



3.4 Conducted Band Edge Measurement

3.4.1 Description of Conducted Band Edge Measurement

22.917(a) For Band 5

For operations in the 824 – 849 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power P(Watts) in a 100kHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

24.238 (a) For Band 2

For operations in the 1850-1910 and 1930-1990 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power P(Watts) in a 1MHz bandwidth. 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.

27.53 (f) For Band 12

For operations in the 698 -746 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power P(Watts) in a 100 kHz bandwidth. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

27.53 (g) For Band 4

For operations in the 1710 – 1755 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power P(Watts) in a 1 MHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

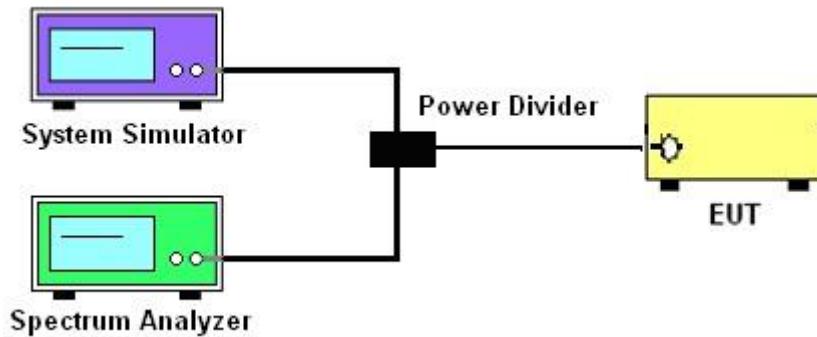
3.4.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.4.3 Test Procedures

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. The band edges of low and high channels for the highest RF powers were measured. Setting $RBW \geq 1\% EBW$, and measuring bandwidth = 1MHz.
3. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
4. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [43 + 10\log(P)]$ (dB)
 $= [30 + 10\log(P)]$ (dBm) - $[43 + 10\log(P)]$ (dB)
 $= -13$ dBm.

3.4.4 Test Setup



3.4.5 Test Result (Plots) of Conducted Band Edge

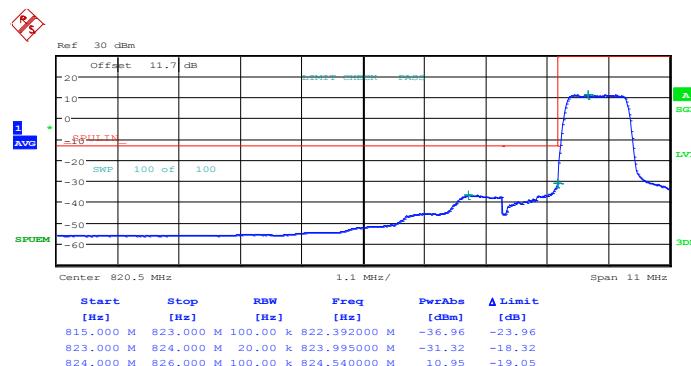
Band :	LTE Band 5	Band Width :	1.4MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 14.FEB.2014 12:57:18

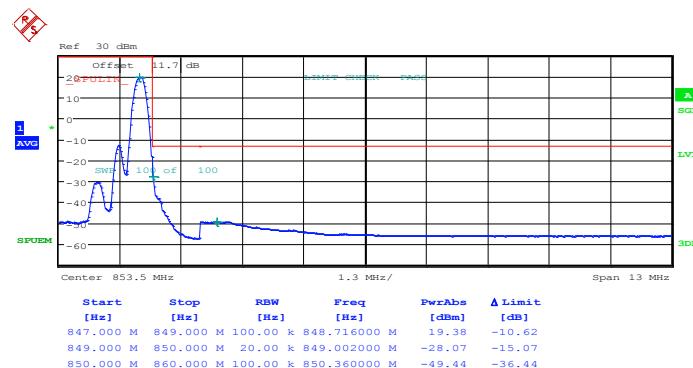
Lower Band Edge Plot for QPSK-RB Size 6, RB Offset 0



Date: 14.FEB.2014 12:58:44

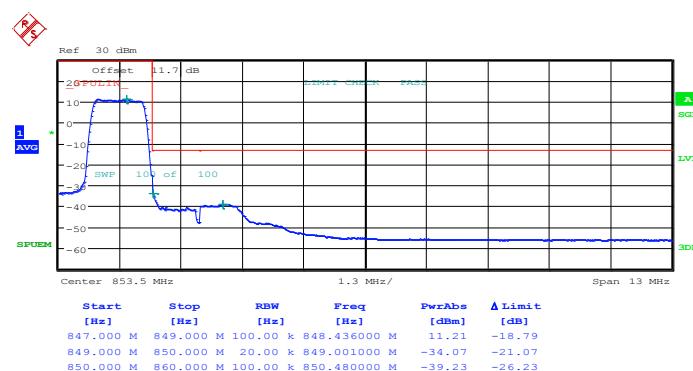


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 5



Date: 14.FEB.2014 13:07:00

Higher Band Edge Plot for QPSK-RB Size 6, RB Offset 0



Date: 14.FEB.2014 13:05:35



Band :	LTE Band 5	Band Width :	1.4MHz / 16QAM
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Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0

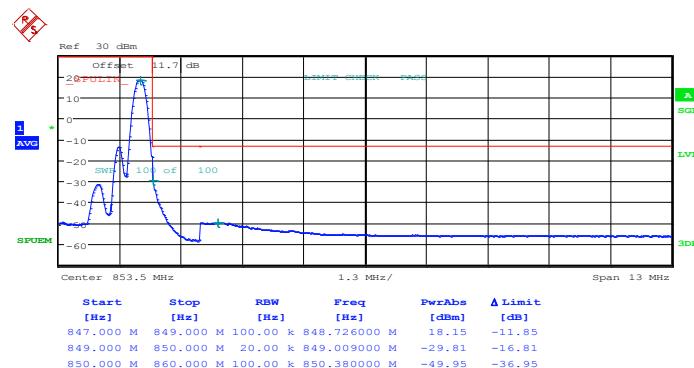
Date: 14.FEB.2014 12:58:01

Lower Band Edge Plot for 16QAM -RB Size 6, RB Offset 0

Date: 14.FEB.2014 12:59:27

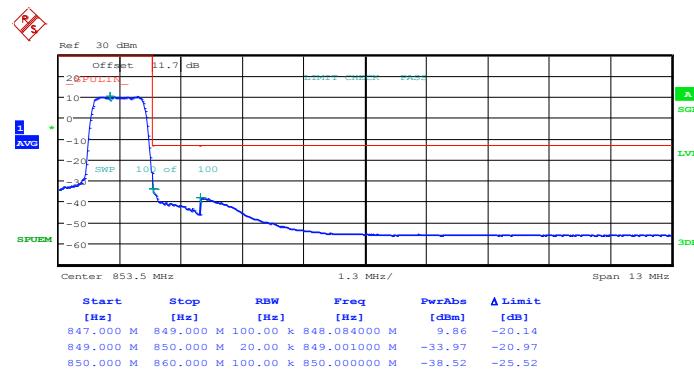


Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 5



Date: 14.FEB.2014 13:07:43

Higher Band Edge Plot for 16QAM -RB Size 6, RB Offset 0



Date: 14.FEB.2014 13:06:17



Band :	LTE Band 5	Band Width :	3MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 14.FEB.2014 13:11:13

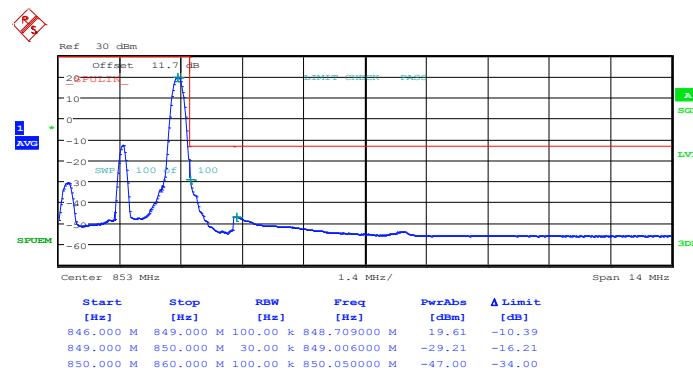
Lower Band Edge Plot for QPSK-RB Size 15, RB Offset 0



Date: 14.FEB.2014 13:12:39

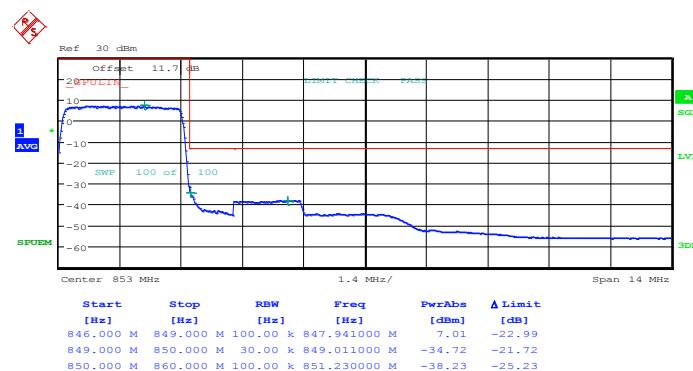


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 14



Date: 14.FEB.2014 13:19:29

Higher Band Edge Plot for QPSK-RB Size 15, RB Offset 0



Date: 14.FEB.2014 13:20:55



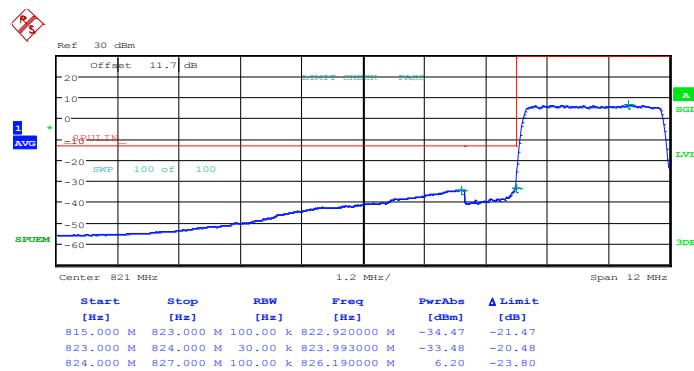
Band :	LTE Band 5	Band Width :	3MHz / 16QAM
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Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



Date: 14.FEB.2014 13:11:56

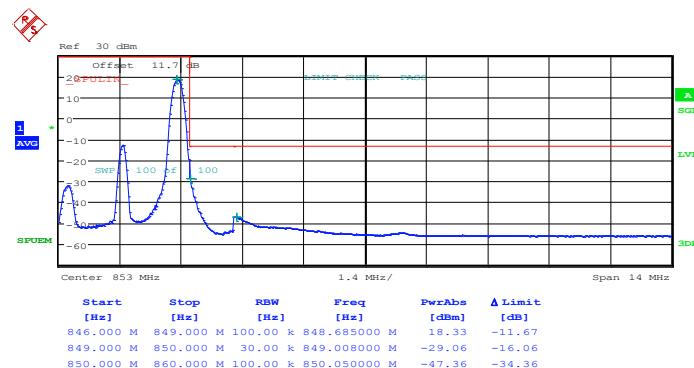
Lower Band Edge Plot for 16QAM -RB Size 15, RB Offset 0



Date: 14.FEB.2014 13:13:22

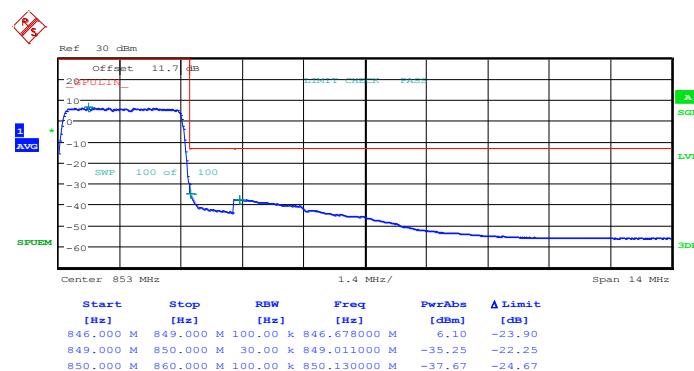


Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 14



Date: 14.FEB.2014 13:20:12

Higher Band Edge Plot for 16QAM -RB Size 15, RB Offset 0

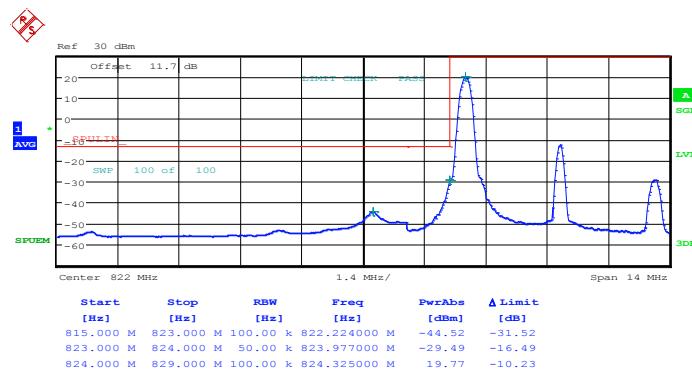


Date: 14.FEB.2014 13:21:38



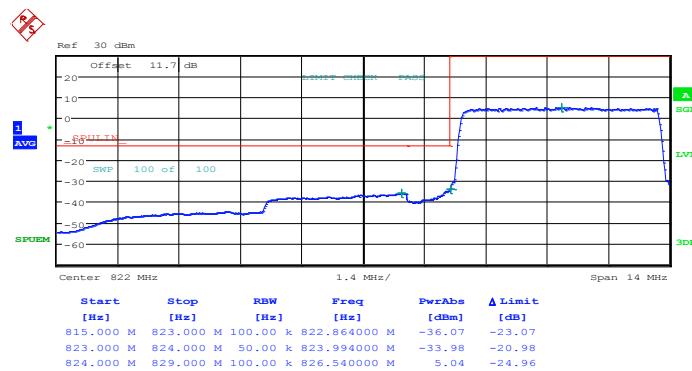
Band :	LTE Band 5	Band Width :	5MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 14.FEB.2014 13:25:07

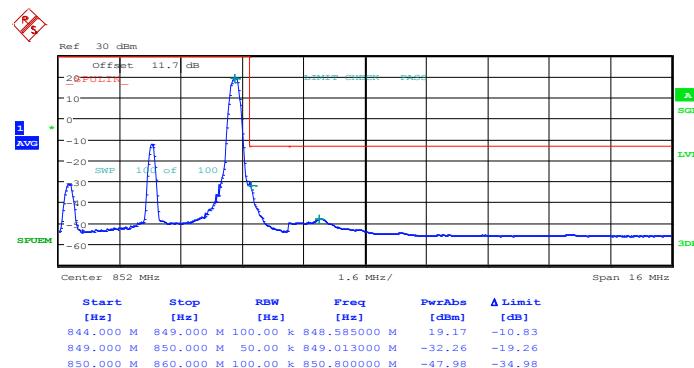
Lower Band Edge Plot for QPSK-RB Size 25, RB Offset 0



Date: 14.FEB.2014 13:26:33

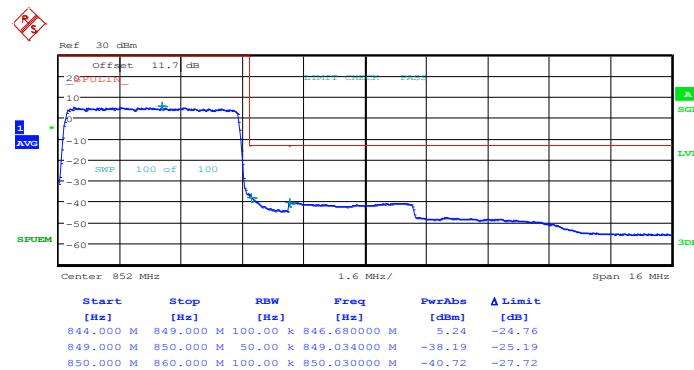


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 24



Date: 14.FEB.2014 13:33:24

Higher Band Edge Plot for QPSK-RB Size 25, RB Offset 0

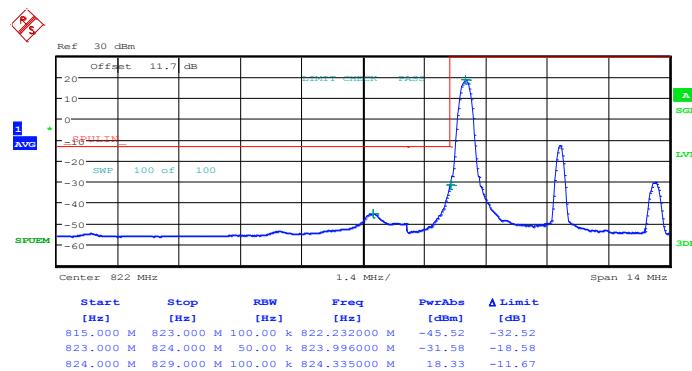


Date: 14.FEB.2014 13:34:50



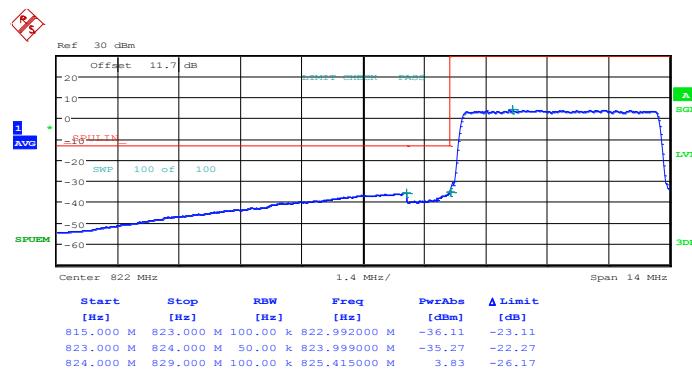
Band :	LTE Band 5	Band Width :	5MHz / 16QAM
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Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



Date: 14.FEB.2014 13:25:50

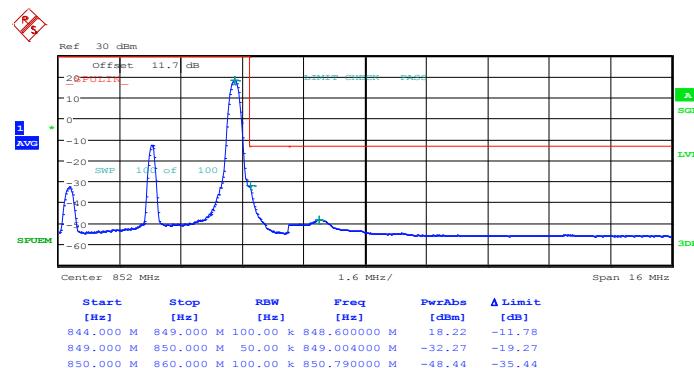
Lower Band Edge Plot for 16QAM -RB Size 25, RB Offset 0



Date: 14.FEB.2014 13:27:16

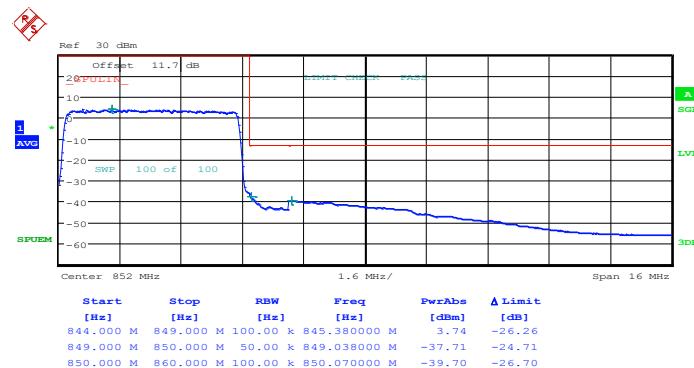


Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 24



Date: 14.FEB.2014 13:34:07

Higher Band Edge Plot for 16QAM -RB Size 25, RB Offset 0

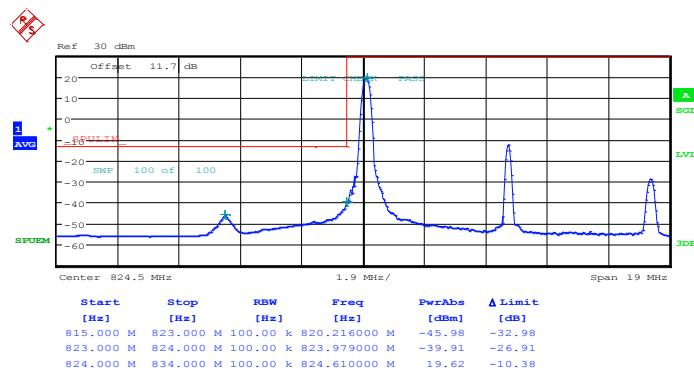


Date: 14.FEB.2014 13:35:33



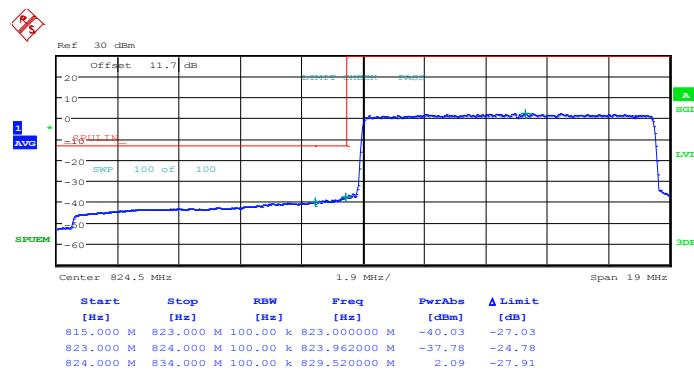
Band :	LTE Band 5	Band Width :	10MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 14.FEB.2014 13:39:03

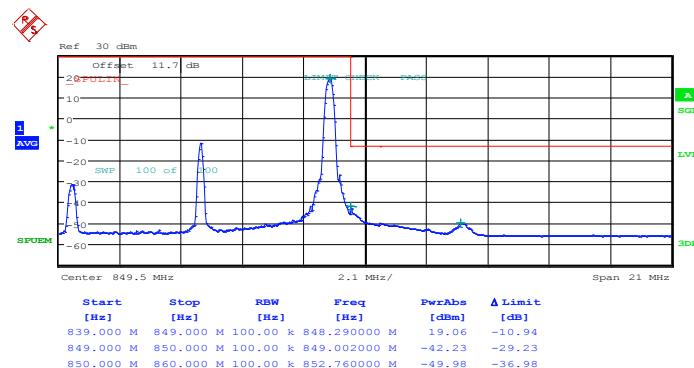
Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Date: 14.FEB.2014 13:40:29

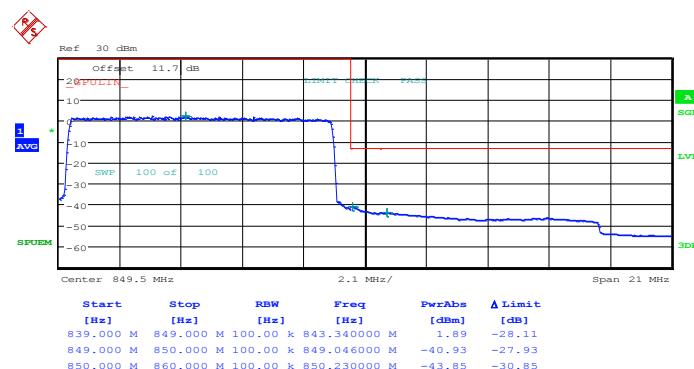


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



Date: 14.FEB.2014 13:47:20

Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0

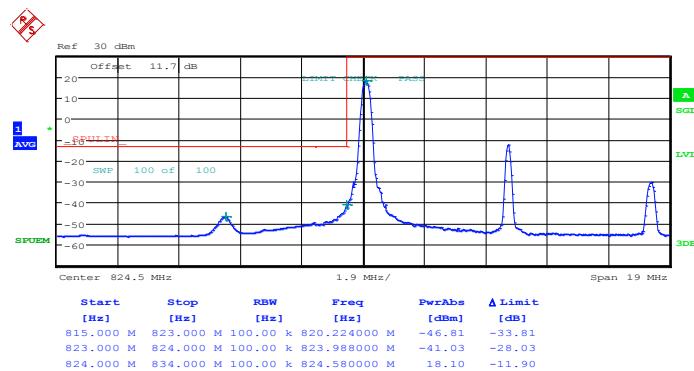


Date: 14.FEB.2014 13:48:46



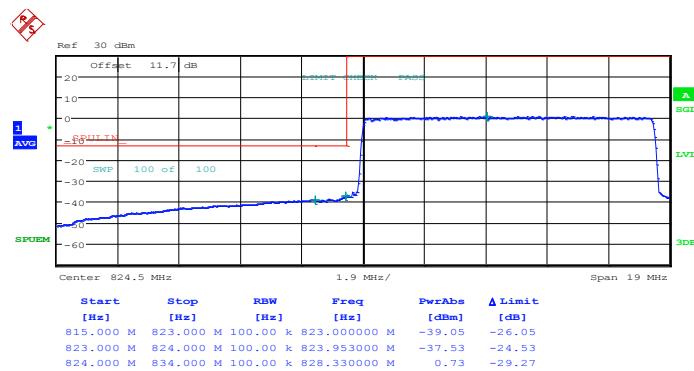
Band :	LTE Band 5	Band Width :	10MHz / 16QAM
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Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



Date: 14.FEB.2014 13:39:46

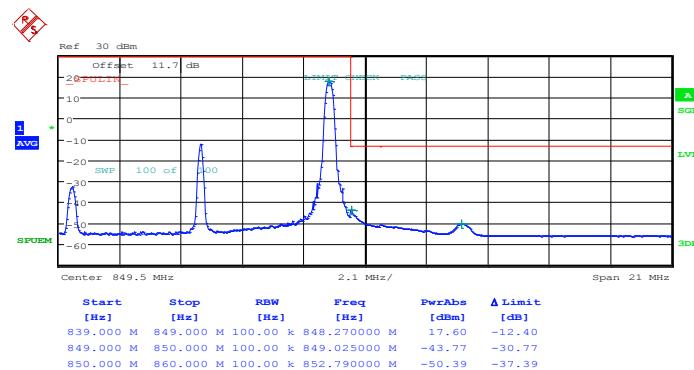
Lower Band Edge Plot for 16QAM -RB Size 50, RB Offset 0



Date: 14.FEB.2014 13:41:12

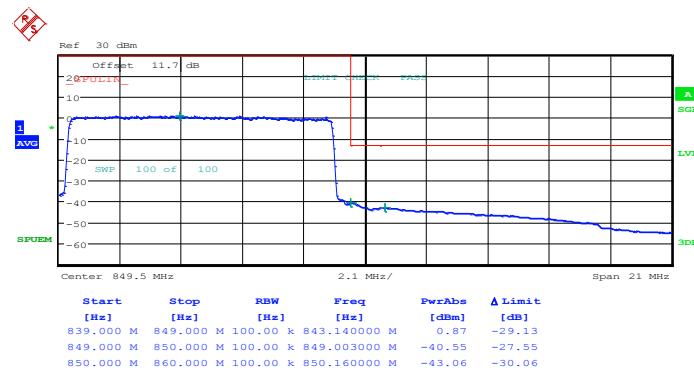


Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 49



Date: 14.FEB.2014 13:48:03

Higher Band Edge Plot for 16QAM -RB Size 50, RB Offset 0



Date: 14.FEB.2014 13:49:29



Band :	LTE Band 2	Band Width :	1.4MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 14.FEB.2014 08:34:38

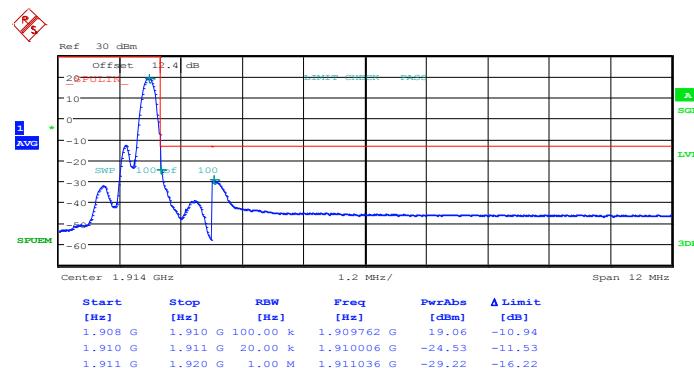
Lower Band Edge Plot for QPSK-RB Size 6, RB Offset 0



Date: 14.FEB.2014 08:36:04



Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 5



Date: 14.FEB.2014 08:42:55

Higher Band Edge Plot for QPSK-RB Size 6, RB Offset 0



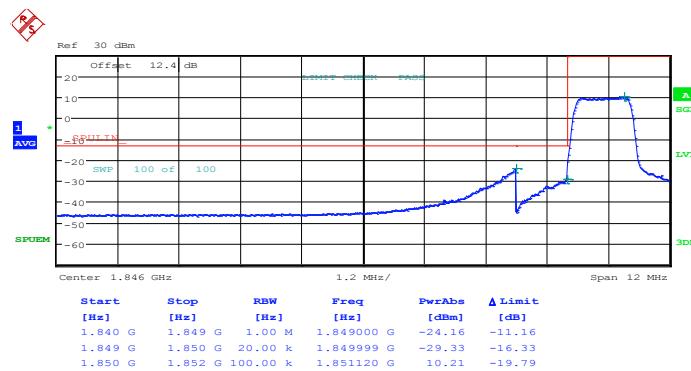
Date: 14.FEB.2014 08:44:21



Band :	LTE Band 2	Band Width :	1.4MHz / 16QAM
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Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0

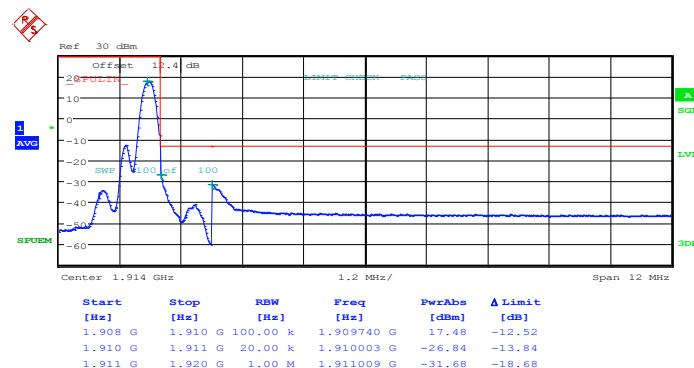
Date: 14.FEB.2014 08:35:21

Lower Band Edge Plot for 16QAM -RB Size 6, RB Offset 0

Date: 14.FEB.2014 08:36:47

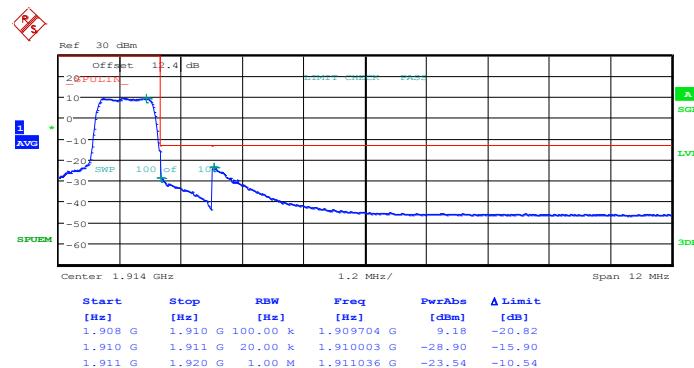


Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 5



Date: 14.FEB.2014 08:43:38

Higher Band Edge Plot for 16QAM -RB Size 6, RB Offset 0



Date: 14.FEB.2014 08:45:04



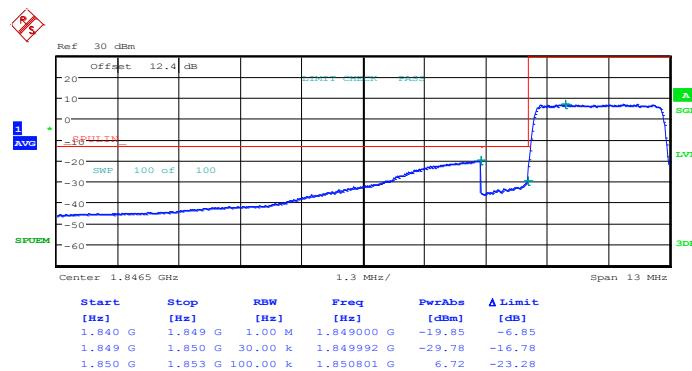
Band :	LTE Band 2	Band Width :	3MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 14.FEB.2014 08:48:33

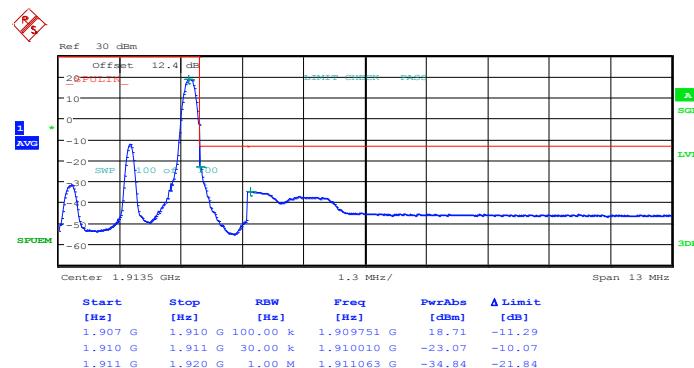
Lower Band Edge Plot for QPSK-RB Size 15, RB Offset 0



Date: 14.FEB.2014 08:49:59

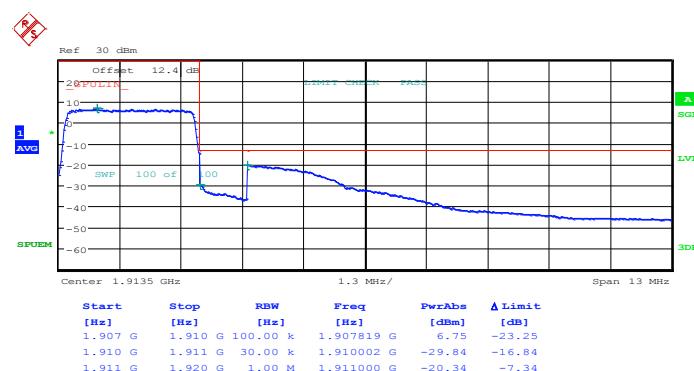


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 14



Date: 14.FEB.2014 08:56:51

Higher Band Edge Plot for QPSK-RB Size 15, RB Offset 0

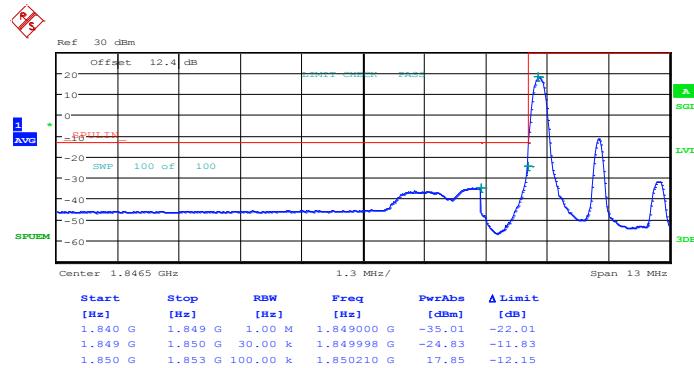


Date: 14.FEB.2014 08:58:16



Band :	LTE Band 2	Band Width :	3MHz / 16QAM
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Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



Date: 14.FEB.2014 08:49:16

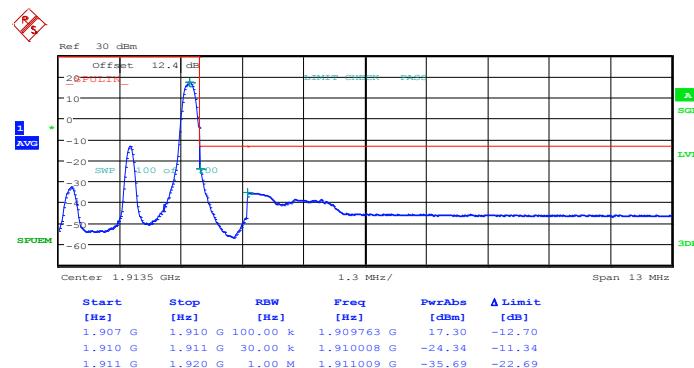
Lower Band Edge Plot for 16QAM -RB Size 15, RB Offset 0



Date: 14.FEB.2014 08:50:42

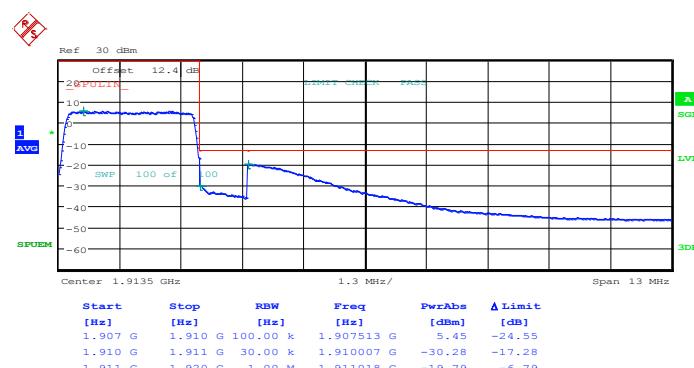


Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 14



Date: 14.FEB.2014 08:57:33

Higher Band Edge Plot for 16QAM -RB Size 15, RB Offset 0

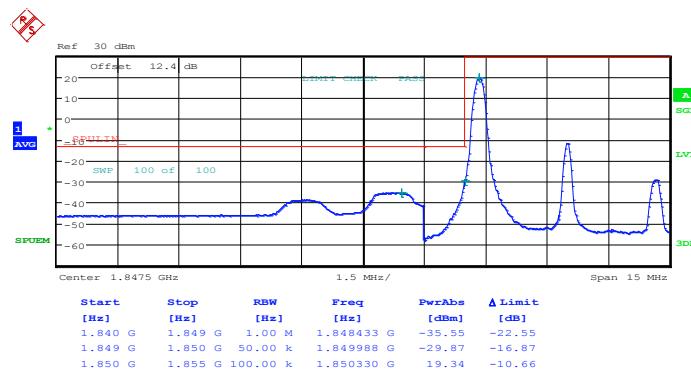


Date: 14.FEB.2014 08:58:59



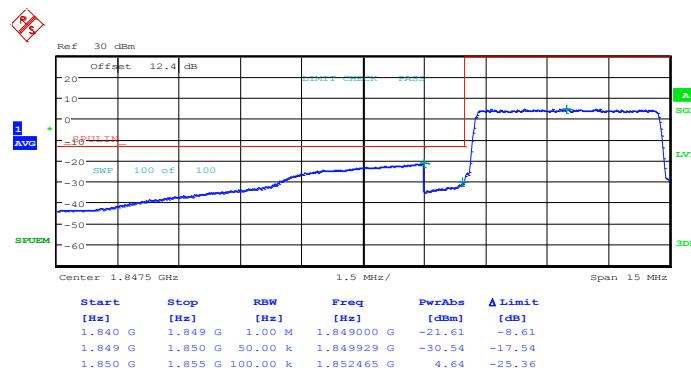
Band :	LTE Band 2	Band Width :	5MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 14.FEB.2014 09:02:29

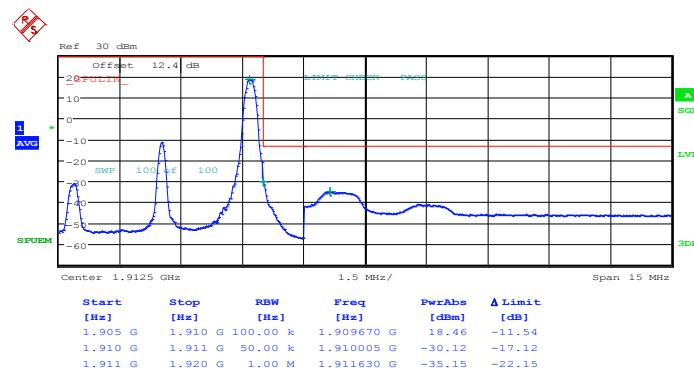
Lower Band Edge Plot for QPSK-RB Size 25, RB Offset 0



