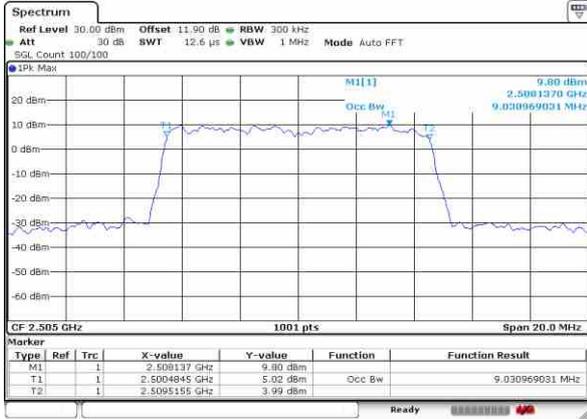




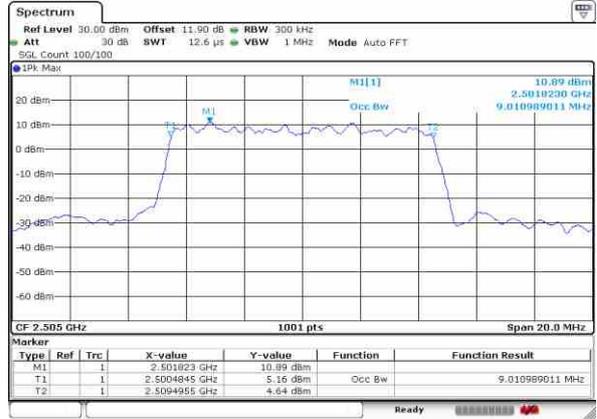
LTE Band 7

Lowest Channel / 10MHz / QPSK



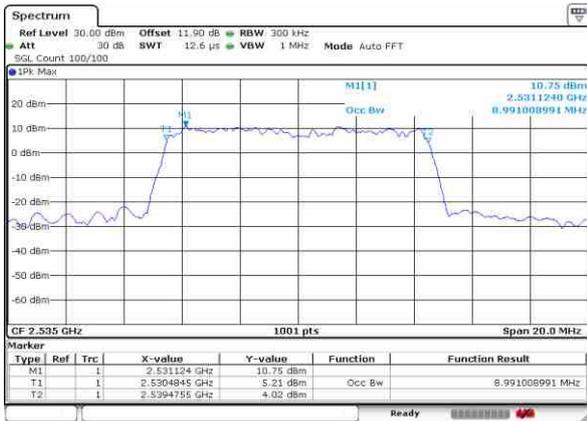
Date: 11.FEB.2019 20:27:17

Lowest Channel / 10MHz / 16QAM



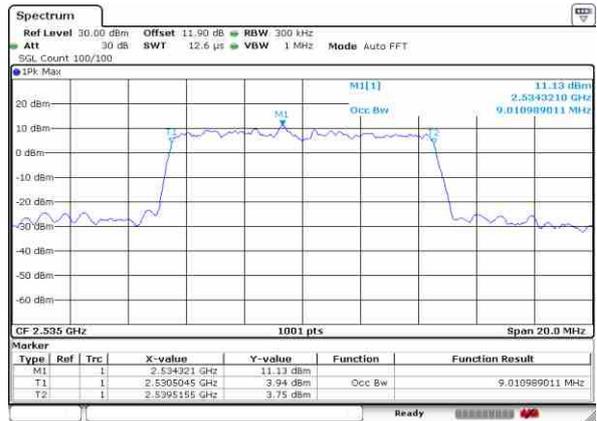
Date: 11.FEB.2019 20:27:49

Middle Channel / 10MHz / QPSK



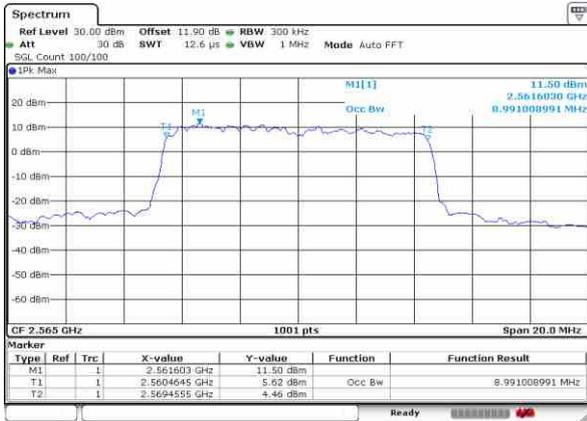
Date: 11.FEB.2019 20:35:01

Middle Channel / 10MHz / 16QAM



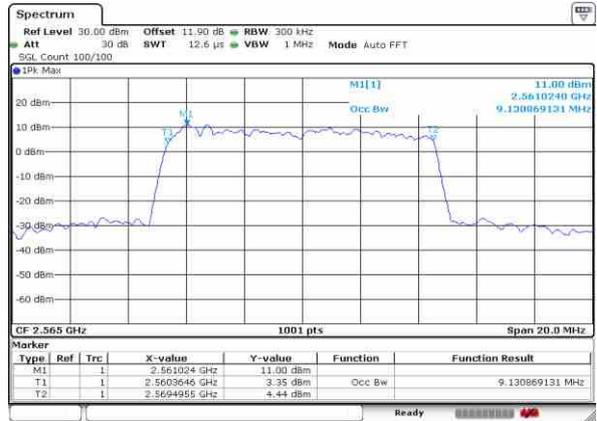
Date: 11.FEB.2019 20:35:13

Highest Channel / 10MHz / QPSK



Date: 11.FEB.2019 20:37:42

Highest Channel / 10MHz / 16QAM

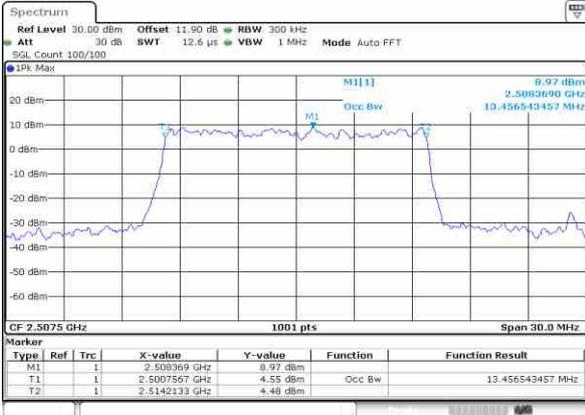


Date: 11.FEB.2019 20:37:54



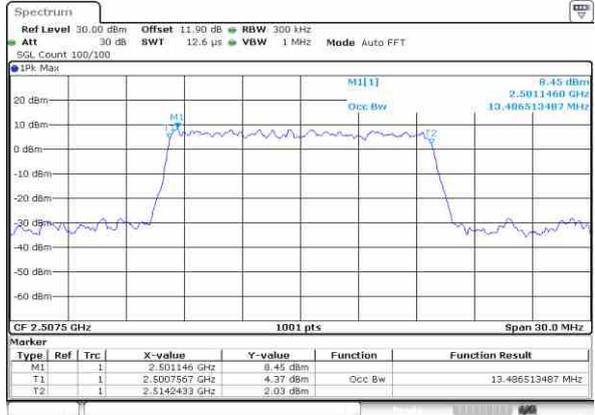
LTE Band 7

Lowest Channel / 15MHz / QPSK



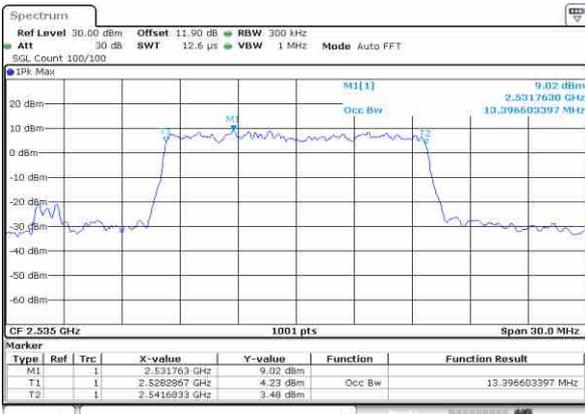
Date: 11.FEB.2019 20:45:03

Lowest Channel / 15MHz / 16QAM



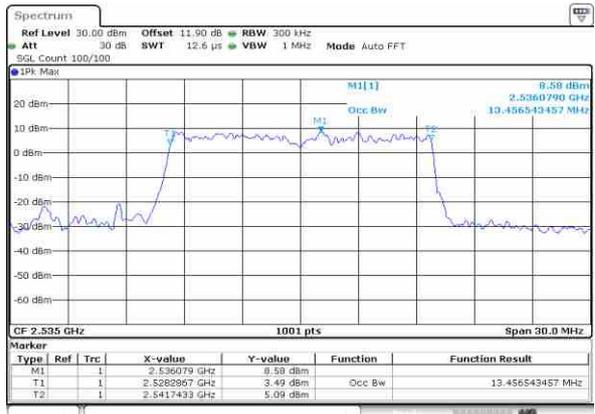
Date: 11.FEB.2019 20:45:14

Middle Channel / 15MHz / QPSK



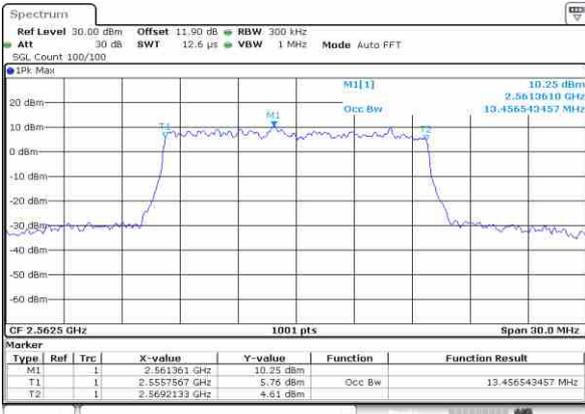
Date: 11.FEB.2019 20:52:21

Middle Channel / 15MHz / 16QAM



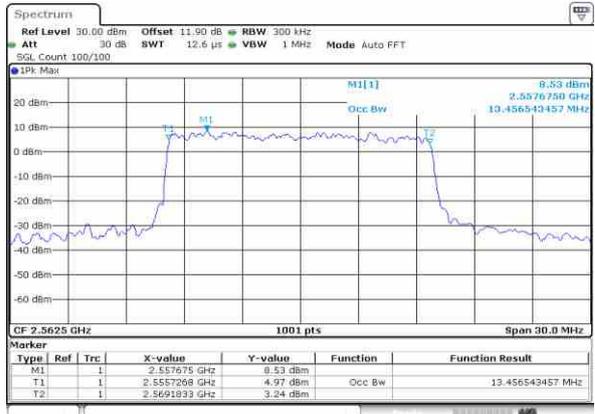
Date: 11.FEB.2019 20:52:32

Highest Channel / 15MHz / QPSK



Date: 11.FEB.2019 20:55:01

Highest Channel / 15MHz / 16QAM



Date: 11.FEB.2019 20:55:12



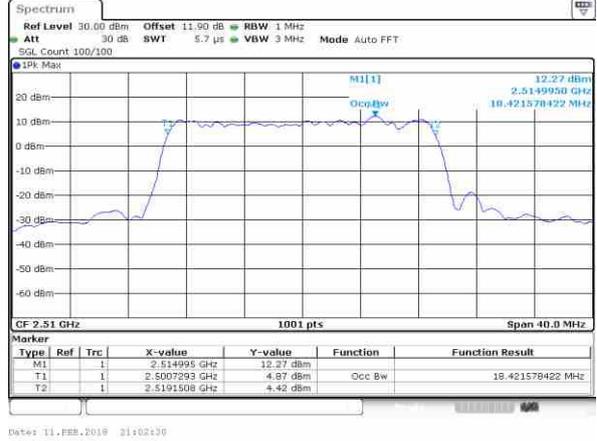
LTE Band 7

Lowest Channel / 20MHz / QPSK



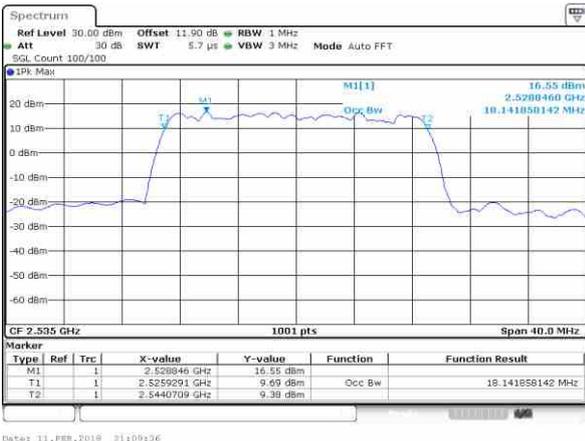
Date: 11.FEB.2019 21:02:16

Lowest Channel / 20MHz / 16QAM



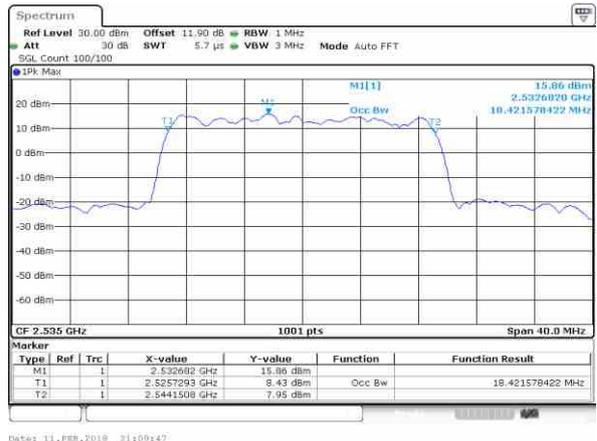
Date: 11.FEB.2019 21:02:19

Middle Channel / 20MHz / QPSK



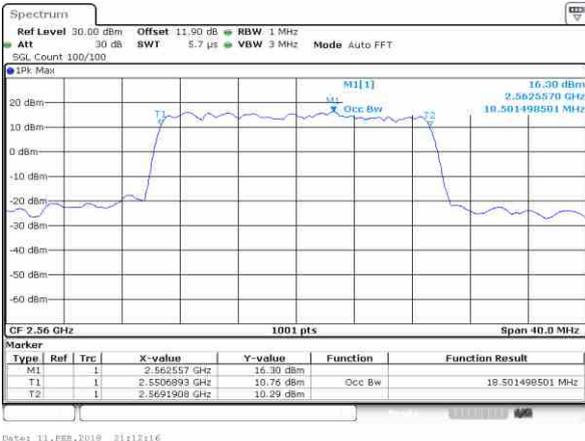
Date: 11.FEB.2019 21:09:16

Middle Channel / 20MHz / 16QAM



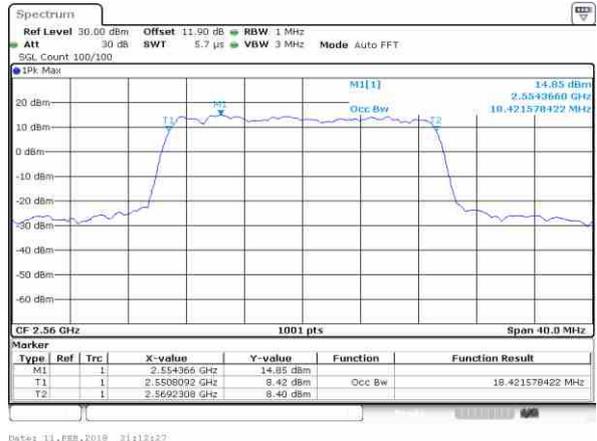
Date: 11.FEB.2019 21:09:47

Highest Channel / 20MHz / QPSK



Date: 11.FEB.2019 21:12:16

Highest Channel / 20MHz / 16QAM

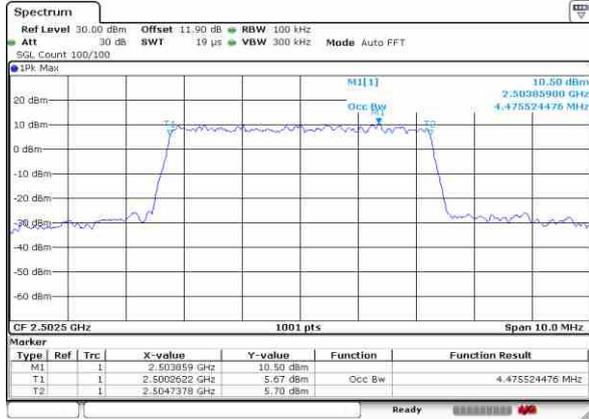


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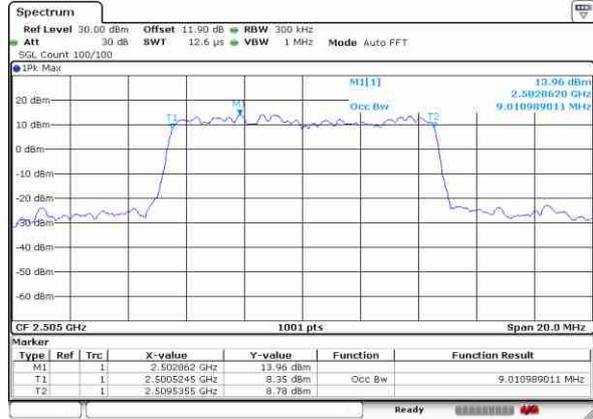
LTE Band 7

