



# LTE Band 13

## Peak-to-Average Ratio

Mode	LTE Band 13 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	-	-	PASS
Middle CH	3.51	4.41	4.35	5.3	
Highest CH	-	-	-	-	



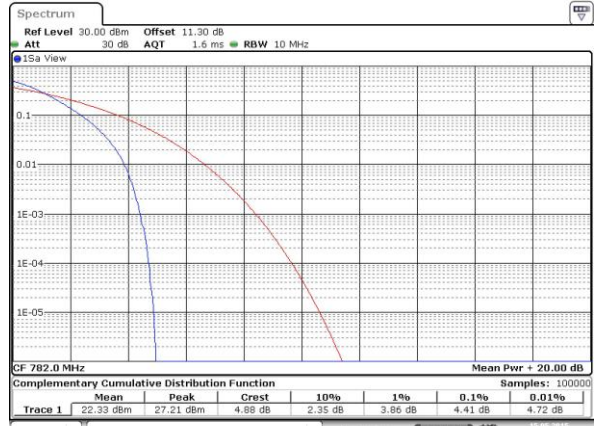
LTE Band 13 / 10MHz / QPSK

Middle Channel/ 1RB



Date: 15 MAY 2015 13:58:25

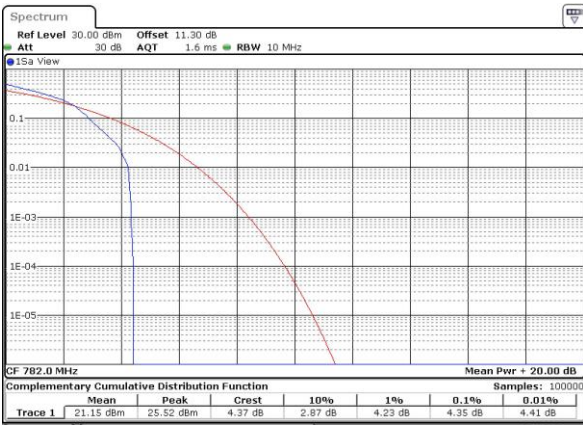
Middle Channel / Full RB



Date: 15 MAY 2015 13:58:46

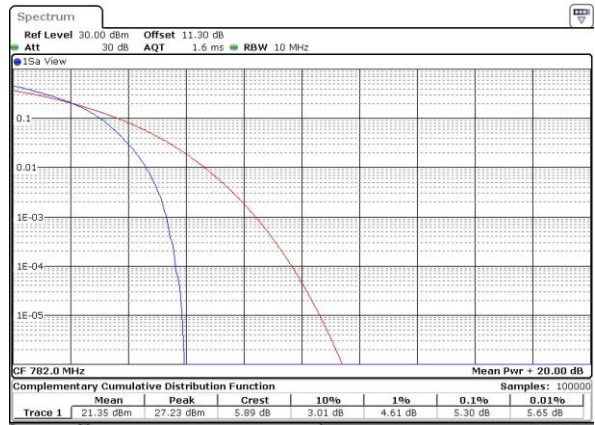
LTE Band 13 / 10MHz / 16QAM

Middle Channel/ 1RB



Date: 15 MAY 2015 13:57:48

Middle Channel / Full RB



Date: 15 MAY 2015 13:58:02



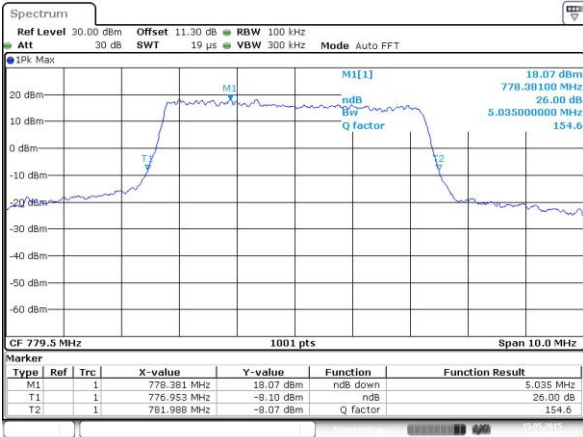
**26dB Bandwidth**

Mode	LTE Band 13 : 26dB BW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
BW												
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	5.04	5.00	-	-	-	-	-	-
Middle CH	-	-	-	-	5.04	5.04	10.09	10.07	-	-	-	-
Highest CH	-	-	-	-	5.06	5.04	-	-	-	-	-	-



