

Frequency Stability

Test Conditions		LTE Band 2 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 1.4MHz	Note 2.
		Frequency Offset (Δf) (Hz)	Result
60	Normal Voltage	3.6	PASS
40	Normal Voltage	2.5	
30	Normal Voltage	-1.4	
20(Ref.)	Normal Voltage	2.9	
10	Normal Voltage	2.2	
0	Normal Voltage	1.8	
-10	Normal Voltage	5.2	
-20	Normal Voltage	4.6	
-30	Normal Voltage	2.6	
20	Maximum Voltage	4.1	
20	Normal Voltage	2.9	
20	Battery End Point	1.6	

Note:

1. Normal Voltage = 3.7 V. ; Battery End Point (BEP) = 3.4 V. ; Maximum Voltage = 4.9 V.
2. The frequency fundamental emissions stay within the authorized frequency block.

$$|MAX(\Delta f)| = 5.2\text{Hz}$$

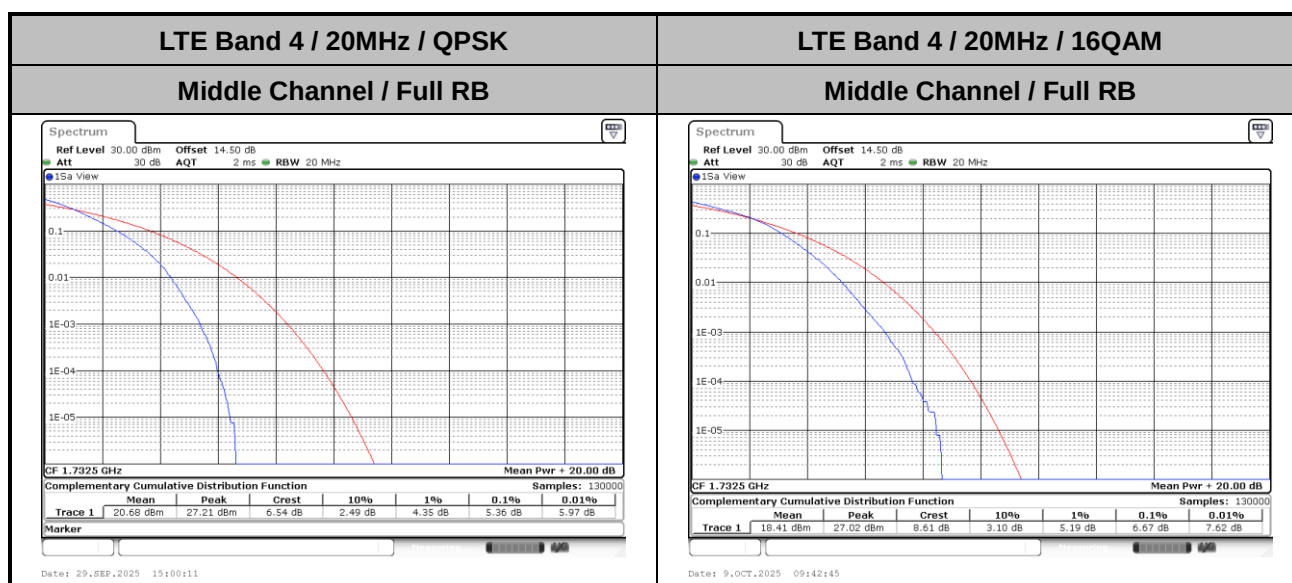
Frequency Stability	Frequency (MHz)	Limit Line	Result
$f_L - MAX(\Delta f) $	1850.151745	$\geq 1850 \text{ MHz}$	PASS
$f_H + MAX(\Delta f) $	1909.848255	$\leq 1910\text{MHz}$	



LTE Band 4

Peak-to-Average Ratio

Mode	LTE Band 4 / 20MHz		
Mod.	QPSK	16QAM	Limit: 13dB
RB Size	Full RB	Full RB	Result
Middle CH	5.36	6.67	PASS





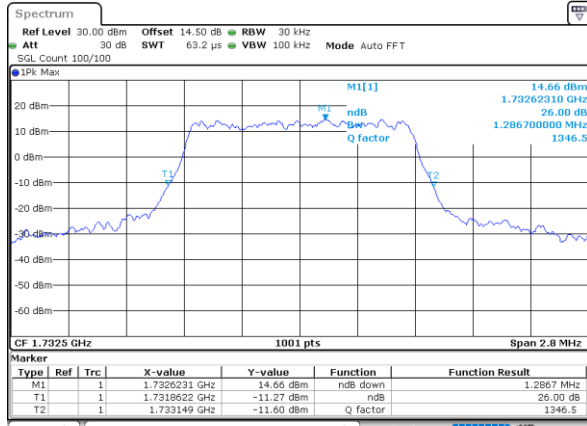
26dB Bandwidth

Mode	LTE Band 4 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	1.29	1.27	2.98	2.93	4.86	4.90	9.83	5.71	14.30	5.66	18.82	5.63



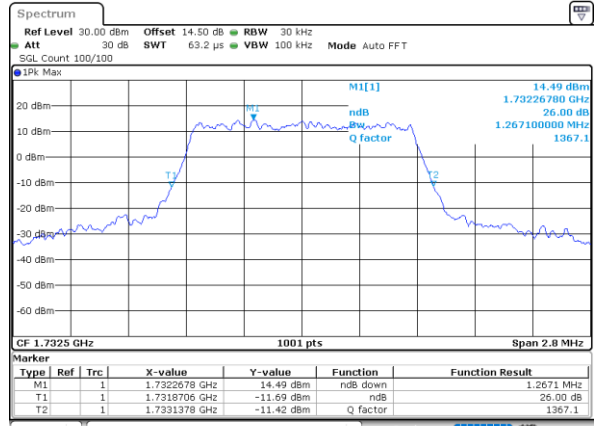
LTE Band 4

Middle Channel / 1.4MHz / QPSK



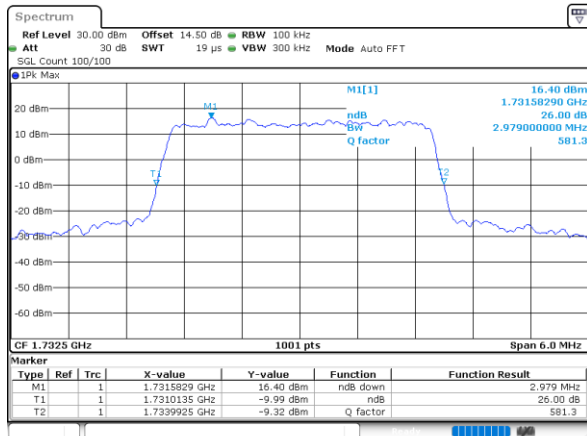
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Middle Channel / 1.4MHz / 16QAM



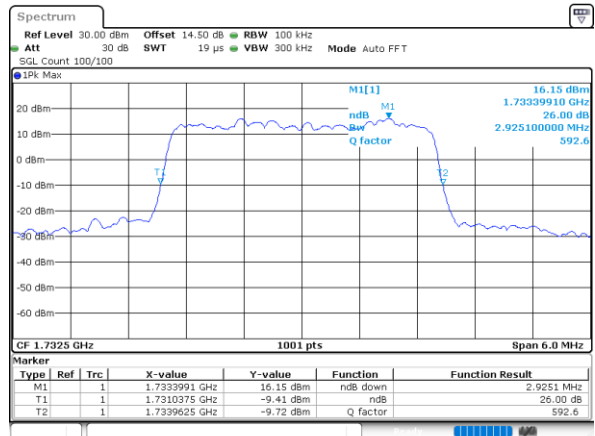
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Middle Channel / 3MHz / QPSK



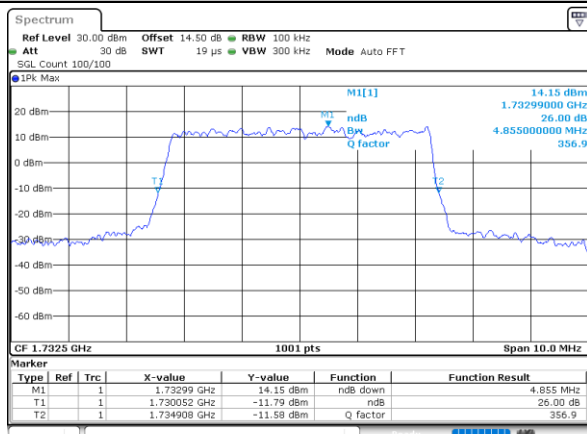
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Middle Channel / 3MHz / 16QAM



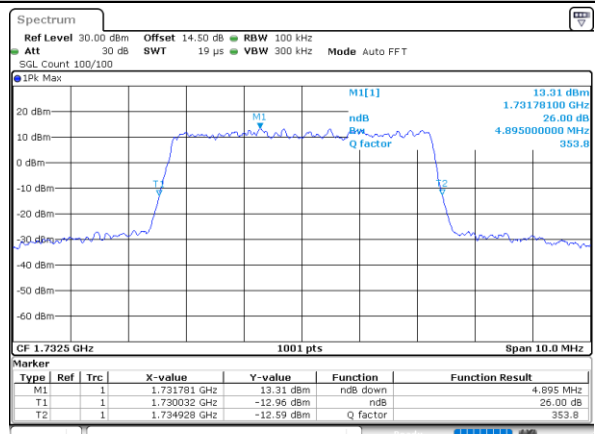
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Middle Channel / 5MHz / QPSK



Date: 29.SEP.2025 14:24:56

Middle Channel / 5MHz / 16QAM

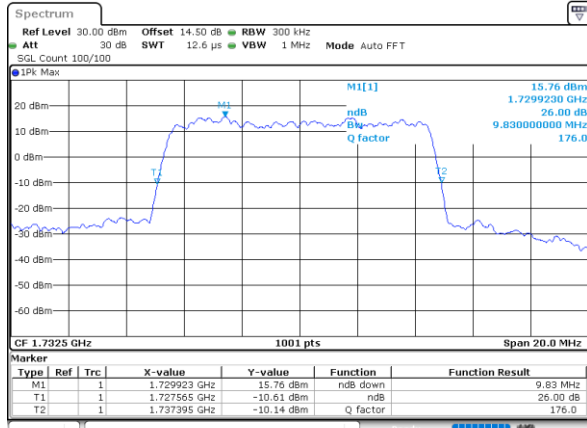


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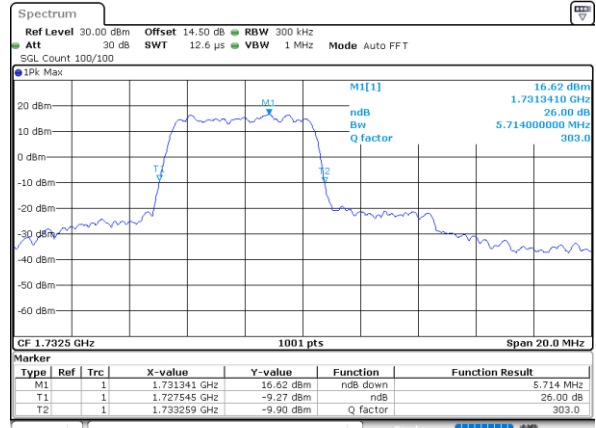
LTE Band 4

Middle Channel / 10MHz / QPSK



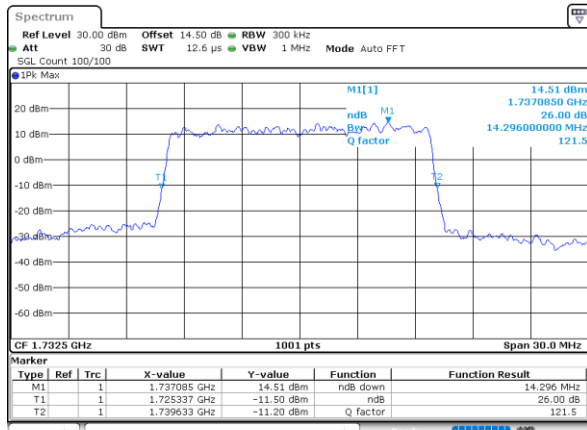
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Middle Channel / 10MHz / 16QAM



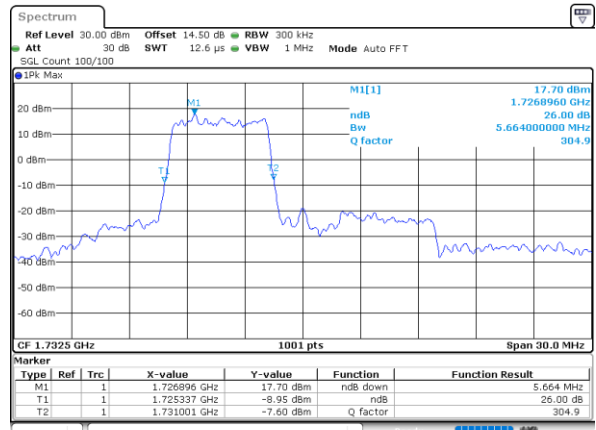
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Middle Channel / 15MHz / QPSK



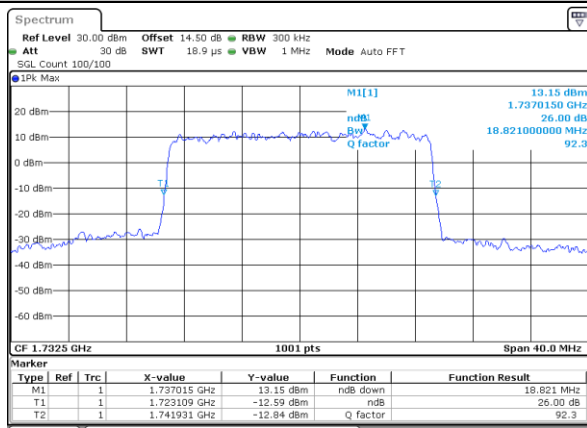
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Middle Channel / 15MHz / 16QAM



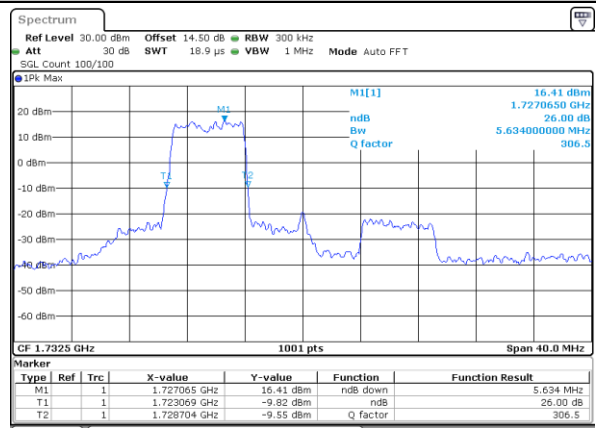
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Middle Channel / 20MHz / QPSK



Date: 29.SEP.2025 14:56:10

Middle Channel / 20MHz / 16QAM



Date: 9.OCT.2025 09:41:53



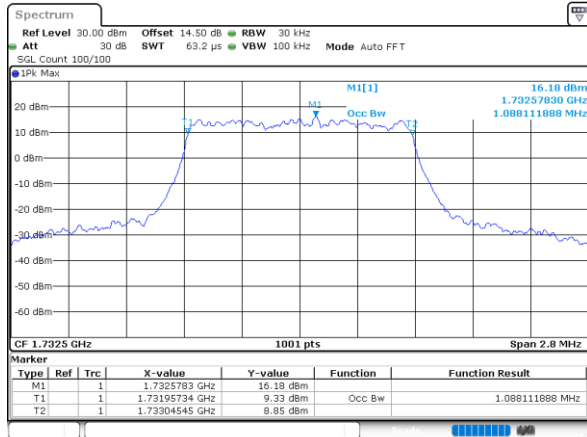
Occupied Bandwidth

Mode	LTE Band 4 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	1.09	1.09	2.70	2.72	4.51	4.47	9.01	4.98	13.49	4.98	17.78	5.03

