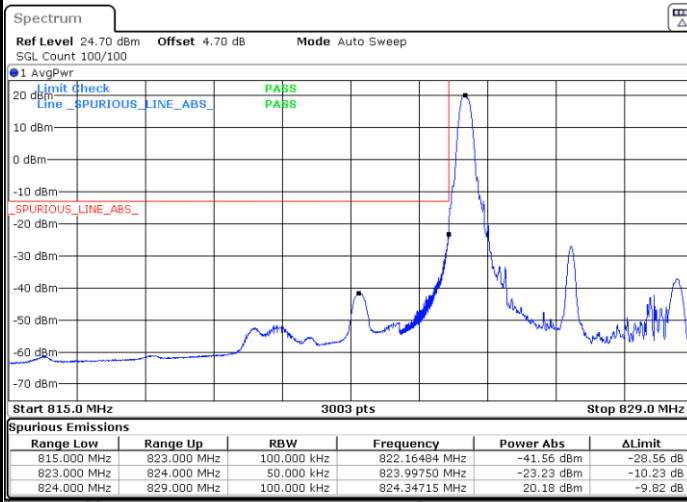




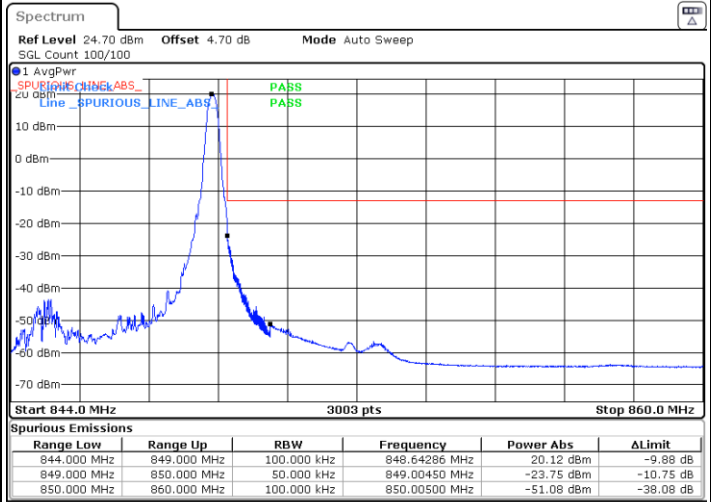
LTE Band 5 / 5MHz / 16QAM

Lowest Band Edge / 1RB



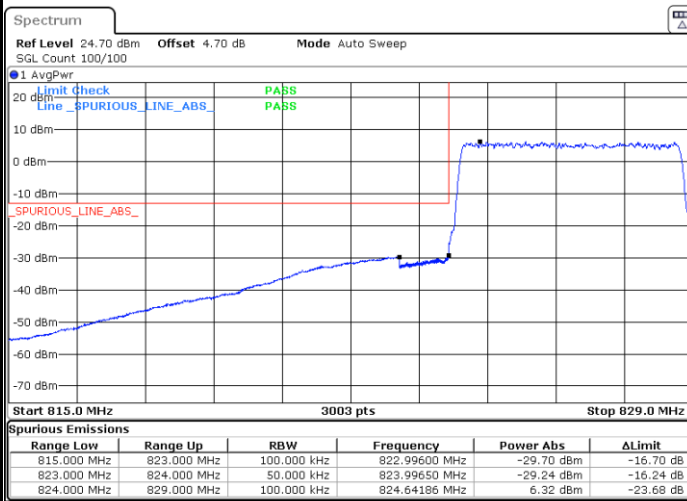
Date: 17.DEC.2021 14:42:18

Highest Band Edge / 1 RB



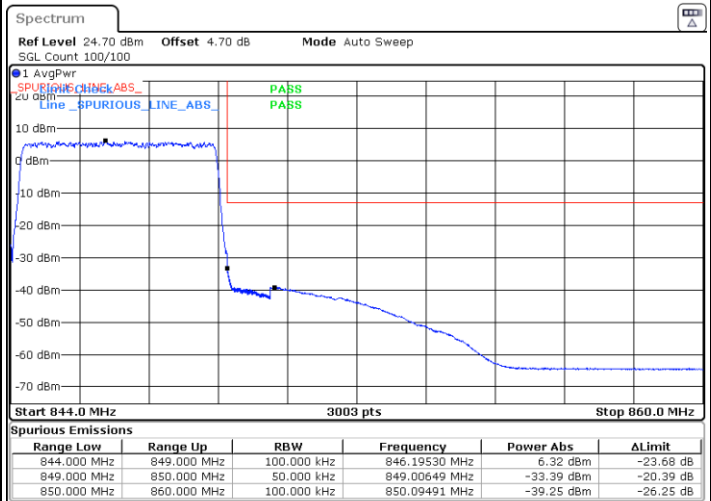
Date: 17.DEC.2021 14:55:30

Lowest Band Edge / Full RB



Date: 17.DEC.2021 14:48:00

Highest Band Edge / Full RB

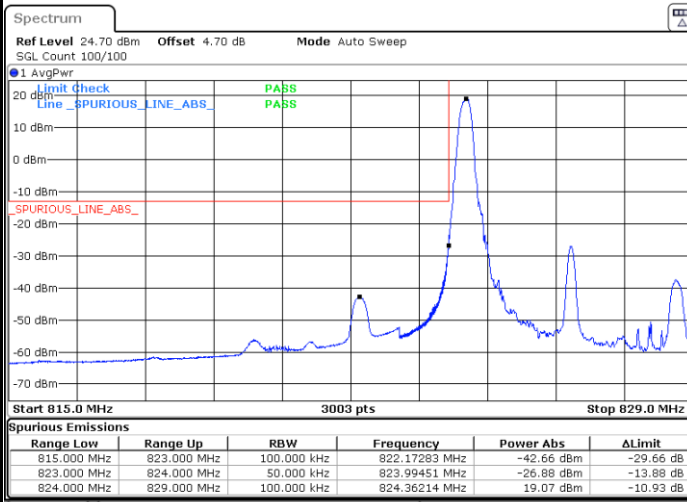


Date: 17.DEC.2021 15:01:11



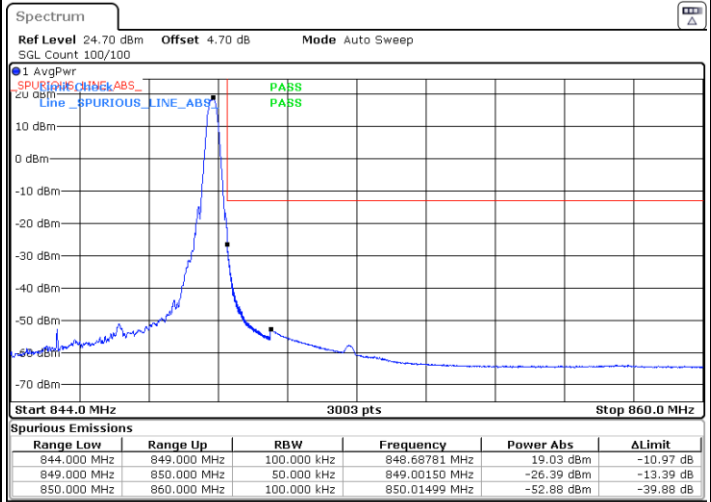
LTE Band 5 / 5MHz / 64QAM

Lowest Band Edge / 1RB



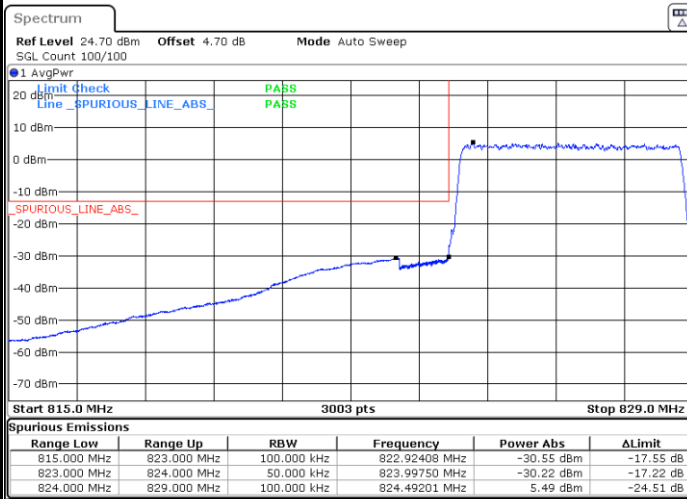
Date: 17.DEC.2021 14:44:12

Highest Band Edge / 1 RB



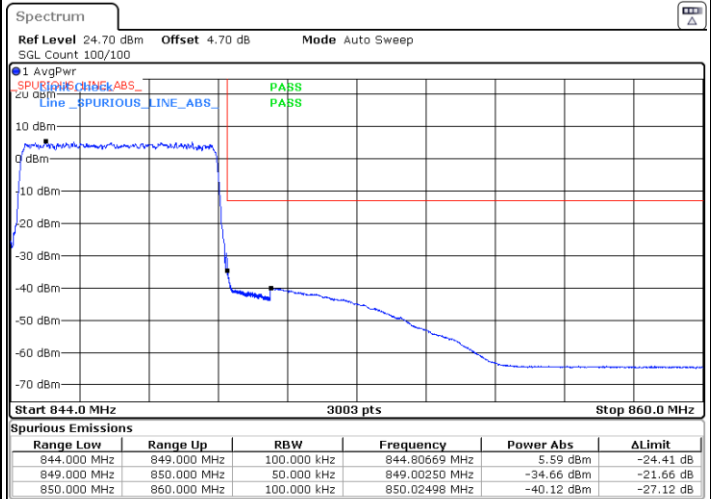
Date: 17.DEC.2021 14:57:24

Lowest Band Edge / Full RB



Date: 17.DEC.2021 14:46:06

Highest Band Edge / Full RB

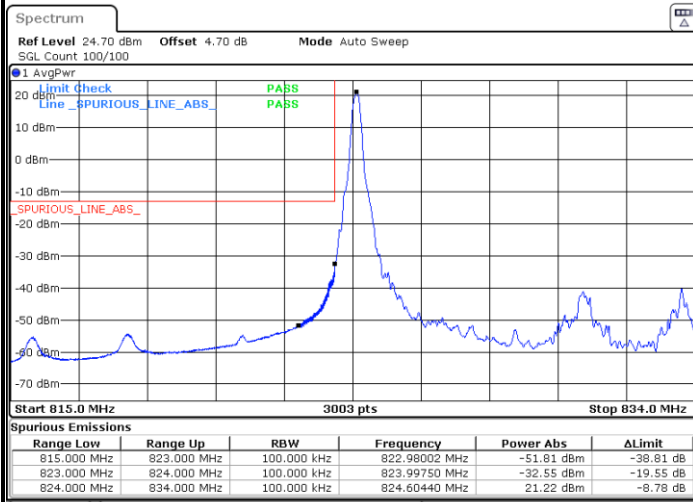


Date: 17.DEC.2021 14:58:18



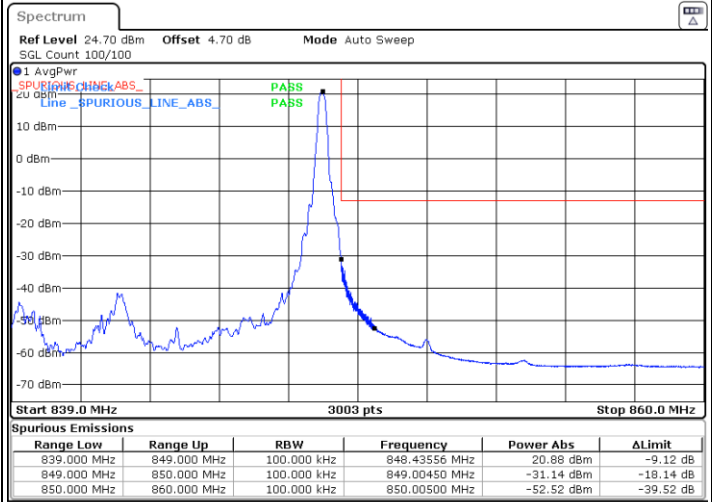
LTE Band 5 / 10MHz / QPSK

Lowest Band Edge / 1 RB



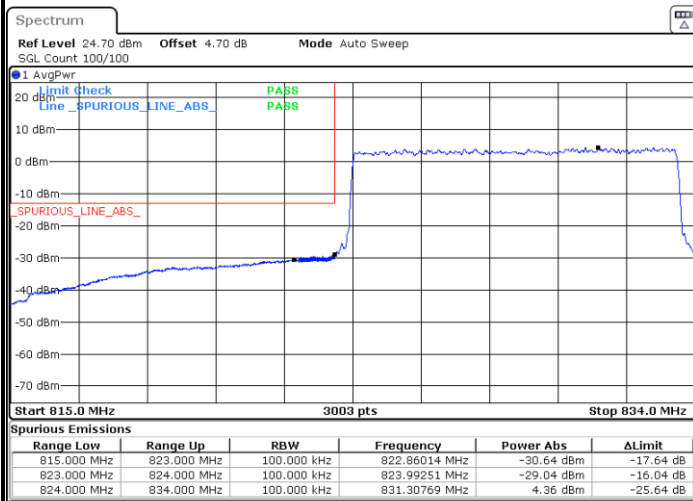
Date: 17.DEC.2021 15:05:45

Highest Band Edge / 1 RB



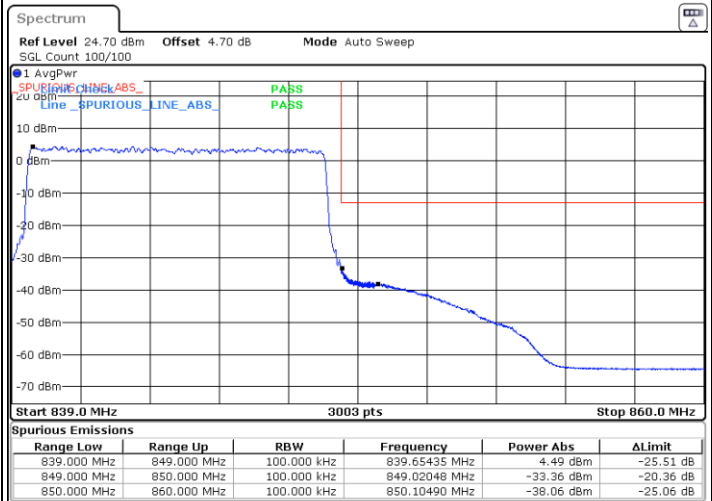
Date: 17.DEC.2021 15:18:56

Lowest Band Edge / Full RB



Date: 17.DEC.2021 15:15:14

Highest Band Edge / Full RB

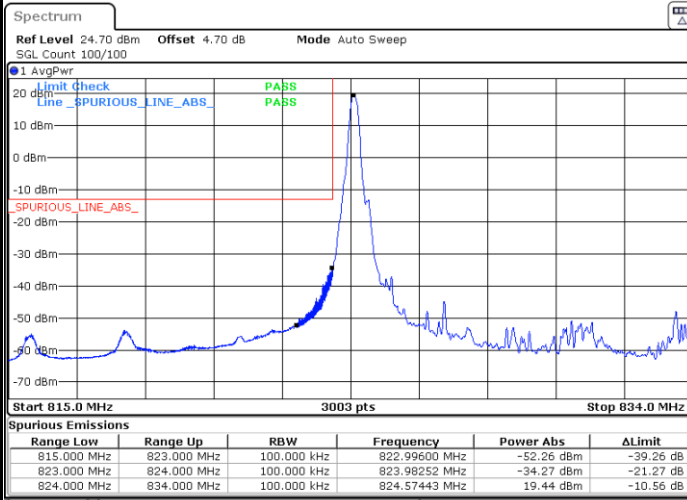


Date: 17.DEC.2021 15:28:25

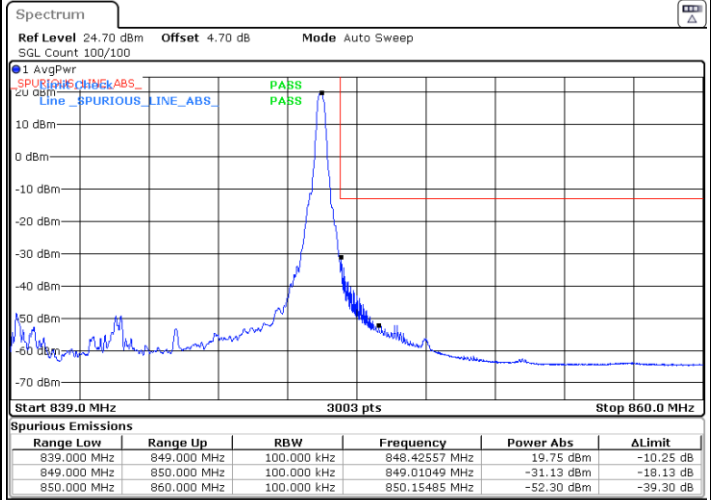


LTE Band 5 / 10MHz / 16QAM

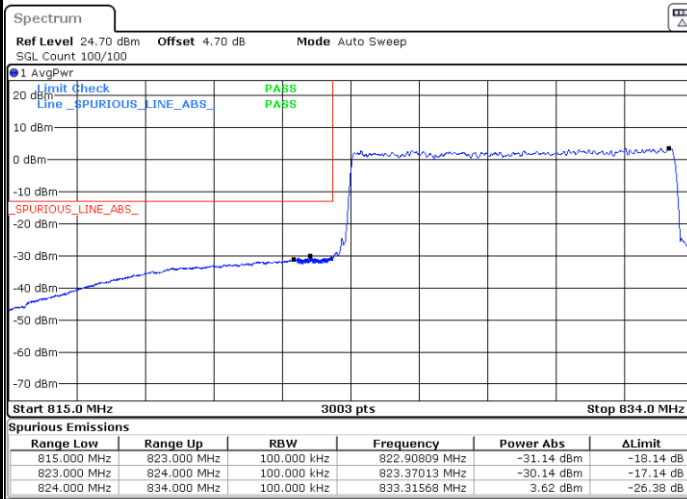
Lowest Band Edge / 1 RB



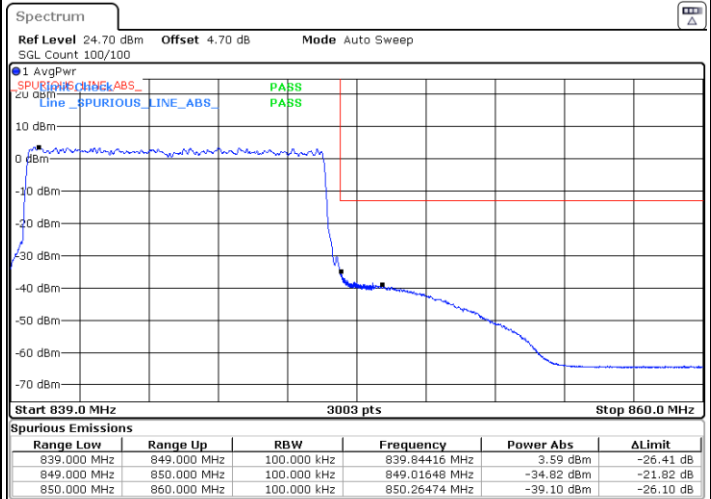
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