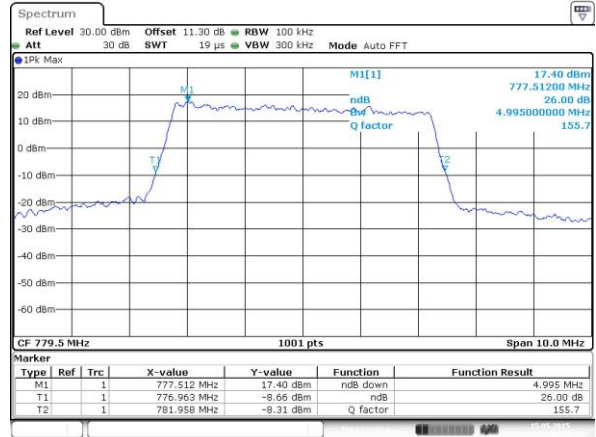
LTE Band 13

Lowest Channel / 5MHz / QPSK



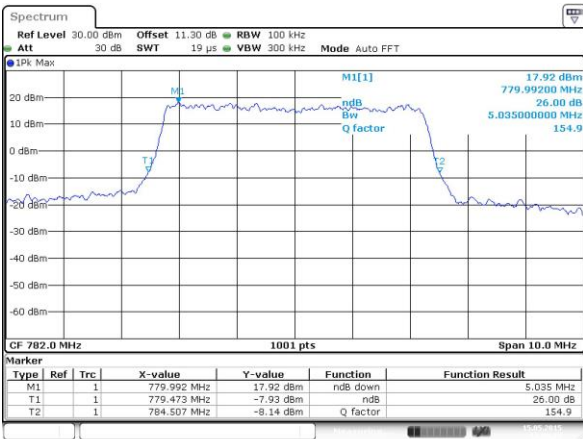
Date: 15.MAY.2015 13:45:31

Lowest Channel / 5MHz / 16QAM



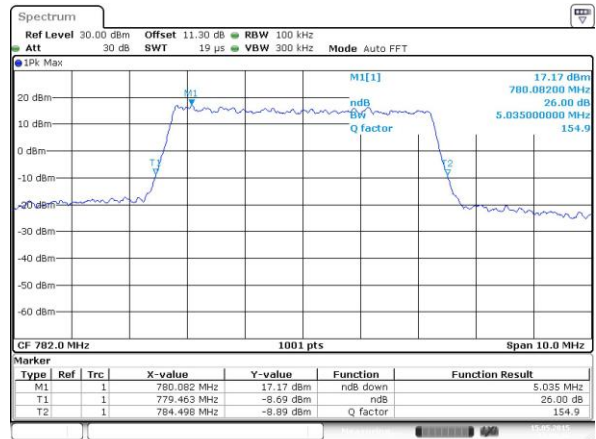
Date: 15.MAY.2015 13:45:19

Middle Channel / 5MHz / QPSK



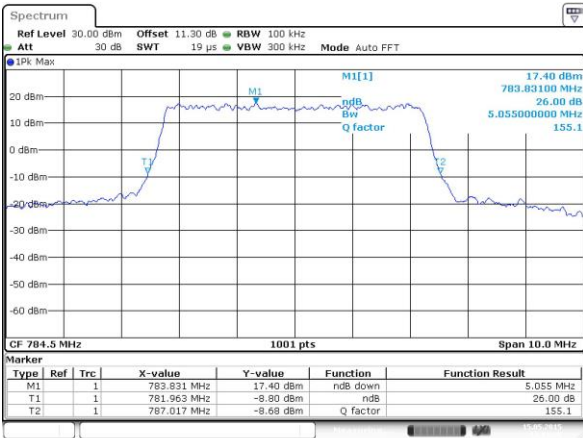
Date: 15.MAY.2015 13:50:23

Middle Channel / 5MHz / 16QAM



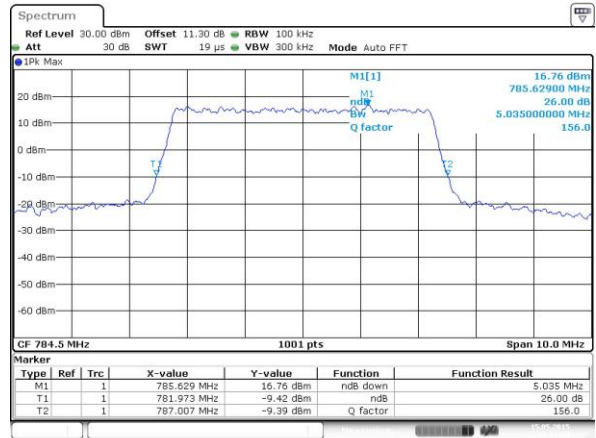
Date: 15.MAY.2015 13:50:36

Highest Channel / 5MHz / QPSK



Date: 15.MAY.2015 13:51:45

Highest Channel / 5MHz / 16QAM



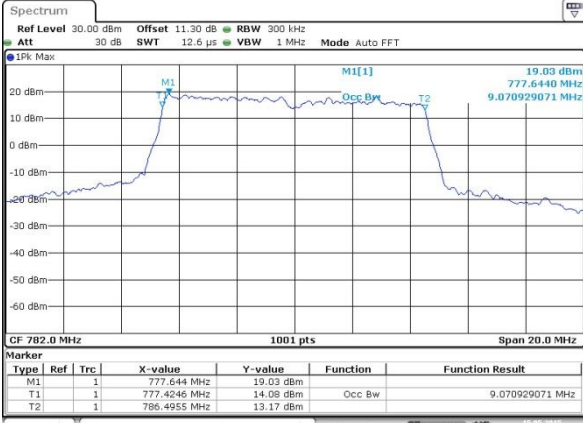
Date: 15.MAY.2015 13:51:32



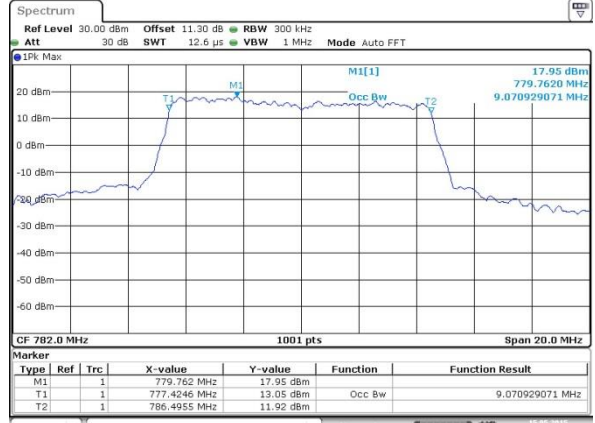
LTE Band 13

Middle Channel / 10MHz / QPSK

Middle Channel / 10MHz / 16QAM



Date: 15 MAY 2015 13:54:16



Date: 15 MAY 2015 13:54:26



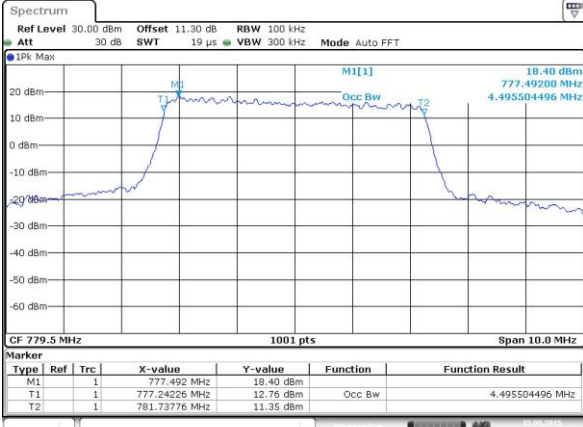
### Occupied Bandwidth

Mode	LTE Band 13 : 99%OBW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
BW	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.5	4.51	-	-	-	-	-	-
Middle CH	-	-	-	-	4.53	4.53	9.07	9.07	-	-	-	-
Highest CH	-	-	-	-	4.51	4.52	-	-	-	-	-	-



