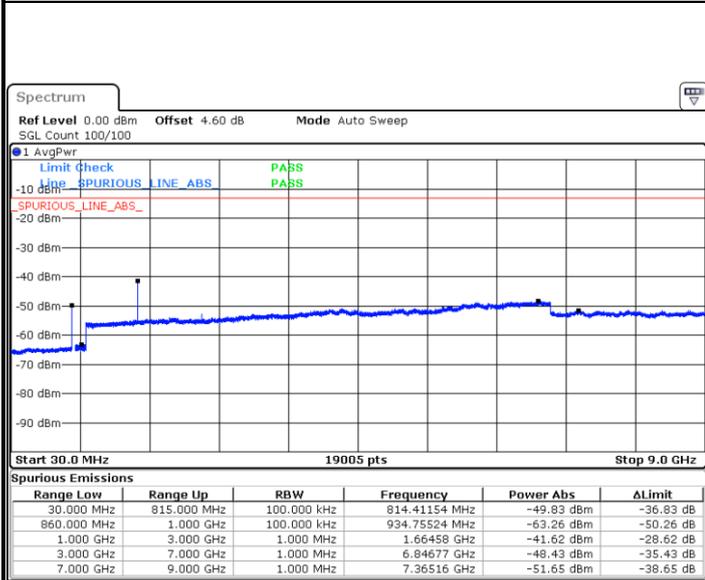




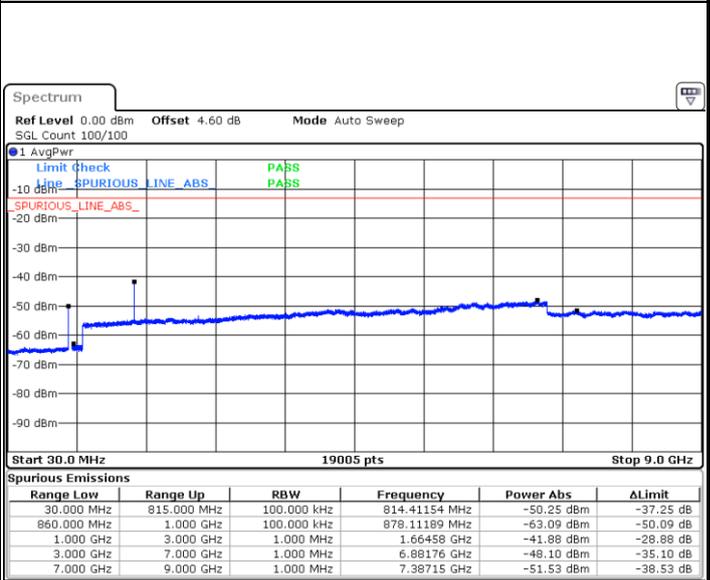
LTE Band 5 / 10MHz

Middle Channel / QPSK



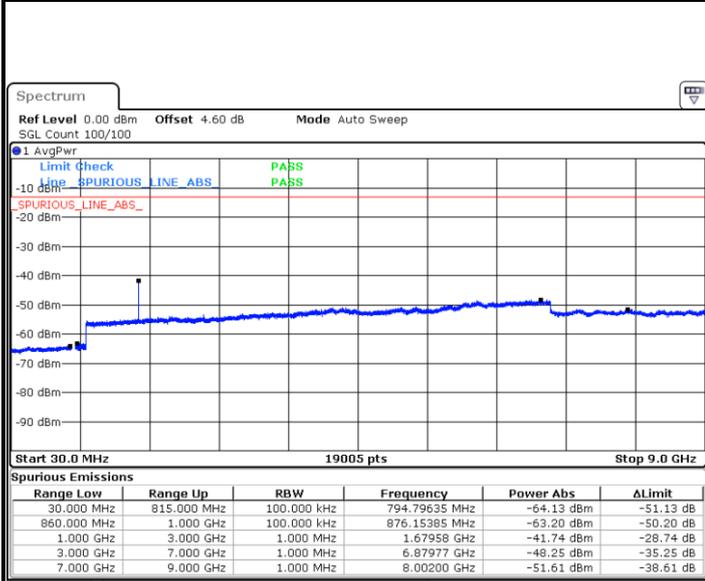
Date: 27.NOV.2019 09:09:21

Middle Channel / 16QAM



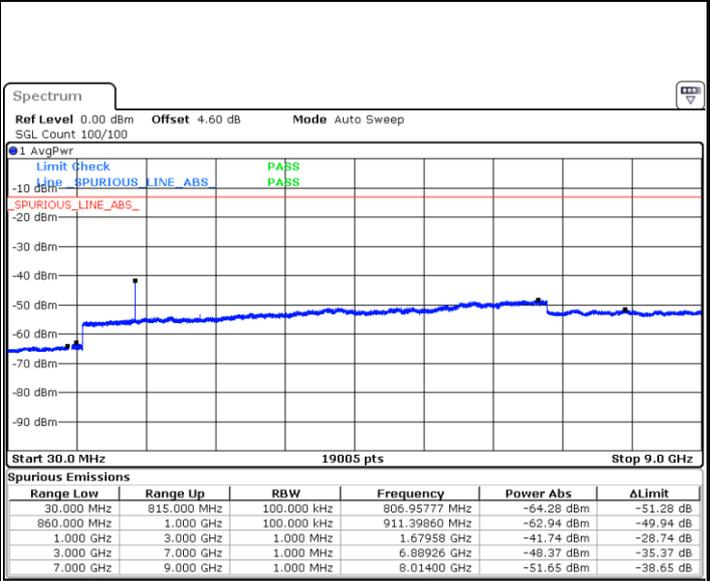
Date: 27.NOV.2019 09:10:15

Highest Channel / QPSK



Date: 27.NOV.2019 09:18:19

Highest Channel / 16QAM



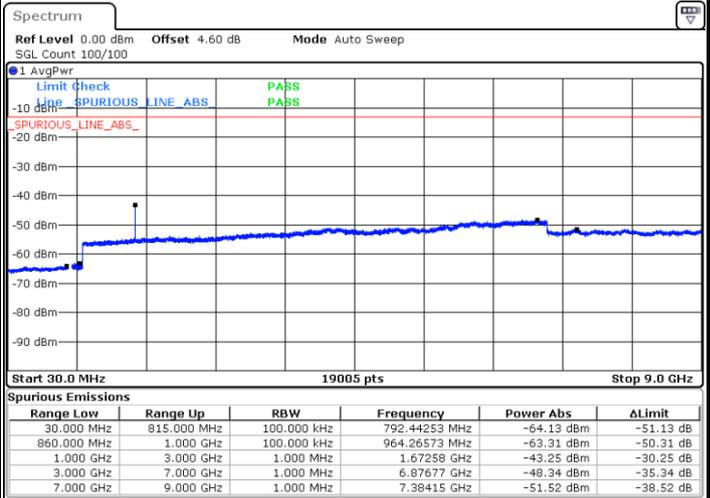
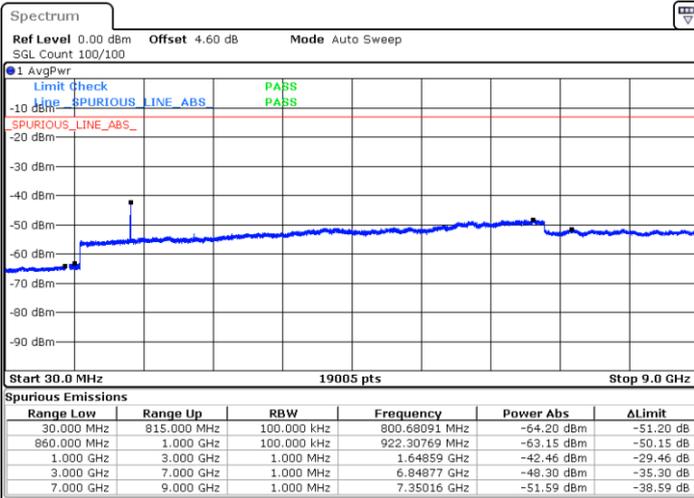
Date: 27.NOV.2019 09:19:14



LTE Band 5 / 1.4MHz

Lowest Channel / 64QAM

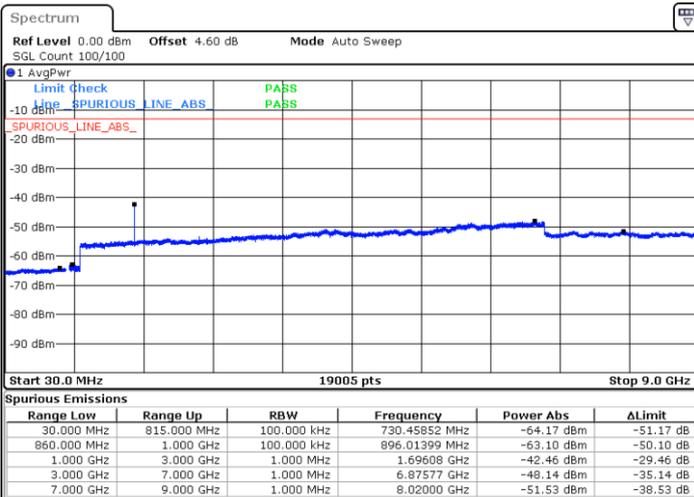
Middle Channel / 64QAM



Date: 28 NOV 2019 00:10:41

Date: 28 NOV 2019 00:11:35

Highest Channel / 64QAM

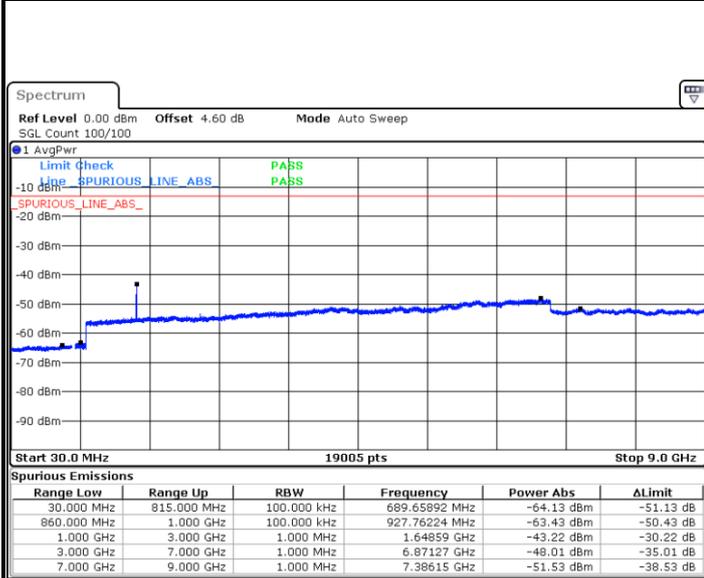


Date: 28 NOV 2019 00:16:25



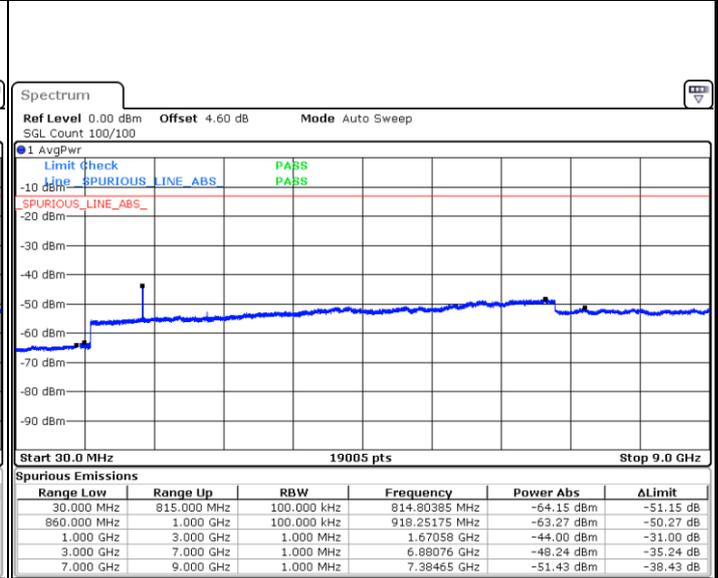
**LTE Band 5 / 3MHz**

**Lowest Channel / 64QAM**



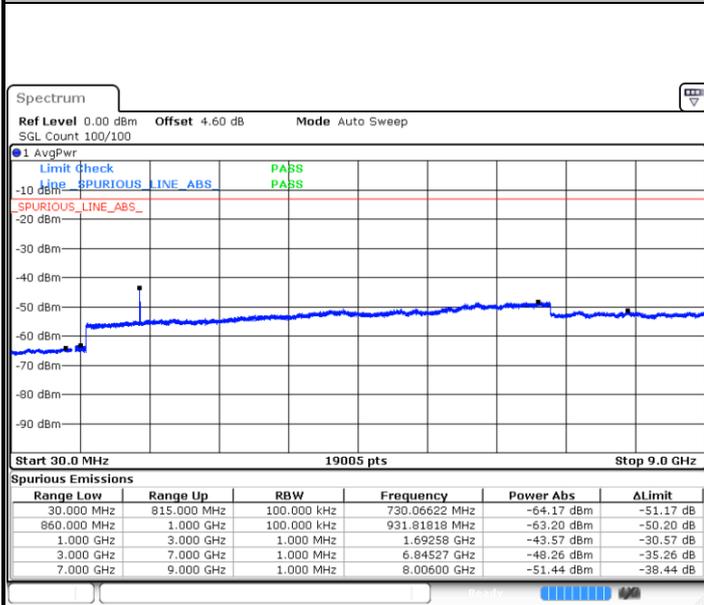
Date: 28 NOV 2019 00:20:54

**Middle Channel / 64QAM**



Date: 28 NOV 2019 00:21:48

**Highest Channel / 64QAM**



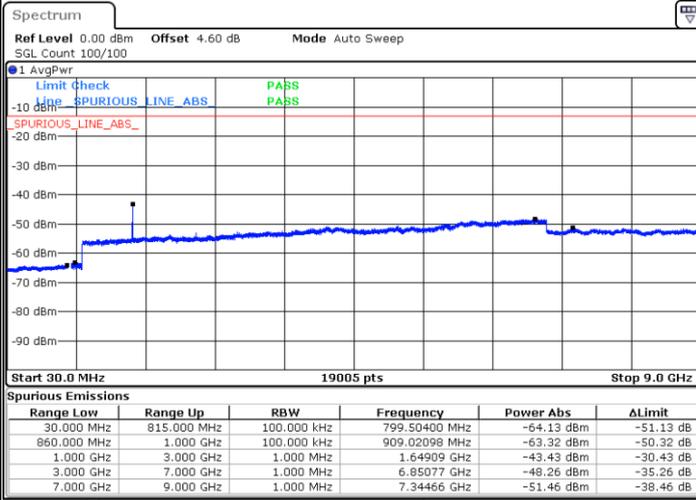
Date: 28 NOV 2019 00:26:38



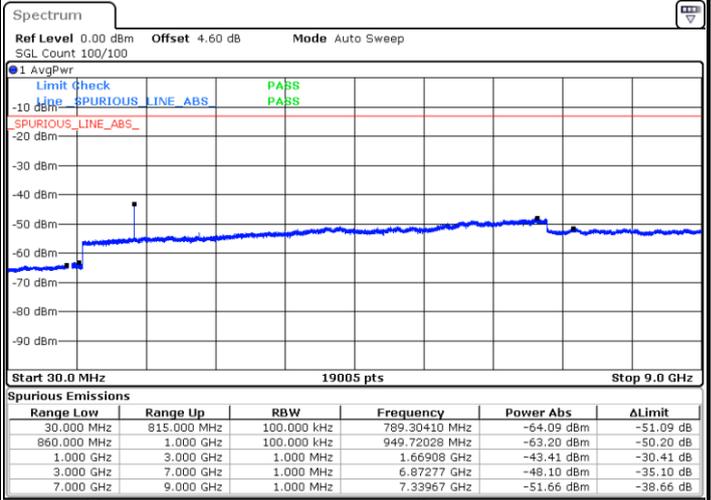
LTE Band 5 / 5MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

