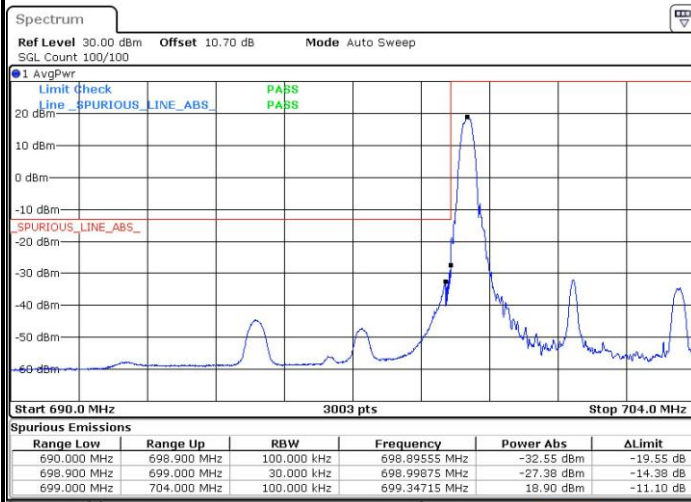


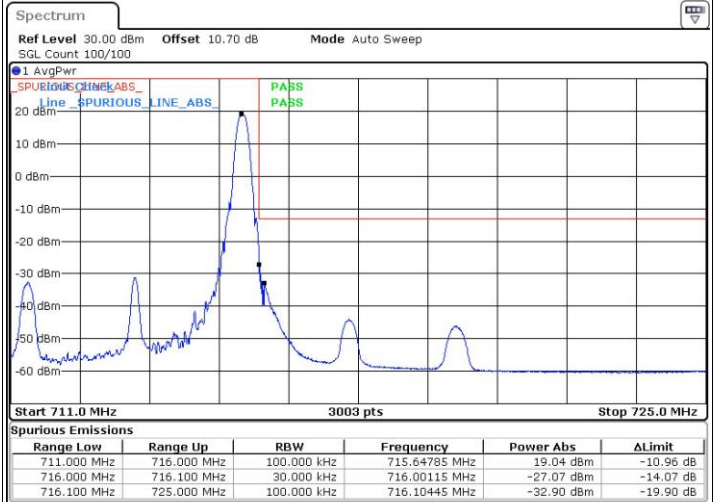


LTE Band 12 / 5MHz / 64QAM

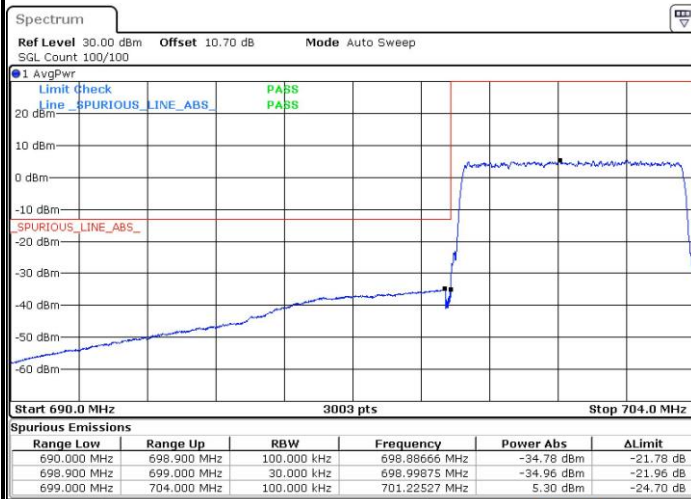
Lowest Band Edge / 1RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



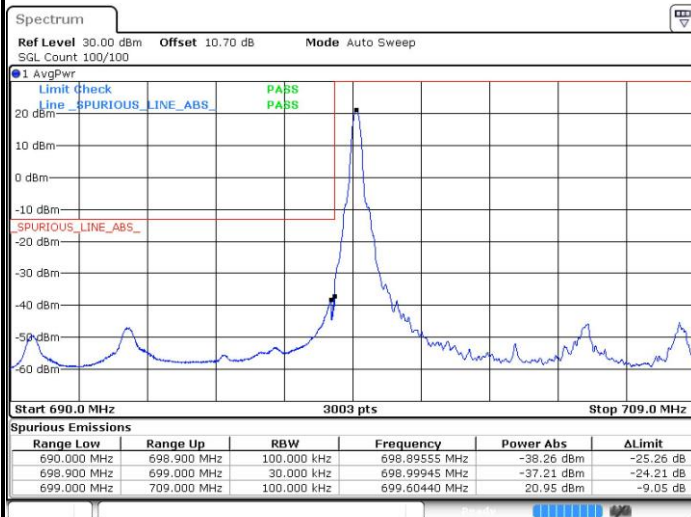
Highest Band Edge / Full RB



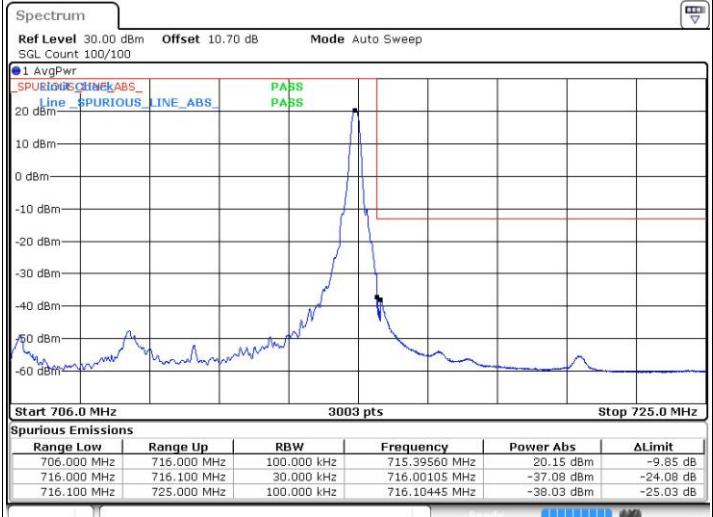


LTE Band 12 / 10MHz / QPSK

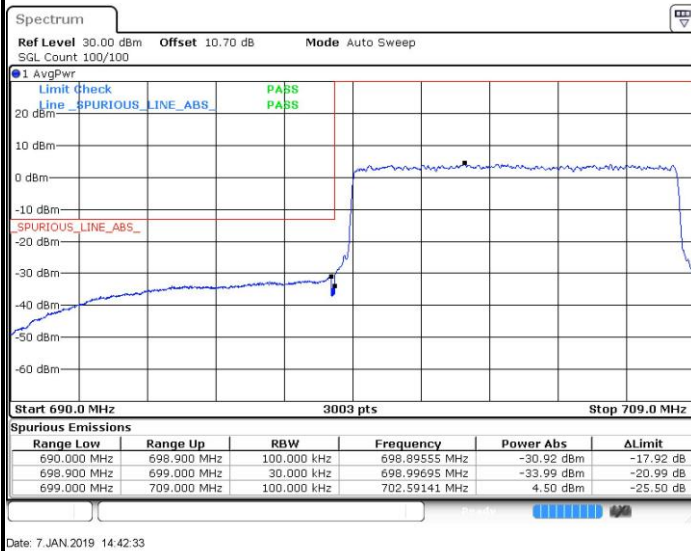
Lowest Band Edge / 1 RB



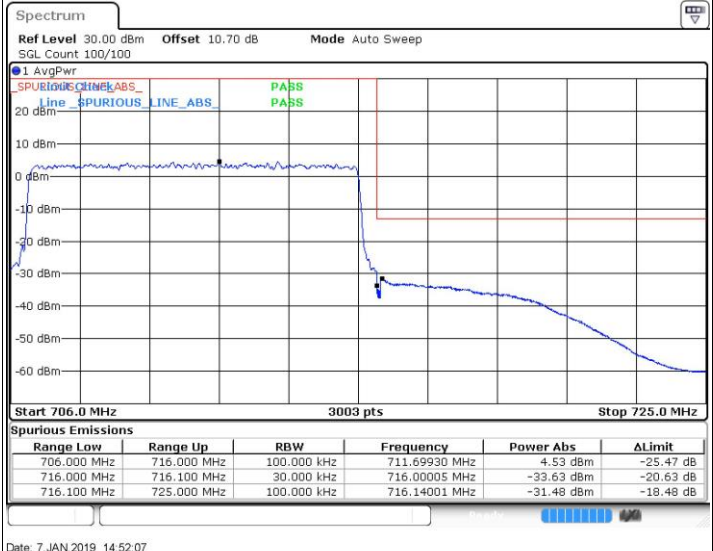
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



