

3.5 Conducted Band Edge Measurement

3.5.1 Description of Conducted Band Edge Measurement

22.917(a)

For operations in the 824 – 849 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ 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 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 $P(\text{Watts})$ 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 operations in the 698 -746 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ 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 operations in the 1710 – 1755 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ 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.

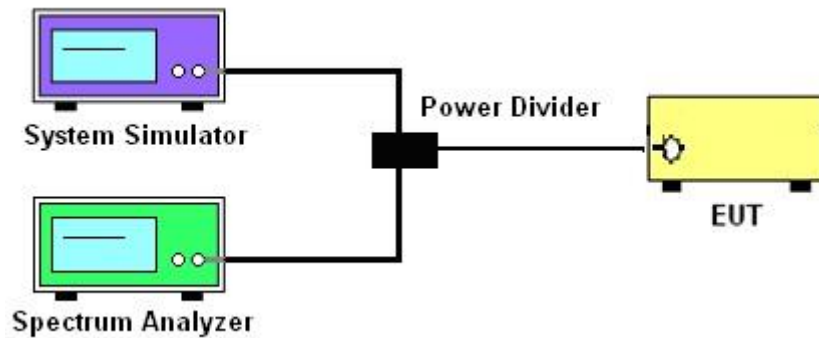
3.5.2 Measuring Instruments

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 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.

3.5.4 Test Setup

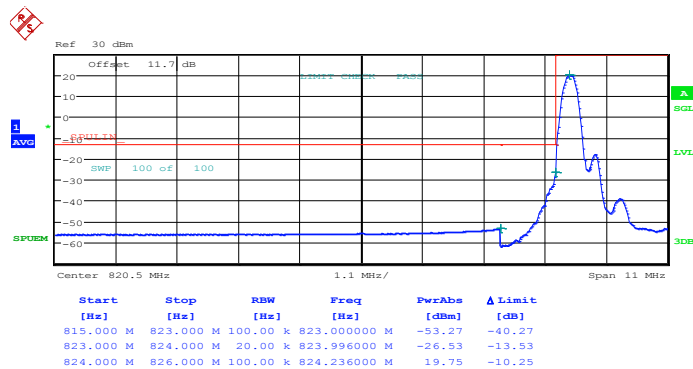




3.5.5 Test Result (Plots) of Conducted Band Edge

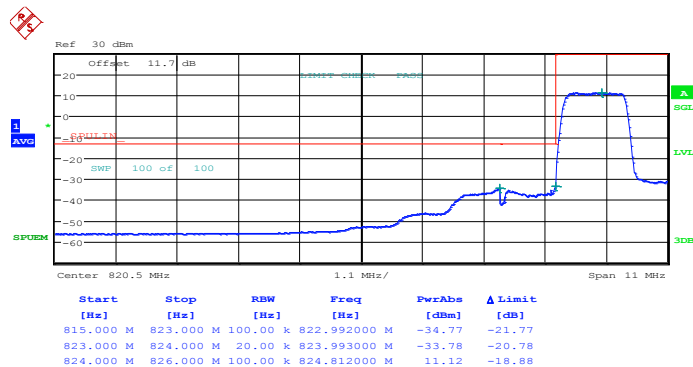
Band :	LTE Band 5	Band Width :	1.4MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



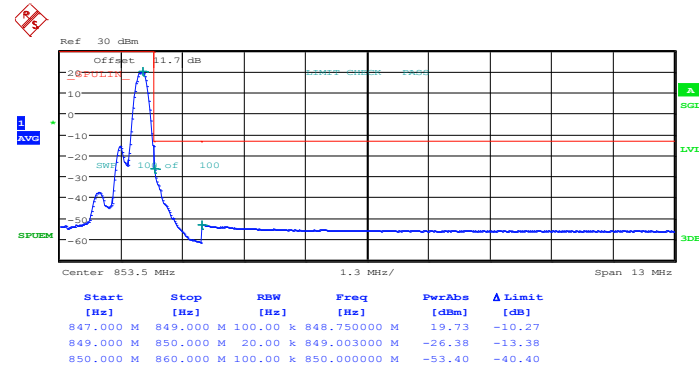
Date: 18.FEB.2014 20:15:52

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



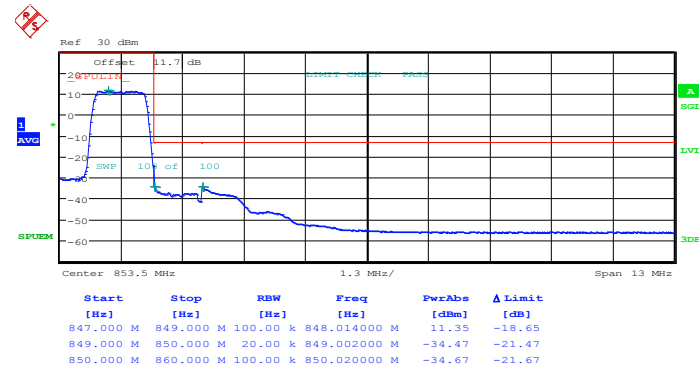
Date: 18.FEB.2014 20:17:18

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



Date: 18.FEB.2014 20:25:34

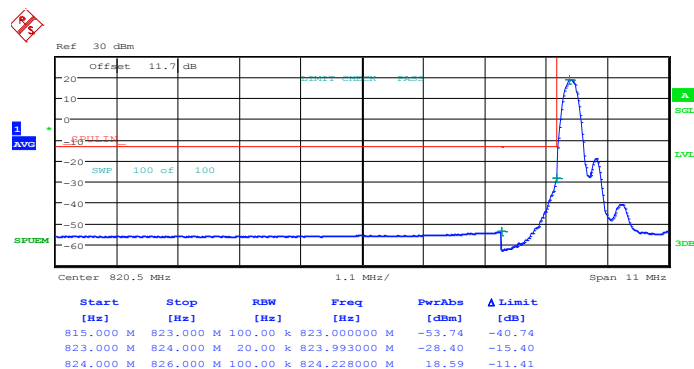
Higher Band Edge Plot for QPSK-RB Size 6, RB Offset 0



Date: 18.FEB.2014 20:24:08

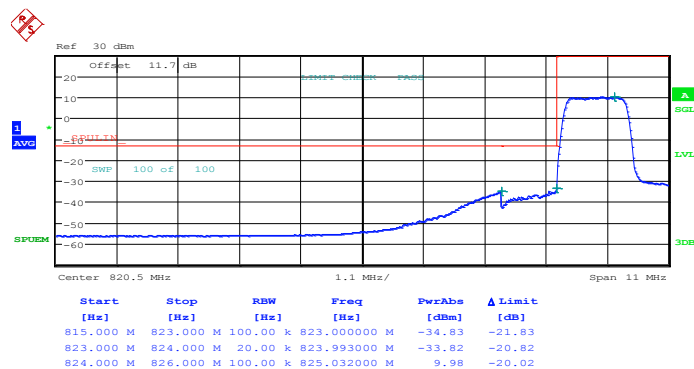
Band :	LTE Band 5	Band Width :	1.4MHz / 16QAM
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Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



Date: 18.FEB.2014 20:16:35

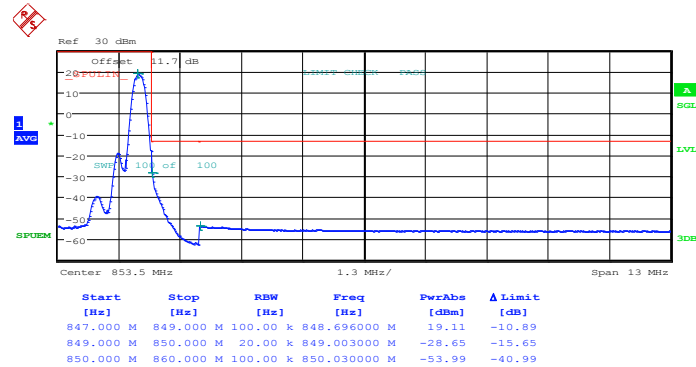
Lower Band Edge Plot for 16QAM -RB Size 6, RB Offset 0



Date: 18.FEB.2014 20:18:00

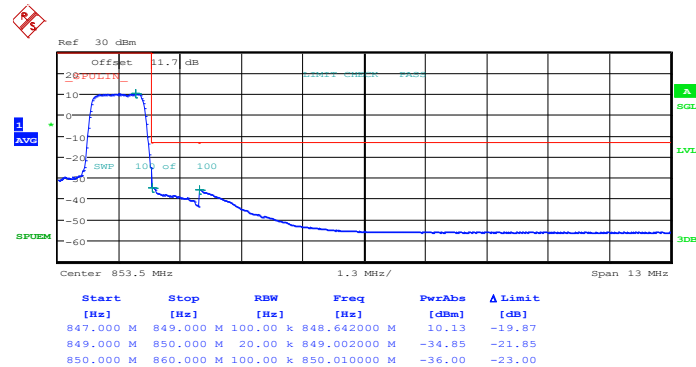


Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 5



Date: 18.FEB.2014 20:26:17

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

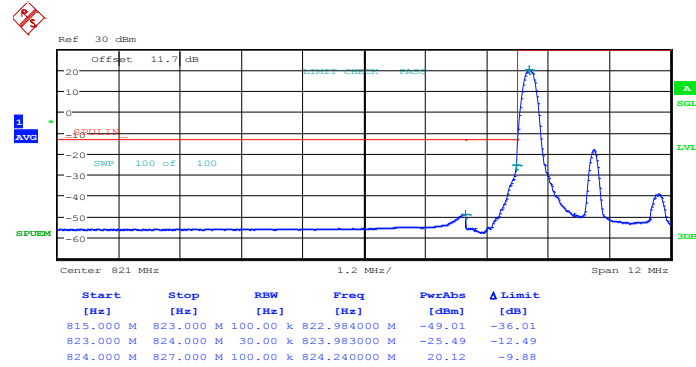


Date: 18.FEB.2014 20:24:51



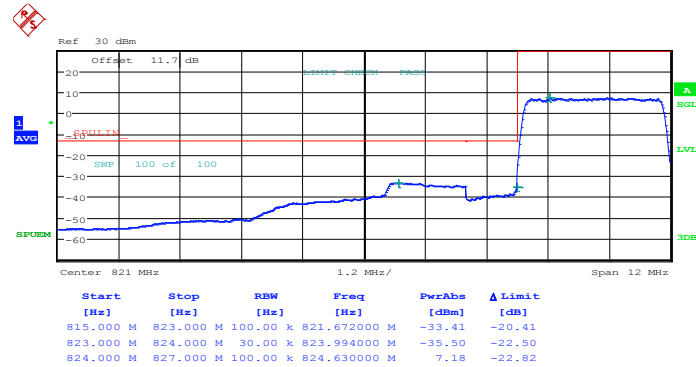
Band :	LTE Band 5	Band Width :	3MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



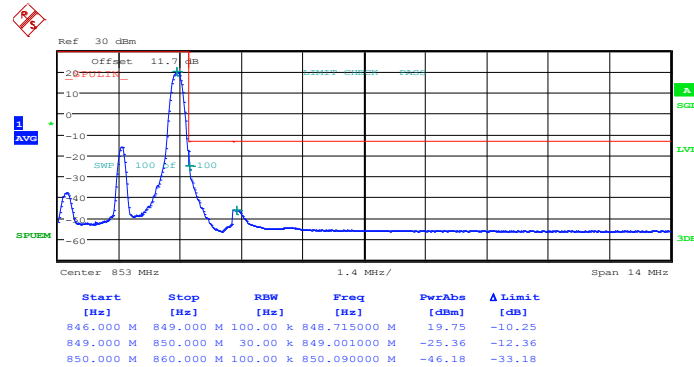
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Lower Band Edge Plot for QPSK-RB Size 15, RB Offset 0



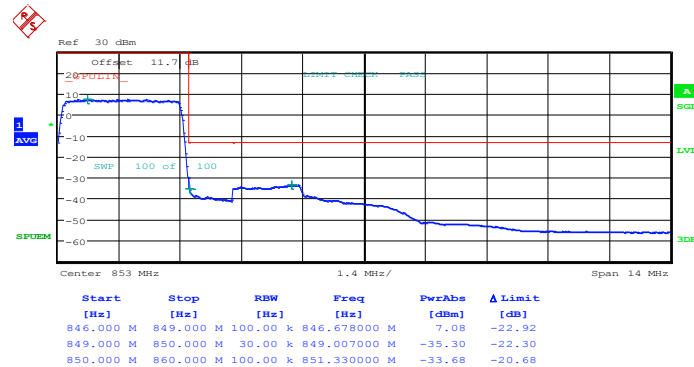
Date: 18.FEB.2014 20:31:12

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



Date: 18.FEB.2014 20:38:03

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

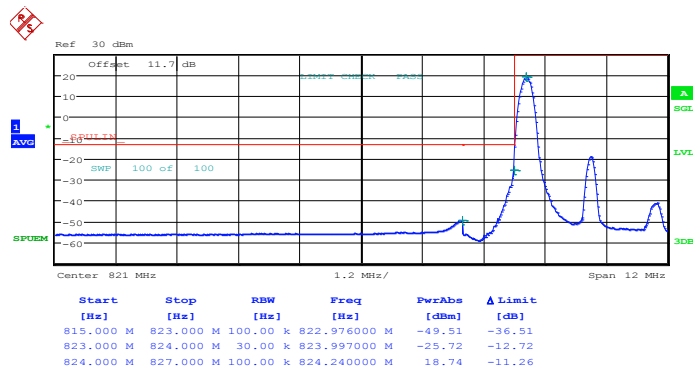


Date: 18.FEB.2014 20:39:28



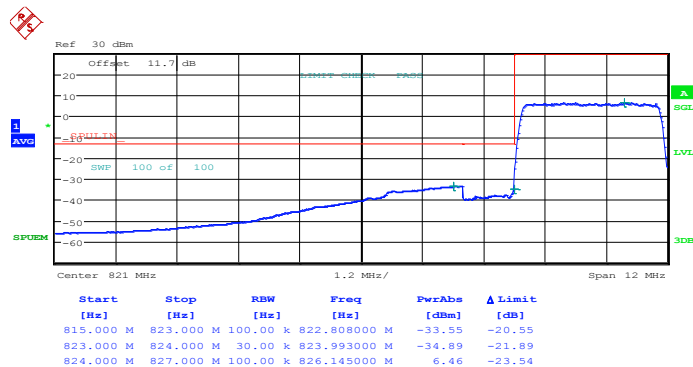
Band :	LTE Band 5	Band Width :	3MHz / 16QAM
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Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



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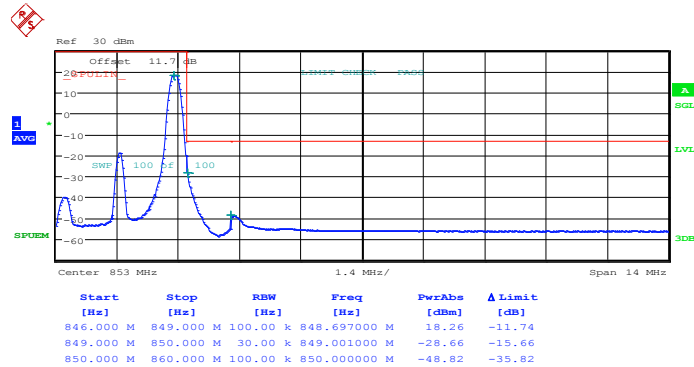
Lower Band Edge Plot for 16QAM -RB Size 15, RB Offset 0



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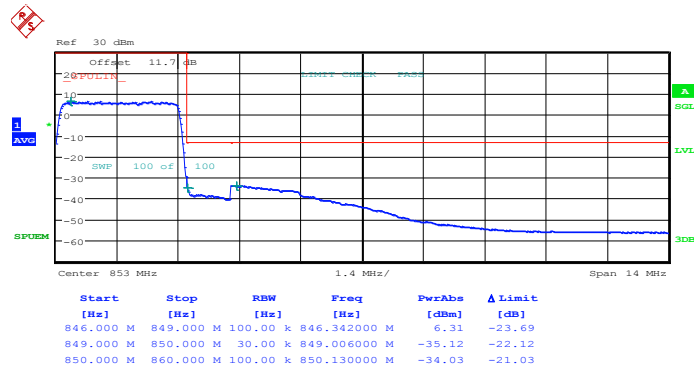


Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 14



Date: 18.FEB.2014 20:38:46

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

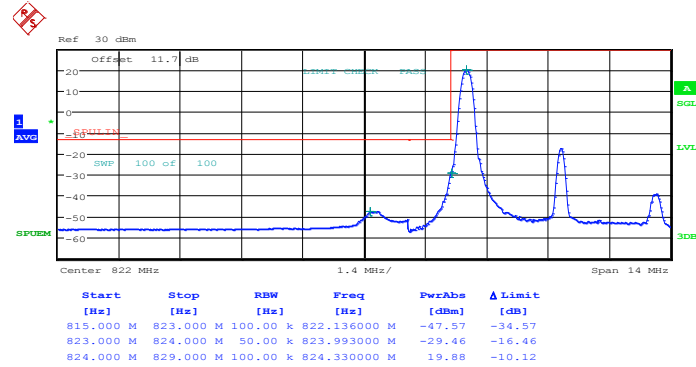


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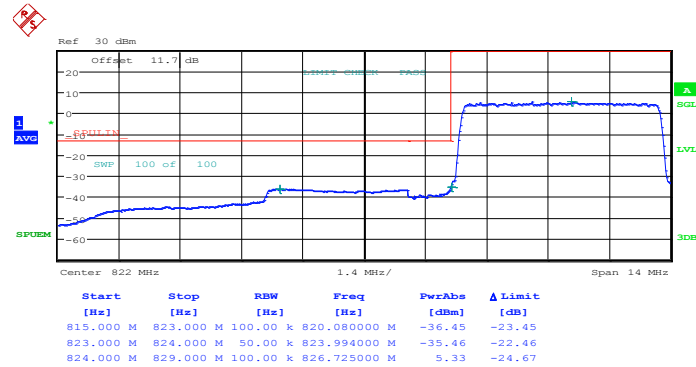
Band :	LTE Band 5	Band Width :	5MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 18.FEB.2014 20:43:41

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



Date: 18.FEB.2014 20:45:06



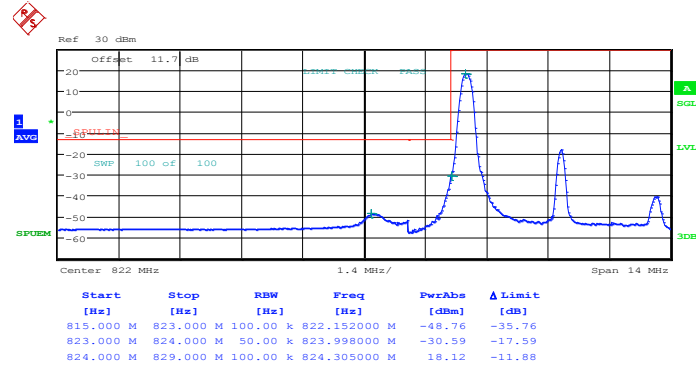
Higher Band Edge Plot for QPSK-RB Size 25, RB Offset 0





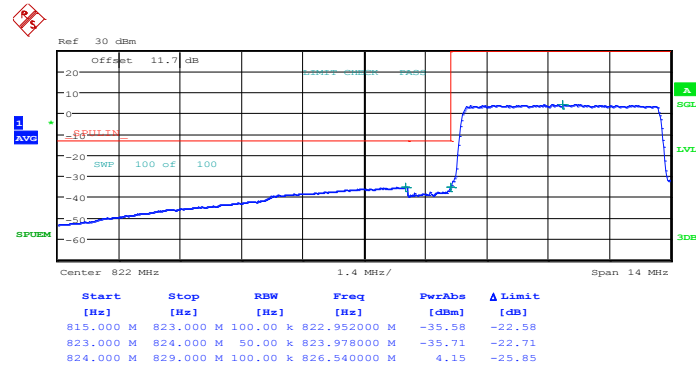
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Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



Date: 18.FEB.2014 20:44:24

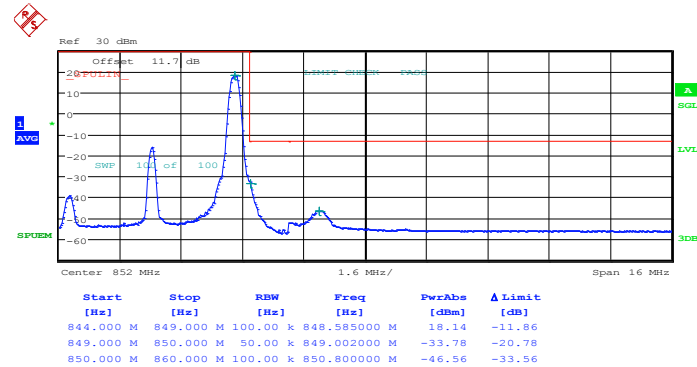
Lower Band Edge Plot for 16QAM -RB Size 25, RB Offset 0



Date: 18.FEB.2014 20:45:49

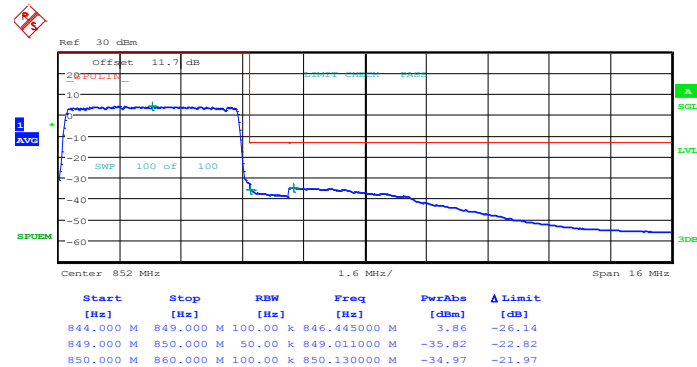


Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 24



Date: 18.FEB.2014 20:52:40

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

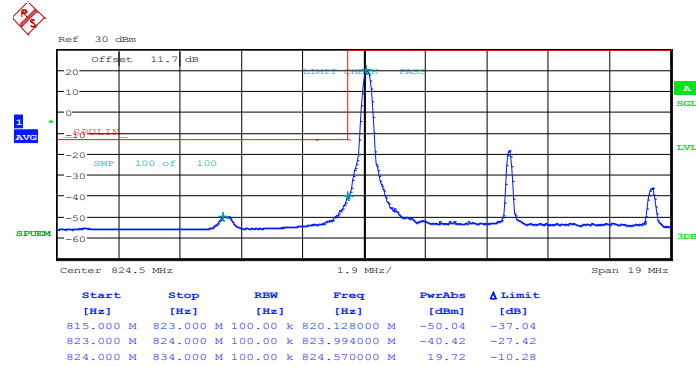


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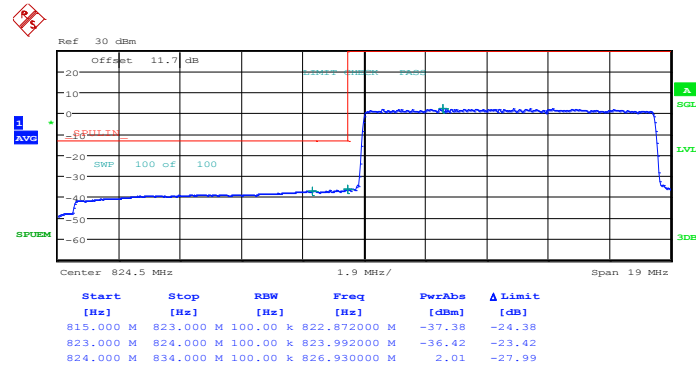
Band :	LTE Band 5	Band Width :	10MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 18.FEB.2014 20:57:35

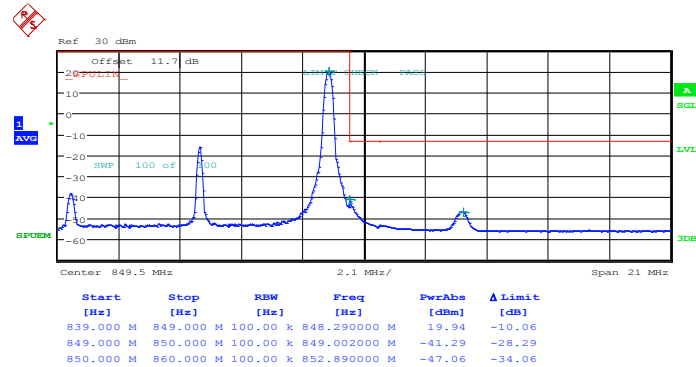
Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Date: 18.FEB.2014 20:59:01

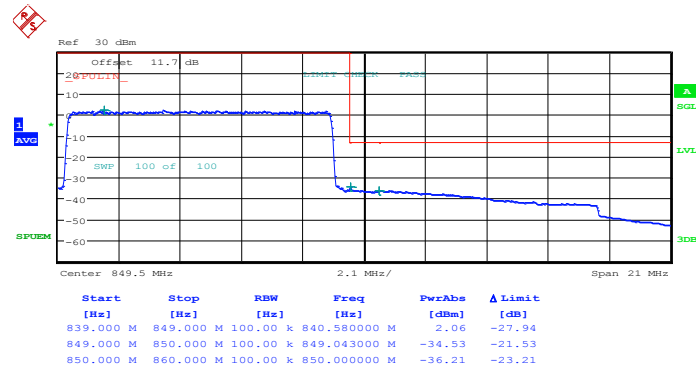


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



Date: 18.FEB.2014 21:05:52

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

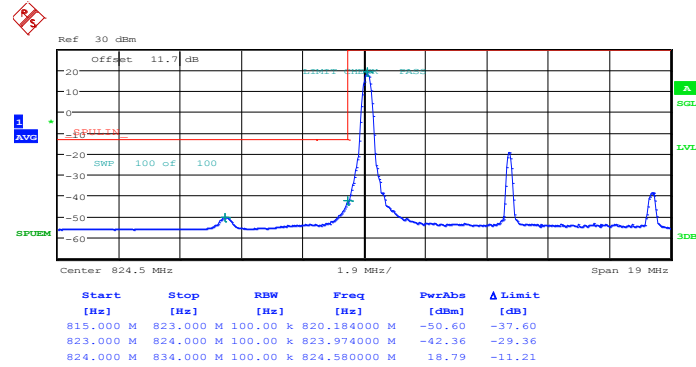


Date: 18.FEB.2014 21:07:18



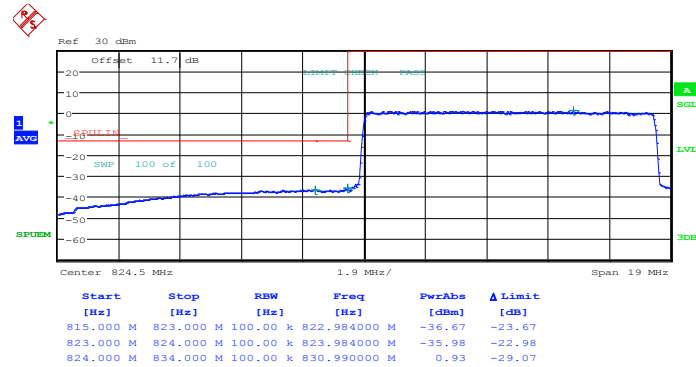
Band :	LTE Band 5	Band Width :	10MHz / 16QAM
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Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



Date: 18.FEB.2014 20:58:18

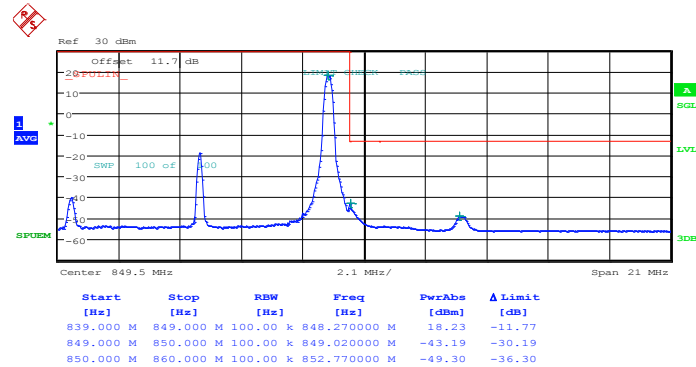
Lower Band Edge Plot for 16QAM -RB Size 50, RB Offset 0



Date: 18.FEB.2014 20:59:44

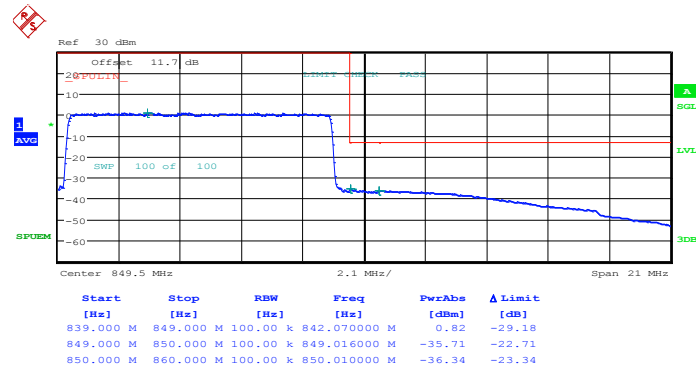


Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 49



Date: 18.FEB.2014 21:06:35

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

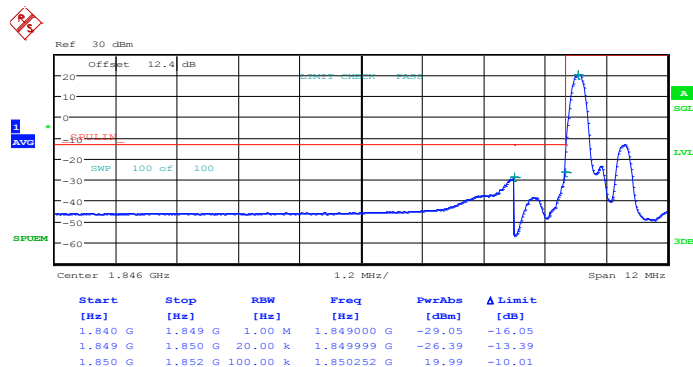


Date: 18.FEB.2014 21:08:01



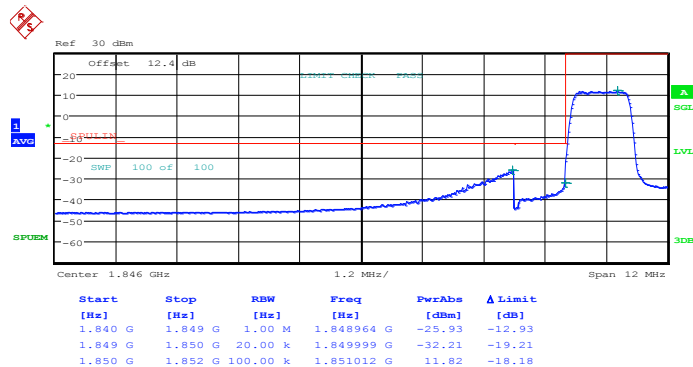
Band :	LTE Band 2	Band Width :	1.4MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 17.FEB.2014 23:57:07

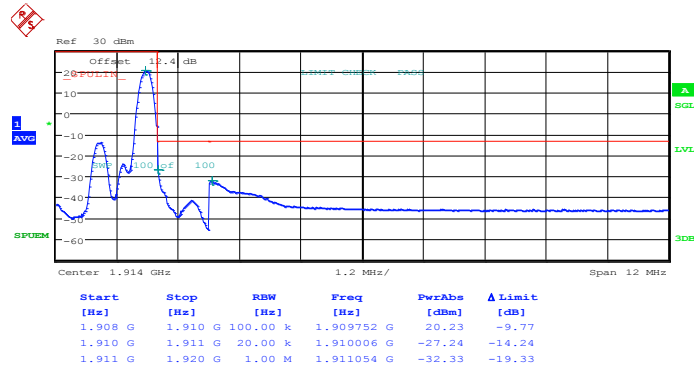
Lower Band Edge Plot for QPSK-RB Size 6, RB Offset 0



Date: 17.FEB.2014 23:58:33

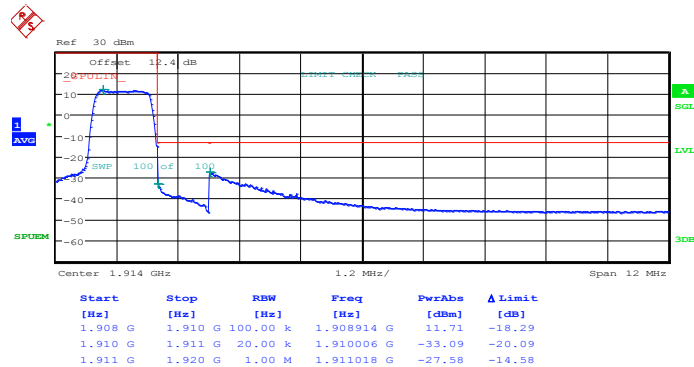


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 5



Date: 18.FEB.2014 00:05:23

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

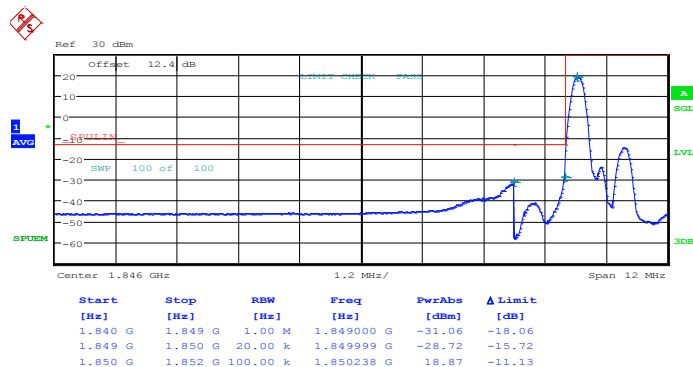


Date: 18.FEB.2014 00:06:49



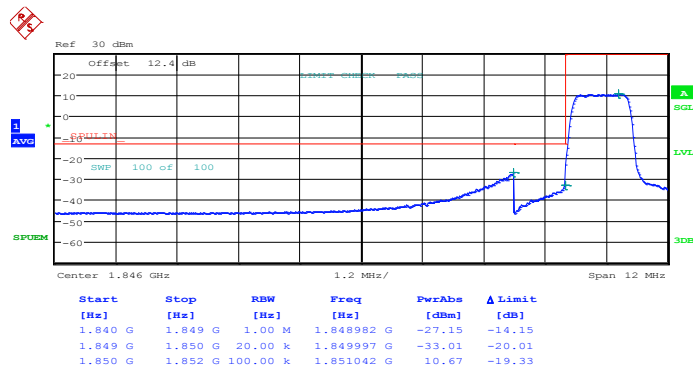
Band :	LTE Band 2	Band Width :	1.4MHz / 16QAM
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Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



Date: 17.FEB.2014 23:57:50

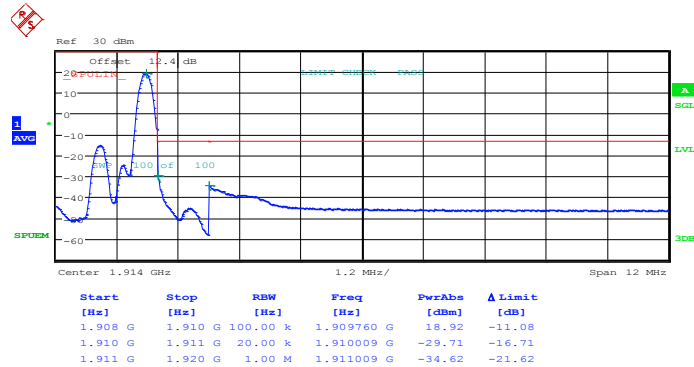
Lower Band Edge Plot for 16QAM -RB Size 6, RB Offset 0



Date: 17.FEB.2014 23:59:16

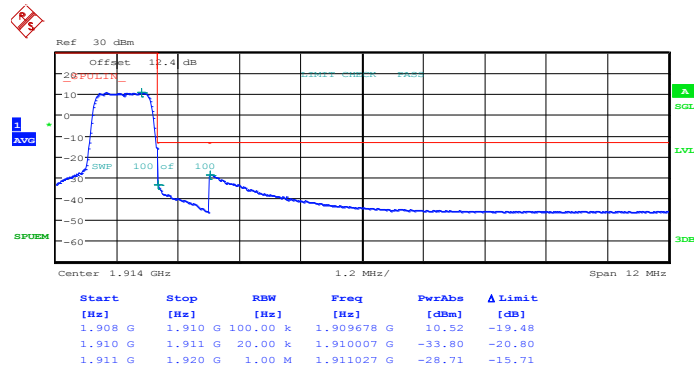


Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 5



Date: 18.FEB.2014 00:06:06

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

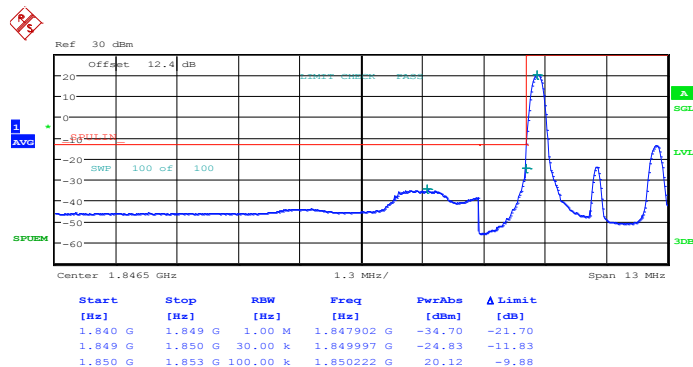


Date: 18.FEB.2014 00:07:32



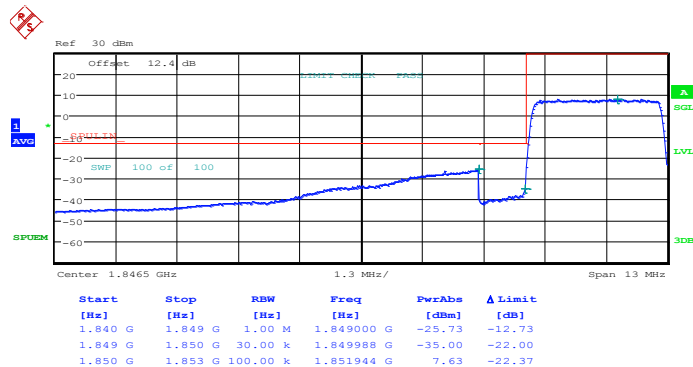
Band :	LTE Band 2	Band Width :	3MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 18.FEB.2014 00:11:02

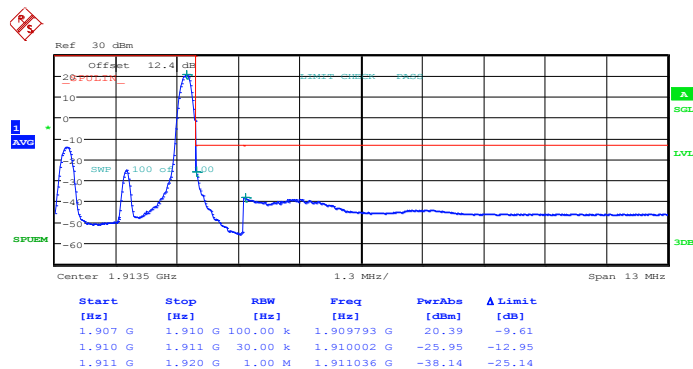
Lower Band Edge Plot for QPSK-RB Size 15, RB Offset 0



Date: 18.FEB.2014 00:12:28

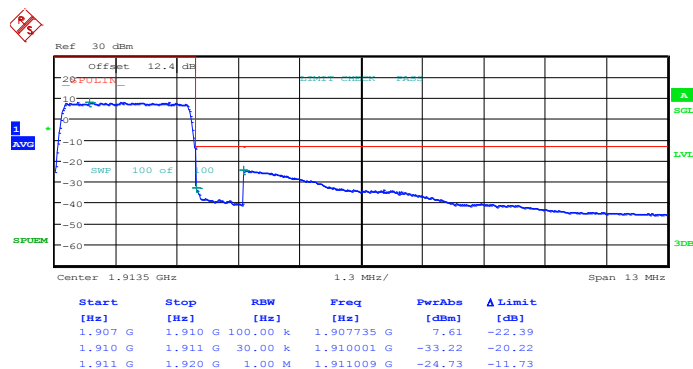


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 14



Date: 18.FEB.2014 00:21:05

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

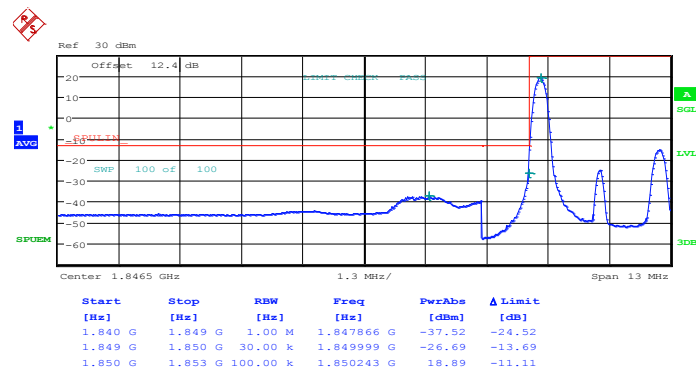


Date: 18.FEB.2014 00:22:31



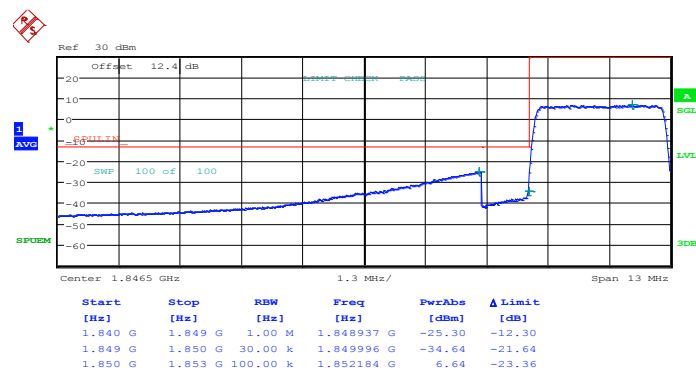
Band :	LTE Band 2	Band Width :	3MHz / 16QAM
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Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



Date: 18.FEB.2014 00:11:45

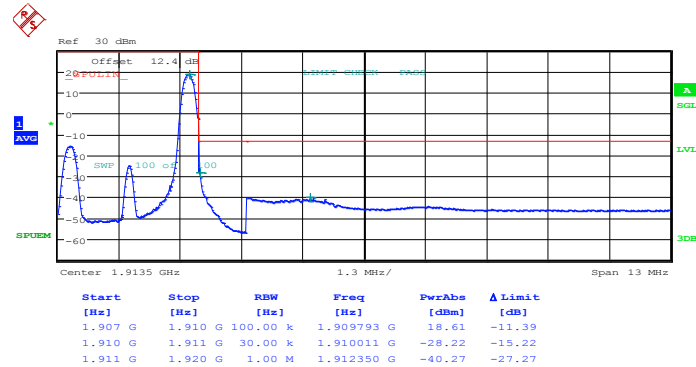
Lower Band Edge Plot for 16QAM -RB Size 15, RB Offset 0