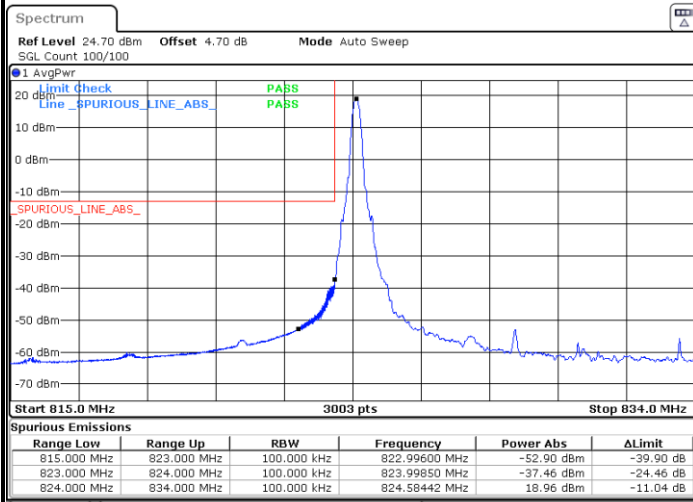
Highest Band Edge / Full RB





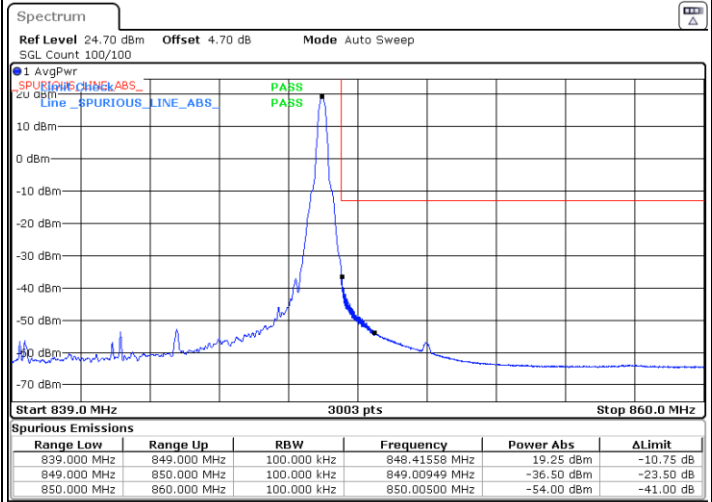
LTE Band 5 / 10MHz / 64QAM

Lowest Band Edge / 1 RB



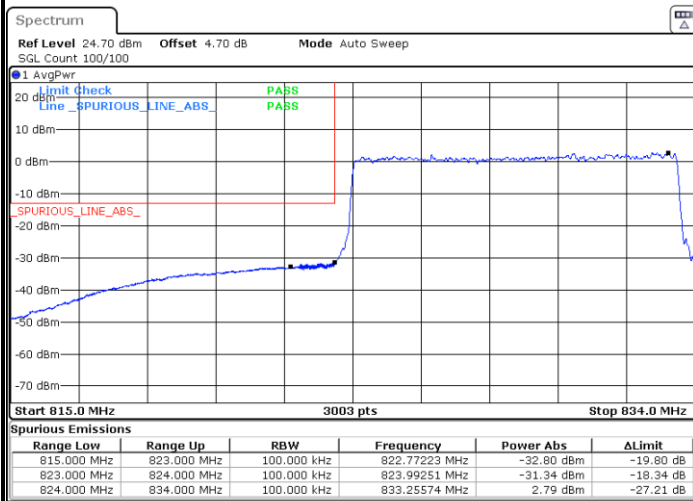
Date: 17.DEC.2021 15:09:32

Highest Band Edge / 1 RB



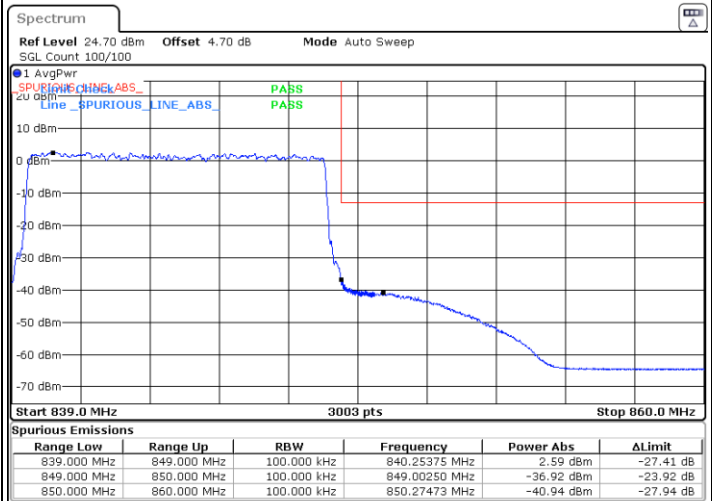
Date: 17.DEC.2021 15:22:44

Lowest Band Edge / Full RB



Date: 17.DEC.2021 15:11:26

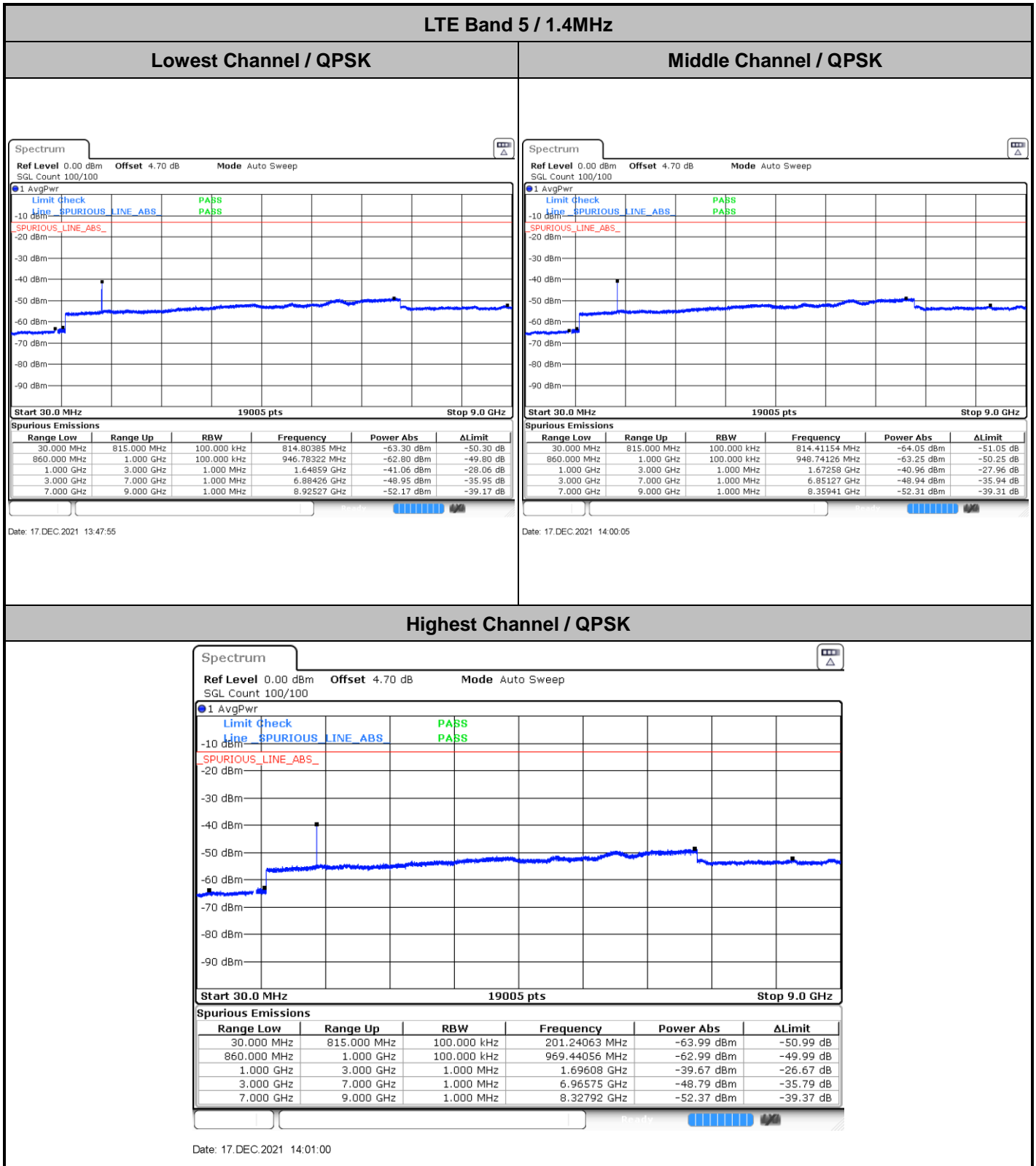
Highest Band Edge / Full RB



Date: 17.DEC.2021 15:24:38



# Conducted Spurious Emission

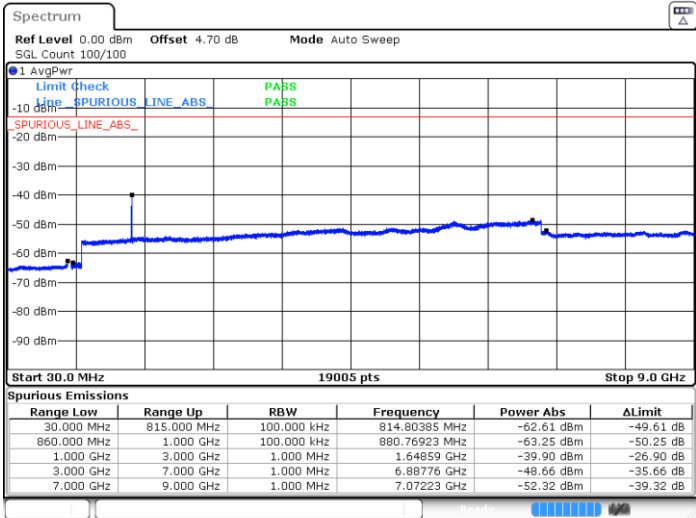




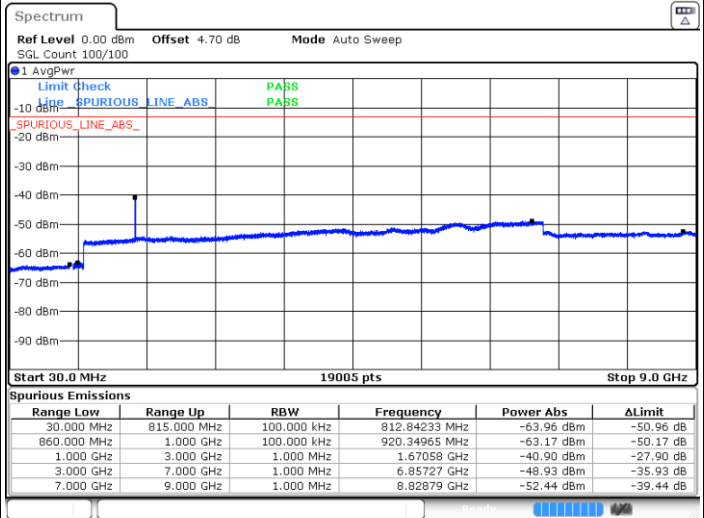
LTE Band 5 / 3MHz

Lowest Channel / QPSK

Middle Channel / QPSK

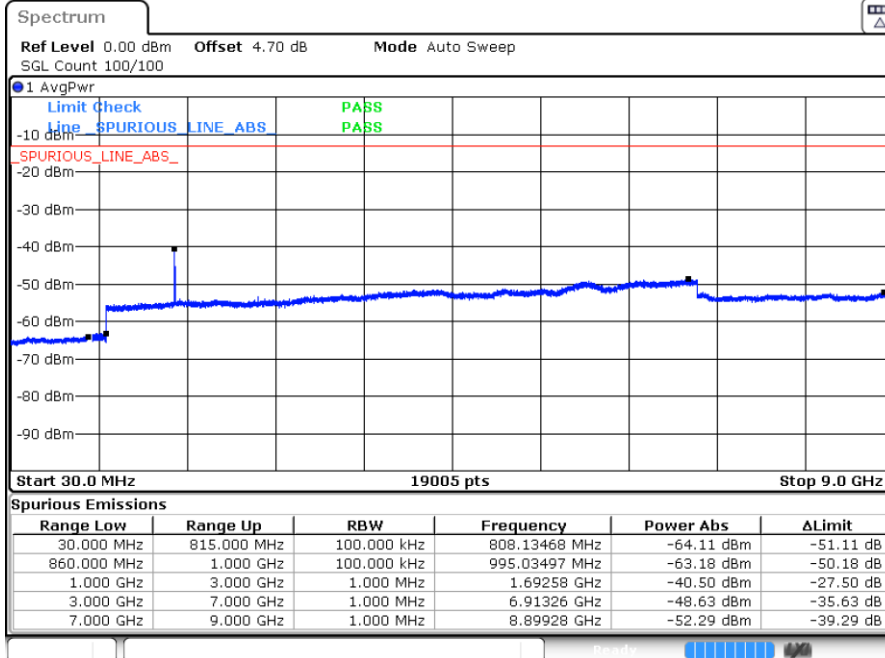


Date: 17.DEC.2021 14:13:18



Date: 17.DEC.2021 14:25:26

Highest Channel / QPSK



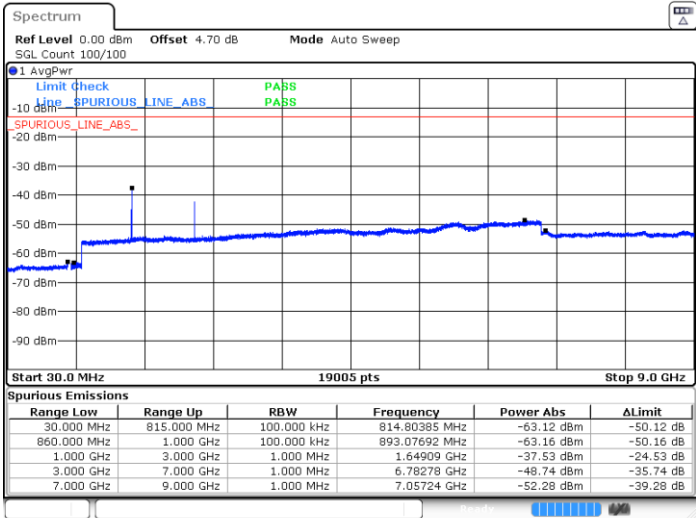