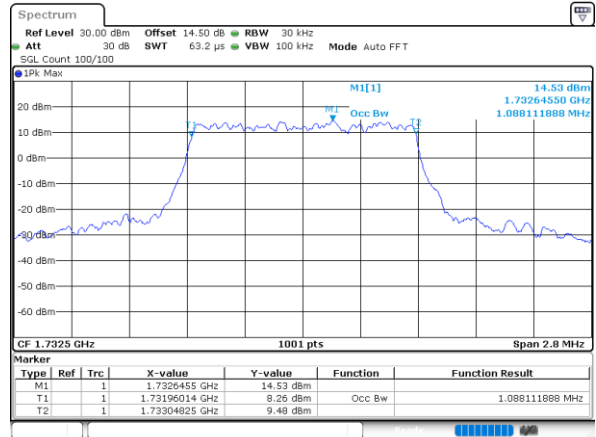


LTE Band 4

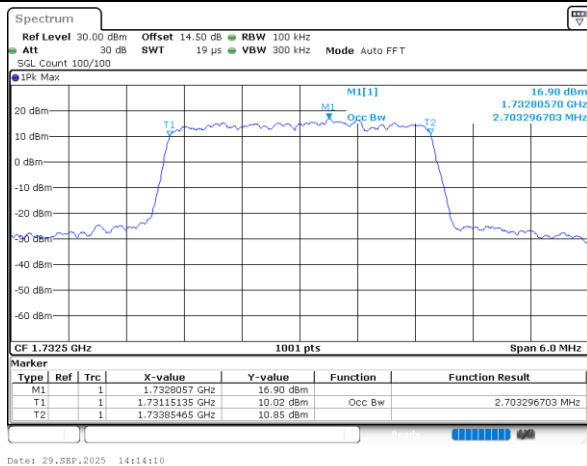
Middle Channel / 1.4MHz / QPSK



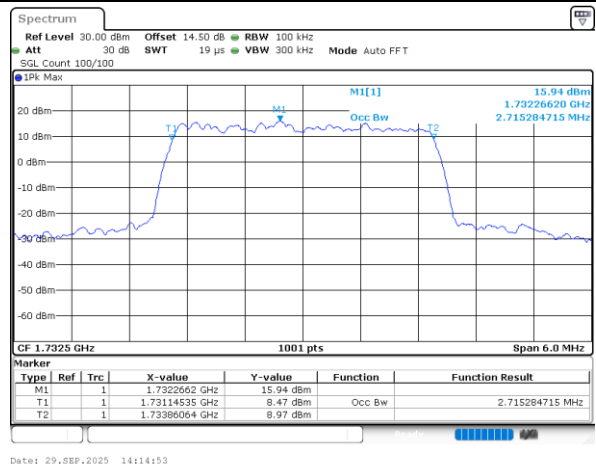
Middle Channel / 1.4MHz / 16QAM



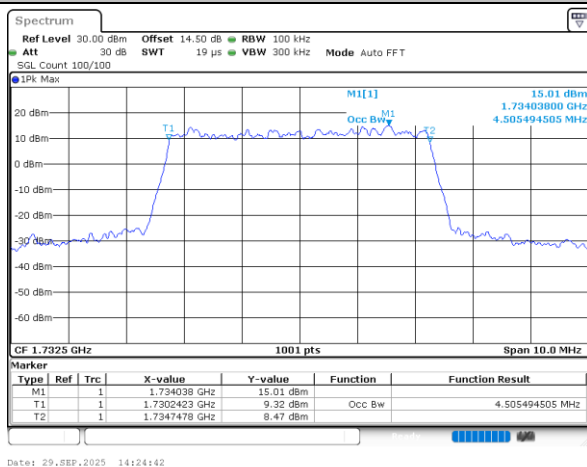
Middle Channel / 3MHz / QPSK



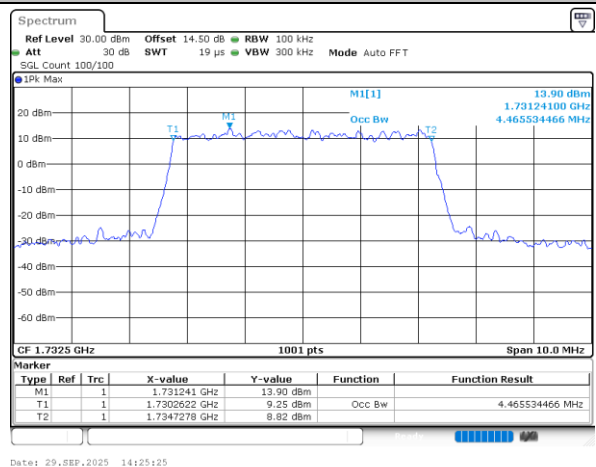
Middle Channel / 3MHz / 16QAM



Middle Channel / 5MHz / QPSK



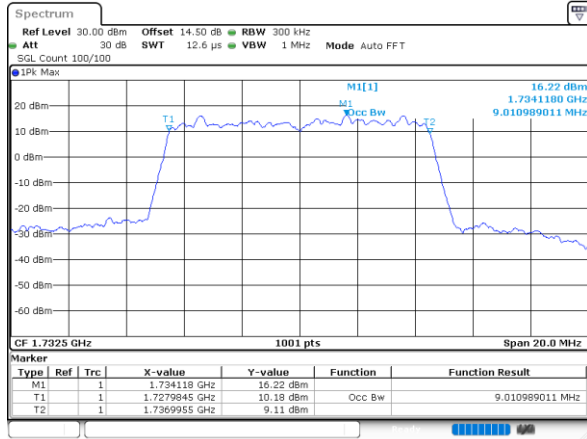
Middle Channel / 5MHz / 16QAM



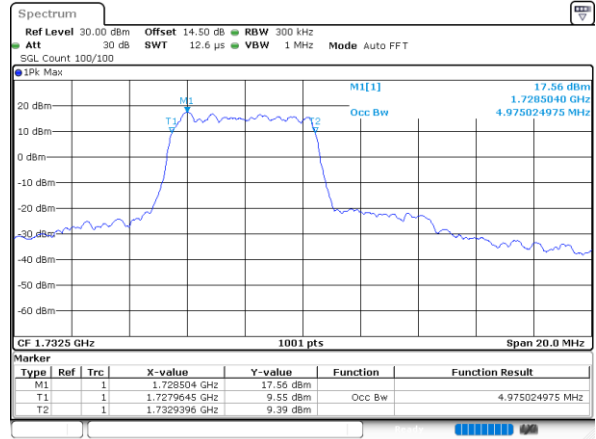


LTE Band 4

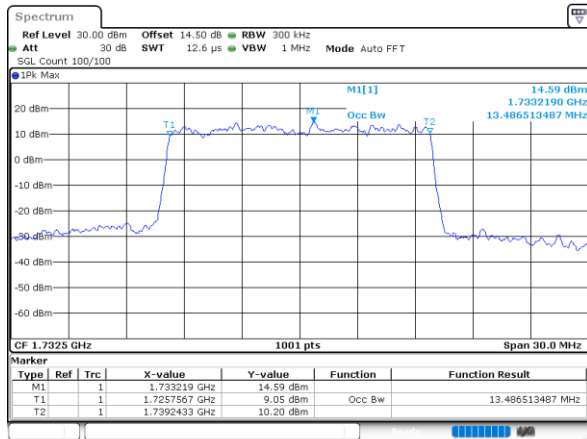
Middle Channel / 10MHz / QPSK



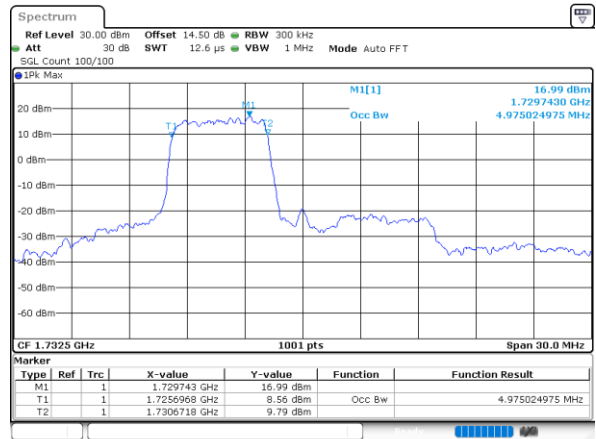
Middle Channel / 10MHz / 16QAM



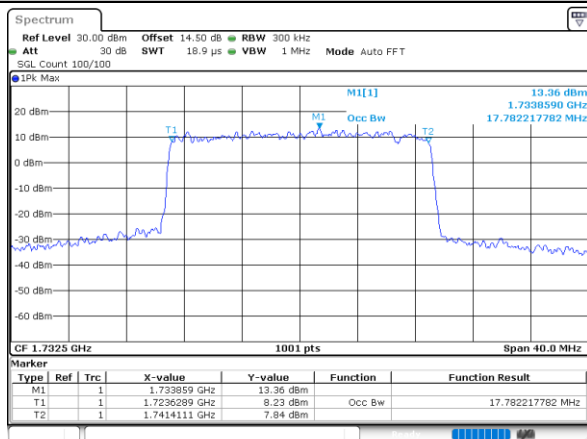
Middle Channel / 15MHz / QPSK



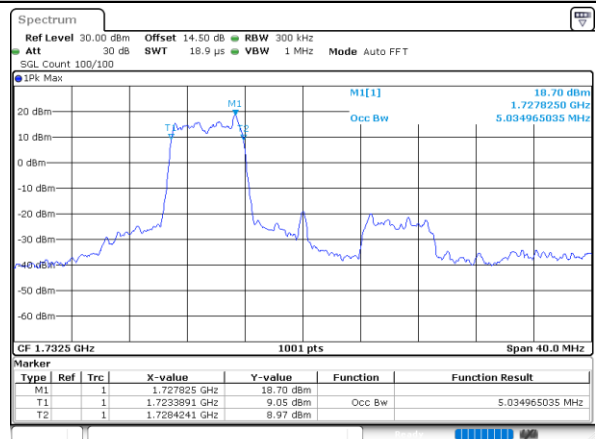
Middle Channel / 15MHz / 16QAM



Middle Channel / 20MHz / QPSK



Middle Channel / 20MHz / 16QAM

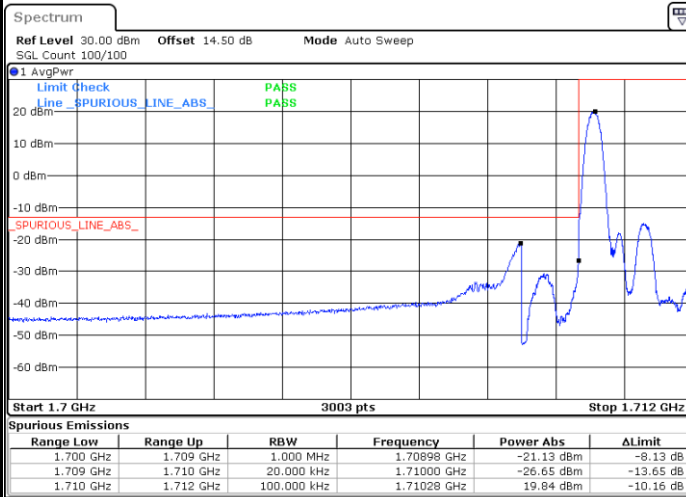




Conducted Band Edge

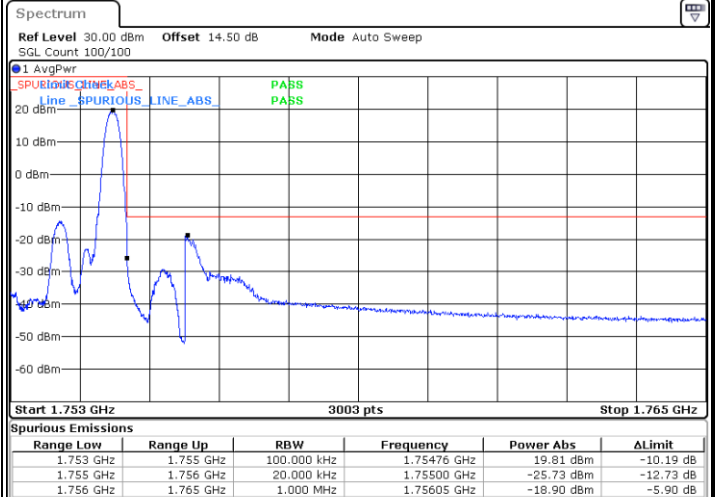
LTE Band 4 / 1.4MHz / QPSK

Lowest Band Edge / 1RB



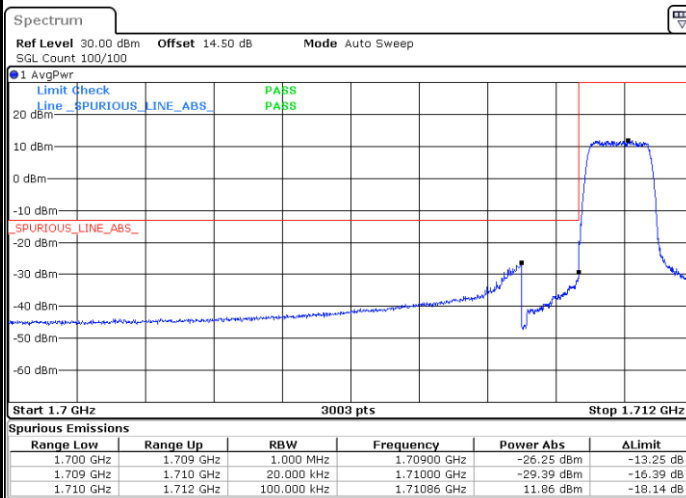
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Highest Band Edge / 1RB



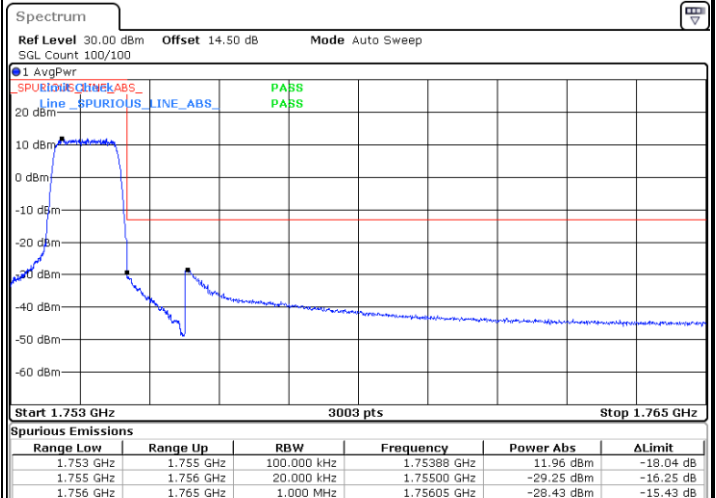
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Lowest Band Edge / Full RB