Date: 18.FEB.2014 00:14:57

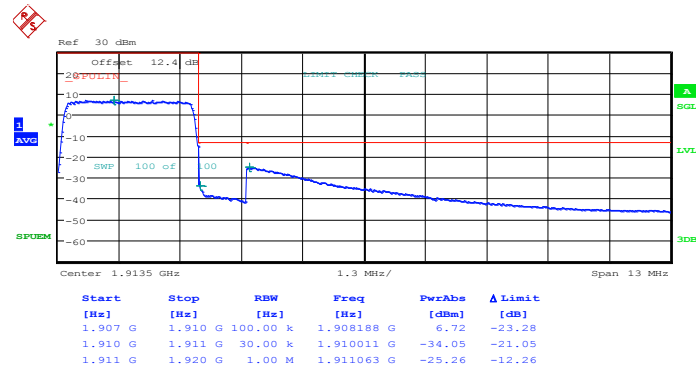


Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 14



Date: 18.FEB.2014 00:21:48

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

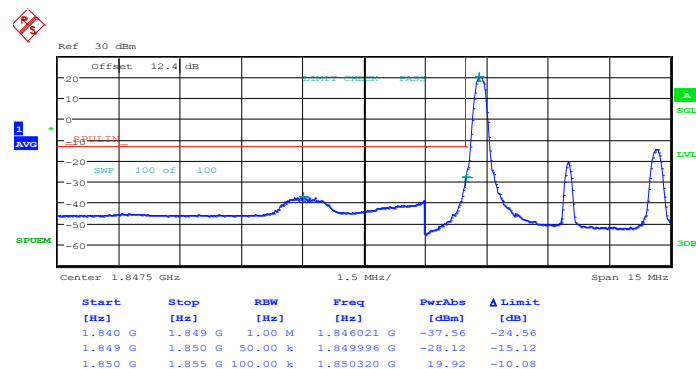


Date: 18.FEB.2014 00:23:14



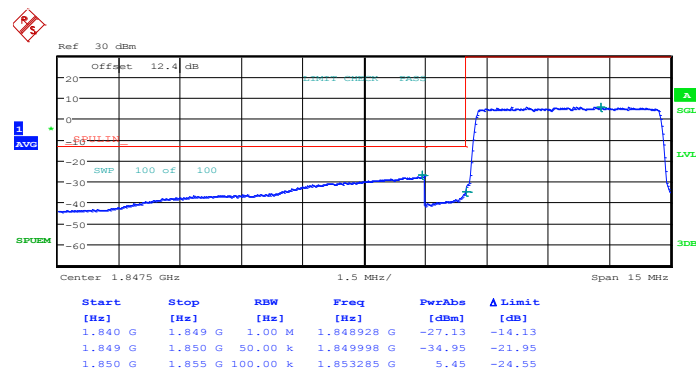
Band :	LTE Band 2	Band Width :	5MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



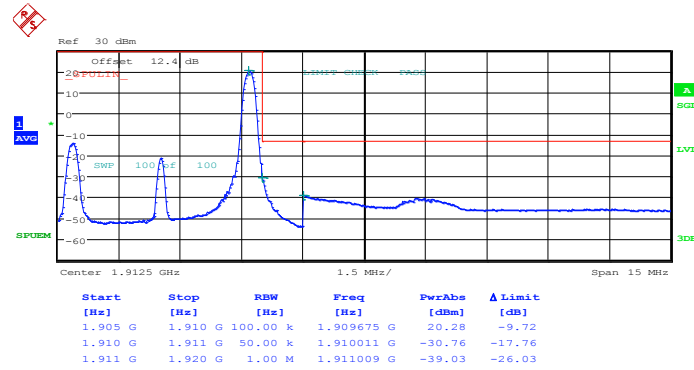
Date: 18.FEB.2014 00:26:44

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



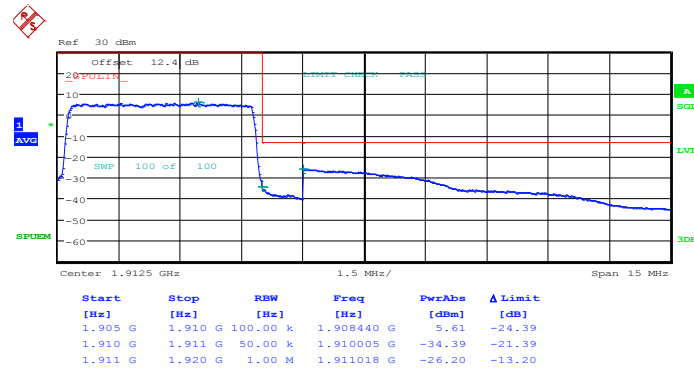
Date: 18.FEB.2014 00:28:09

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



Date: 18.FEB.2014 00:35:00

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

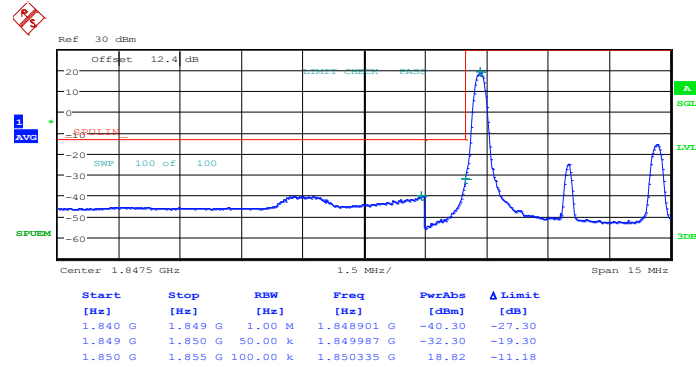


Date: 18.FEB.2014 00:36:25



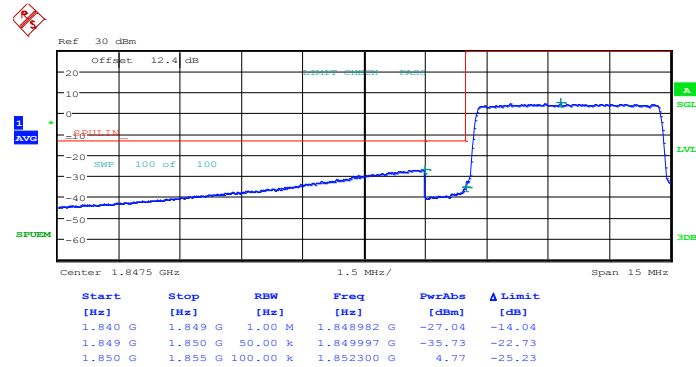
Band :	LTE Band 2	Band Width :	5MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 18.FEB.2014 00:27:27

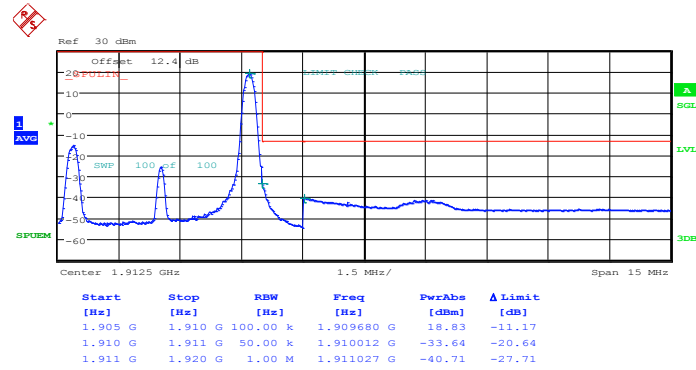
Lower Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



Date: 18.FEB.2014 00:28:52

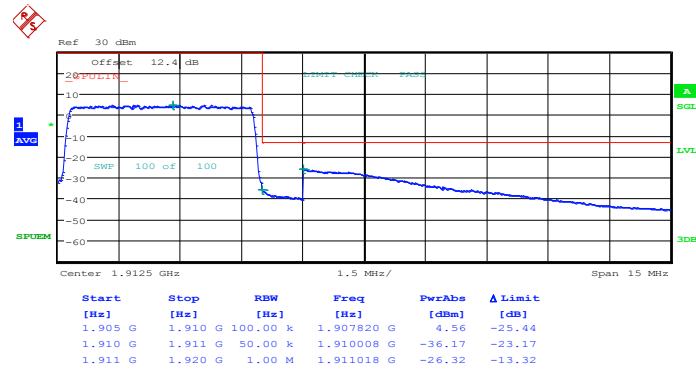


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 24



Date: 18.FEB.2014 00:35:43

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

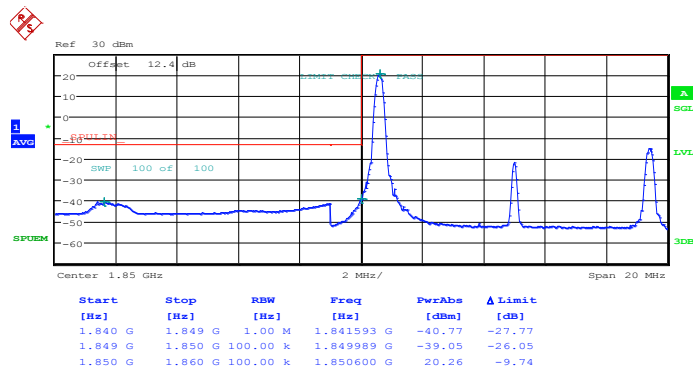


Date: 18.FEB.2014 00:37:08



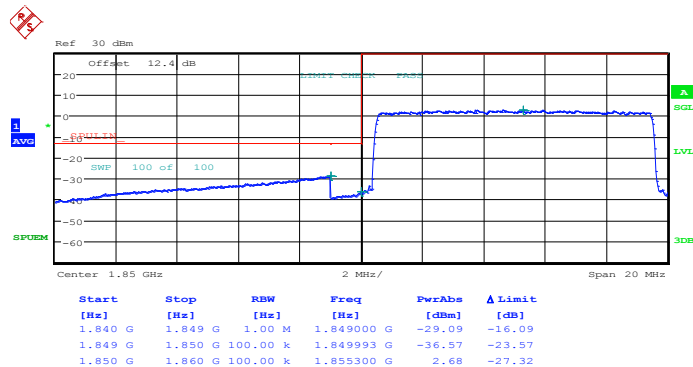
Band :	LTE Band 2	Band Width :	10MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



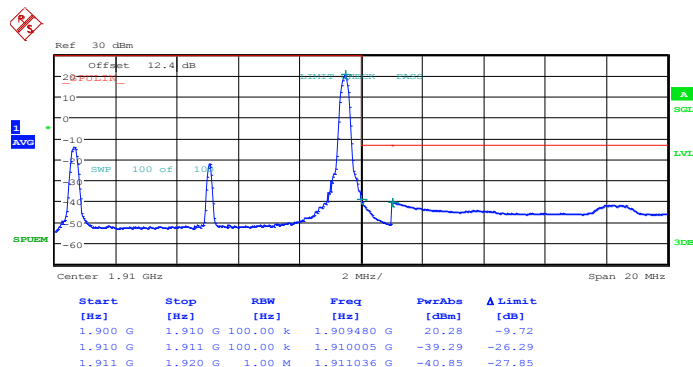
Date: 18.FEB.2014 00:40:38

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



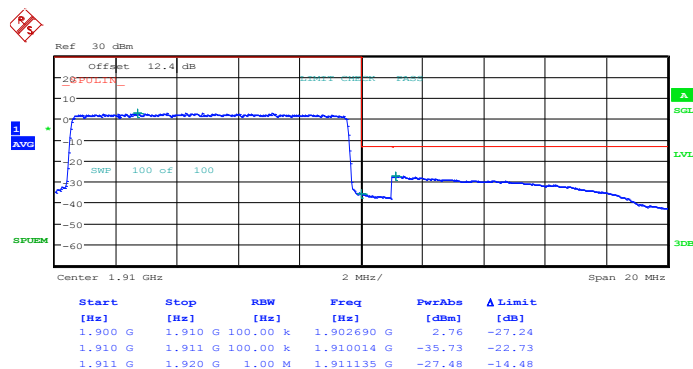
Date: 18.FEB.2014 00:42:04

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



Date: 18.FEB.2014 00:48:54

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

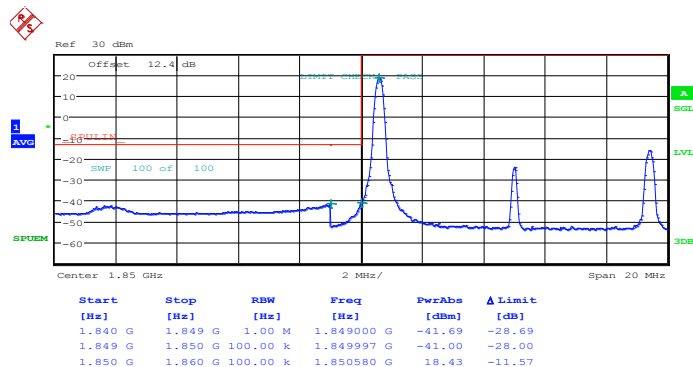


Date: 18.FEB.2014 00:50:20



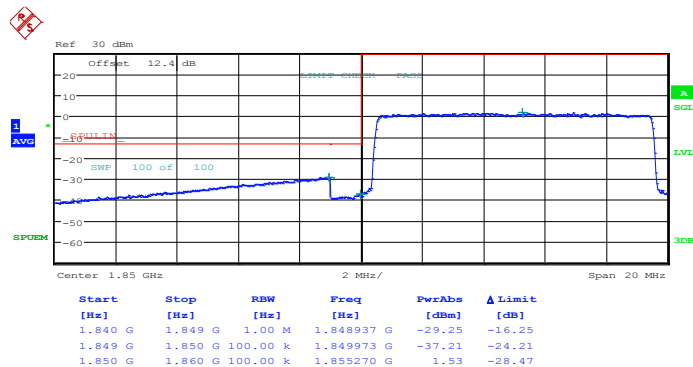
Band :	LTE Band 2	Band Width :	10MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



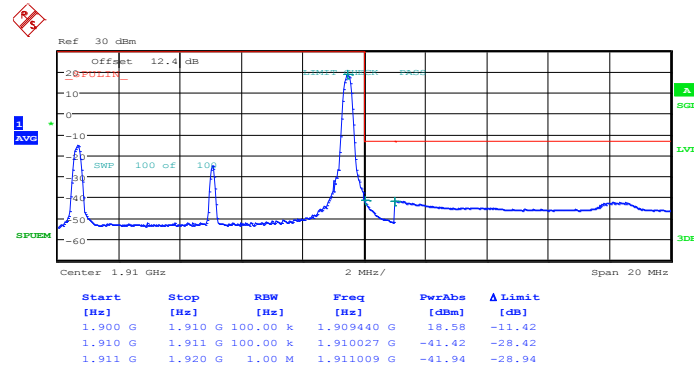
Date: 18.FEB.2014 00:41:21

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



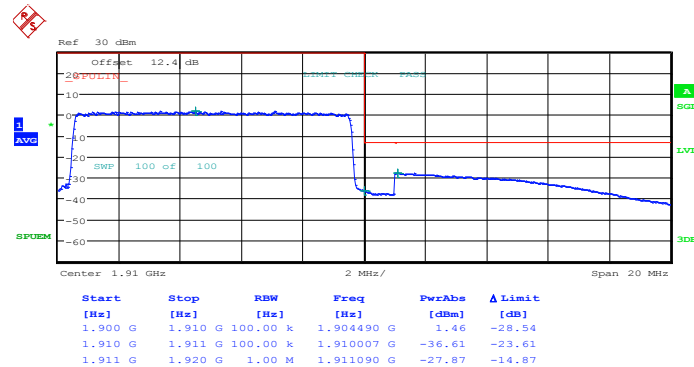
Date: 18.FEB.2014 00:42:46

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



Date: 18.FEB.2014 00:49:37

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

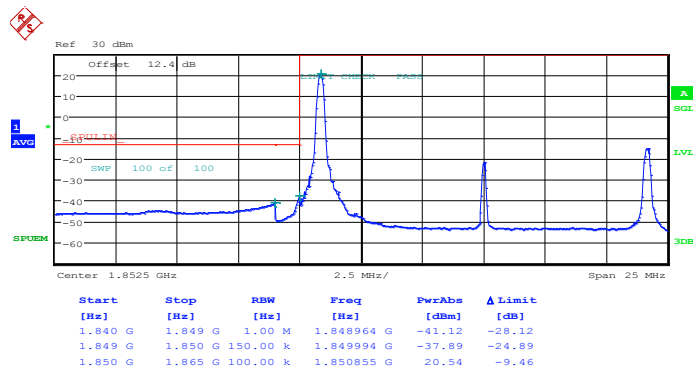


Date: 18.FEB.2014 00:51:03



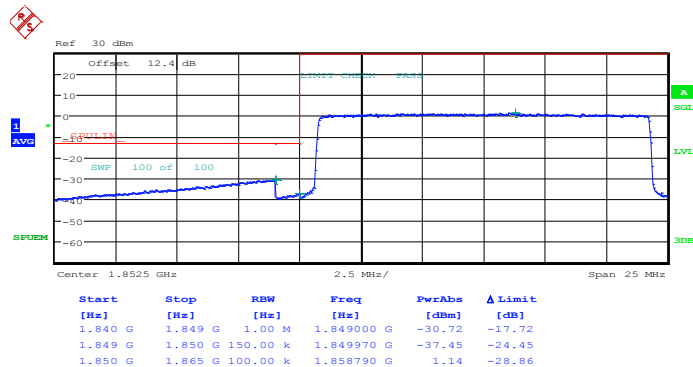
Band :	LTE Band 2	Band Width :	15MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 18.FEB.2014 00:54:33

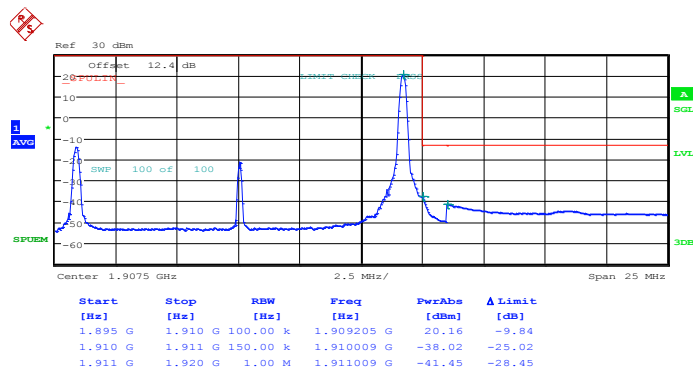
Lower Band Edge Plot for QPSK-RB Size 75, RB Offset 0



Date: 18.FEB.2014 00:55:59

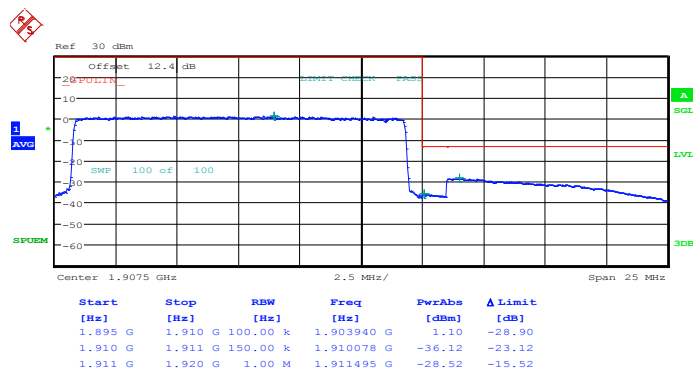


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 74



Date: 18.FEB.2014 01:02:49

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

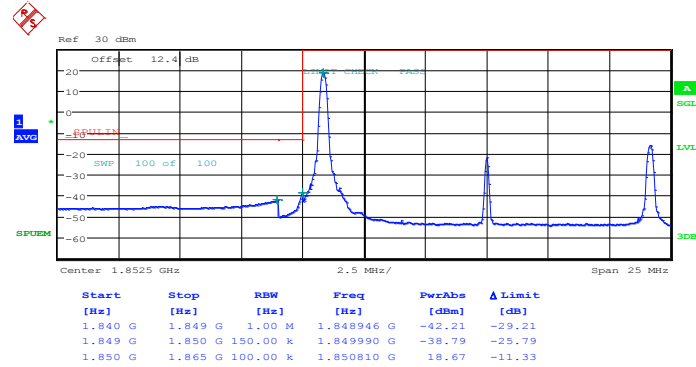


Date: 18.FEB.2014 01:04:15



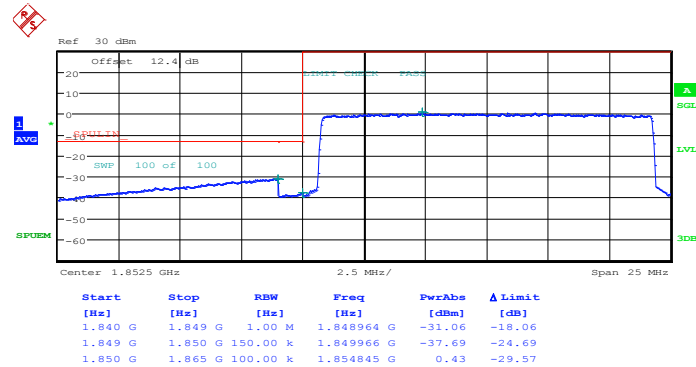
Band :	LTE Band 2	Band Width :	15MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



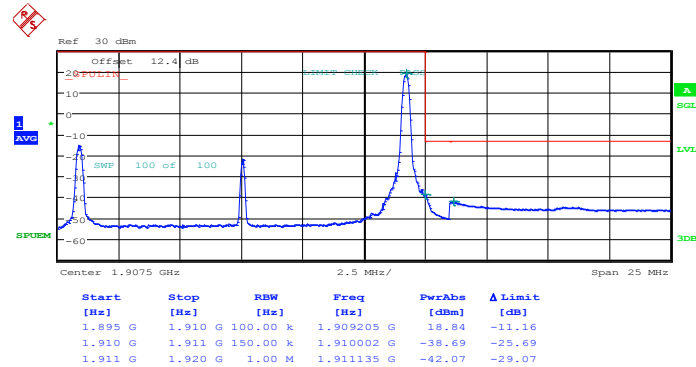
Date: 18.FEB.2014 00:55:16

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



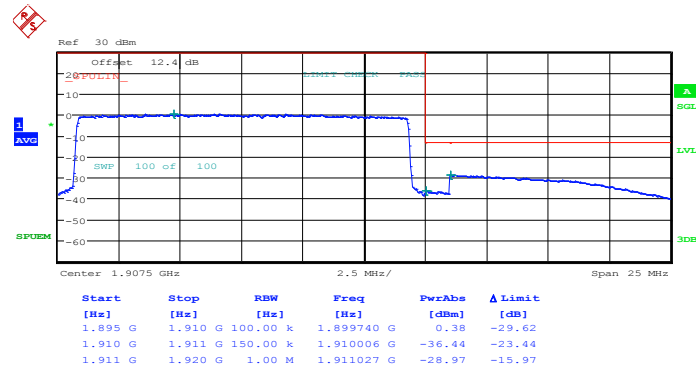
Date: 18.FEB.2014 00:56:41

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



Date: 18.FEB.2014 01:03:32

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

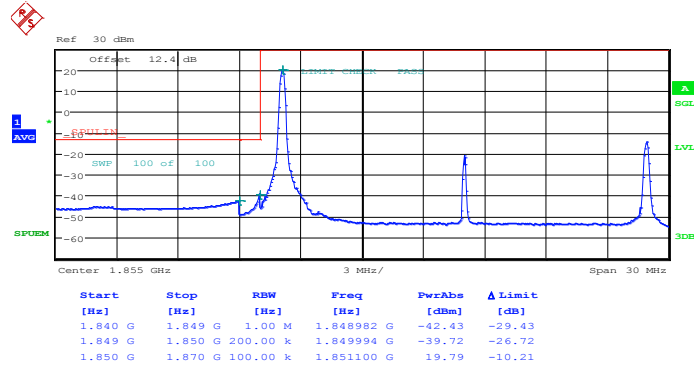


Date: 18.FEB.2014 01:04:58



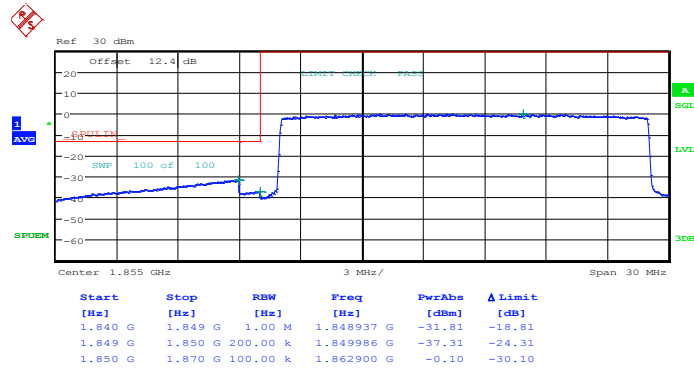
Band :	LTE Band 2	Band Width :	20MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



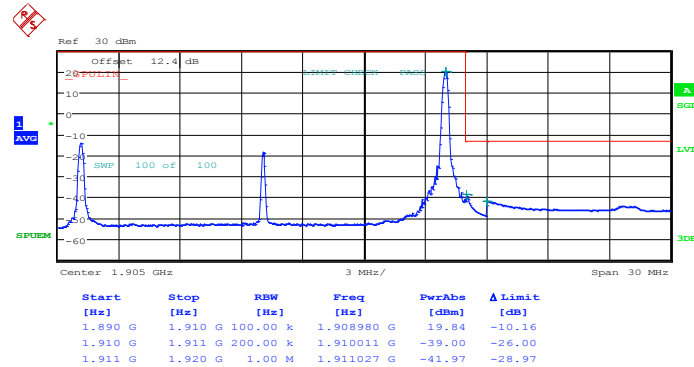
Date: 18.FEB.2014 18:30:58

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



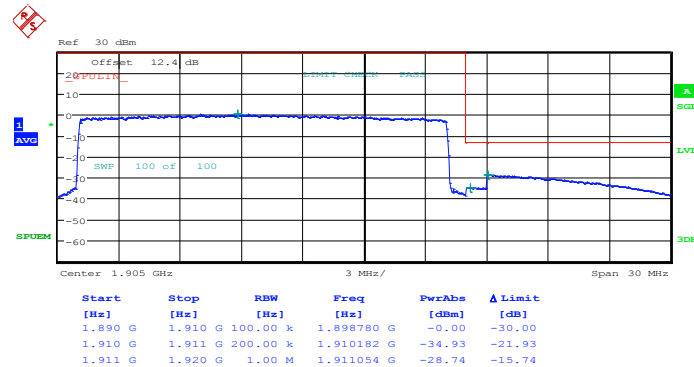
Date: 18.FEB.2014 18:32:24

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



Date: 18.FEB.2014 18:39:16

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

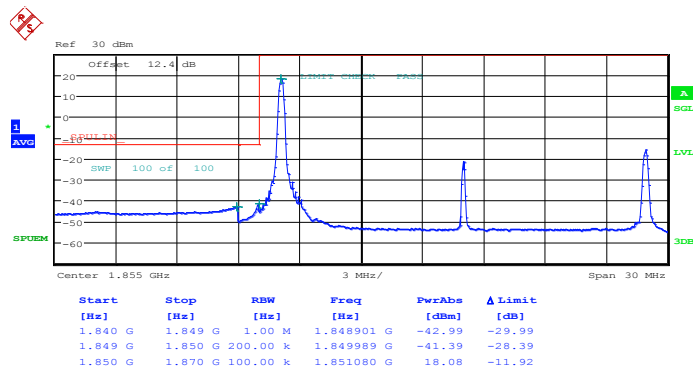


Date: 18.FEB.2014 18:40:42



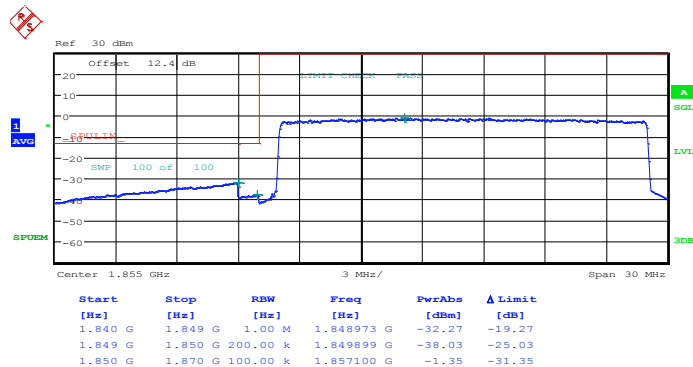
Band :	LTE Band 2	Band Width :	20MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0

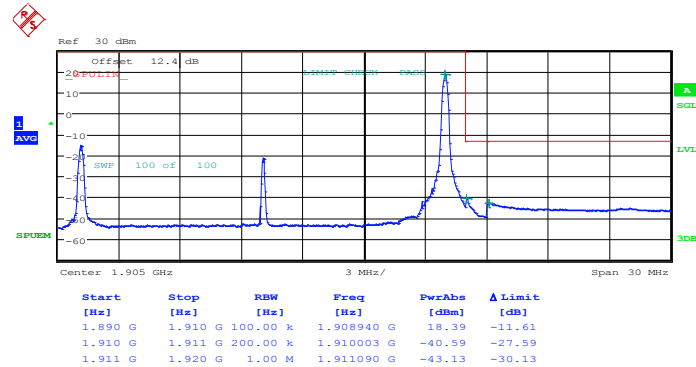


Date: 18.FEB.2014 18:31:41

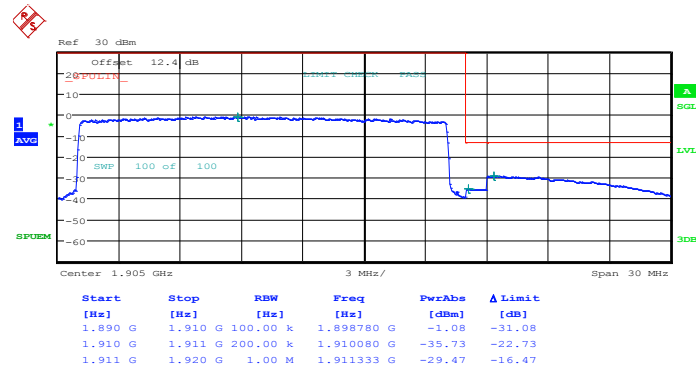
Lower Band Edge Plot for 16QAM-RB Size 100, RB Offset 0



Date: 18.FEB.2014 18:33:07

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


Date: 18.FEB.2014 18:39:59

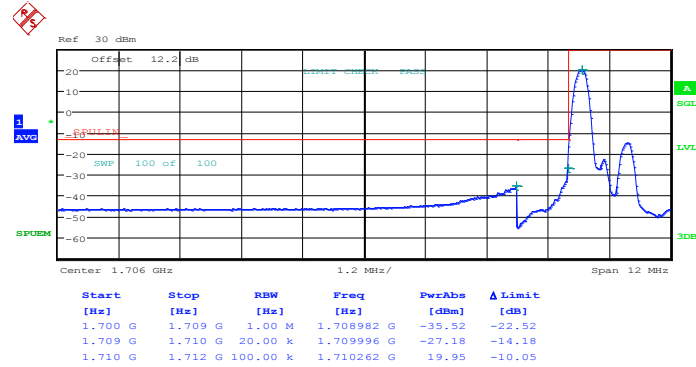
Higher Band Edge Plot for 16QAM-RB Size 100, RB Offset 0


Date: 18.FEB.2014 18:41:25



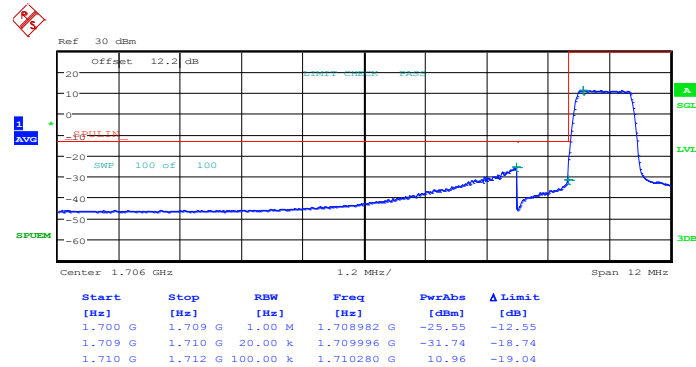
Band :	LTE Band 4	Band Width :	1.4MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



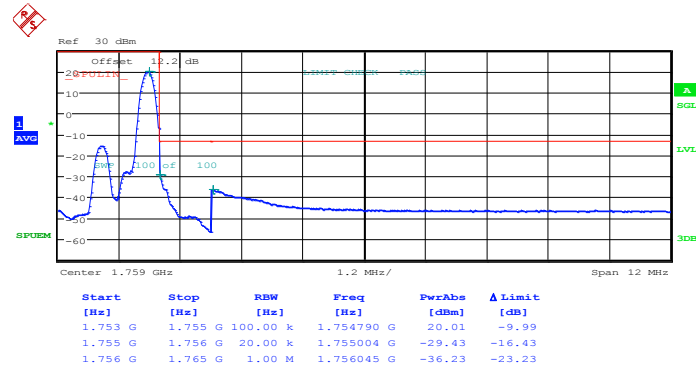
Date: 18.FEB.2014 18:47:24

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



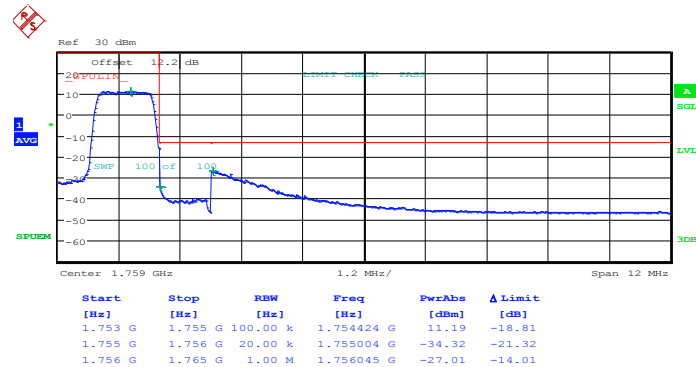
Date: 18.FEB.2014 18:48:50

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



Date: 18.FEB.2014 18:55:42

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

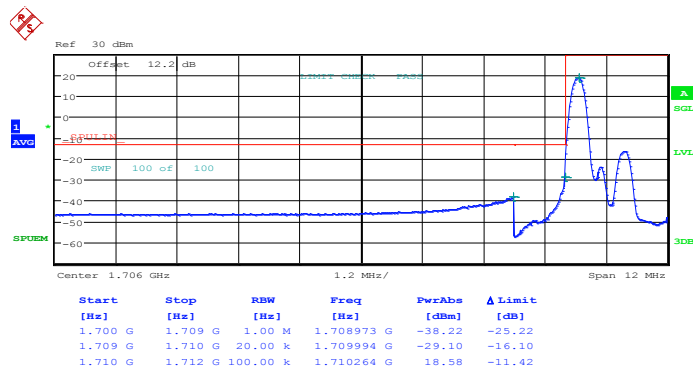


Date: 18.FEB.2014 18:57:08



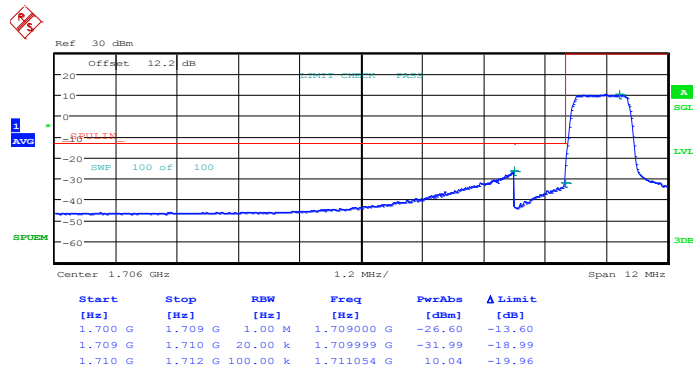
Band :	LTE Band 4	Band Width :	1.4MHz / 16QAM
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Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



Date: 18.FEB.2014 18:48:07

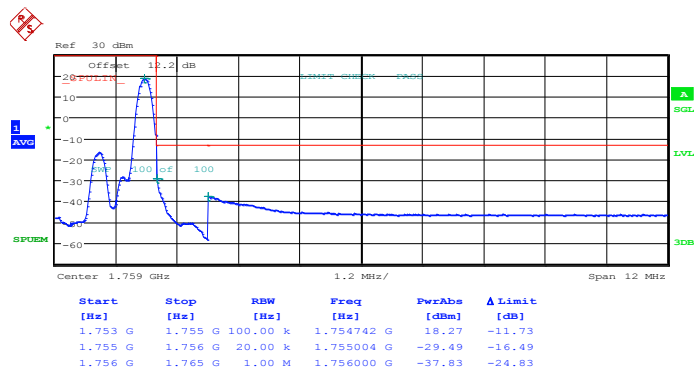
Lower Band Edge Plot for 16QAM-RB Size 6, RB Offset 0



Date: 18.FEB.2014 18:49:33

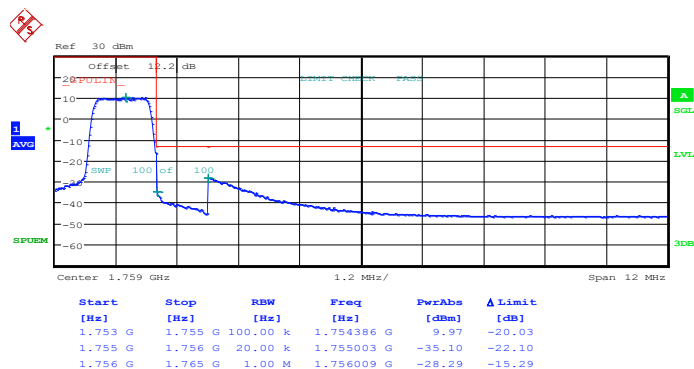


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 5



Date: 18.FEB.2014 18:56:25

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

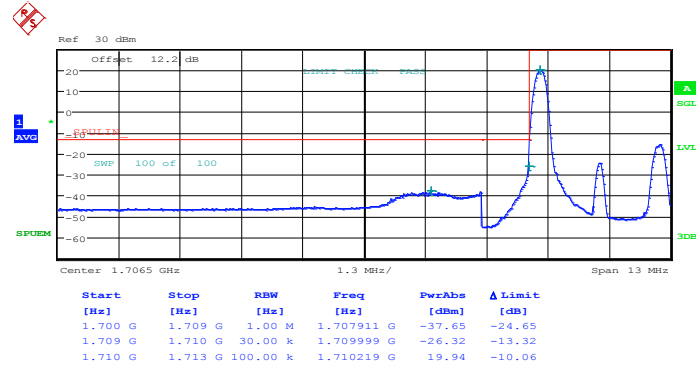


Date: 18.FEB.2014 18:57:51



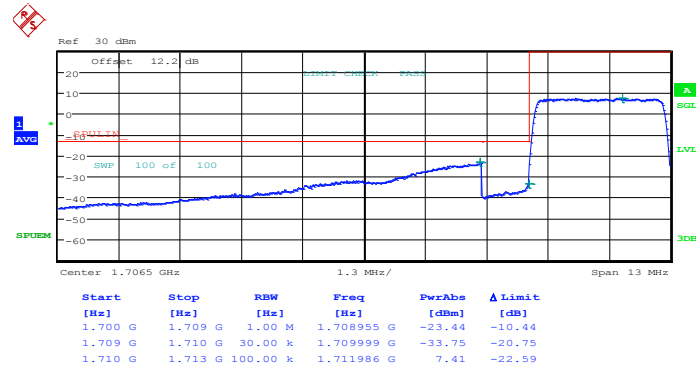
Band :	LTE Band 4	Band Width :	3MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



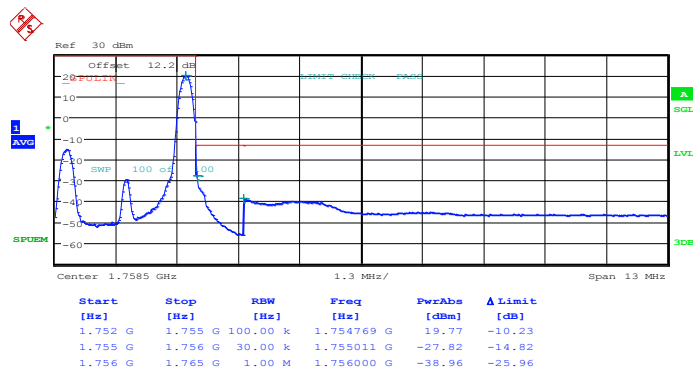
Date: 18.FEB.2014 19:01:21

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



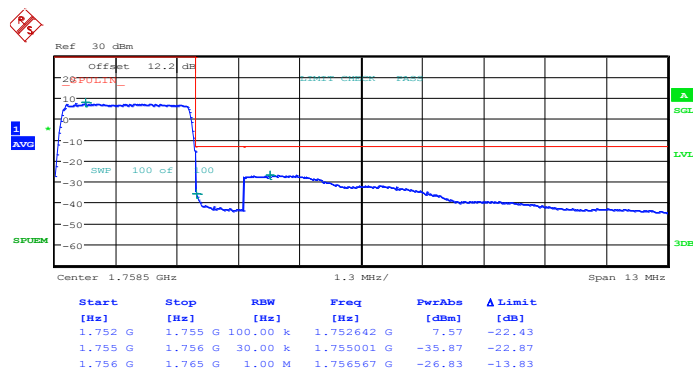
Date: 18.FEB.2014 19:02:47

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



Date: 18.FEB.2014 19:09:39

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

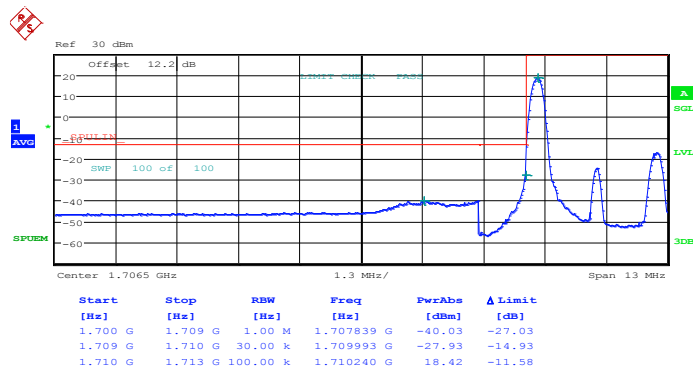


Date: 18.FEB.2014 19:11:05



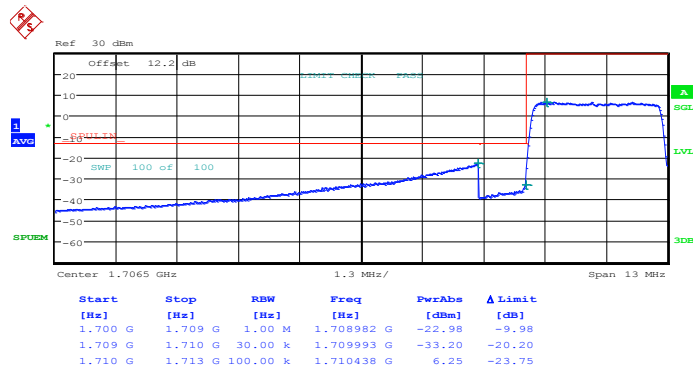
Band :	LTE Band 4	Band Width :	3MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 18.FEB.2014 19:02:04

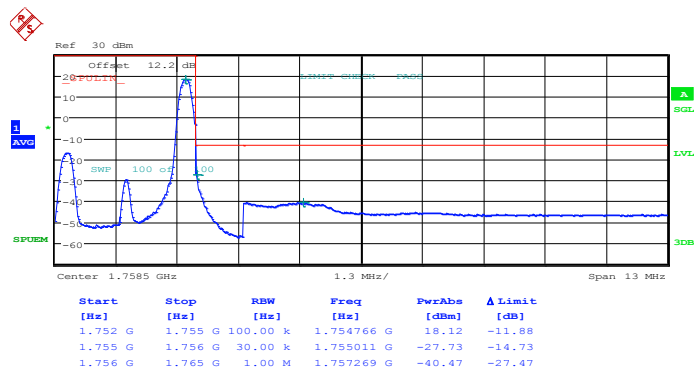
Lower Band Edge Plot for 16QAM-RB Size 15, RB Offset 0



