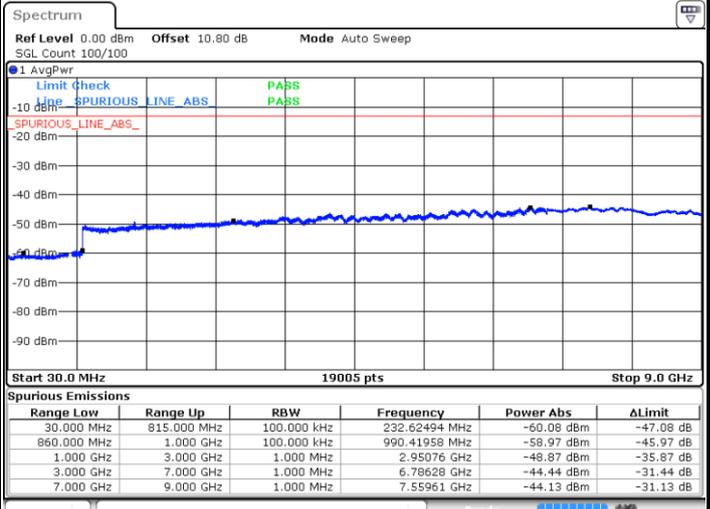
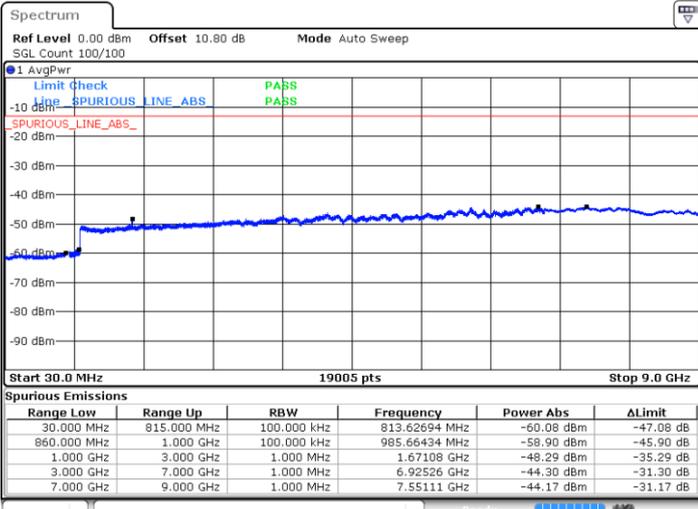




LTE Band 5 / 3MHz

Middle Channel / QPSK

Middle Channel / 16QAM

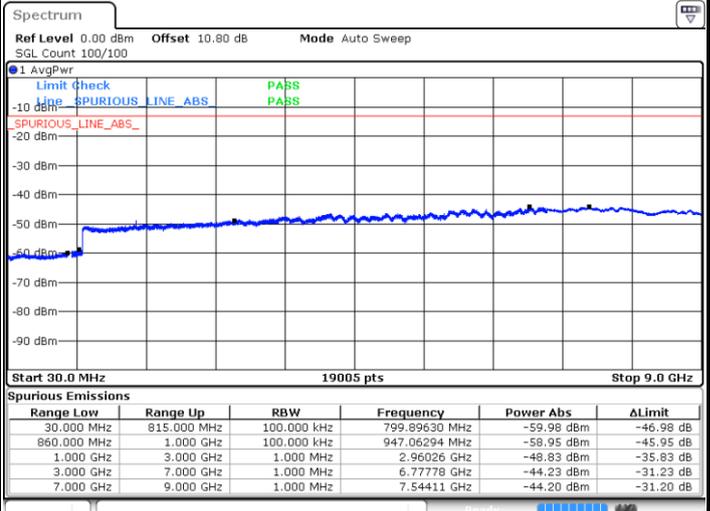
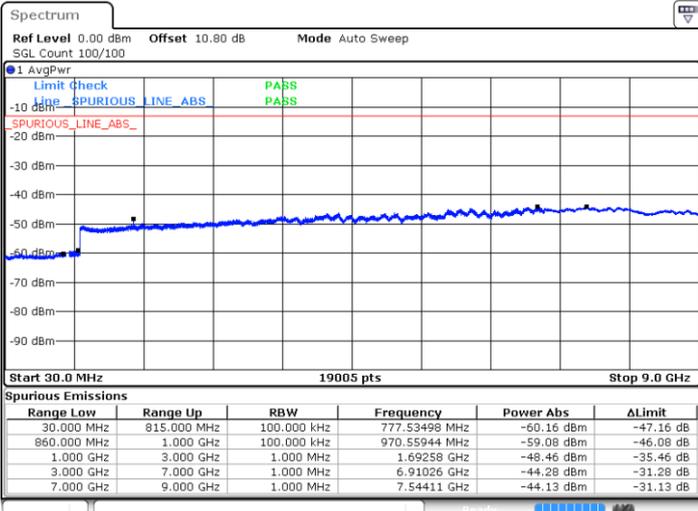


Date: 4 JAN 2020 05:39:11

Date: 4 JAN 2020 05:39:51

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 4 JAN 2020 05:48:04

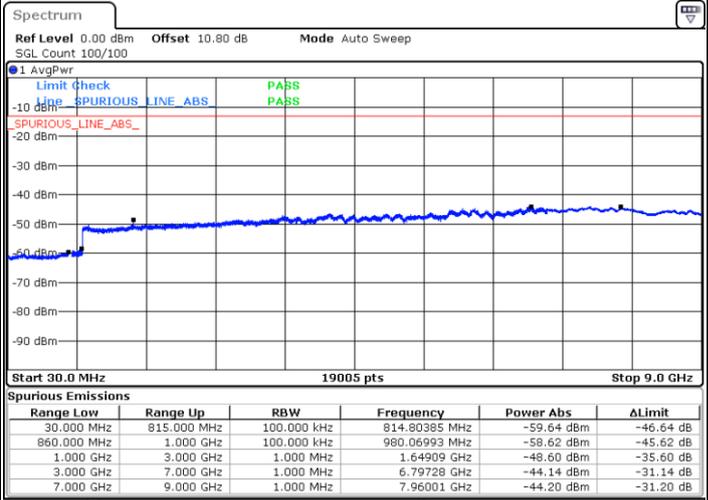
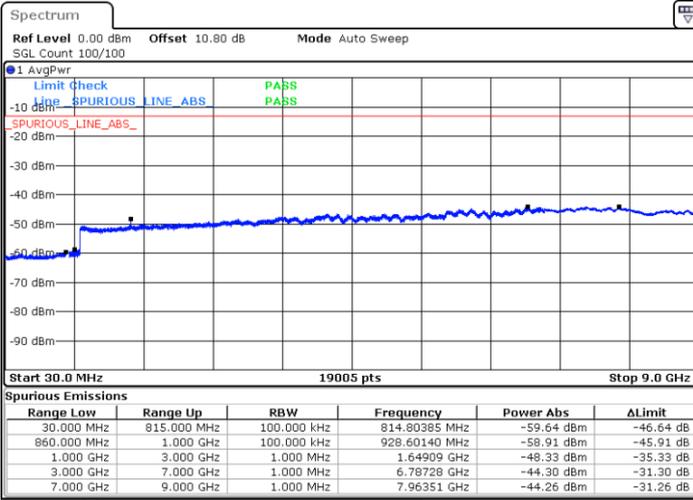
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LTE Band 5 / 5MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

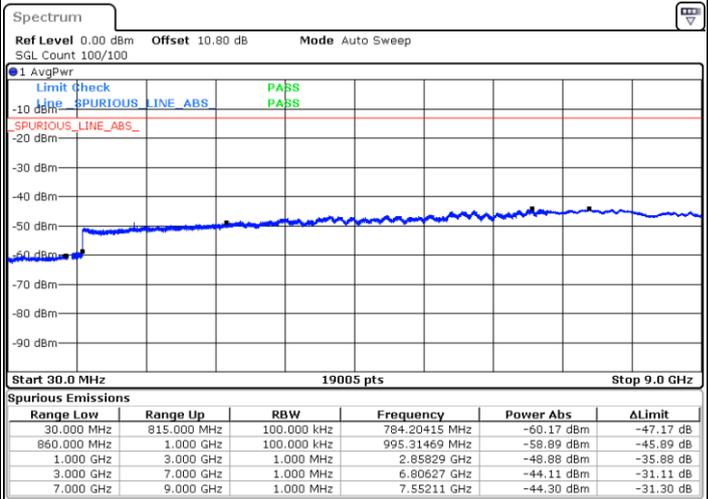
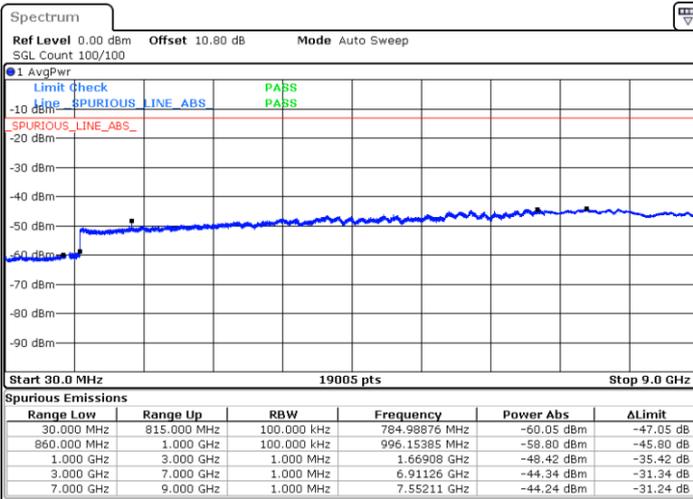


Date: 4 JAN 2020 04:16:48

Date: 4 JAN 2020 04:17:29

Middle Channel / QPSK

Middle Channel / 16QAM



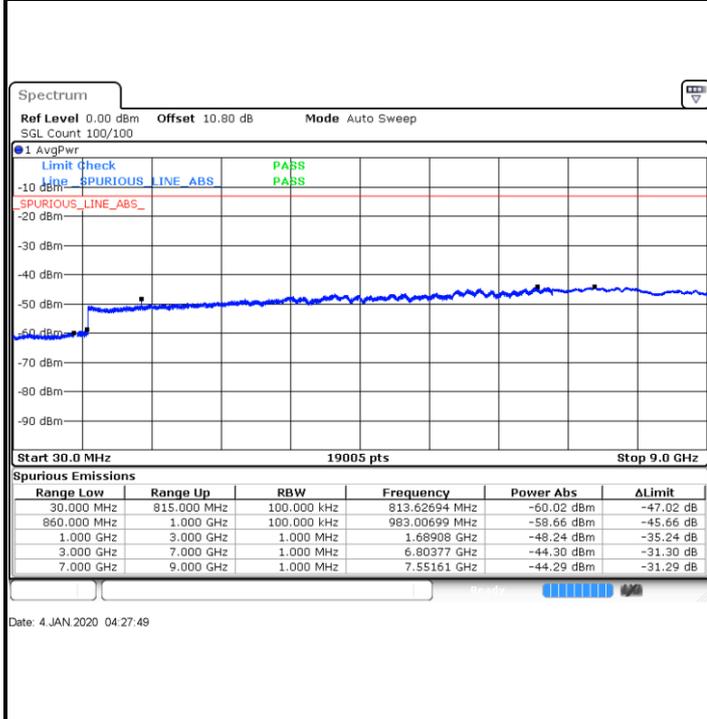
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Date: 4 JAN 2020 04:19:36