Date: 17.DEC.2021 14:26:20



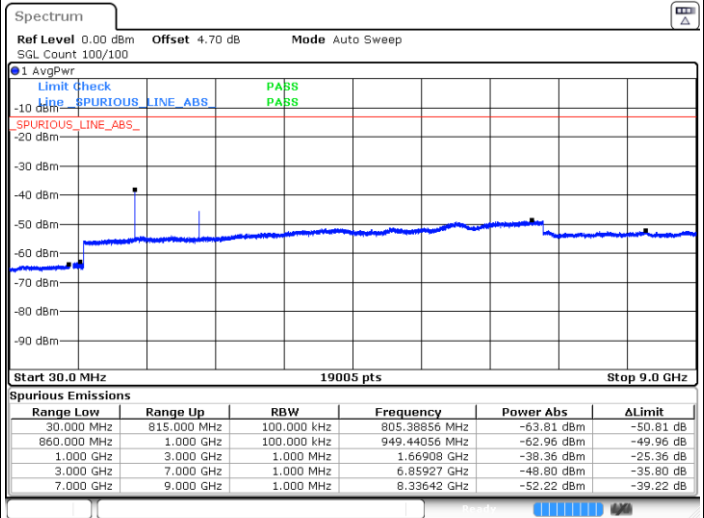
LTE Band 5 / 5MHz

Lowest Channel / QPSK

Middle Channel / QPSK

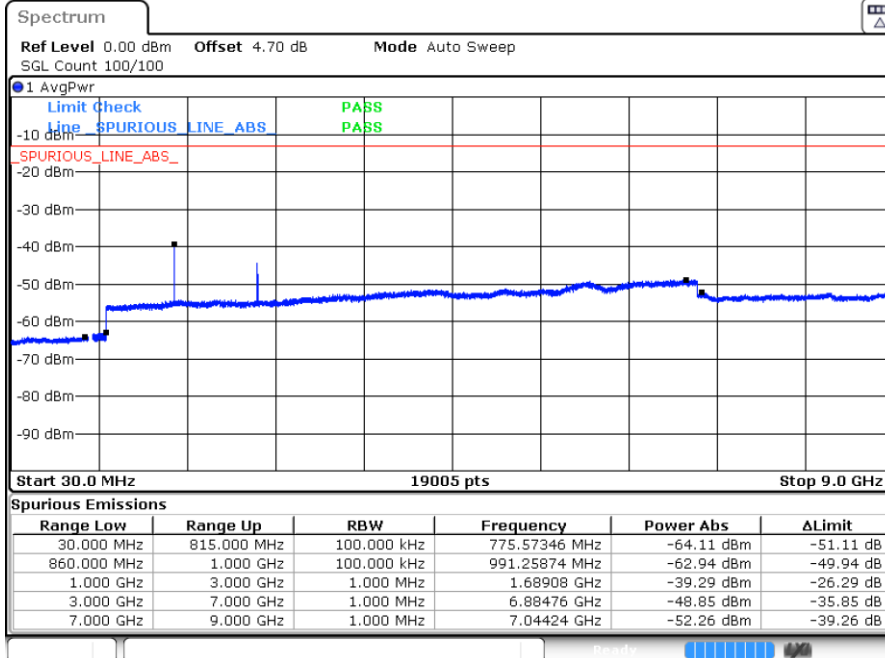


Date: 17.DEC.2021 14:38:40



Date: 17.DEC.2021 14:50:48

Highest Channel / QPSK



Date: 17.DEC.2021 14:51:42

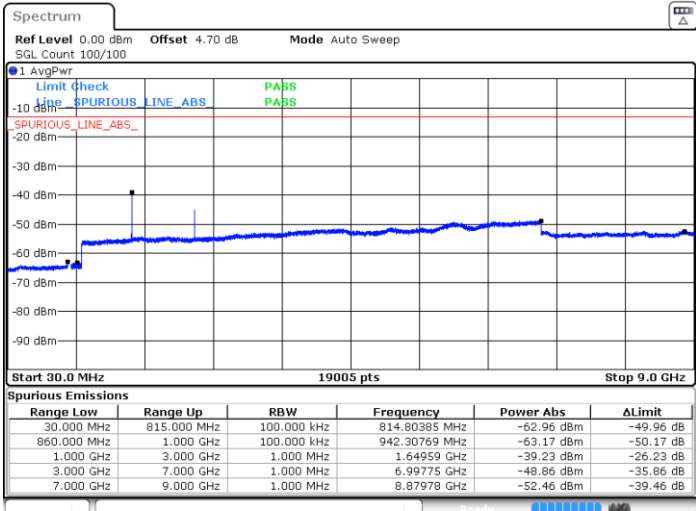




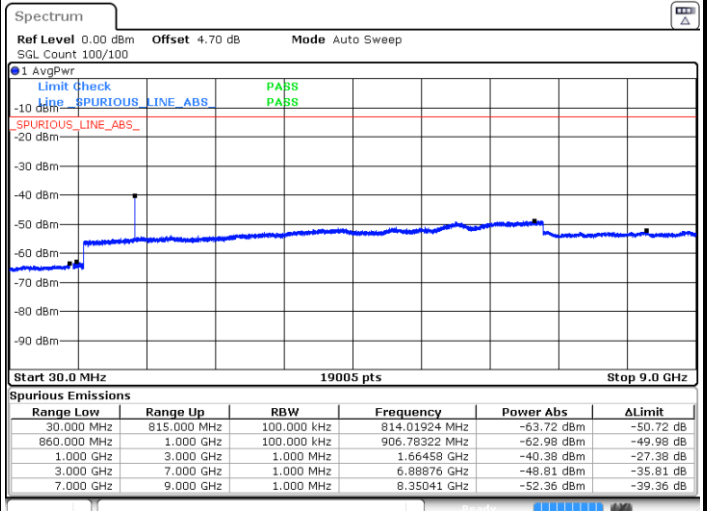
LTE Band 5 / 10MHz

Lowest Channel / QPSK

Middle Channel / QPSK

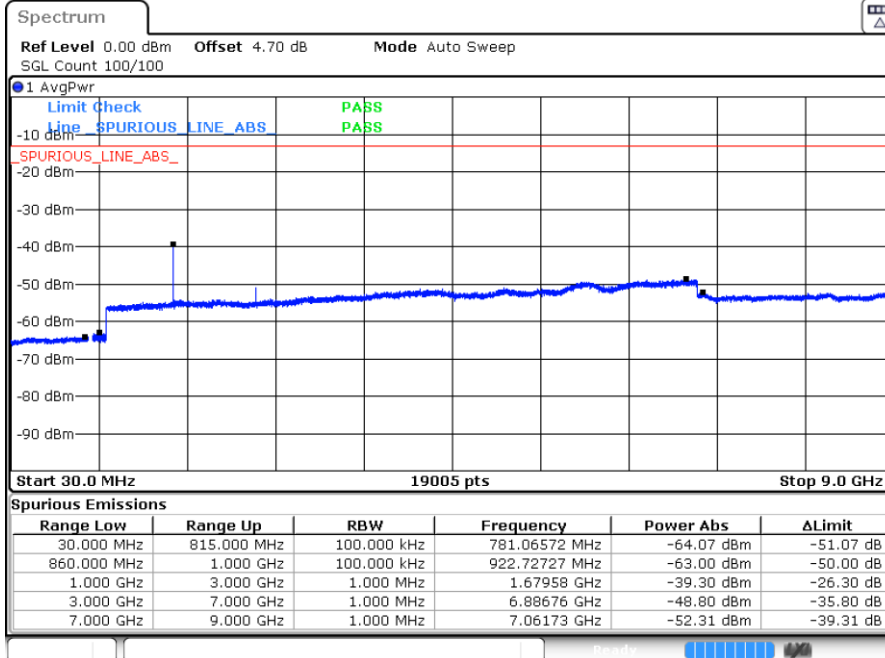


Date: 17.DEC.2021 15:04:01



Date: 17.DEC.2021 15:16:08

Highest Channel / QPSK



Date: 17.DEC.2021 15:17:02



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	0.0009	PASS
40	Normal Voltage	0.0015	
30	Normal Voltage	0.0050	
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	0.0051	
20	Normal Voltage	0.0061	
20	Battery End Point	0.0017	