Date: 14.FEB.2014 09:03:55

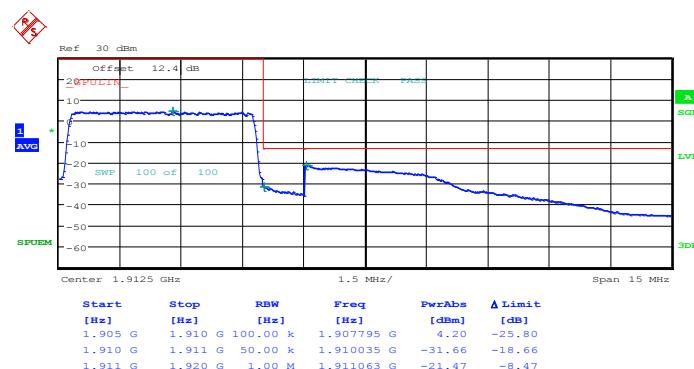


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 24



Date: 14.FEB.2014 09:10:46

Higher Band Edge Plot for QPSK-RB Size 25, RB Offset 0

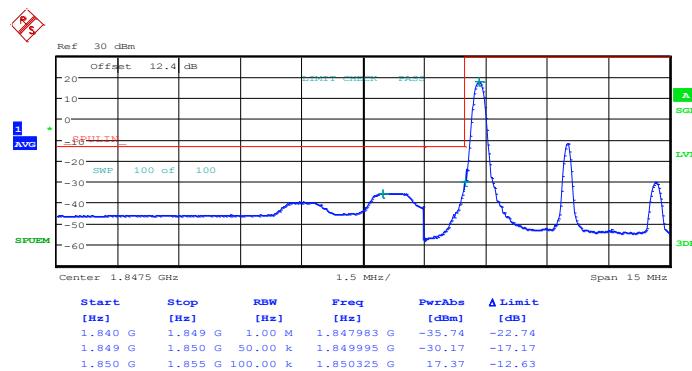


Date: 14.FEB.2014 09:12:10



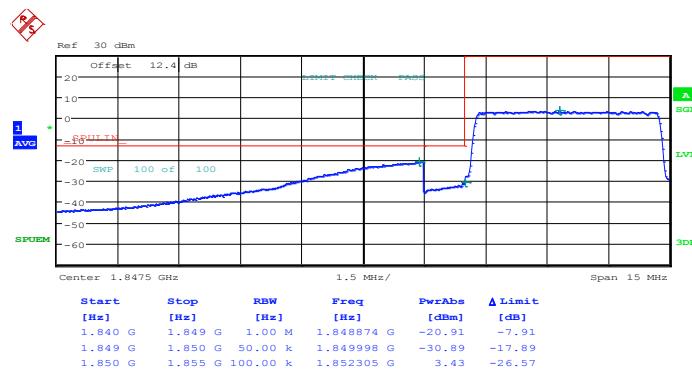
Band :	LTE Band 2	Band Width :	5MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 14.FEB.2014 09:03:12

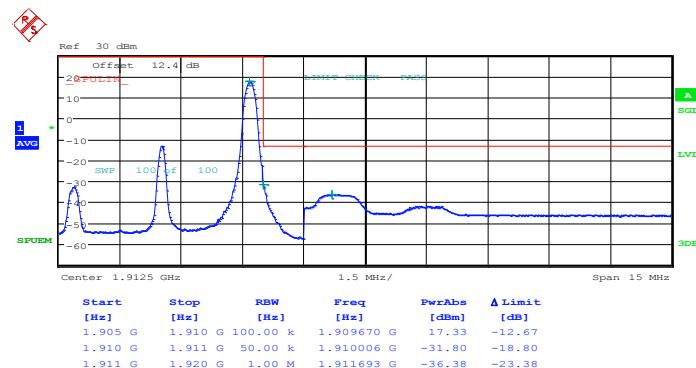
Lower Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



Date: 14.FEB.2014 09:04:38

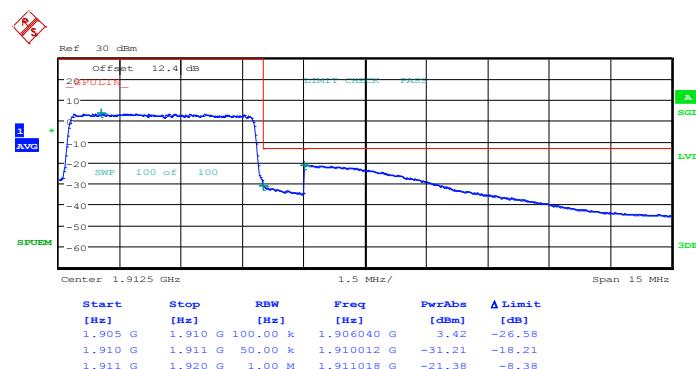


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 24



Date: 14.FEB.2014 09:11:28

Higher Band Edge Plot for 16QAM-RB Size 25, RB Offset 0

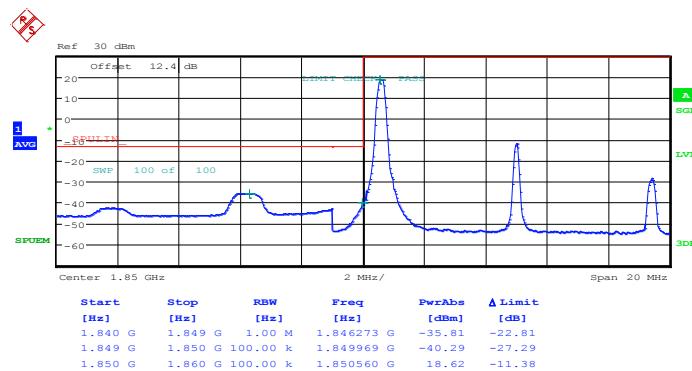


Date: 14.FEB.2014 09:12:53



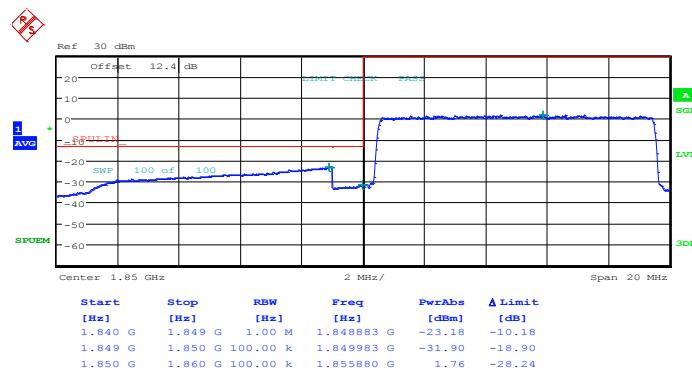
Band :	LTE Band 2	Band Width :	10MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 14.FEB.2014 09:16:18

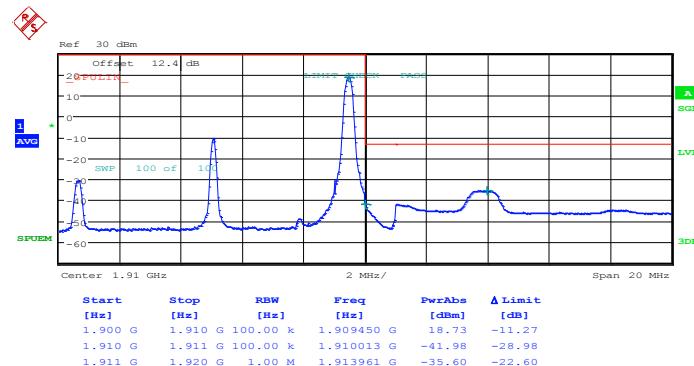
Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Date: 14.FEB.2014 09:17:43

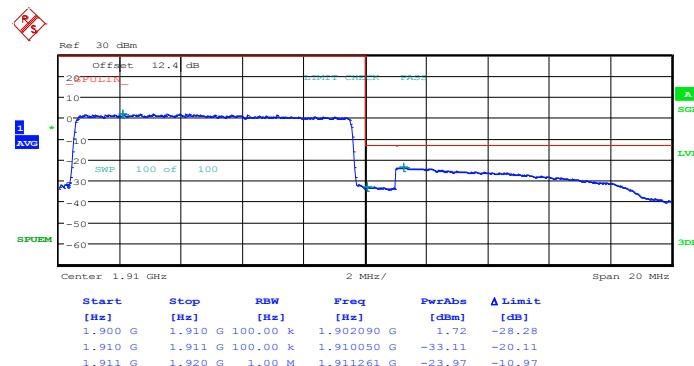


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



Date: 14.FEB.2014 09:34:48

Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0

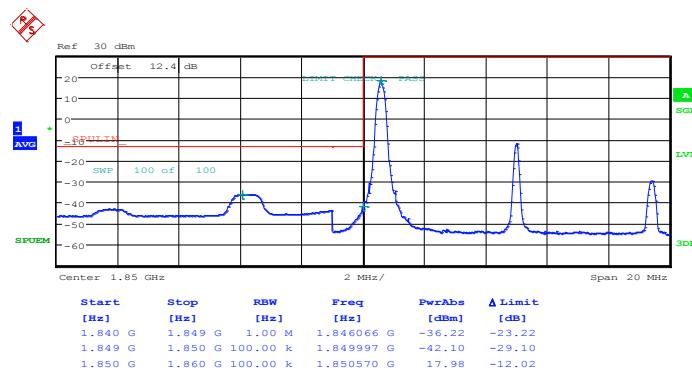


Date: 14.FEB.2014 09:36:14



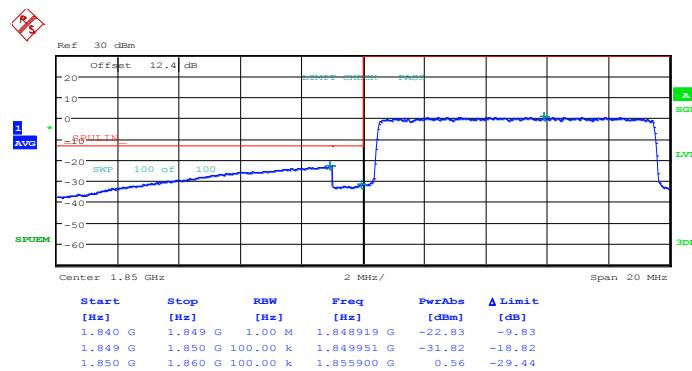
Band :	LTE Band 2	Band Width :	10MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 14.FEB.2014 09:17:00

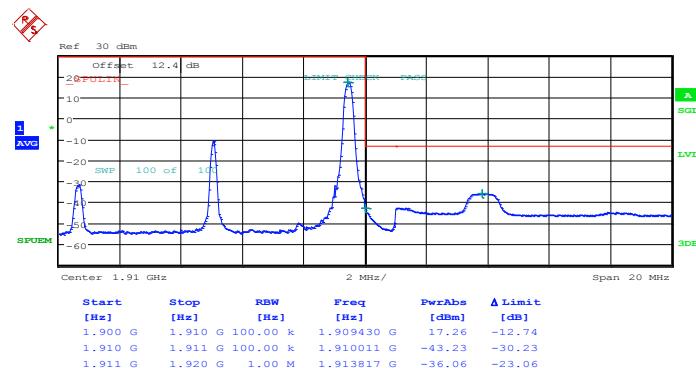
Lower Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



Date: 14.FEB.2014 09:18:25

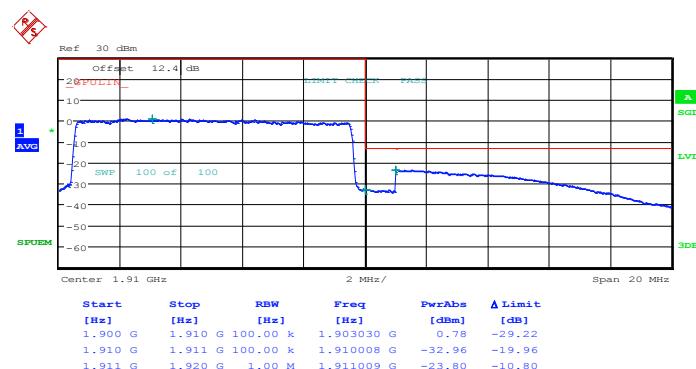


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 49



Date: 14.FEB.2014 09:35:31

Higher Band Edge Plot for 16QAM-RB Size 50, RB Offset 0

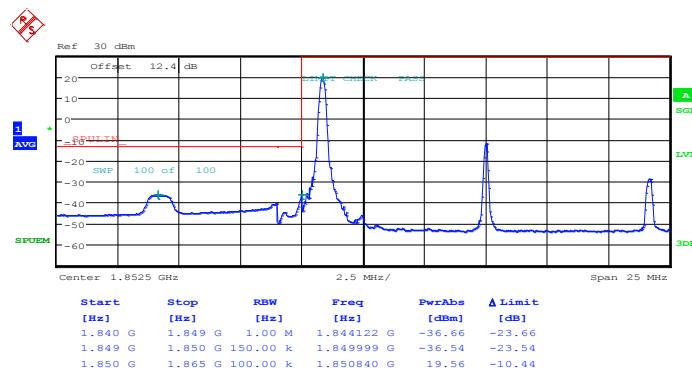


Date: 14.FEB.2014 09:36:57



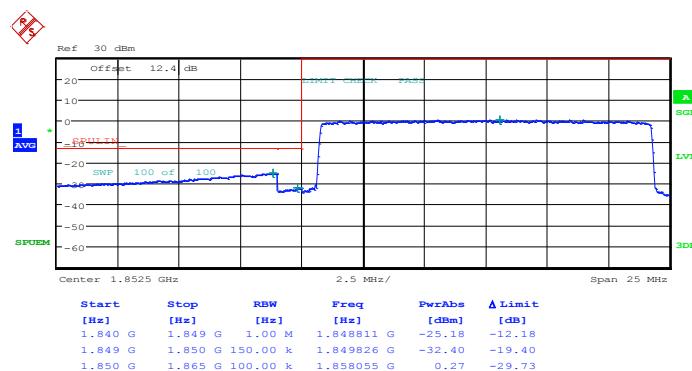
Band :	LTE Band 2	Band Width :	15MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 14.FEB.2014 09:40:26

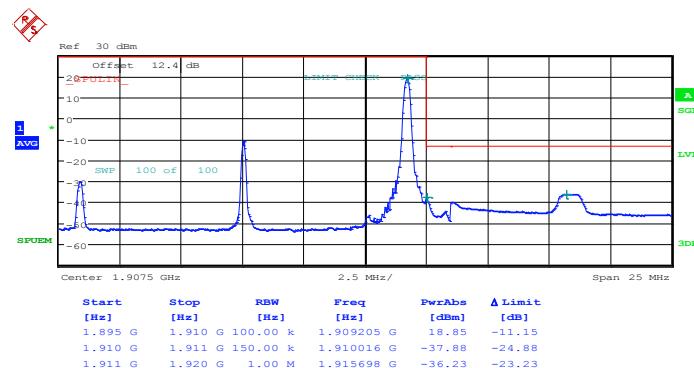
Lower Band Edge Plot for QPSK-RB Size 75, RB Offset 0



Date: 14.FEB.2014 09:41:52

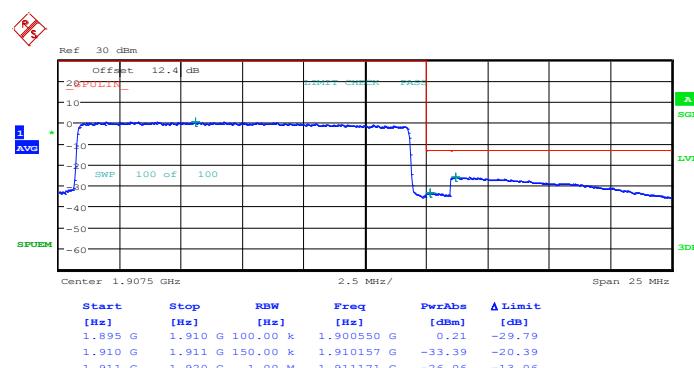


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 74



Date: 14.FEB.2014 09:48:44

Higher Band Edge Plot for QPSK-RB Size 75, RB Offset 0

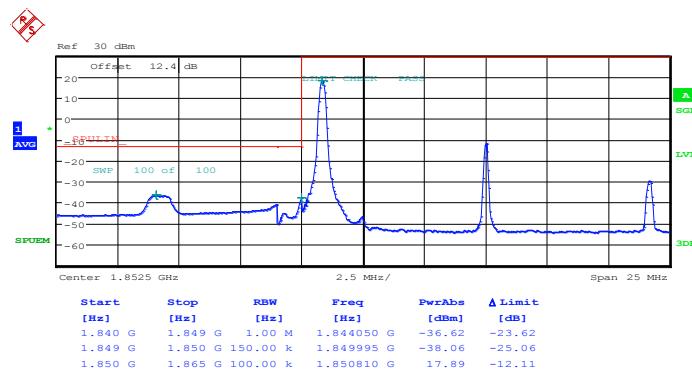


Date: 14.FEB.2014 09:50:09



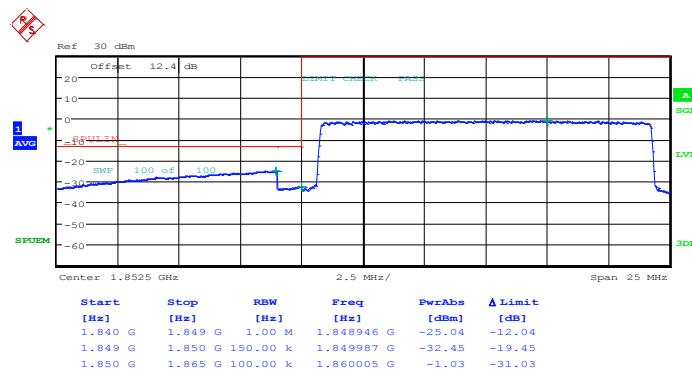
Band :	LTE Band 2	Band Width :	15MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 14.FEB.2014 09:41:09

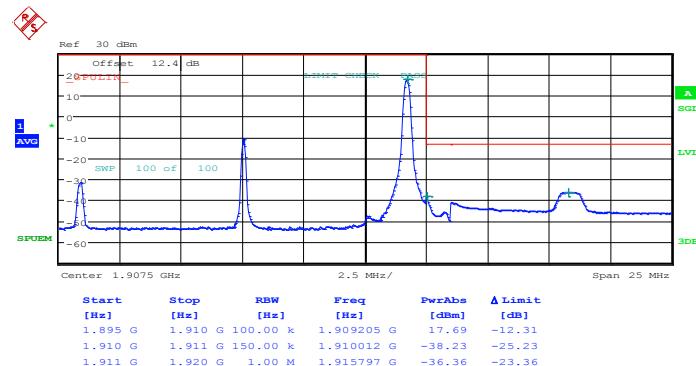
Lower Band Edge Plot for 16QAM-RB Size 75, RB Offset 0



Date: 14.FEB.2014 09:42:35

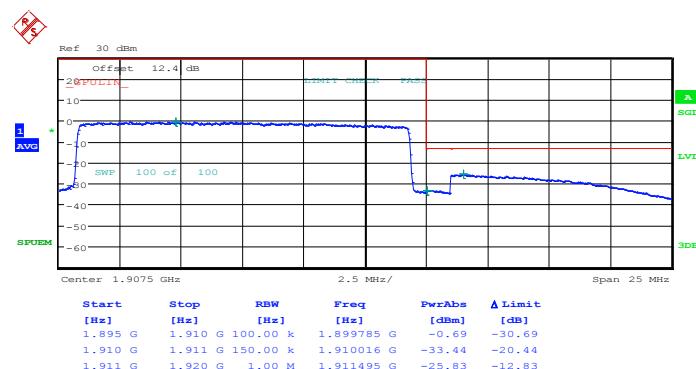


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 74



Date: 14.FEB.2014 09:49:26

Higher Band Edge Plot for 16QAM-RB Size 75, RB Offset 0

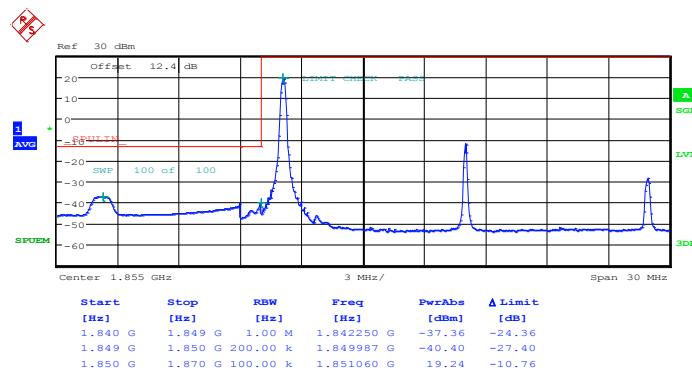


Date: 14.FEB.2014 09:50:52



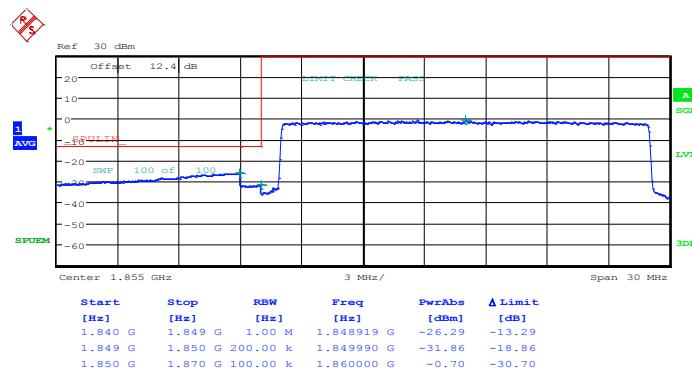
Band :	LTE Band 2	Band Width :	20MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 14.FEB.2014 09:56:08

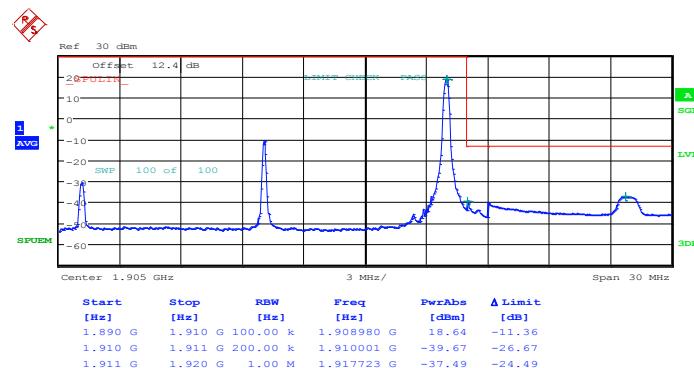
Lower Band Edge Plot for QPSK-RB Size 100, RB Offset 0



Date: 14.FEB.2014 09:57:34

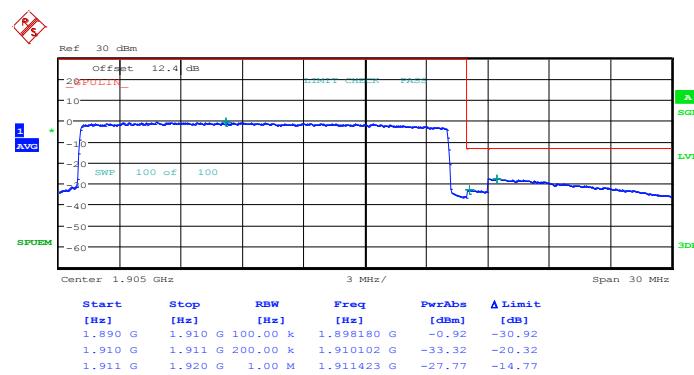


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 99



Date: 14.FEB.2014 10:04:26

Higher Band Edge Plot for QPSK-RB Size 100, RB Offset 0

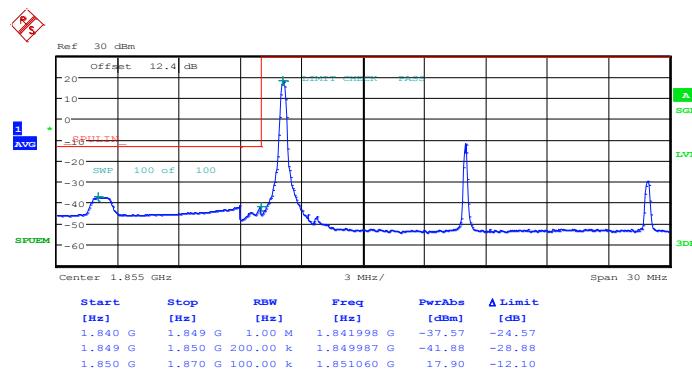


Date: 14.FEB.2014 10:05:52



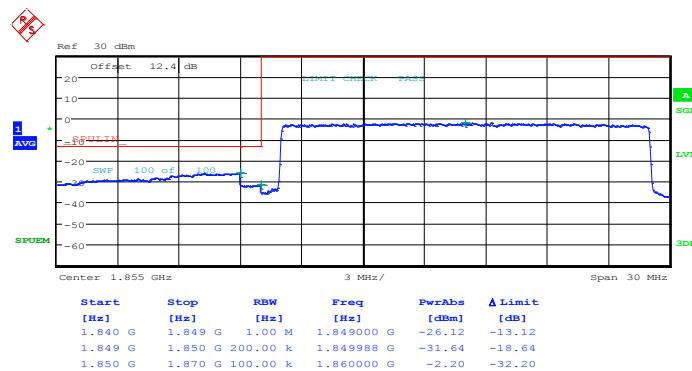
Band :	LTE Band 2	Band Width :	20MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 14.FEB.2014 09:56:51

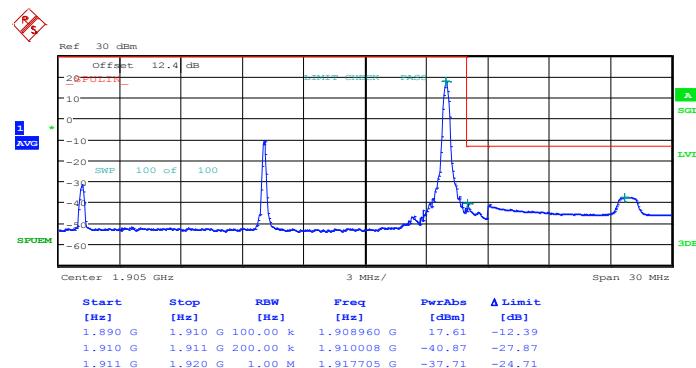
Lower Band Edge Plot for 16QAM-RB Size 100, RB Offset 0



Date: 14.FEB.2014 09:58:17

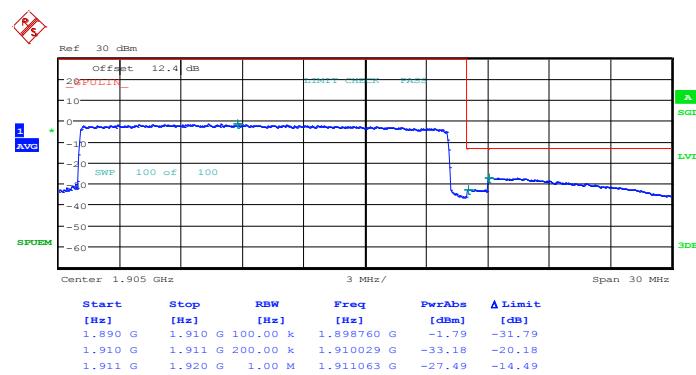


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 99



Date: 14.FEB.2014 10:05:09

Higher Band Edge Plot for 16QAM-RB Size 100, RB Offset 0



Date: 14.FEB.2014 10:06:35



Band :	LTE Band 4	Band Width :	1.4MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 14.FEB.2014 10:16:55

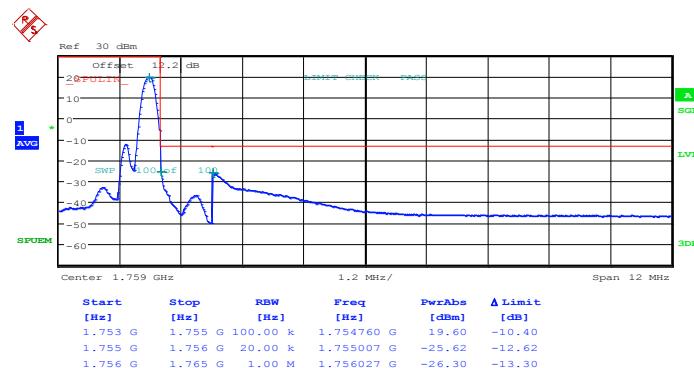
Lower Band Edge Plot for QPSK-RB Size 6, RB Offset 0



Date: 14.FEB.2014 10:18:21

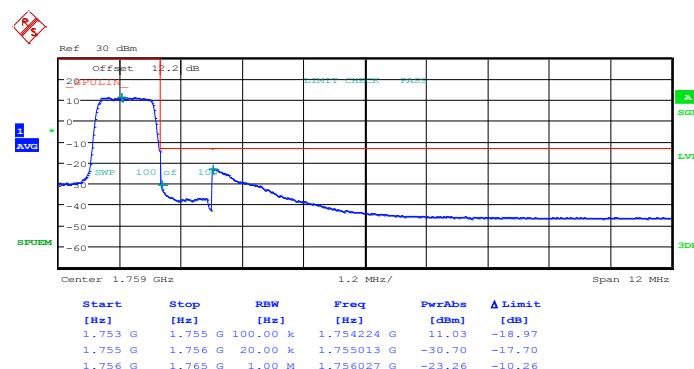


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 5



Date: 14.FEB.2014 10:25:13

Higher Band Edge Plot for QPSK-RB Size 6, RB Offset 0



Date: 14.FEB.2014 10:26:39



Band :	LTE Band 4	Band Width :	1.4MHz / 16QAM
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Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0

Date: 14.FEB.2014 10:17:38

Lower Band Edge Plot for 16QAM-RB Size 6, RB Offset 0

Date: 14.FEB.2014 10:19:04

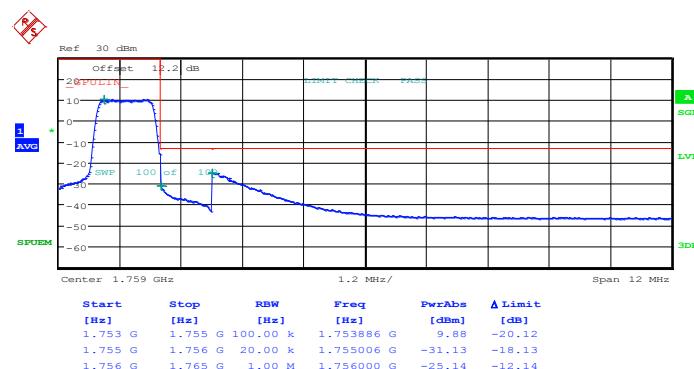


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 5



Date: 14.FEB.2014 10:25:56

Higher Band Edge Plot for 16QAM-RB Size 6, RB Offset 0

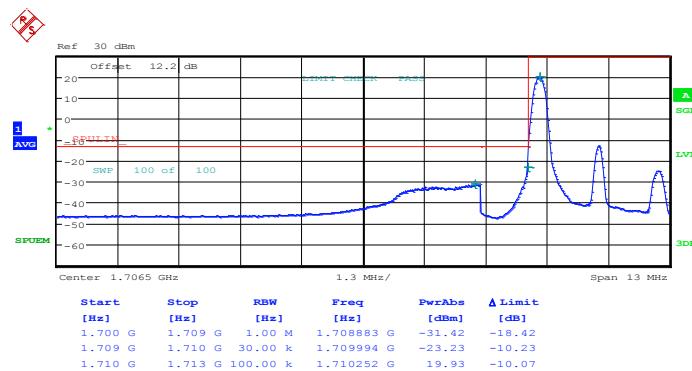


Date: 14.FEB.2014 10:27:22



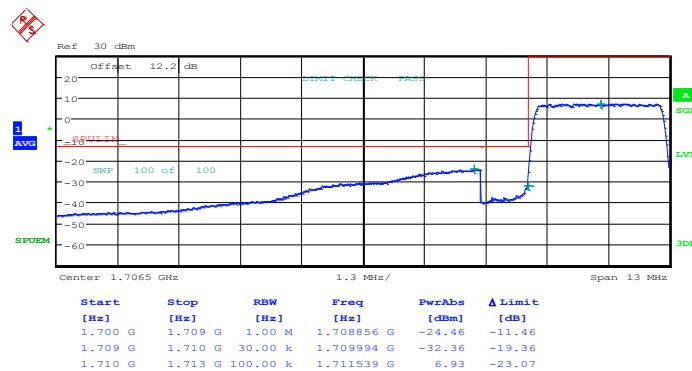
Band :	LTE Band 4	Band Width :	3MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 14.FEB.2014 10:30:52

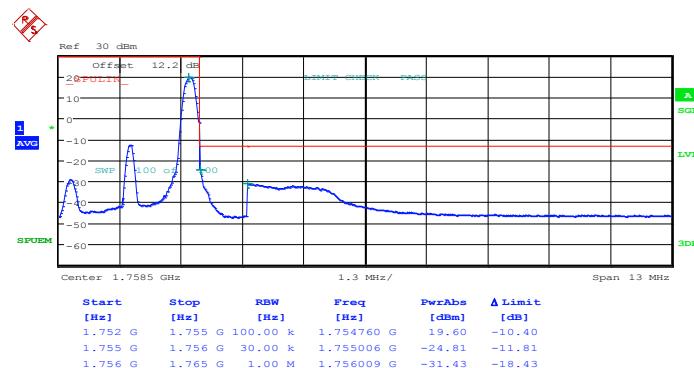
Lower Band Edge Plot for QPSK-RB Size 15, RB Offset 0



Date: 14.FEB.2014 10:32:18

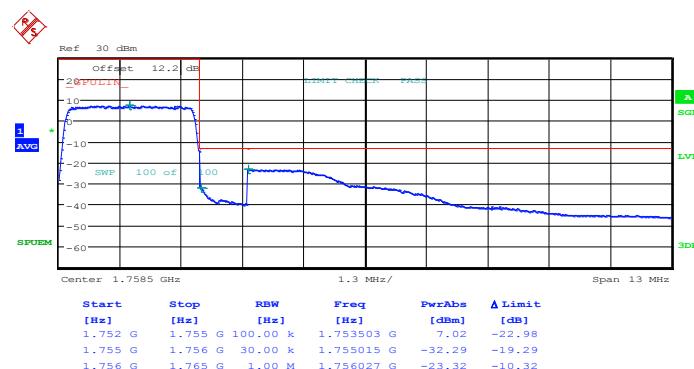


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 14



Date: 14.FEB.2014 10:39:10

Higher Band Edge Plot for QPSK-RB Size 15, RB Offset 0



Date: 14.FEB.2014 10:40:36



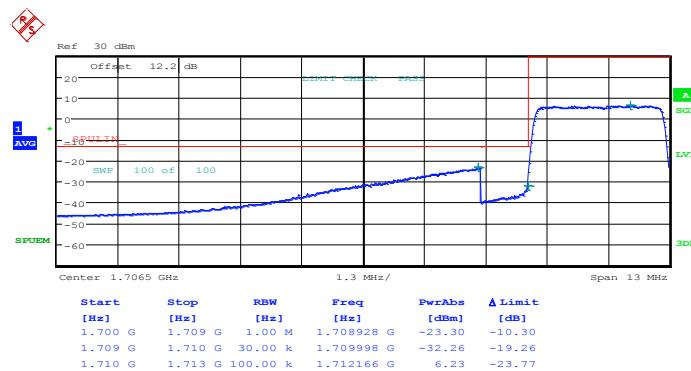
Band :	LTE Band 4	Band Width :	3MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 14.FEB.2014 10:31:35

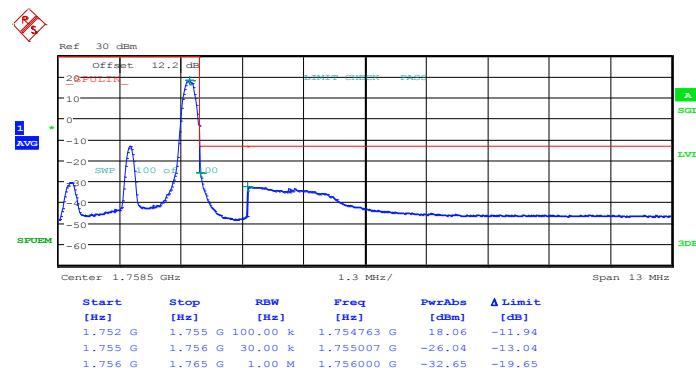
Lower Band Edge Plot for 16QAM-RB Size 15, RB Offset 0



Date: 14.FEB.2014 10:33:01

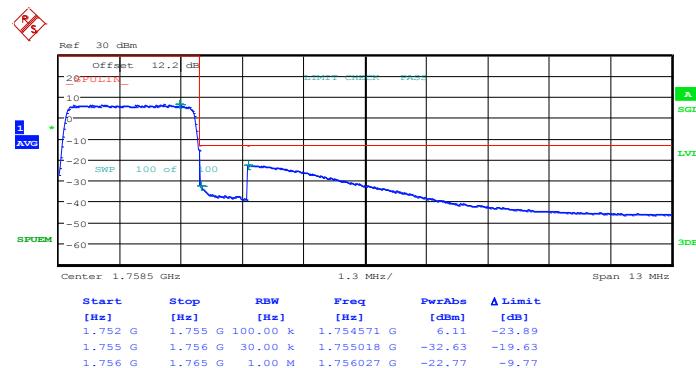


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 14



Date: 14.FEB.2014 10:39:53

Higher Band Edge Plot for 16QAM-RB Size 15, RB Offset 0

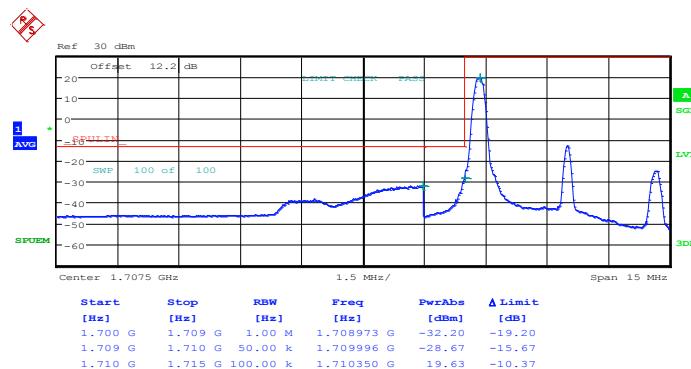


Date: 14.FEB.2014 10:41:19



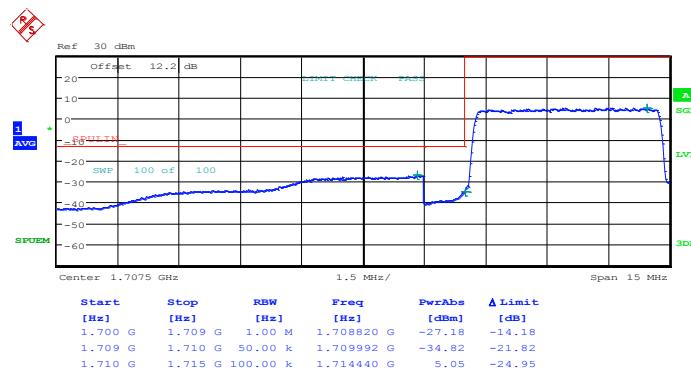
Band :	LTE Band 4	Band Width :	5MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 14.FEB.2014 10:44:49