Date: 29.SEP.2025 14:00:18

Highest Band Edge / Full RB

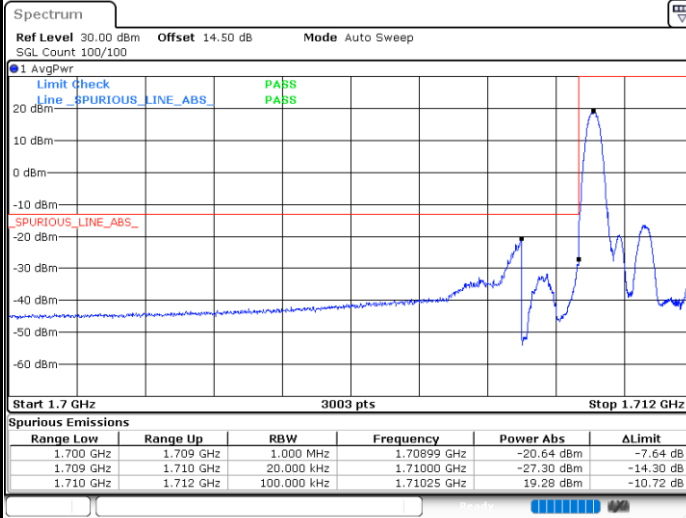


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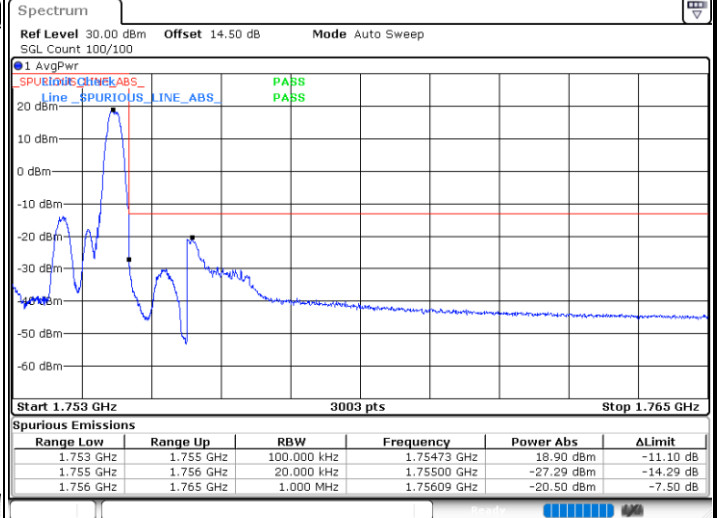


LTE Band 4 / 1.4MHz / 16QAM

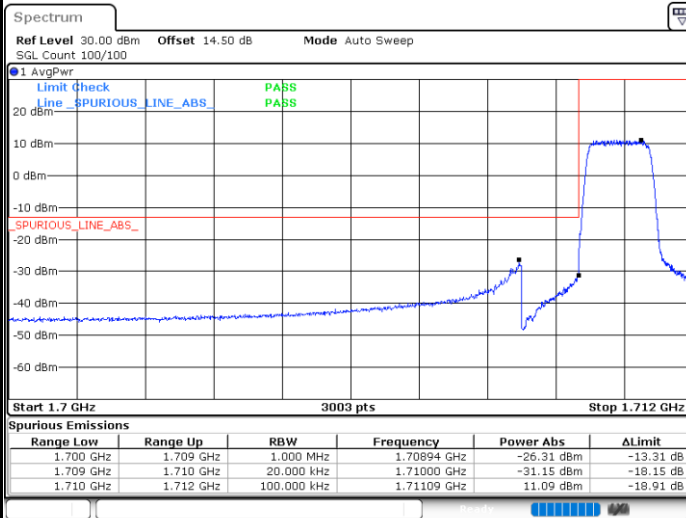
Lowest Band Edge / 1 RB



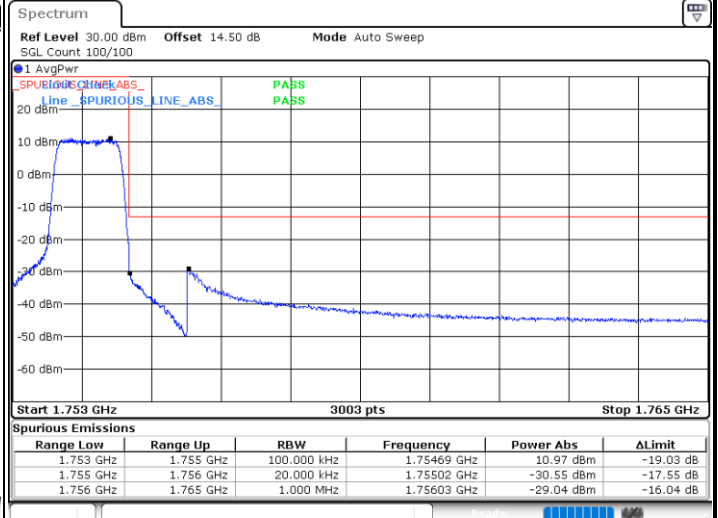
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



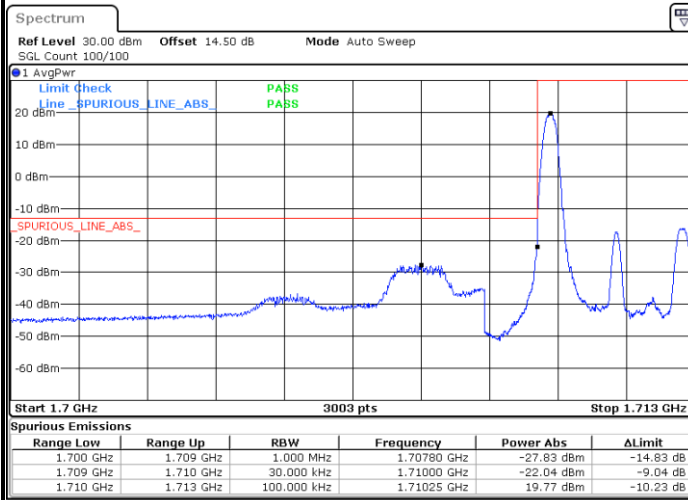
Highest Band Edge / Full RB



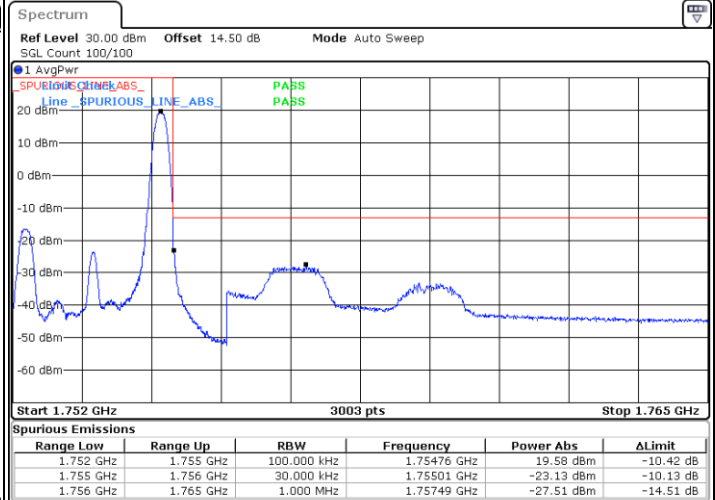


LTE Band 4 / 3MHz / QPSK

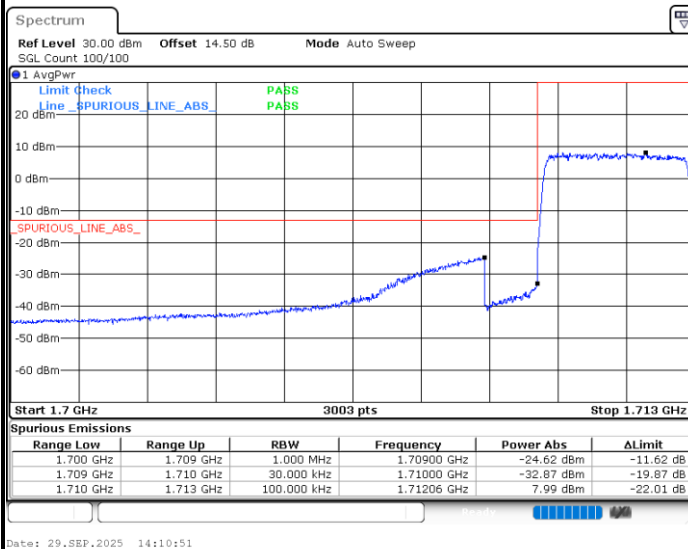
Lowest Band Edge / 1RB



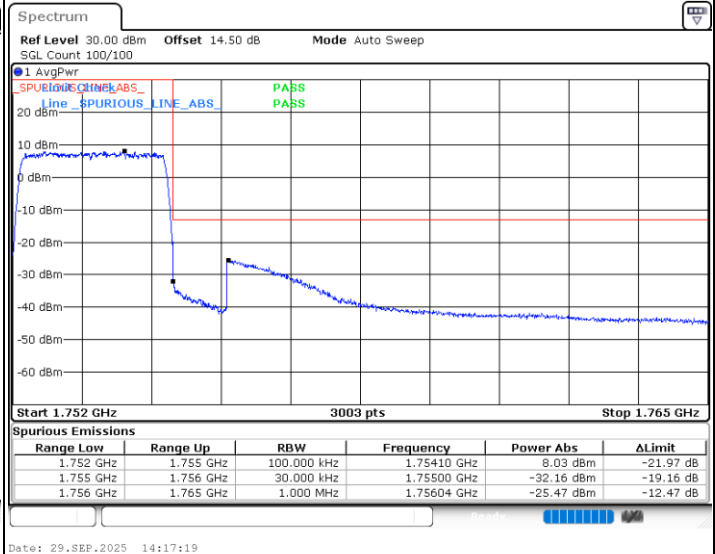
Highest Band Edge / 1RB



Lowest Band Edge / Full RB



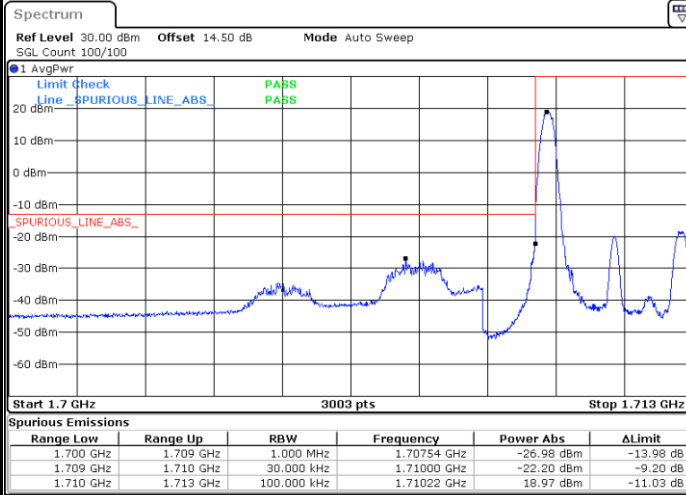
Highest Band Edge / Full RB



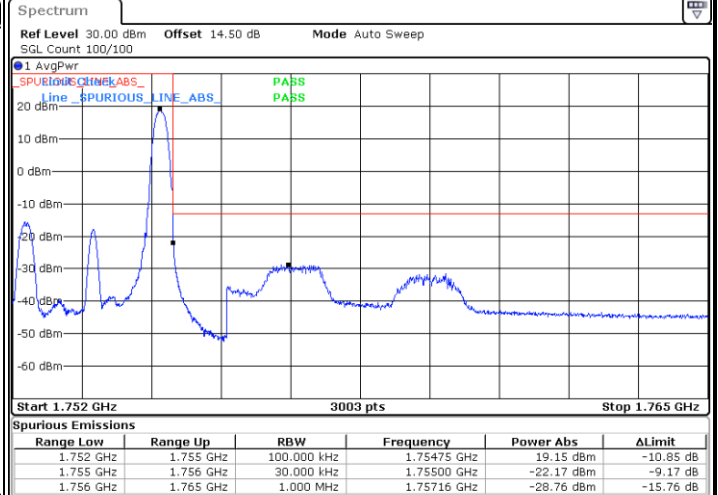


LTE Band 4 / 3MHz / 16QAM

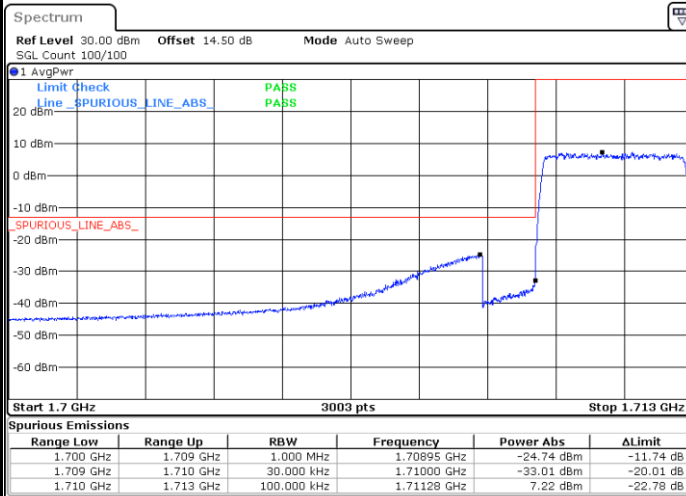
Lowest Band Edge / 1 RB



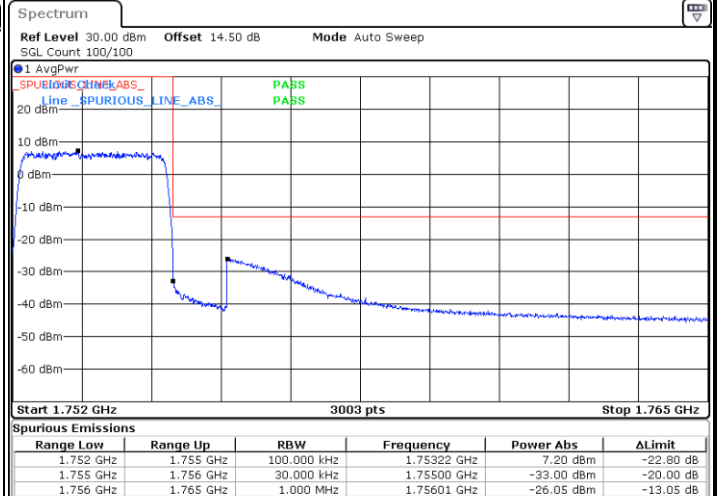
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