Note:

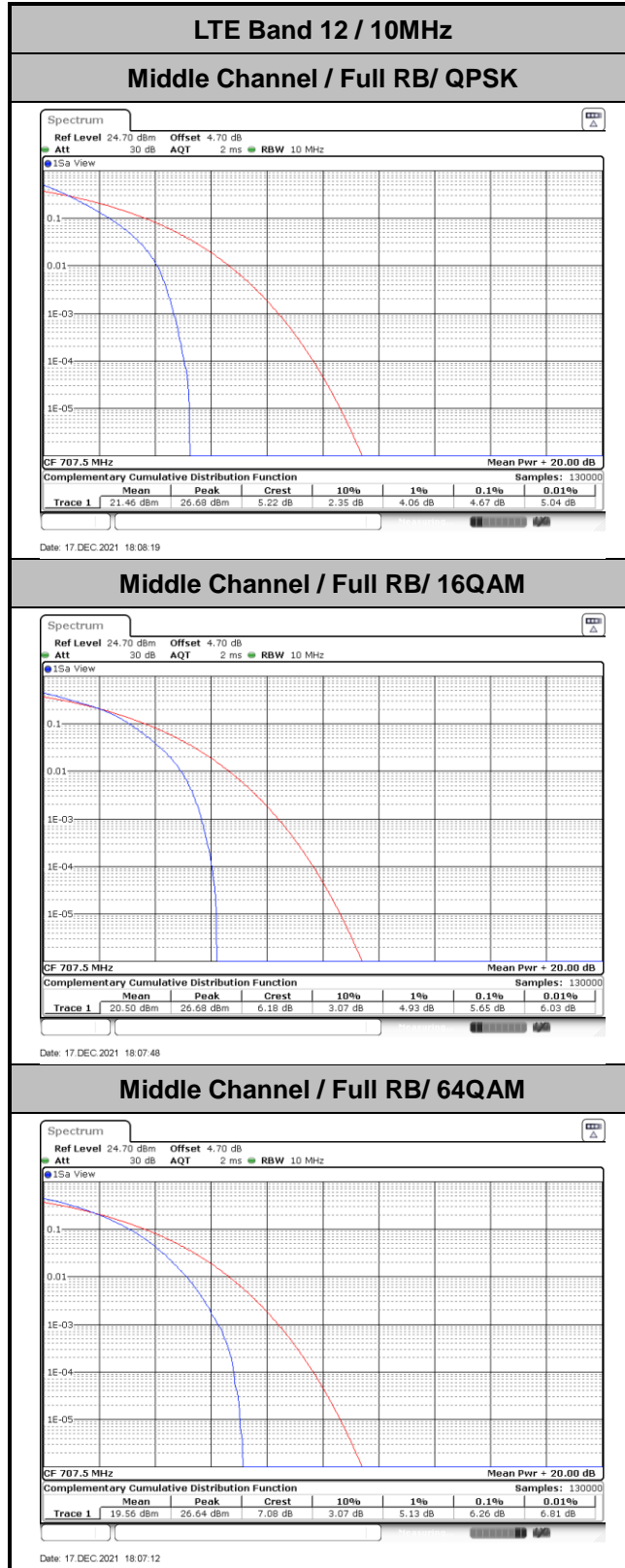
1. Normal Voltage =3.89 V. ; Battery End Point (BEP) =3.4 V. ; Maximum Voltage =4.48 V.



## LTE Band 12

### Peak-to-Average Ratio

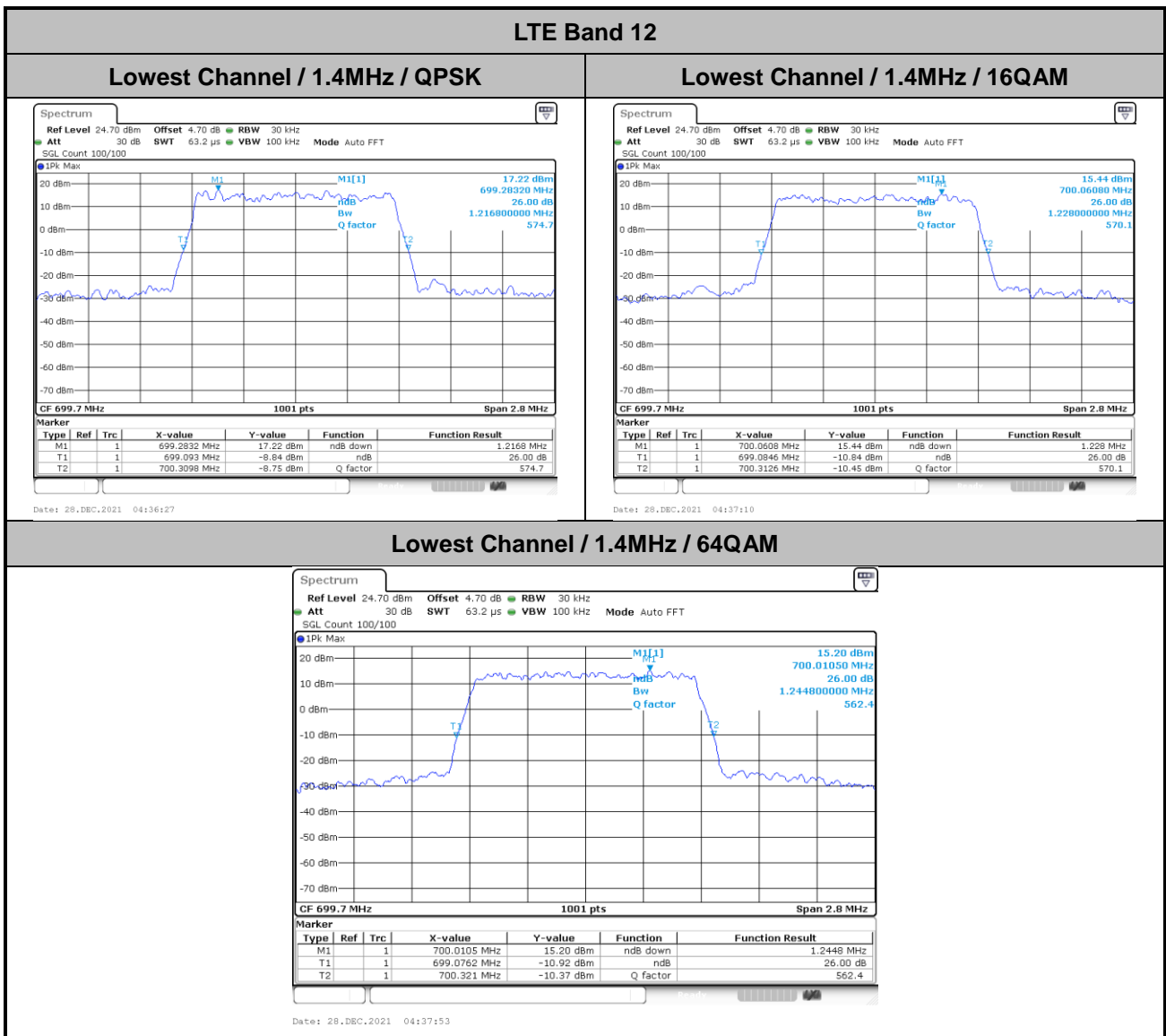
Mode	LTE Band 12 / 10MHz			
Mod.	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Result
Middle CH	4.67	5.65	6.26	<b>PASS</b>





**26dB Bandwidth**

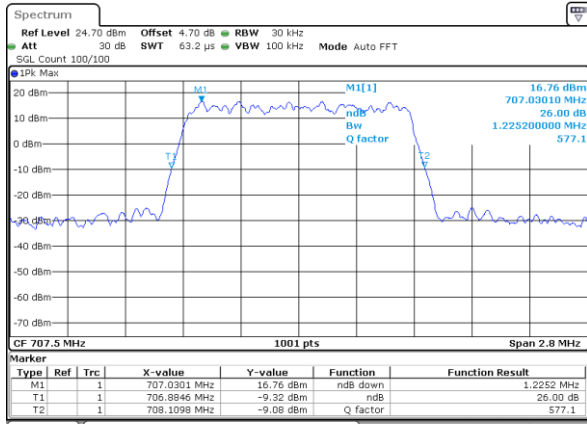
Mode	LTE Band 12 : 26dB BW(MHz)		
BW	1.4 MHz		
Mod.	QPSK	16QAM	64QAM
Lowest CH	1.22	1.23	1.24
Middle CH	1.23	1.23	1.22
Highest CH	1.24	1.23	1.22