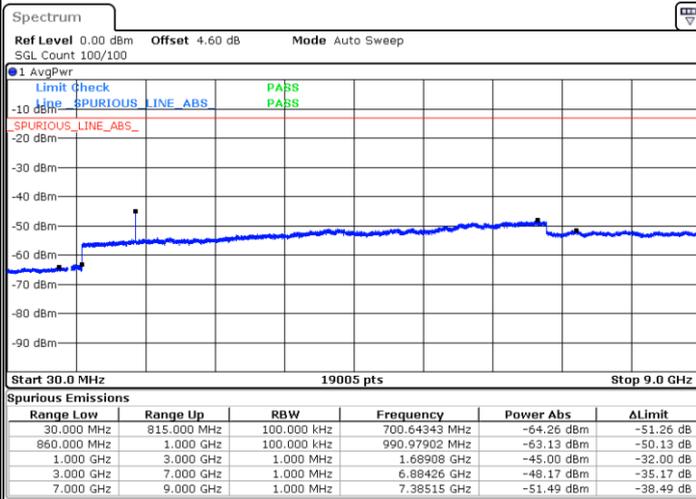


Date: 28 NOV 2019 00:31:07



Date: 28 NOV 2019 00:32:01

Highest Channel / 64QAM



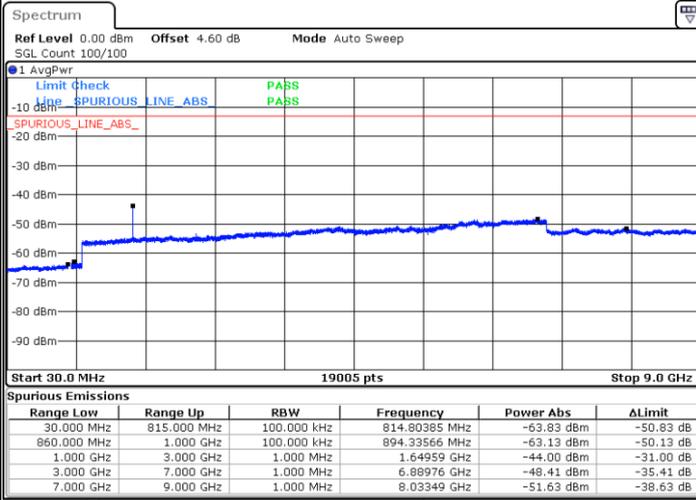
Date: 28 NOV 2019 00:37:27



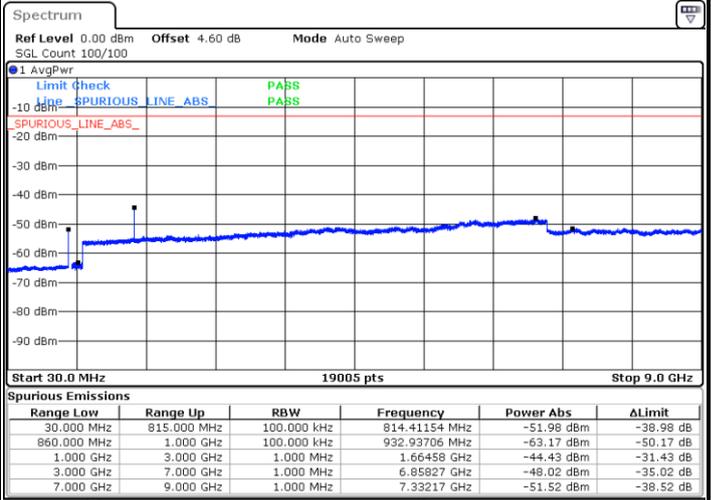
LTE Band 5 / 10MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

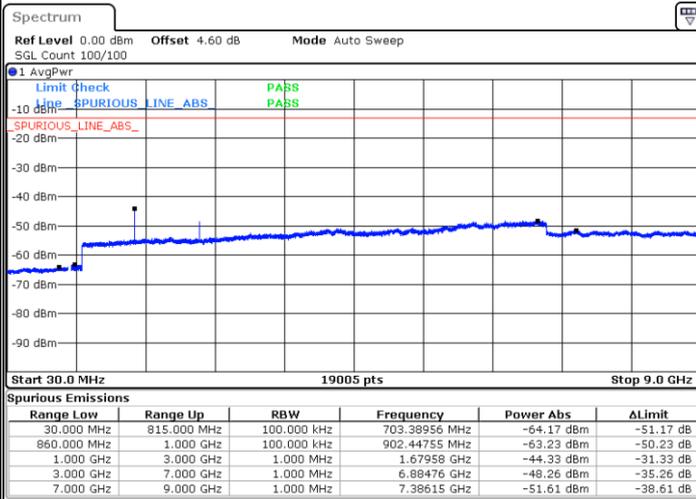


Date: 28 NOV 2019 00:41:57



Date: 28 NOV 2019 00:42:51

Highest Channel / 64QAM



Date: 28 NOV 2019 00:47:42



**Frequency Stability**

Test Conditions		LTE Band 5 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	2.5ppm
		Deviation (ppm)	Result
50	Normal Voltage	0.0012	PASS
40	Normal Voltage	0.0014	
30	Normal Voltage	0.0033	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0056	
0	Normal Voltage	0.0059	
-10	Normal Voltage	0.0051	
-20	Normal Voltage	0.0023	
-30	Normal Voltage	0.0010	
20	Maximum Voltage	0.0045	
20	Normal Voltage	0.0050	
20	Battery End Point	0.0012	

**Note:**

1. Normal Voltage =3.8 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 7

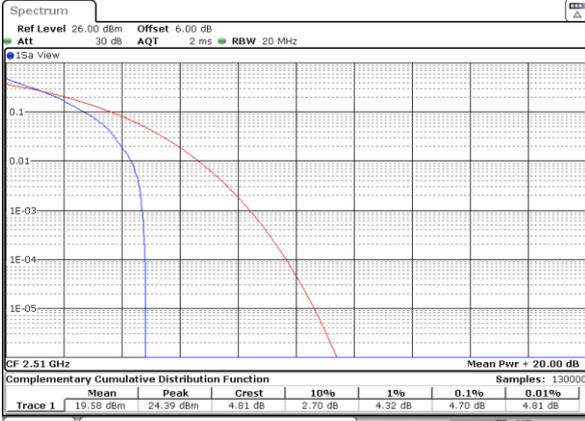
## Peak-to-Average Ratio

Mode	LTE Band 7 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.70	5.42	5.68	6.29	PASS
Middle CH	5.30	5.30	6.09	6.41	
Highest CH	5.39	5.30	6.03	6.20	
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	6.09	6.64			PASS
Middle CH	6.17	6.64			
Highest CH	6.72	6.52			