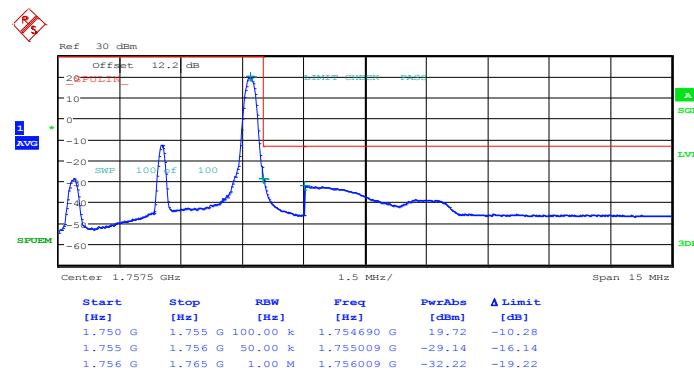
Lower Band Edge Plot for QPSK-RB Size 25, RB Offset 0



Date: 14.FEB.2014 10:46:15

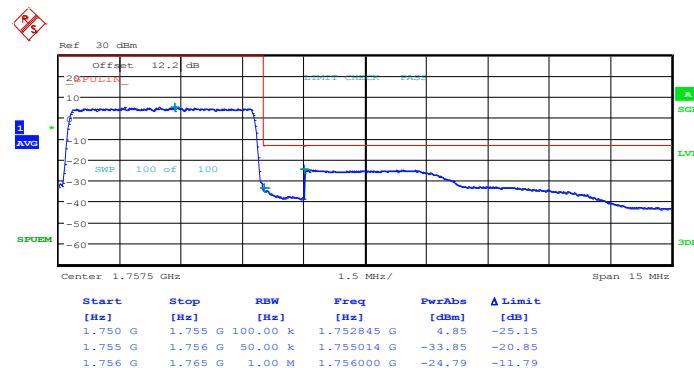


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 24



Date: 14.FEB.2014 10:53:07

Higher Band Edge Plot for QPSK-RB Size 25, RB Offset 0

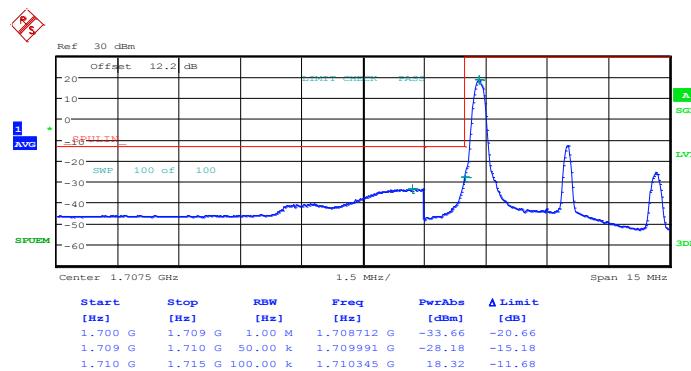


Date: 14.FEB.2014 10:54:33



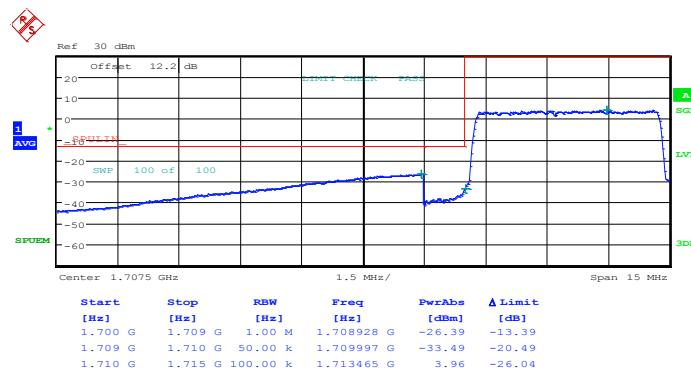
Band :	LTE Band 4	Band Width :	5MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 14.FEB.2014 10:45:32

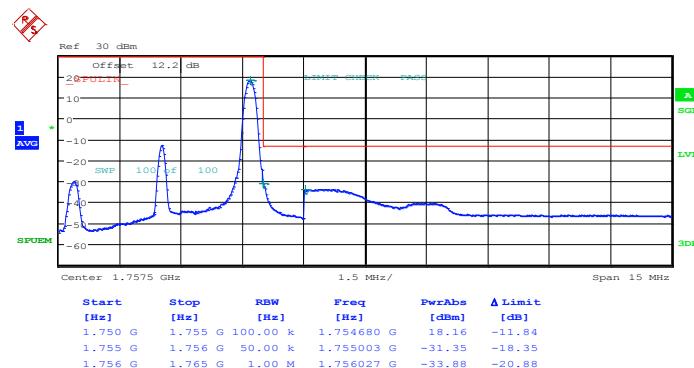
Lower Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



Date: 14.FEB.2014 10:46:58

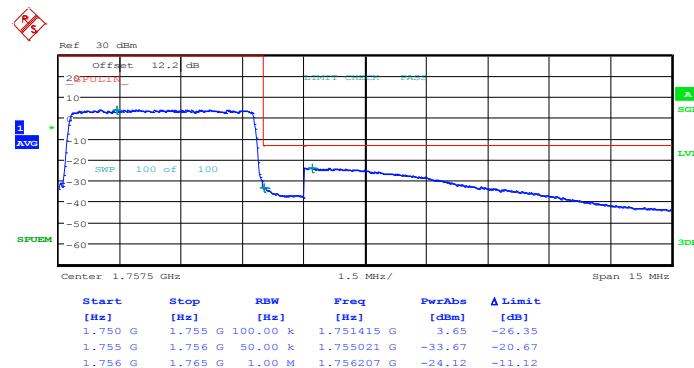


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 24



Date: 14.FEB.2014 10:53:50

Higher Band Edge Plot for 16QAM-RB Size 25, RB Offset 0

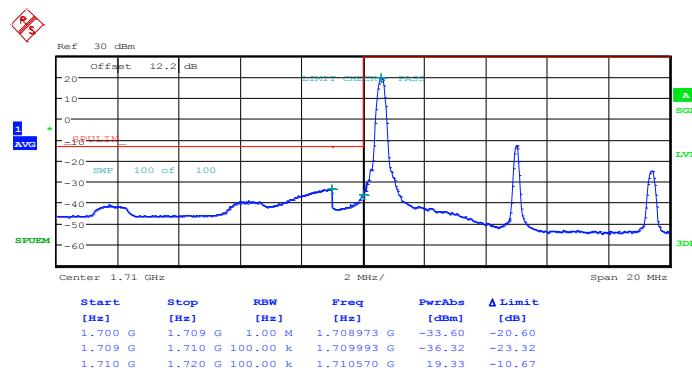


Date: 14.FEB.2014 10:55:16



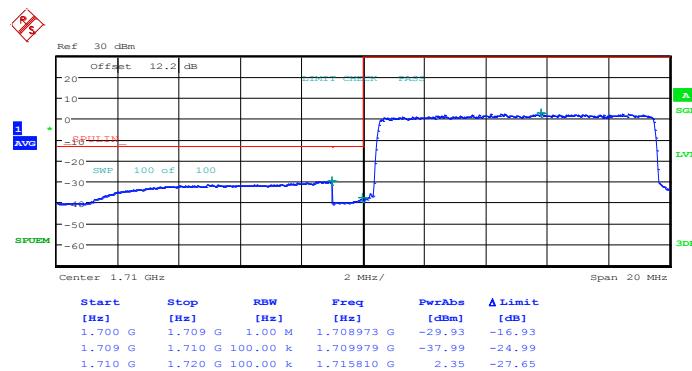
Band :	LTE Band 4	Band Width :	10MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 14.FEB.2014 10:58:46

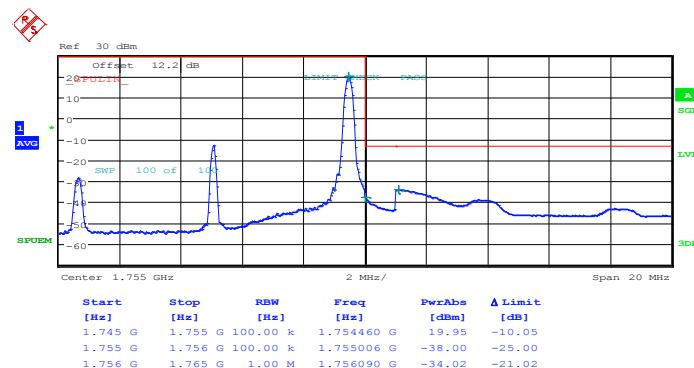
Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Date: 14.FEB.2014 11:00:12

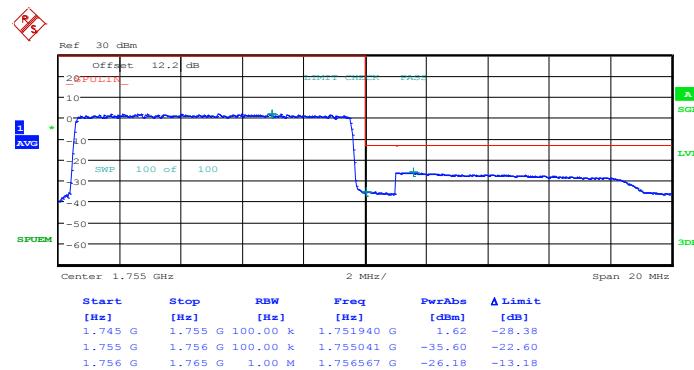


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



Date: 14.FEB.2014 11:07:04

Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0

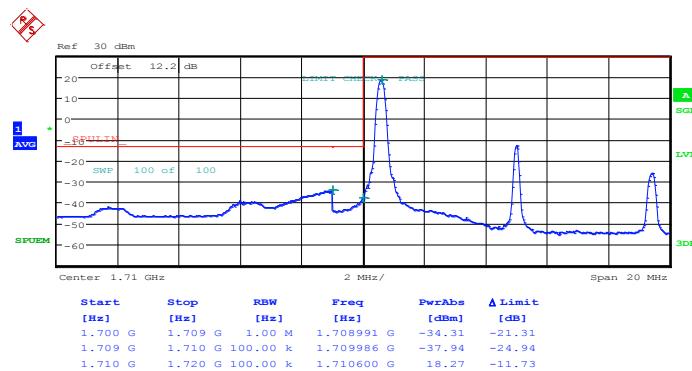


Date: 14.FEB.2014 11:08:30



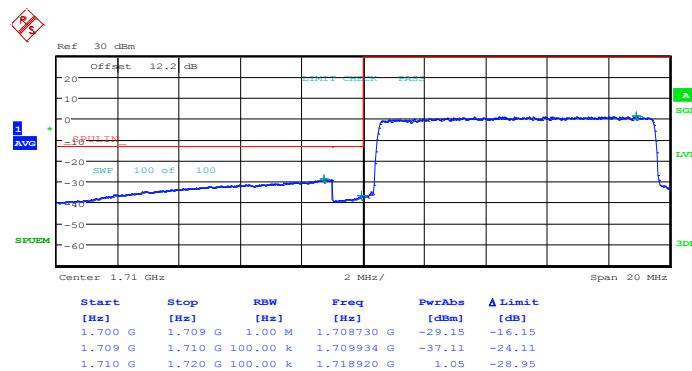
Band :	LTE Band 4	Band Width :	10MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 14.FEB.2014 10:59:29

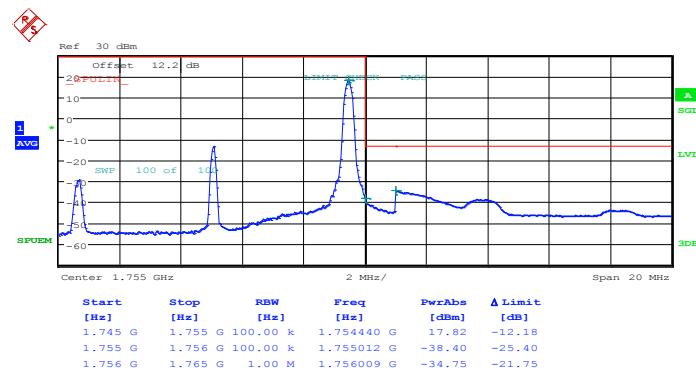
Lower Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



Date: 14.FEB.2014 11:00:55

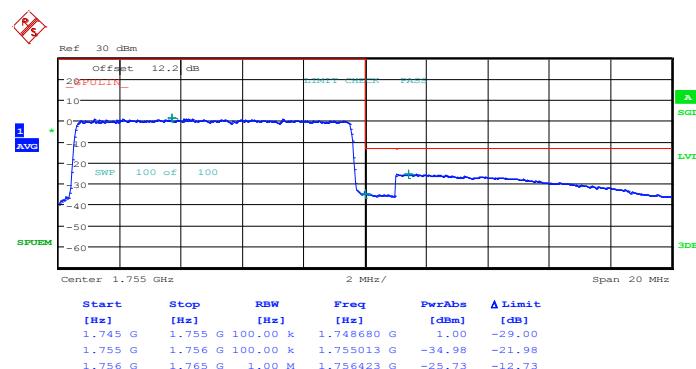


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 49



Date: 14.FEB.2014 11:07:47

Higher Band Edge Plot for 16QAM-RB Size 50, RB Offset 0

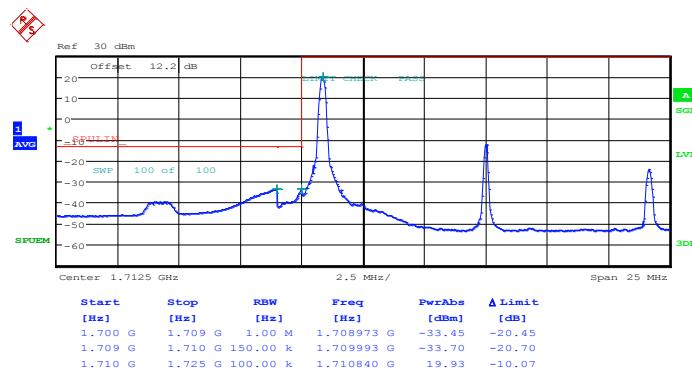


Date: 14.FEB.2014 11:09:13



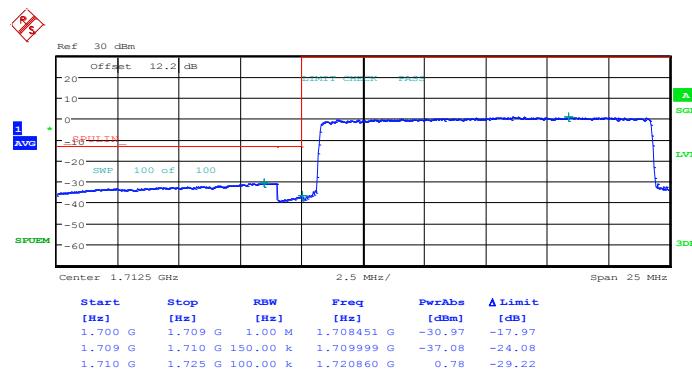
Band :	LTE Band 4	Band Width :	15MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 14.FEB.2014 11:12:43

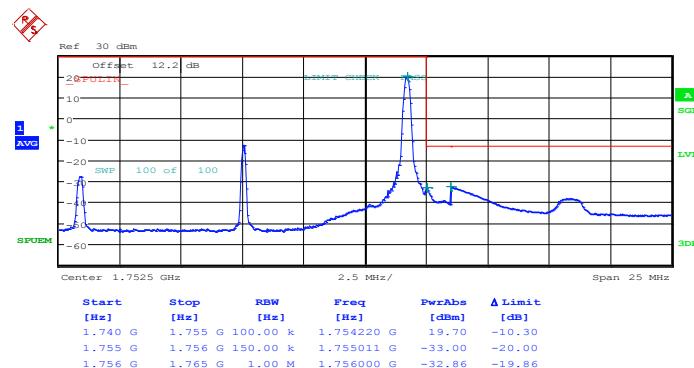
Lower Band Edge Plot for QPSK-RB Size 75, RB Offset 0



Date: 14.FEB.2014 11:14:09

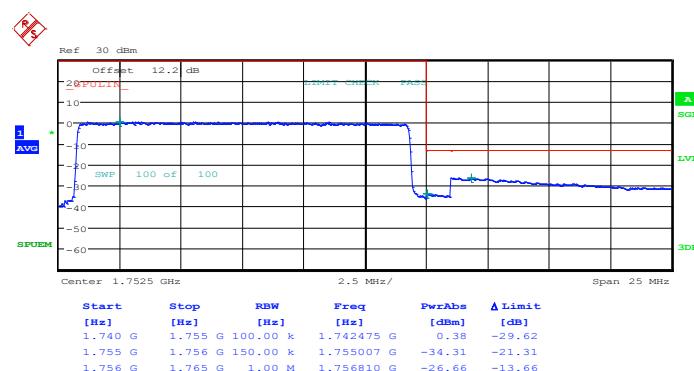


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 74



Date: 14.FEB.2014 11:21:02

Higher Band Edge Plot for QPSK-RB Size 75, RB Offset 0

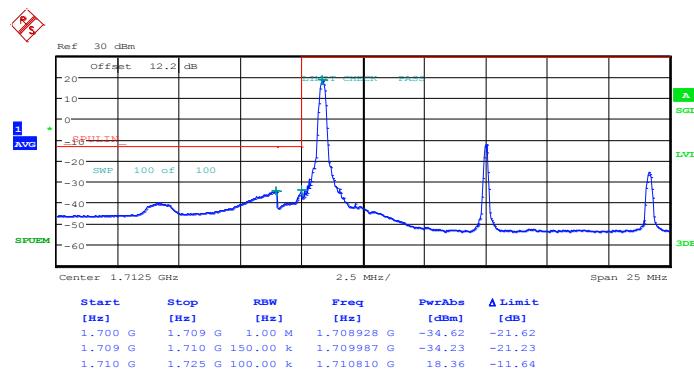


Date: 14.FEB.2014 11:22:28



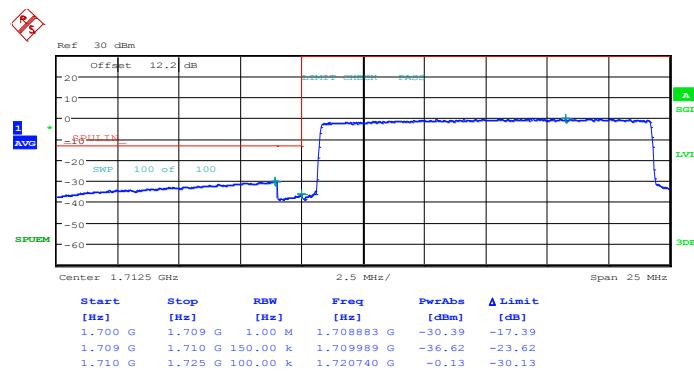
Band :	LTE Band 4	Band Width :	15MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 14.FEB.2014 11:13:26

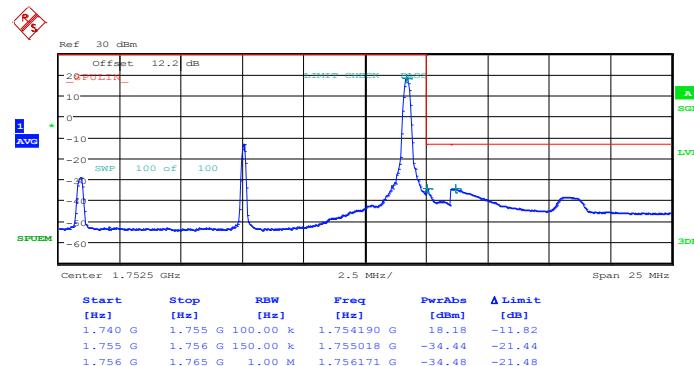
Lower Band Edge Plot for 16QAM-RB Size 75, RB Offset 0



Date: 14.FEB.2014 11:14:52

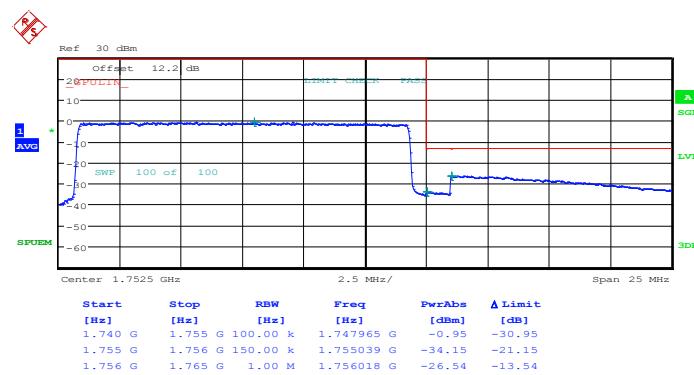


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 74



Date: 14.FEB.2014 11:21:45

Higher Band Edge Plot for 16QAM-RB Size 75, RB Offset 0

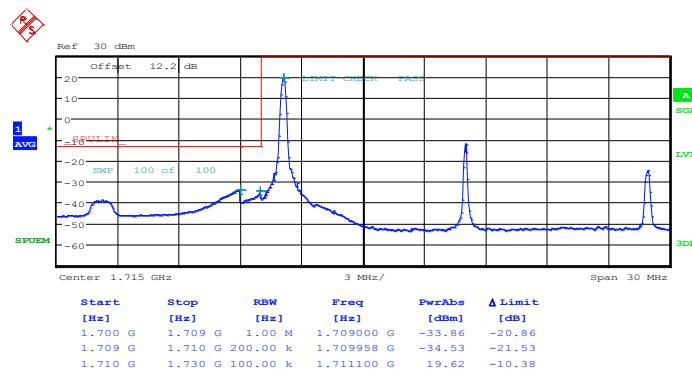


Date: 14.FEB.2014 11:23:11



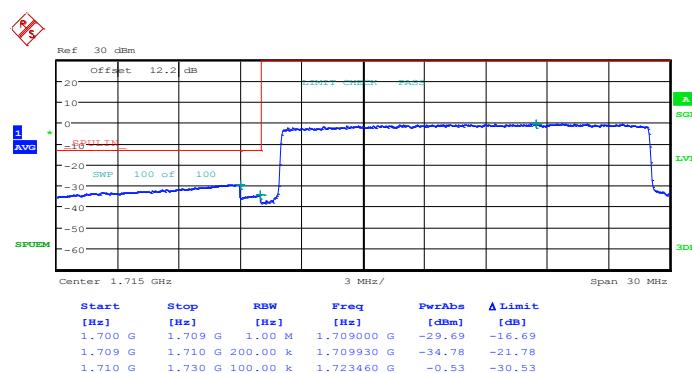
Band :	LTE Band 4	Band Width :	20MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 14.FEB.2014 11:26:41

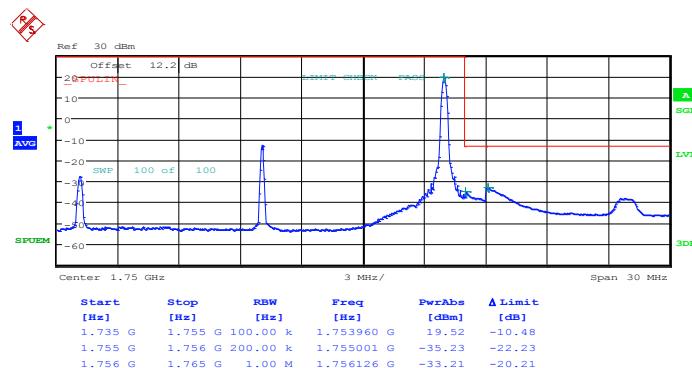
Lower Band Edge Plot for QPSK-RB Size 100, RB Offset 0



Date: 14.FEB.2014 11:28:07

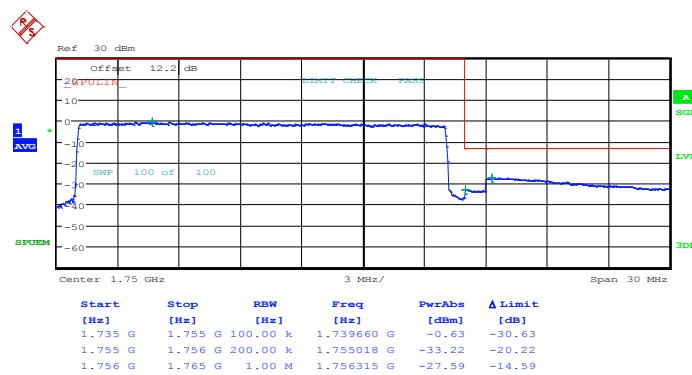


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 99



Date: 14.FEB.2014 11:34:59

Higher Band Edge Plot for QPSK-RB Size 100, RB Offset 0

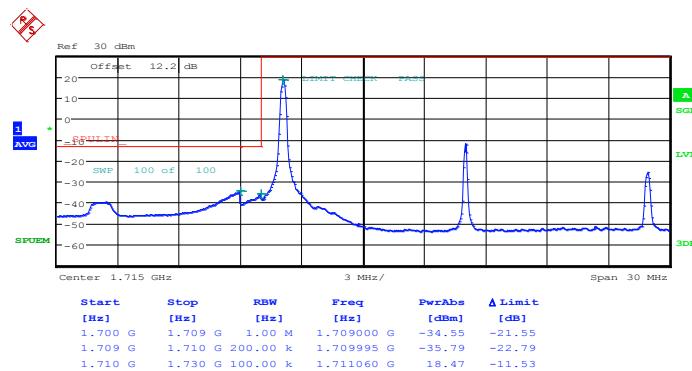


Date: 14.FEB.2014 11:36:25



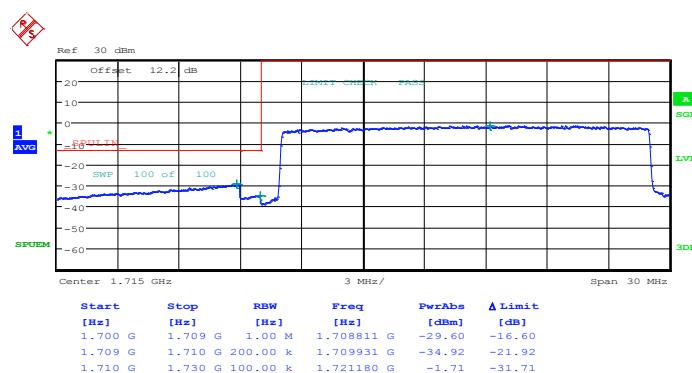
Band :	LTE Band 4	Band Width :	20MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 14.FEB.2014 11:27:24

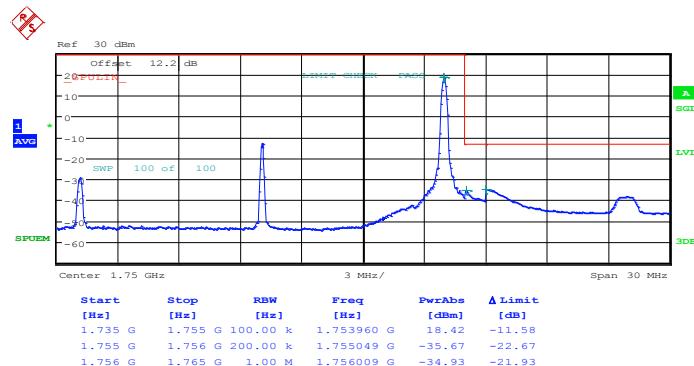
Lower Band Edge Plot for 16QAM-RB Size 100, RB Offset 0



Date: 14.FEB.2014 11:28:50

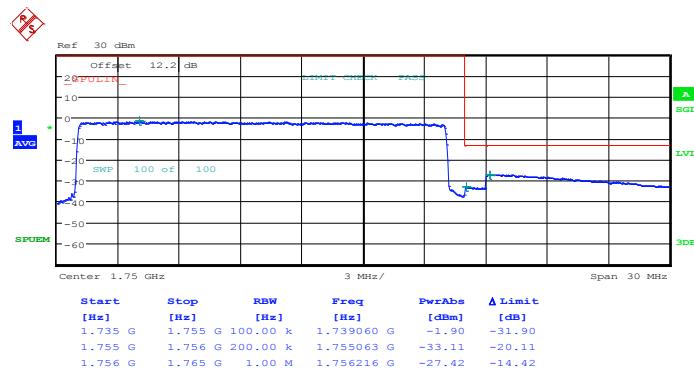


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 99



Date: 14.FEB.2014 11:35:42

Higher Band Edge Plot for 16QAM-RB Size 100, RB Offset 0

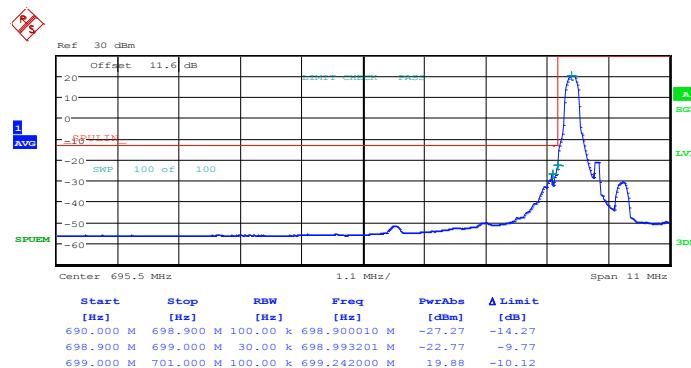


Date: 14.FEB.2014 11:37:08



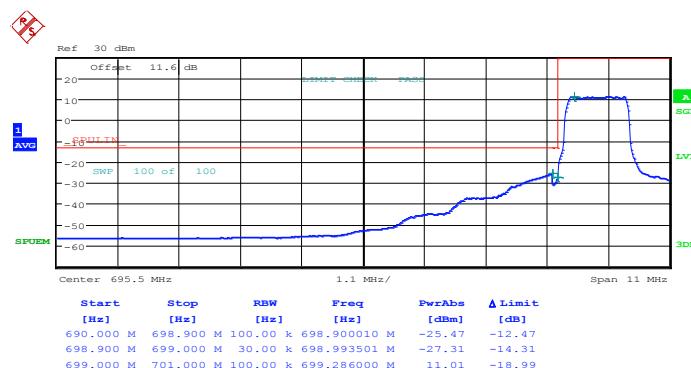
Band :	LTE Band 12	Band Width :	1.4MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 14.FEB.2014 14:35:48

Lower Band Edge Plot for QPSK-RB Size 6, RB Offset 0



Date: 14.FEB.2014 14:33:39

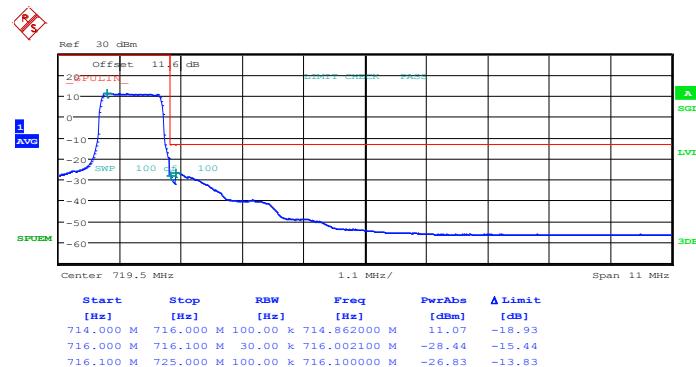


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 5



Date: 14.FEB.2014 14:44:04

Higher Band Edge Plot for QPSK-RB Size 6, RB Offset 0



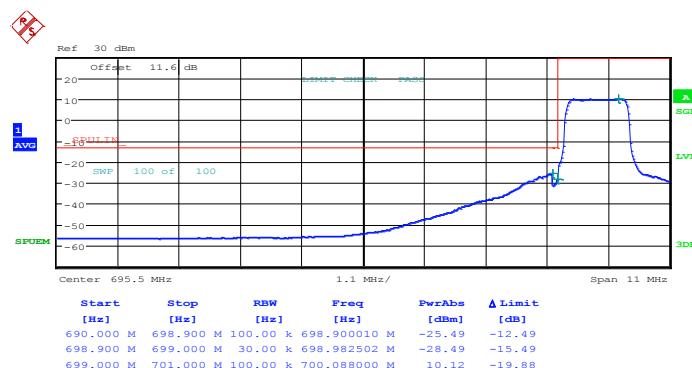
Date: 14.FEB.2014 14:41:56



Band :	LTE Band 12	Band Width :	1.4MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0

Date: 14.FEB.2014 14:35:05

Lower Band Edge Plot for 16QAM-RB Size 6, RB Offset 0

Date: 14.FEB.2014 14:34:22

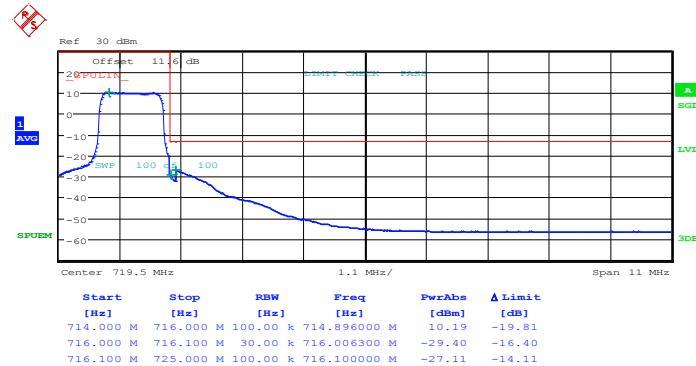


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 5



Date: 14.FEB.2014 14:43:21

Higher Band Edge Plot for 16QAM-RB Size 6, RB Offset 0



Date: 14.FEB.2014 14:42:39



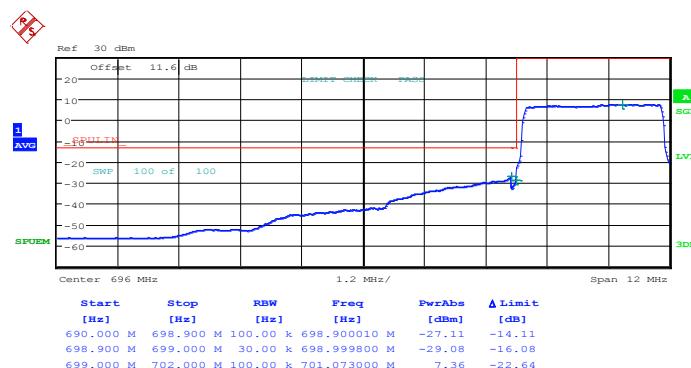
Band :	LTE Band 12	Band Width :	3MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 14.FEB.2014 14:49:56

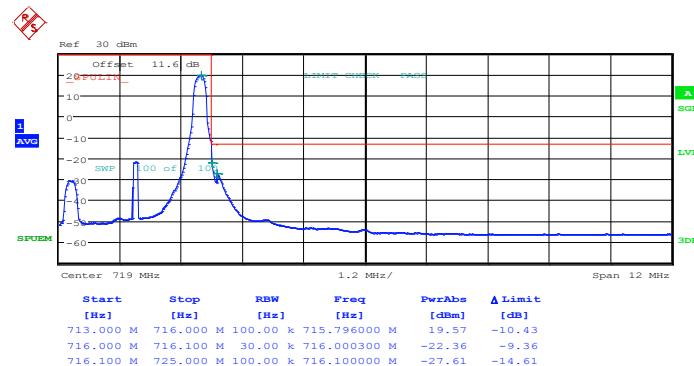
Lower Band Edge Plot for QPSK-RB Size 15, RB Offset 0



Date: 14.FEB.2014 14:47:37



Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 14



Date: 14.FEB.2014 14:58:16

Higher Band Edge Plot for QPSK-RB Size 15, RB Offset 0



Date: 14.FEB.2014 14:56:05



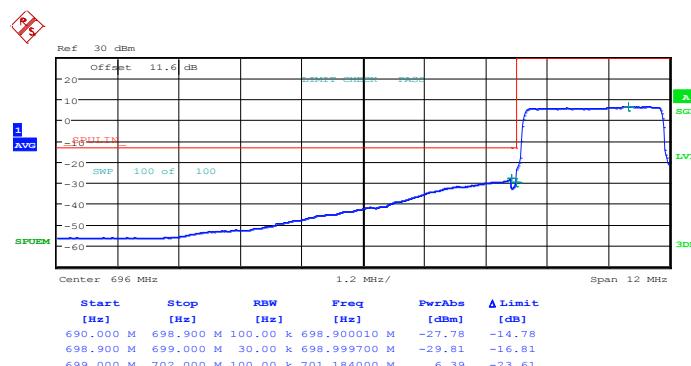
Band :	LTE Band 12	Band Width :	3MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 14.FEB.2014 14:49:09

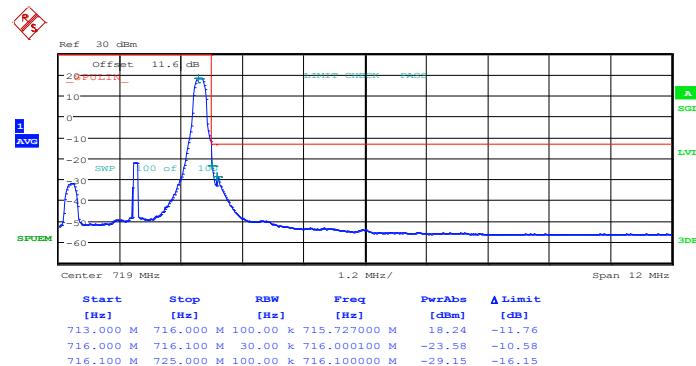
Lower Band Edge Plot for 16QAM-RB Size 15, RB Offset 0



Date: 14.FEB.2014 14:48:23



Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 14



Date: 14.FEB.2014 14:57:32

Higher Band Edge Plot for 16QAM-RB Size 15, RB Offset 0

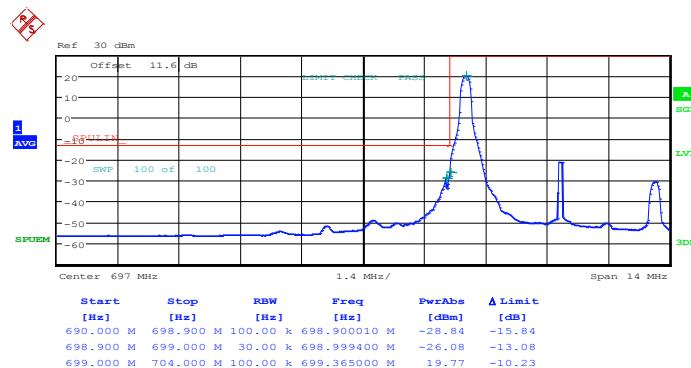


Date: 14.FEB.2014 14:56:48



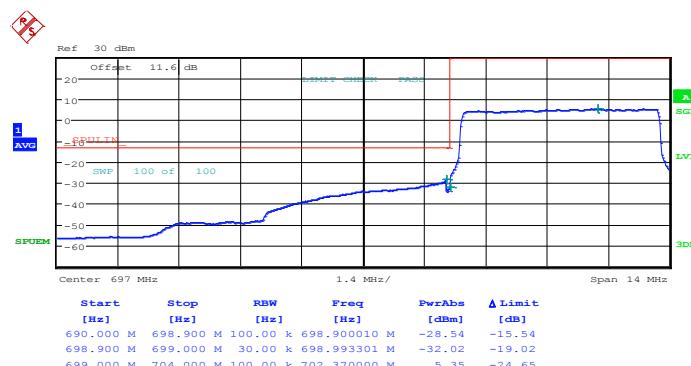
Band :	LTE Band 12	Band Width :	5MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 14.FEB.2014 15:04:24

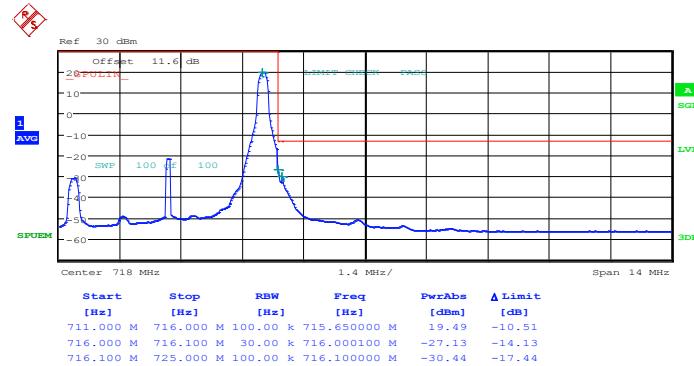
Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Date: 14.FEB.2014 15:01:53



Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



Date: 14.FEB.2014 15:12:14

Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0

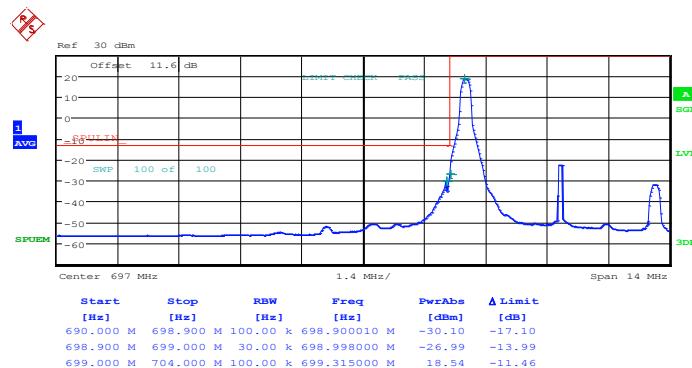


Date: 14.FEB.2014 15:11:26



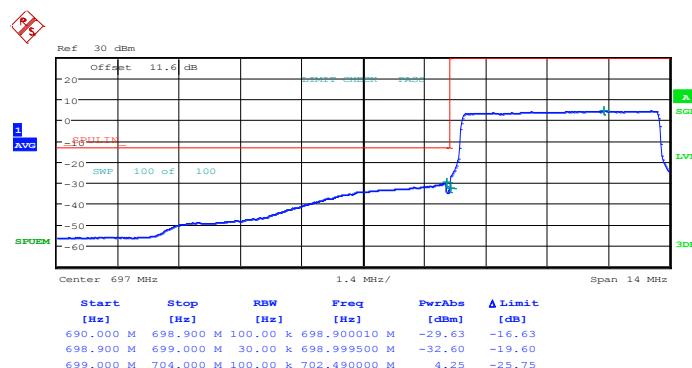
Band :	LTE Band 12	Band Width :	5MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 14.FEB.2014 15:03:34

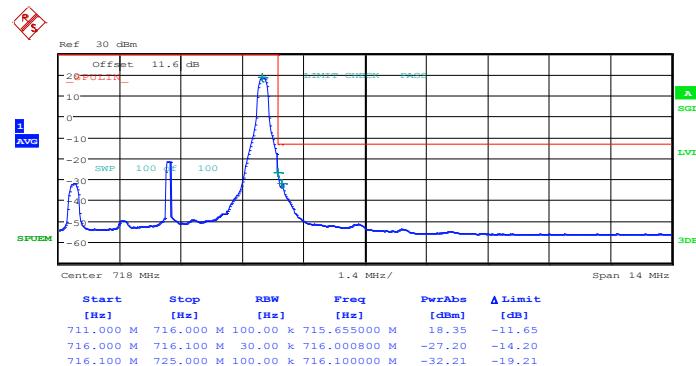
Lower Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



Date: 14.FEB.2014 15:02:44

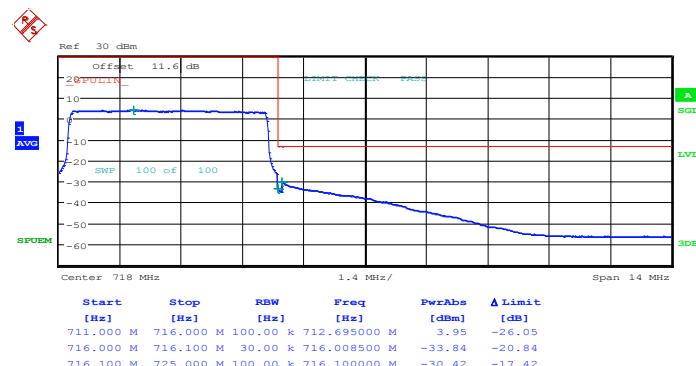


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 49



Date: 14.FEB.2014 15:13:01

Higher Band Edge Plot for 16QAM-RB Size 50, RB Offset 0

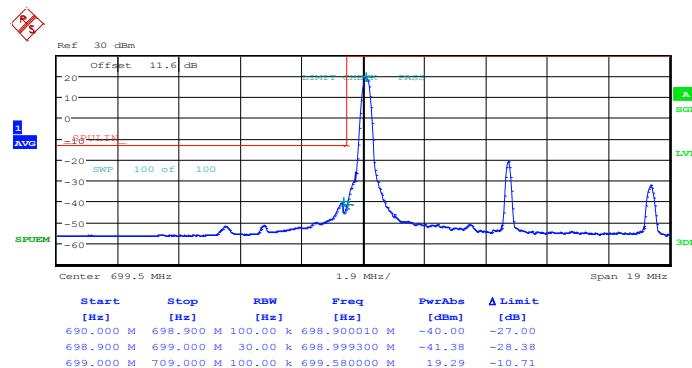


Date: 14.FEB.2014 15:20:56



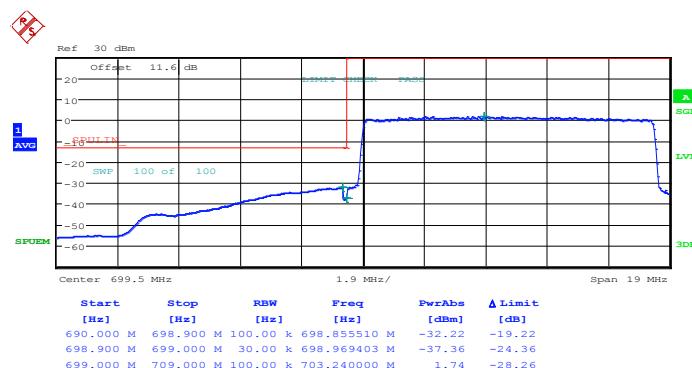
Band :	LTE Band 12	Band Width :	10MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 14.FEB.2014 15:40:56

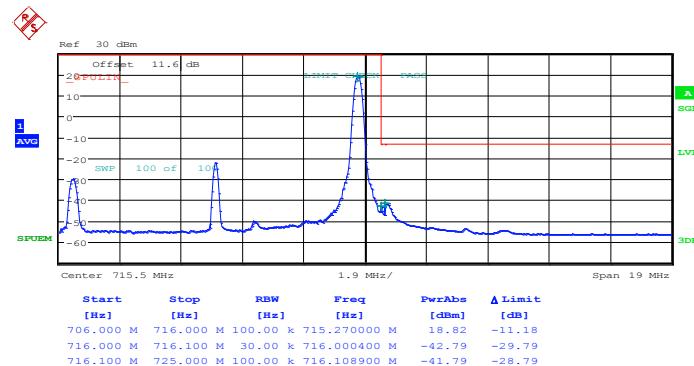
Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Date: 14.FEB.2014 15:38:46

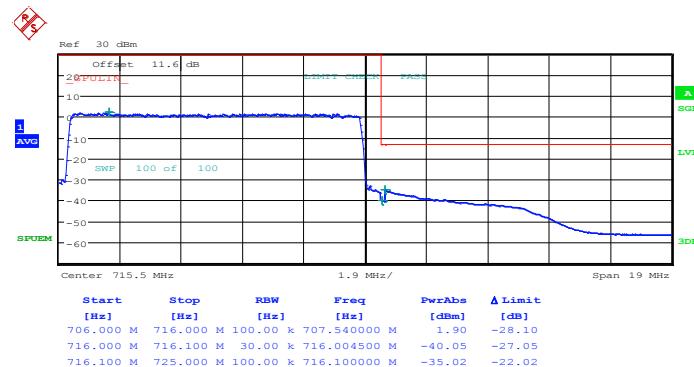


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



Date: 14.FEB.2014 15:49:08

Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0

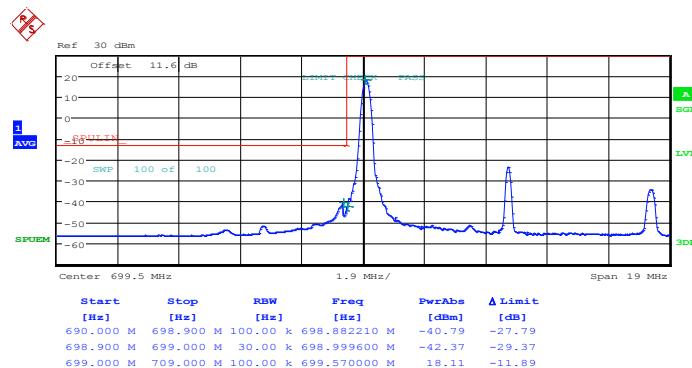


Date: 14.FEB.2014 15:54:22



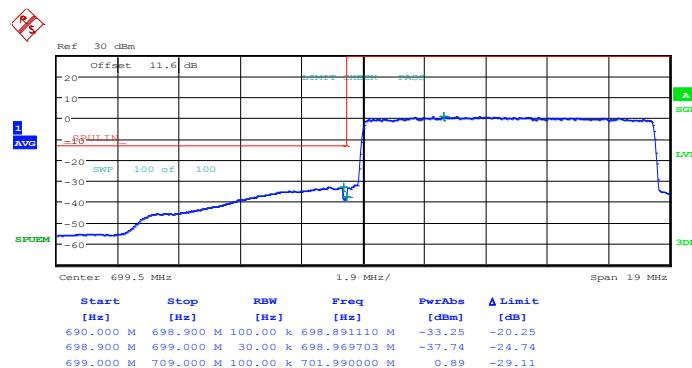
Band :	LTE Band 7	Band Width :	10MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 14.FEB.2014 15:40:13

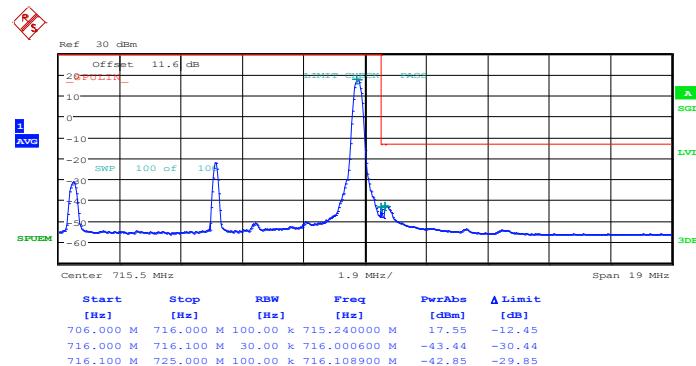
Lower Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



Date: 14.FEB.2014 15:39:29

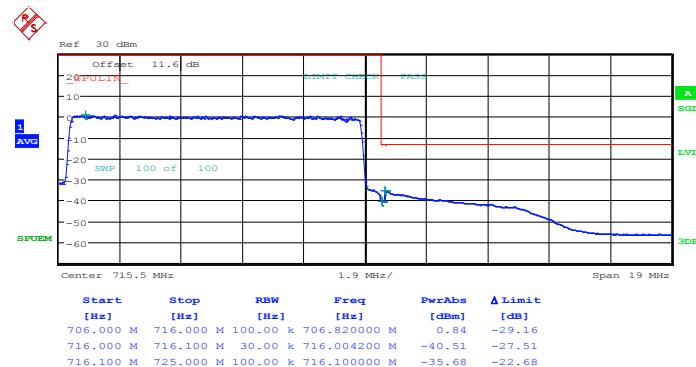


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 49



Date: 14.FEB.2014 15:48:25

Higher Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



Date: 14.FEB.2014 15:47:42

3.5 Conducted Spurious Emission Measurement

3.5.1 Description of Conducted Spurious Emission Measurement

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 9 kHz up to a frequency including its 10th harmonic.

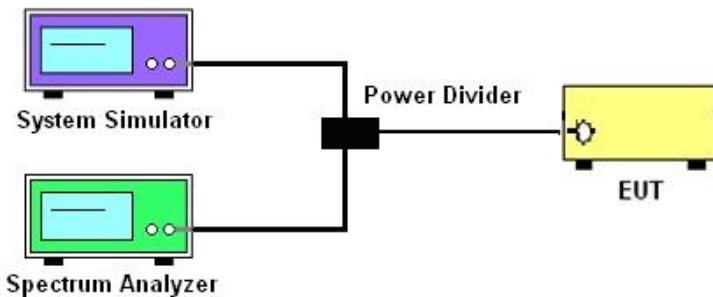
3.5.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.5.3 Test Procedures

1. The EUT was connected to spectrum analyzer and base station via power divider.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator.
The path loss was compensated to the results for each measurement.
3. The middle channel for the highest RF power within the transmitting frequency was measured.
4. The conducted spurious emission for the whole frequency range was taken.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
7. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [43 + 10\log(P)]$ (dB)
 $= [30 + 10\log(P)]$ (dBm) - $[43 + 10\log(P)]$ (dB)
 $= -13$ dBm.

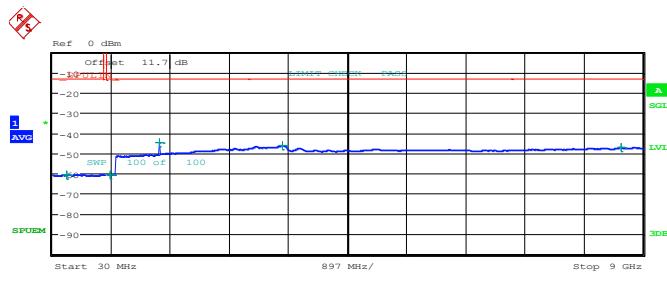
3.5.4 Test Setup



3.5.5 Test Result (Plots) of Conducted Spurious Emission

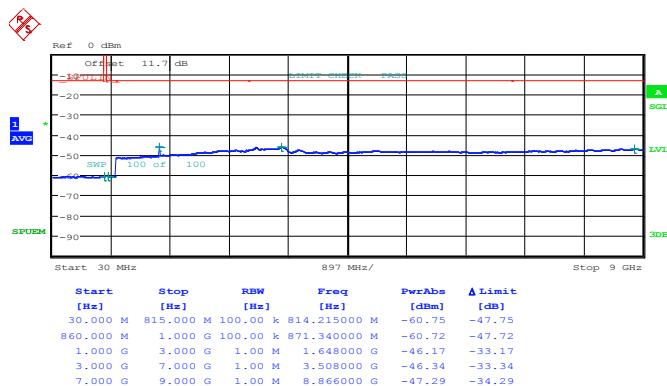
Band :	LTE Band 5	Channel :	CH20407 (Low)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 13:00:23

16QAM (RB Size 1, RB Offset 0)

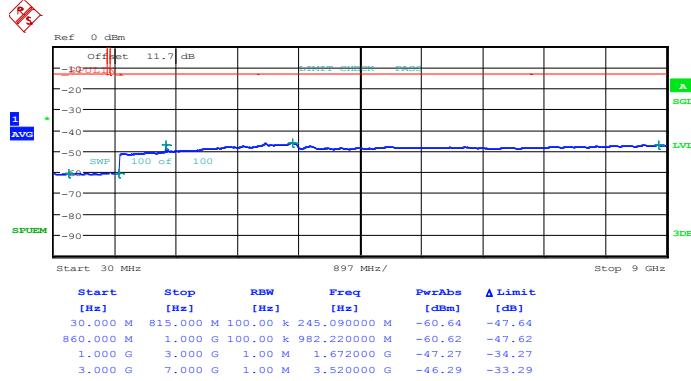


Date: 14.FEB.2014 13:01:19



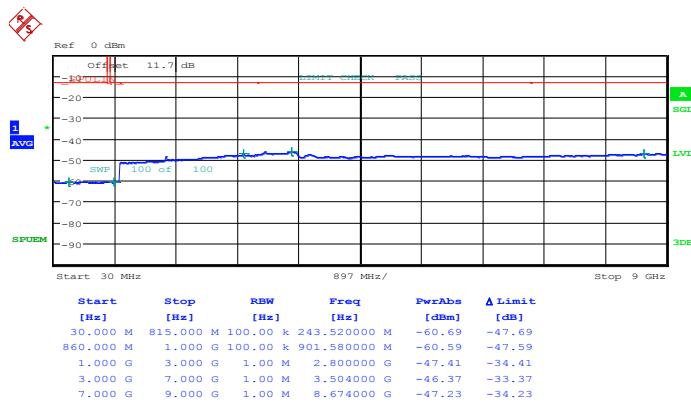
Band :	LTE Band 5	Channel :	CH20525 (Middle)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 13:03:05

16QAM (RB Size 1, RB Offset 0)

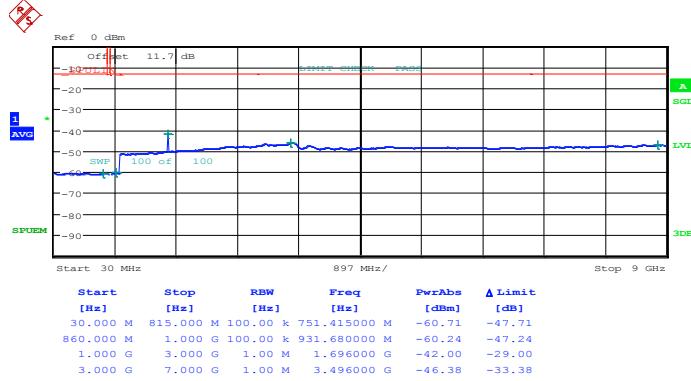


Date: 14.FEB.2014 13:04:01



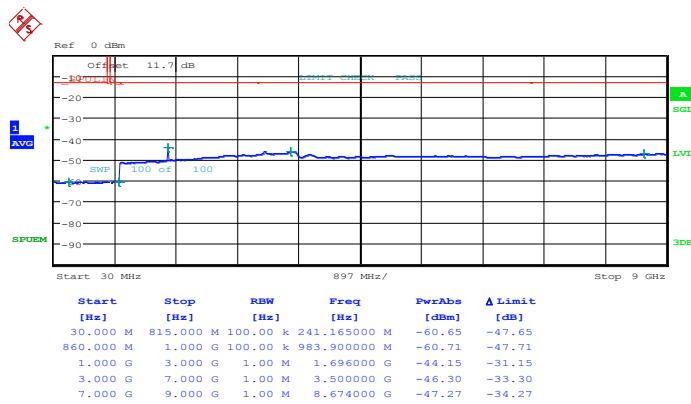
Band :	LTE Band 5	Channel :	CH20643 (High)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 13:08:39

16QAM (RB Size 1, RB Offset 0)

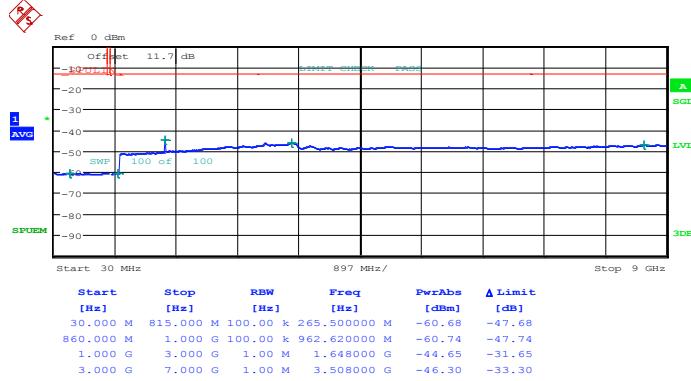


Date: 14.FEB.2014 13:09:35



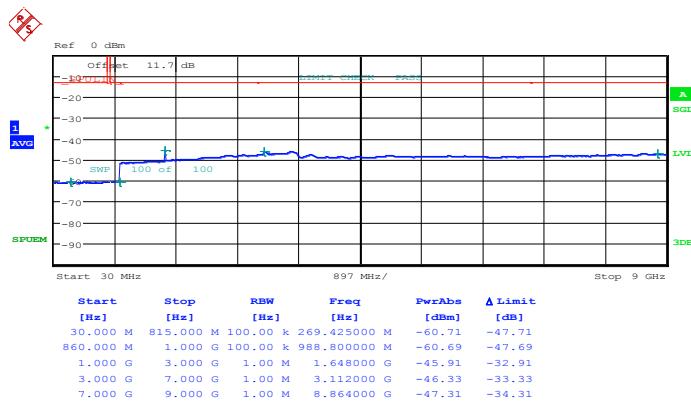
Band :	LTE Band 5	Channel :	CH20415 (Low)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 13:14:18

16QAM (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 13:15:14



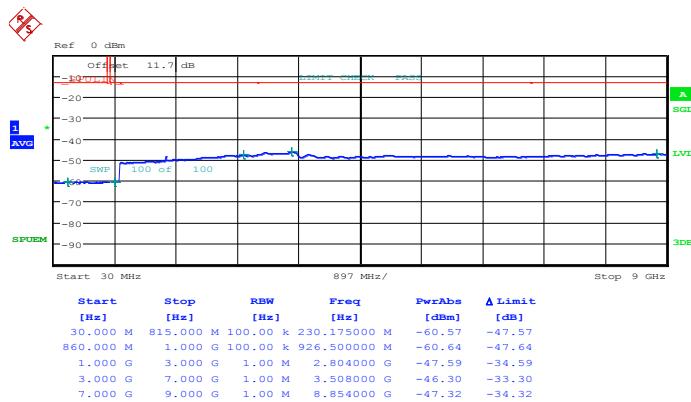
Band :	LTE Band 5	Channel :	CH20525 (Middle)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 13:17:00

16QAM (RB Size 1, RB Offset 0)

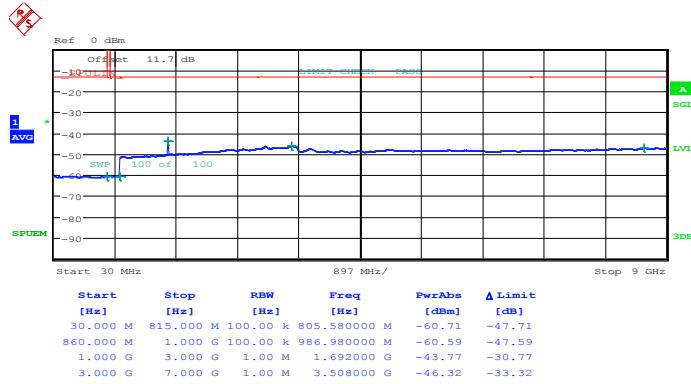


Date: 14.FEB.2014 13:17:56



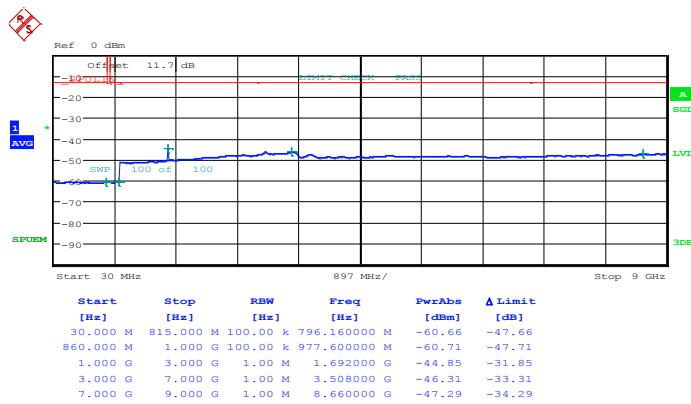
Band :	LTE Band 5	Channel :	CH20635 (High)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 13:22:34

16QAM (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 13:23:30



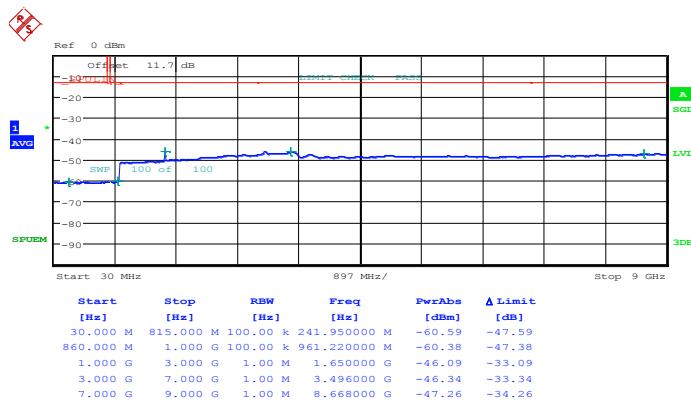
Band :	LTE Band 5	Channel :	CH20425 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 13:28:12

16QAM (RB Size 1, RB Offset 0)

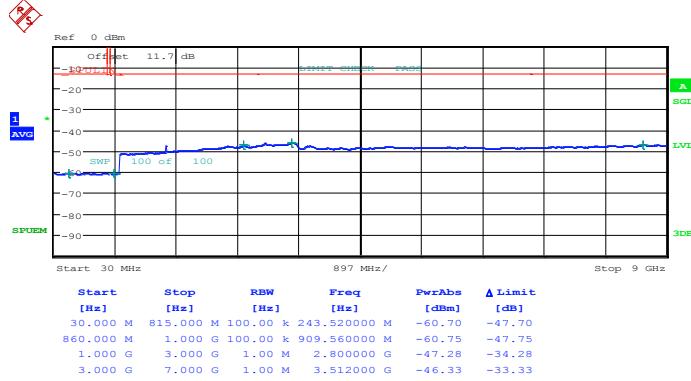


Date: 14.FEB.2014 13:29:08



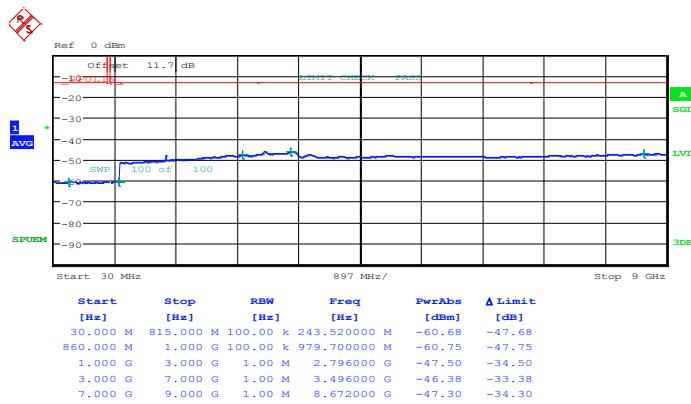
Band :	LTE Band 5	Channel :	CH20525 (Middle)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 13:30:55

16QAM (RB Size 1, RB Offset 0)

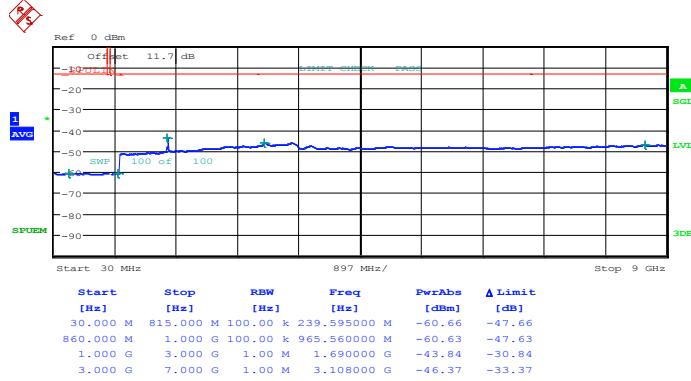


Date: 14.FEB.2014 13:31:51



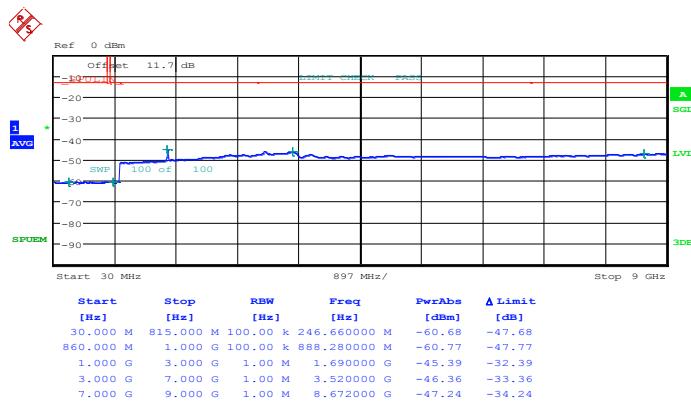
Band :	LTE Band 5	Channel :	CH20625 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 13:36:29

16QAM (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 13:37:25



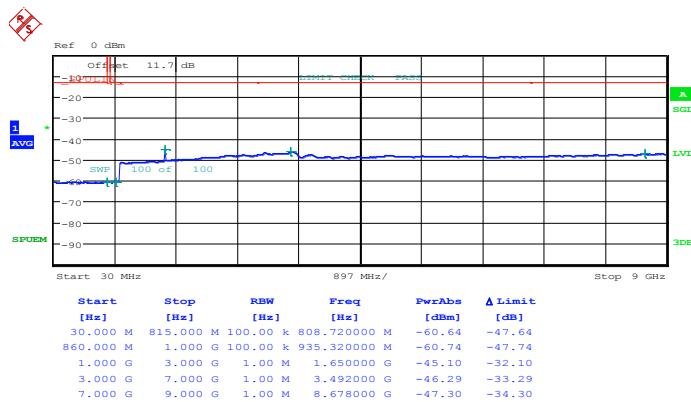
Band :	LTE Band 5	Channel :	CH20450 (Low)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 13:42:08

16QAM (RB Size 1, RB Offset 0)

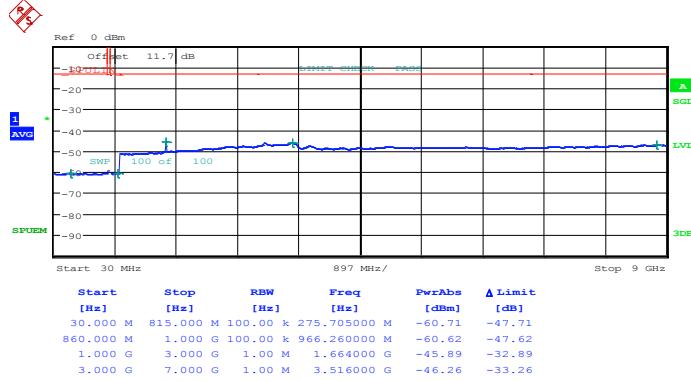


Date: 14.FEB.2014 13:43:04



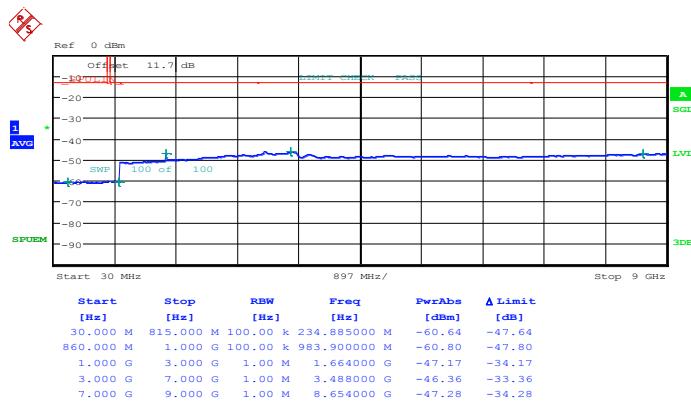
Band :	LTE Band 5	Channel :	CH20525 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 13:44:51

16QAM (RB Size 1, RB Offset 0)

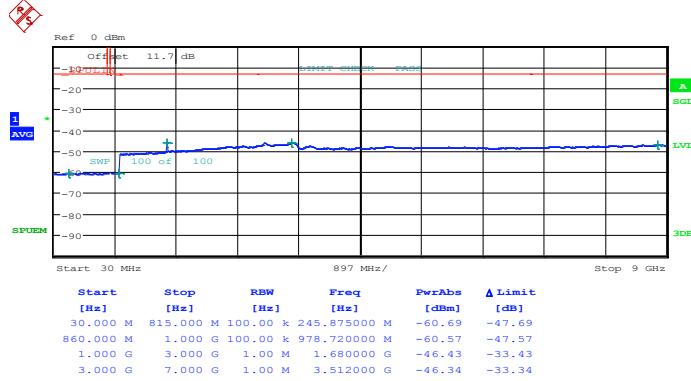


Date: 14.FEB.2014 13:45:47



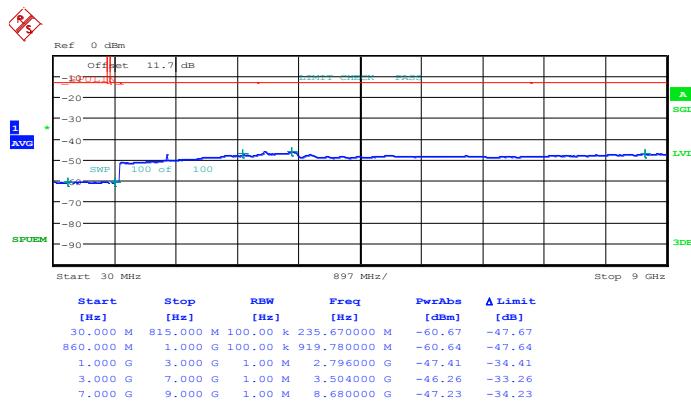
Band :	LTE Band 5	Channel :	CH20600 (High)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 13:50:25

16QAM (RB Size 1, RB Offset 0)

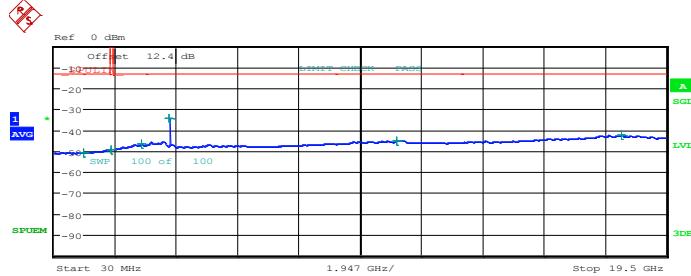


Date: 14.FEB.2014 13:51:21



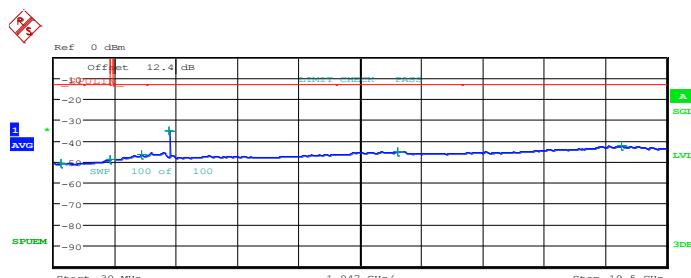
Band :	LTE Band 2	Channel :	CH18607 (Low)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 08:37:43

16QAM (RB Size 1, RB Offset 0)

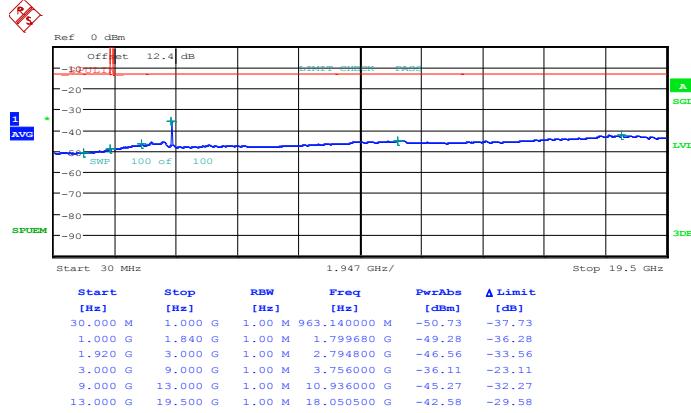


Date: 14.FEB.2014 08:38:39



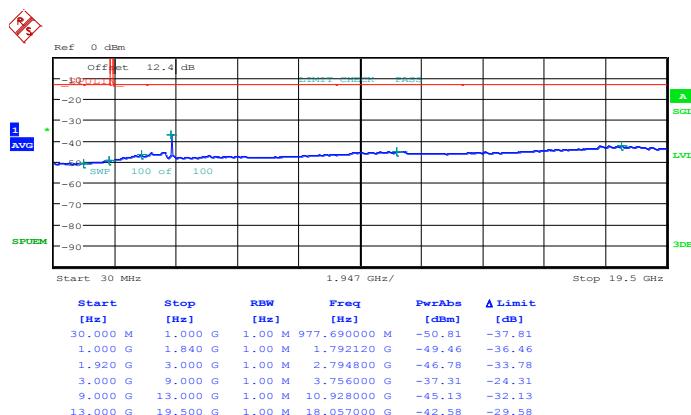
Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 08:40:26

16QAM (RB Size 1, RB Offset 0)

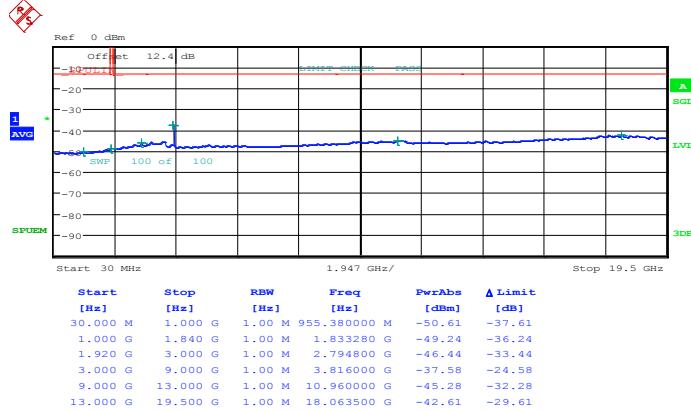


Date: 14.FEB.2014 08:41:22



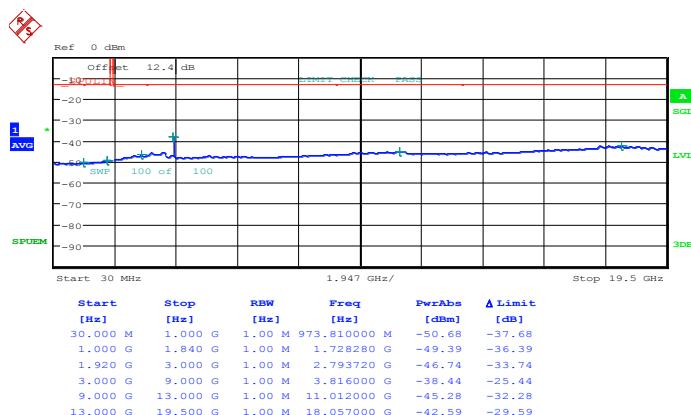
Band :	LTE Band 2	Channel :	CH19193 (High)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 08:46:00

16QAM (RB Size 1, RB Offset 0)

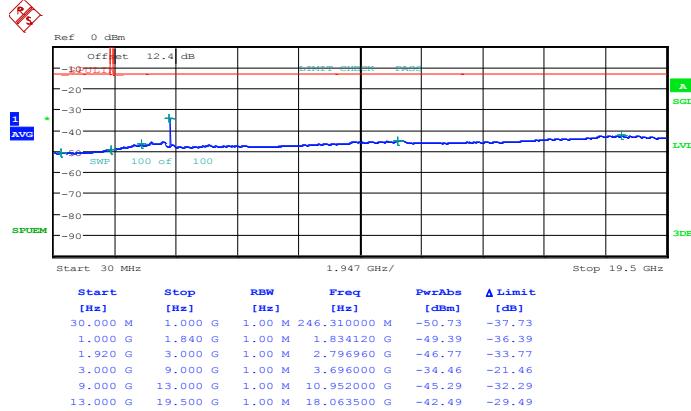


Date: 14.FEB.2014 08:46:56



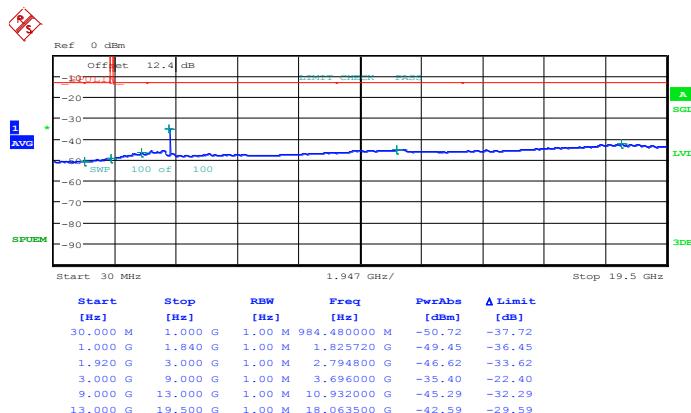
Band :	LTE Band 2	Channel :	CH18615 (Low)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 08:51:38