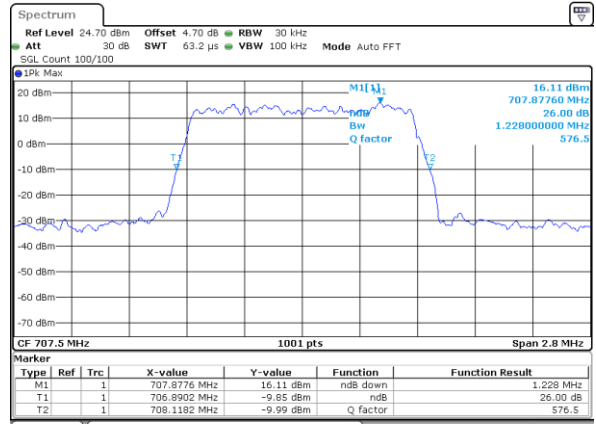
LTE Band 12

Middle Channel / 1.4MHz / QPSK



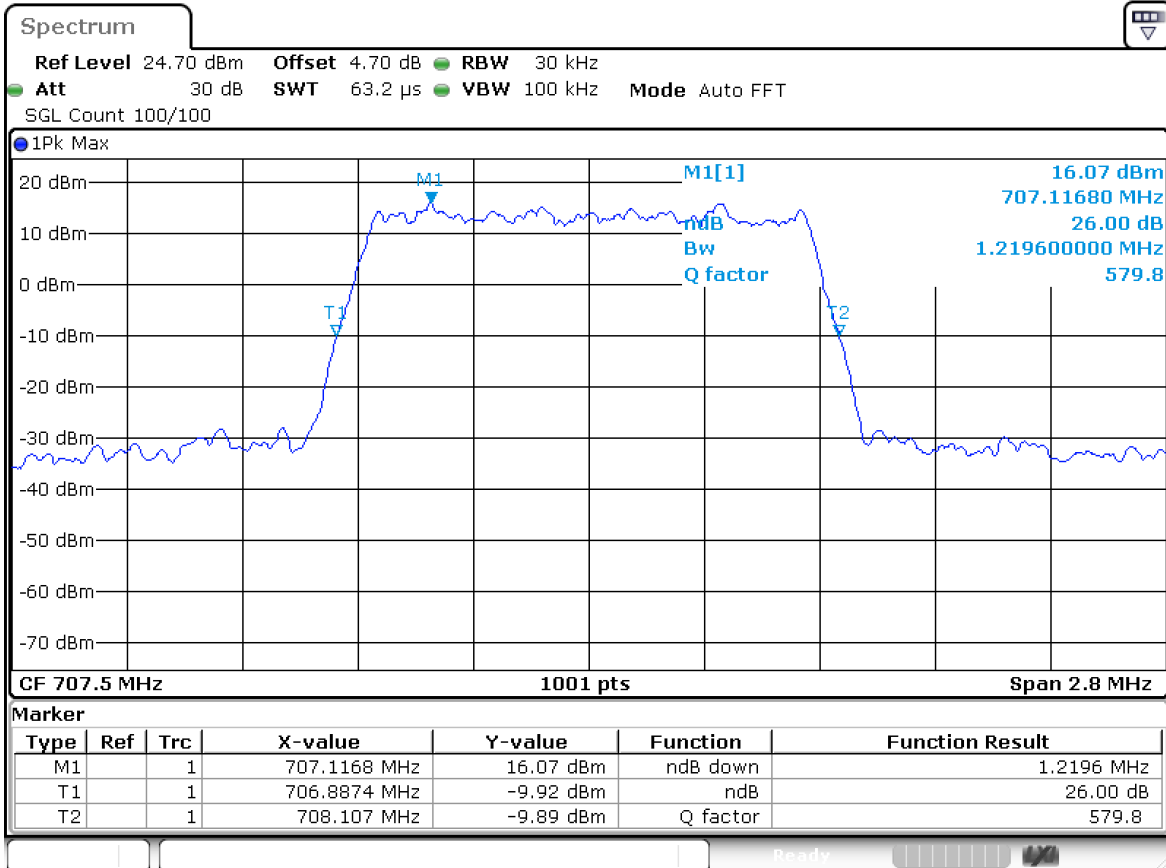
Date: 28.DEC.2021 04:38:35

Middle Channel / 1.4MHz / 16QAM



Date: 28.DEC.2021 04:39:17

Middle Channel / 1.4MHz / 64QAM

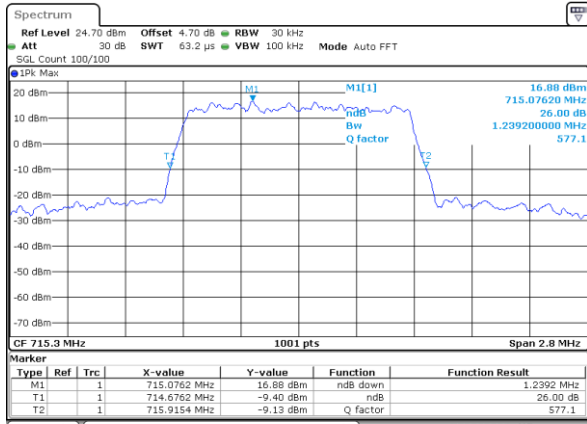


Date: 28.DEC.2021 04:39:59



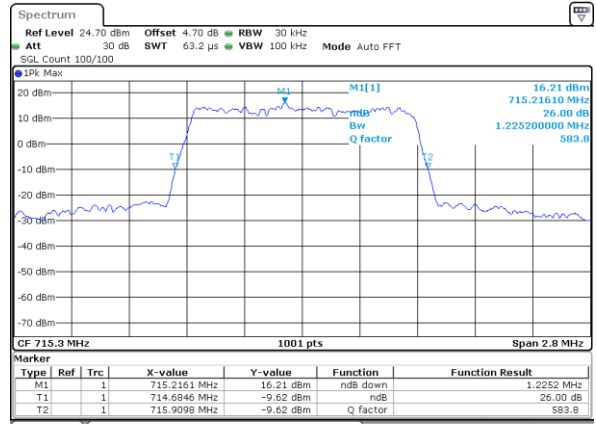
LTE Band 12

Highest Channel / 1.4MHz / QPSK



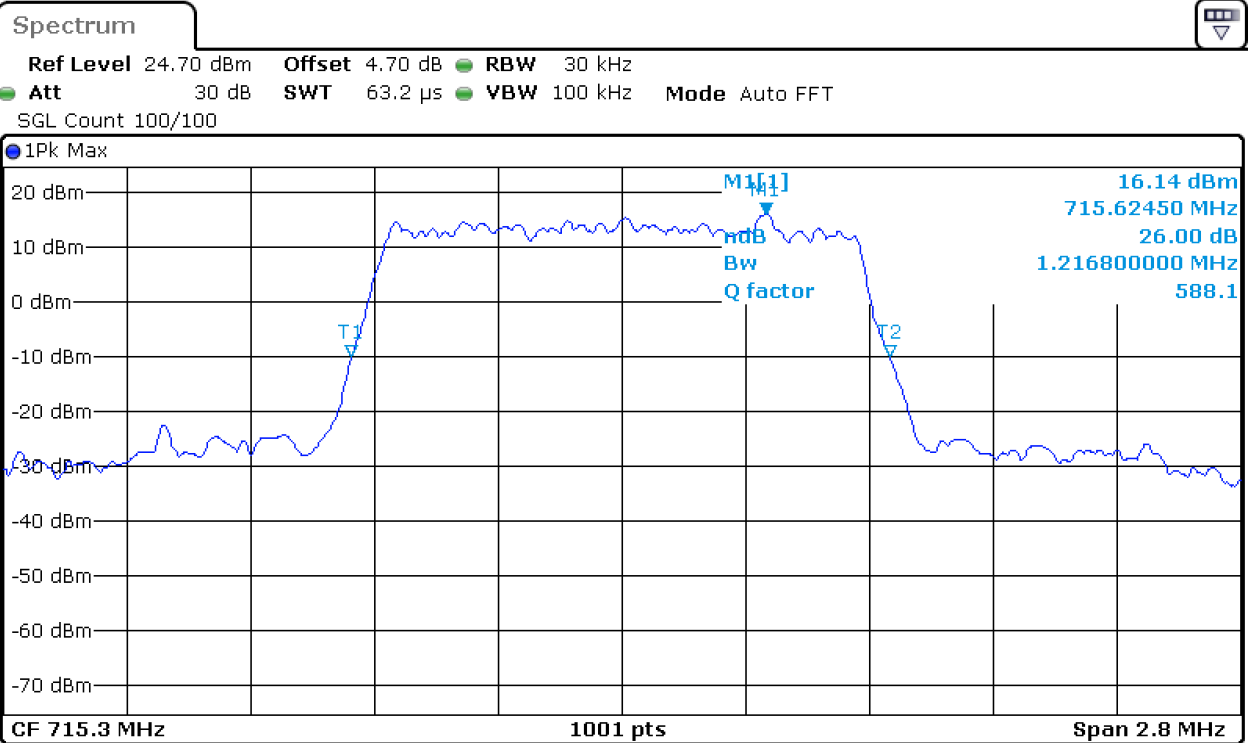
Date: 28.DEC.2021 04:40:41

Highest Channel / 1.4MHz / 16QAM



Date: 28.DEC.2021 04:41:23

Highest Channel / 1.4MHz / 64QAM

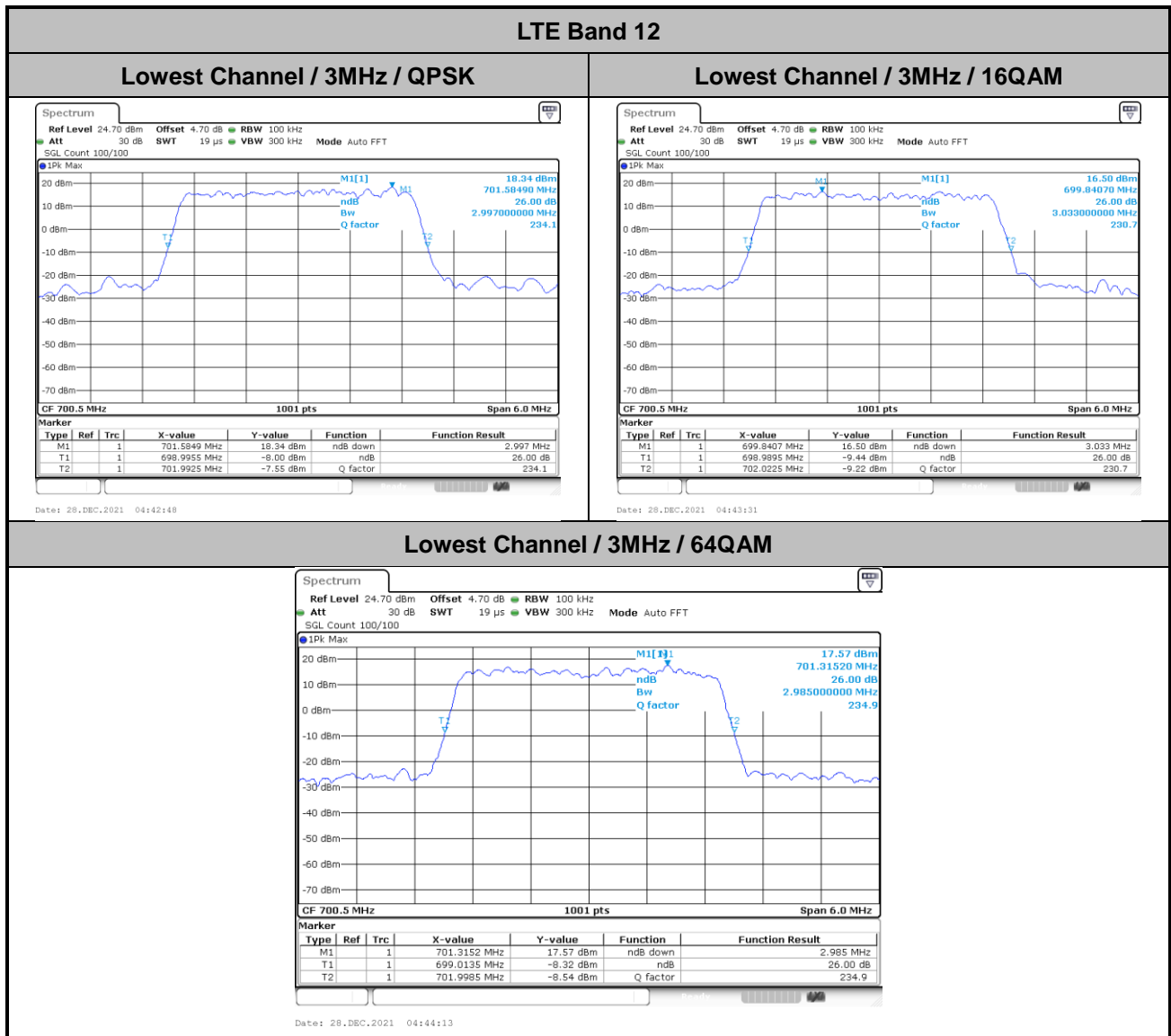


Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1	1		715.6245 MHz	16.14 dBm	ndB down	1.2168 MHz
T1	1		714.6874 MHz	-9.95 dBm	ndB	26.00 dB
T2	1		715.9042 MHz	-9.76 dBm	Q factor	588.1

Date: 28.DEC.2021 04:42:05



Mode	LTE Band 12 : 26dB BW(MHz)		
BW	3 MHz		
Mod.	QPSK	16QAM	64QAM
Lowest CH	3.00	3.03	2.99
Middle CH	3.02	3.03	3.03
Highest CH	3.04	3.03	3.02