LTE Band 7 / 20MHz / QPSK

Lowest Channel / 1RB



Date: 3 DEC 2019 22:51:58

Lowest Channel / Full RB



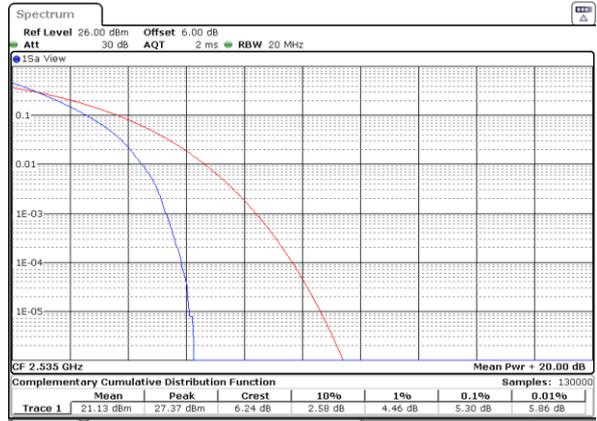
Date: 3 DEC 2019 22:52:07

Middle Channel / 1RB



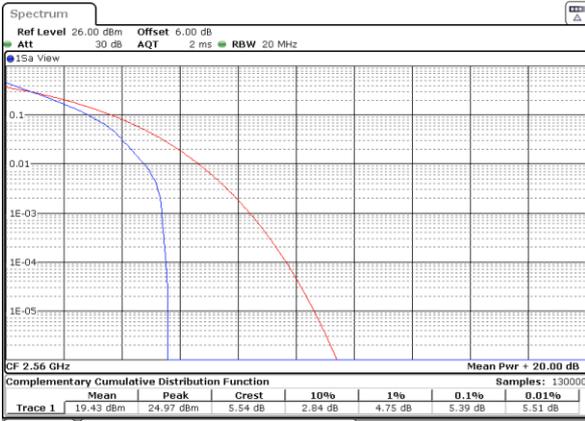
Date: 3 DEC 2019 22:52:43

Middle Channel / Full RB



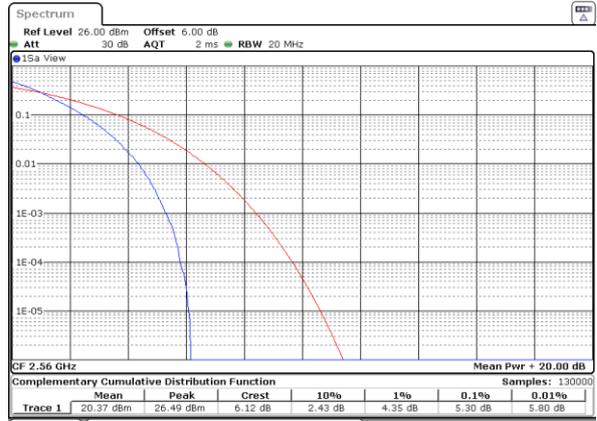
Date: 3 DEC 2019 22:52:34

Highest Channel / 1RB



Date: 3 DEC 2019 22:53:11

Highest Channel / Full RB

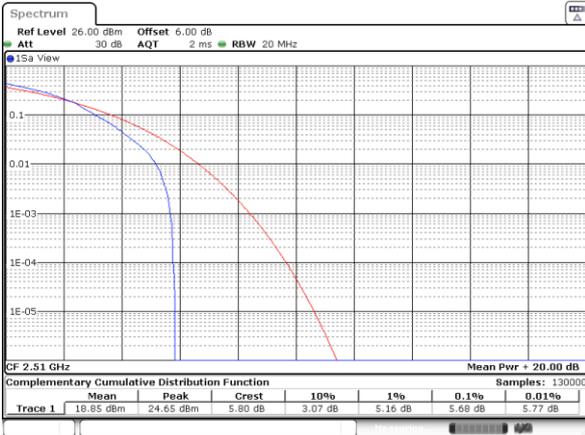


Date: 3 DEC 2019 22:53:22



LTE Band 7 / 20MHz / 16QAM

Lowest Channel / 1RB



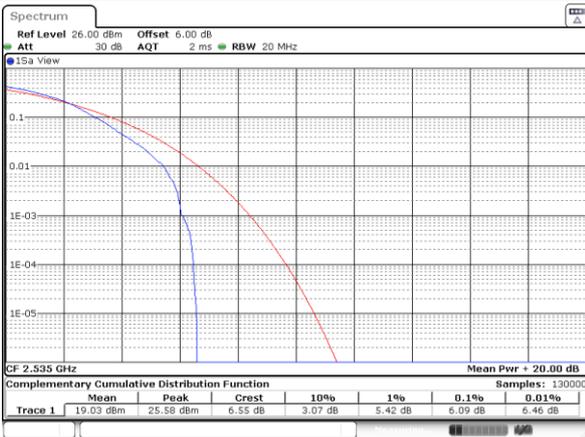
Date: 3 DEC 2019 22:51:49

Lowest Channel / Full RB



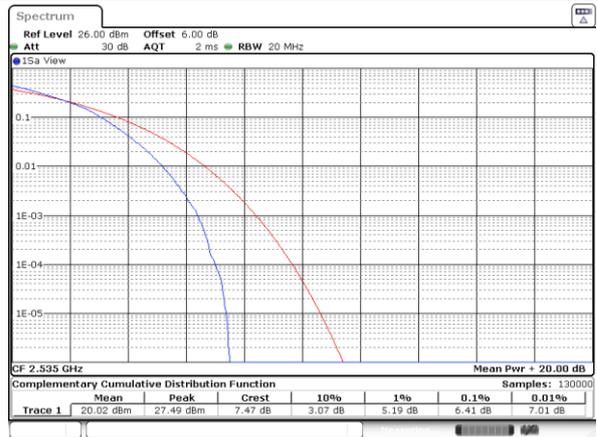
Date: 3 DEC 2019 22:52:16

Middle Channel / 1RB



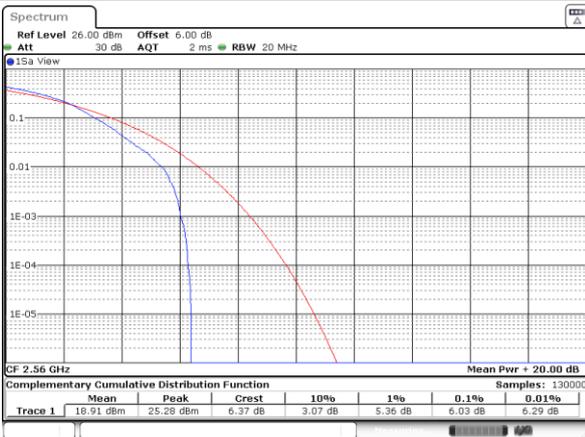
Date: 3 DEC 2019 22:52:53

Middle Channel / Full RB



Date: 3 DEC 2019 22:52:25

Highest Channel / 1RB



Date: 3 DEC 2019 22:53:02

Highest Channel / Full RB

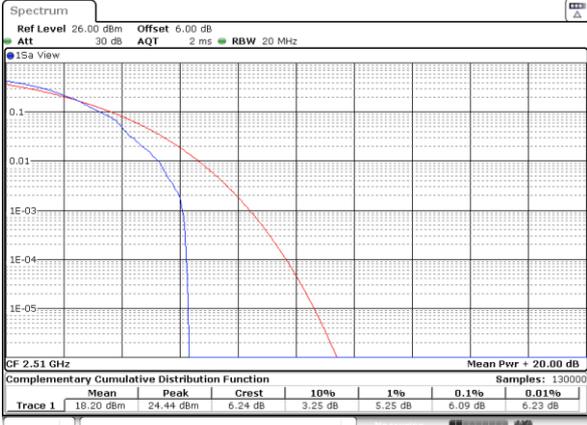


Date: 3 DEC 2019 22:53:31



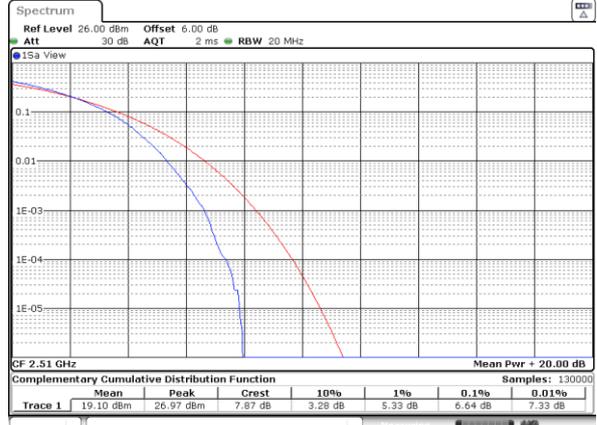
LTE Band 7 / 20MHz / 64QAM

Lowest Channel / 1RB



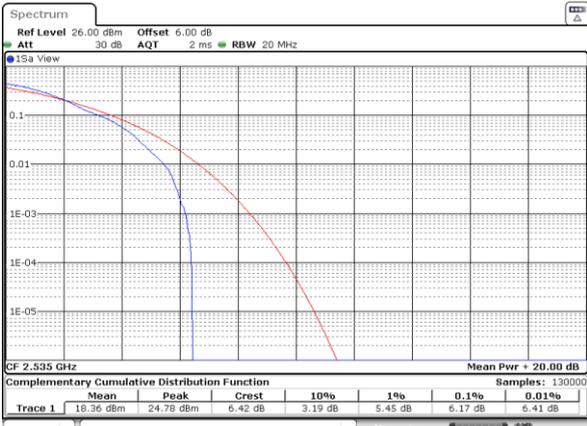
Date: 3 DEC 2019 23:20:49

Lowest Channel / Full RB



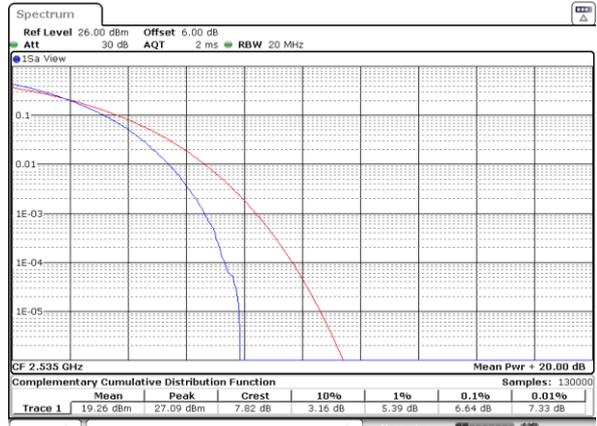
Date: 3 DEC 2019 23:20:58

Middle Channel / 1RB



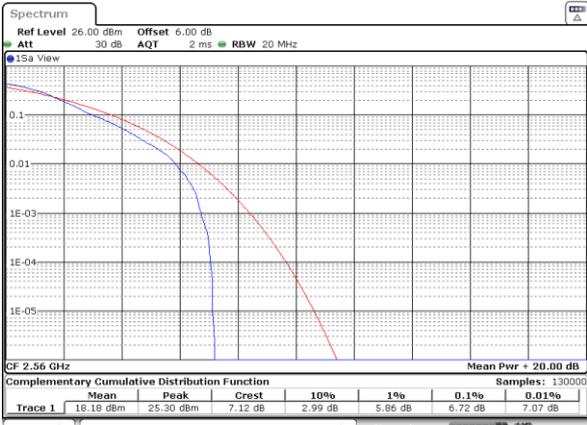
Date: 3 DEC 2019 23:21:18

Middle Channel / Full RB



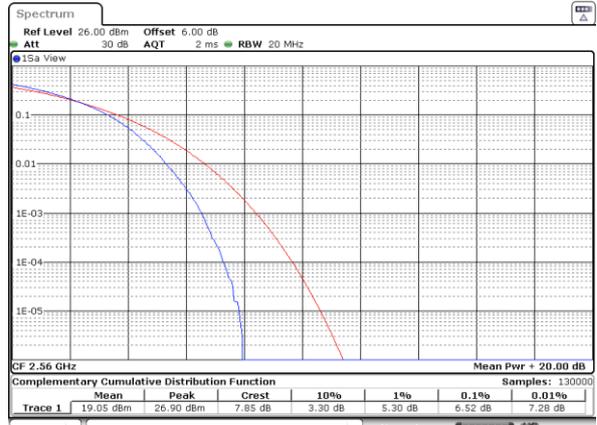
Date: 3 DEC 2019 23:21:09

Highest Channel / 1RB



Date: 3 DEC 2019 23:21:27

Highest Channel / Full RB



Date: 3 DEC 2019 23:22:07



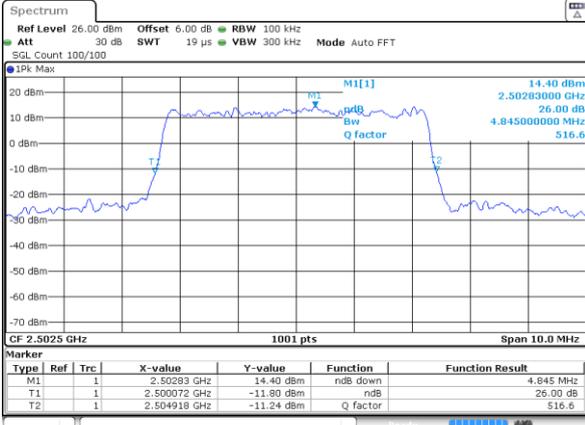
**26dB Bandwidth**

Mode	LTE Band 7 : 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					4.845	4.925	9.65	9.81	14.416	14.236	20.22	20.18
Middle CH					4.925	4.875	9.65	9.73	14.446	14.565	20.18	20.22
Highest CH					4.885	4.835	9.69	9.73	14.296	14.266	20.10	20.14
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.					64QAM		64QAM		64QAM		64QAM	
Lowest CH					4.805		9.89		14.266		20.26	
Middle CH					4.835		9.69		14.386		20.22	
Highest CH					4.915		9.73		14.386		20.14	