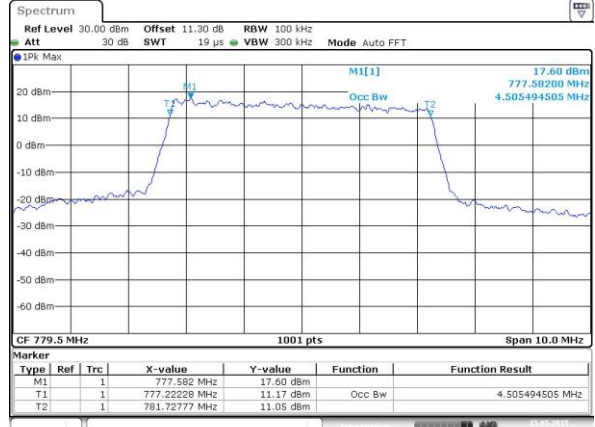
LTE Band 13

Lowest Channel / 5MHz / QPSK



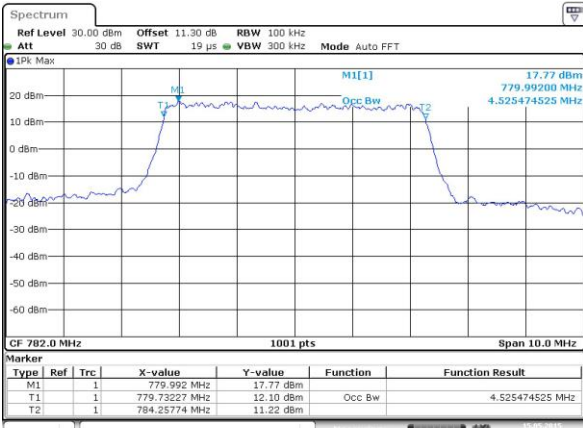
Date: 15.MAY.2015 13:44:55

Lowest Channel / 5MHz / 16QAM



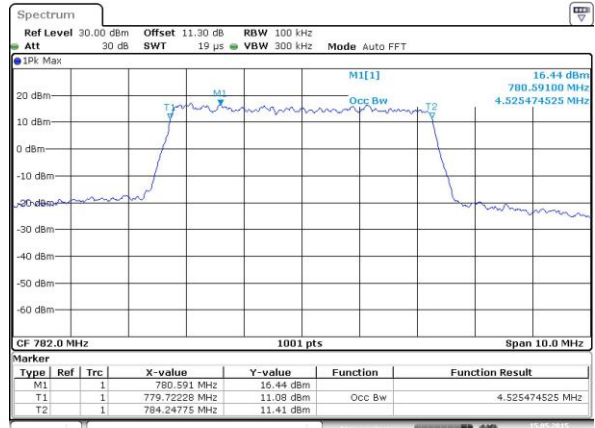
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Middle Channel / 5MHz / QPSK