Lowest Channel / 5MHz / 64QAM



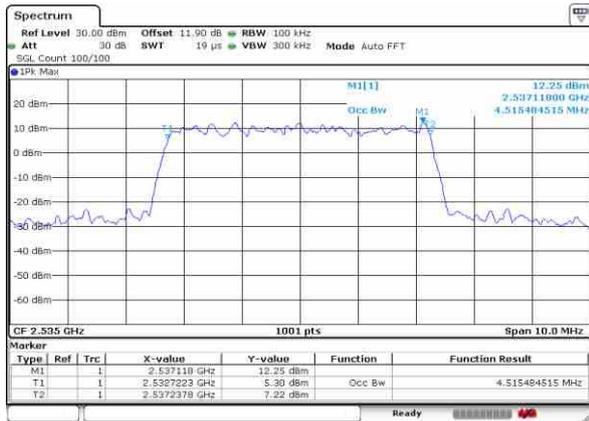
Date: 11.FEB.2019 22:02:28

Lowest Channel / 10MHz / 64QAM



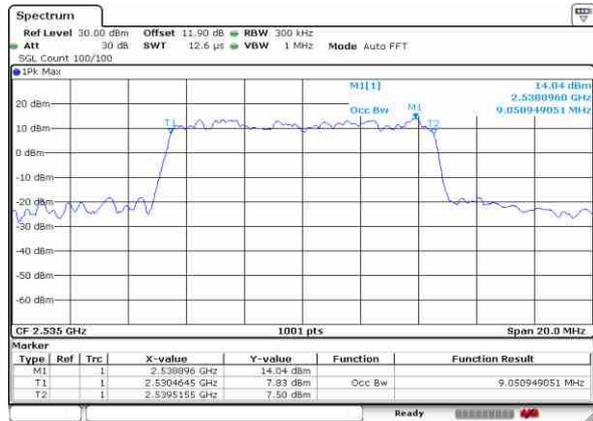
Date: 11.FEB.2019 22:11:10

Middle Channel / 5MHz / 64QAM



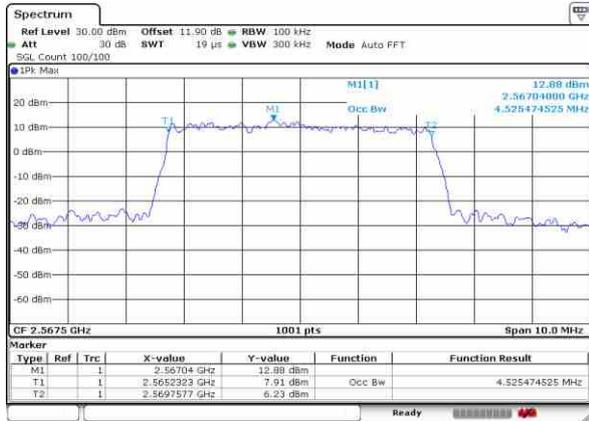
Date: 11.FEB.2019 22:06:09

Middle Channel / 10MHz / 64QAM



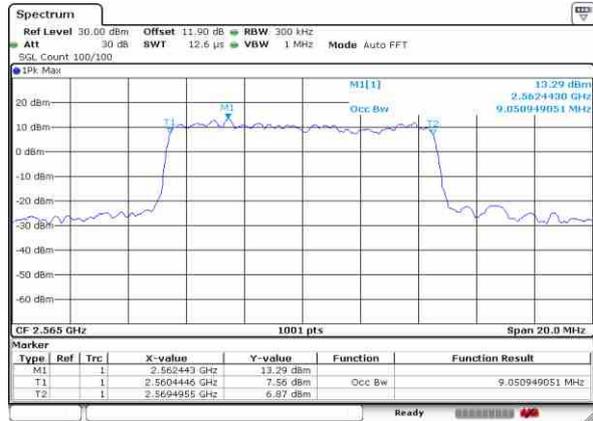
Date: 11.FEB.2019 22:14:51

Highest Channel / 5MHz / 64QAM



Date: 11.FEB.2019 22:07:30

Highest Channel / 10MHz / 64QAM

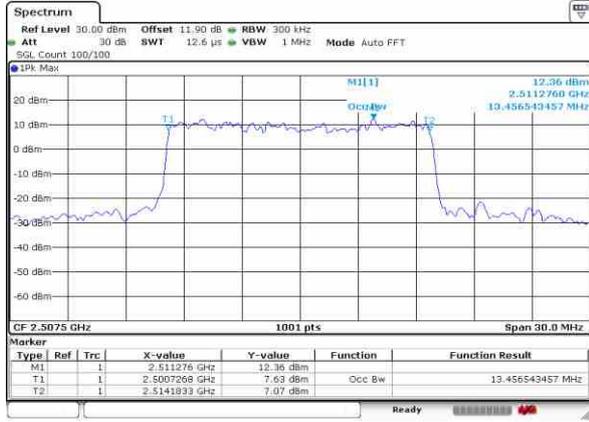


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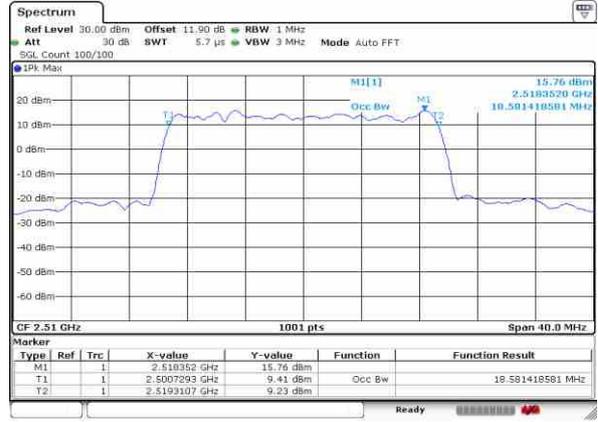
LTE Band 7

Lowest Channel / 15MHz / 64QAM



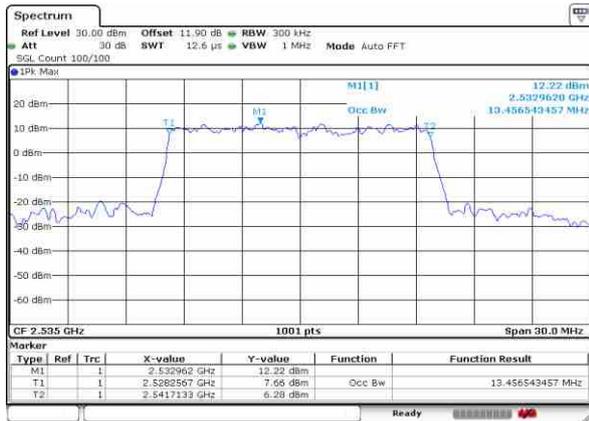
Date: 11.FEB.2019 22:19:53

Lowest Channel / 20MHz / 64QAM



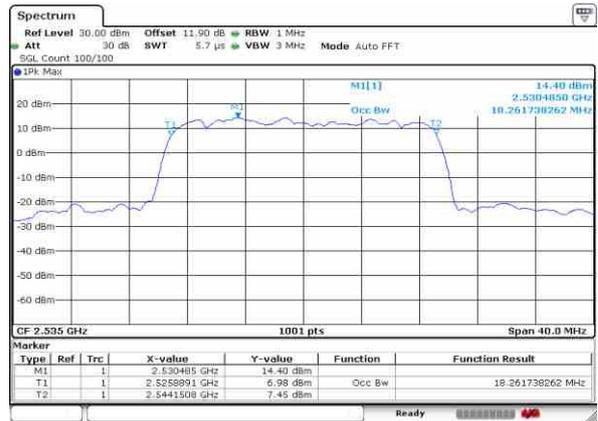
Date: 11.FEB.2019 22:28:35

Middle Channel / 15MHz / 64QAM



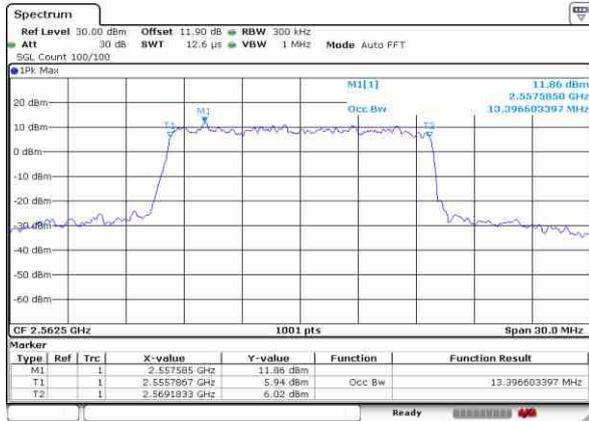
Date: 11.FEB.2019 22:23:34

Middle Channel / 20MHz / 64QAM



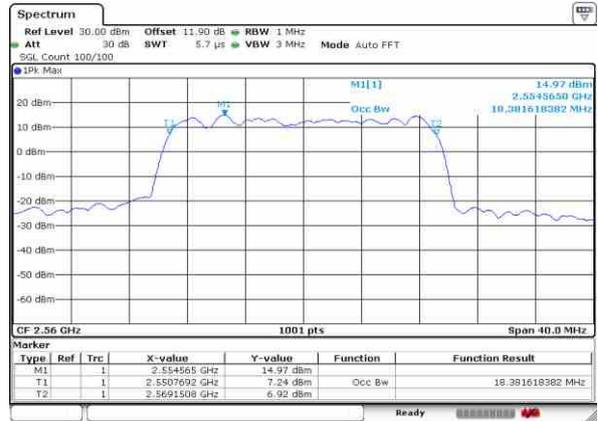
Date: 11.FEB.2019 22:32:16

Highest Channel / 15MHz / 64QAM



Date: 11.FEB.2019 22:24:59

Highest Channel / 20MHz / 64QAM



Date: 11.FEB.2019 22:38:32



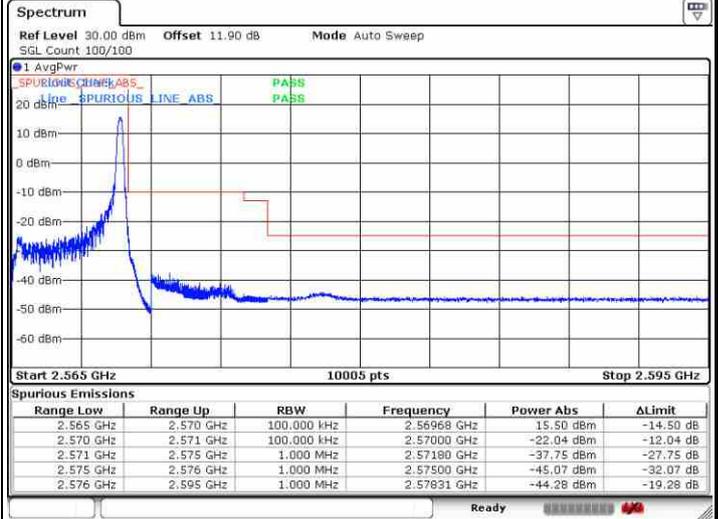
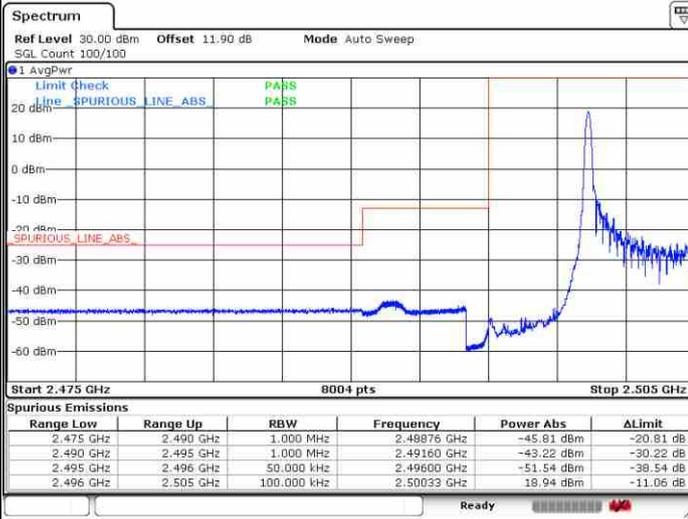
Conducted Band Edge