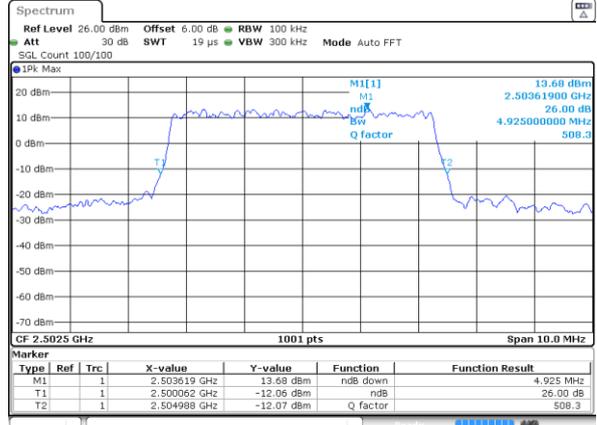
LTE Band 7

Lowest Channel / 5MHz / QPSK



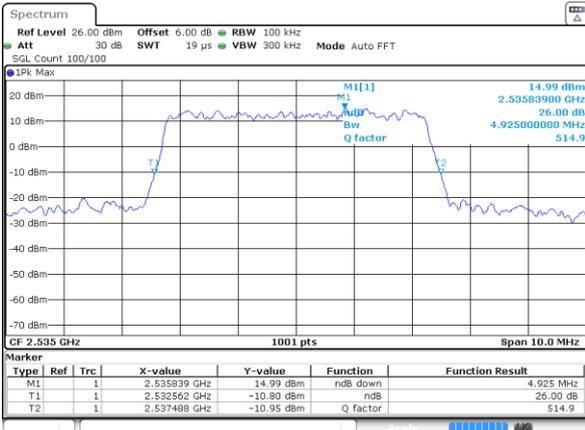
Date: 3 DEC 2019 21:45:51

Lowest Channel / 5MHz / 16QAM



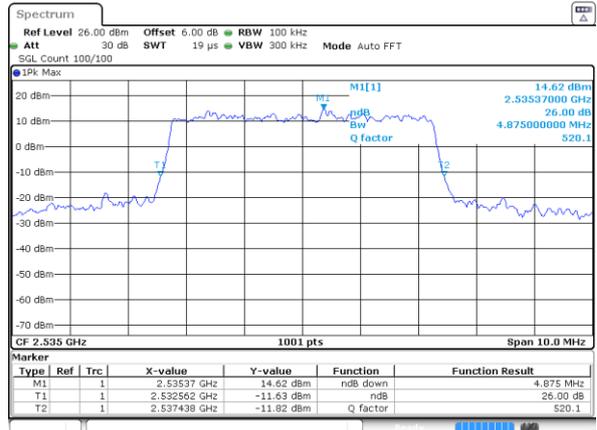
Date: 3 DEC 2019 21:46:11

Middle Channel / 5MHz / QPSK



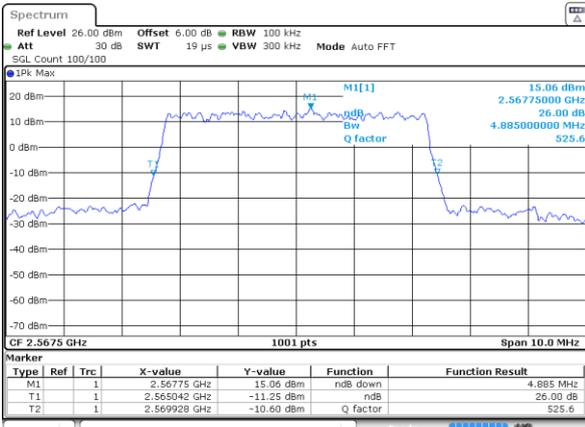
Date: 3 DEC 2019 21:46:51

Middle Channel / 5MHz / 16QAM



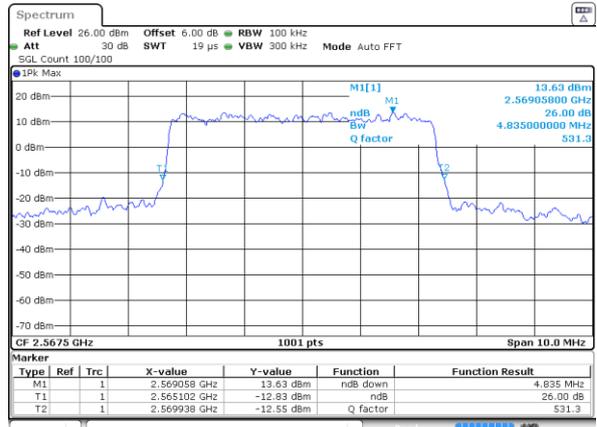
Date: 3 DEC 2019 21:46:31

Highest Channel / 5MHz / QPSK



Date: 3 DEC 2019 21:47:11

Highest Channel / 5MHz / 16QAM

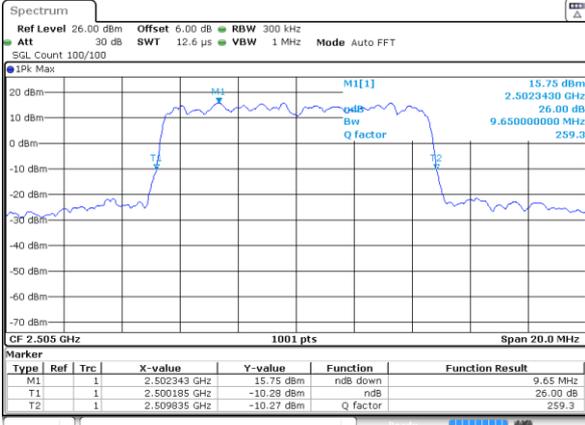


Date: 3 DEC 2019 21:47:31



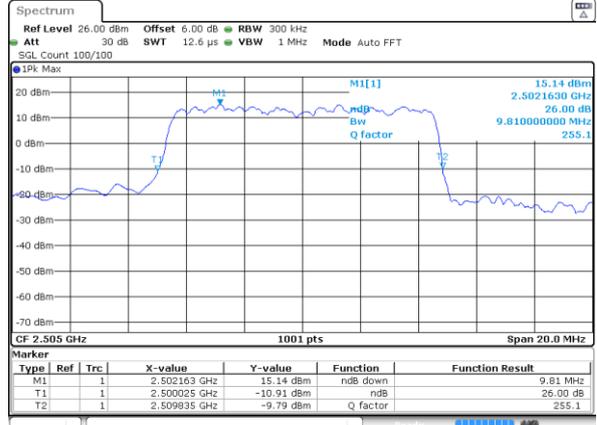
LTE Band 7

Lowest Channel / 10MHz / QPSK



Date: 3 DEC 2019 22:02:24

Lowest Channel / 10MHz / 16QAM



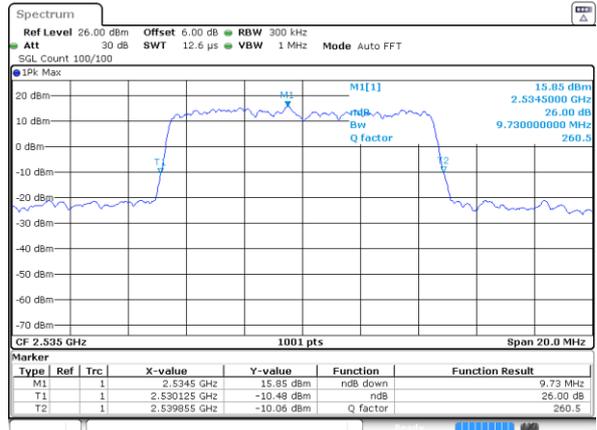
Date: 3 DEC 2019 22:02:44

Middle Channel / 10MHz / QPSK



Date: 3 DEC 2019 22:03:24

Middle Channel / 10MHz / 16QAM



Date: 3 DEC 2019 22:03:04

Highest Channel / 10MHz / QPSK



Date: 3 DEC 2019 22:03:44

Highest Channel / 10MHz / 16QAM

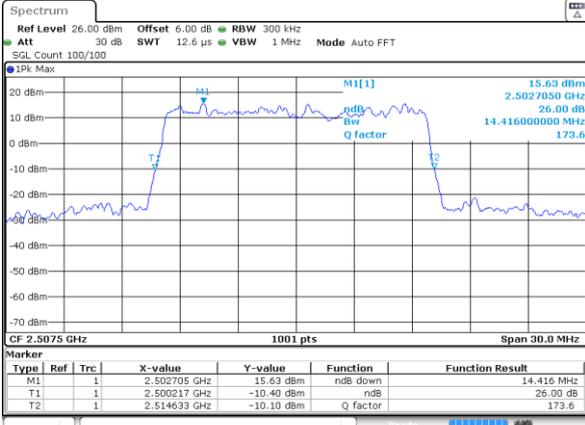


Date: 3 DEC 2019 22:04:04



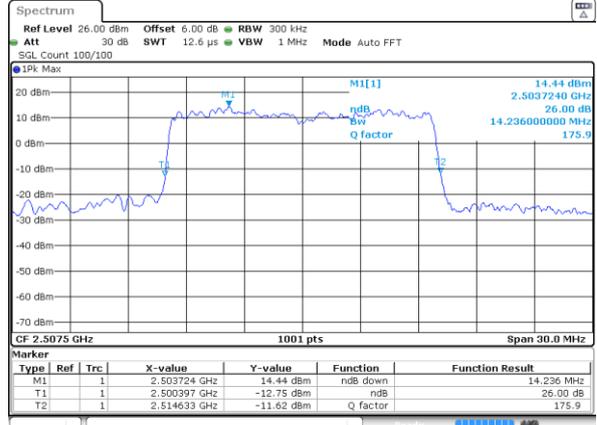
LTE Band 7

Lowest Channel / 15MHz / QPSK



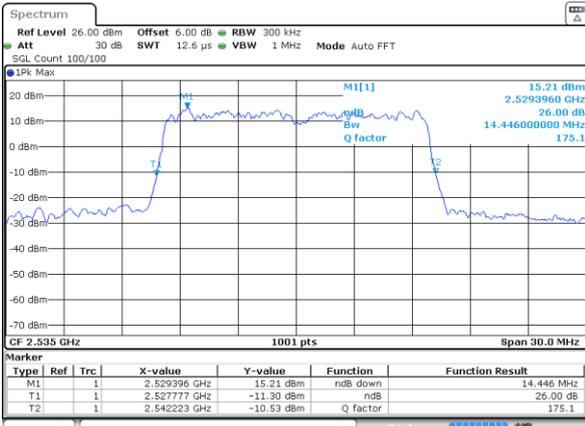
Date: 3 DEC 2019 22:19:14

Lowest Channel / 15MHz / 16QAM



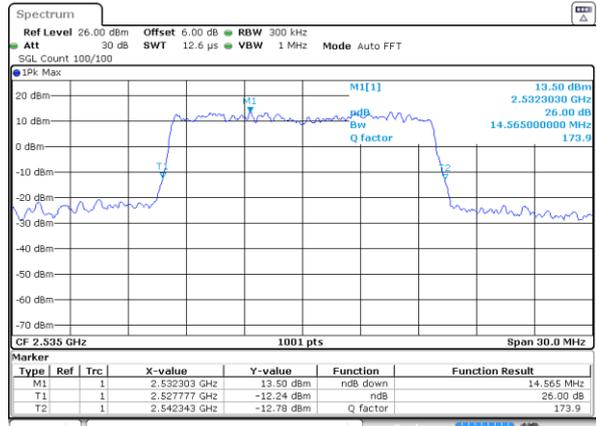
Date: 3 DEC 2019 22:18:54

Middle Channel / 15MHz / QPSK



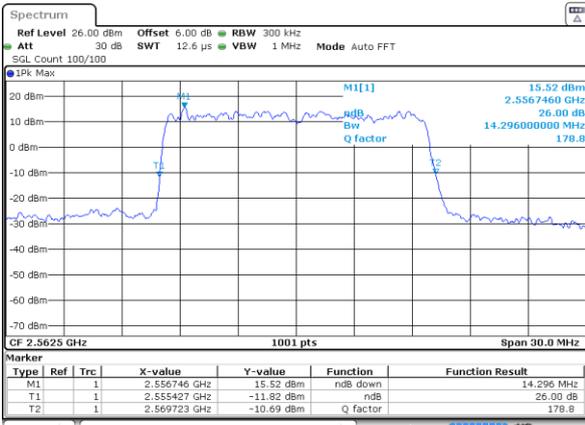
Date: 3 DEC 2019 22:19:34

Middle Channel / 15MHz / 16QAM



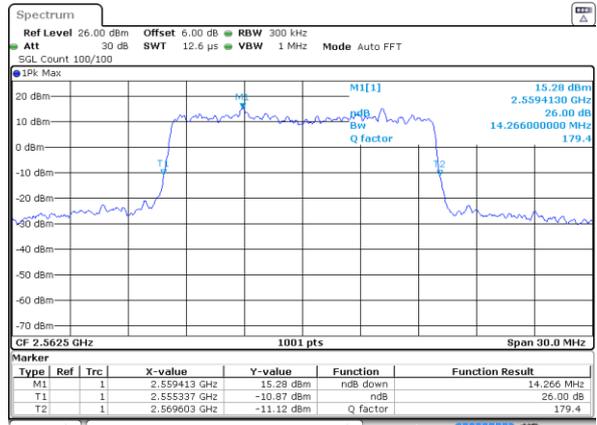
Date: 3 DEC 2019 22:19:54

Highest Channel / 15MHz / QPSK



Date: 3 DEC 2019 22:20:35

Highest Channel / 15MHz / 16QAM

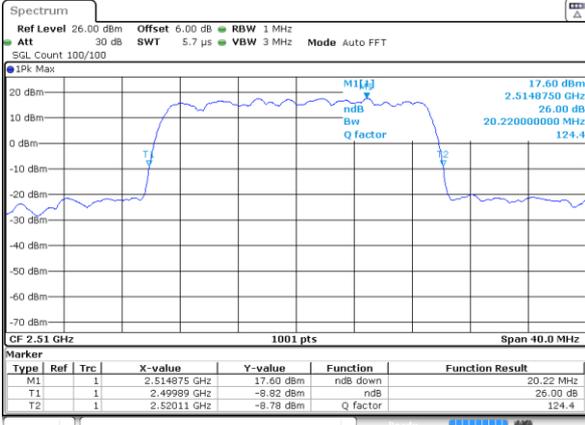


Date: 3 DEC 2019 22:20:15



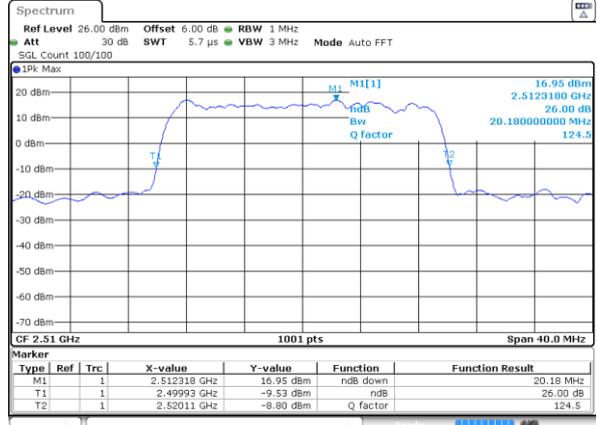
LTE Band 7

Lowest Channel / 20MHz / QPSK



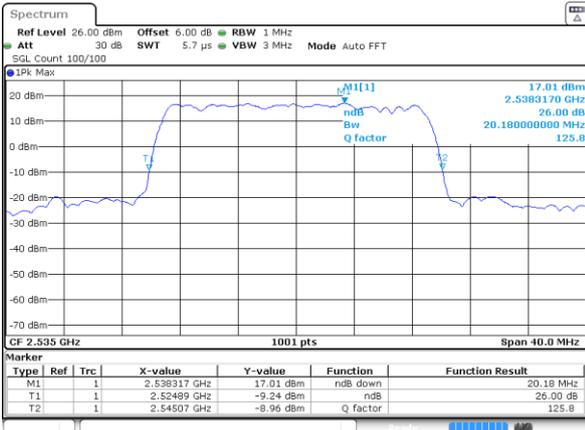
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Lowest Channel / 20MHz / 16QAM



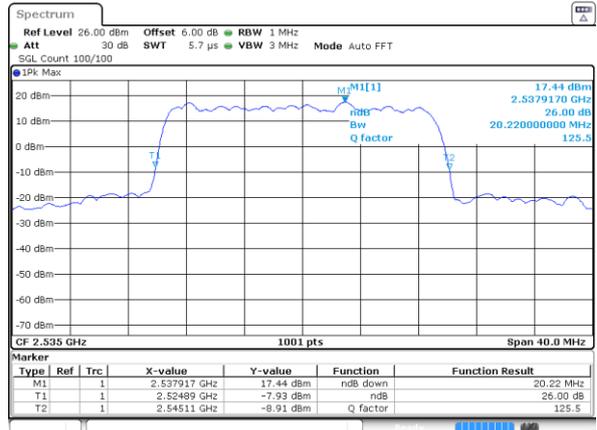
Date: 3 DEC 2019 22:35:25

Middle Channel / 20MHz / QPSK



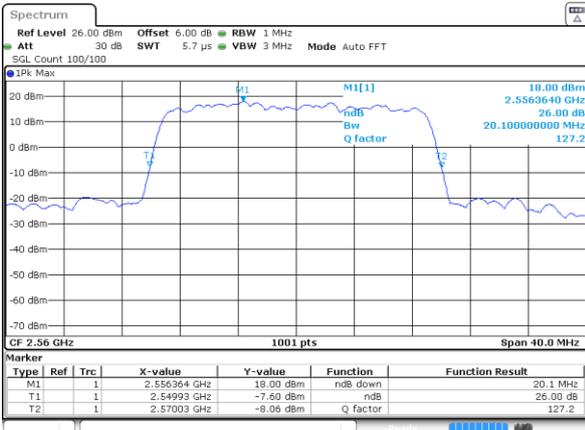
Date: 3 DEC 2019 22:36:05

Middle Channel / 20MHz / 16QAM



Date: 3 DEC 2019 22:36:25

Highest Channel / 20MHz / QPSK



Date: 3 DEC 2019 22:37:05

Highest Channel / 20MHz / 16QAM

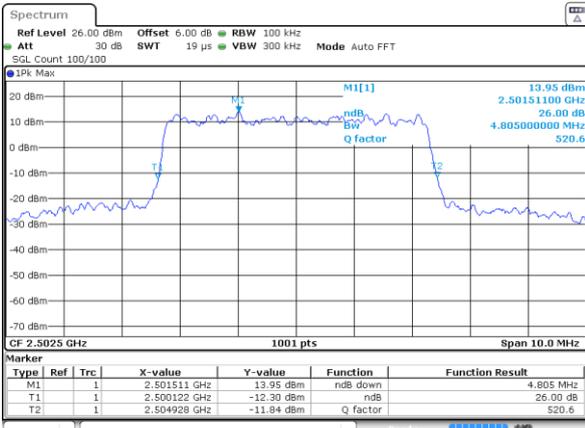


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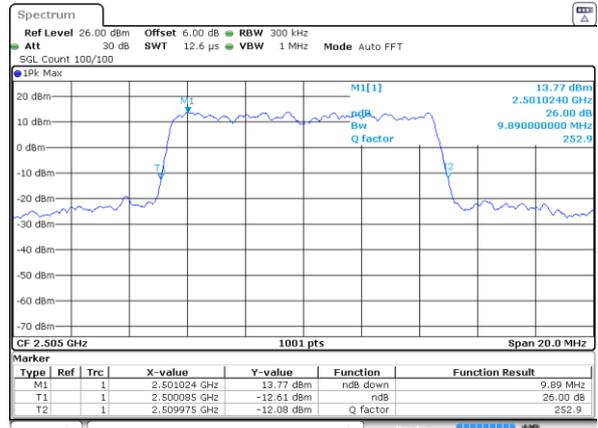
LTE Band 7

