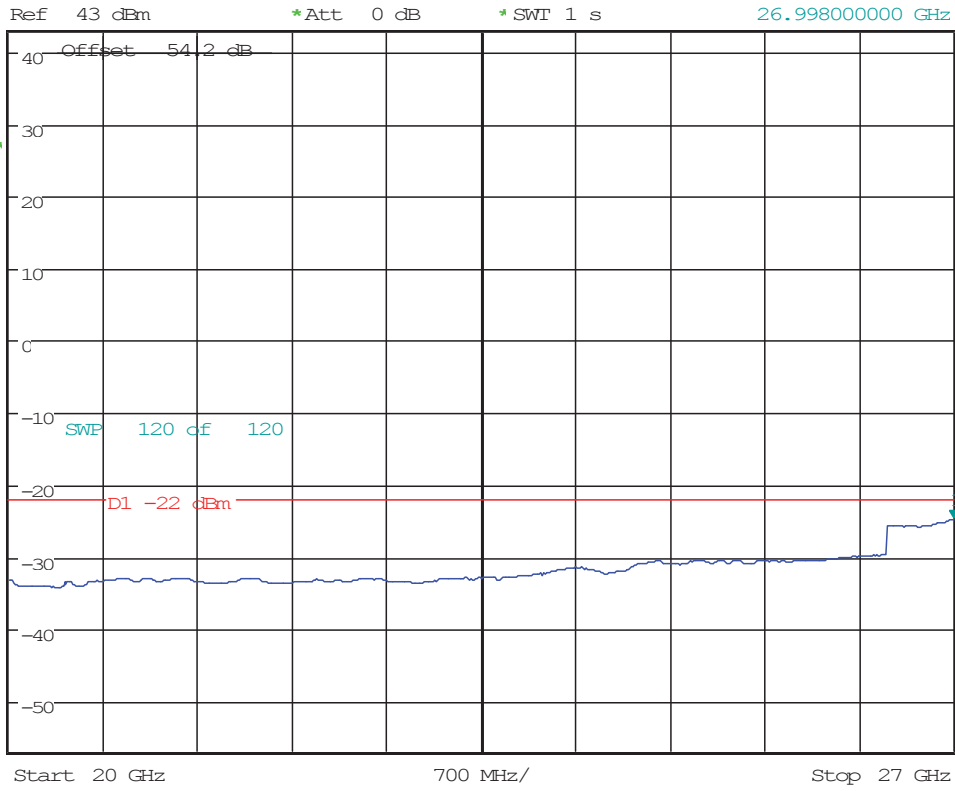


TX SPURIOUS: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2558-2598MHz; -48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 23.NOV.2015 14:04:11



1. RV
 /AVE

* RBW 1 MHz
 * VBW 3 MHz
 * SWI 1 s
 Marker 1 [T1]
 -24.72 dBm
 26.998000000 GHz

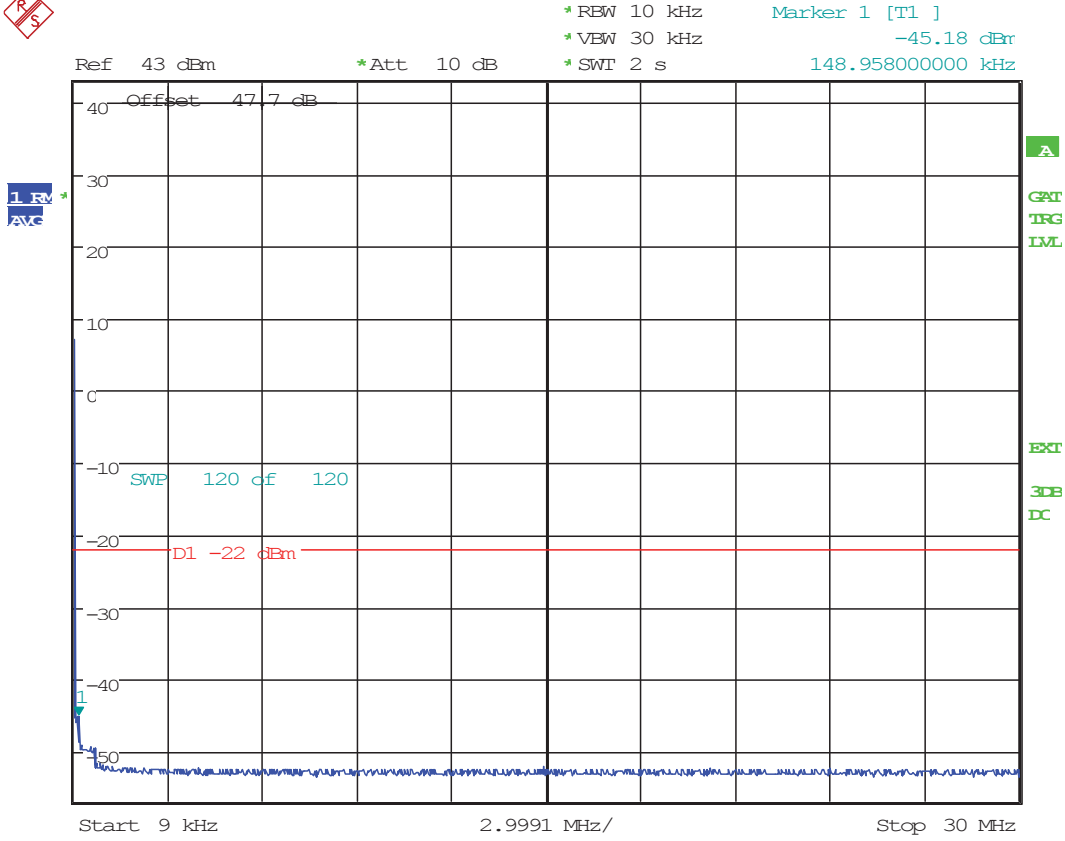


TX SPURIOUS: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2558-2598MHz; -48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 23.NOV.2015 14:20:37

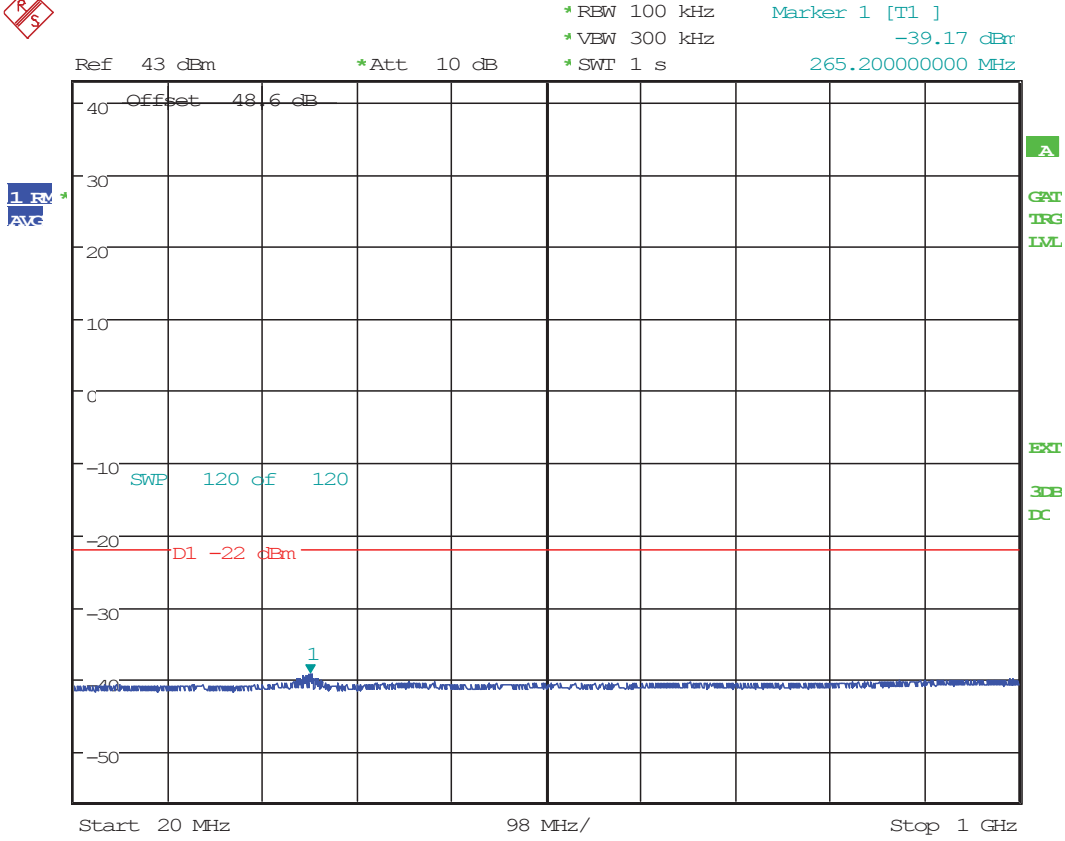
**Transmit Port
Antenna Conducted Spurious Emissions**

**20+20 MHz BW
64QAM Modulation
8x20 watts (MIMO)**

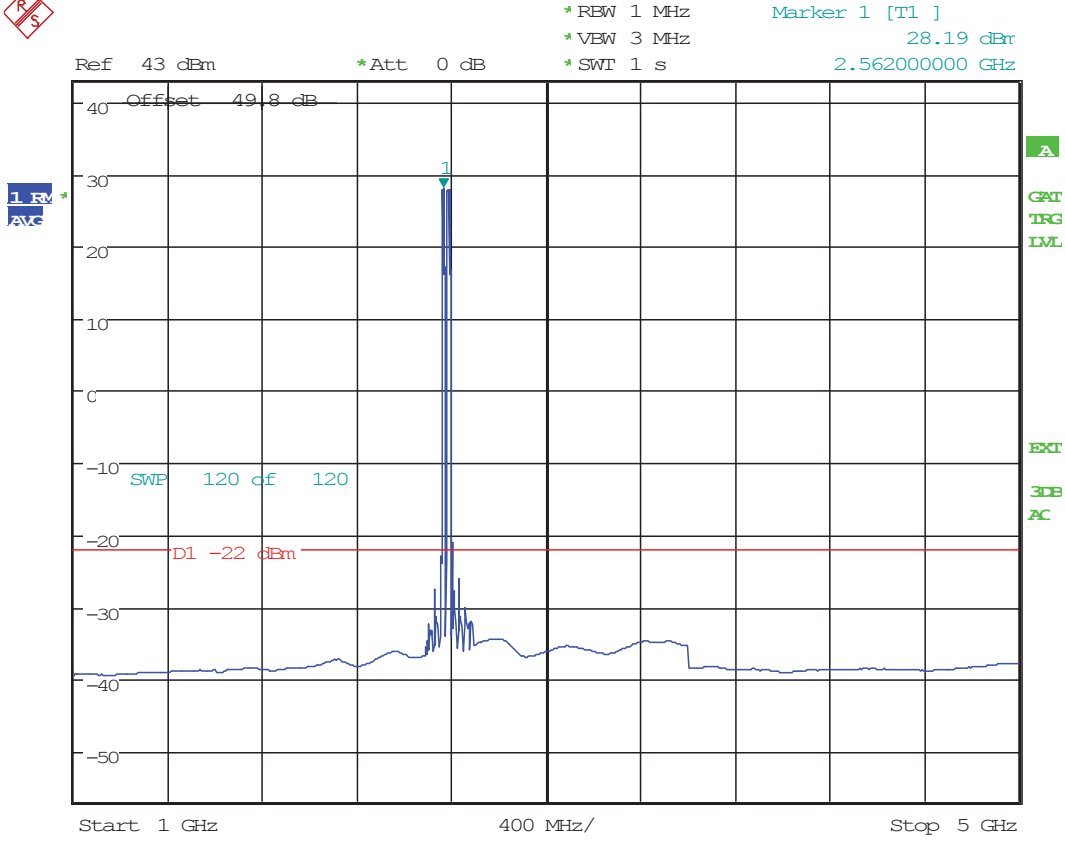
**Bandwidth 2558 – 2598 MHz
(Middle)**



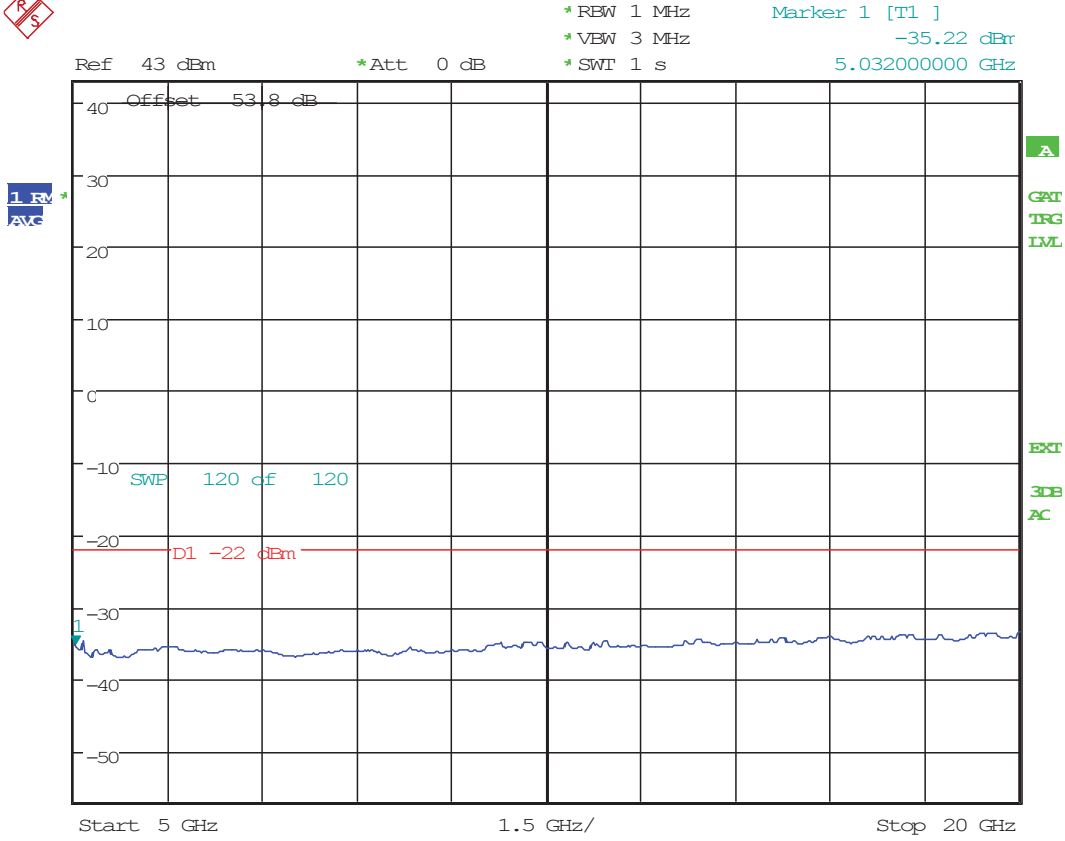
TX Spurious;Test Eng:SEG;TDD B41 RRH Cast Fingu Fltr;20+20MH
 z BW;20W;2558-2598MHz;-48VDC;64QAM;FCCID-ASBBTRX-15A.
 Date: 9.OCT.2015 14:54:59



TX Spurious;Test Eng:SEG;TDD B41 RRH Cast Fingu Fltr;20+20MH
 zBW;20W;2558-2598MHz;-48VDC;64QAM; FCCID-ASBBTRX-15A.
 Date: 9.OCT.2015 15:02:22



TX Spurious; Test Eng: SEG; TDD B41 RRH Cast Fingu Fltr; 20+20MH
zBW; 20W; 2558-2598M; -48VDC; 64QAM; FCCID-ASBBTRX-15A.
Date: 9.OCT.2015 15:09:46

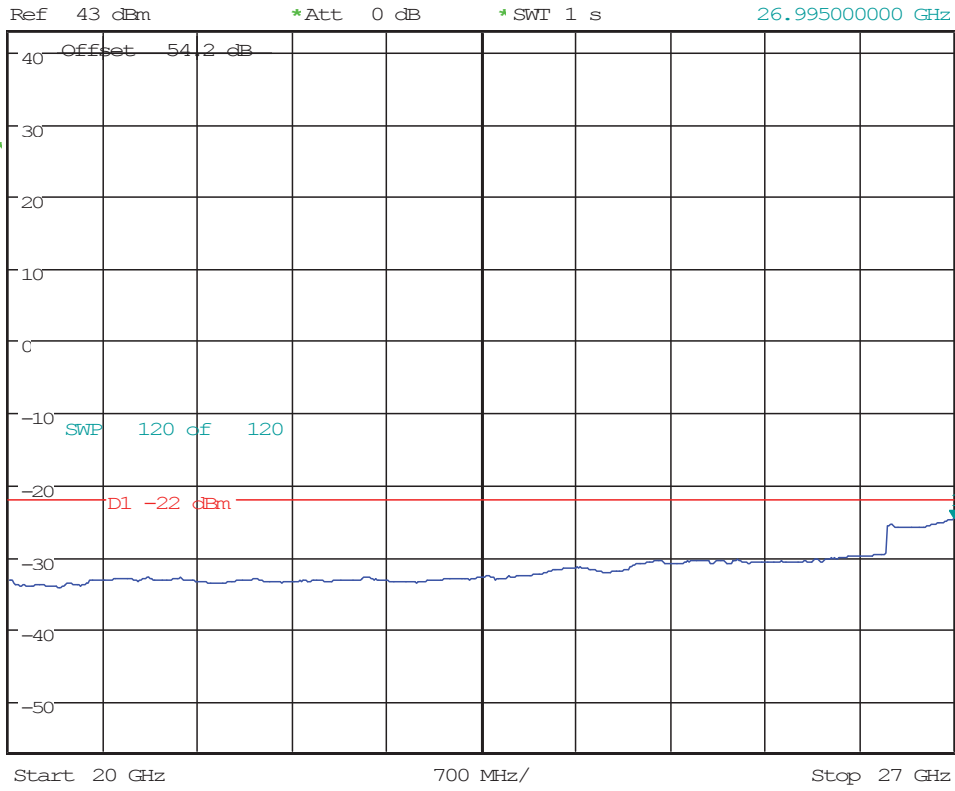


TX Spurious; Test Eng: SEG; TDD B41 RRH Cast Fingu Fltr; 20+20MH
 zBW; 20W; 2558-2598MHz; -48VDC; 64QAM; FCCID-ASBBTRX-15A.
 Date: 9.OCT.2015 15:17:45



1. RV
 /AVE

* RBW 1 MHz
 * VBW 3 MHz
 * SWI 1 s
 Marker 1 [T1]
 -24.71 dBm
 26.995000000 GHz

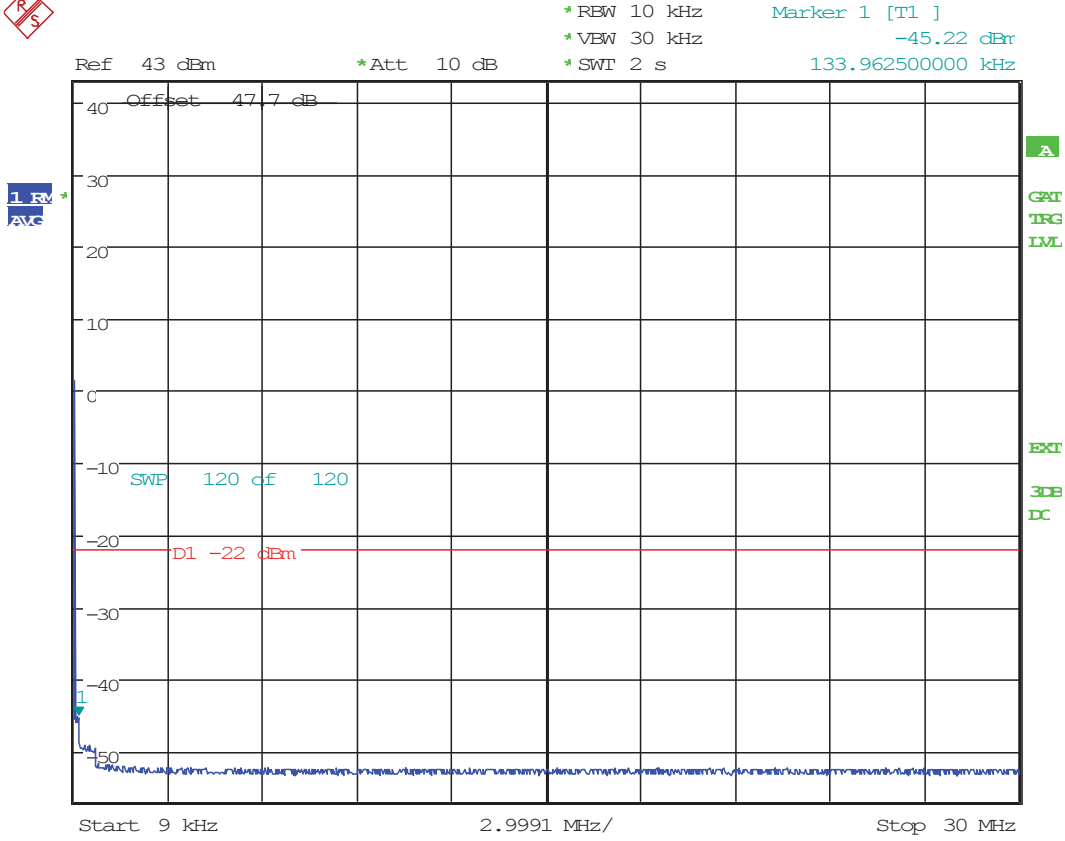


TX Spurious; Test Eng: SEG; TDD B41 RRH Cast Fingu Fltr; 20+20MH
 zBW; 20W; 2558-2598MHz; -48VDC; 64QAM; FCCID-ASBBTRX-15A.
 Date: 9.OCT.2015 15:26:35

**Transmit Port
Antenna Conducted Spurious Emissions**

**20+20 MHz BW
QPSK Modulation
8x20 watts (MIMO)**

**Bandwidth 2650 – 2690 MHz
(Higher)**

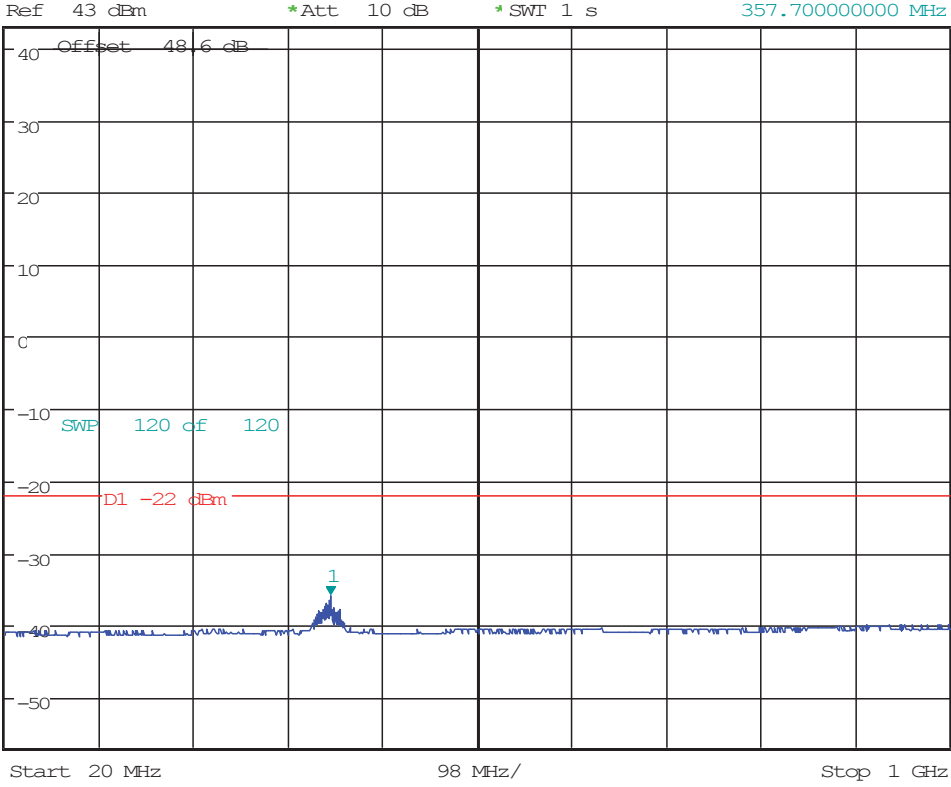


TX SPURIOUS: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2650-2690MHz; -48VDC;QPSK; FCCID:AS5BBTRX-15A
 Date: 25.NOV.2015 18:21:08

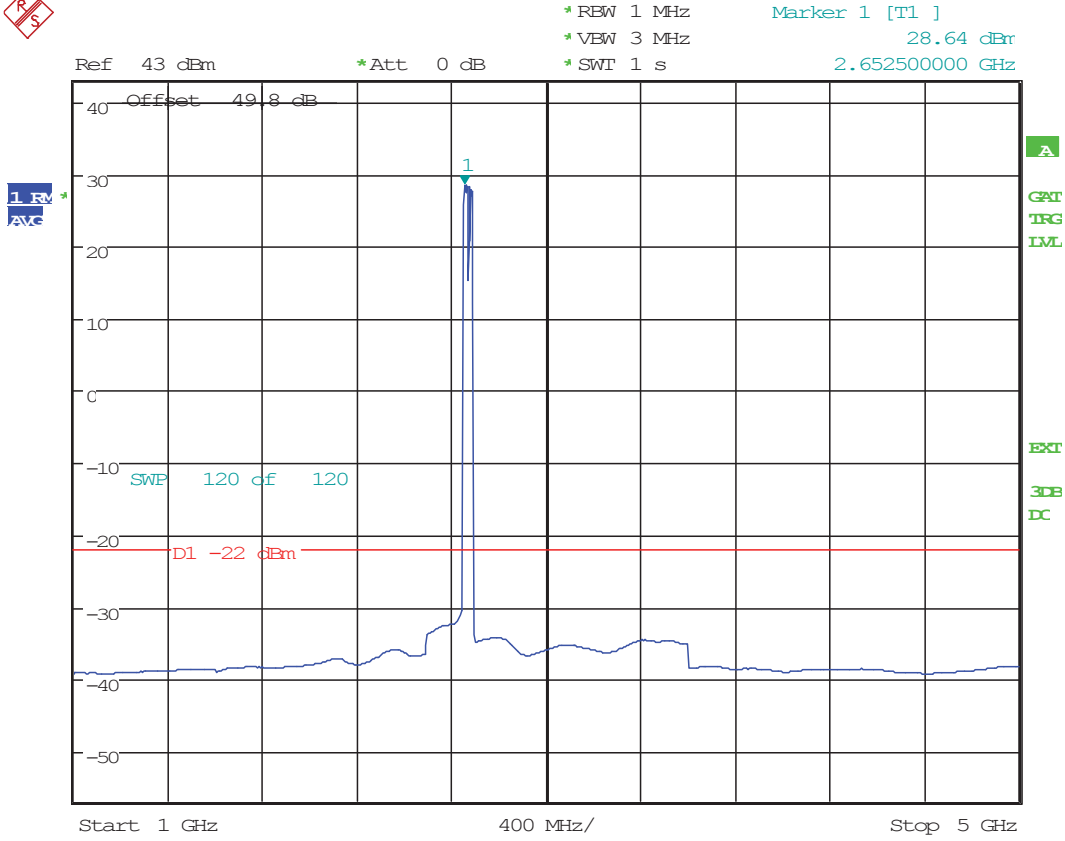


1 RV
 AVE

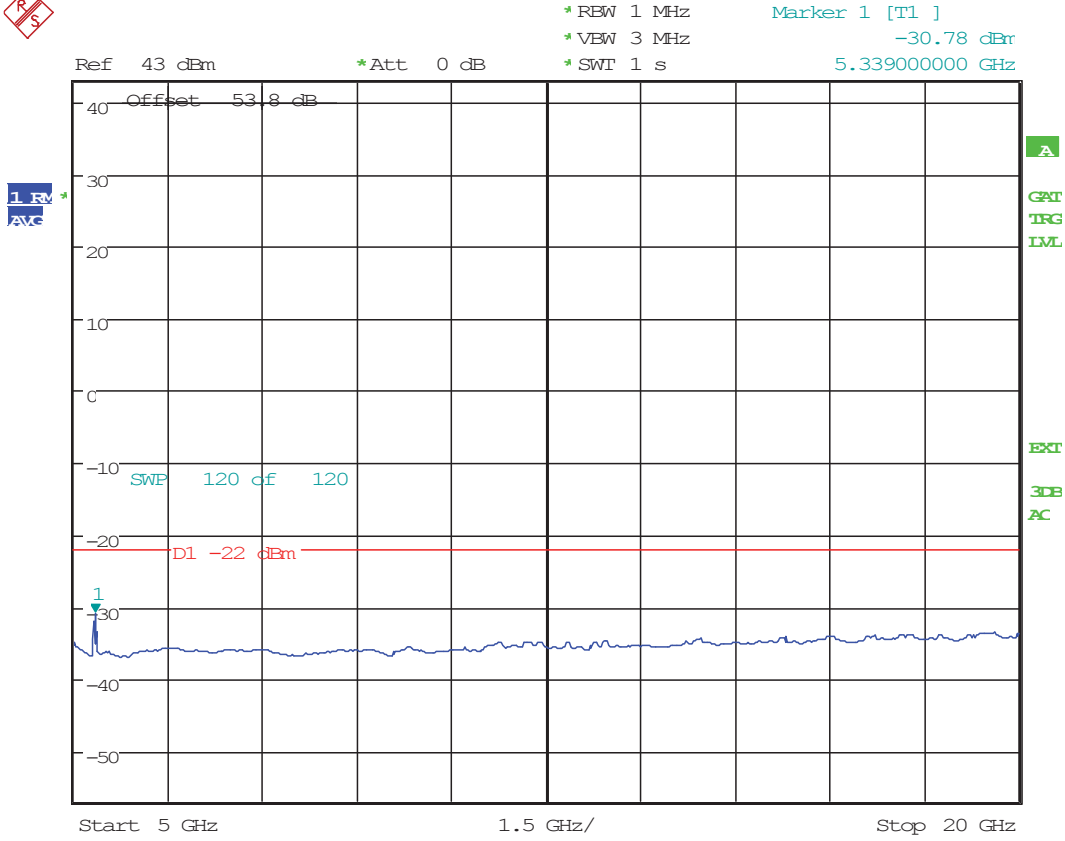
*RBW 100 kHz Marker 1 [T1]
 *VBW 300 kHz -35.98 dBm
 *SWT 1 s 357.70000000 MHz



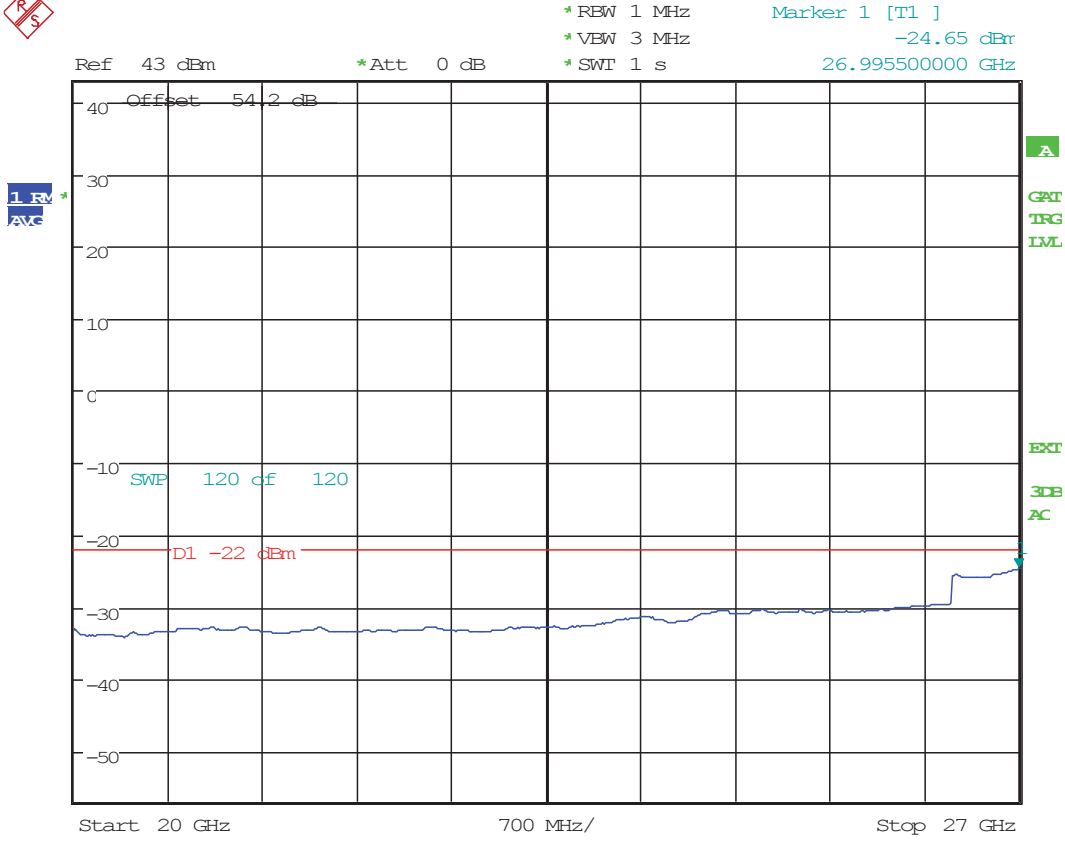
TX SPURIOUS: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2650-2690MHz; -48VDC;QPSK; FCCID:AS5BBTRX-15A
 Date: 25.NOV.2015 17:54:20



TX SPURIOUS: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
20+20M BW; 2650-2690MHz; -48VDC;QPSK; FCCID:AS5BBTRX-15A
Date: 25.NOV.2015 18:36:20



TX SPURIOUS: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2650-2690MHz; -48VDC;QPSK; FCCID:AS5BBTRX-15A
 Date: 25.NOV.2015 18:49:38

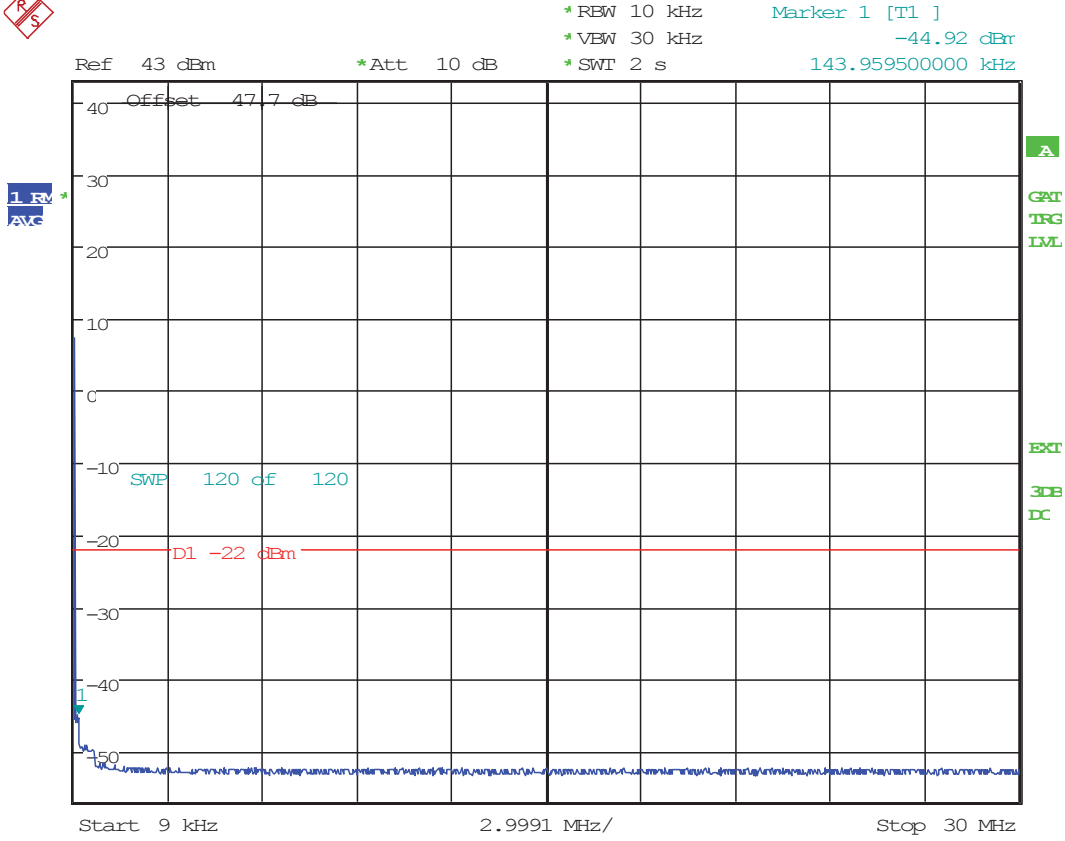


TX SPURIOUS: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2650-2690MHz; -48VDC;QPSK; FCCID:AS5BBTRX-15A
 Date: 25.NOV.2015 19:03:22

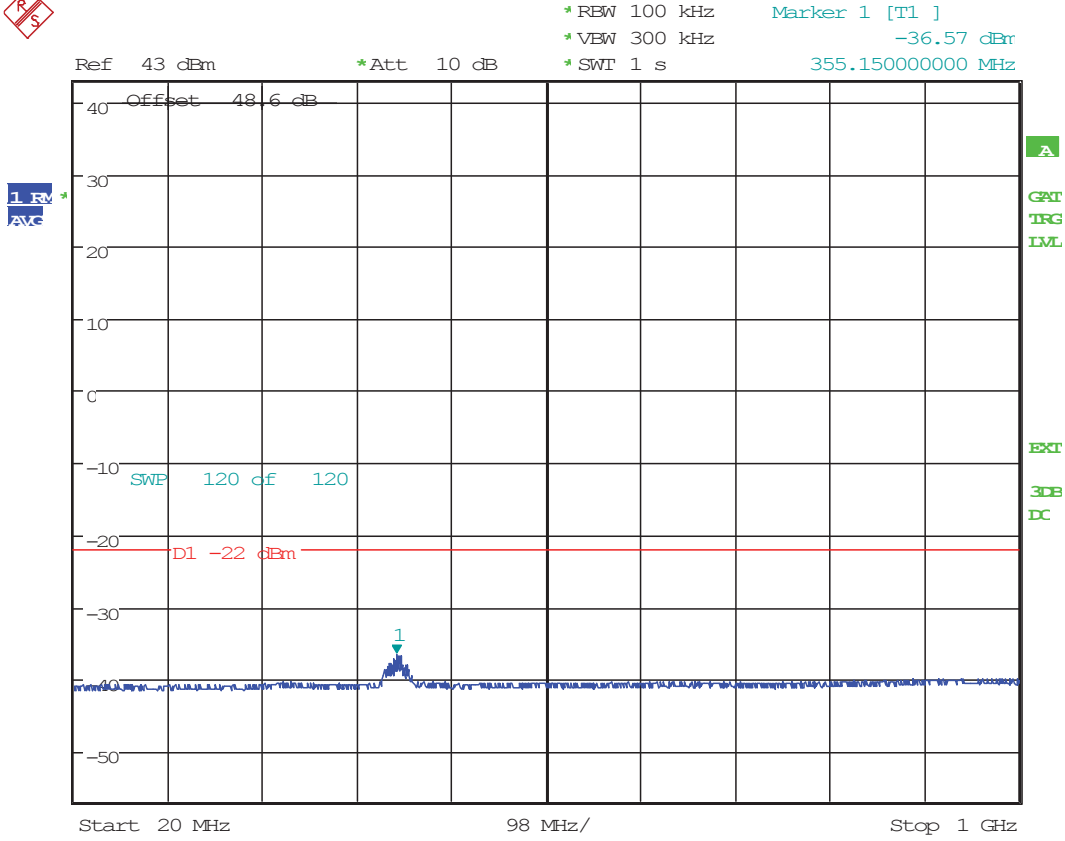
**Transmit Port
Antenna Conducted Spurious Emissions**

**20+20 MHz BW
16QAM Modulation
8x20 watts (MIMO)**

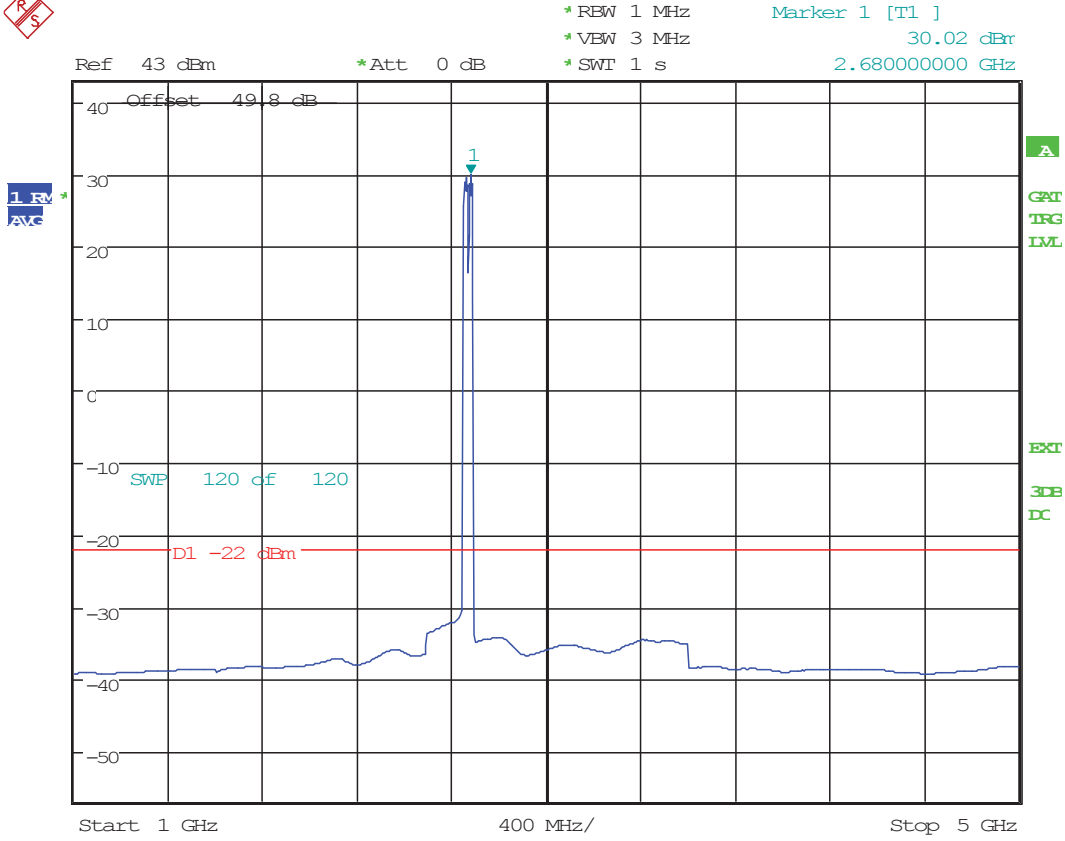
**Bandwidth 2650 – 2690 MHz
(Higher)**



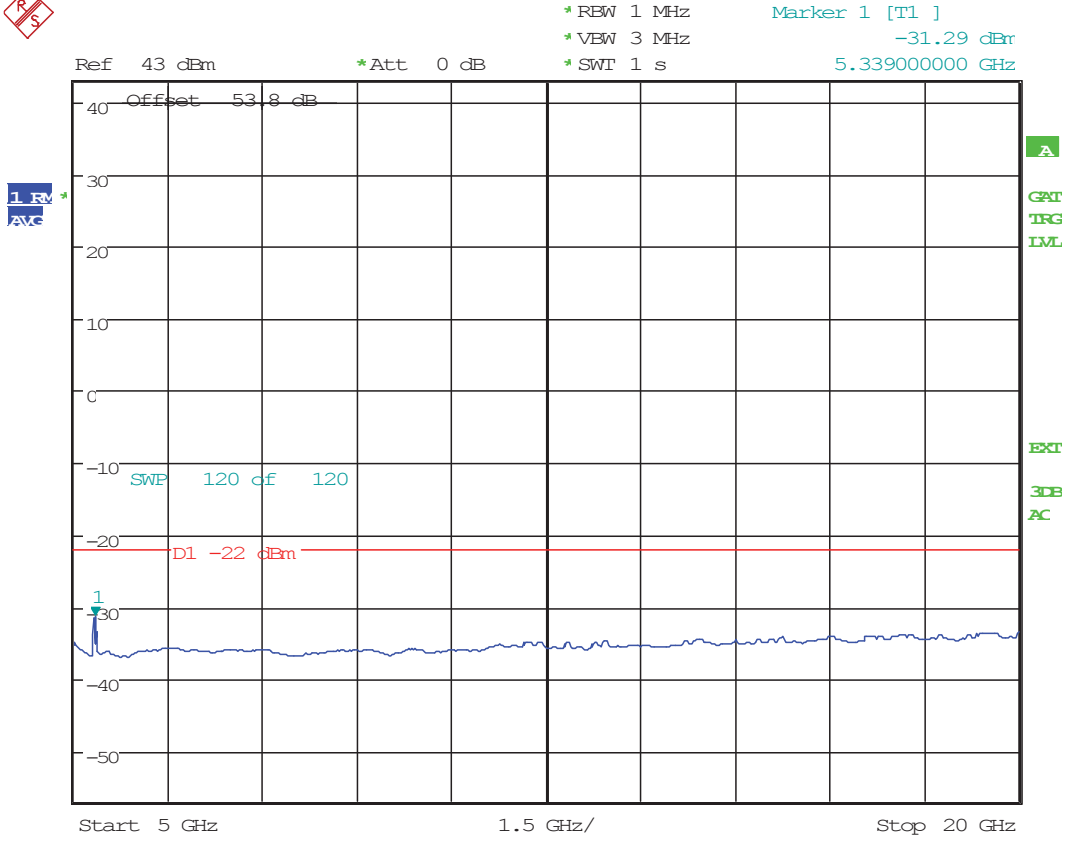
TX SPURIOUS: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2650-2690MHz; -48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 24.NOV.2015 17:24:03