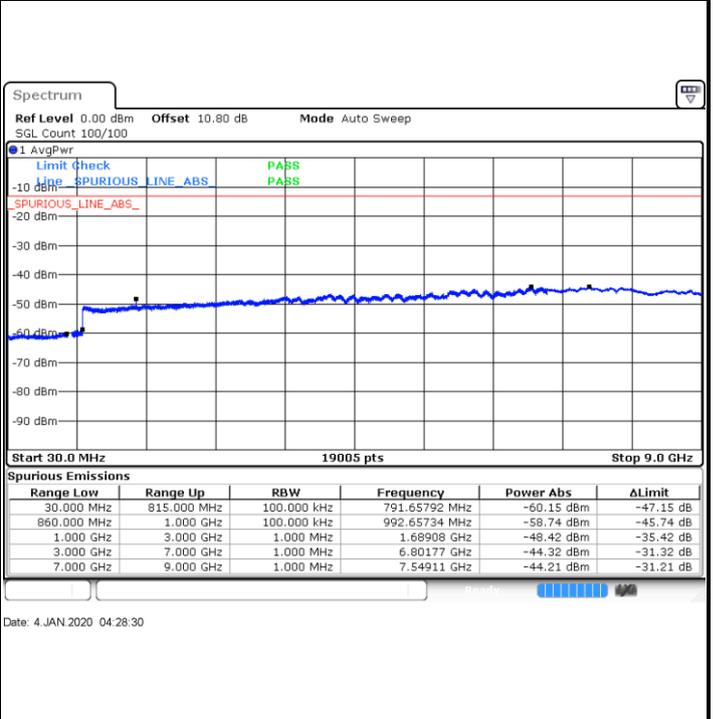


LTE Band 5 / 5MHz

Highest Channel / QPSK

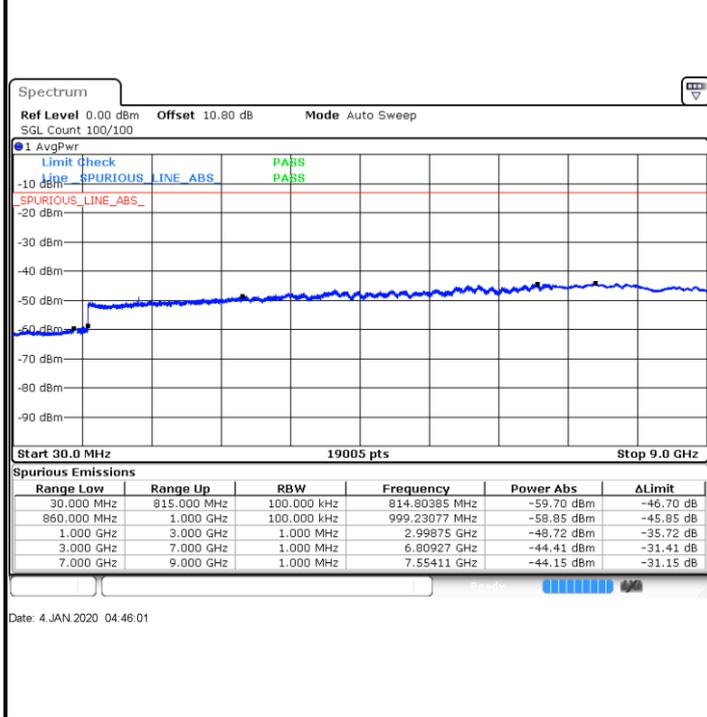


Highest Channel / 16QAM

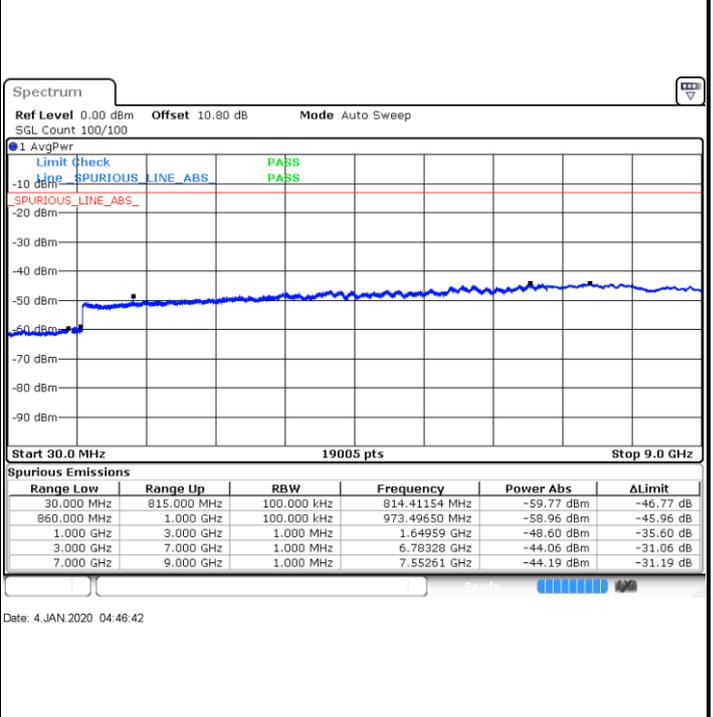


LTE Band 5 / 10MHz

Lowest Channel / QPSK



Lowest Channel / 16QAM

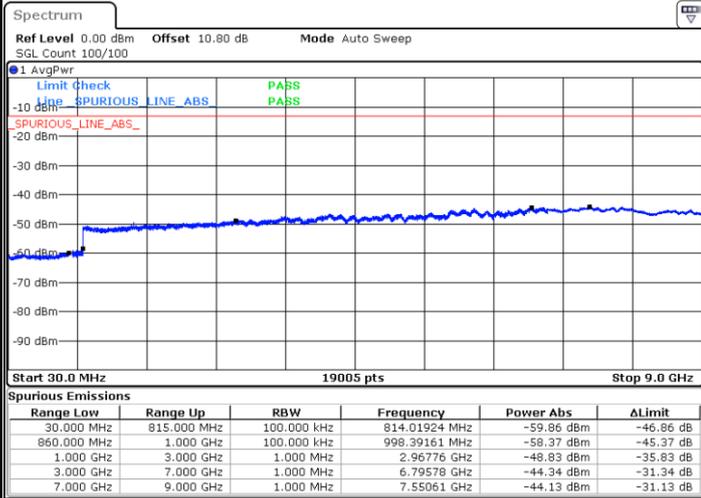




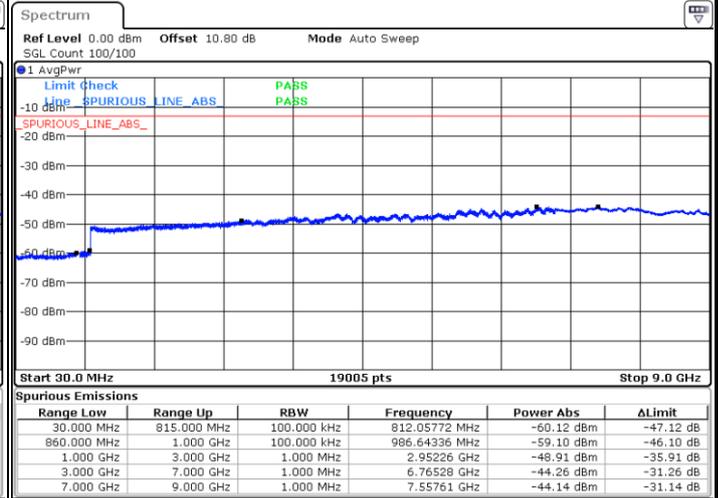
LTE Band 5 / 1.4MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

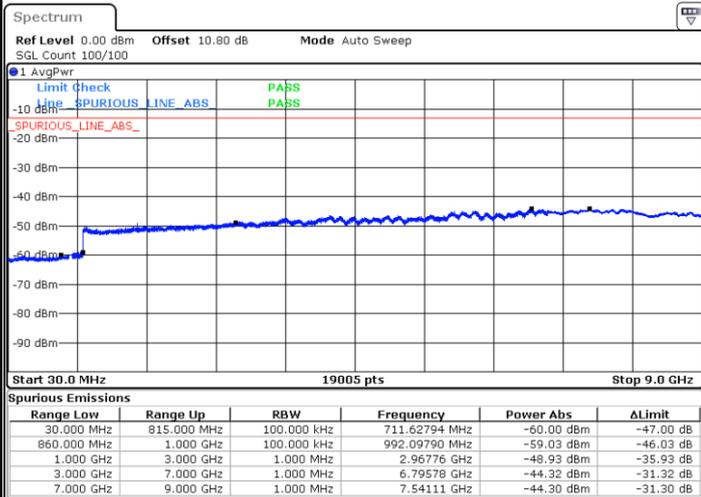


Date: 4 JAN 2020 06:18:56



Date: 4 JAN 2020 06:19:59

Highest Channel / 64QAM



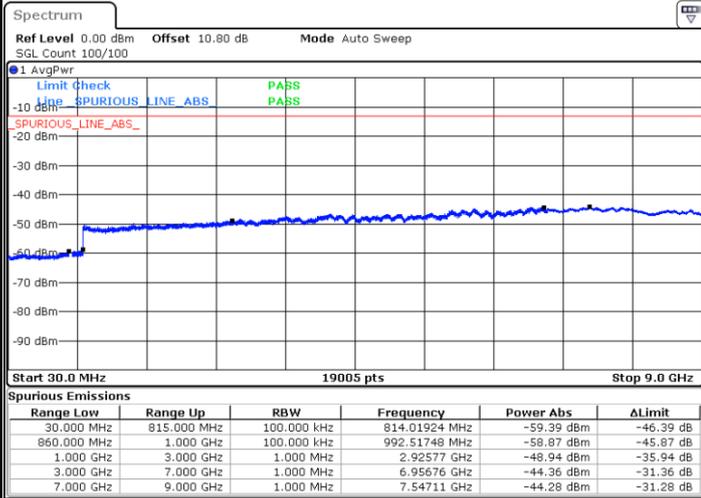
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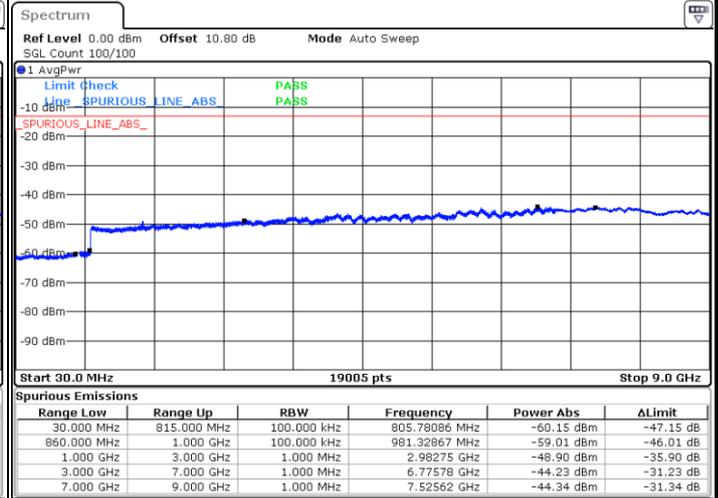
LTE Band 5 / 3MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

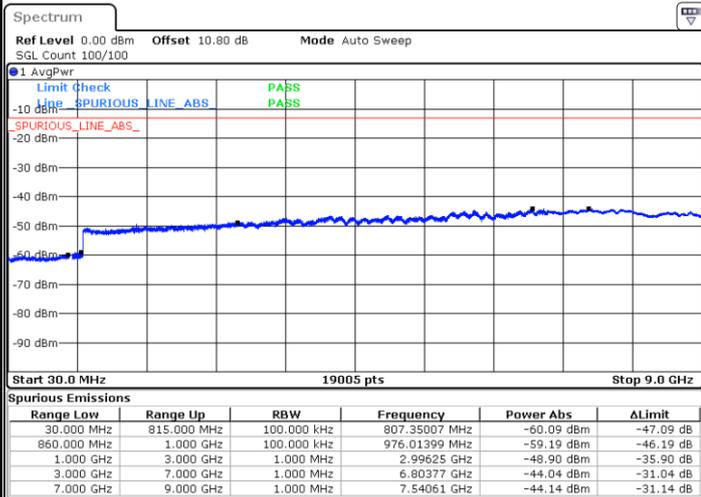


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Date: 4 JAN 2020 05:54:16

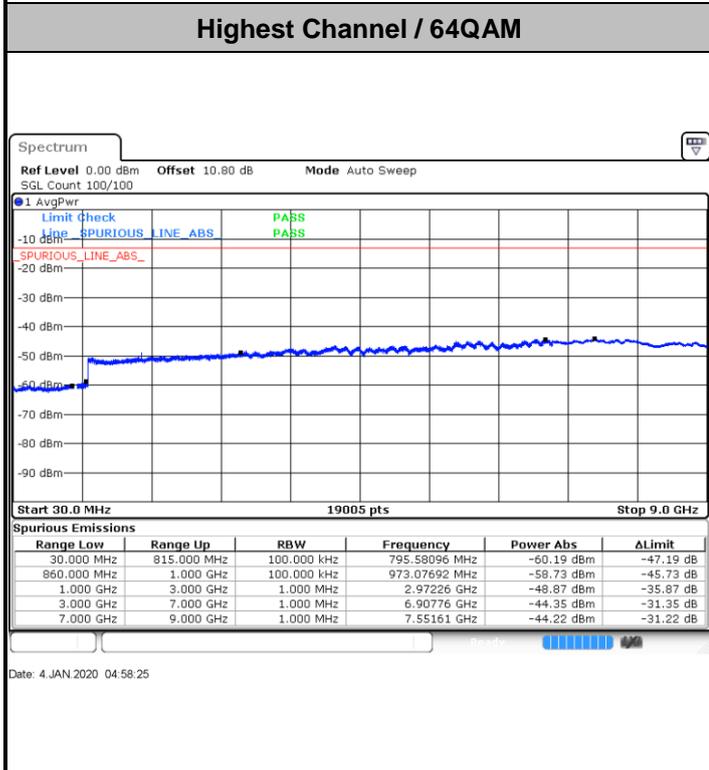
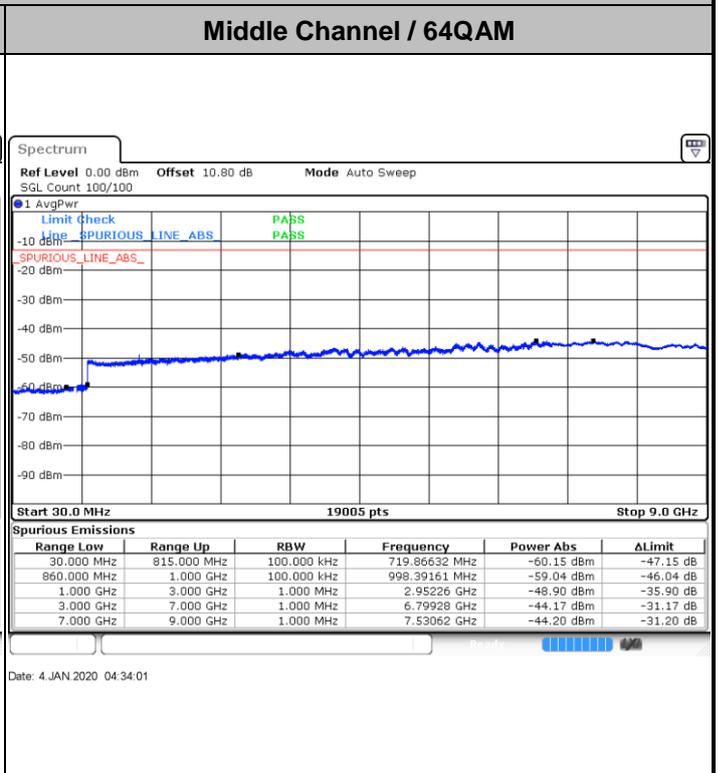
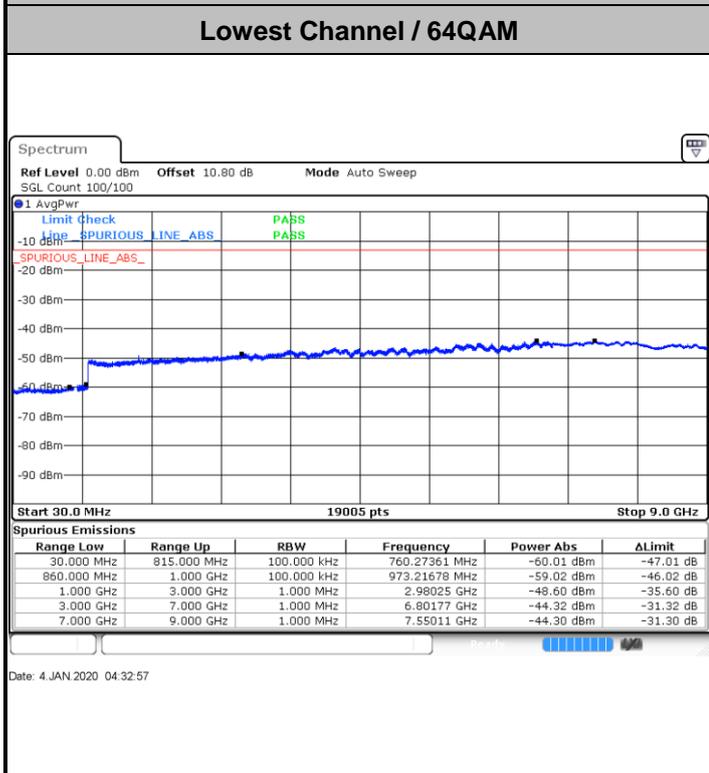
Highest Channel / 64QAM