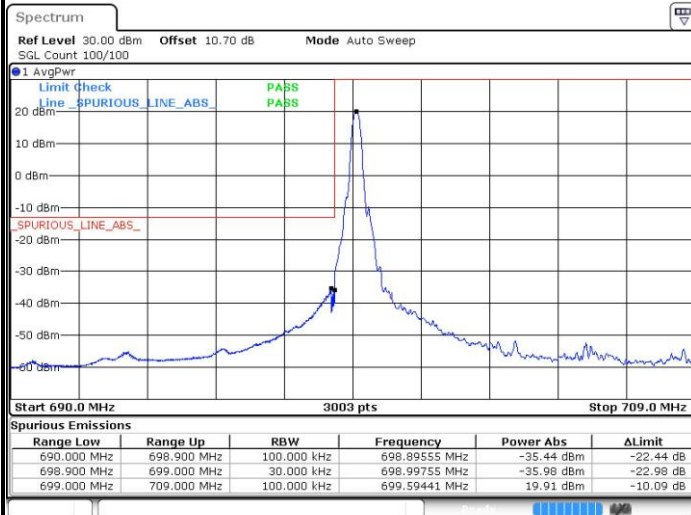
Highest Band Edge / Full RB



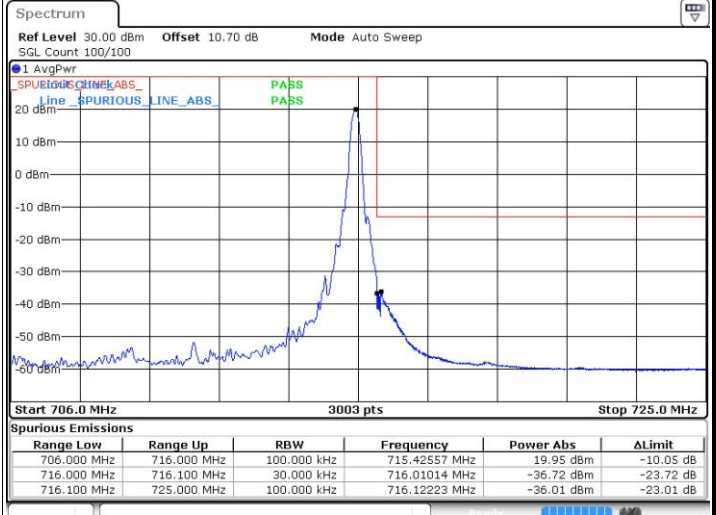


LTE Band 12 / 10MHz / 16QAM

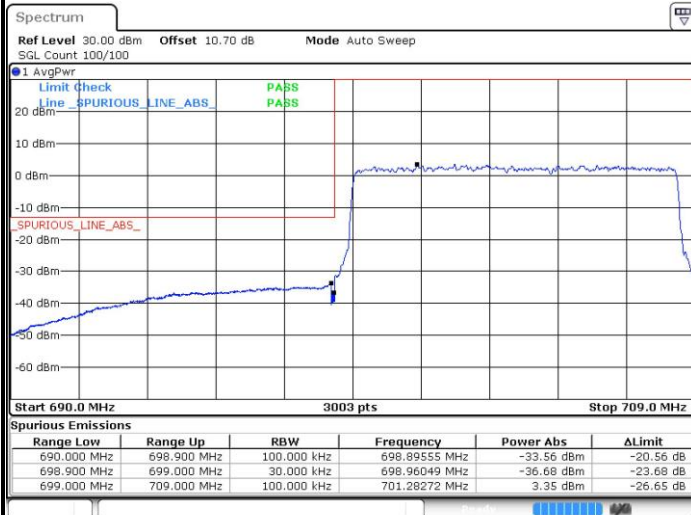
Lowest Band Edge / 1 RB



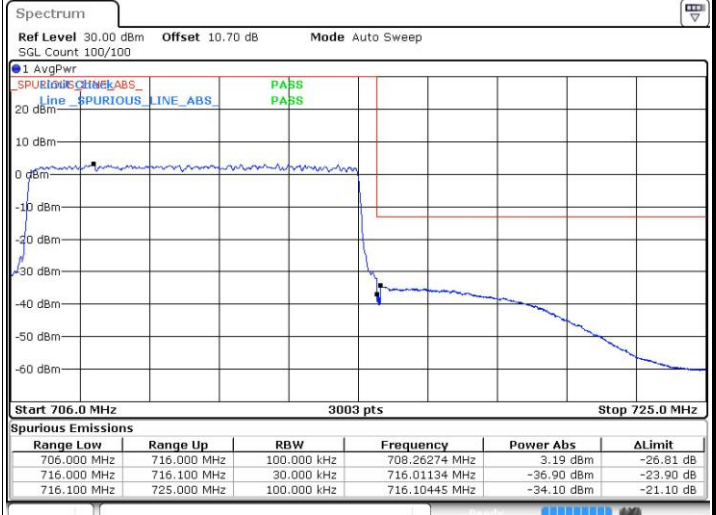
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



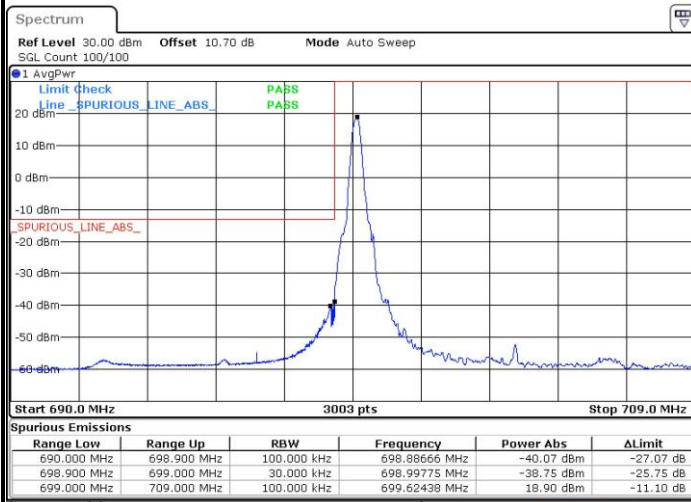
Highest Band Edge / Full RB



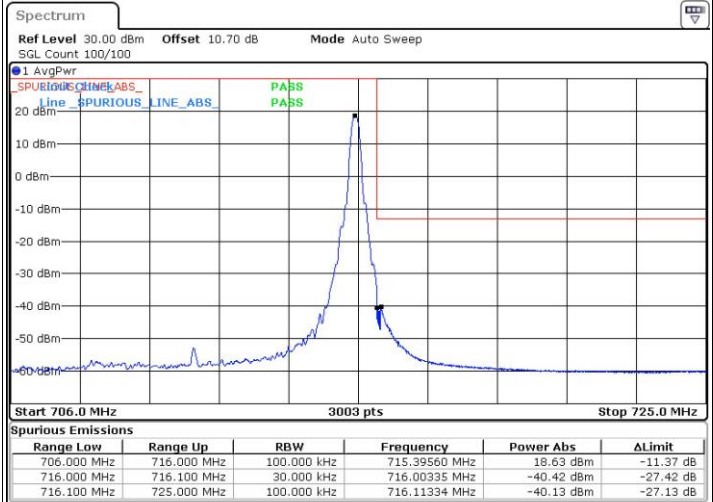


LTE Band 12 / 10MHz / 64QAM

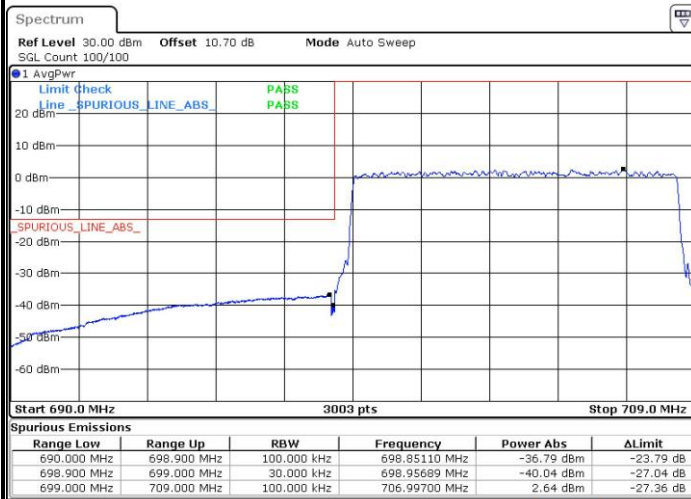
Lowest Band Edge / 1 RB



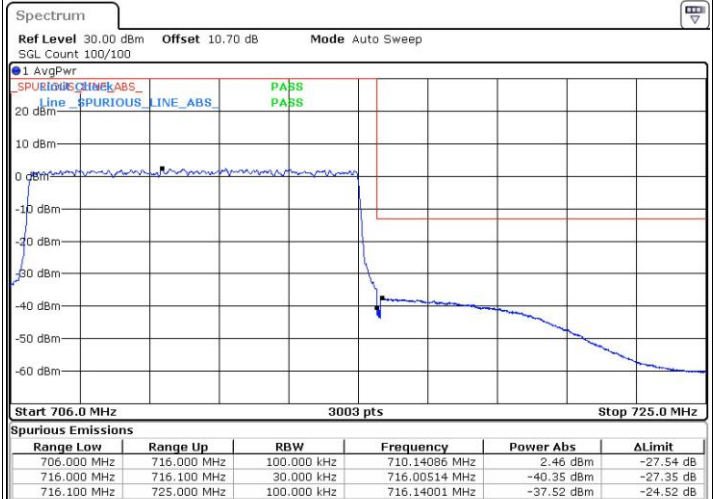
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