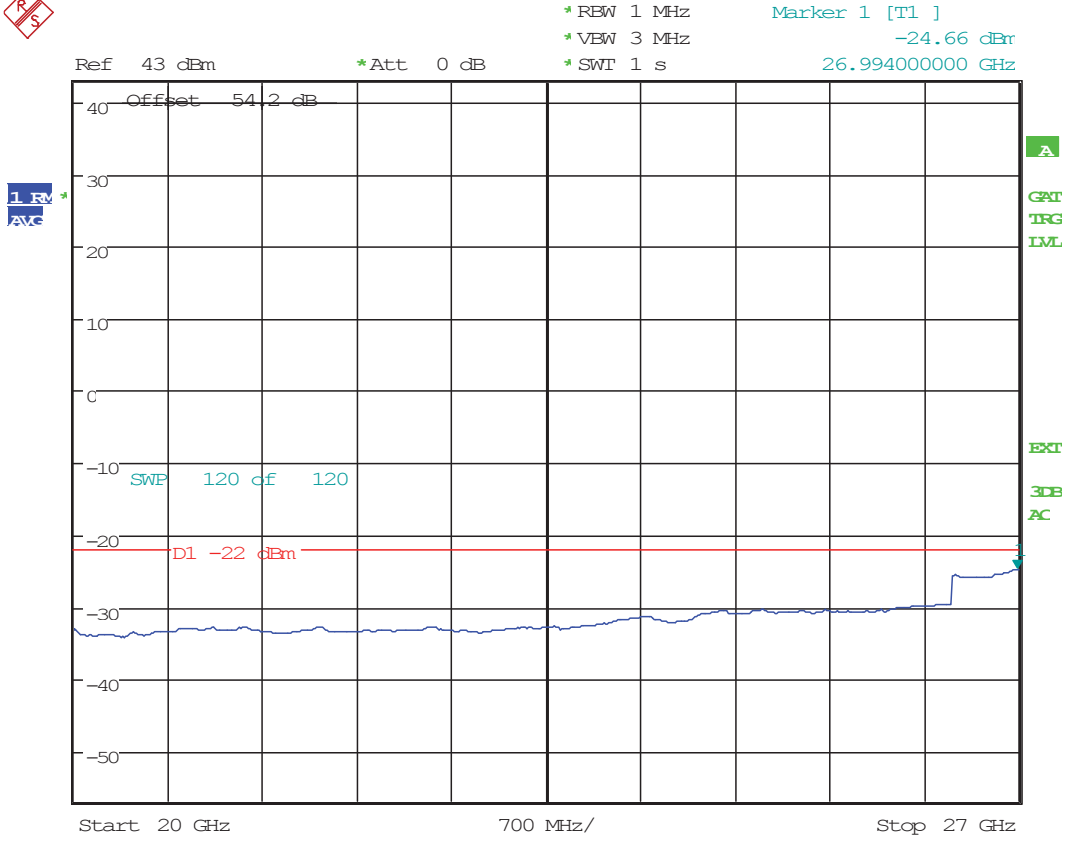
TX SPURIOUS: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2650-2690MHz; -48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 24.NOV.2015 16:59:52



TX SPURIOUS: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2650-2690MHz; -48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 24.NOV.2015 16:45:15



TX SPURIOUS: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2650-2690MHz; -48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 24.NOV.2015 16:15:08

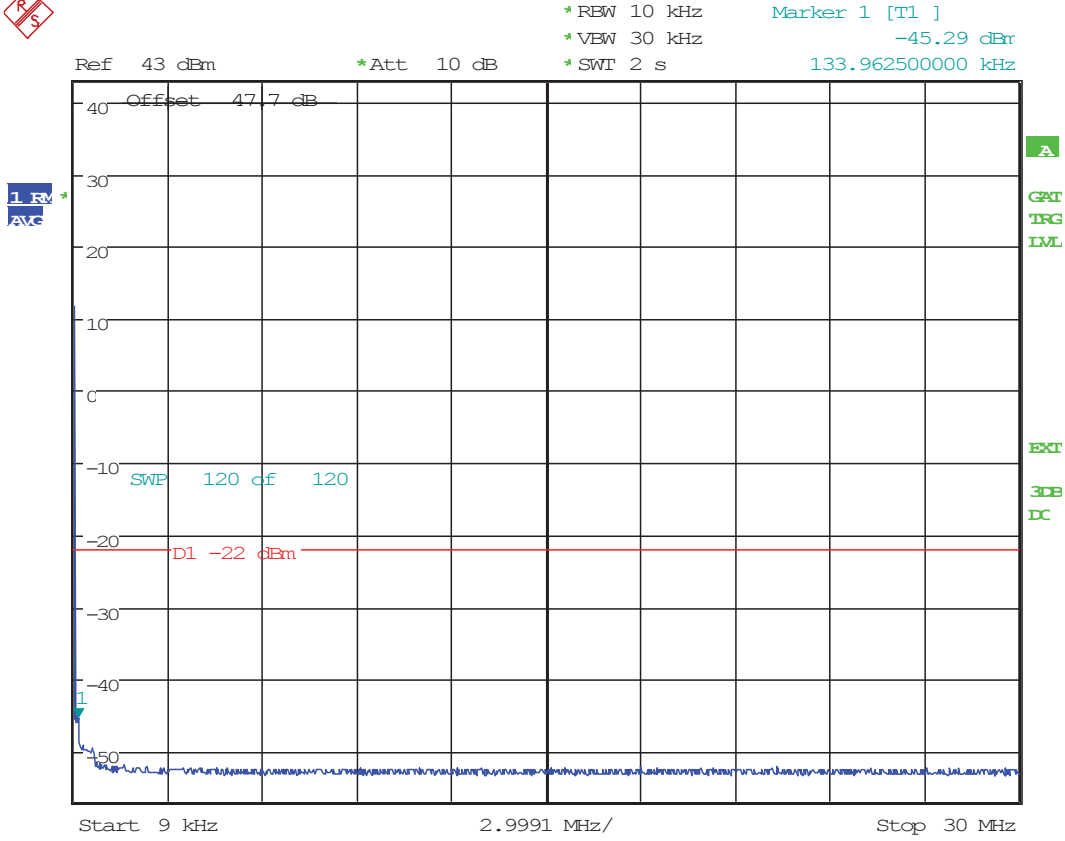


TX SPURIOUS: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2650-2690MHz; -48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 24.NOV.2015 16:02:53

**Transmit Port
Antenna Conducted Spurious Emissions**

**20+20 MHz BW
64QAM Modulation
8x20 watts (MIMO)**

**Bandwidth 2650 – 2690 MHz
(Higher)**

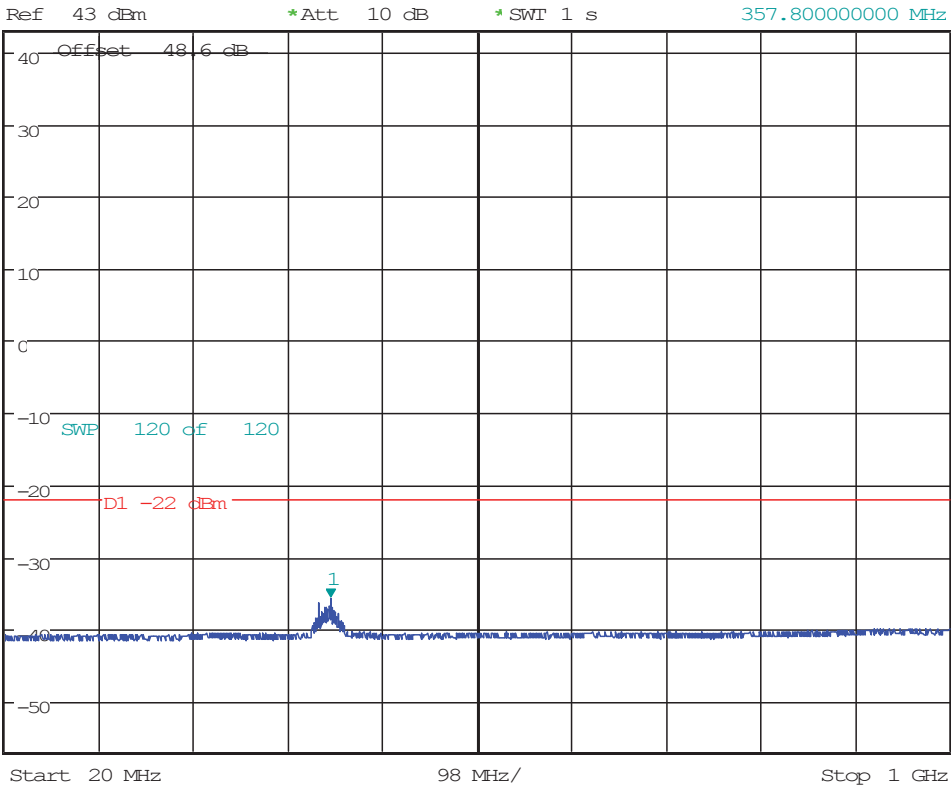


TX SPURIOUS: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2650-2690MHz; -48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 24.NOV.2015 13:33:27

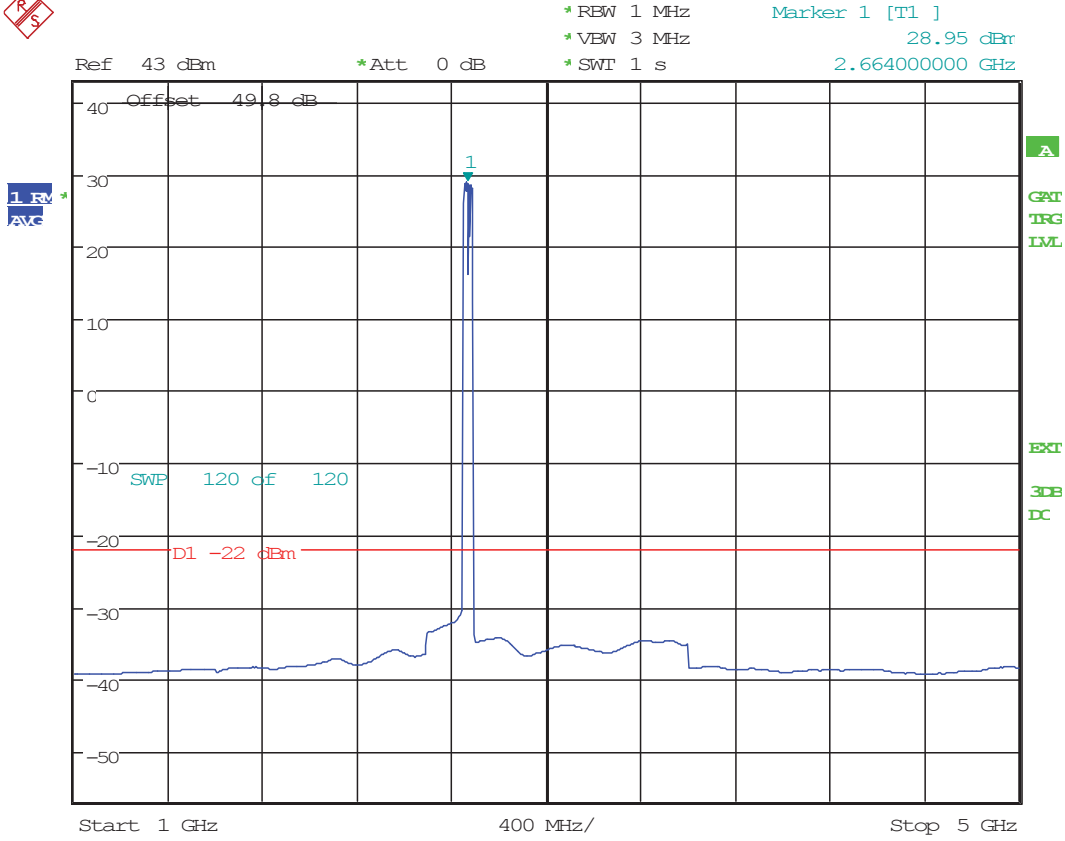


1 RV
 AVE

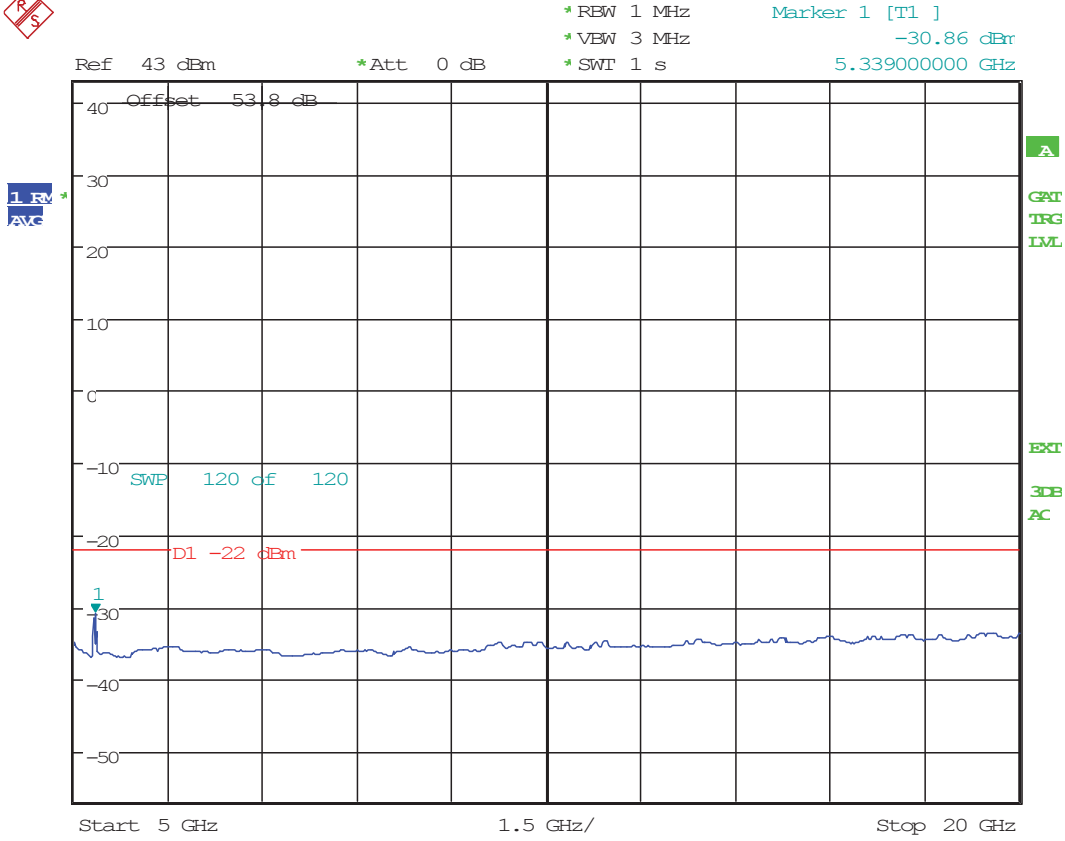
* RBW 100 kHz Marker 1 [T1]
 * VBW 300 kHz -35.70 dBm
 * SWI 1 s 357.80000000 MHz



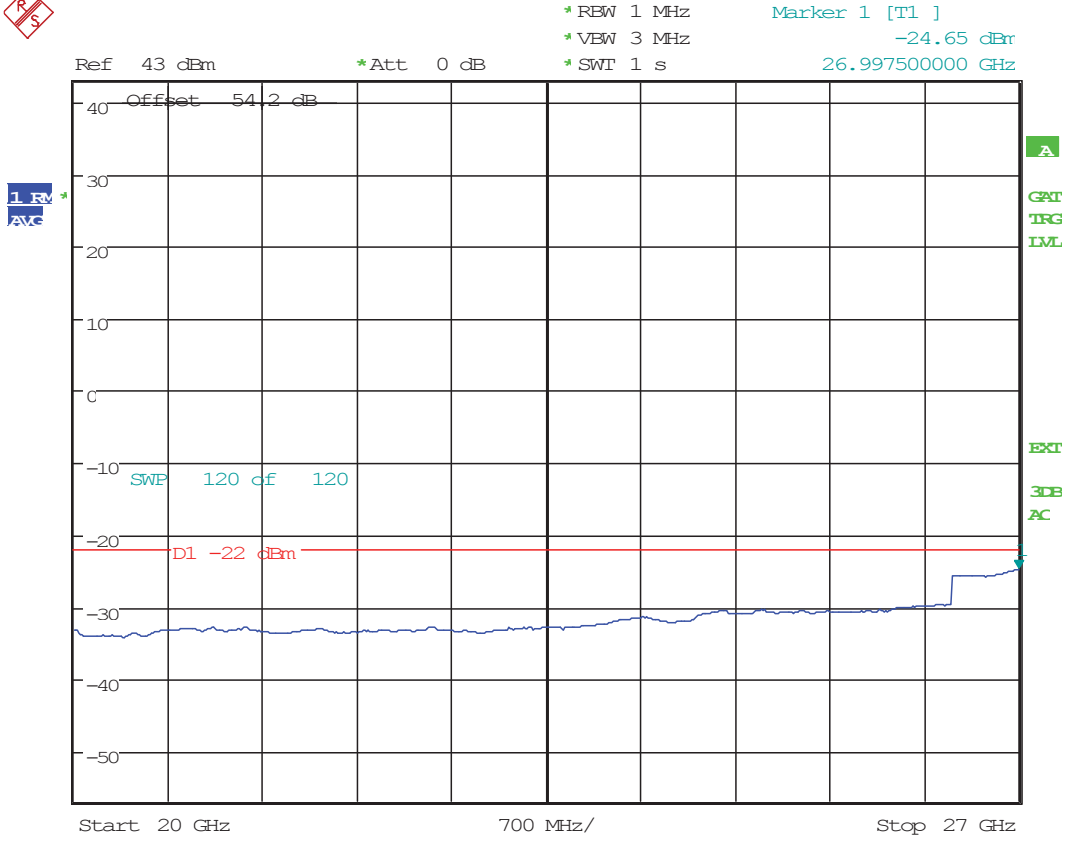
TX SPURIOUS: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2650-2690MHz; -48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 24.NOV.2015 13:46:41



TX SPURIOUS: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2650-2690MHz; -48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 24.NOV.2015 14:00:58

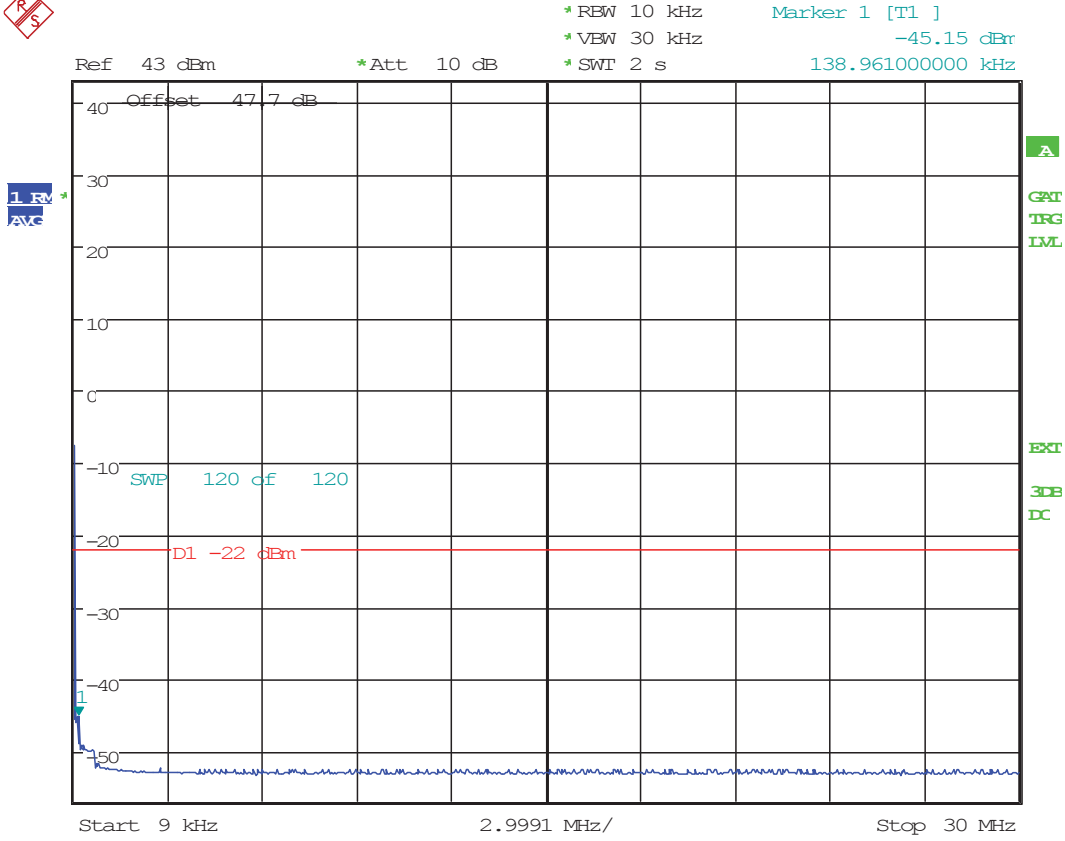


TX SPURIOUS: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2650-2690MHz; -48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 24.NOV.2015 14:17:14



TX SPURIOUS: TEST ENG:SEG;TDD B41 RRH Cast Fingu Fltr
 20+20M BW; 2650-2690MHz; -48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 24.NOV.2015 14:29:59

**20+20+20MHz Bandwidth,
2496-2516MHz, 2516-2536 & 2536-2556 MHz
QPSK 60MHz (Lower)
8x20 watts (MIMO)**

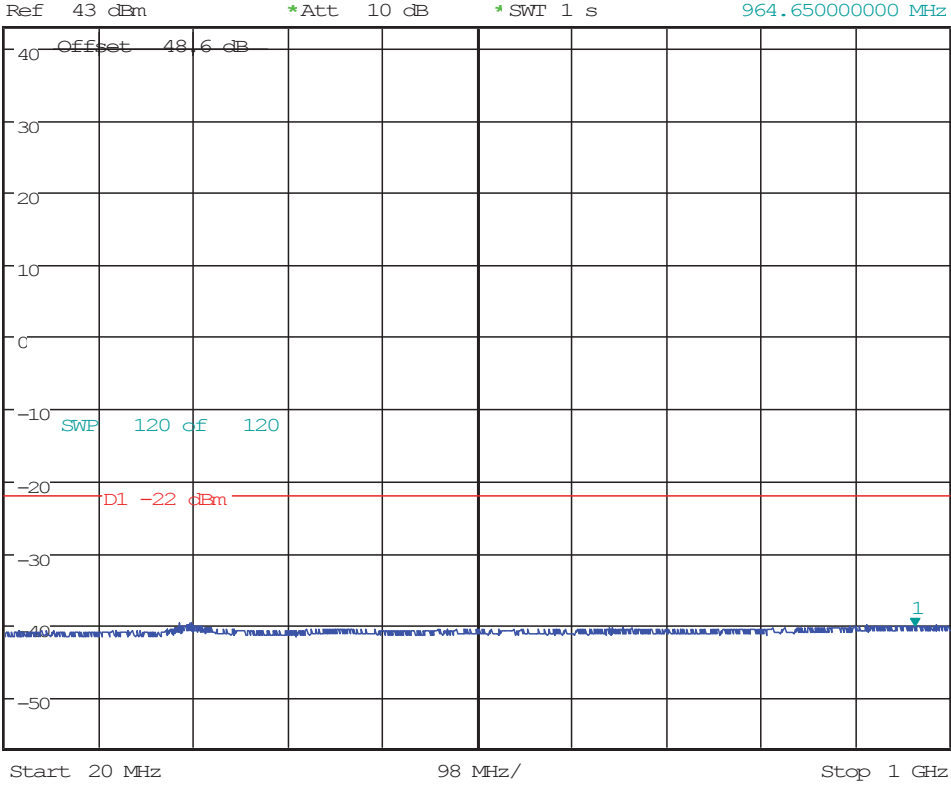


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW; 20W;2496-2556M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 11.DEC.2015 09:42:39

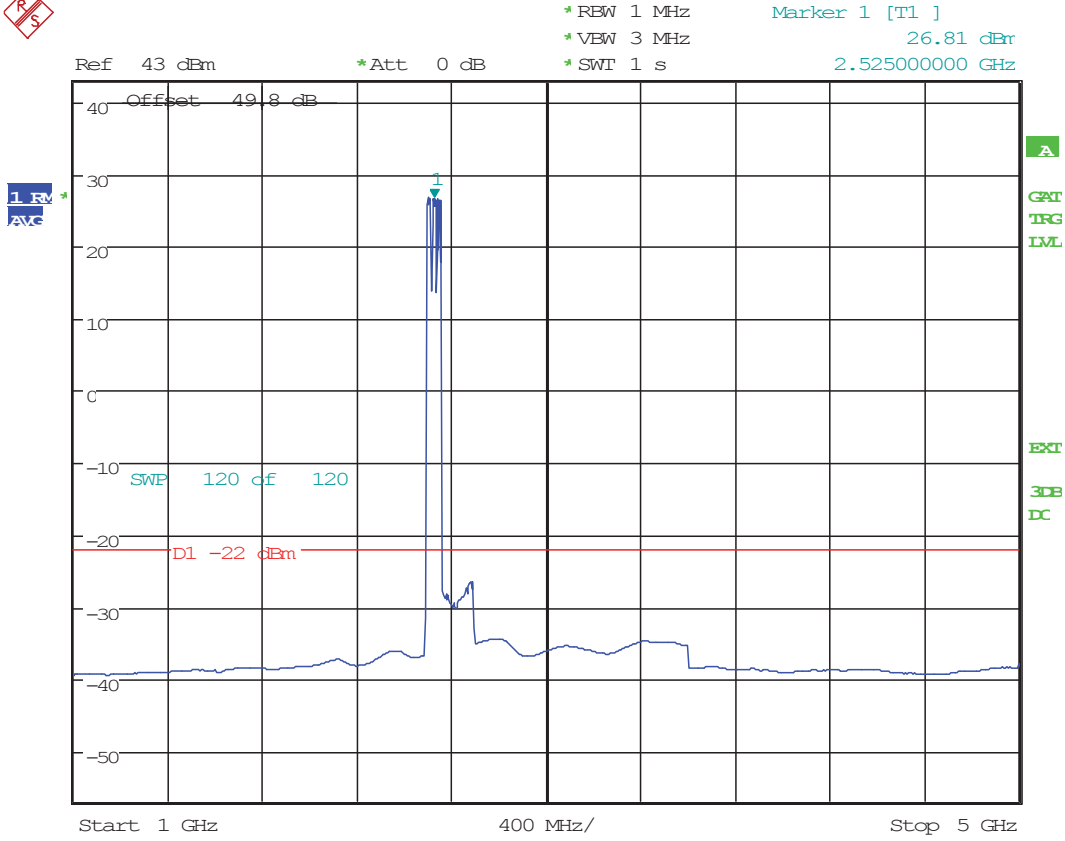


1 RV
 1.00

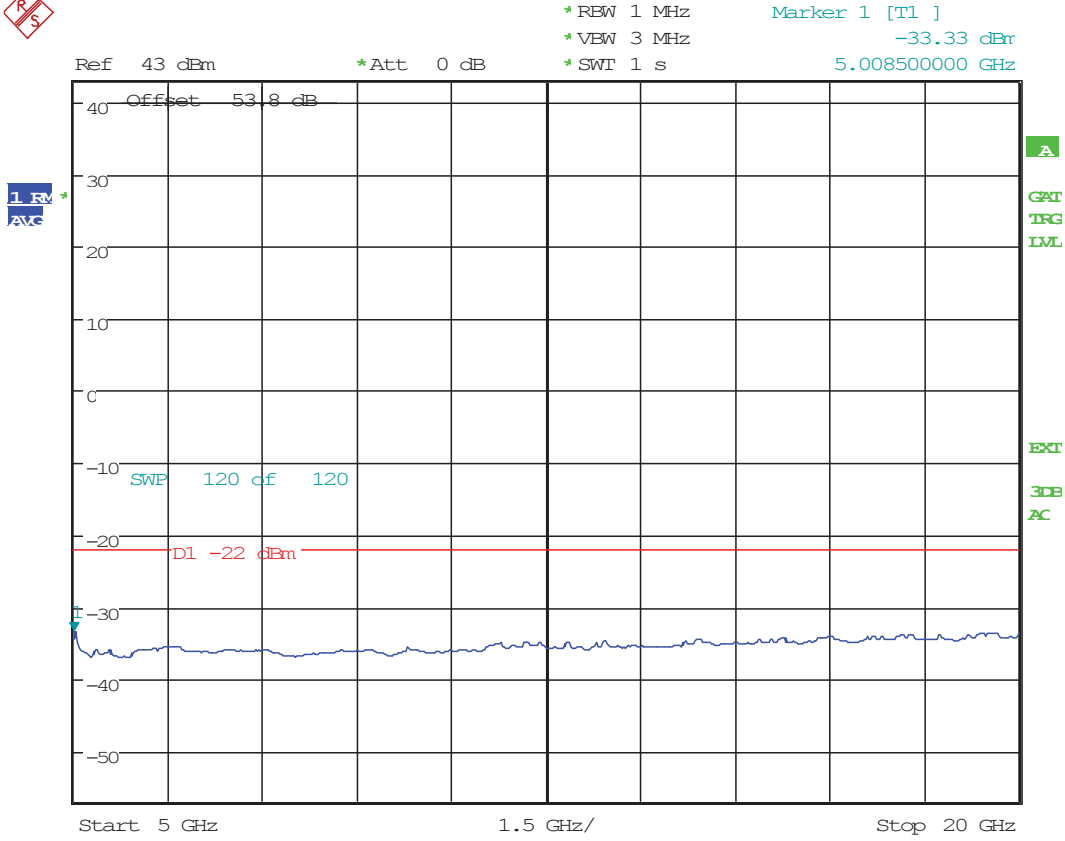
* RBW 100 kHz Marker 1 [T1]
 * VBW 300 kHz -40.39 dBm
 * SWI 1 s 964.65000000 MHz



TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW;20W;2496-2556M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 11.DEC.2015 00:23:01



TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20M+20 BW;20W;2496-2556M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
Date: 11.DEC.2015 00:36:12

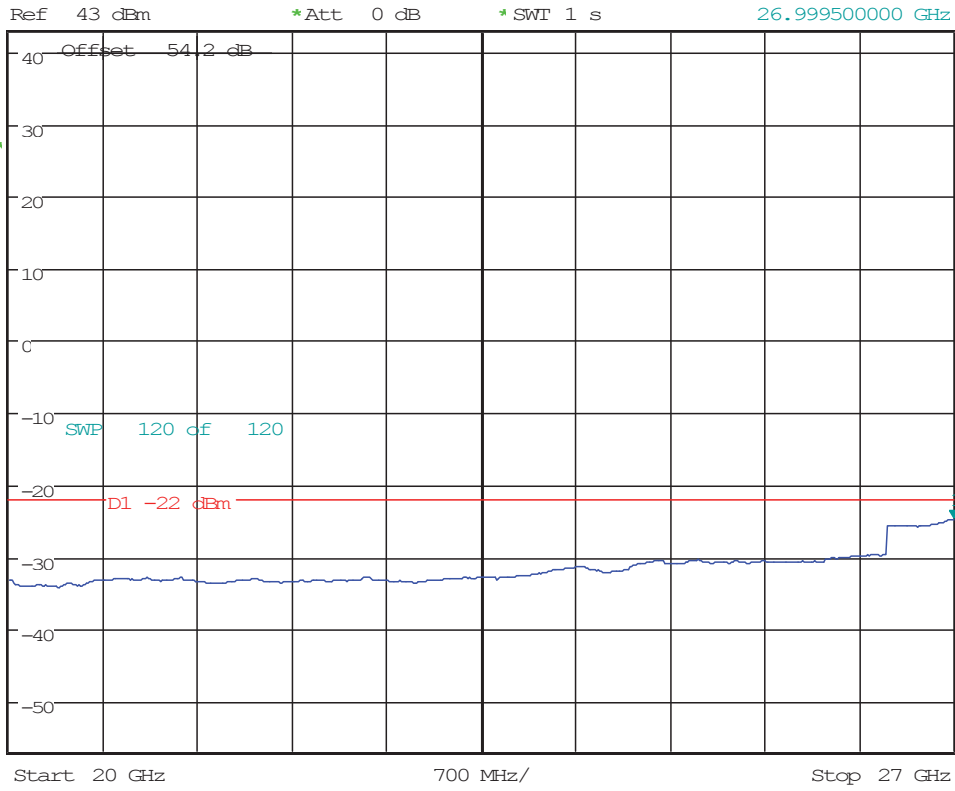


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW;20W;2496-2556M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 11.DEC.2015 00:49:53



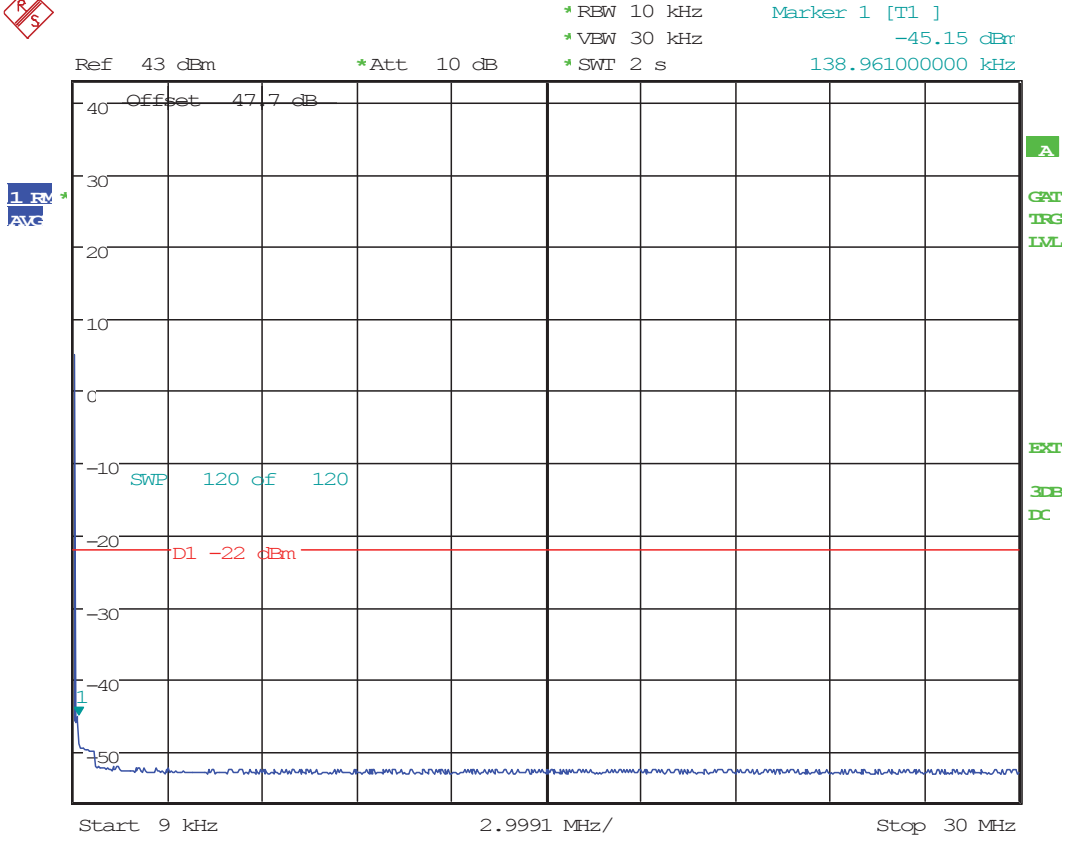
1. RV
 /AVE

*RBW 1 MHz
 *VBW 3 MHz
 *SWT 1 s
 Marker 1 [T1]
 -24.67 dBm
 26.999500000 GHz

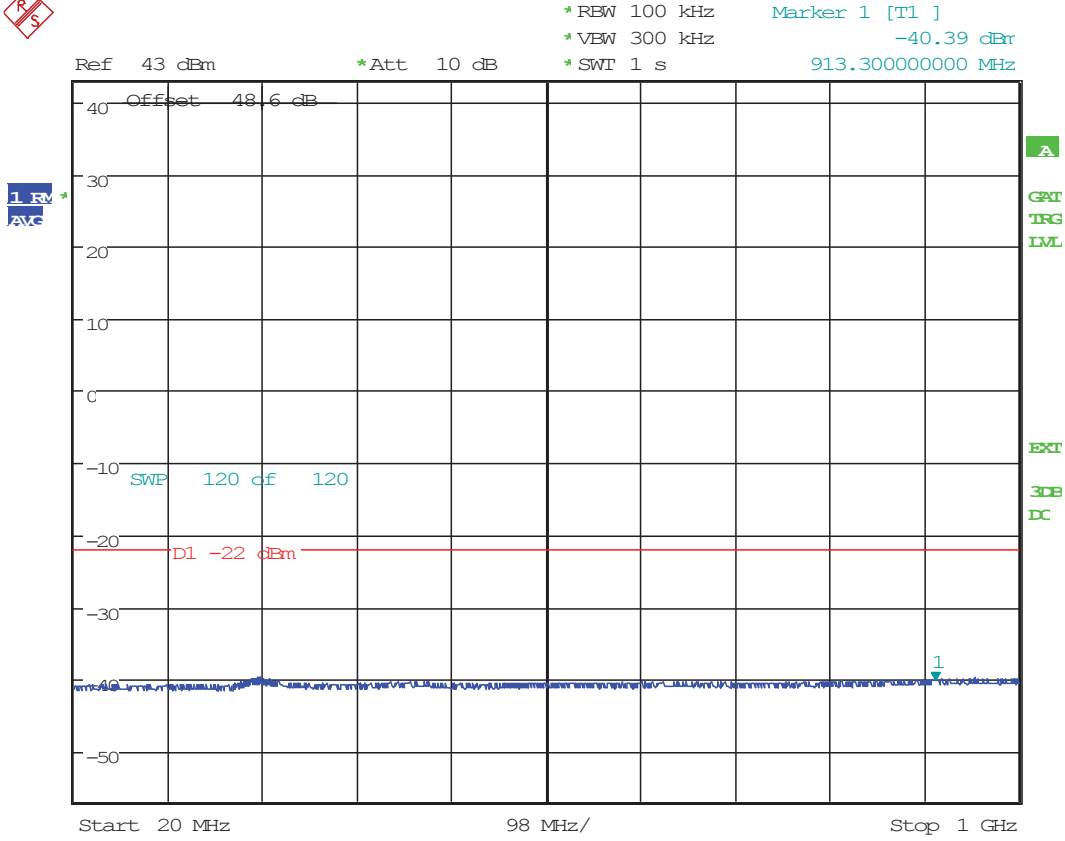


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW;20W;2496-2556M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 11.DEC.2015 01:01:40

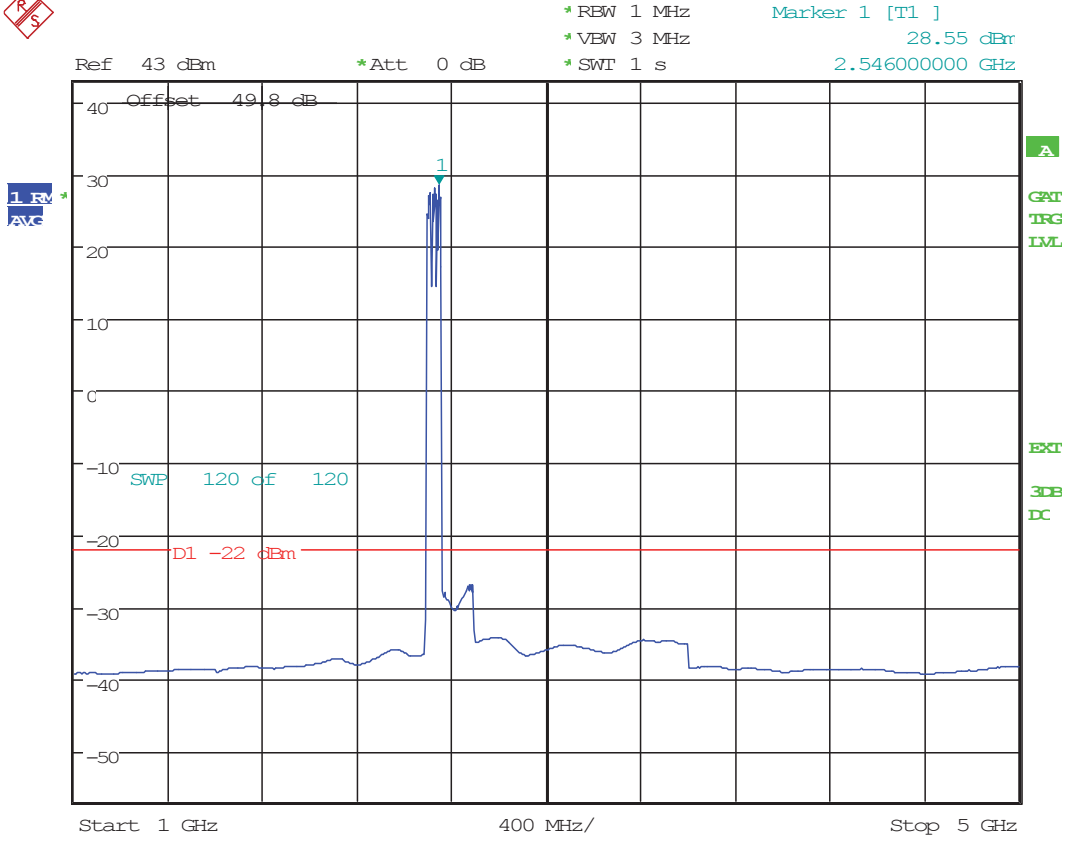
**20+20+20MHz Bandwidth,
2496-2516MHz, 2516-2536 & 2536-2556 MHz
16QAM 60MHz (Lower)
8x20 watts (MIMO)**