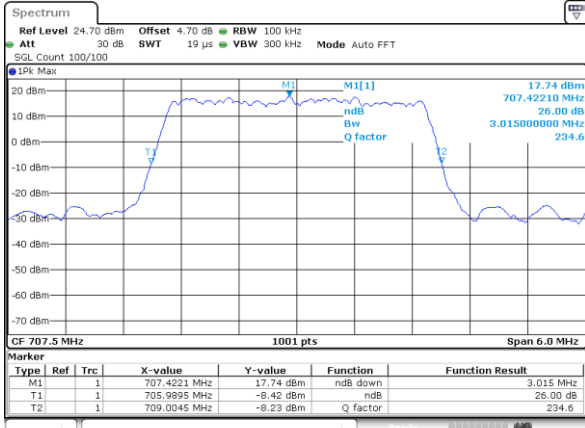






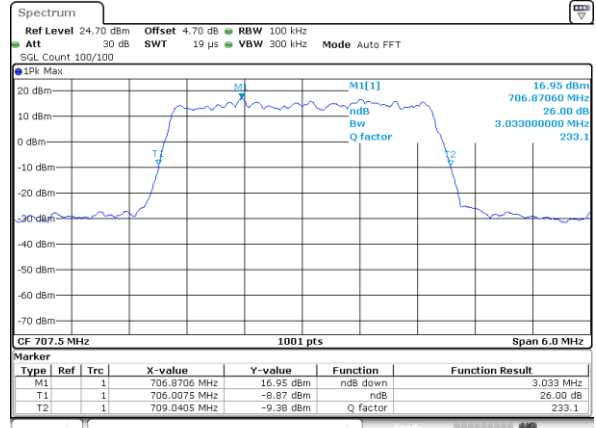
LTE Band 12

Middle Channel / 3MHz / QPSK



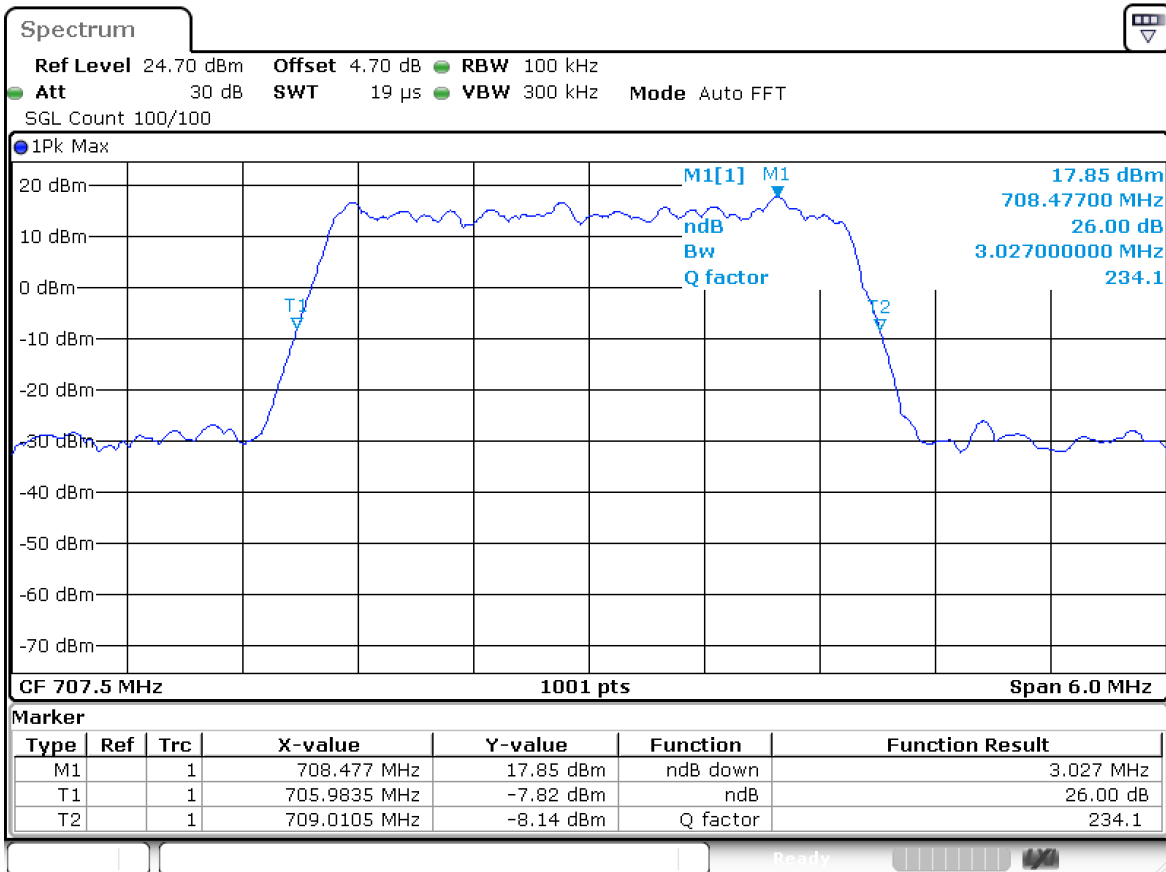
Date: 28.DEC.2021 04:44:55

Middle Channel / 3MHz / 16QAM



Date: 28.DEC.2021 04:45:37

Middle Channel / 3MHz / 64QAM

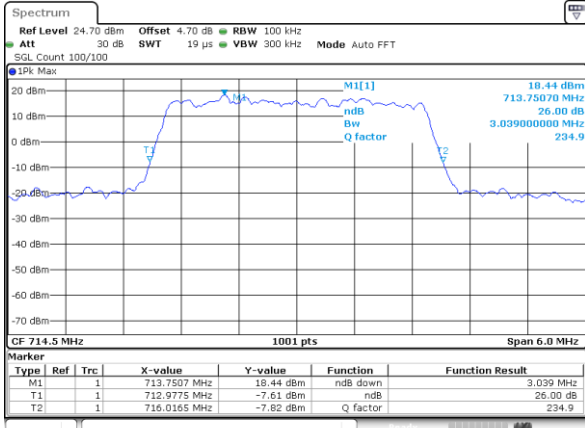


Date: 28.DEC.2021 04:46:19



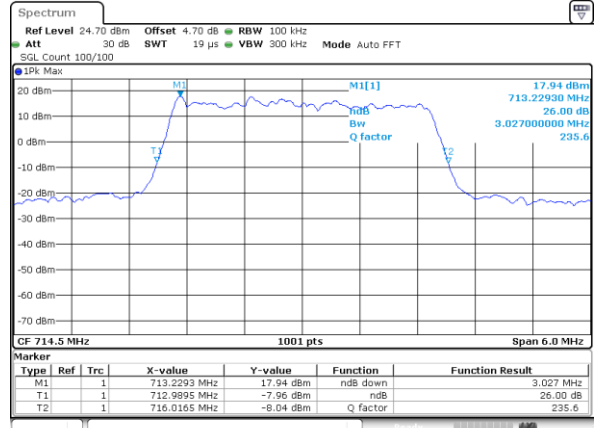
LTE Band 12

Highest Channel / 3MHz / QPSK



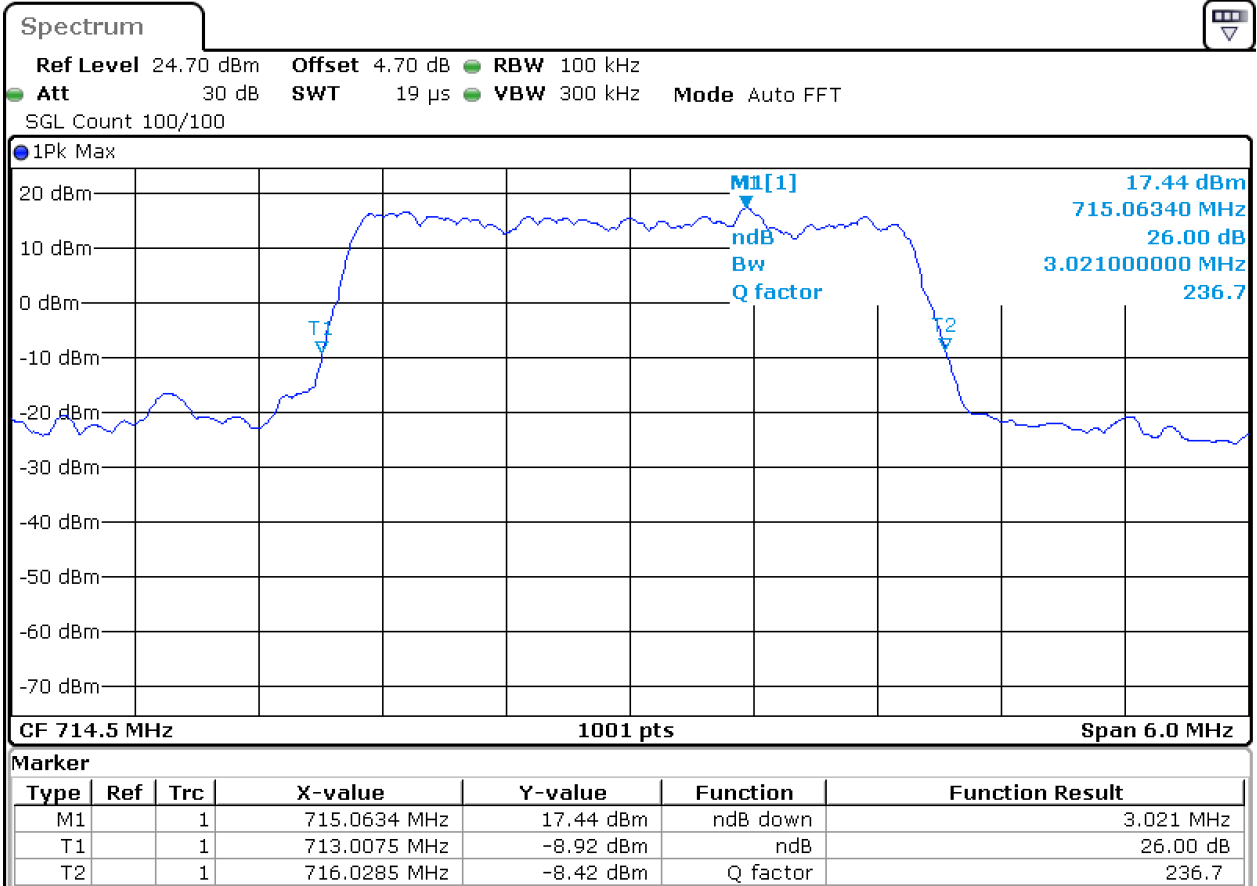
Date: 28.DEC.2021 04:47:01

Highest Channel / 3MHz / 16QAM



Date: 28.DEC.2021 04:47:44

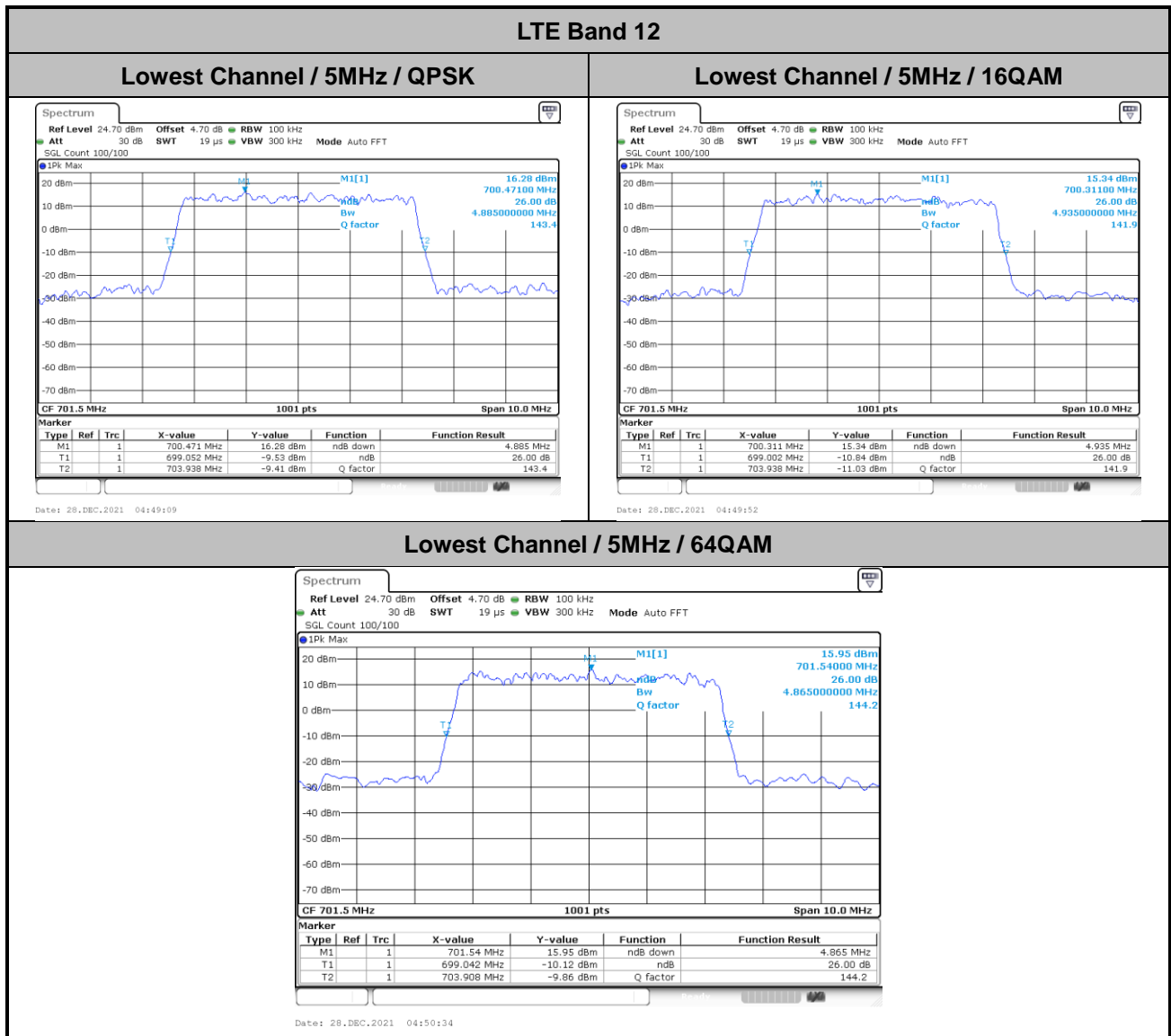
Highest Channel / 3MHz / 64QAM



Date: 28.DEC.2021 04:48:26



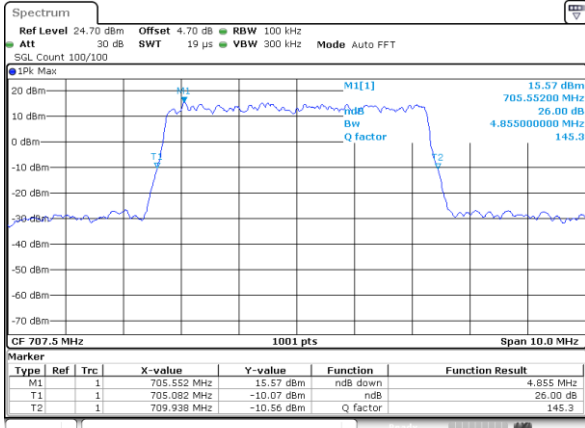
Mode	LTE Band 12 : 26dB BW(MHz)		
BW	5 MHz		
Mod.	QPSK	16QAM	64QAM
Lowest CH	4.89	4.94	4.87
Middle CH	4.86	4.90	4.88
Highest CH	4.93	4.87	4.90