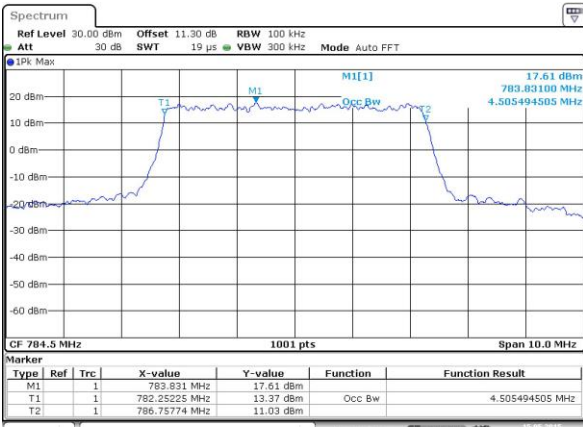
Date: 15.MAY.2015 13:50:58

Middle Channel / 5MHz / 16QAM



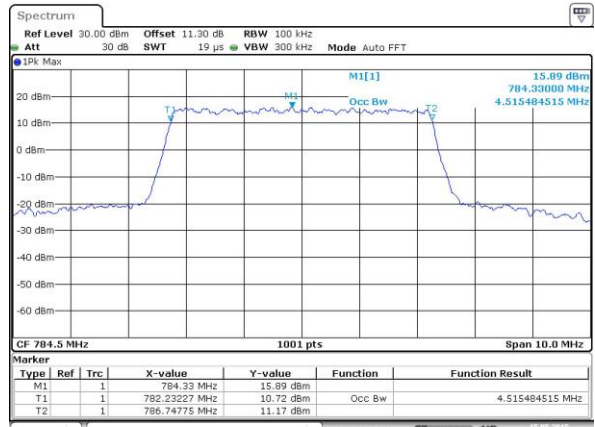
Date: 15.MAY.2015 13:50:47

Highest Channel / 5MHz / QPSK



Date: 15.MAY.2015 13:51:09

Highest Channel / 5MHz / 16QAM

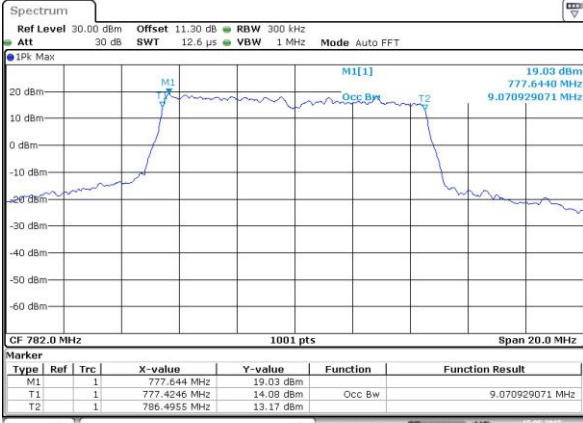


Date: 15.MAY.2015 13:51:20



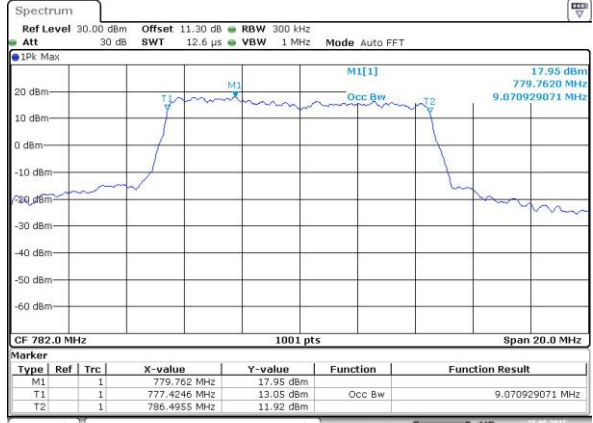
LTE Band 13

Middle Channel / 10MHz / QPSK



Date: 15.MAY.2015 13:54:16

Middle Channel / 10MHz / 16QAM



Date: 15.MAY.2015 13:54:26





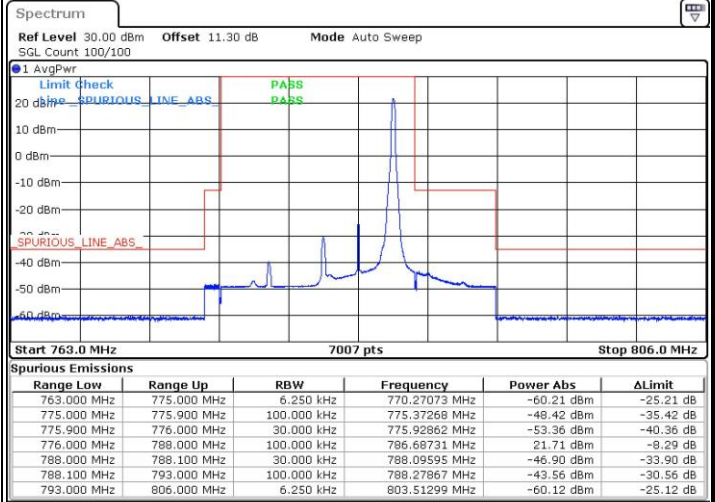
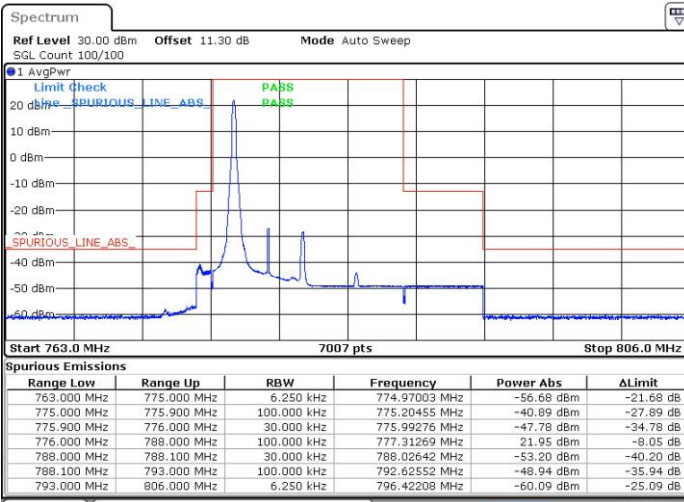
**Conducted Band Edge**



LTE Band 13 / 5MHz / QPSK

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

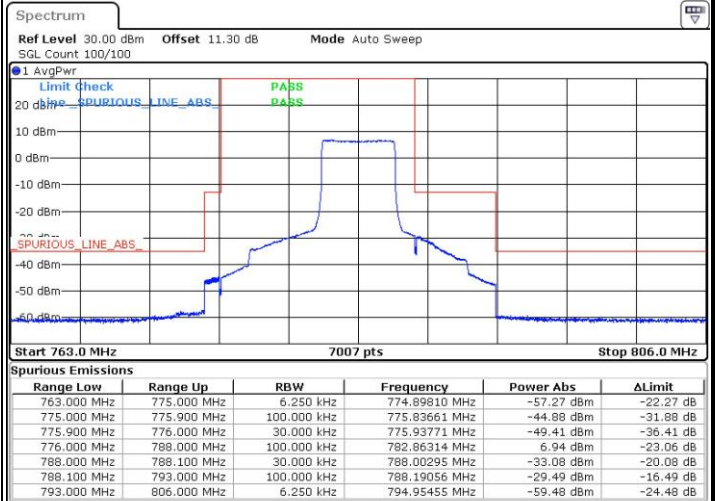
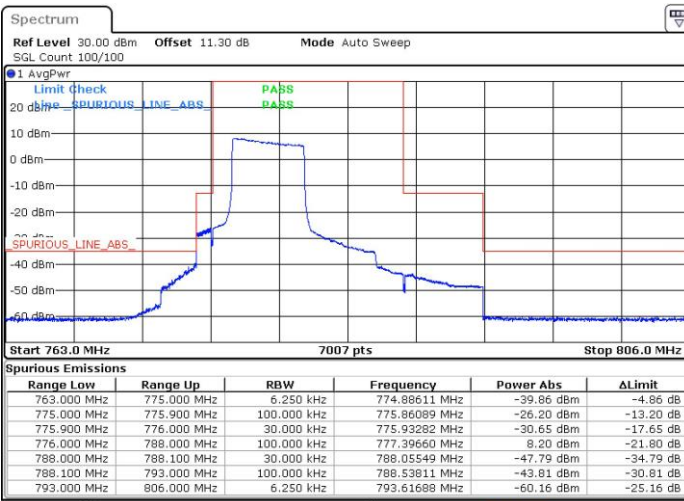