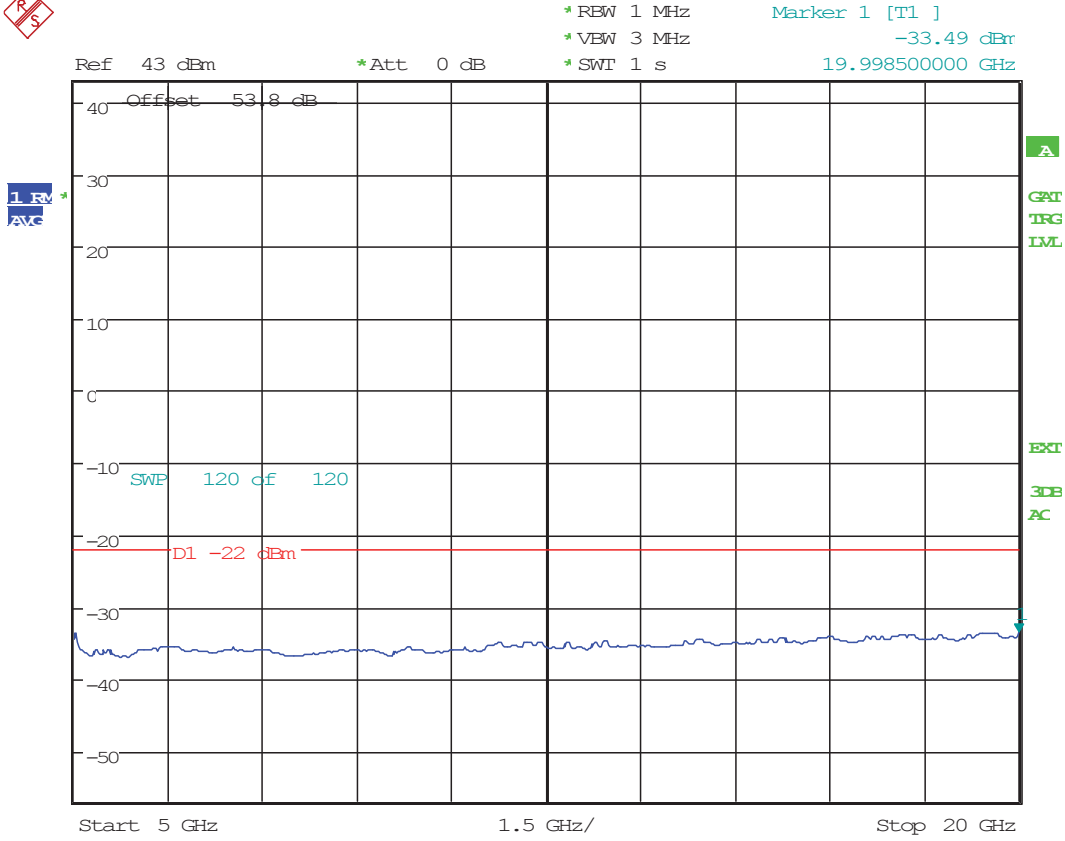
TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW; 20W;2496-2556M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 10.DEC.2015 22:01:34



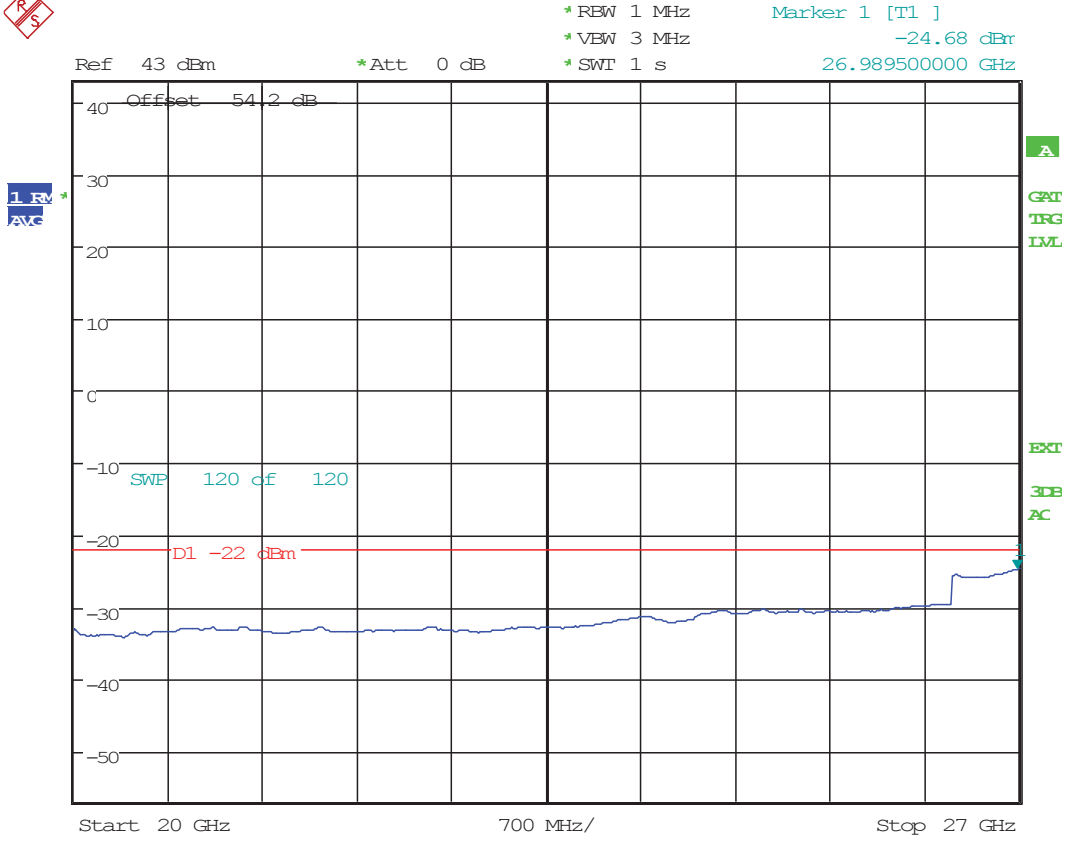
TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW;20W;2496-2556M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 10.DEC.2015 22:14:33



TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20M+20 BW;20W;2496-2556M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
Date: 10.DEC.2015 10:44:53

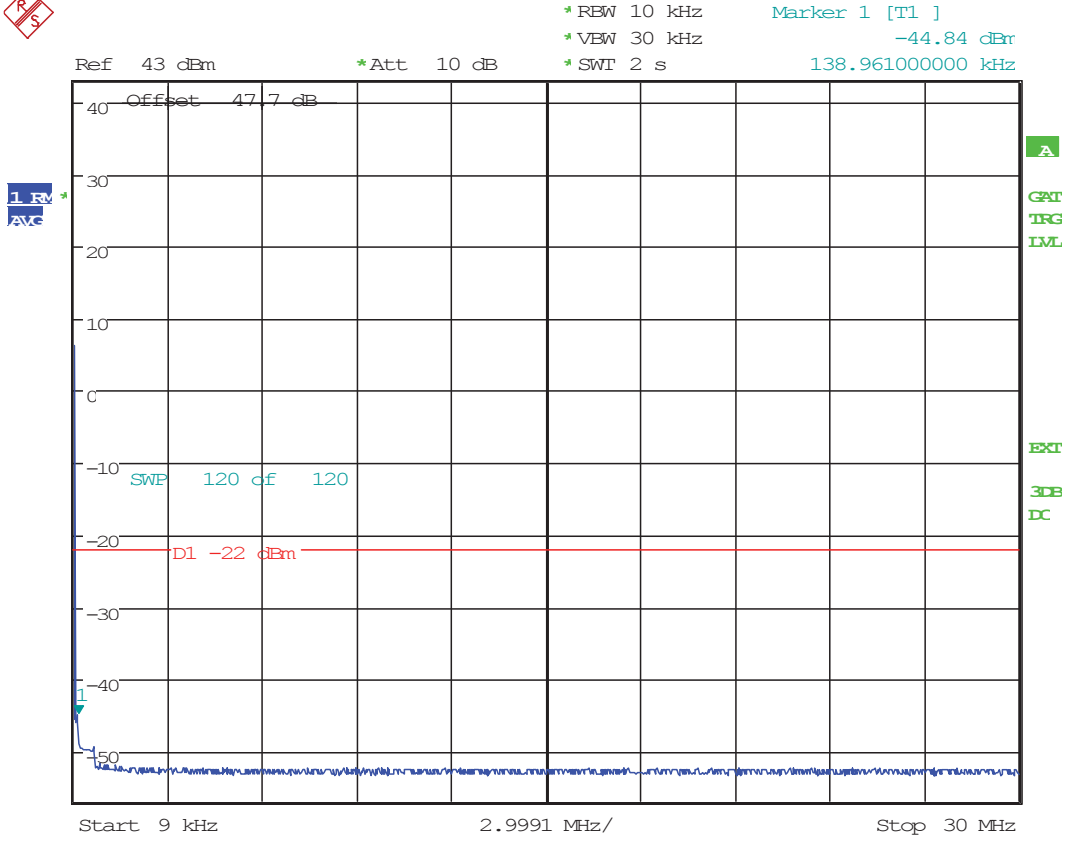


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW;20W;2496-2556M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 10.DEC.2015 22:28:04

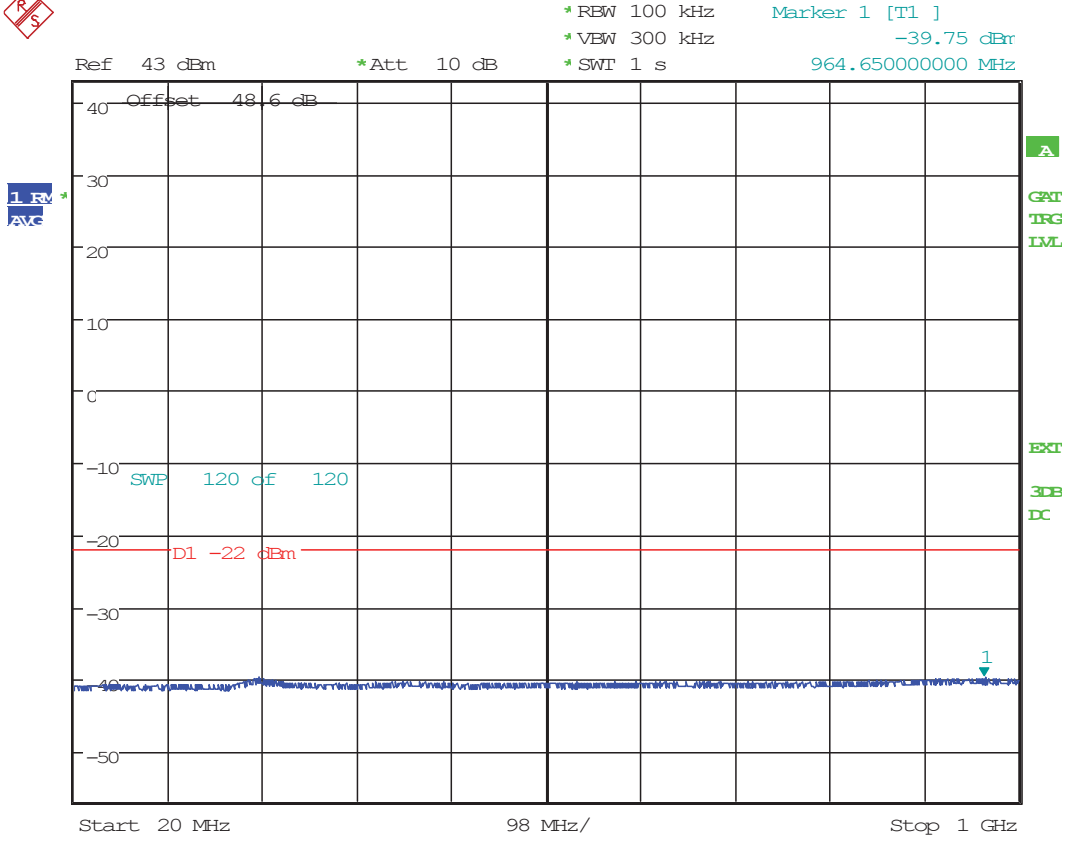


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW;20W;2496-2556M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 10.DEC.2015 22:42:06

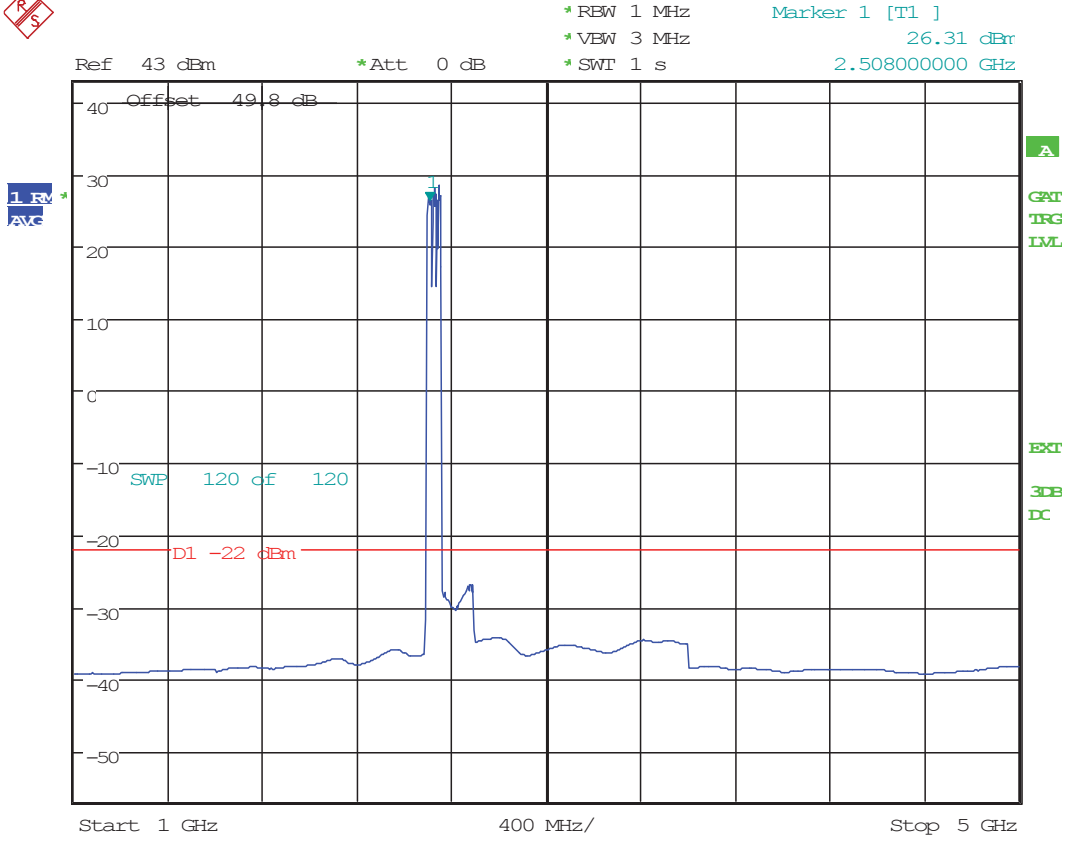
**20+20+20MHz Bandwidth,
2496-2516MHz, 2516-2536 & 2536-2556 MHz
64QAM 60MHz (Lower)
8x20 watts (MIMO)**



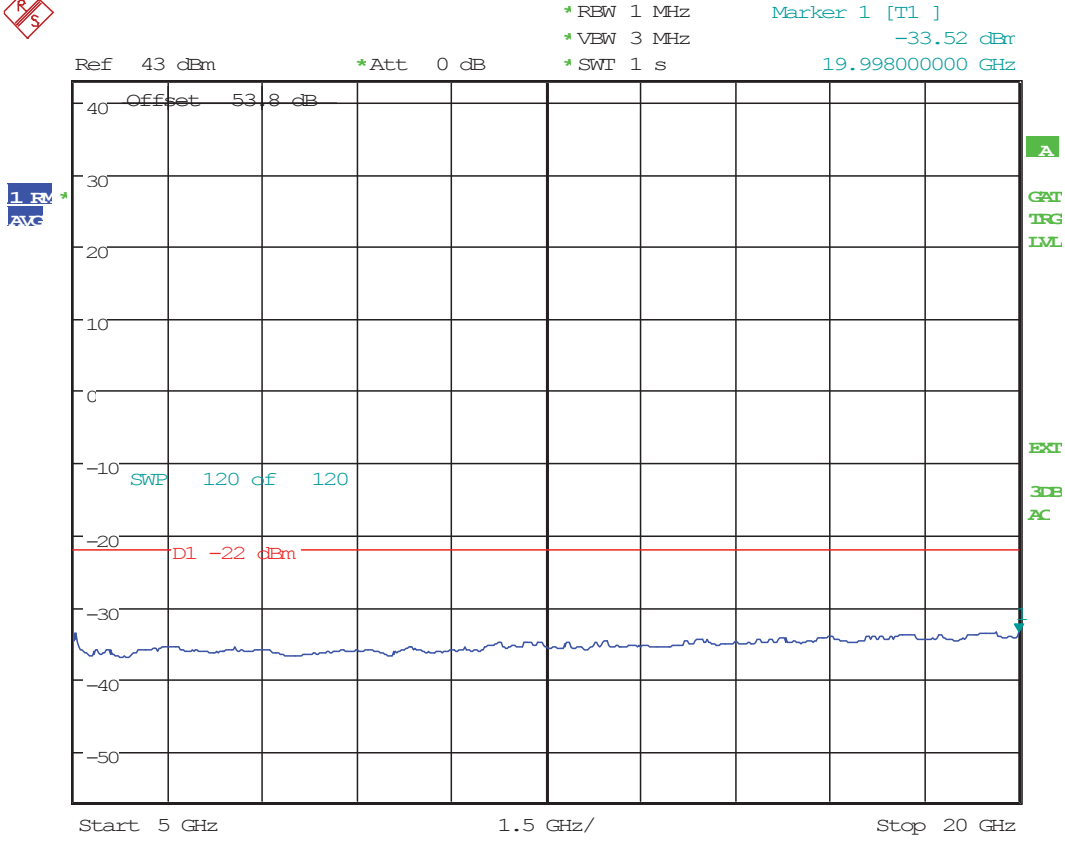
TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW; 20W;2496-2556M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 10.DEC.2015 08:44:55



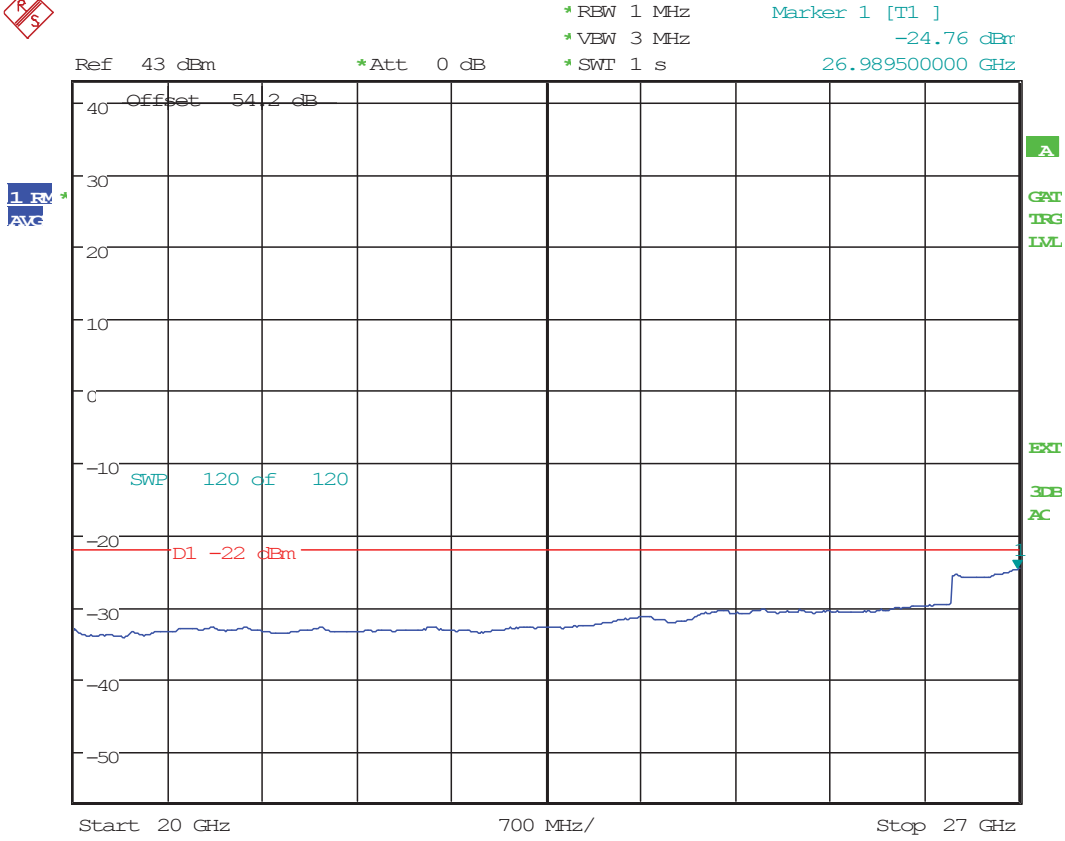
TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW;20W;2496-2556M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 10.DEC.2015 08:56:46



TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20M+20 BW;20W;2496-2556M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
Date: 10.DEC.2015 08:21:27

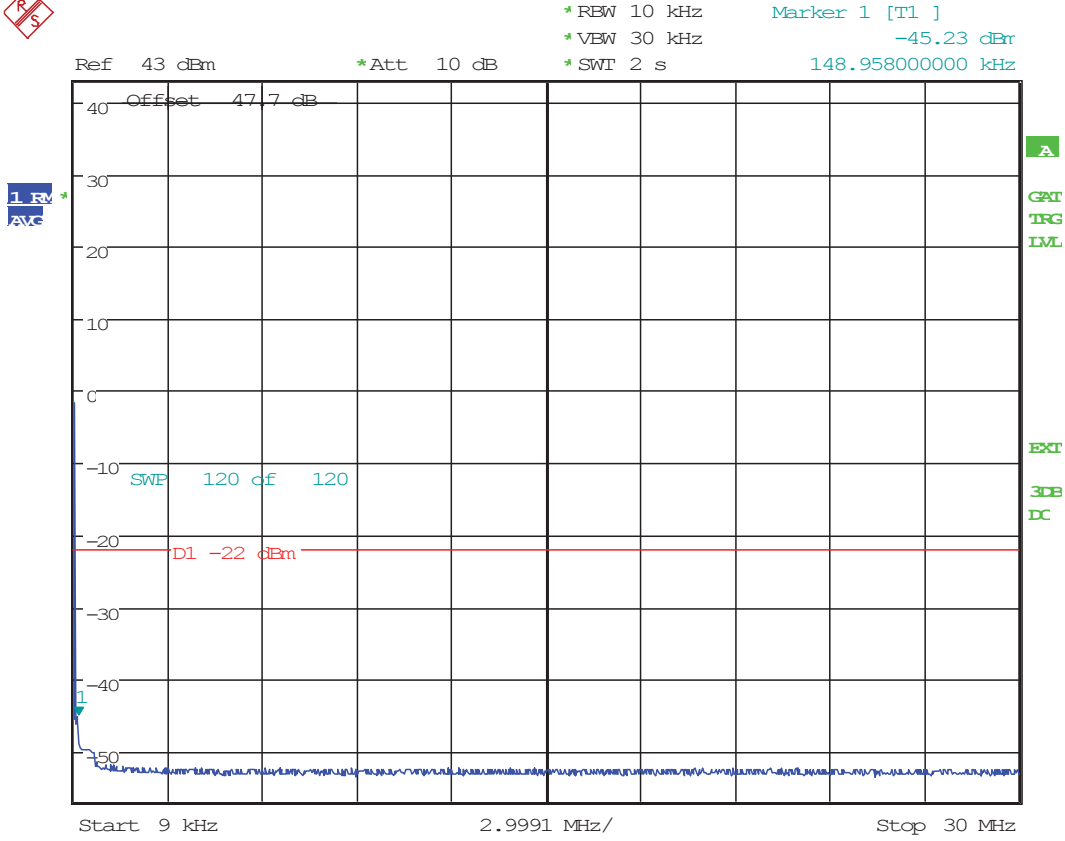


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW;20W;2496-2556M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 10.DEC.2015 09:08:46



TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW;20W;2496-2556M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 10.DEC.2015 09:22:15

**20+20+20MHz Bandwidth,
2563-2583MHz, 2583-2603 & 2603-2623 MHz
QPSK 60MHz (Middle)
8x20 watts (MIMO)
26dB Bandwidth**

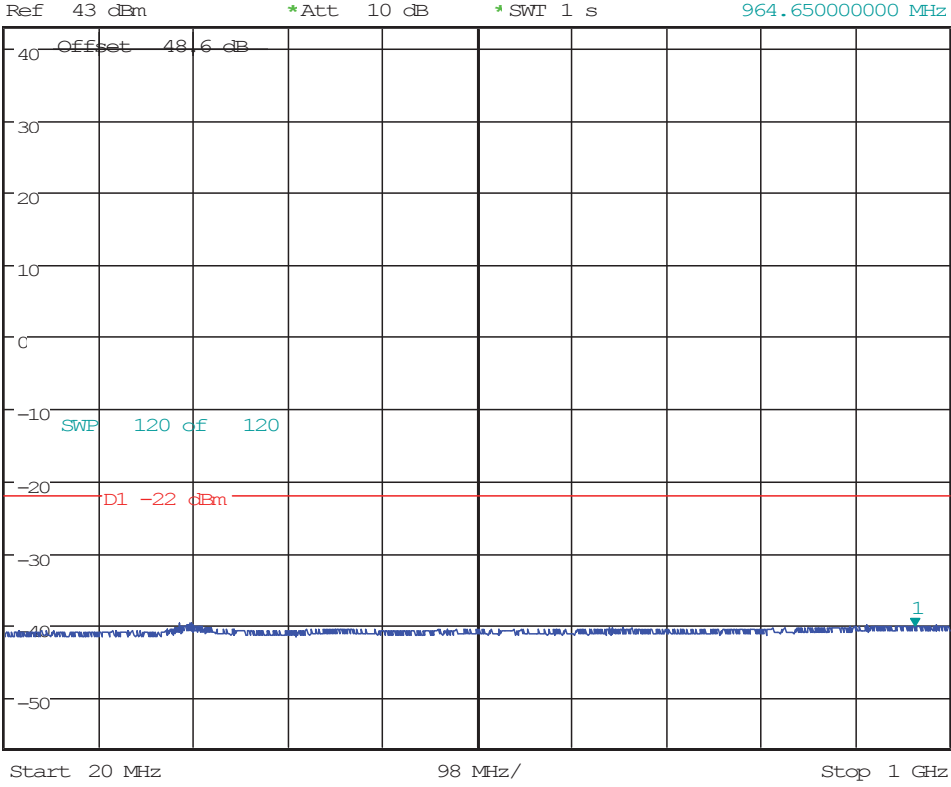


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW; 20W;2563-2623M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 11.DEC.2015 20:41:27

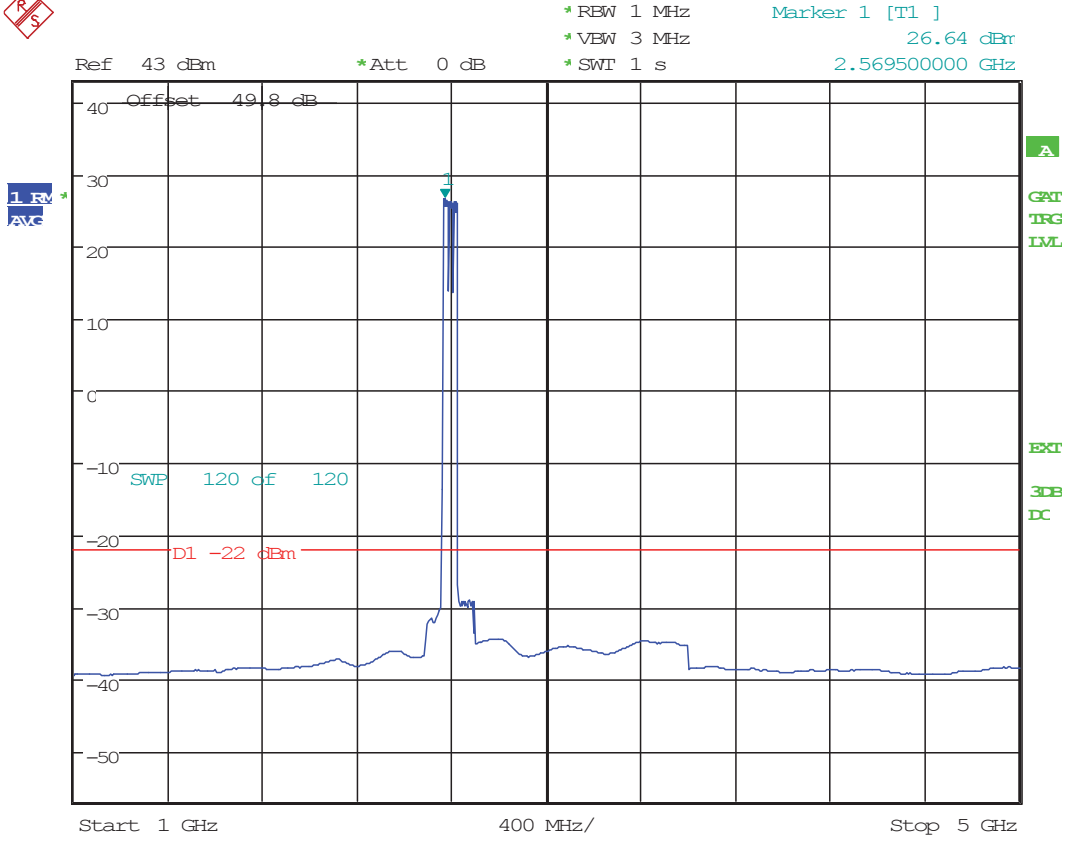


1. RV
 RVC

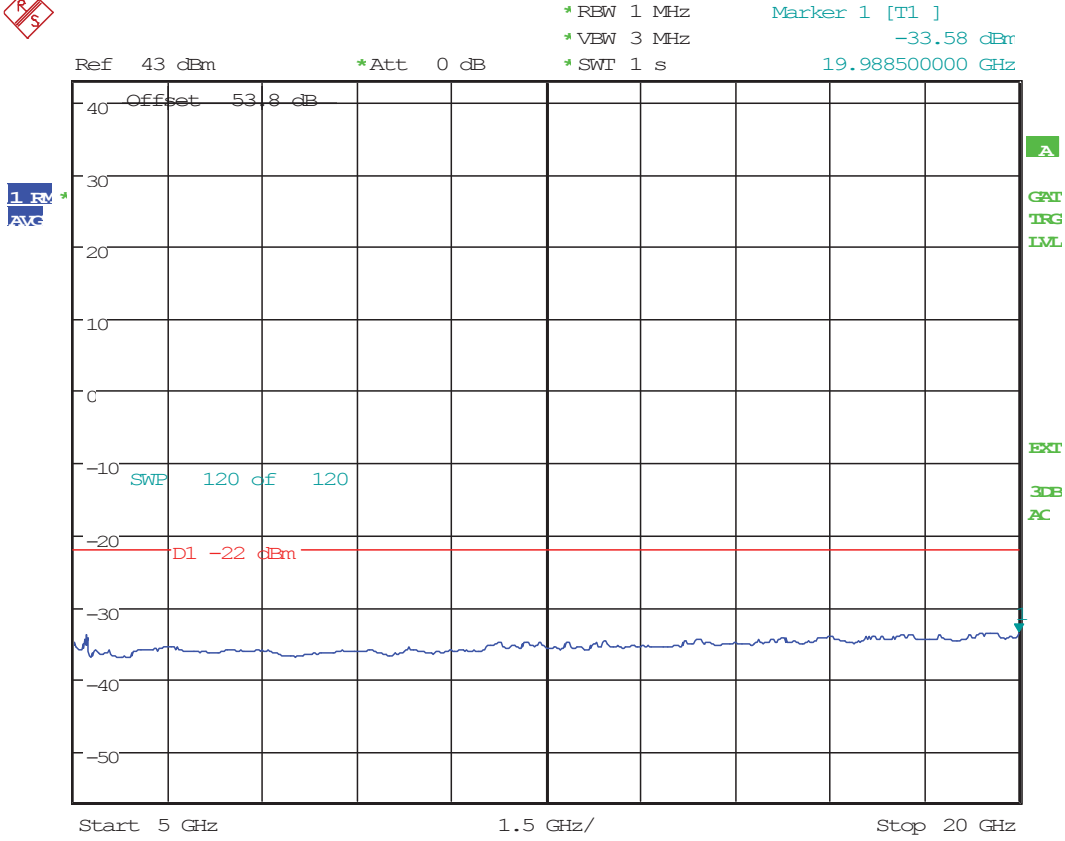
* RBW 100 kHz Marker 1 [T1]
 * VBW 300 kHz -40.39 dBm
 * SWI 1 s 964.65000000 MHz



TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW;20W;2496-2556M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 11.DEC.2015 00:23:01



TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20M+20 BW;20W;2563-2623M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
Date: 11.DEC.2015 21:07:54

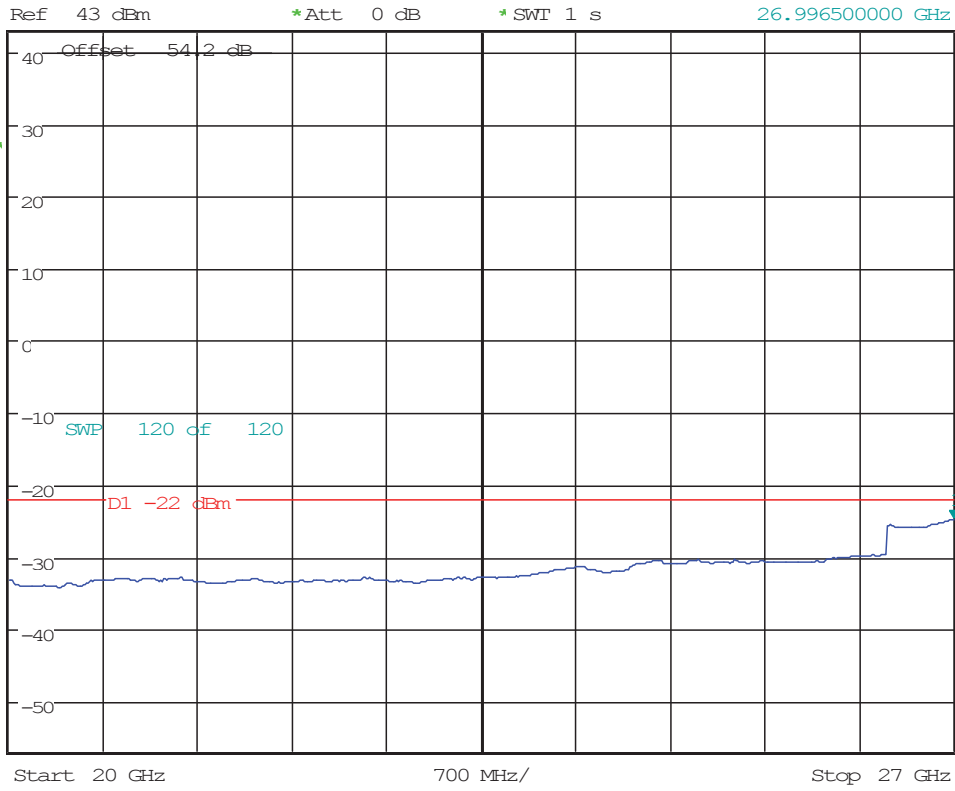


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW;20W;2563-2623M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 11.DEC.2015 21:20:22



1. RV
 /AVE

* RBW 1 MHz
 * VBW 3 MHz
 * SWI 1 s
 Marker 1 [T1]
 -24.69 dBm
 26.996500000 GHz

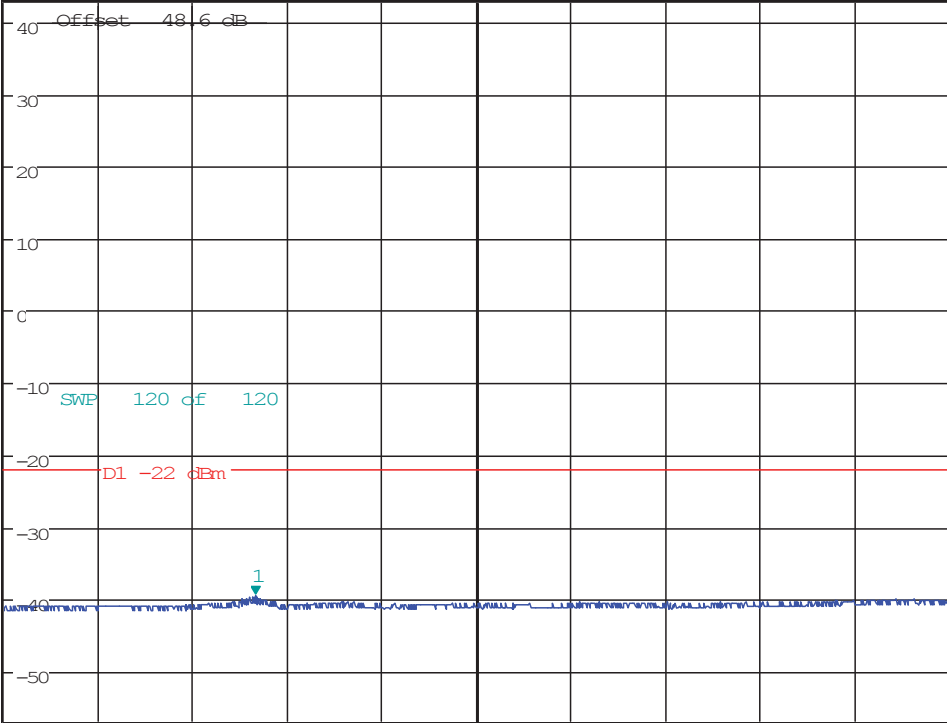


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW;20W;2563-2623M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 11.DEC.2015 21:32:23



* RBW 100 kHz Marker 1 [T1]
* VBW 300 kHz -39.37 dBm
* SWI 1 s 280.900000000 MHz

Ref 43 dBm *Att 10 dB



1 RV
AVE

A

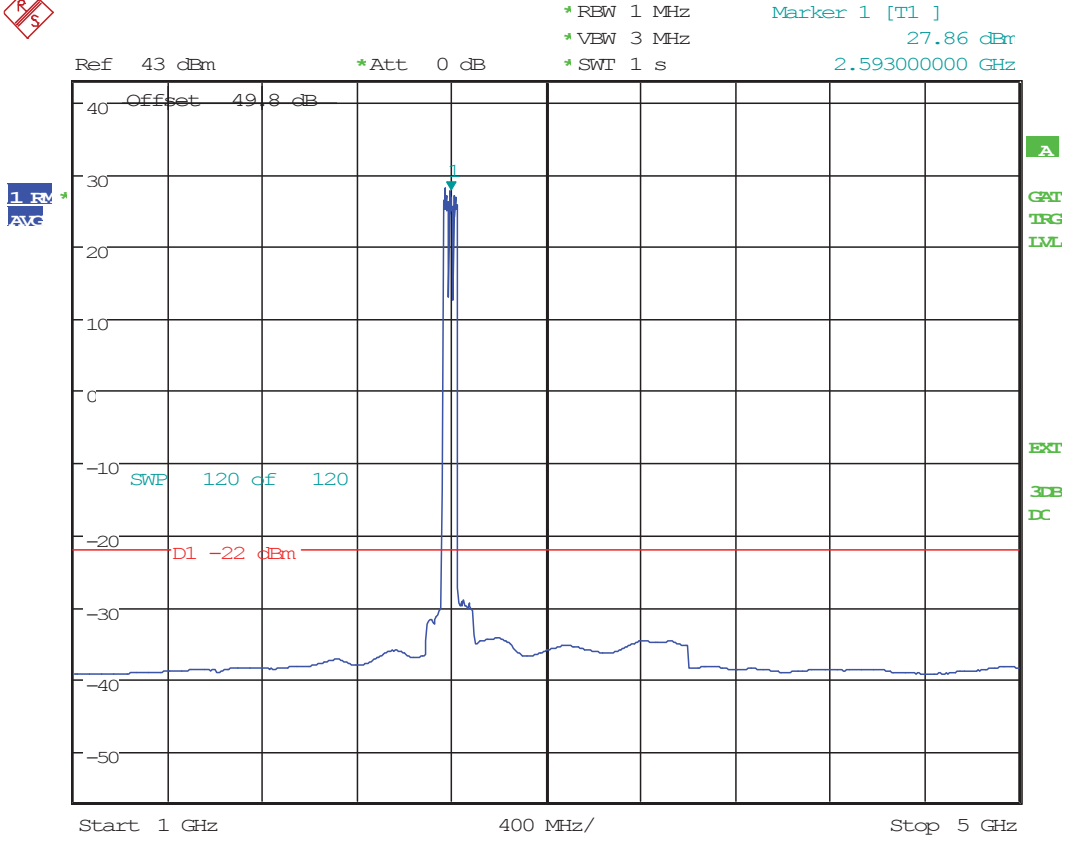
GAT
TRG
TML

EXT

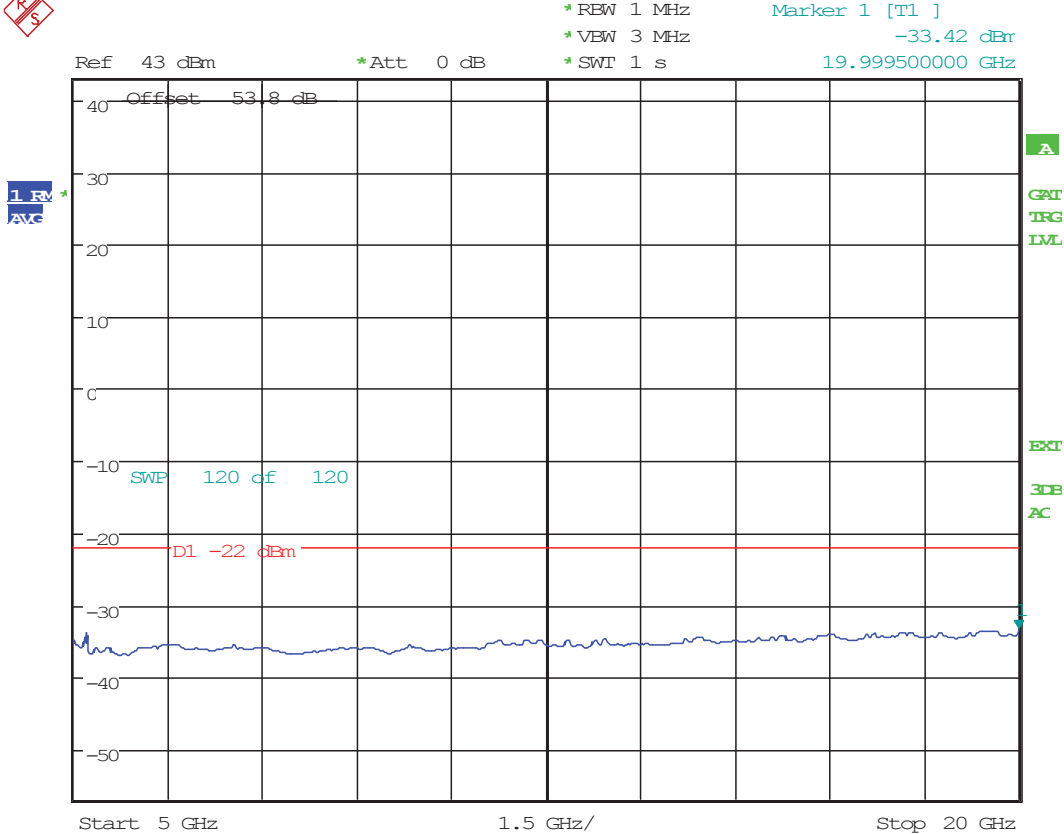
3DB

DC

TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20+20M BW;20W;2563-2623M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
Date: 14.DEC.2015 12:38:14



TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20M+20 BW;20W;2563-2623M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
Date: 14.DEC.2015 12:22:06

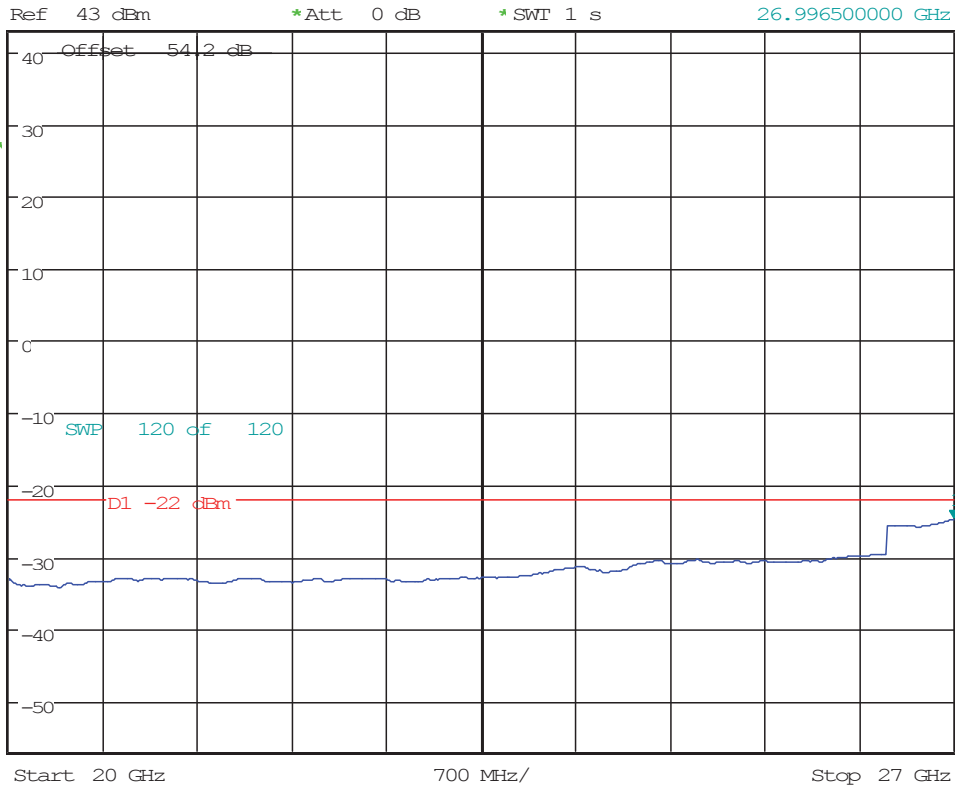


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20+20M BW;20W;2563-2623M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
Date: 14.DEC.2015 12:09:23



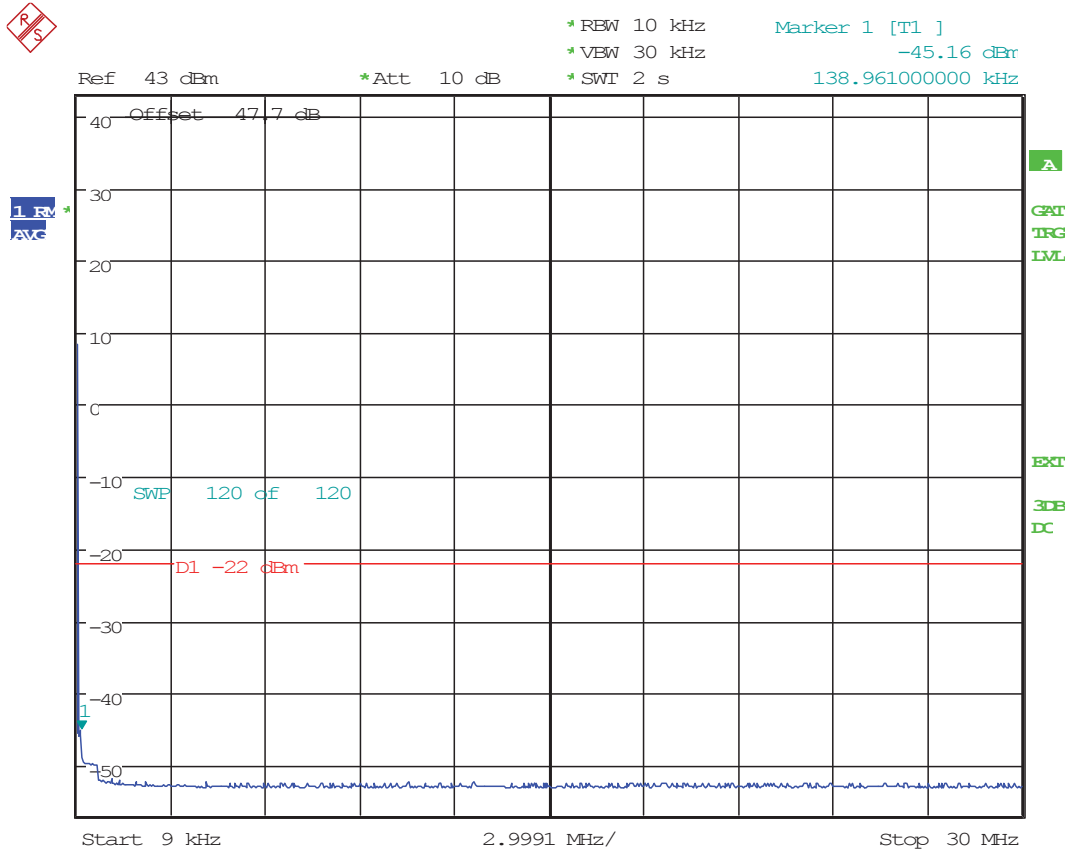
1. RV
 /AVE

* RBW 1 MHz
 * VBW 3 MHz
 * SWI 1 s
 Marker 1 [T1]
 -24.72 dBm
 26.996500000 GHz

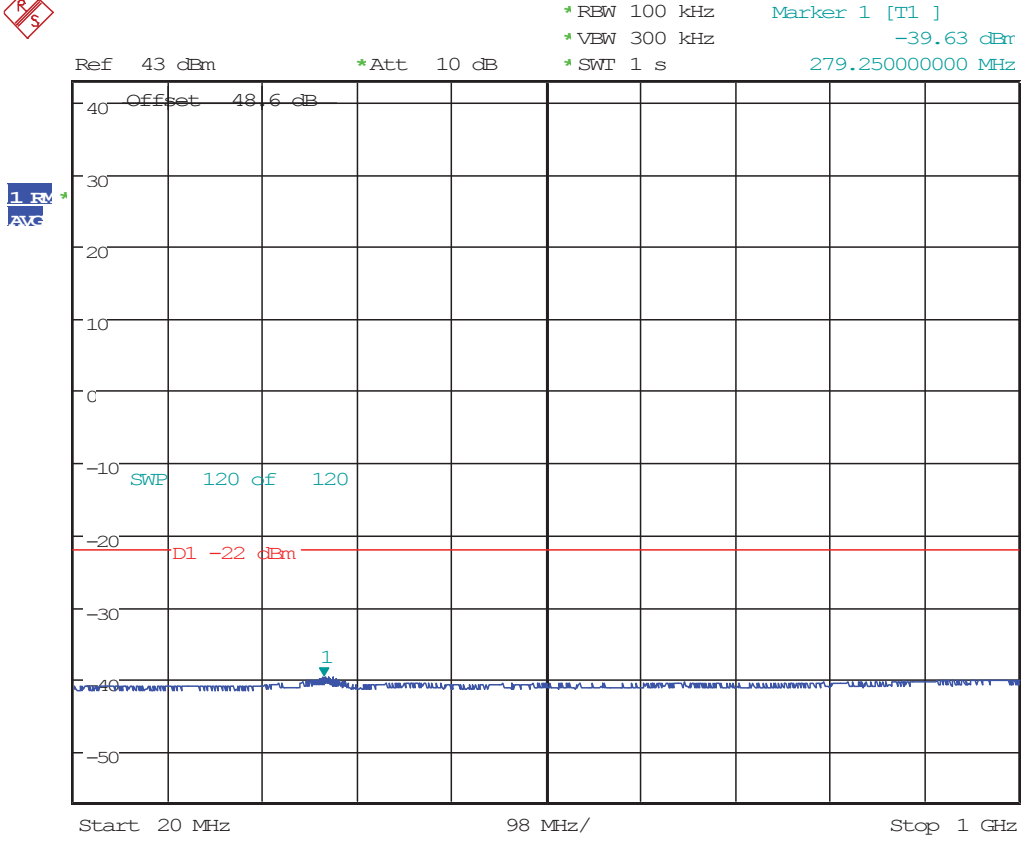


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW;20W;2563-2623M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 14.DEC.2015 11:53:57

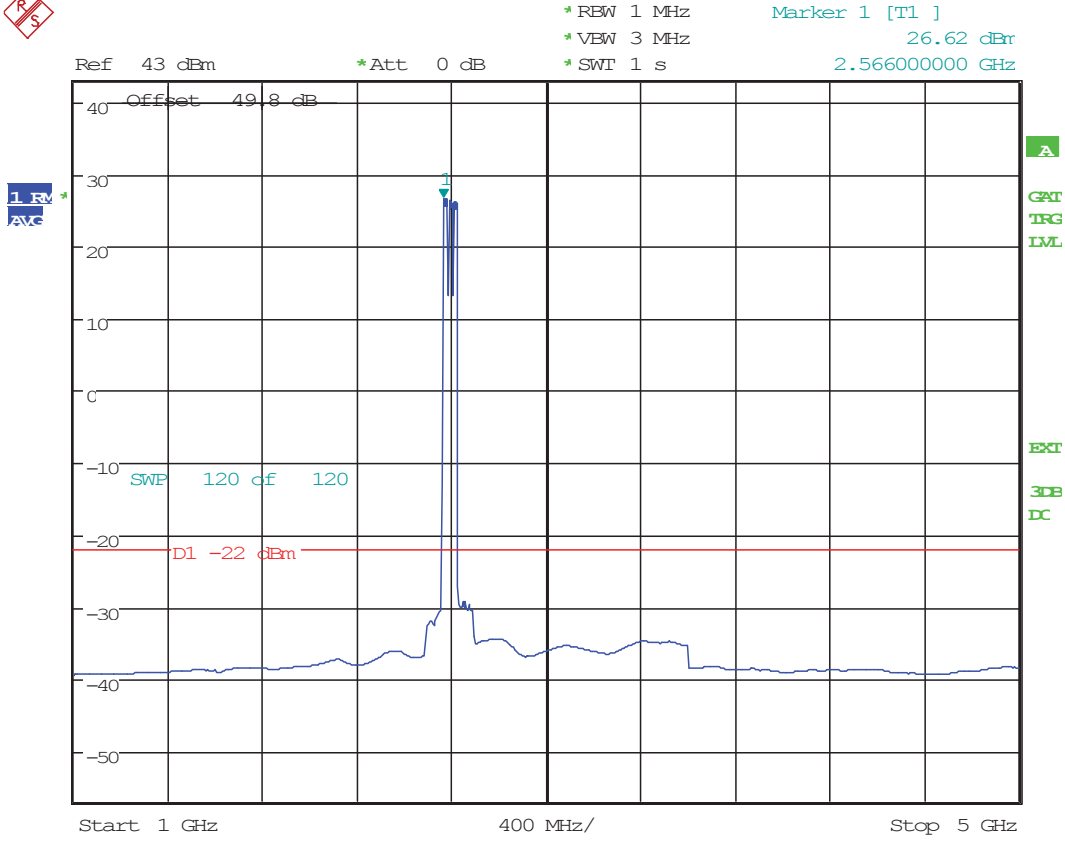
20+20+20MHz Bandwidth,
2563-2583MHz, 2583-2603 & 2603-2623 MHz
64QAM 60MHz (Middle)
8x20 watts (MIMO)



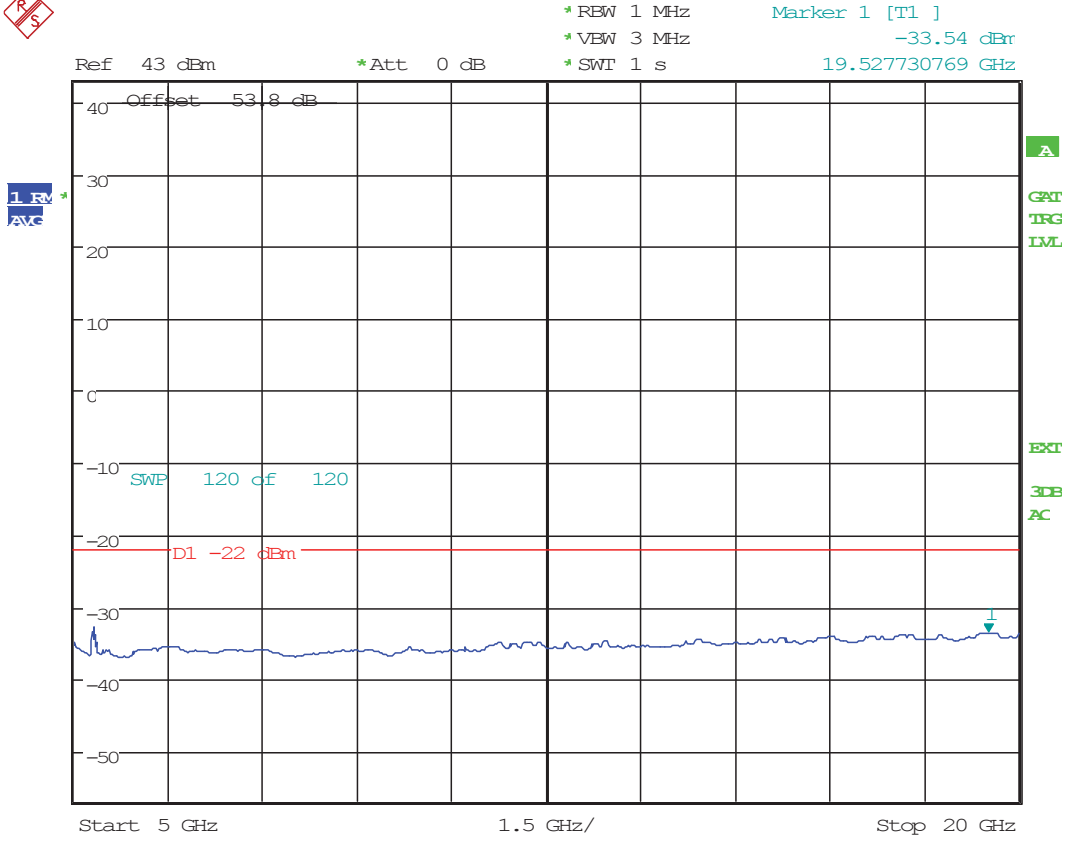
TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20+20M BW; 20W;2563-2623M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
Date: 14.DEC.2015 16:18:17



TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW;20W;2563-2623M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 14.DEC.2015 16:35:56



TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20M+20 BW;20W;2563-2623M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
Date: 14.DEC.2015 16:47:50

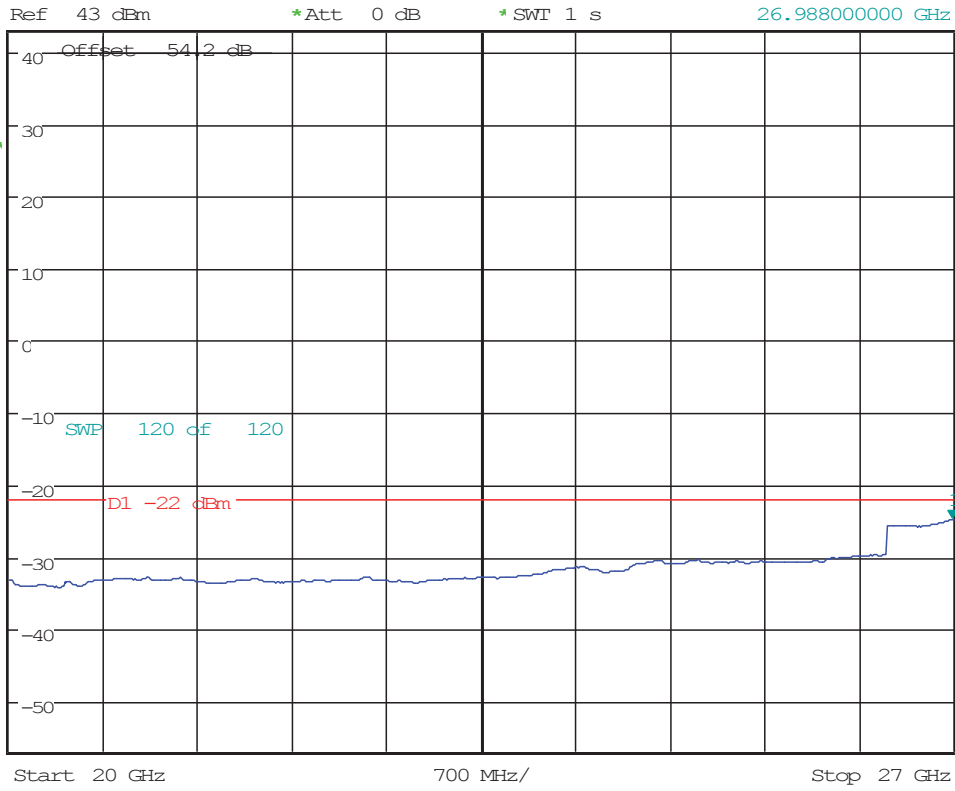


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW;20W;2563-2623M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 15.DEC.2015 09:51:04



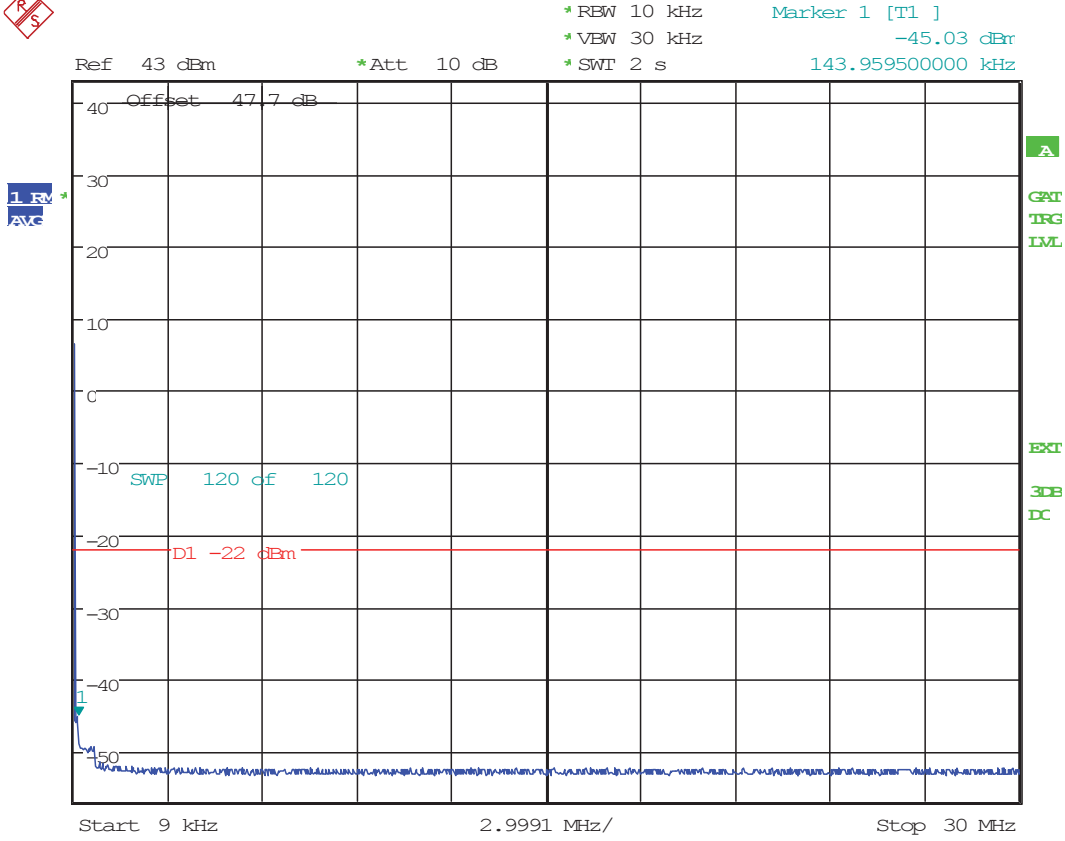
1. RV
 /AVE

* RBW 1 MHz
 * VBW 3 MHz
 * SWI 1 s
 Marker 1 [T1]
 -24.76 dBm
 26.988000000 GHz

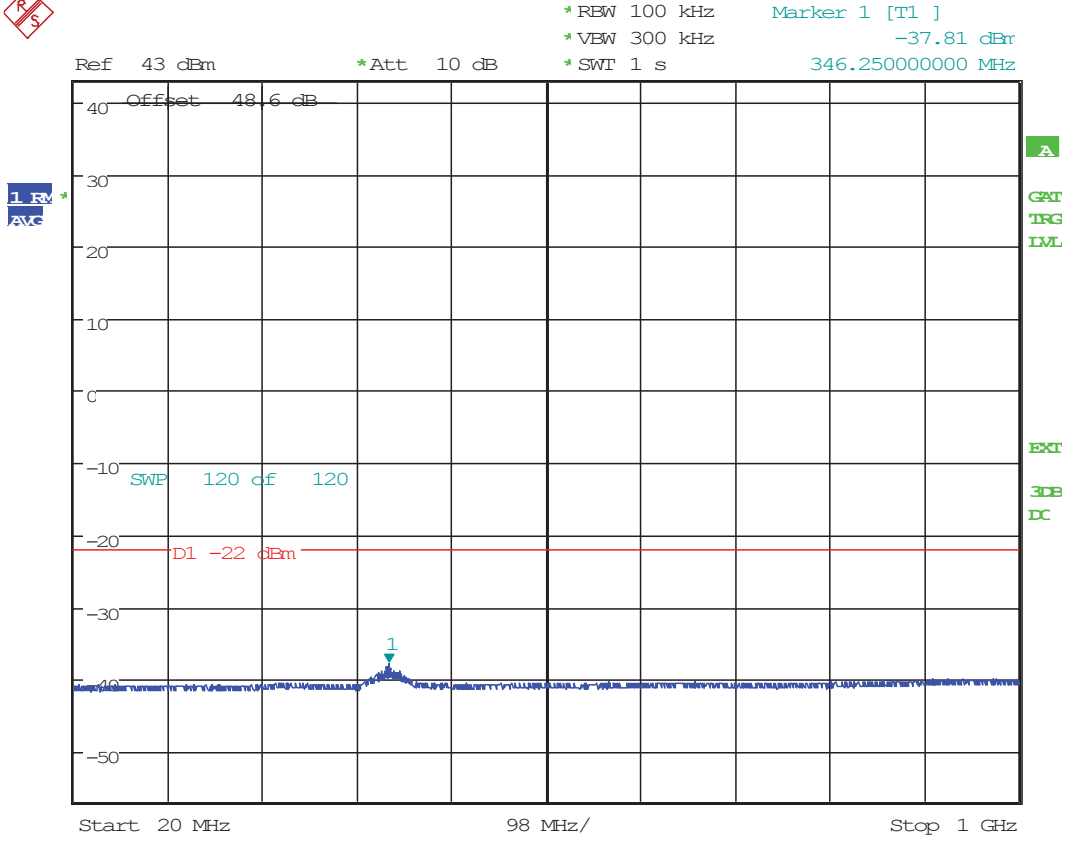


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW;20W;2563-2623M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 15.DEC.2015 10:06:03

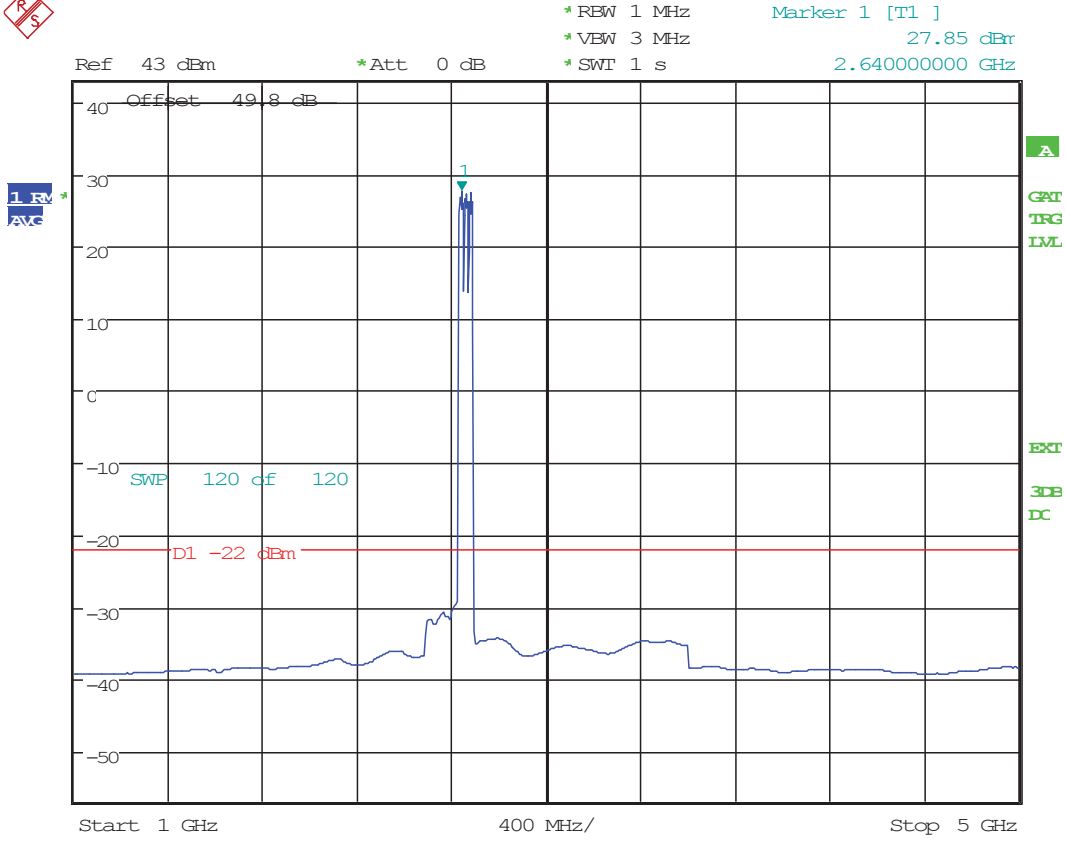
**20+20+20MHz Bandwidth,
2630-2650MHz, 2650-2670 & 2670-2690 MHz
QPSK 60MHz (Higher)
8x20 watts (MIMO)**



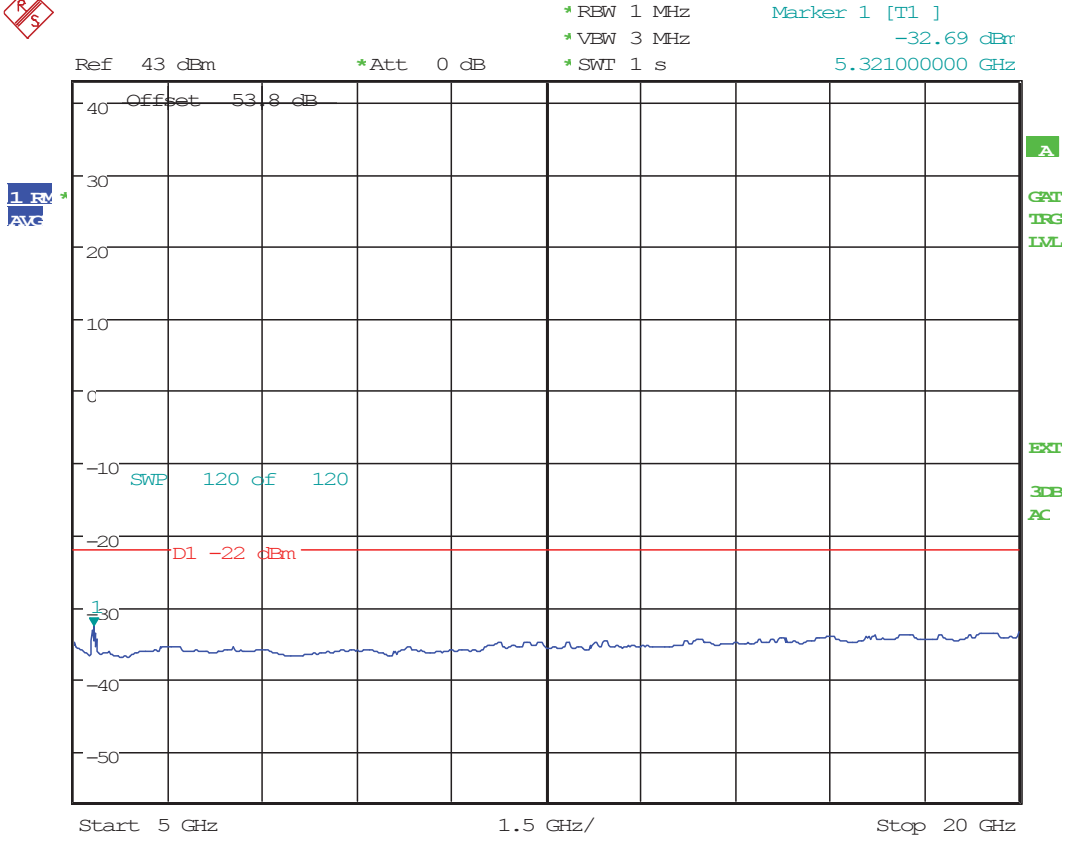
TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW; 20W;2630-2690M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 15.DEC.2015 11:13:41



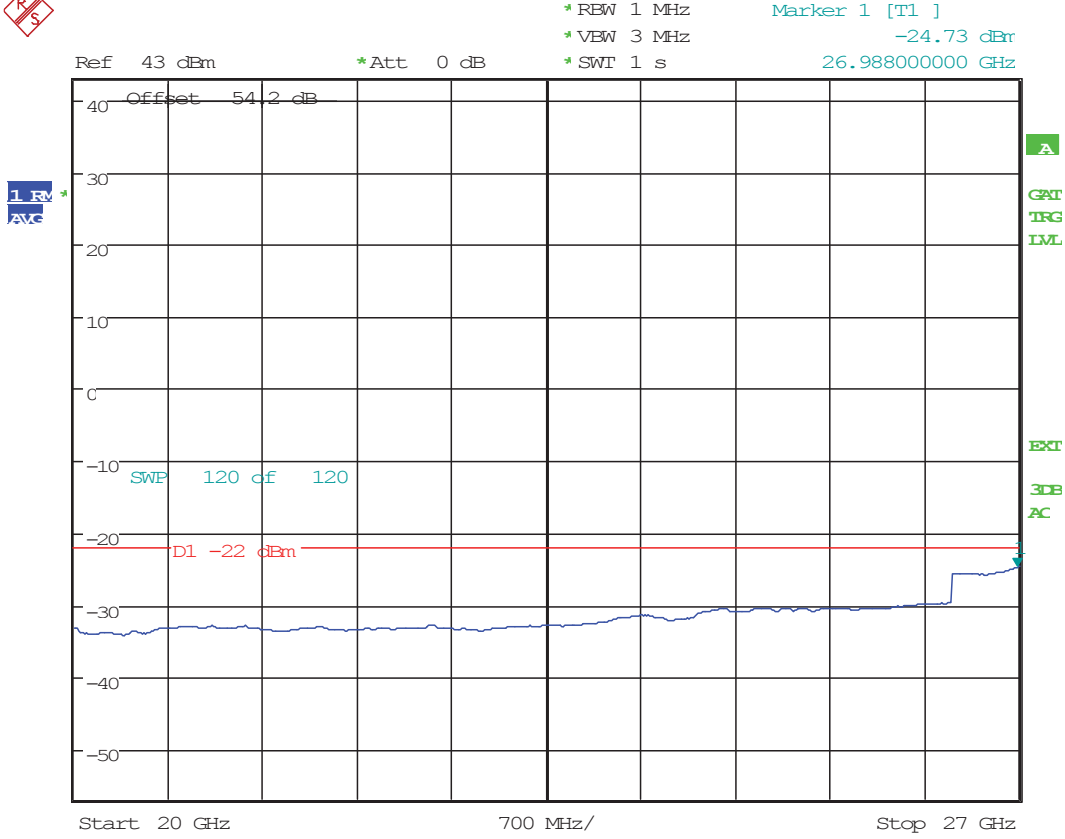
TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW;20W;2630-2690M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 15.DEC.2015 10:49:45



TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20M+20 BW;20W;2630-2690M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
Date: 15.DEC.2015 10:37:29

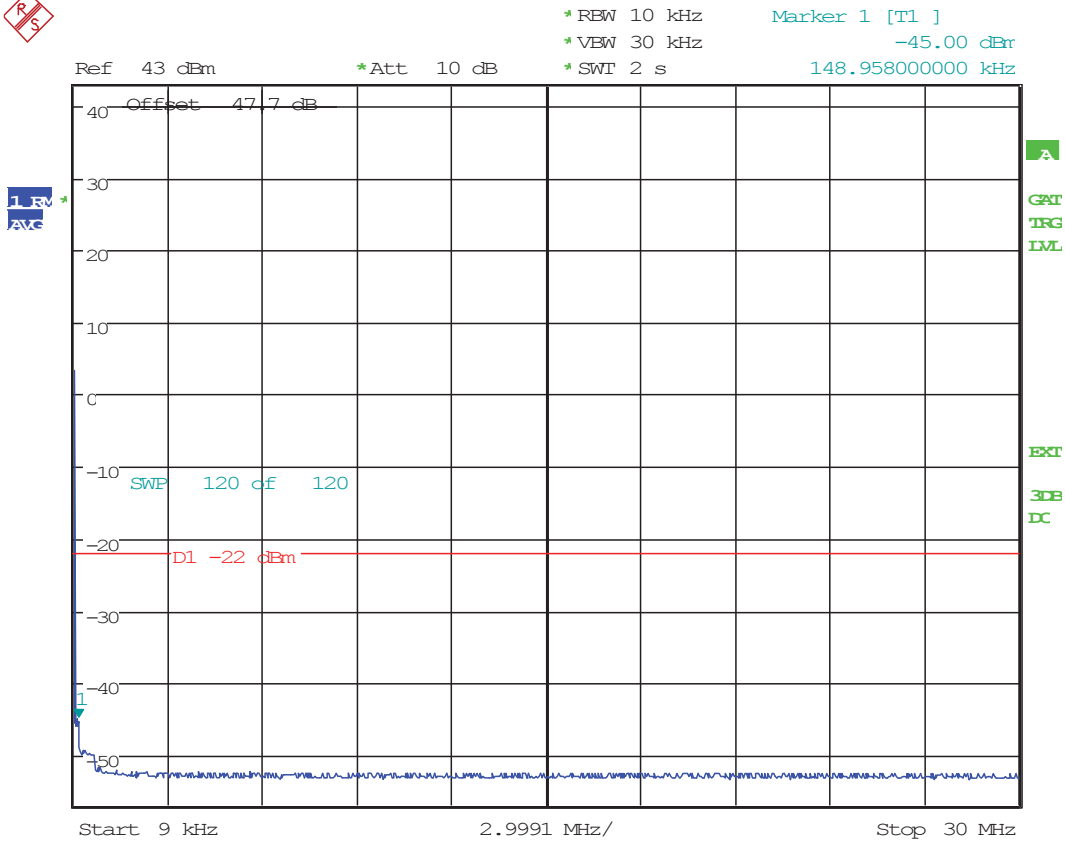


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW;20W;2630-2690M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 15.DEC.2015 10:23:21

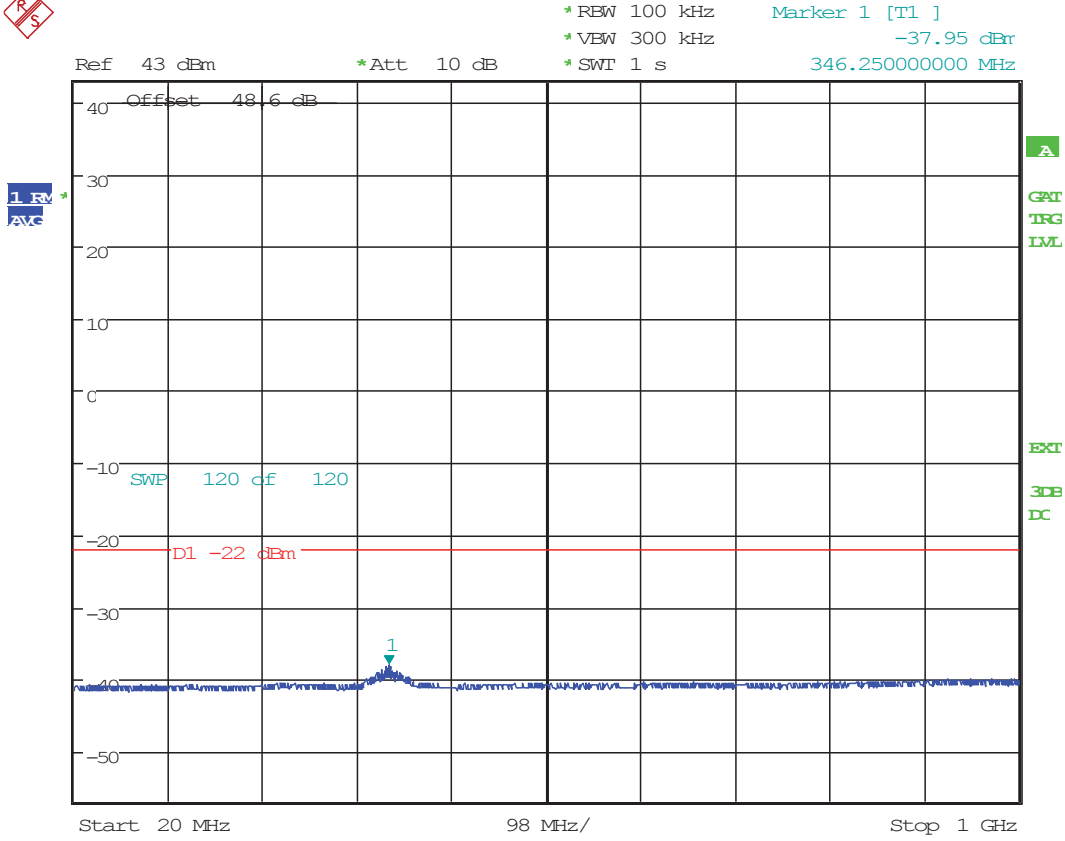


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20+20M BW;20W;2630-2690M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
Date: 15.DEC.2015 10:11:24

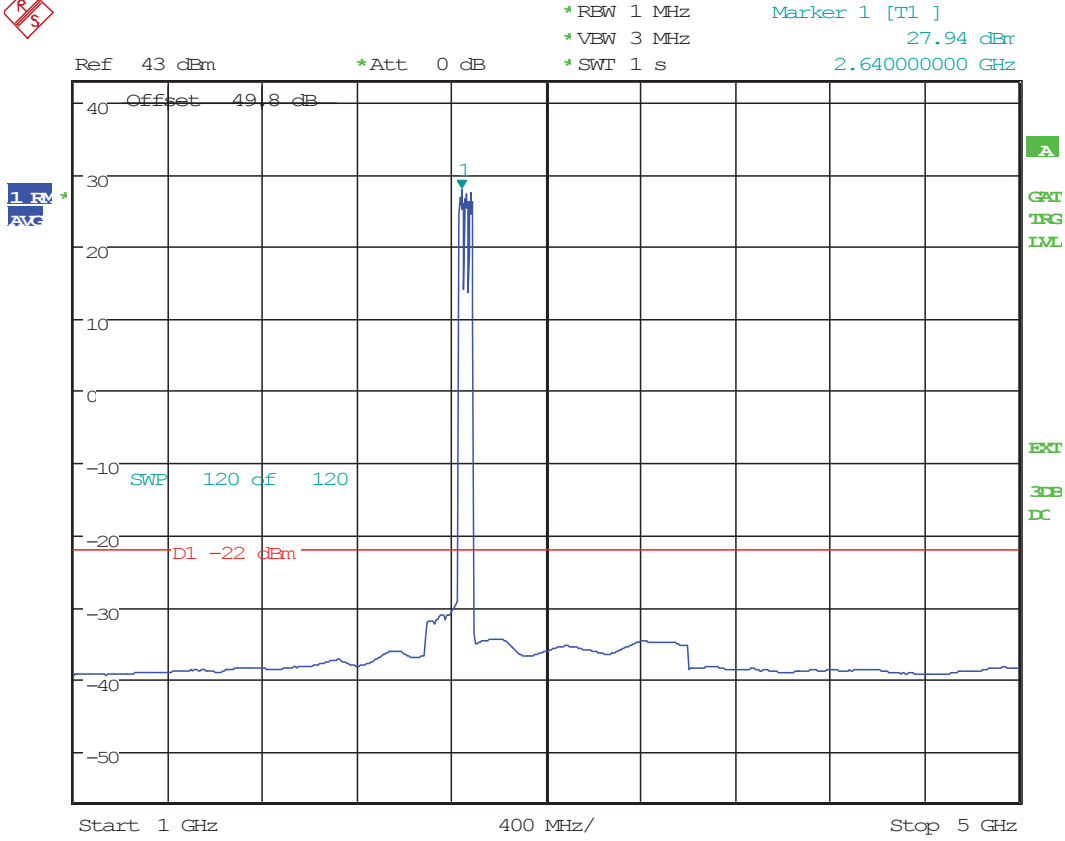
20+20+20MHz Bandwidth,
2630-2650MHz, 2650-2670 & 2670-2690 MHz
16QAM 60MHz (Higher)
8x20 watts (MIMO)