Date: 18.FEB.2014 19:03:30

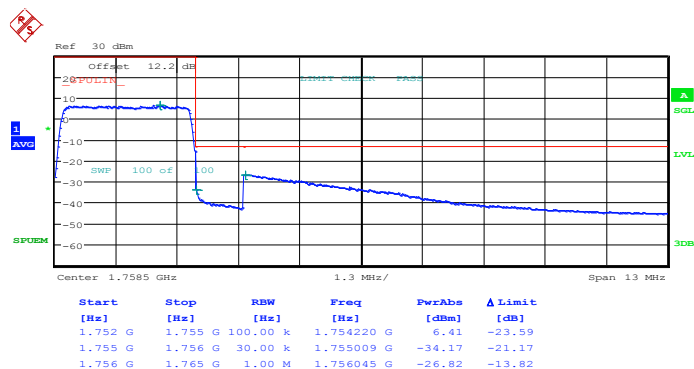


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 14



Date: 18.FEB.2014 19:10:22

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

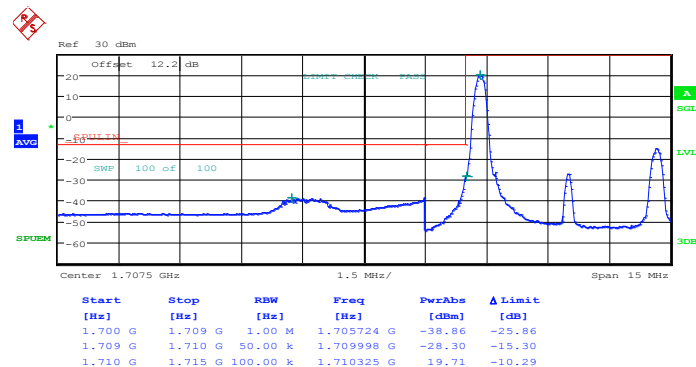


Date: 18.FEB.2014 19:11:48



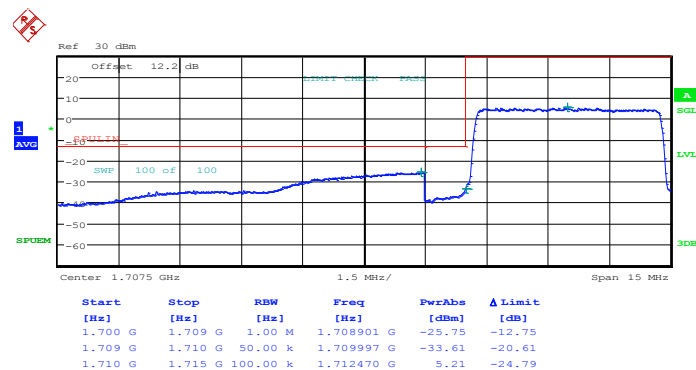
Band :	LTE Band 4	Band Width :	5MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



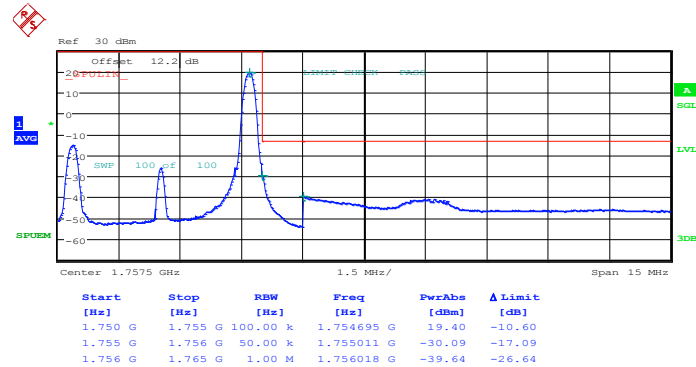
Date: 18.FEB.2014 19:15:18

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



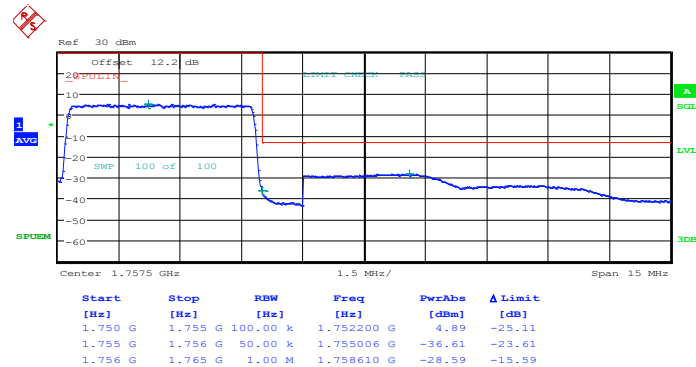
Date: 18.FEB.2014 19:16:44

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



Date: 18.FEB.2014 19:23:36

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

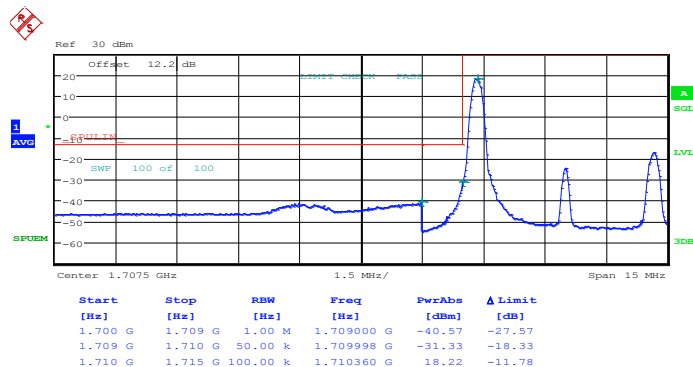


Date: 18.FEB.2014 19:25:02



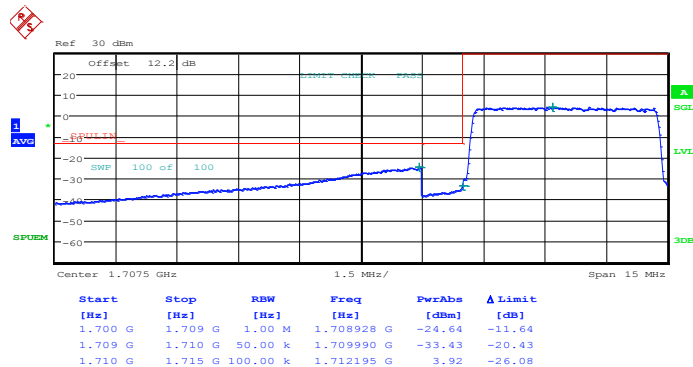
Band :	LTE Band 4	Band Width :	5MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 18.FEB.2014 19:16:01

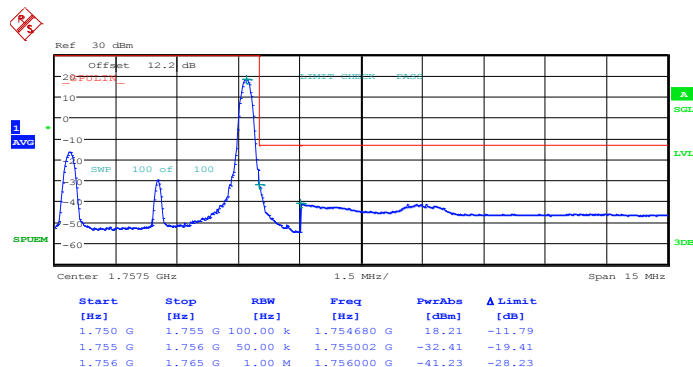
Lower Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



Date: 18.FEB.2014 19:17:27

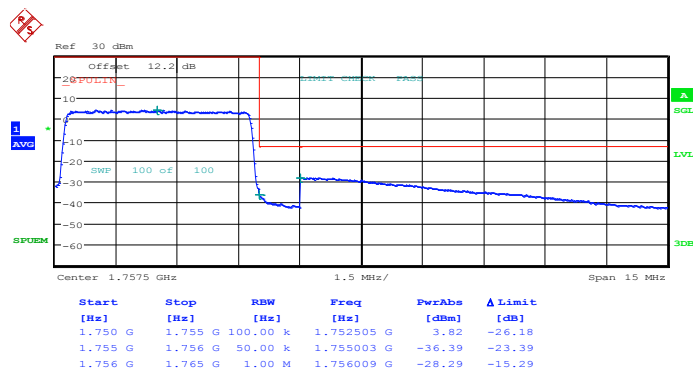


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 24



Date: 18.FEB.2014 19:24:19

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

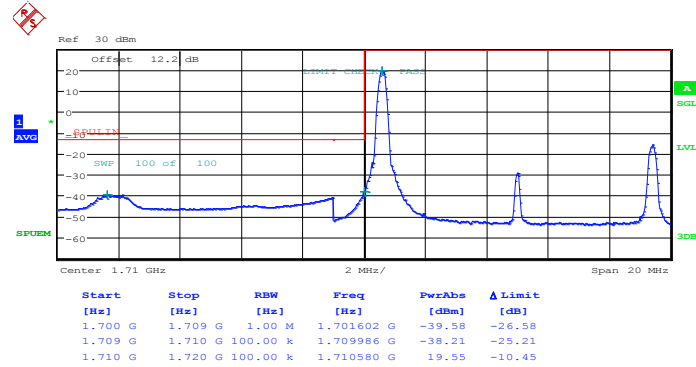


Date: 18.FEB.2014 19:25:45



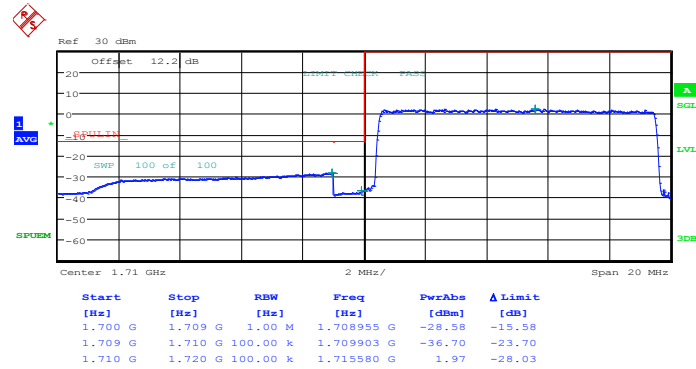
Band :	LTE Band 4	Band Width :	10MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 18.FEB.2014 19:29:15

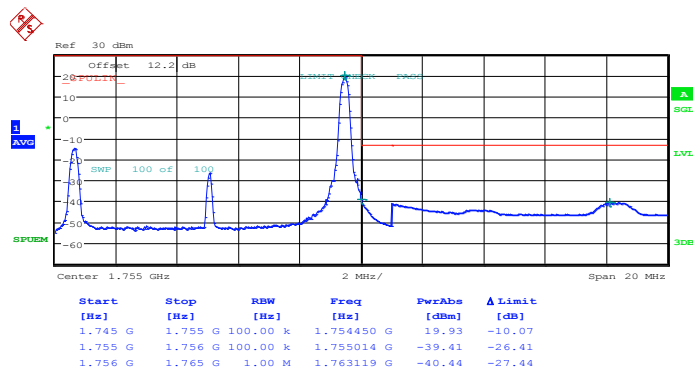
Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Date: 18.FEB.2014 19:30:41

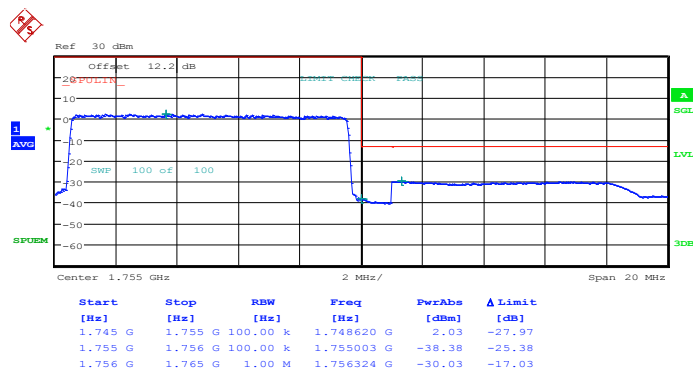


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



Date: 18.FEB.2014 19:37:33

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

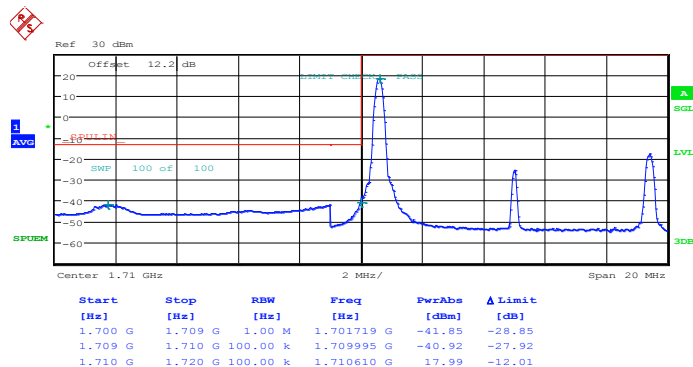


Date: 18.FEB.2014 19:38:59



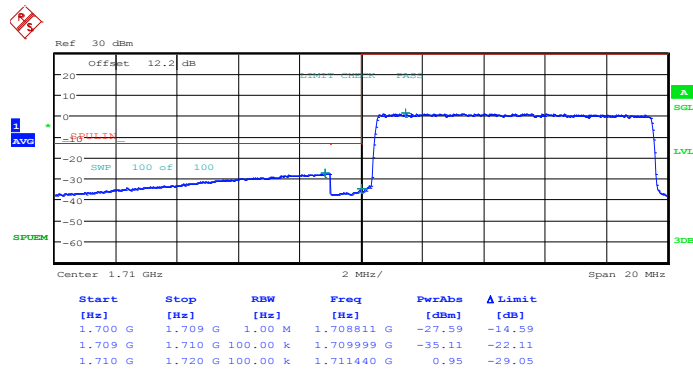
Band :	LTE Band 4	Band Width :	10MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



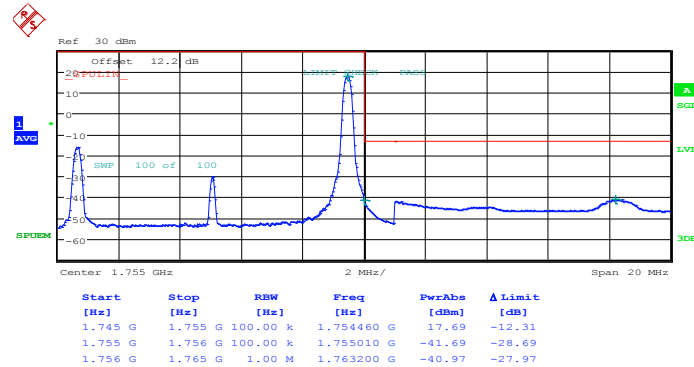
Date: 18.FEB.2014 19:29:58

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



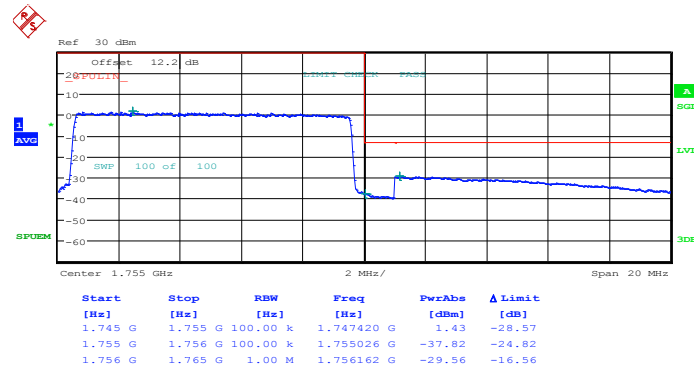
Date: 18.FEB.2014 19:31:24

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



Date: 18.FEB.2014 19:38:16

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

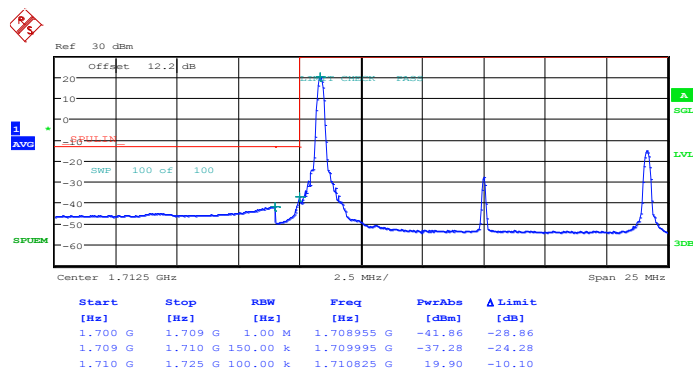


Date: 18.FEB.2014 19:39:42



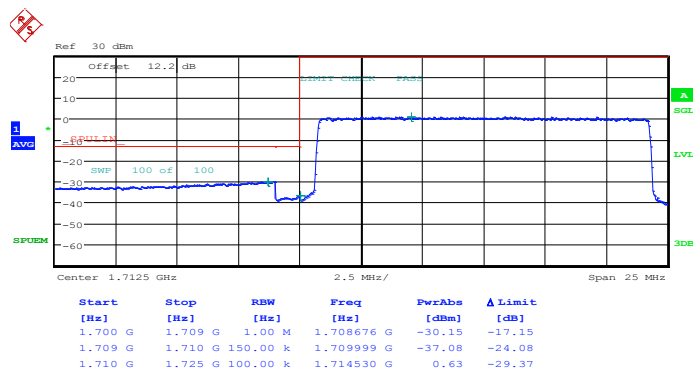
Band :	LTE Band 4	Band Width :	15MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



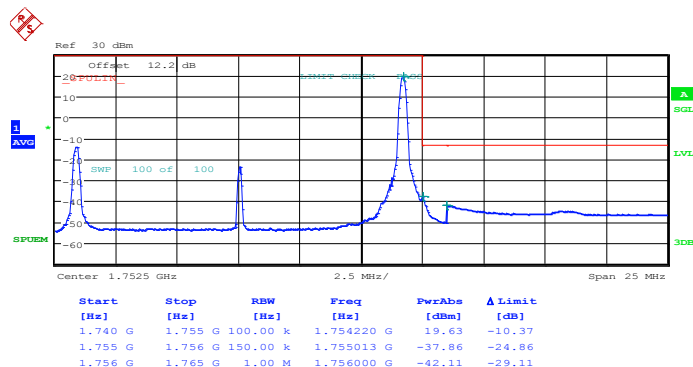
Date: 18.FEB.2014 19:43:12

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



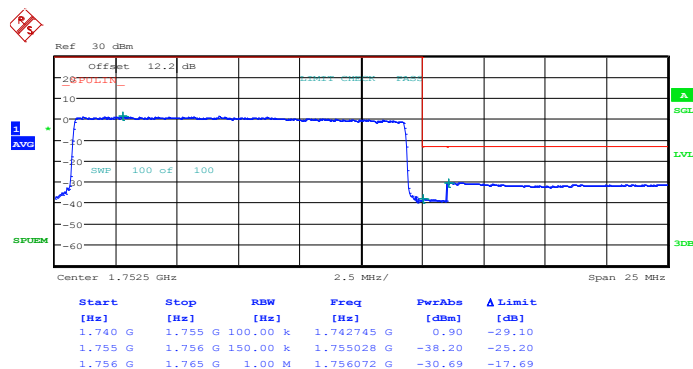
Date: 18.FEB.2014 19:44:38

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



Date: 18.FEB.2014 19:51:30

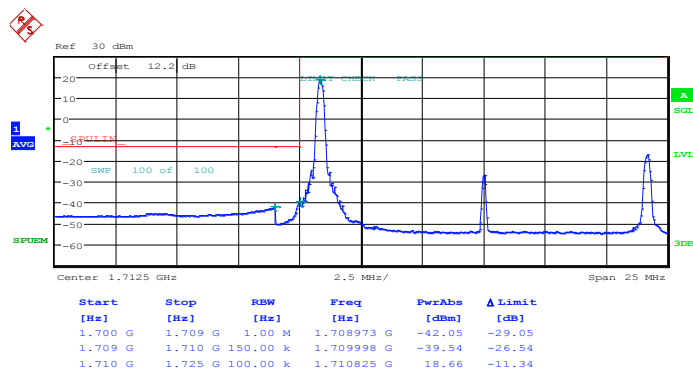
Higher Band Edge Plot for QPSK-RB Size 75, RB Offset 0



Date: 18.FEB.2014 19:52:56

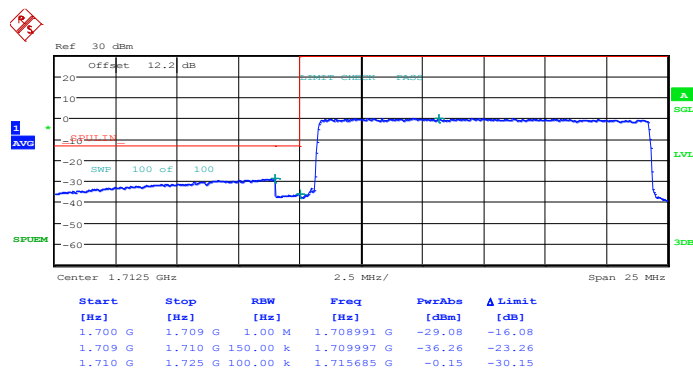
Band :	LTE Band 4	Band Width :	15MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 18.FEB.2014 19:43:55

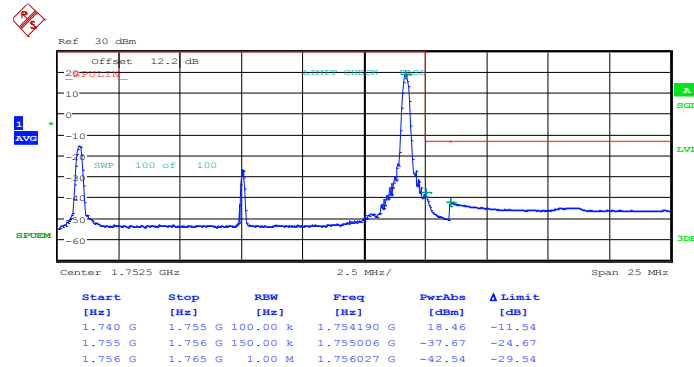
Lower Band Edge Plot for 16QAM-RB Size 75, RB Offset 0



Date: 18.FEB.2014 19:45:21

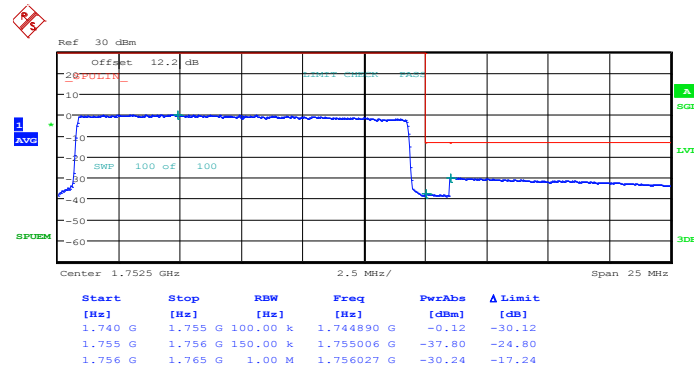


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 74



Date: 18.FEB.2014 19:52:13

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

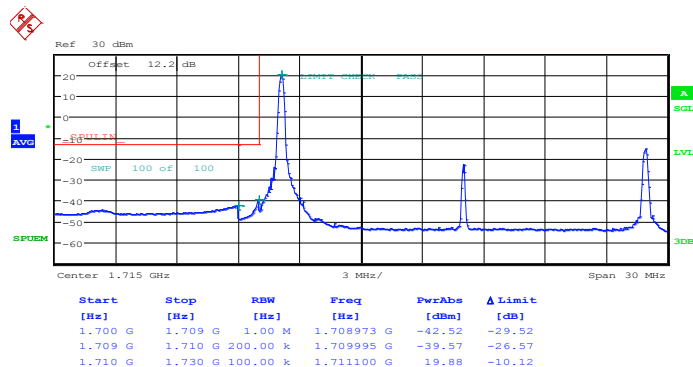


Date: 18.FEB.2014 19:53:39



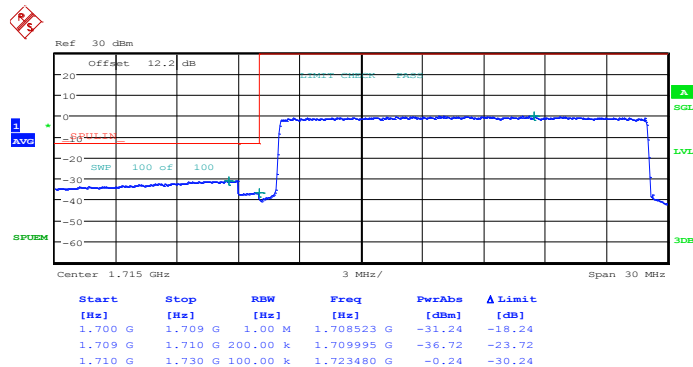
Band :	LTE Band 4	Band Width :	20MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



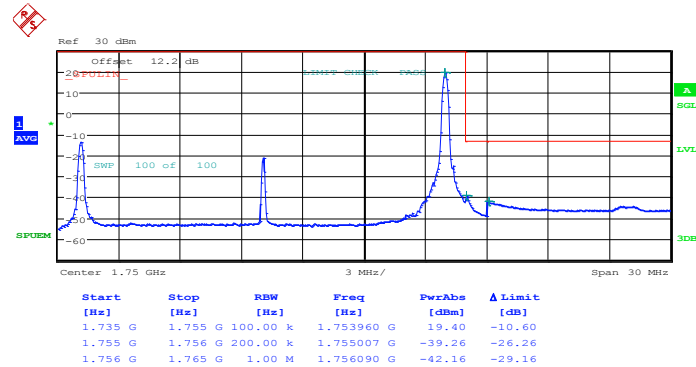
Date: 18.FEB.2014 19:57:09

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



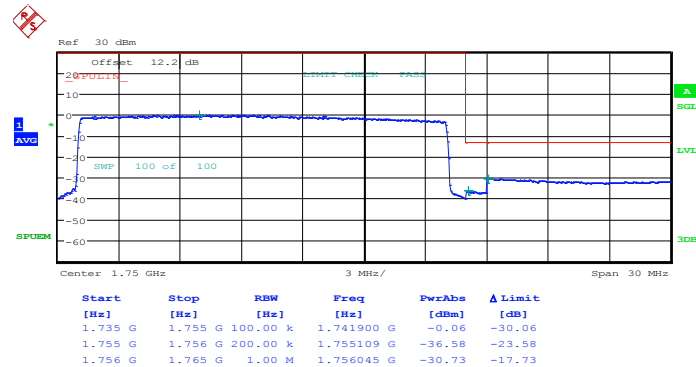
Date: 18.FEB.2014 19:58:35

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



Date: 18.FEB.2014 20:05:26

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



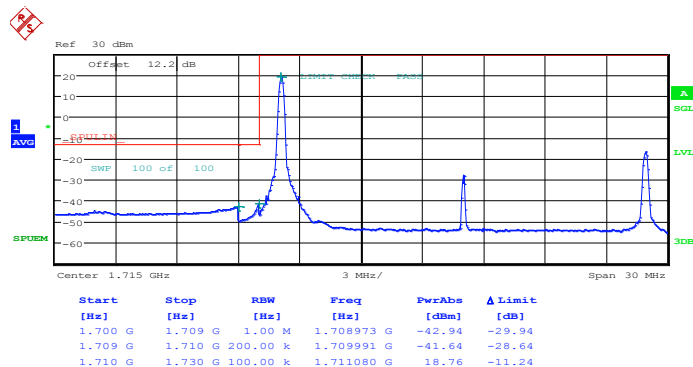
Date: 18.FEB.2014 20:06:52



Band : LTE Band 4

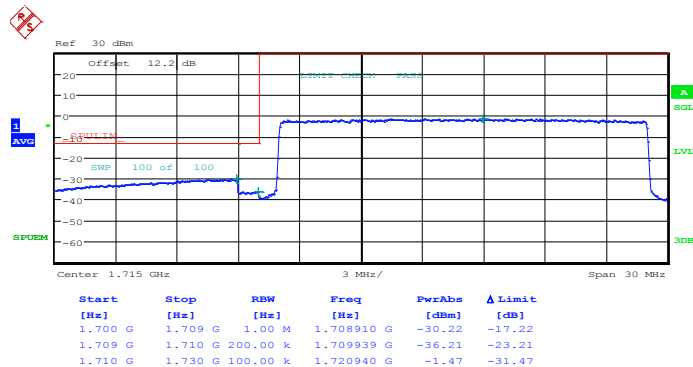
Band Width : 20MHz / 16QAM

Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 18.FEB.2014 19:57:52

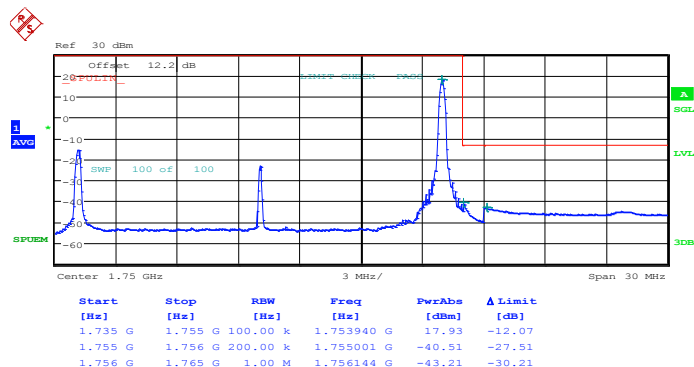
Lower Band Edge Plot for 16QAM-RB Size 100, RB Offset 0



Date: 18.FEB.2014 19:59:18

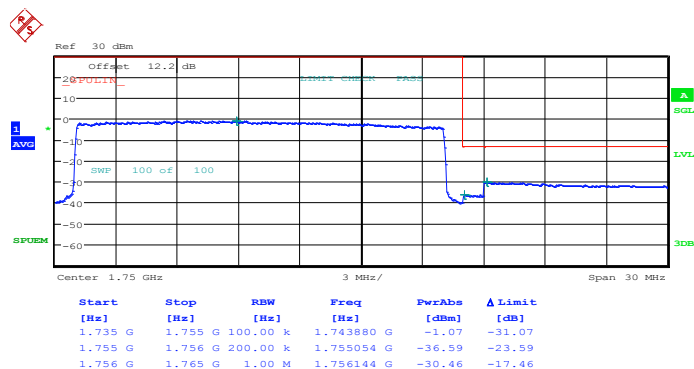


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 99



Date: 18.FEB.2014 20:06:09

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

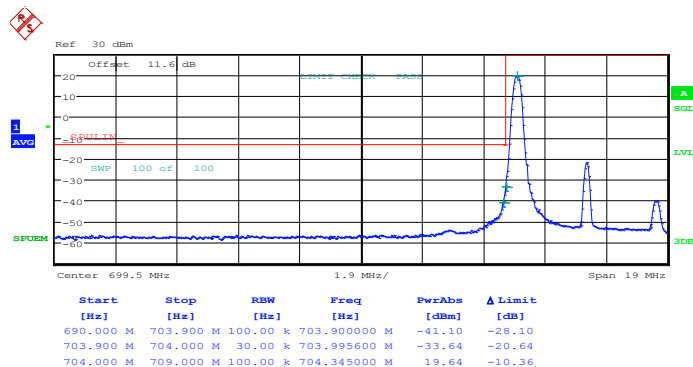


Date: 18.FEB.2014 20:07:35



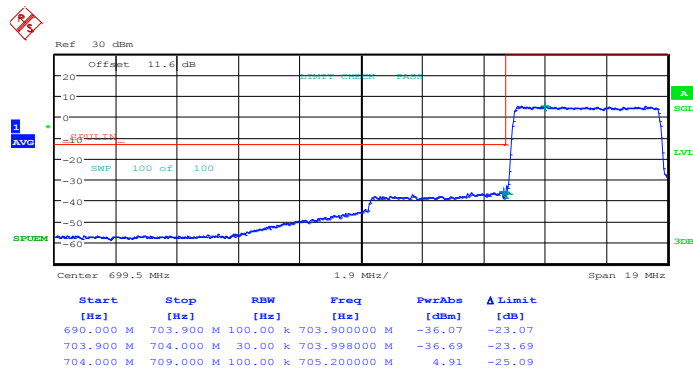
Band :	LTE Band 17	Band Width :	5MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



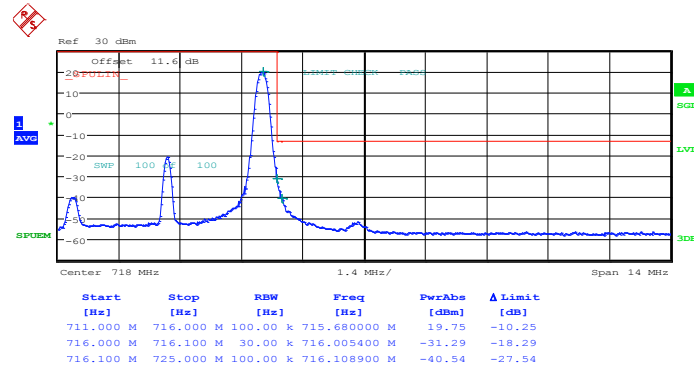
Date: 18.FEB.2014 21:27:43

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



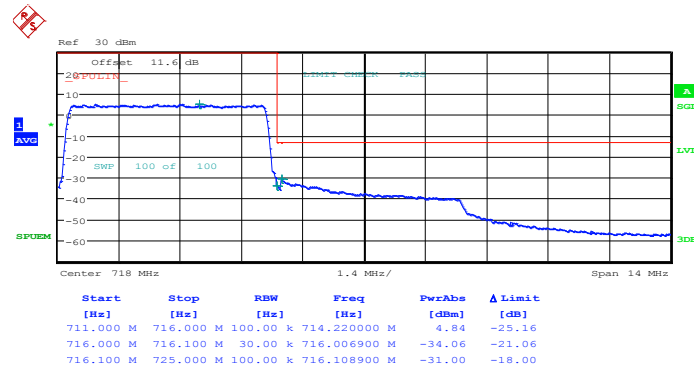
Date: 18.FEB.2014 21:29:09

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



Date: 18.FEB.2014 21:36:00

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

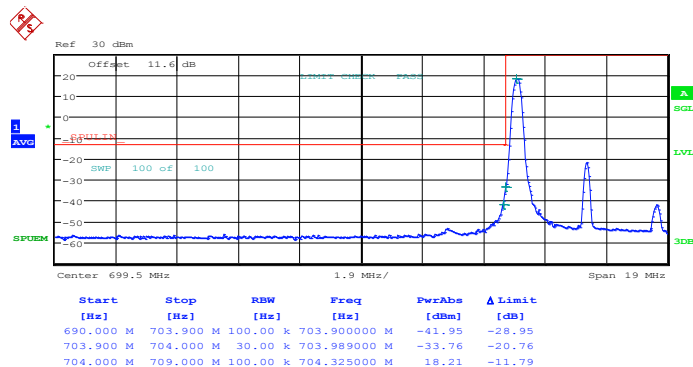


Date: 18.FEB.2014 21:37:26



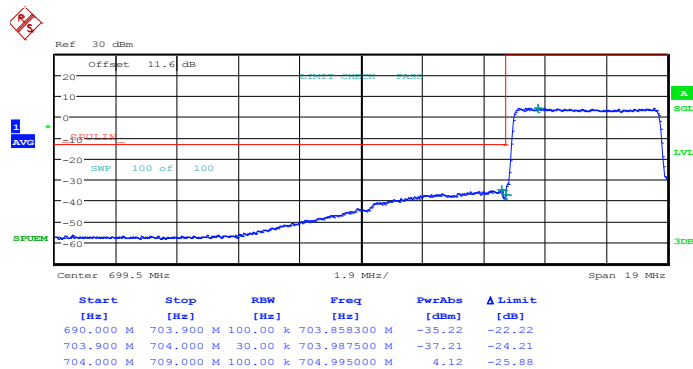
Band :	LTE Band 17	Band Width :	5MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 18.FEB.2014 21:28:26

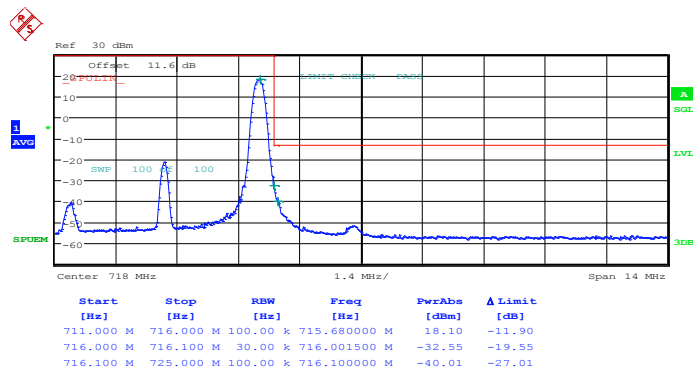
Lower Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



Date: 18.FEB.2014 21:29:52

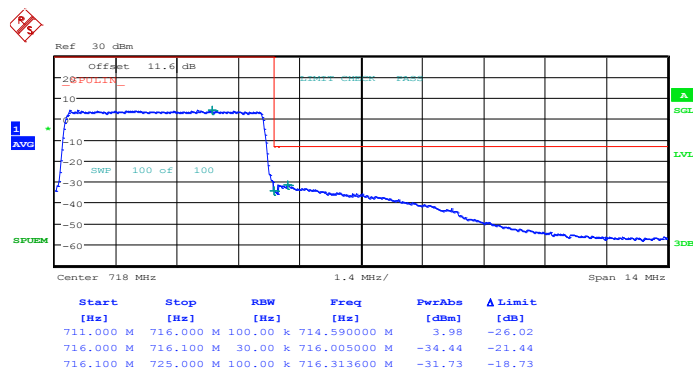


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 24



Date: 18.FEB.2014 21:36:43

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

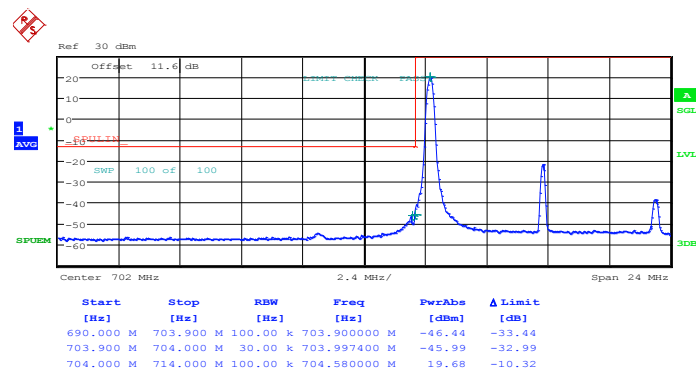


Date: 18.FEB.2014 21:38:09



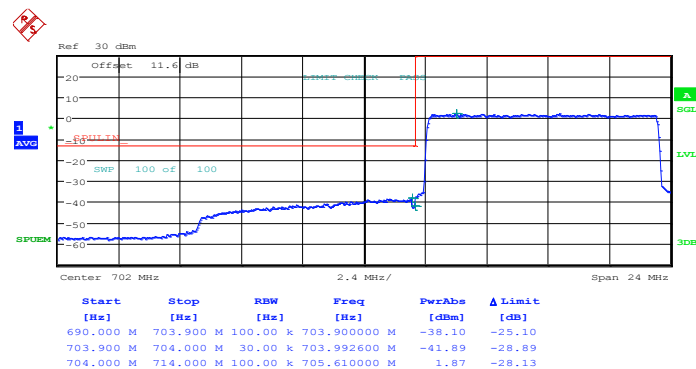
Band :	LTE Band 17	Band Width :	10MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0

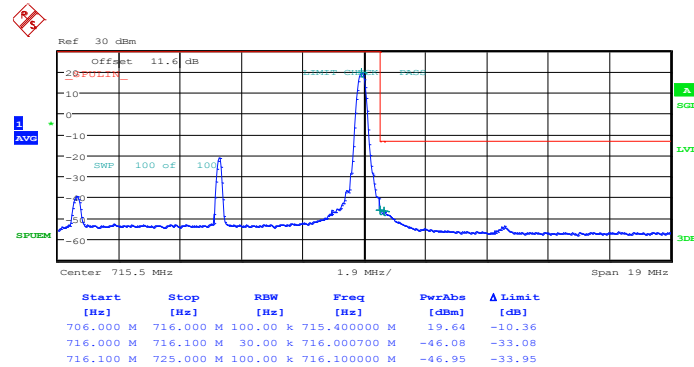


Date: 18.FEB.2014 21:41:39

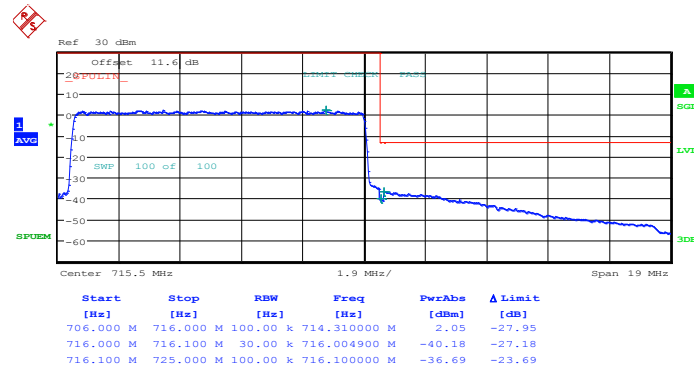
Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Date: 18.FEB.2014 21:43:05

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


Date: 18.FEB.2014 21:49:56

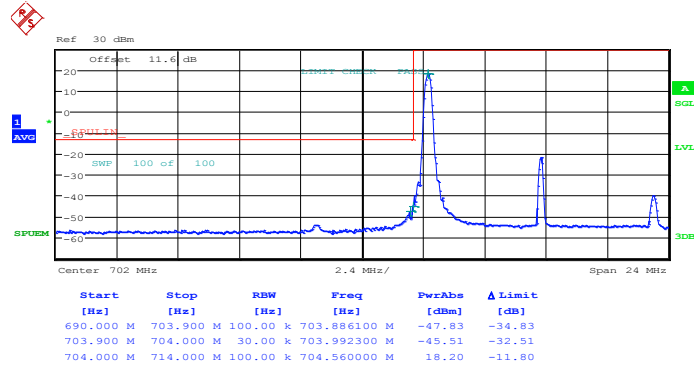
Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0


Date: 18.FEB.2014 21:51:22



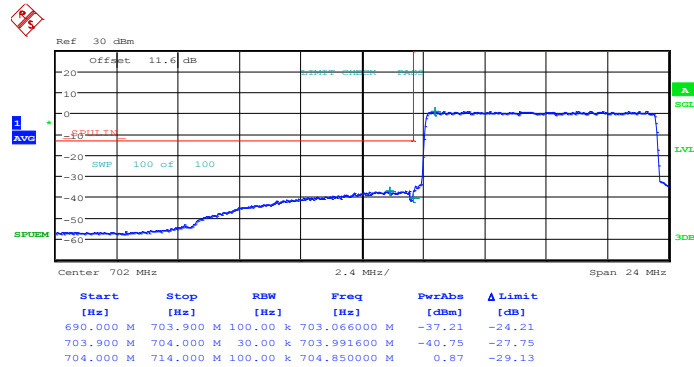
Band :	LTE Band 17	Band Width :	10MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



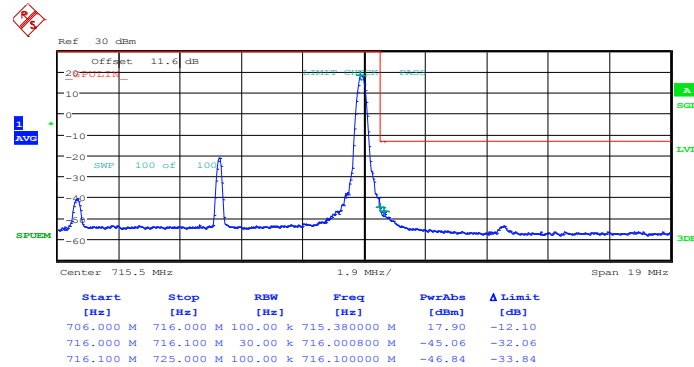
Date: 18.FEB.2014 21:42:22

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



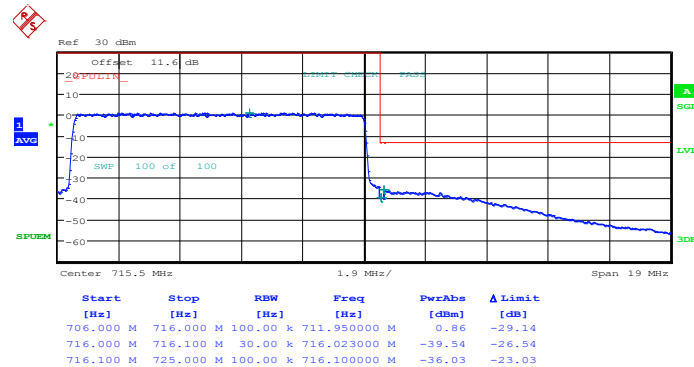
Date: 18.FEB.2014 21:43:48

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



Date: 18.FEB.2014 21:50:39

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



Date: 18.FEB.2014 21:52:05

3.6 Conducted Spurious Emission Measurement

3.6.1 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.