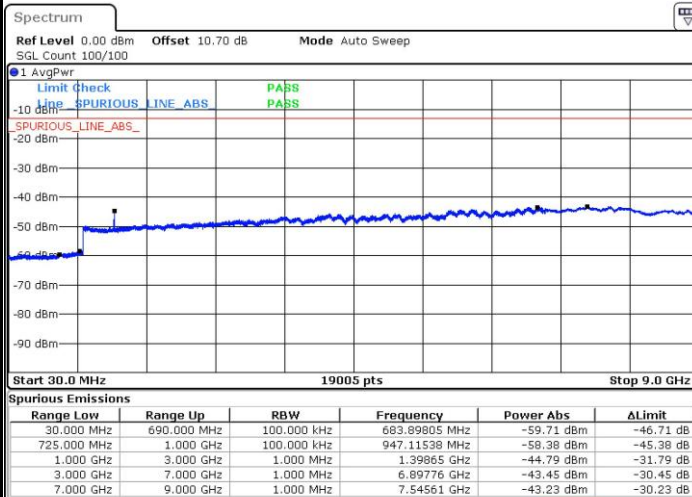




Conducted Spurious Emission

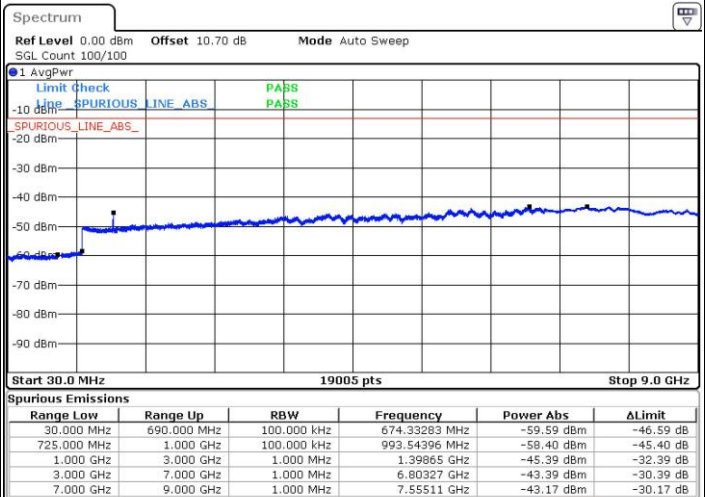
LTE Band 12 / 1.4MHz

Lowest Channel / QPSK



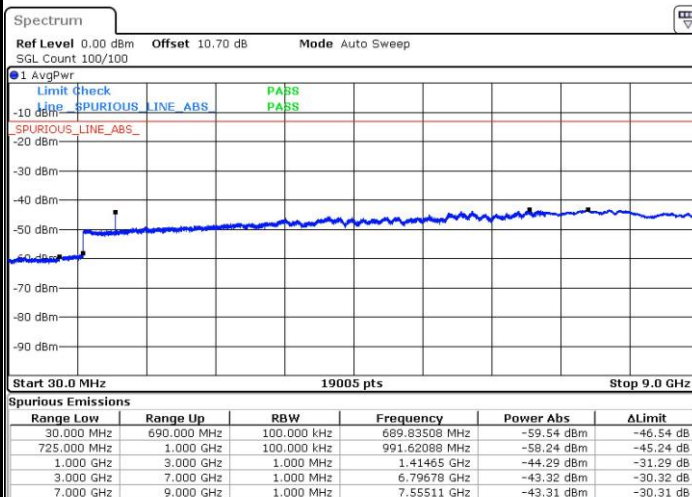
Date: 7 JAN 2019 15:06:46

Lowest Channel / 16QAM



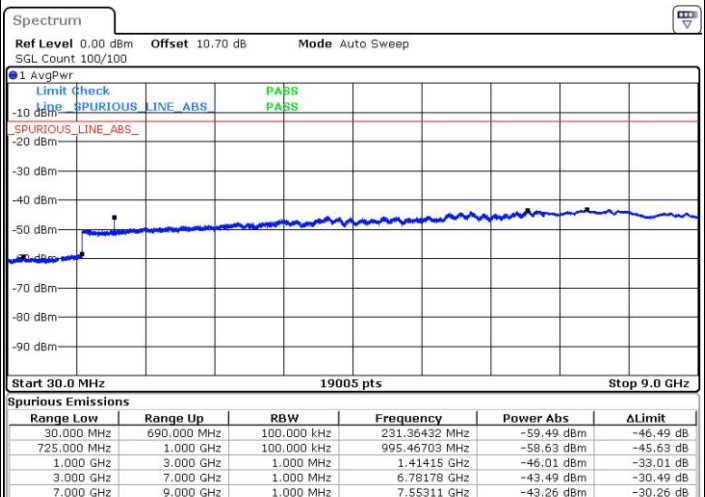
Date: 7 JAN 2019 15:07:46

Middle Channel / QPSK



Date: 7 JAN 2019 15:10:32

Middle Channel / 16QAM

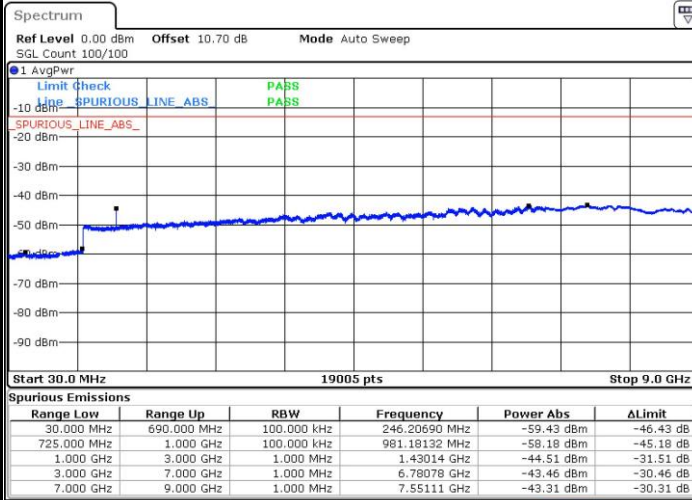


Date: 7 JAN 2019 15:09:32



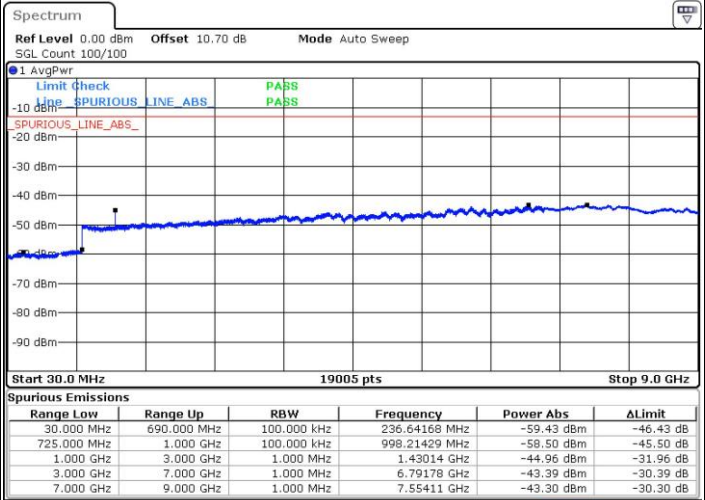
LTE Band 12 / 1.4MHz

Highest Channel / QPSK



Date: 7.JAN.2019 15:16:19

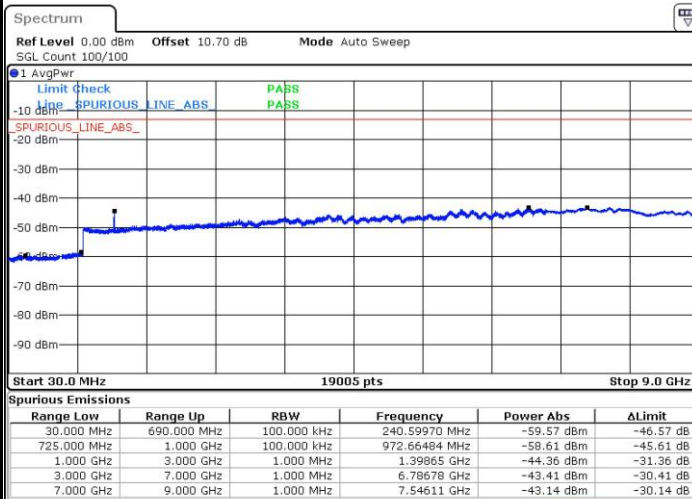
Highest Channel / 16QAM



Date: 7.JAN.2019 15:17:19

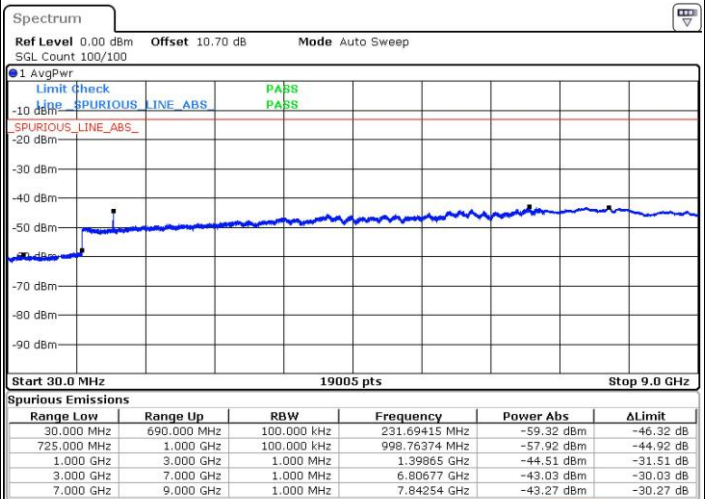
LTE Band 12 / 3MHz

Lowest Channel / QPSK



Date: 7.JAN.2019 14:13:53

Lowest Channel / 16QAM

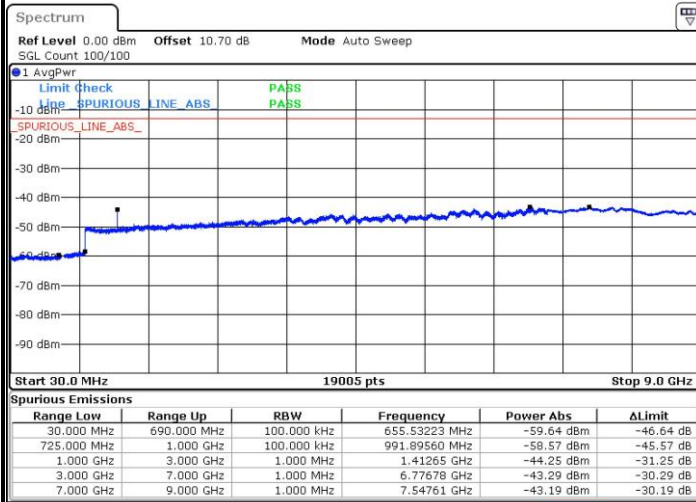


Date: 7.JAN.2019 14:14:53



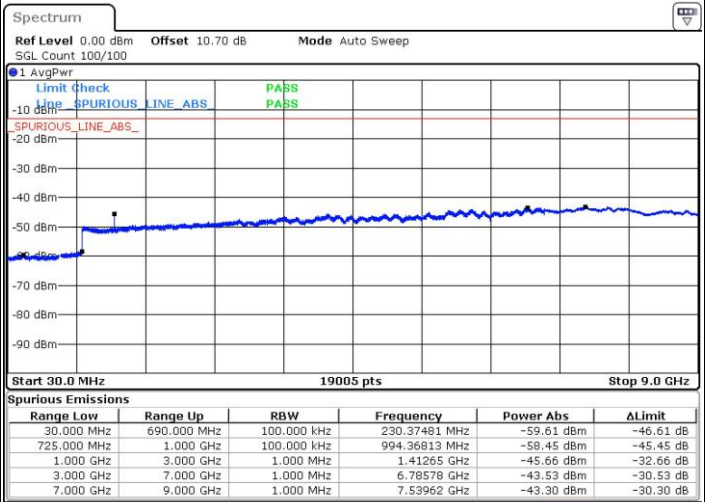
LTE Band 12 / 3MHz

Middle Channel / QPSK



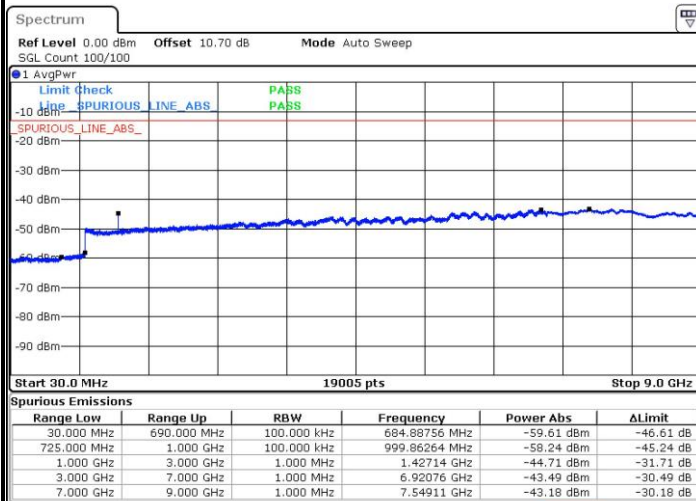
Date: 7.JAN.2019 14:17:40

Middle Channel / 16QAM



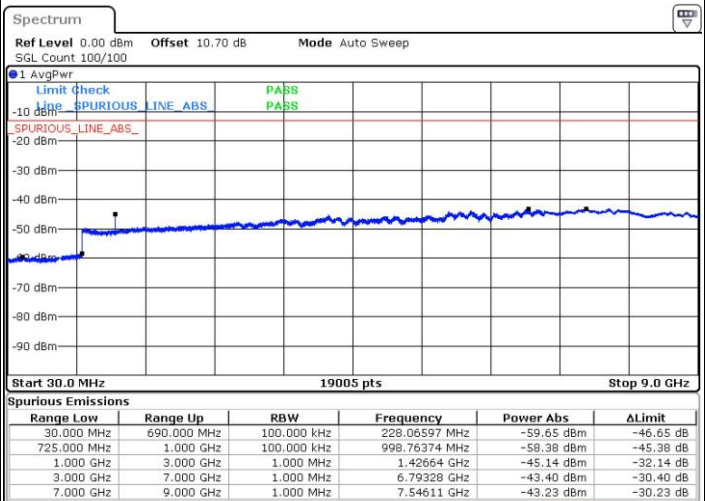
Date: 7.JAN.2019 14:16:40