Lowest Channel / 5MHz / 64QAM



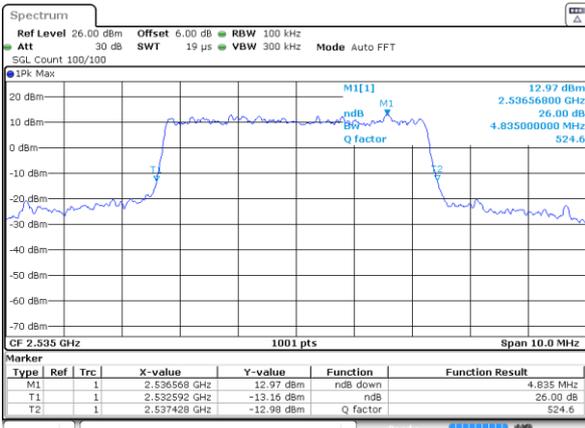
Date: 3 DEC 2019 22:54:24

Lowest Channel / 10MHz / 64QAM



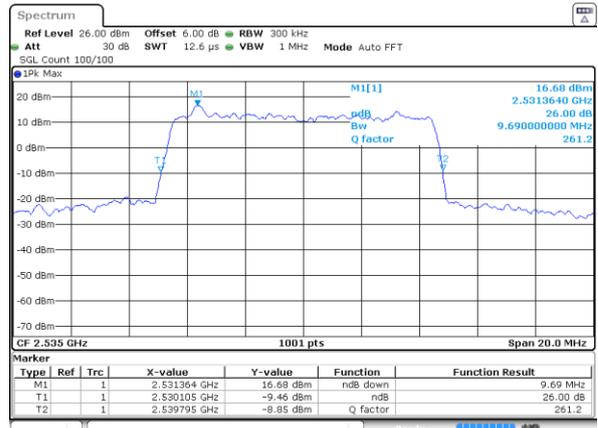
Date: 3 DEC 2019 23:00:23

Middle Channel / 5MHz / 64QAM



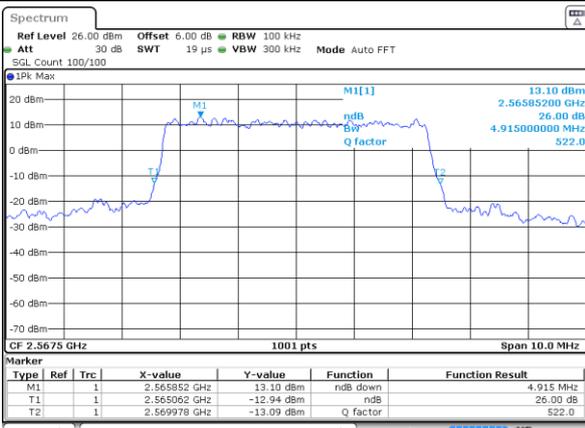
Date: 3 DEC 2019 22:54:35

Middle Channel / 10MHz / 64QAM



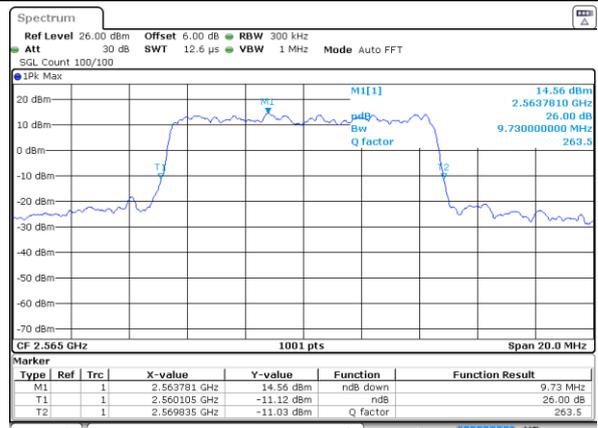
Date: 3 DEC 2019 23:00:33

Highest Channel / 5MHz / 64QAM



Date: 3 DEC 2019 22:54:45

Highest Channel / 10MHz / 64QAM

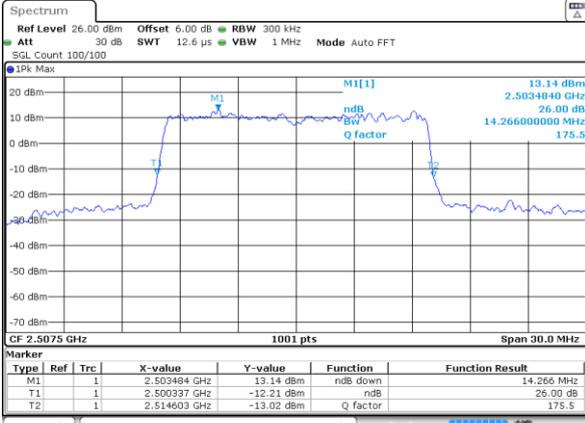


Date: 3 DEC 2019 23:00:43



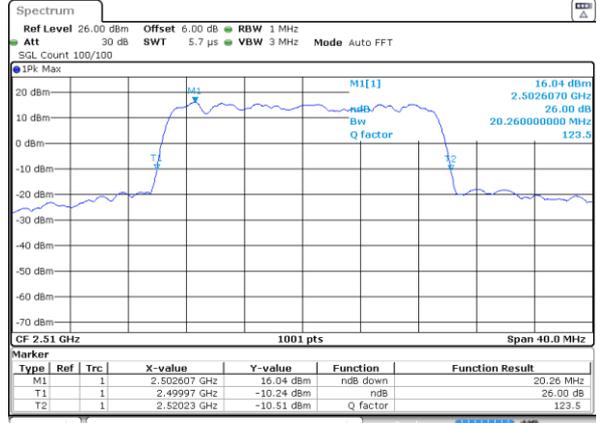
LTE Band 7

Lowest Channel / 15MHz / 64QAM



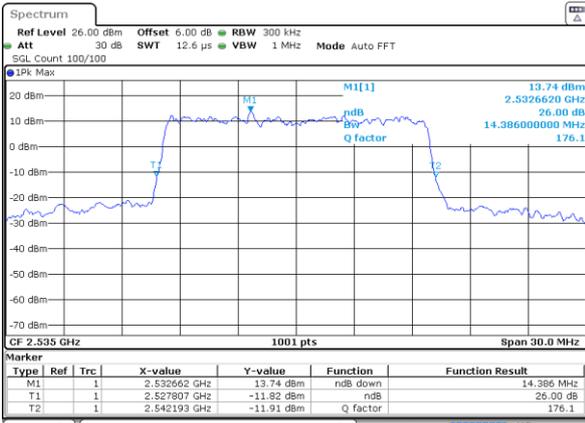
Date: 3 DEC 2019 23:06:22

Lowest Channel / 20MHz / 64QAM



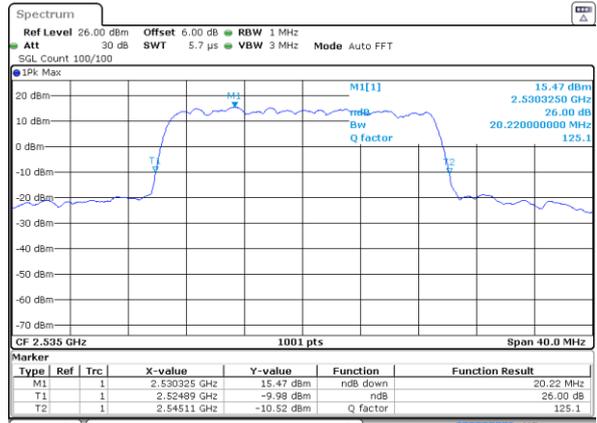
Date: 3 DEC 2019 23:12:21

Middle Channel / 15MHz / 64QAM



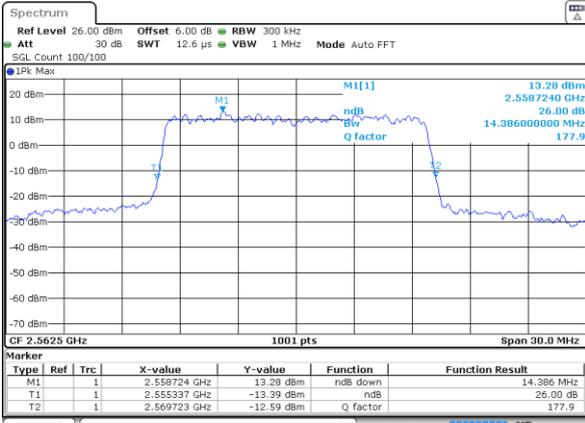
Date: 3 DEC 2019 23:06:32

Middle Channel / 20MHz / 64QAM



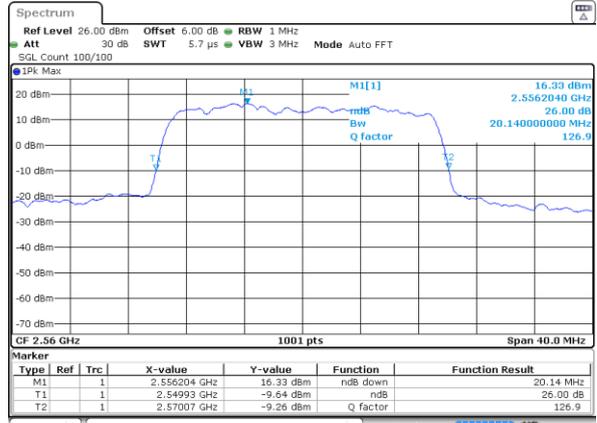
Date: 3 DEC 2019 23:12:31

Highest Channel / 15MHz / 64QAM



Date: 3 DEC 2019 23:06:42

Highest Channel / 20MHz / 64QAM



Date: 3 DEC 2019 23:12:41



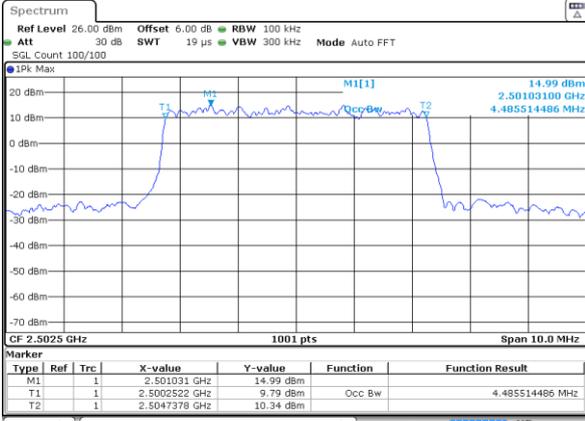
**Occupied Bandwidth**

Mode	LTE Band 7 : 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					4.486	4.486	9.071	8.991	13.487	13.427	18.382	18.581
Middle CH					4.486	4.505	9.071	8.991	13.487	13.457	18.382	18.262
Highest CH					4.466	4.486	9.031	9.031	13.367	13.367	18.422	18.342
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.					64QAM		64QAM		64QAM		64QAM	
Lowest CH					4.496		9.051		13.487		18.462	
Middle CH					4.486		9.111		13.457		18.342	
Highest CH					4.476		8.991		13.427		18.262	



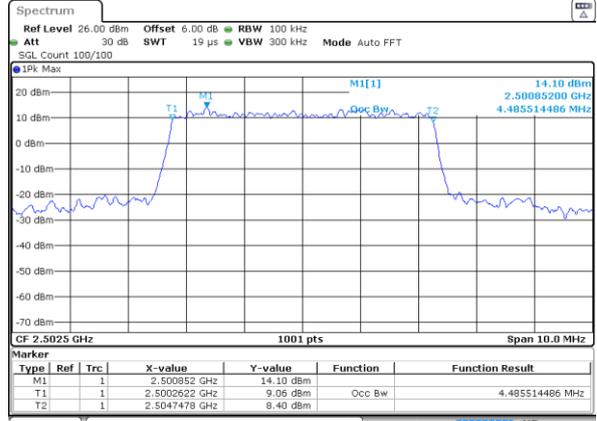
LTE Band 7

Lowest Channel / 5MHz / QPSK



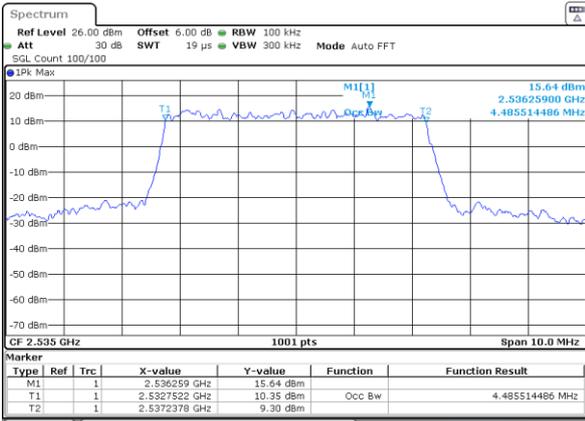
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Lowest Channel / 5MHz / 16QAM



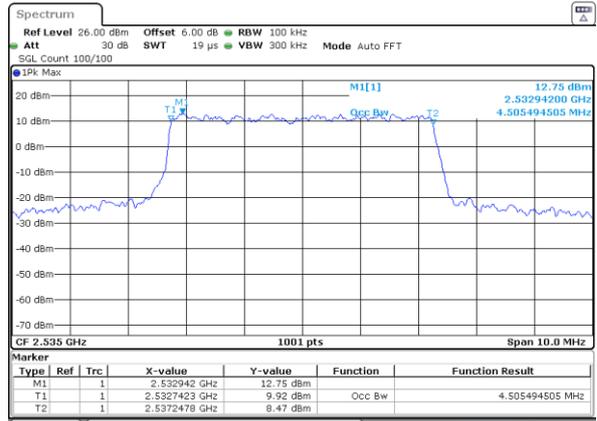
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Middle Channel / 5MHz / QPSK



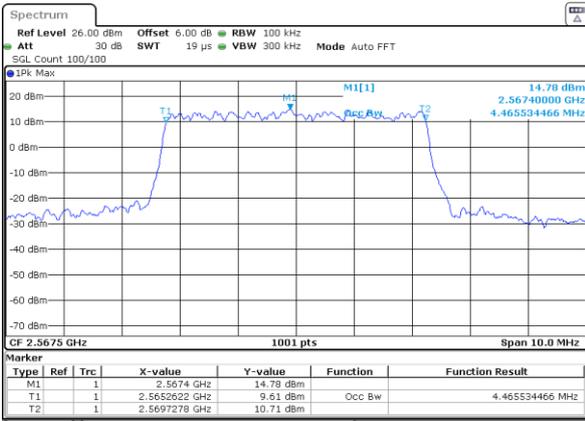
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Middle Channel / 5MHz / 16QAM



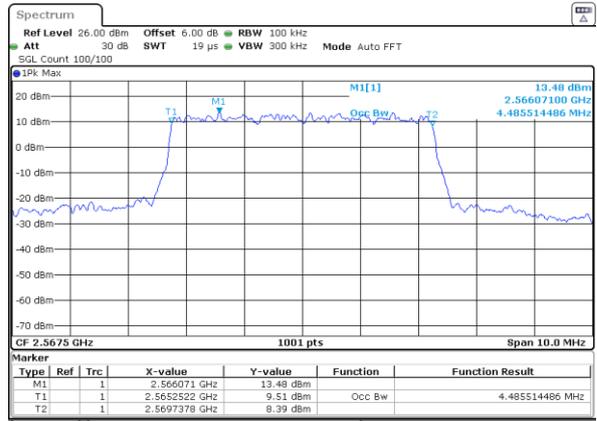
Date: 3.DEC.2019 21:46:21

Highest Channel / 5MHz / QPSK



Date: 3.DEC.2019 21:47:01

Highest Channel / 5MHz / 16QAM

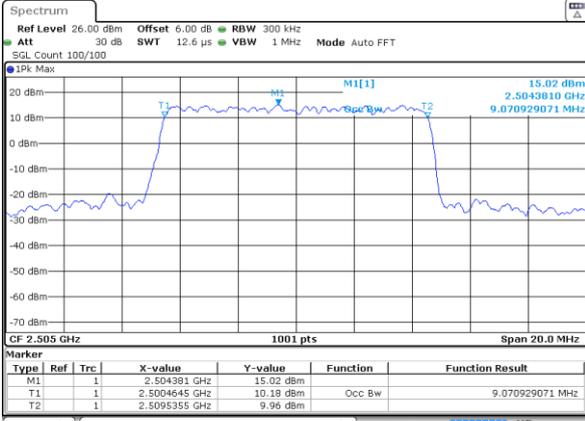


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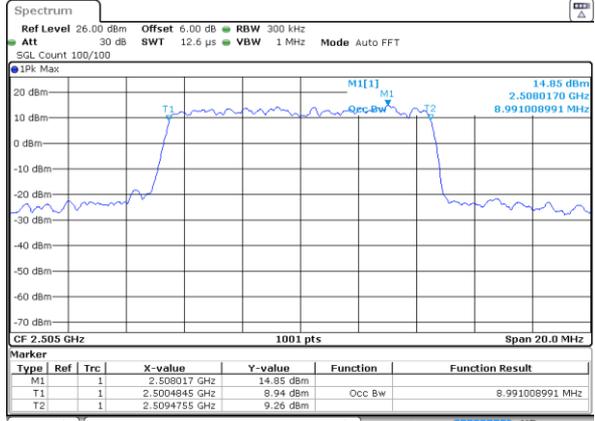
LTE Band 7