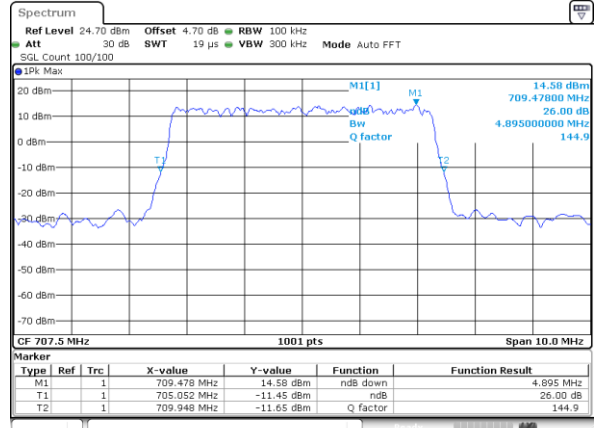
LTE Band 12

Middle Channel / 5MHz / QPSK



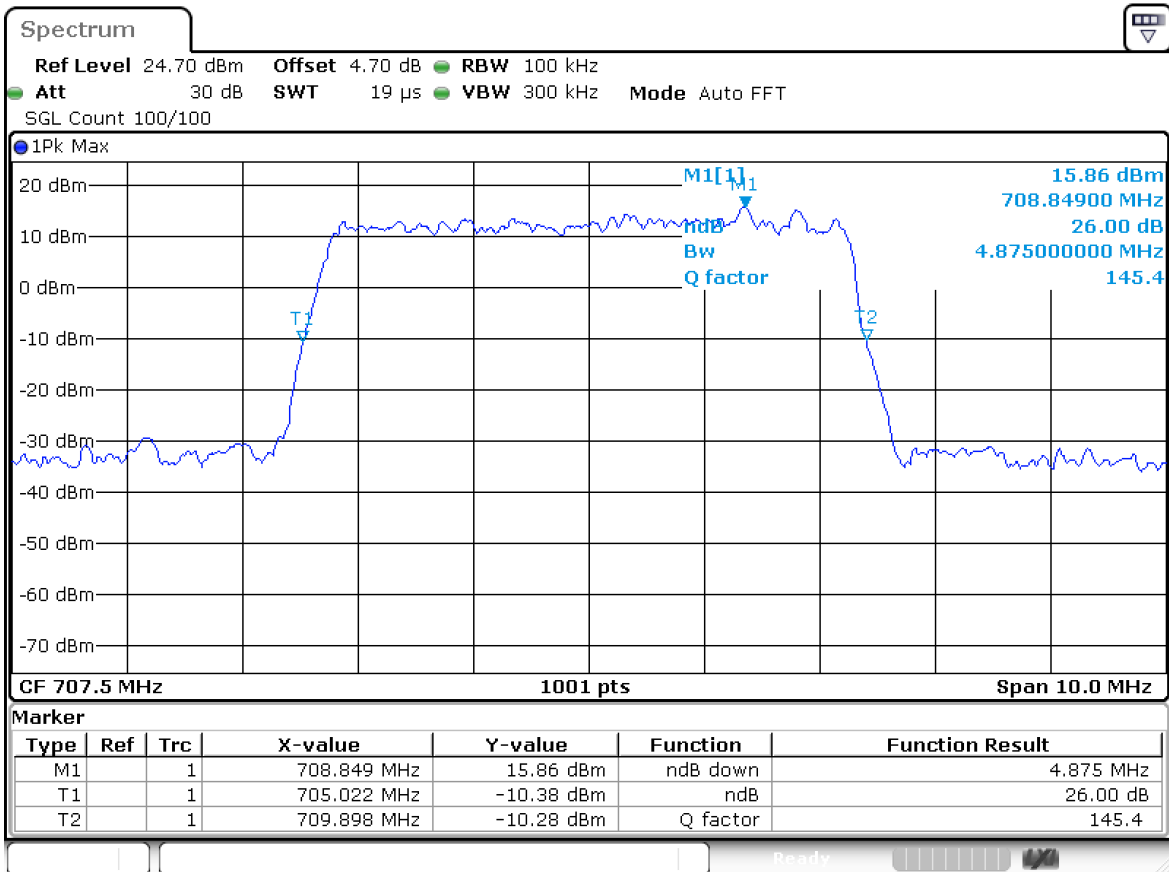
Date: 28.DEC.2021 04:51:16

Middle Channel / 5MHz / 16QAM



Date: 28.DEC.2021 04:51:58

Middle Channel / 5MHz / 64QAM

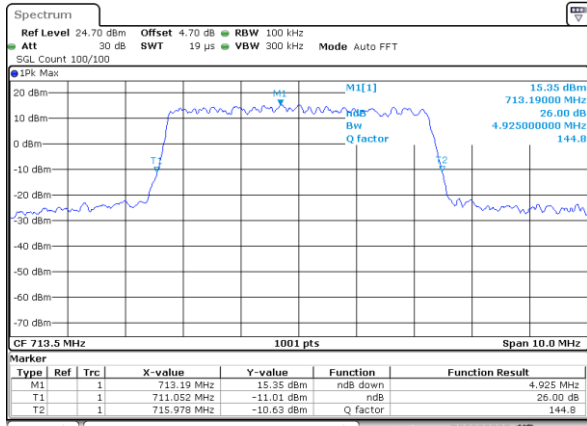


Date: 28.DEC.2021 04:52:39



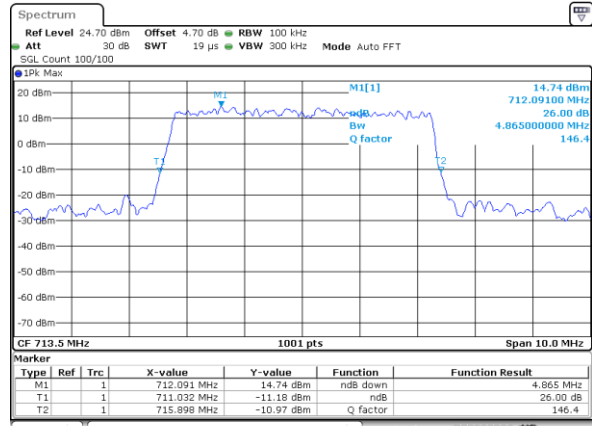
LTE Band 12

Highest Channel / 5MHz / QPSK



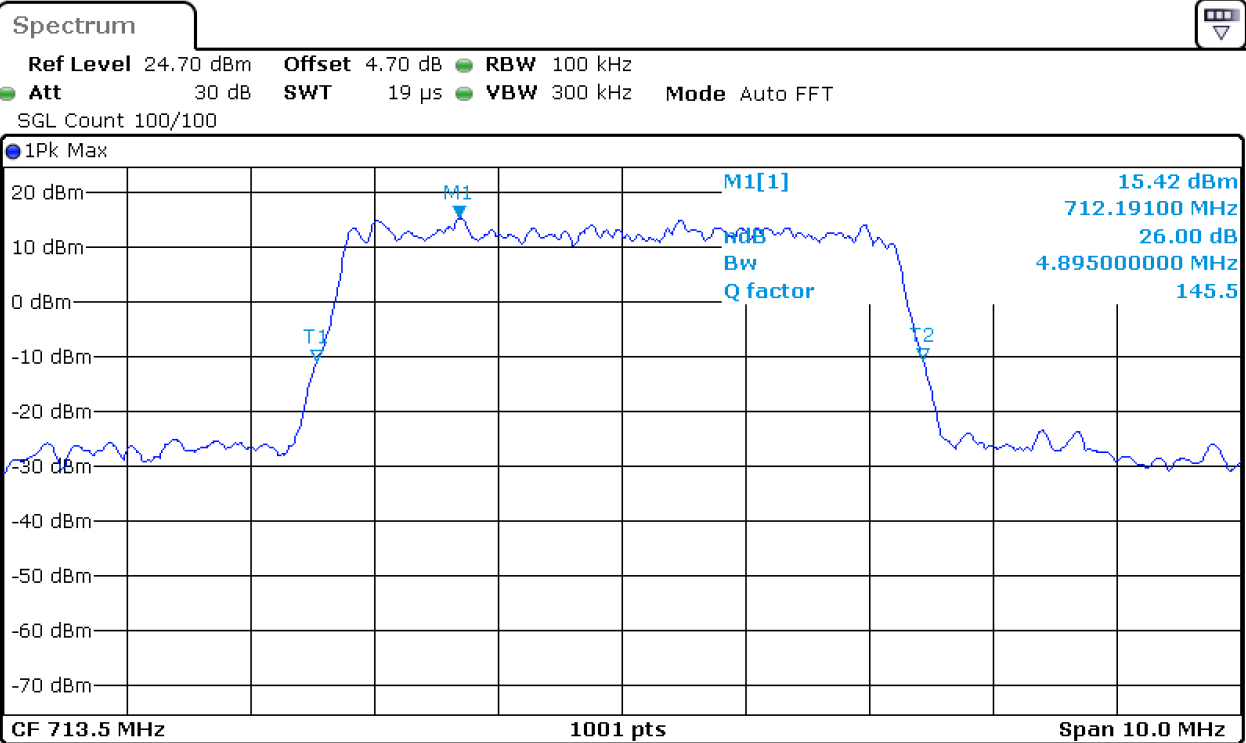
Date: 28.DEC.2021 04:53:21

Highest Channel / 5MHz / 16QAM



Date: 28.DEC.2021 04:54:04

Highest Channel / 5MHz / 64QAM

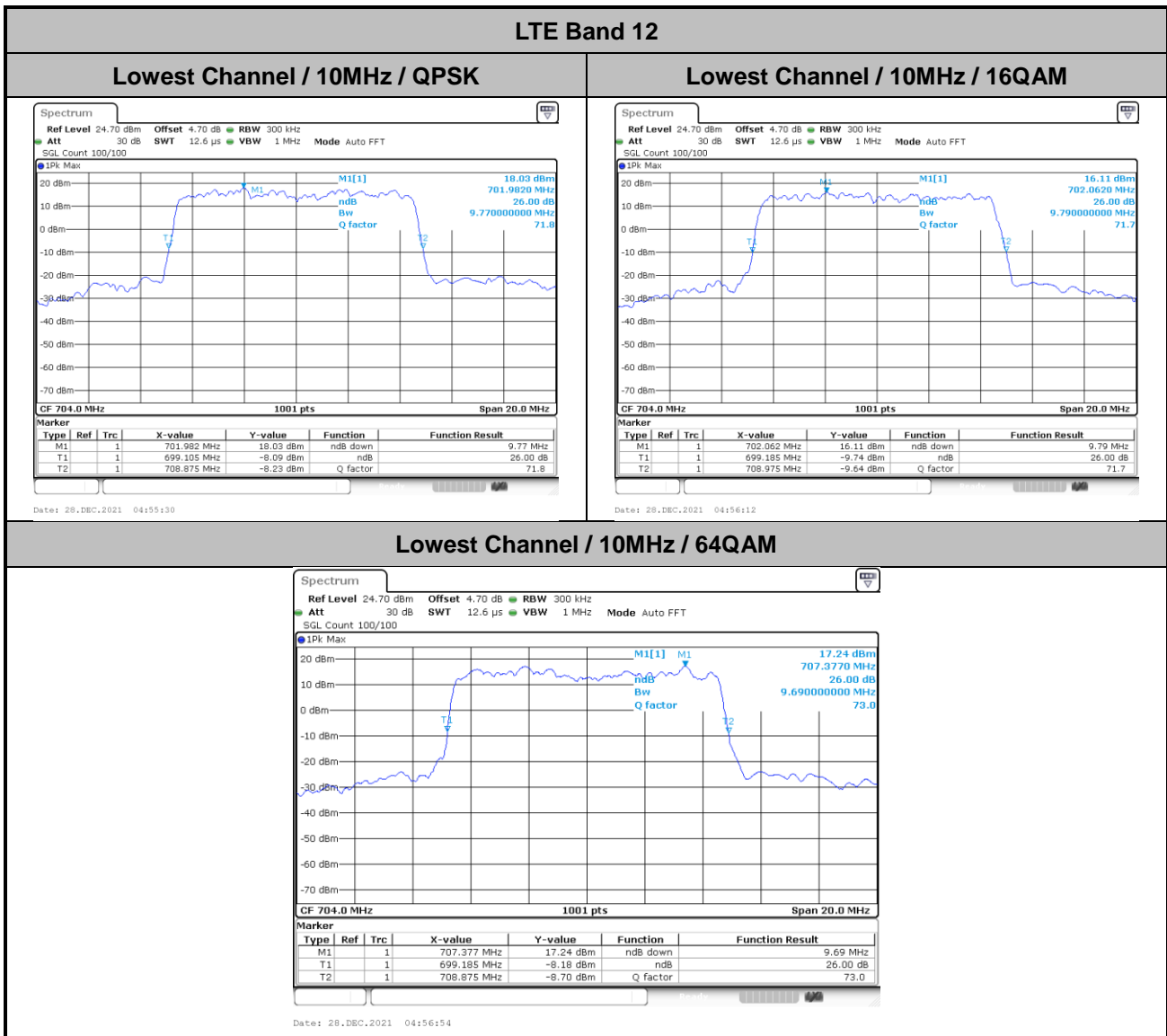


Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1	1		712.191 MHz	15.42 dBm	ndB down	4.895 MHz
T1	1		711.032 MHz	-10.79 dBm	ndB	26.00 dB
T2	1		715.928 MHz	-10.37 dBm	Q factor	145.5

Date: 28.DEC.2021 04:54:47



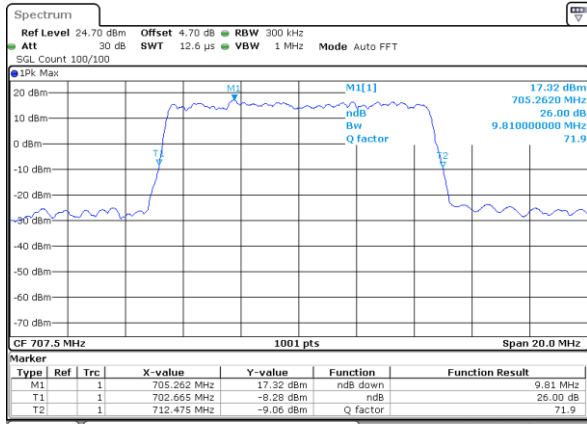
Mode	LTE Band 12 : 26dB BW(MHz)		
BW	10 MHz		
Mod.	QPSK	16QAM	64QAM
Lowest CH	9.77	9.79	9.69
Middle CH	9.81	9.71	9.77
Highest CH	9.71	9.75	9.77