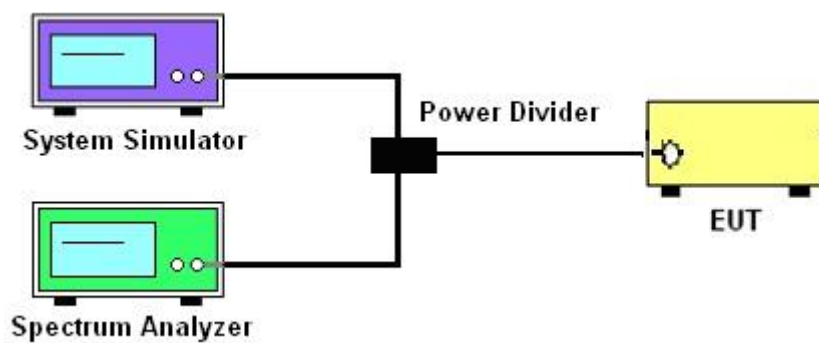
3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

1. The EUT was 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.

3.6.4 Test Setup

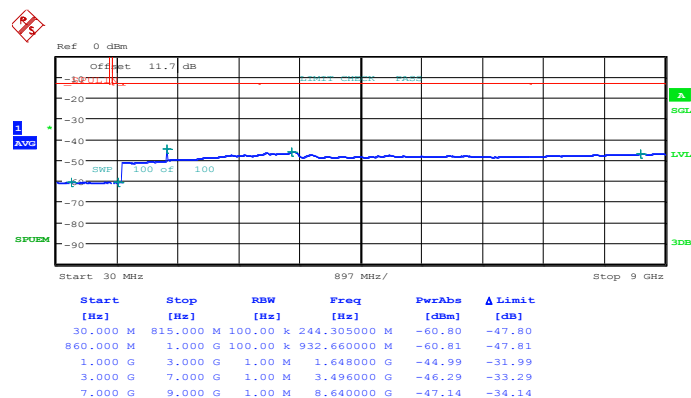




3.6.5 Test Result (Plots) of Conducted Spurious Emission

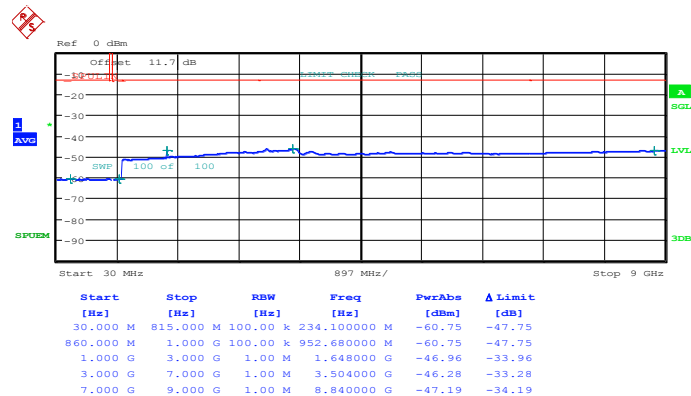
Band :	LTE Band 5	Channel :	CH20407 (Low)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 20:18:56

16QAM (RB Size 1, RB Offset 0)

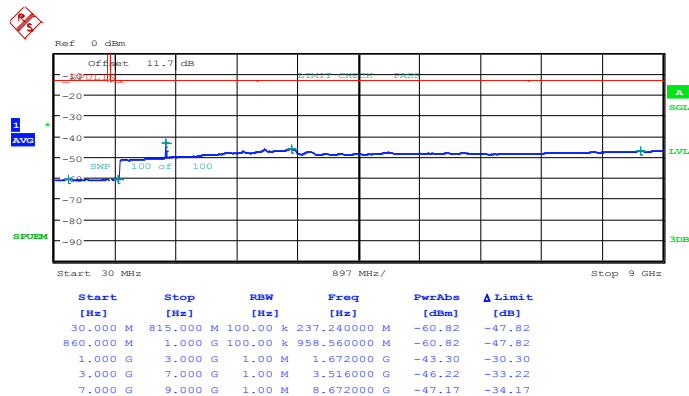


Date: 18.FEB.2014 20:19:52



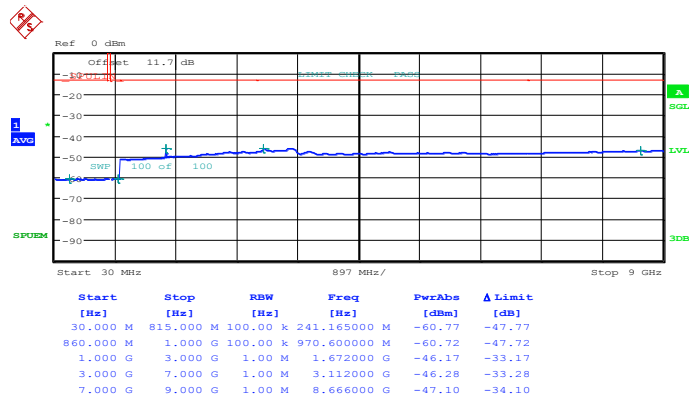
Band :	LTE Band 5	Channel :	CH20525 (Middle)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 20:21:39

16QAM (RB Size 1, RB Offset 0)

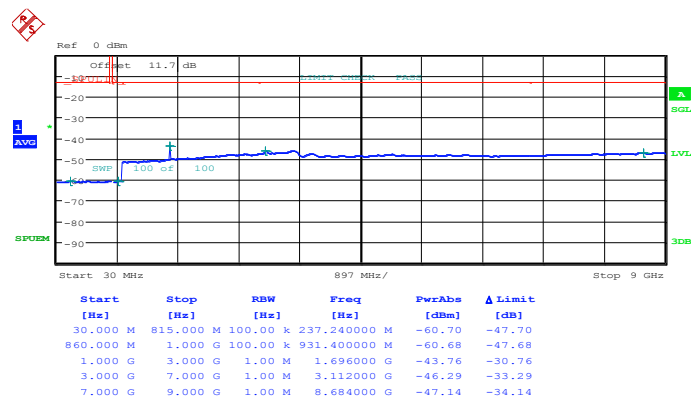


Date: 18.FEB.2014 20:22:35



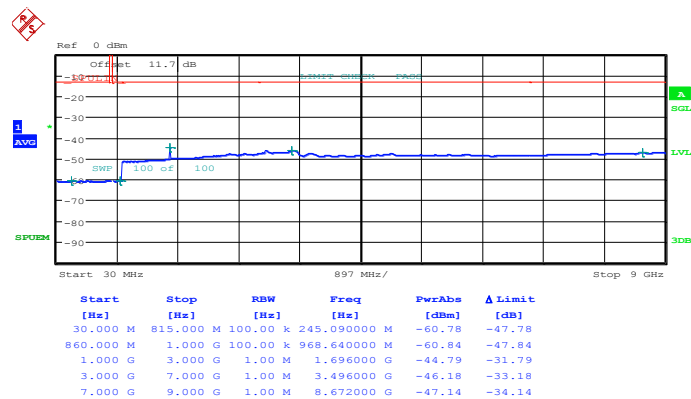
Band :	LTE Band 5	Channel :	CH20643 (High)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 20:27:13

16QAM (RB Size 1, RB Offset 0)

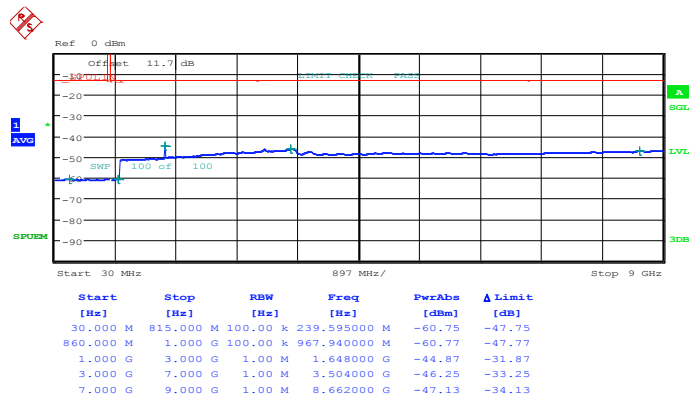


Date: 18.FEB.2014 20:28:09



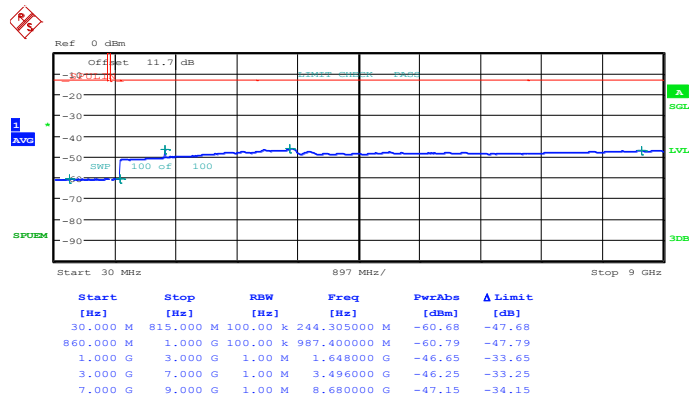
Band :	LTE Band 5	Channel :	CH20415 (Low)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 20:32:51

16QAM (RB Size 1, RB Offset 0)

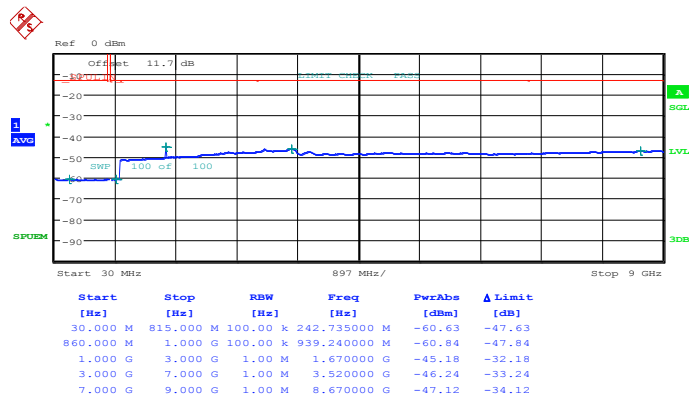


Date: 18.FEB.2014 20:33:47



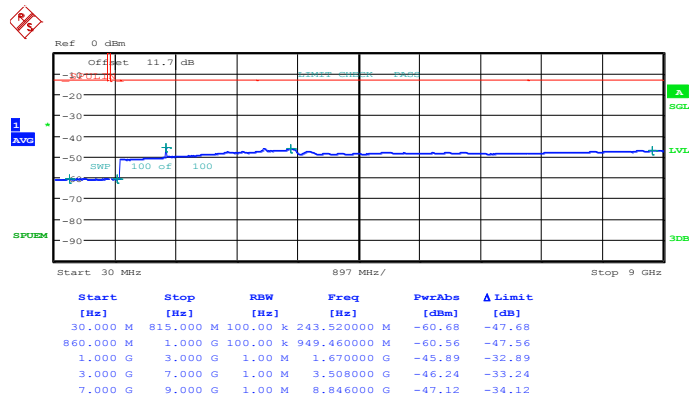
Band :	LTE Band 5	Channel :	CH20525 (Middle)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 20:35:33

16QAM (RB Size 1, RB Offset 0)

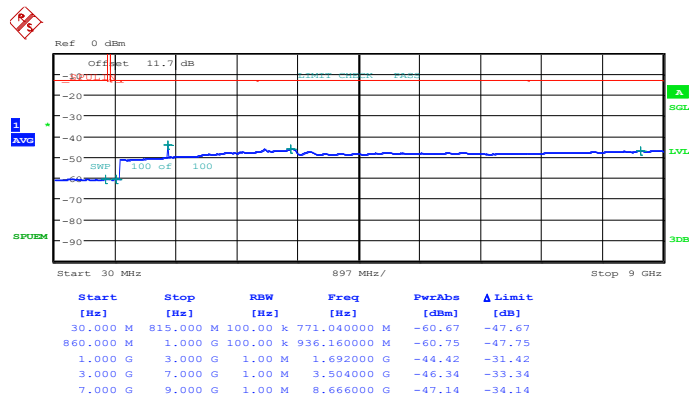


Date: 18.FEB.2014 20:36:29



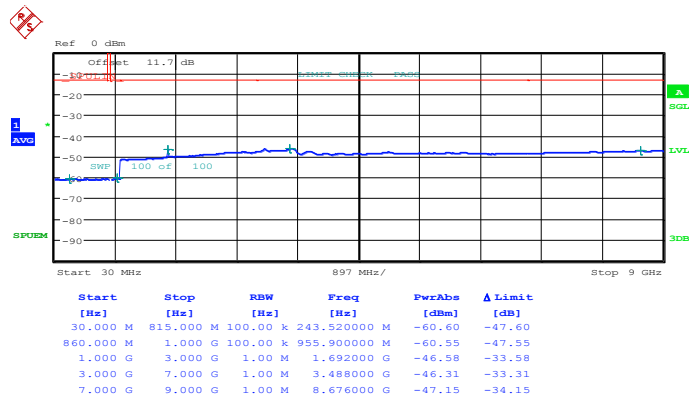
Band :	LTE Band 5	Channel :	CH20635 (High)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 20:41:07

16QAM (RB Size 1, RB Offset 0)

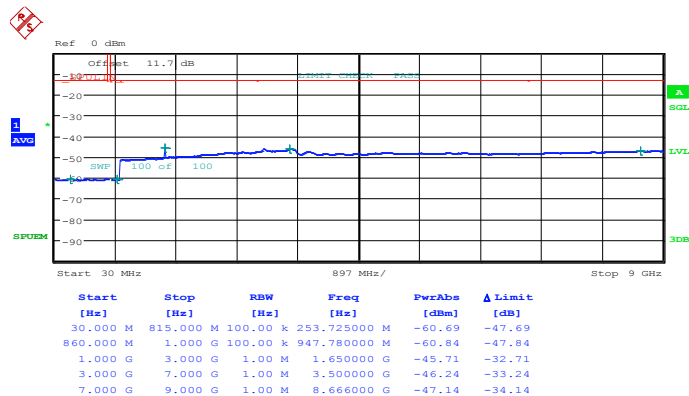


Date: 18.FEB.2014 20:42:03



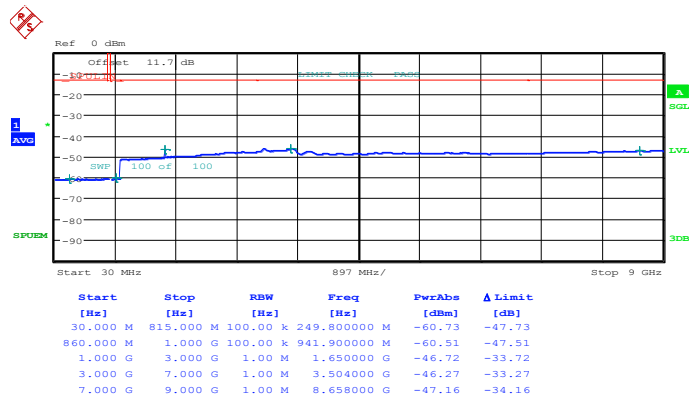
Band :	LTE Band 5	Channel :	CH20425 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 20:46:45

16QAM (RB Size 1, RB Offset 0)

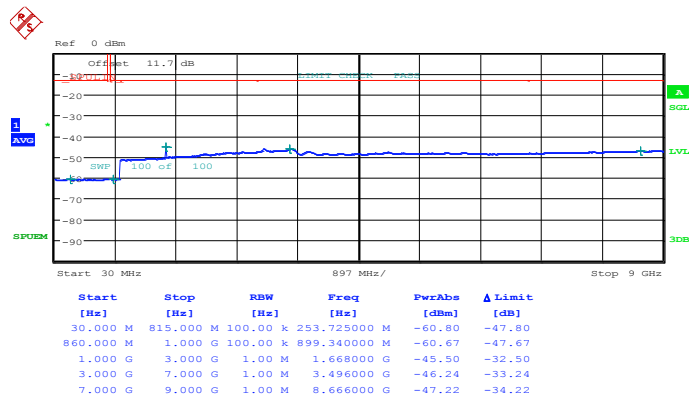


Date: 18.FEB.2014 20:47:41



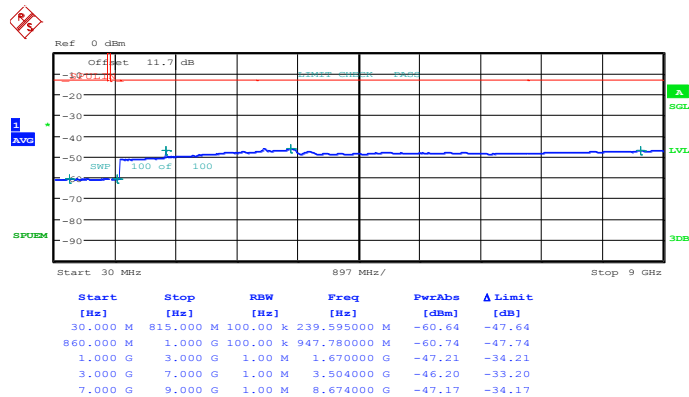
Band :	LTE Band 5	Channel :	CH20525 (Middle)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 20:49:27

16QAM (RB Size 1, RB Offset 0)

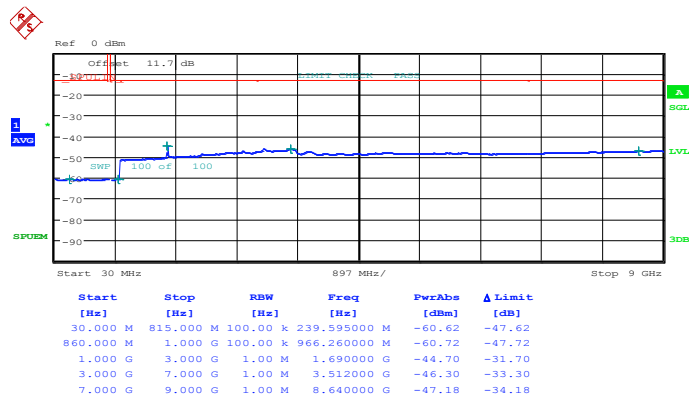


Date: 18.FEB.2014 20:50:23



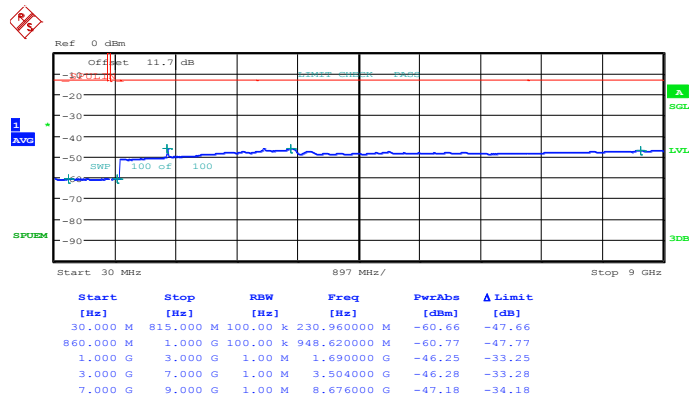
Band :	LTE Band 5	Channel :	CH20625 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 20:55:02

16QAM (RB Size 1, RB Offset 0)

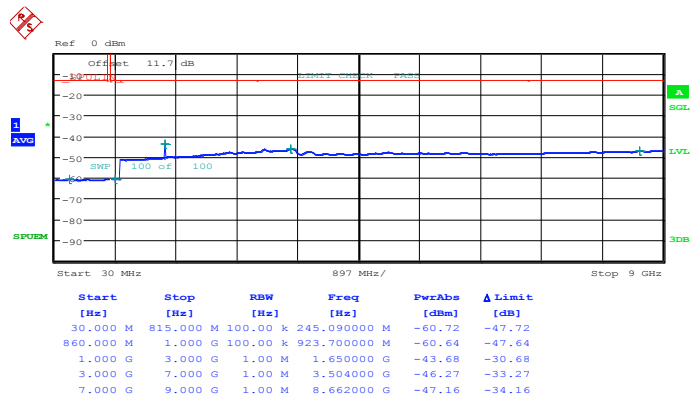


Date: 18.FEB.2014 20:55:58



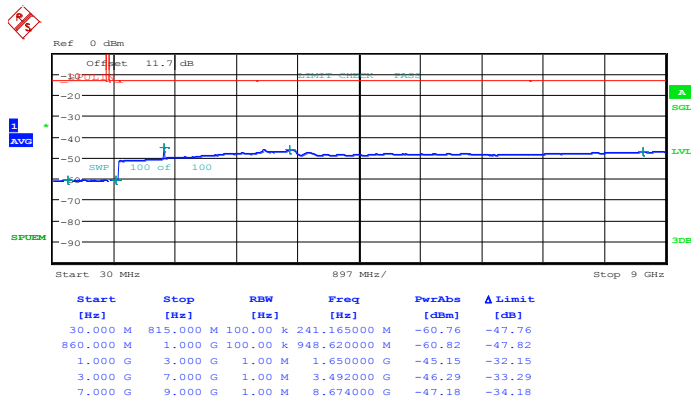
Band :	LTE Band 5	Channel :	CH20450 (Low)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 21:00:40

16QAM (RB Size 1, RB Offset 0)

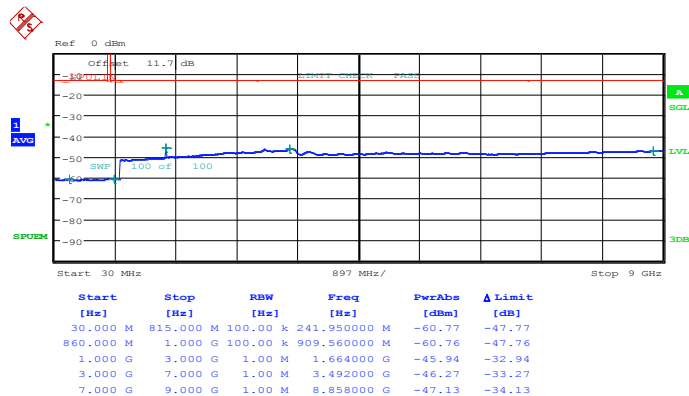


Date: 18.FEB.2014 21:01:36



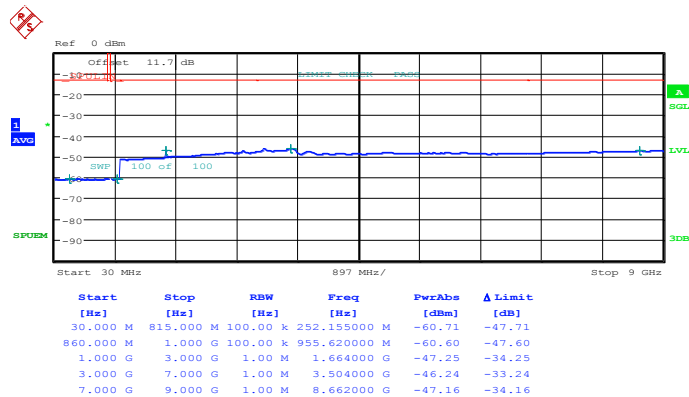
Band :	LTE Band 5	Channel :	CH20525 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 21:03:22

16QAM (RB Size 1, RB Offset 0)

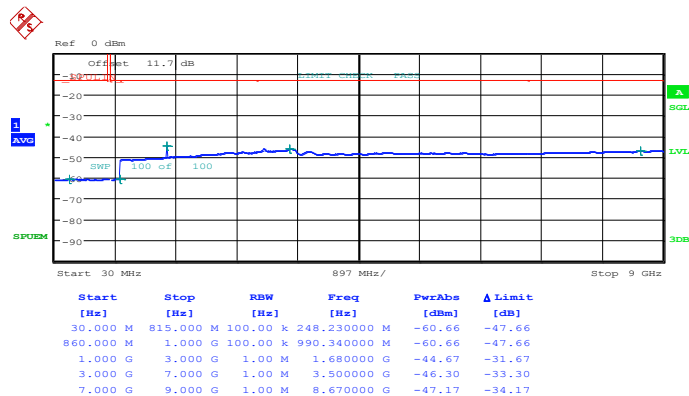


Date: 18.FEB.2014 21:04:18



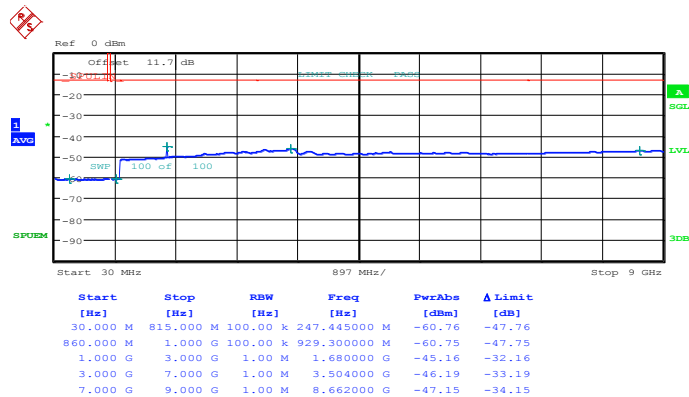
Band :	LTE Band 5	Channel :	CH20600 (High)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 21:08:56

16QAM (RB Size 1, RB Offset 0)

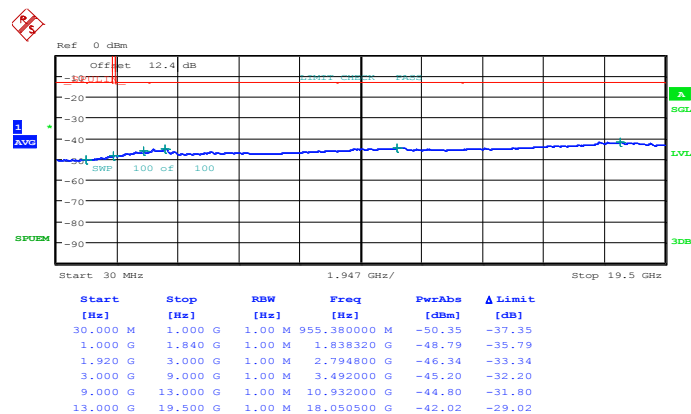


Date: 18.FEB.2014 21:09:53



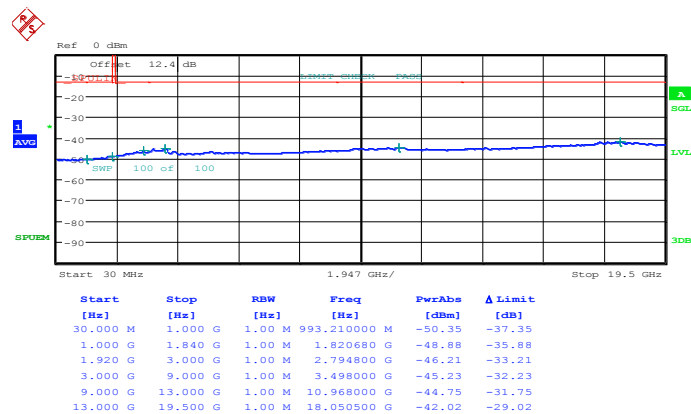
Band :	LTE Band 2	Channel :	CH18607 (Low)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 00:00:11

16QAM (RB Size 1, RB Offset 0)

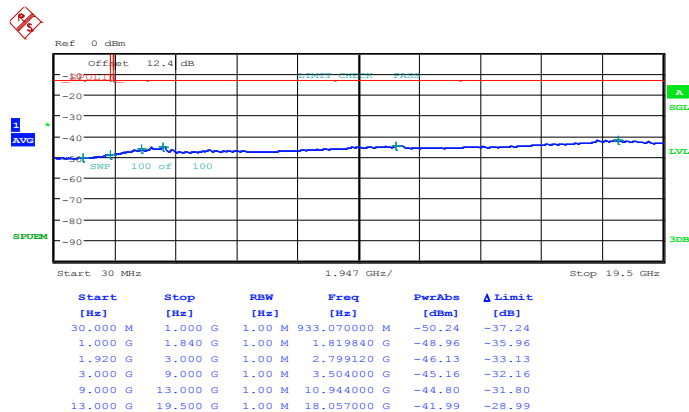


Date: 18.FEB.2014 00:01:07



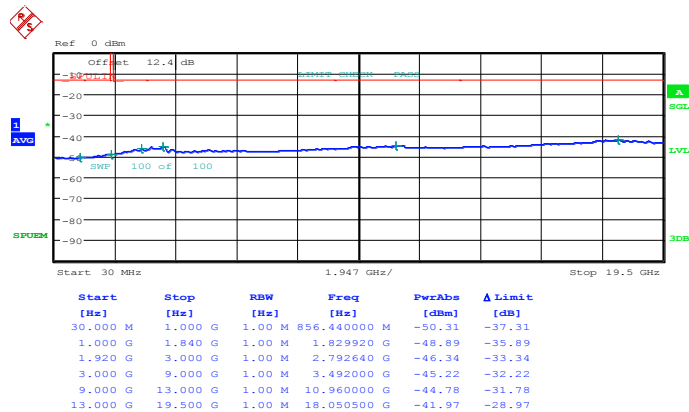
Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 00:02:54

16QAM (RB Size 1, RB Offset 0)

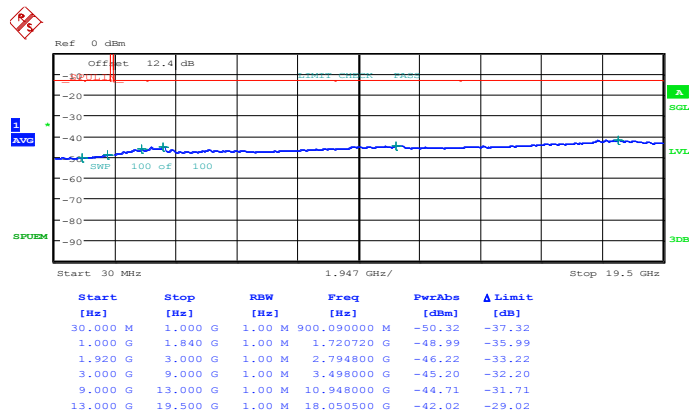


Date: 18.FEB.2014 00:03:50



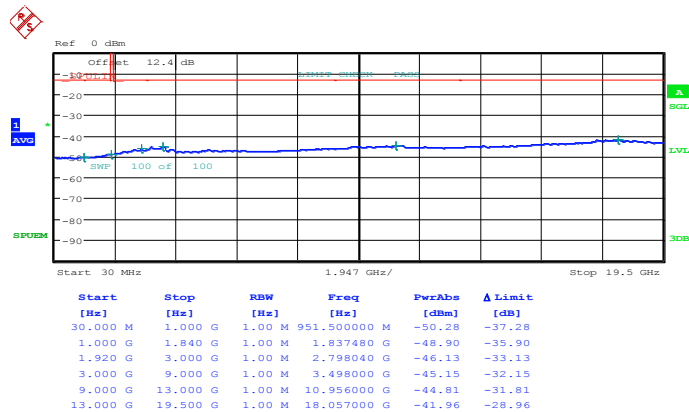
Band :	LTE Band 2	Channel :	CH19193 (High)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 00:08:28

16QAM (RB Size 1, RB Offset 0)

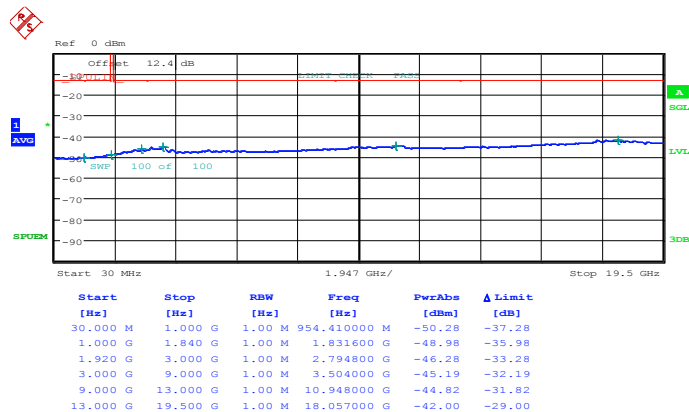


Date: 18.FEB.2014 00:09:24



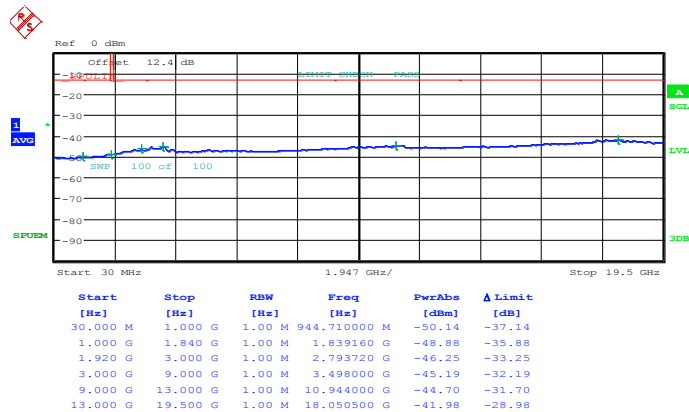
Band :	LTE Band 2	Channel :	CH18615 (Low)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 00:15:53

16QAM (RB Size 1, RB Offset 0)

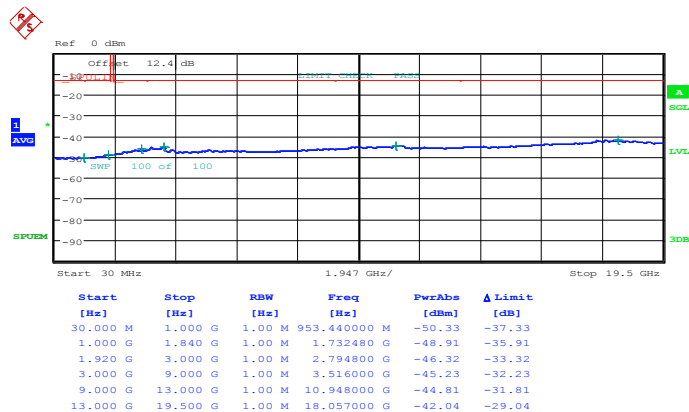


Date: 18.FEB.2014 00:16:49



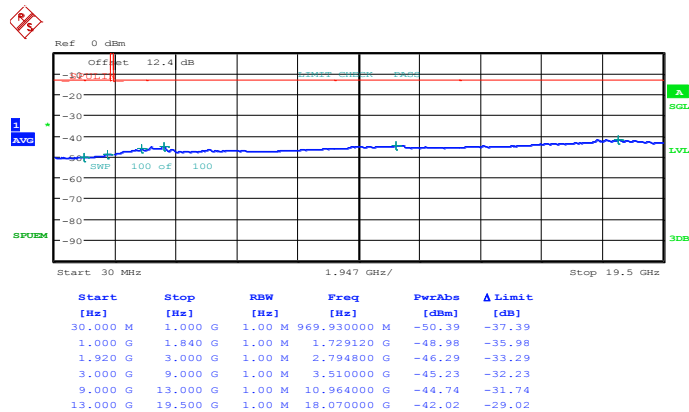
Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 00:18:36

16QAM (RB Size 1, RB Offset 0)

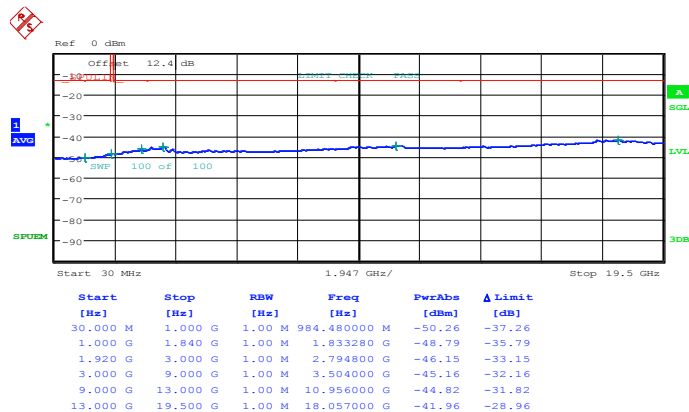


Date: 18.FEB.2014 00:19:32



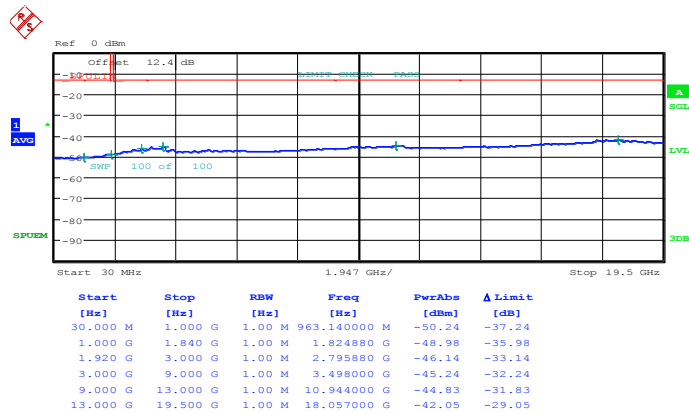
Band :	LTE Band 2	Channel :	CH19185 (High)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 00:24:10

16QAM (RB Size 1, RB Offset 0)

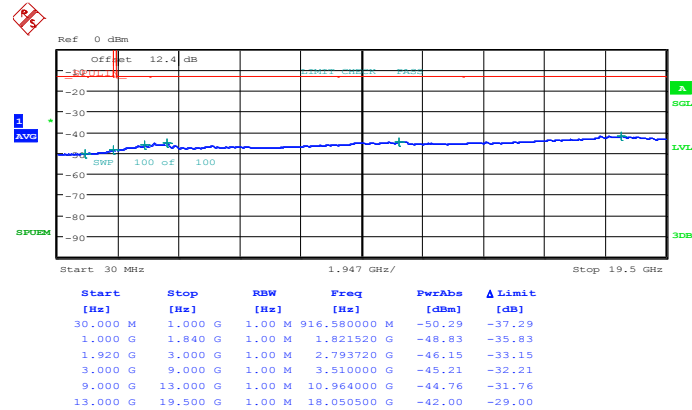


Date: 18.FEB.2014 00:25:06



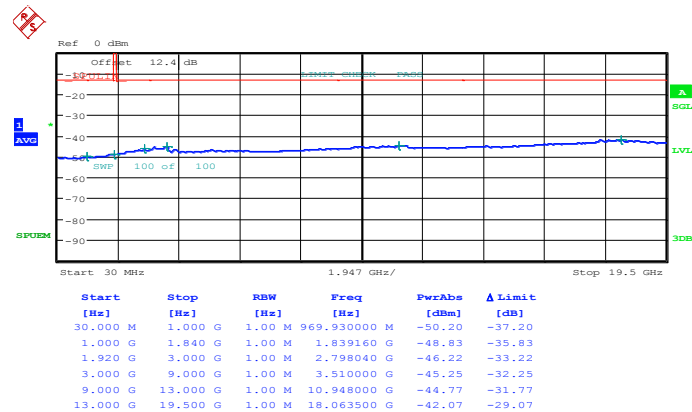
Band :	LTE Band 2	Channel :	CH18625 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 00:29:48

16QAM (RB Size 1, RB Offset 0)

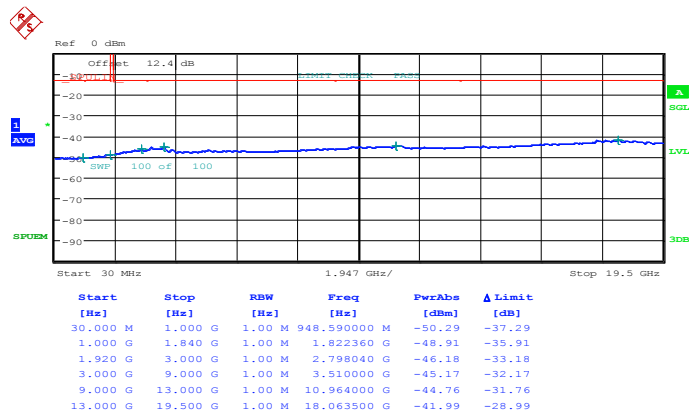


Date: 18.FEB.2014 00:30:44



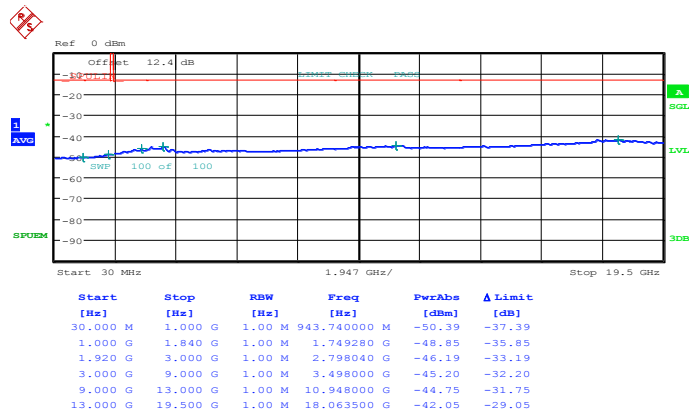
Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 00:32:31

16QAM (RB Size 1, RB Offset 0)