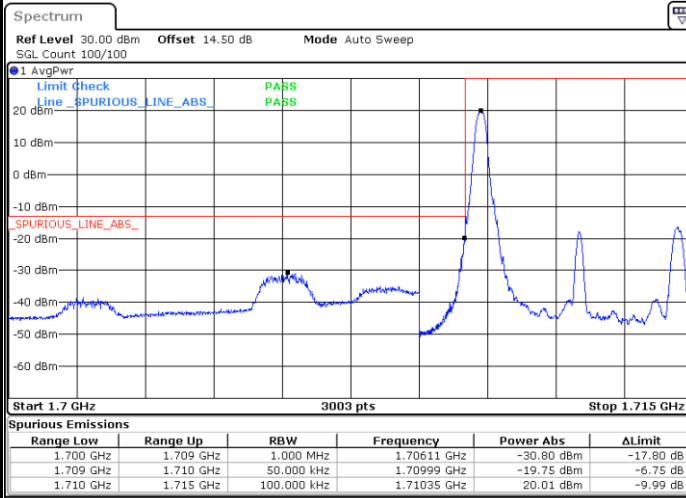
Highest Band Edge / Full RB



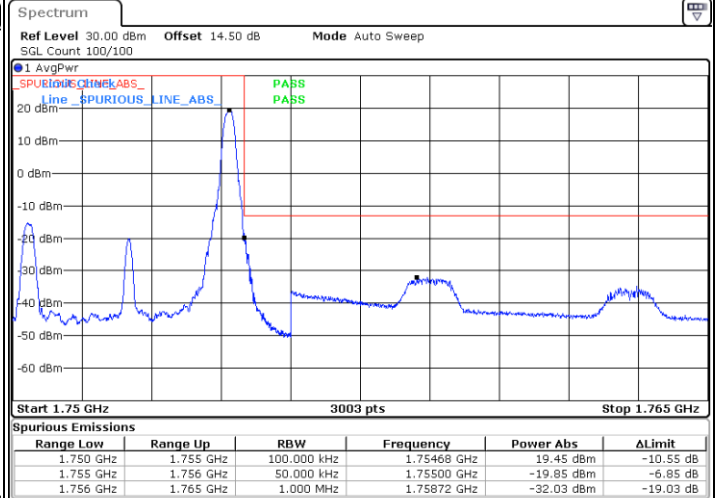


LTE Band 4 / 5MHz / QPSK

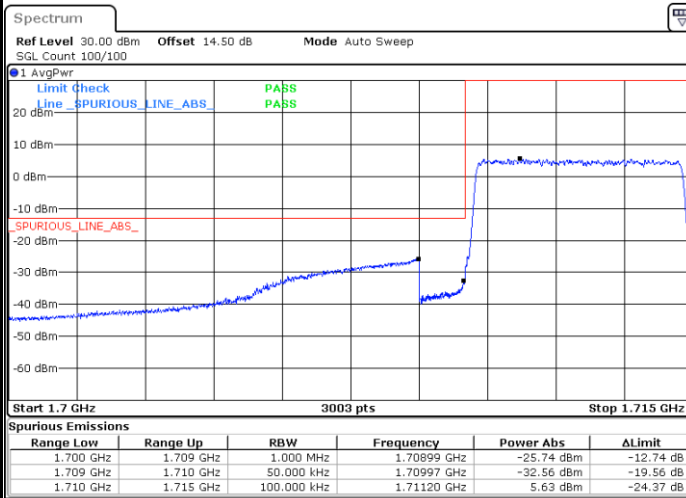
Lowest Band Edge / 1RB



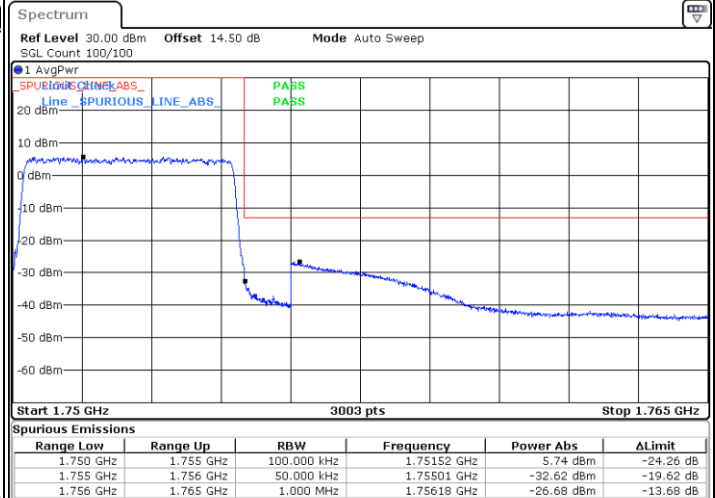
Highest Band Edge / 1RB



Lowest Band Edge / Full RB



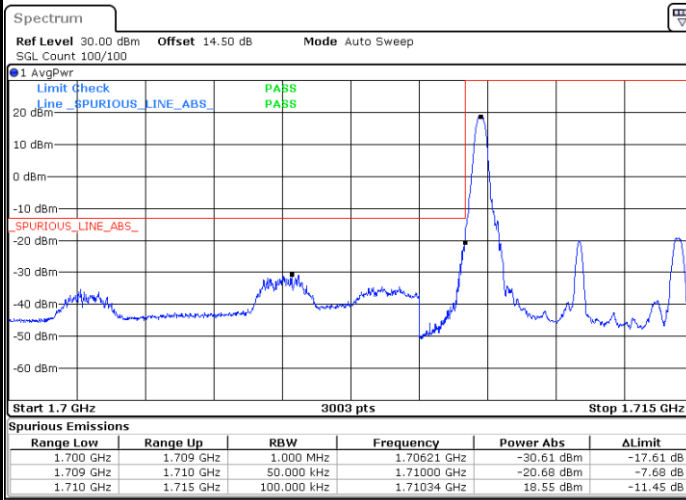
Highest Band Edge / Full RB



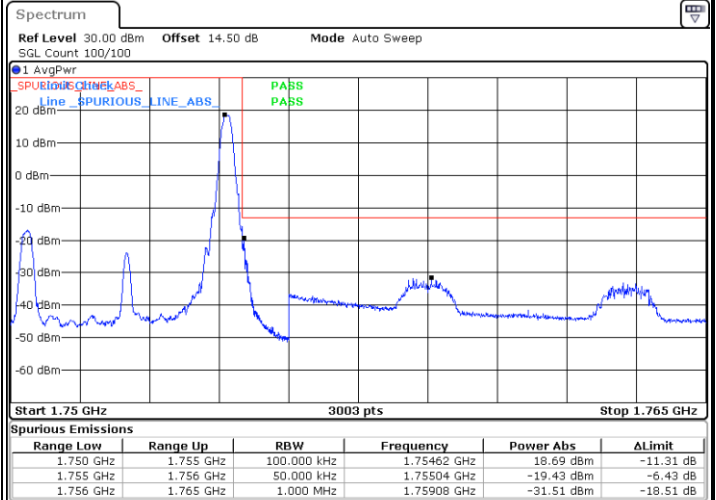


LTE Band 4 / 5MHz / 16QAM

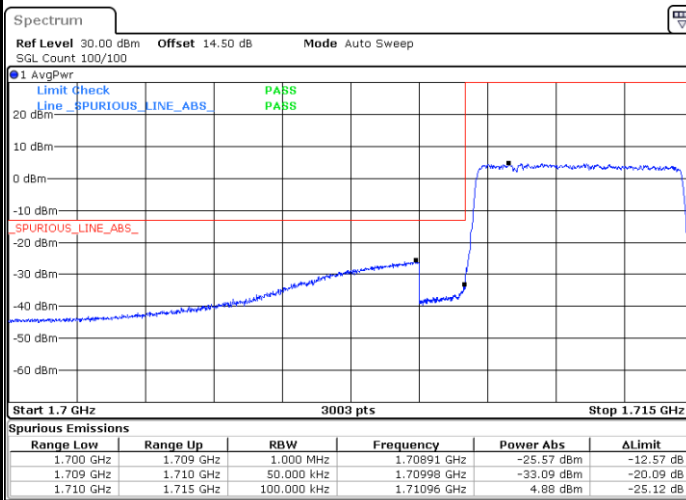
Lowest Band Edge / 1 RB



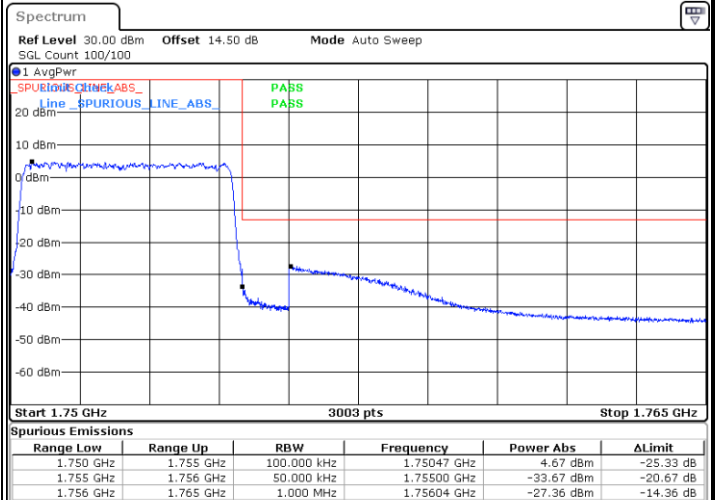
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



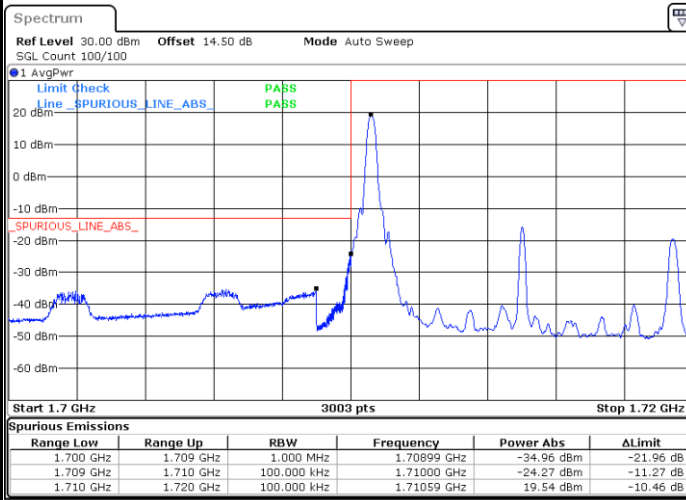
Highest Band Edge / Full RB



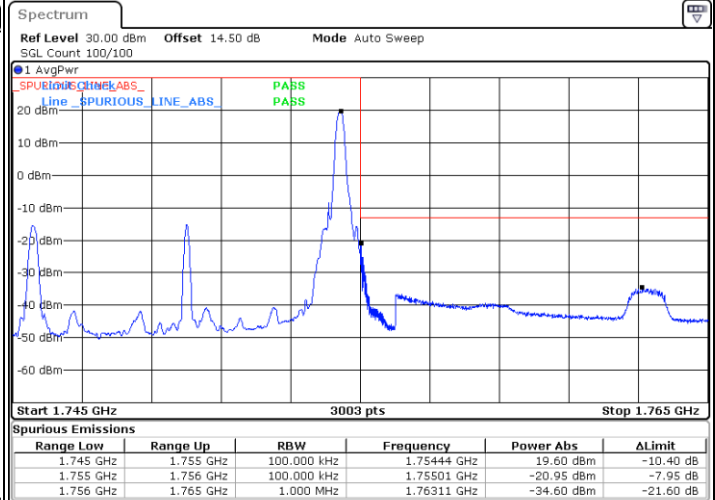


LTE Band 4 / 10MHz / QPSK

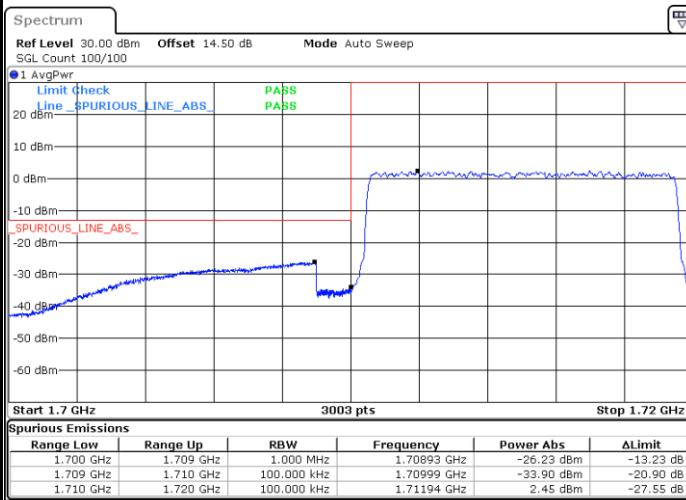
Lowest Band Edge / 1RB



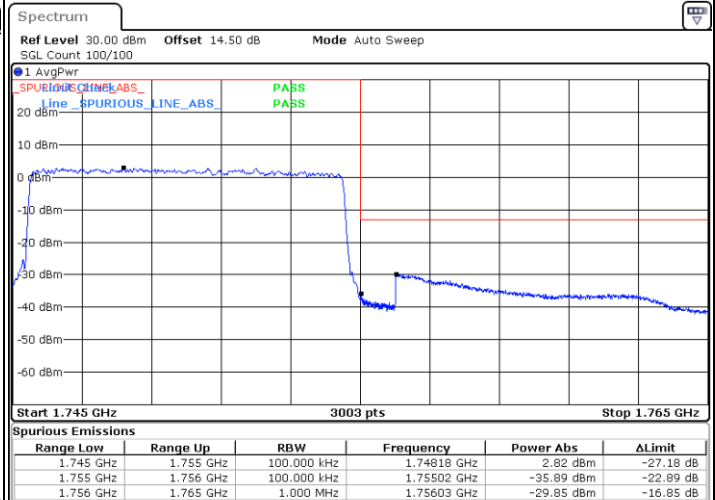
Highest Band Edge / 1RB



Lowest Band Edge / Full RB



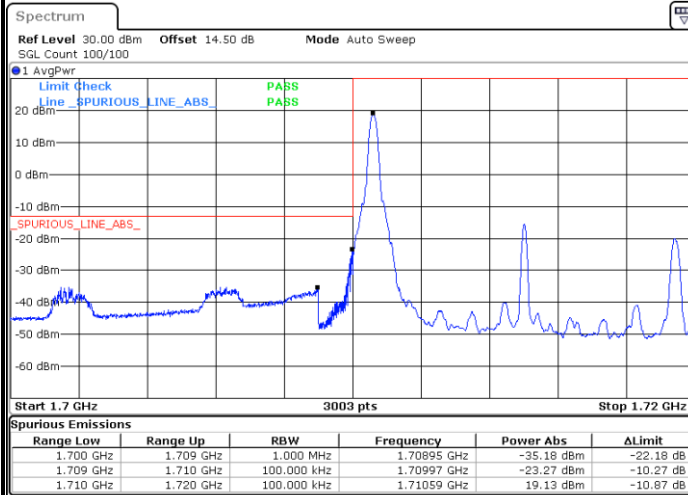
Highest Band Edge / Full RB



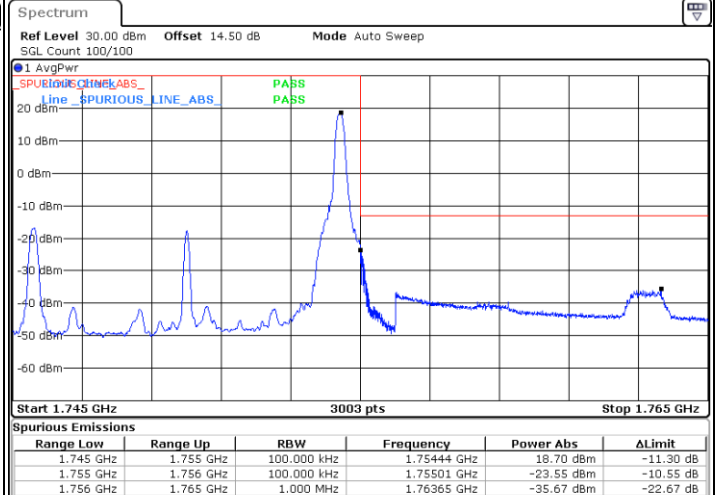


LTE Band 4 / 10MHz / 16QAM

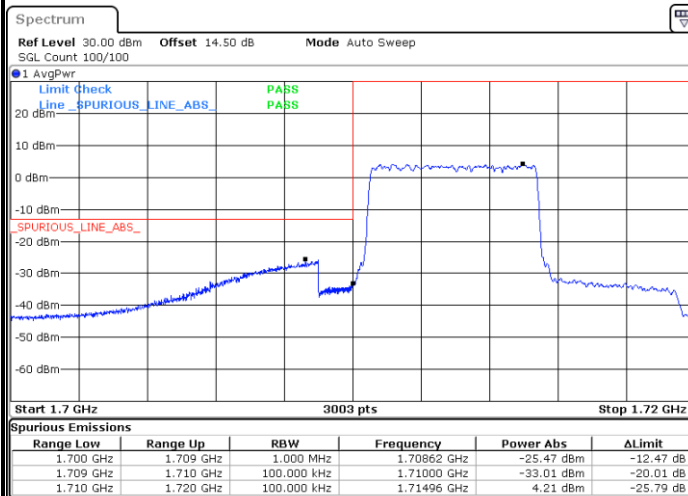
Lowest Band Edge / 1 RB



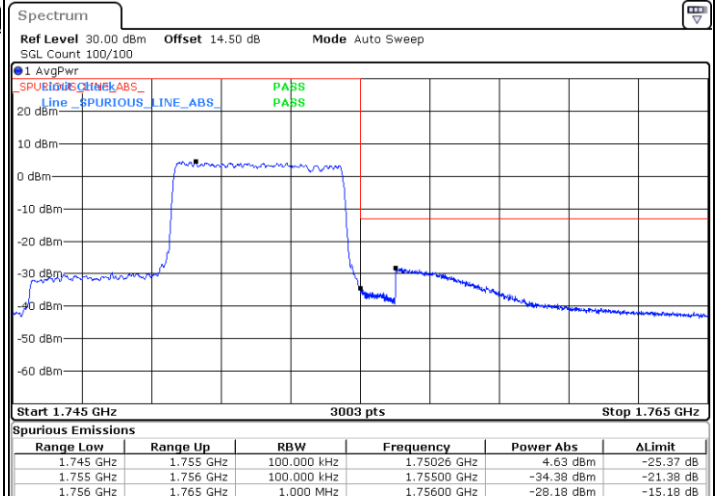
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