Lowest Channel / 10MHz / QPSK



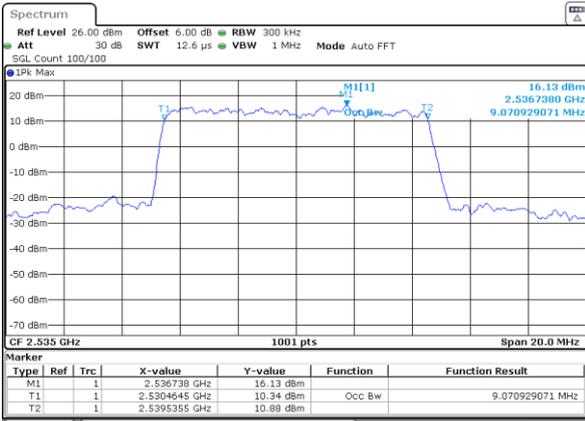
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Lowest Channel / 10MHz / 16QAM



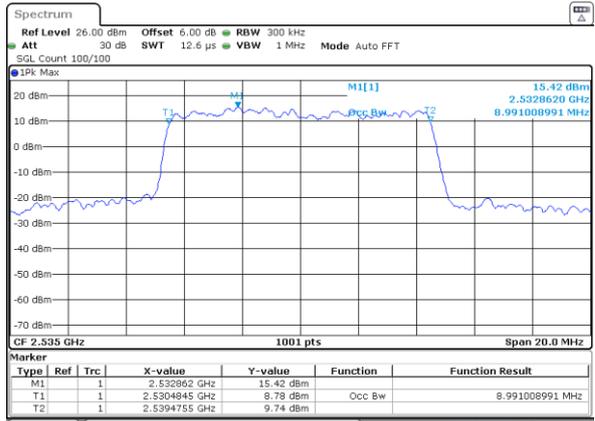
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Middle Channel / 10MHz / QPSK



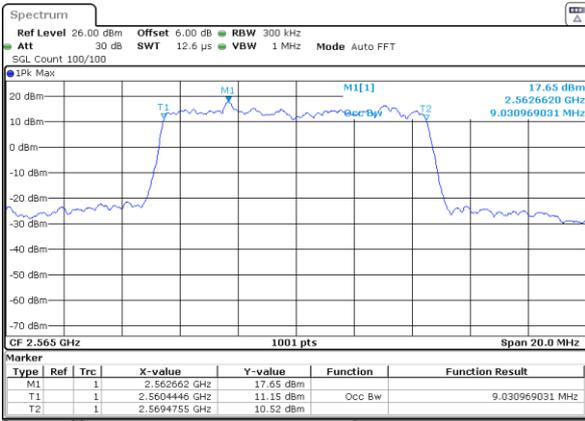
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Middle Channel / 10MHz / 16QAM



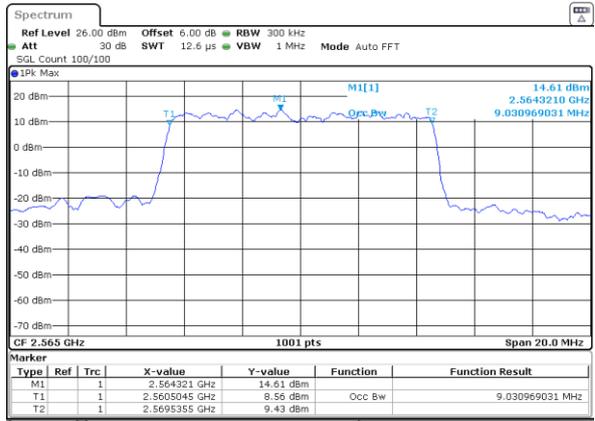
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Highest Channel / 10MHz / QPSK



Date: 3 DEC 2019 22:03:34

Highest Channel / 10MHz / 16QAM

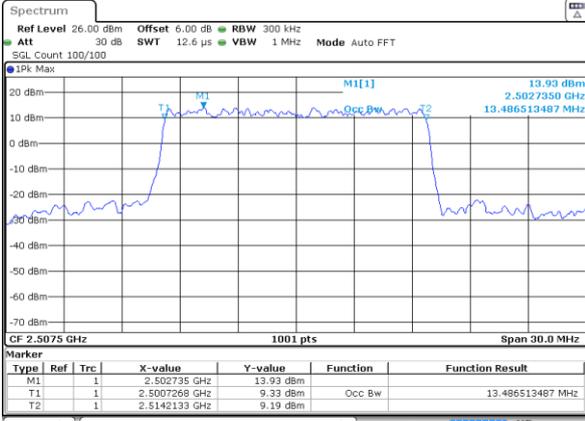


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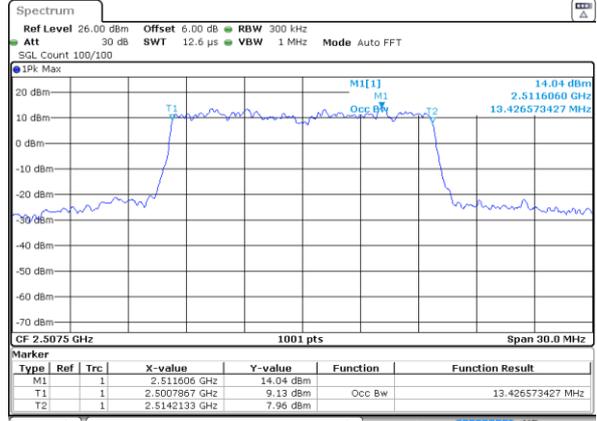
LTE Band 7

Lowest Channel / 15MHz / QPSK



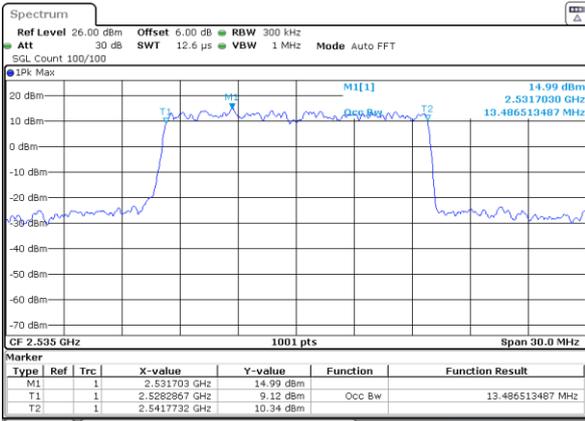
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Lowest Channel / 15MHz / 16QAM



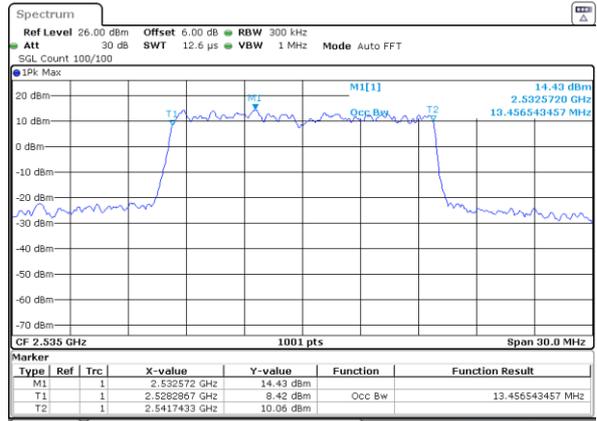
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Middle Channel / 15MHz / QPSK



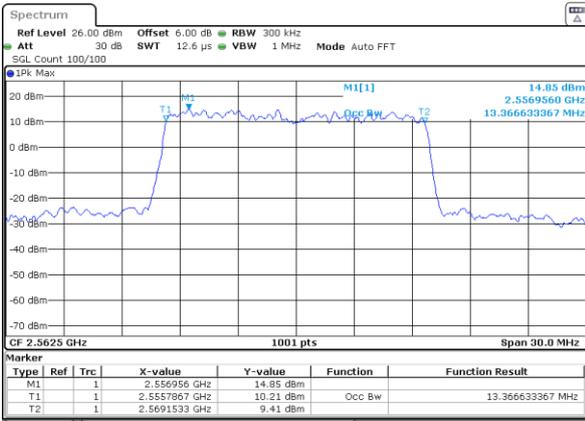
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Middle Channel / 15MHz / 16QAM



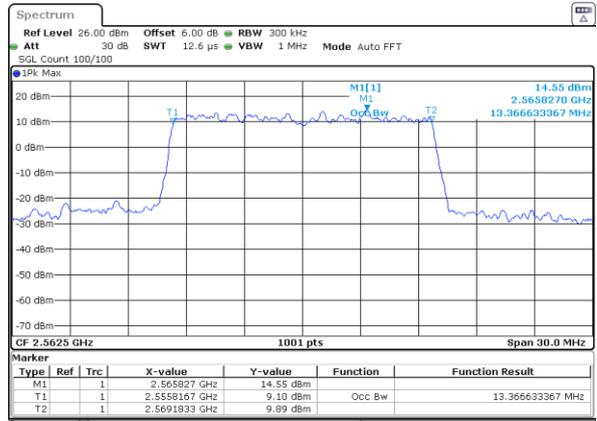
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Highest Channel / 15MHz / QPSK



Date: 3.DEC.2019 22:20:25

Highest Channel / 15MHz / 16QAM

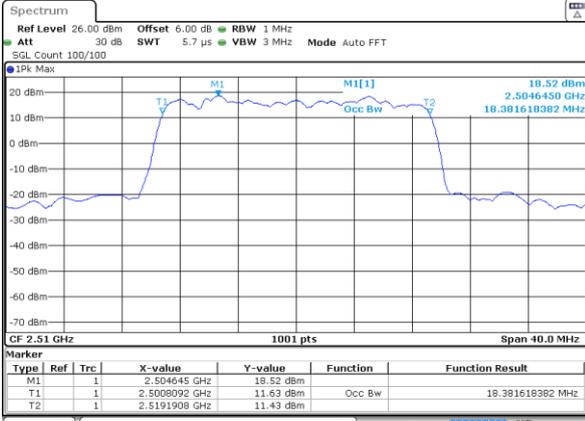


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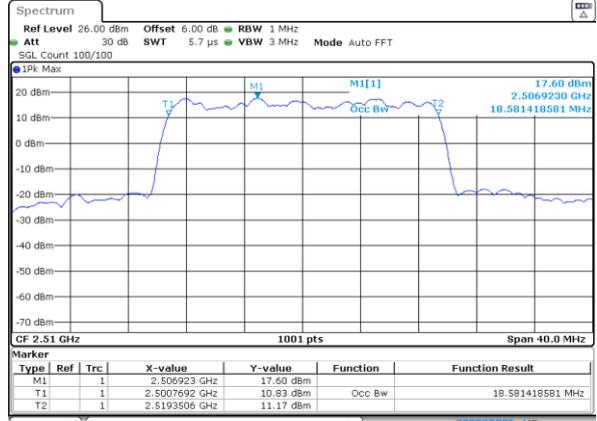
LTE Band 7

Lowest Channel / 20MHz / QPSK



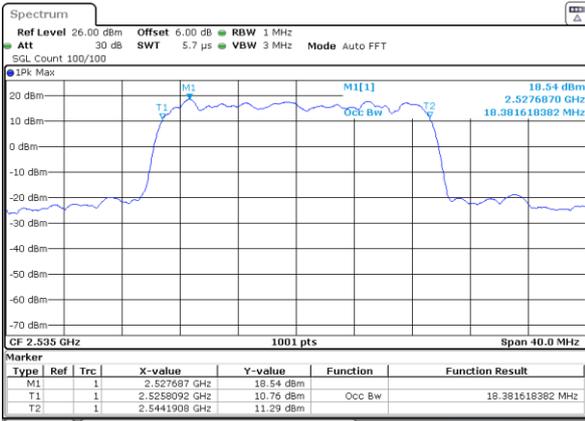
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Lowest Channel / 20MHz / 16QAM



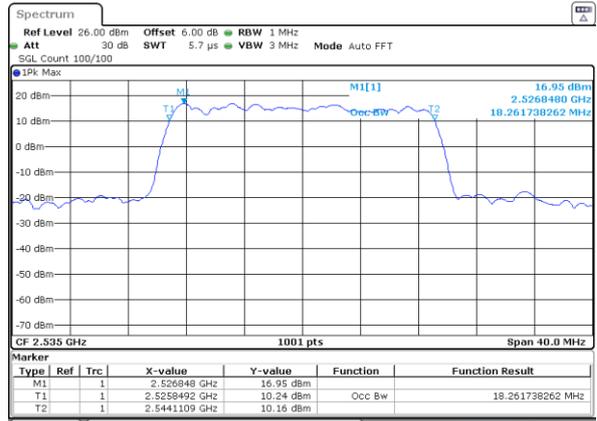
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Middle Channel / 20MHz / QPSK



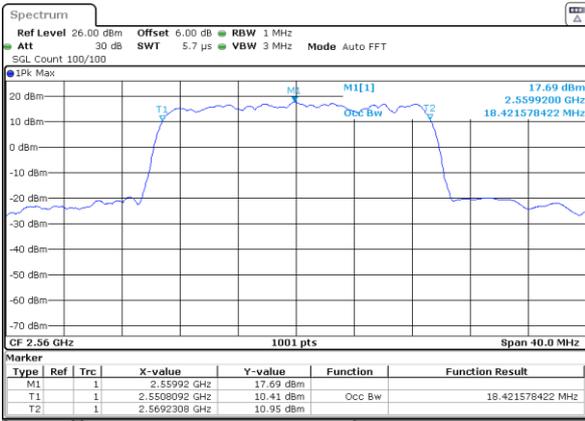
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Middle Channel / 20MHz / 16QAM