Date: 4 JAN 2020 05:58:43



LTE Band 5 / 5MHz

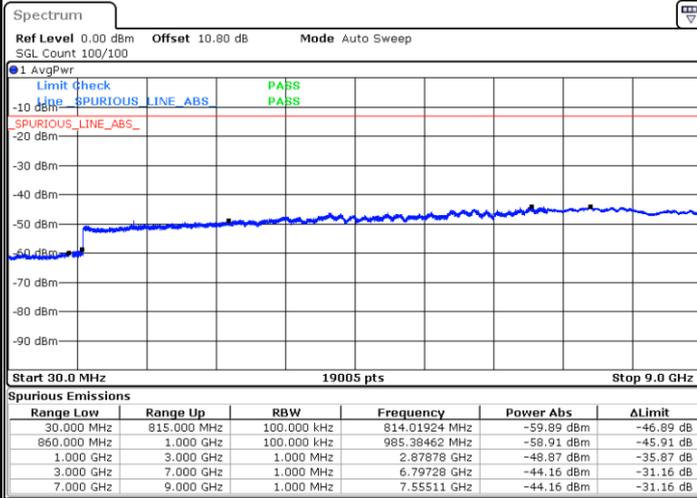




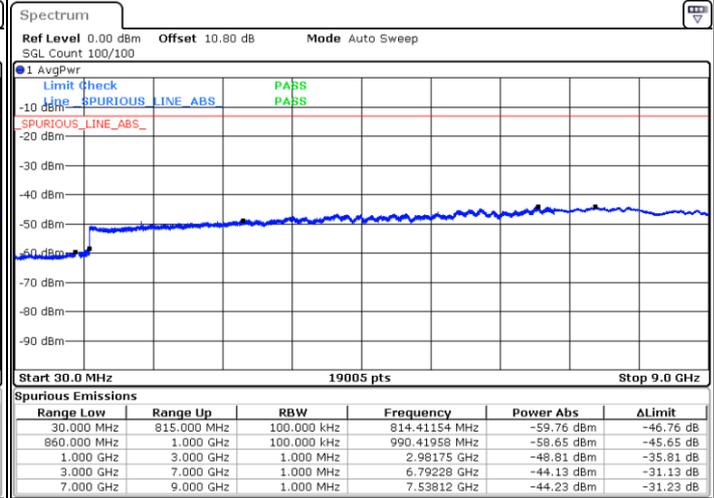
LTE Band 5 / 10MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

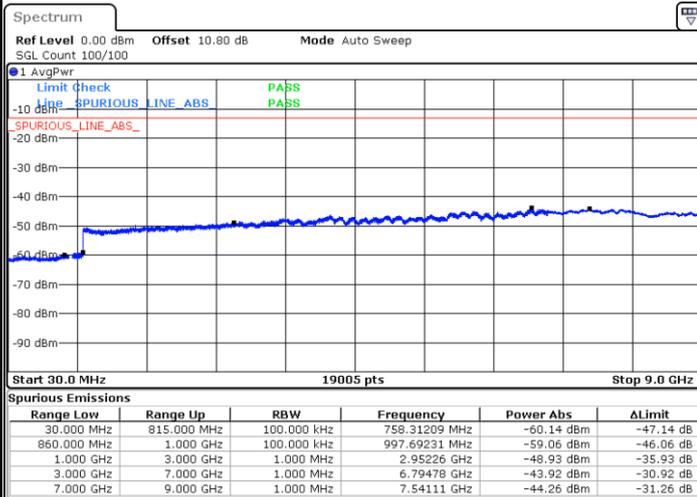


Date: 4. JAN 2020 05:02:52



Date: 4. JAN 2020 05:03:56

Highest Channel / 64QAM



Date: 4. JAN 2020 05:08:22



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	0.0130	PASS
40	Normal Voltage	0.0121	
30	Normal Voltage	0.0075	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0051	
0	Normal Voltage	0.0022	
-10	Normal Voltage	0.0074	
-20	Normal Voltage	0.0132	
-30	Normal Voltage	0.0002	
20	Maximum Voltage	0.0100	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0023	

Note:

1. Normal Voltage =7.7 V. ; Battery End Point (BEP) =6.9 V. ; Maximum Voltage =8.5 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 5B

26dB Bandwidth

Mode	LTE Band 5B : 26dB BW(MHz)		
QPSK			
BW	3MHz+5MHz	5MHz+3MHz	5MHz+10MHz
Lowest CH	-	-	14.69
Middle CH	-	-	14.51
Highest CH	-	-	14.57
BW	10MHz+5MHz	10MHz+10MHz	N/A
Lowest CH	14.57	9.71	-
Middle CH	14.69	9.91	-
Highest CH	14.69	19.62	-

Mode	LTE Band 5B : 26dB BW(MHz)		
16QAM			
BW	3MHz+5MHz	5MHz+3MHz	5MHz+10MHz
Lowest CH	-	-	14.57
Middle CH	-	-	14.63
Highest CH	-	-	14.54
BW	10MHz+5MHz	10MHz+10MHz	N/A
Lowest CH	14.63	19.82	-
Middle CH	14.57	19.50	-
Highest CH	14.69	9.71	-

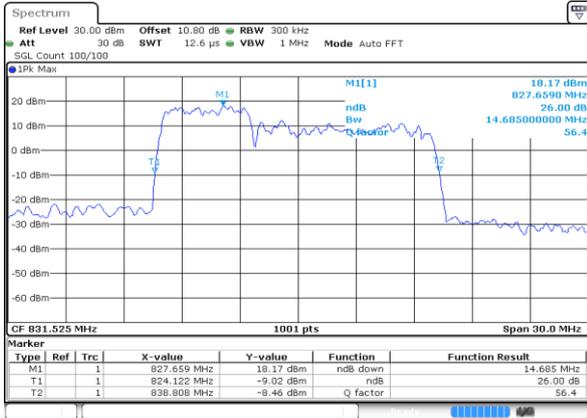
Mode	LTE Band 5B : 26dB BW(MHz)		
64QAM			
BW	3MHz+5MHz	5MHz+3MHz	5MHz+10MHz
Lowest CH	-	-	14.57
Middle CH	-	-	14.51
Highest CH	-	-	14.60
BW	10MHz+5MHz	10MHz+10MHz	N/A
Lowest CH	14.75	19.58	-
Middle CH	14.60	9.63	-
Highest CH	14.72	9.83	-



LTE Band 5B

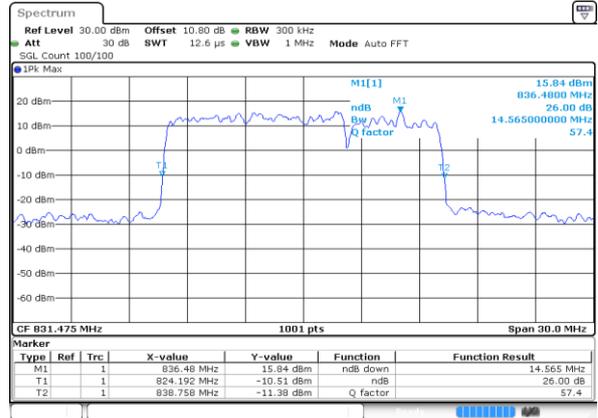
QPSK

Lowest Channel / 5MHz+10MHz



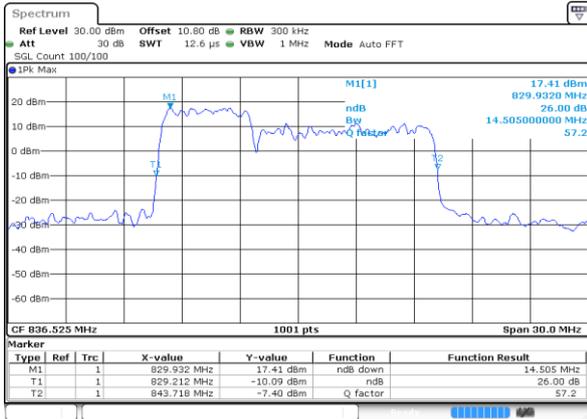
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Lowest Channel / 10MHz+5MHz



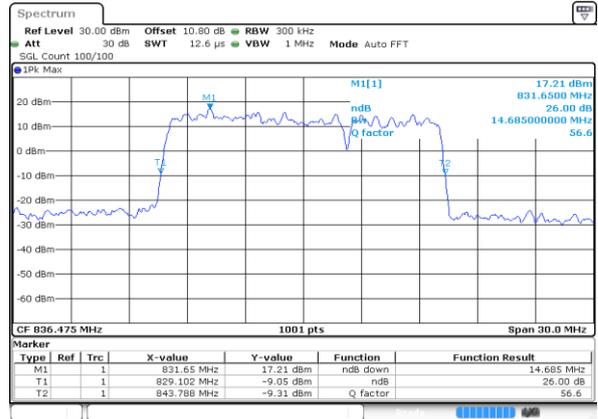
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Middle Channel / 5MHz+10MHz



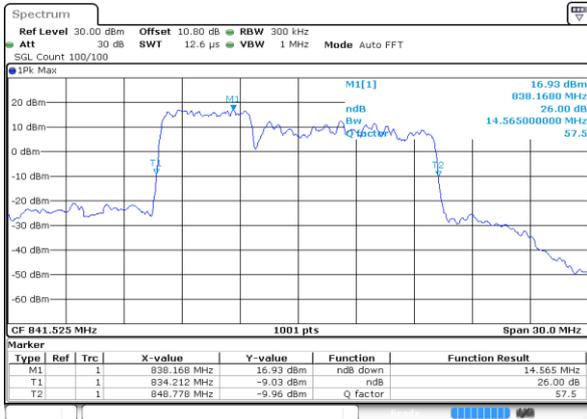
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Middle Channel / 10MHz+5MHz



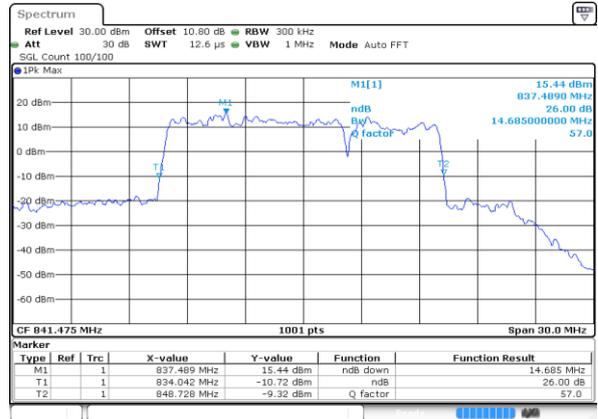
Date: 1 JAN 2020 19:24:51

Highest Channel / 5MHz+10MHz



Date: 1 JAN 2020 18:26:11

Highest Channel / 10MHz+5MHz



Date: 1 JAN 2020 19:36:27

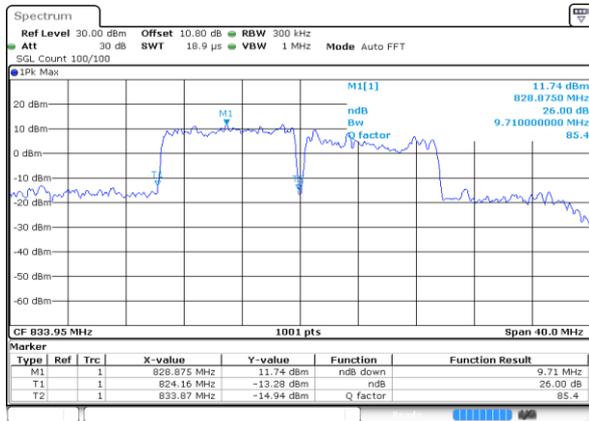


LTE Band 5B

QPSK

Lowest Channel / 10MHz+10MHz

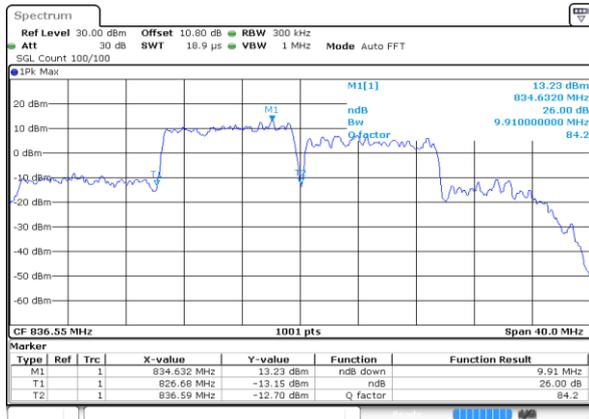
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Date: 1 JAN 2020 20:50:22

Middle Channel / 10MHz+10MHz

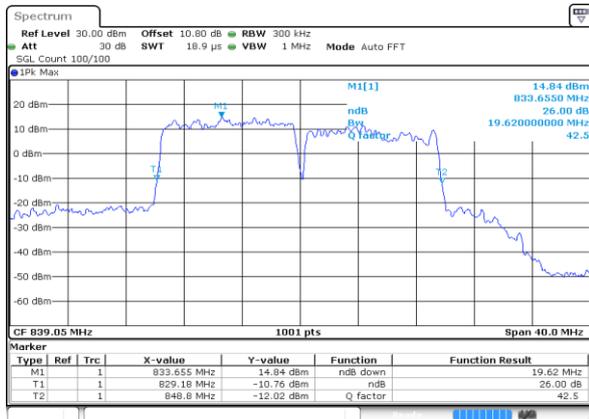
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Date: 1 JAN 2020 21:24:40

Highest Channel / 10MHz+10MHz

N/A



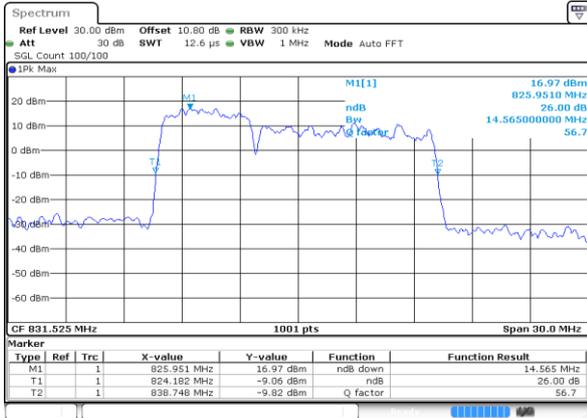
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LTE Band 5B