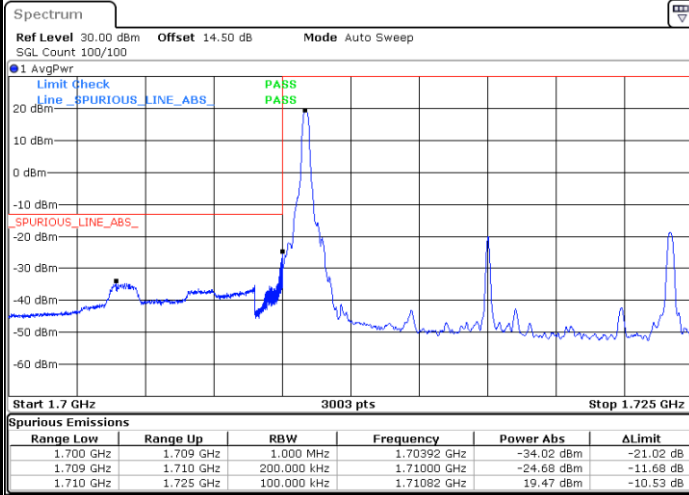
Highest Band Edge / Full RB



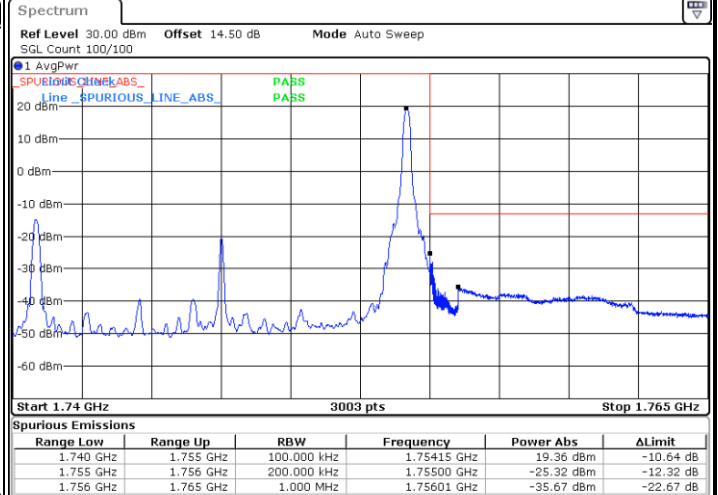


LTE Band 4 / 15MHz / QPSK

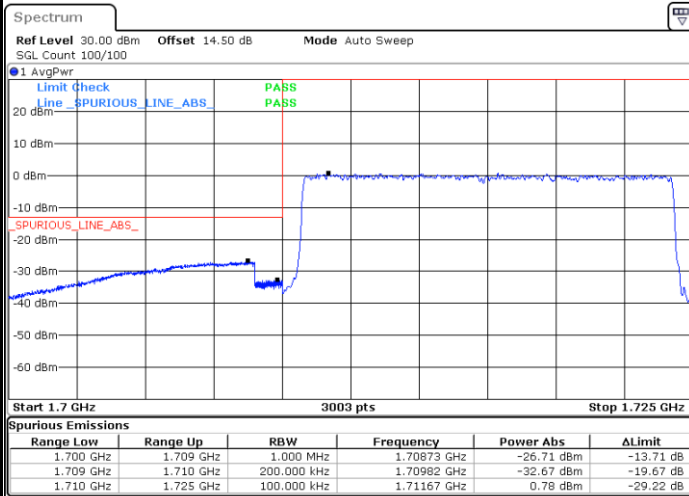
Lowest Band Edge / 1RB



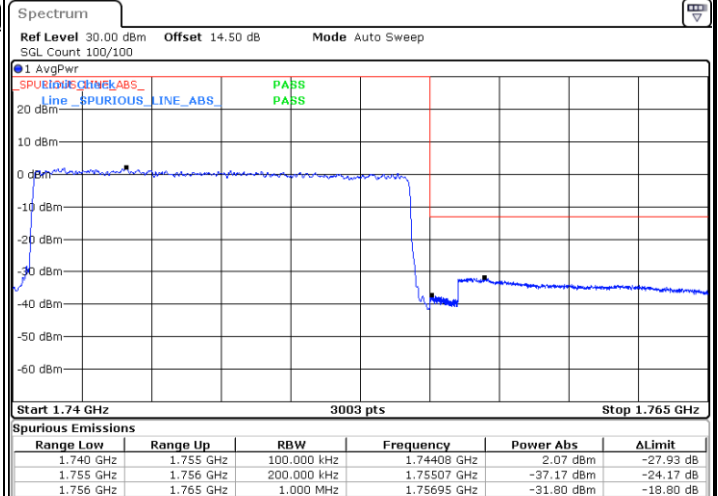
Highest Band Edge / 1RB



Lowest Band Edge / Full RB



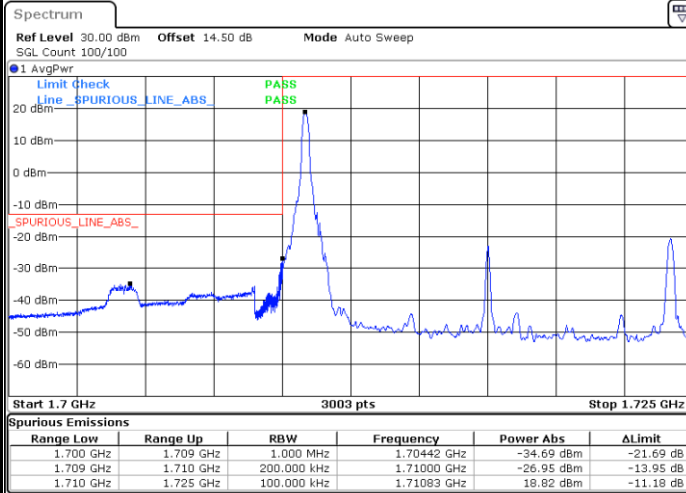
Highest Band Edge / Full RB



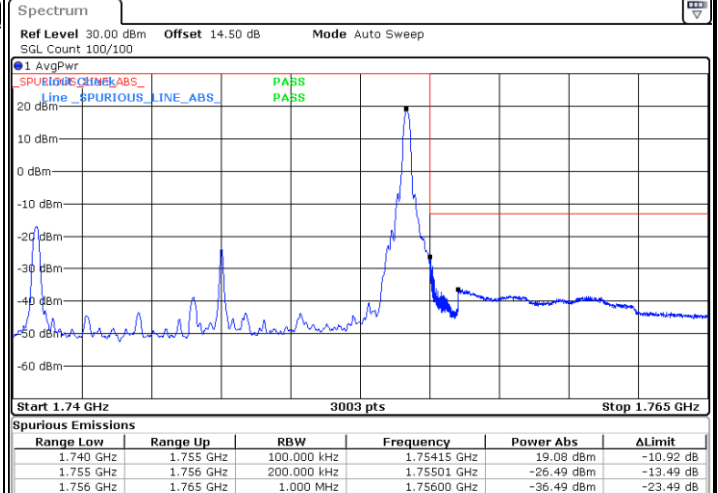


LTE Band 4 / 15MHz / 16QAM

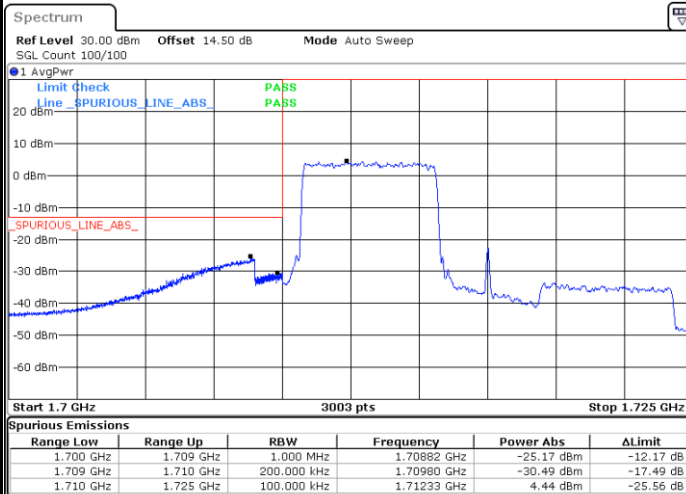
Lowest Band Edge / 1 RB



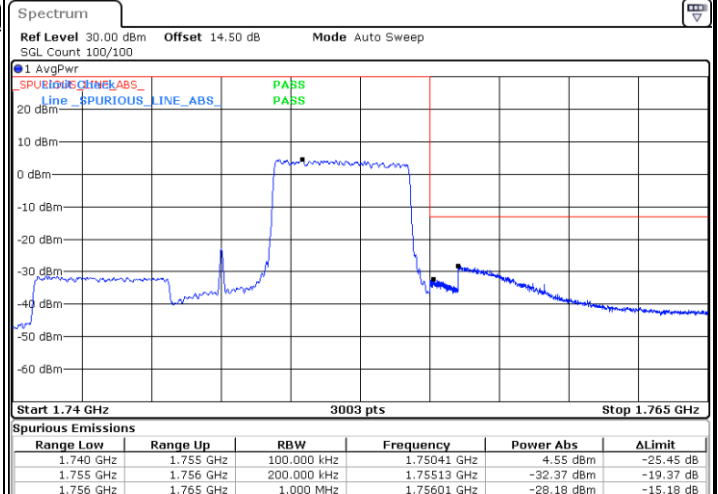
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