LTE Band 7 / 5MHz / QPSK

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

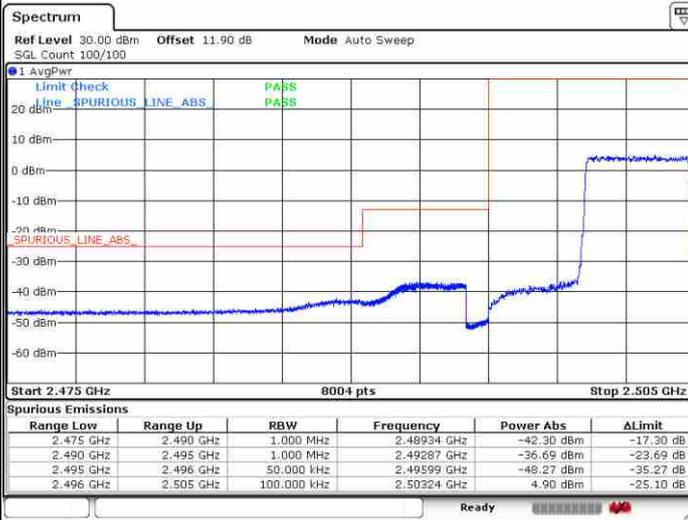


Date: 11.FEB.2018 20:01:42

Date: 11.FEB.2018 20:21:56

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



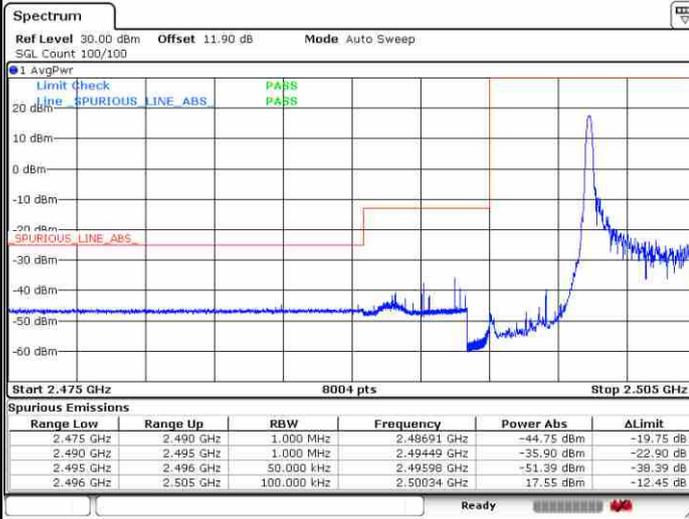
Date: 11.FEB.2018 20:04:04

Date: 11.FEB.2018 20:24:18



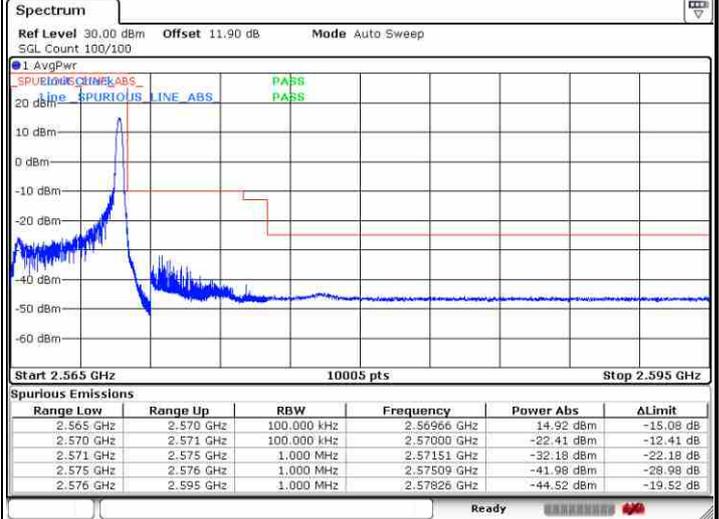
LTE Band 7 / 5MHz / 16QAM

Lowest Band Edge / 1 RB



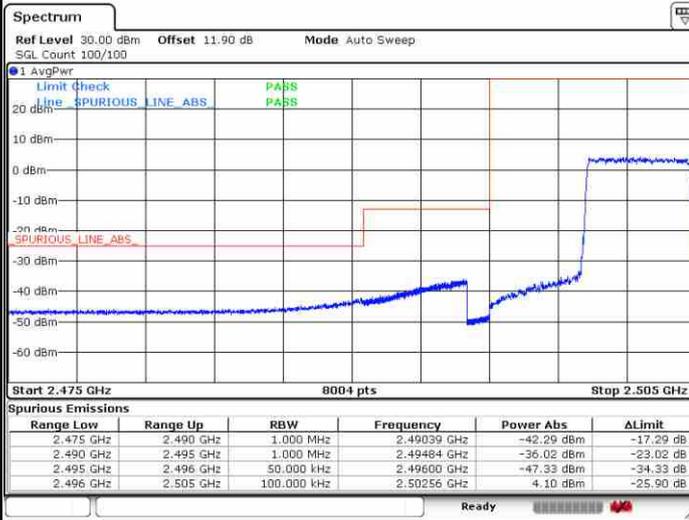
Date: 11.FEB.2018 20:02:53

Highest Band Edge / 1 RB



Date: 11.FEB.2018 20:23:06

Lowest Band Edge / Full RB



Date: 11.FEB.2018 20:05:15

Highest Band Edge / Full RB

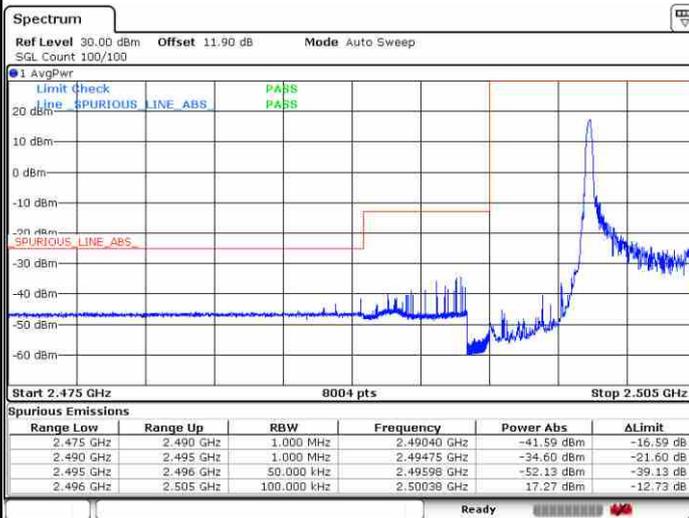


Date: 11.FEB.2018 20:25:30



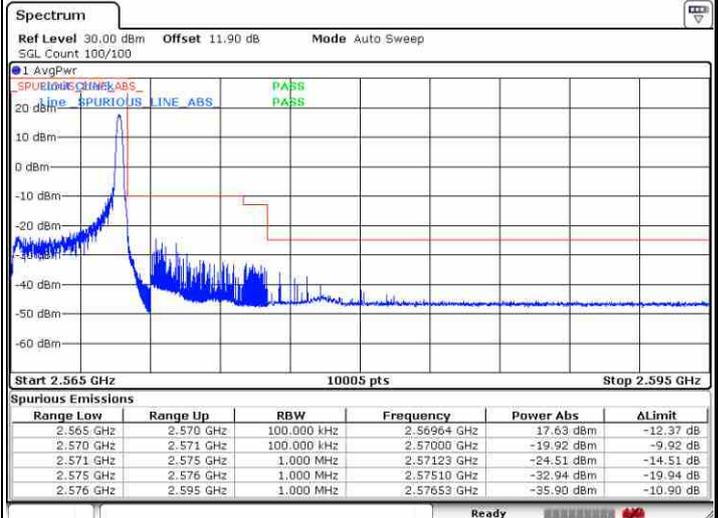
LTE Band 7 / 5MHz / 64QAM

Lowest Band Edge / 1RB



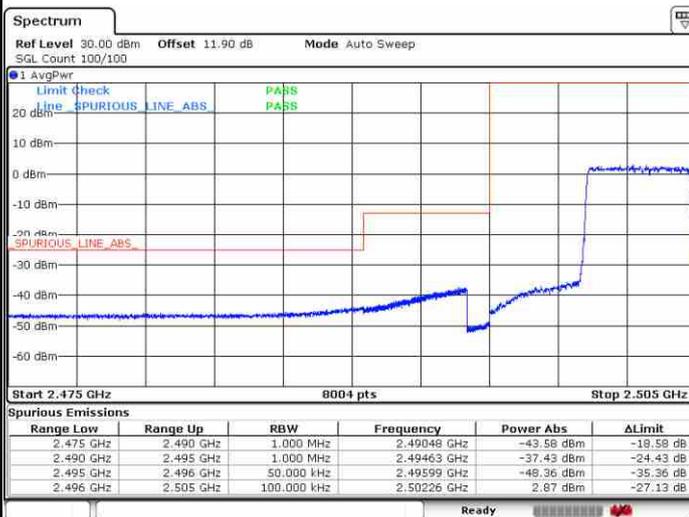
Date: 11.FEB.2018 22:03:49

Highest Band Edge / 1 RB



Date: 11.FEB.2018 22:08:51

Lowest Band Edge / Full RB



Date: 11.FEB.2018 22:05:00

Highest Band Edge / Full RB



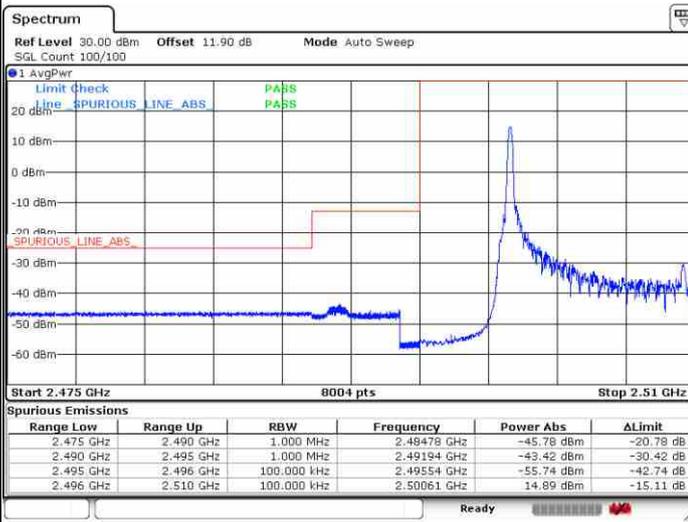
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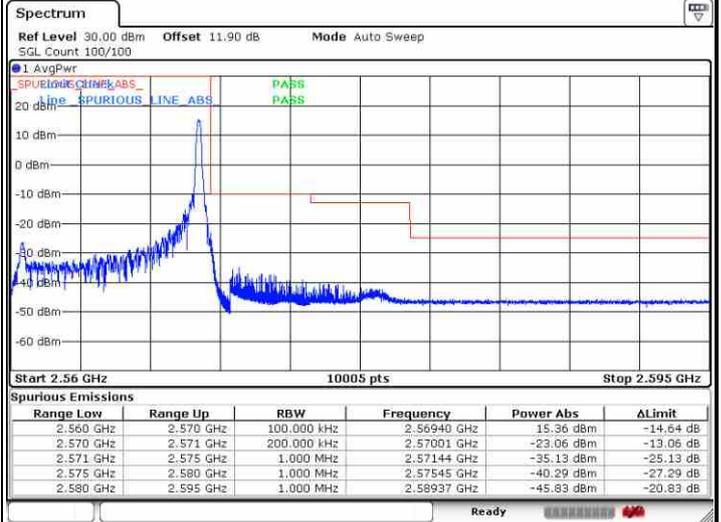
LTE Band 7 / 10MHz / QPSK

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB



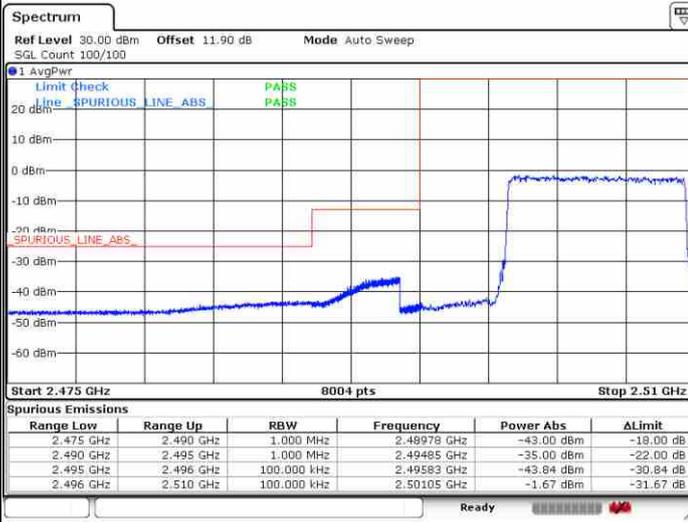
Date: 11.FEB.2018 20:29:23



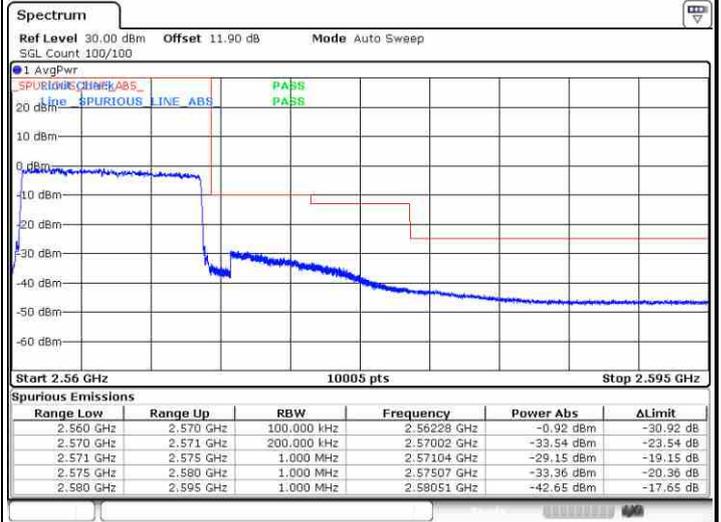
Date: 11.FEB.2018 20:39:27

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 11.FEB.2018 20:31:42

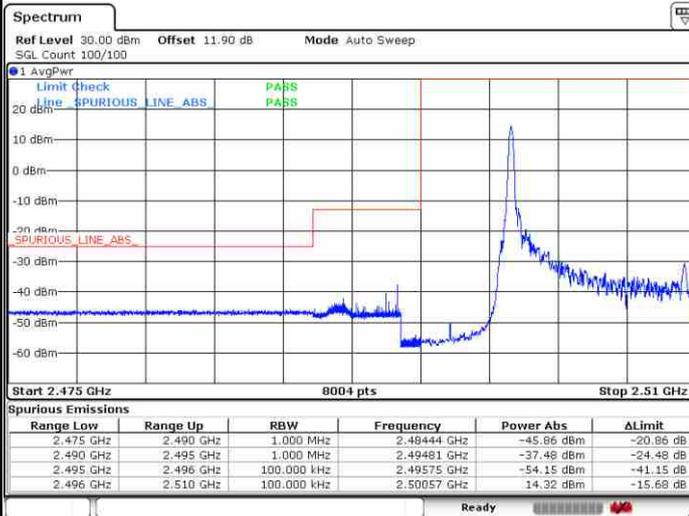


Date: 11.FEB.2018 20:41:46



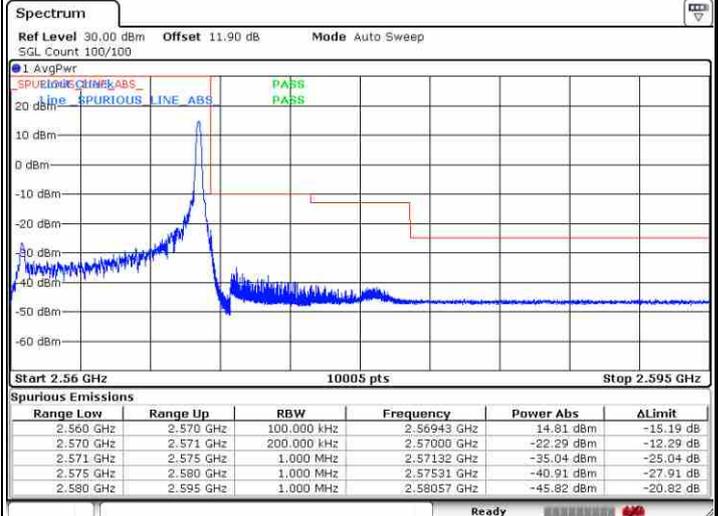
LTE Band 7 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