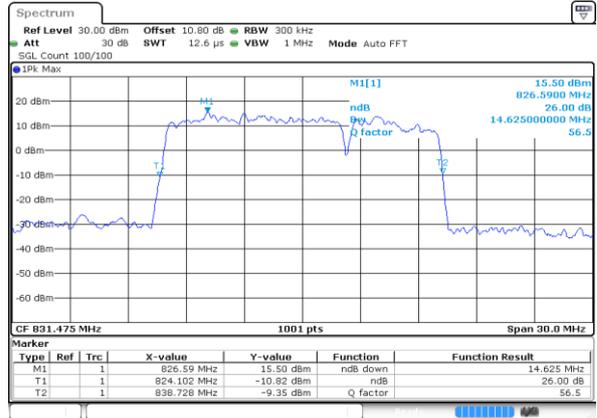
16QAM

Lowest Channel / 5MHz+10MHz



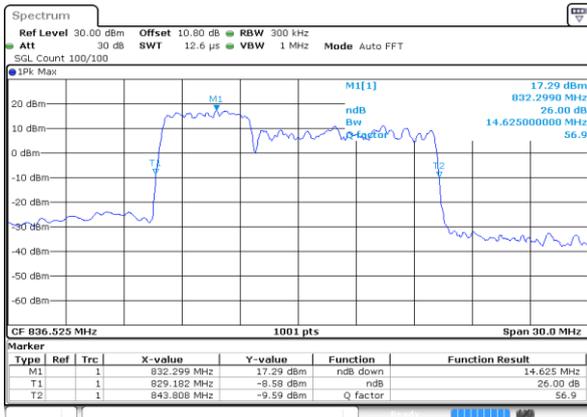
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Lowest Channel / 10MHz+5MHz



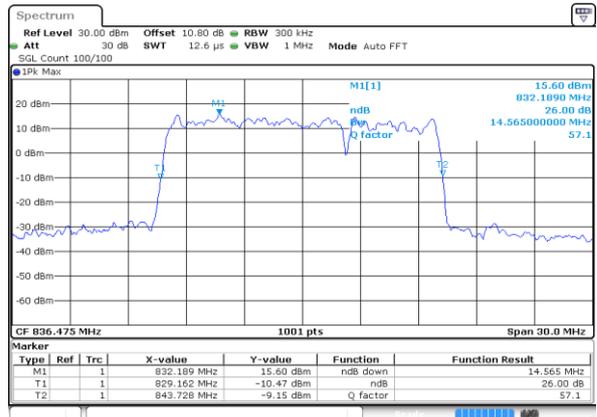
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Middle Channel / 5MHz+10MHz



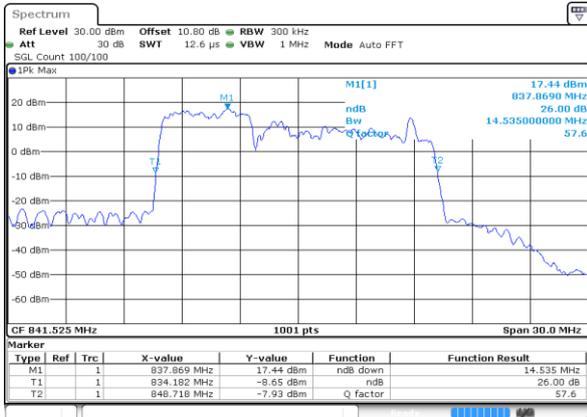
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Middle Channel / 10MHz+5MHz



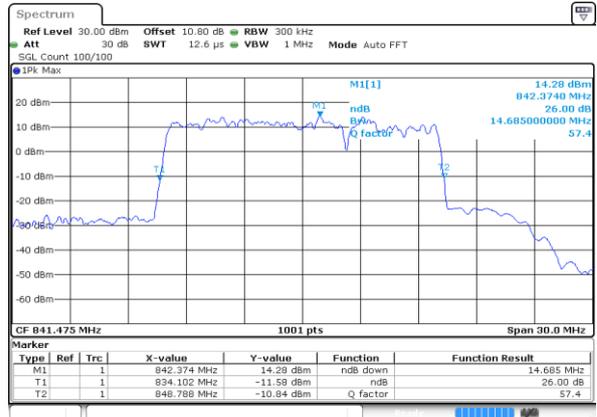
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Highest Channel / 5MHz+10MHz



Date: 1 JAN 2020 18:26:34

Highest Channel / 10MHz+5MHz



Date: 1 JAN 2020 19:36:50

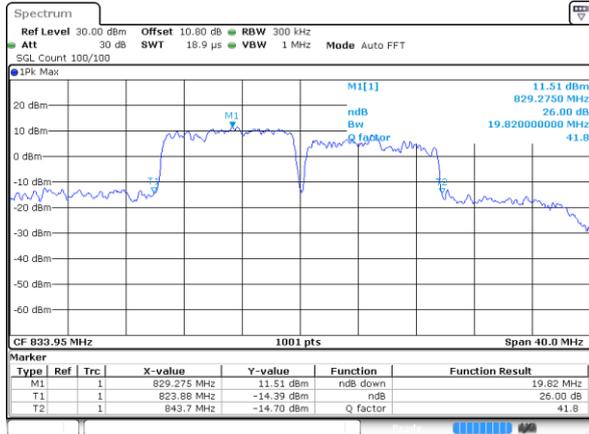


LTE Band 5B

16QAM

Lowest Channel / 10MHz+10MHz

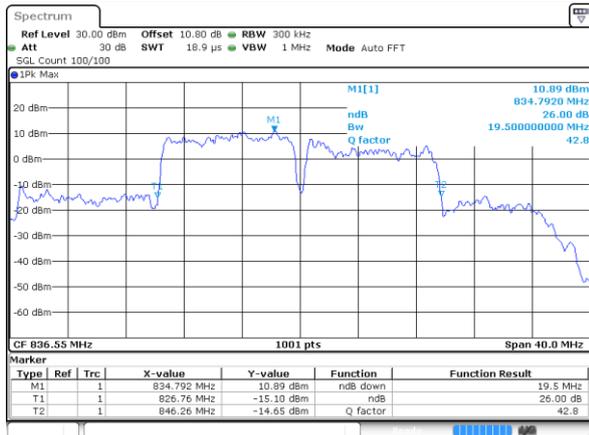
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Date: 1 JAN 2020 20:49:59

Middle Channel / 10MHz+10MHz

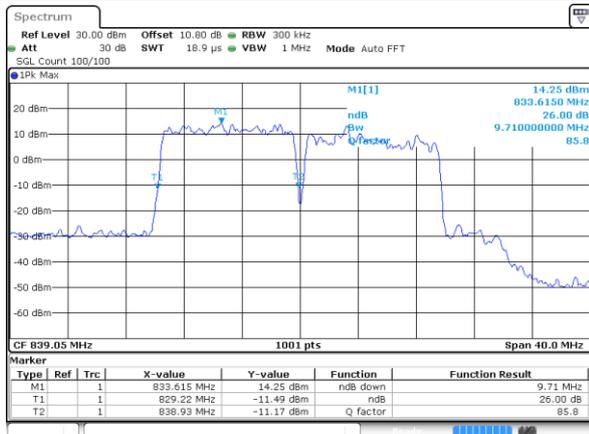
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Date: 1 JAN 2020 21:24:17

Highest Channel / 10MHz+10MHz

N/A



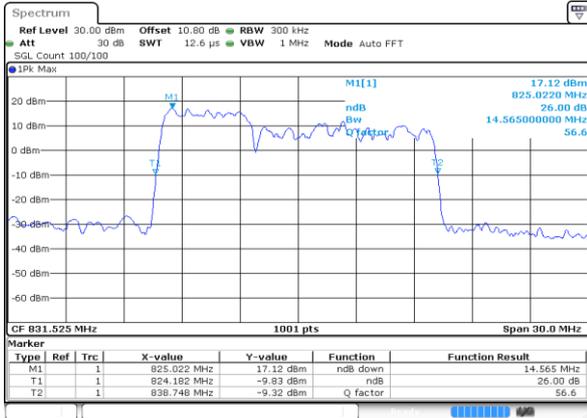
Date: 1 JAN 2020 21:43:21



LTE Band 5B

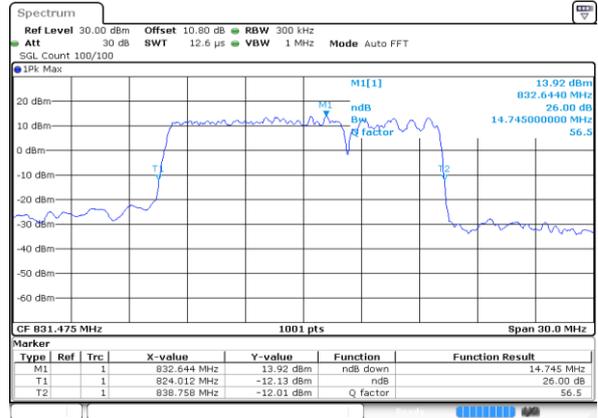
64QAM

Lowest Channel / 5MHz+10MHz



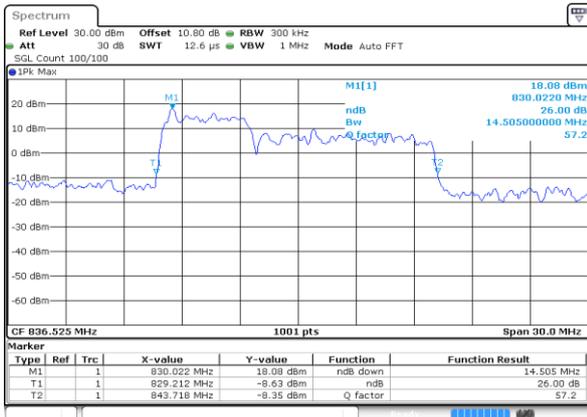
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Lowest Channel / 10MHz+5MHz



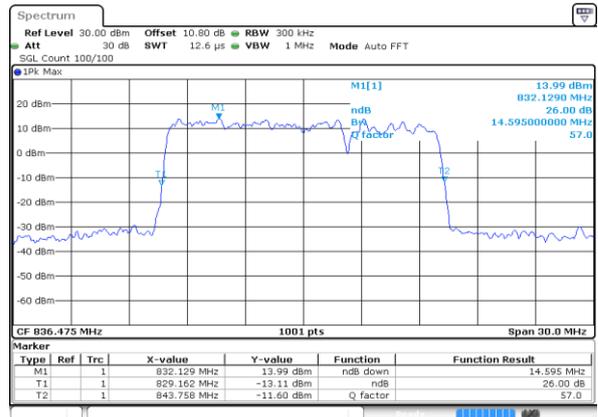
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Middle Channel / 5MHz+10MHz