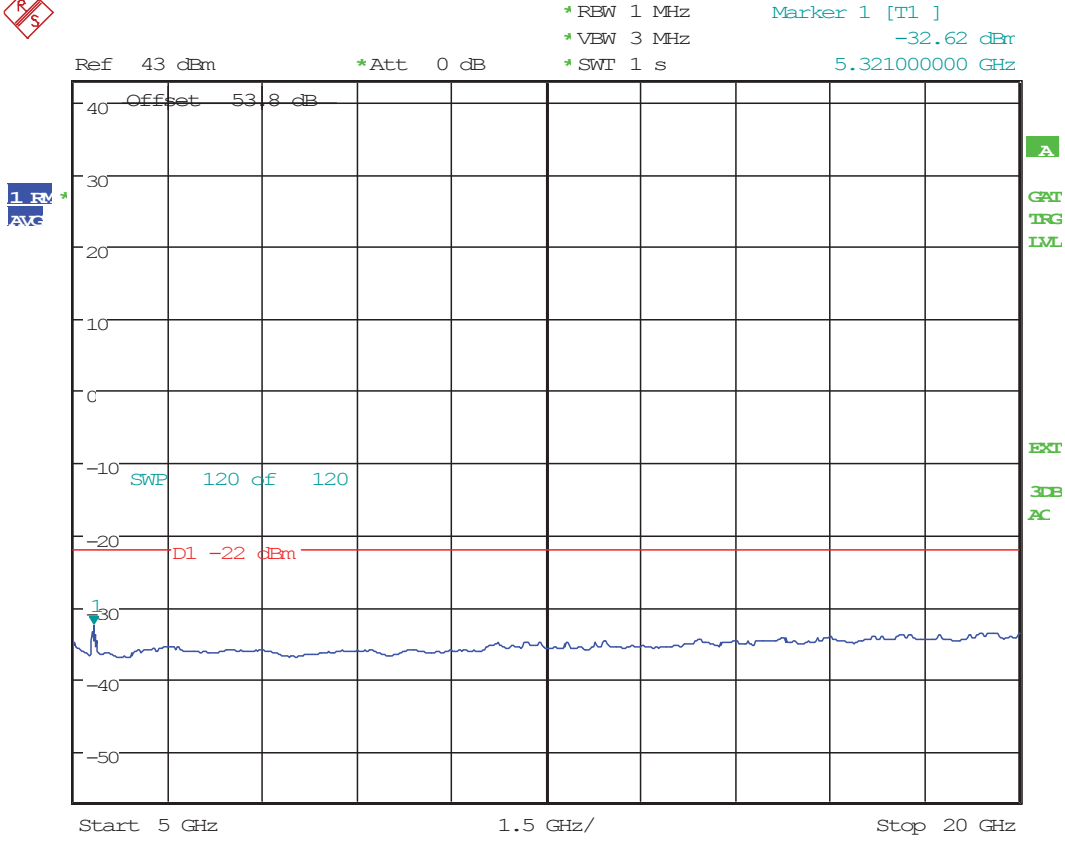
TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20+20M BW; 20W;2630-2690M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
Date: 15.DEC.2015 13:40:28



TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW;20W;2630-2690M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 15.DEC.2015 13:52:55



TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20M+20 BW;20W;2630-2690M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
Date: 15.DEC.2015 14:05:57

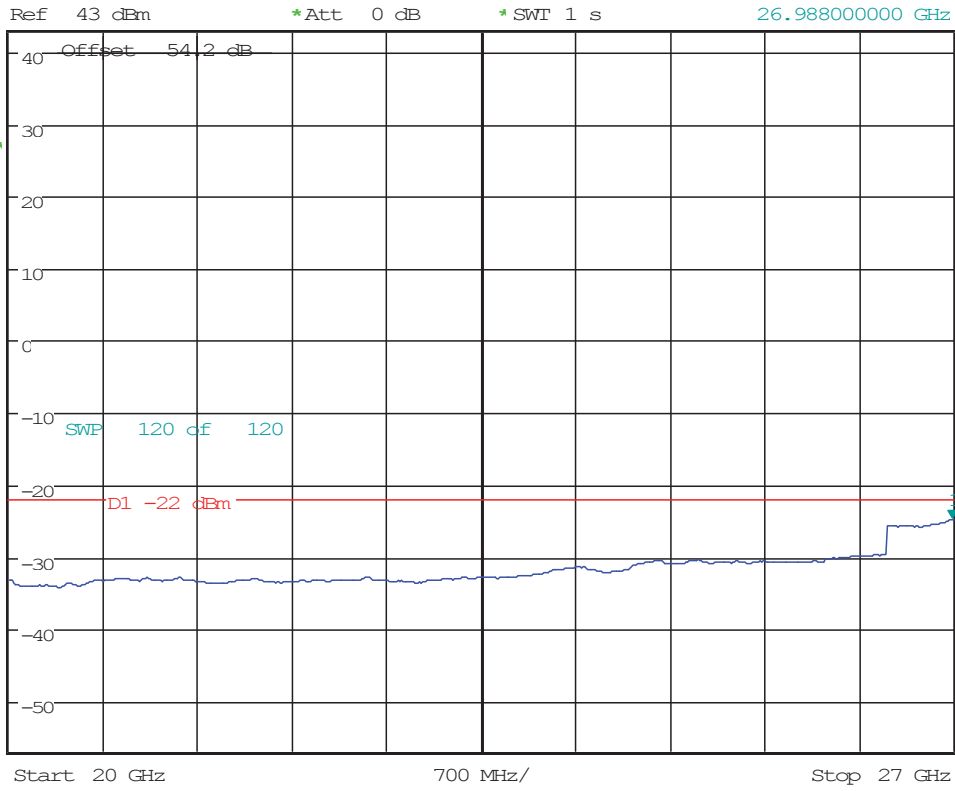


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW;20W;2630-2690M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 15.DEC.2015 14:31:16



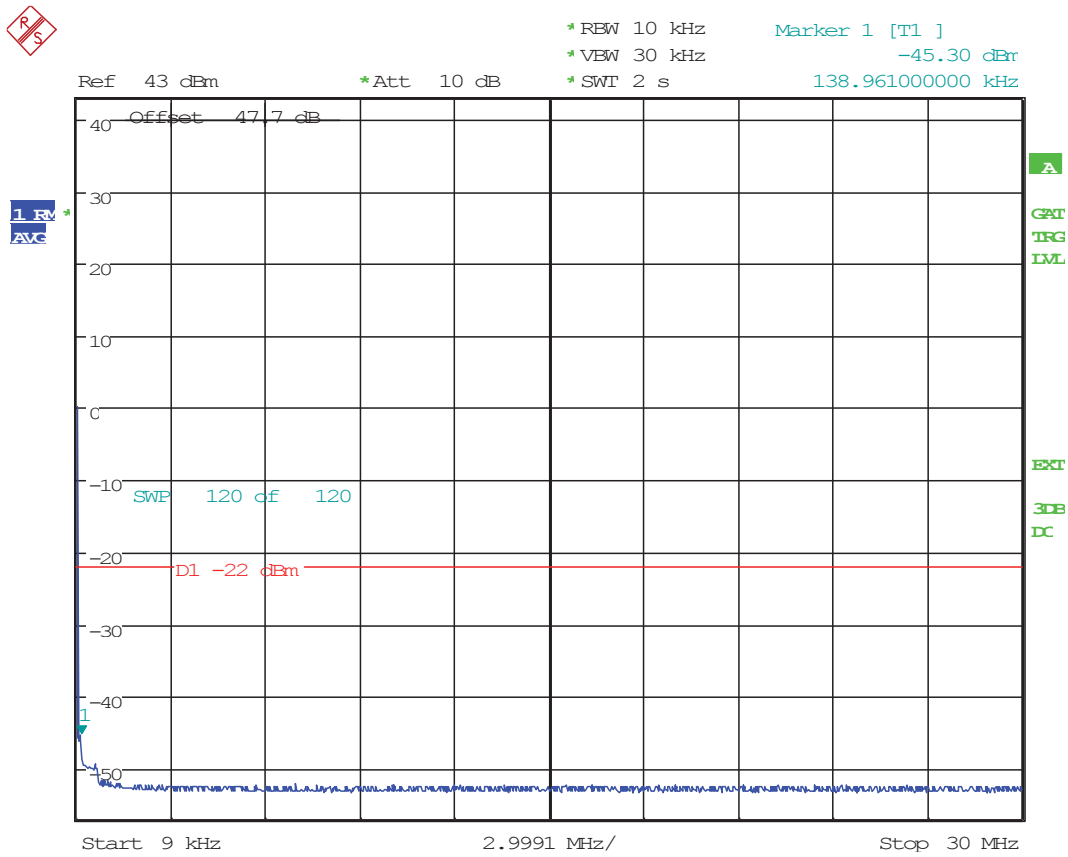
1. RV
 /AVE

* RBW 1 MHz
 * VBW 3 MHz
 * SWI 1 s
 Marker 1 [T1]
 -24.77 dBm
 26.988000000 GHz

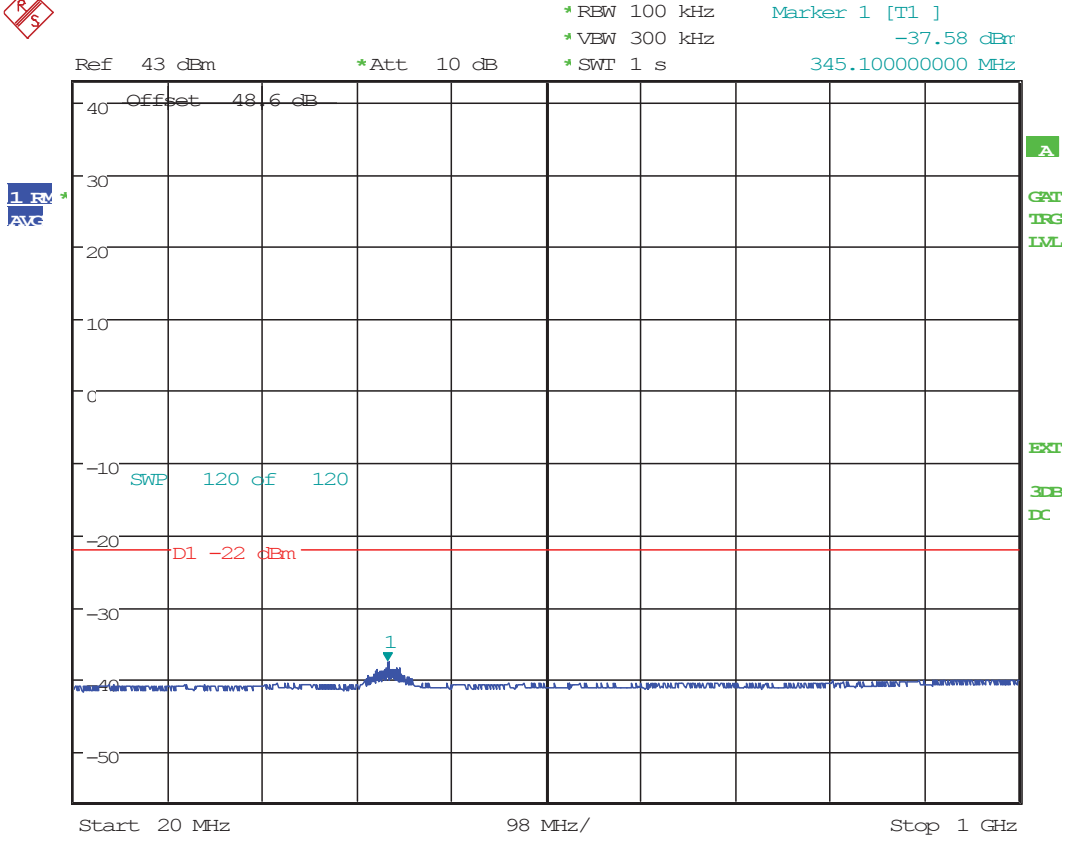


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW;20W;2630-2690M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 15.DEC.2015 14:46:34

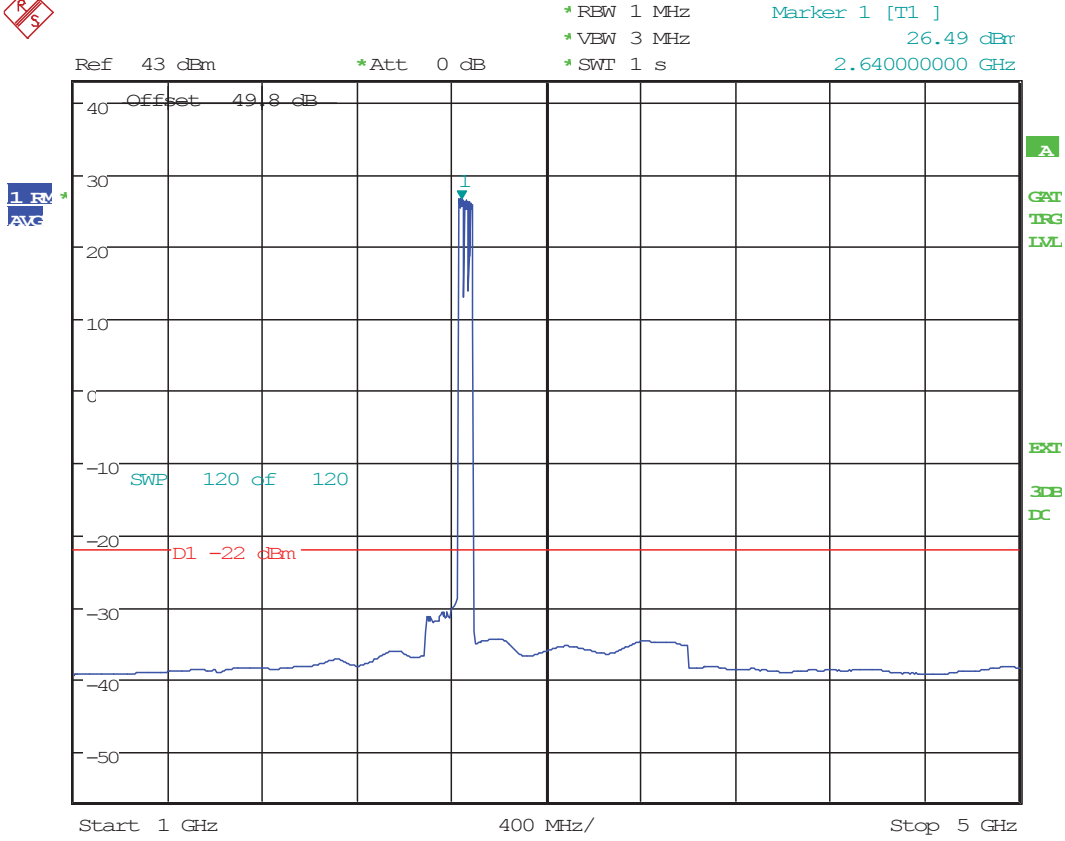
20+20+20MHz Bandwidth,
2630-2650MHz, 2650-2670 & 2670-2690 MHz
64QAM 60MHz (Higher)
8x20 watts (MIMO)



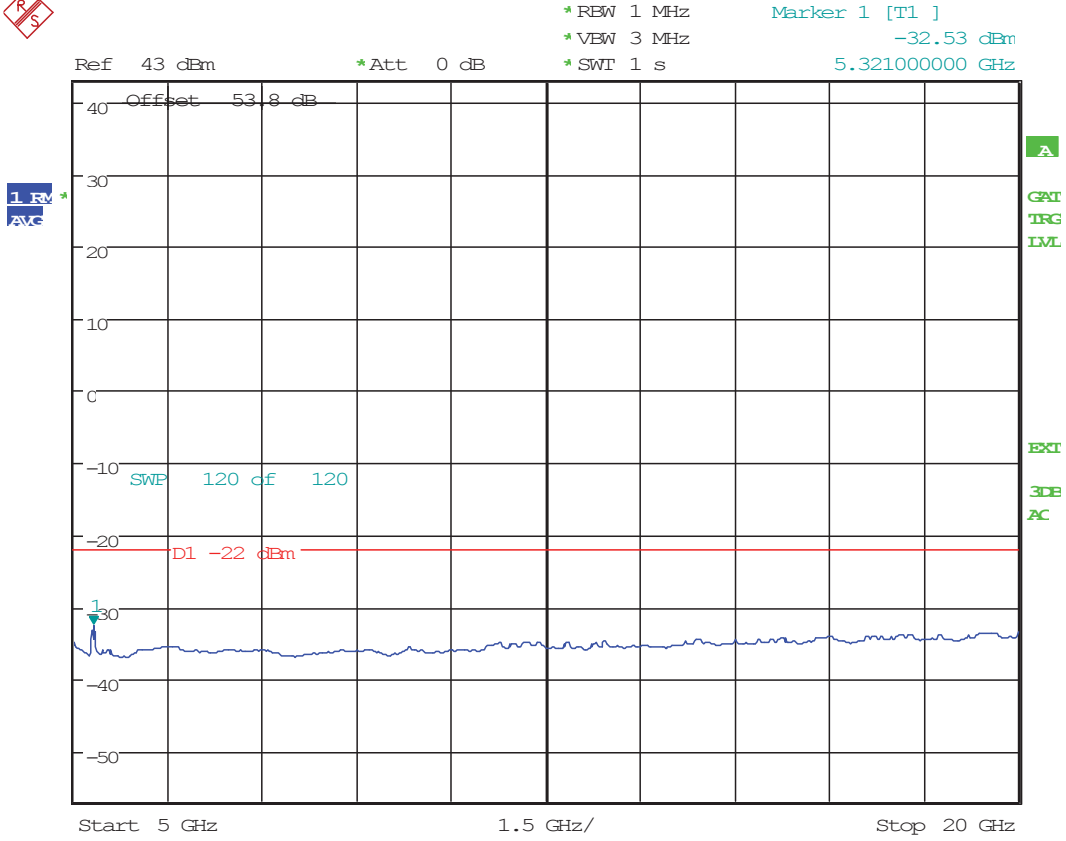
TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+20+20M BW; 20W;2630-2690M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
Date: 15.DEC.2015 15:55:51



TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW;20W;2630-2690M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 15.DEC.2015 16:11:41



TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20M+20 BW;20W;2630-2690M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 15.DEC.2015 15:30:20

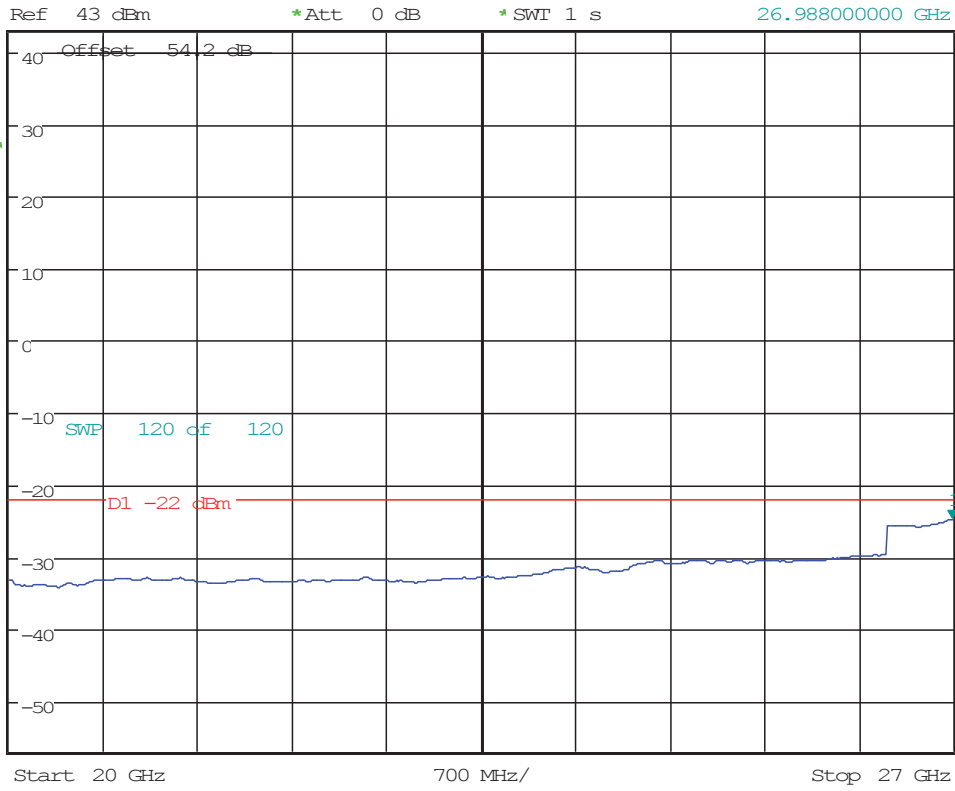


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW;20W;2630-2690M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 15.DEC.2015 15:16:33



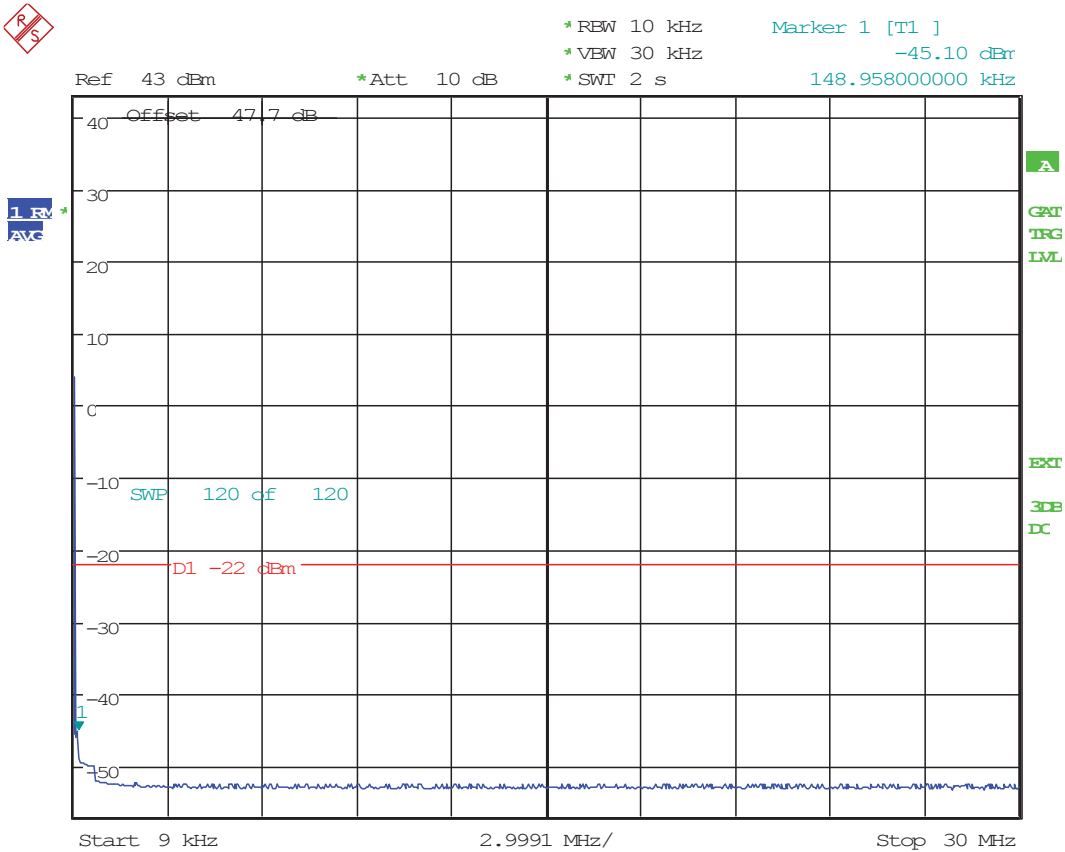
1. RV
 /AVE

* RBW 1 MHz
 * VBW 3 MHz
 * SWI 1 s
 Marker 1 [T1]
 -24.77 dBm
 26.988000000 GHz

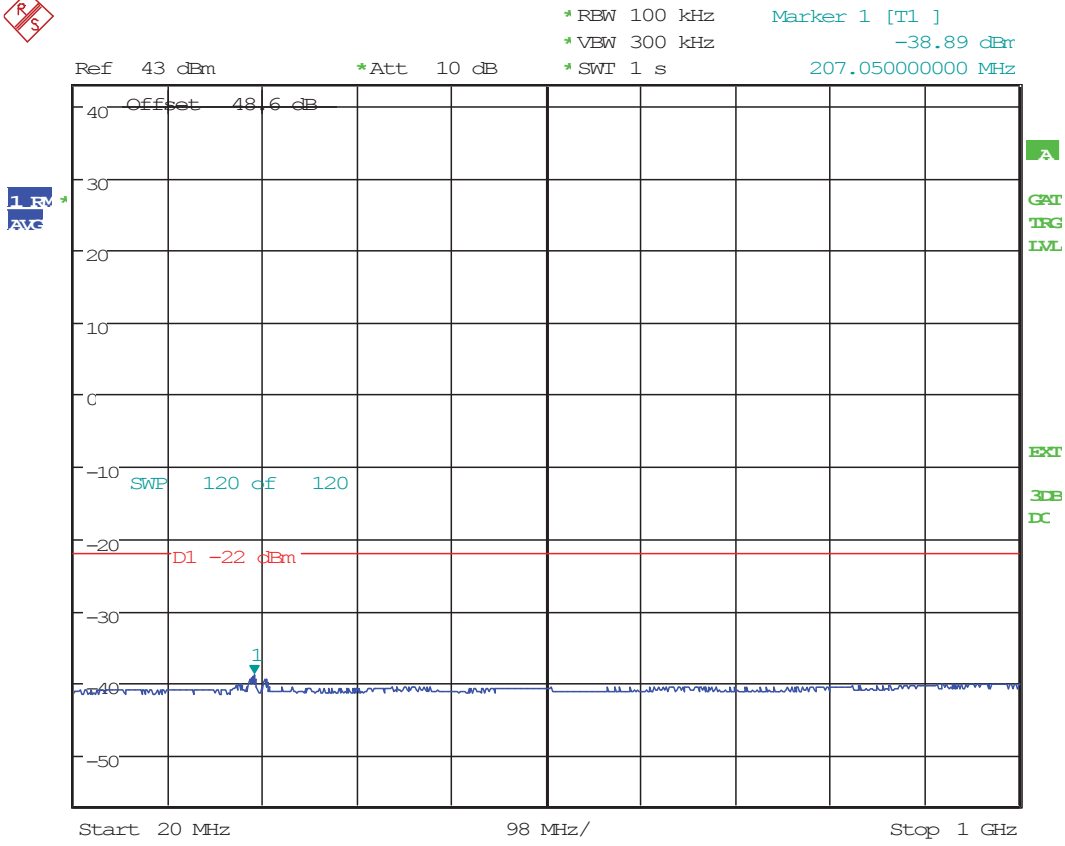


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+20+20M BW;20W;2630-2690M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 15.DEC.2015 15:04:41

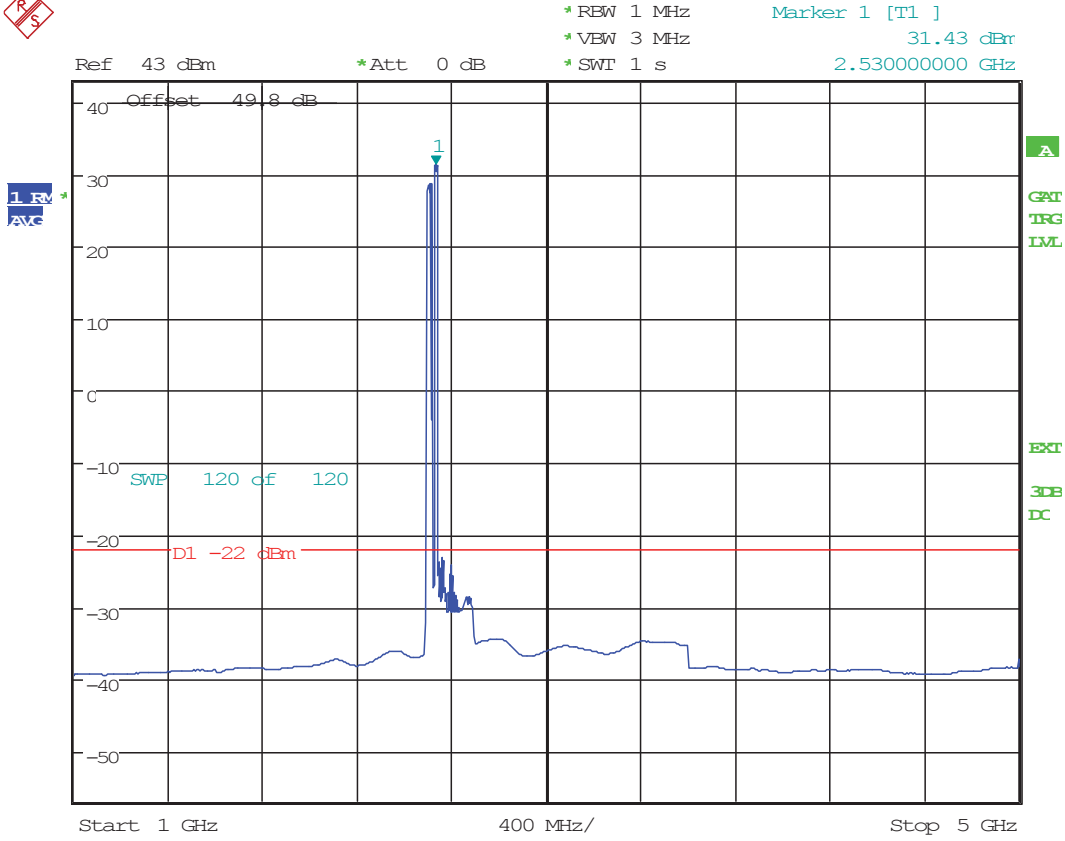
**20+10MHz Bandwidth,
 2496-2516MHz, 2528-2538 MHz
 QPSK(Lower)
 8x20 watts (MIMO)**



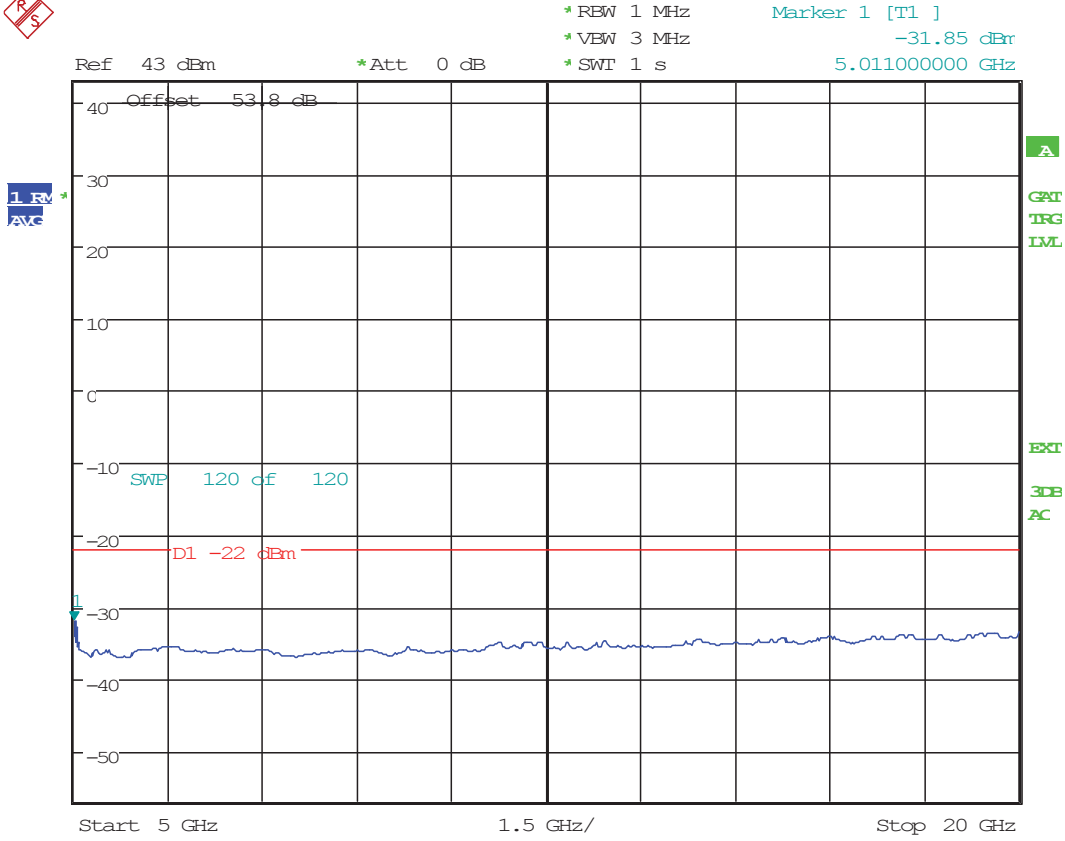
TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC; 20W;2496-2538M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 17.DEC.2015 15:39:04



TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2496-2538M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 18.DEC.2015 09:28:48



TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10 BW NC;20W;2496-2538M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
Date: 17.DEC.2015 16:19:26

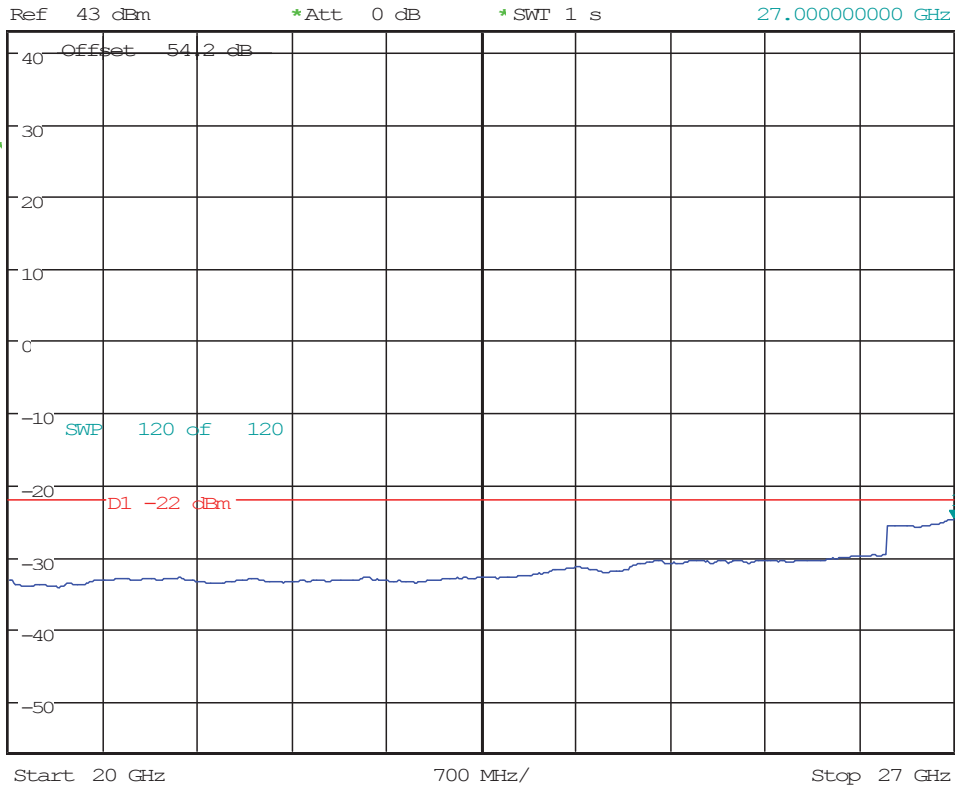


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2496-2538M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 18.DEC.2015 09:40:45



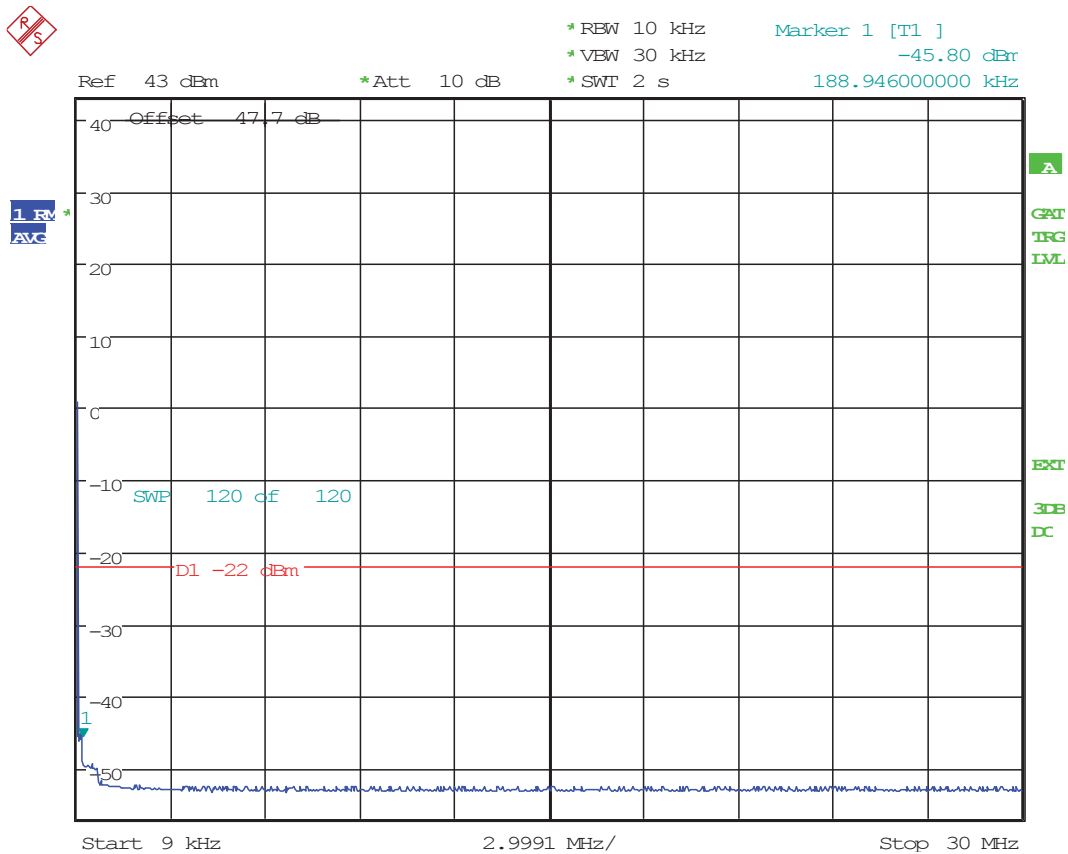
1. RV
 /AVE

* RBW 1 MHz
 * VBW 3 MHz
 * SWI 1 s
 Marker 1 [T1]
 -24.68 dBm
 27.000000000 GHz

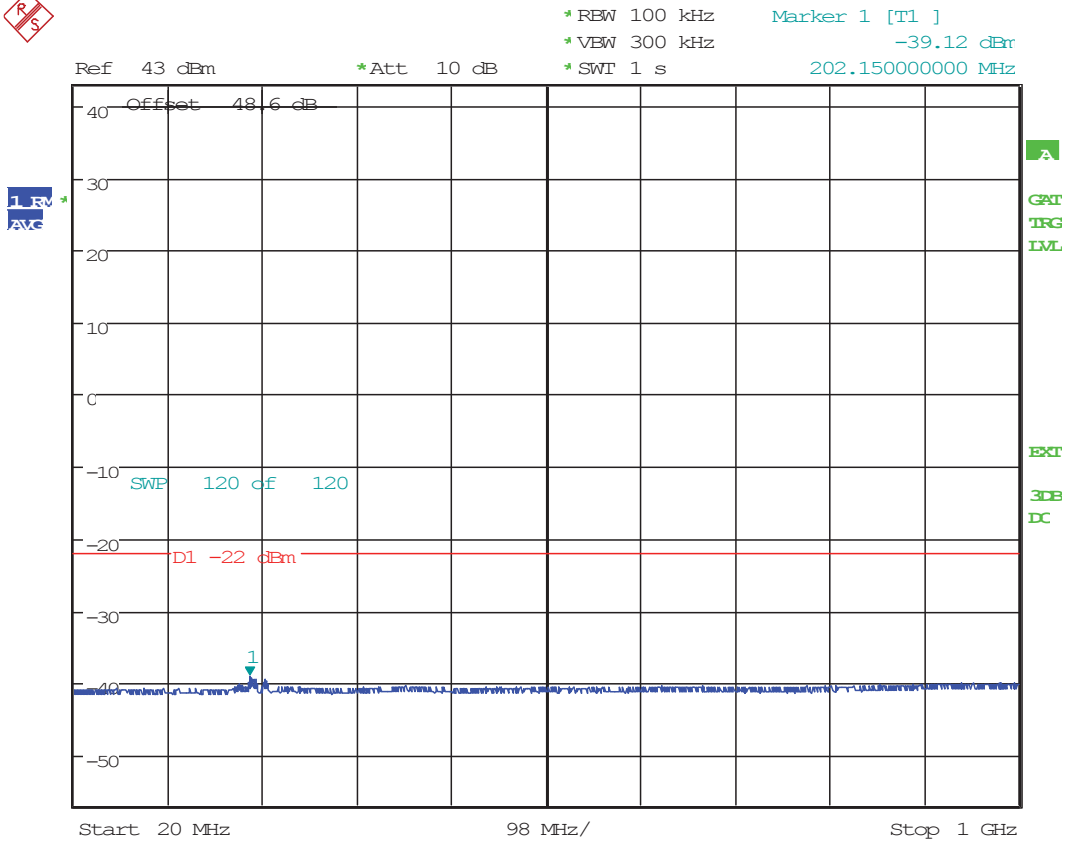


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2496-2538M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 18.DEC.2015 17:10:19

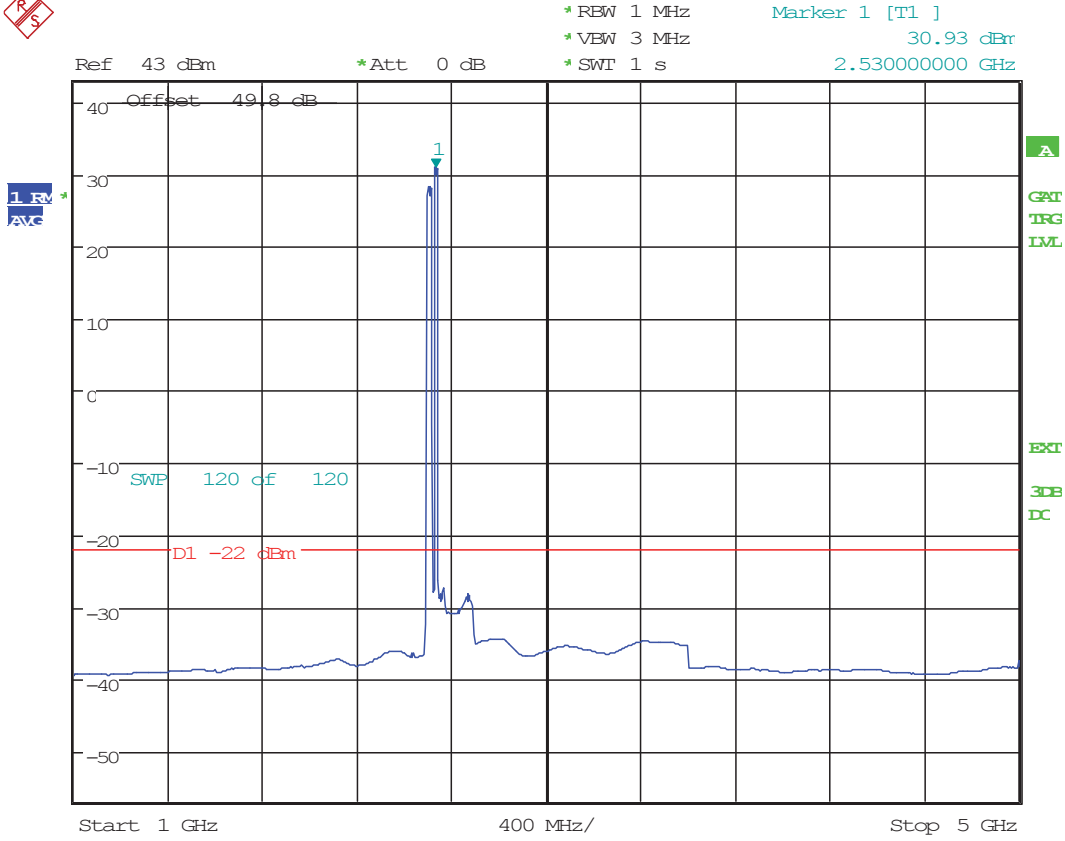
20+10MHz Bandwidth,
2496-2516MHz, 2528-2538 MHz
16QAM(Lower)
8x20 watts (MIMO)