16QAM (RB Size 1, RB Offset 0)

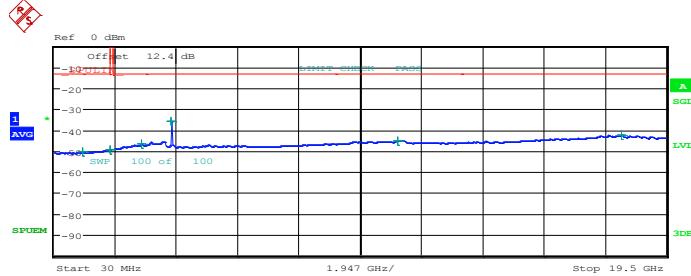


Date: 14.FEB.2014 08:52:34



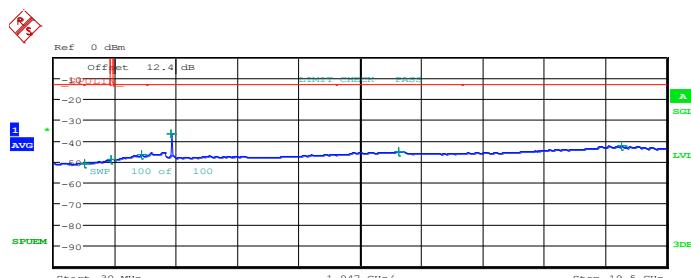
Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 08:54:21

16QAM (RB Size 1, RB Offset 0)

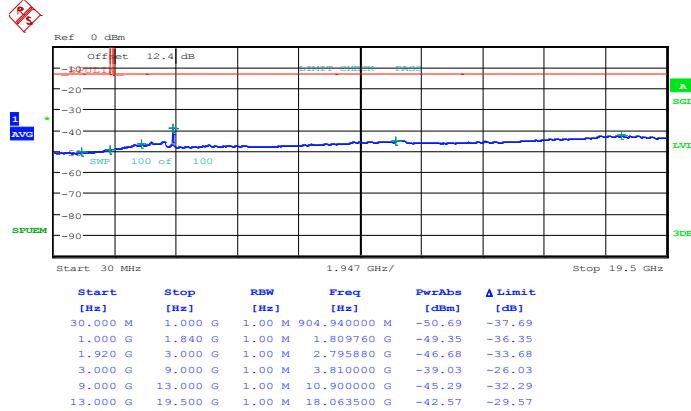


Date: 14.FEB.2014 08:55:17



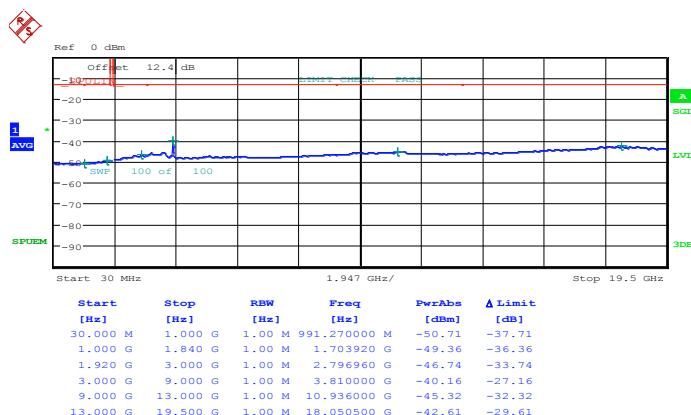
Band :	LTE Band 2	Channel :	CH19185 (High)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 08:59:55

16QAM (RB Size 1, RB Offset 0)

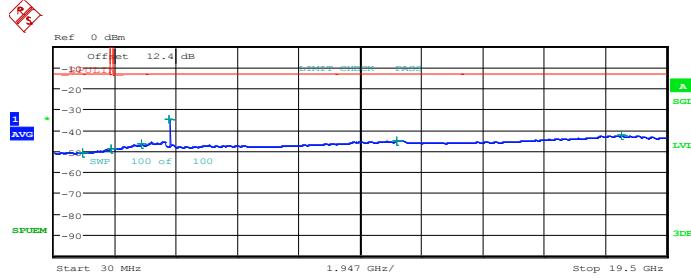


Date: 14.FEB.2014 09:00:51



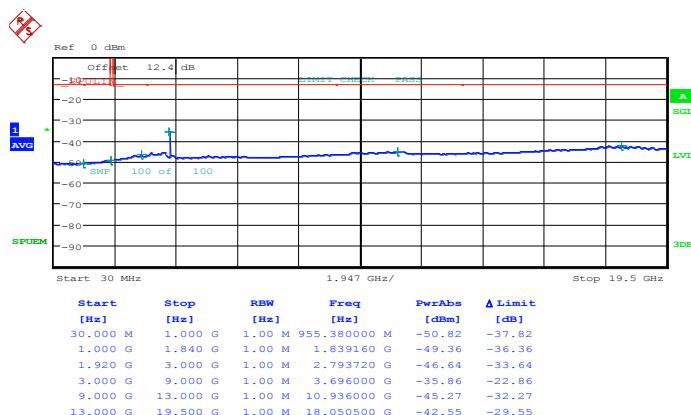
Band :	LTE Band 2	Channel :	CH18625 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 09:05:34

16QAM (RB Size 1, RB Offset 0)

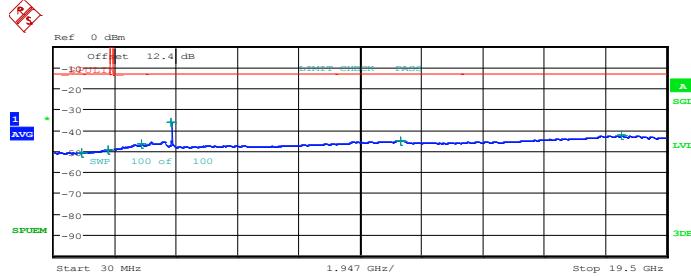


Date: 14.FEB.2014 09:06:30



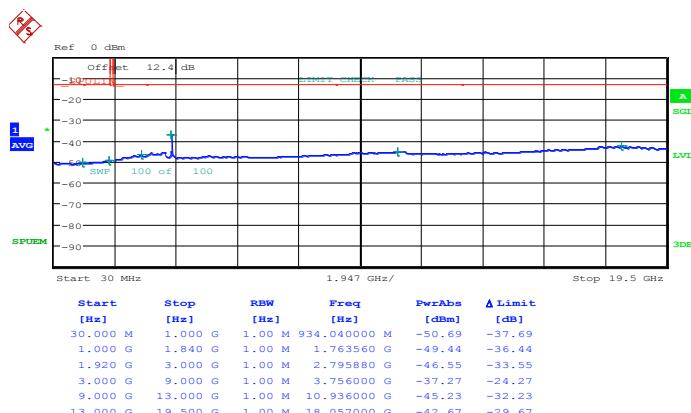
Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 09:08:16

16QAM (RB Size 1, RB Offset 0)

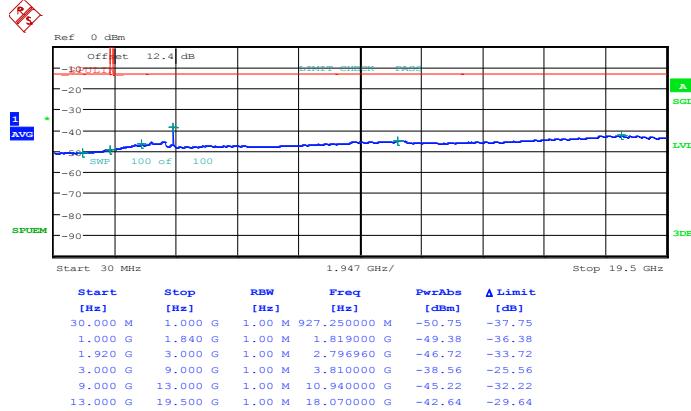


Date: 14.FEB.2014 09:09:12



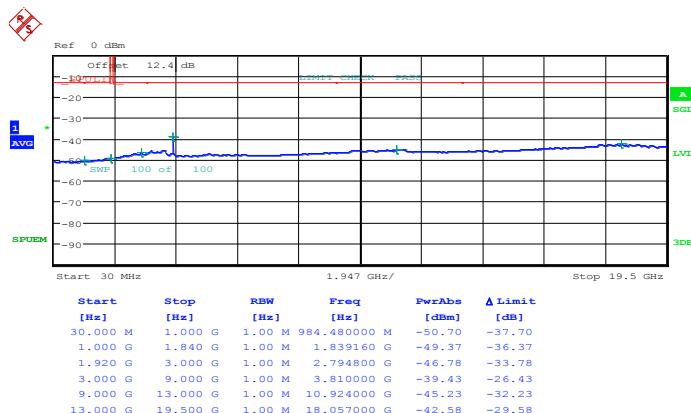
Band :	LTE Band 2	Channel :	CH19175 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 09:13:48

16QAM (RB Size 1, RB Offset 0)

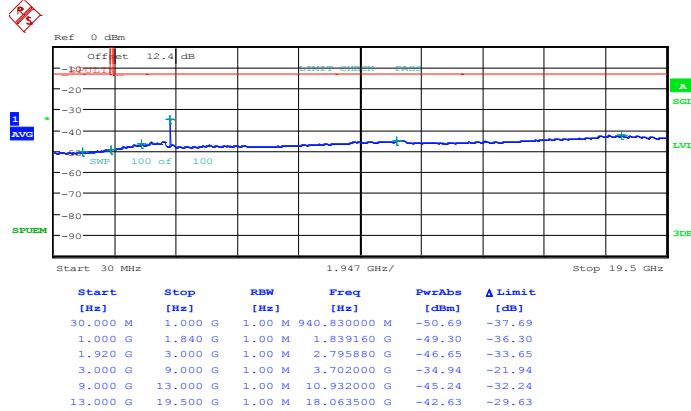


Date: 14.FEB.2014 09:14:44



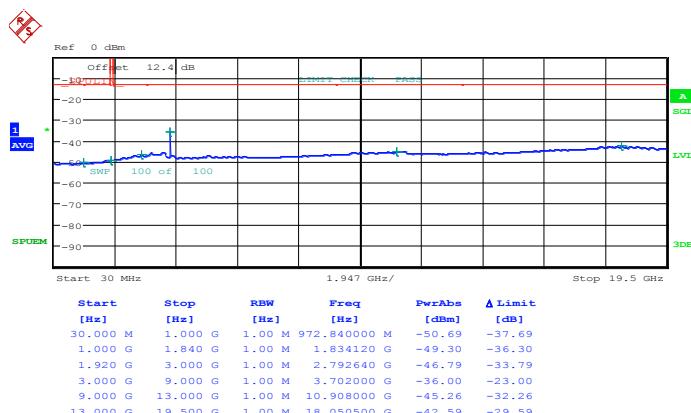
Band :	LTE Band 2	Channel :	CH18650 (Low)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 09:19:20

16QAM (RB Size 1, RB Offset 0)

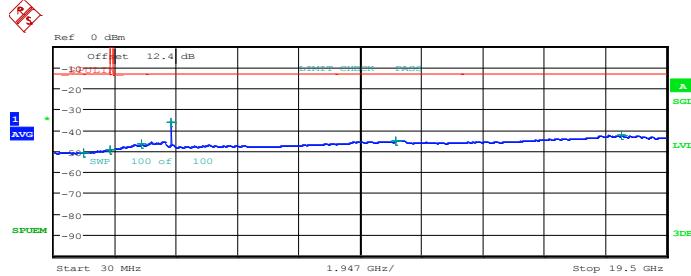


Date: 14.FEB.2014 09:20:16



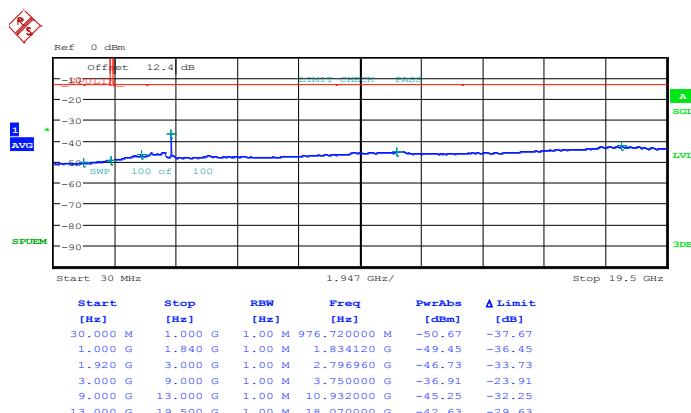
Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 09:32:18

16QAM (RB Size 1, RB Offset 0)

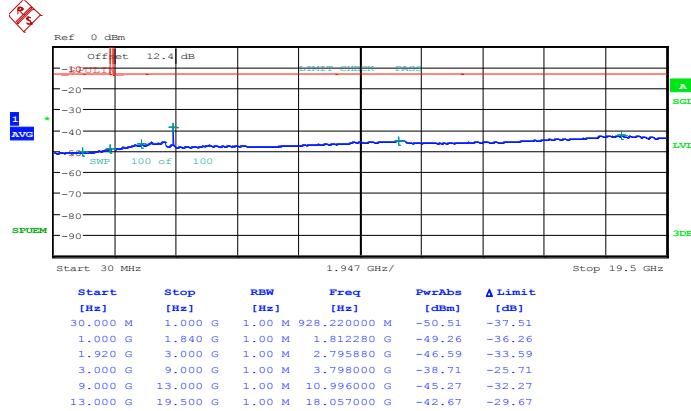


Date: 14.FEB.2014 09:33:15



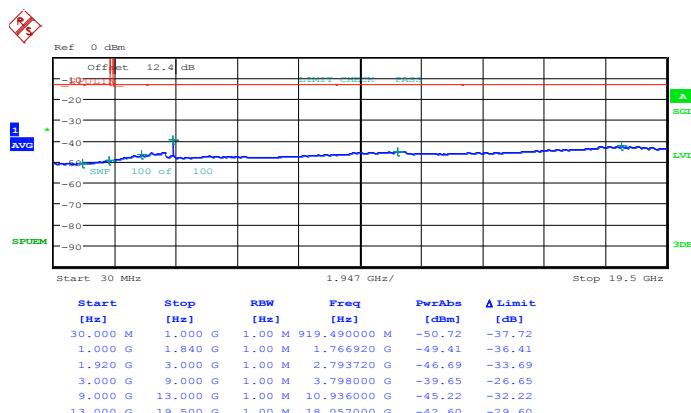
Band :	LTE Band 2	Channel :	CH19150 (High)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 09:37:53

16QAM (RB Size 1, RB Offset 0)

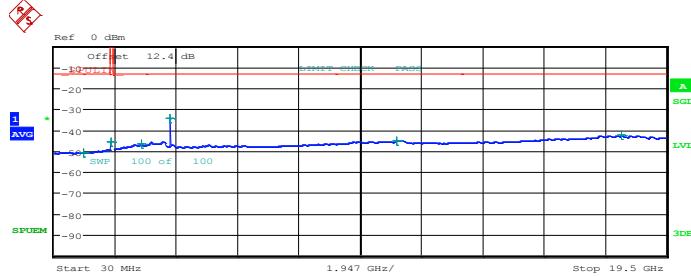


Date: 14.FEB.2014 09:38:49



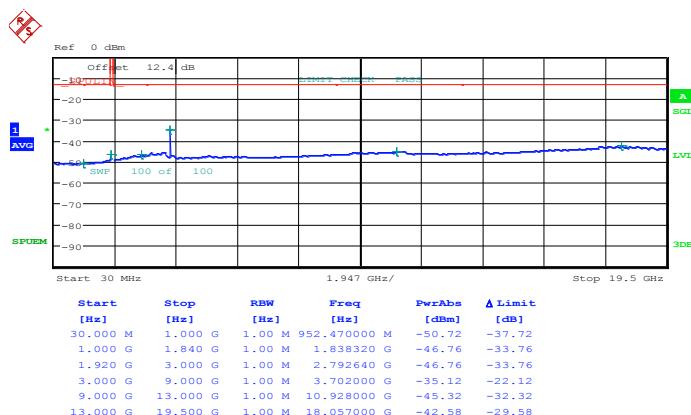
Band :	LTE Band 2	Channel :	CH18675 (Low)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 09:43:31

16QAM (RB Size 1, RB Offset 0)

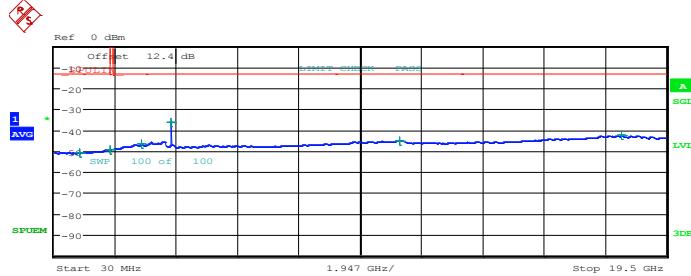


Date: 14.FEB.2014 09:44:28



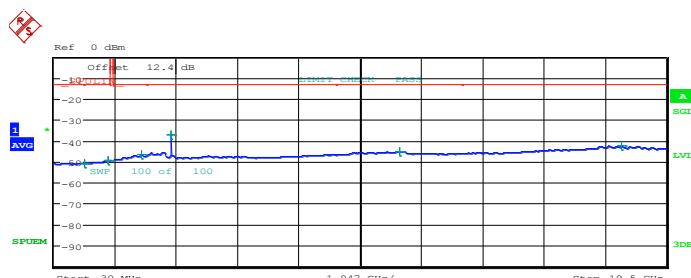
Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 09:46:14

16QAM (RB Size 1, RB Offset 0)

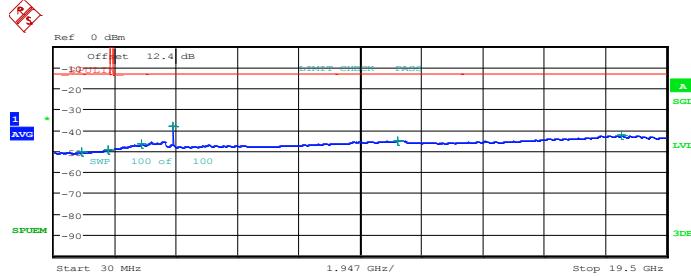


Date: 14.FEB.2014 09:47:10



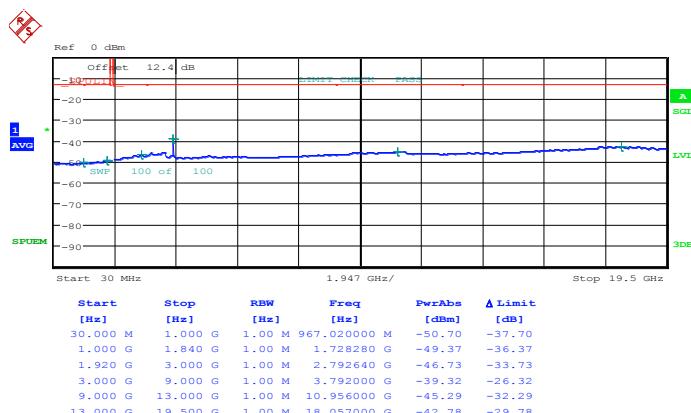
Band :	LTE Band 2	Channel :	CH19125 (High)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 09:51:48

16QAM (RB Size 1, RB Offset 0)

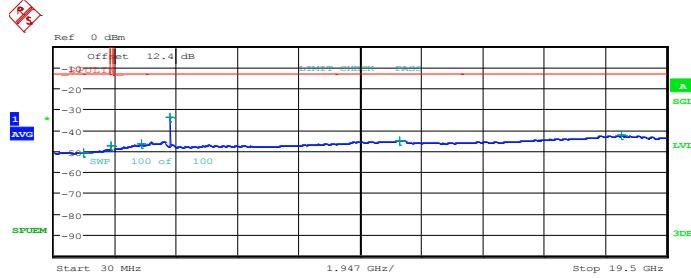


Date: 14.FEB.2014 09:52:44



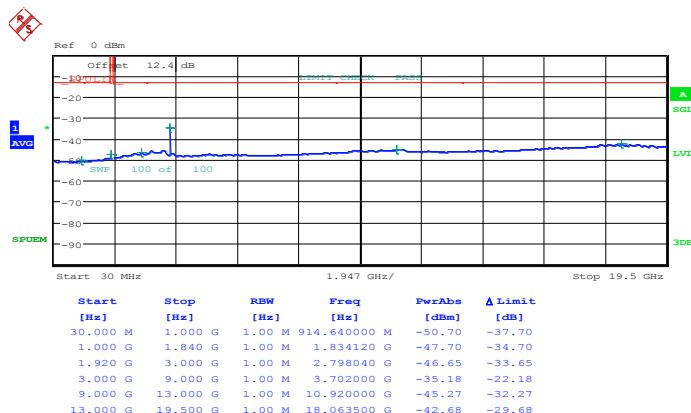
Band :	LTE Band 2	Channel :	CH18700 (Low)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 09:59:13

16QAM (RB Size 1, RB Offset 0)

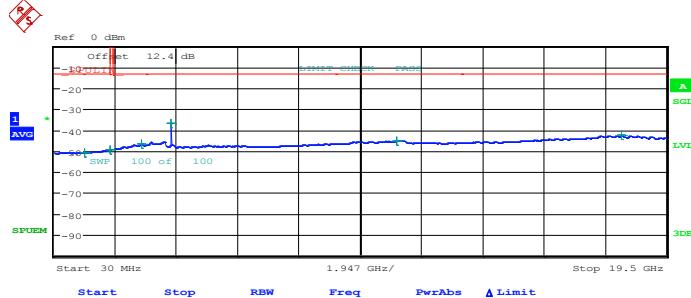


Date: 14.FEB.2014 10:00:10



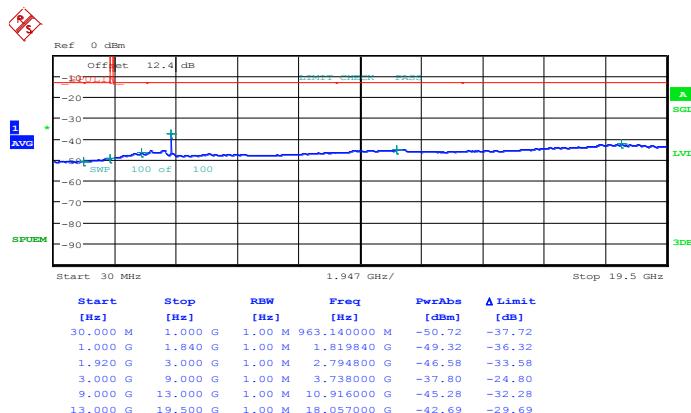
Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 10:01:56

16QAM (RB Size 1, RB Offset 0)

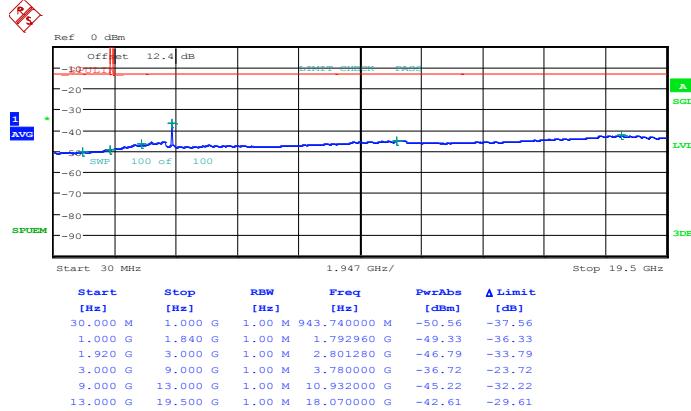


Date: 14.FEB.2014 10:02:52



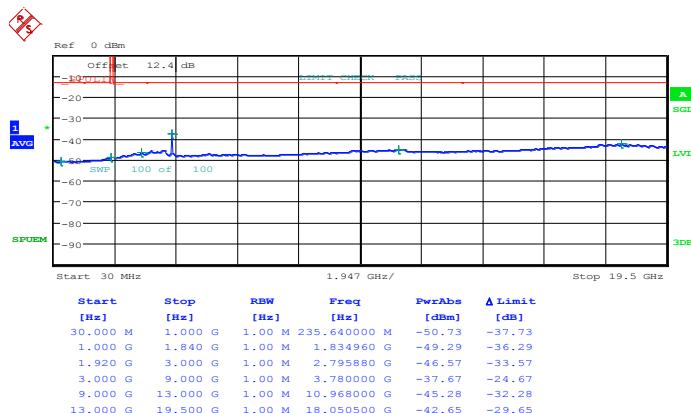
Band :	LTE Band 2	Channel :	CH19100 (High)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 10:07:31

16QAM (RB Size 1, RB Offset 0)

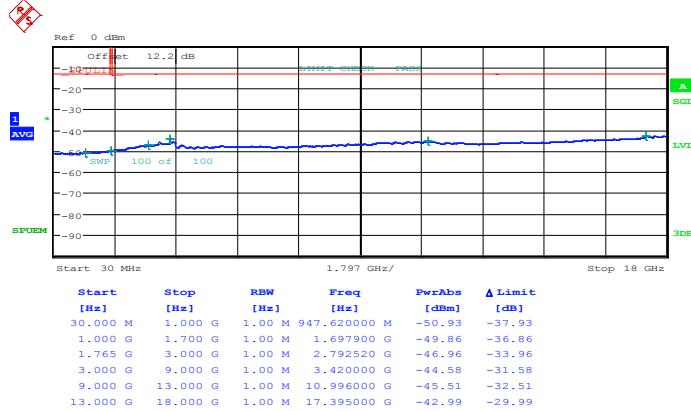


Date: 14.FEB.2014 10:08:27



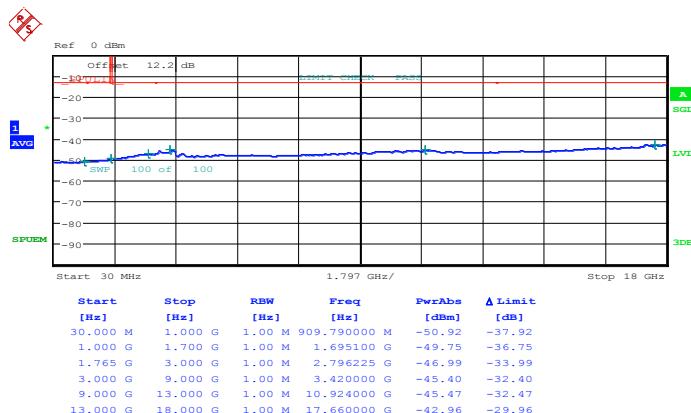
Band :	LTE Band 4	Channel :	CH19957 (Low)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 10:20:00

16QAM (RB Size 1, RB Offset 0)

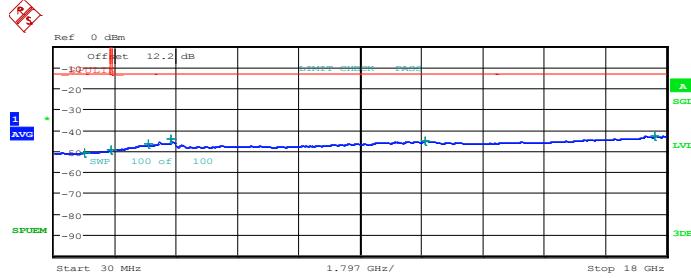


Date: 14.FEB.2014 10:20:57



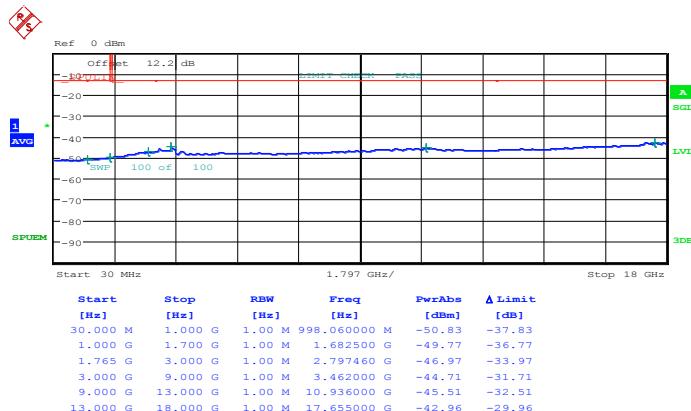
Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 10:22:43

16QAM (RB Size 1, RB Offset 0)

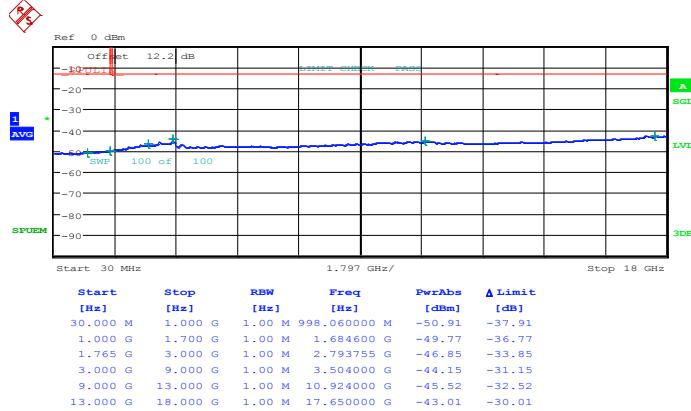


Date: 14.FEB.2014 10:23:40



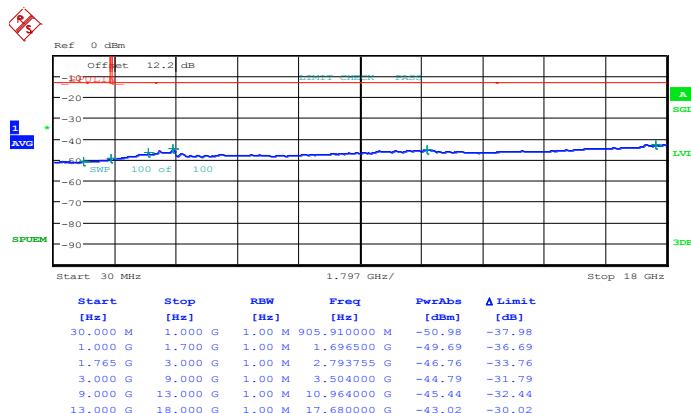
Band :	LTE Band 4	Channel :	CH20393 (High)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 10:28:18

16QAM (RB Size 1, RB Offset 0)

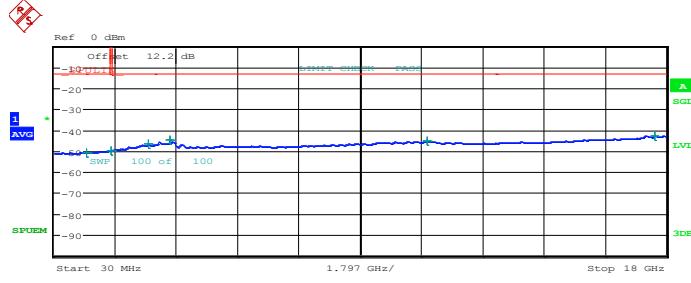


Date: 14.FEB.2014 10:29:15



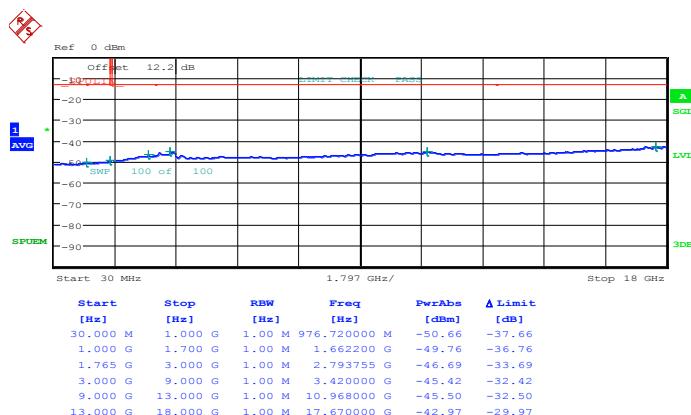
Band :	LTE Band 4	Channel :	CH19965 (Low)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 10:33:57

16QAM (RB Size 1, RB Offset 0)

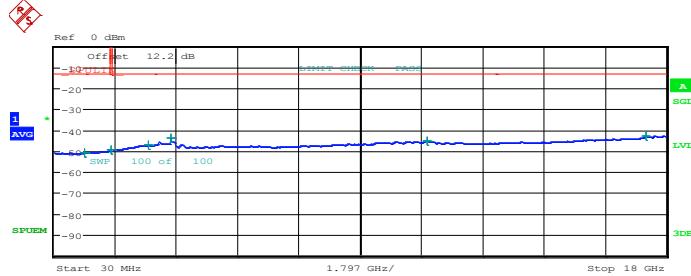


Date: 14.FEB.2014 10:34:54



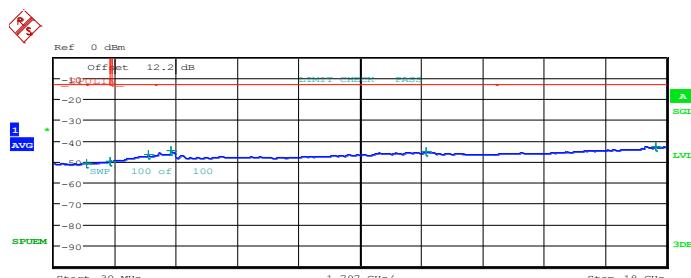
Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 10:36:40

16QAM (RB Size 1, RB Offset 0)

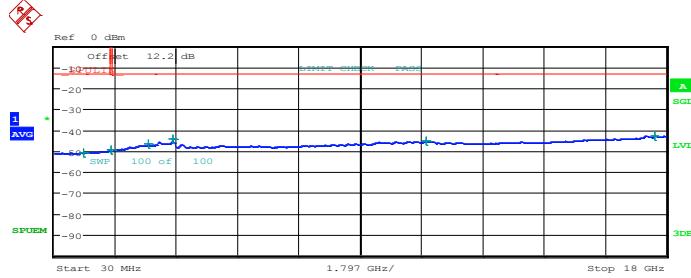


Date: 14.FEB.2014 10:37:37



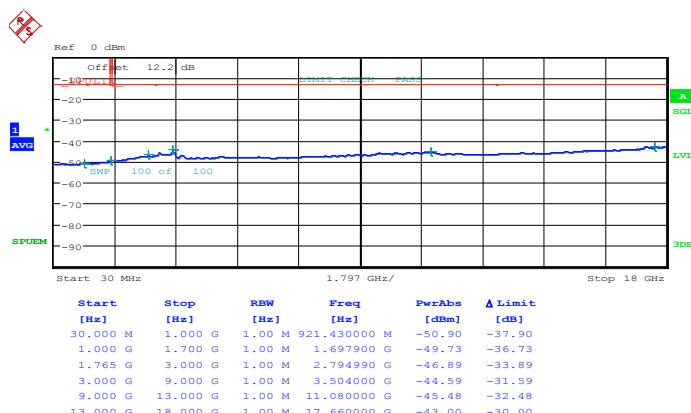
Band :	LTE Band 4	Channel :	CH20385 (High)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 10:42:15

16QAM (RB Size 1, RB Offset 0)

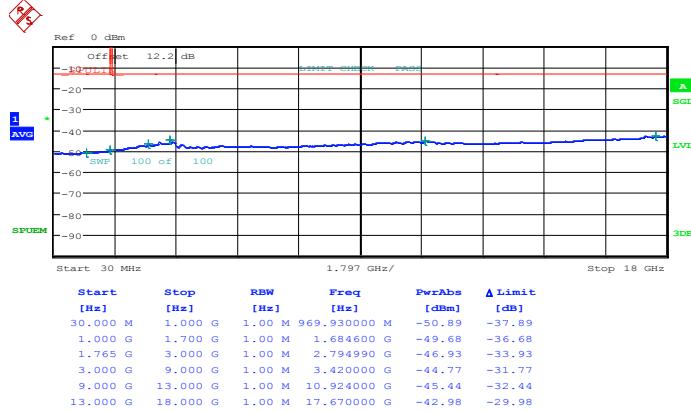


Date: 14.FEB.2014 10:43:11



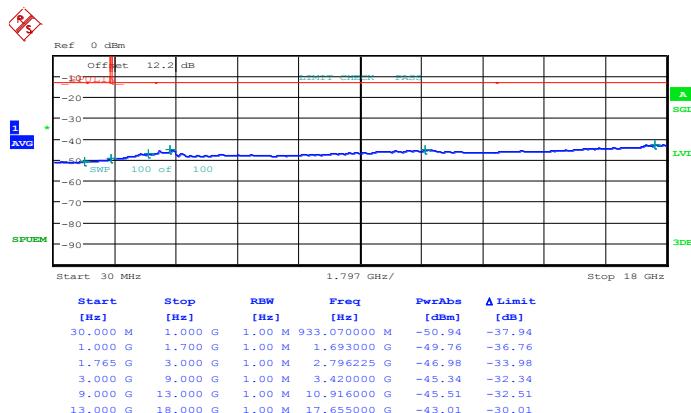
Band :	LTE Band 4	Channel :	CH19975 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 10:47:54

16QAM (RB Size 1, RB Offset 0)

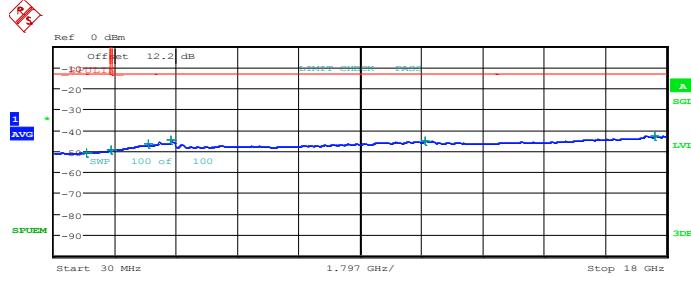


Date: 14.FEB.2014 10:48:50



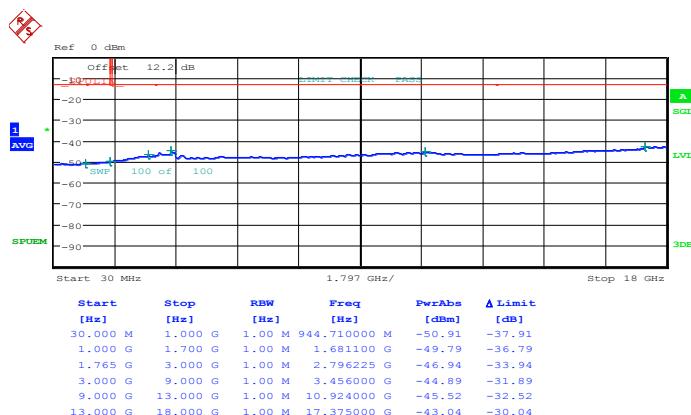
Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 10:50:37

16QAM (RB Size 1, RB Offset 0)

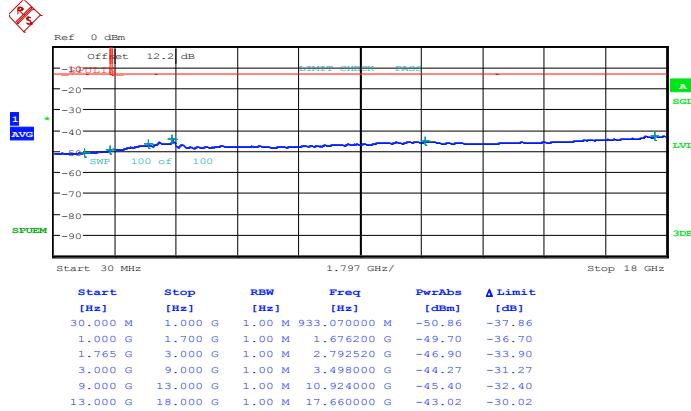


Date: 14.FEB.2014 10:51:34



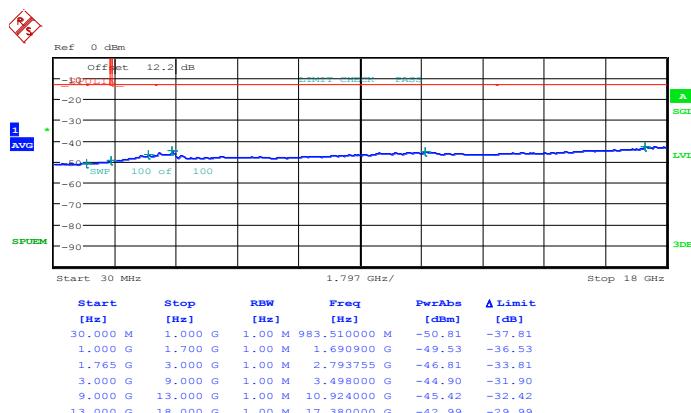
Band :	LTE Band 4	Channel :	CH20375 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 10:56:12