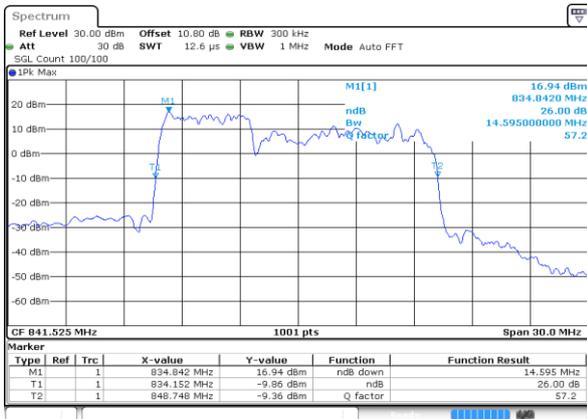
Date: 1 JAN 2020 18:12:13

Middle Channel / 10MHz+5MHz



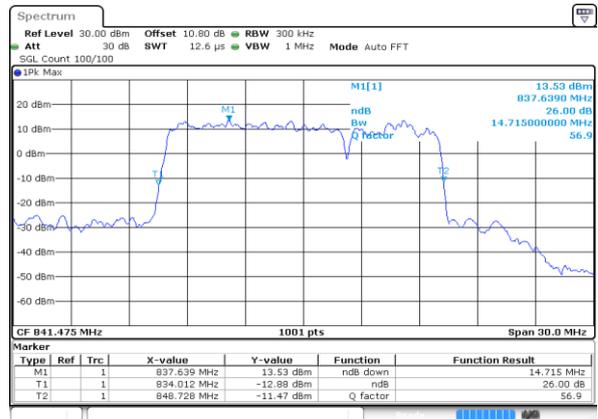
Date: 1 JAN 2020 19:24:06

Highest Channel / 5MHz+10MHz



Date: 1 JAN 2020 18:26:57

Highest Channel / 10MHz+5MHz



Date: 1 JAN 2020 19:37:13



LTE Band 5B																													
64QAM																													
Lowest Channel / 10MHz+10MHz	N/A																												
<p>Spectrum</p> <p>Ref Level 30.00 dBm Offset 10.80 dB RBW 300 kHz Att 30 dB SWF 18.9 μs VBW 1 MHz Mode Auto FFT SGL Count 100/100</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-value</th> <th>Y-value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td>832.072 MHz</td> <td>-10.94 dBm</td> <td>ndB down</td> <td>19.59 MHz</td> </tr> <tr> <td>T1</td> <td>1</td> <td></td> <td>824.08 MHz</td> <td>-14.39 dBm</td> <td>ndB</td> <td>26.00 dB</td> </tr> <tr> <td>T2</td> <td>1</td> <td></td> <td>843.66 MHz</td> <td>-15.83 dBm</td> <td>Q factor</td> <td>42.5</td> </tr> </tbody> </table> <p>CF 833.95 MHz 1001 pts Span 40.0 MHz</p> <p>Date: 1 JAN 2020 20:49:36</p>	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		832.072 MHz	-10.94 dBm	ndB down	19.59 MHz	T1	1		824.08 MHz	-14.39 dBm	ndB	26.00 dB	T2	1		843.66 MHz	-15.83 dBm	Q factor	42.5	N/A
Type	Ref	Trc	X-value	Y-value	Function	Function Result																							
M1	1		832.072 MHz	-10.94 dBm	ndB down	19.59 MHz																							
T1	1		824.08 MHz	-14.39 dBm	ndB	26.00 dB																							
T2	1		843.66 MHz	-15.83 dBm	Q factor	42.5																							
Middle Channel / 10MHz+10MHz	N/A																												
<p>Spectrum</p> <p>Ref Level 30.00 dBm Offset 10.80 dB RBW 300 kHz Att 30 dB SWF 18.9 μs VBW 1 MHz Mode Auto FFT SGL Count 100/100</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-value</th> <th>Y-value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td>831.955 MHz</td> <td>9.62 dBm</td> <td>ndB down</td> <td>9.63 MHz</td> </tr> <tr> <td>T1</td> <td>1</td> <td></td> <td>826.8 MHz</td> <td>-14.94 dBm</td> <td>ndB</td> <td>26.00 dB</td> </tr> <tr> <td>T2</td> <td>1</td> <td></td> <td>836.43 MHz</td> <td>-16.46 dBm</td> <td>Q factor</td> <td>86.4</td> </tr> </tbody> </table> <p>CF 836.55 MHz 1001 pts Span 40.0 MHz</p> <p>Date: 1 JAN 2020 21:23:54</p>	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		831.955 MHz	9.62 dBm	ndB down	9.63 MHz	T1	1		826.8 MHz	-14.94 dBm	ndB	26.00 dB	T2	1		836.43 MHz	-16.46 dBm	Q factor	86.4	N/A
Type	Ref	Trc	X-value	Y-value	Function	Function Result																							
M1	1		831.955 MHz	9.62 dBm	ndB down	9.63 MHz																							
T1	1		826.8 MHz	-14.94 dBm	ndB	26.00 dB																							
T2	1		836.43 MHz	-16.46 dBm	Q factor	86.4																							
Highest Channel / 10MHz+10MHz	N/A																												
<p>Spectrum</p> <p>Ref Level 30.00 dBm Offset 10.80 dB RBW 300 kHz Att 30 dB SWF 18.9 μs VBW 1 MHz Mode Auto FFT SGL Count 100/100</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-value</th> <th>Y-value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td>833.176 MHz</td> <td>14.41 dBm</td> <td>ndB down</td> <td>9.83 MHz</td> </tr> <tr> <td>T1</td> <td>1</td> <td></td> <td>829.26 MHz</td> <td>-12.29 dBm</td> <td>ndB</td> <td>26.00 dB</td> </tr> <tr> <td>T2</td> <td>1</td> <td></td> <td>839.09 MHz</td> <td>-11.93 dBm</td> <td>Q factor</td> <td>84.8</td> </tr> </tbody> </table> <p>CF 839.05 MHz 1001 pts Span 40.0 MHz</p> <p>Date: 1 JAN 2020 21:43:44</p>	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		833.176 MHz	14.41 dBm	ndB down	9.83 MHz	T1	1		829.26 MHz	-12.29 dBm	ndB	26.00 dB	T2	1		839.09 MHz	-11.93 dBm	Q factor	84.8	N/A
Type	Ref	Trc	X-value	Y-value	Function	Function Result																							
M1	1		833.176 MHz	14.41 dBm	ndB down	9.83 MHz																							
T1	1		829.26 MHz	-12.29 dBm	ndB	26.00 dB																							
T2	1		839.09 MHz	-11.93 dBm	Q factor	84.8																							



Occupied Bandwidth

Mode	LTE Band 5B : 99%OBW(MHz)		
QPSK			
BW	3MHz+5MHz	5MHz+3MHz	5MHz+10MHz
Lowest CH	-	-	13.91
Middle CH	-	-	13.88
Highest CH	-	-	13.85
BW	10MHz+5MHz	10MHz+10MHz	N/A
Lowest CH	14.12	18.70	-
Middle CH	14.00	21.18	-
Highest CH	13.97	18.54	-

Mode	LTE Band 5B : 99%OBW(MHz)		
16QAM			
BW	3MHz+5MHz	5MHz+3MHz	5MHz+10MHz
Lowest CH	-	-	13.88
Middle CH	-	-	14.00
Highest CH	-	-	13.76
BW	10MHz+5MHz	10MHz+10MHz	N/A
Lowest CH	14.12	18.82	-
Middle CH	14.00	18.90	-
Highest CH	13.82	18.58	-

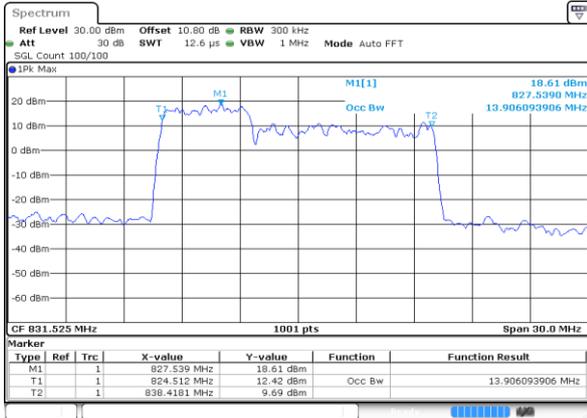
Mode	LTE Band 5B : 99%OBW(MHz)		
64QAM			
BW	3MHz+5MHz	5MHz+3MHz	5MHz+10MHz
Lowest CH	-	-	13.76
Middle CH	-	-	13.94
Highest CH	-	-	13.76
BW	10MHz+5MHz	10MHz+10MHz	N/A
Lowest CH	13.91	18.78	-
Middle CH	13.91	18.66	-
Highest CH	13.85	18.82	-



LTE Band 5B

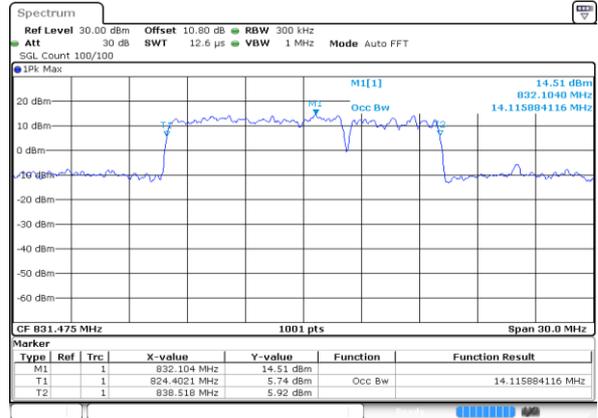
QPSK

Lowest Channel / 5MHz+10MHz



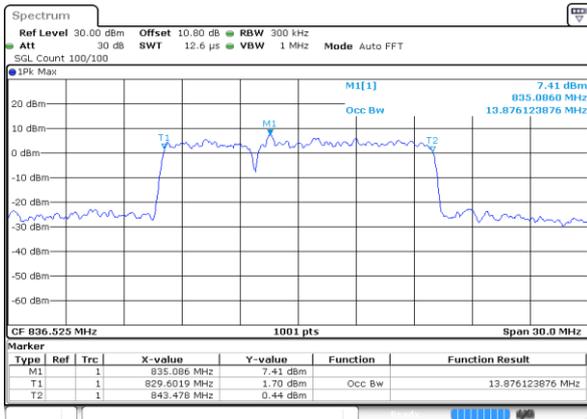
Date: 1 JAN 2020 17:38:57

Lowest Channel / 10MHz+5MHz



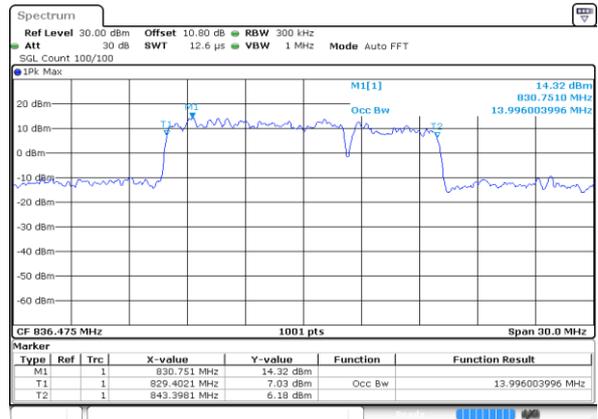
Date: 1 JAN 2020 18:54:21

Middle Channel / 5MHz+10MHz



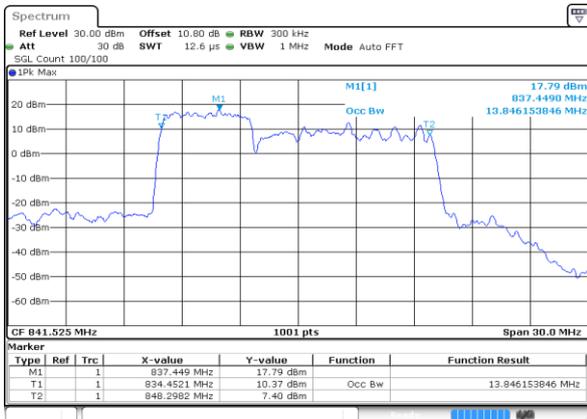
Date: 1 JAN 2020 18:11:05

Middle Channel / 10MHz+5MHz



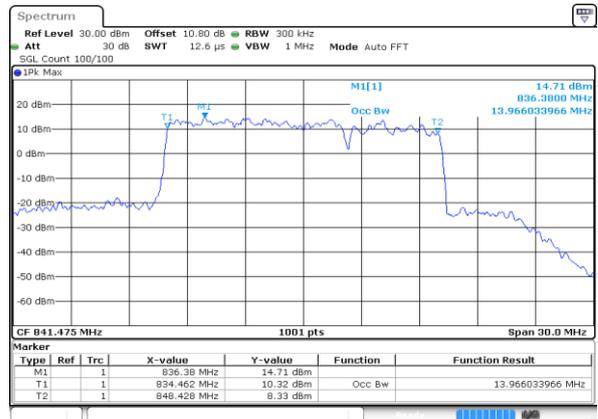
Date: 1 JAN 2020 19:22:58

Highest Channel / 5MHz+10MHz



Date: 1 JAN 2020 18:25:49

Highest Channel / 10MHz+5MHz



Date: 1 JAN 2020 19:36:05

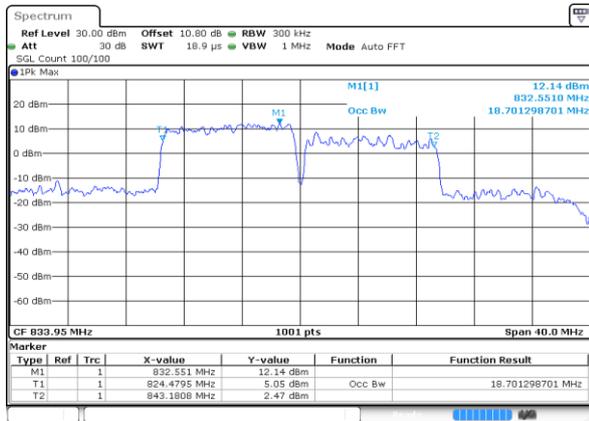


LTE Band 5B

QPSK

Lowest Channel / 10MHz+10MHz

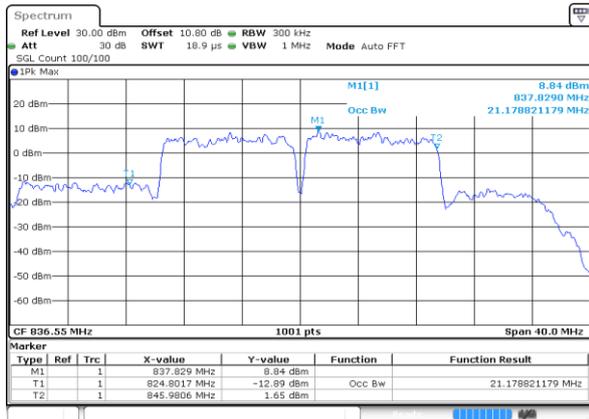
N/A



Date: 1 JAN 2020 20:48:28

Middle Channel / 10MHz+10MHz

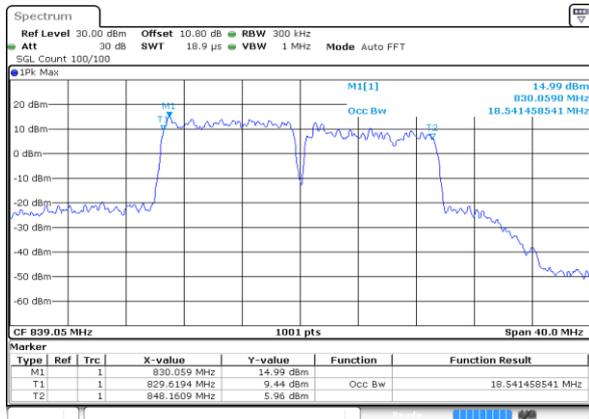
N/A



Date: 1 JAN 2020 21:22:46

Highest Channel / 10MHz+10MHz

N/A



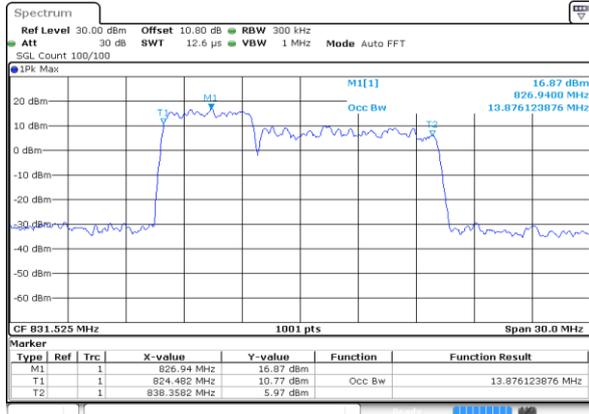
Date: 1 JAN 2020 21:42:36



LTE Band 5B

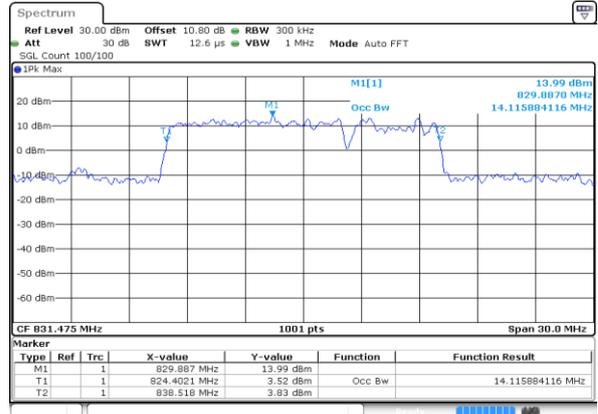
16QAM

Lowest Channel / 5MHz+10MHz



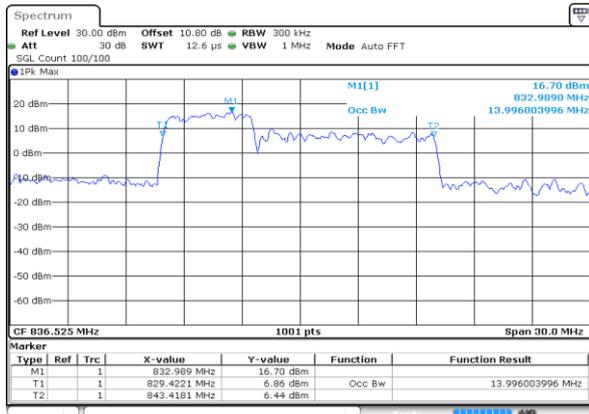
Date: 1 JAN 2020 17:39:20

Lowest Channel / 10MHz+5MHz



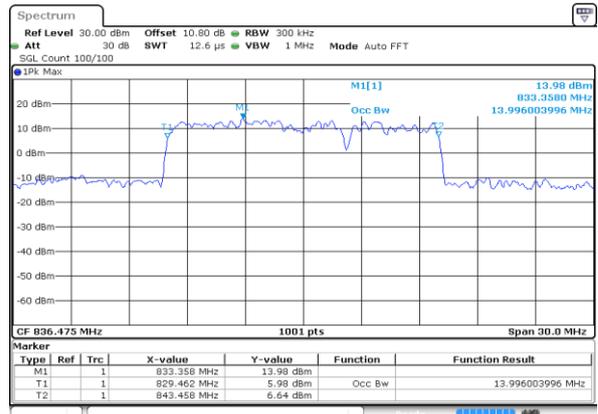
Date: 1 JAN 2020 18:54:43

Middle Channel / 5MHz+10MHz



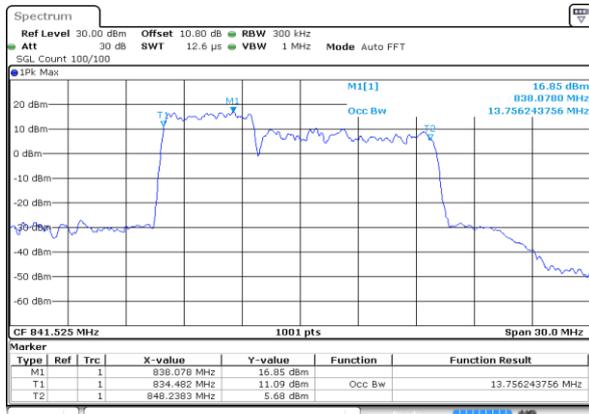
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Middle Channel / 10MHz+5MHz