Highest Channel / QPSK



Date: 7.JAN.2019 14:23:26

Highest Channel / 16QAM

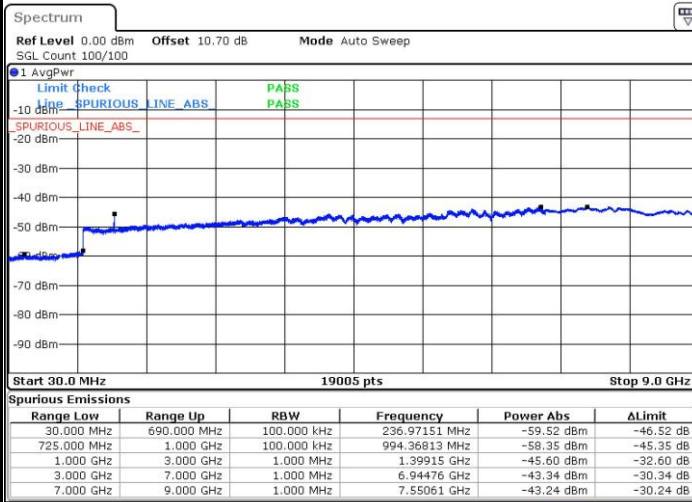


Date: 7.JAN.2019 14:24:27



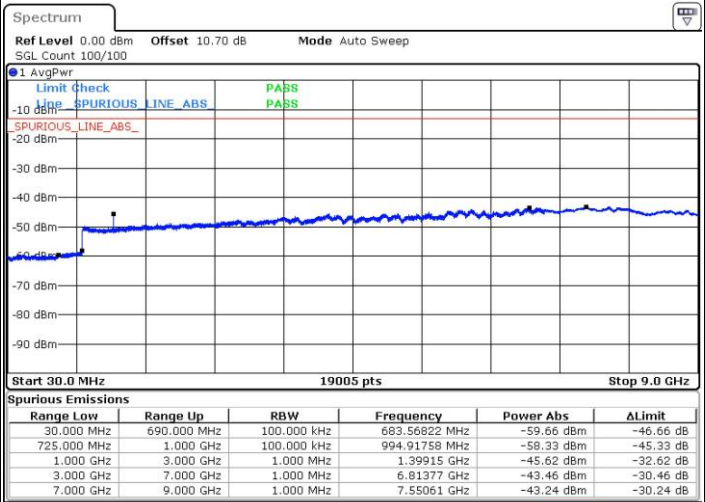
LTE Band 12 / 5MHz

Lowest Channel / QPSK



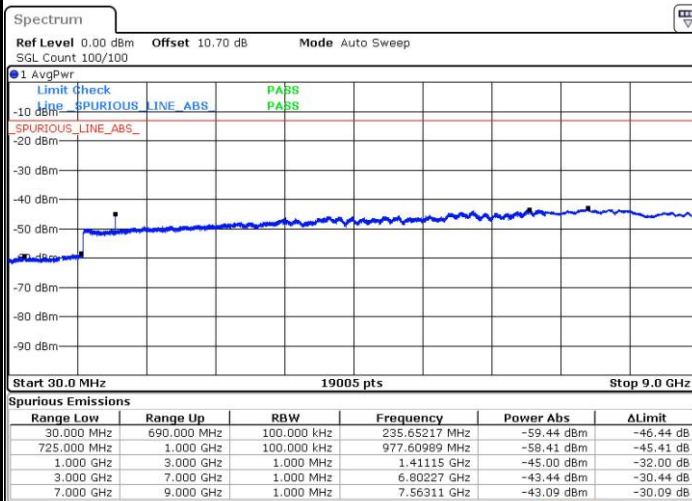
Date: 7.JAN.2019 14:30:14

Lowest Channel / 16QAM



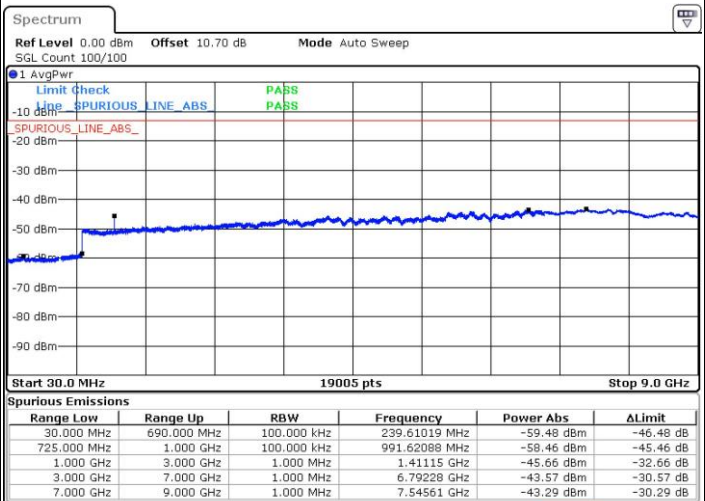
Date: 7.JAN.2019 14:31:14

Middle Channel / QPSK



Date: 7.JAN.2019 14:34:01

Middle Channel / 16QAM

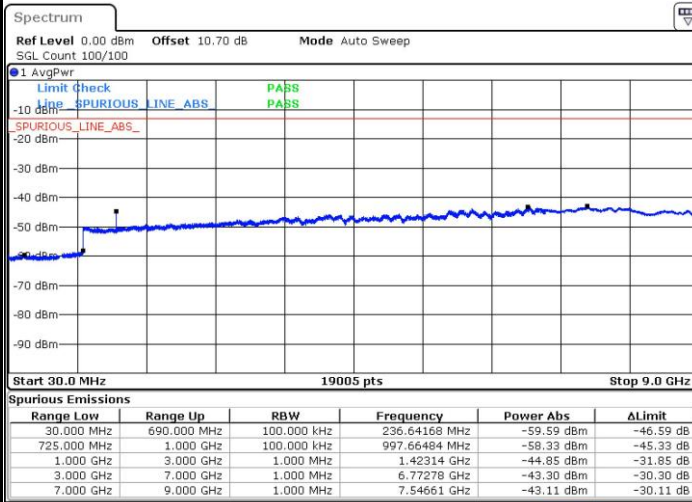


Date: 7.JAN.2019 14:33:00



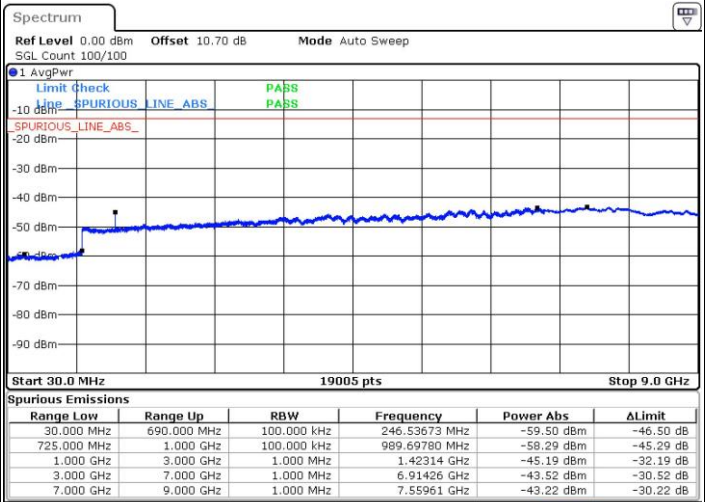
LTE Band 12 / 5MHz

Highest Channel / QPSK



Date: 7.JAN.2019 14:40:48

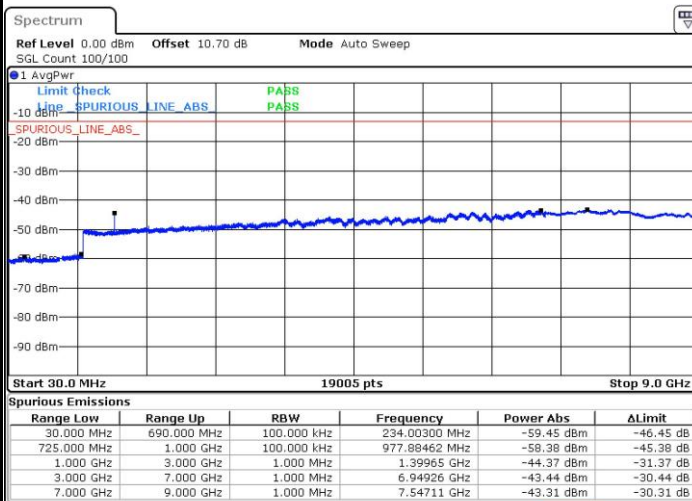
Highest Channel / 16QAM



Date: 7.JAN.2019 14:39:47

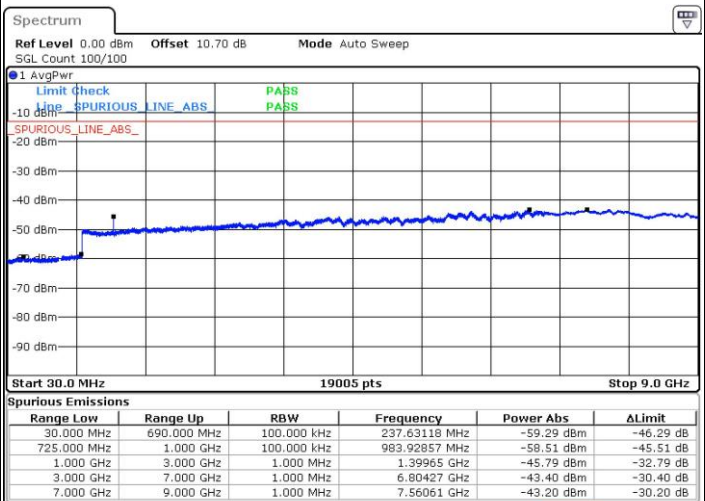
LTE Band 12 / 10MHz

Lowest Channel / QPSK



Date: 7.JAN.2019 14:46:34

Lowest Channel / 16QAM

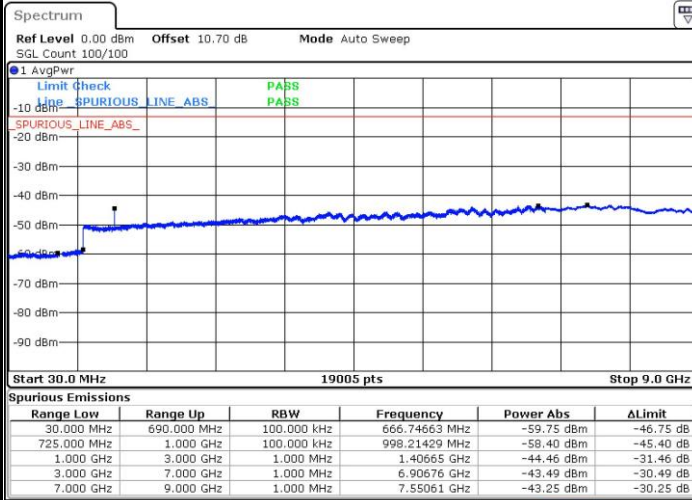


Date: 7.JAN.2019 14:47:35



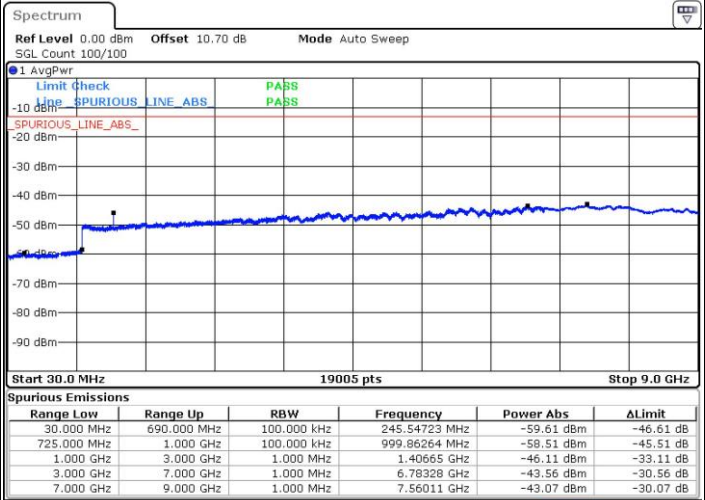
LTE Band 12 / 10MHz

Middle Channel / QPSK



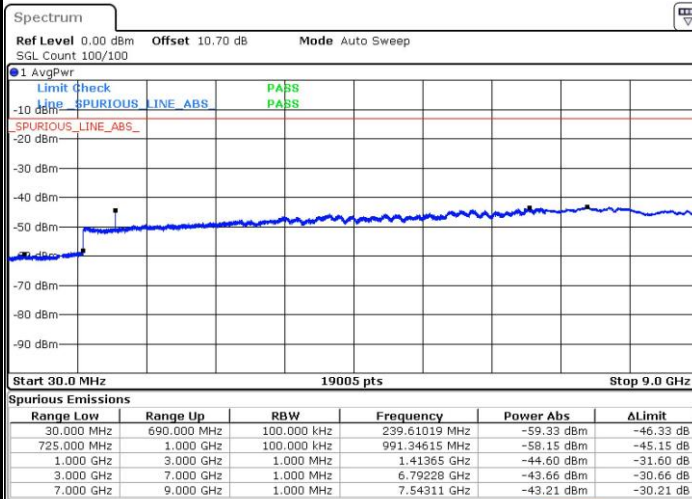
Date: 7.JAN.2019 14:50:21