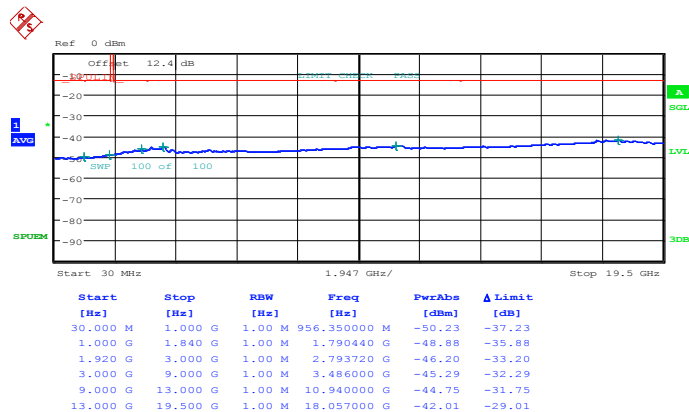


Date: 18.FEB.2014 00:33:27



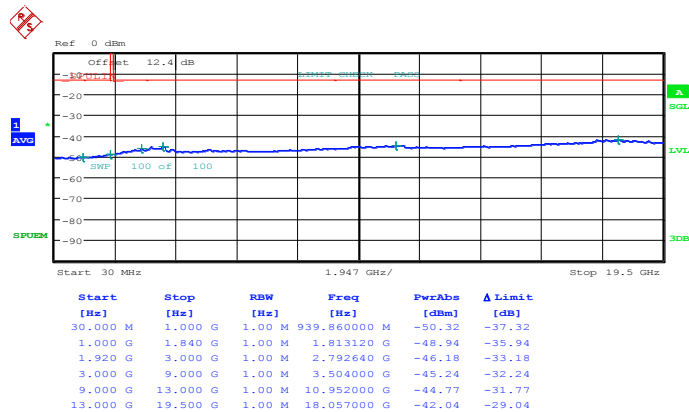
Band :	LTE Band 2	Channel :	CH19175 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 00:38:04

16QAM (RB Size 1, RB Offset 0)

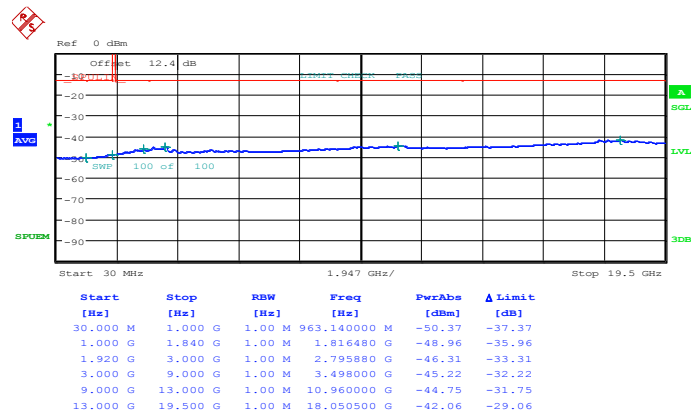


Date: 18.FEB.2014 00:39:00



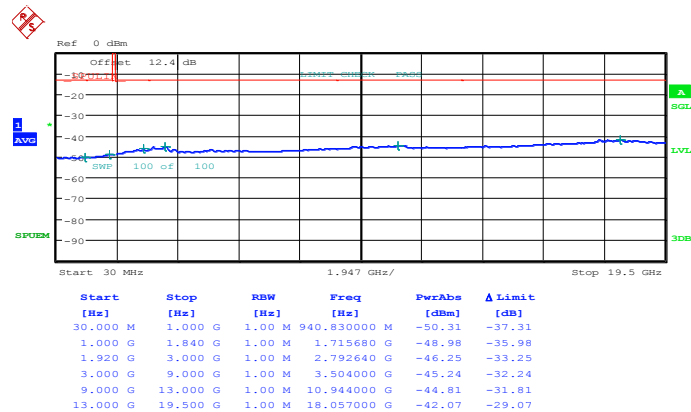
Band :	LTE Band 2	Channel :	CH18650 (Low)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 00:43:42

16QAM (RB Size 1, RB Offset 0)

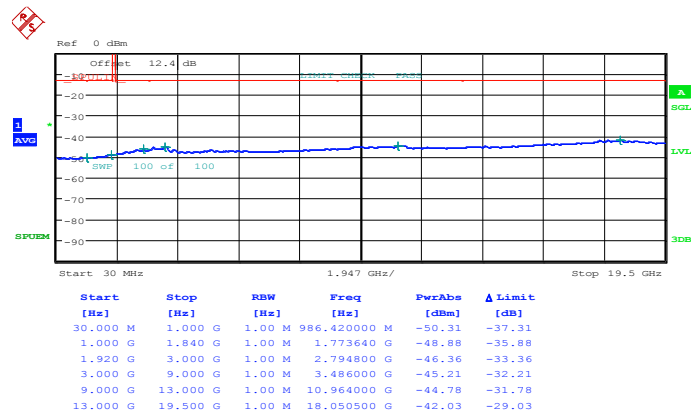


Date: 18.FEB.2014 00:44:38



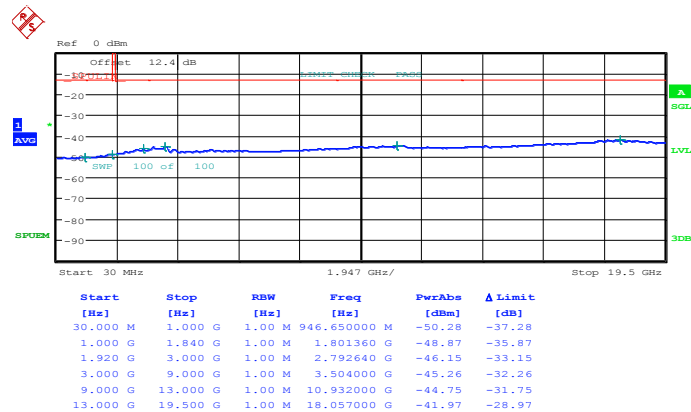
Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 00:46:25

16QAM (RB Size 1, RB Offset 0)

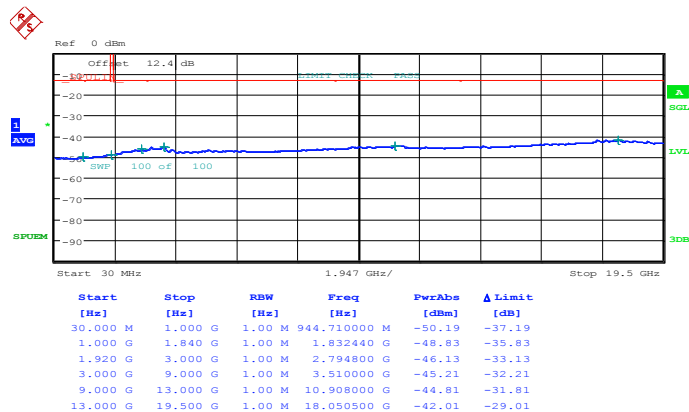


Date: 18.FEB.2014 00:47:21



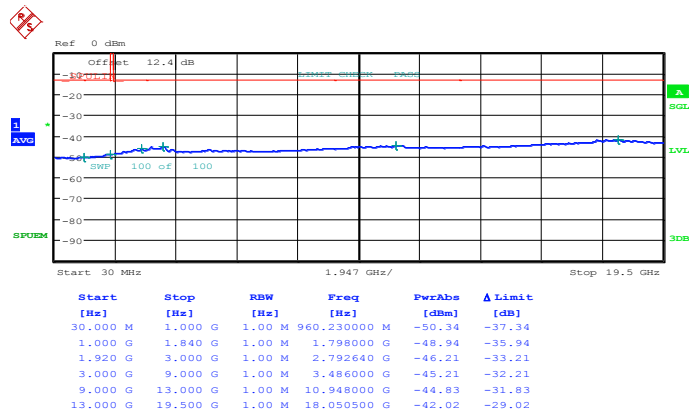
Band :	LTE Band 2	Channel :	CH19150 (High)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 00:51:59

16QAM (RB Size 1, RB Offset 0)

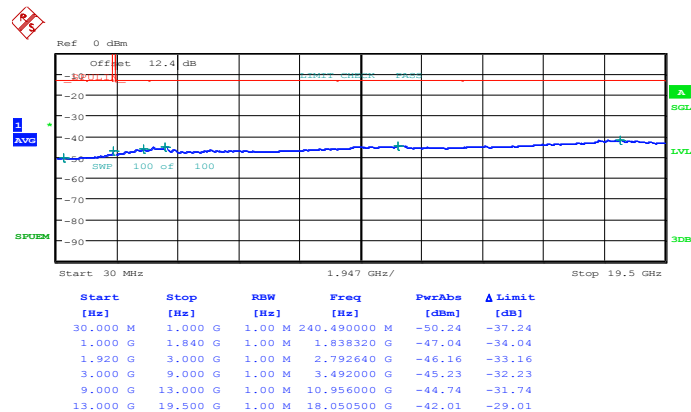


Date: 18.FEB.2014 00:52:55



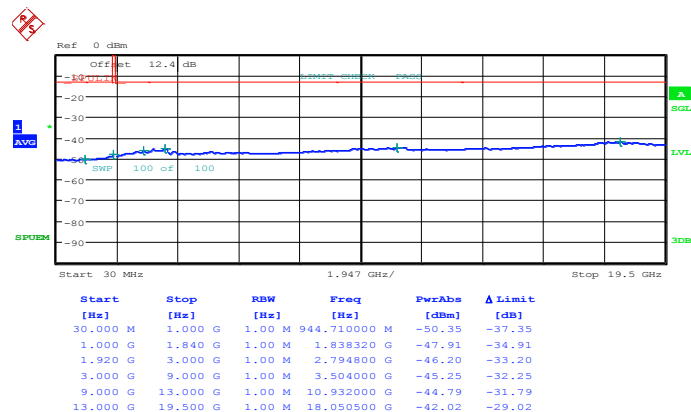
Band :	LTE Band 2	Channel :	CH18675 (Low)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 00:57:37

16QAM (RB Size 1, RB Offset 0)

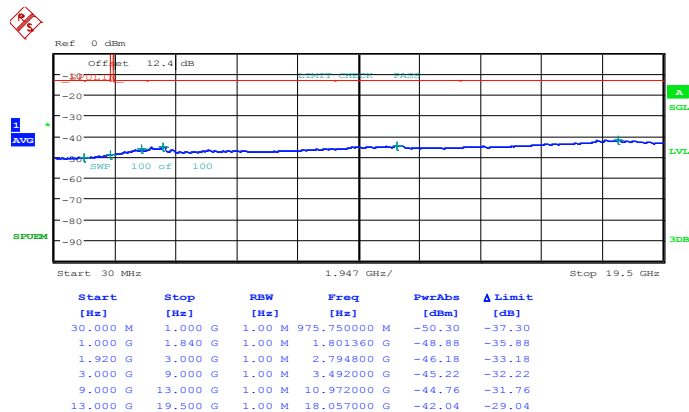


Date: 18.FEB.2014 00:58:33



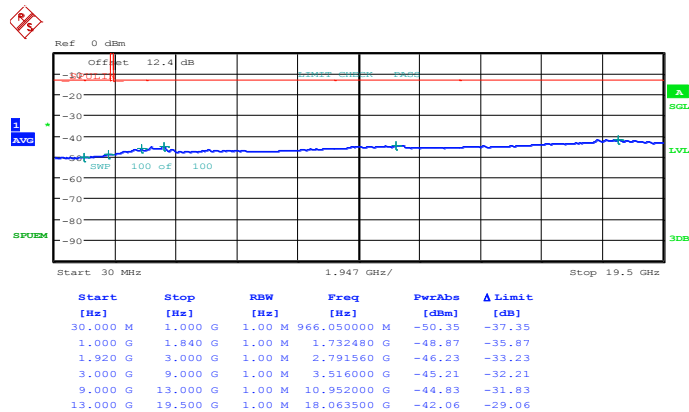
Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 01:00:20

16QAM (RB Size 1, RB Offset 0)

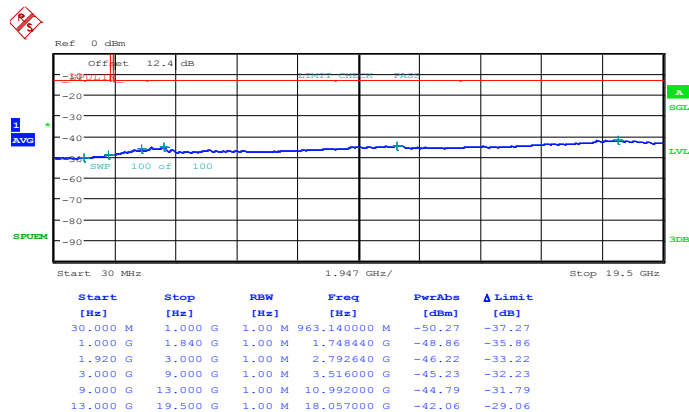


Date: 18.FEB.2014 01:01:16



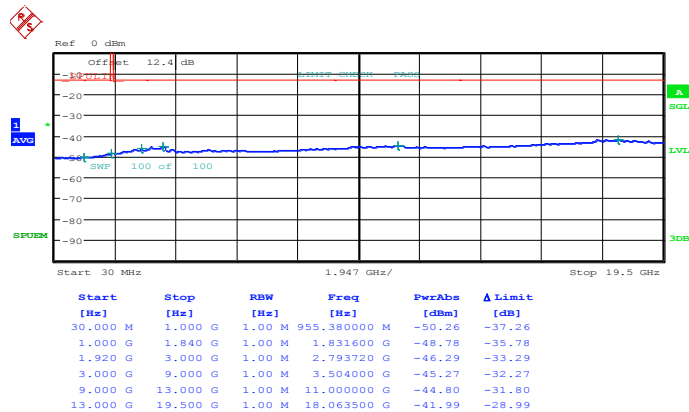
Band :	LTE Band 2	Channel :	CH19125 (High)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 01:05:54

16QAM (RB Size 1, RB Offset 0)

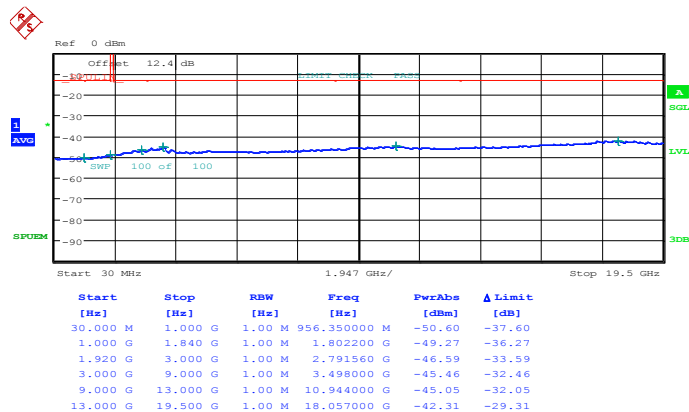


Date: 18.FEB.2014 01:06:50



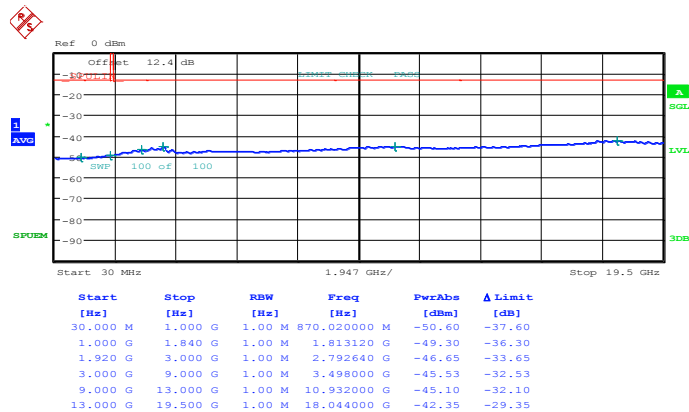
Band :	LTE Band 2	Channel :	CH18700 (Low)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 18:34:03

16QAM (RB Size 1, RB Offset 0)

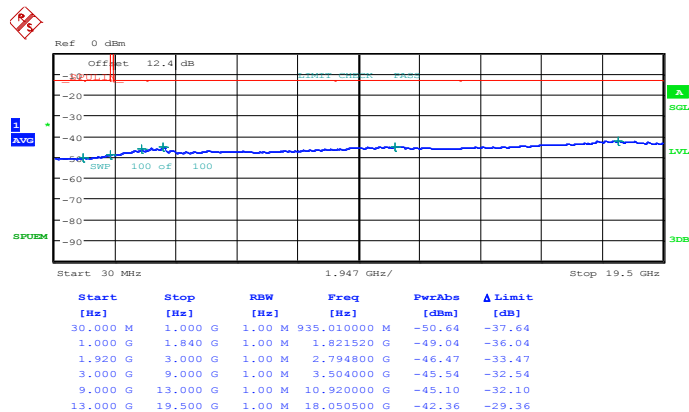


Date: 18.FEB.2014 18:34:59



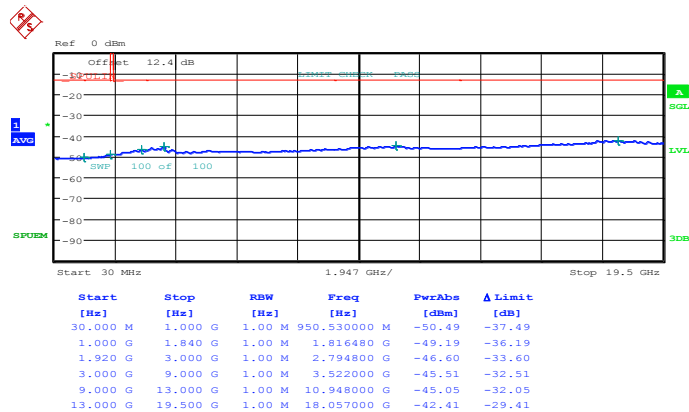
Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 18:36:46

16QAM (RB Size 1, RB Offset 0)

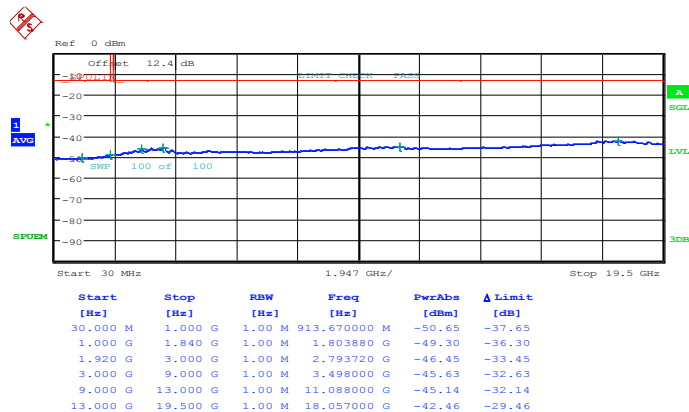


Date: 18.FEB.2014 18:37:42



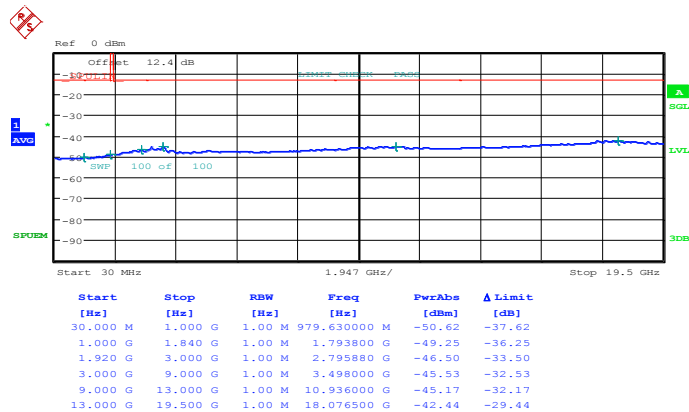
Band :	LTE Band 2	Channel :	CH19100 (High)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 18:42:21

16QAM (RB Size 1, RB Offset 0)

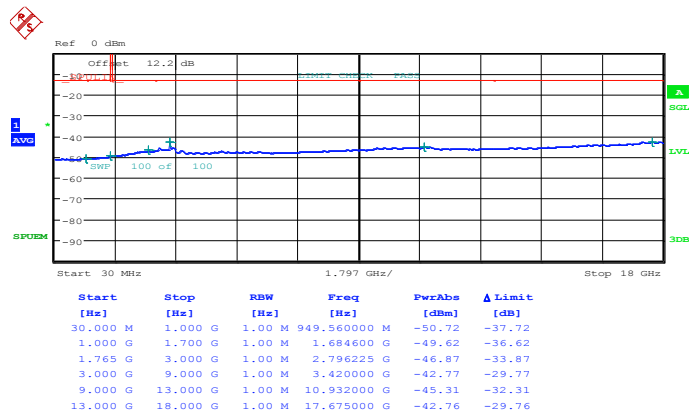


Date: 18.FEB.2014 18:43:17



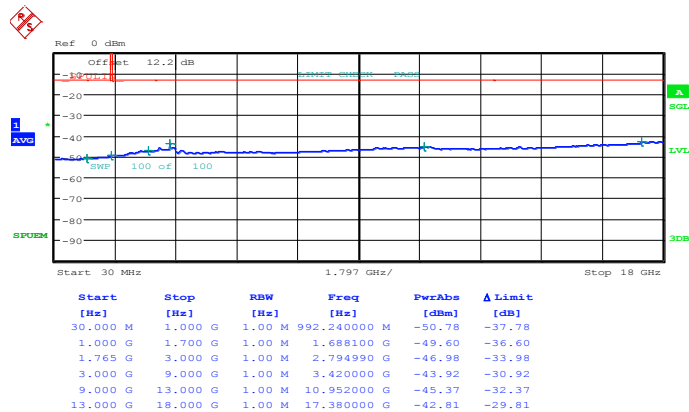
Band :	LTE Band 4	Channel :	CH19957 (Low)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 18:50:29

16QAM (RB Size 1, RB Offset 0)

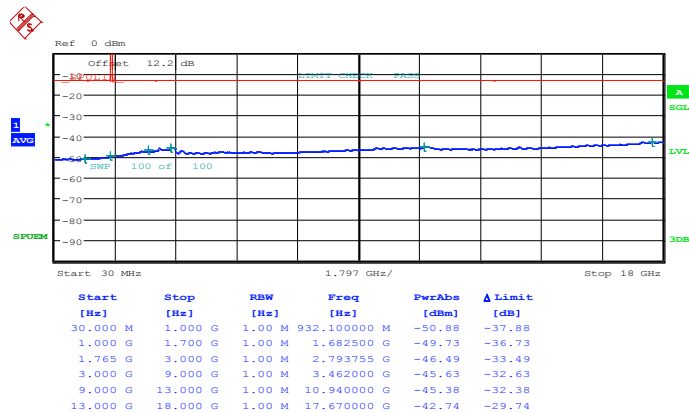


Date: 18.FEB.2014 18:51:25



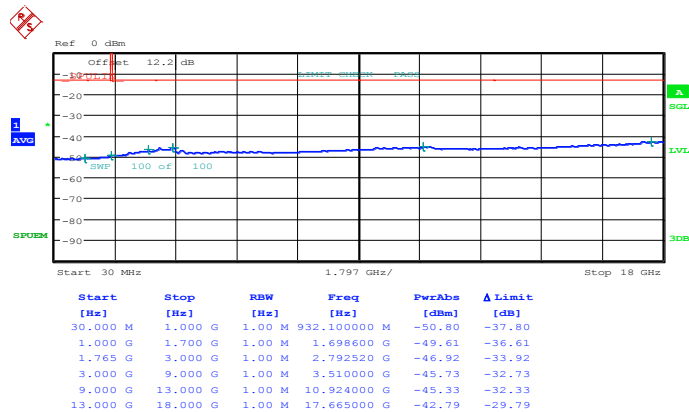
Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 18:53:12

16QAM (RB Size 1, RB Offset 0)

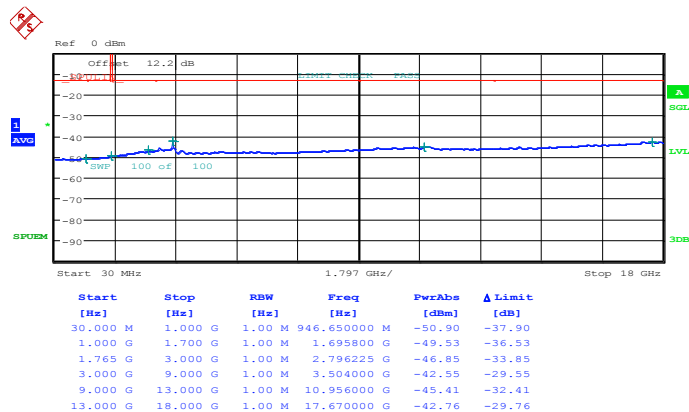


Date: 18.FEB.2014 18:54:08



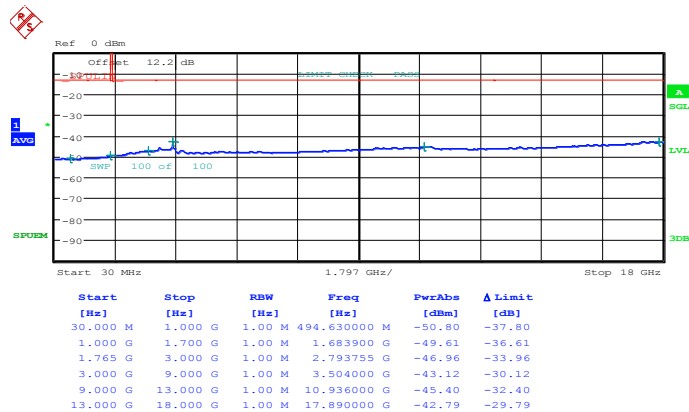
Band :	LTE Band 4	Channel :	CH20393 (High)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 18:58:47

16QAM (RB Size 1, RB Offset 0)

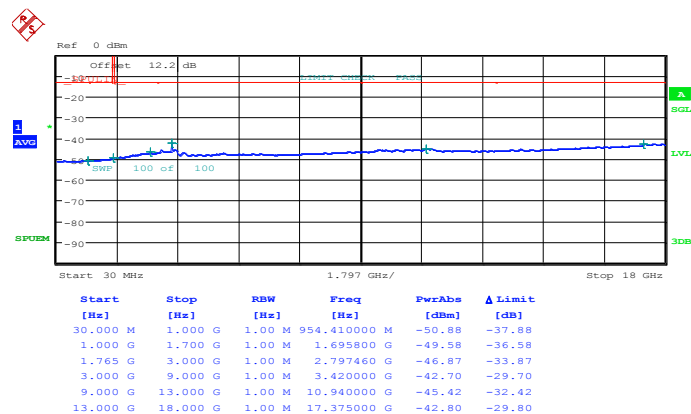


Date: 18.FEB.2014 18:59:43



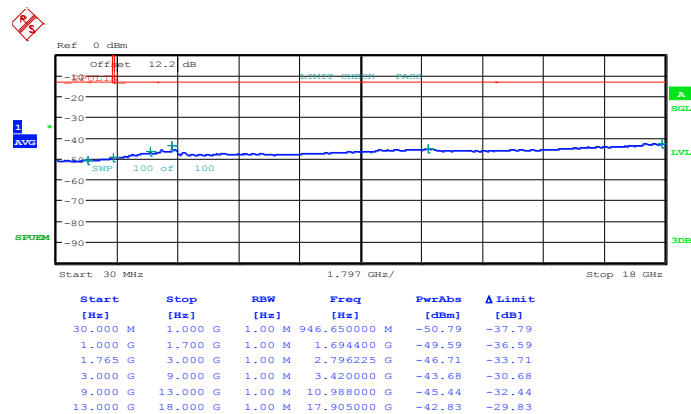
Band :	LTE Band 4	Channel :	CH19965 (Low)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 19:04:26

16QAM (RB Size 1, RB Offset 0)

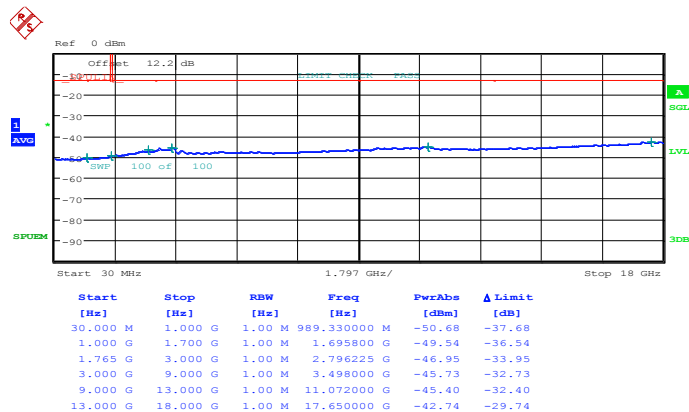


Date: 18.FEB.2014 19:05:22



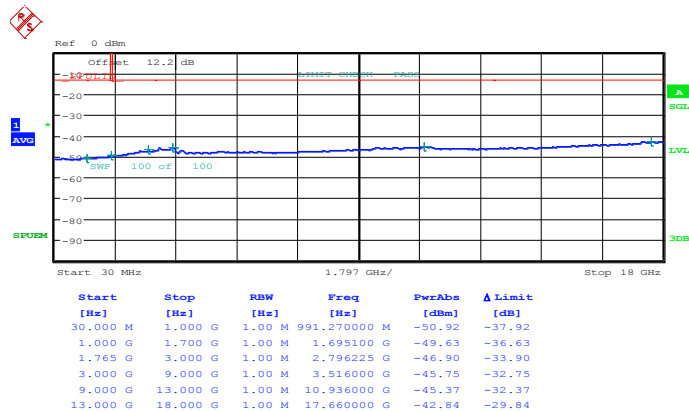
Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 19:07:09

16QAM (RB Size 1, RB Offset 0)

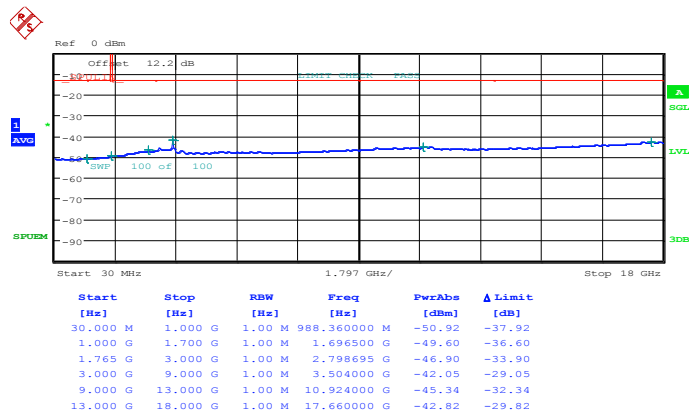


Date: 18.FEB.2014 19:08:05



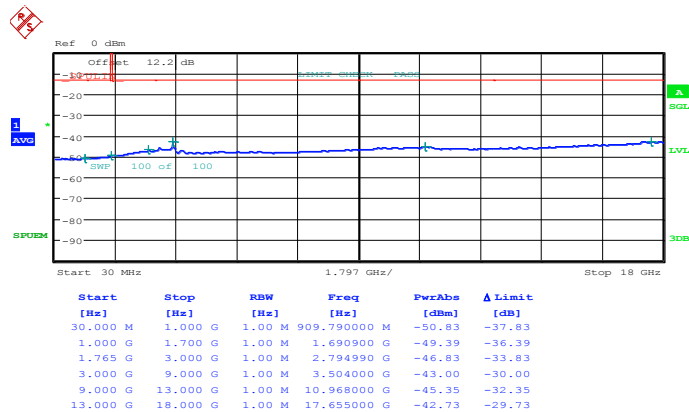
Band :	LTE Band 4	Channel :	CH20385 (High)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 19:12:44

16QAM (RB Size 1, RB Offset 0)

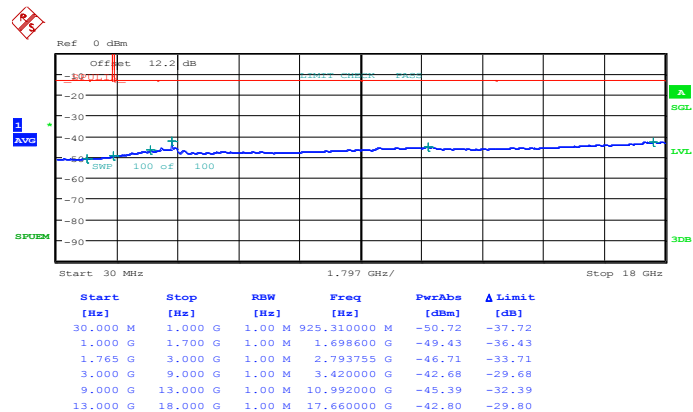


Date: 18.FEB.2014 19:13:40



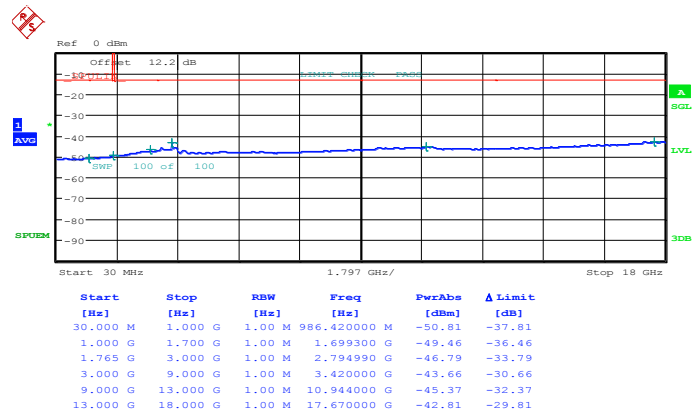
Band :	LTE Band 4	Channel :	CH19975 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 19:18:23

16QAM (RB Size 1, RB Offset 0)

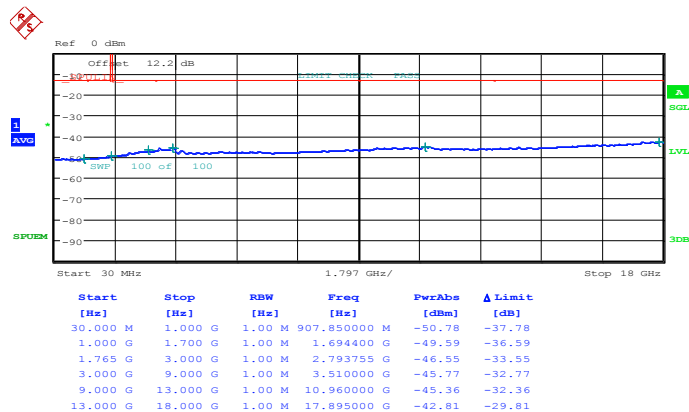


Date: 18.FEB.2014 19:19:19



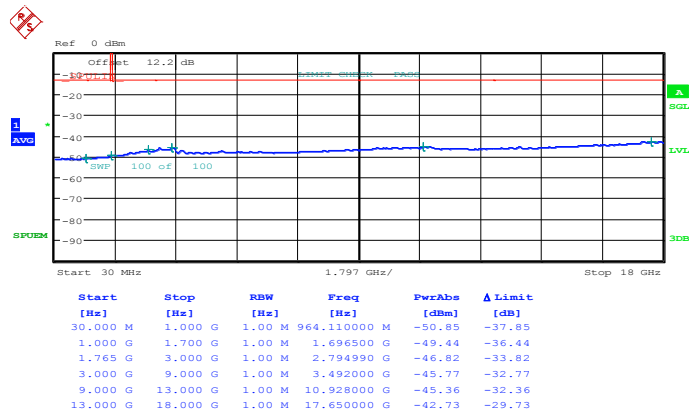
Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 19:21:06

16QAM (RB Size 1, RB Offset 0)

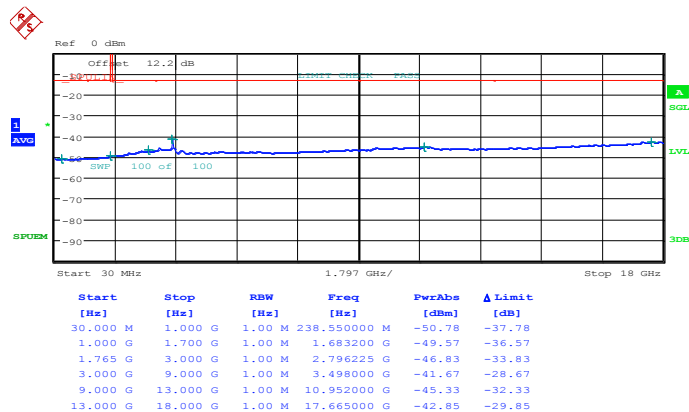


Date: 18.FEB.2014 19:22:02



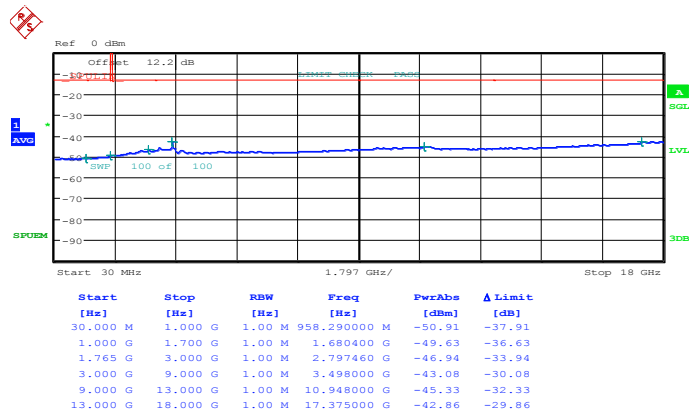
Band :	LTE Band 4	Channel :	CH20375 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 19:26:41

16QAM (RB Size 1, RB Offset 0)

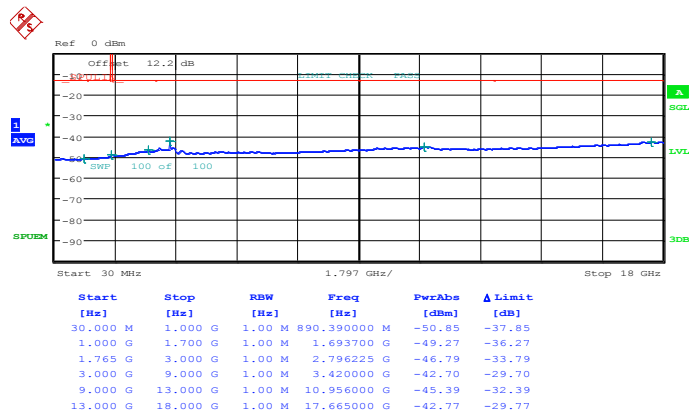


Date: 18.FEB.2014 19:27:37



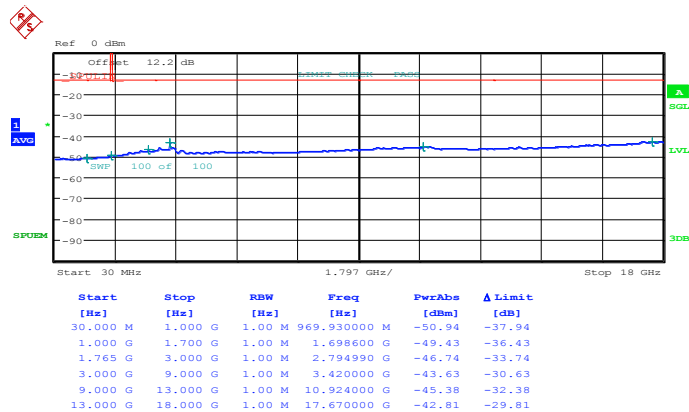
Band :	LTE Band 4	Channel :	CH20000 (Low)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 19:32:20

16QAM (RB Size 1, RB Offset 0)

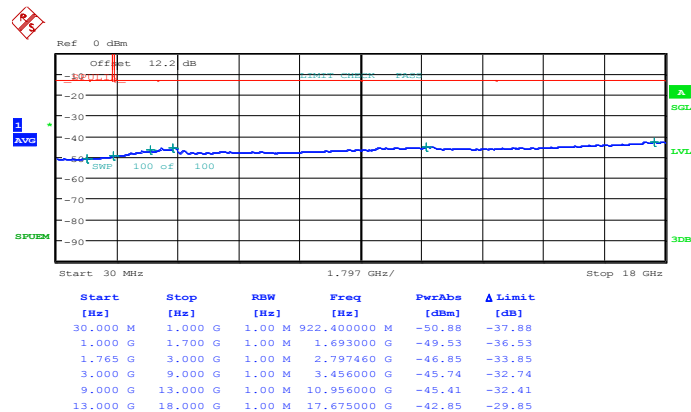


Date: 18.FEB.2014 19:33:16



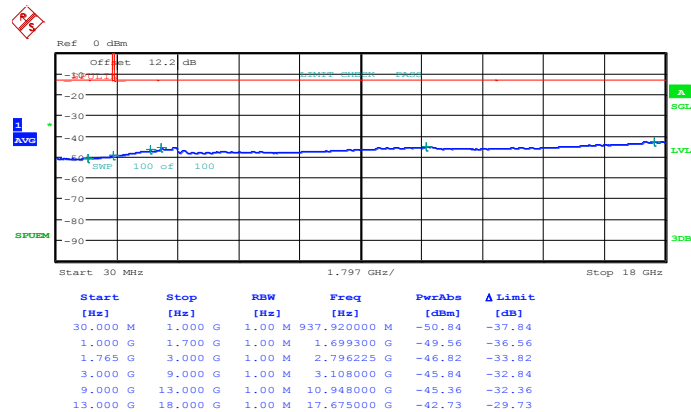
Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 19:35:03

16QAM (RB Size 1, RB Offset 0)

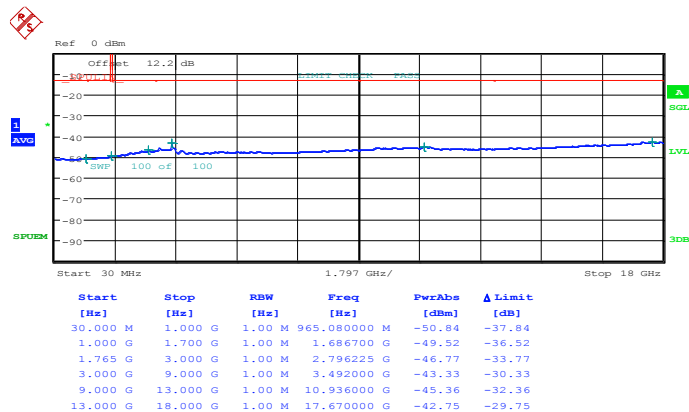


Date: 18.FEB.2014 19:35:59



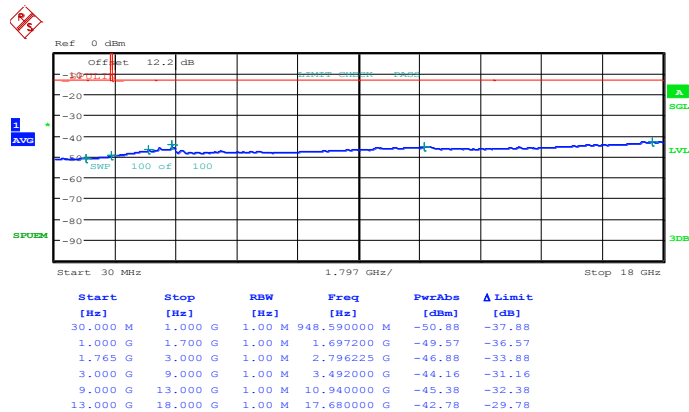
Band :	LTE Band 4	Channel :	CH20350 (High)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 19:40:38

16QAM (RB Size 1, RB Offset 0)