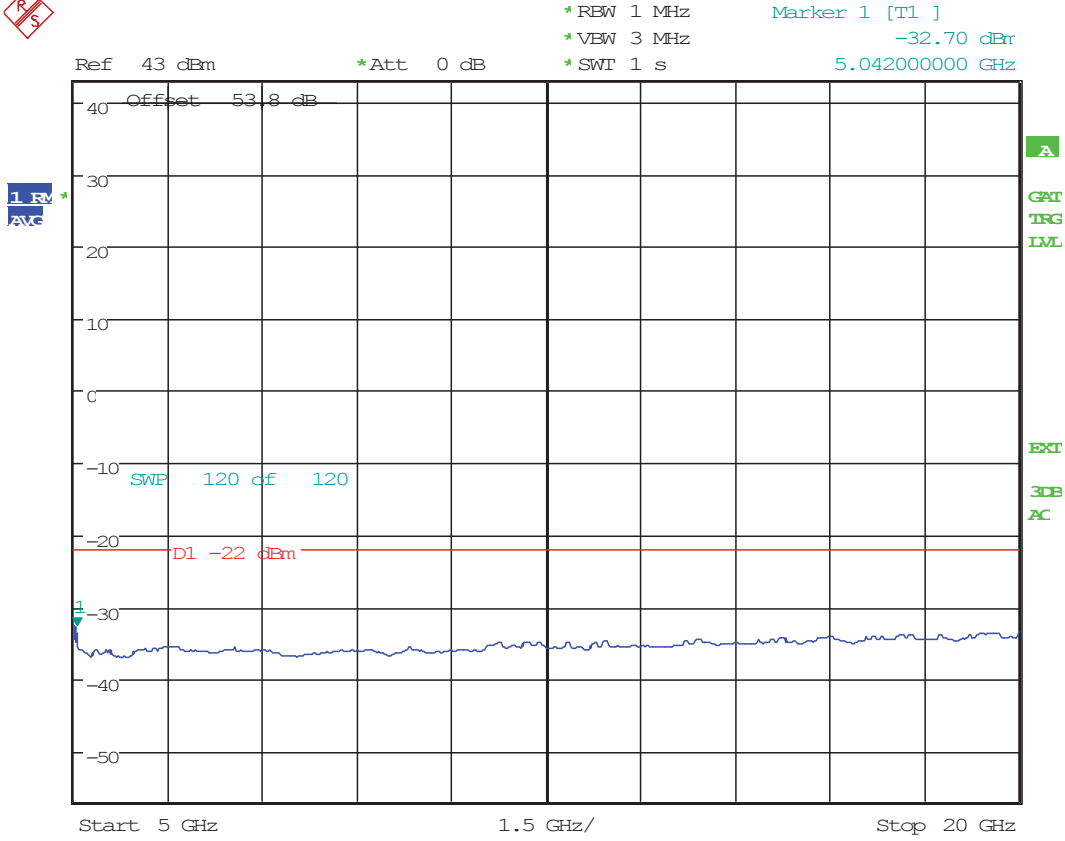
TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10M BW NC; 20W;2496-2538M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
Date: 18.DEC.2015 19:10:34



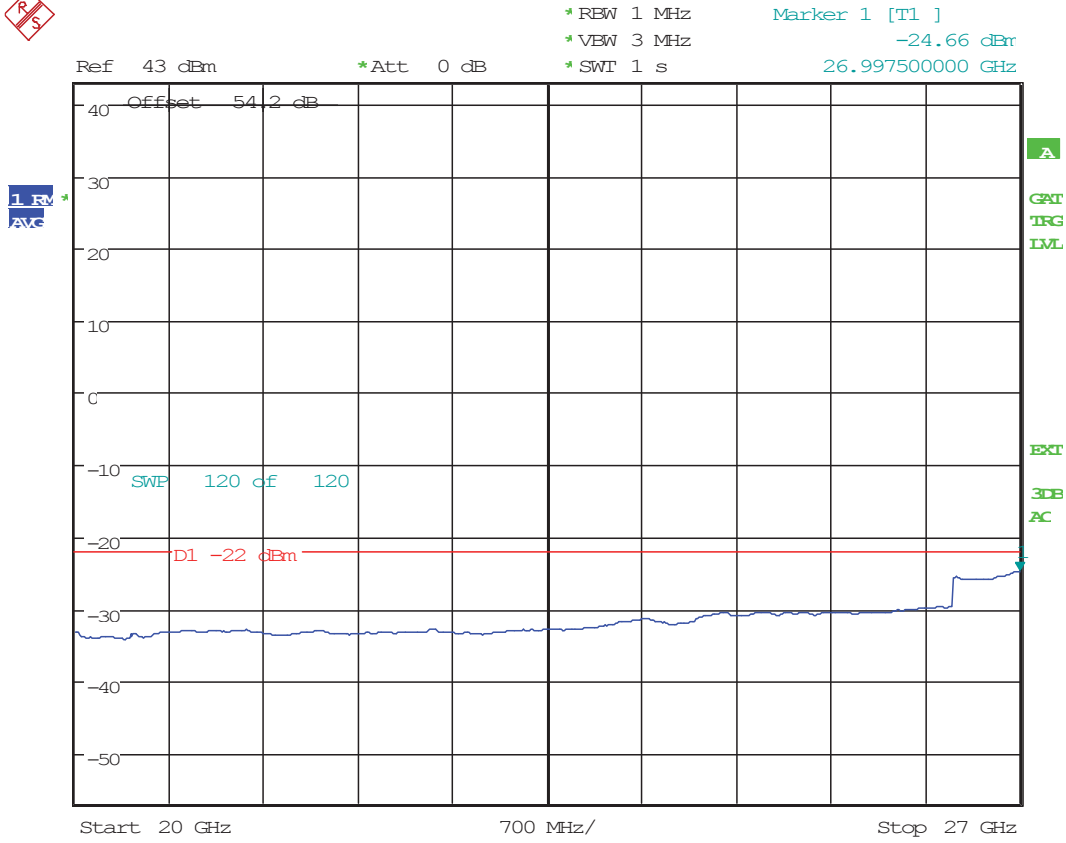
TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2496-2538M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 18.DEC.2015 17:55:28



TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10 BW NC;20W;2496-2538M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
Date: 18.DEC.2015 17:42:24

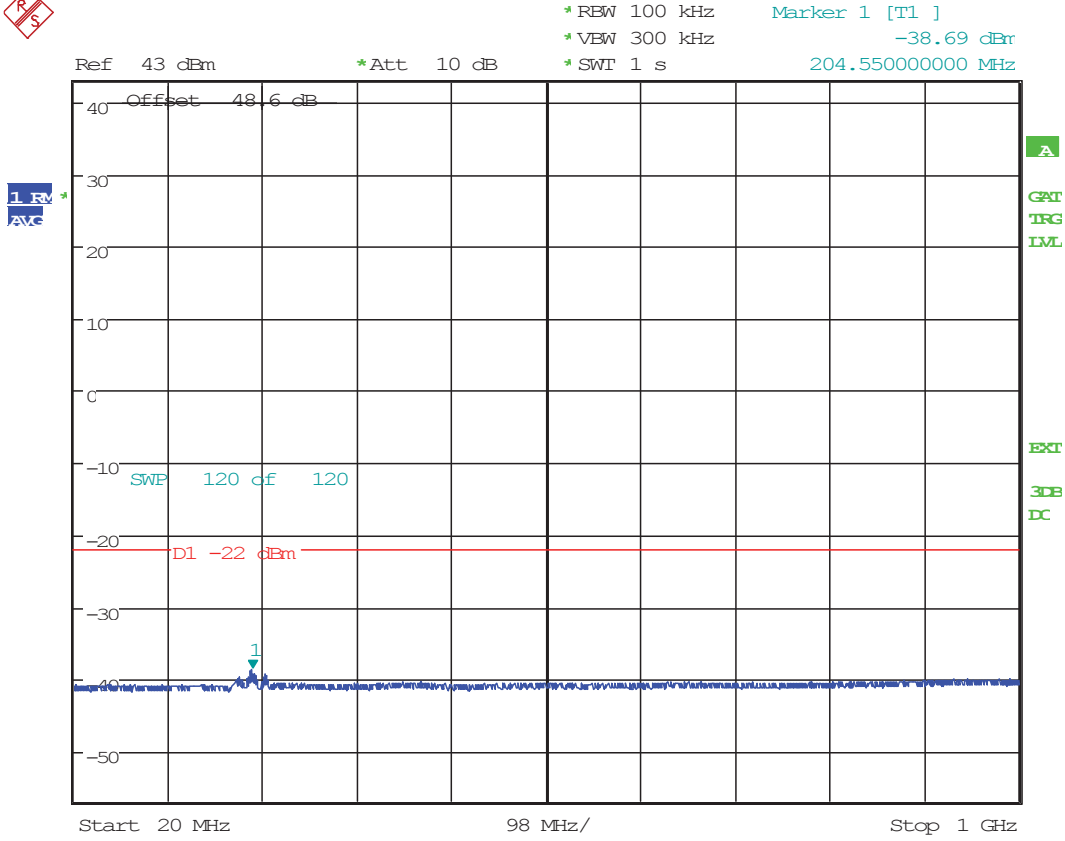


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2496-2538M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 18.DEC.2015 17:29:14

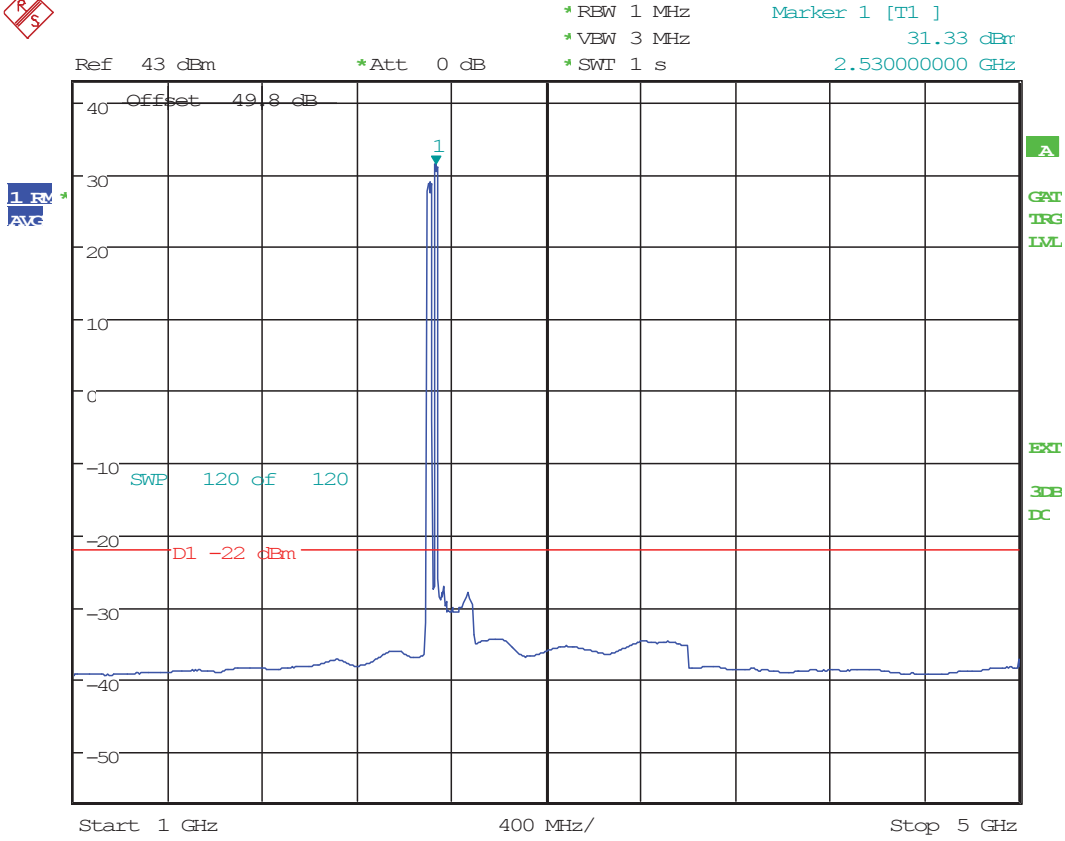


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10M BW NC;20W;2496-2538M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
Date: 18.DEC.2015 17:17:25

20+10MHz Bandwidth,
2496-2516MHz, 2528-2538 MHz
64QAM(Lower)
8x20 watts (MIMO)



TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2496-2538M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 21.DEC.2015 10:13:14

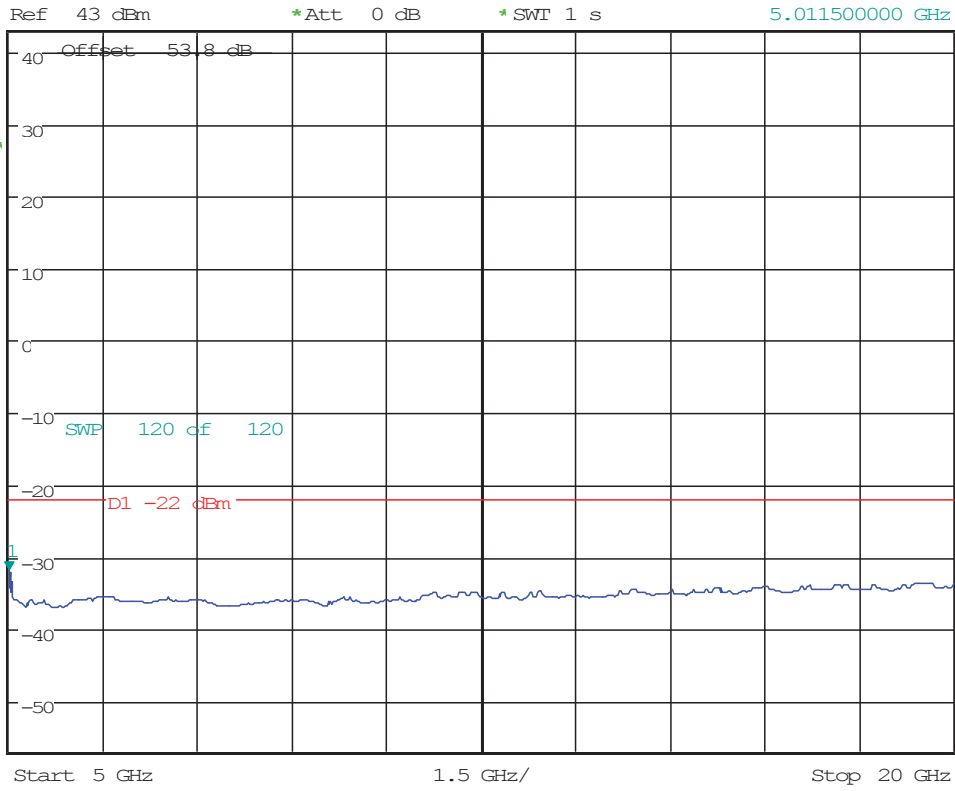


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10 BW NC;20W;2496-2538M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 21.DEC.2015 10:01:32



1. RV
 /AVE

* RBW 1 MHz
 * VBW 3 MHz
 * SWI 1 s
 Marker 1 [T1]
 -31.95 dBm
 5.011500000 GHz

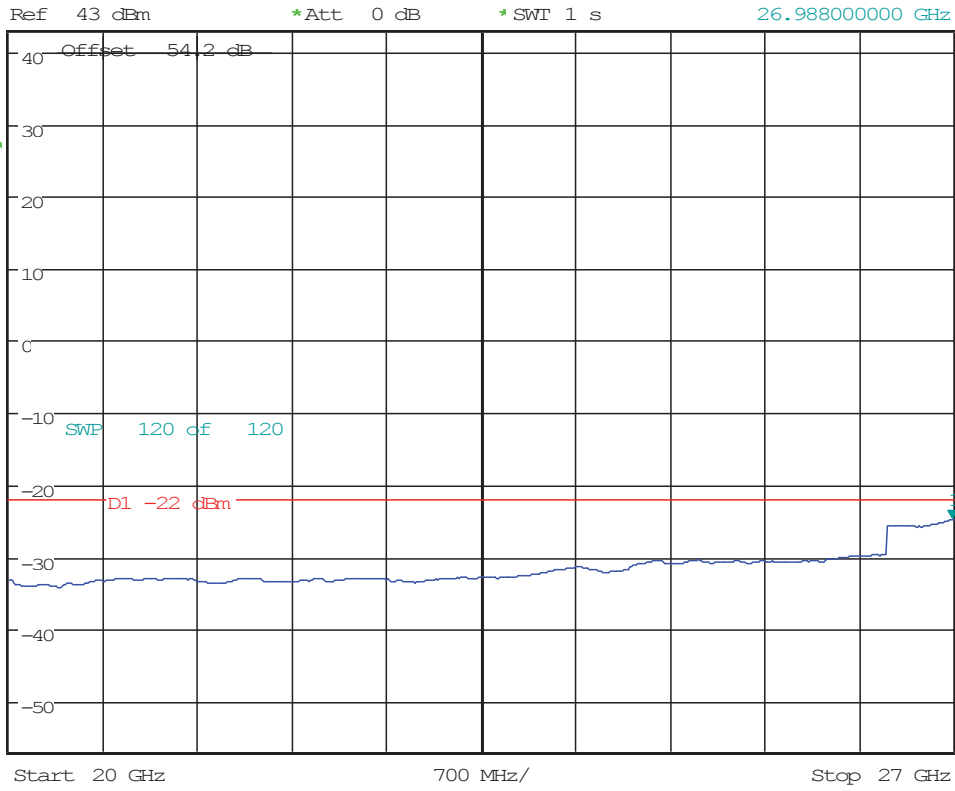


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2496-2538M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 21.DEC.2015 09:49:28



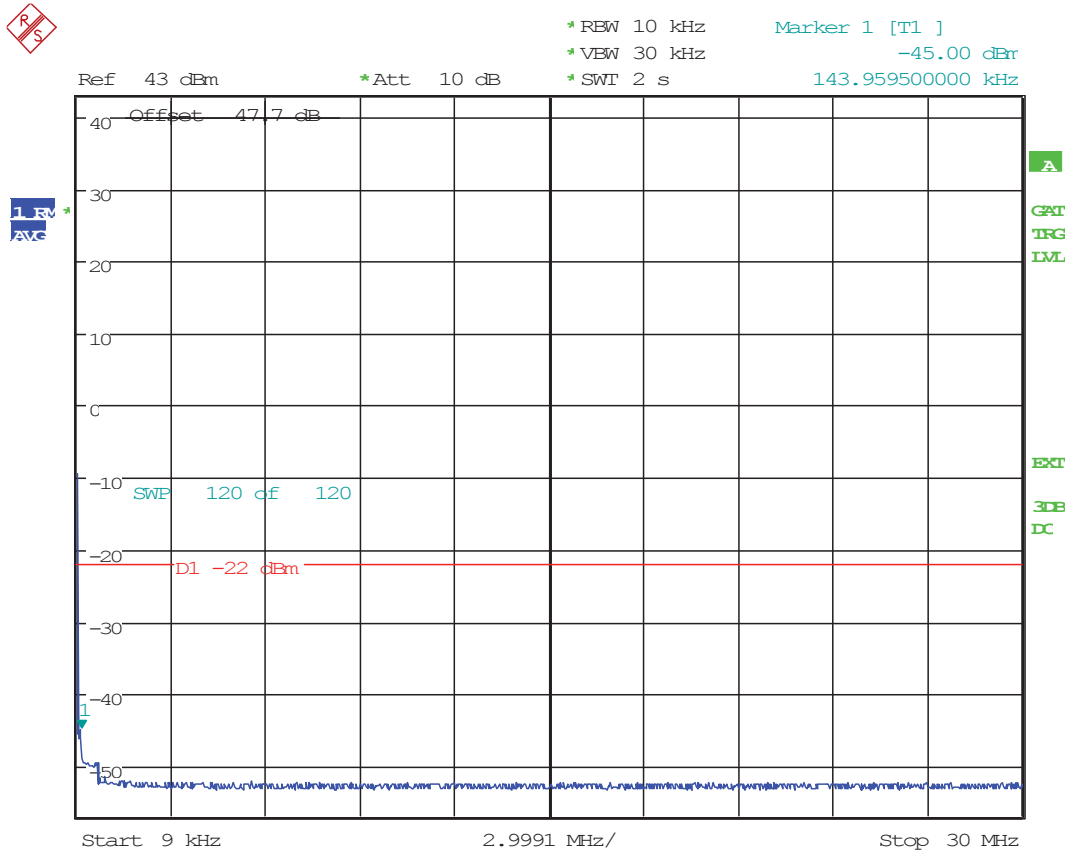
1. RV
 /AVE

* RBW 1 MHz
 * VBW 3 MHz
 * SWI 1 s
 Marker 1 [T1]
 -24.79 dBm
 26.988000000 GHz

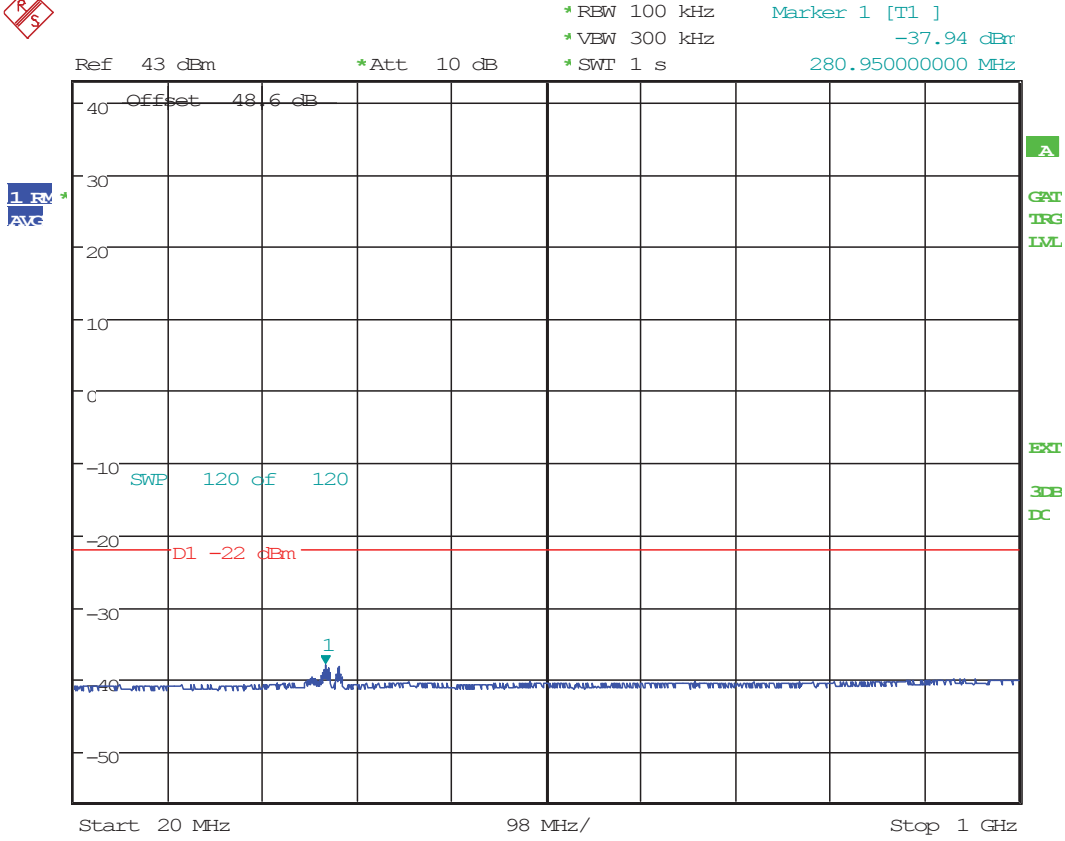


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2496-2538M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 21.DEC.2015 09:37:37

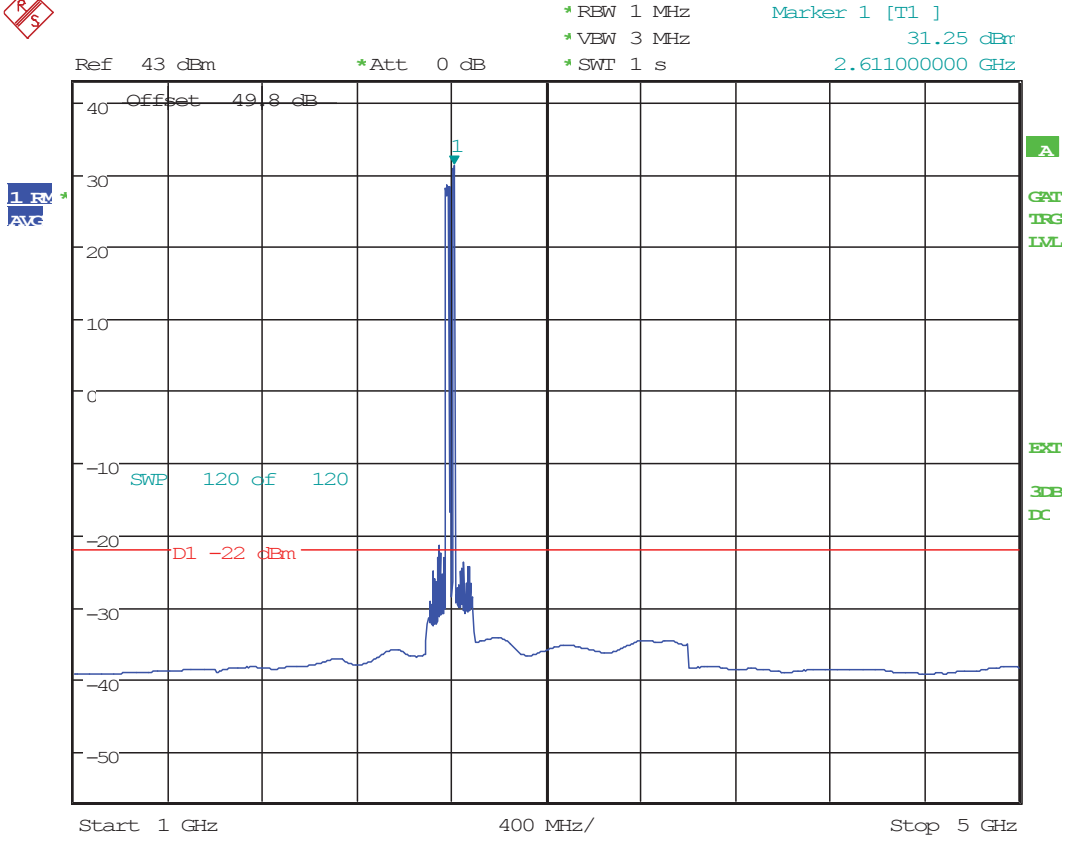
**20+10MHz Bandwidth,
2562-2582MHz, 2609-2619 MHz
QPSK (Middle)
8x20 watts (MIMO)**



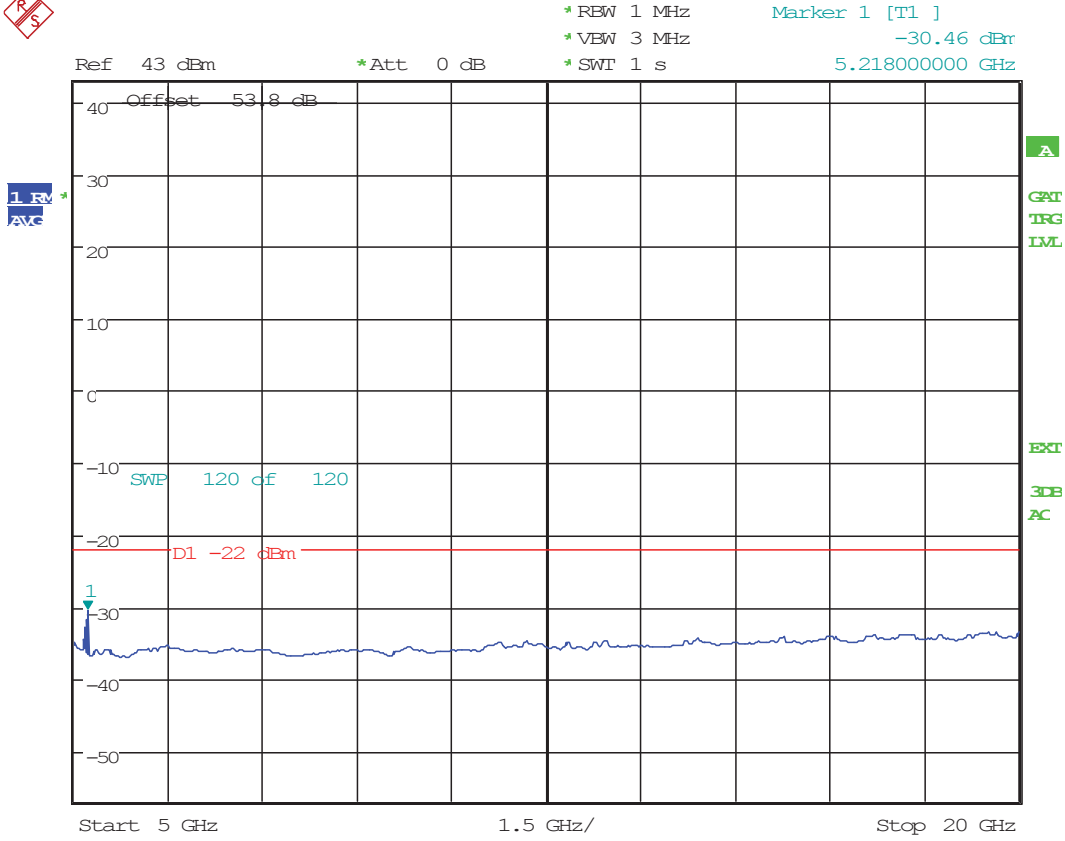
TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10M BW NC;20W;2572-2614M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
Date: 21.DEC.2015 14:32:03



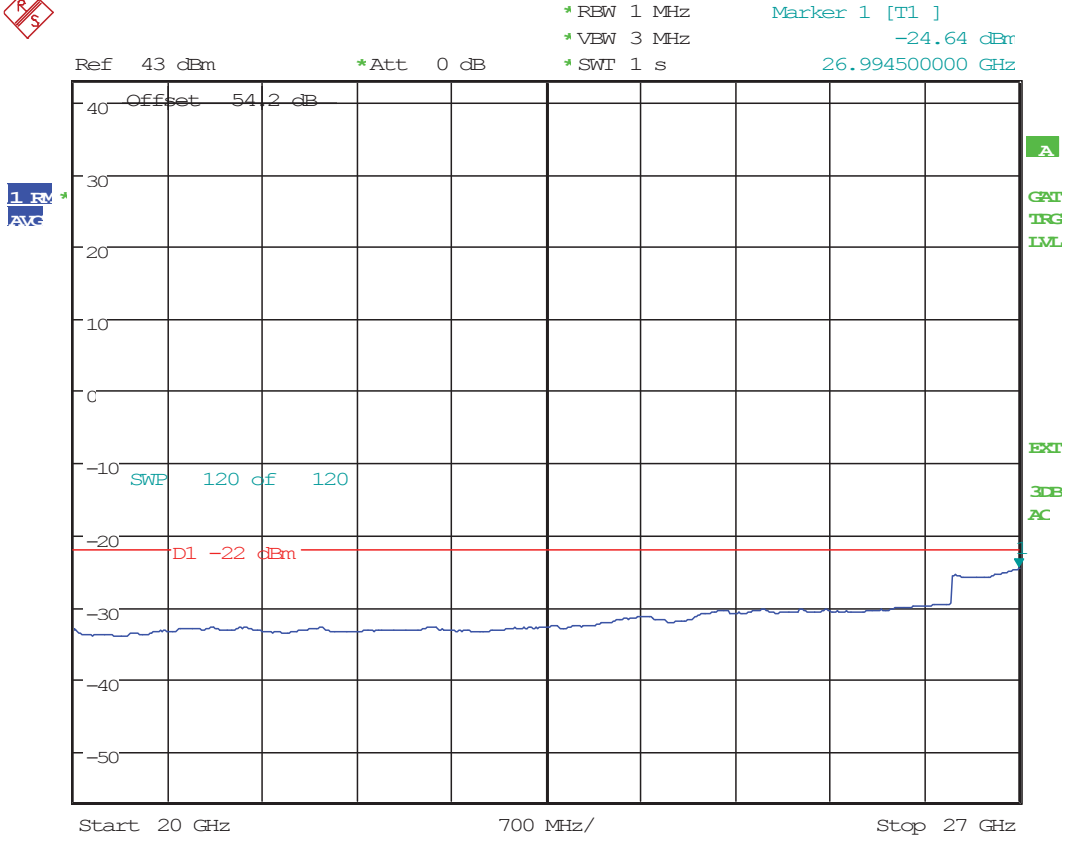
TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2572-2614M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 21.DEC.2015 14:48:22



TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10 BW NC;20W;2572-2614M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
Date: 21.DEC.2015 15:01:30

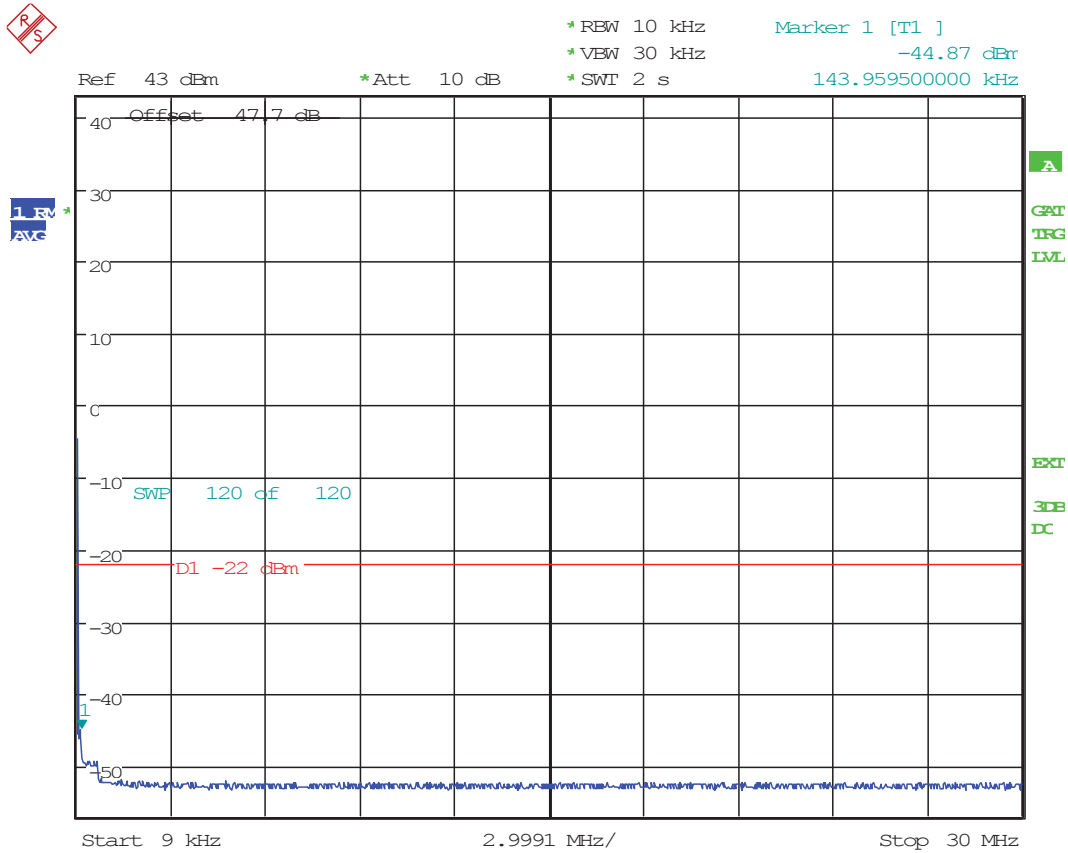


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2572-2614M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 21.DEC.2015 15:13:22

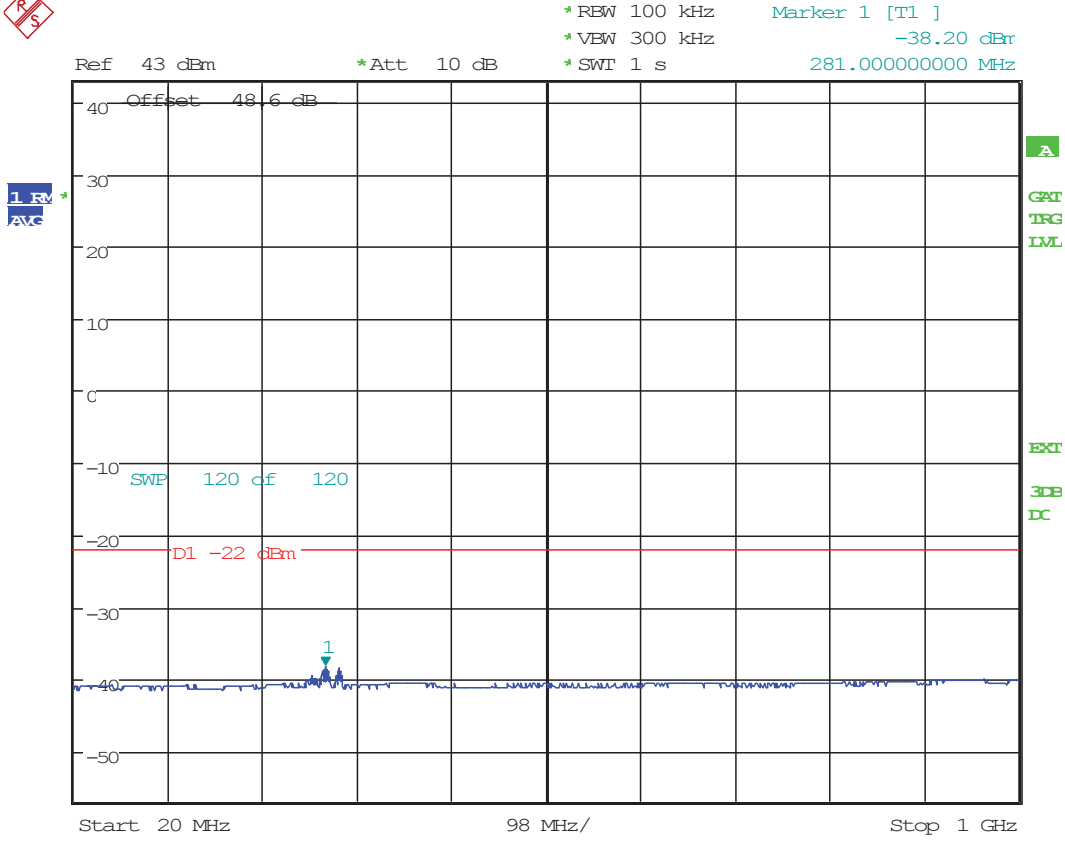


TX SPURIOUS: TEST ENG:JY; TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC; 2572-2614M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 21.DEC.2015 16:30:20

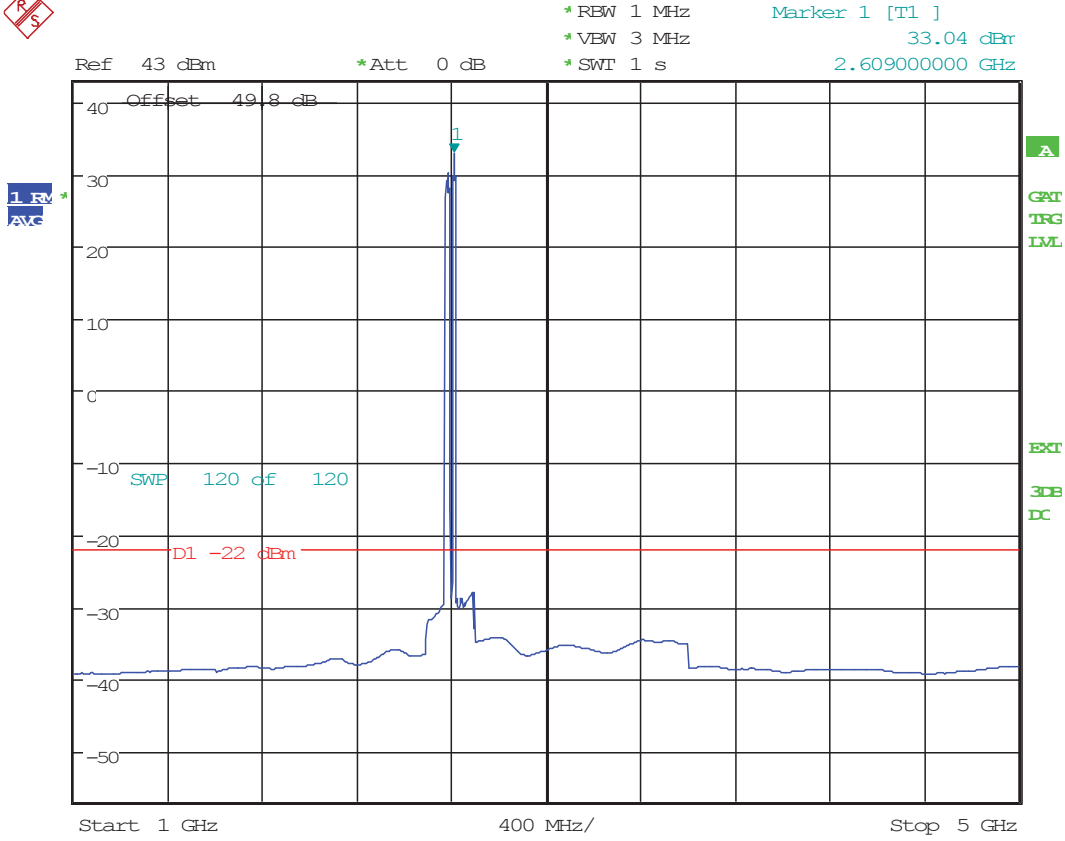
**20+10MHz Bandwidth,
2562-2582MHz, 2609-2619 MHz
16QAM (Middle)
8x20 watts (MIMO)**