Middle Channel / 16QAM



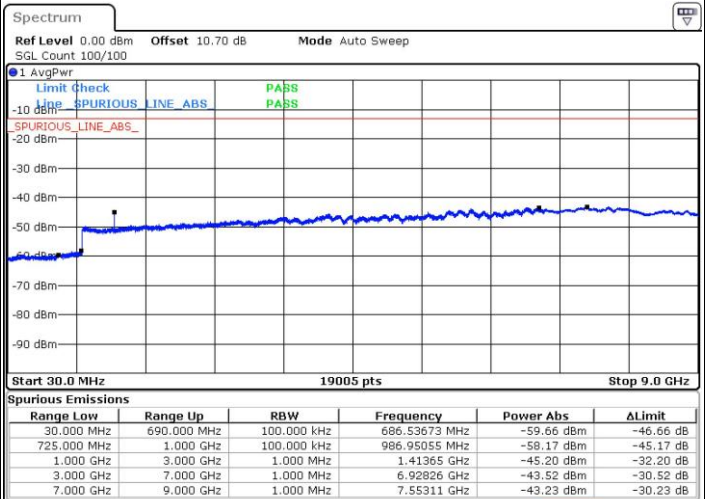
Date: 7.JAN.2019 14:49:20

Highest Channel / QPSK



Date: 7.JAN.2019 14:56:08

Highest Channel / 16QAM

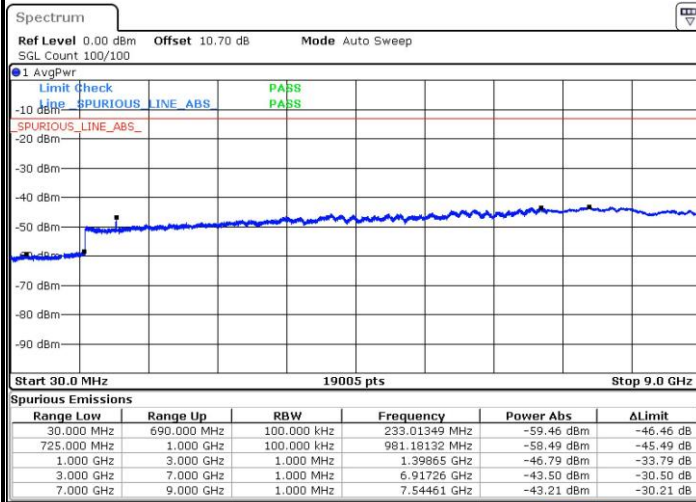


Date: 7.JAN.2019 14:57:08



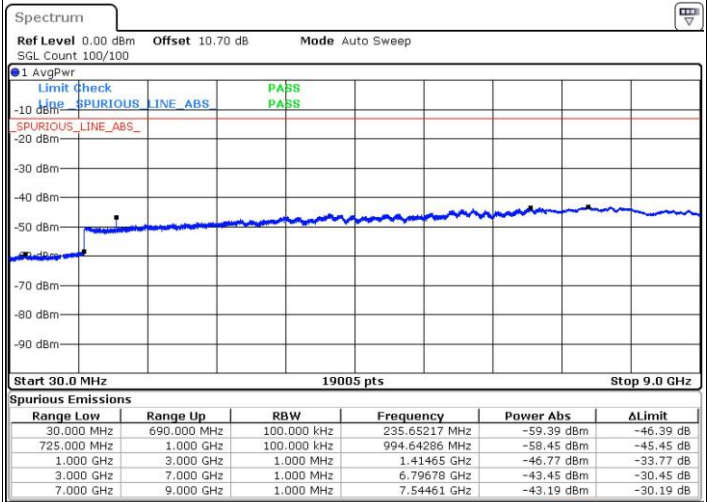
LTE Band 12 / 1.4MHz

Lowest Channel / 64QAM



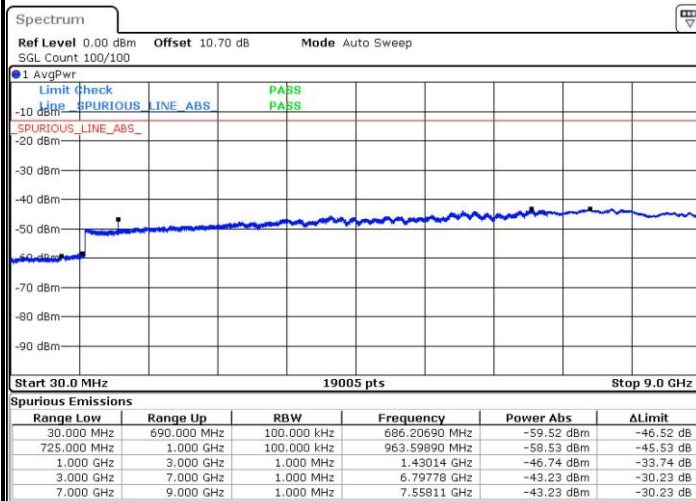
Date: 7.JAN.2019 16:05:20

Middle Channel / 64QAM



Date: 7.JAN.2019 16:06:43

Highest Channel / 64QAM

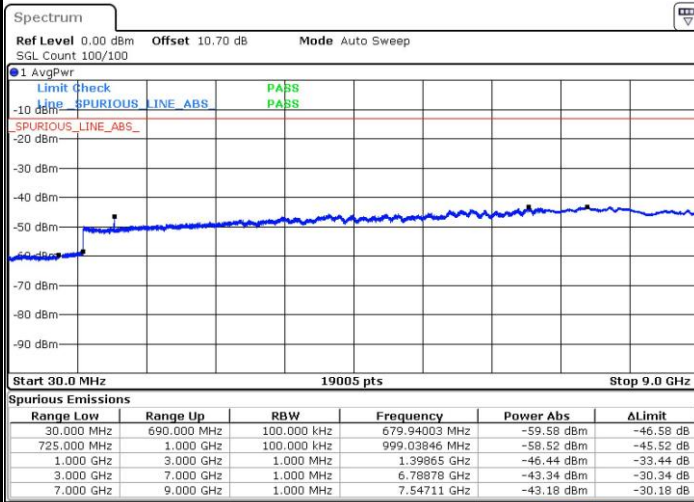


Date: 7.JAN.2019 16:10:07



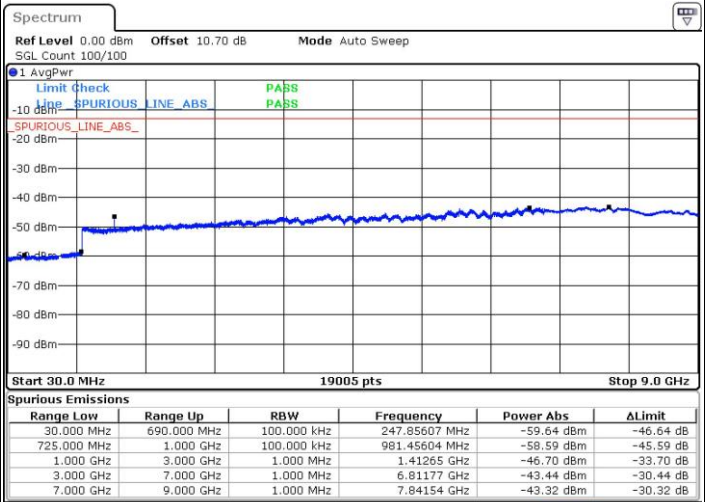
LTE Band 12 / 3MHz

Lowest Channel / 64QAM



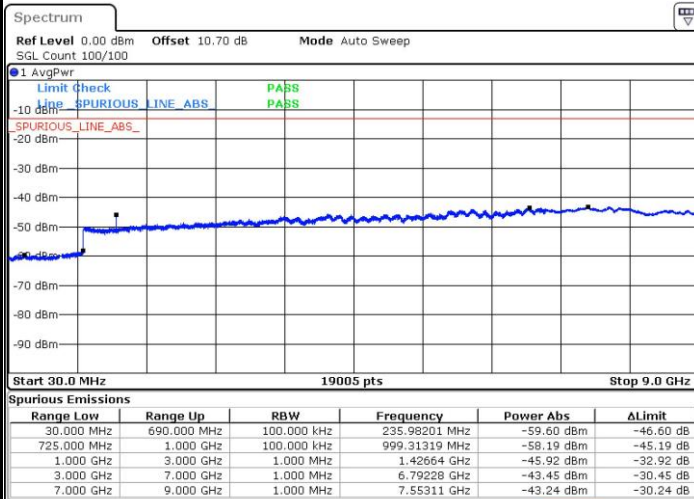
Date: 7.JAN.2019 15:20:43

Middle Channel / 64QAM



Date: 7.JAN.2019 15:22:06

Highest Channel / 64QAM

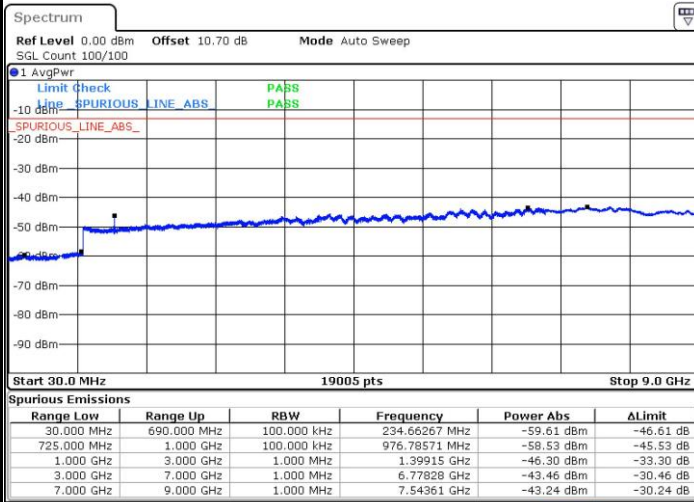


Date: 7.JAN.2019 15:25:29



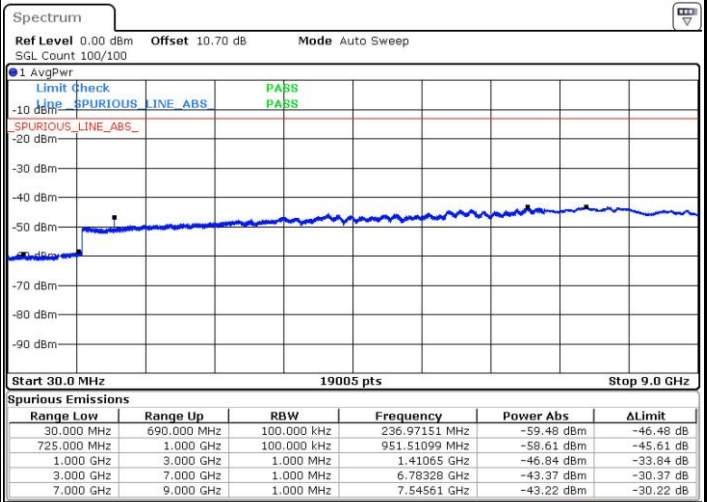
LTE Band 12 / 5MHz

Lowest Channel / 64QAM



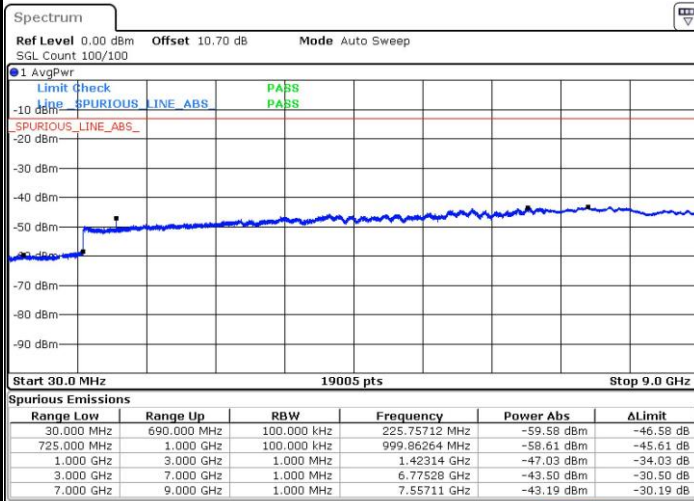
Date: 7.JAN.2019 15:28:53

Middle Channel / 64QAM



Date: 7.JAN.2019 15:30:16

Highest Channel / 64QAM

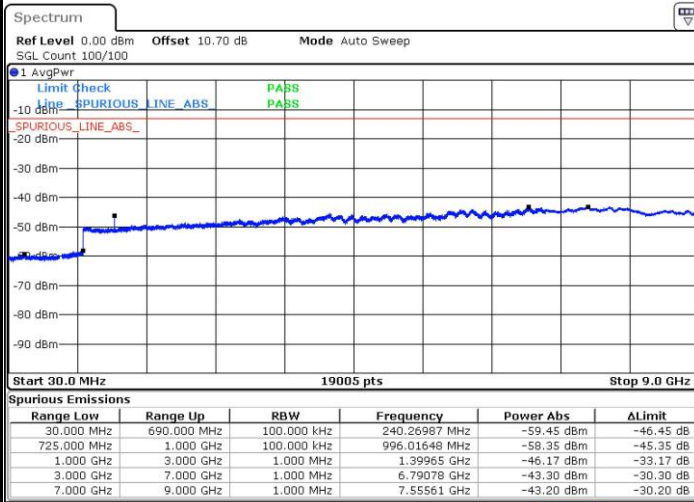