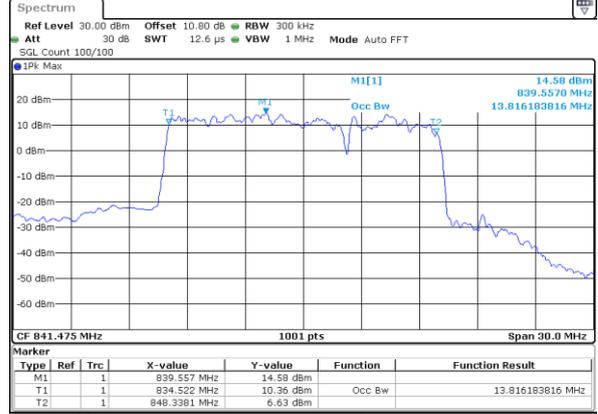
Date: 1 JAN 2020 19:23:20

Highest Channel / 5MHz+10MHz



Date: 1 JAN 2020 18:25:26

Highest Channel / 10MHz+5MHz



Date: 1 JAN 2020 19:35:42

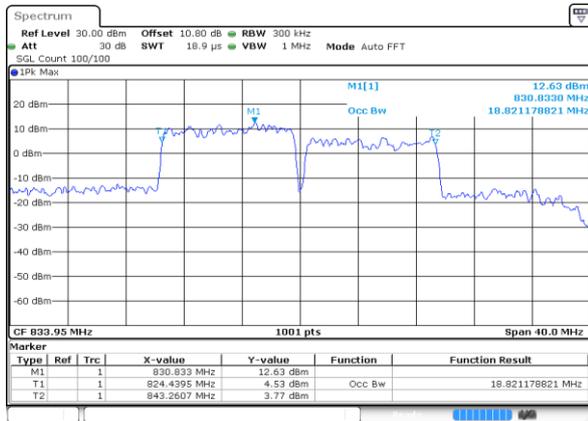


LTE Band 5B

16QAM

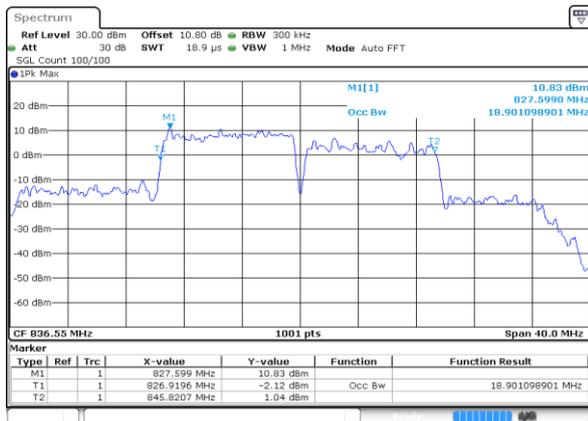
Lowest Channel / 10MHz+10MHz

N/A



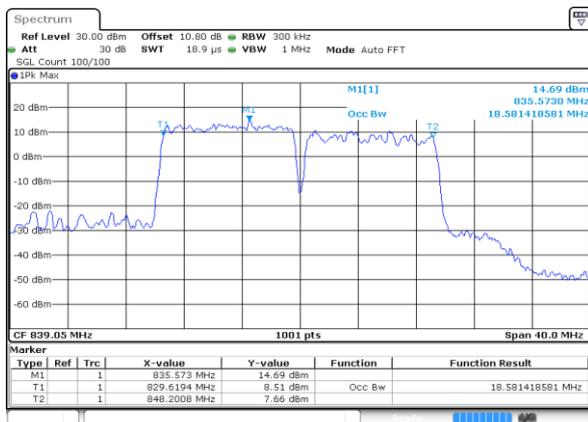
Middle Channel / 10MHz+10MHz

N/A



Highest Channel / 10MHz+10MHz

N/A

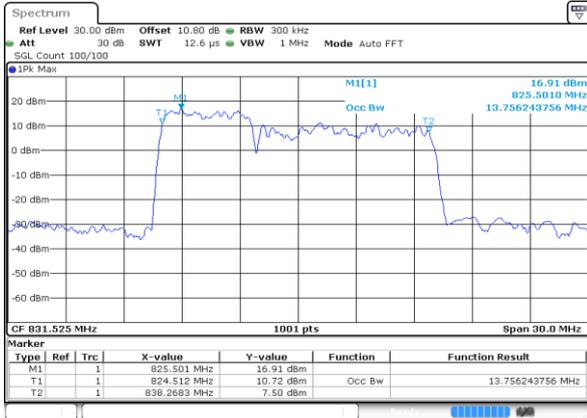




LTE Band 5B

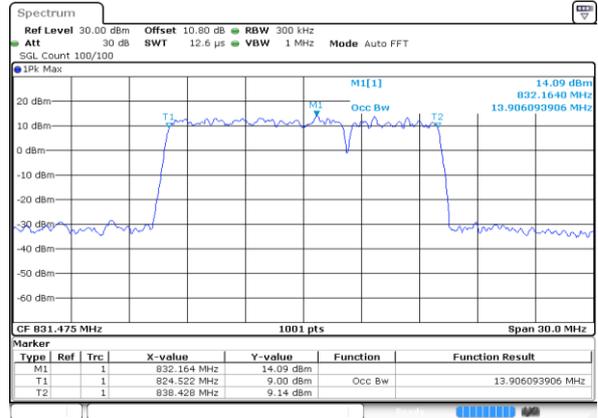
64QAM

Lowest Channel / 5MHz+10MHz



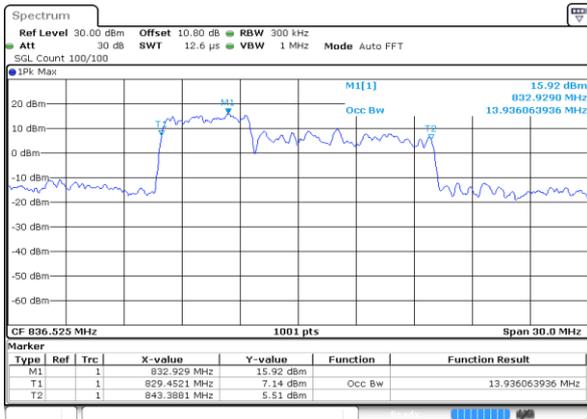
Date: 1 JAN 2020 17:39:43

Lowest Channel / 10MHz+5MHz



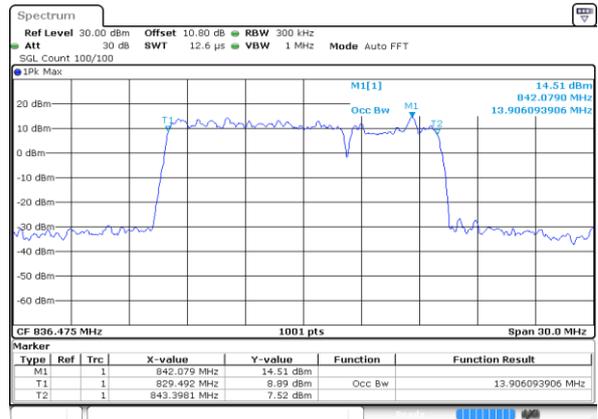
Date: 1 JAN 2020 18:55:07

Middle Channel / 5MHz+10MHz



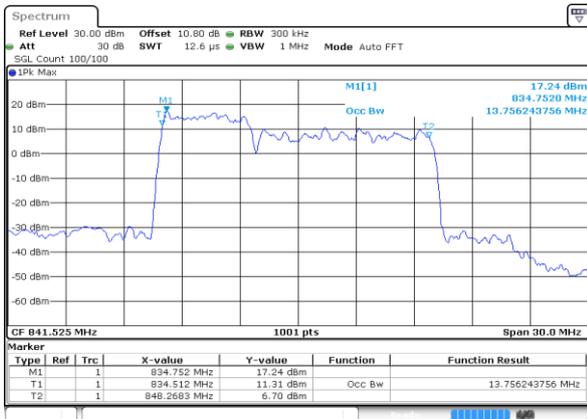
Date: 1 JAN 2020 18:11:51

Middle Channel / 10MHz+5MHz



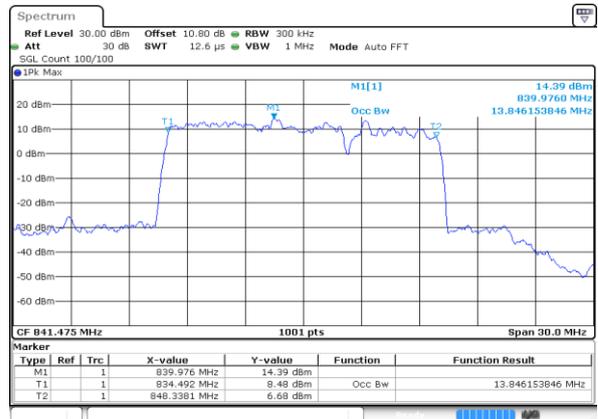
Date: 1 JAN 2020 19:23:43

Highest Channel / 5MHz+10MHz



Date: 1 JAN 2020 18:25:03

Highest Channel / 10MHz+5MHz



Date: 1 JAN 2020 19:35:19

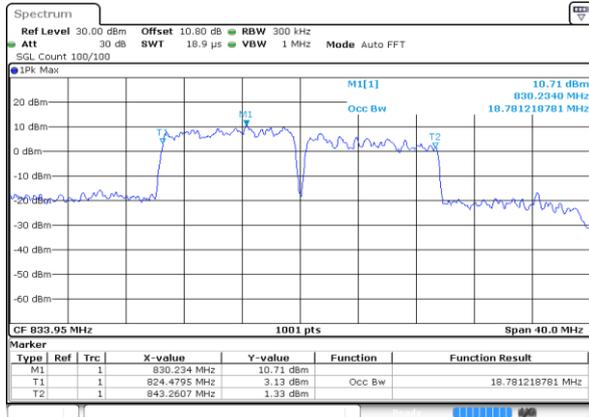


LTE Band 5B

64QAM

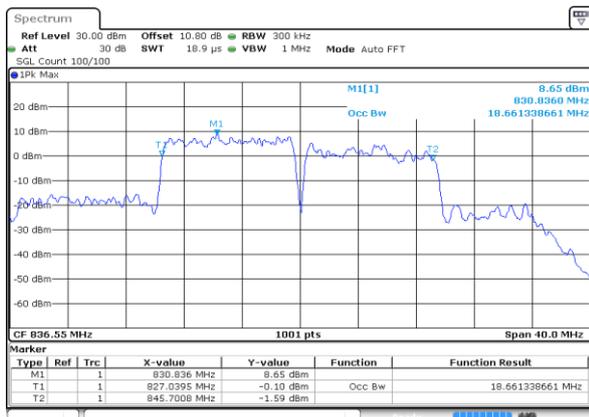
Lowest Channel / 10MHz+10MHz

N/A



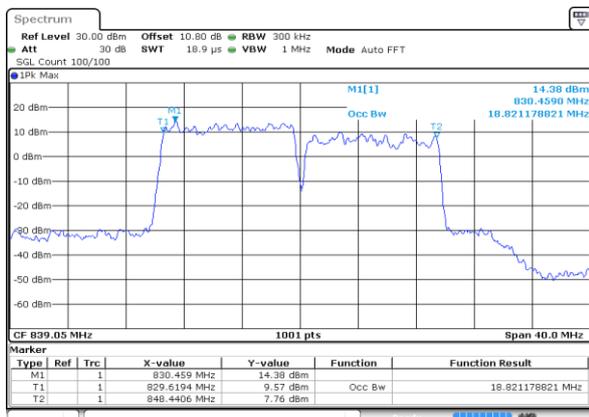
Middle Channel / 10MHz+10MHz

N/A



Highest Channel / 10MHz+10MHz

N/A





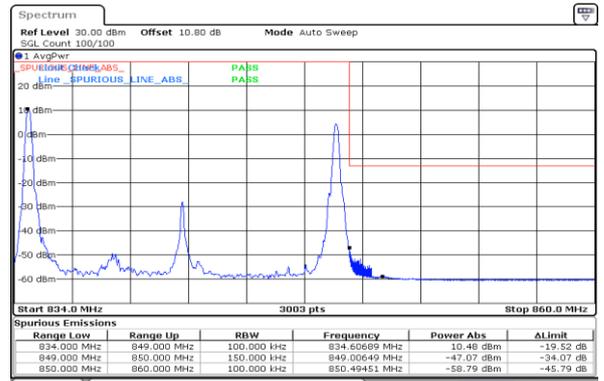
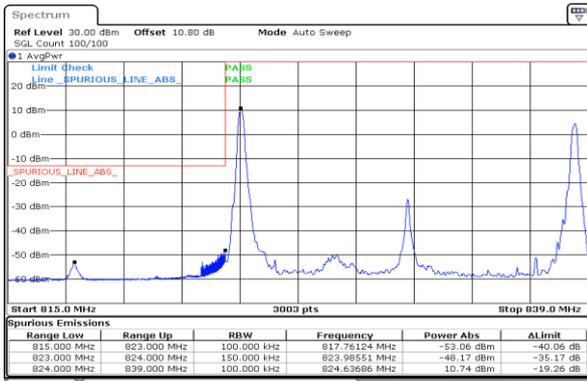
Conducted Band Edge