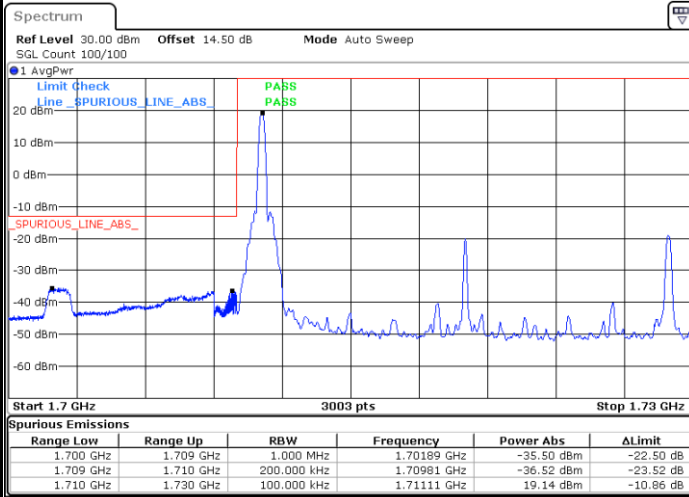
Highest Band Edge / Full RB



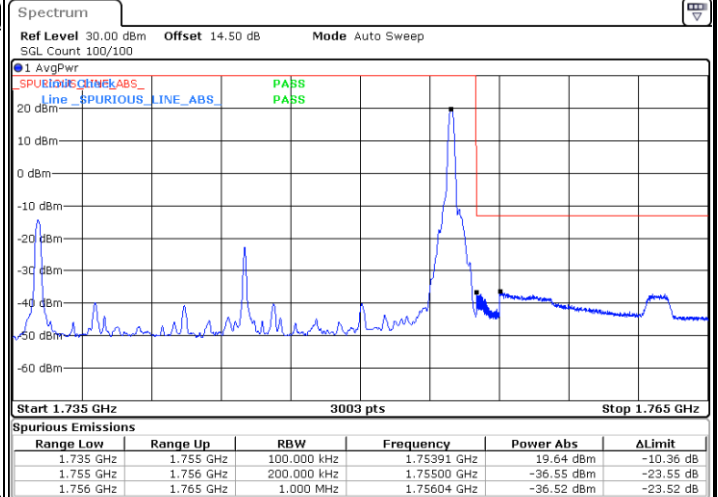


LTE Band 4 / 20MHz / QPSK

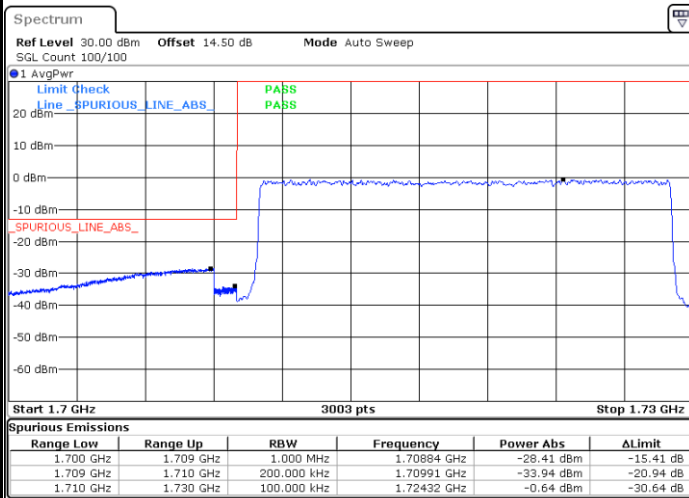
Lowest Band Edge / 1RB



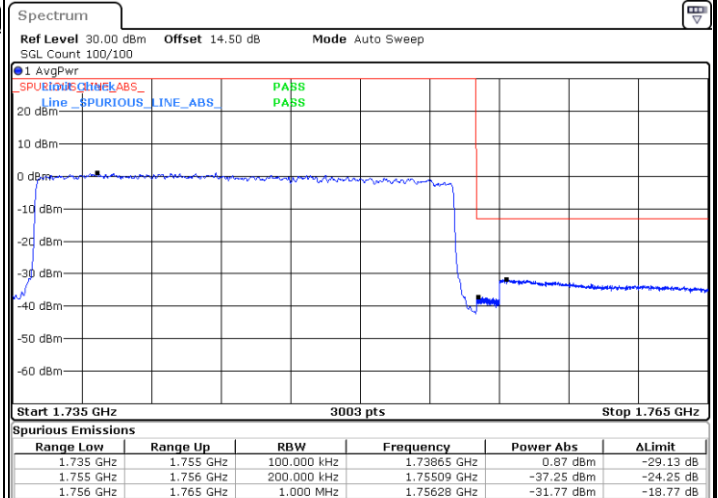
Highest Band Edge / 1RB



Lowest Band Edge / Full RB



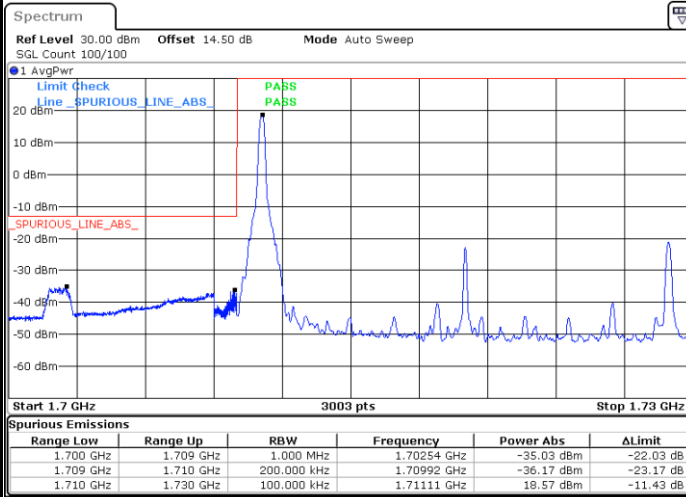
Highest Band Edge / Full RB



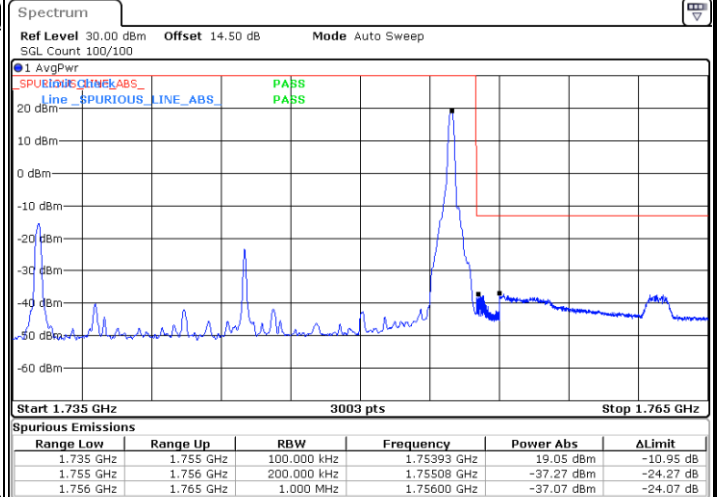


LTE Band 4 / 20MHz / 16QAM

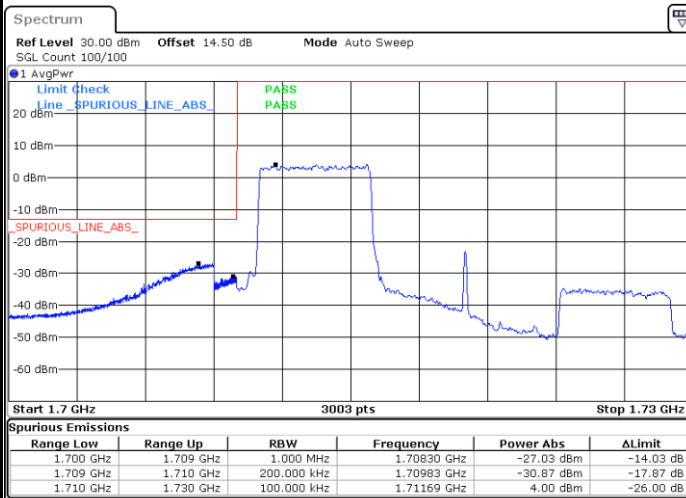
Lowest Band Edge / 1 RB



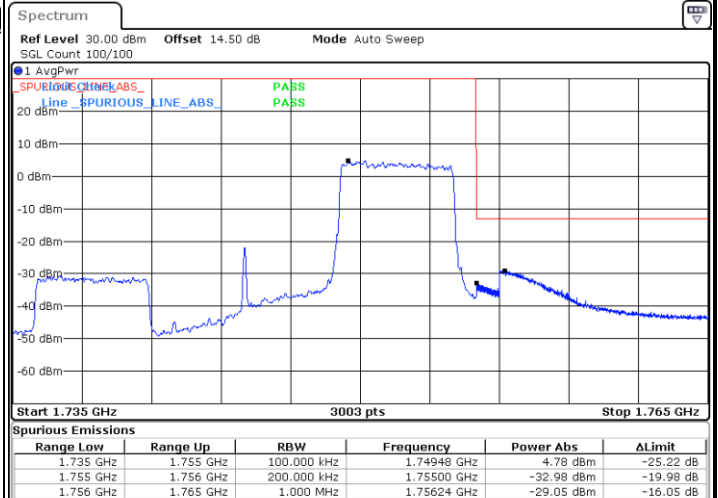
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