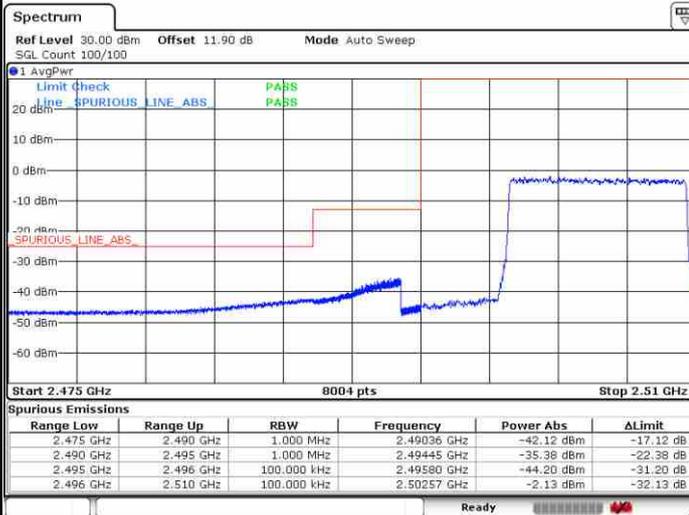
Date: 11.FEB.2018 20:30:33

Highest Band Edge / 1 RB



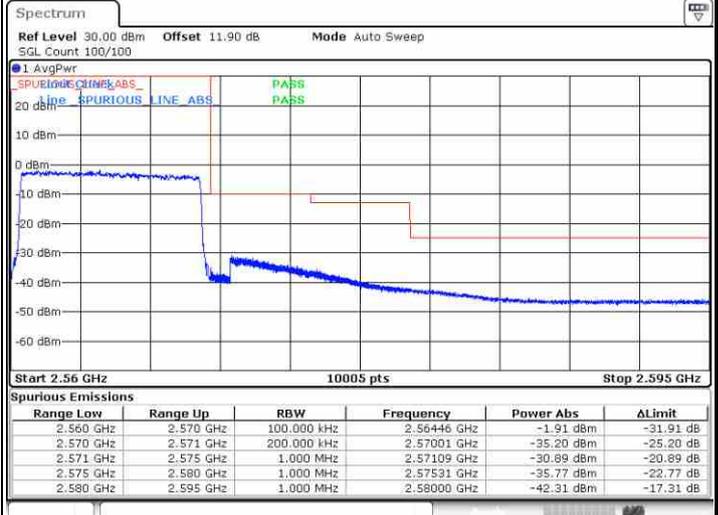
Date: 11.FEB.2018 20:40:37

Lowest Band Edge / Full RB



Date: 11.FEB.2018 20:32:51

Highest Band Edge / Full RB

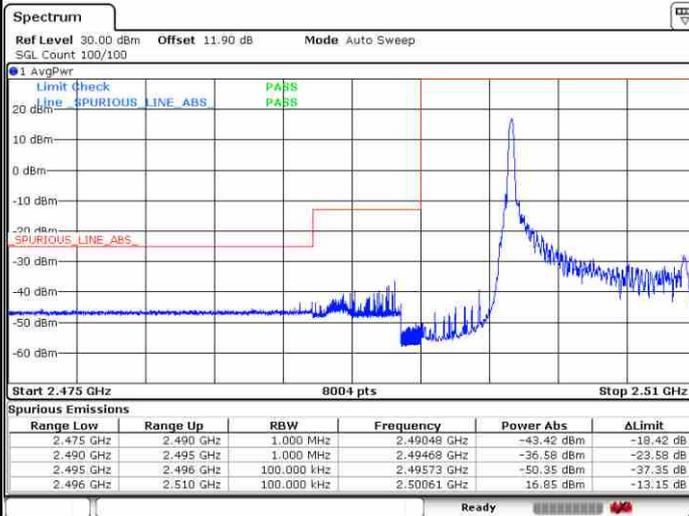


Date: 11.FEB.2018 20:42:57



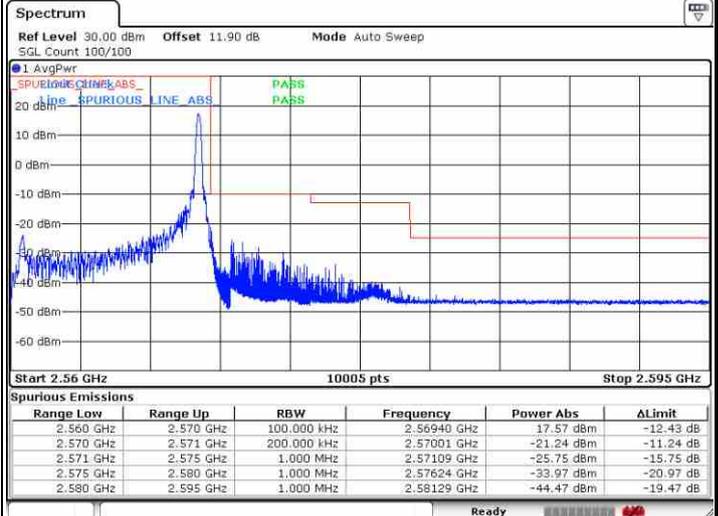
LTE Band 7 / 10MHz / 64QAM

Lowest Band Edge / 1 RB



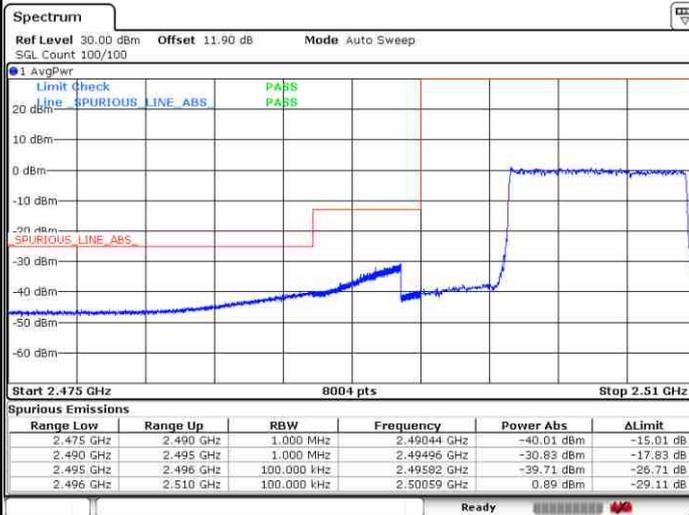
Date: 11.FEB.2018 22:12:32

Highest Band Edge / 1 RB



Date: 11.FEB.2018 22:17:34

Lowest Band Edge / Full RB



Date: 11.FEB.2018 22:13:42

Highest Band Edge / Full RB

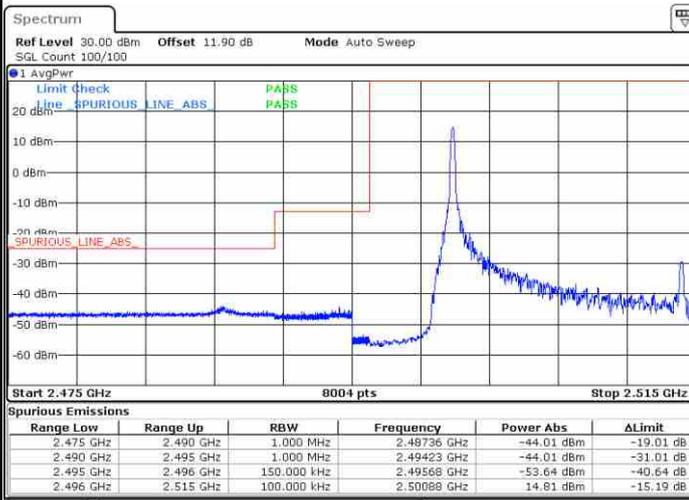


Date: 11.FEB.2018 22:18:44



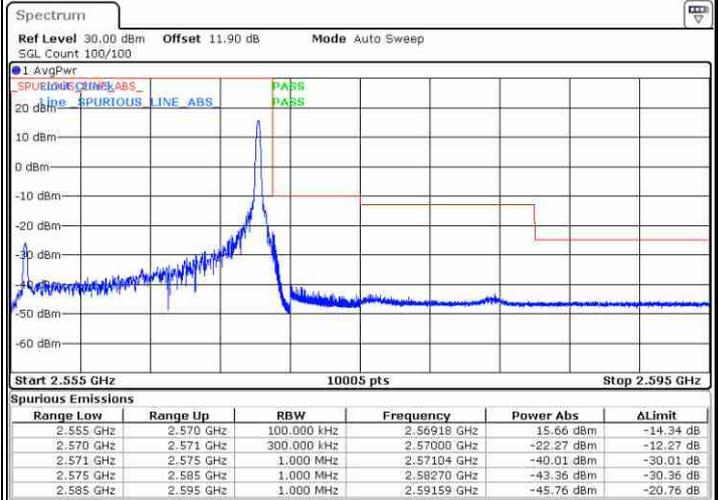
LTE Band 7 / 15MHz / QPSK

Lowest Band Edge / 1 RB



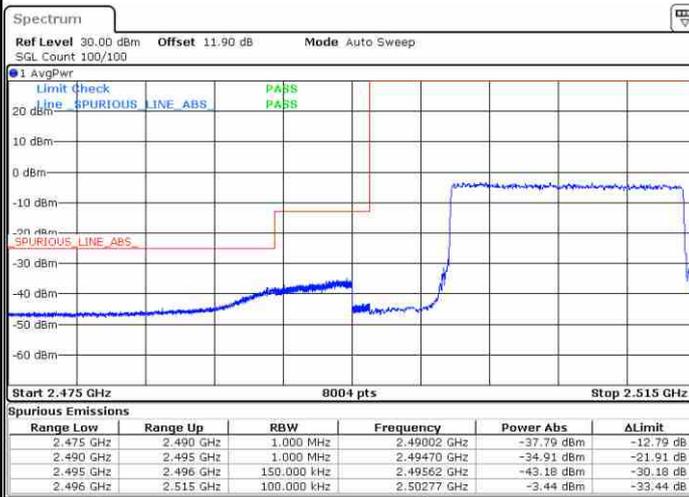
Date: 11.FEB.2018 20:46:46

Highest Band Edge / 1 RB



Date: 11.FEB.2018 20:56:44

Lowest Band Edge / Full RB



Date: 11.FEB.2018 20:49:05

Highest Band Edge / Full RB

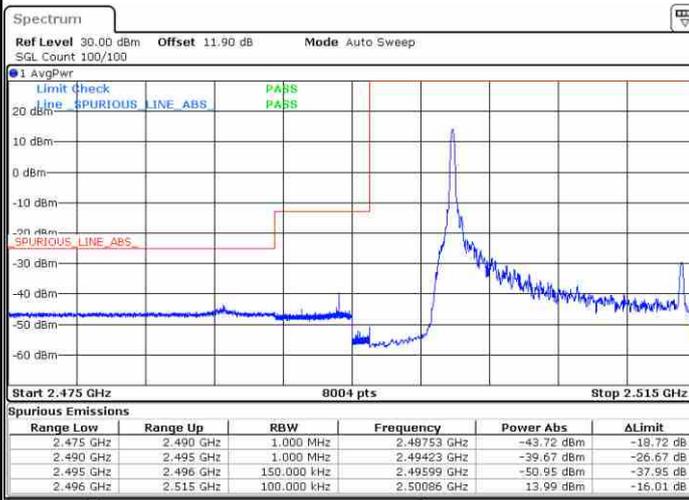


Date: 11.FEB.2018 20:59:03



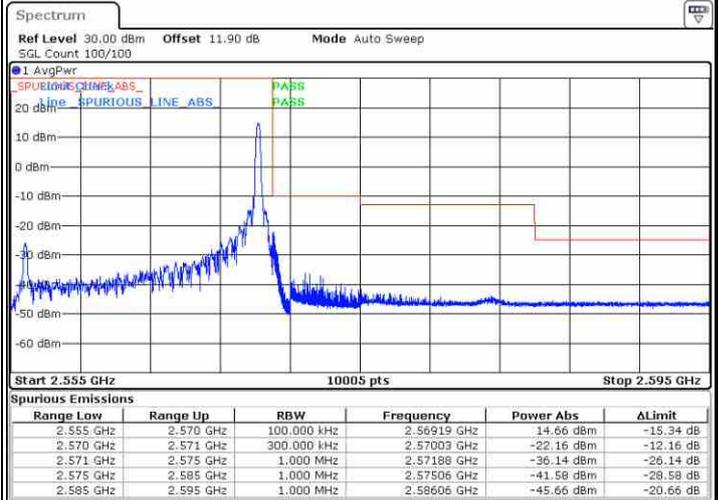
LTE Band 7 / 15MHz / 16QAM

Lowest Band Edge / 1 RB



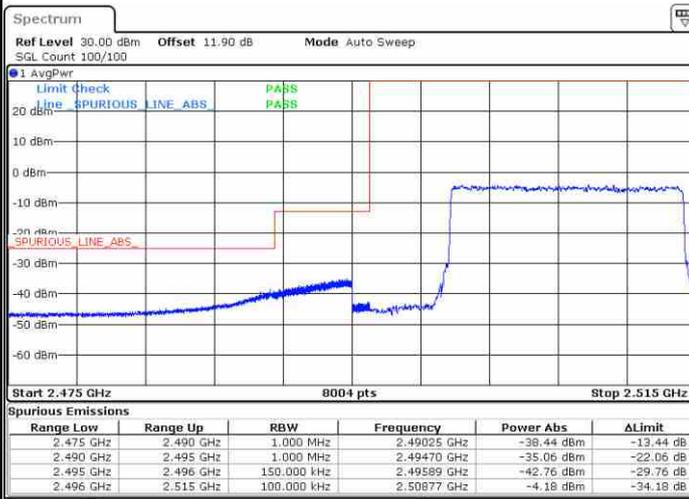
Date: 11.FEB.2018 20:47:56

Highest Band Edge / 1 RB



Date: 11.FEB.2018 20:57:54

Lowest Band Edge / Full RB



Date: 11.FEB.2018 20:50:14

Highest Band Edge / Full RB

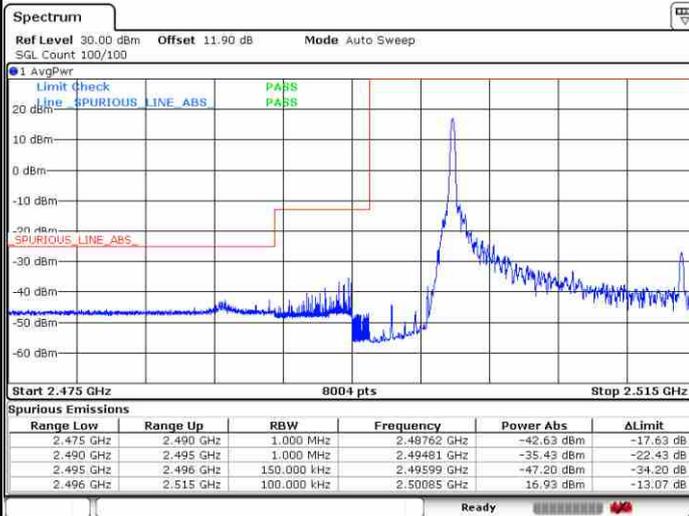


Date: 11.FEB.2018 21:00:13



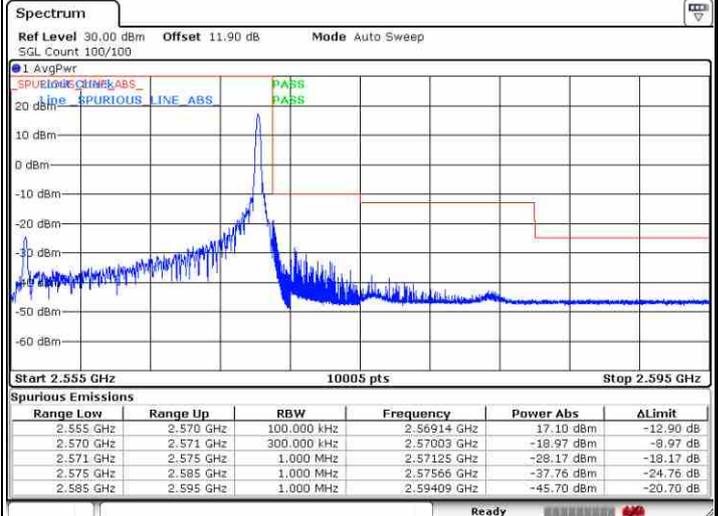
LTE Band 7 / 15MHz / 64QAM

Lowest Band Edge / 1 RB



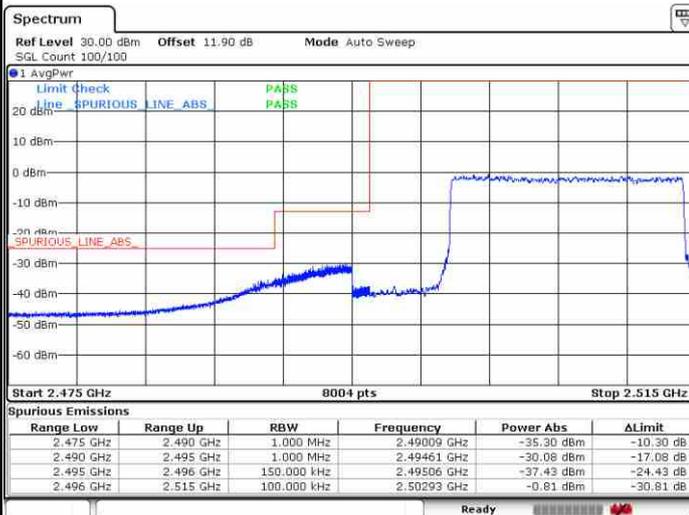
Date: 11.FEB.2018 22:21:15

Highest Band Edge / 1 RB



Date: 11.FEB.2018 22:26:16

Lowest Band Edge / Full RB



Date: 11.FEB.2018 22:22:25

Highest Band Edge / Full RB

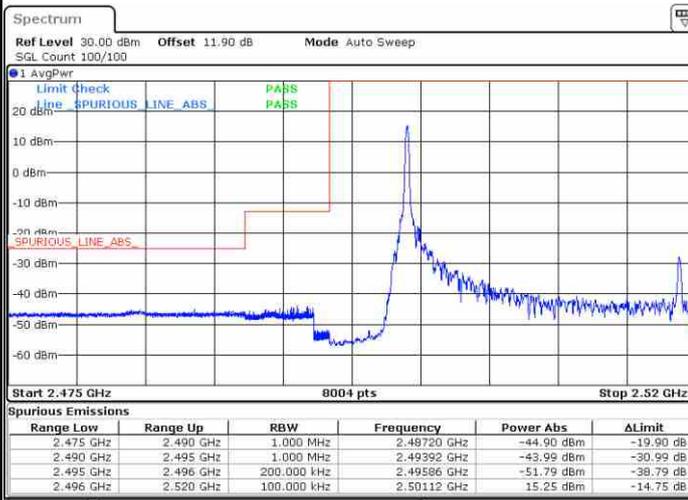


Date: 11.FEB.2018 22:27:26



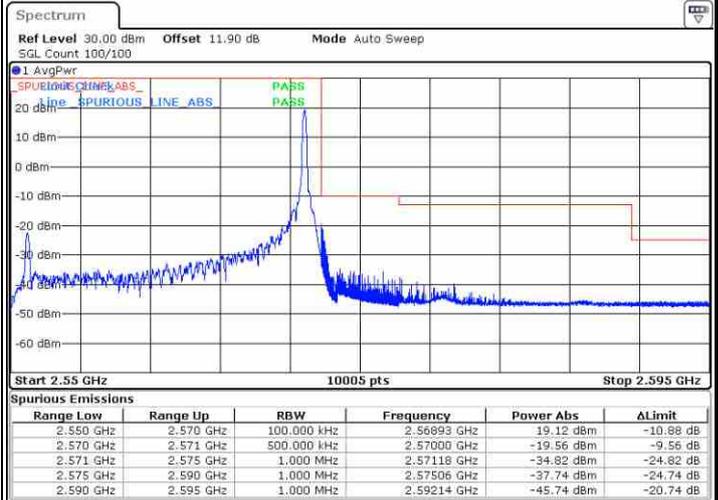
LTE Band 7 / 20MHz / QPSK

Lowest Band Edge / 1 RB



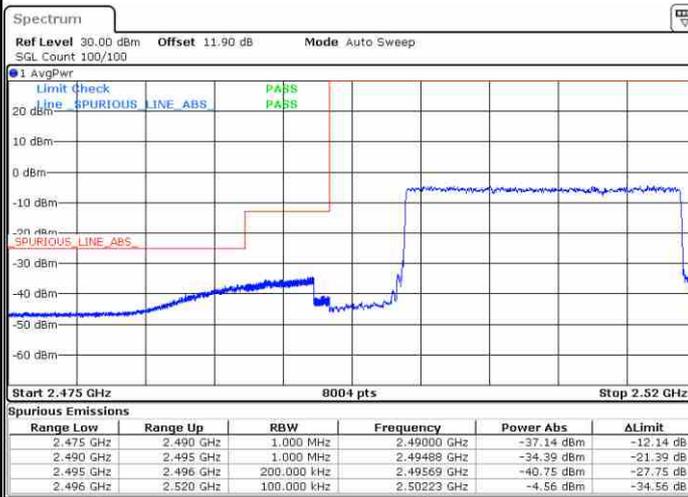
Date: 11.FEB.2018 21:04:02

Highest Band Edge / 1 RB



Date: 11.FEB.2018 21:14:00

Lowest Band Edge / Full RB



Date: 11.FEB.2018 21:06:21

Highest Band Edge / Full RB

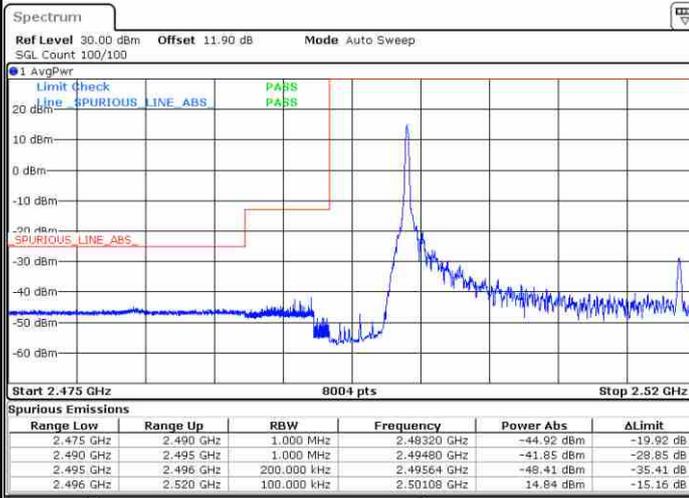


Date: 11.FEB.2018 21:17:28



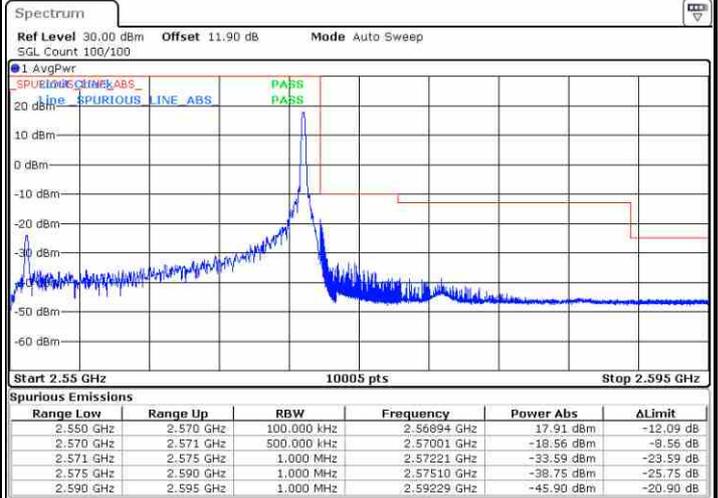