LTE Band 5B / 5MHz+10MHz

QPSK

Lowest Band Edge / 1RB0 and 1RB49

Highest Band Edge / 1RB0 and 1RB49

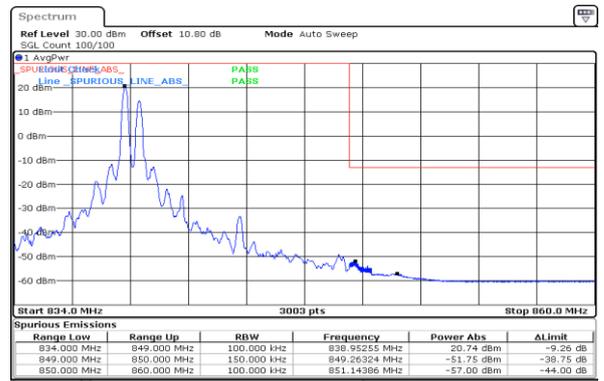
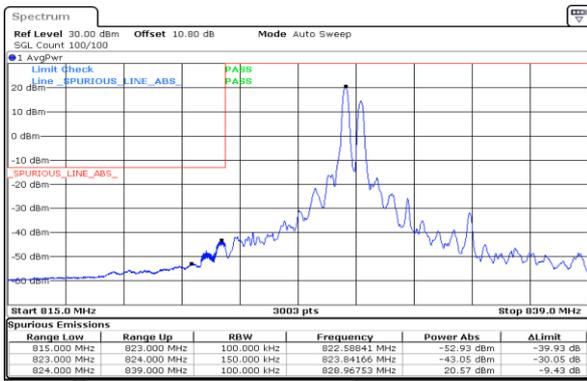


Date: 1 JAN 2020 17:52:04

Date: 1 JAN 2020 18:34:24

Lowest Band Edge / 1RB24 and 1RB0

Highest Band Edge / 1RB24 and 1RB0

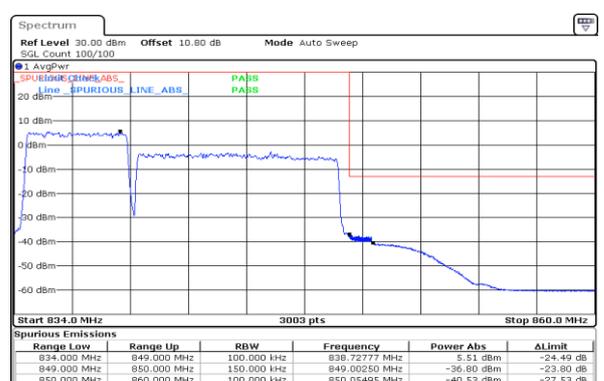
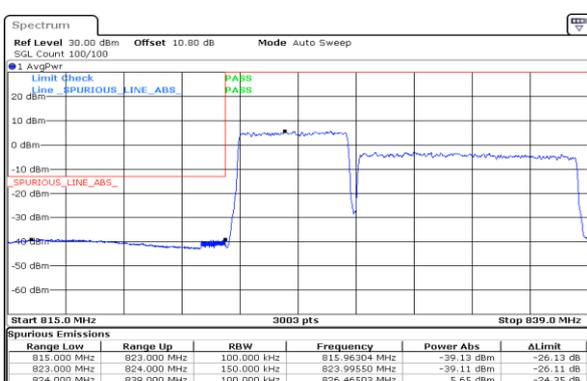


Date: 1 JAN 2020 17:53:55

Date: 1 JAN 2020 18:43:42

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 1 JAN 2020 17:42:43

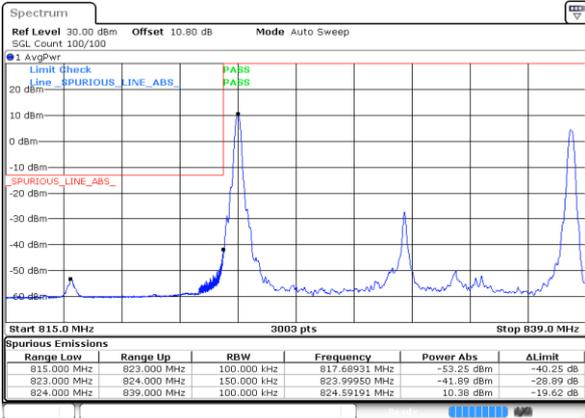
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LTE Band 5B / 10MHz+5MHz

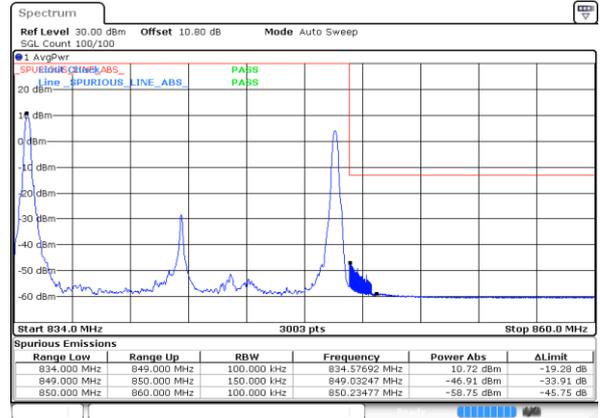
QPSK

Lowest Band Edge / 1RB0 and 1RB24



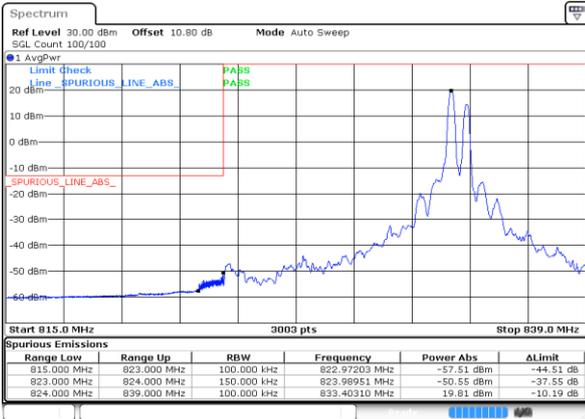
Date: 1 JAN 2020 19:07:28

Highest Band Edge / 1RB0 and 1RB24



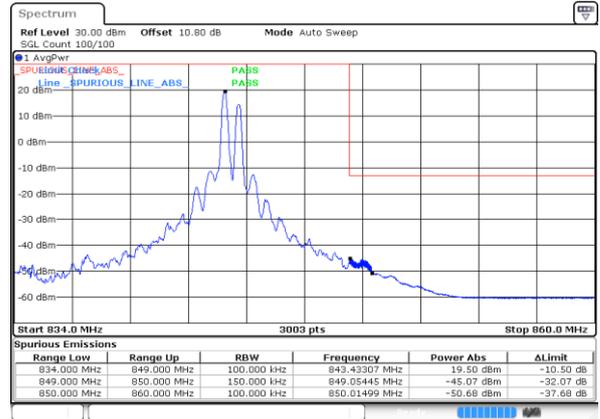
Date: 1 JAN 2020 19:44:40

Lowest Band Edge / 1RB49 and 1RB0



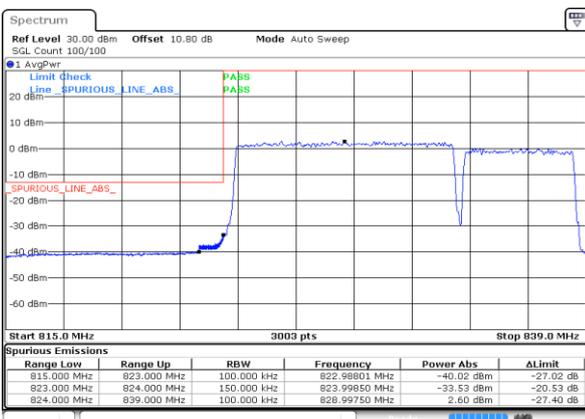
Date: 1 JAN 2020 19:09:19

Highest Band Edge / 1RB49 and 1RB0



Date: 1 JAN 2020 19:53:58

Lowest Band Edge / Full RB



Date: 1 JAN 2020 18:58:06

Highest Band Edge / Full RB



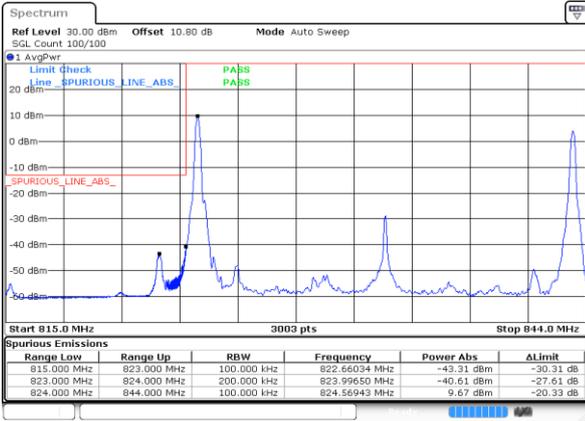
Date: 1 JAN 2020 19:42:48



LTE Band 5B / 10MHz+10MHz

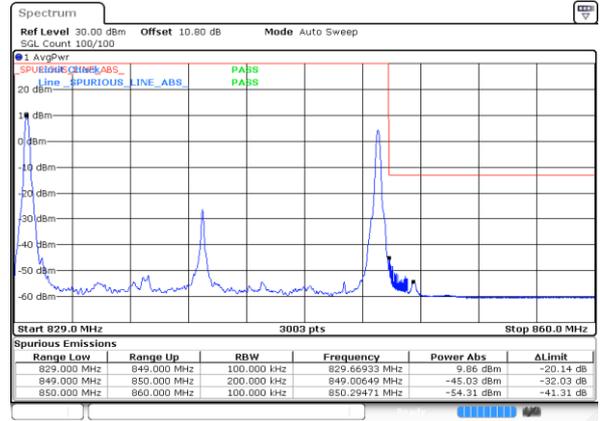
QPSK

Lowest Band Edge / 1RB0 and 1RB49



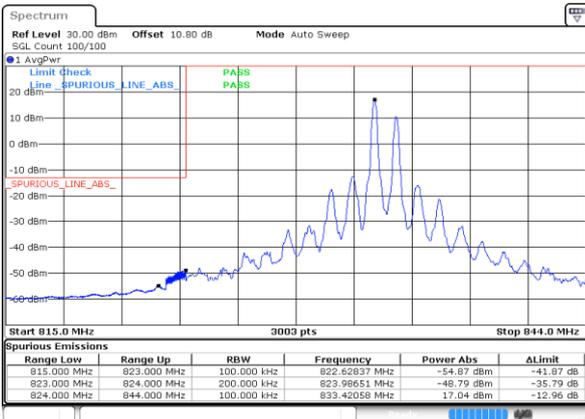
Date: 1 JAN 2020 21:01:34

Highest Band Edge / 1RB0 and 1RB49



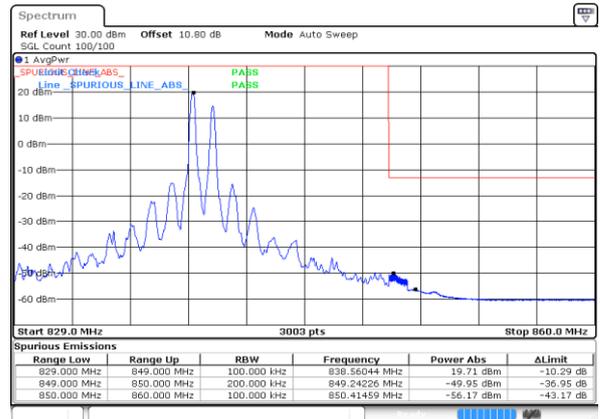
Date: 1 JAN 2020 21:51:11

Lowest Band Edge / 1RB49 and 1RB0



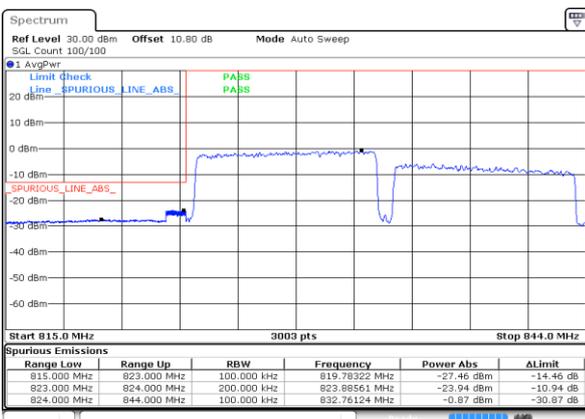
Date: 1 JAN 2020 21:03:26

Highest Band Edge / 1RB49 and 1RB0



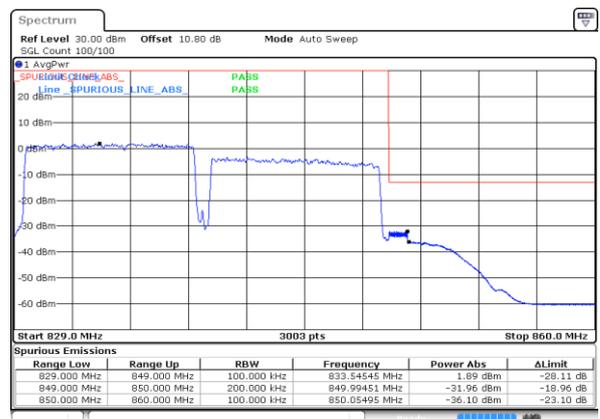
Date: 1 JAN 2020 22:00:30

Lowest Band Edge / Full RB



Date: 1 JAN 2020 20:52:13

Highest Band Edge / Full RB



Date: 1 JAN 2020 21:49:19

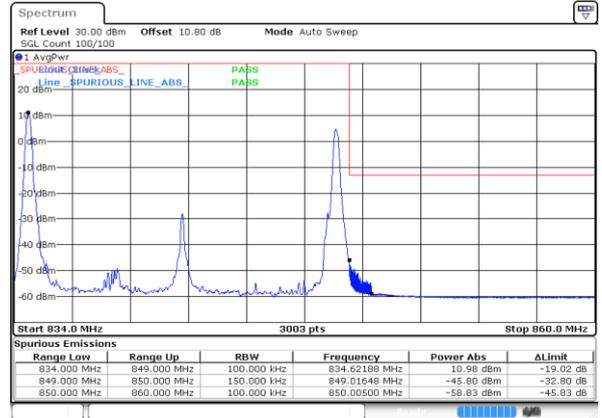
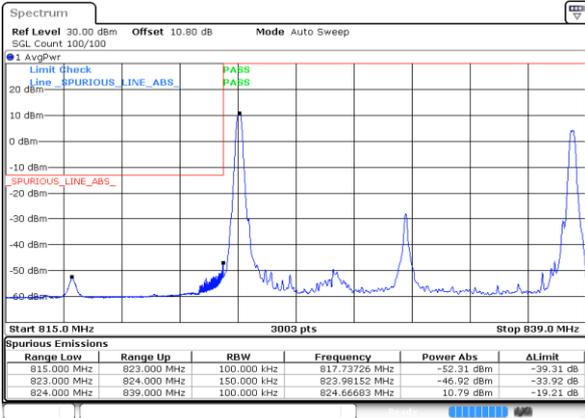