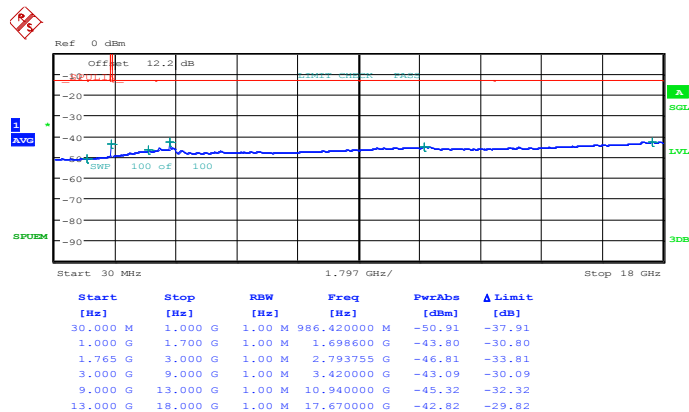


Date: 18.FEB.2014 19:41:34



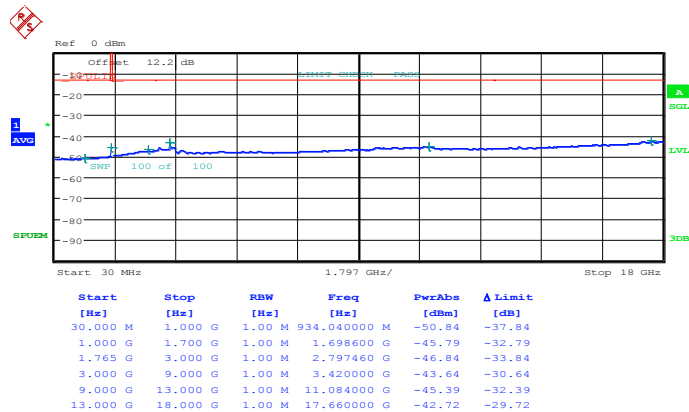
Band :	LTE Band 4	Channel :	CH20025 (Low)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 19:46:17

16QAM (RB Size 1, RB Offset 0)

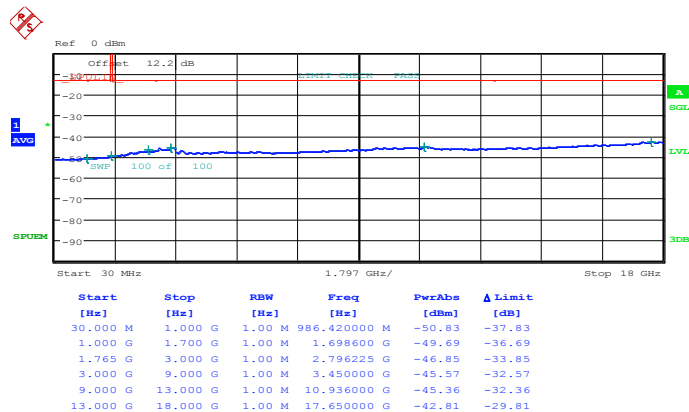


Date: 18.FEB.2014 19:47:13



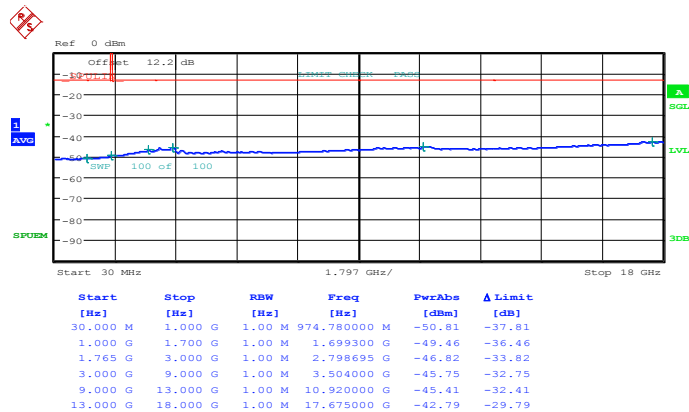
Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 19:49:00

16QAM (RB Size 1, RB Offset 0)

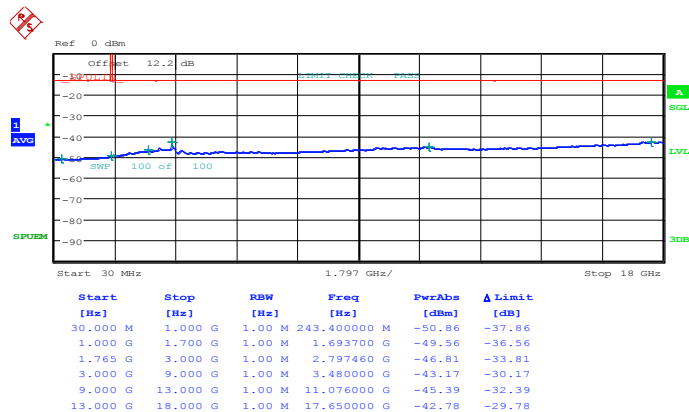


Date: 18.FEB.2014 19:49:56



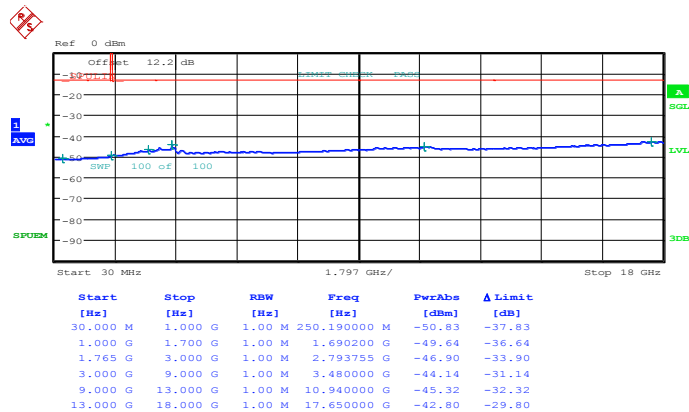
Band :	LTE Band 4	Channel :	CH20325 (High)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 19:54:35

16QAM (RB Size 1, RB Offset 0)

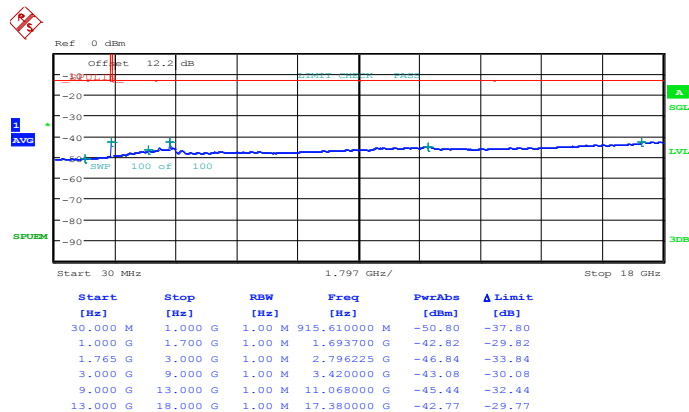


Date: 18.FEB.2014 19:55:31



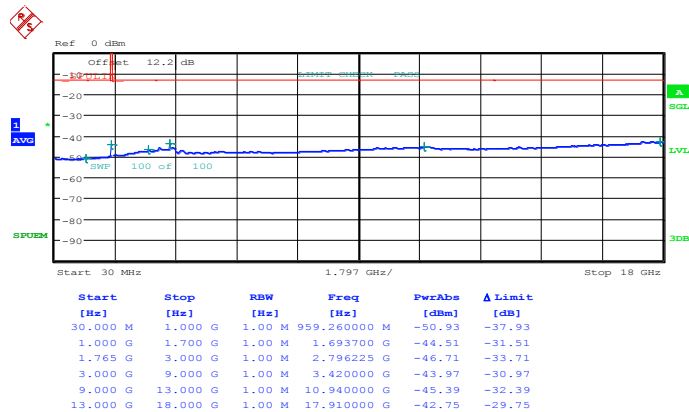
Band :	LTE Band 4	Channel :	CH20050 (Low)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 20:00:14

16QAM (RB Size 1, RB Offset 0)

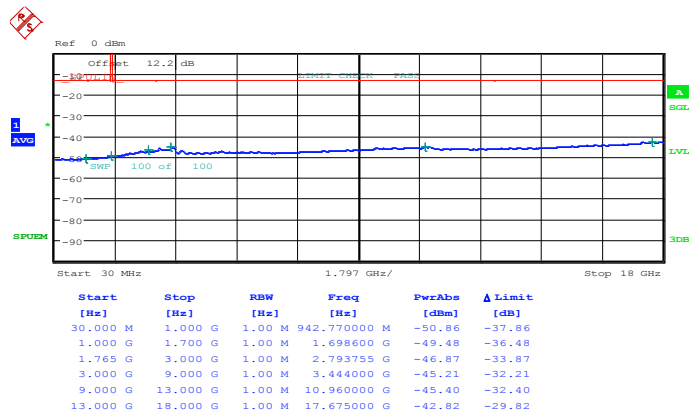


Date: 18.FEB.2014 20:01:10



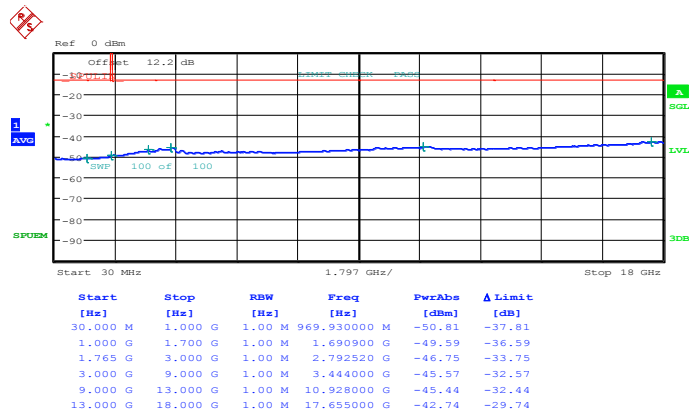
Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 20:02:57

16QAM (RB Size 1, RB Offset 0)

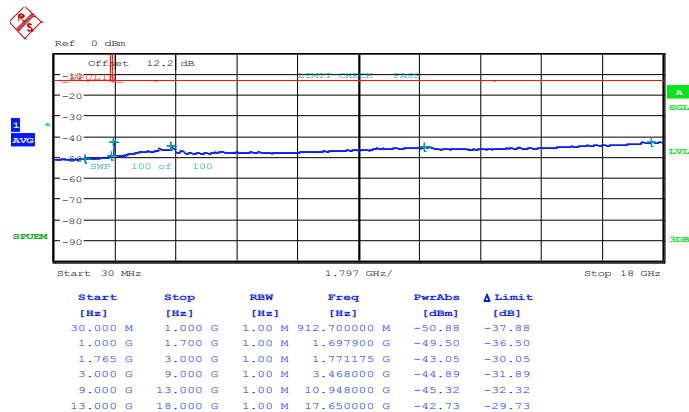


Date: 18.FEB.2014 20:03:53



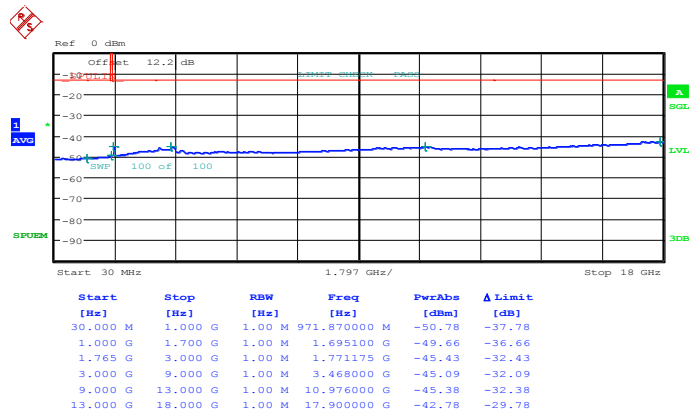
Band :	LTE Band 4	Channel :	CH20300 (High)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 20:08:31

16QAM (RB Size 1, RB Offset 0)

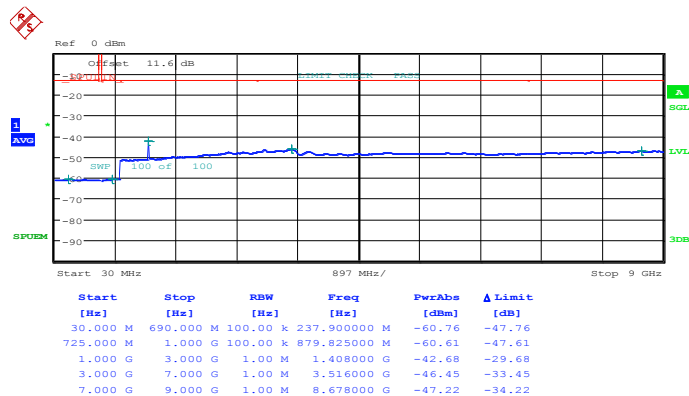


Date: 18.FEB.2014 20:09:28



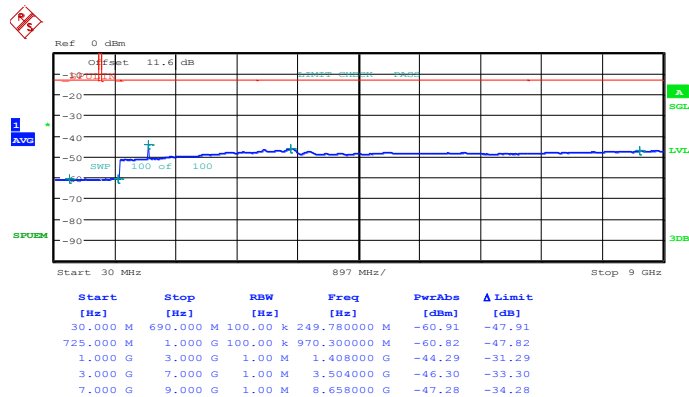
Band :	LTE Band 17	Channel :	CH23755 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 21:30:48

16QAM (RB Size 1, RB Offset 0)

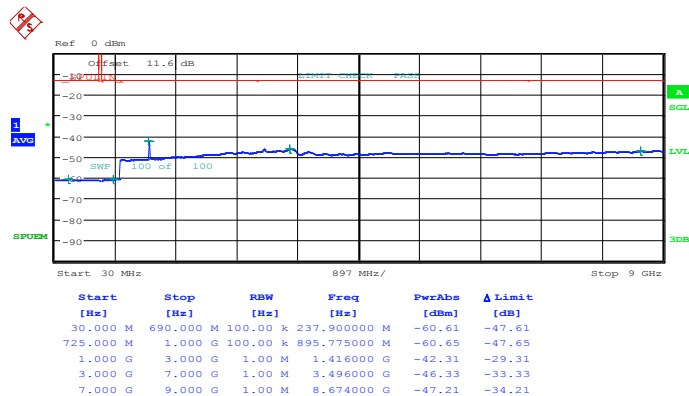


Date: 18.FEB.2014 21:31:44



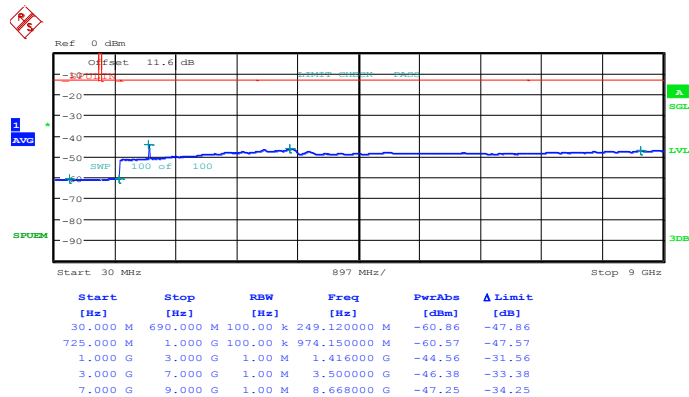
Band :	LTE Band 17	Channel :	CH23790 (Middle)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 21:33:30

16QAM (RB Size 1, RB Offset 0)

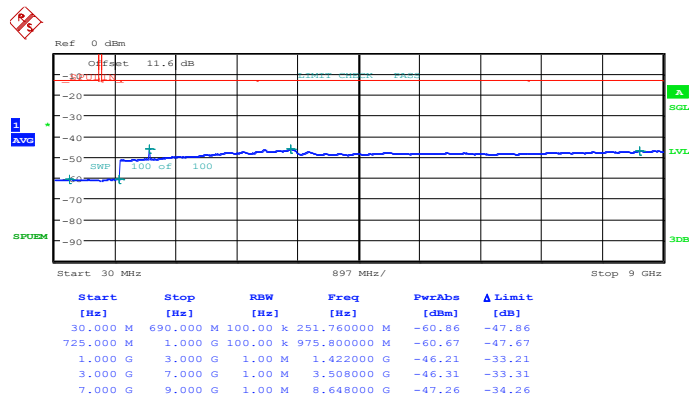


Date: 18.FEB.2014 21:34:26



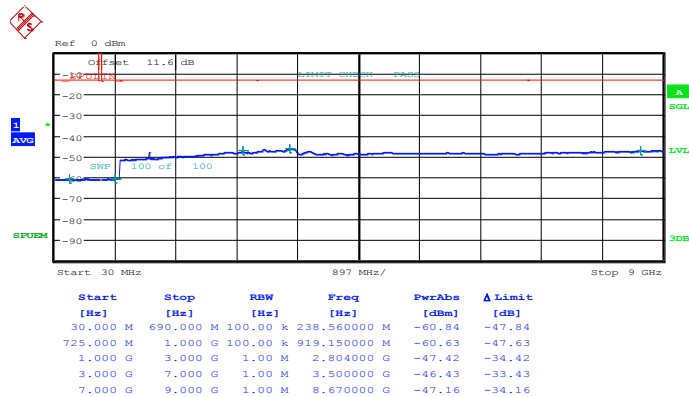
Band :	LTE Band 17	Channel :	CH23825 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 21:39:05

16QAM (RB Size 1, RB Offset 0)

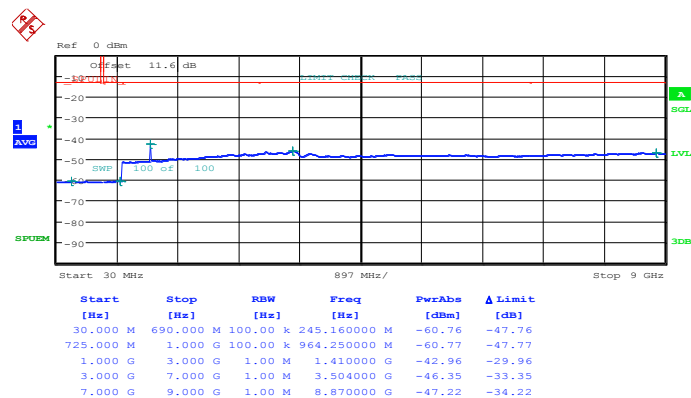


Date: 18.FEB.2014 21:40:01



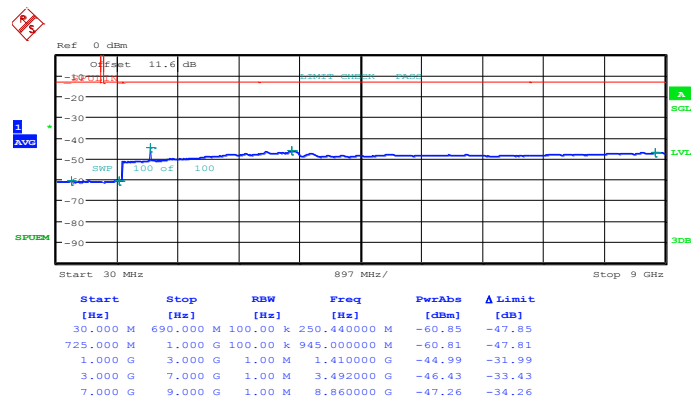
Band :	LTE Band 17	Channel :	CH23780 (Low)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 21:44:44

16QAM (RB Size 1, RB Offset 0)

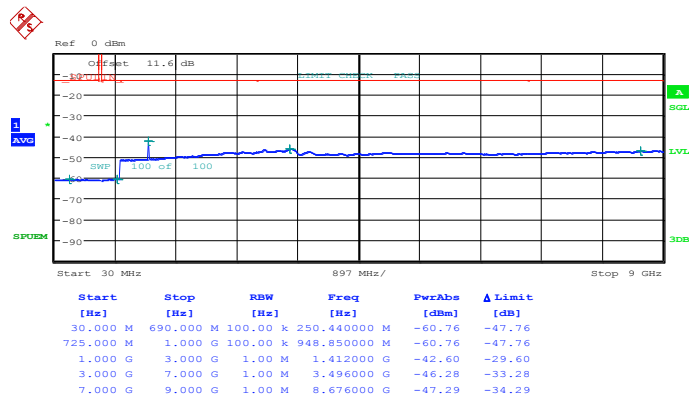


Date: 18.FEB.2014 21:45:40



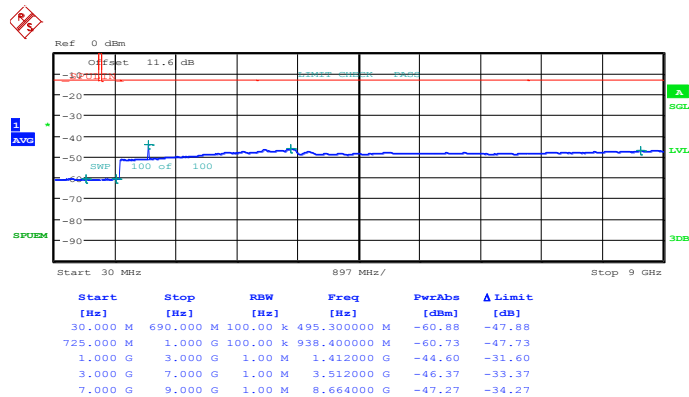
Band :	LTE Band 17	Channel :	CH23790 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 21:47:26

16QAM (RB Size 1, RB Offset 0)

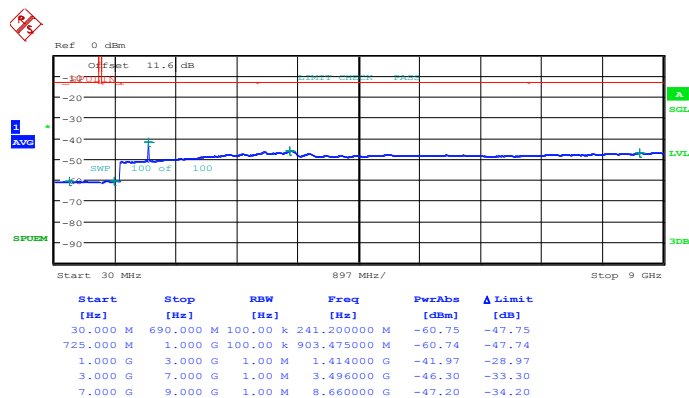


Date: 18.FEB.2014 21:48:23



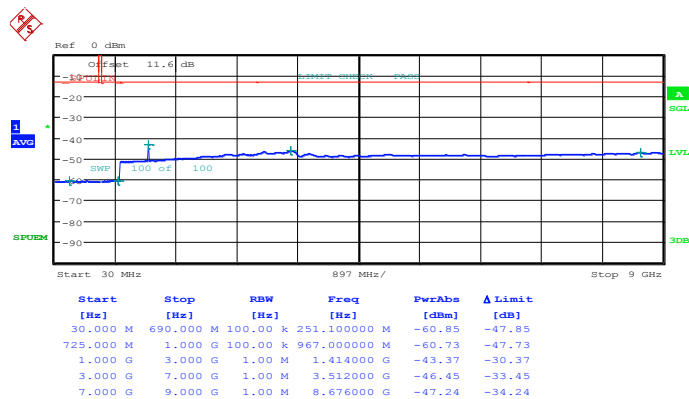
Band :	LTE Band 17	Channel :	CH23800 (High)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 21:53:01

16QAM (RB Size 1, RB Offset 0)



Date: 18.FEB.2014 21:53:57

3.7 Radiated Spurious Emission Measurement

3.7.1 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.

3.7.2 Measuring Instruments

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

3.7.3 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.

The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)

$$= P(W) - [43 + 10\log(P)] \text{ (dB)}$$

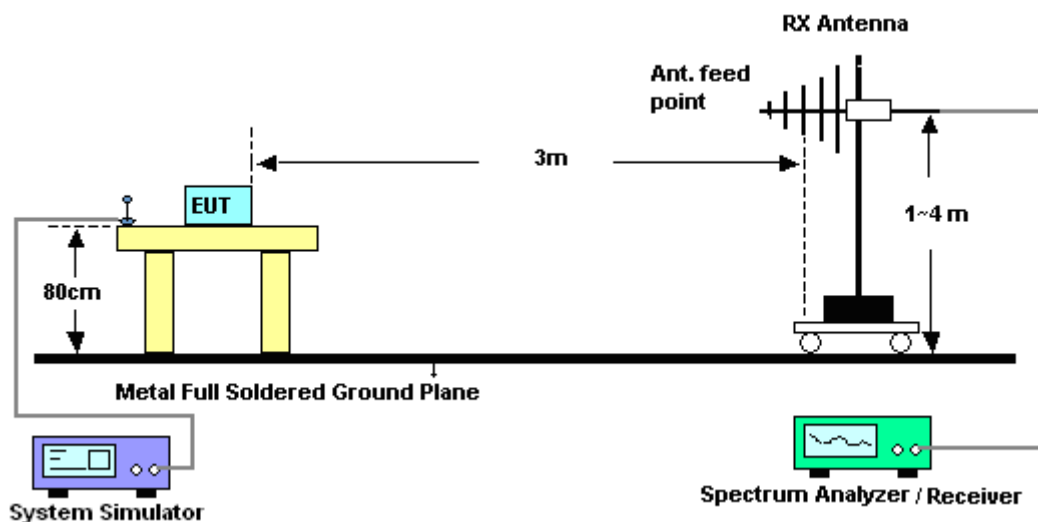
$$= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$$

$$= -13\text{dBm}.$$

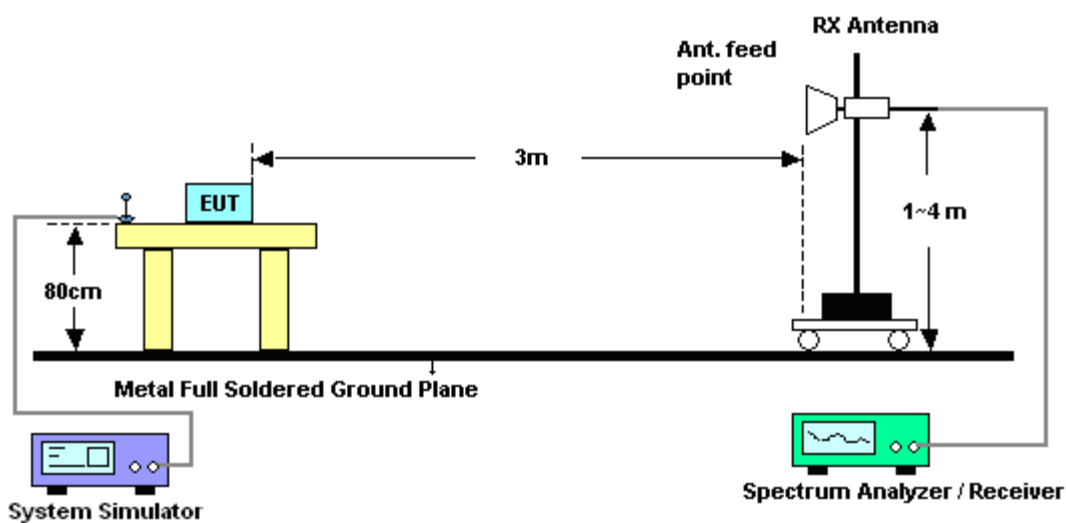
11. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
12. ERP (dBm) = EIRP - 2.15

3.7.4 Test Setup

For radiated emissions from 30MHz to 1GHz

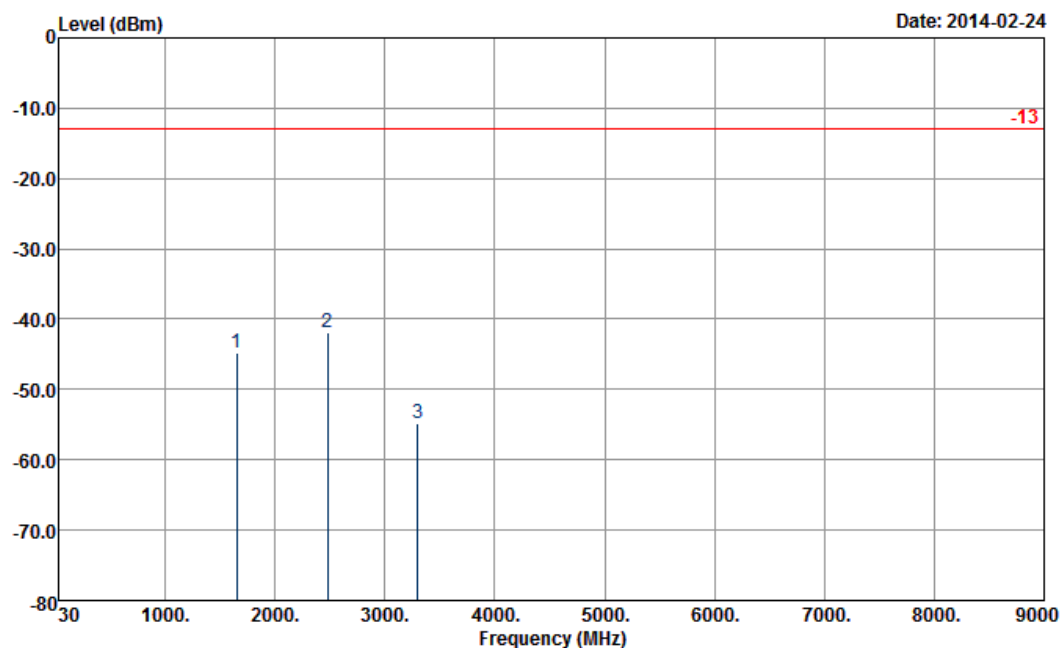


For radiated emissions above 1GHz



3.7.5 Test Result of Field Strength of Spurious Radiated

Band :	LTE Band 5	Temperature :	20~22°C
Test Mode :	1.4MHz QPSK RB Size 1 Offset 5	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

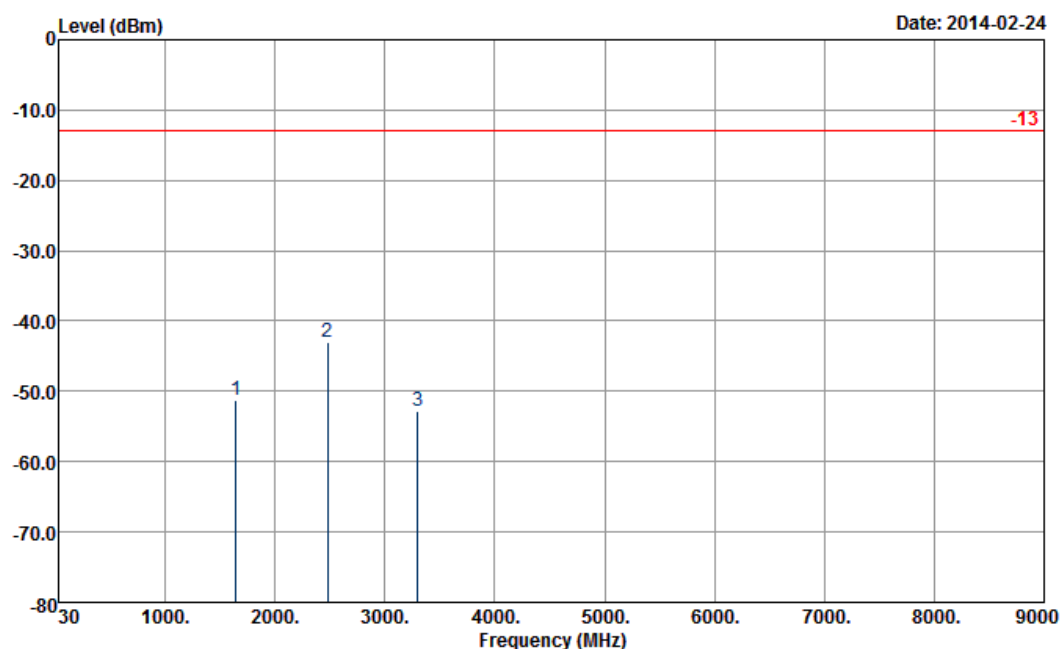


Site : 03CH07-HY
Condition : -13 HF-EIRP(080306) HORIZONTAL

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
1651	-44.84	-13	-31.84	-54.71	-48.73	1.61	5.50	H	Pass
2476	-41.92	-13	-28.92	-55.17	-46.07	2.09	6.24	H	Pass
3301	-54.86	-13	-41.86	-68.58	-59.87	3.08	8.09	H	Pass



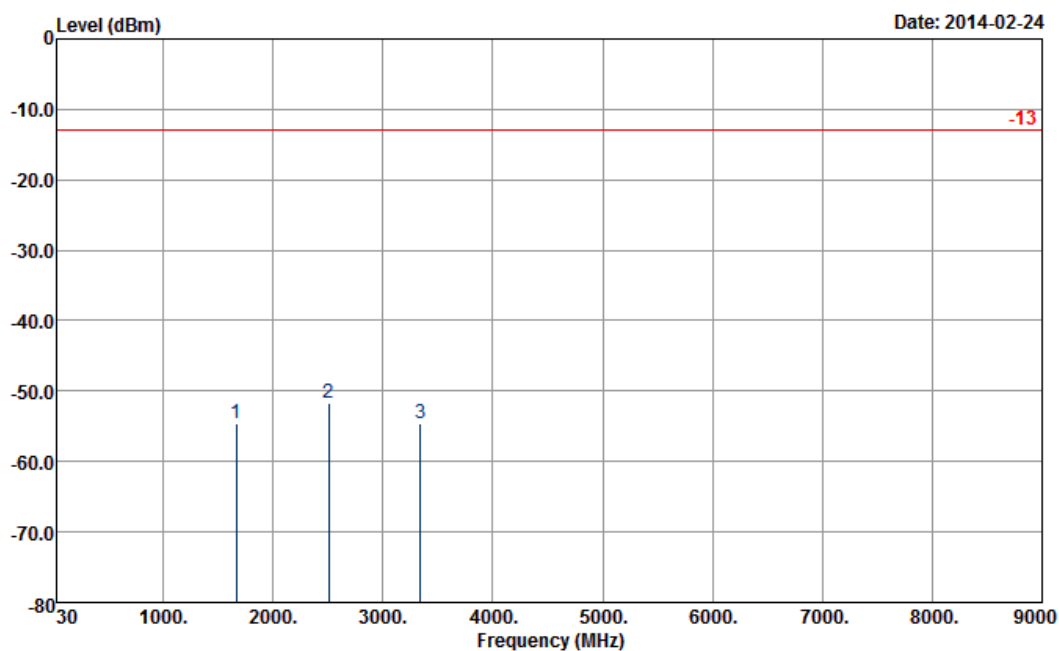
Band :	LTE Band 5	Temperature :	20~22°C
Test Mode :	1.4MHz QPSK RB Size 1 Offset 5	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



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
1648	-51.33	-13	-38.33	-62.34	-55.22	1.61	5.50	V	Pass
2476	-43.11	-13	-30.11	-57.14	-47.26	2.09	6.24	V	Pass
3301	-52.75	-13	-39.75	-68.11	-57.76	3.08	8.09	V	Pass

Band :	LTE Band 5	Temperature :	20~22°C
Test Mode :	3MHz QPSK RB Size 1 Offset 0	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

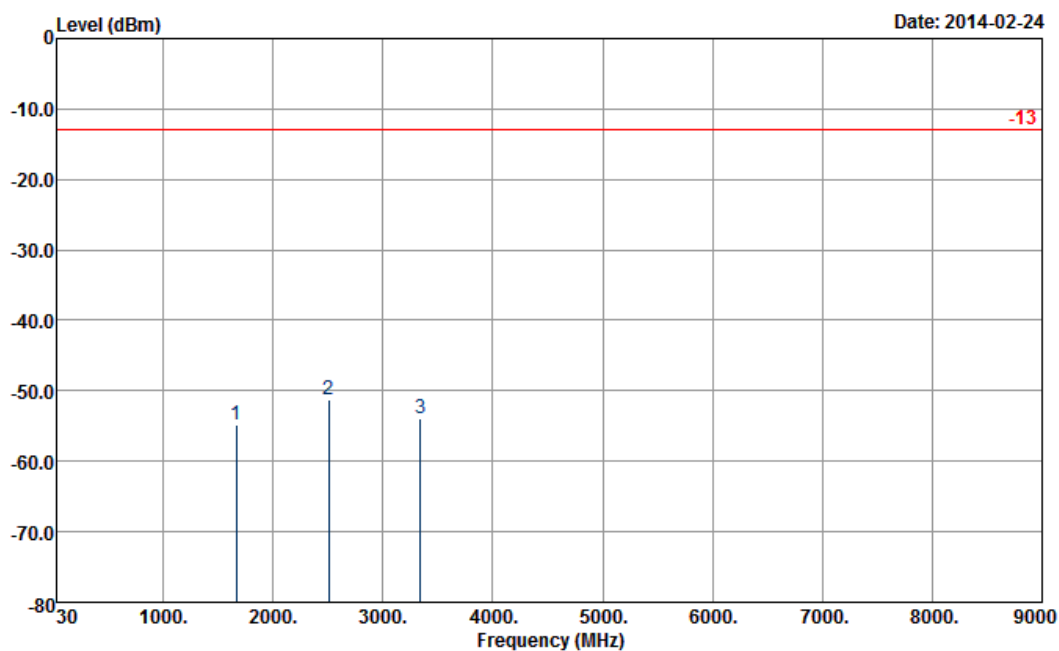


Site : 03CH07-HY
Condition : -13 HF-EIRP(080306) HORIZONTAL

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
1669	-54.56	-13	-41.56	-64.83	-58.43	1.62	5.49	H	Pass
2506	-51.59	-13	-38.59	-64.74	-55.71	2.1	6.22	H	Pass
3340	-54.63	-13	-41.63	-68.58	-59.67	3.03	8.07	H	Pass



Band :	LTE Band 5	Temperature :	20~22°C
Test Mode :	3MHz QPSK RB Size 1 Offset 0	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

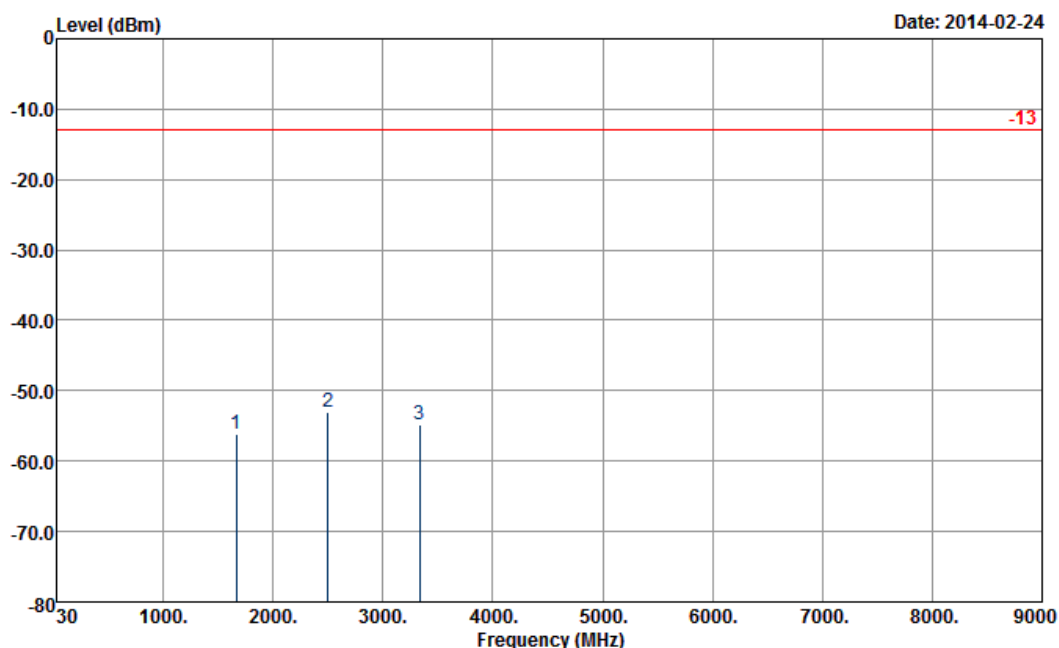


Site : 03CH07-HY
Condition : -13 HF-EIRP(080306) VERTICAL

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
1669	-54.74	-13	-41.74	-67.75	-58.61	1.62	5.49	V	Pass
2506	-51.26	-13	-38.26	-68.58	-55.38	2.1	6.22	V	Pass
3340	-53.90	-13	-40.90	-69.19	-58.94	3.03	8.07	V	Pass



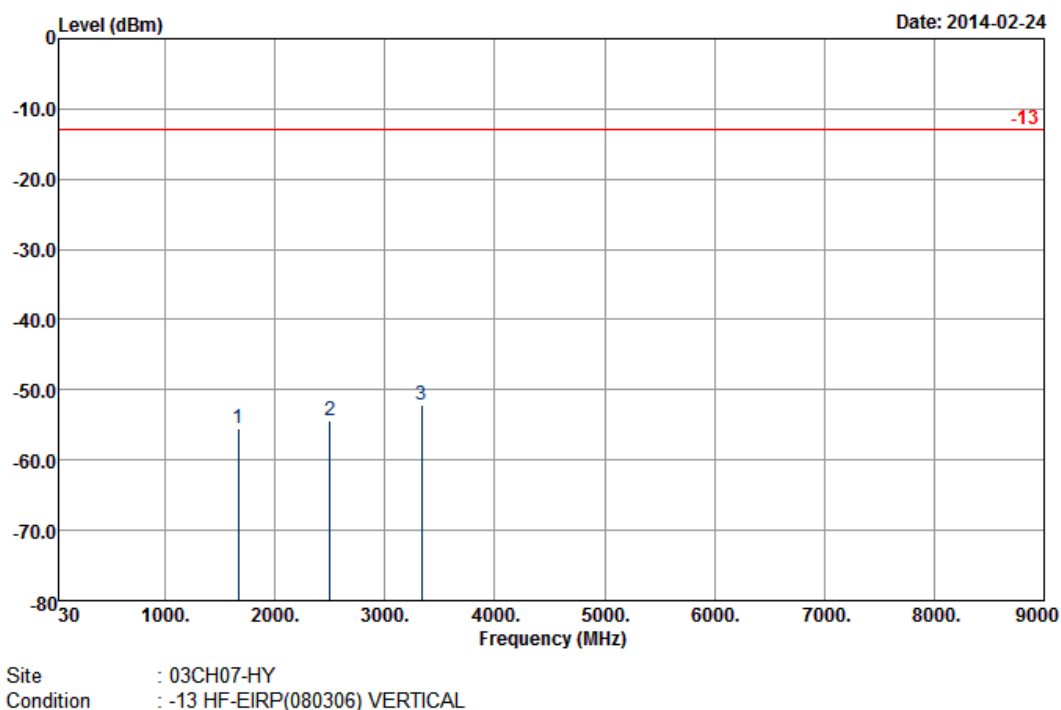
Band :	LTE Band 5	Temperature :	20~22°C
Test Mode :	5MHz QPSK RB Size 1 Offset 0	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



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

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
1669	-56.05	-13	-43.05	-65.05	-59.92	1.62	5.49	H	Pass
2503	-52.94	-13	-39.94	-66.11	-57.06	2.1	6.22	H	Pass
3337	-54.79	-13	-41.79	-68.08	-59.83	3.03	8.07	H	Pass