LTE Band 7 / 20MHz / 16QAM

Lowest Band Edge / 1 RB



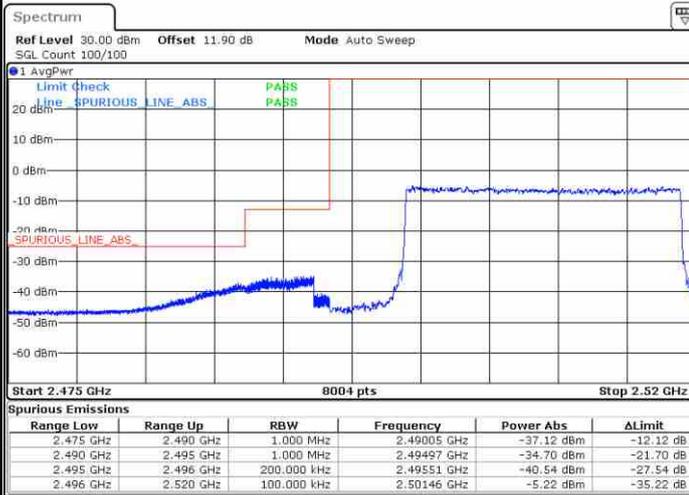
Date: 11.FEB.2018 21:05:12

Highest Band Edge / 1RB



Date: 11.FEB.2018 21:15:09

Lowest Band Edge / Full RB



Date: 11.FEB.2018 21:07:31

Highest Band Edge / Full RB

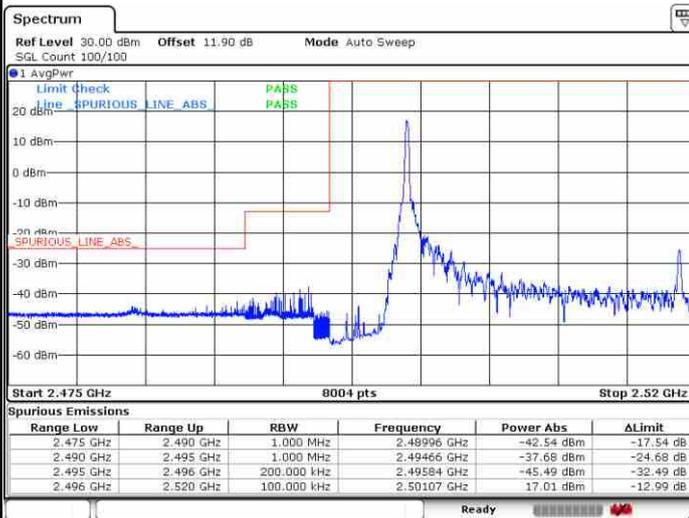


Date: 11.FEB.2018 21:16:19



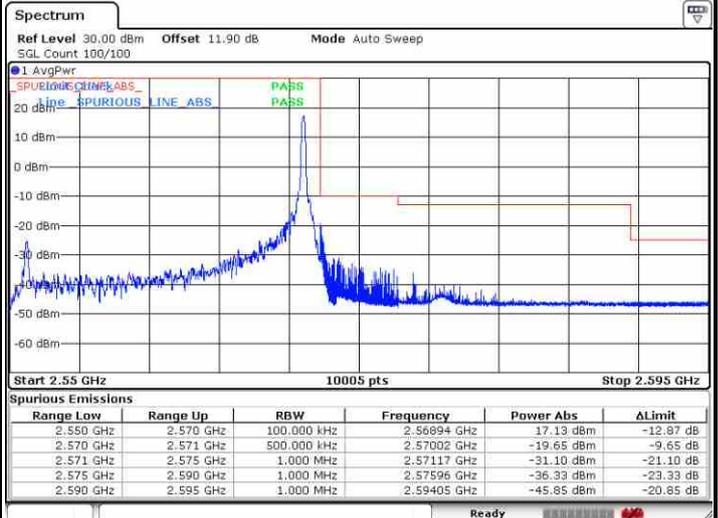
LTE Band 7 / 20MHz / 64QAM

Lowest Band Edge / 1 RB



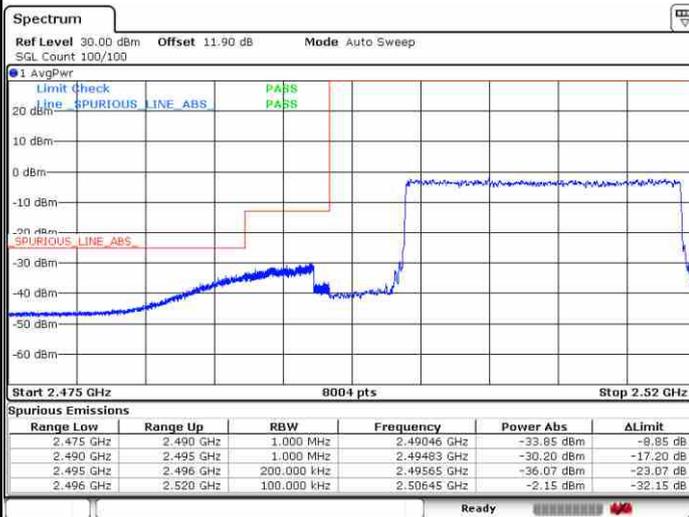
Date: 11.FEB.2018 22:29:56

Highest Band Edge / 1 RB



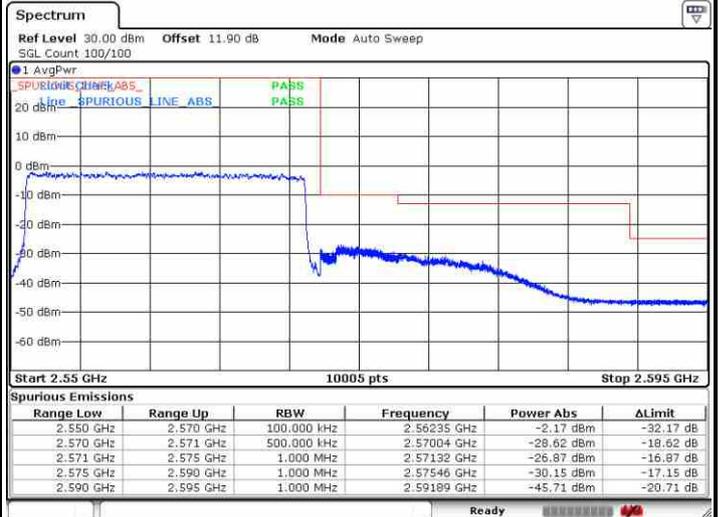
Date: 11.FEB.2018 22:38:54

Lowest Band Edge / Full RB



Date: 11.FEB.2018 22:31:06

Highest Band Edge / Full RB



Date: 11.FEB.2018 22:41:05



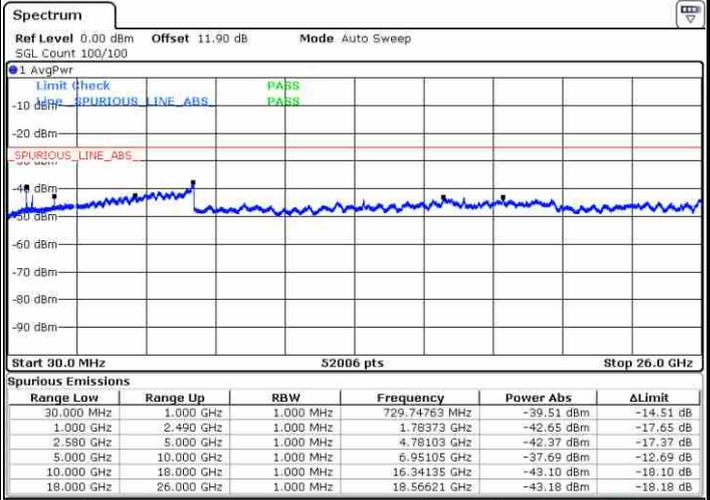
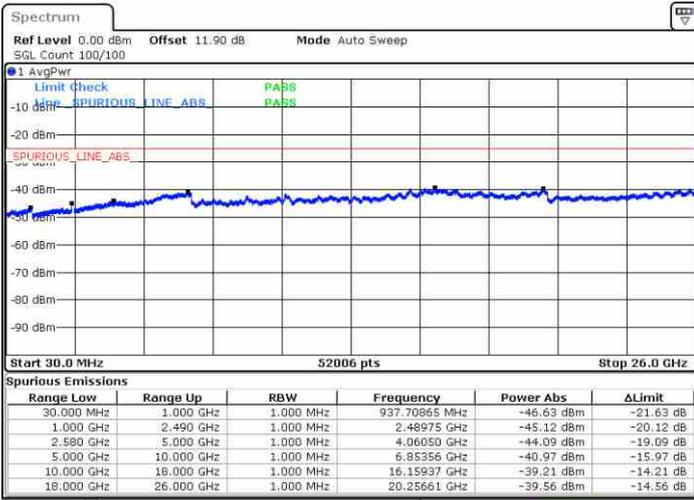
Conducted Spurious Emission



LTE Band 7 / 5MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

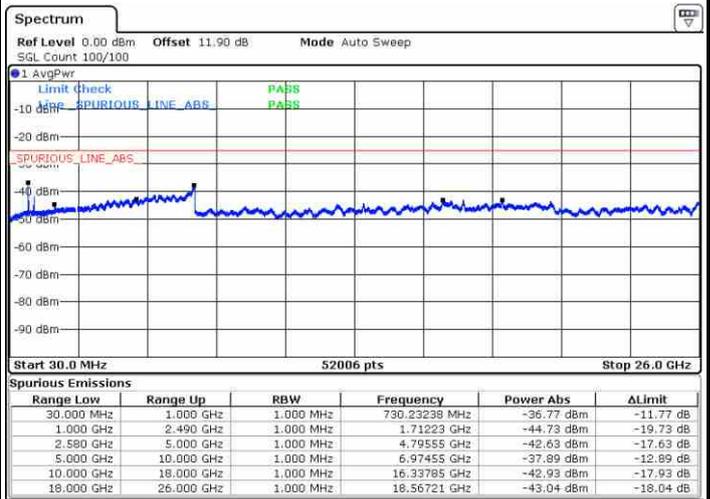
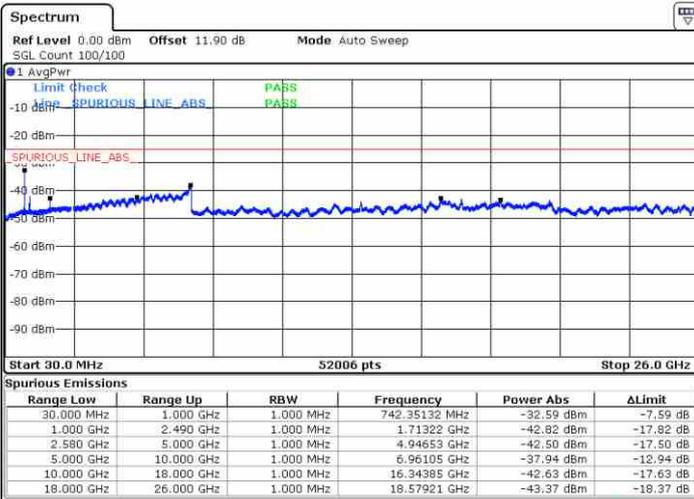


Date: 12.FEB.2018 08:23:17

Date: 11.FEB.2018 20:17:17

Middle Channel / QPSK

Middle Channel / 16QAM



Date: 11.FEB.2018 20:19:02

Date: 11.FEB.2018 20:20:00



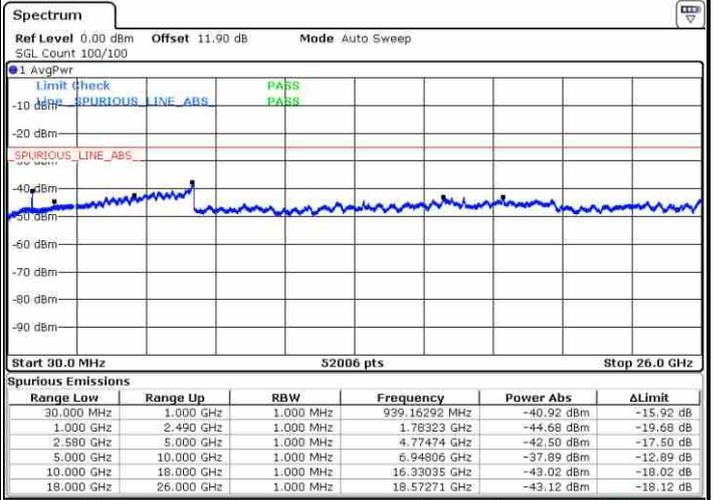
LTE Band 7 / 5MHz

Highest Channel / QPSK



Date: 11.FEB.2018 20:26:26

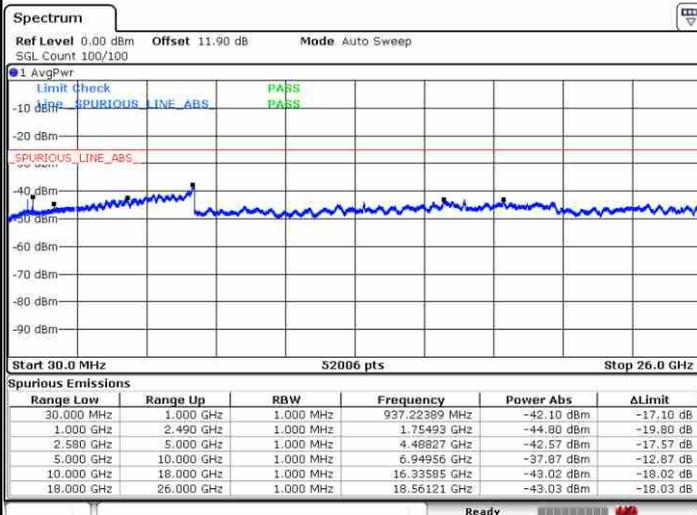
Highest Channel / 16QAM



Date: 11.FEB.2018 20:27:24

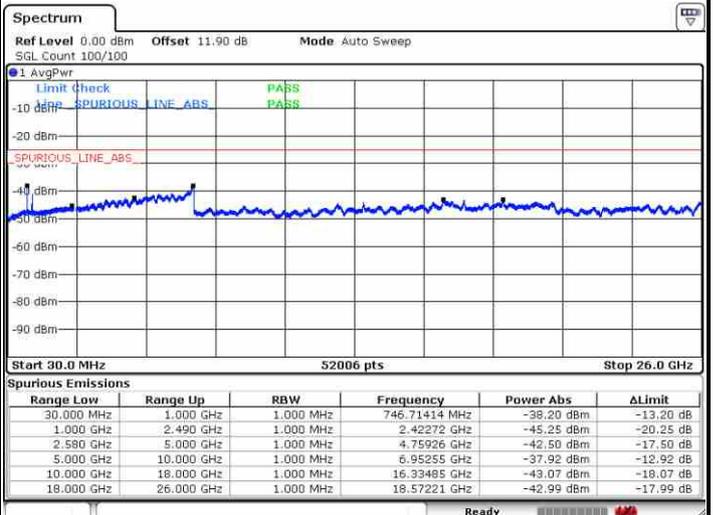
LTE Band 7 / 10MHz

Lowest Channel / QPSK



Date: 11.FEB.2018 20:33:50

Lowest Channel / 16QAM



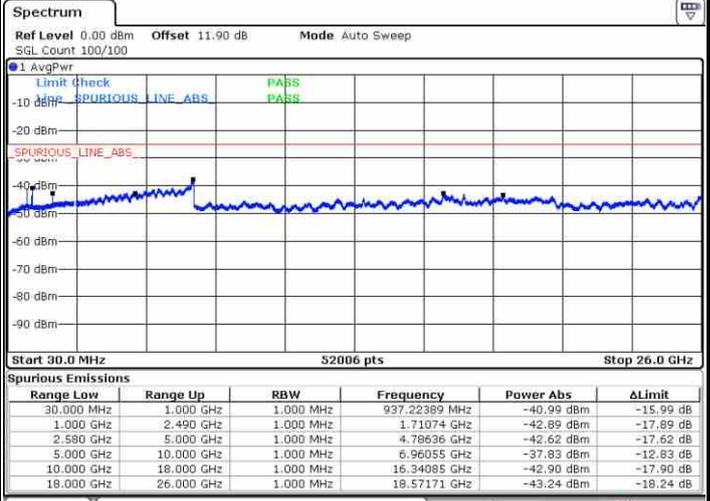
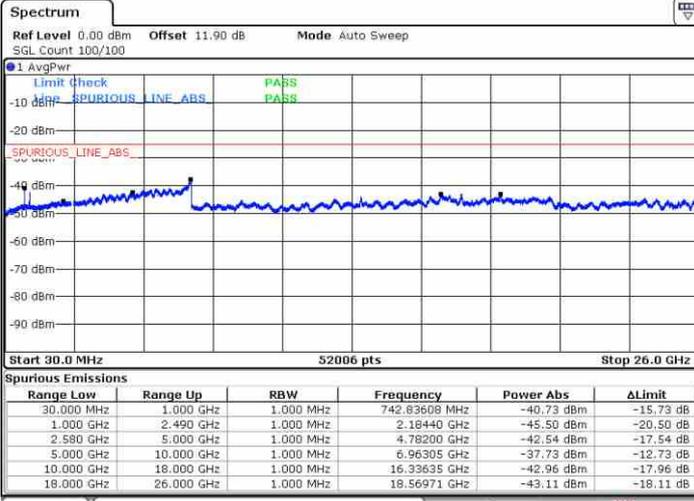
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LTE Band 7 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM

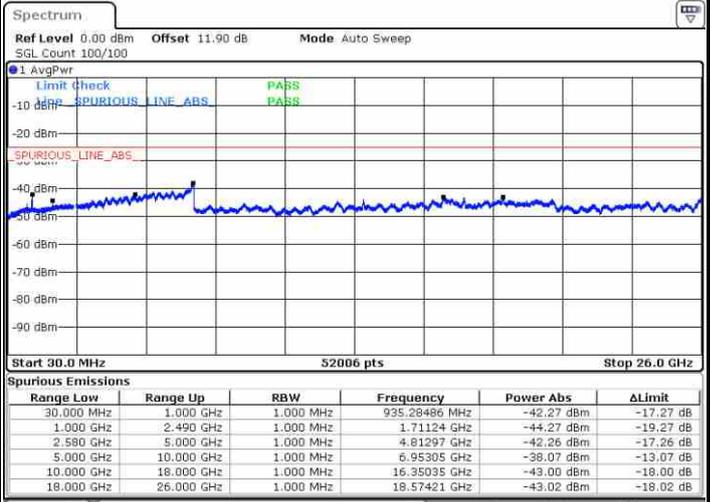
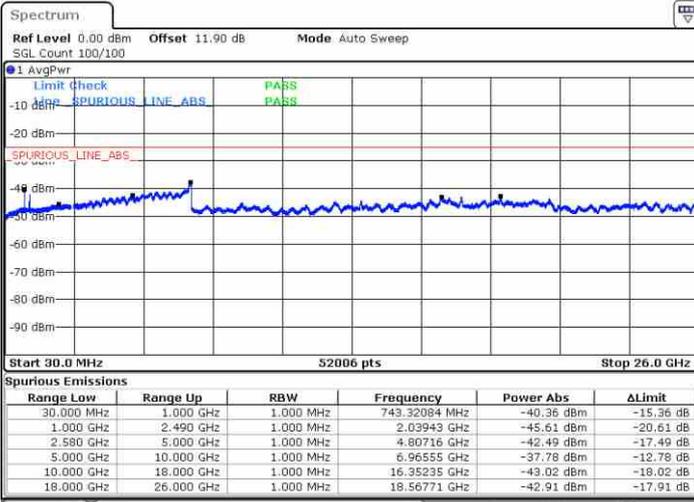


Date: 11.FEB.2018 20:36:32

Date: 11.FEB.2018 20:37:30

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 11.FEB.2018 20:43:53

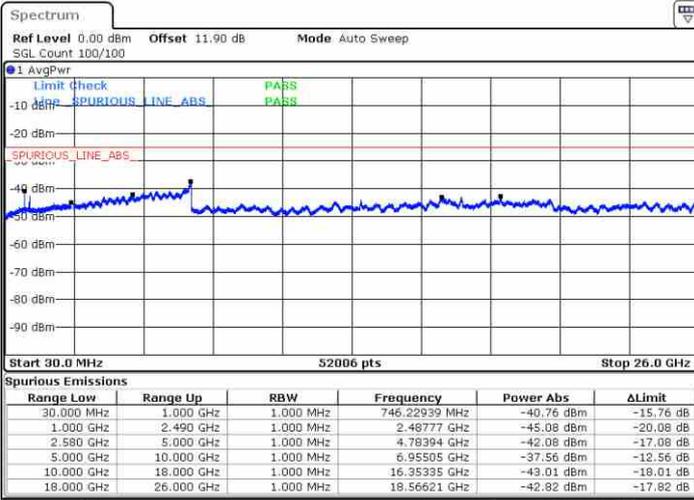
Date: 11.FEB.2018 20:44:50



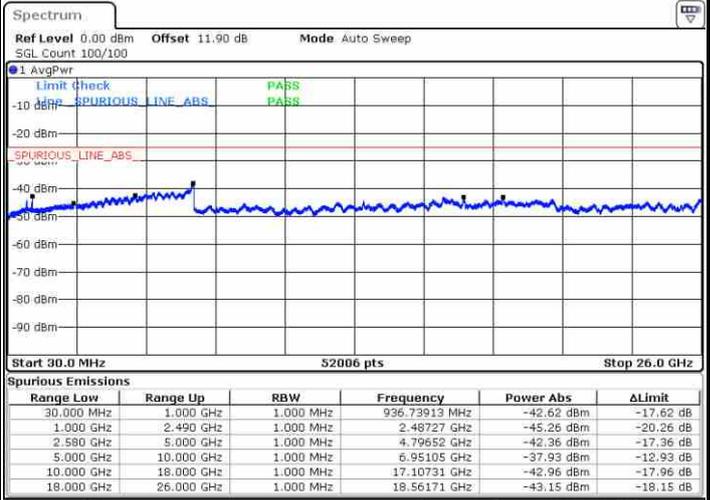
LTE Band 7 / 15MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM



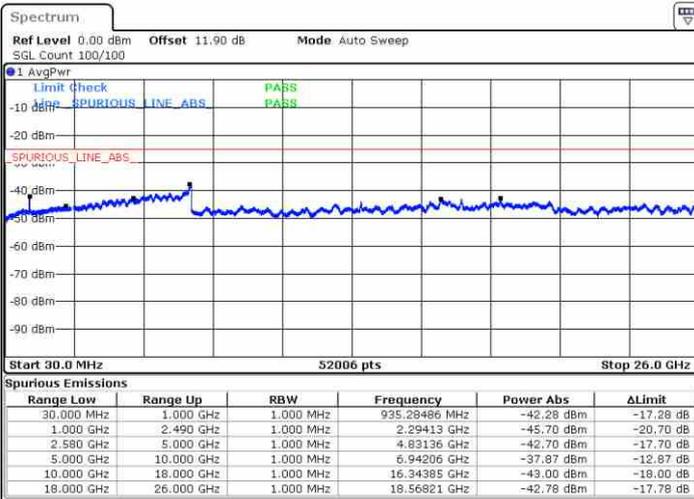
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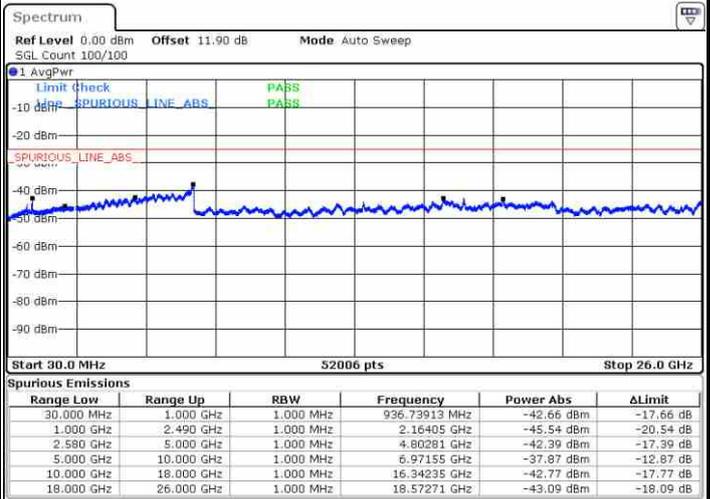
Date: 11.FEB.2018 20:52:08