Date: 15.MAY.2015 14:11:18

Date: 15.MAY.2015 14:16:33

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 15.MAY.2015 14:05:15

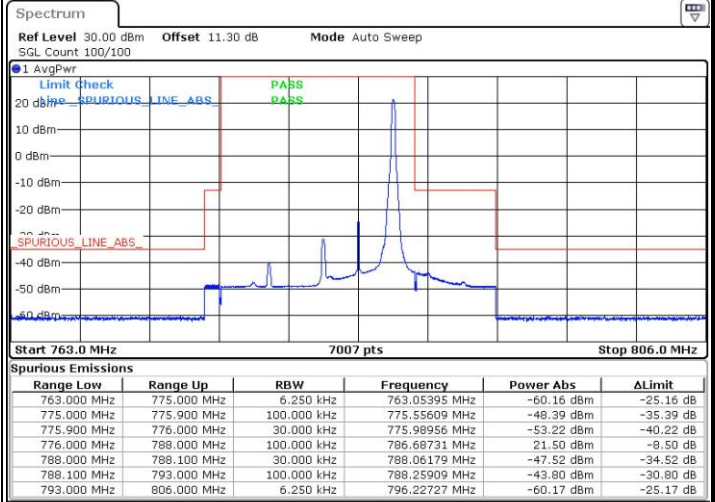
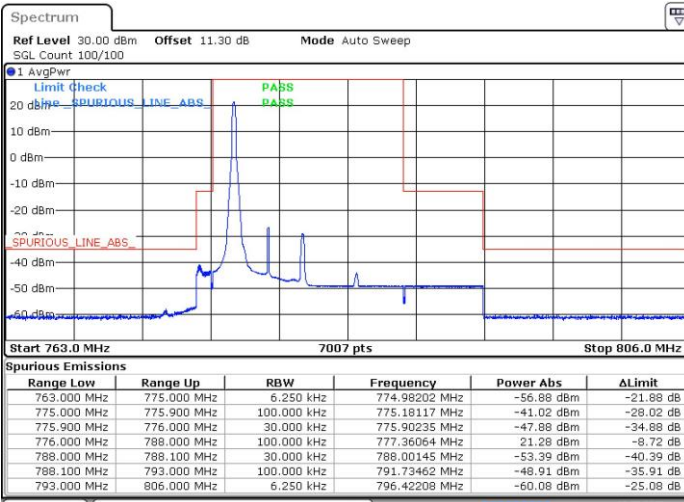
Date: 15.MAY.2015 14:09:03



LTE Band 13 / 5MHz / 16QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

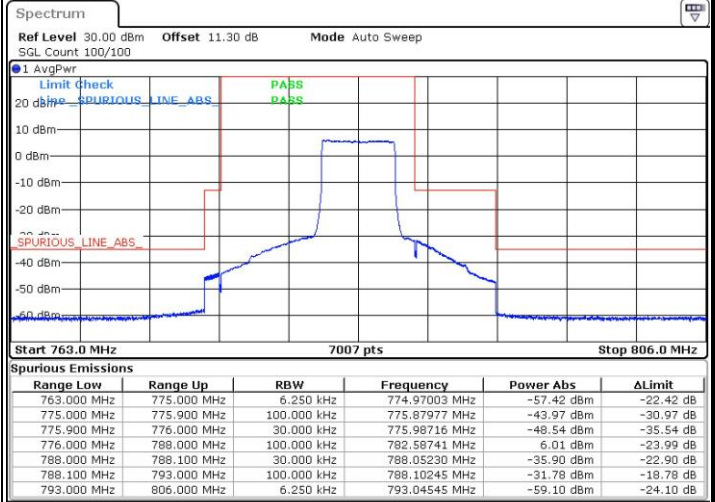
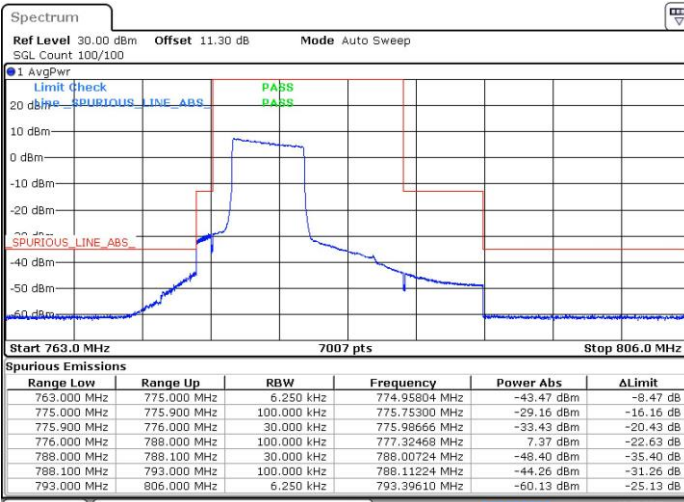