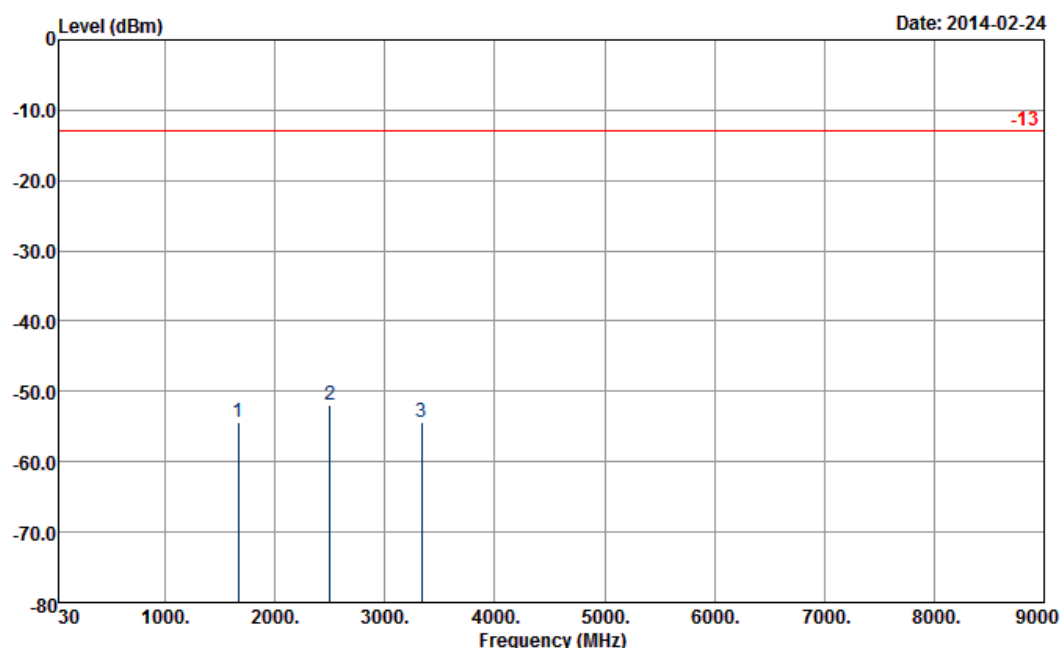
Band :	LTE Band 5	Temperature :	20~22°C
Test Mode :	5MHz QPSK RB Size 1 Offset 0	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1669	-55.49	-13	-42.49	-66.42	-59.36	1.62	5.49	V	Pass
2503	-54.30	-13	-41.30	-68.03	-58.42	2.1	6.22	V	Pass
3337	-52.17	-13	-39.17	-67.96	-57.21	3.03	8.07	V	Pass



Band :	LTE Band 5	Temperature :	20~22°C
Test Mode :	10MHz QPSK RB Size 1 Offset 49	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

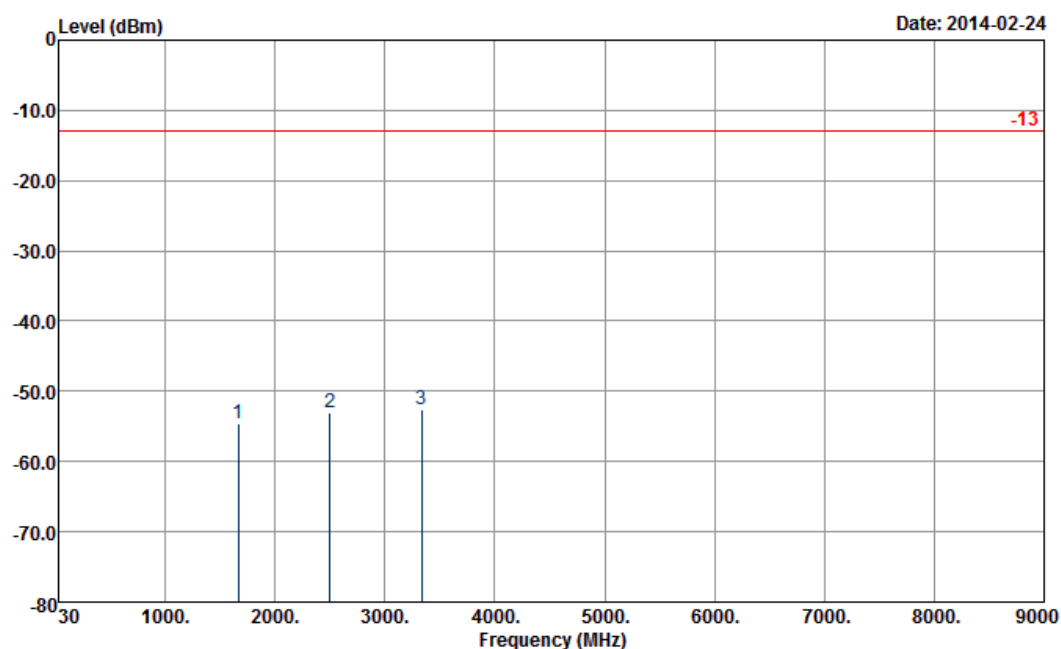


Site : 03CH07-HY
Condition : -13 HF-EIRP(080306) HORIZONTAL

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
1666	-54.47	-13	-41.47	-64.31	-58.42	1.63	5.58	H	Pass
2500	-51.82	-13	-38.82	-64.37	-55.92	2.21	6.31	H	Pass
3334	-54.31	-13	-41.31	-68.28	-59.34	3.1	8.13	H	Pass



Band :	LTE Band 5	Temperature :	20~22°C
Test Mode :	10MHz QPSK RB Size 1 Offset 49	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

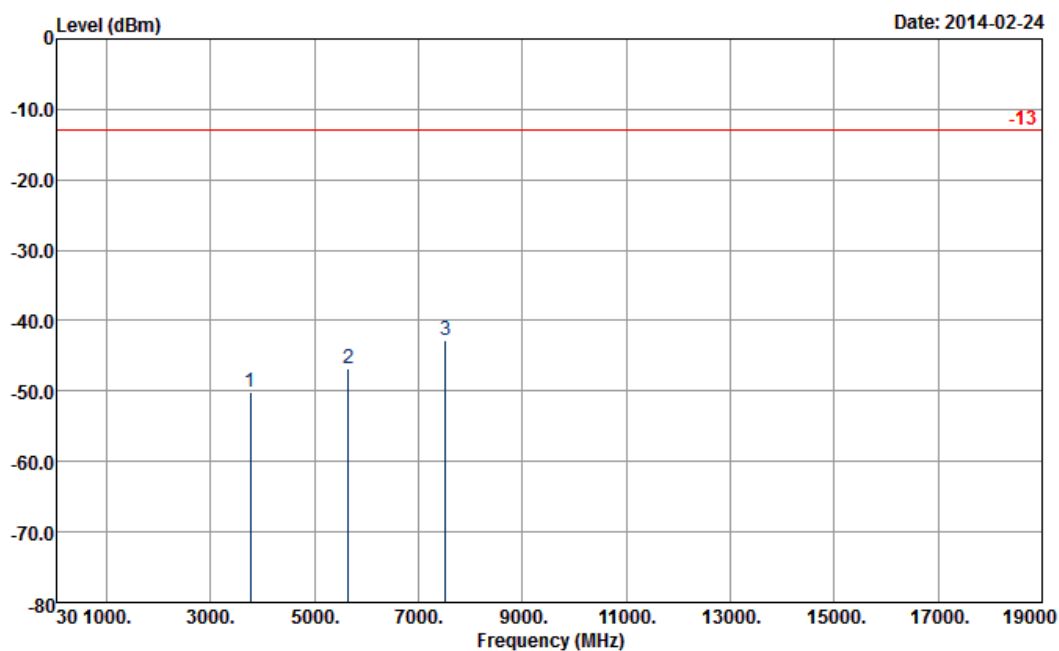


Site : 03CH07-HY
Condition : -13 HF-EIRP(080306) VERTICAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1666	-54.57	-13	-41.57	-66.88	-58.52	1.63	5.58	V	Pass
2500	-52.93	-13	-39.93	-66.54	-57.03	2.21	6.31	V	Pass
3334	-52.58	-13	-39.58	-67.99	-57.61	3.1	8.13	V	Pass



Band :	LTE Band 2	Temperature :	20~22°C
Test Mode :	1.4MHz QPSK RB Size 1 Offset 5	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

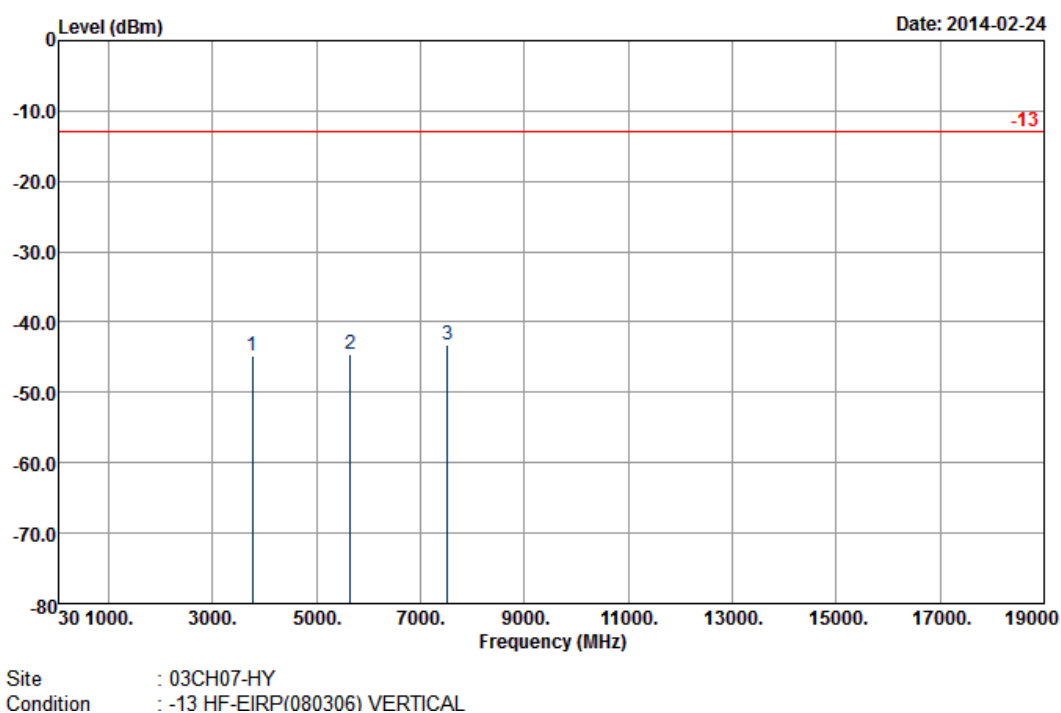


Site : 03CH07-HY
Condition : -13 HF-EIRP(080306) HORIZONTAL

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
3760	-50.09	-13	-37.09	-65.37	-56.39	2.51	8.81	H	Pass
5640	-46.76	-13	-33.76	-67.54	-54.47	2.99	10.70	H	Pass
7520	-42.83	-13	-29.83	-70.12	-51.36	3.59	12.12	H	Pass



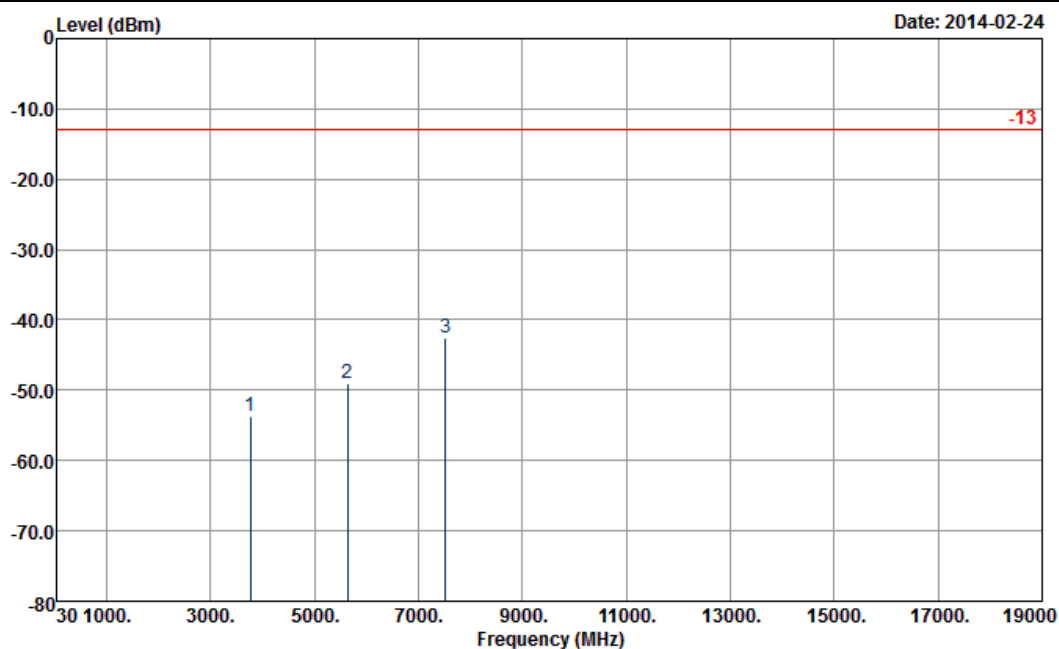
Band :	LTE Band 2	Temperature :	20~22°C
Test Mode :	1.4MHz QPSK RB Size 1 Offset 5	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3760	-44.82	-13	-31.82	-61.12	-51.12	2.51	8.81	V	Pass
5640	-44.52	-13	-31.52	-65.07	-52.23	2.99	10.70	V	Pass
7520	-43.34	-13	-30.34	-70.27	-51.87	3.59	12.12	V	Pass



Band :	LTE Band 2	Temperature :	20~22°C
Test Mode :	3MHz QPSK RB Size 1 Offset 0	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

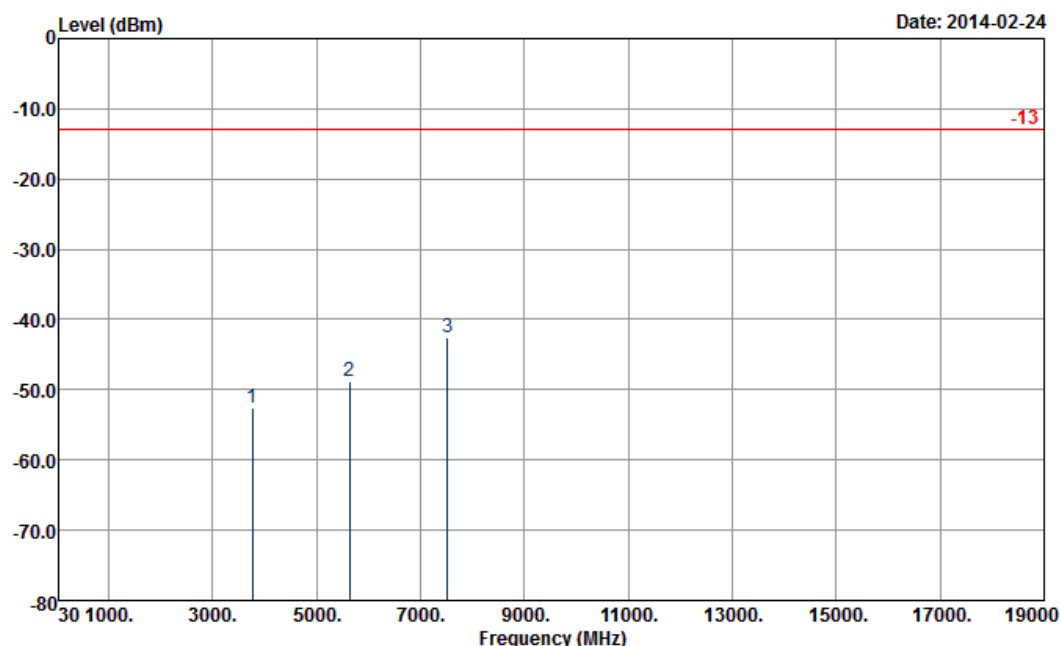


Site : 03CH07-HY
Condition : -13 HF-EIRP(080306) HORIZONTAL

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	-53.71	-13	-40.71	-69.06	-60.01	2.51	8.81	H	Pass
5632	-48.95	-13	-35.95	-69.62	-56.66	2.99	10.70	H	Pass
7512	-42.62	-13	-29.62	-69.94	-51.15	3.59	12.12	H	Pass



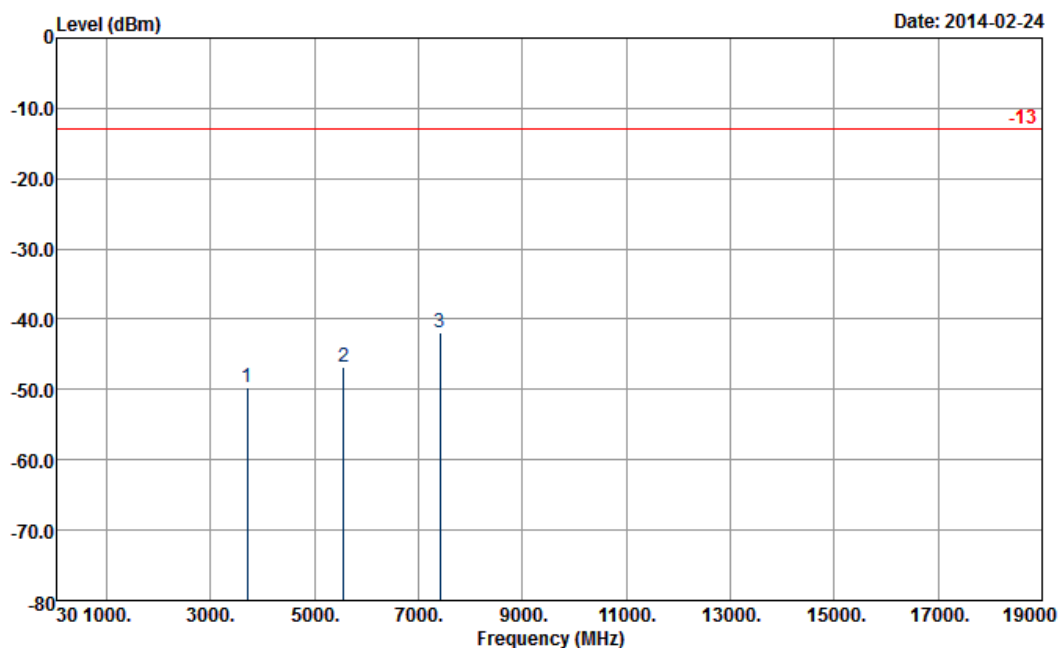
Band :	LTE Band 2	Temperature :	20~22°C
Test Mode :	3MHz QPSK RB Size 1 Offset 0	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



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

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3756	-52.58	-13	-39.58	-68.82	-58.88	2.51	8.81	V	Pass
5632	-48.91	-13	-35.91	-69.47	-56.62	2.99	10.70	V	Pass
7512	-42.56	-13	-29.56	-69.86	-51.09	3.59	12.12	V	Pass

Band :	LTE Band 2	Temperature :	20~22°C
Test Mode :	5MHz QPSK RB Size 1 Offset 24	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

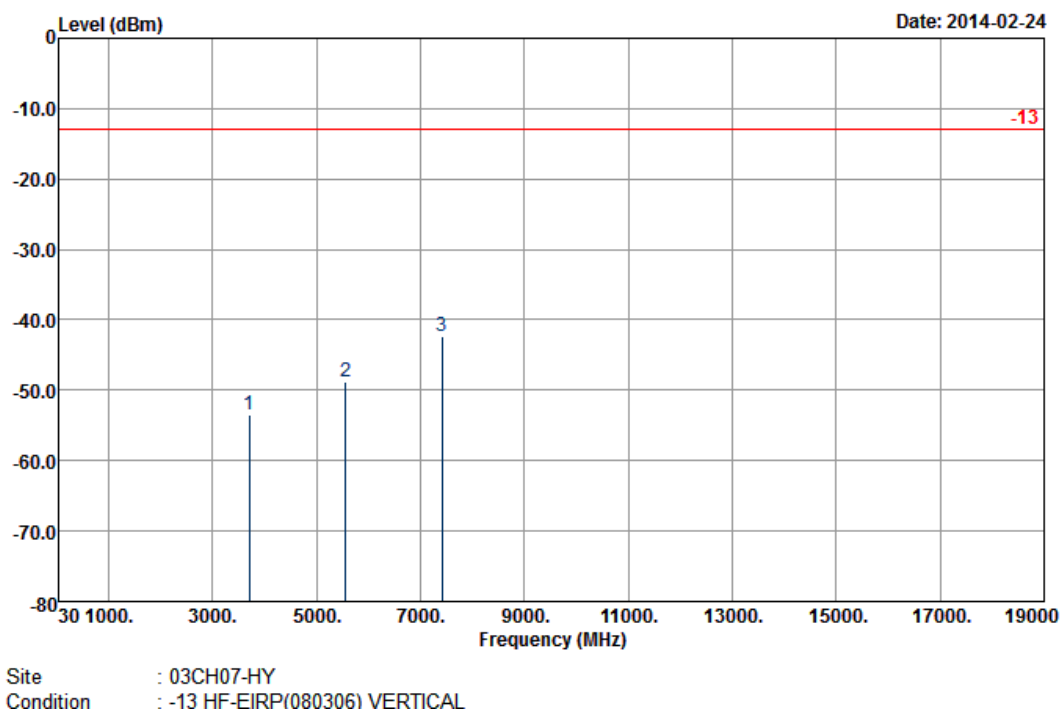


Site : 03CH07-HY
Condition : -13 HF-EIRP(080306) HORIZONTAL

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
3708	-49.61	-13	-36.61	-64.76	-55.94	2.46	8.79	H	Pass
5564	-46.69	-13	-33.69	-67.15	-54.56	2.9	10.77	H	Pass
7416	-41.95	-13	-28.95	-69.32	-50.77	3.42	12.24	H	Pass



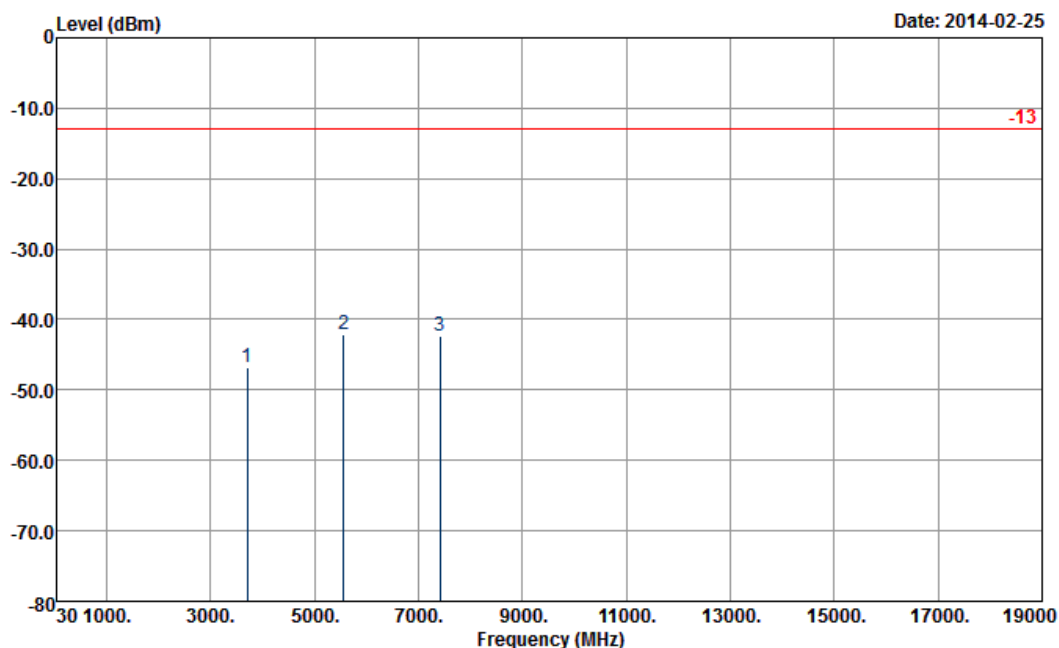
Band :	LTE Band 2	Temperature :	20~22°C
Test Mode :	5MHz QPSK RB Size 1 Offset 24	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3708	-53.54	-13	-40.54	-69.69	-59.87	2.46	8.79	V	Pass
5560	-48.74	-13	-35.74	-69.1	-56.61	2.9	10.77	V	Pass
7416	-42.30	-13	-29.30	-69.31	-51.12	3.42	12.24	V	Pass



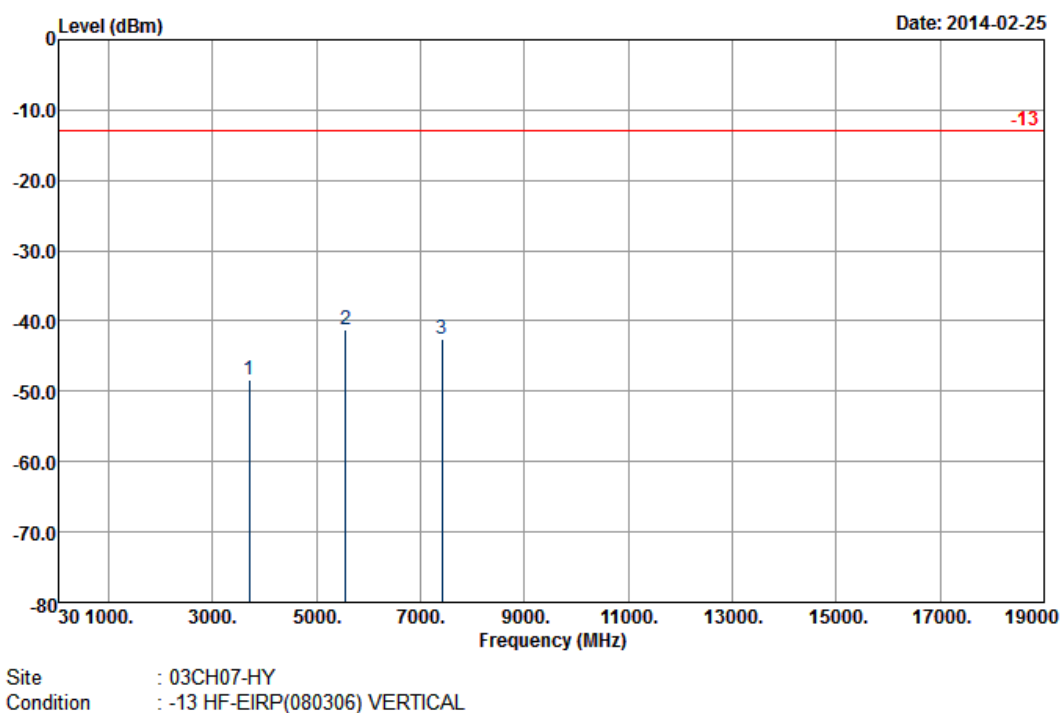
Band :	LTE Band 2	Temperature :	20~22°C
Test Mode :	10MHz QPSK RB Size 1 Offset 24	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



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

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
3708	-46.73	-13	-33.73	-61.97	-53.15	2.47	8.89	H	Pass
5564	-42.15	-13	-29.15	-62.61	-50.01	2.93	10.79	H	Pass
7416	-42.31	-13	-29.31	-69.7	-51.12	3.45	12.26	H	Pass

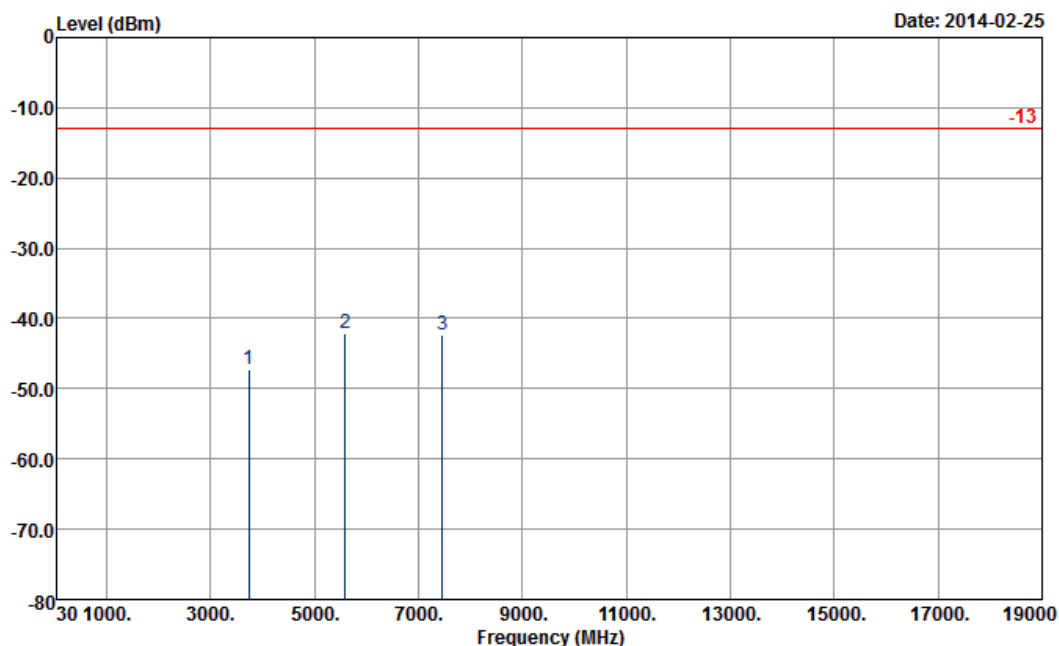
Band :	LTE Band 2	Temperature :	20~22°C
Test Mode :	10MHz QPSK RB Size 1 Offset 24	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3708	-48.44	-13	-35.44	-64.48	-54.86	2.47	8.89	V	Pass
5564	-41.24	-13	-28.24	-61.47	-49.1	2.93	10.79	V	Pass
7416	-42.61	-13	-29.61	-69.57	-51.42	3.45	12.26	V	Pass



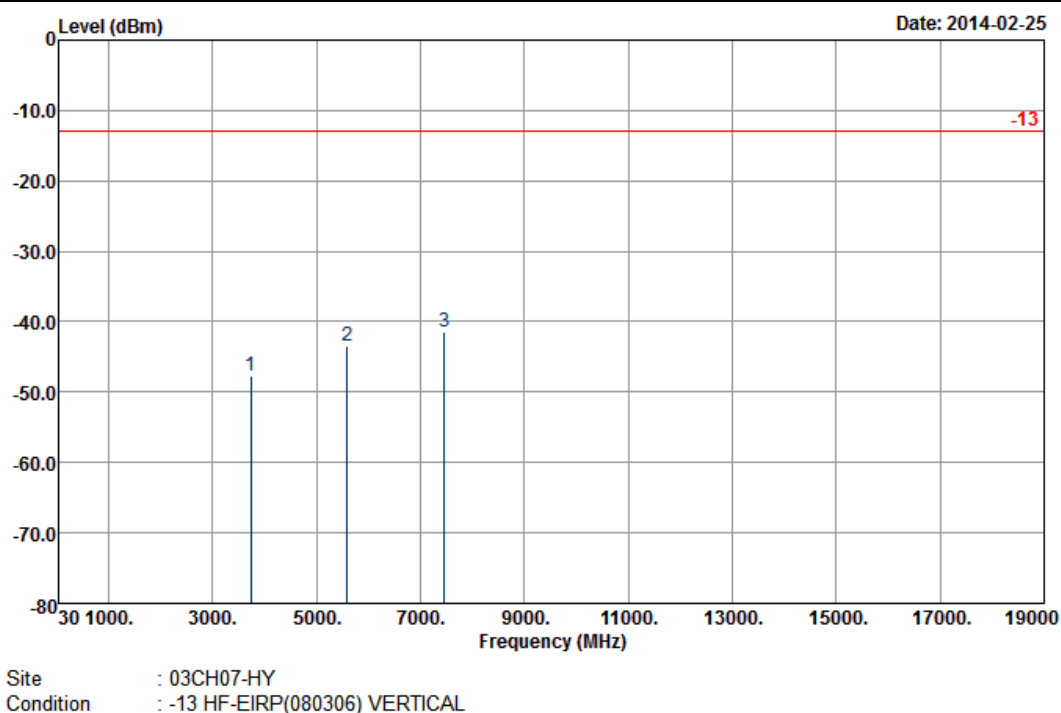
Band :	LTE Band 2	Temperature :	20~22°C
Test Mode :	15MHz QPSK RB Size 1 Offset 74	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



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

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
3728	-47.34	-13	-34.34	-62.42	-53.69	2.49	8.84	H	Pass
5592	-42.16	-13	-29.16	-62.77	-50.01	3.01	10.86	H	Pass
7456	-42.32	-13	-29.32	-69.83	-51.29	3.38	12.35	H	Pass

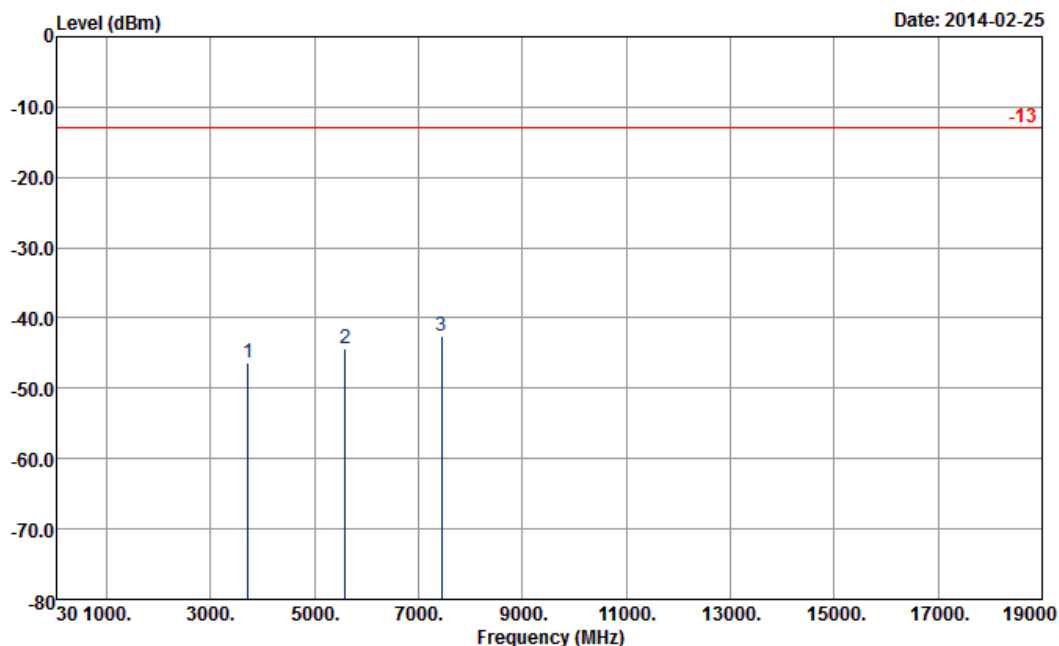
Band :	LTE Band 2	Temperature :	20~22°C
Test Mode :	15MHz QPSK RB Size 1 Offset 74	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3728	-47.60	-13	-34.60	-63.76	-53.95	2.49	8.84	V	Pass
5592	-43.53	-13	-30.53	-64.05	-51.38	3.01	10.86	V	Pass
7456	-41.55	-13	-28.55	-68.87	-50.52	3.38	12.35	V	Pass



Band :	LTE Band 2	Temperature :	20~22°C
Test Mode :	20MHz QPSK RB Size 1 Offset 49	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

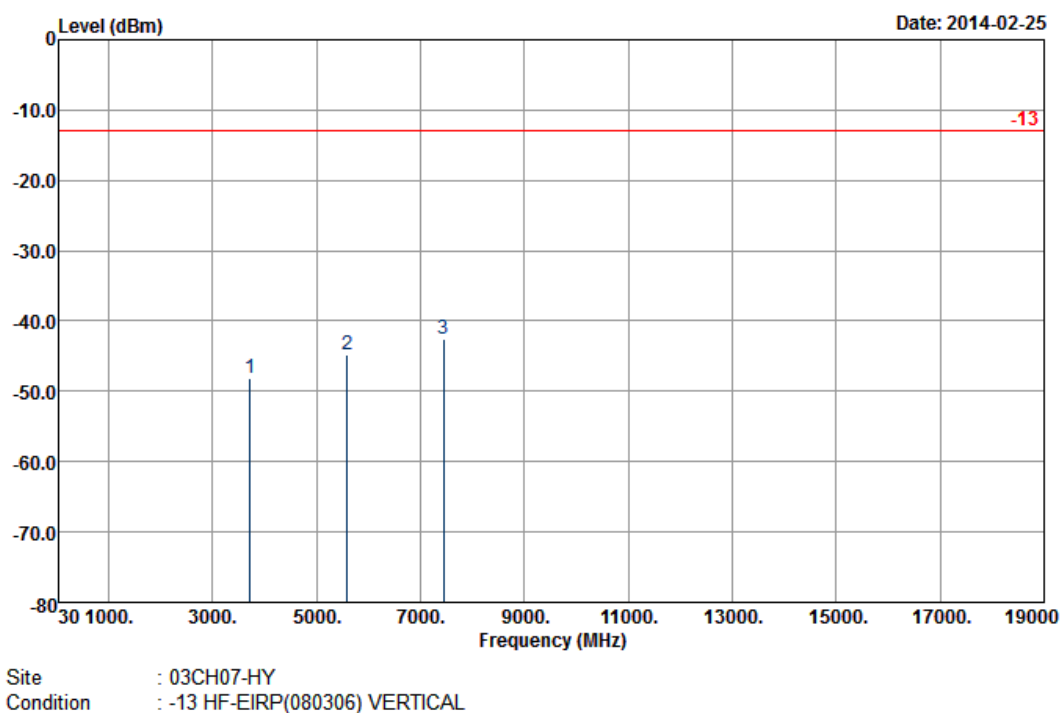


Site : 03CH07-HY
Condition : -13 HF-EIRP(080306) HORIZONTAL

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
3720	-46.38	-13	-33.38	-61.64	-52.76	2.51	8.89	H	Pass
5580	-44.28	-13	-31.28	-64.82	-52.14	3.03	10.89	H	Pass
7440	-42.53	-13	-29.53	-70.02	-51.67	3.24	12.38	H	Pass



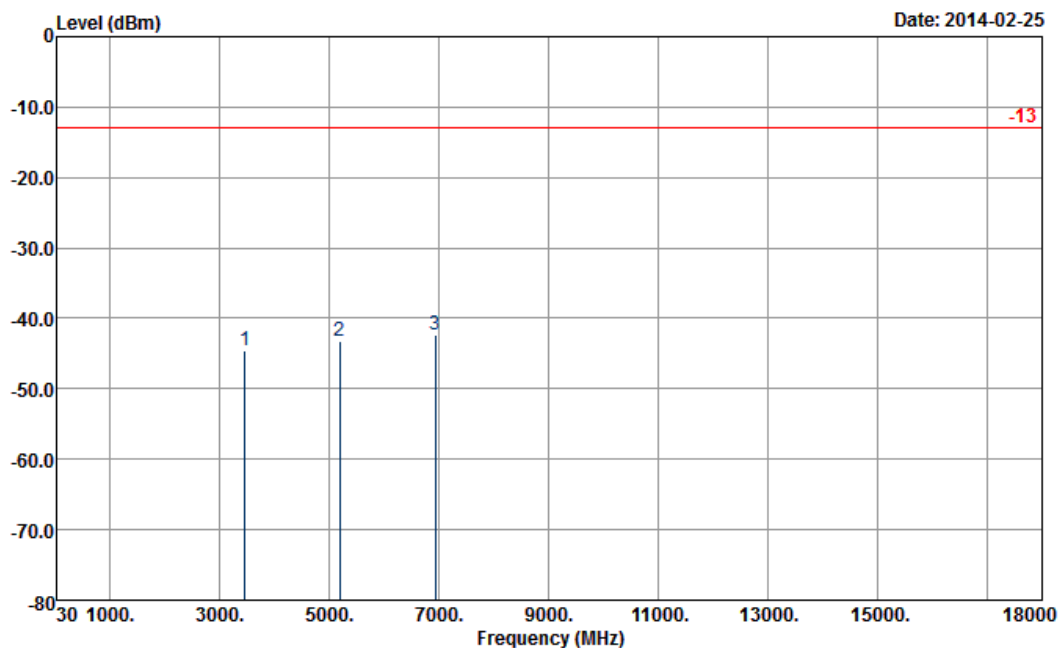
Band :	LTE Band 2	Temperature :	20~22°C
Test Mode :	20MHz QPSK RB Size 1 Offset 49	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3720	-48.16	-13	-35.16	-64.44	-54.54	2.51	8.89	V	Pass
5580	-44.77	-13	-31.77	-65.15	-52.63	3.03	10.89	V	Pass
7440	-42.57	-13	-29.57	-69.53	-51.71	3.24	12.38	V	Pass



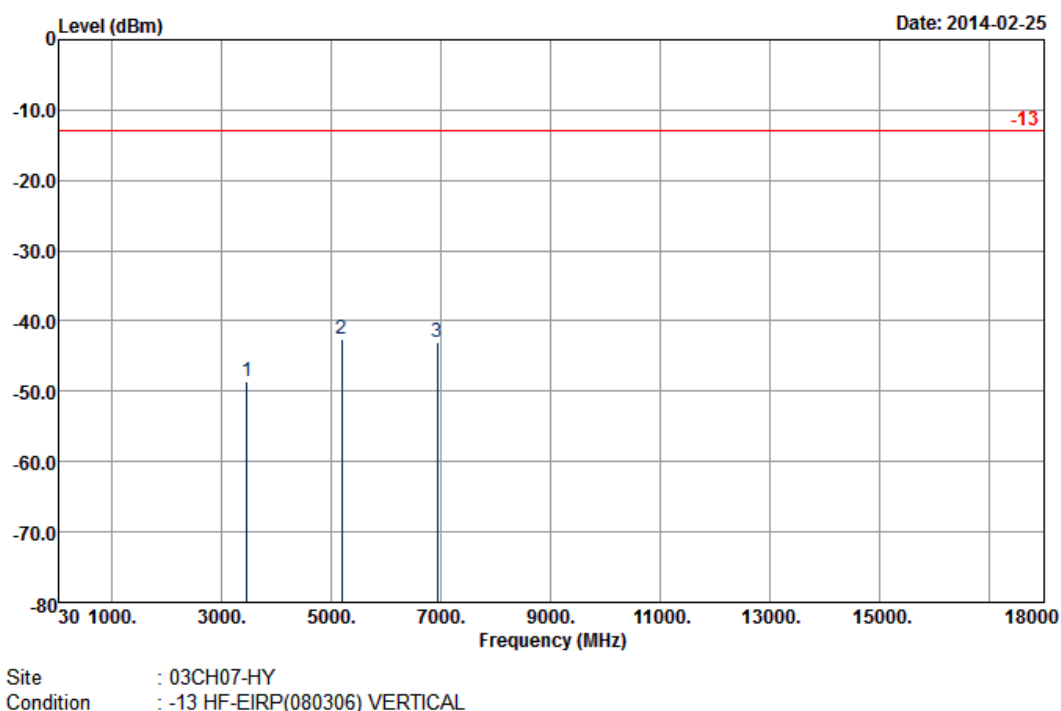
Band :	LTE Band 4	Temperature :	20~22°C
Test Mode :	1.4MHz QPSK RB Size 3 Offset 0	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



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

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
3465	-44.67	-13	-31.67	-58.81	-48.5	4.48	8.31	H	Pass
5197	-43.26	-13	-30.26	-62.74	-47.9	5.332	9.98	H	Pass
6930	-42.26	-13	-29.26	-68.73	-47.5	6.1	11.34	H	Pass