Date: 7.JAN.2019 15:33:39



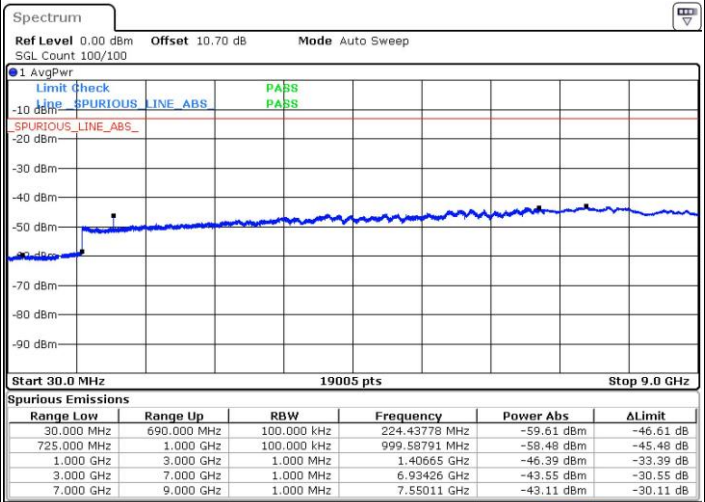
LTE Band 12 / 10MHz

Lowest Channel / 64QAM



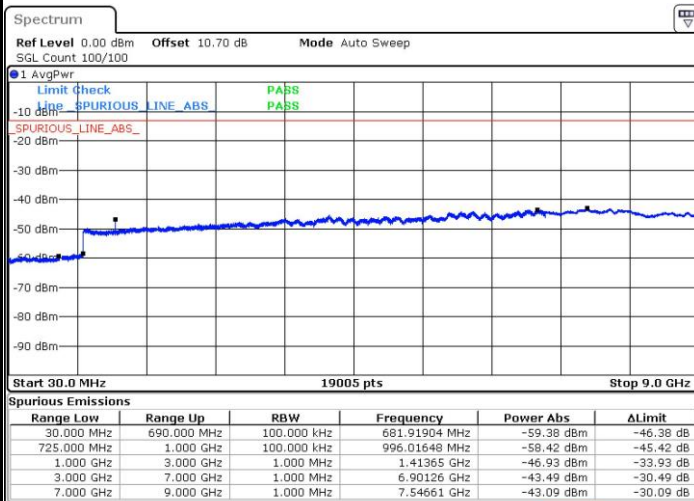
Date: 7.JAN.2019 15:37:03

Middle Channel / 64QAM



Date: 7.JAN.2019 15:38:26

Highest Channel / 64QAM



Date: 7.JAN.2019 15:41:50

Frequency Stability

Test Conditions		LTE Band 12 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0117	PASS
40	Normal Voltage	0.0127	
30	Normal Voltage	0.0144	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0119	
0	Normal Voltage	0.0014	
-10	Normal Voltage	0.0105	
-20	Normal Voltage	0.0109	
-30	Normal Voltage	0.0123	
20	Maximum Voltage	0.0016	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0120	

Note:

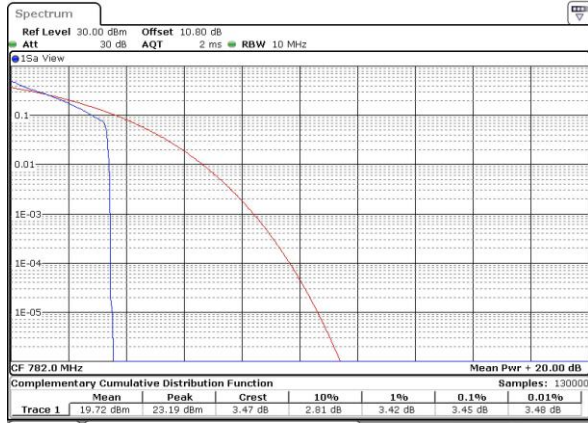
1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 13

Peak-to-Average Ratio

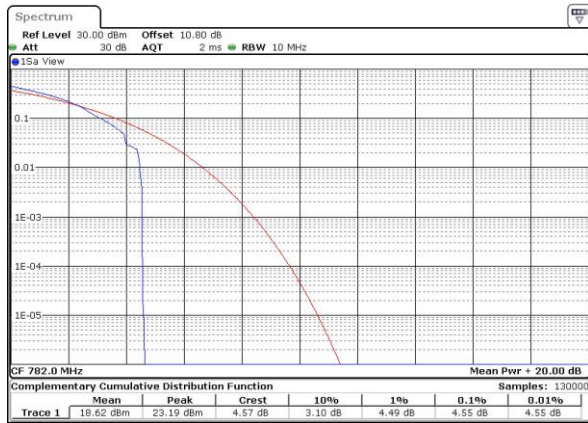
Mode	LTE Band 13 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	-	-	PASS
Middle CH	3.45	4.49	4.55	5.54	
Highest CH	-	-	-	-	
Mode	LTE Band 13 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	-	-	-	-	PASS
Middle CH	4.41	5.59	-	-	
Highest CH	-	-	-	-	