Middle Channel / QPSK

Middle Channel / 16QAM



Date: 11.FEB.2018 20:53:51



Date: 11.FEB.2018 20:54:48



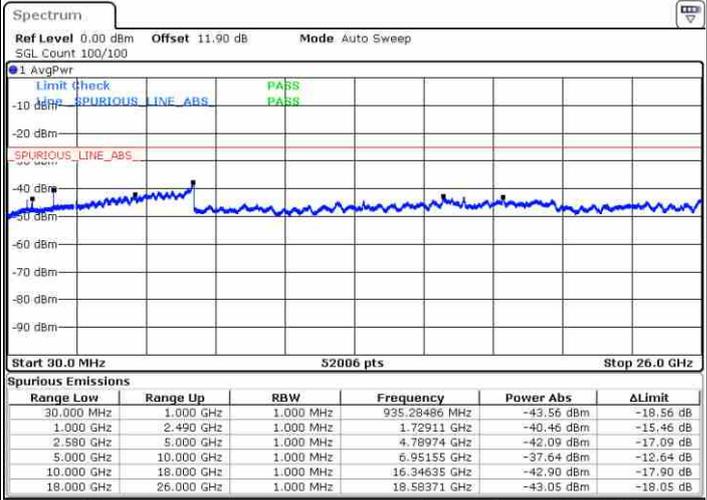
LTE Band7 / 15MHz

Highest Channel / QPSK



Date: 11.FEB.2018 21:01:09

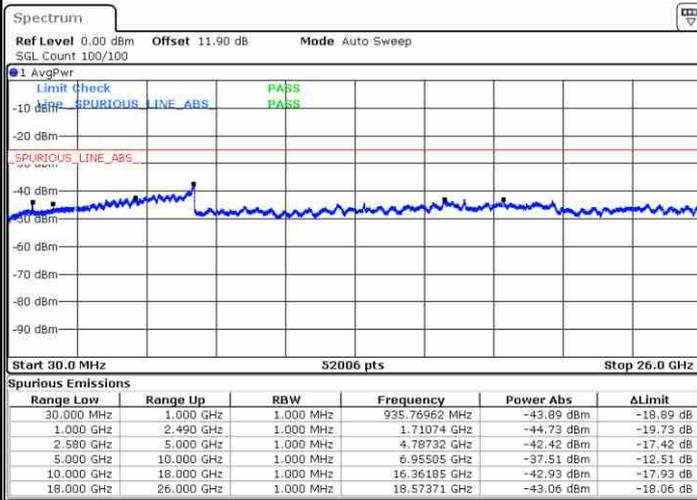
Highest Channel / 16QAM



Date: 11.FEB.2018 21:02:06

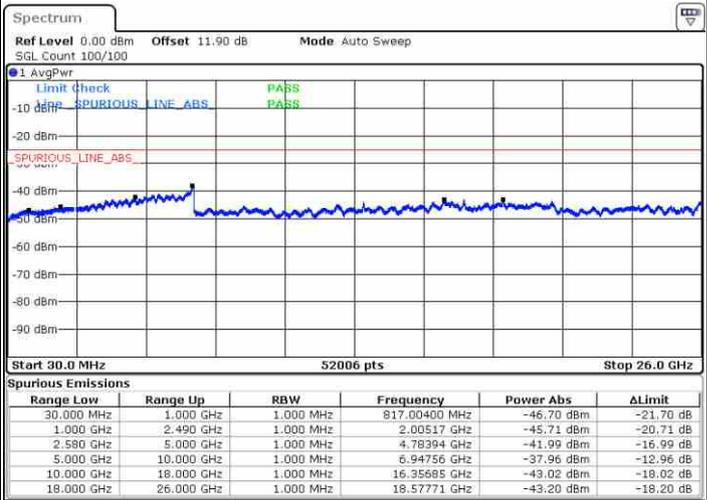
LTE Band 7 / 20MHz

Lowest Channel / QPSK



Date: 11.FEB.2018 21:08:26

Lowest Channel / 16QAM



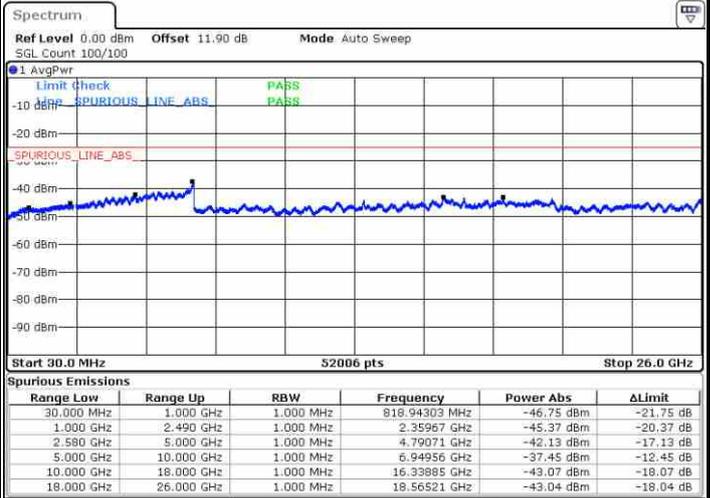
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LTE Band 7 / 20MHz

Middle Channel / QPSK

Middle Channel / 16QAM

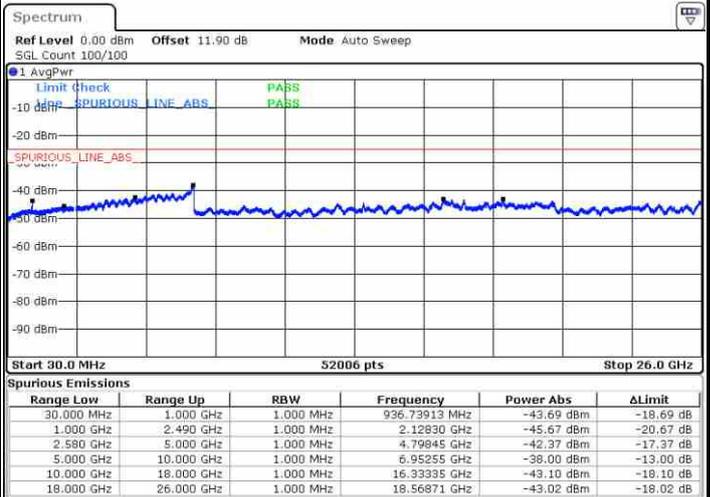
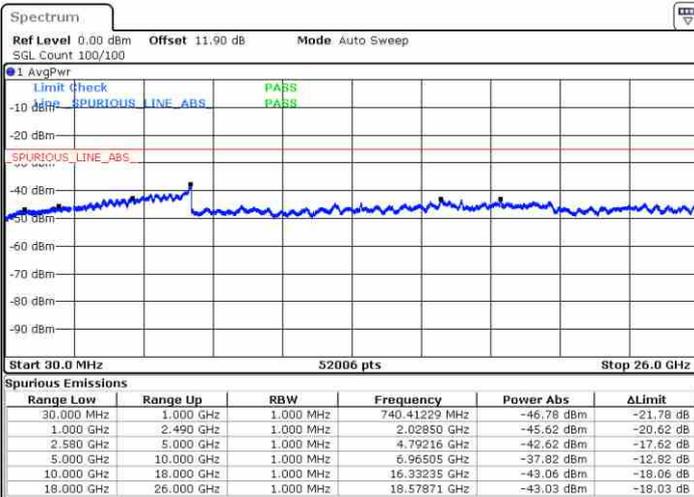


Date: 11.FEB.2018 21:11:06

Date: 11.FEB.2018 21:12:04

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 11.FEB.2018 21:18:24

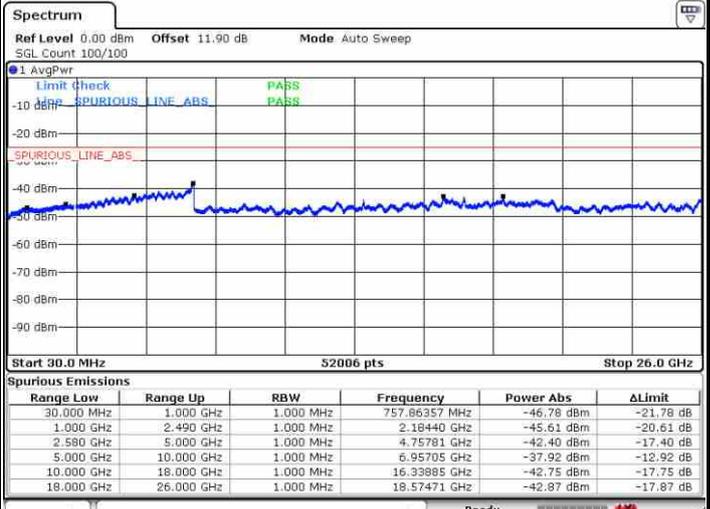
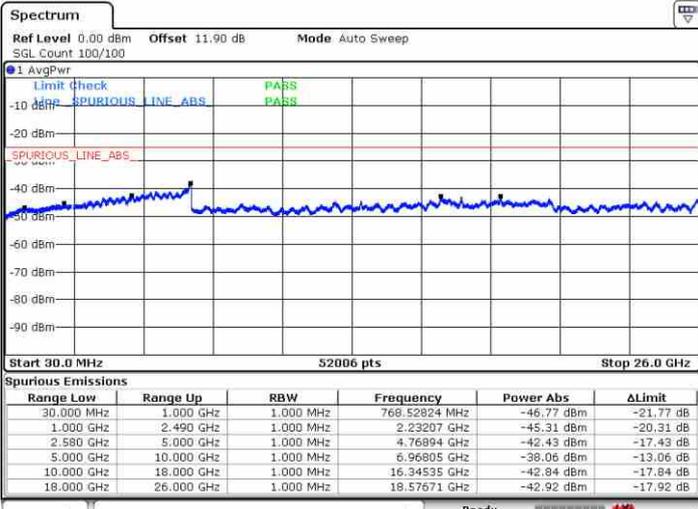
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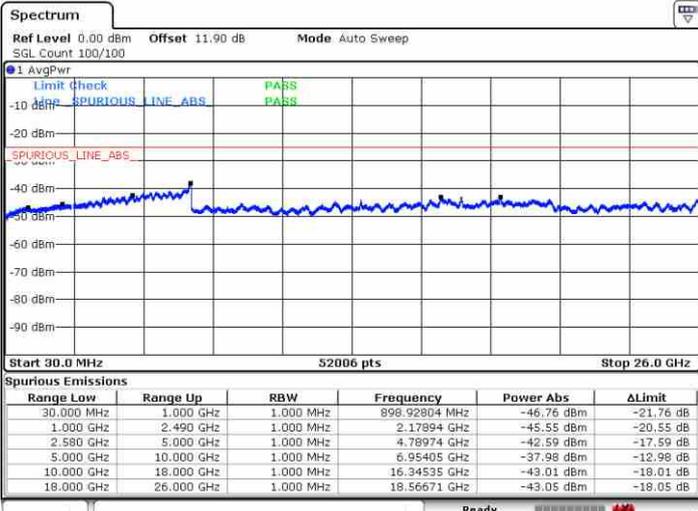
LTE Band 7 / 5MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM



Highest Channel / 64QAM

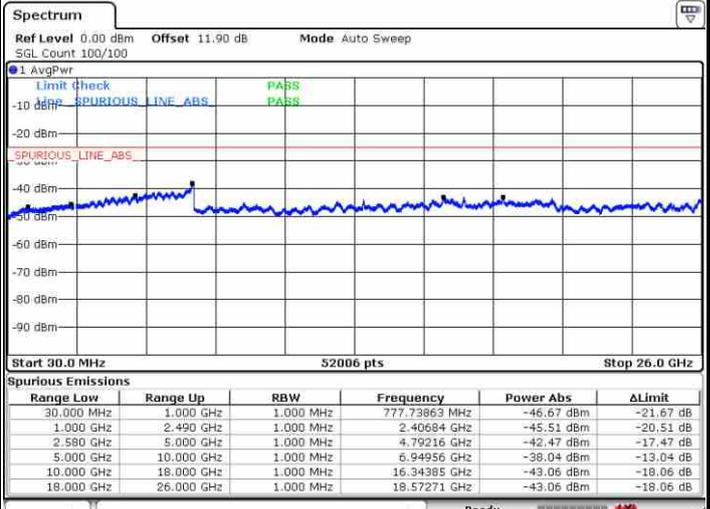
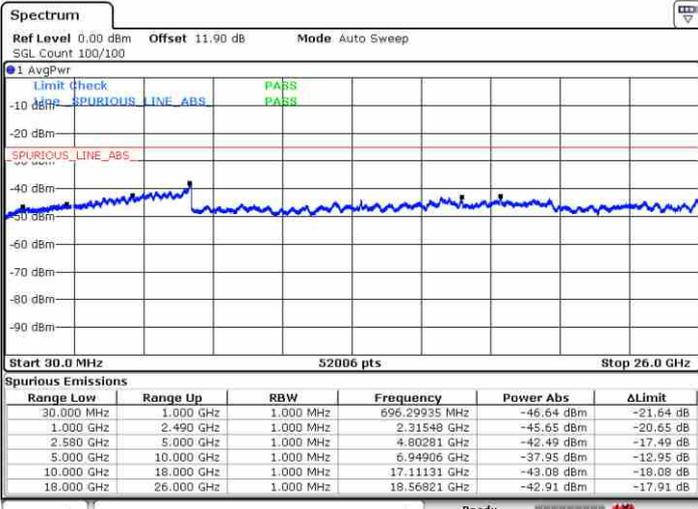




LTE Band 7 / 10MHz

Lowest Channel / 64QAM

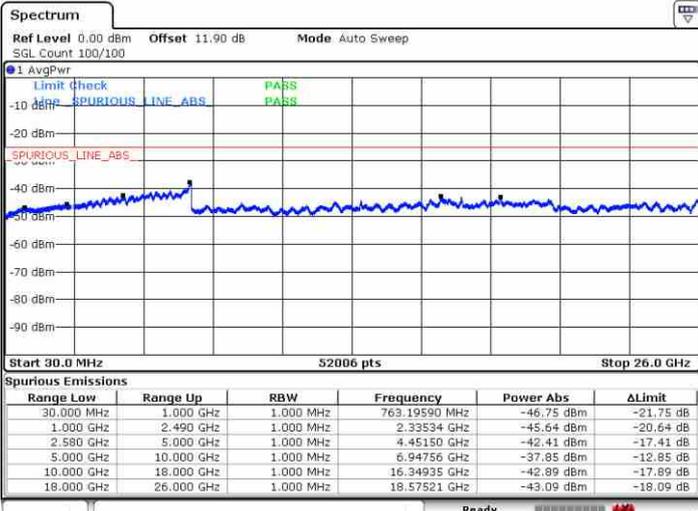
Middle Channel / 64QAM



Date: 11.FEB.2018 22:14:38

Date: 11.FEB.2018 22:15:59

Highest Channel / 64QAM



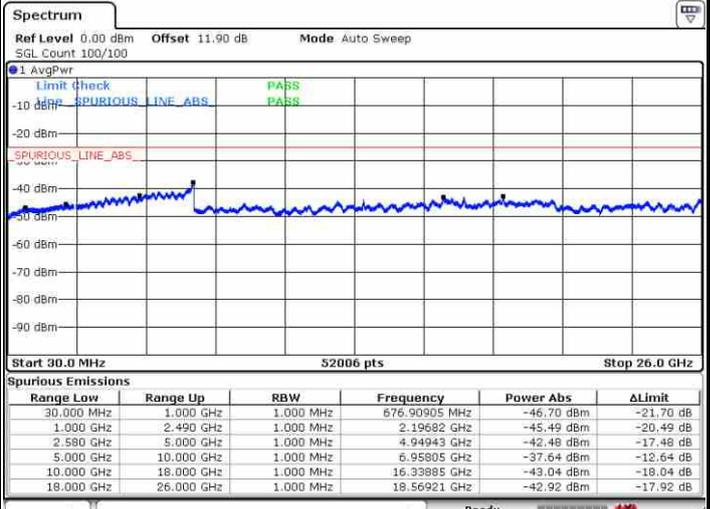
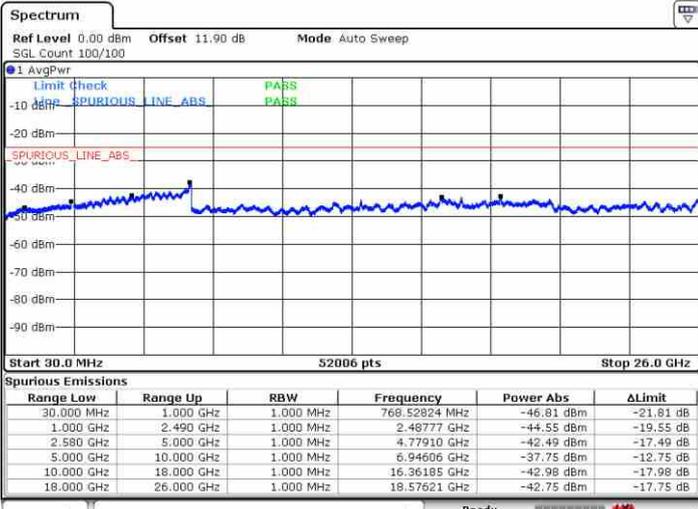
Date: 11.FEB.2018 22:19:41