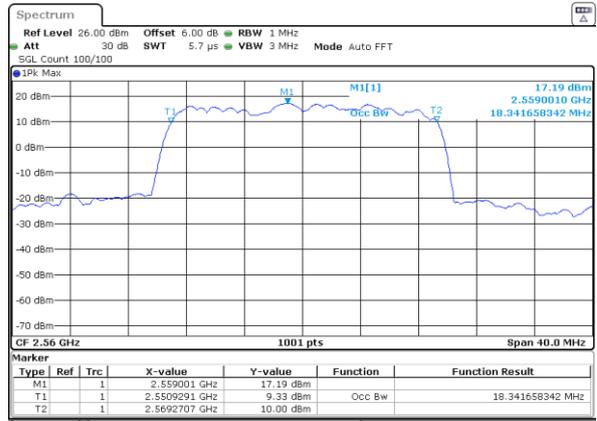
Date: 3 DEC 2019 22:36:15

Highest Channel / 20MHz / QPSK



Date: 3 DEC 2019 22:36:55

Highest Channel / 20MHz / 16QAM

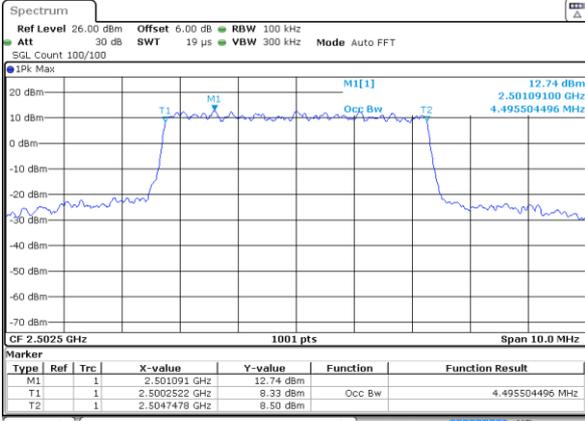


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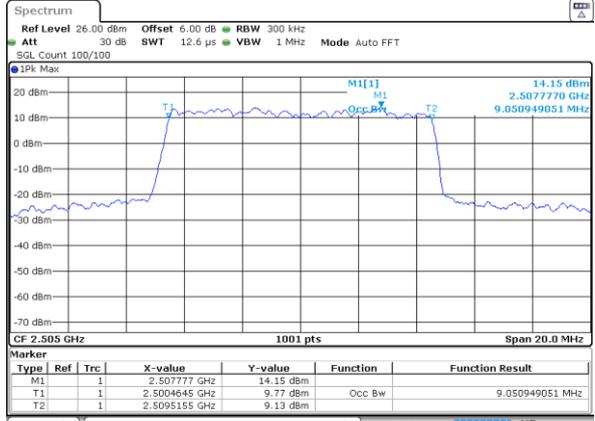
LTE Band 7

Lowest Channel / 5MHz / 64QAM



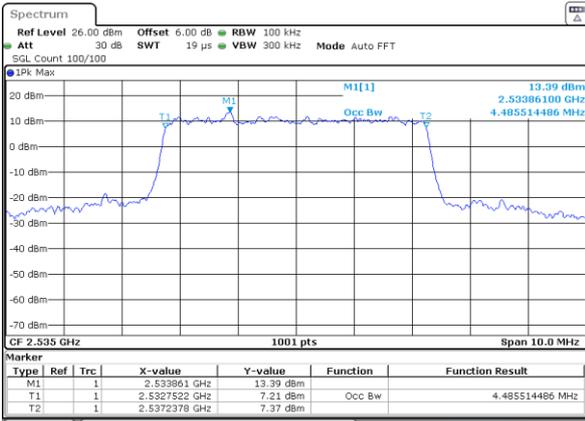
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Lowest Channel / 10MHz / 64QAM



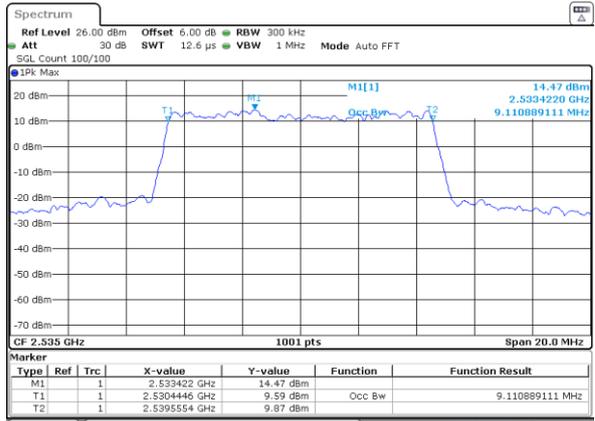
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Middle Channel / 5MHz / 64QAM



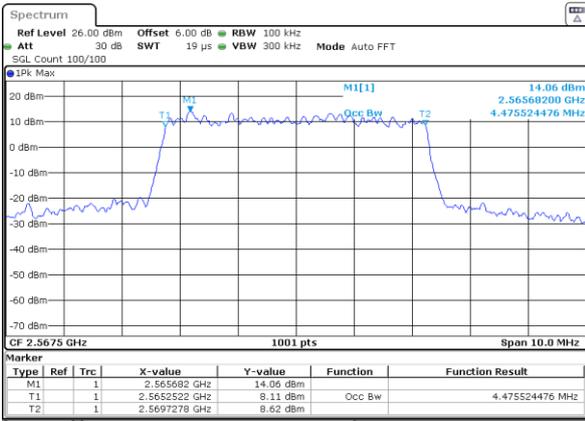
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Middle Channel / 10MHz / 64QAM



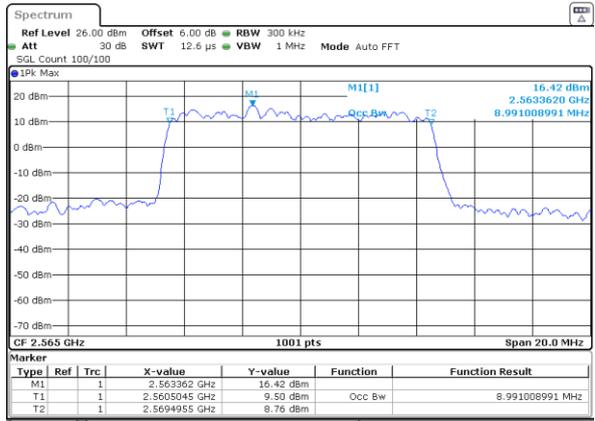
Date: 3 DEC 2019 23:00:03

Highest Channel / 5MHz / 64QAM



Date: 3 DEC 2019 22:54:14

Highest Channel / 10MHz / 64QAM

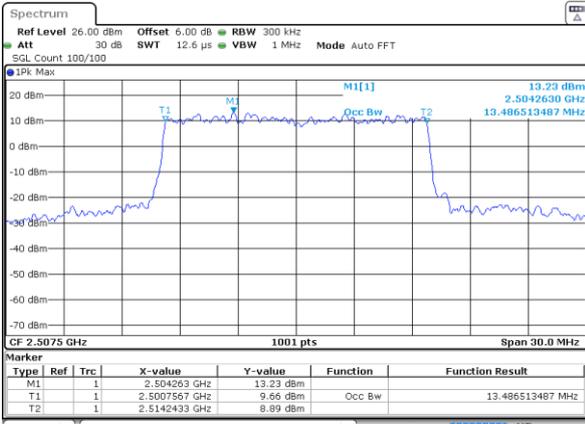


Date: 3 DEC 2019 23:00:13



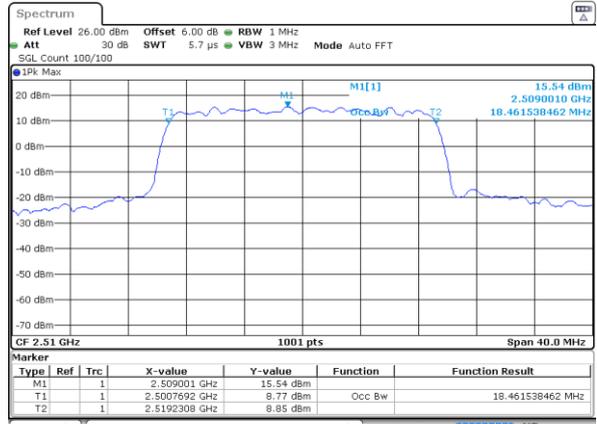
LTE Band 7

Lowest Channel / 15MHz / 64QAM



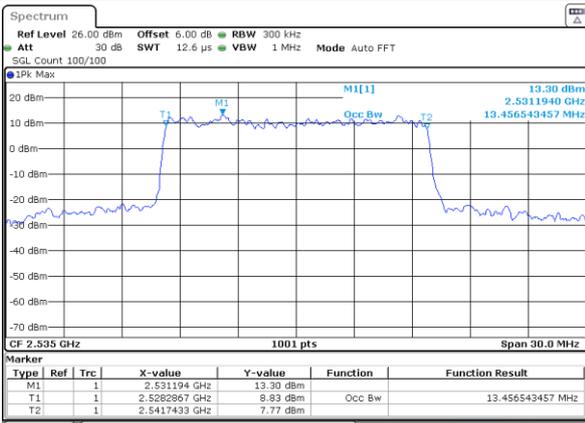
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Lowest Channel / 20MHz / 64QAM