LTE Band 13 / 10MHz / QPSK
Middle Channel / 1RB


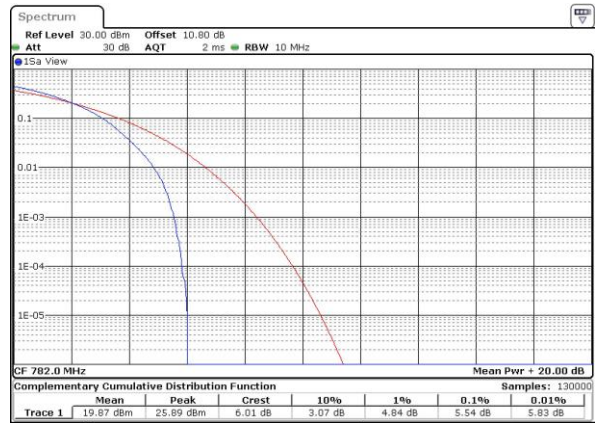
Date: 8 JAN 2019 19:56:05

Middle Channel / Full RB


Date: 8 JAN 2019 19:56:15

LTE Band 13 / 10MHz / 16QAM
Middle Channel / 1RB


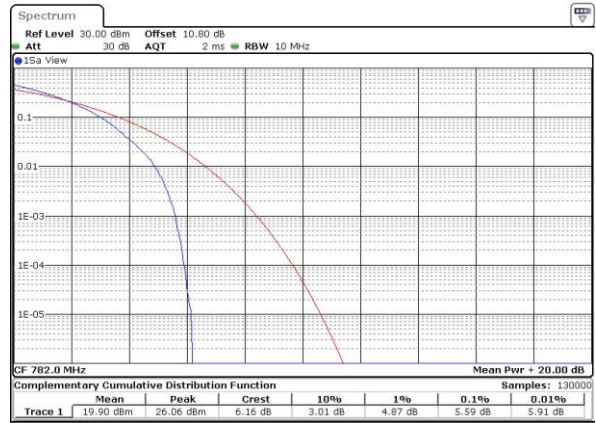
Date: 8 JAN 2019 19:55:44

Middle Channel / Full RB


Date: 8 JAN 2019 19:55:54

LTE Band 13 / 10MHz / 64QAM
Middle Channel / 1RB


Date: 8 JAN 2019 19:54:43

Middle Channel / Full RB


Date: 8 JAN 2019 19:55:34

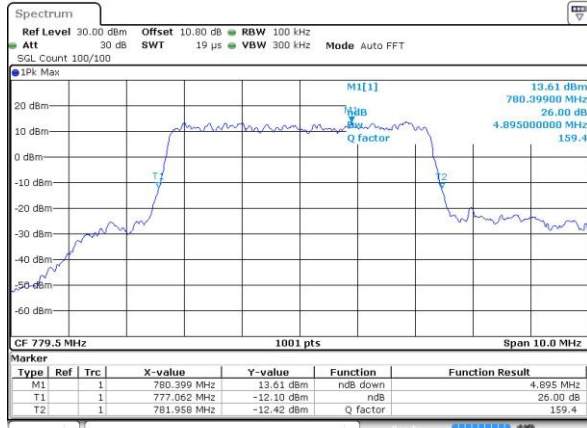
**26dB Bandwidth**

Mode	LTE Band 13 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.90	4.95	-	-	-	-	-	-
Middle CH	-	-	-	-	4.85	4.92	9.71	9.65	-	-	-	-
Highest CH	-	-	-	-	4.98	4.83	-	-	-	-	-	-
Mode	LTE Band 13 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.91	-	-	-	-	-	-	-
Middle CH	-	-	-	-	4.88	-	9.91	-	-	-	-	-
Highest CH	-	-	-	-	4.84	-	-	-	-	-	-	-

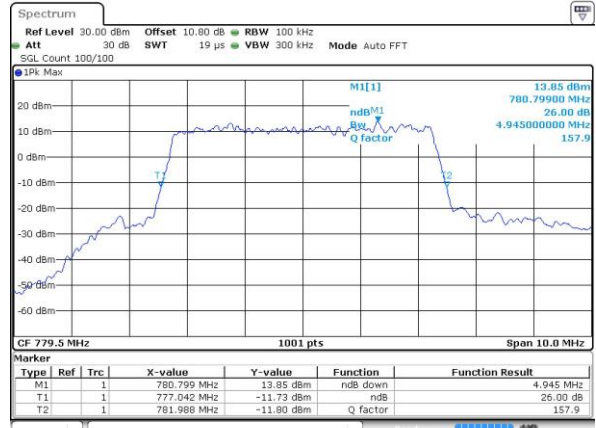


LTE Band 13

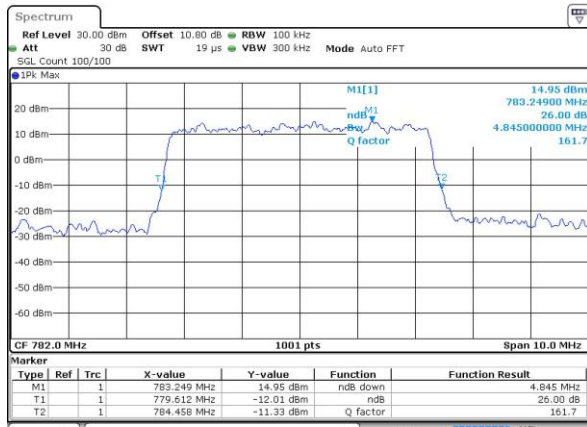
Lowest Channel / 5MHz / QPSK



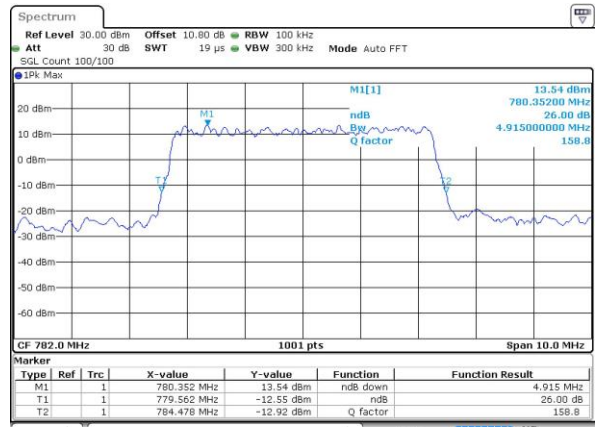
Lowest Channel / 5MHz / 16QAM



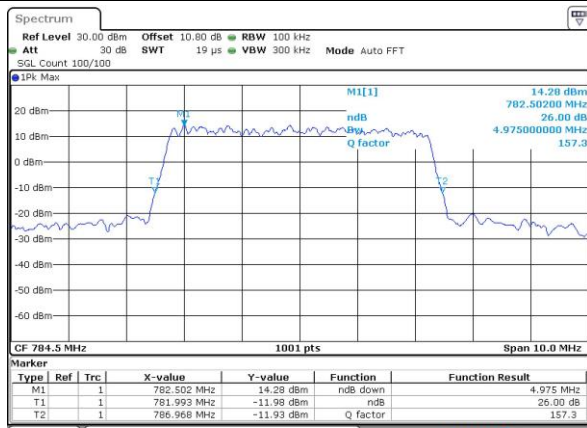
Middle Channel / 5MHz / QPSK



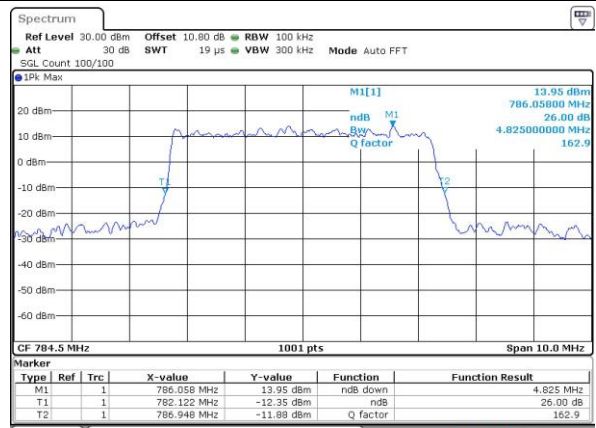
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