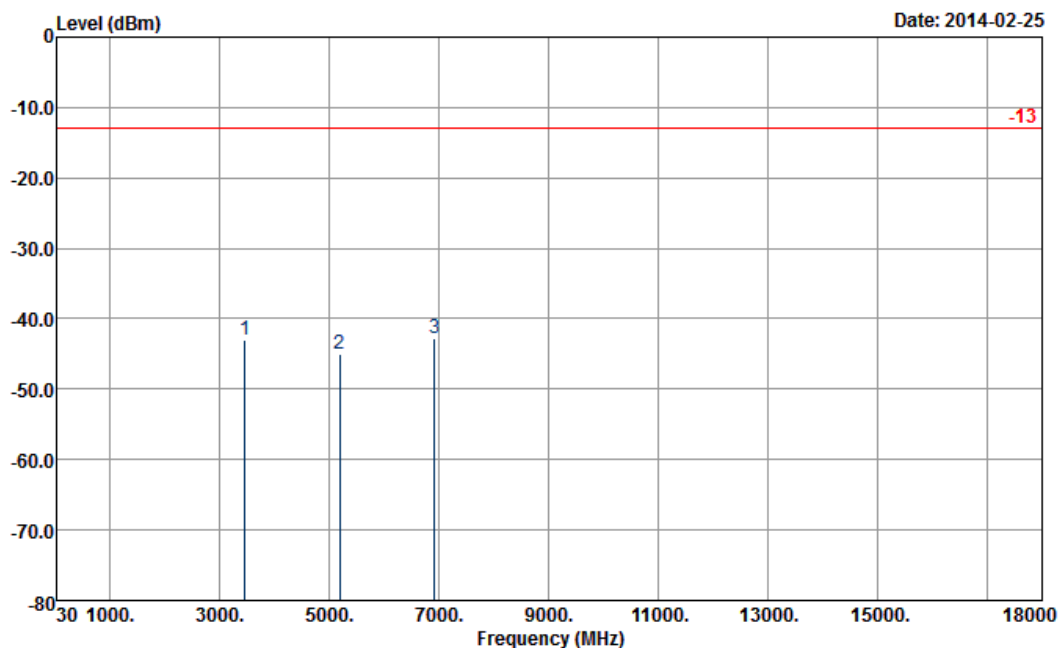
Band :	LTE Band 4	Temperature :	20~22°C
Test Mode :	1.4MHz QPSK RB Size 3 Offset 0	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3465	-48.67	-13	-35.67	-63.97	-52.5	4.48	8.31	V	Pass
5197	-42.46	-13	-29.46	-61.27	-47.1	5.332	9.98	V	Pass
6930	-42.96	-13	-29.96	-69.19	-48.2	6.1	11.34	V	Pass



Band :	LTE Band 4	Temperature :	20~22°C
Test Mode :	3MHz QPSK RB Size 1 Offset 0	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

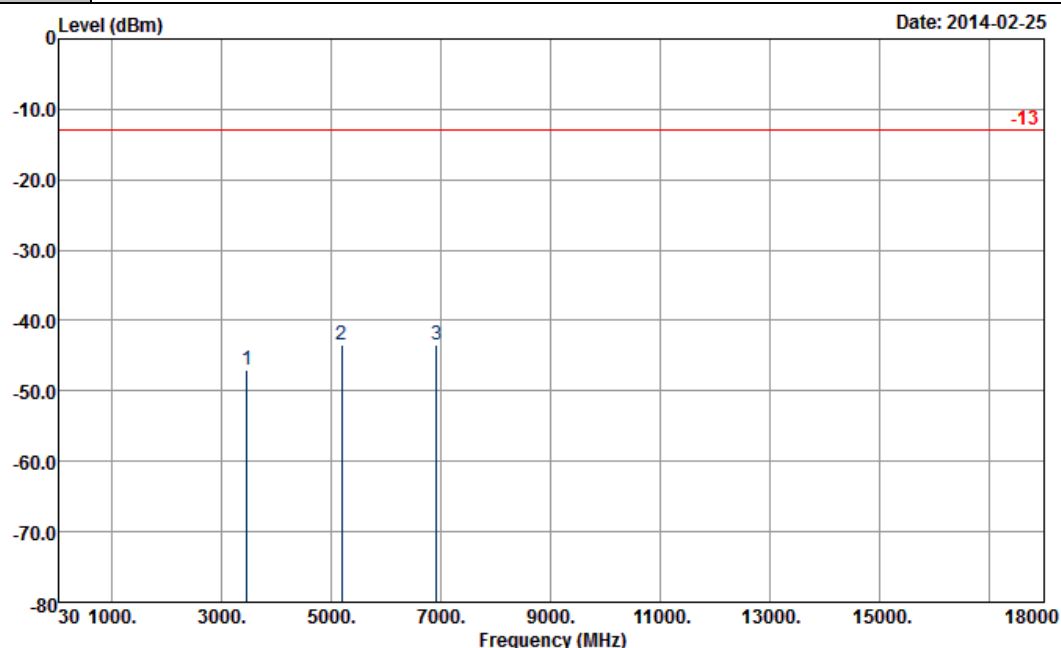


Site : 03CH07-HY
Condition : -13 HF-EIRP(080306) HORIZONTAL

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	-42.97	-13	-29.97	-57.46	-46.8	4.48	8.31	H	Pass
5193	-45.06	-13	-32.06	-64.02	-49.7	5.332	9.98	H	Pass
6924	-42.86	-13	-29.86	-68.85	-48.1	6.1	11.34	H	Pass



Band :	LTE Band 4	Temperature :	20~22°C
Test Mode :	3MHz QPSK RB Size 1 Offset 0	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

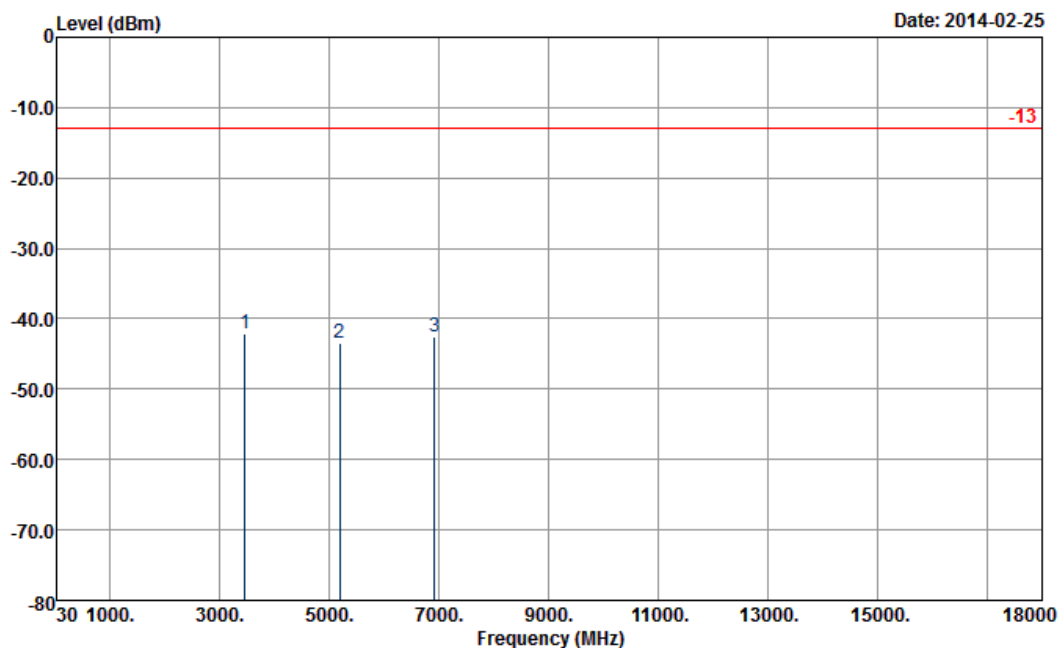


Site : 03CH07-HY
Condition : -13 HF-EIRP(080306) VERTICAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3462	-46.97	-13	-33.97	-62.68	-50.8	4.48	8.31	V	Pass
5193	-43.56	-13	-30.56	-62.8	-48.2	5.332	9.98	V	Pass
6924	-43.36	-13	-30.36	-69.13	-48.6	6.1	11.34	V	Pass



Band :	LTE Band 4	Temperature :	20~22°C
Test Mode :	5MHz QPSK RB Size 1 Offset 0	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

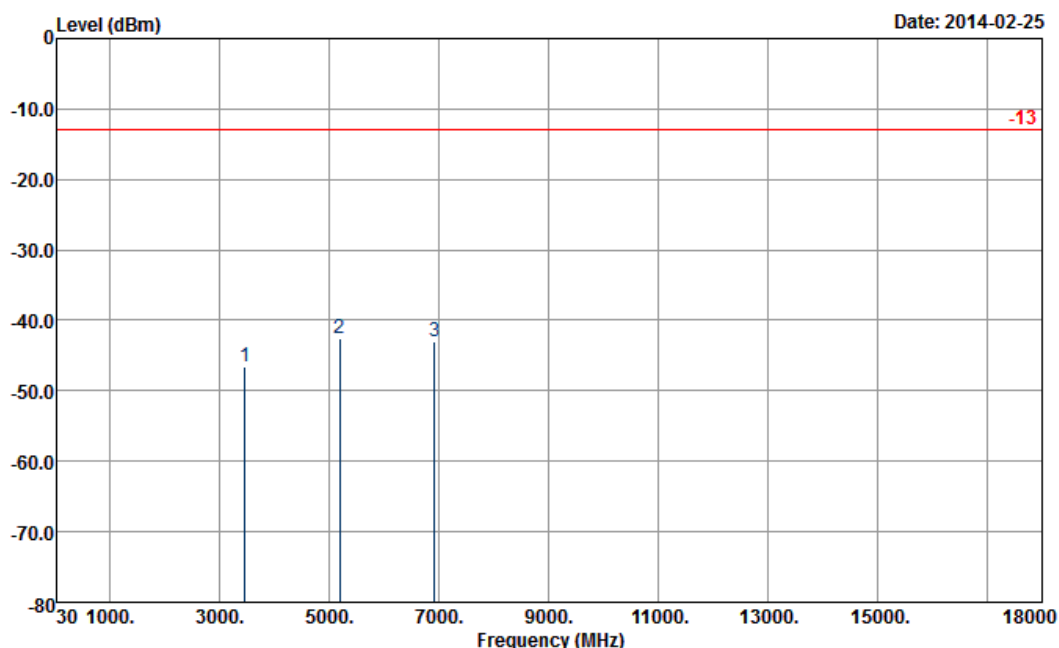


Site : 03CH07-HY
Condition : -13 HF-EIRP(080306) HORIZONTAL

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
3460	-42.07	-13	-29.07	-57.08	-45.9	4.48	8.31	H	Pass
5190	-43.56	-13	-30.56	-63.13	-48.2	5.332	9.98	H	Pass
6920	-42.56	-13	-29.56	-68.84	-47.8	6.1	11.34	H	Pass



Band :	LTE Band 4	Temperature :	20~22°C
Test Mode :	5MHz QPSK RB Size 1 Offset 0	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

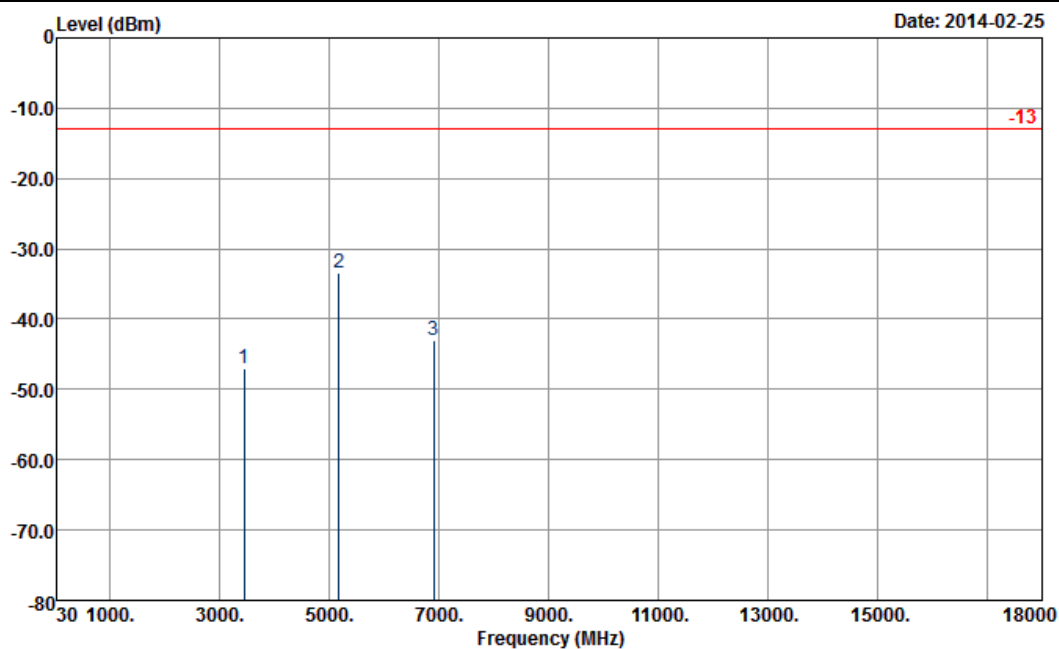


Site : 03CH07-HY
Condition : -13 HF-EIRP(080306) VERTICAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3460	-46.47	-13	-33.47	-62.47	-50.3	4.48	8.31	V	Pass
5190	-42.66	-13	-29.66	-61.87	-47.3	5.332	9.98	V	Pass
6920	-42.96	-13	-29.96	-68.79	-48.2	6.1	11.34	V	Pass



Band :	LTE Band 4	Temperature :	20~22°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

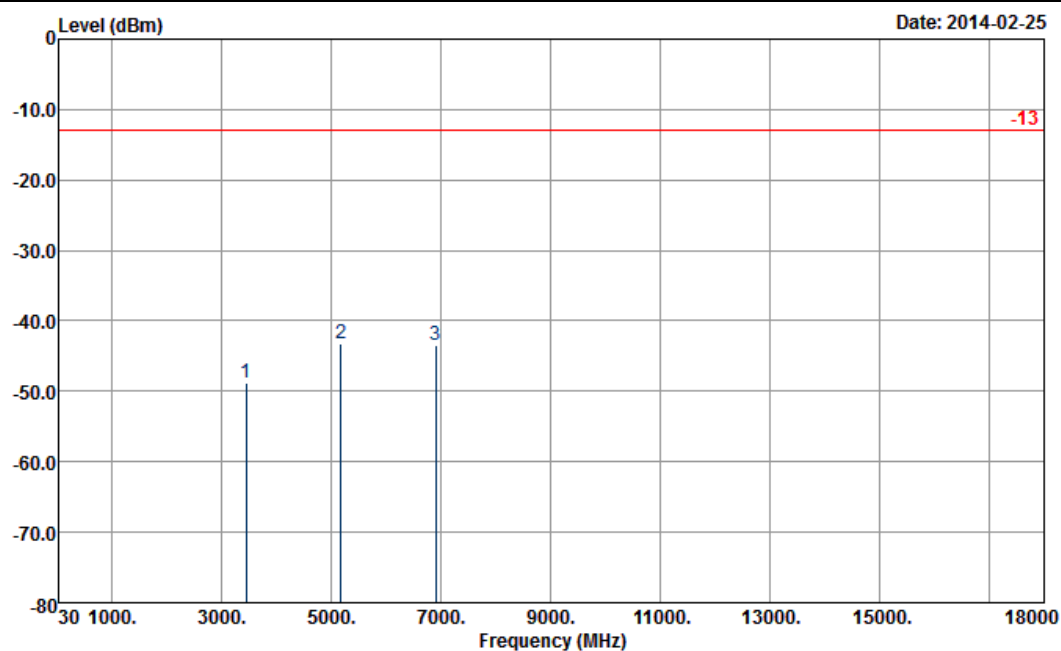


Site : 03CH07-HY
Condition : -13 HF-EIRP(080306) HORIZONTAL

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	-46.97	-13	-33.97	-61.4	-50.8	4.48	8.31	H	Pass
5183	-33.46	-13	-20.46	-51.81	-38.1	5.332	9.98	H	Pass
6910	-42.96	-13	-29.96	-68.22	-48.2	6.1	11.34	H	Pass



Band :	LTE Band 4	Temperature :	20~22°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

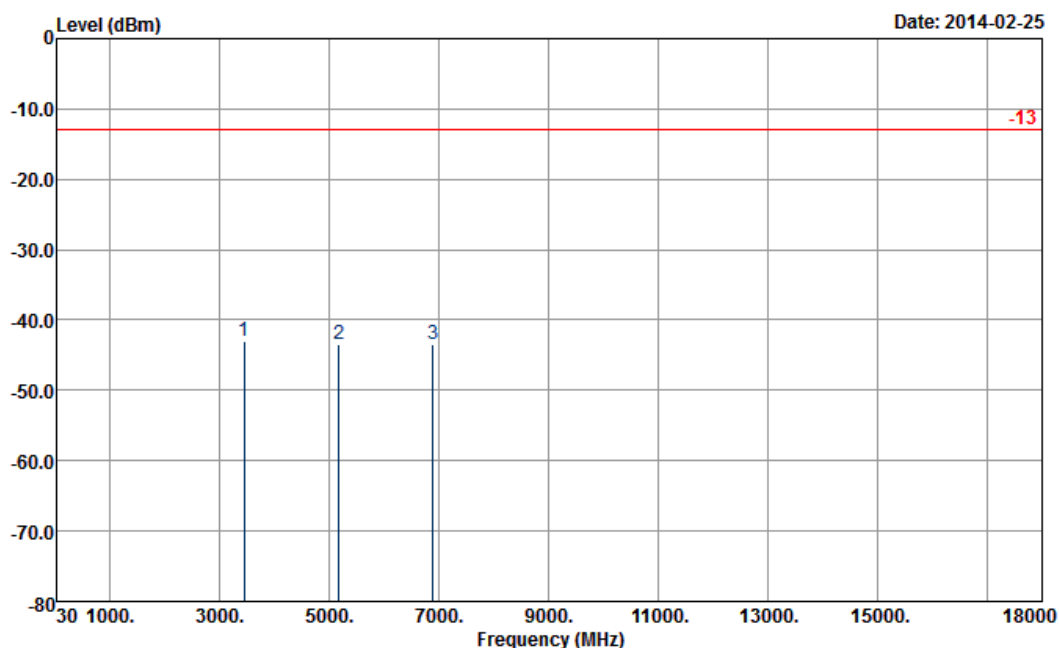


Site : 03CH07-HY
Condition : -13 HF-EIRP(080306) VERTICAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3455	-48.77	-13	-35.77	-64.58	-52.6	4.48	8.31	V	Pass
5183	-43.16	-13	-30.16	-61.54	-47.8	5.332	9.98	V	Pass
6910	-43.36	-13	-30.36	-68.4	-48.6	6.1	11.34	V	Pass



Band :	LTE Band 4	Temperature :	20~22°C
Test Mode :	15MHz QPSK RB Size 1 Offset 0	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

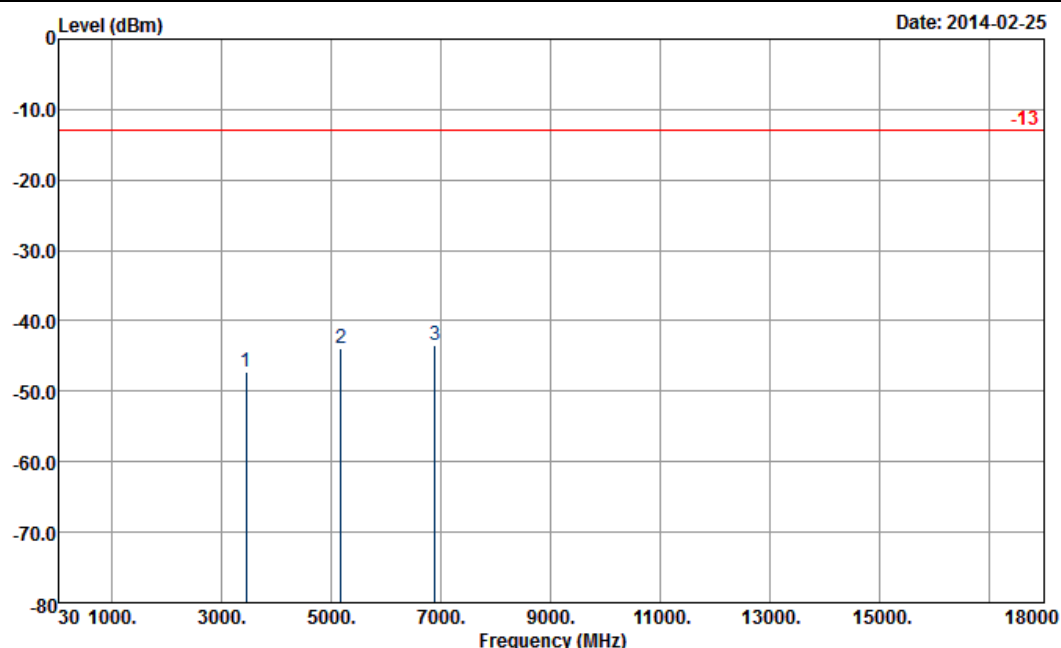


Site : 03CH07-HY
Condition : -13 HF-EIRP(080306) HORIZONTAL

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
3450	-42.97	-13	-29.97	-58.01	-46.8	4.48	8.31	H	Pass
5175	-43.46	-13	-30.46	-62.61	-48.1	5.332	9.98	H	Pass
6900	-43.36	-13	-30.36	-69.07	-48.6	6.1	11.34	H	Pass



Band :	LTE Band 4	Temperature :	20~22°C
Test Mode :	15MHz QPSK RB Size 1 Offset 0	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

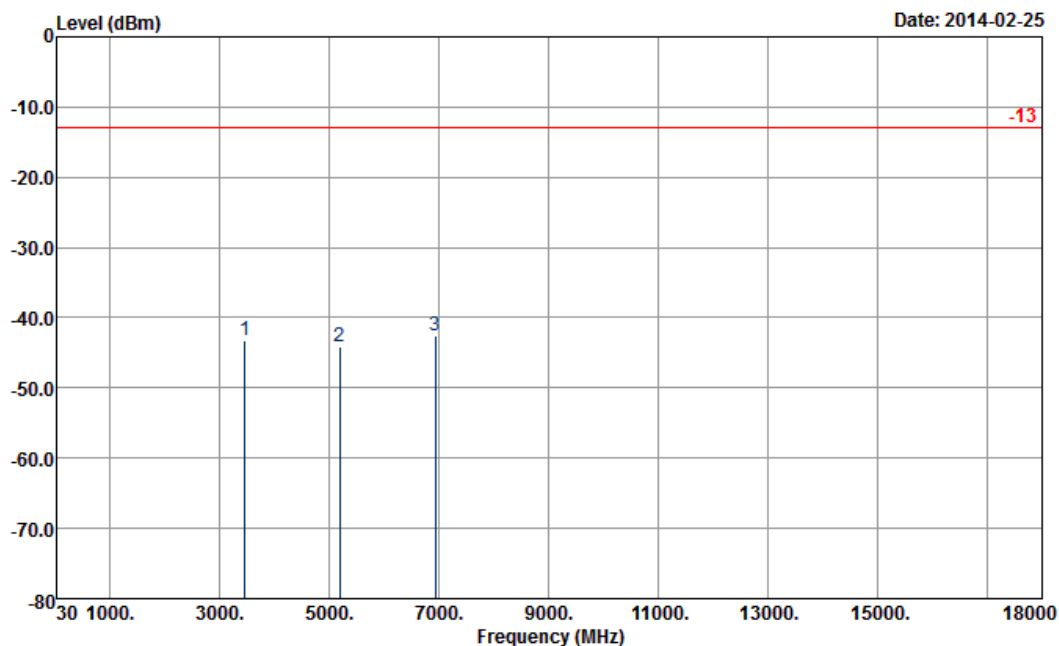


Site : 03CH07-HY
Condition : -13 HF-EIRP(080306) VERTICAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3450	-47.27	-13	-34.27	-62.81	-51.1	4.48	8.31	V	Pass
5175	-43.86	-13	-30.86	-63	-48.5	5.332	9.98	V	Pass
6900	-43.36	-13	-30.36	-68.7	-48.6	6.1	11.34	V	Pass



Band :	LTE Band 4	Temperature :	20~22°C
Test Mode :	20MHz QPSK RB Size 1 Offset 49	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

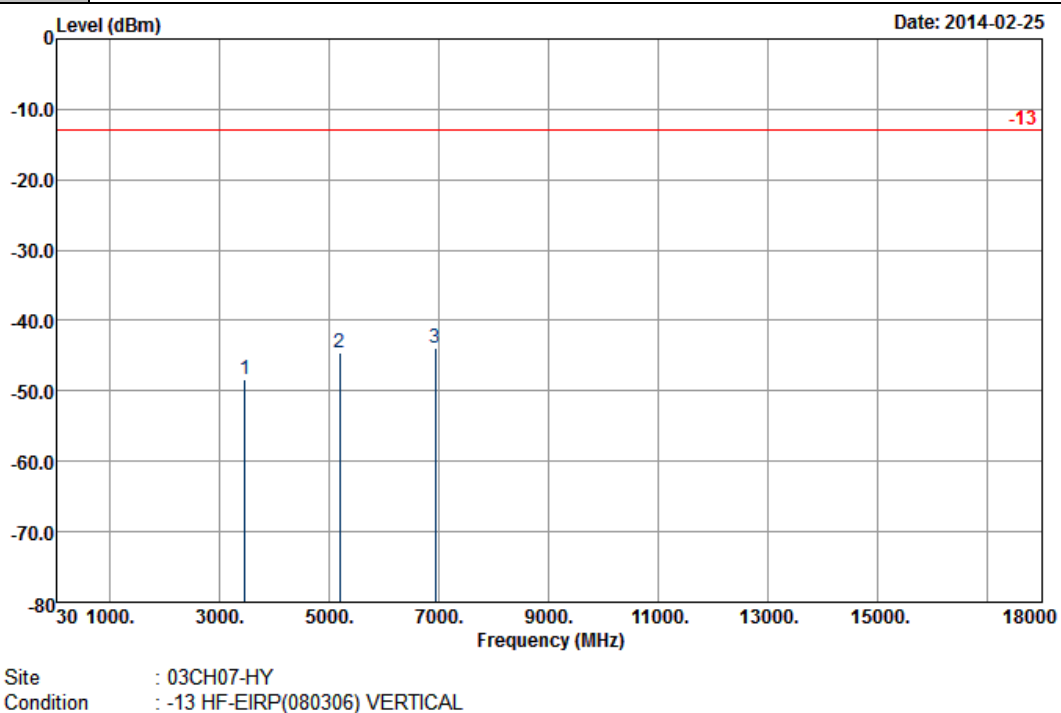


Site : 03CH07-HY
Condition : -13 HF-EIRP(080306) HORIZONTAL

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
3465	-43.27	-13	-30.27	-57.77	-47.1	4.48	8.31	H	Pass
5197	-44.06	-13	-31.06	-63.46	-48.7	5.332	9.98	H	Pass
6930	-42.66	-13	-29.66	-69.02	-47.9	6.1	11.34	H	Pass

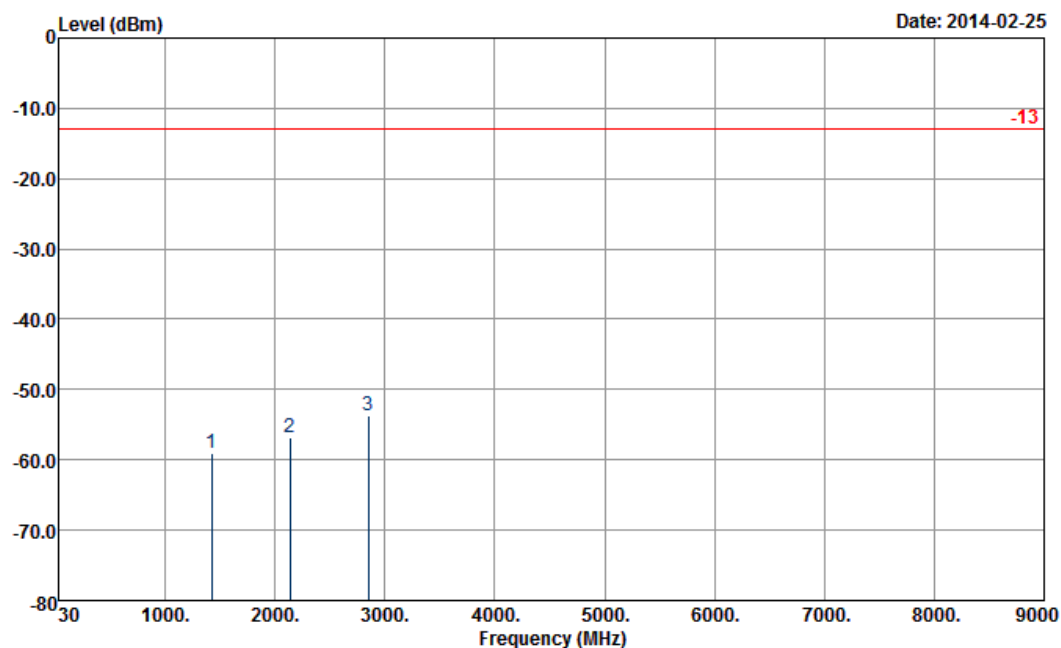


Band :	LTE Band 4	Temperature :	20~22°C
Test Mode :	20MHz QPSK RB Size 1 Offset 49	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3465	-48.37	-13	-35.37	-63.64	-52.2	4.48	8.31	V	Pass
5197	-44.56	-13	-31.56	-63.15	-49.2	5.332	9.98	V	Pass
6930	-43.86	-13	-30.86	-68.58	-49.1	6.1	11.34	V	Pass

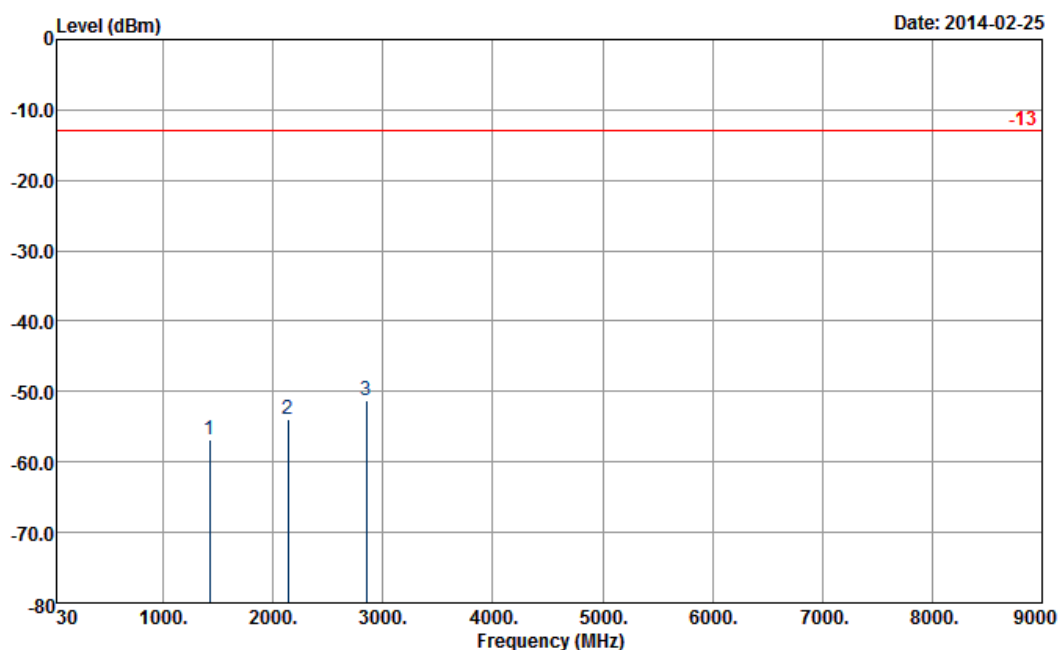
Band :	LTE Band 17	Temperature :	20~22°C
Test Mode :	5MHz QPSK RB Size 1 Offset 24	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1425	-59.02	-13	-46.02	-66.43	-63.1	1.53	5.61	H	Pass
2138	-56.83	-13	-43.83	-67.16	-61	1.85	6.02	H	Pass
2850	-53.74	-13	-40.74	-67.1	-58.5	2.24	7.00	H	Pass



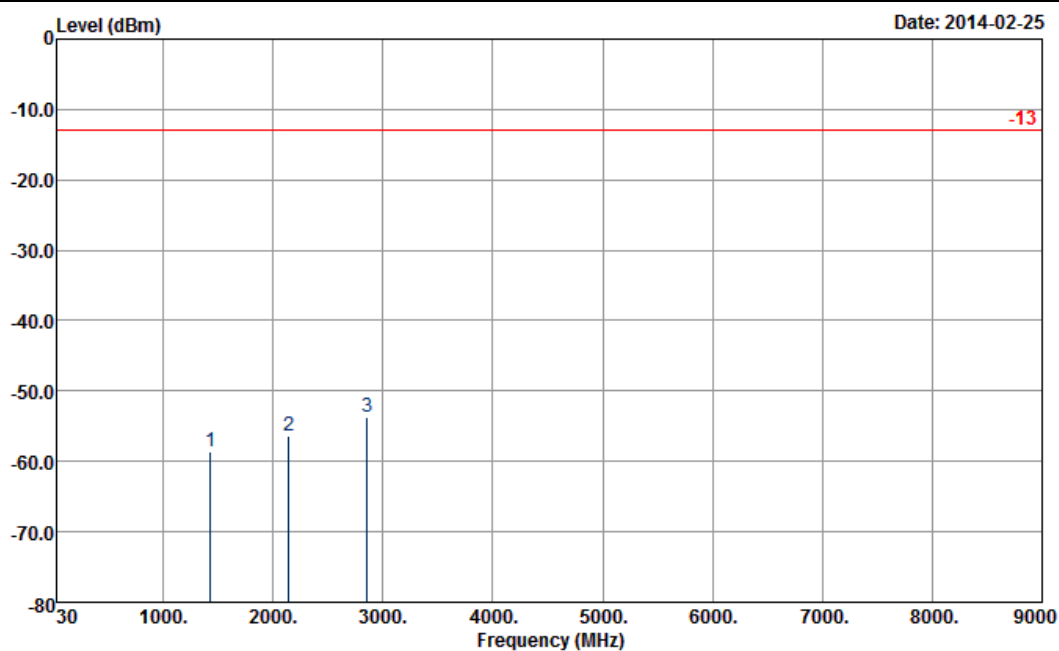
Band :	LTE Band 17	Temperature :	20~22°C
Test Mode :	5MHz QPSK RB Size 1 Offset 24	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



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
1425	-56.92	-13	-43.92	-66.52	-61	1.53	5.61	V	Pass
2138	-53.83	-13	-40.83	-67.19	-58	1.85	6.02	V	Pass
2850	-51.34	-13	-38.34	-66.94	-56.1	2.24	7.00	V	Pass

Band :	LTE Band 17	Temperature :	20~22°C
Test Mode :	10MHz QPSK RB Size 1 Offset 49	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

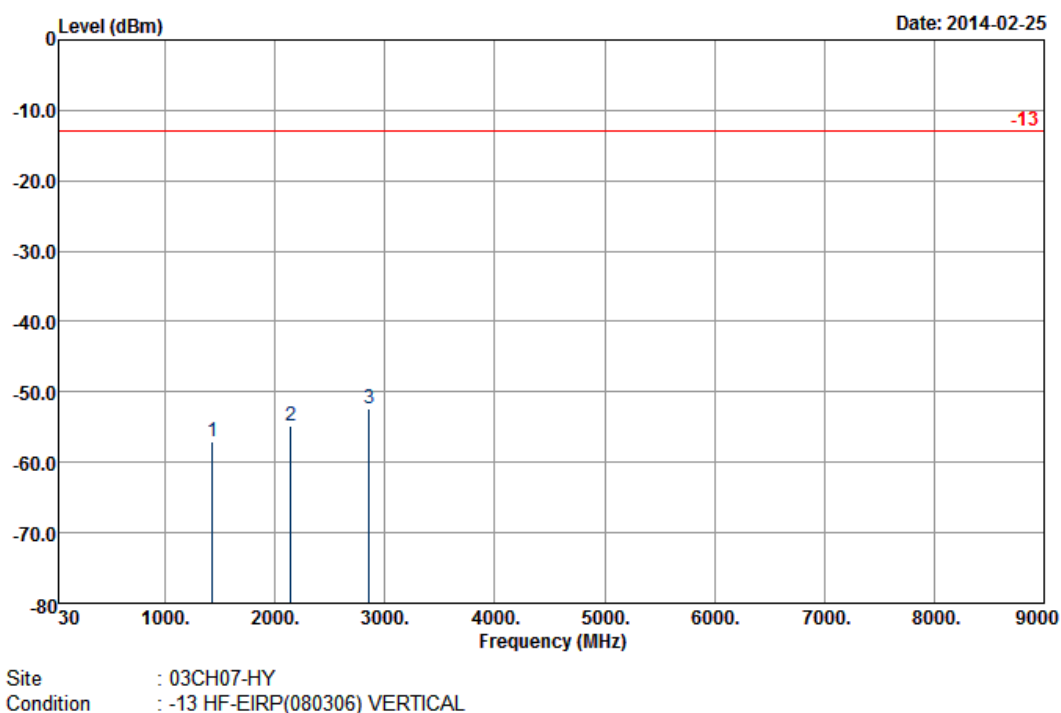


Site : 03CH07-HY
Condition : -13 HF-EIRP(080306) HORIZONTAL

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
1428	-58.71	-13	-45.71	-66.53	-62.8	1.52	5.61	H	Pass
2142	-56.31	-13	-43.31	-67.09	-60.5	1.83	6.02	H	Pass
2856	-53.73	-13	-40.73	-66.93	-58.5	2.24	7.01	H	Pass



Band :	LTE Band 17	Temperature :	20~22°C
Test Mode :	10MHz QPSK RB Size 1 Offset 49	Relative Humidity :	43~45%
Test Engineer :	Eric Shih	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 Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1428	-57.10	-13	-44.10	-66.71	-61.2	1.51	5.61	V	Pass
2142	-54.90	-13	-41.90	-67.23	-59.1	1.82	6.02	V	Pass
2856	-52.29	-13	-39.29	-66.78	-57.1	2.2	7.01	V	Pass

3.8 Frequency Stability Measurement

3.8.1 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.

3.8.2 Measuring Instruments

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

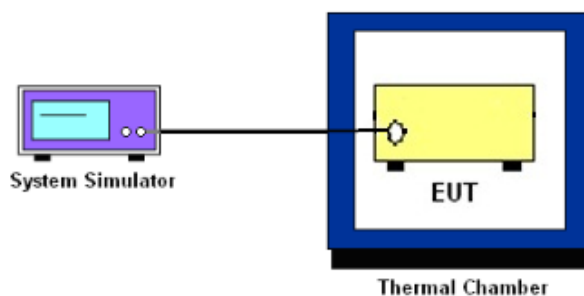
3.8.3 Test Procedures for Temperature Variation

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.

3.8.4 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.

3.8.5 Test Setup



3.8.6 Test Result of Temperature Variation (FCC)

Band :	LTE Band 5 (QPSK)	Limit (ppm) :	2.5
Temperature (°C)	BW 10MHz	Result	
	Deviation (ppm)		
50	0.0091	PASS	
40	0.0074		
30	0.0077		
20	0.0069		
10	0.0073		
0	0.0084		
-10	0.0071		
-20	0.0078		
-30	0.0087		

Band :	LTE Band 2 (QPSK)	Limit (ppm) :	2.5
Temperature (°C)	BW 10MHz	Result	
	Deviation (ppm)		
50	0.0046	PASS	
40	0.0048		
30	0.0052		
20	0.0047		
10	0.0040		
0	0.0045		
-10	0.0050		
-20	0.0054		
-30	0.0051		

Band :	LTE Band 4 (QPSK)	Limit (ppm) :	2.5
Temperature (°C)	BW 10MHz	Result	
	Deviation (ppm)		
50	0.0051	PASS	
40	0.0045		
30	0.0044		
20	0.0047		
10	0.0052		
0	0.0049		
-10	0.0043		
-20	0.0044		
-30	0.0053		

Band :	LTE Band 17 (QPSK)	Limit (ppm) :	2.5
Temperature (°C)	BW 10MHz	Result	
	Deviation (ppm)		
50	0.0069	PASS	
40	0.0059		
30	0.0072		
20	0.0066		
10	0.0054		
0	0.0070		
-10	0.0062		
-20	0.0065		
-30	0.0068		

3.8.7 Test Result of Voltage Variation (FCC)

Band	Bandwidth	Voltage (Volt)	Deviation (ppm)	Limit (ppm)	Result
LTE Band 5	10M	4.35	0.0078	2.5	PASS
		Normal	0.0082		
		3.60	0.0069		
LTE Band 2	10M	4.35	0.0047	2.5	PASS
		Normal	0.0049		
		3.60	0.0047		
LTE Band 4	10M	4.35	0.0042	2.5	PASS
		Normal	0.0044		
		3.60	0.0043		
LTE Band 17	10M	4.35	0.0075	2.5	PASS
		Normal	0.0068		
		3.60	0.0065		

Remark:

1. Normal Voltage = 3.80V.
2. The manufacturer declared that the EUT could work properly between voltage 3.60V ~ 4.35V.



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz~40GHz	Jun. 07, 2013	Feb. 17, 2014~ Feb. 19, 2014	Jun. 06, 2014	Conducted (TH02-HY)
Thermal Chamber	Ten Billion	TTH-D3SP	TBN-930701	N/A	Jul. 19, 2013	Feb. 17, 2014~ Feb. 19, 2014	Jul. 18, 2014	Conducted (TH02-HY)
LTE Base Station	Anritsu	MT8820C	6201026480	30MHz~2.7GHz SISO (FDD Band 1~26)	Jan. 07, 2014	Feb. 17, 2014~ Feb. 19, 2014	Jan. 06, 2015	Conducted (TH02-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP30	101067	9KHz ~ 30GHz	Nov. 20, 2013	Feb. 24, 2014~ Feb. 25, 2014	Nov. 19, 2014	Radiation (03CH07-HY)
Bilog Antenna	Schaffner	CBL6111C	2726	30MHz ~ 1GHz	Oct. 10, 2013	Feb. 24, 2014~ Feb. 25, 2014	Oct. 09, 2014	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	75962	1GHz~18GHz	Aug. 22, 2013	Feb. 24, 2014~ Feb. 25, 2014	Aug. 21, 2014	Radiation (03CH07-HY)
Preamplifier	SONOMA	310N	187231	9kHz~1GHz	May 15, 2013	Feb. 24, 2014~ Feb. 25, 2014	May 14, 2014	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A02362	1 GHz~26.5 GHz	Nov. 29, 2013	Feb. 24, 2014~ Feb. 25, 2014	Nov. 28, 2014	Radiation (03CH07-HY)
Turn Table	ChainTek	ChainTek 3000	N/A	0 ~ 360 degree	N/A	Feb. 24, 2014~ Feb. 25, 2014	N/A	Radiation (03CH07-HY)
Antenna Mast	ChainTek	M-400-0	114/8000604 /L	N/A	N/A	Feb. 24, 2014~ Feb. 25, 2014	N/A	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA91702 51	15GHz- 40GHz	Oct. 03, 2013	Feb. 24, 2014~ Feb. 25, 2014	Oct. 02, 2014	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% ($U = 2Uc(y)$)	4.50
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