16QAM (RB Size 1, RB Offset 0)

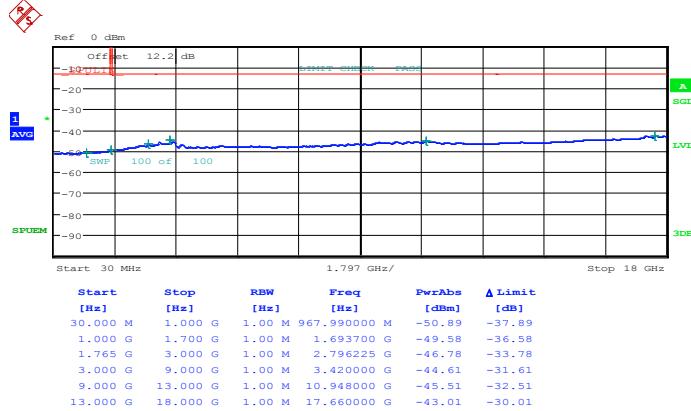


Date: 14.FEB.2014 10:57:09



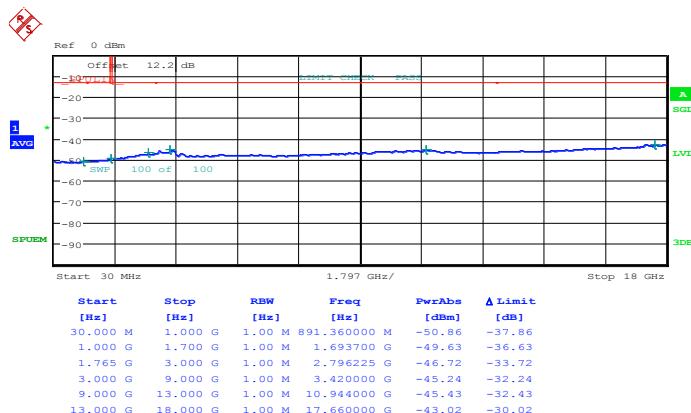
Band :	LTE Band 4	Channel :	CH20000 (Low)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 11:01:51

16QAM (RB Size 1, RB Offset 0)

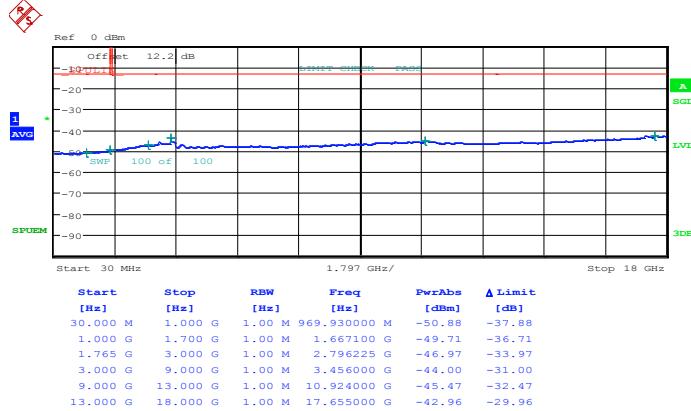


Date: 14.FEB.2014 11:02:48



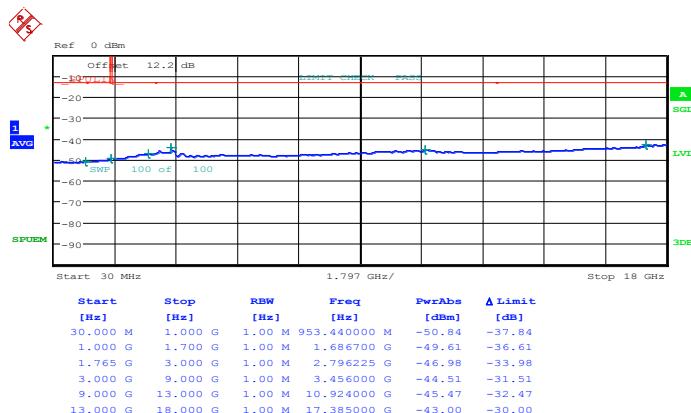
Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 11:04:34

16QAM (RB Size 1, RB Offset 0)

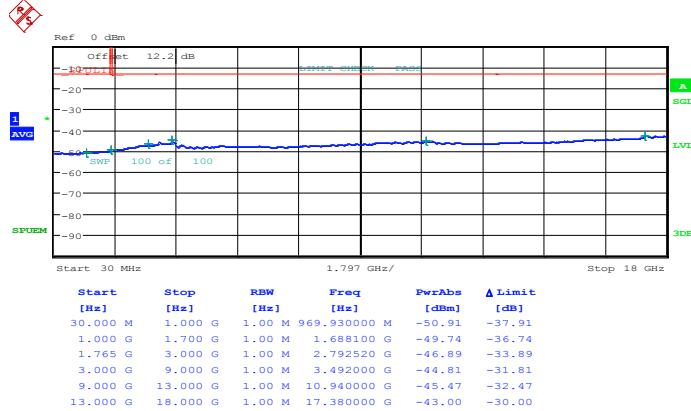


Date: 14.FEB.2014 11:05:31



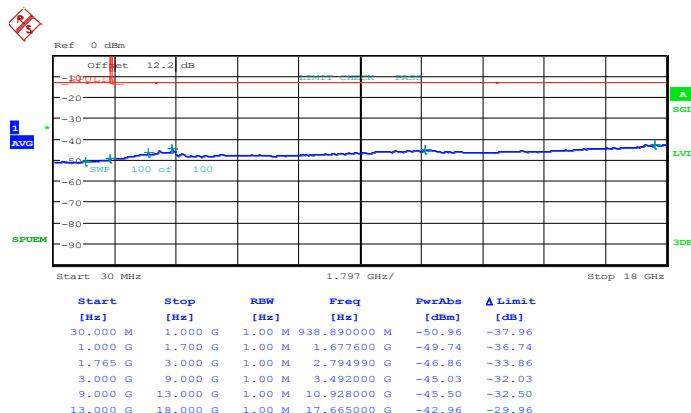
Band :	LTE Band 4	Channel :	CH20350 (High)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 11:10:09

16QAM (RB Size 1, RB Offset 0)

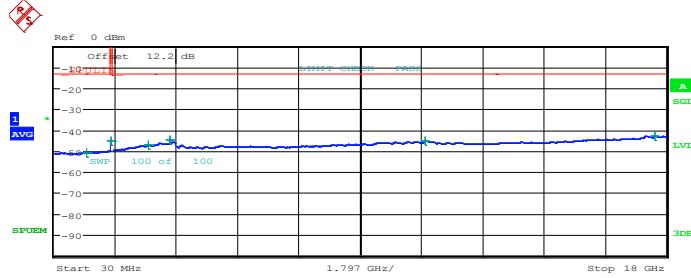


Date: 14.FEB.2014 11:11:06



Band :	LTE Band 4	Channel :	CH20025 (Low)
Band Width :	15MHz		

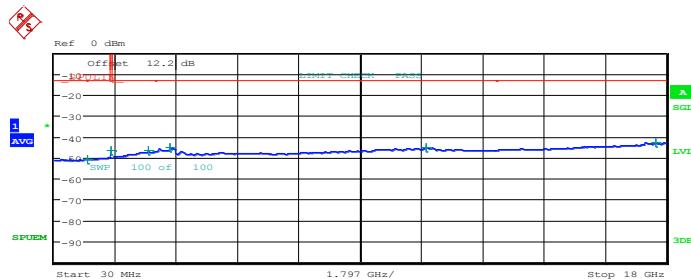
QPSK (RB Size 1, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	1.00 M	979.630000 M	-50.97	-37.97
1.000 G	1.700 G	1.00 M	1.697900 G	-45.47	-32.47
1.765 G	3.000 G	1.00 M	2.794990 G	-46.99	-33.99
3.000 G	9.000 G	1.00 M	3.420000 G	-44.78	-31.78
9.000 G	13.000 G	1.00 M	10.924000 G	-45.51	-32.51
13.000 G	18.000 G	1.00 M	17.655000 G	-42.96	-29.96

Date: 14.FEB.2014 11:15:48

16QAM (RB Size 1, RB Offset 0)



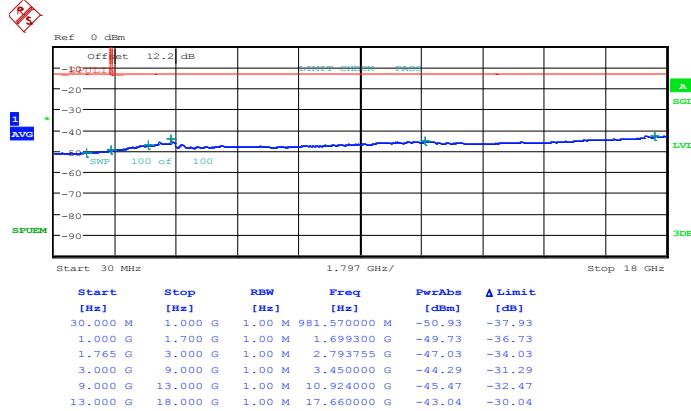
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	1.00 M	998.060000 M	-50.80	-37.80
1.000 G	1.700 G	1.00 M	1.697900 G	-46.71	-33.71
1.765 G	3.000 G	1.00 M	2.797460 G	-46.92	-33.92
3.000 G	9.000 G	1.00 M	3.420000 G	-45.45	-32.45
9.000 G	13.000 G	1.00 M	10.932000 G	-45.46	-32.46
13.000 G	18.000 G	1.00 M	17.670000 G	-42.99	-29.99

Date: 14.FEB.2014 11:16:44



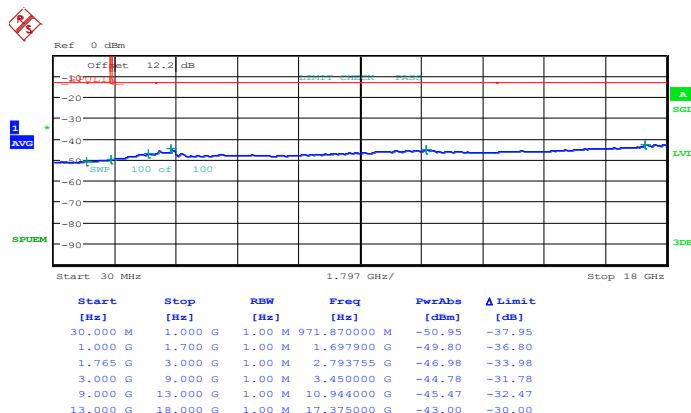
Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 11:18:31

16QAM (RB Size 1, RB Offset 0)

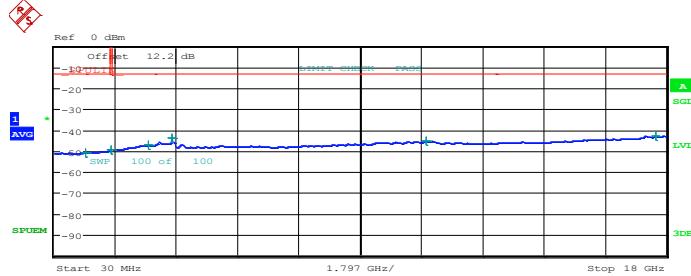


Date: 14.FEB.2014 11:19:28



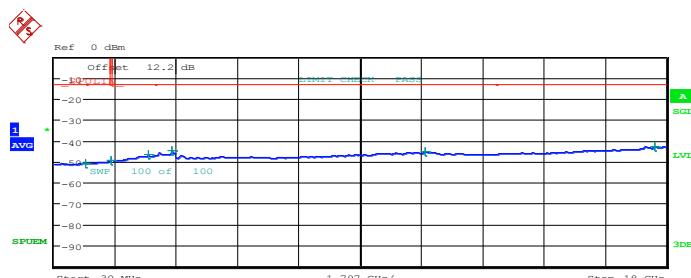
Band :	LTE Band 4	Channel :	CH20325 (High)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 11:24:07

16QAM (RB Size 1, RB Offset 0)

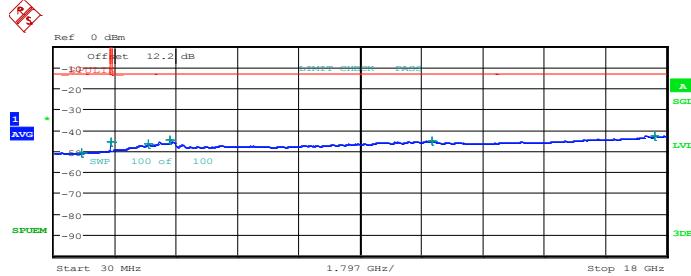


Date: 14.FEB.2014 11:25:04



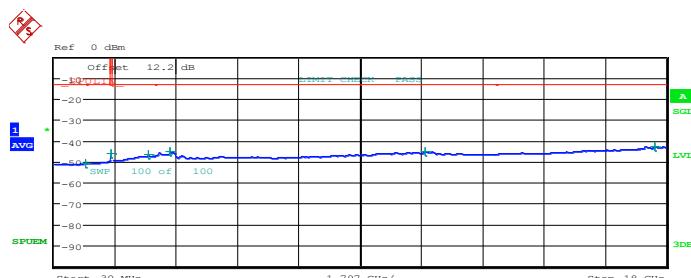
Band :	LTE Band 4	Channel :	CH20050 (Low)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 11:29:46

16QAM (RB Size 1, RB Offset 0)

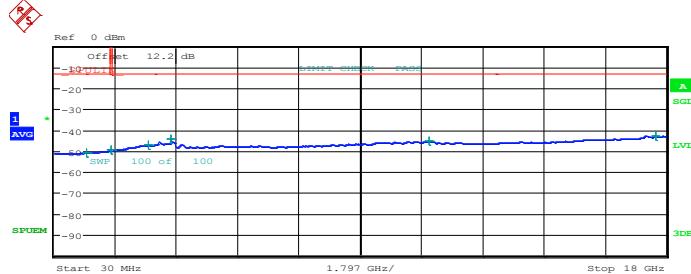


Date: 14.FEB.2014 11:30:43



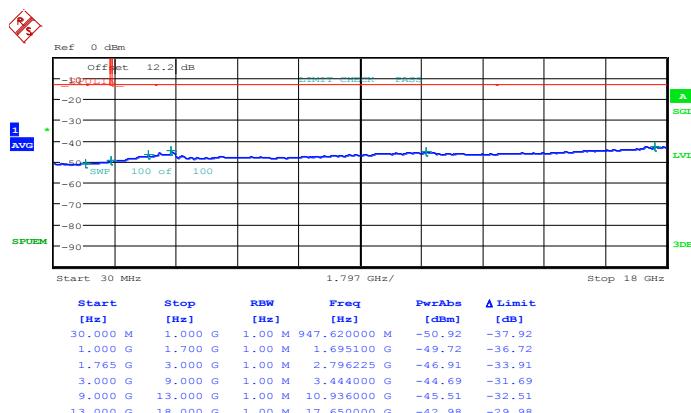
Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 11:32:29

16QAM (RB Size 1, RB Offset 0)

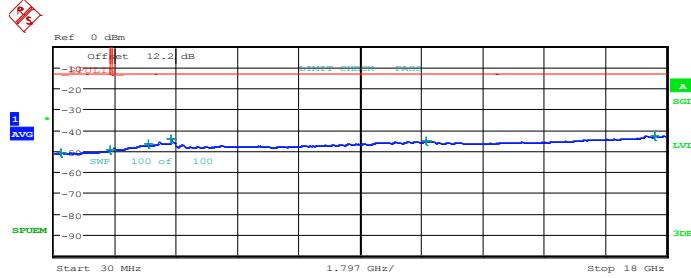


Date: 14.FEB.2014 11:33:25



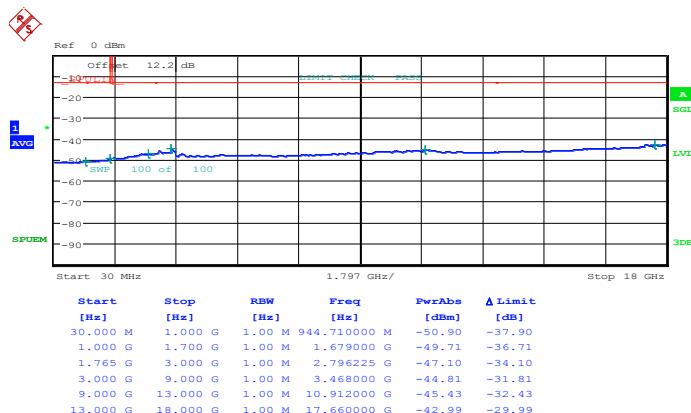
Band :	LTE Band 4	Channel :	CH20300 (High)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 11:38:04

16QAM (RB Size 1, RB Offset 0)

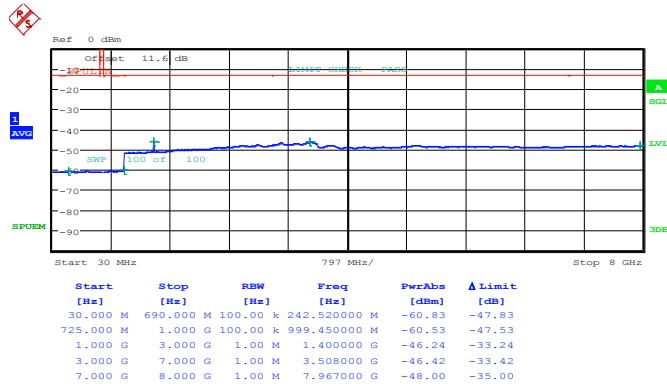


Date: 14.FEB.2014 11:39:00



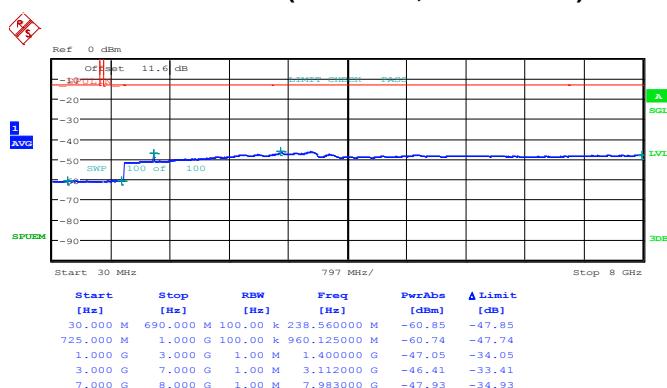
Band :	LTE Band 12	Channel :	CH23017 (Low)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 14:36:44

16QAM (RB Size 1, RB Offset 0)

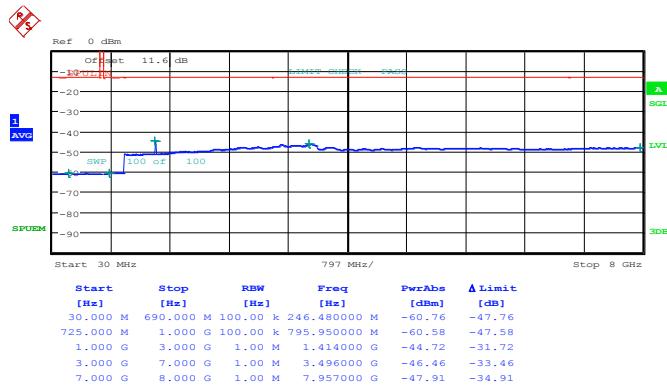


Date: 14.FEB.2014 14:37:40



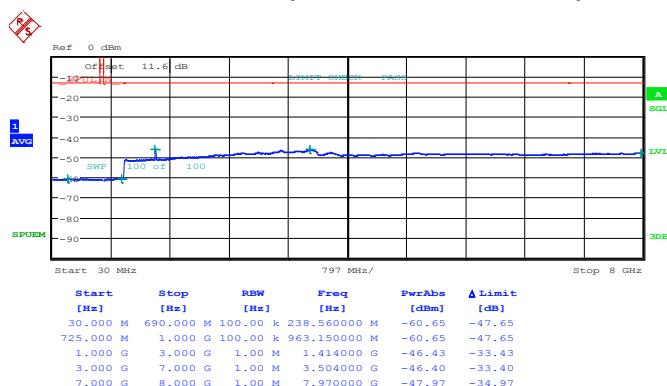
Band :	LTE Band 12	Channel :	CH23095 (Middle)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 14:40:23

16QAM (RB Size 1, RB Offset 0)

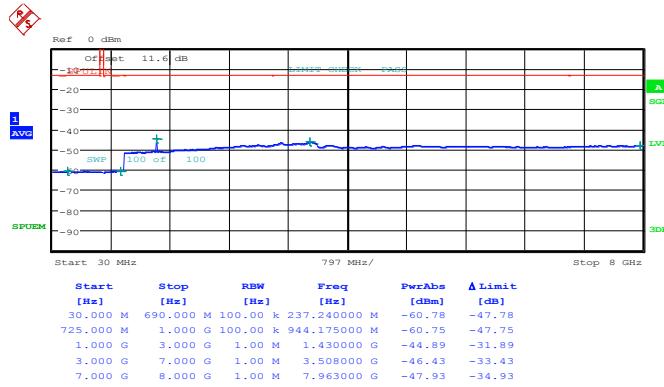


Date: 14.FEB.2014 14:39:27



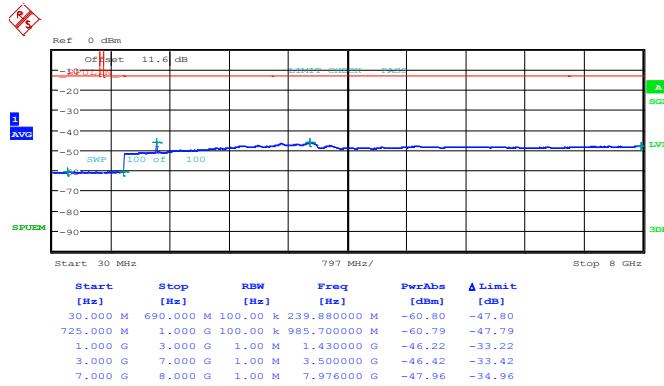
Band :	LTE Band 13	Channel :	CH23173 (High)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 14:45:01

16QAM (RB Size 1, RB Offset 0)

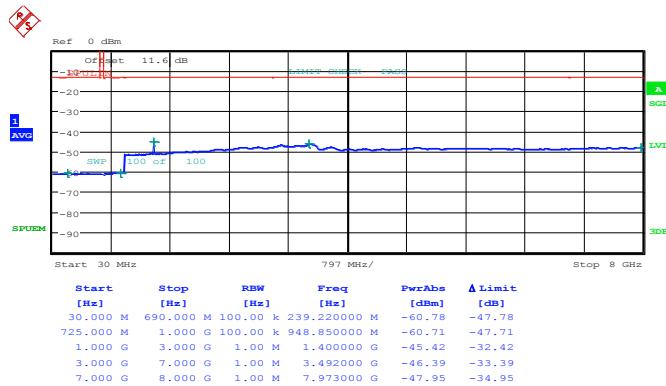


Date: 14.FEB.2014 14:45:57



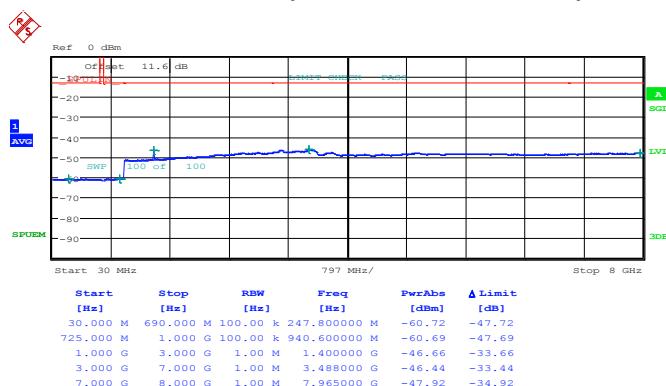
Band :	LTE Band 12	Channel :	CH23025 (Low)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 14:50:52

16QAM (RB Size 1, RB Offset 0)

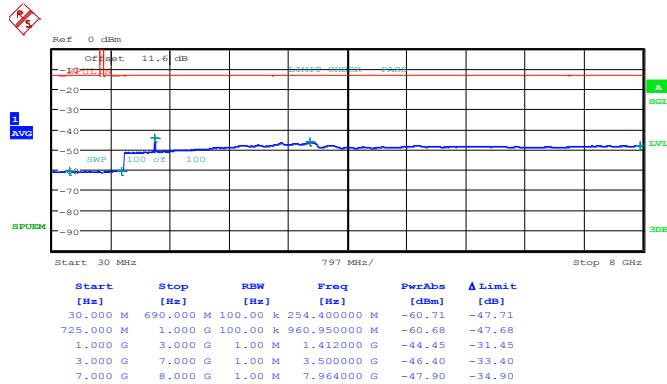


Date: 14.FEB.2014 14:51:48



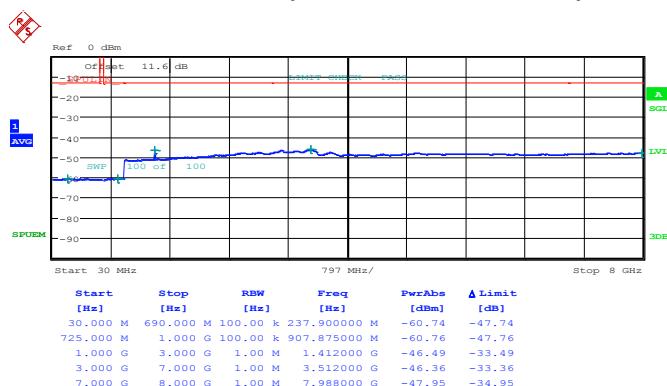
Band :	LTE Band 12	Channel :	CH23095 (Middle)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 14:54:30

16QAM (RB Size 1, RB Offset 0)

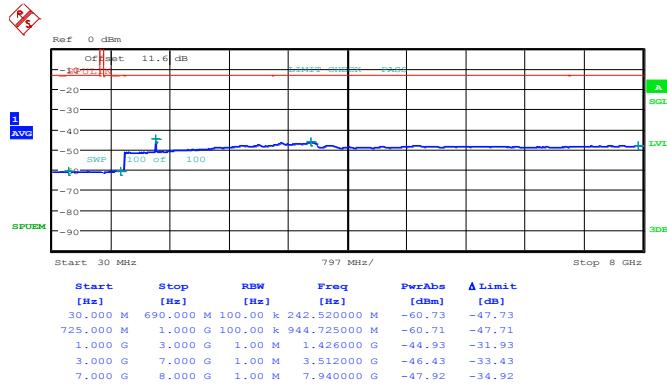


Date: 14.FEB.2014 14:53:34



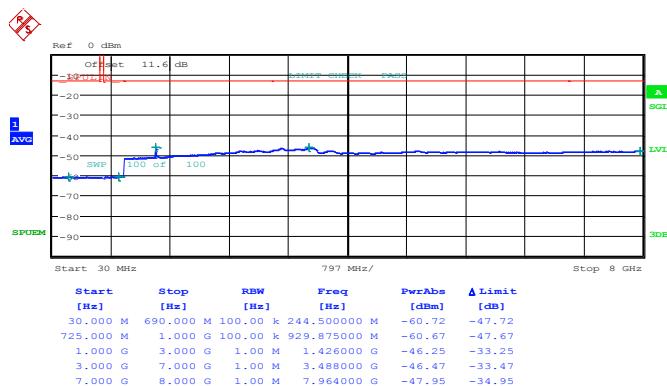
Band :	LTE Band 12	Channel :	CH23165 (High)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 14:59:12

16QAM (RB Size 1, RB Offset 0)

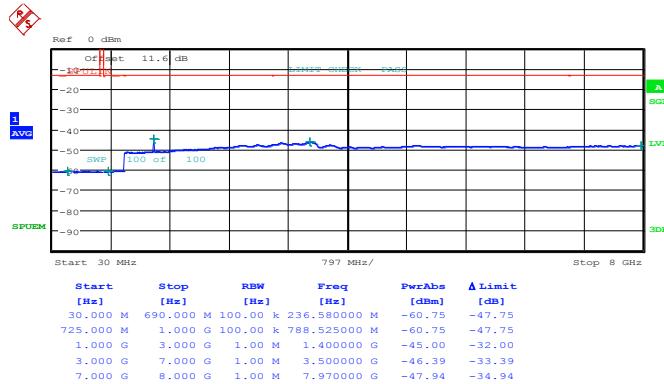


Date: 14.FEB.2014 15:00:08



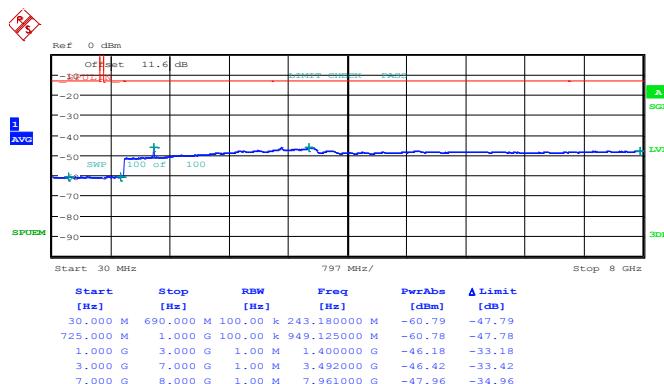
Band :	LTE Band 12	Channel :	CH23035 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 15:05:20

16QAM (RB Size 1, RB Offset 0)

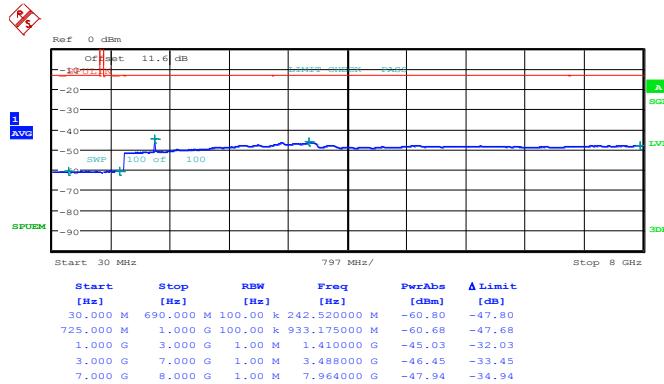


Date: 14.FEB.2014 15:06:17



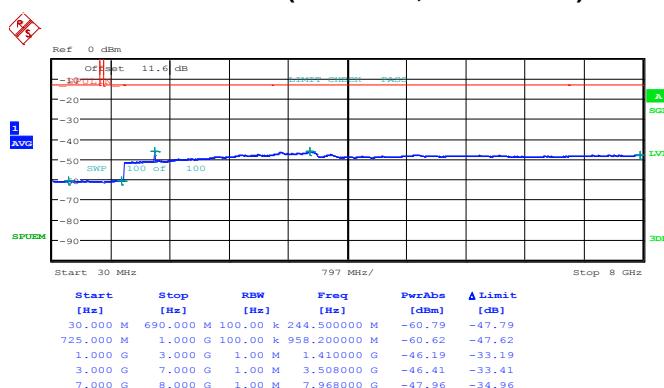
Band :	LTE Band 12	Channel :	CH23095 (Middle)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 15:08:59

16QAM (RB Size 1, RB Offset 0)

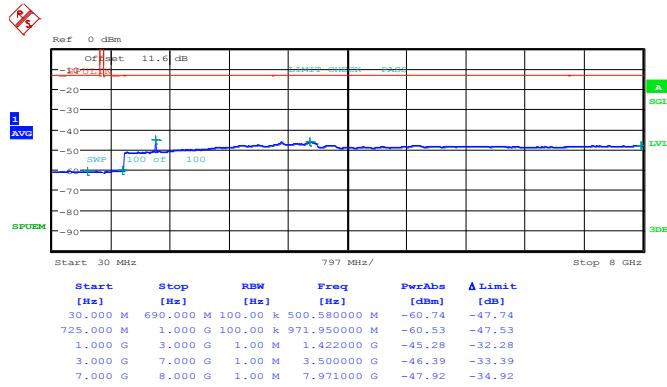


Date: 14.FEB.2014 15:08:03



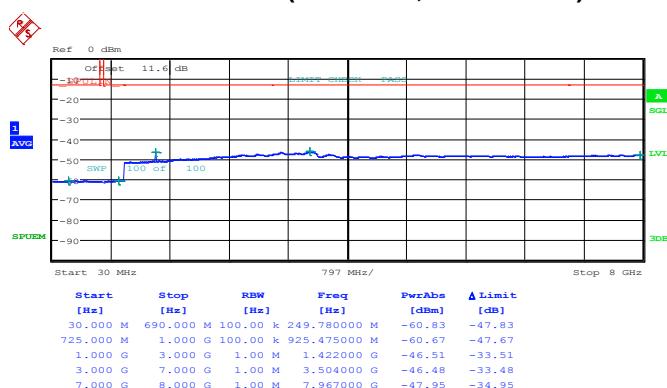
Band :	LTE Band 12	Channel :	CH23155 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 15:14:54

16QAM (RB Size 1, RB Offset 0)

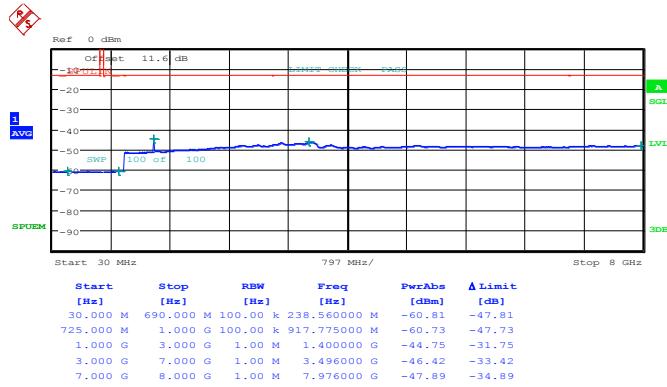


Date: 14.FEB.2014 15:13:58



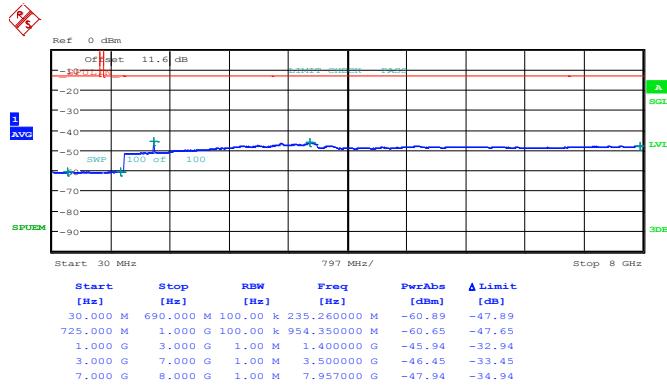
Band :	LTE Band 12	Channel :	CH23060 (Low)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 15:41:52

16QAM (RB Size 1, RB Offset 0)

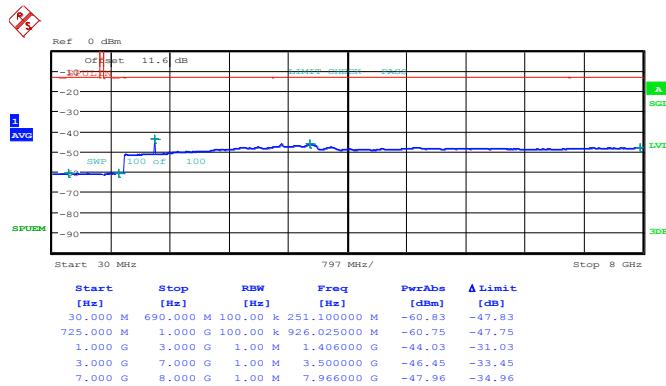


Date: 14.FEB.2014 15:42:49



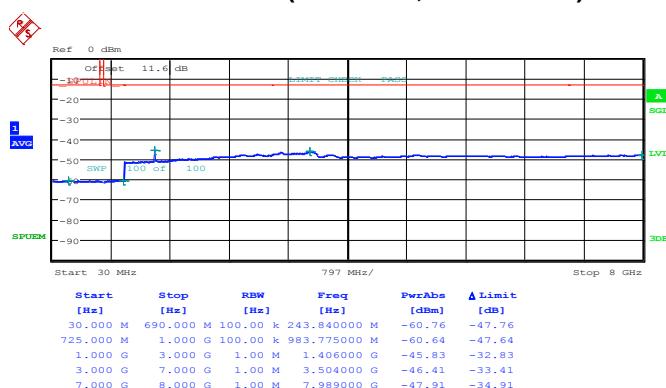
Band :	LTE Band 12	Channel :	CH23095 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 15:45:32

16QAM (RB Size 1, RB Offset 0)

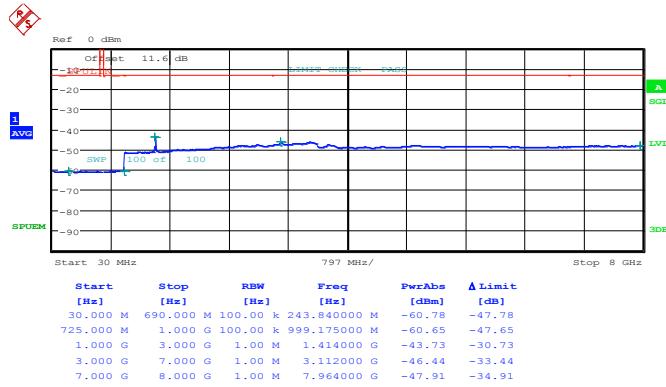


Date: 14.FEB.2014 15:44:35



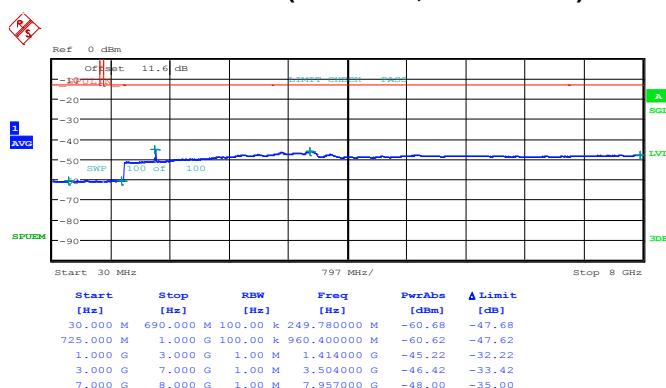
Band :	LTE Band 12	Channel :	CH23130 (High)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 15:50:04

16QAM (RB Size 1, RB Offset 0)



Date: 14.FEB.2014 15:51:01



3.6 Radiated Spurious Emission Measurement

3.6.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI / TIA / EIA-603-C-2004. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $43 + 10 \log(P)$ dB.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