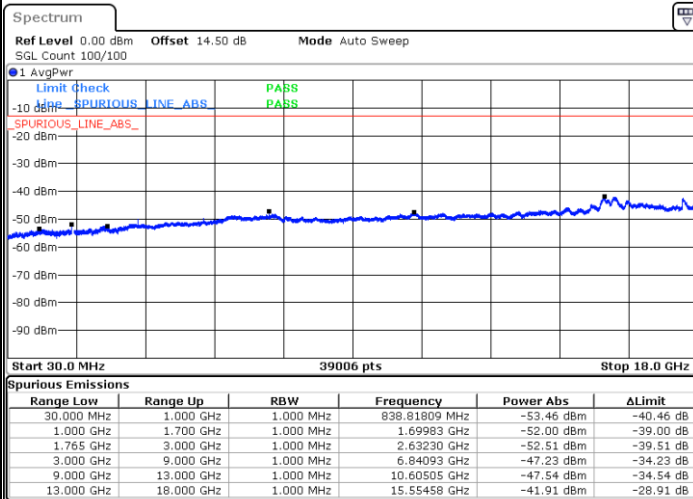
Highest Band Edge / Full RB



Conducted Spurious Emission

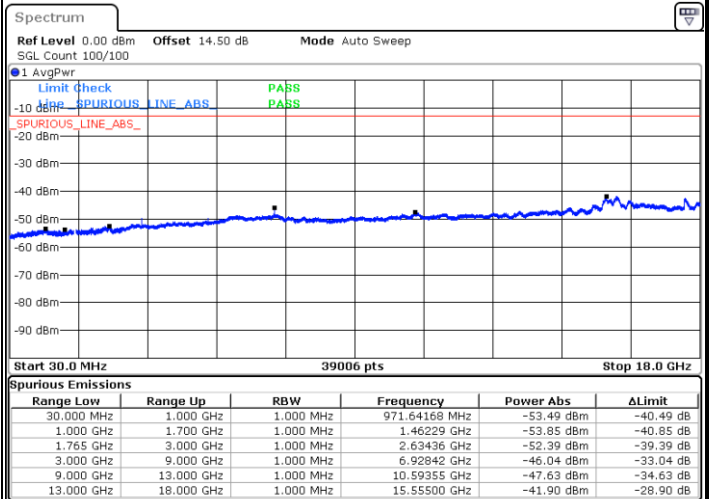
LTE Band 4 / 1.4MHz

Lowest Channel / QPSK



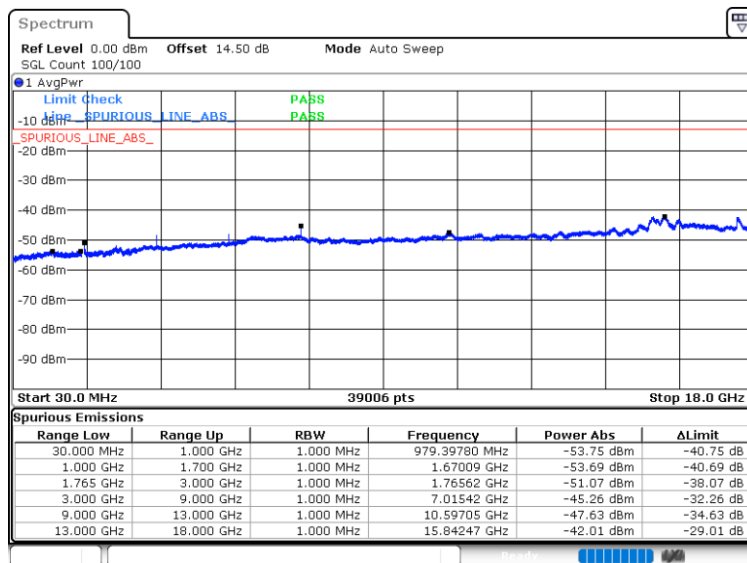
Date: 29.SEP.2025 14:02:06

Middle Channel / QPSK



Date: 29.SEP.2025 14:03:09

Highest Channel / QPSK

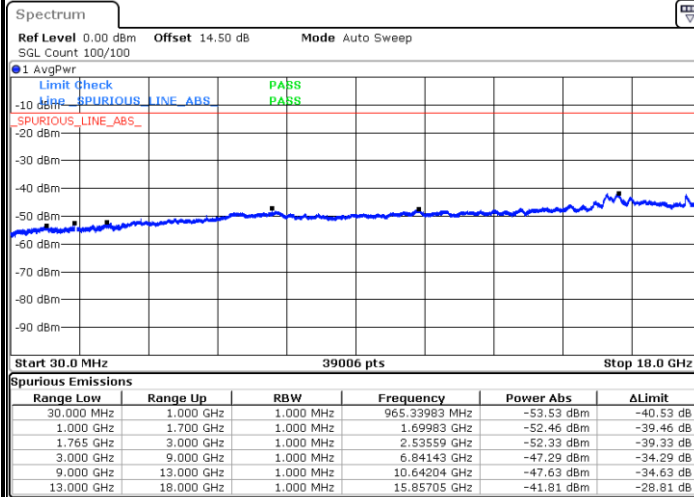


Date: 29.SEP.2025 14:08:34



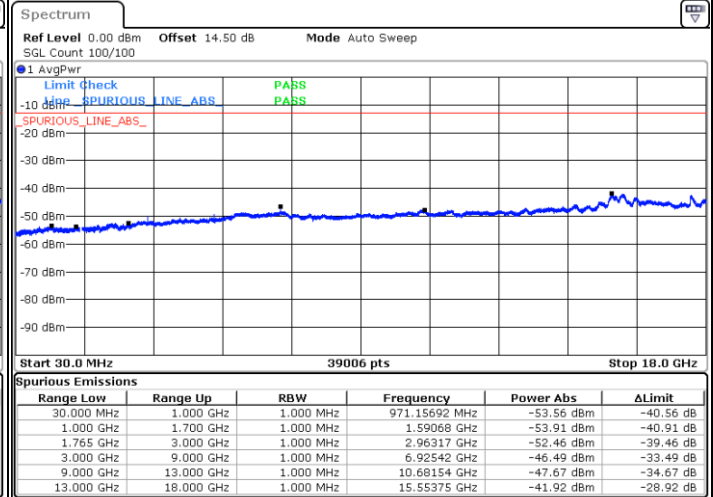
LTE Band 4 / 3MHz

Lowest Channel / QPSK



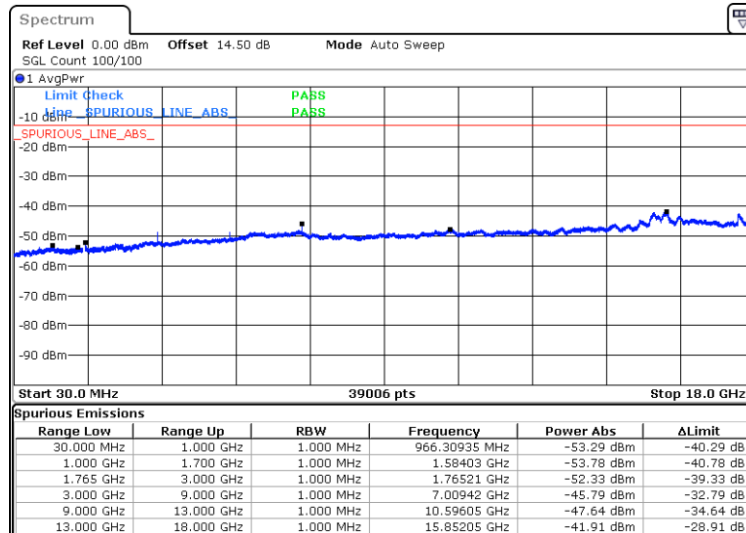
Date: 29.SEP.2025 14:12:38

Middle Channel / QPSK



Date: 29.SEP.2025 14:13:41

Highest Channel / QPSK

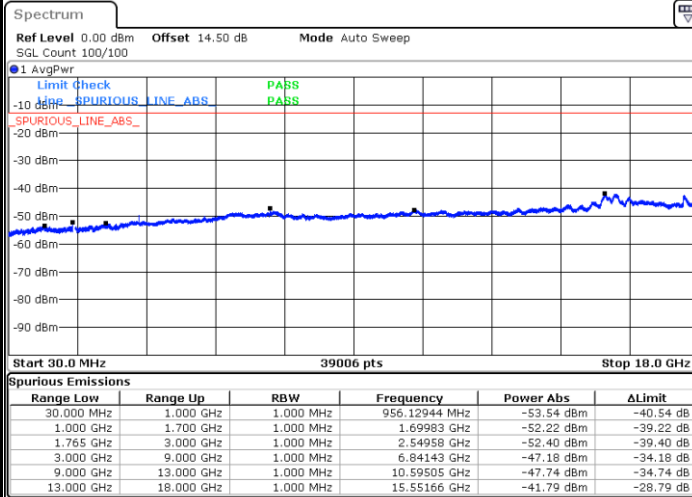


Date: 29.SEP.2025 14:19:06



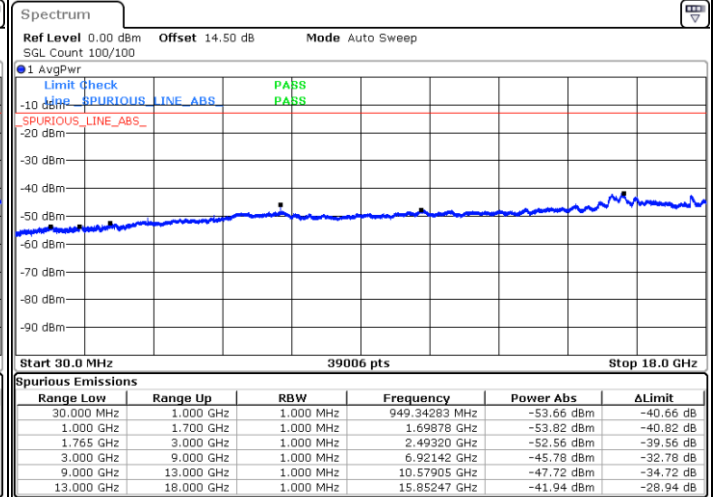
LTE Band 4 / 5MHz

Lowest Channel / QPSK



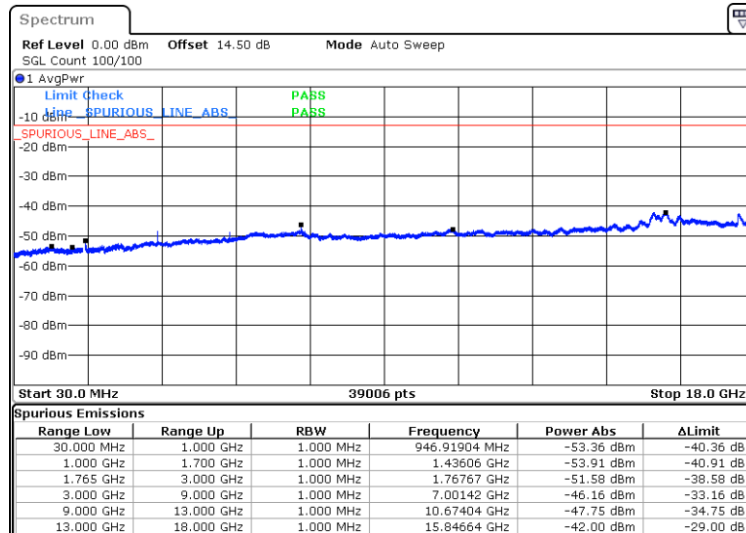
Date: 29.SEP.2025 14:23:10

Middle Channel / QPSK



Date: 29.SEP.2025 14:24:13

Highest Channel / QPSK

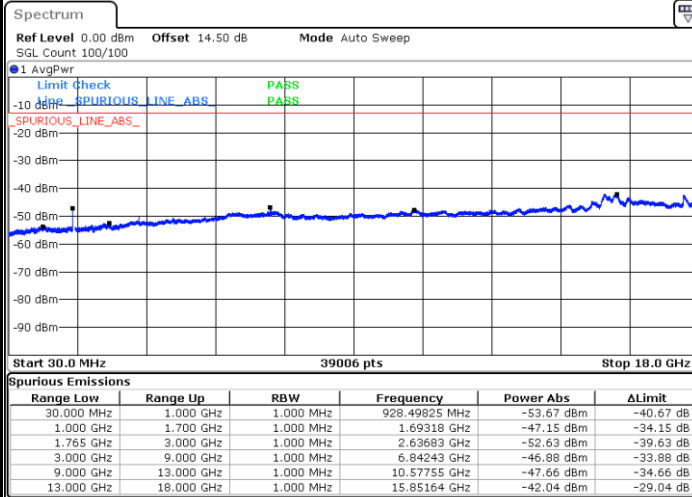


Date: 29.SEP.2025 14:29:39



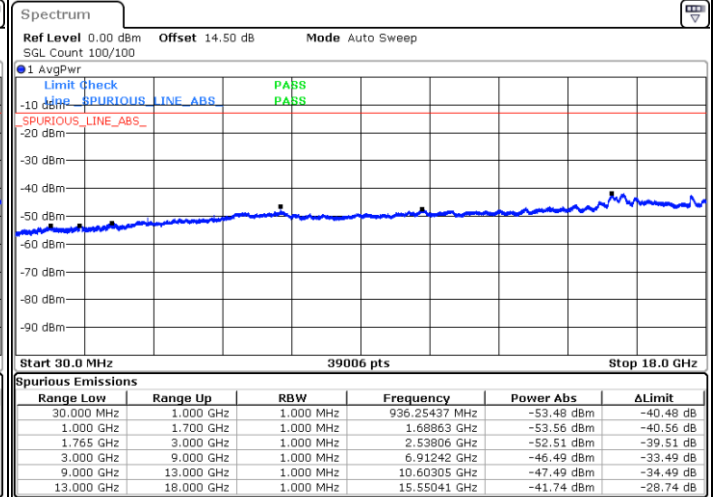
LTE Band 4 / 10MHz

Lowest Channel / QPSK



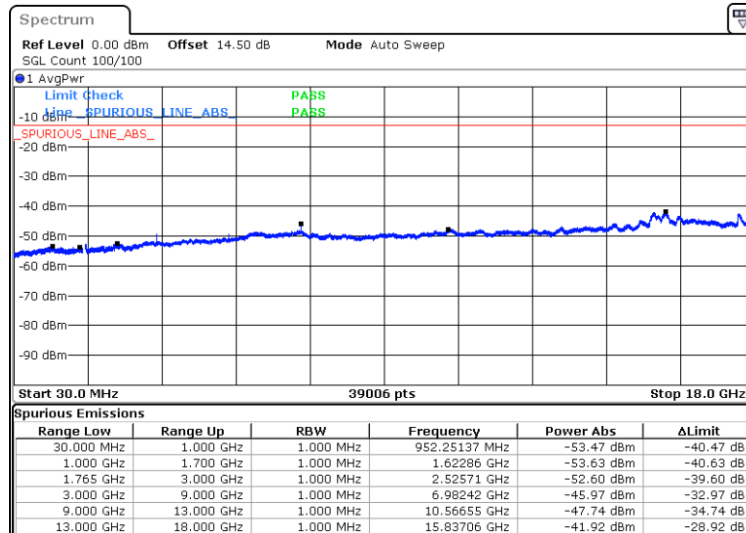
Date: 29.SEP.2025 14:32:59

Middle Channel / QPSK



Date: 29.SEP.2025 14:34:02

Highest Channel / QPSK

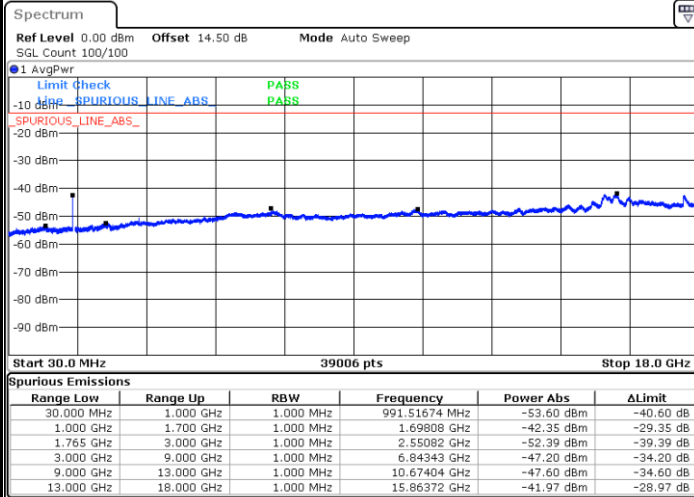


Date: 29.SEP.2025 14:40:00



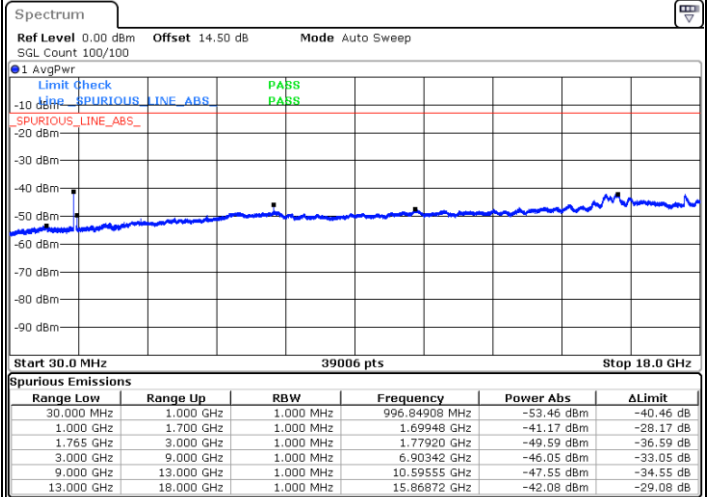
LTE Band 4 / 15MHz

Lowest Channel / QPSK



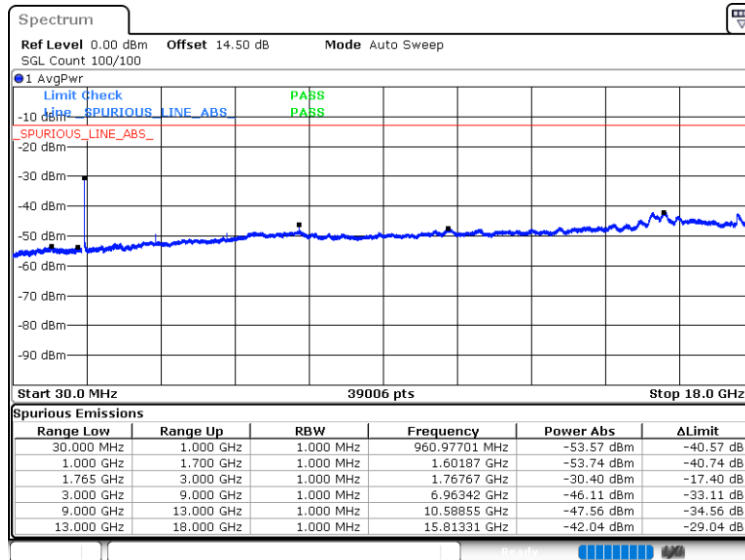
Date: 29.SEP.2025 14:46:02

Middle Channel / QPSK



Date: 29.SEP.2025 14:47:05

Highest Channel / QPSK

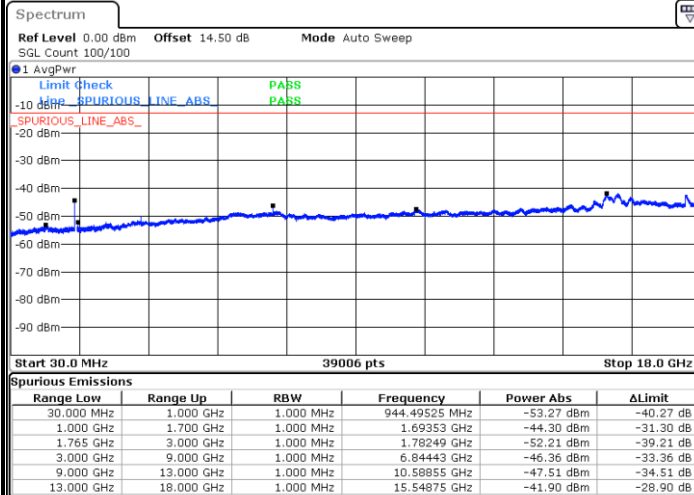


Date: 29.SEP.2025 14:51:03



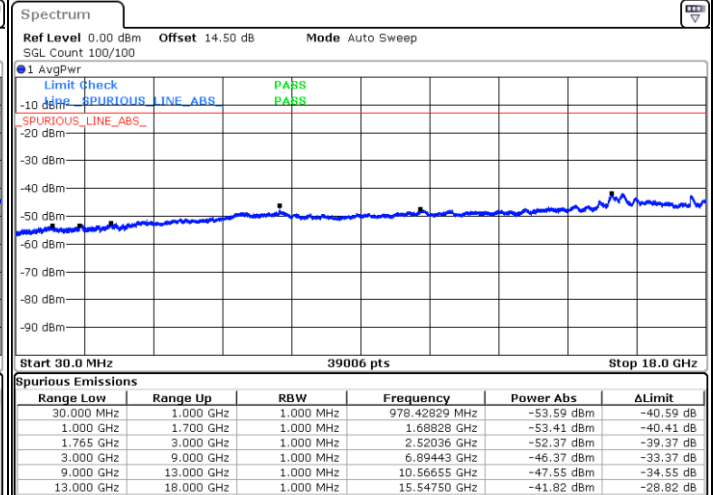
LTE Band 4 / 20MHz

Lowest Channel / QPSK



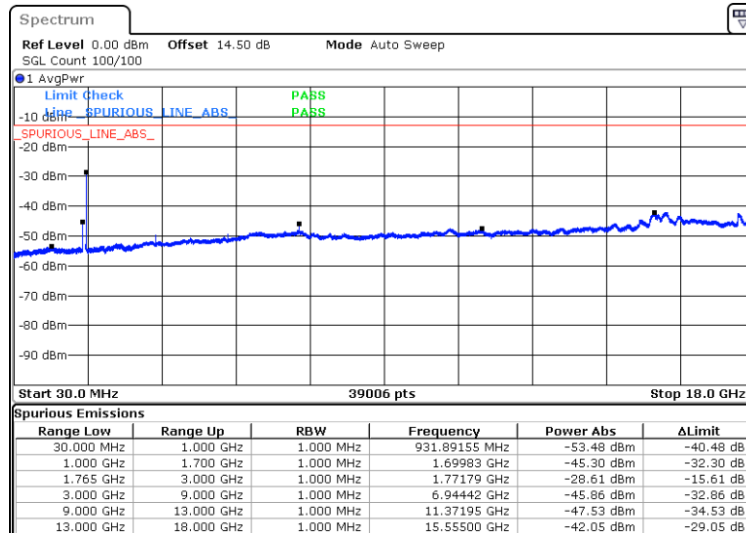
Date: 29.SEP.2025 14:54:23

Middle Channel / QPSK



Date: 29.SEP.2025 14:55:26

Highest Channel / QPSK



Date: 29.SEP.2025 15:17:53

Frequency Stability

Test Conditions		LTE Band 4 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 1.4MHz	Note 2.
		Frequency Offset (Δf) (Hz)	Result
60	Normal Voltage	4.2	PASS
40	Normal Voltage	3.2	
30	Normal Voltage	-3.1	
20(Ref.)	Normal Voltage	2.1	
10	Normal Voltage	1.9	
0	Normal Voltage	2	
-10	Normal Voltage	2.9	
-20	Normal Voltage	2.3	
-30	Normal Voltage	2.7	
20	Maximum Voltage	3.4	
20	Normal Voltage	2.1	
20	Battery End Point	3.5	

Note:

1. Normal Voltage = 3.7 V. ; Battery End Point (BEP) = 3.4 V. ; Maximum Voltage = 4.9 V.
2. The frequency fundamental emissions stay within the authorized frequency block.

$$|\text{MAX}(\Delta f)| = 4.2\text{Hz}$$

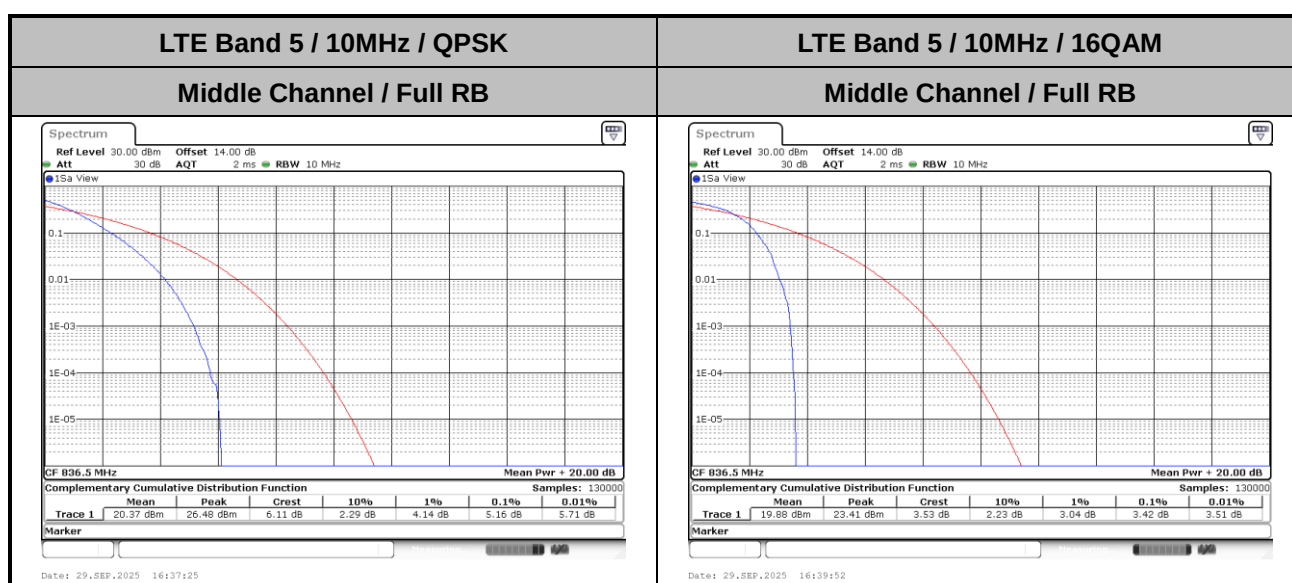
Frequency Stability	Frequency (MHz)	Limit Line	Result
$f_L - \text{MAX}(\Delta f) $	1710.014891	$\geq 1710 \text{ MHz}$	PASS
$f_H + \text{MAX}(\Delta f) $	1754.848254	$\leq 1755 \text{ MHz}$	