LTE Band 7 / 15MHz

Lowest Channel / 64QAM

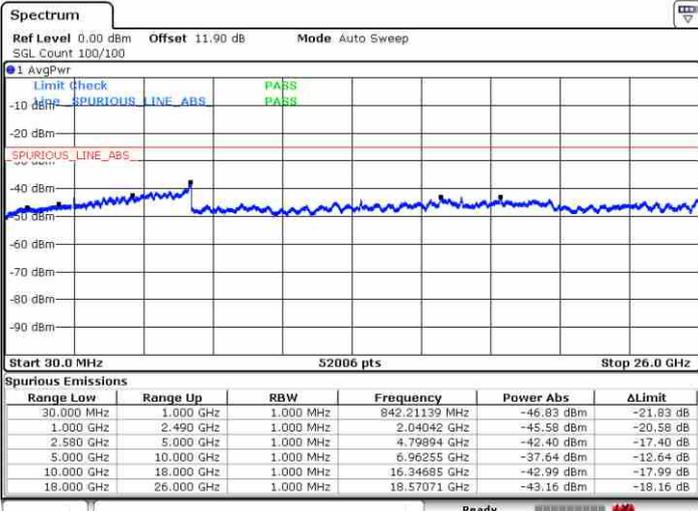
Middle Channel / 64QAM



Date: 11.FEB.2018 22:23:21

Date: 11.FEB.2018 22:24:42

Highest Channel / 64QAM



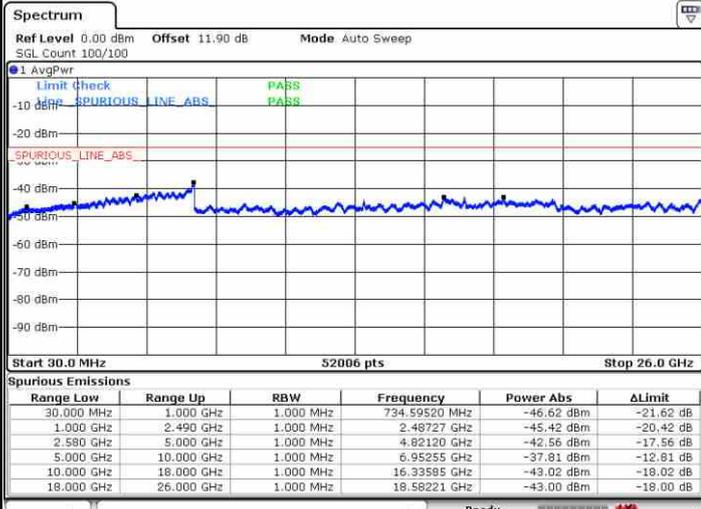
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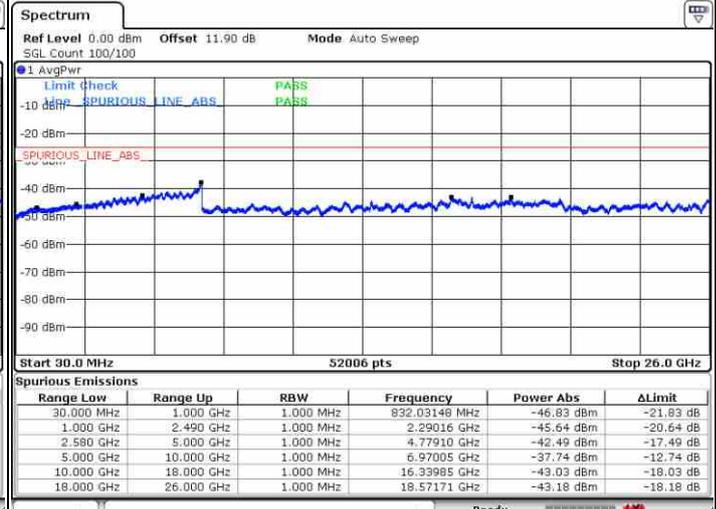
LTE Band 7 / 20MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

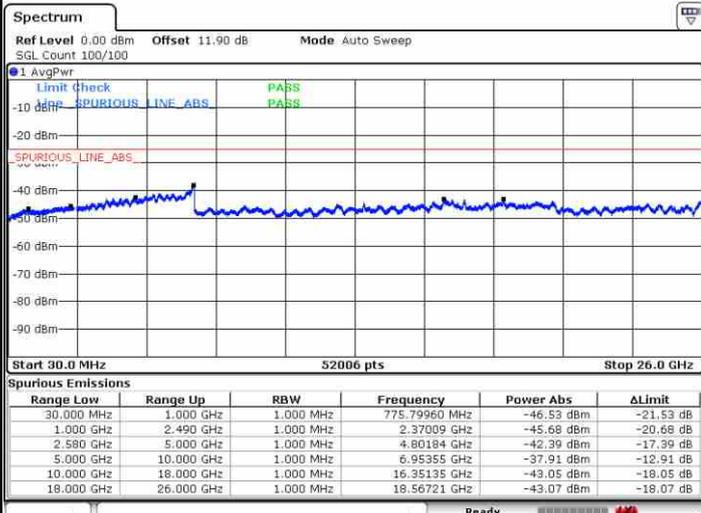


Date: 11.FEB.2018 22:32:04



Date: 11.FEB.2018 22:48:33

Highest Channel / 64QAM



Date: 11.FEB.2018 22:42:03



Frequency Stability

Test Conditions		LTE Band 7 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0001	PASS
40	Normal Voltage	0.0086	
30	Normal Voltage	0.0002	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0001	
0	Normal Voltage	0.0001	
-10	Normal Voltage	0.0093	
-20	Normal Voltage	0.0088	
-30	Normal Voltage	0.0087	
20	Maximum Voltage	0.0093	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0088	

Note:

- 3. Normal Voltage =3.82 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.
- 4. Note: The frequency fundamental emissions stay within the authorized frequency block.



A7. LTE Band 12

<For Up Antenna>

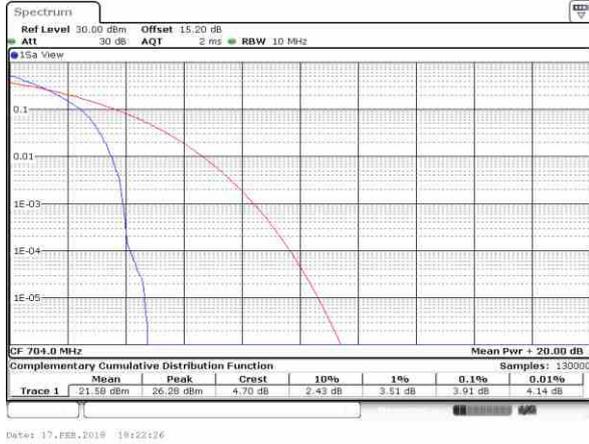
Peak-to-Average Ratio

Mode	LTE Band 12 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.91	4.61	4.35	5.45	PASS
Middle CH	3.83	4.49	4.26	5.45	
Highest CH	3.74	4.43	4.84	5.39	
Mode	LTE Band 12 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	5.19	5.45	-	-	PASS
Middle CH	6.20	5.94	-	-	
Highest CH	5.71	5.59	-	-	

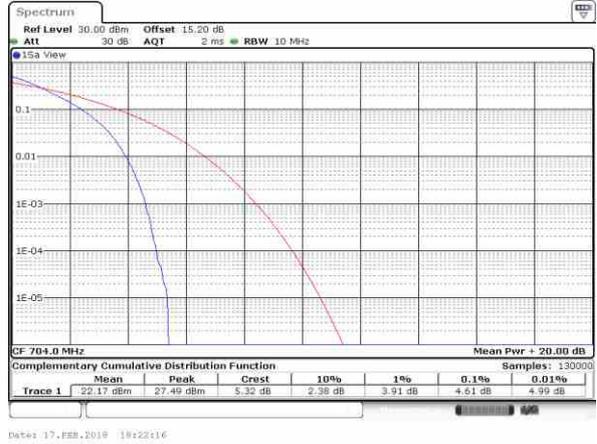


LTE Band 12 / 10MHz / QPSK

Lowest Channel / 1RB



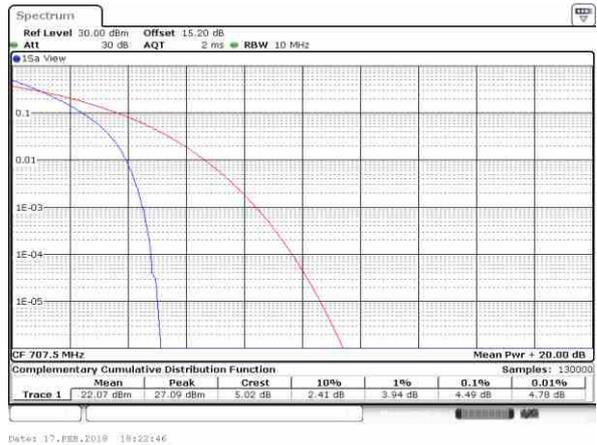
Lowest Channel / Full RB



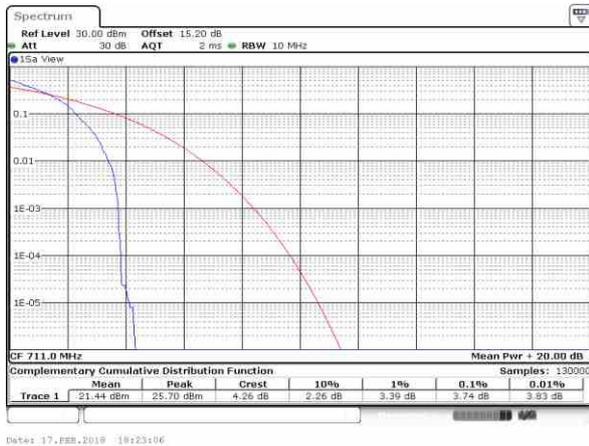
Middle Channel / 1RB



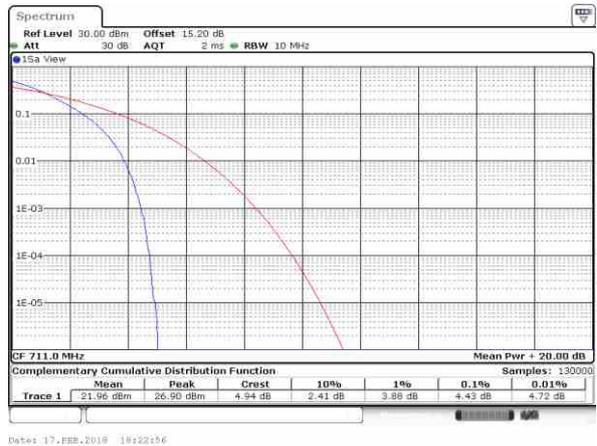
Middle Channel / Full RB



Highest Channel / 1RB



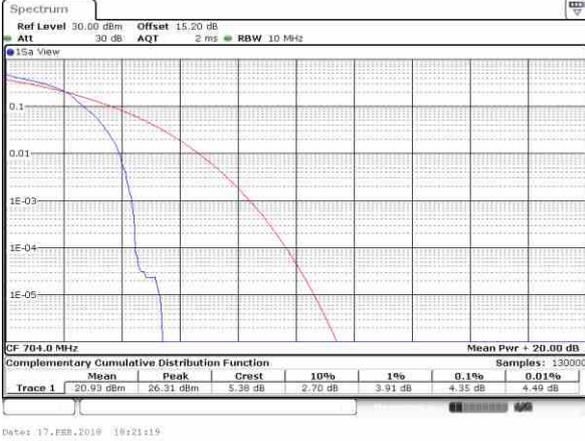
Highest Channel / Full RB



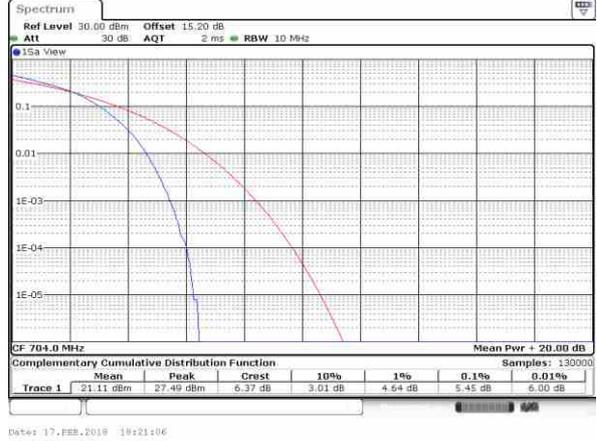


LTE Band 12 / 10MHz / 16QAM

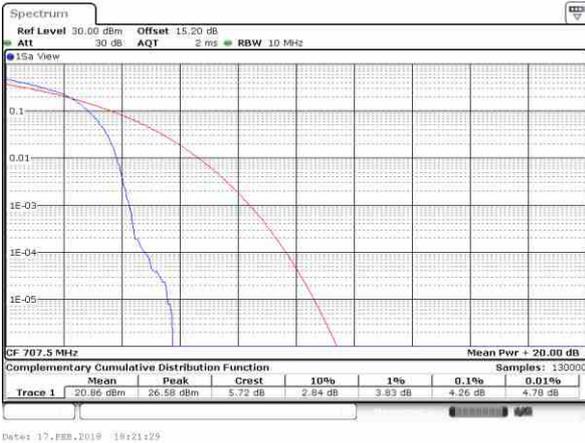
Lowest Channel / 1RB



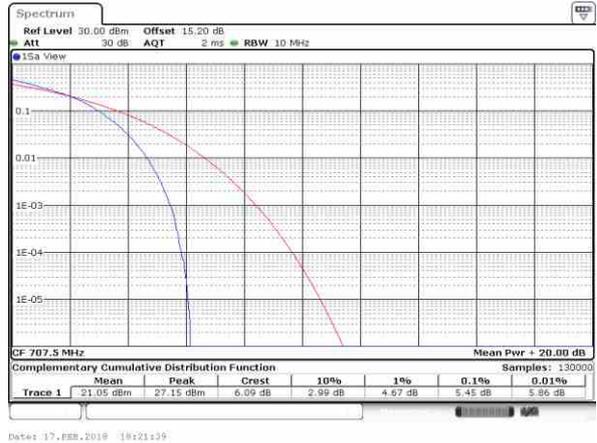
Lowest Channel / Full RB



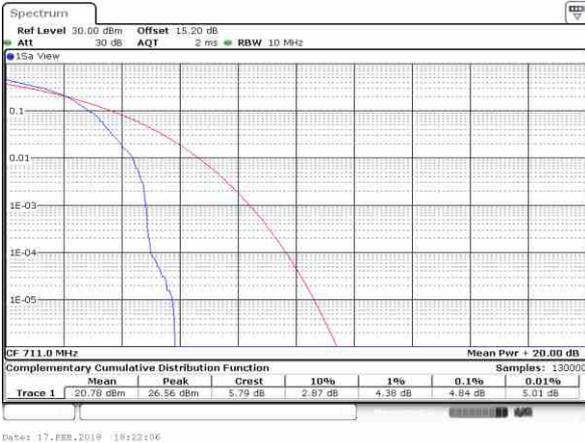
Middle Channel / 1RB



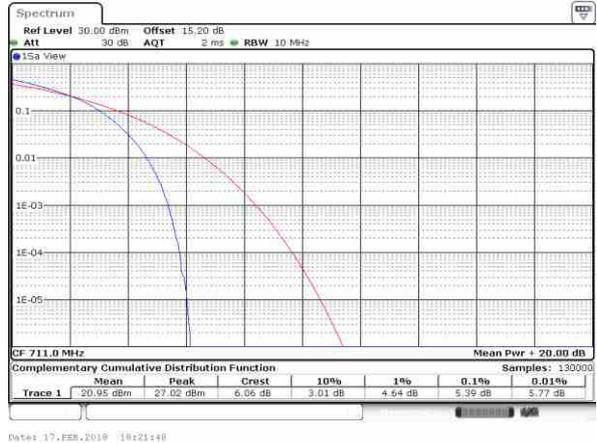
Middle Channel / Full RB



Highest Channel / 1RB



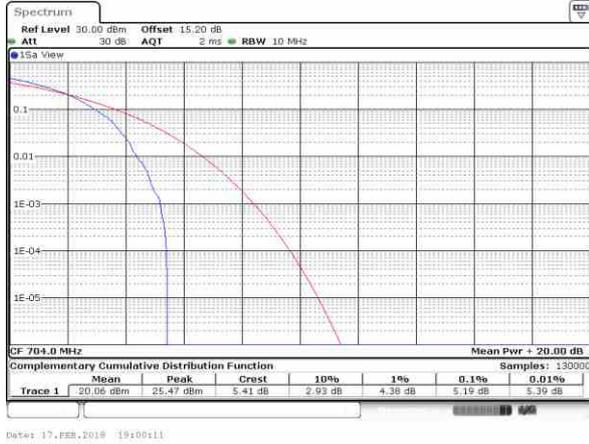
Highest Channel / Full RB



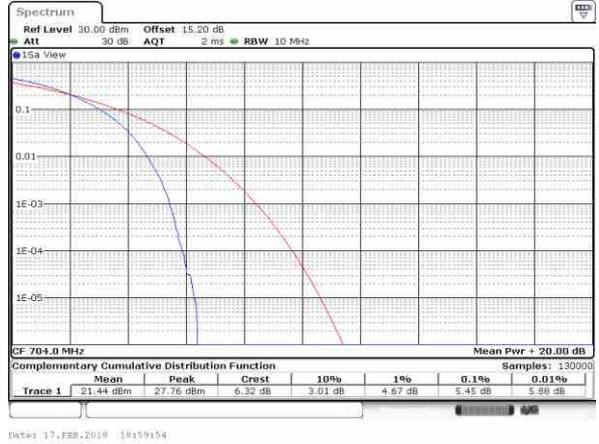


LTE Band 12 / 10MHz / 64QAM

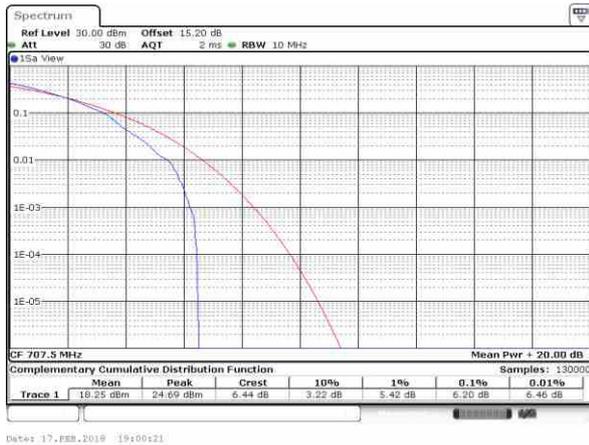
Lowest Channel / 1RB



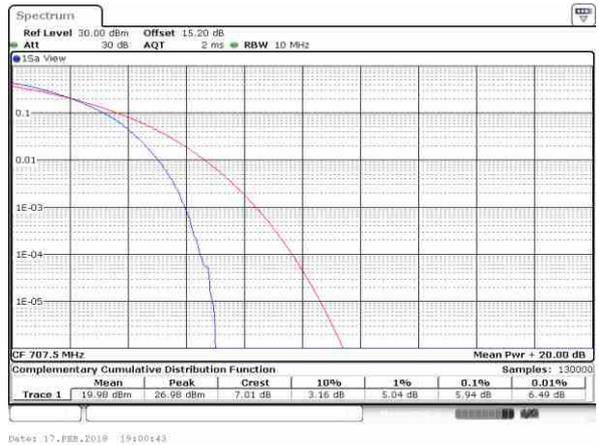
Lowest Channel / Full RB



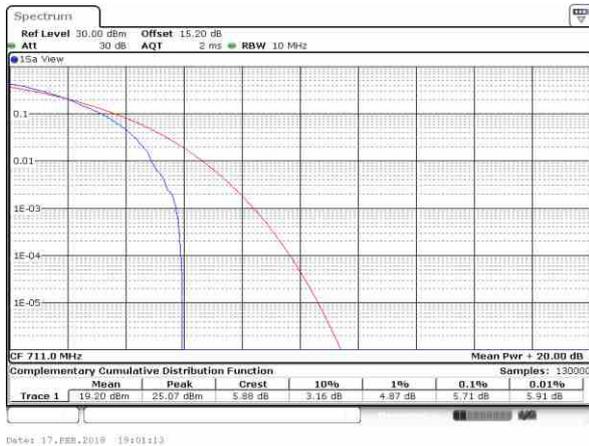
Middle Channel / 1RB



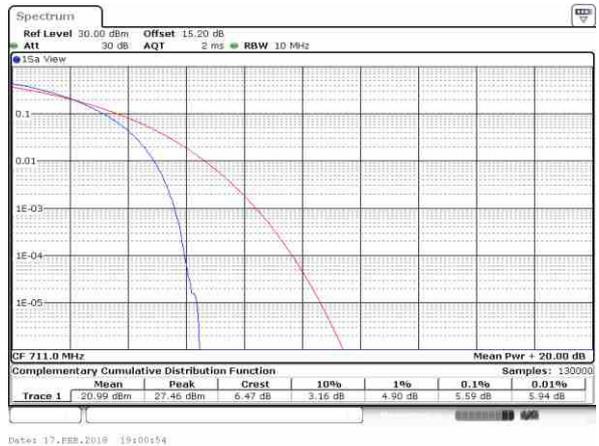
Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB