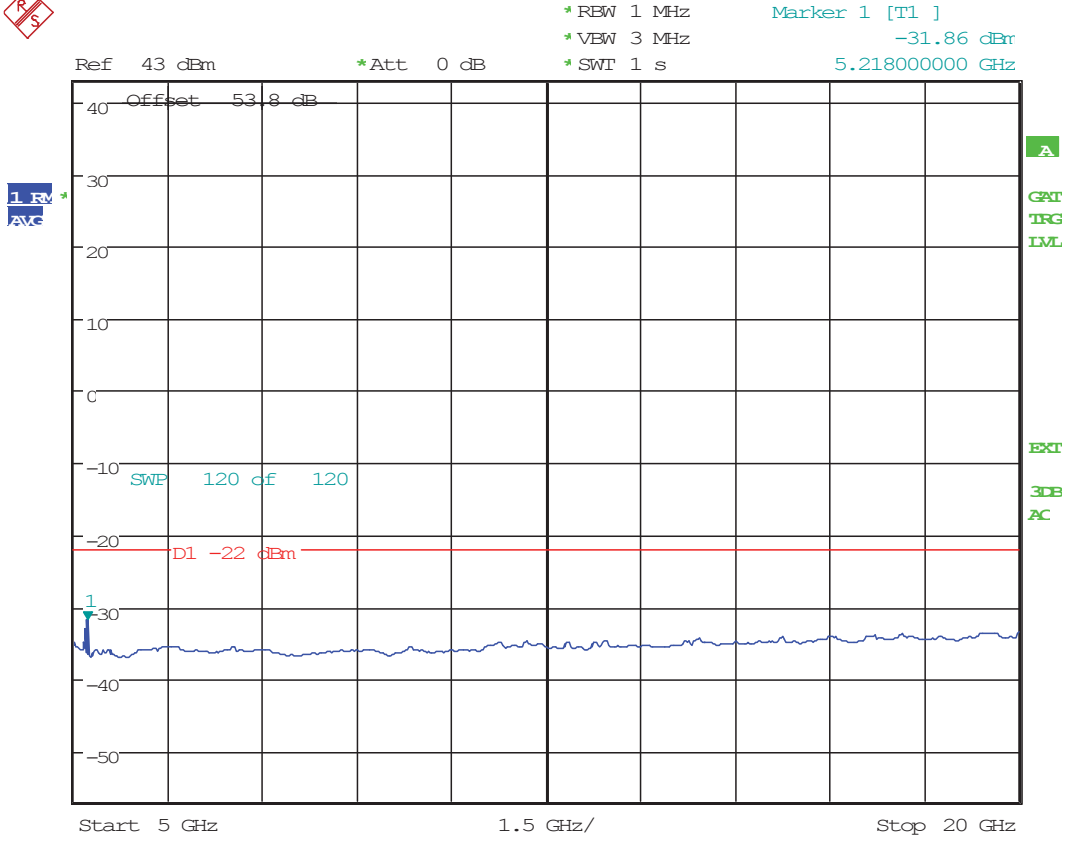
TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10M BW NC;20W;2572-2614M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
Date: 22.DEC.2015 09:55:25



TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2572-2614M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 22.DEC.2015 09:31:00



TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10 BW NC;20W;2572-2614M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
Date: 21.DEC.2015 17:57:46

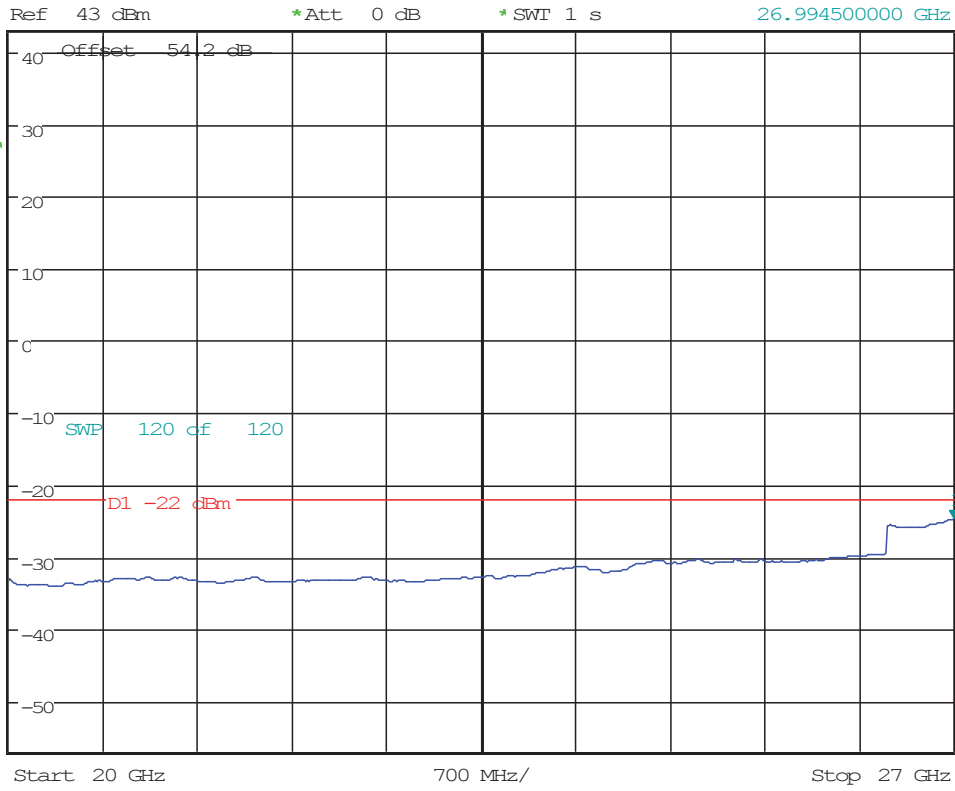


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2572-2614M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 21.DEC.2015 17:43:59



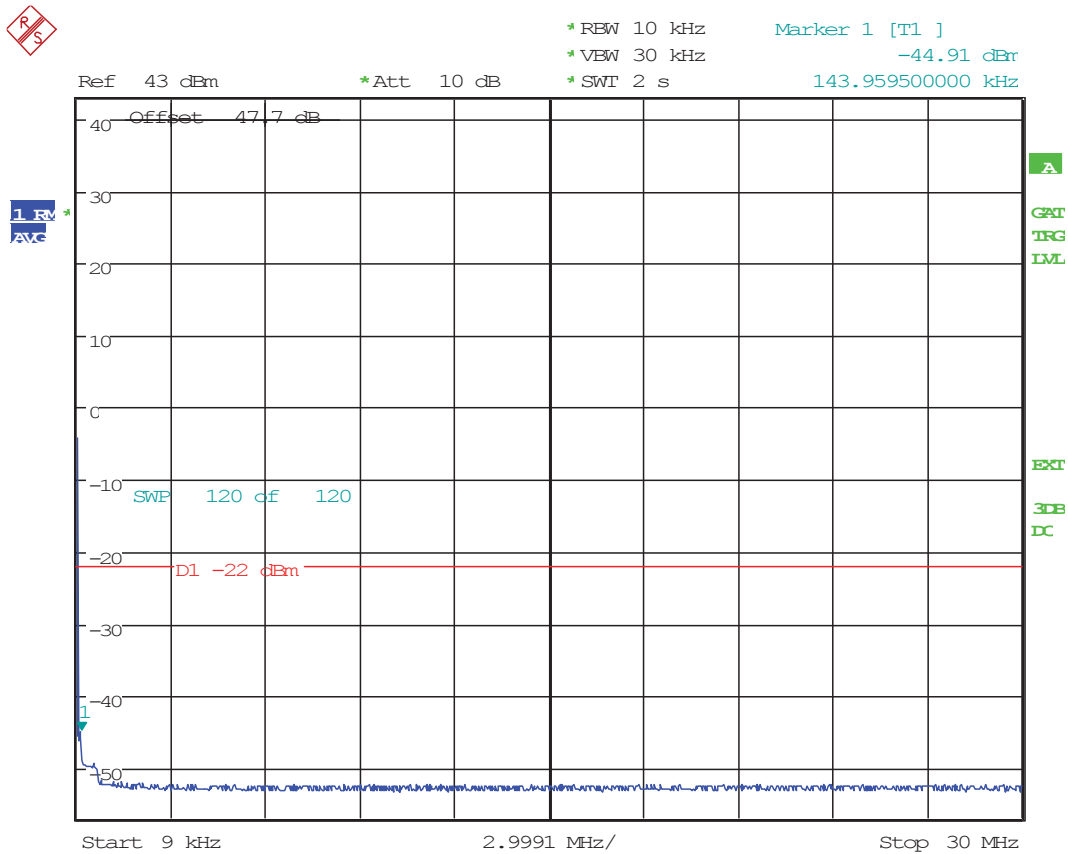
1. RV
 /AVE

* RBW 1 MHz
 * VBW 3 MHz
 * SWI 1 s
 Marker 1 [T1]
 -24.65 dBm
 26.994500000 GHz



TX SPURIOUS: TEST ENG:JY; TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC; 2572-2614M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 21.DEC.2015 16:31:32

20+10MHz Bandwidth,
2562-2582MHz, 2609-2619 MHz
64QAM (Middle)
8x20 watts (MIMO)



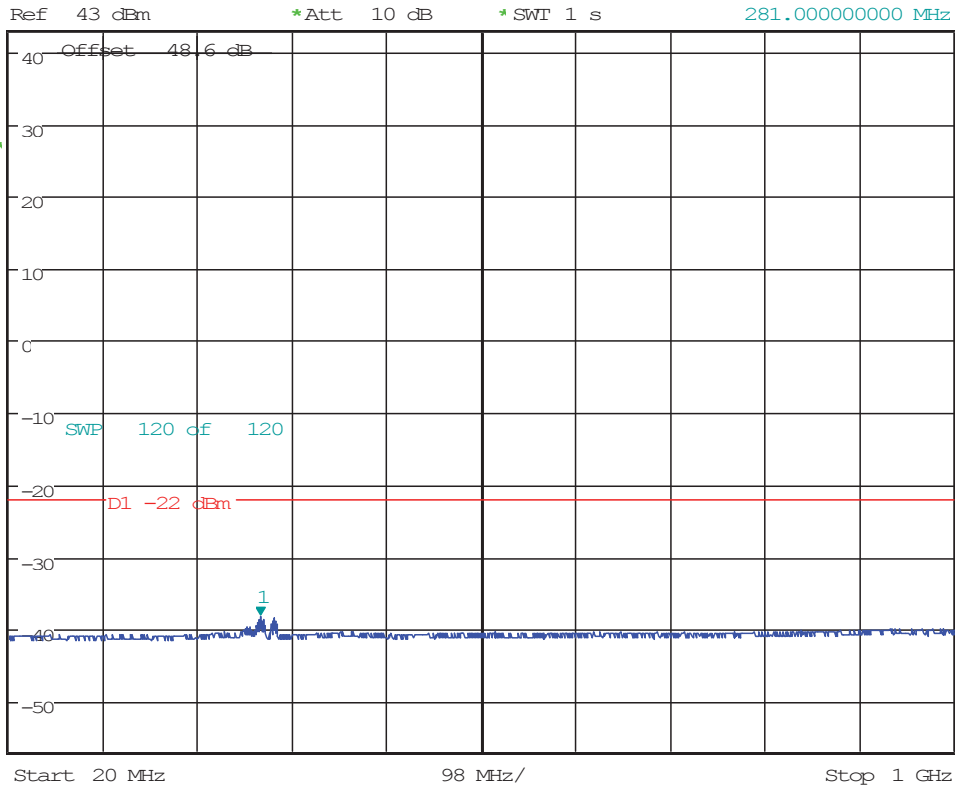
TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10M BW NC;20W;2572-2614M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
Date: 22.DEC.2015 09:58:04



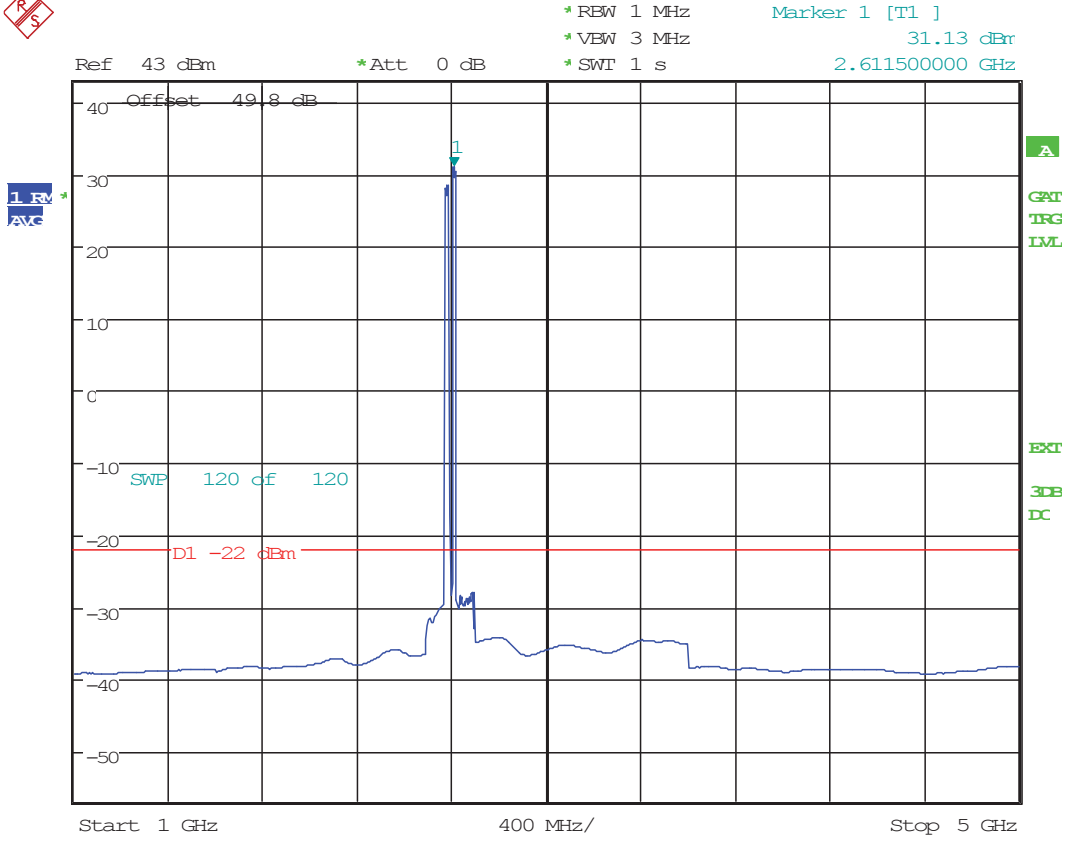
1 RV
 AVE

* RBW 100 kHz
 * VBW 300 kHz
 * SWI 1 s

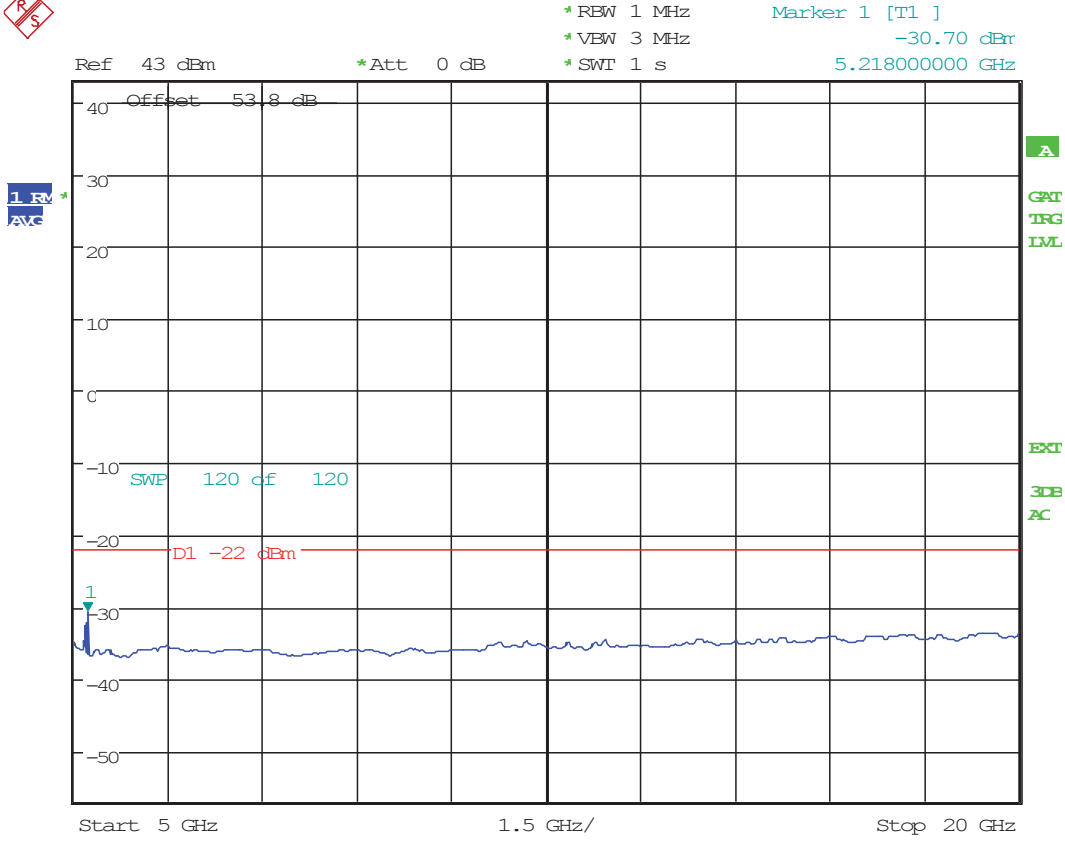
Marker 1 [T1]
 -38.16 dBm
 281.00000000 MHz



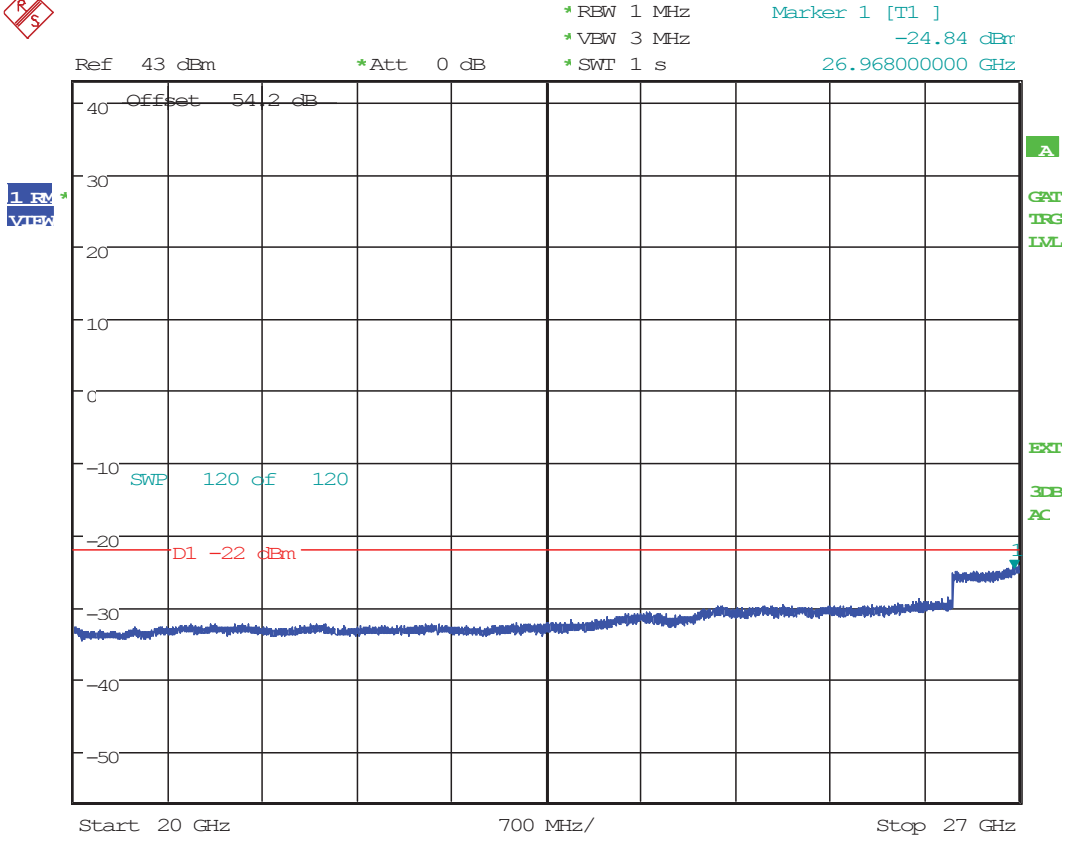
TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2572-2614M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 22.DEC.2015 10:13:13



TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10 BW NC;20W;2572-2614M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
Date: 22.DEC.2015 10:25:07

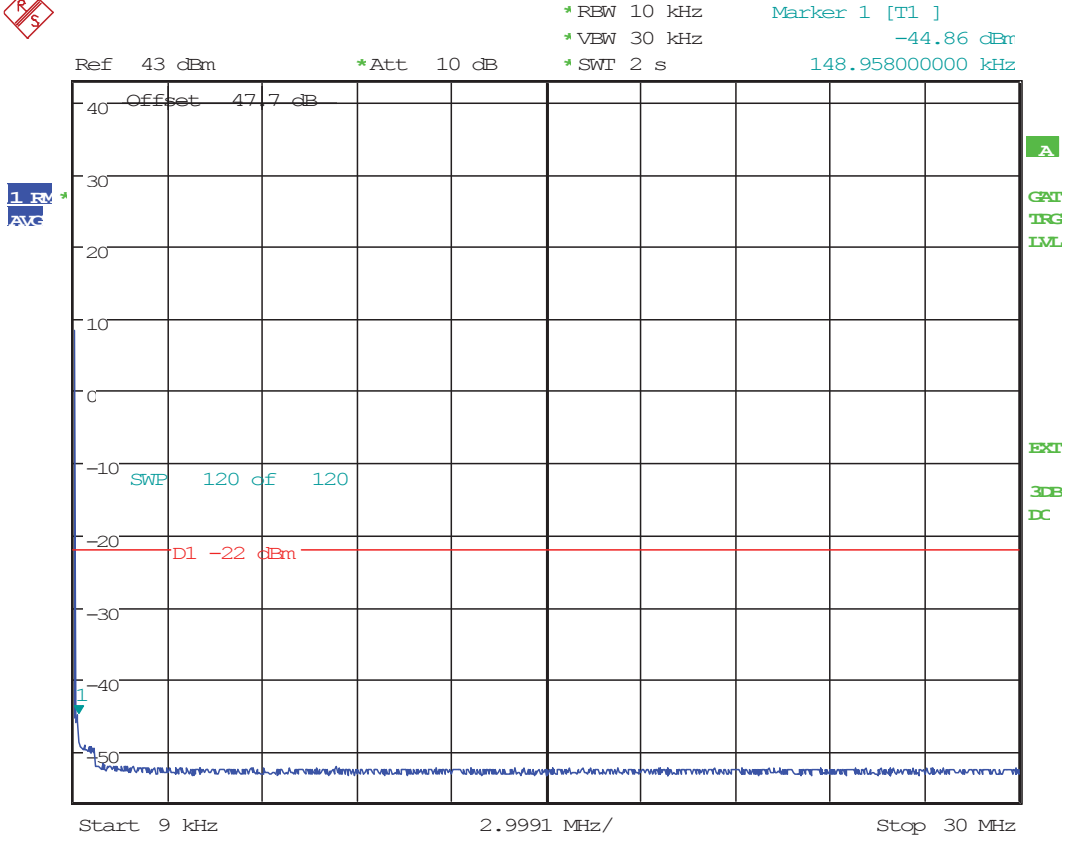


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2572-2614M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 22.DEC.2015 10:39:06

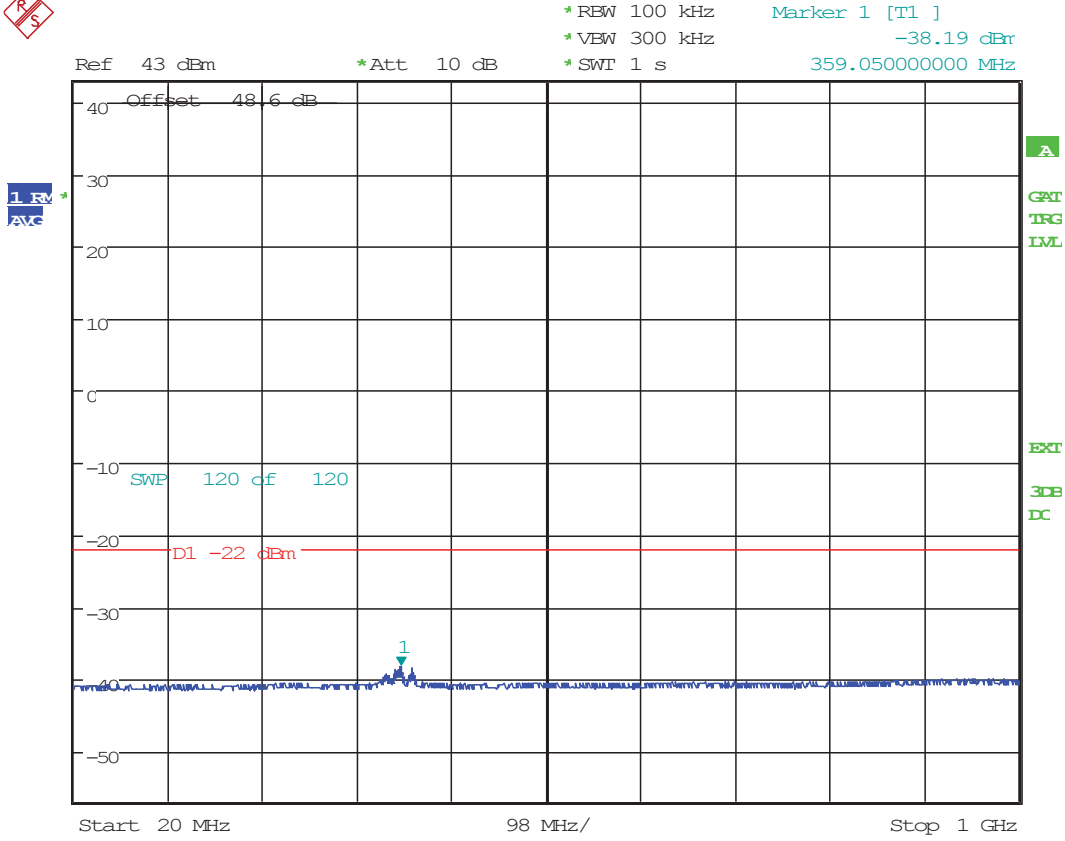


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10M BW NC;20W;2572-2614M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
Date: 22.DEC.2015 10:56:00

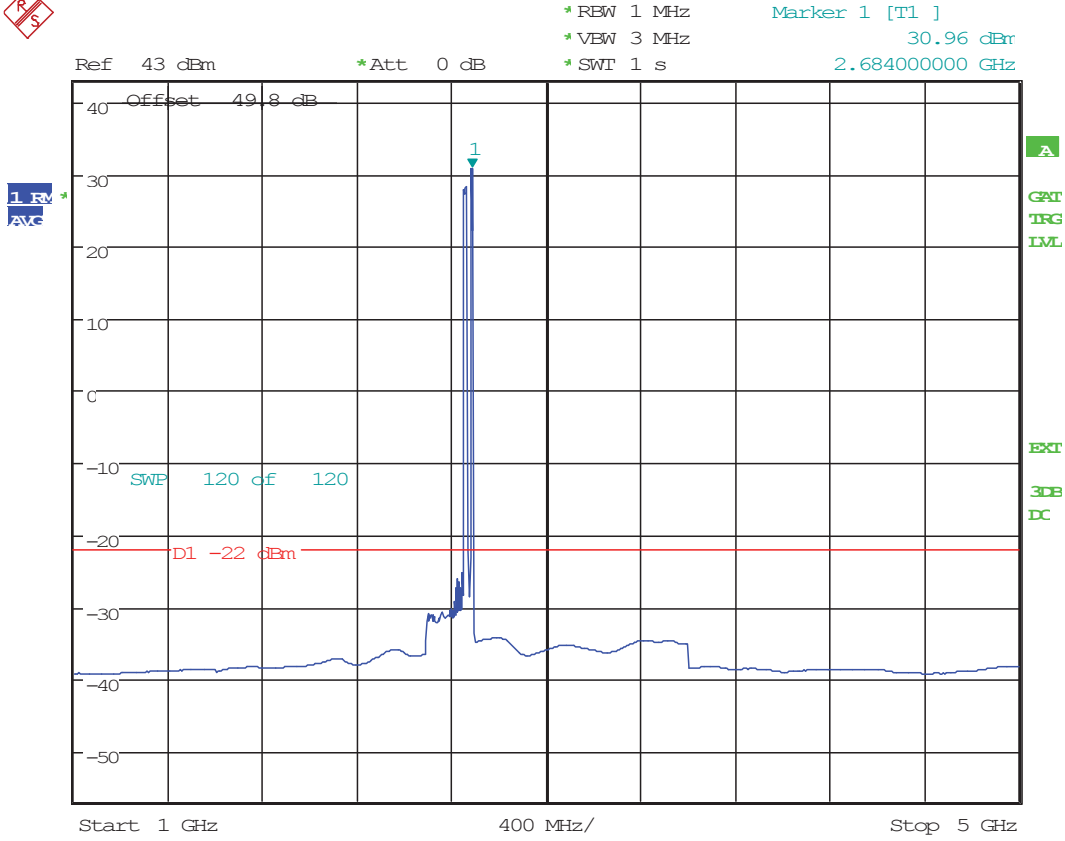
20+10MHz Bandwidth,
2648-2668MHz, 2680-2690 MHz
QPSK (Higher)
8x20 watts (MIMO)



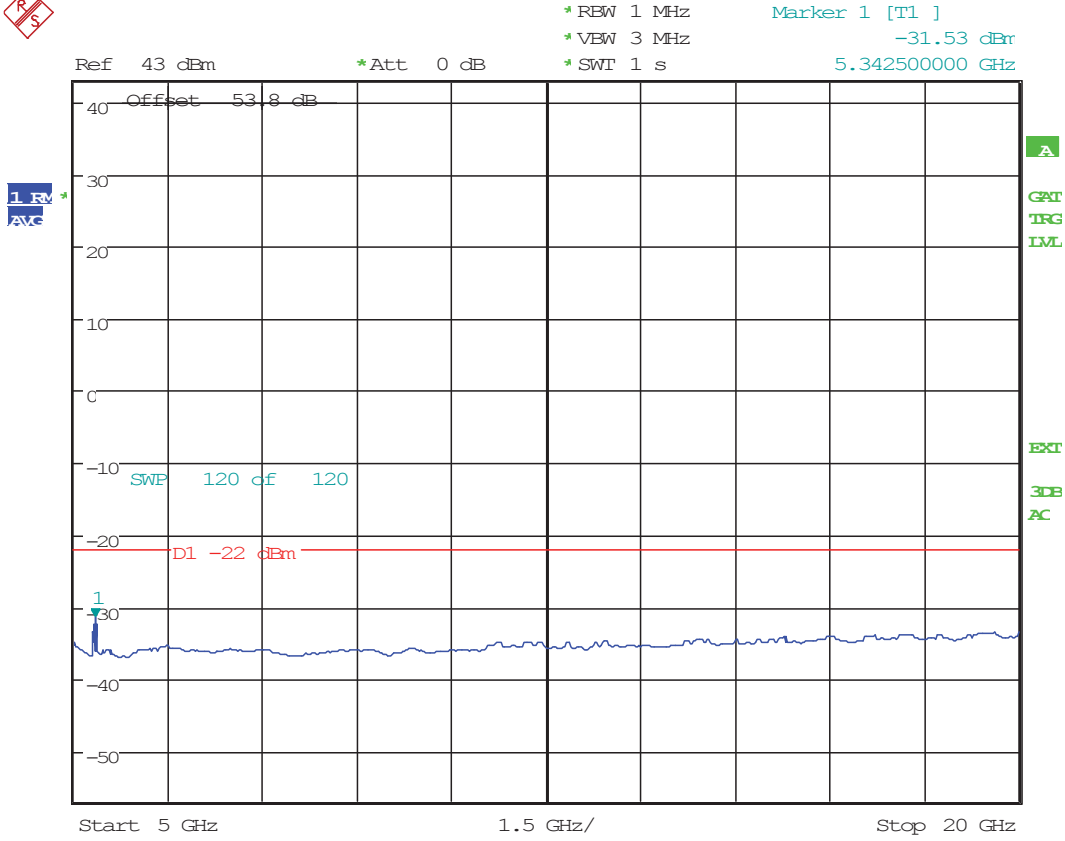
TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2658-2685M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 22.DEC.2015 14:03:23



TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2658-2685M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 22.DEC.2015 14:16:48



TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10 BW NC;20W;2658-2685M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 22.DEC.2015 14:32:08

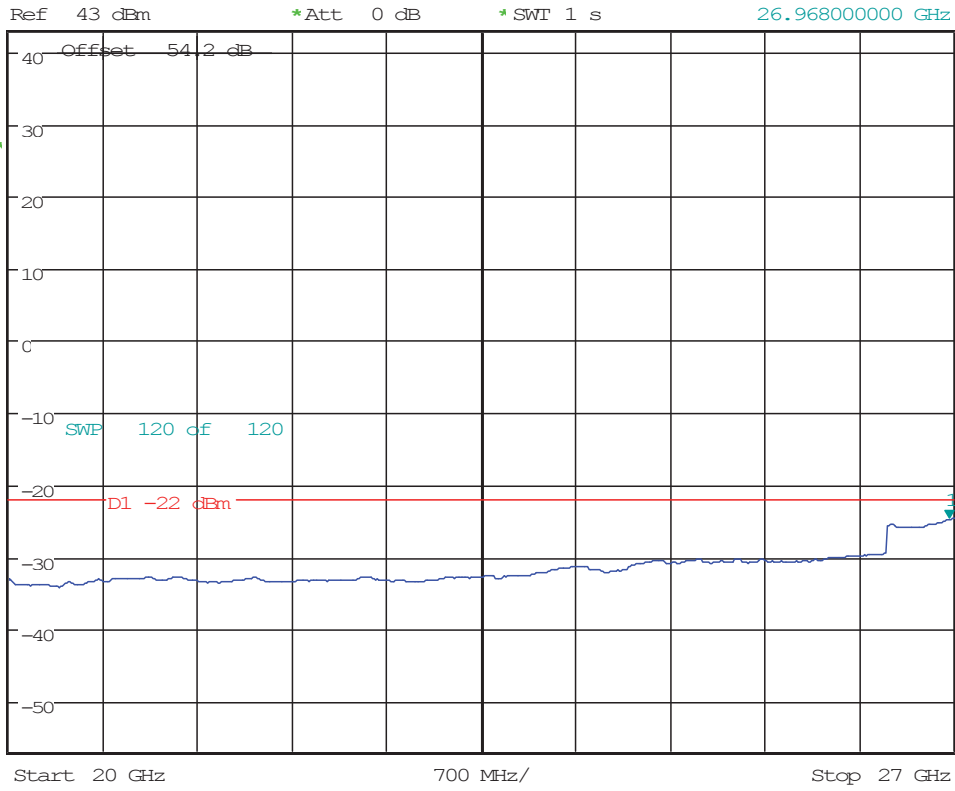


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2658-2685M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 22.DEC.2015 14:44:27



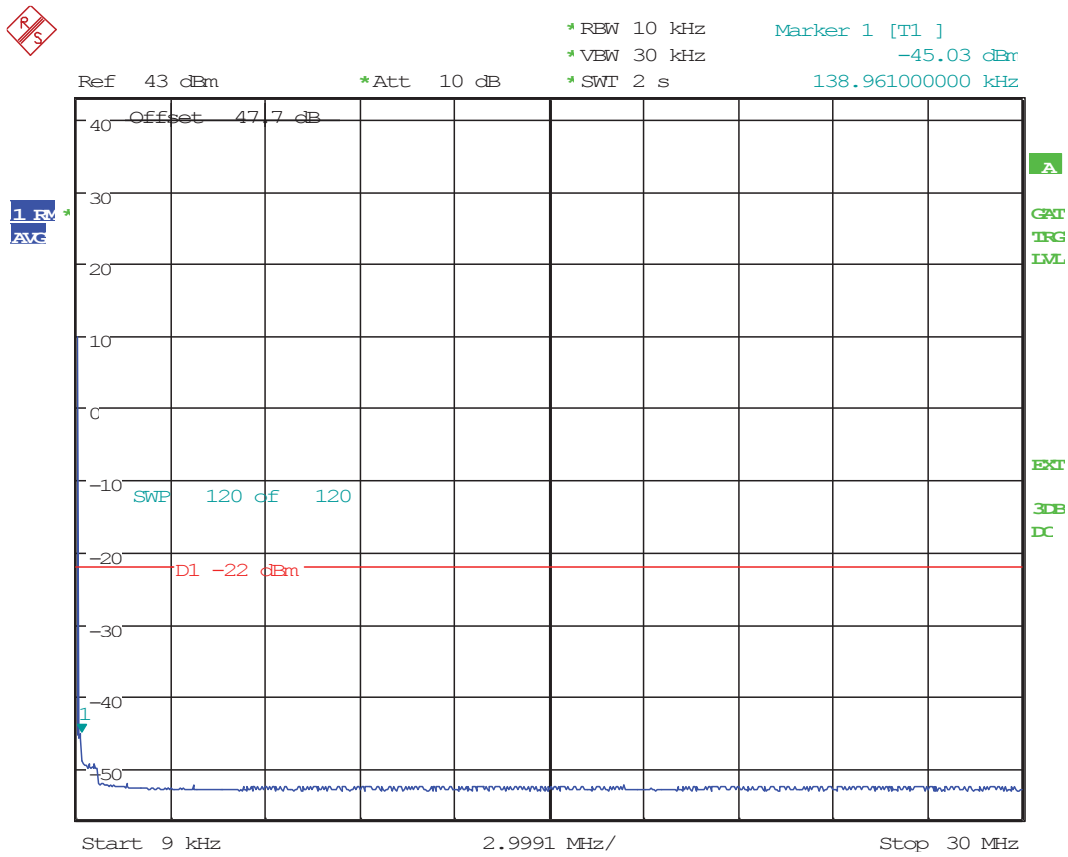
1. RV
 /AVE

* RBW 1 MHz
 * VBW 3 MHz
 * SWI 1 s
 Marker 1 [T1]
 -24.74 dBm
 26.968000000 GHz

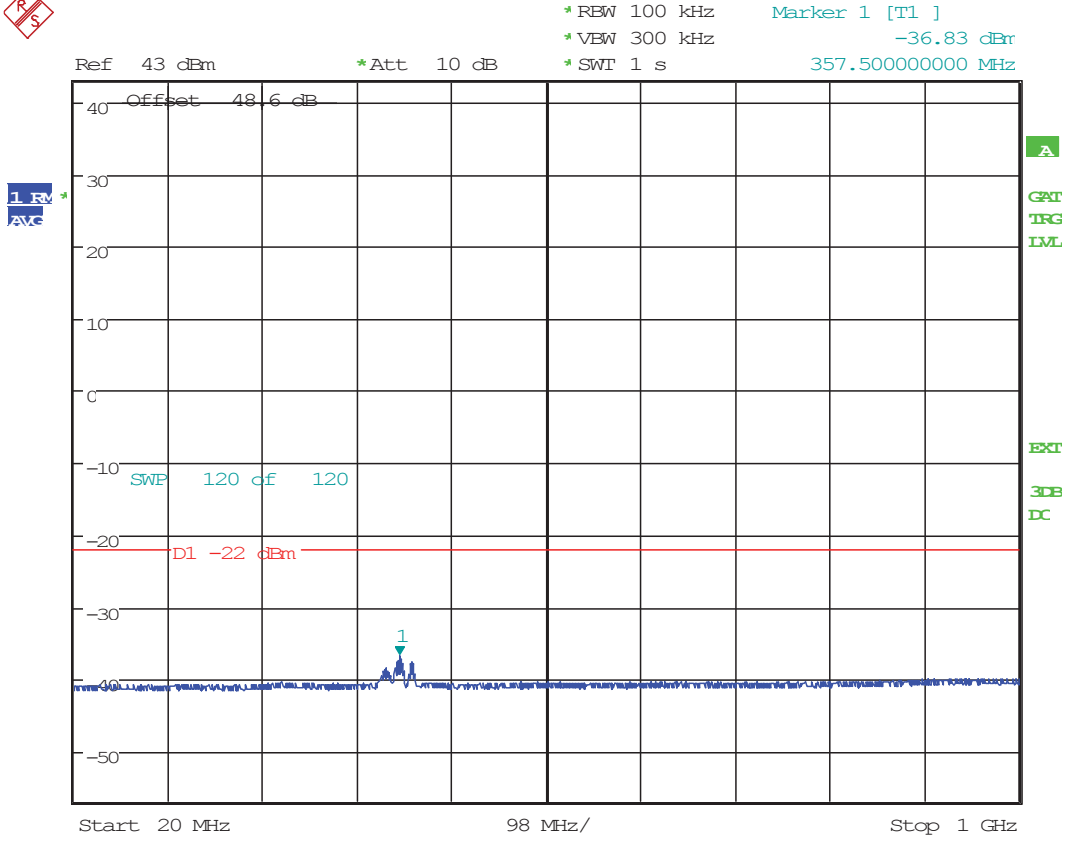


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2658-2685M;-48VDC;QPSK;FCCID:AS5BBTRX-15A
 Date: 22.DEC.2015 14:57:03

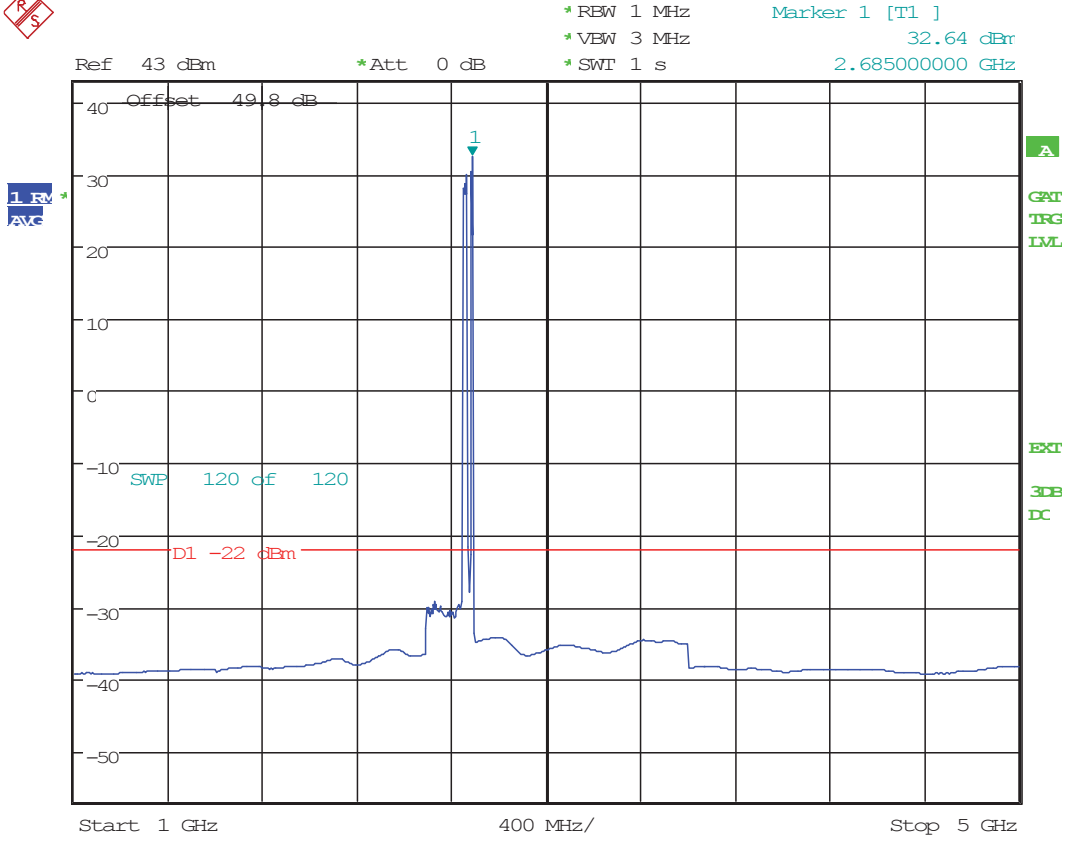
**20+10MHz Bandwidth,
2648-2668MHz, 2680-2690 MHz
16QAM (Higher)
8x20 watts (MIMO)**