LTE Band 5

Peak-to-Average Ratio

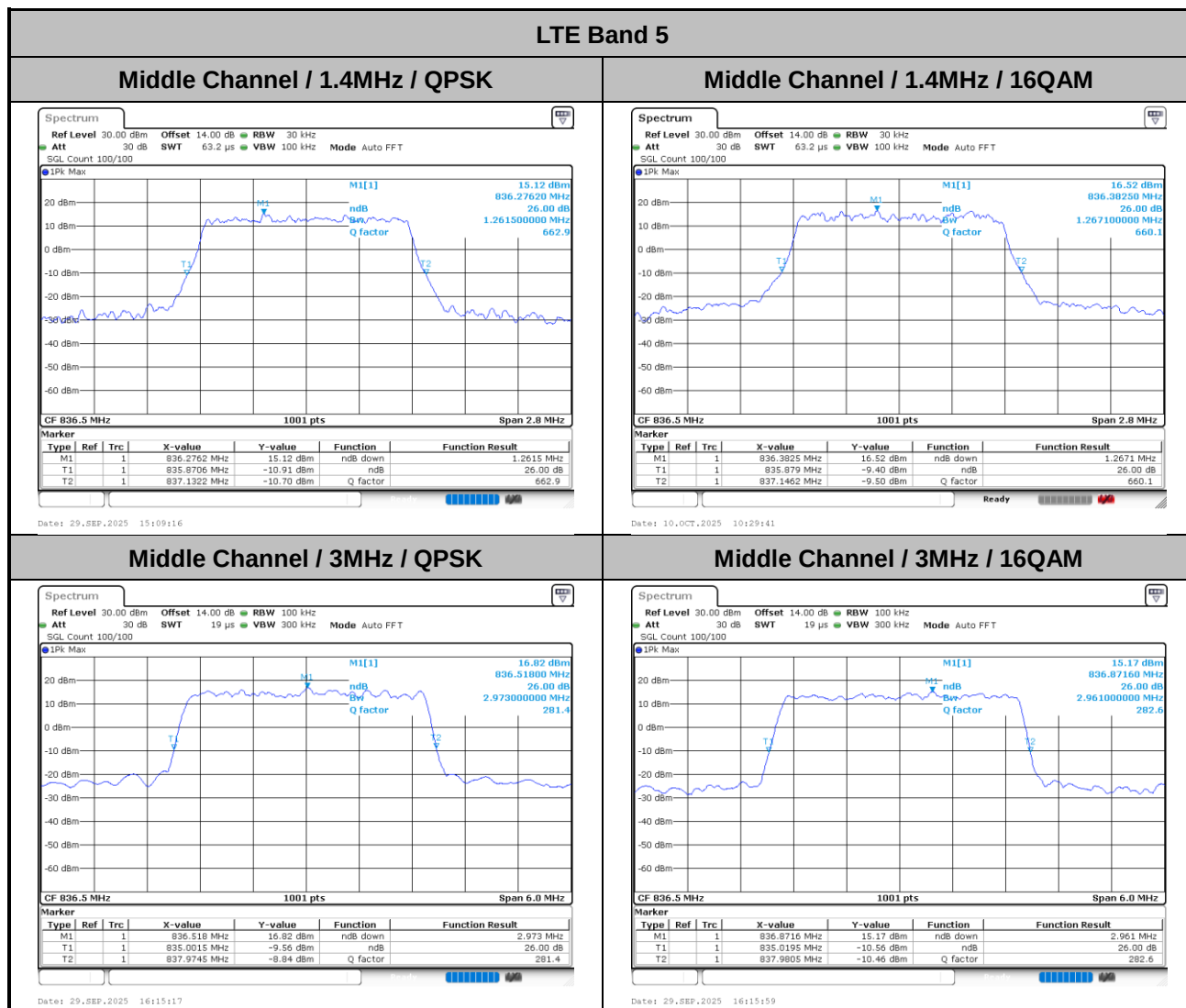
Mode	LTE Band 5 / 10MHz		
Mod.	QPSK	16QAM	Limit: 13dB
RB Size	Full RB	Full RB	Result
Middle CH	5.16	3.42	PASS





26dB Bandwidth

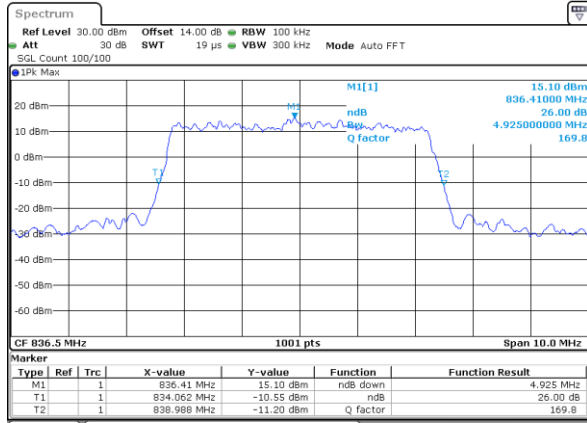
Mode	LTE Band 5 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	1.26	1.27	2.97	2.96	4.93	4.88	9.69	5.69	-	-	-	-





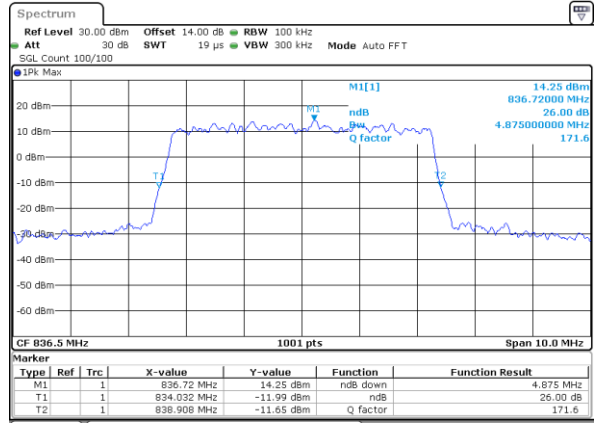
LTE Band 5

Middle Channel / 5MHz / QPSK



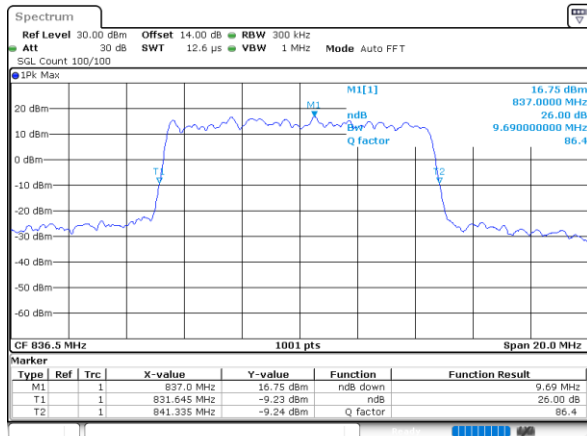
Date: 29,SEP,2025 16:26:36

Middle Channel / 5MHz / 16QAM



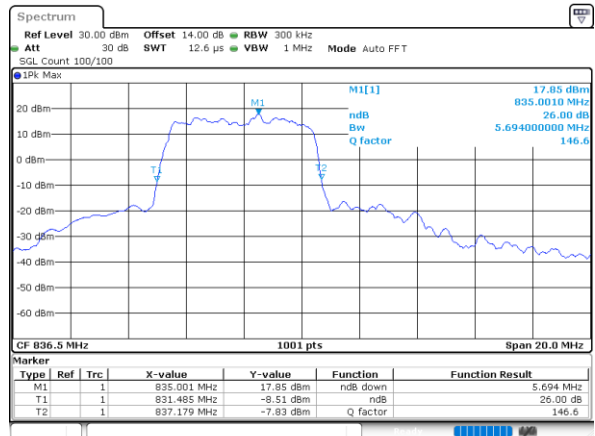
Date: 29,SEP,2025 16:27:19

Middle Channel / 10MHz / QPSK



Date: 29,SEP,2025 16:37:10

Middle Channel / 10MHz / 16QAM

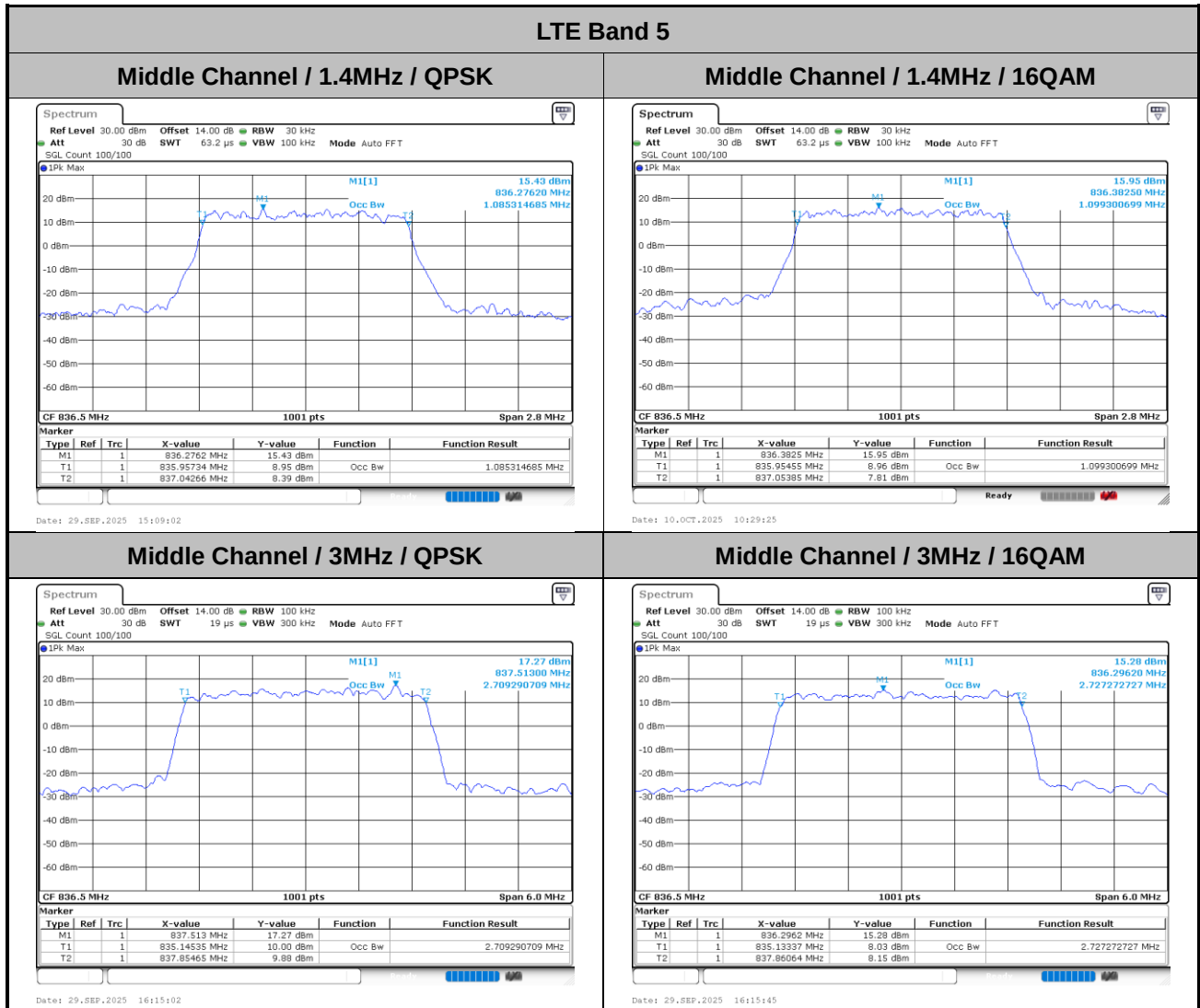


Date: 9,OCT,2025 09:46:23



Occupied Bandwidth

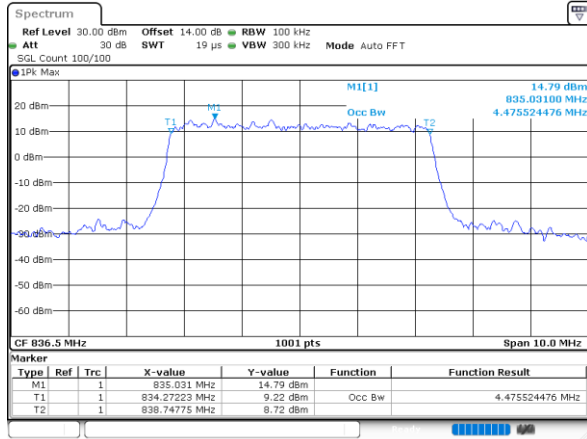
Mode	LTE Band 5 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	1.09	1.10	2.71	2.73	4.48	4.49	8.97	5.00	-	-	-	-



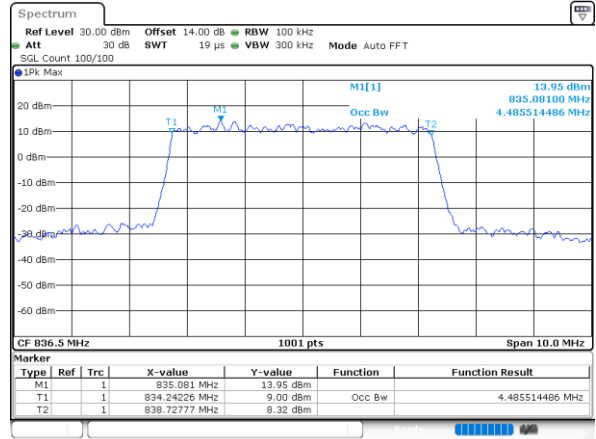


LTE Band 5

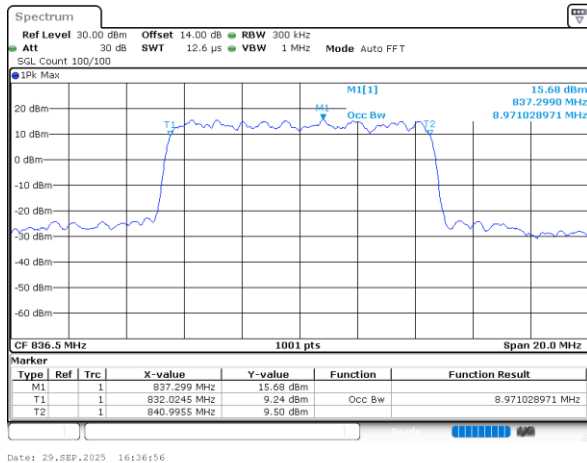
Middle Channel / 5MHz / QPSK



Middle Channel / 5MHz / 16QAM



Middle Channel / 10MHz / QPSK



Middle Channel / 10MHz / 16QAM