Date: 15.MAY.2015 14:12:39

Date: 15.MAY.2015 14:13:53

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



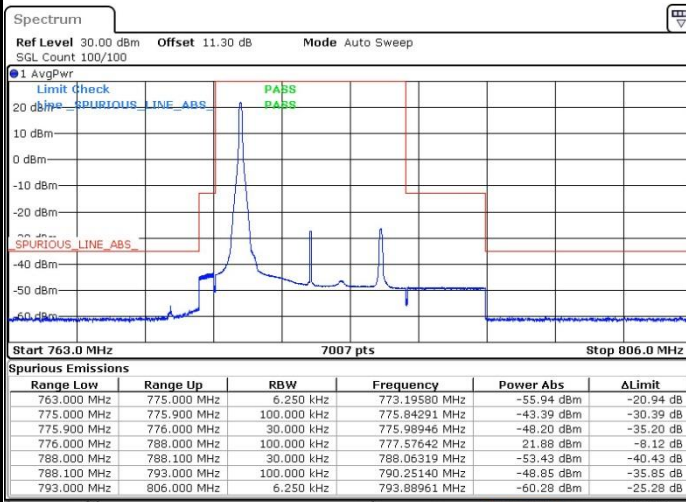
Date: 15.MAY.2015 14:06:43

Date: 15.MAY.2015 14:07:55



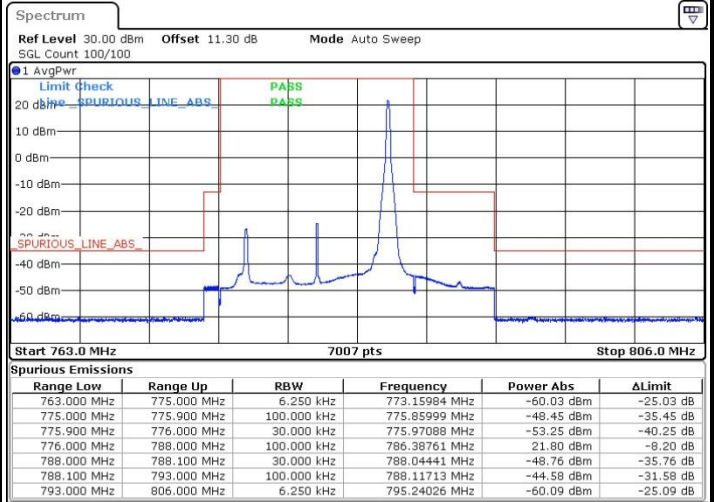
LTE Band 13 / 10MHz / QPSK

Lowest Band Edge / 1 RB



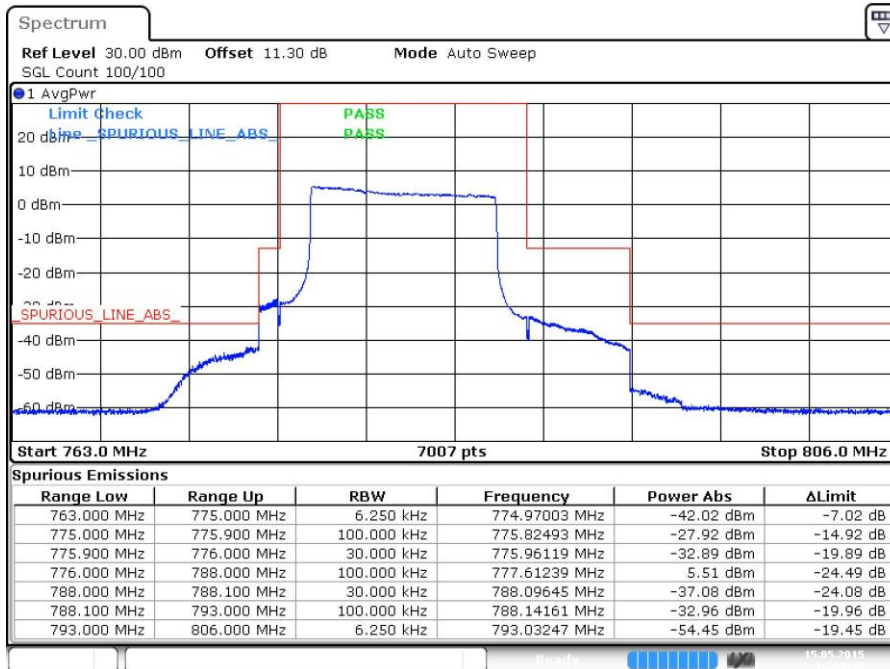
Date: 15.MAY.2015 14:18:13

Highest Band Edge / 1 RB



Date: 15.MAY.2015 14:22:58

Band Edge / Full RB

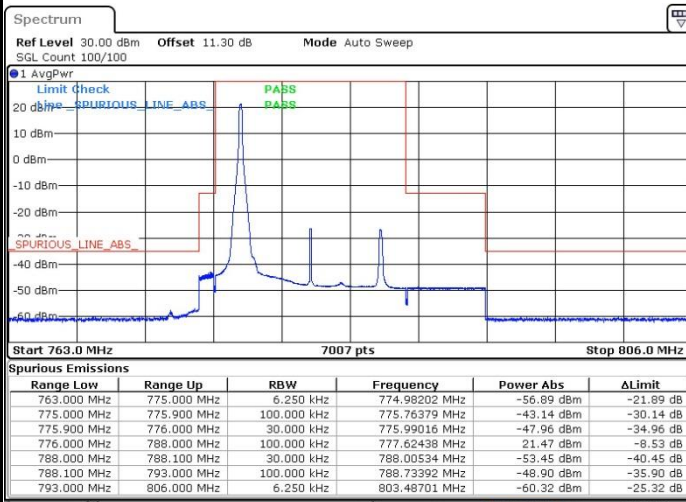


Date: 15.MAY.2015 14:24:17



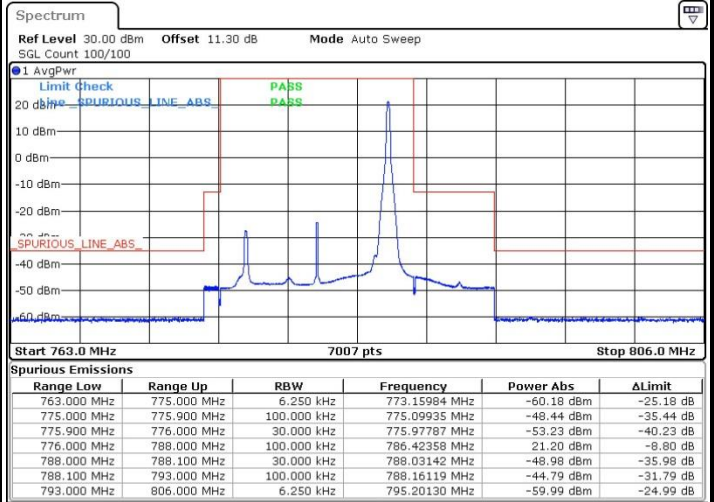
LTE Band 13 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