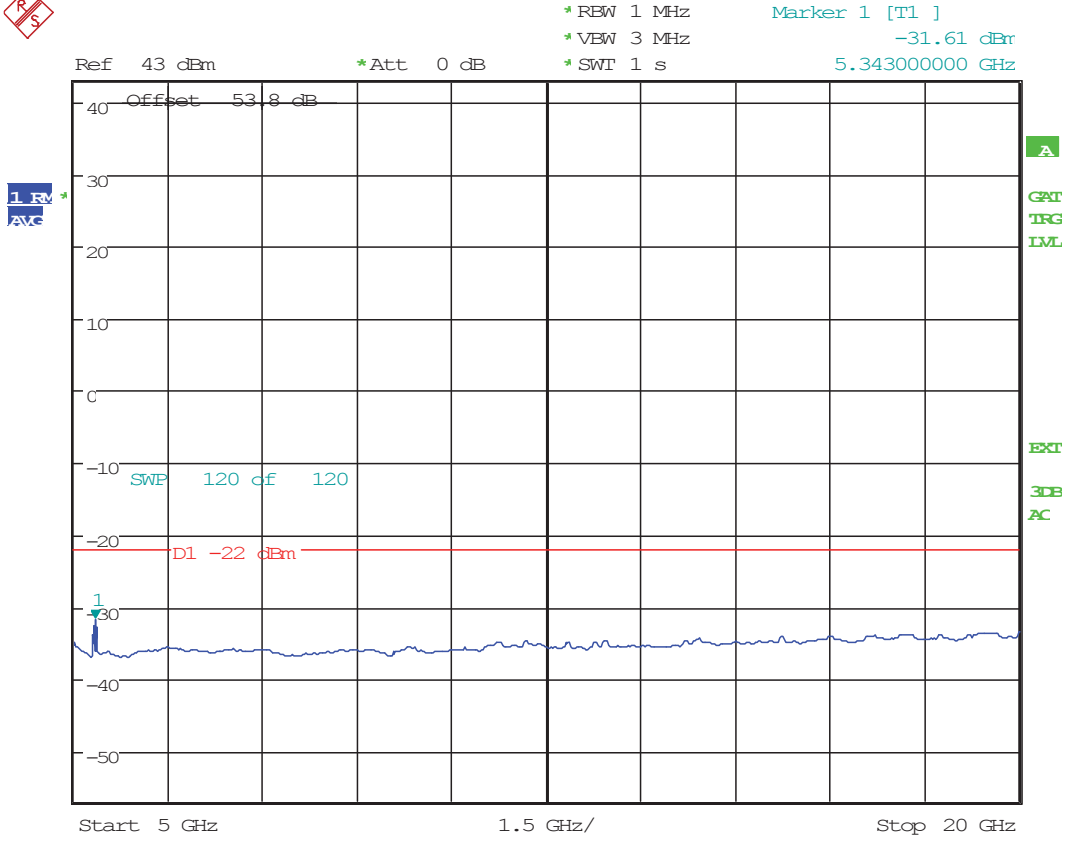
TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10M BW NC;20W;2658-2685M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
Date: 24.DEC.2015 10:11:08



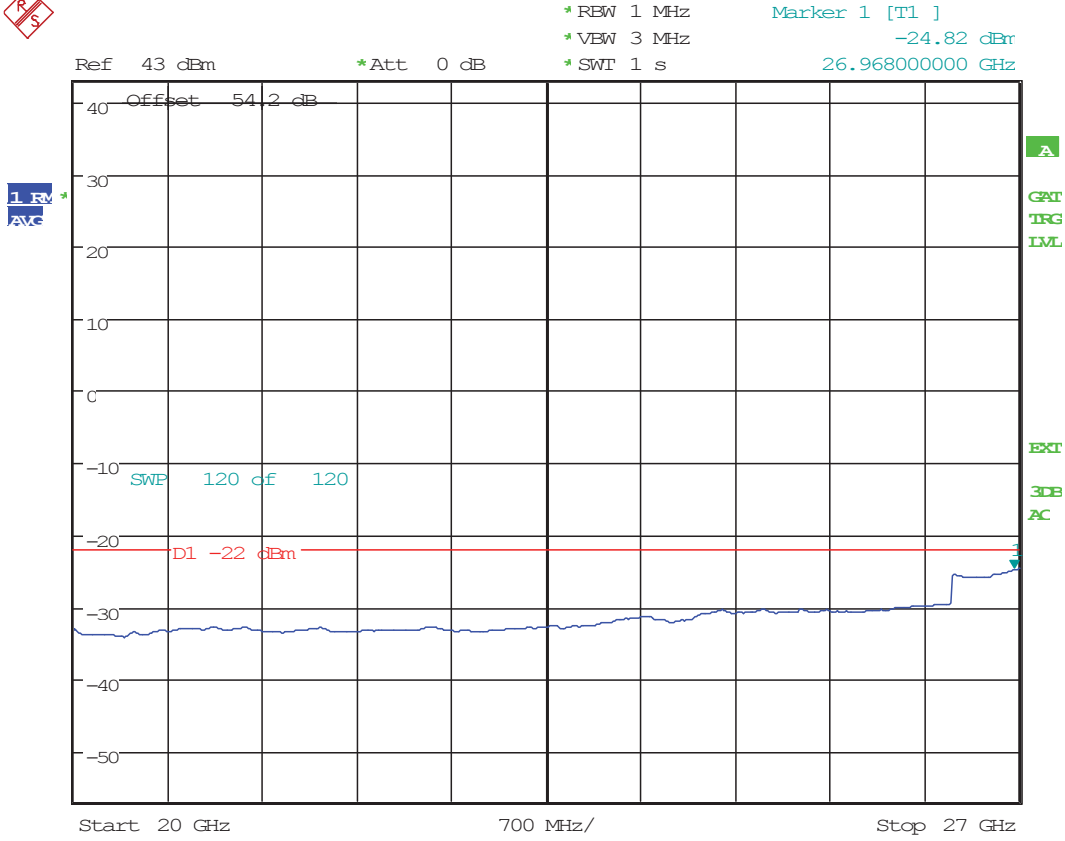
TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2658-2685M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 24.DEC.2015 11:14:40



TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10 BW NC;20W;2658-2685M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 24.DEC.2015 11:26:32

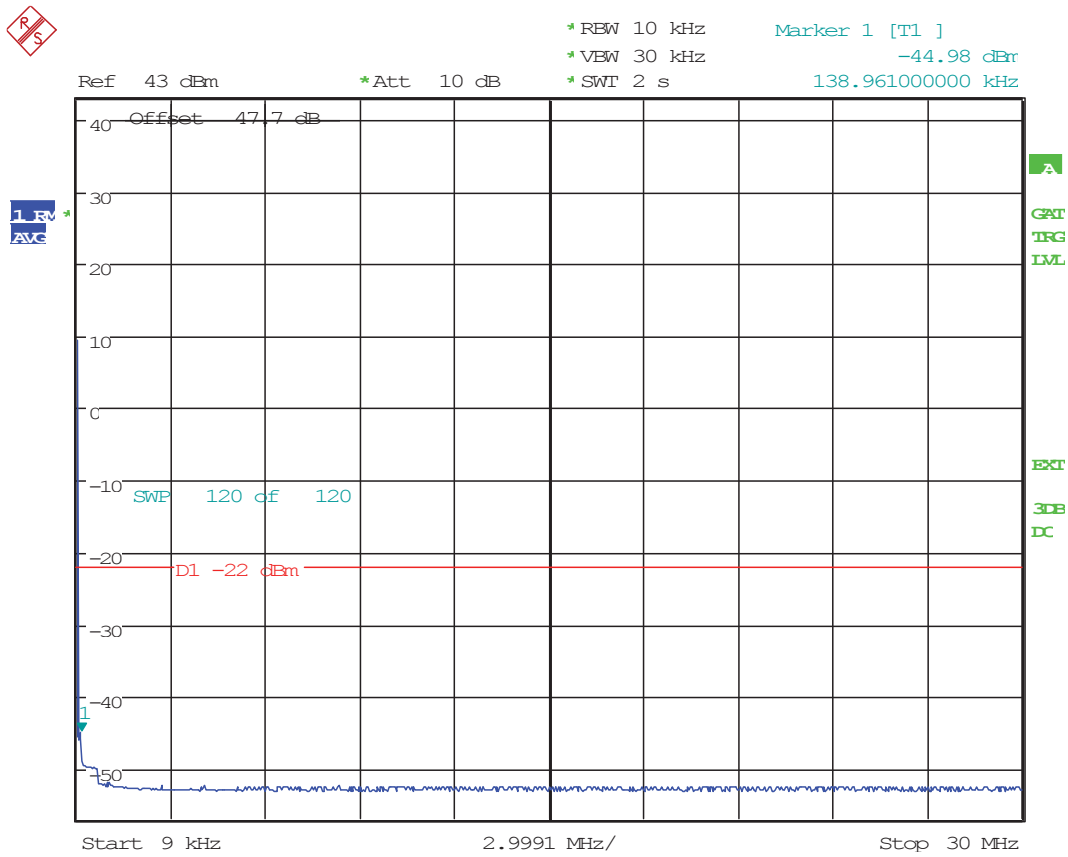


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2658-2685M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 24.DEC.2015 11:41:46

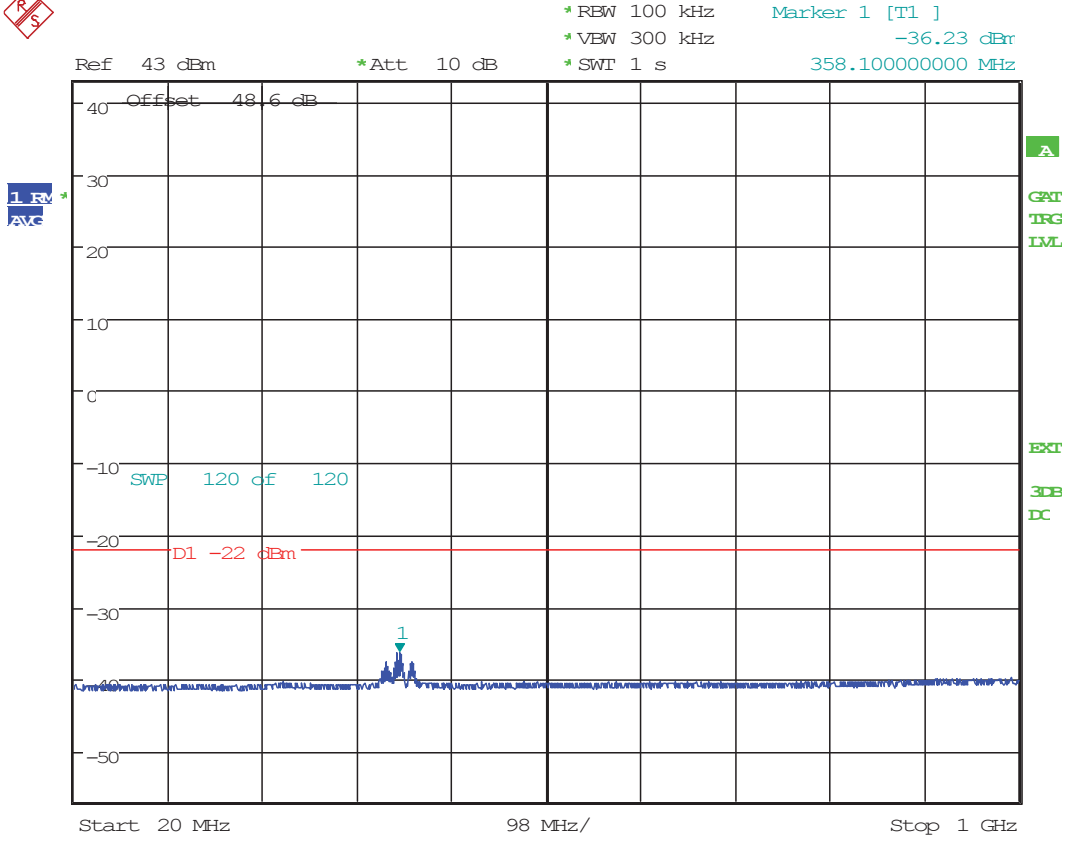


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2658-2685M;-48VDC;16QAM;FCCID:AS5BBTRX-15A
 Date: 24.DEC.2015 13:26:07

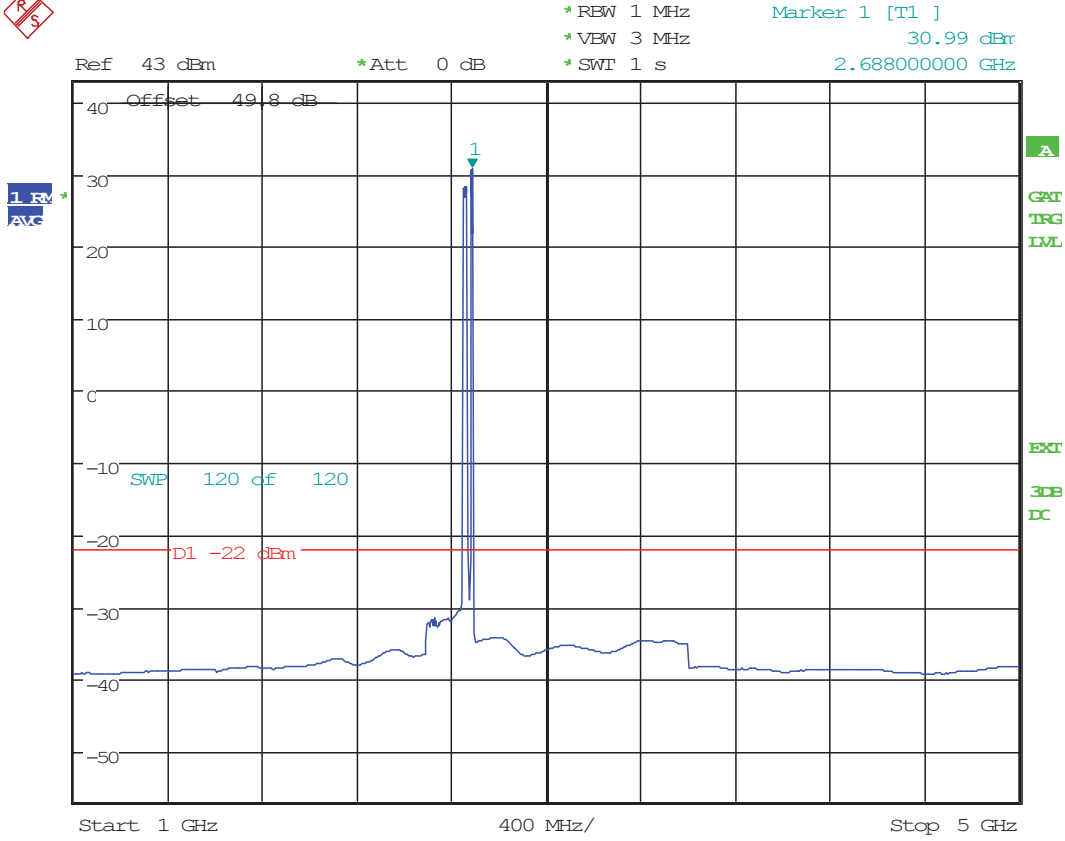
**20+10MHz Bandwidth,
2648-2668MHz, 2680-2690 MHz
64QAM (Higher)
8x20 watts (MIMO)**



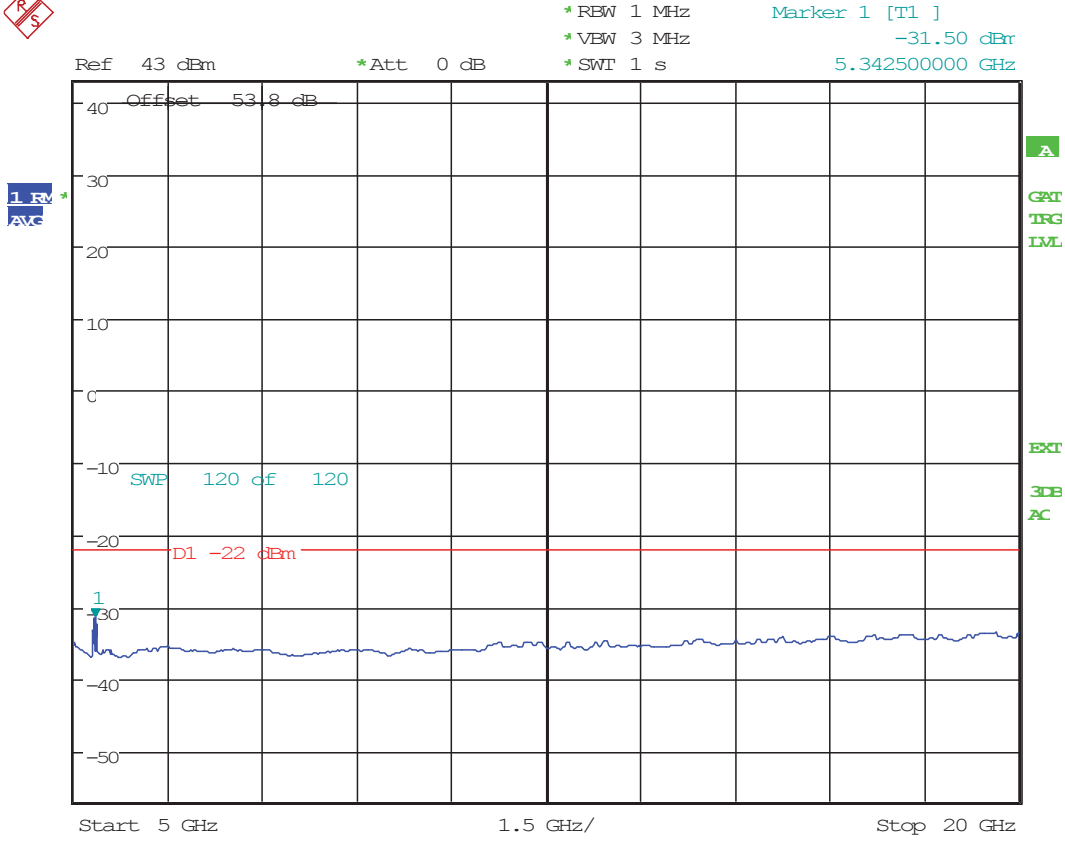
TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10M BW NC;20W;2658-2685M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
Date: 28.DEC.2015 09:18:01



TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2658-2685M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 28.DEC.2015 10:45:10



TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
20+10 BW NC;20W;2658-2685M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
Date: 24.DEC.2015 13:59:36

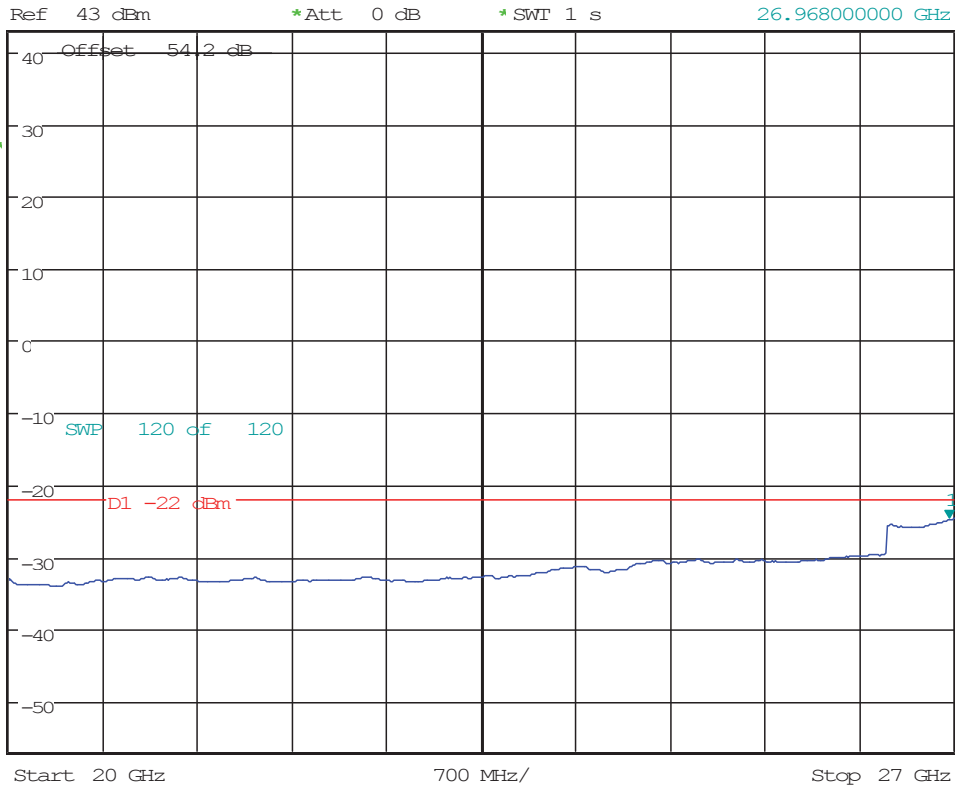


TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2658-2685M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 28.DEC.2015 09:34:13



1. RV
 /AVE

* RBW 1 MHz
 * VBW 3 MHz
 * SWI 1 s
 Marker 1 [T1]
 -24.78 dBm
 26.968000000 GHz



TX SPURIOUS: TEST ENG:JY;TDD B41 RRH Cast Fingu Fltr
 20+10M BW NC;20W;2658-2685M;-48VDC;64QAM;FCCID:AS5BBTRX-15A
 Date: 24.DEC.2015 13:31:49

Test Equipment List for Part 27

<u>Manufacturer</u>	<u>Model</u>	<u>Serial Number</u>	<u>Type</u>	<u>Description</u>	<u>GPCL ID</u>	<u>Last Cal</u>	<u>Interval</u>	<u>Status</u>
Agilent Technologies	N9020A	MY53420147	MXA Signal Analyzer	20Hz-26.5GHz Analyzer	E1152	2/24/2014	24	Active
Rohde & Schwarz	ESU40	100246	Test Receiver	EMI 20Hz - 40GHz -155 dBm +30 dBm	E954	10/22/2015	24	Active
Agilent Technologies	8990B	MY51000319	Power Analyzer	Peak Power Analyzer	E1199	12/15/2014	24	Active
Agilent Technologies	N1921A	US44510270	Power Sensor	-35 - +20 dBm 50 MHz -18 GHz	E914	6/15/2015	12	Active
Weinschel	74-30-12	1065	Attenuator	30dB 25W 0.05GHz-26GHz	E1154		0	Active
Weinschel	74-10-12	1068	Attenuator	10dB 25Watt 0.05GHz - 26GHz	E1155		0	Active
Weinschel	74-10-12	1069	Attenuator	10dB 0.05GHz-26GHz 25W	E1156		0	Active

5. FCC Section 2.1053, 27.53

5.1 Section 2.1053 Field Strength of Spurious Emissions

FIELD STRENGTH OF SPURIOUS RADIATION

Field strength measurements of radiated spurious emissions were made at 5 m semi anechoic room of Global Product Compliance Laboratory of Alcatel-Lucent Murray Hill. A complete description and full measurement data for the site is on file with the Commission (FCC File is 515091)

The, “8x20W TDD RRH with Cast Filter & Cast Housing” with FCCID: AS5BBTRX-15A” was tested at a RF output of 20 Watts at Antenna Interface Connector (AIC). All configurations tested for antenna port conducted spurious were tested with exception of 16QAM modulation and middle frequency bands. All edge channels were tested. For Example 20MHz BW 20W, left Edge bands at 2496-2516 MHz with 20W and right edge channel at 2528-2538 MHz with 20W. These tests were performed in TD-RRH enclosure. The D2Us Base band units (BBU) connected through Fiber optic interface but placed outside the chamber. During testing, the **TDD B41 RRH LR15.1 8x20 Configuration** AICs were terminated with 50 ohm load. The spectrum from 10 MHz to the 10th harmonic (27 GHz) of the carrier was searched for spurious radiation. Measurements were made according to ANSI C63.4. All emissions more than 20 dB below the specification limit were considered not reportable (Section 2.1057(c)).

All emissions more than 20 dB below the specification limit were considered not reportable (Section 2.1057(c)).

The calculated emission levels were found by:

$$\text{Measured level (dB}\mu\text{V)} + \text{Cable Loss (dB)} + \text{Antenna Factor (dB)} = \text{Field Strength (dB}\mu\text{V/m)}$$

Section 27.53 (m) and 2.1053 contains the requirements for the levels of spurious radiation as a function of frequency.

FCC Section 27.53(m): the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ dB or -13dBm. Pursuant to FCC OET RULES 662911 D01 and D02 for eight antenna MIMO mode of operations, the FCC limit of -13dBm shall be 9dB more stringent, therefore all channel edge and out of band spurious emissions shall be -22dBm.

The reference level for the un-modulated carriers is calculated as the field produced by an ideal isotropic antenna excited by the transmitter output power according to the following relation taken from Recommendation ITU-R, SM.329-11, “*Unwanted emissions in the spurious domain*” January 2011.

$$E = [(30 * P)^{1/2}] / R$$

$$20 \log(E * 106) - (52 + 10 \log P) = 73.2 \text{ dB } \mu\text{V/meter}$$

E = Field Intensity in Volts/meter

P = Transmitted Power in Watts

R = Distance from the ideal isotropic antenna in meters = 3 m

$$E = [(30 * P)^{1/2}] / R$$

RESULTS:

For this particular test, the field strength of any spurious radiation is required to be less than 73.2 dB μ V/meter. Reportable measurements are equal to or greater than 53.2 dB μ V/meter. Over the spectrum investigated, 10 MHz to 10th of the carrier (27GHz), no reportable spurious emissions were detected. This demonstrates that the **“TDD B41 RRH LR15.1 8x20 Configuration”** the subject of this application, complies with Sections 2.1053, 27.53 (m) and 2.1057 of the Rules.

Test Equipment List
Radiated Emissions
2015-0159

Manufacturer	Model	Serial Number	Type	Description	GPCL ID	Last Cal	Interval
Hewlett Packard	8593E	3911A04009	Spectrum Analyzer	9 KHz-22 GHz	E375	2/6/2015	24
Sonoma Instrument Co.	310N	186747	Amplifier	9kHz-1GHz	E814	8/15/2014	24
Weinschel	2/6	CD2545	Attenuator	6dB	E1130	2/27/2015	24
EMCO	3115	0001-6008	Horn Antenna	Double Ridged Horn 1-18 GHz	E444	10/13/2014	24
A.H. Systems Inc.	SAS-521-2	457	Biological Antenna	25 - 2000 MHz	E766	12/29/2014	24
ETS Lindgren	3117	00135194	Horn Antenna	Double-Ridged Waveguide Horn 1-18 GHz	E1074	11/25/2014	24
Trilithic	5HC2850/18050-1.8-KK	PCS-HPF-5	High Pass Filter	PCS	E986	N/A	N/A
Hewlett Packard	8449B	3008A01270	Pre-Amplifier	Preamplifier 1-26.5 GHz	E376	12/22/2014	24
Rohde & Schwarz	ESIB40	100119	Test Receiver	EMI (20Hz to 40 GHz)-150 +30dBm	E936	6/2/2015	24
Hewlett Packard	37204A	3212U27807	HP-IB Extender		E257	N/A	N/A
Hewlett Packard	37204	3212U31136	HP-IB Extender		E481	N/A	N/A
EMC Test Systems	3116	2539	Horn Antenna	Double Ridged Horn 18-40 GHz	E513	3/19/2015	24

6. Section 2.1055 - Measurement of Frequency Stability

Frequency Stability Testing was completed on a system level using the PRI04028 - 2.5GHz (Band 41) with CF 2.506GHz. The testing was performed from 01/12/2016 through 01/13/2016 on a 2.5GHz (Band 41) B41 RRH8x20-B, which was located in the T-15 Thermal chamber of the GPCL test facility located in Bldg 4, Room 4-280, Murray Hill, NJ. The temperatures to which the UUT were subjected to comprised high temperature (+50°C, system ambient) and low temperature (-30°C system ambient). The system level Frequency Stability testing of the UUT yielded results in compliance with established design criteria.

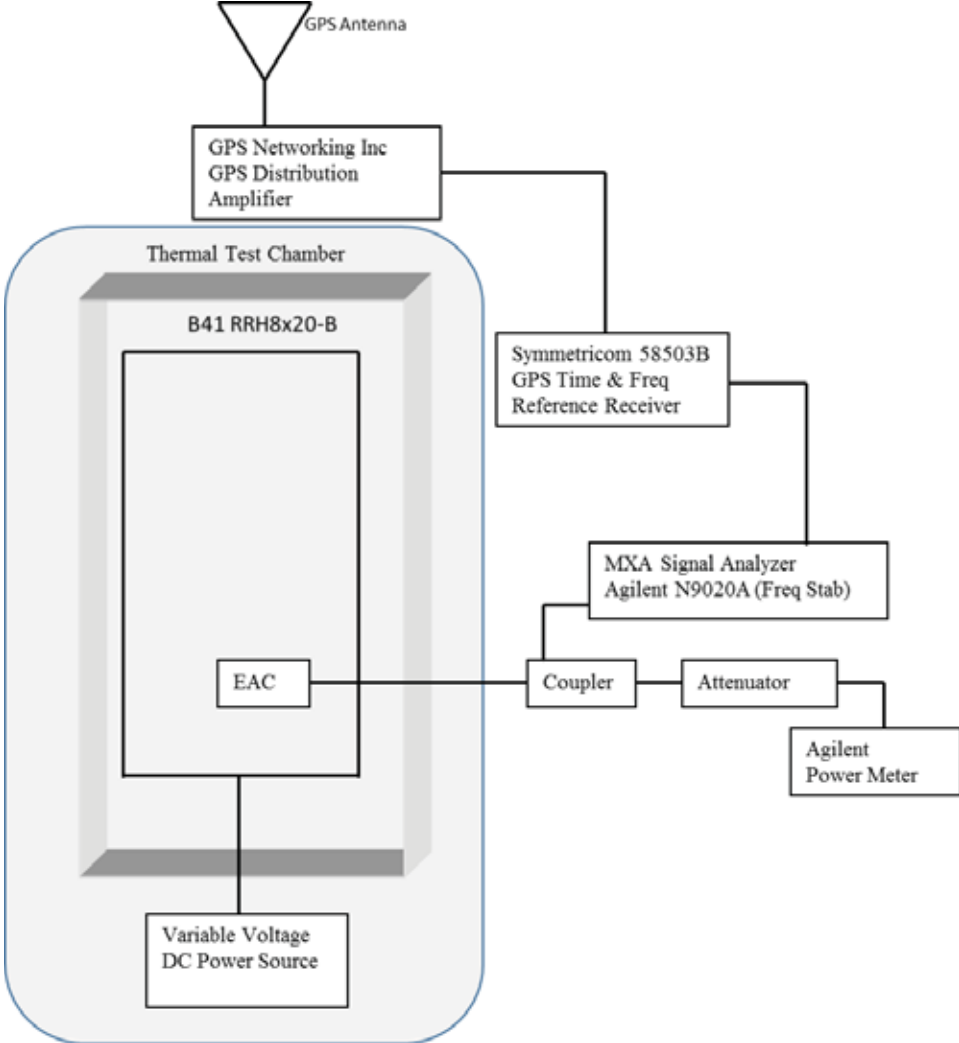
Frequency Stability performance was verified by measuring Frequency Tolerance at EAC using an MXA Signal Analyzer. Frequency Tolerance is a measurement of the difference between the actual transmit frequency and the assigned frequency (2.506GHz).

UUT: B41 RRH8x20-B, SN: MI1528500001.

Instrument Used for Measurement

Instrument Type	Serial Number	Vendor	Cal Due Date
MXA Signal Analyzer	MY52091035	AGILENT N9020A	10/30/2016
Power Meter	MY52400032	AGILENT E4419A	03/11/2017
Power Sensor	MY51090017	AGILENT E9300A	08/06/2016
Power Sensor	MY51020039	AGILENT E9300A	08/06/2016
Multimeter	JP35001820	HP 971A	06/08/2016
Thermal Logger	S5JC04069	YOKOGAWA MV2000	03/05/2017
GPS Receiver	KR93200773	SYMMETRICOM 58503B	No Cal Req.
Power supply	13N5112J	TDK-LAMBDA GEN60-85-3P208	No Cal Req.

FIGURE 1: TEST SET-UP



Frequency Block Tested: B41 RRH8x20-B (CF = 2.506GHz)

1. (a) Set the power supply to nominal Voltage. (b) Record the frequency at ~25°C. (c) Raise EUT operating temperature to 50°C. (d) Record the frequency difference. (e) Repeat step (d) at each 10°C step down to -30°C. Result will be 10 readings and take temperature readings to establish thermal stability at each point.

Baseline Measurement at +25°C

Transmit Frequency Deviation at +25°C at 100% of Nominal Voltage, -48VDC	
Time (minutes)	Transmit Carrier Deviation (Hz)
0	0.783
0.5	0.860
1.0	0.591
1.5	0.365
2.0	1.324
2.5	0.876
3.0	0.951
FCC SPECIFICATION	±2506 MHz (±0.05ppm) ±0.05ppm = ±125.3 Hz
FCC RESULT	PASS

Transmit Frequency Deviation at +50°C at 100% of Nominal Voltage, -48VDC	
Time (minutes)	Transmit Carrier Deviation (Hz)
0	0.513
0.5	1.218
1.0	0.862
1.5	0.784
2.0	1.069
2.5	0.815
3.0	0.752
FCC SPECIFICATION	±2506 MHz (±0.05ppm) ±0.05ppm = ±125.3 Hz
FCC RESULT	PASS

Transmit Frequency Deviation at +40°C at 100% of Nominal Voltage, -48VDC	
Time (minutes)	Transmit Carrier Deviation (Hz)
0	0.930
0.5	0.671
1.0	0.709
1.5	1.283
2.0	0.694
2.5	0.801
3.0	0.922
FCC SPECIFICATION	±2506 MHz (±0.05ppm) ±0.05ppm = ±125.3 Hz
FCC RESULT	PASS

Transmit Frequency Deviation at +30°C at 100% of Nominal Voltage, -48VDC	
Time (minutes)	Transmit Carrier Deviation (Hz)
0	0.541
0.5	0.736
1.0	0.645
1.5	0.753
2.0	0.681
2.5	0.983
3.0	0.596
FCC SPECIFICATION	±2506 MHz (±0.05ppm) ±0.05ppm = ±125.3 Hz
FCC RESULT	PASS

Transmit Frequency Deviation at +20°C at 100% of Nominal Voltage, -48VDC	
Time (minutes)	Transmit Carrier Deviation (Hz)
0	1.032
0.5	0.619
1.0	0.826
1.5	0.697
2.0	0.701
2.5	0.548
3.0	-0.866
FCC SPECIFICATION	±2506 MHz (±0.05ppm) ±0.05ppm = ±125.3 Hz
FCC RESULT	PASS

Transmit Frequency Deviation at +10°C at 100% of Nominal Voltage, -48VDC	
Time (minutes)	Transmit Carrier Deviation (Hz)
0	0.995
0.5	0.836
1.0	0.743
1.5	1.421
2.0	0.765
2.5	0.536
3.0	0.928
FCC SPECIFICATION	±2506 MHz (±0.05ppm) ±0.05ppm = ±125.3 Hz
FCC RESULT	PASS

Transmit Frequency Deviation at 0°C at 100% of Nominal Voltage, -48VDC	
Time (minutes)	Transmit Carrier Deviation (Hz)
0	0.972
0.5	0.794
1.0	0.782
1.5	0.971
2.0	0.916
2.5	0.646
3.0	0.755
FCC SPECIFICATION	±2506 MHz (±0.05ppm) ±0.05ppm = ±125.3 Hz
FCC RESULT	PASS

Transmit Frequency Deviation at -10°C at 100% of Nominal Voltage, -48VDC	
Time (minutes)	Transmit Carrier Deviation (Hz)
0	1.012
0.5	0.654
1.0	0.813
1.5	0.944
2.0	0.742
2.5	0.940
3.0	0.653
FCC SPECIFICATION	±2506 MHz (±0.05ppm) ±0.05ppm = ±125.3 Hz
FCC RESULT	PASS

Transmit Frequency Deviation at -20°C at 100% of Nominal Voltage, -48VDC	
Time (minutes)	Transmit Carrier Deviation (Hz)
0	0.660
0.5	0.591
1.0	0.954
1.5	0.884
2.0	0.957
2.5	0.604
3.0	0.437
FCC SPECIFICATION	±2506 MHz (±0.05ppm) ±0.05ppm = ±125.3 Hz
FCC RESULT	PASS

Transmit Frequency Deviation at -30°C at 100% of Nominal Voltage, -48VDC	
Time (minutes)	Transmit Carrier Deviation (Hz)
0	0.502
0.5	0.917
1.0	0.882
1.5	0.714
2.0	1.031
2.5	0.527
3.0	0.863
FCC SPECIFICATION	±2506 MHz (±0.05ppm) ±0.05ppm = ±125.3 Hz
FCC RESULT	PASS

Upon return to +25°C.

- At ambient, vary voltage to +15% and -15% of nominal and record frequency difference. Result will be 12 readings for each voltage (nominal, ~+ 3%, ~+6%, ~+9%, ~+12%, +15%, and nominal, ~- 3%, ~-6%, ~-9%, ~-12%, -15%).

Transmit Frequency Deviation at +25°C at 100% of Nominal Voltage, -48VDC	
Time (minutes)	Transmit Carrier Deviation (Hz)
0	0.680
0.5	0.721
1.0	0.745
1.5	0.958
2.0	0.873
2.5	0.675
3.0	0.509
FCC SPECIFICATION	±2506 MHz (±0.05ppm) ±0.05ppm = ±125.3 Hz
FCC RESULT	PASS

Transmit Frequency Deviation at +25°C at 103% of Nominal Voltage, -49.44VDC	
Time (minutes)	Transmit Carrier Deviation (Hz)
0	0.792
0.5	0.678
1.0	0.649
1.5	0.590
2.0	0.818
2.5	0.933
3.0	0.806
FCC SPECIFICATION	±2506 MHz (±0.05ppm) ±0.05ppm = ±125.3 Hz
FCC RESULT	PASS

Transmit Frequency Deviation at +25°C at 106% of Nominal Voltage, -50.88VDC	
Time (minutes)	Transmit Carrier Deviation (Hz)
0	0.752
0.5	0.584
1.0	0.744
1.5	0.836
2.0	0.661
2.5	0.945
3.0	0.753
FCC SPECIFICATION	±2506 MHz (±0.05ppm) ±0.05ppm = ±125.3 Hz
FCC RESULT	PASS

Transmit Frequency Deviation at +25°C at 109% of Nominal Voltage, -52.32VDC	
Time (minutes)	Transmit Carrier Deviation (Hz)
0	0.843
0.5	0.932
1.0	0.590
1.5	0.649
2.0	0.762
2.5	0.855
3.0	0.596
FCC SPECIFICATION	±2506 MHz (±0.05ppm) ±0.05ppm = ±125.3 Hz
FCC RESULT	PASS

Transmit Frequency Deviation at +25°C at 112% of Nominal Voltage, -53.76VDC	
Time (minutes)	Transmit Carrier Deviation (Hz)
0	0.766
0.5	0.840
1.0	0.678
1.5	0.905
2.0	0.694
2.5	0.711
3.0	0.403
FCC SPECIFICATION	±2506 MHz (±0.05ppm) ±0.05ppm = ±125.3 Hz
FCC RESULT	PASS

Transmit Frequency Deviation at +25°C at 115% of Nominal Voltage, -55.20VDC	
Time (minutes)	Transmit Carrier Deviation (Hz)
0	0.774
0.5	0.939
1.0	0.490
1.5	0.507
2.0	0.861
2.5	0.917
3.0	0.673
FCC SPECIFICATION	±2506 MHz (±0.05ppm) ±0.05ppm = ±125.3 Hz
FCC RESULT	PASS

Transmit Frequency Deviation at +25°C at 100% of Nominal Voltage, -48.0VDC	
Time (minutes)	Transmit Carrier Deviation (Hz)
0	0.759
0.5	0.432
1.0	0.803
1.5	0.746
2.0	0.592
2.5	0.737
3.0	0.901
FCC SPECIFICATION	±2506 MHz (±0.05ppm) ±0.05ppm = ±125.3 Hz
FCC RESULT	PASS

Transmit Frequency Deviation at +25°C at -3% of Nominal Voltage, -46.56VDC	
Time (minutes)	Transmit Carrier Deviation (Hz)
0	1.072
0.5	0.837
1.0	0.641
1.5	0.993
2.0	0.864
2.5	0.756
3.0	0.650
FCC SPECIFICATION	±2506 MHz (±0.05ppm) ±0.05ppm = ±125.3 Hz
FCC RESULT	PASS

Transmit Frequency Deviation at +25°C at -6% of Nominal Voltage, -45.12VDC	
Time (minutes)	Transmit Carrier Deviation (Hz)
0	0.923
0.5	0.609
1.0	0.722
1.5	0.683
2.0	0.516
2.5	0.883
3.0	0.654
FCC SPECIFICATION	±2506 MHz (±0.05ppm) ±0.05ppm = ±125.3 Hz
FCC RESULT	PASS

Transmit Frequency Deviation at +25°C at -9% of Nominal Voltage, -43.68VDC	
Time (minutes)	Transmit Carrier Deviation (Hz)
0	0.714
0.5	0.492
1.0	0.705
1.5	0.840
2.0	0.632
2.5	0.911
3.0	0.544
FCC SPECIFICATION	±2506 MHz (±0.05ppm) ±0.05ppm = ±125.3 Hz
FCC RESULT	PASS

Transmit Frequency Deviation at +25°C at -12% of Nominal Voltage, -42.24VDC	
Time (minutes)	Transmit Carrier Deviation (Hz)
0	0.521
0.5	0.896
1.0	0.662
1.5	0.586
2.0	0.960
2.5	0.507
3.0	0.813
FCC SPECIFICATION	±2506 MHz (±0.05ppm) ±0.05ppm = ±125.3 Hz
FCC RESULT	PASS

Transmit Frequency Deviation at +25°C at -15% of Nominal Voltage, -40.80VDC	
Time (minutes)	Transmit Carrier Deviation (Hz)
0	0.763
0.5	0.991
1.0	0.832
1.5	0.735
2.0	0.907
2.5	0.575
3.0	0.831
FCC SPECIFICATION	±2506 MHz (±0.05ppm) ±0.05ppm = ±125.3 Hz
FCC RESULT	PASS

**FREQUENCY SPECTRUM TO BE INVESTIGATED
SECTION 2.1057**

SECTION 2.1057

FREQUENCY SPECTRUM TO BE INVESTIGATED

Frequency Spectrum to be investigated, Measurement Bandwidth and detector function used meet or exceed the Specification contained in Section 2.1057, 27, and 3GGP TS36.104 V8.4.0 (2008-12)

Measurement Instrumentation and Antennas

All instrumentations, antennas and test Chamber used for the purpose of tests contained in the report were in calibration and calibrations are traceable to NIST