3.6.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.6.3 Test Procedures

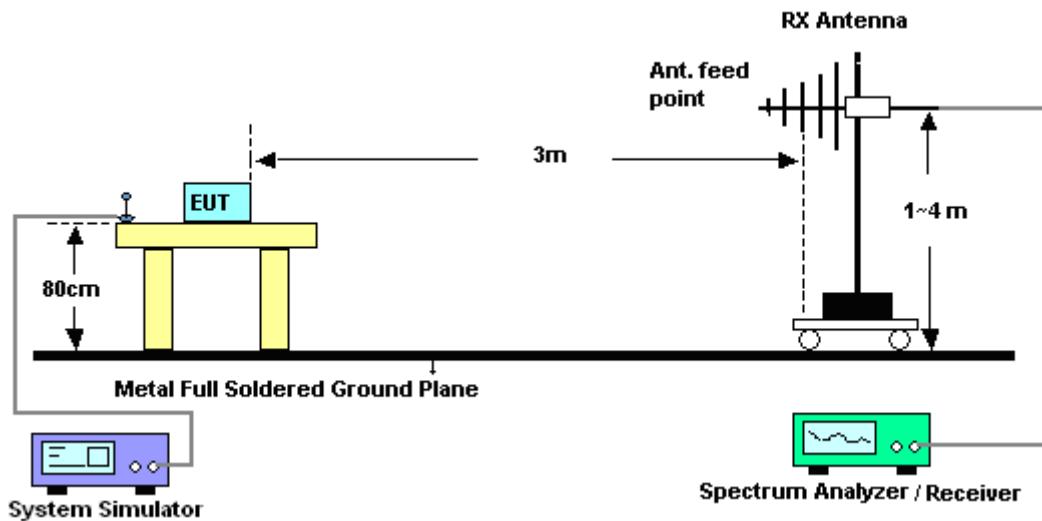
1. The EUT was placed on a rotatable wooden table with 0.8 meter above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

$$\begin{aligned} \text{The limit line is derived from } & 43 + 10\log(P)\text{dB below the transmitter power P(Watts)} \\ & = P(W) - [43 + 10\log(P)] \text{ (dB)} \\ & = [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)} \\ & = -13\text{dBm}. \end{aligned}$$

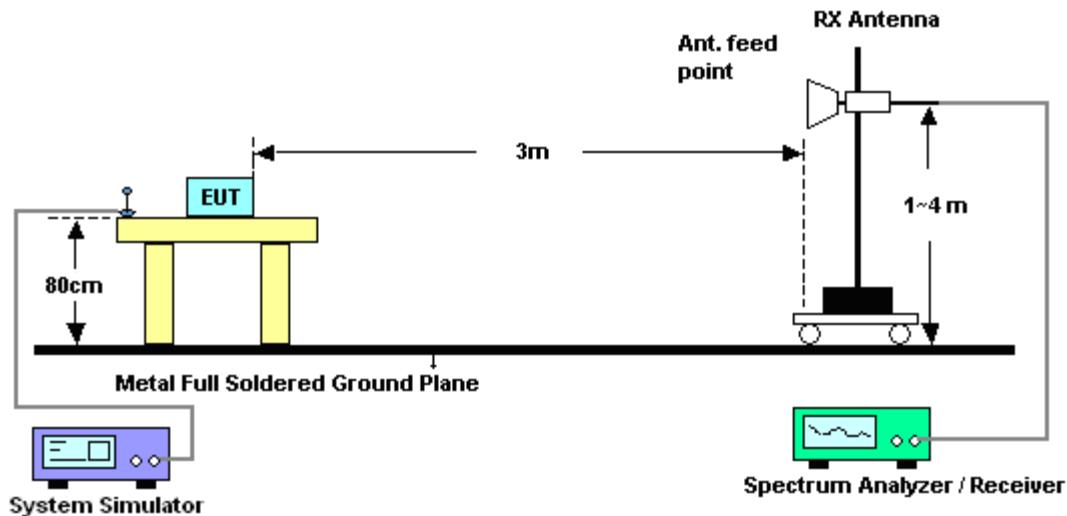
11. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
12. ERP (dBm) = EIRP - 2.15

3.6.4 Test Setup

For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz





3.6.5 Test Result of Field Strength of Spurious Radiated

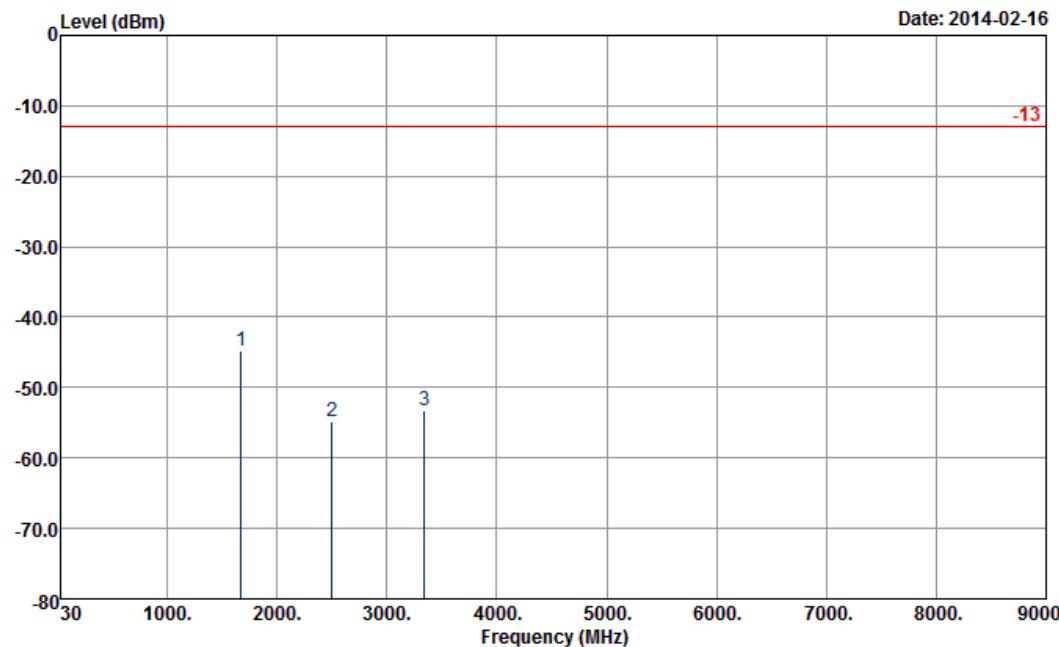
Band :	LTE Band 5		Temperature :	23~26°C					
Test Mode :	1.4MHz QPSK RB Size 3 Offset 0		Relative Humidity :	48~52%					
Test Engineer :	Stan Hsieh		Polarization :	Horizontal					
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
	Level (dBm)		Date:	2014-02-16					
	-10.0			-13					
	-20.0								
	-30.0								
	-40.0								
	-50.0								
	-60.0								
	-70.0								
	-80								
	30	1000.	2000.	3000.					
	Frequency (MHz)	4000.	5000.	6000.					
	7000.	8000.	9000						
Site	: 03CH07-HY								
Condition	: -13 HF-EIRP(080306) HORIZONTAL								
Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1672	-40.13	-13	-27.13	-48.95	-44	1.62	5.49	H	Pass
2504	-55.16	-13	-42.16	-68.44	-59.28	2.1	6.22	H	Pass
3344	-55.21	-13	-42.21	-69.43	-60.25	3.03	8.07	H	Pass



FCC RF Test Report

Report No. : FG421186B

Band :	LTE Band 5	Temperature :	23~26°C
Test Mode :	1.4MHz QPSK RB Size 3 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH07-HY
Condition : -13 HF-EIRP(080306) VERTICAL

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA		S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
				Reading (dBm)	SPA					
1672	-44.68	-13	-31.68	-55.82	-48.55	1.62	5.49	V	Pass	
2504	-54.75	-13	-41.75	-68.24	-58.87	2.1	6.22	V	Pass	
3344	-53.35	-13	-40.35	-68.87	-58.39	3.03	8.07	V	Pass	



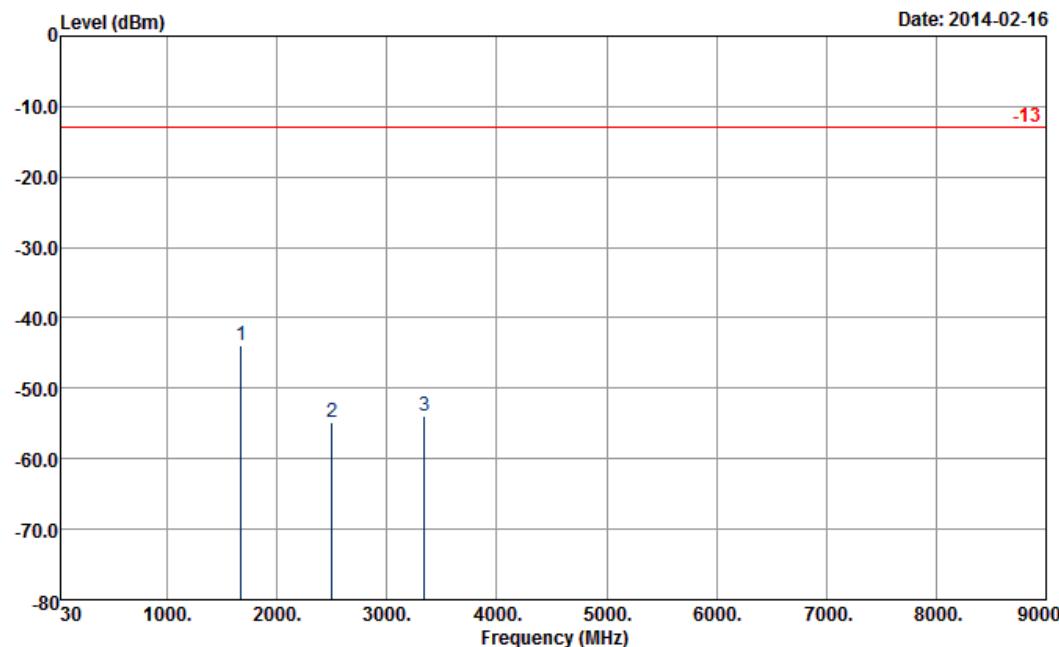
Band :	LTE Band 5	Temperature :	23~26°C						
Test Mode :	3MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%						
Test Engineer :	Stan Hsieh	Polarization :	Horizontal						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
 Date: 2014-02-16									
Site	: 03CH07-HY								
Condition	: -13 HF-EIRP(080306) HORIZONTAL								
Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1672	-40.56	-13	-27.56	-49.47	-44.43	1.62	5.49	H	Pass
2504	-55.47	-13	-42.47	-68.68	-59.59	2.1	6.22	H	Pass
3344	-55.59	-13	-42.59	-69.67	-60.63	3.03	8.07	H	Pass



FCC RF Test Report

Report No. : FG421186B

Band :	LTE Band 5	Temperature :	23~26°C
Test Mode :	3MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA		S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
				Reading (dBm)	Power (dBm)					
1672	-43.99	-13	-30.99	-55.14	-47.86	1.62	5.49	V	Pass	
2504	-54.83	-13	-41.83	-68.36	-58.95	2.1	6.22	V	Pass	
3344	-53.84	-13	-40.84	-69.29	-58.88	3.03	8.07	V	Pass	



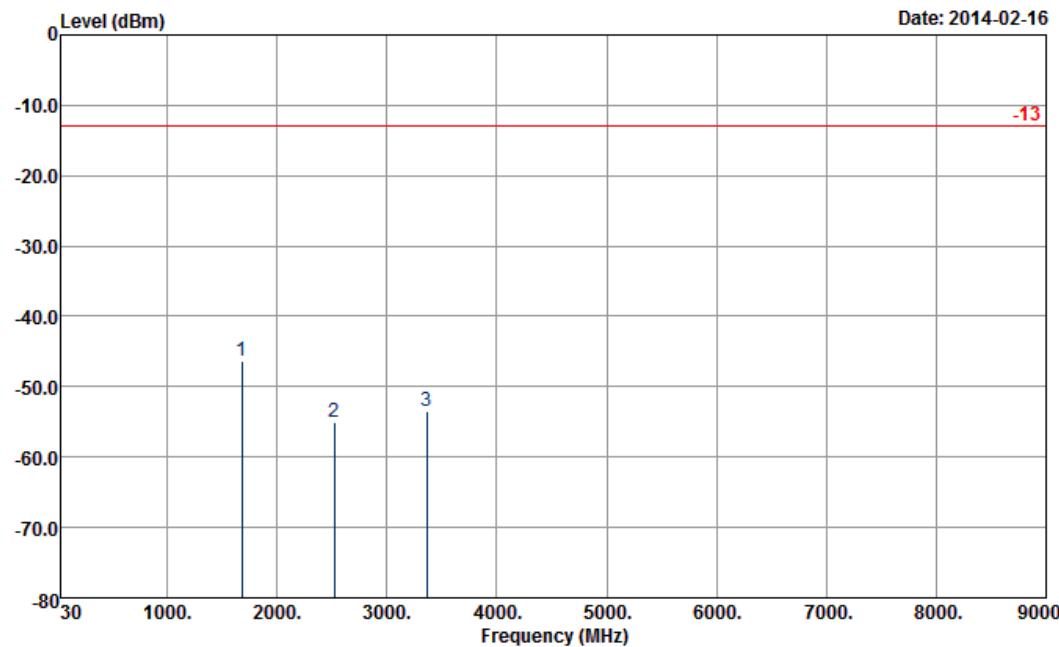
Band :	LTE Band 5	Temperature :	23~26°C						
Test Mode :	5MHz QPSK RB Size 1 Offset 24	Relative Humidity :	48~52%						
Test Engineer :	Stan Hsieh	Polarization :	Horizontal						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
 Date: 2014-02-16									
Site : 03CH07-HY Condition : -13 HF-EIRP(080306) HORIZONTAL									
Frequency	ERP	Limit	Over Limit	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	(dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
1680	-41.86	-13	-28.86	-50.74	-45.73	1.62	5.49	H	Pass
2520	-56.04	-13	-43.04	-69.27	-60.16	2.1	6.22	H	Pass
3360	-55.47	-13	-42.47	-69.57	-60.51	3.03	8.07	H	Pass



FCC RF Test Report

Report No. : FG421186B

Band :	LTE Band 5	Temperature :	23~26°C
Test Mode :	5MHz QPSK RB Size 1 Offset 24	Relative Humidity :	48~52%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH07-HY
Condition : -13 HF-EIRP(080306) VERTICAL

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA		S.G. (dBm)	TX Cable loss (dBm)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
				Reading (dBm)	Power (dBm)					
1680	-46.41	-13	-33.41	-57.59	-50.28	1.62	5.49	V	Pass	
2520	-55.05	-13	-42.05	-68.74	-59.17	2.1	6.22	V	Pass	
3360	-53.44	-13	-40.44	-69.26	-58.48	3.03	8.07	V	Pass	



FCC RF Test Report

Report No. : FG421186B

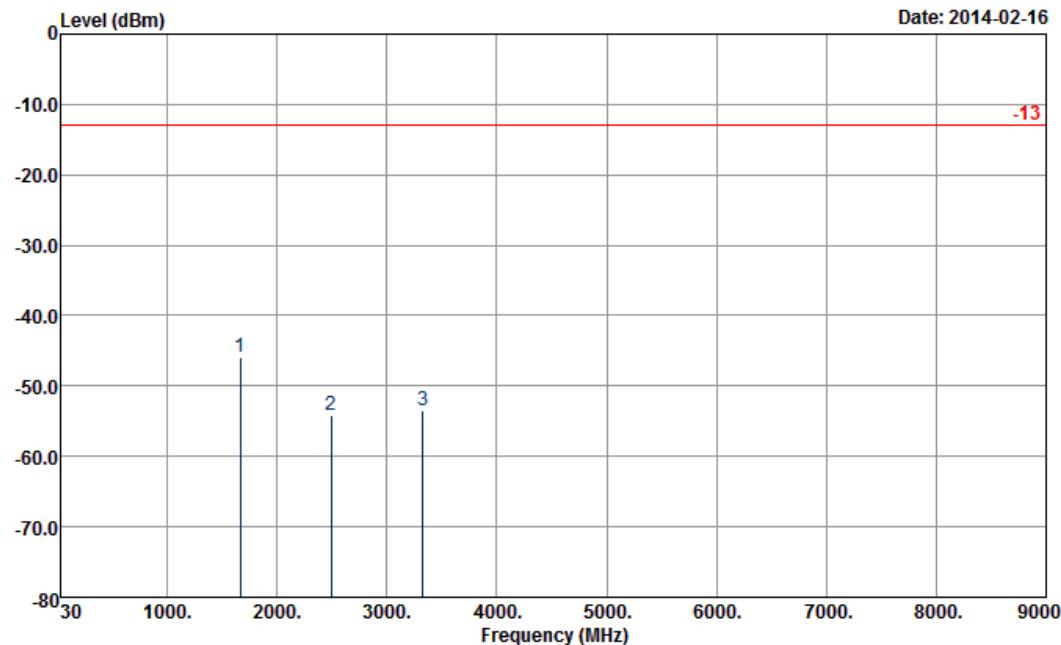
Band :	LTE Band 5	Temperature :	23~26°C						
Test Mode :	10MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%						
Test Engineer :	Stan Hsieh	Polarization :	Horizontal						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
 Date: 2014-02-16									
Site	: 03CH07-HY								
Condition	: -13 HF-EIRP(080306) HORIZONTAL								
Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1664	-41.06	-13	-28.06	-49.91	-44.93	1.62	5.49	H	Pass
2496	-55.07	-13	-42.07	-68.36	-59.19	2.1	6.22	H	Pass
3328	-55.32	-13	-42.32	-69.45	-60.36	3.03	8.07	H	Pass



FCC RF Test Report

Report No. : FG421186B

Band :	LTE Band 5	Temperature :	23~26°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA		S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
				Reading (dBm)	Power (dBm)					
1664	-45.85	-13	-32.85	-56.89	-49.72	1.62	5.49	V	Pass	
2496	-54.14	-13	-41.14	-67.87	-58.26	2.1	6.22	V	Pass	
3328	-53.42	-13	-40.42	-69.18	-58.46	3.03	8.07	V	Pass	



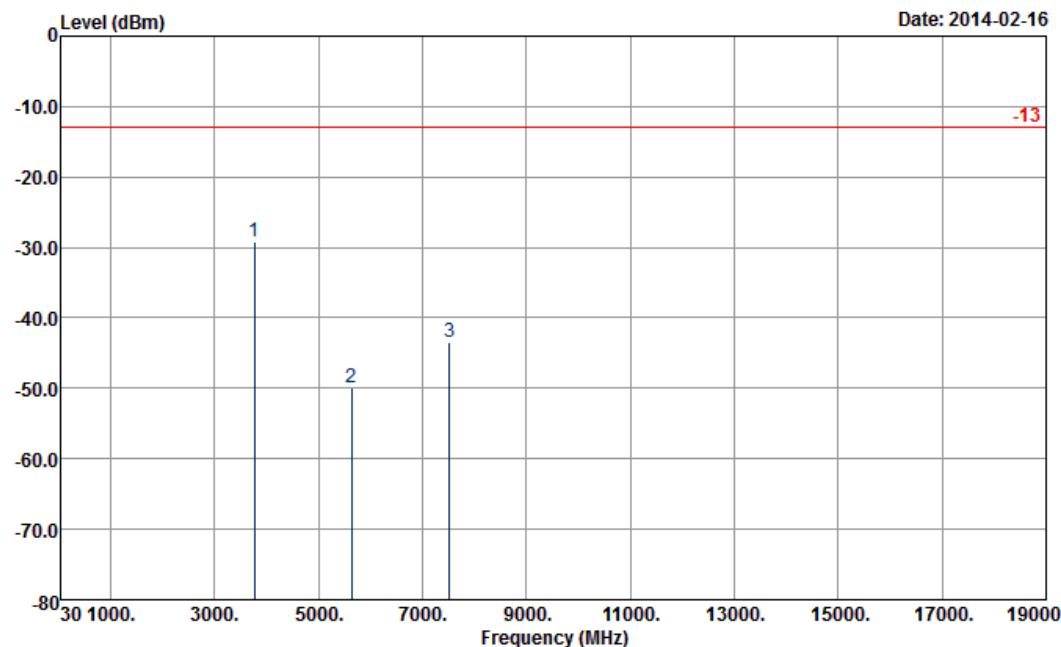
Band :	LTE Band 2	Temperature :	23~26°C						
Test Mode :	1.4MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%						
Test Engineer :	Stan Hsieh	Polarization :	Horizontal						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
 Date: 2014-02-16									
Site : 03CH07-HY Condition : -13 HF-EIRP(080306) HORIZONTAL									
Frequency	EIRP	Limit	Over Limit	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	(dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
3756	-25.32	-13	-12.32	-40.67	-31.62	2.51	8.81	H	Pass
5632	-48.96	-13	-35.96	-69.66	-56.67	2.99	10.70	H	Pass
7515	-41.49	-13	-28.49	-68.9	-50.02	3.59	12.12	H	Pass



FCC RF Test Report

Report No. : FG421186B

Band :	LTE Band 2	Temperature :	23~26°C
Test Mode :	1.4MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA		S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
				Reading (dBm)	Power (dBm)					
3756	-29.11	-13	-16.11	-45.41	-35.41	2.51	8.81	V	Pass	
5632	-49.92	-13	-36.92	-70.35	-57.63	2.99	10.70	V	Pass	
7515	-43.47	-13	-30.47	-70.6	-52	3.59	12.12	V	Pass	



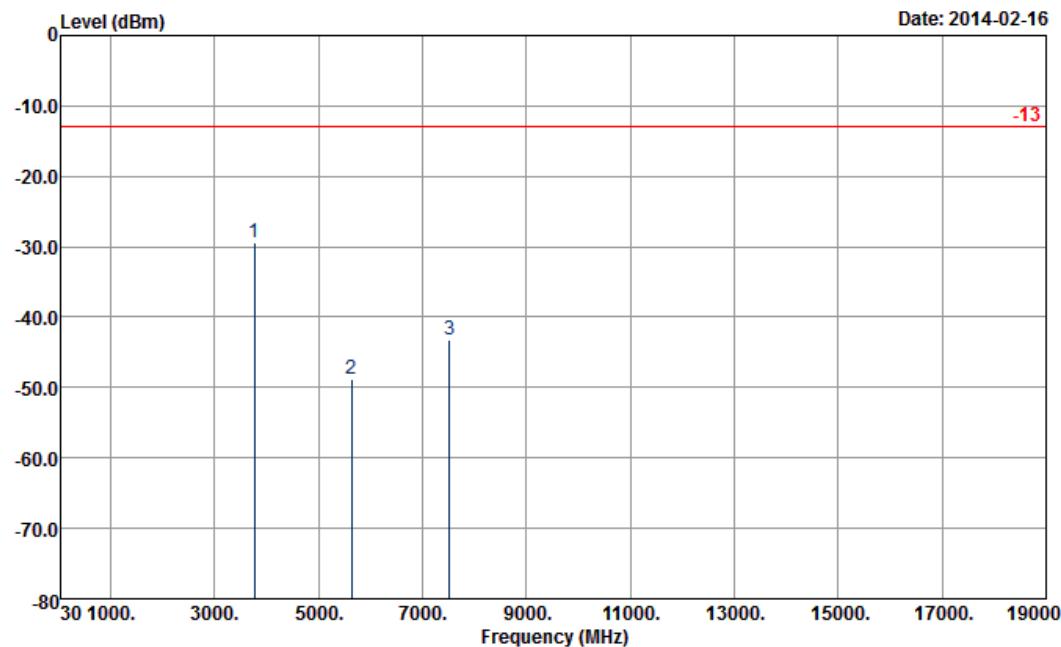
Band :	LTE Band 2	Temperature :	23~26°C						
Test Mode :	3MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%						
Test Engineer :	Stan Hsieh	Polarization :	Horizontal						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
 Date: 2014-02-16									
Site : 03CH07-HY Condition : -13 HF-EIRP(080306) HORIZONTAL									
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3756	-25.44	-13	-12.44	-40.69	-31.74	2.51	8.81	H	Pass
5632	-48.44	-13	-35.44	-69.18	-56.15	2.99	10.70	H	Pass
7515	-42.79	-13	-29.79	-70.14	-51.32	3.59	12.12	H	Pass



FCC RF Test Report

Report No. : FG421186B

Band :	LTE Band 2	Temperature :	23~26°C
Test Mode :	3MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH07-HY
Condition : -13 HF-EIRP(080306) VERTICAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA		S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
				Reading (dBm)	Power (dBm)					
3756	-29.36	-13	-16.36	-45.58	-35.66	2.51	8.81	V	Pass	
5632	-48.87	-13	-35.87	-69.36	-56.58	2.99	10.70	V	Pass	
7515	-43.16	-13	-30.16	-70.23	-51.69	3.59	12.12	V	Pass	



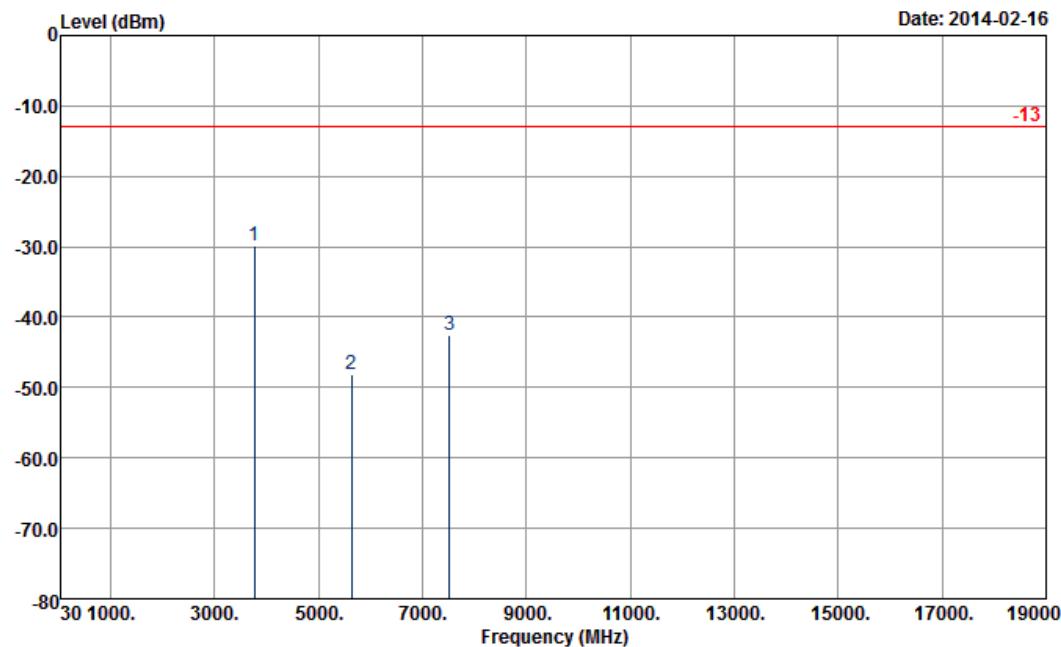
Band :	LTE Band 2	Temperature :	23~26°C						
Test Mode :	5MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%						
Test Engineer :	Stan Hsieh	Polarization :	Horizontal						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
 Date: 2014-02-16									
Site : 03CH07-HY Condition : -13 HF-EIRP(080306) HORIZONTAL									
Frequency	EIRP	Limit	Over Limit	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	(dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
3756	-25.56	-13	-12.56	-40.92	-31.86	2.51	8.81	H	Pass
5632	-49.98	-13	-36.98	-70.66	-57.69	2.99	10.70	H	Pass
7515	-42.83	-13	-29.83	-70.29	-51.36	3.59	12.12	H	Pass



FCC RF Test Report

Report No. : FG421186B

Band :	LTE Band 2	Temperature :	23~26°C
Test Mode :	5MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



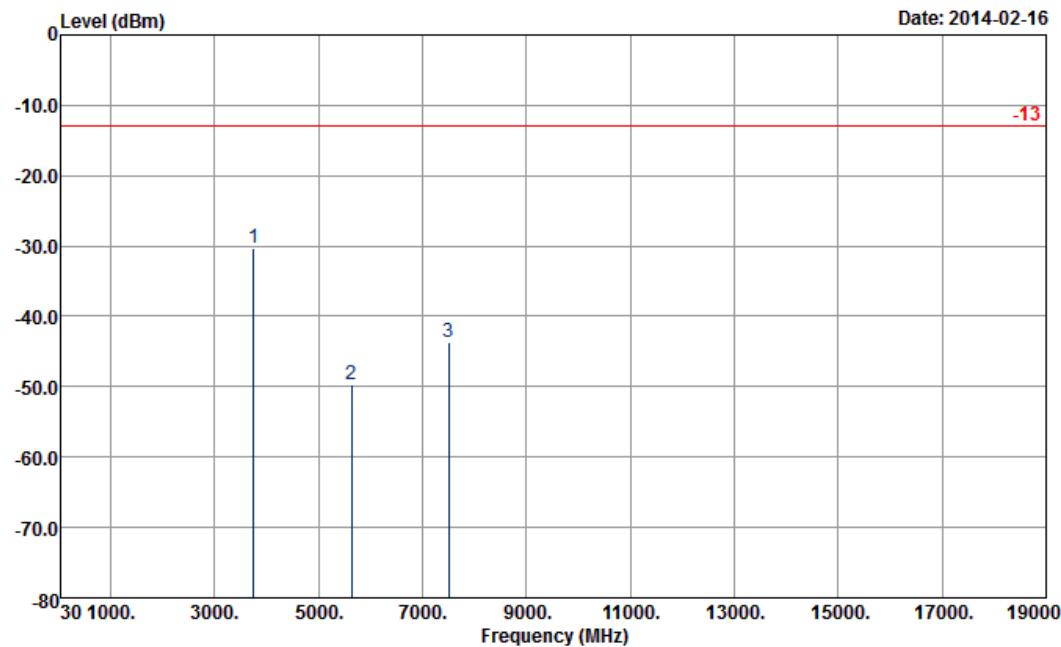
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA		S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
				Reading (dBm)	Power (dBm)					
3756	-29.84	-13	-16.84	-46.17	-36.14	2.51	8.81	V	Pass	
5632	-48.20	-13	-35.20	-68.62	-55.91	2.99	10.70	V	Pass	
7515	-42.47	-13	-29.47	-69.68	-51	3.59	12.12	V	Pass	



Band :	LTE Band 2	Temperature :	23~26°C						
Test Mode :	10MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%						
Test Engineer :	Stan Hsieh	Polarization :	Horizontal						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
 Level (dBm) Frequency (MHz)			Date: 2014-02-16 -13						
Site	: 03CH07-HY								
Condition	: -13 HF-EIRP(080306) HORIZONTAL								
Frequency	EIRP	Limit	Over Limit	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	(dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
3749	-26.02	-13	-13.02	-41.35	-32.32	2.51	8.81	H	Pass
5625	-49.68	-13	-36.68	-70.33	-57.39	2.99	10.70	H	Pass
7501	-42.88	-13	-29.88	-70.3	-51.41	3.59	12.12	H	Pass



Band :	LTE Band 2	Temperature :	23~26°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH07-HY
Condition : -13 HF-EIRP(080306) VERTICAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA		S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
				Reading (dBm)	Power (dBm)					
3749	-30.38	-13	-17.38	-46.61	-36.68	2.51	8.81	V	Pass	
5625	-49.78	-13	-36.78	-70.21	-57.49	2.99	10.70	V	Pass	
7501	-43.62	-13	-30.62	-70.99	-52.15	3.59	12.12	V	Pass	



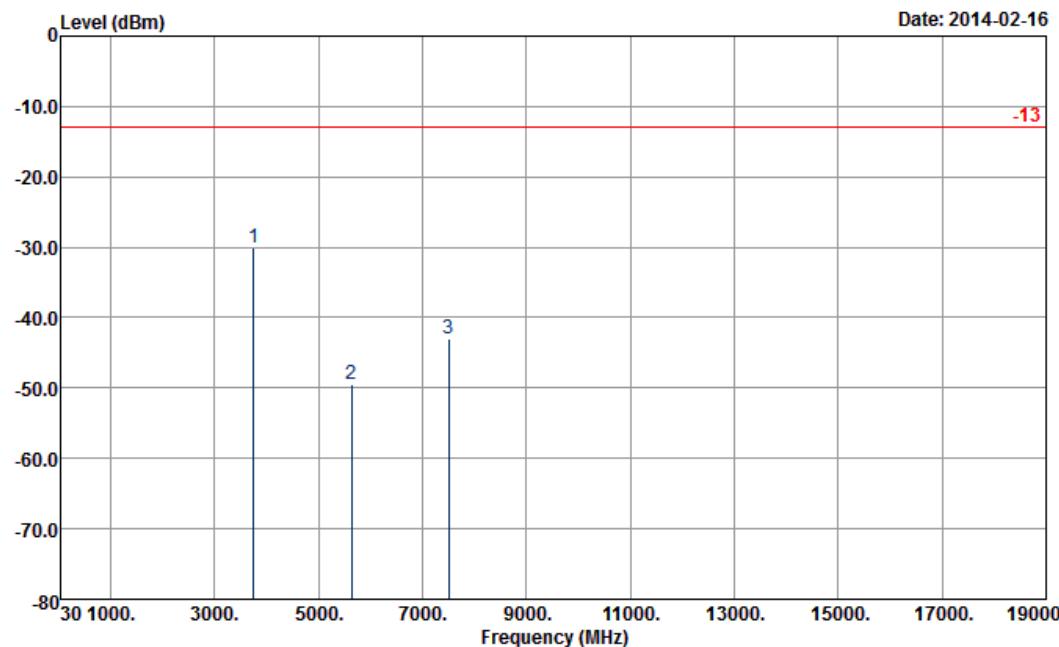
Band :	LTE Band 2	Temperature :	23~26°C						
Test Mode :	15MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%						
Test Engineer :	Stan Hsieh	Polarization :	Horizontal						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
 Level (dBm) Date: 2014-02-16 Frequency (MHz)									
Site : 03CH07-HY Condition : -13 HF-EIRP(080306) HORIZONTAL									
Frequency	EIRP	Limit	Over Limit	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	(dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
3749	-26.72	-13	-13.72	-42.07	-33.02	2.51	8.81	H	Pass
5625	-49.07	-13	-36.07	-69.7	-56.78	2.99	10.70	H	Pass
7501	-42.61	-13	-29.61	-70.07	-51.14	3.59	12.12	H	Pass



FCC RF Test Report

Report No. : FG421186B

Band :	LTE Band 2	Temperature :	23~26°C
Test Mode :	15MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA		S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
				Reading (dBm)	Power (dBm)					
3749	-30.19	-13	-17.19	-46.49	-36.49	2.51	8.81	V	Pass	
5625	-49.58	-13	-36.58	-70.09	-57.29	2.99	10.70	V	Pass	
7501	-42.93	-13	-29.93	-70.26	-51.46	3.59	12.12	V	Pass	



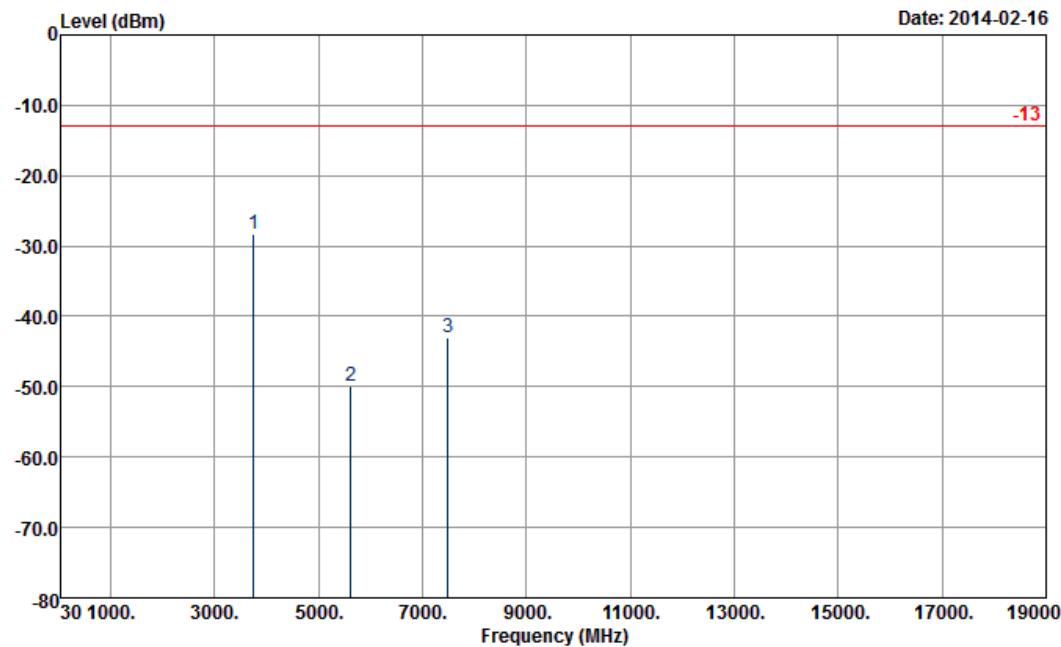
Band :	LTE Band 2	Temperature :	23~26°C						
Test Mode :	20MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%						
Test Engineer :	Stan Hsieh	Polarization :	Horizontal						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
 Date: 2014-02-16									
Site : 03CH07-HY Condition : -13 HF-EIRP(080306) HORIZONTAL									
Frequency	EIRP	Limit	Over Limit	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	(dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
3742	-25.69	-13	-12.69	-40.93	-31.99	2.51	8.81	H	Pass
5611	-49.41	-13	-36.41	-69.98	-57.12	2.99	10.70	H	Pass
7487	-42.83	-13	-29.83	-70.34	-51.36	3.59	12.12	H	Pass



FCC RF Test Report

Report No. : FG421186B

Band :	LTE Band 2	Temperature :	23~26°C
Test Mode :	20MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH07-HY
Condition : -13 HF-EIRP(080306) VERTICAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA		S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
				Reading (dBm)	Power (dBm)					
3742	-28.31	-13	-15.31	-44.56	-34.61	2.51	8.81	V	Pass	
5611	-49.82	-13	-36.82	-70.28	-57.53	2.99	10.70	V	Pass	
7487	-42.95	-13	-29.95	-70.26	-51.48	3.59	12.12	V	Pass	



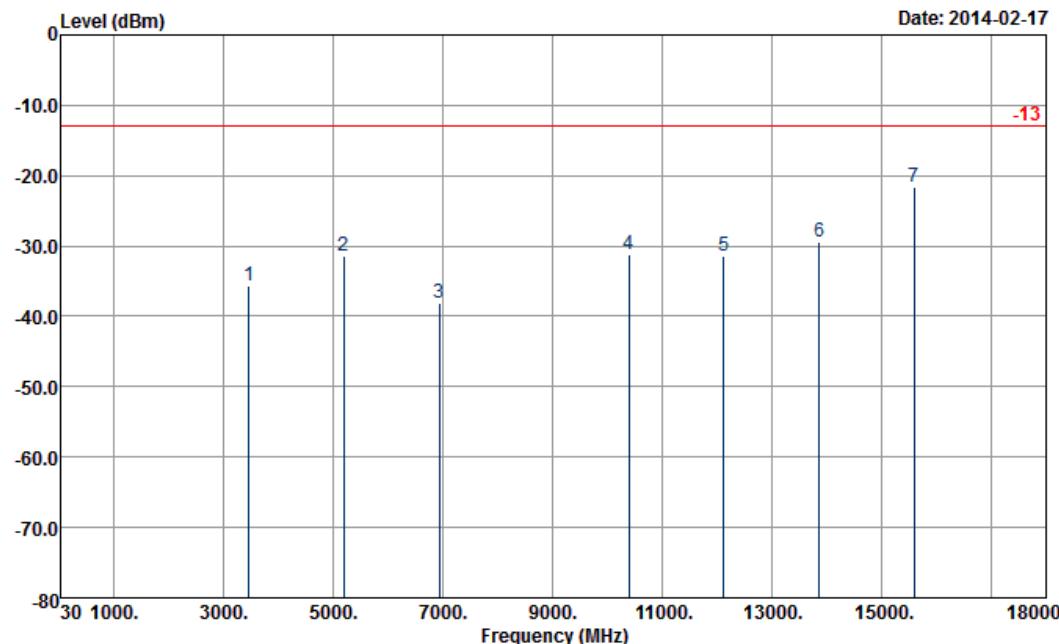
Band :	LTE Band 4	Temperature :	23~26°C						
Test Mode :	1.4MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%						
Test Engineer :	Stan Hsieh	Polarization :	Horizontal						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
 Date: 2014-02-17									
Site : 03CH07-HY Condition : -13 HF-EIRP(080306) HORIZONTAL									
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3464	-41.42	-13	-28.42	-55.77	-45.25	4.48	8.31	H	Pass
5196	-36.53	-13	-23.53	-55.35	-41.17	5.332	9.98	H	Pass
6932	-40.42	-13	-27.42	-66.61	-45.66	6.1	11.34	H	Pass
10392	-36.68	-13	-23.68	-66	-40.97	8.65	12.94	H	Pass
12128	-34.31	-13	-21.31	-65.98	-38.62	8.59	12.90	H	Pass
13859	-33.21	-13	-20.21	-67.02	-39.26	8.14	14.19	H	Pass
15591	-29.89	-13	-16.89	-63.88	-34.38	9.45	13.94	H	Pass