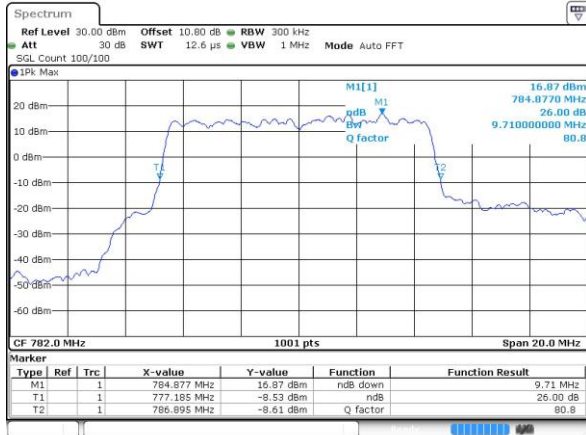
Highest Channel / 5MHz / 16QAM





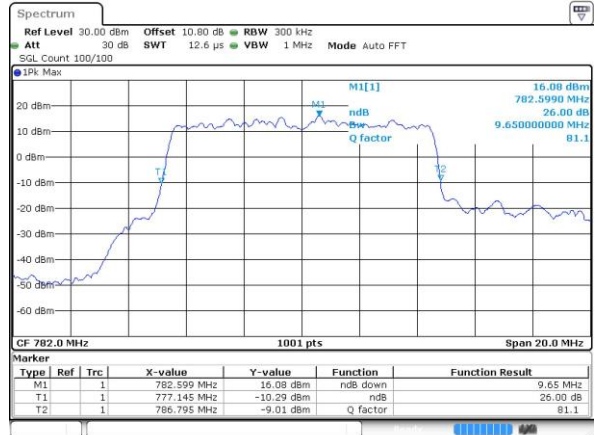
LTE Band 13

Middle Channel / 10MHz / QPSK



Date: 8 JAN 2019 19:21:31

Middle Channel / 10MHz / 16QAM

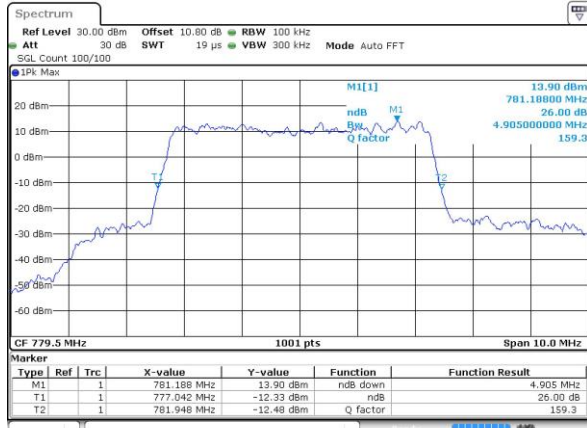


Date: 8 JAN 2019 19:21:19

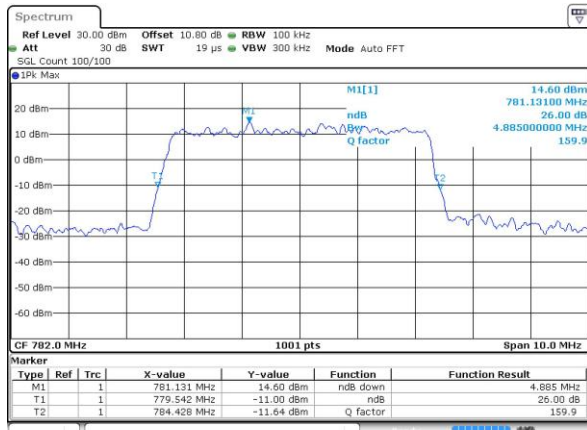


LTE Band 13

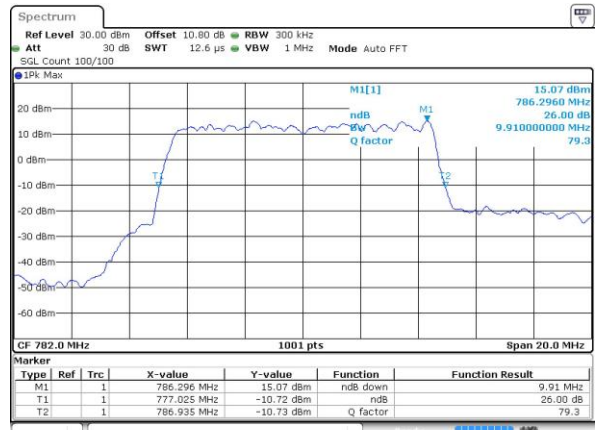
Lowest Channel / 5MHz / 64QAM



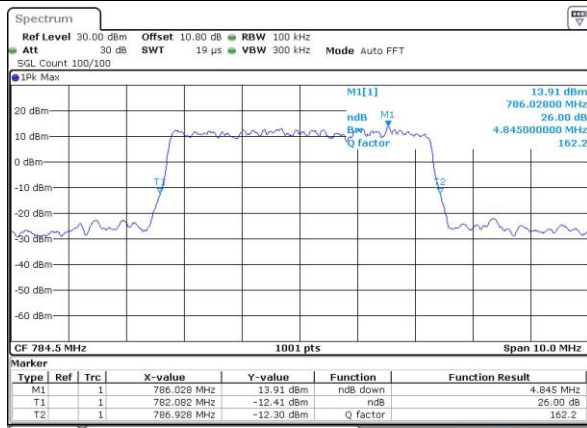
Middle Channel / 5MHz / 64QAM



Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM



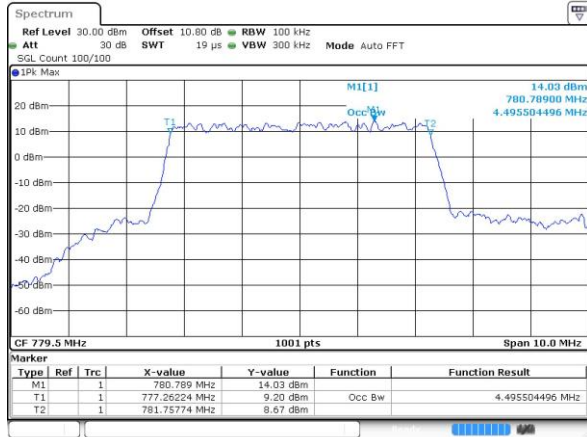
**Occupied Bandwidth**

Mode	LTE Band 13 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.5	4.5	-	-	-	-	-	-
Middle CH	-	-	-	-	4.49	4.49	9.01	9.09	-	-	-	-
Highest CH	-	-	-	-	4.49	4.48	-	-	-	-	-	-
Mode	LTE Band 13 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.50	-	-	-	-	-	-	-
Middle CH	-	-	-	-	4.50	-	9.01	-	-	-	-	-
Highest CH	-	-	-	-	4.50	-	-	-	-	-	-	-



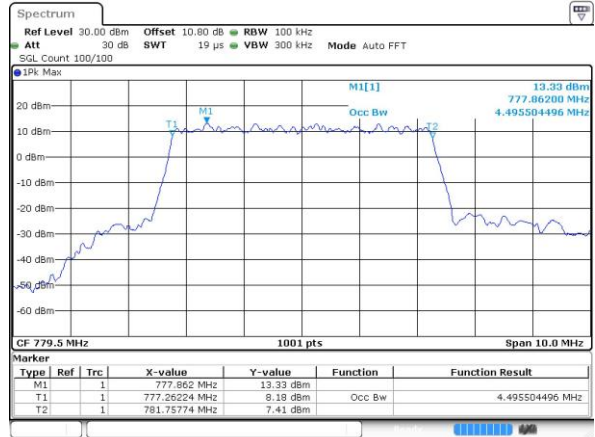
LTE Band 13

Lowest Channel / 5MHz / QPSK



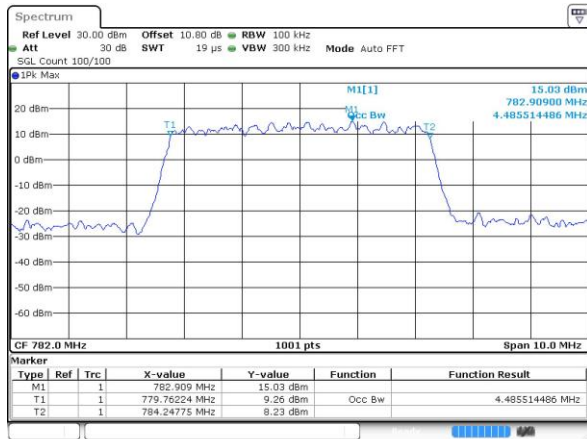
Date: 8 JAN 2019 18:47:54

Lowest Channel / 5MHz / 16QAM



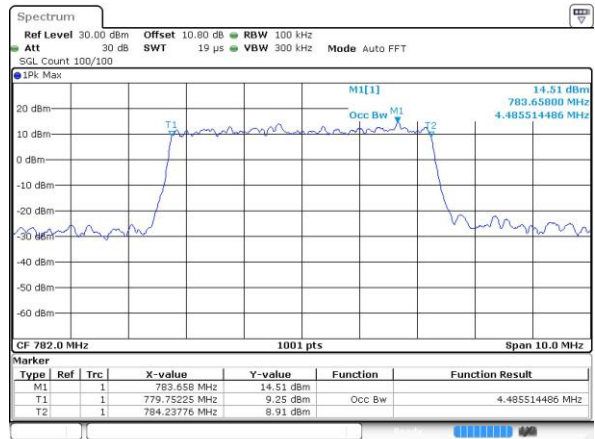
Date: 8 JAN 2019 18:48:07

Middle Channel / 5MHz / QPSK



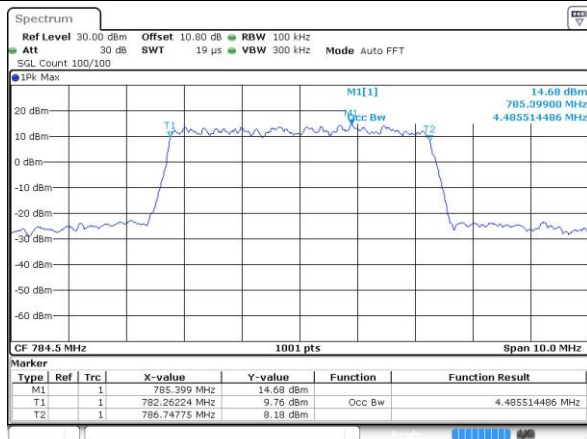
Date: 8 JAN 2019 19:00:07

Middle Channel / 5MHz / 16QAM



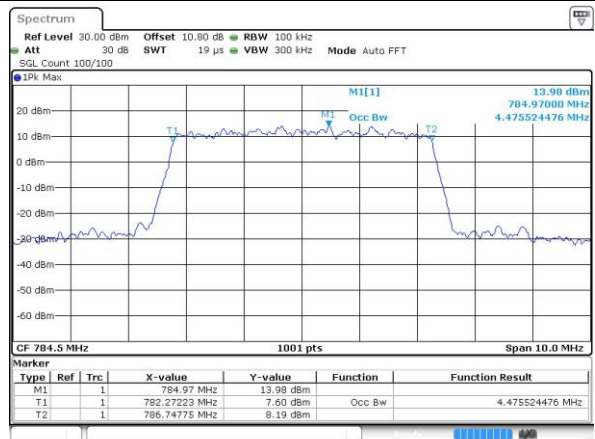
Date: 8 JAN 2019 18:59:55

Highest Channel / 5MHz / QPSK



Date: 8 JAN 2019 19:00:19

Highest Channel / 5MHz / 16QAM



Date: 8 JAN 2019 19:00:31



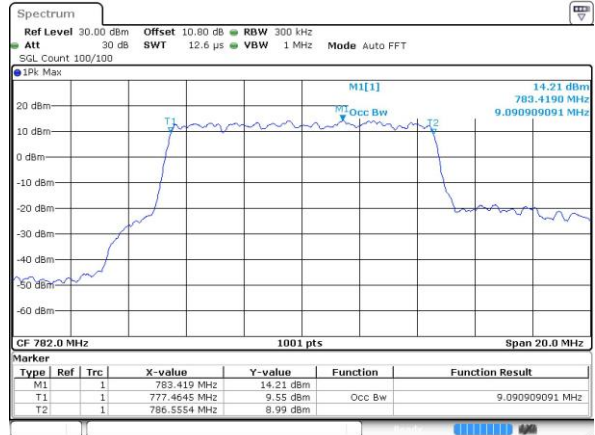
LTE Band 13

Middle Channel / 10MHz / QPSK



Date: 8 JAN 2019 19:20:56

Middle Channel / 10MHz / 16QAM

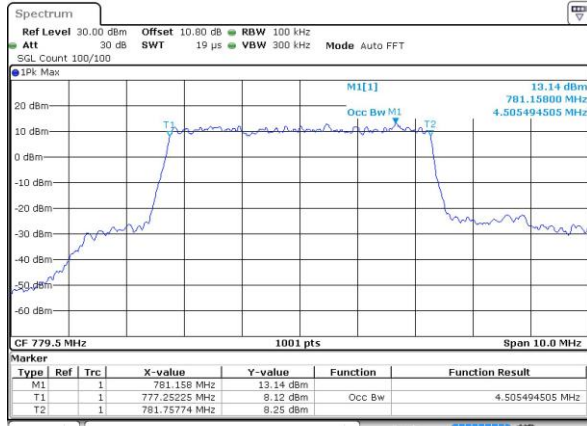


Date: 8 JAN 2019 19:21:08

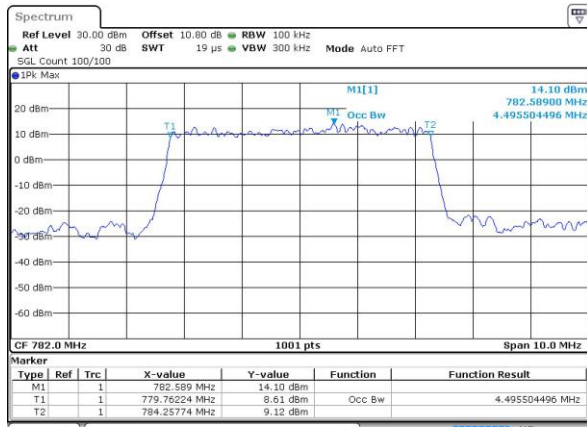


LTE Band 13

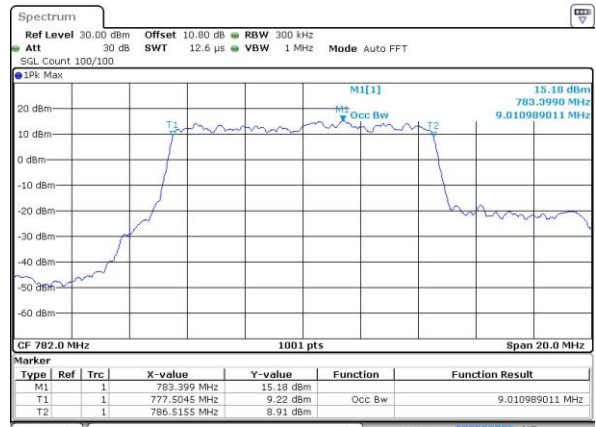
Lowest Channel / 5MHz / 64QAM



Middle Channel / 5MHz / 64QAM



Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM