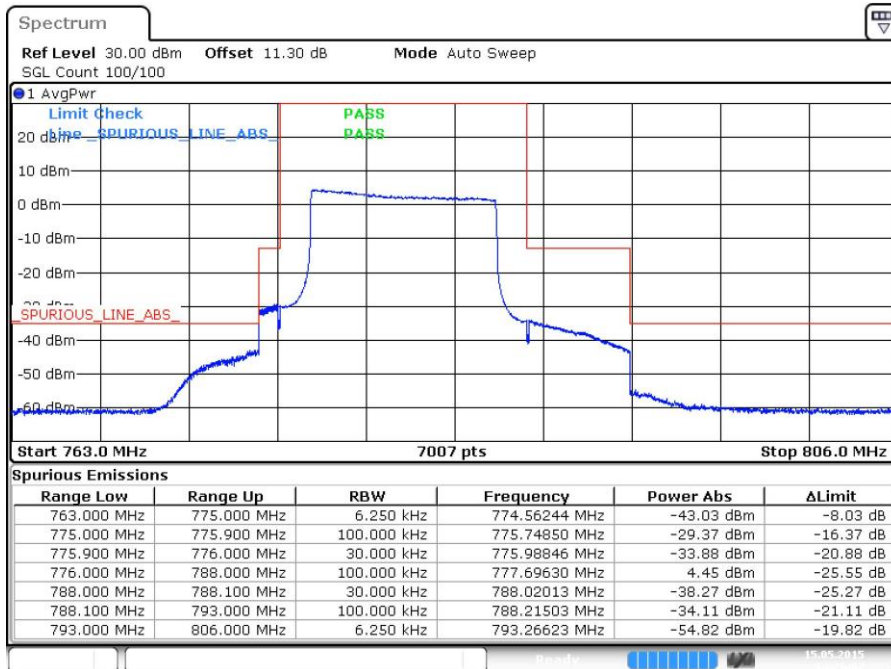
Date: 15.MAY.2015 14:19:20

Highest Band Edge / 1 RB



Date: 15.MAY.2015 14:20:42

Band Edge / Full RB



Date: 15.MAY.2015 14:26:07



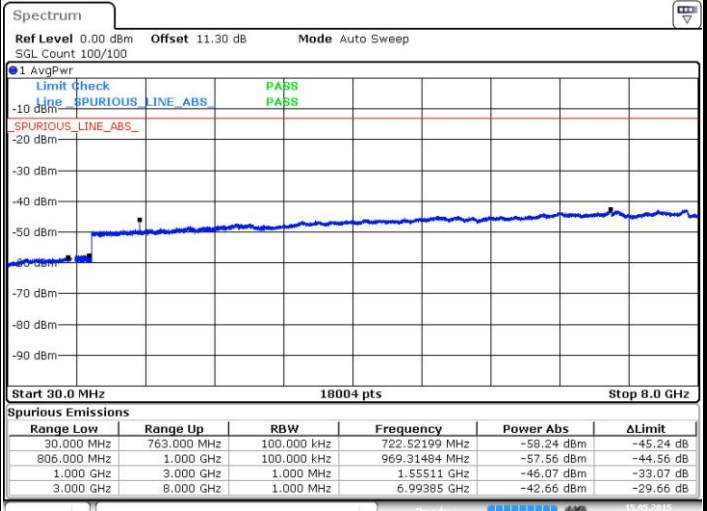
**Conducted Spurious Emission**



LTE Band 13 / 5MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

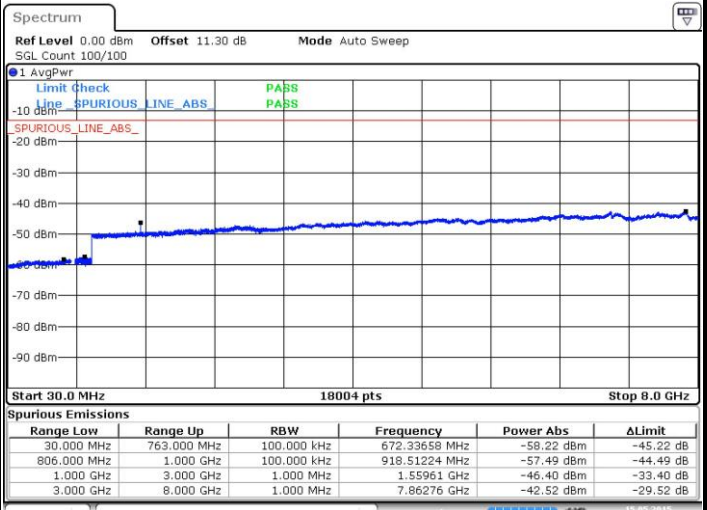
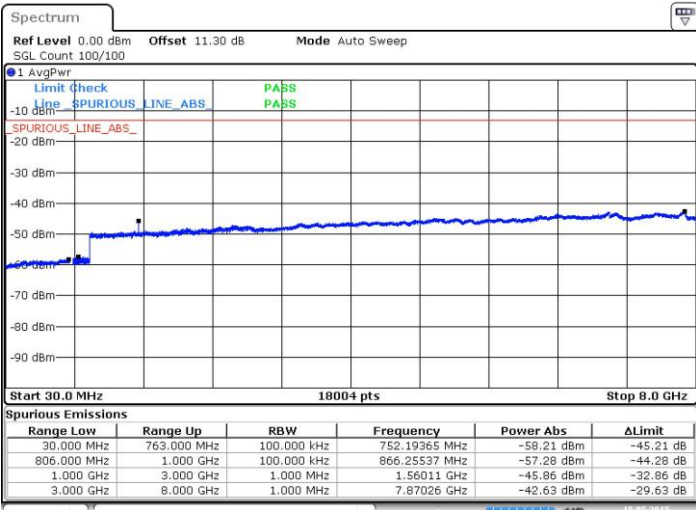


Date: 15.MAY.2015 13:46:41

Date: 15.MAY.2015 13:47:51

Middle Channel / QPSK

Middle Channel / 16QAM



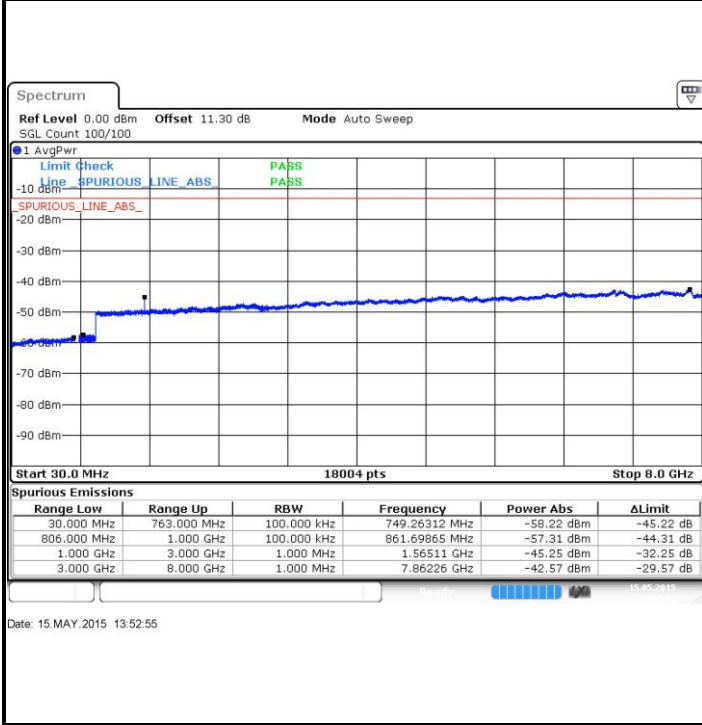
Date: 15.MAY.2015 13:50:10

Date: 15.MAY.2015 13:49:00

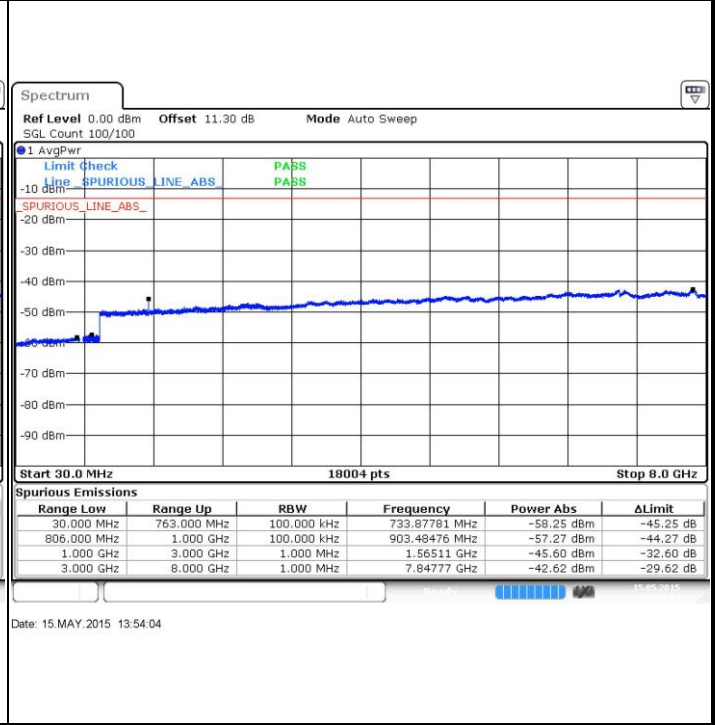


LTE Band 13 / 5MHz

Highest Channel / QPSK

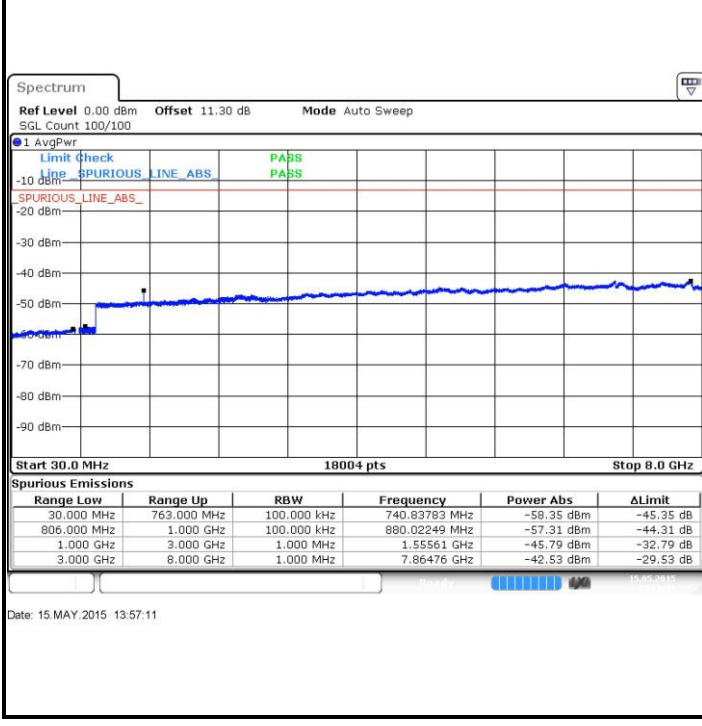


Highest Channel / 16QAM

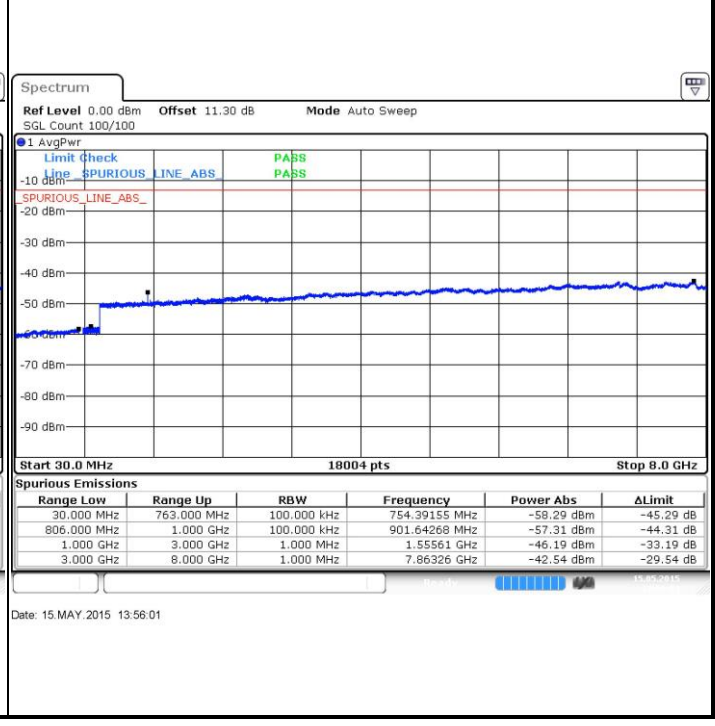


LTE Band 13 / 10MHz

Middle Channel / QPSK



Middle Channel / 16QAM







### Frequency Stability

Test Conditions		LTE Band 13 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0128	PASS
40	Normal Voltage	0.0132	
30	Normal Voltage	0.0013	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0009	
0	Normal Voltage	0.0003	
-10	Normal Voltage	0.0127	
-20	Normal Voltage	0.0114	
-30	Normal Voltage	0.0113	
20	Maximum Voltage	0.0115	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0128	

**Note:**

1. Normal Voltage = 3.8 V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage =4.35 V
2. Note: The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.