FCC RF Test Report

Report No. : FG421186B

Band :	LTE Band 4	Temperature :	23~26°C
Test Mode :	1.4MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH07-HY
Condition : -13 HF-EIRP(080306) VERTICAL

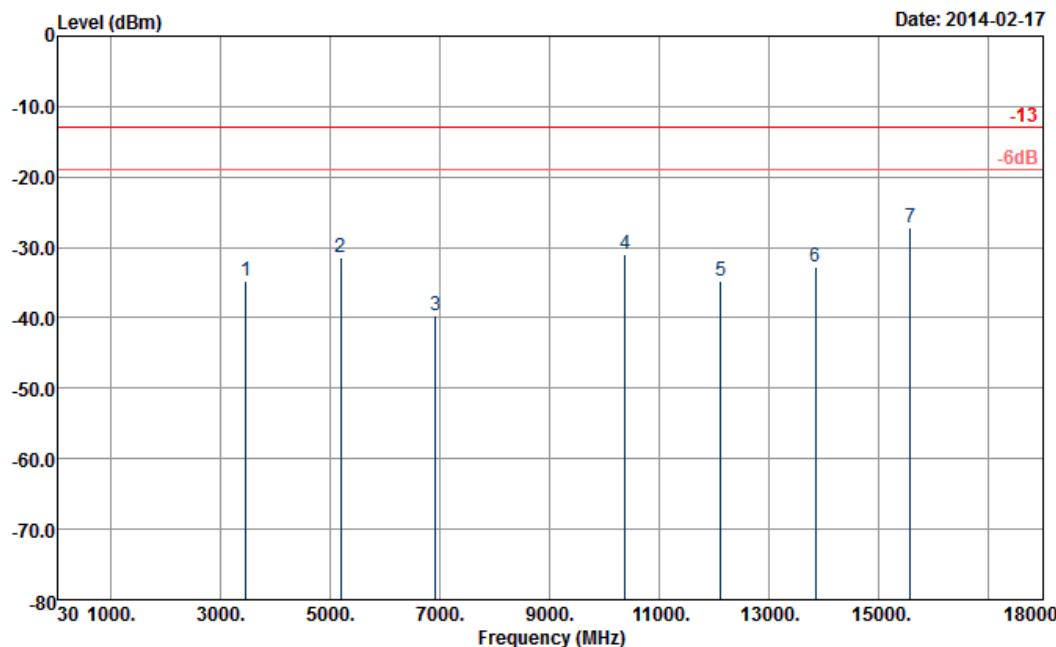
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA		S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
				Reading (dBm)	Power (dBm)					
3464	-35.63	-13	-22.63	-51.19	-39.46	4.48	8.31	V	Pass	
5196	-31.51	-13	-18.51	-50.38	-36.15	5.332	9.98	V	Pass	
6932	-38.01	-13	-25.01	-63.39	-43.25	6.1	11.34	V	Pass	
10392	-31.22	-13	-18.22	-59.45	-35.51	8.65	12.94	V	Pass	
12128	-31.40	-13	-18.40	-61.52	-35.71	8.59	12.90	V	Pass	
13859	-29.41	-13	-16.41	-61.76	-35.46	8.14	14.19	V	Pass	
15591	-21.62	-13	-8.62	-54.93	-26.11	9.45	13.94	V	Pass	



Band :	LTE Band 4	Temperature :	23~26°C						
Test Mode :	3MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%						
Test Engineer :	Stan Hsieh	Polarization :	Horizontal						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
 Site : 03CH07-HY Condition : -13 HF-EIRP(080306) HORIZONTAL			Date: 2014-02-17						
Frequency	EIRP	Limit	Over Limit	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	(dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
3462	-40.10	-13	-27.10	-54.41	-43.93	4.48	8.31	H	Pass
5191	-35.75	-13	-22.75	-54.56	-40.39	5.332	9.98	H	Pass
10384	-36.89	-13	-23.89	-66.12	-41.18	8.65	12.94	H	Pass
15584	-31.72	-13	-18.72	-65.69	-36.21	9.45	13.94	H	Pass



Band :	LTE Band 4	Temperature :	23~26°C
Test Mode :	3MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA		S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
				Reading (dBm)	Power (dBm)					
3462	-34.68	-13	-21.68	-50.25	-38.51	4.48	8.31	V	Pass	
5191	-31.43	-13	-18.43	-50.27	-36.07	5.332	9.98	V	Pass	
6927	-39.57	-13	-26.57	-64.94	-44.81	6.1	11.34	V	Pass	
10384	-31.00	-13	-18.00	-59.21	-35.29	8.65	12.94	V	Pass	
12120	-34.70	-13	-21.70	-64.74	-39.01	8.59	12.90	V	Pass	
13848	-32.85	-13	-19.85	-65.12	-38.9	8.14	14.19	V	Pass	
15584	-27.16	-13	-14.16	-60.45	-31.65	9.45	13.94	V	Pass	



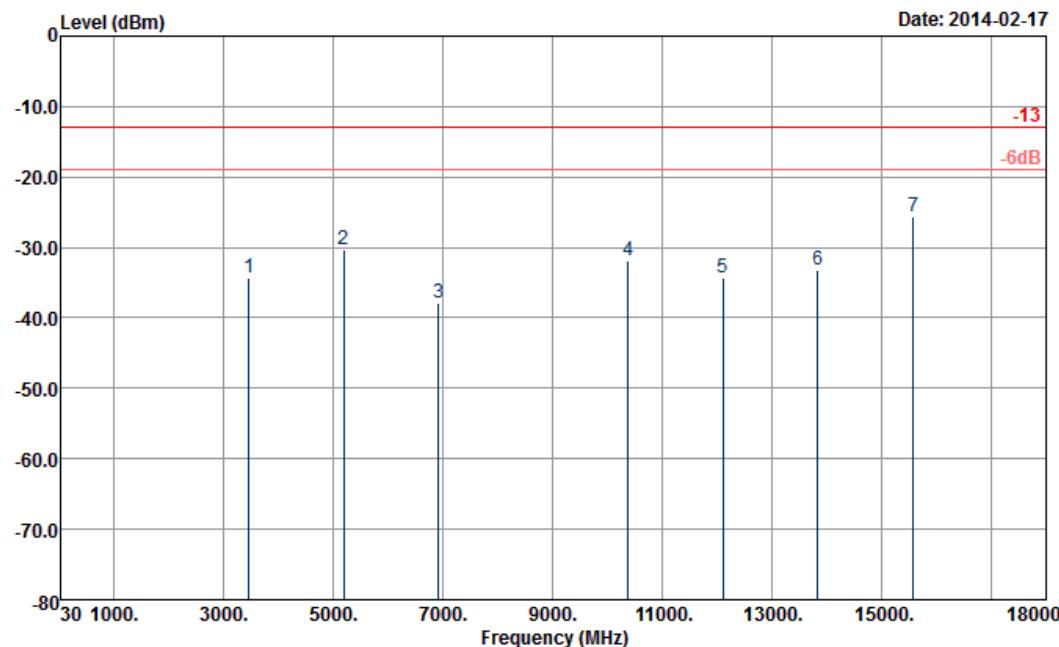
Band :	LTE Band 4	Temperature :	23~26°C						
Test Mode :	5MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%						
Test Engineer :	Stan Hsieh	Polarization :	Horizontal						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
<p>The figure is a spectral plot titled "Level (dBm)" vs "Frequency (MHz)". It shows a red horizontal line at -13 dBm and a red horizontal line at -6 dBm. Four vertical blue lines are labeled 1, 2, 3, and 4, corresponding to frequencies of 3462, 5191, 10384, and 15576 MHz respectively. The plot ranges from 30 MHz to 18000 MHz on the x-axis and from 0 to -80 dBm on the y-axis.</p>									
<p>Date: 2014-02-17</p> <p>Site : 03CH07-HY Condition : -13 HF-EIRP(080306) HORIZONTAL</p>									
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3462	-39.53	-13	-26.53	-53.89	-43.36	4.48	8.31	H	Pass
5191	-33.92	-13	-20.92	-52.74	-38.56	5.332	9.98	H	Pass
10384	-38.04	-13	-25.04	-67.29	-42.33	8.65	12.94	H	Pass
15576	-34.63	-13	-21.63	-68.57	-39.12	9.45	13.94	H	Pass



FCC RF Test Report

Report No. : FG421186B

Band :	LTE Band 4	Temperature :	23~26°C
Test Mode :	5MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH07-HY
Condition : -13 HF-EIRP(080306) VERTICAL

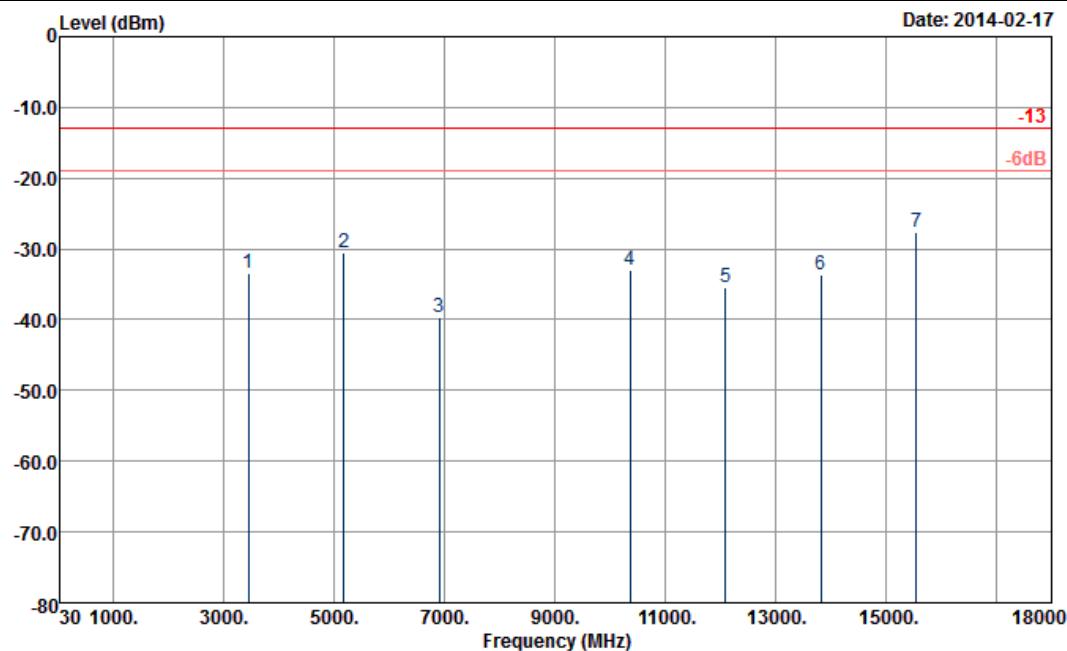
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA		S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
				Reading (dBm)	Power (dBm)					
3462	-34.25	-13	-21.25	-49.8	-38.08	4.48	8.31	V	Pass	
5191	-30.40	-13	-17.40	-49.27	-35.04	5.332	9.98	V	Pass	
6920	-37.81	-13	-24.81	-63.1	-43.05	6.1	11.34	V	Pass	
10384	-31.85	-13	-18.85	-60.09	-36.14	8.65	12.94	V	Pass	
12112	-34.29	-13	-21.29	-64.33	-38.6	8.59	12.90	V	Pass	
13840	-33.26	-13	-20.26	-65.51	-39.31	8.14	14.19	V	Pass	
15576	-25.63	-13	-12.63	-58.85	-30.12	9.45	13.94	V	Pass	



Band :	LTE Band 4	Temperature :	23~26°C						
Test Mode :	10MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%						
Test Engineer :	Stan Hsieh	Polarization :	Horizontal						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
 Date: 2014-02-17									
Site	: 03CH07-HY								
Condition	: -13 HF-EIRP(080306) HORIZONTAL								
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3455	-39.21	-13	-26.21	-53.5	-43.04	4.48	8.31	H	Pass
5184	-34.69	-13	-21.69	-53.44	-39.33	5.332	9.98	H	Pass
10368	-36.73	-13	-23.73	-65.95	-41.02	8.65	12.94	H	Pass
15552	-34.63	-13	-21.63	-68.5	-39.12	9.45	13.94	H	Pass



Band :	LTE Band 4	Temperature :	23~26°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH07-HY
Condition : -13 HF-EIRP(080306) VERTICAL

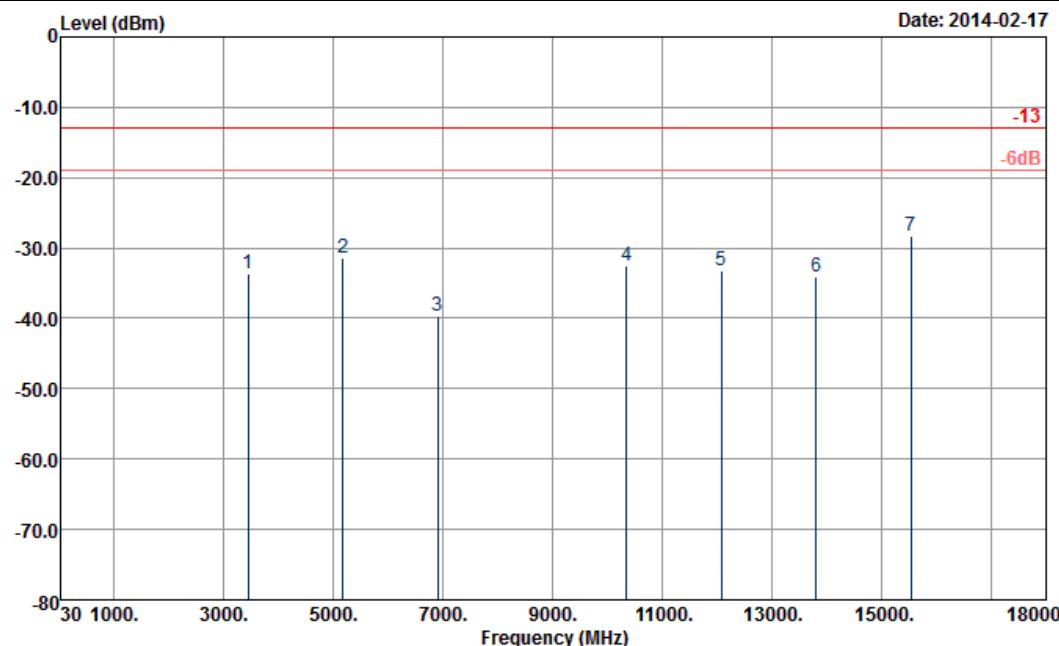
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA		S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
				Reading (dBm)	SPA					
3455	-33.53	-13	-20.53	-49.14	-37.36	4.48	8.31	V	Pass	
5184	-30.64	-13	-17.64	-49.42	-35.28	5.332	9.98	V	Pass	
6913	-39.63	-13	-26.63	-64.93	-44.87	6.1	11.34	V	Pass	
10368	-33.01	-13	-20.01	-61.21	-37.3	8.65	12.94	V	Pass	
12096	-35.53	-13	-22.53	-65.55	-39.84	8.59	12.90	V	Pass	
13824	-33.75	-13	-20.75	-66.02	-39.8	8.14	14.19	V	Pass	
15552	-27.53	-13	-14.53	-60.69	-32.02	9.45	13.94	V	Pass	



Band :	LTE Band 4	Temperature :	23~26°C						
Test Mode :	15MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%						
Test Engineer :	Stan Hsieh	Polarization :	Horizontal						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
 Date: 2014-02-17									
Site	: 03CH07-HY								
Condition	: -13 HF-EIRP(080306) HORIZONTAL								
Frequency	EIRP	Limit	Over Limit	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	(dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
3448	-38.39	-13	-25.39	-52.7	-42.22	4.48	8.31	H	Pass
5177	-36.07	-13	-23.07	-54.81	-40.71	5.332	9.98	H	Pass
10352	-37.83	-13	-24.83	-67.04	-42.12	8.65	12.94	H	Pass



Band :	LTE Band 4	Temperature :	23~26°C
Test Mode :	15MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH07-HY
Condition : -13 HF-EIRP(080306) VERTICAL

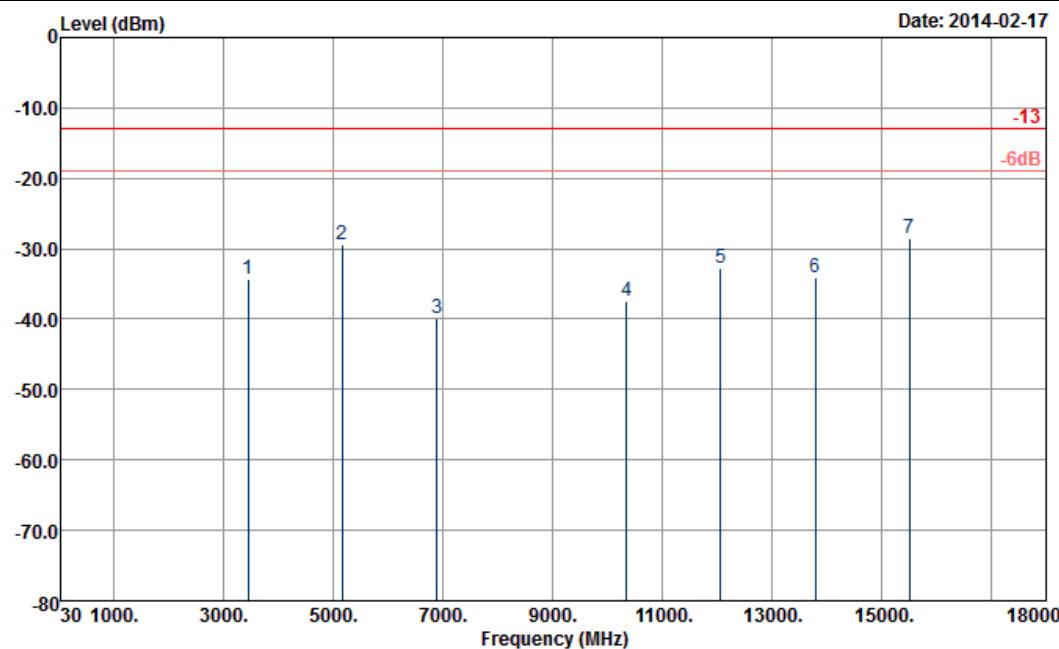
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA		S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
				Reading (dBm)	SPA					
3448	-33.71	-13	-20.71	-49.27	-37.54	4.48	8.31	V	Pass	
5177	-31.41	-13	-18.41	-50.34	-36.05	5.332	9.98	V	Pass	
6906	-39.56	-13	-26.56	-64.8	-44.8	6.1	11.34	V	Pass	
10352	-32.62	-13	-19.62	-60.81	-36.91	8.65	12.94	V	Pass	
12080	-33.10	-13	-20.10	-63.09	-37.41	8.59	12.90	V	Pass	
13808	-34.16	-13	-21.16	-66.4	-40.21	8.14	14.19	V	Pass	
15536	-28.29	-13	-15.29	-61.38	-32.78	9.45	13.94	V	Pass	



Band :	LTE Band 4	Temperature :	23~26°C						
Test Mode :	20MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%						
Test Engineer :	Stan Hsieh	Polarization :	Horizontal						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
 Date: 2014-02-17									
Site	: 03CH07-HY								
Condition	: -13 HF-EIRP(080306) HORIZONTAL								
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3448	-38.99	-13	-25.99	-53.29	-42.82	4.48	8.31	H	Pass
5170	-35.08	-13	-22.08	-53.74	-39.72	5.332	9.98	H	Pass
6892	-42.36	-13	-29.36	-68.4	-47.6	6.1	11.34	H	Pass



Band :	LTE Band 4	Temperature :	23~26°C
Test Mode :	20MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH07-HY
Condition : -13 HF-EIRP(080306) VERTICAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA		S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
				Reading (dBm)	SPA					
3448	-34.41	-13	-21.41	-49.99	-38.24	4.48	8.31	V	Pass	
5170	-29.36	-13	-16.36	-48.07	-34	5.332	9.98	V	Pass	
6892	-39.84	-13	-26.84	-65.1	-45.08	6.1	11.34	V	Pass	
10344	-37.43	-13	-24.43	-65.64	-41.72	8.65	12.94	V	Pass	
12064	-32.69	-13	-19.69	-62.62	-37	8.59	12.90	V	Pass	
13792	-34.14	-13	-21.14	-66.35	-40.19	8.14	14.19	V	Pass	
15512	-28.57	-13	-15.57	-61.62	-33.06	9.45	13.94	V	Pass	



FCC RF Test Report

Report No. : FG421186B

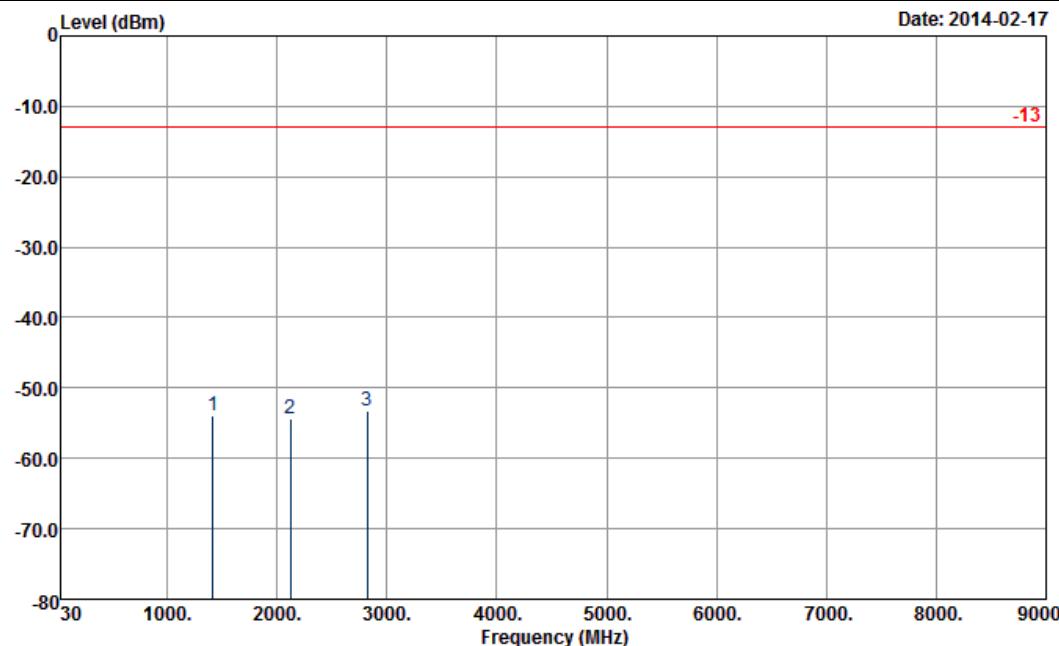
Band :	LTE Band 12	Temperature :	23~26°C						
Test Mode :	1.4MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%						
Test Engineer :	Stan Hsieh	Polarization :	Horizontal						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
<p>Level (dBm)</p> <p>Date: 2014-02-17</p> <p>-10.0</p> <p>-20.0</p> <p>-30.0</p> <p>-40.0</p> <p>-50.0</p> <p>-60.0</p> <p>-70.0</p> <p>-80</p> <p>Frequency (MHz)</p> <p>1416 2120 2824</p> <p>-13</p>									
Site	: 03CH07-HY								
Condition	: -13 HF-EIRP(080306) HORIZONTAL								
Frequency	ERP	Limit	Over Limit	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	(dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
1416	-58.92	-13	-45.92	-66.97	-60.62	1.47	5.32	H	Pass
2120	-56.25	-13	-43.25	-67.46	-58.22	1.86	5.98	H	Pass
2824	-55.08	-13	-42.08	-68.44	-58.15	2.21	7.43	H	Pass



FCC RF Test Report

Report No. : FG421186B

Band :	LTE Band 12	Temperature :	23~26°C
Test Mode :	1.4MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH07-HY
Condition : -13 HF-EIRP(080306) VERTICAL

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA		S.G. (dBm)	TX Cable loss (dBm)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
				Reading (dBm)	Power (dBm)					
1416	-54.01	-13	-41.01	-64.3	-55.71	1.47	5.32	V	Pass	
2120	-54.41	-13	-41.41	-67.57	-56.38	1.86	5.98	V	Pass	
2824	-53.35	-13	-40.35	-68.32	-56.42	2.21	7.43	V	Pass	



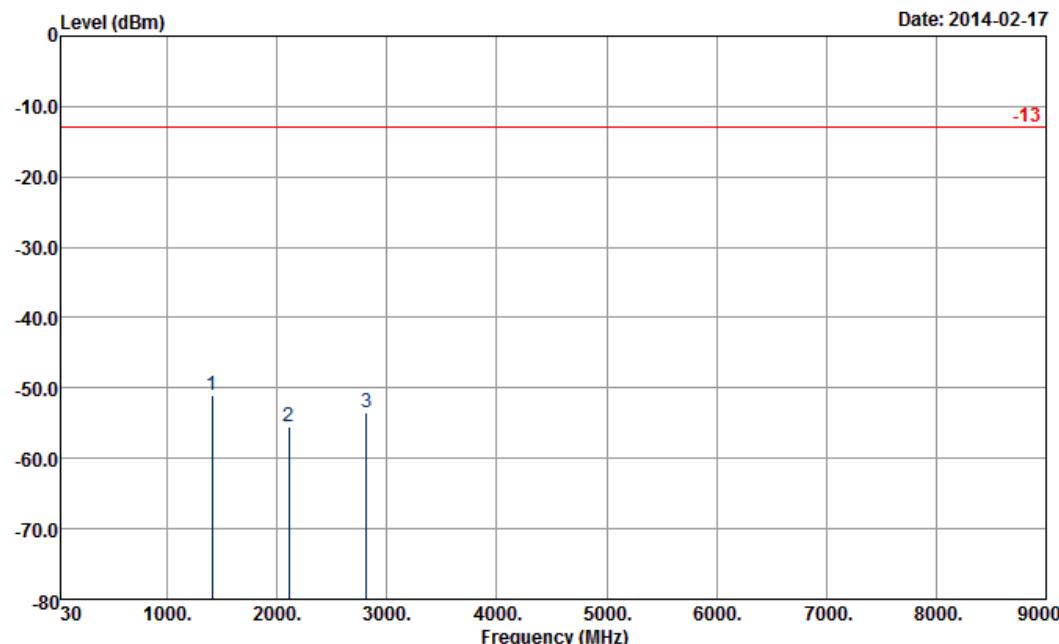
Band :	LTE Band 12	Temperature :	23~26°C						
Test Mode :	3MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%						
Test Engineer :	Stan Hsieh	Polarization :	Horizontal						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
 Date: 2014-02-17									
Site : 03CH07-HY Condition : -13 HF-EIRP(080306) HORIZONTAL									
Frequency	ERP	Limit	Over Limit	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	(dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
1408	-58.99	-13	-45.99	-67.11	-60.69	1.47	5.32	H	Pass
2112	-56.61	-13	-43.61	-67.79	-58.58	1.86	5.98	H	Pass
2816	-55.39	-13	-42.39	-68.87	-58.46	2.21	7.43	H	Pass



FCC RF Test Report

Report No. : FG421186B

Band :	LTE Band 12	Temperature :	23~26°C
Test Mode :	3MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA		S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
				Reading (dBm)	Power (dBm)					
1408	-50.98	-13	-37.98	-61.26	-52.68	1.47	5.32	V	Pass	
2112	-55.52	-13	-42.52	-68.74	-57.49	1.86	5.98	V	Pass	
2816	-53.46	-13	-40.46	-68.46	-56.53	2.21	7.43	V	Pass	



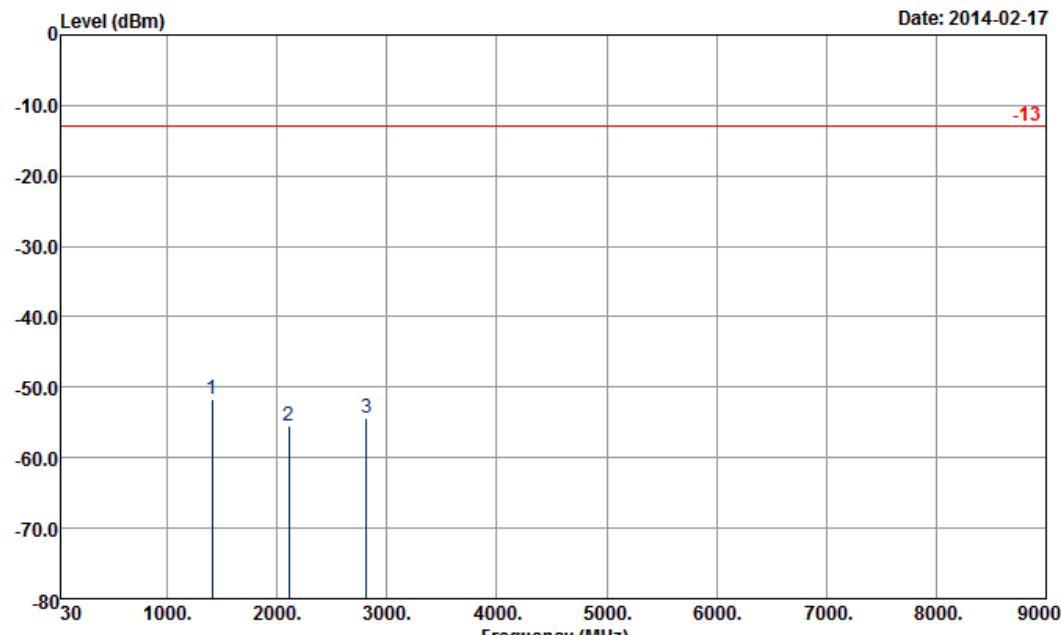
Band :	LTE Band 12	Temperature :	23~26°C						
Test Mode :	5MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%						
Test Engineer :	Stan Hsieh	Polarization :	Horizontal						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
 Date: 2014-02-17									
Site : 03CH07-HY Condition : -13 HF-EIRP(080306) HORIZONTAL									
Frequency	ERP	Limit	Over Limit	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	(dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
1408	-58.81	-13	-45.81	-66.95	-60.51	1.47	5.32	H	Pass
2112	-57.05	-13	-44.05	-68.22	-59.02	1.86	5.98	H	Pass
2816	-55.79	-13	-42.79	-69.16	-58.86	2.21	7.43	H	Pass



FCC RF Test Report

Report No. : FG421186B

Band :	LTE Band 12	Temperature :	23~26°C
Test Mode :	5MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH07-HY
Condition : -13 HF-EIRP(080306) VERTICAL

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1408	-51.73	-13	-38.73	-62.1	-53.43	1.47	5.32	V	Pass
2112	-55.39	-13	-42.39	-68.55	-57.36	1.86	5.98	V	Pass
2816	-54.38	-13	-41.38	-69.52	-57.45	2.21	7.43	V	Pass



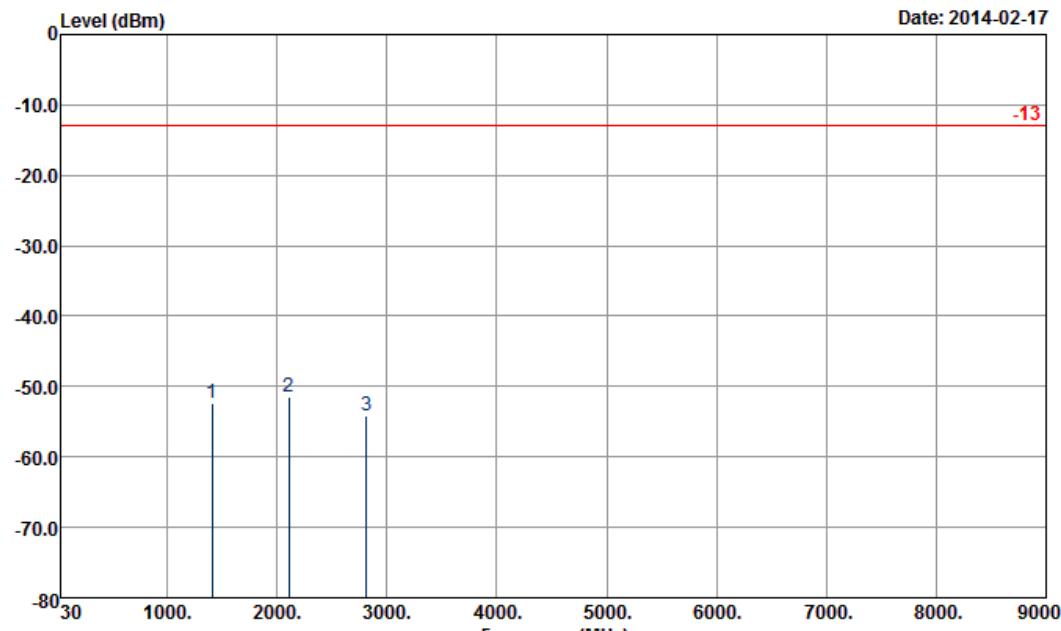
Band :	LTE Band 12	Temperature :	23~26°C						
Test Mode :	10MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%						
Test Engineer :	Stan Hsieh	Polarization :	Horizontal						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
 Date: 2014-02-17									
Site	: 03CH07-HY								
Condition	: -13 HF-EIRP(080306) HORIZONTAL								
Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1408	-57.82	-13	-44.82	-65.95	-59.52	1.47	5.32	H	Pass
2112	-57.18	-13	-44.18	-68.35	-59.15	1.86	5.98	H	Pass
2816	-55.81	-13	-42.81	-69.29	-58.88	2.21	7.43	H	Pass



FCC RF Test Report

Report No. : FG421186B

Band :	LTE Band 12	Temperature :	23~26°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH07-HY
Condition : -13 HF-EIRP(080306) VERTICAL

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1408	-52.31	-13	-39.31	-62.66	-54.01	1.47	5.32	V	Pass
2112	-51.52	-13	-38.52	-64.75	-53.49	1.86	5.98	V	Pass
2816	-54.16	-13	-41.16	-69.07	-57.23	2.21	7.43	V	Pass

3.7 Frequency Stability Measurement

3.7.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ ($\pm 2.5\text{ppm}$) of the center frequency.

3.7.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

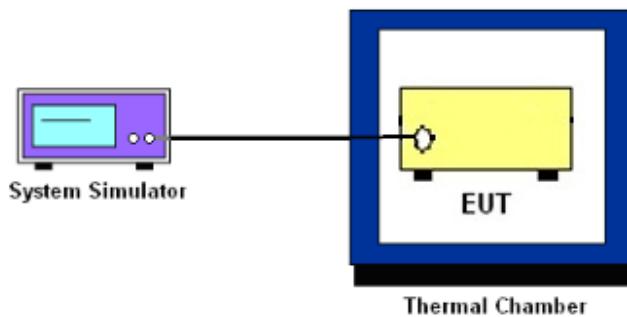
3.7.3 Test Procedures for Temperature Variation

1. The EUT was set up in the thermal chamber and connected with the base station.
2. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
3. With power OFF, the temperature was raised in 10°C step up to 50°C . The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

3.7.4 Test Procedures for Voltage Variation

1. The EUT was placed in a temperature chamber at $25 \pm 5^\circ\text{C}$ and connected with the base station.
2. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
3. The variation in frequency was measured for the worst case.

3.7.5 Test Setup





3.7.6 Test Result of Temperature Variation (FCC)

Band :	LTE Band 5 (QPSK)	Limit (ppm) :	2.5
Temperature (°C)	BW 10MHz		Result
	Deviation (ppm)		
50	0.0044		PASS
40	0.0030		
30	0.0016		
20	0.0022		
10	0.0044		
0	0.0014		
-10	0.0001		
-20	0.0012		
-30	0.0042		

Band :	LTE Band 2 (QPSK)	Limit (ppm) :	2.5
Temperature (°C)	BW 10MHz		Result
	Deviation (ppm)		
50	0.0012		PASS
40	0.0041		
30	0.0003		
20	0.0037		
10	0.0016		
0	0.0014		
-10	0.0013		
-20	0.0005		
-30	0.0033		



Band :	LTE Band 4 (QPSK)	Limit (ppm) :	2.5
Temperature (°C)	BW 10MHz		Result
	Deviation (ppm)		
50	0.0012		
40	0.0186		
30	0.0008		
20	0.0029		
10	0.0069		
0	0.0029		
-10	0.0048		
-20	0.0156		
-30	0.0187		

Band :	LTE Band 12 (QPSK)	Limit (ppm) :	2.5
Temperature (°C)	BW 10MHz		Result
	Deviation (ppm)		
50	0.0048		
40	0.0066		
30	0.0030		
20	0.0045		
10	0.0031		
0	0.0004		
-10	0.0007		
-20	0.0061		
-30	0.0033		



3.7.7 Test Result of Voltage Variation (FCC)

Band	Bandwidth	Voltage (Volt)	Deviation (ppm)	Limit (ppm)	Result
LTE Band 5	10M	3.50	0.0008	2.5	PASS
		Normal	0.0026		
		4.20	0.0041		
LTE Band 2	10M	3.50	0.0047	2.5	PASS
		Normal	0.0007		
		4.20	0.0029		
LTE Band 4	10M	3.50	0.0051	2.5	PASS
		Normal	0.0006		
		4.20	0.0213		
LTE Band 12	10M	3.50	0.0025	2.5	PASS
		Normal	0.0059		
		4.20	0.0024		

Remark:

1. Normal Voltage = 3.70V.
2. The manufacturer declared that the EUT could work properly between voltage 3.50V ~ 4.20V.



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
LTE Base Station	Anritsu	MT8820C	6201026480	30MHz~2.7GHz SISO	Jan. 07, 2014	Feb. 14, 2014	Jan. 06, 2015	Conducted (TH02-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz~40GHz	Jun. 07, 2013	Feb. 14, 2014	Jun. 06, 2014	Conducted (TH02-HY)
Thermal Chamber	Ten Billion	TTH-D3SP	TBN-930701	N/A	Jul. 19, 2013	Feb. 14, 2014	Jul. 18, 2014	Conducted (TH02-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP30	101067	9KHz ~ 30GHz	Nov. 20, 2013	Feb. 16, 2014 ~ Feb. 17, 2014	Nov. 19, 2014	Radiation (03CH07-HY)
Bilog Antenna	Schaffner	CBL6111C	2726	30MHz ~ 1GHz	Oct. 10, 2013	Feb. 16, 2014 ~ Feb. 17, 2014	Oct. 09, 2014	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	75962	1GHz~18GHz	Aug. 22, 2013	Feb. 16, 2014 ~ Feb. 17, 2014	Aug. 21, 2014	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	30MHz~1GHz	Feb. 26, 2013	Feb. 16, 2014 ~ Feb. 17, 2014	Feb. 25, 2014	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A02362	1 GHz~26.5 GHz	Nov. 29, 2013	Feb. 16, 2014 ~ Feb. 17, 2014	Nov. 28, 2014	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBEC K	BBHA 9170	BBHA91702 51	15GHz- 40GHz	Oct. 03, 2013	Feb. 16, 2014 ~ Feb. 17, 2014	Oct. 02, 2014	Radiation (03CH07-HY)
Turn Table	ChainTek	ChainTek 3000	N/A	0 ~ 360 degree	N/A	Feb. 16, 2014 ~ Feb. 17, 2014	N/A	Radiation (03CH07-HY)
Antenna Mast	ChainTek	M-400-0	114/8000604	N/A	N/A	Feb. 16, 2014 ~ Feb. 17, 2014	N/A	Radiation (03CH07-HY)



5 Uncertainty of Evaluation

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_{\text{c}}(y)$)	4.50
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