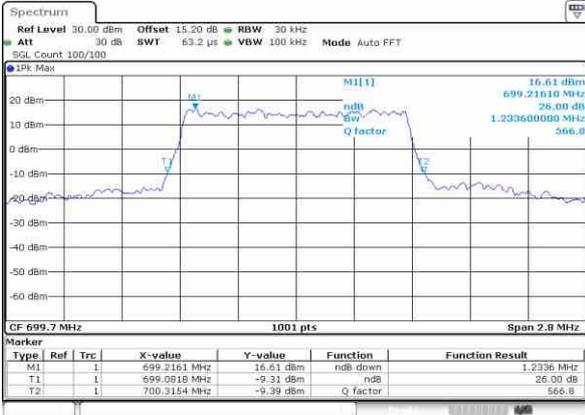
26dB Bandwidth

Mode	LTE Band 12 : 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	1.23	1.23	2.99	2.97	4.90	4.93	9.93	9.77	-	-	-	-
Middle CH	1.24	1.24	3.00	3.00	4.85	4.91	9.77	9.97	-	-	-	-
Highest CH	1.25	1.23	3.01	3.01	4.96	4.88	9.91	9.65	-	-	-	-
Mode	LTE Band 12 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.25	-	3.01	-	4.88	-	9.93	-	-	-	-	-
Middle CH	1.25	-	2.98	-	4.93	-	10.07	-	-	-	-	-
Highest CH	1.25	-	2.99	-	4.88	-	9.83	-	-	-	-	-



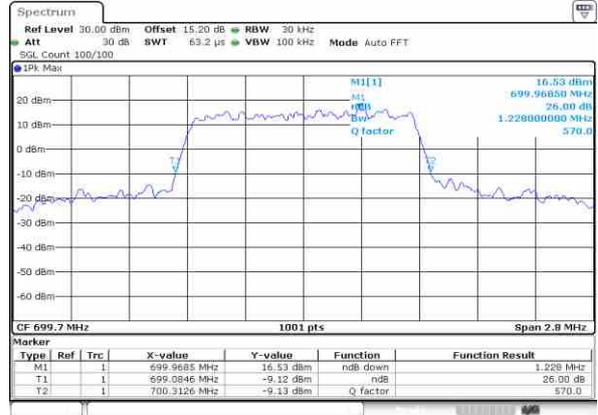
LTE Band 12

Lowest Channel / 1.4MHz / QPSK



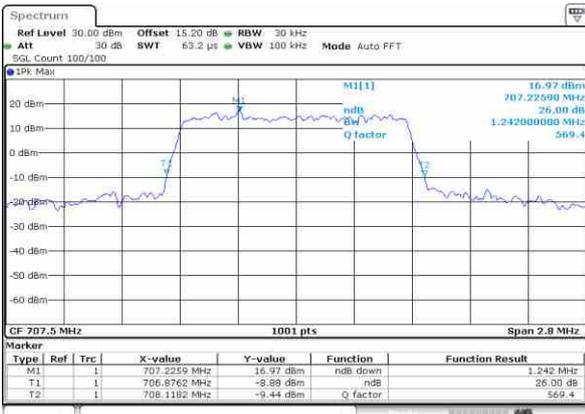
Date: 17.FEB.2019 19:03:27

Lowest Channel / 1.4MHz / 16QAM



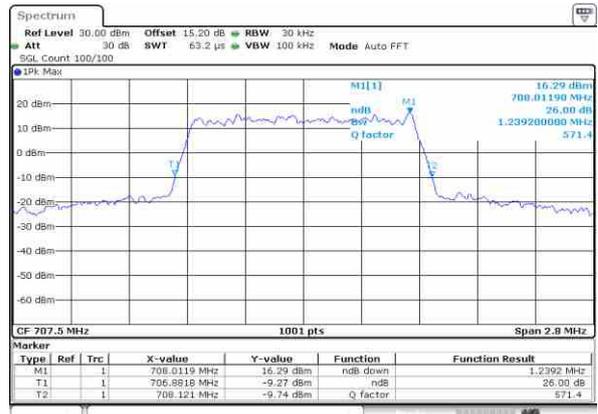
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Middle Channel / 1.4MHz / QPSK



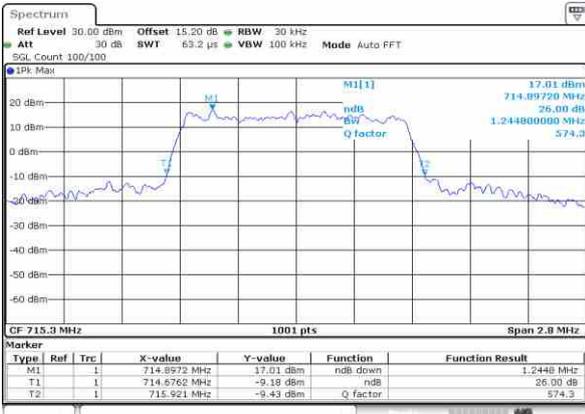
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Middle Channel / 1.4MHz / 16QAM



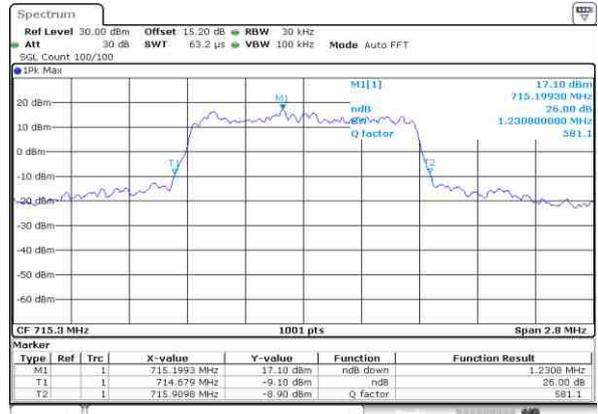
Date: 17.FEB.2019 19:10:43

Highest Channel / 1.4MHz / QPSK



Date: 17.FEB.2019 19:13:24

Highest Channel / 1.4MHz / 16QAM

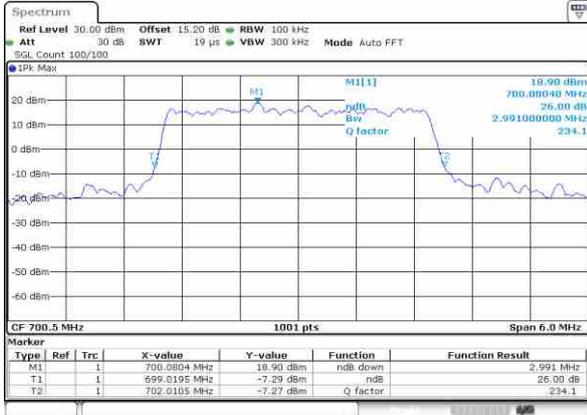


Date: 17.FEB.2019 19:13:13



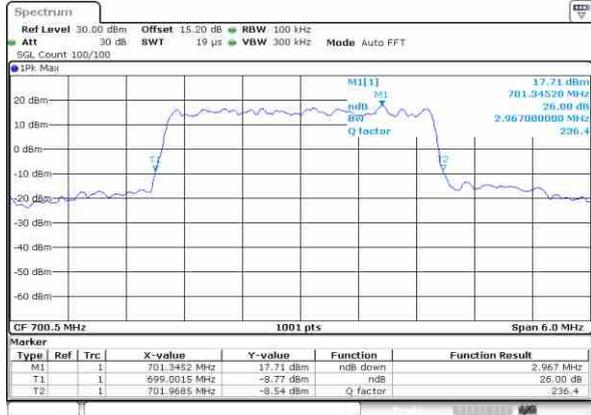
LTE Band 12

Lowest Channel / 3MHz / QPSK



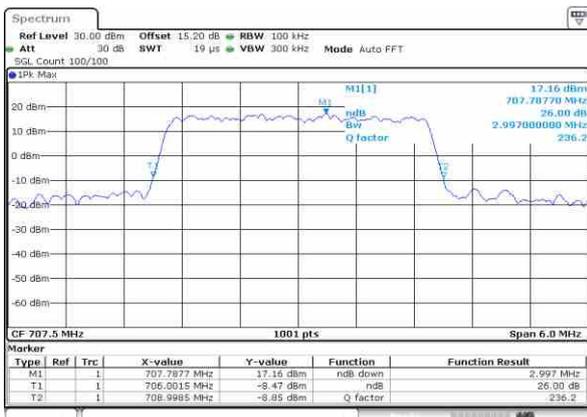
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Lowest Channel / 3MHz / 16QAM



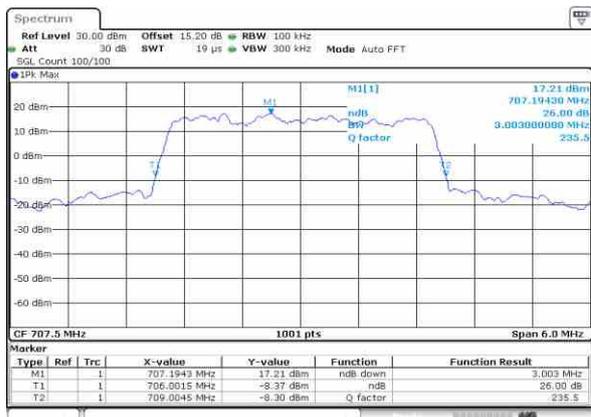
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Middle Channel / 3MHz / QPSK



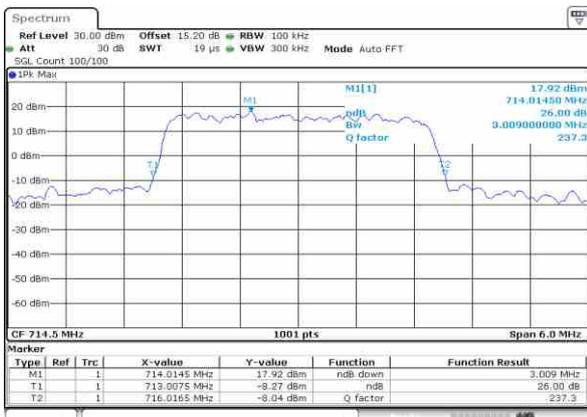
Date: 17.FEB.2018 17:12:14

Middle Channel / 3MHz / 16QAM



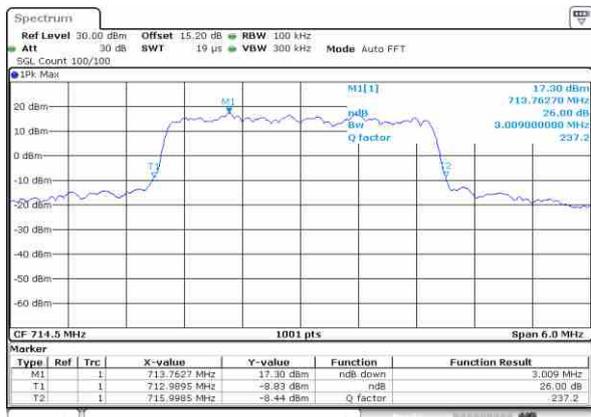
Date: 17.FEB.2018 17:12:26

Highest Channel / 3MHz / QPSK



Date: 17.FEB.2018 17:15:06

Highest Channel / 3MHz / 16QAM

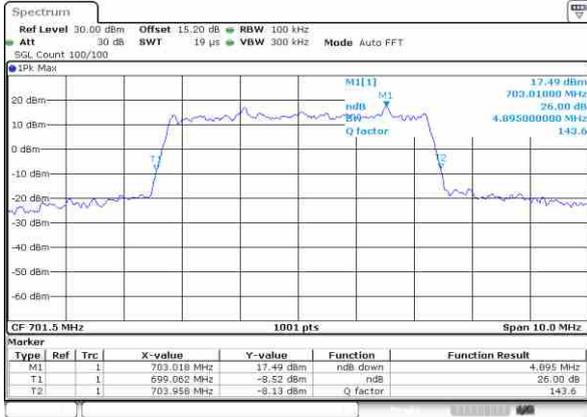


Date: 17.FEB.2018 17:14:54



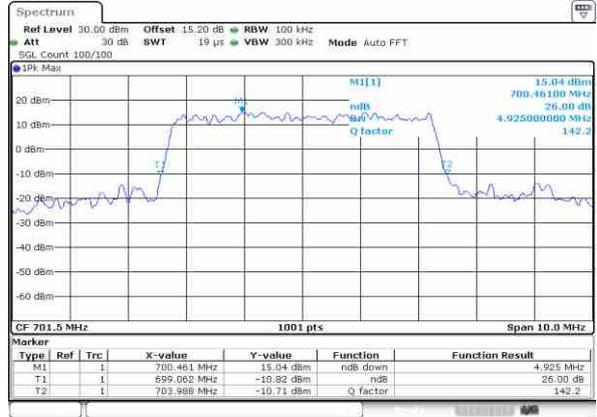
LTE Band 12

Lowest Channel / 5MHz / QPSK



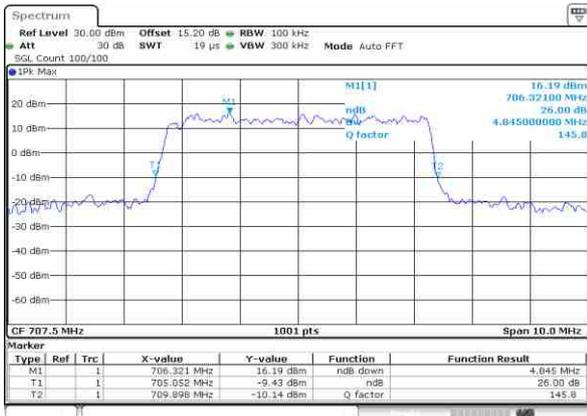
Date: 17.FEB.2019 17:22:22

Lowest Channel / 5MHz / 16QAM



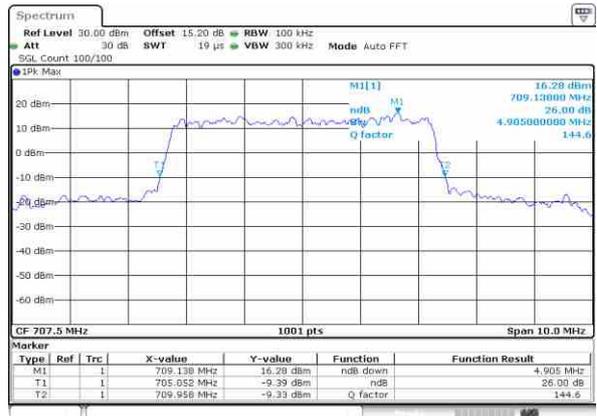
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Middle Channel / 5MHz / QPSK



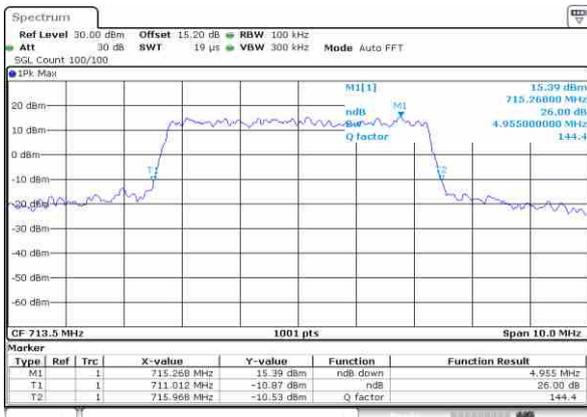
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Middle Channel / 5MHz / 16QAM



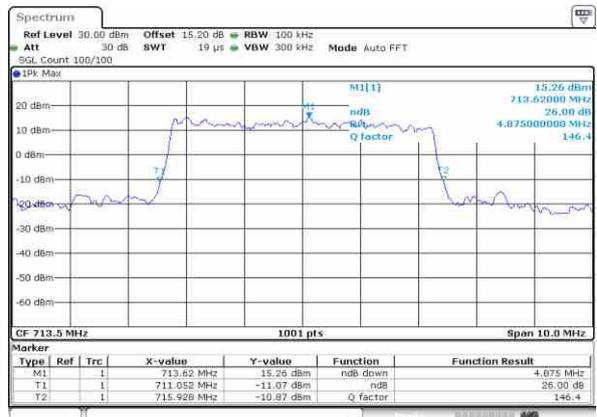
Date: 17.FEB.2019 17:25:36

Highest Channel / 5MHz / QPSK



Date: 17.FEB.2019 17:32:19

Highest Channel / 5MHz / 16QAM



Date: 17.FEB.2019 17:32:07