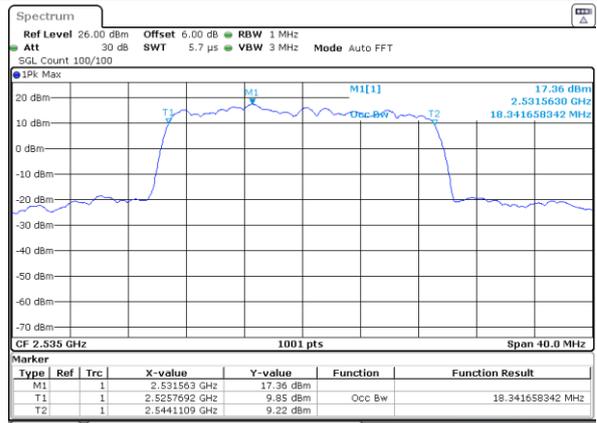
Date: 3 DEC 2019 23:11:50

Middle Channel / 15MHz / 64QAM



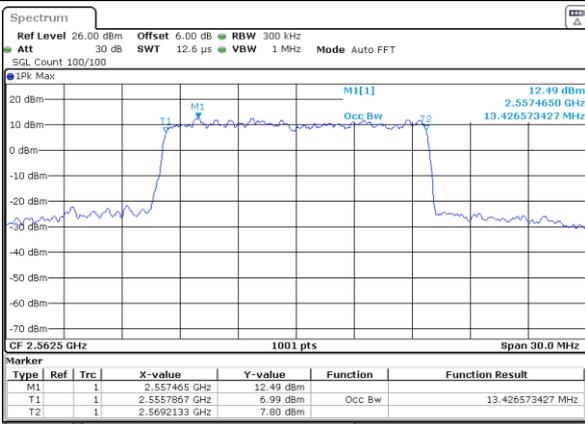
Date: 3 DEC 2019 23:06:02

Middle Channel / 20MHz / 64QAM



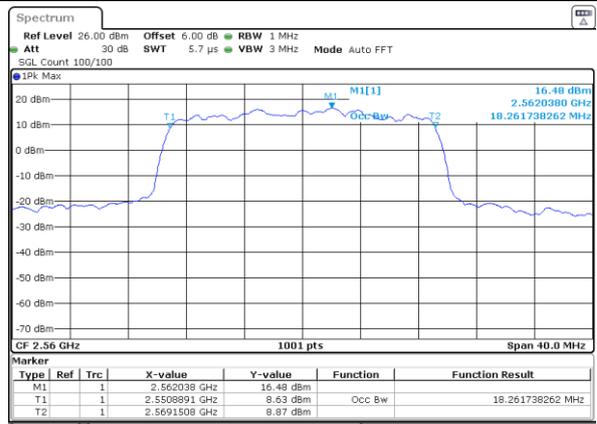
Date: 3 DEC 2019 23:12:01

Highest Channel / 15MHz / 64QAM



Date: 3 DEC 2019 23:06:12

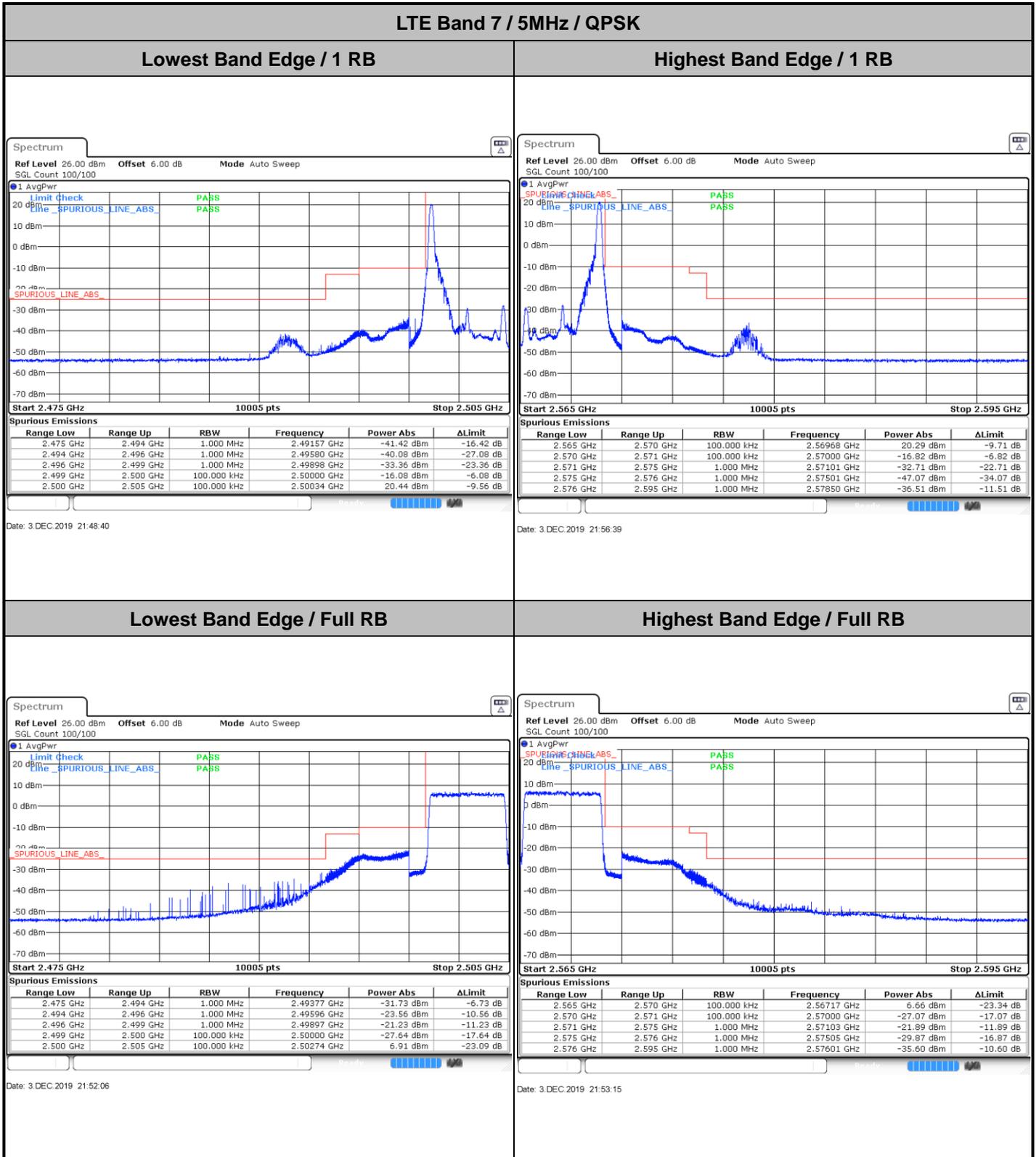
Highest Channel / 20MHz / 64QAM



Date: 3 DEC 2019 23:12:11



# Conducted Band Edge

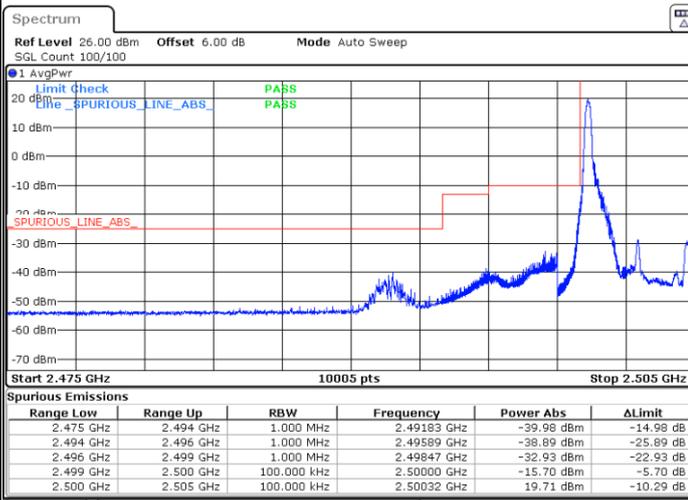




LTE Band 7 / 5MHz / 16QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB



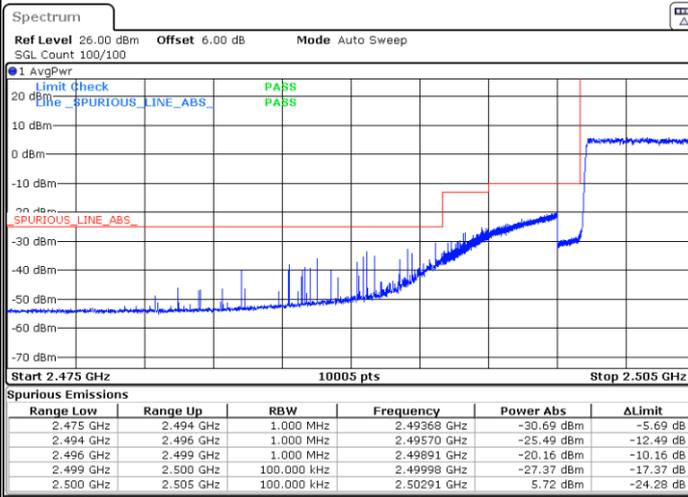
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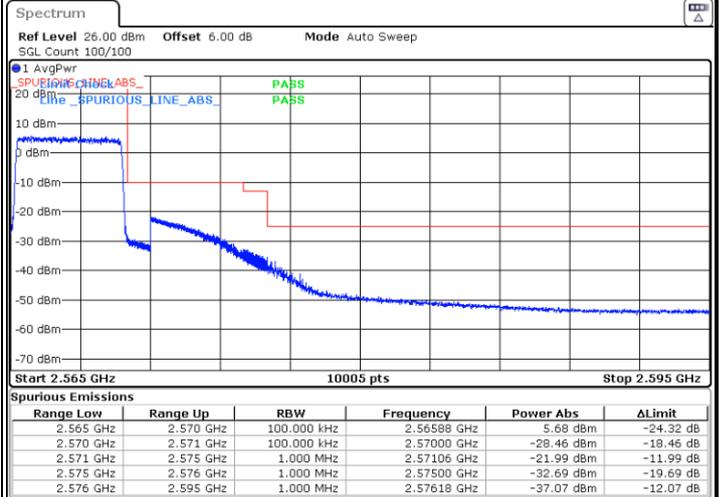
Date: 3 DEC.2019 21:55:31

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 3 DEC.2019 21:50:57

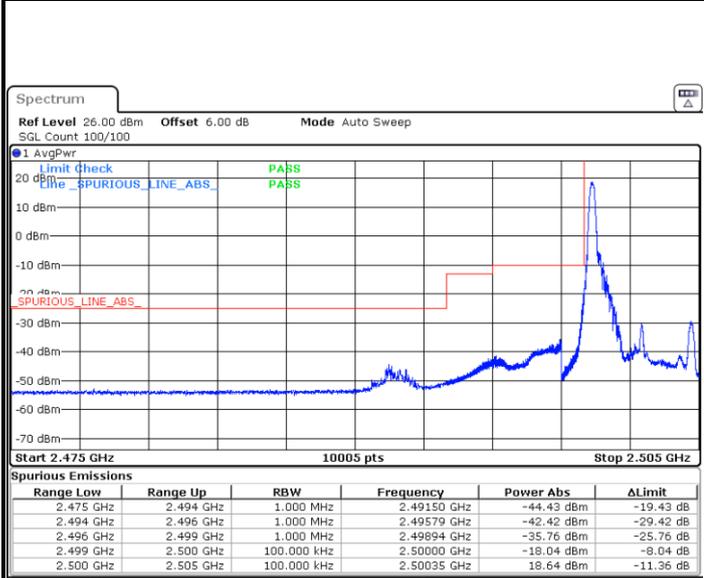


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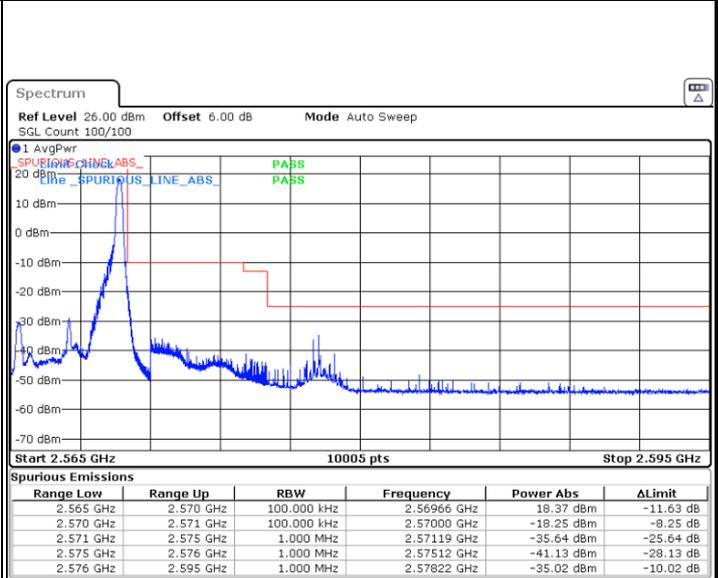
**LTE Band 7 / 5MHz / 64QAM**

**Lowest Band Edge / 1RB**



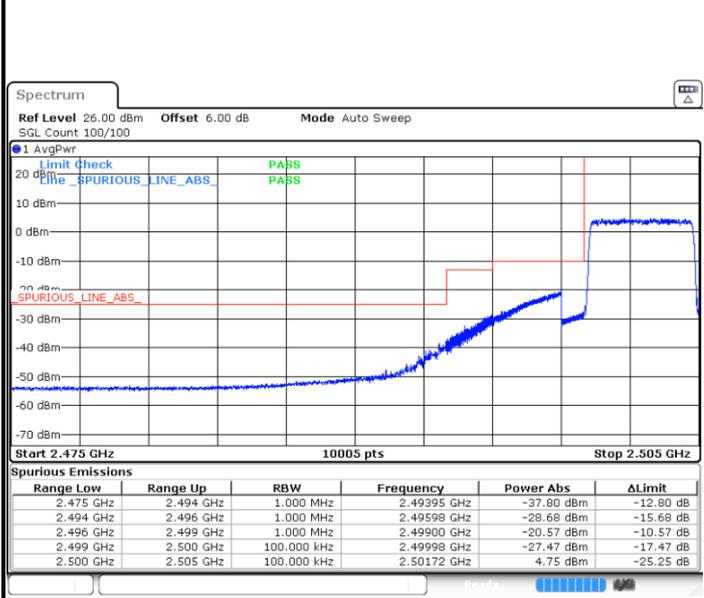
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**Highest Band Edge / 1 RB**



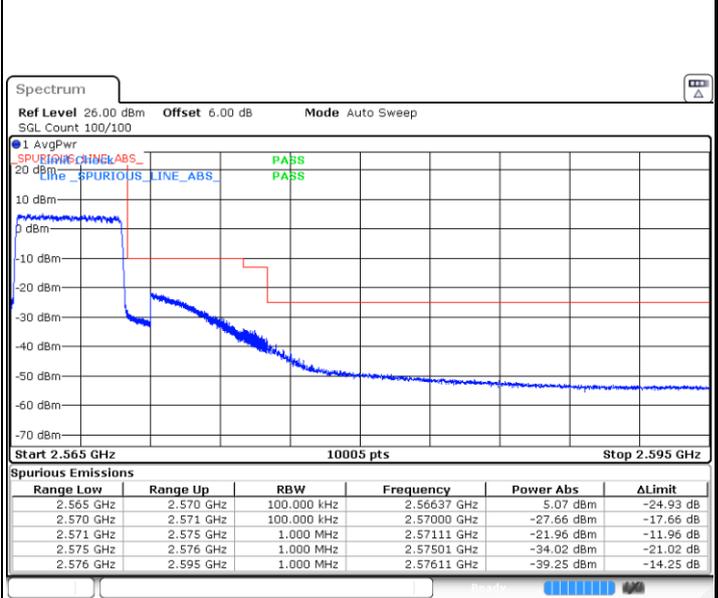
Date: 3 DEC.2019 22:58:35

**Lowest Band Edge / Full RB**



Date: 3 DEC.2019 23:31:25

**Highest Band Edge / Full RB**

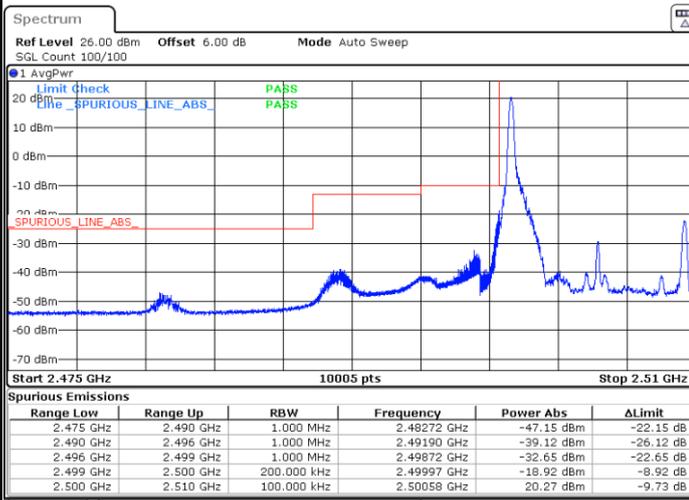


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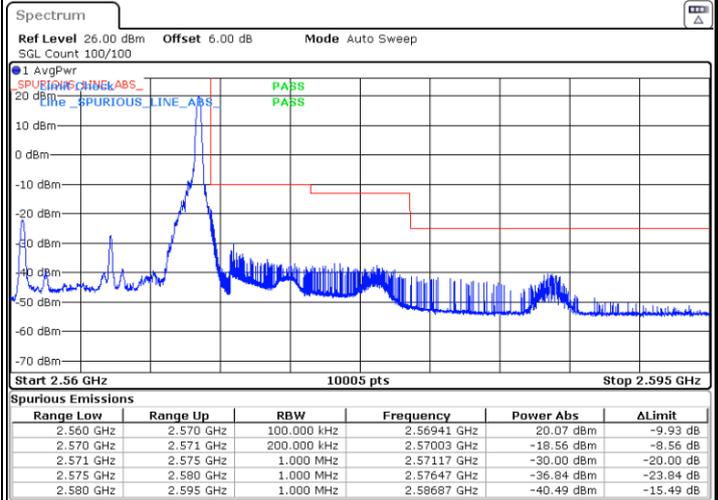
LTE Band 7 / 10MHz / QPSK

Lowest Band Edge / 1 RB



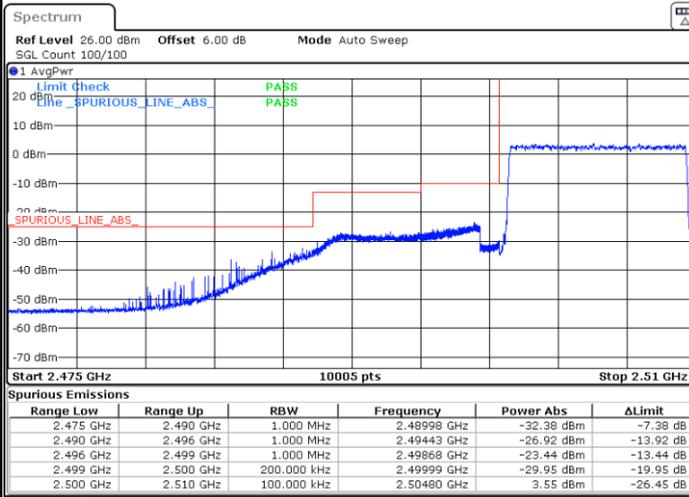
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Highest Band Edge / 1 RB



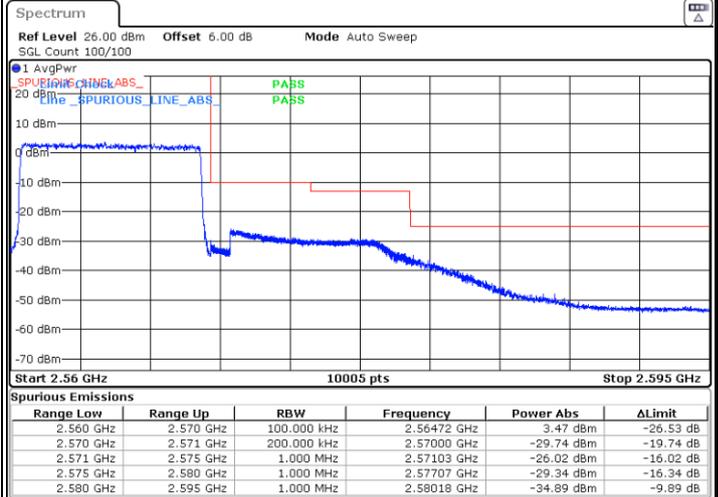
Date: 3 DEC.2019 22:13:11

Lowest Band Edge / Full RB



Date: 3 DEC.2019 22:08:37

Highest Band Edge / Full RB



Date: 3 DEC.2019 22:09:46