LTE Band 5B / 5MHz+10MHz

16QAM

Lowest Band Edge / 1RB0 and 1RB49

Highest Band Edge / 1RB0 and 1RB49

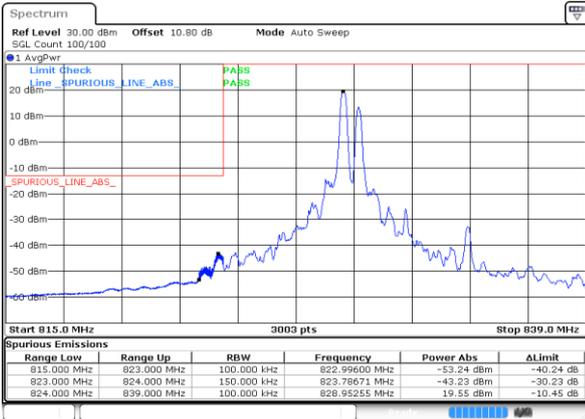


Date: 1 JAN 2020 17:50:12

Date: 1 JAN 2020 18:36:18

Lowest Band Edge / 1RB24 and 1RB0

Highest Band Edge / 1RB24 and 1RB0

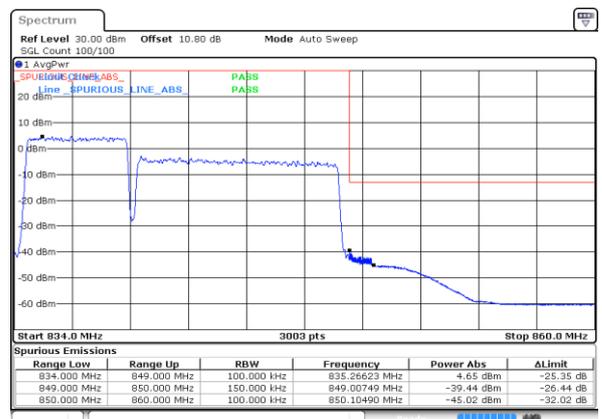
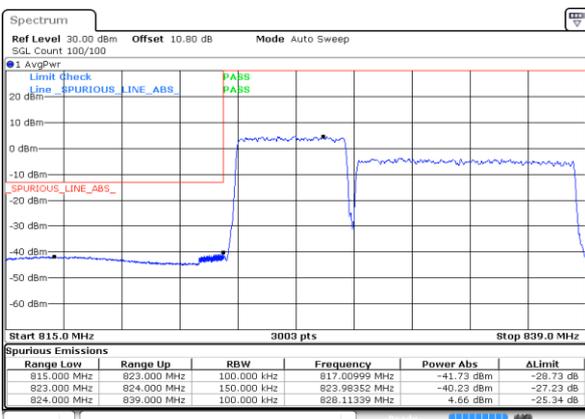


Date: 1 JAN 2020 17:55:48

Date: 1 JAN 2020 18:41:50

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 1 JAN 2020 17:44:35

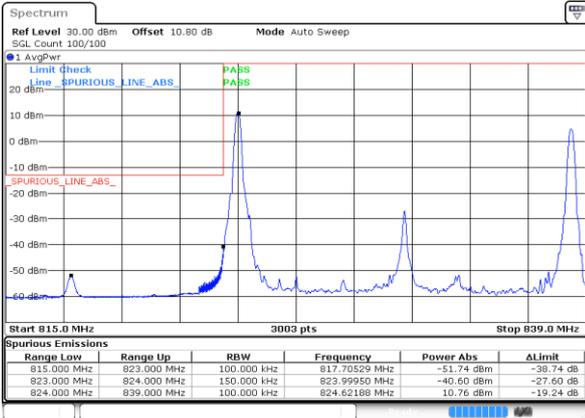
Date: 1 JAN 2020 18:30:40



LTE Band 5B / 10MHz+5MHz

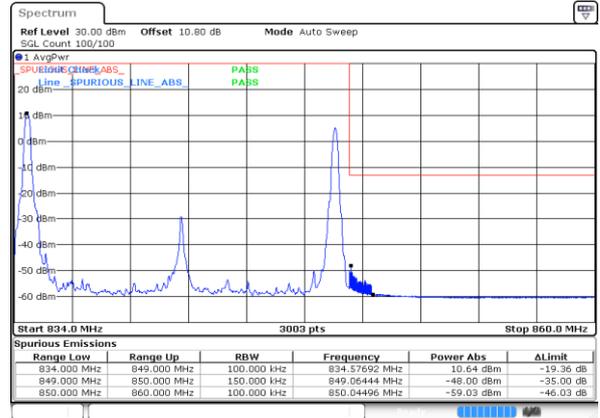
16QAM

Lowest Band Edge / 1RB0 and 1RB24



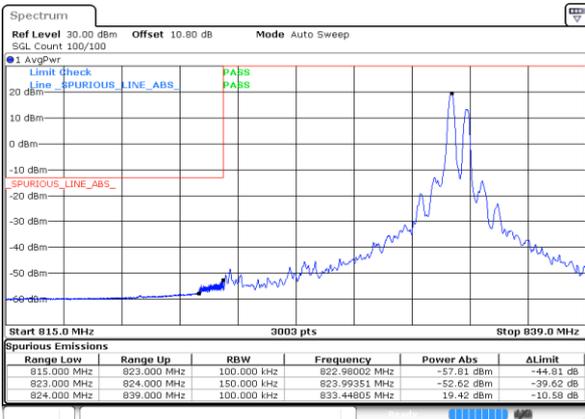
Date: 1 JAN 2020 19:05:35

Highest Band Edge / 1RB0 and 1RB24



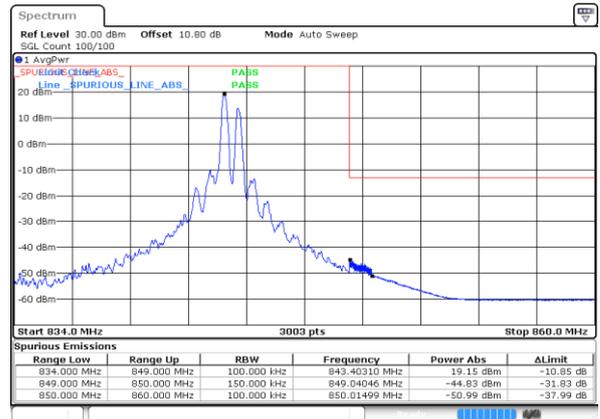
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Lowest Band Edge / 1RB49 and 1RB0



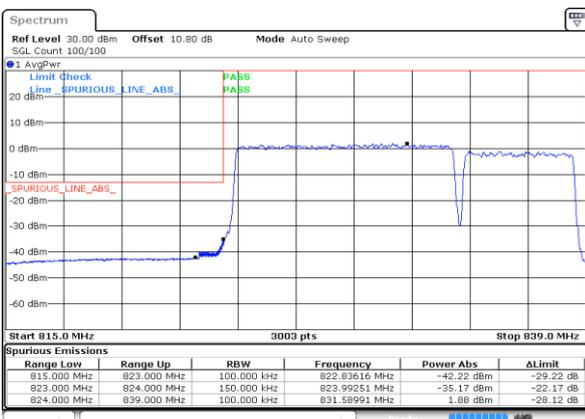
Date: 1 JAN 2020 19:11:11

Highest Band Edge / 1RB49 and 1RB0



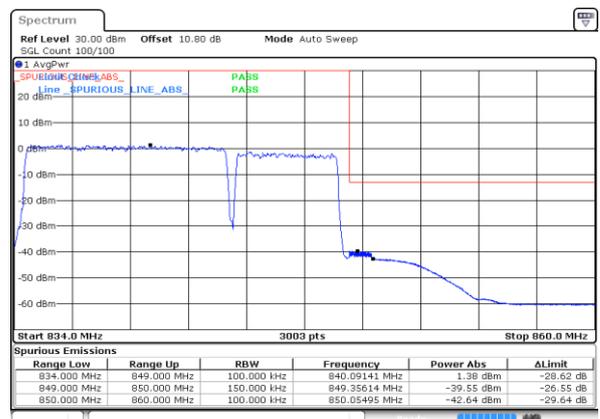
Date: 1 JAN 2020 19:52:06

Lowest Band Edge / Full RB



Date: 1 JAN 2020 18:59:58

Highest Band Edge / Full RB



Date: 1 JAN 2020 19:40:55

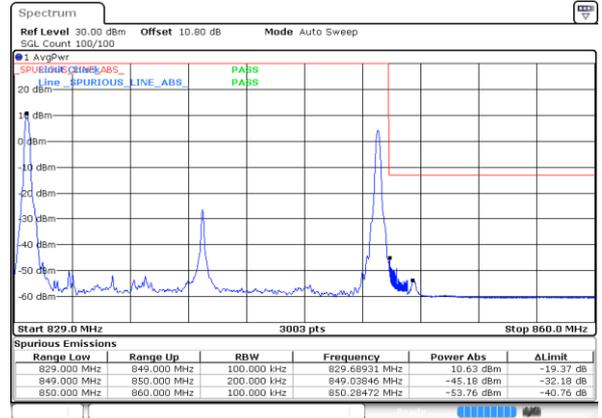
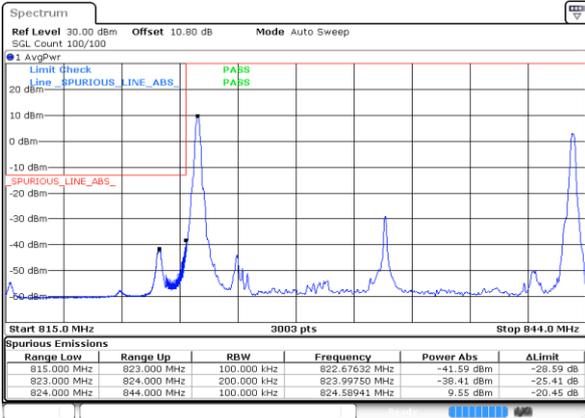


LTE Band 5B / 10MHz+10MHz

16QAM

Lowest Band Edge / 1RB0 and 1RB49

Highest Band Edge / 1RB0 and 1RB49

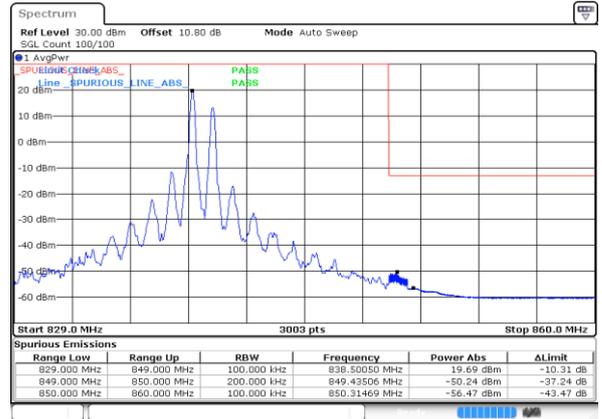
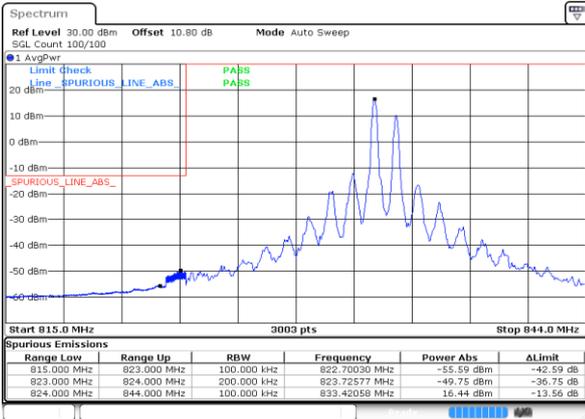


Date: 1 JAN 2020 20:59:42

Date: 1 JAN 2020 21:53:03

Lowest Band Edge / 1RB49 and 1RB0

Highest Band Edge / 1RB49 and 1RB0

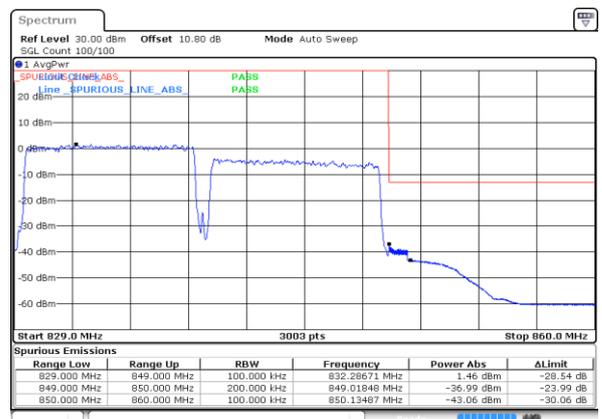
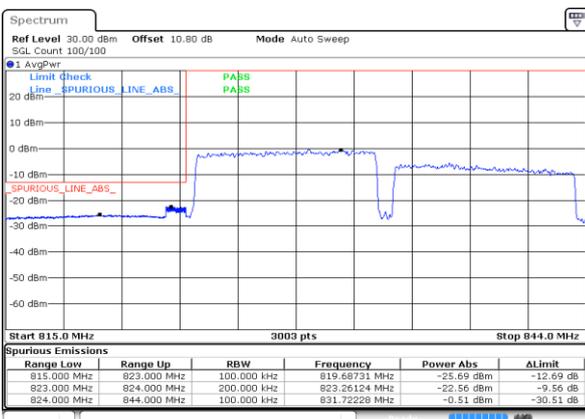


Date: 1 JAN 2020 21:05:18

Date: 1 JAN 2020 21:58:38

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 1 JAN 2020 20:54:05

Date: 1 JAN 2020 21:47:27