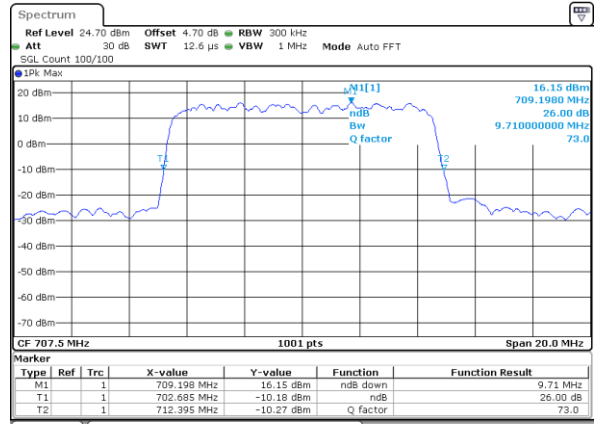
LTE Band 12

Middle Channel / 10MHz / QPSK



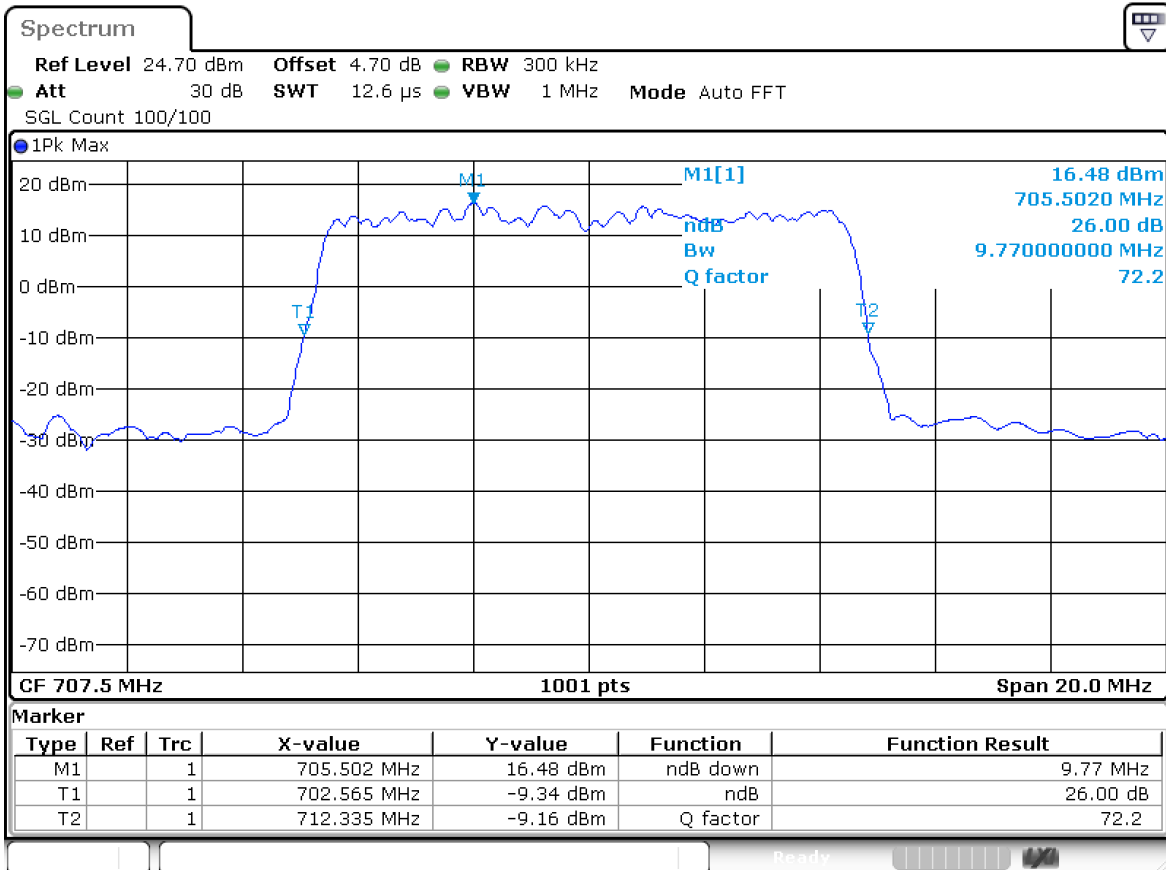
Date: 28.DEC.2021 04:57:36

Middle Channel / 10MHz / 16QAM



Date: 28.DEC.2021 04:58:17

Middle Channel / 10MHz / 64QAM

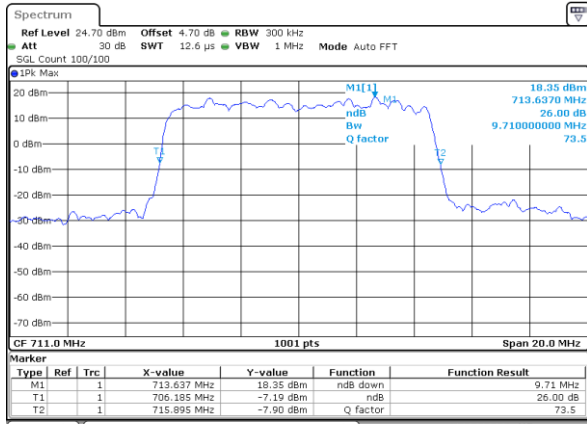


Date: 28.DEC.2021 04:58:59



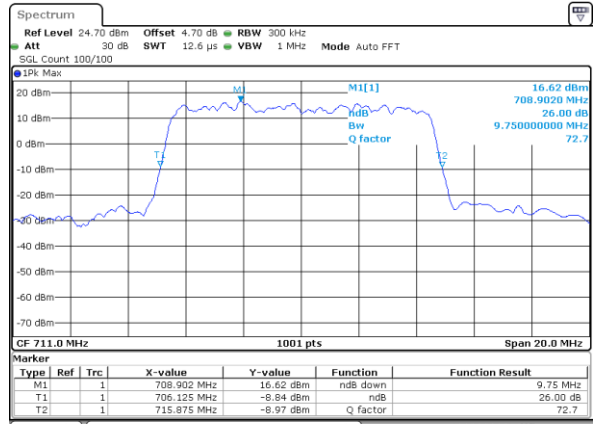
LTE Band 12

Highest Channel / 10MHz / QPSK



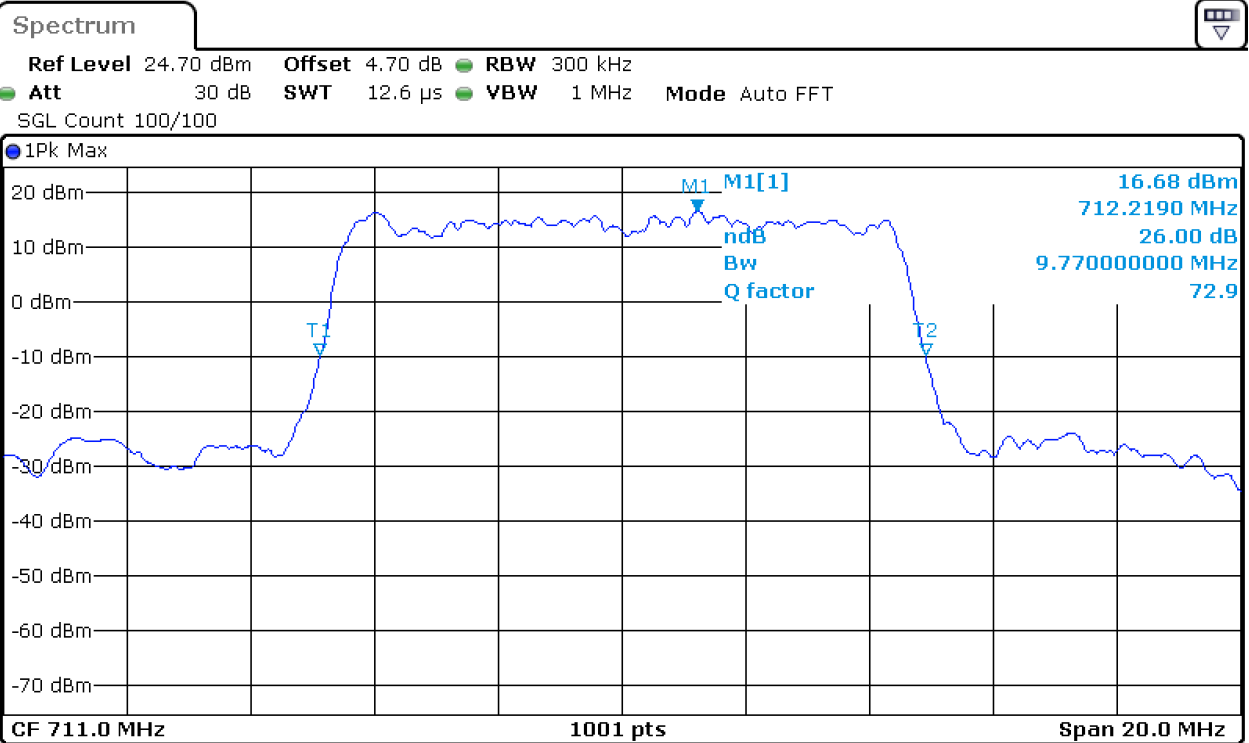
Date: 28.DEC.2021 04:59:41

Highest Channel / 10MHz / 16QAM



Date: 28.DEC.2021 05:00:23

Highest Channel / 10MHz / 64QAM



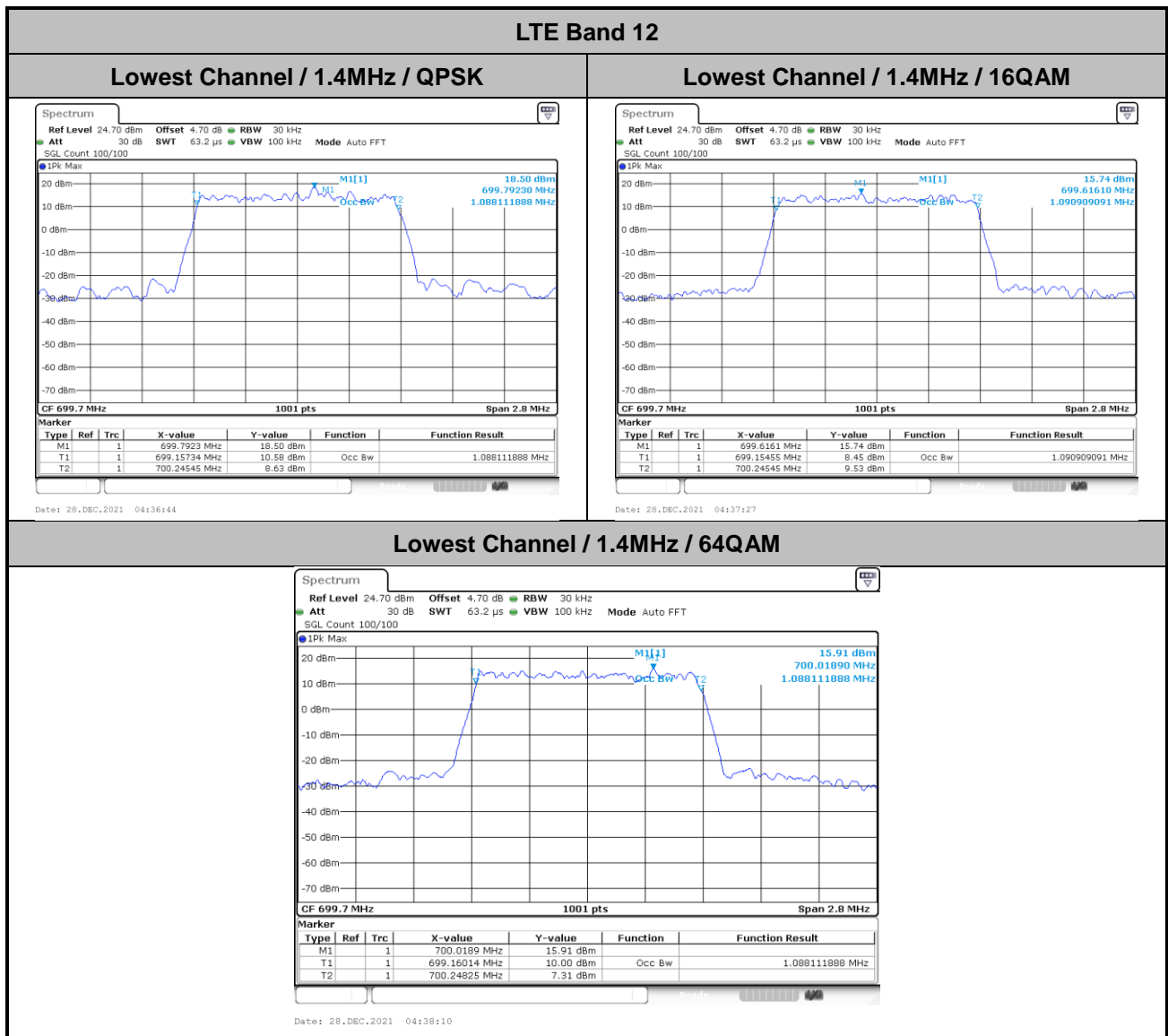
Date: 28.DEC.2021 05:01:05





# Occupied Bandwidth

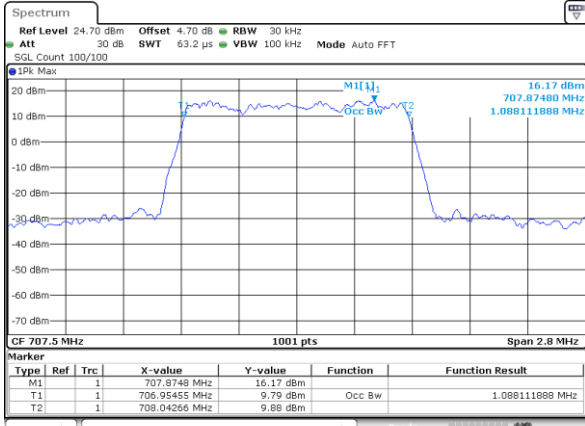
Mode	LTE Band 12 : 99%OBW(MHz)		
BW	1.4 MHz		
Mod.	QPSK	16QAM	64QAM
Lowest CH	1.09	1.09	1.09
Middle CH	1.09	1.08	1.09
Highest CH	1.09	1.09	1.09





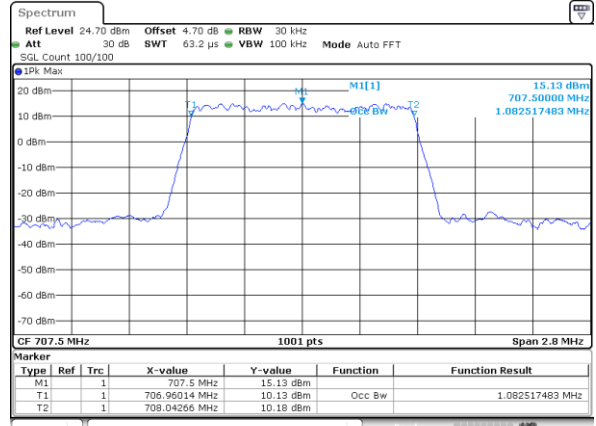
LTE Band 12

Middle Channel / 1.4MHz / QPSK



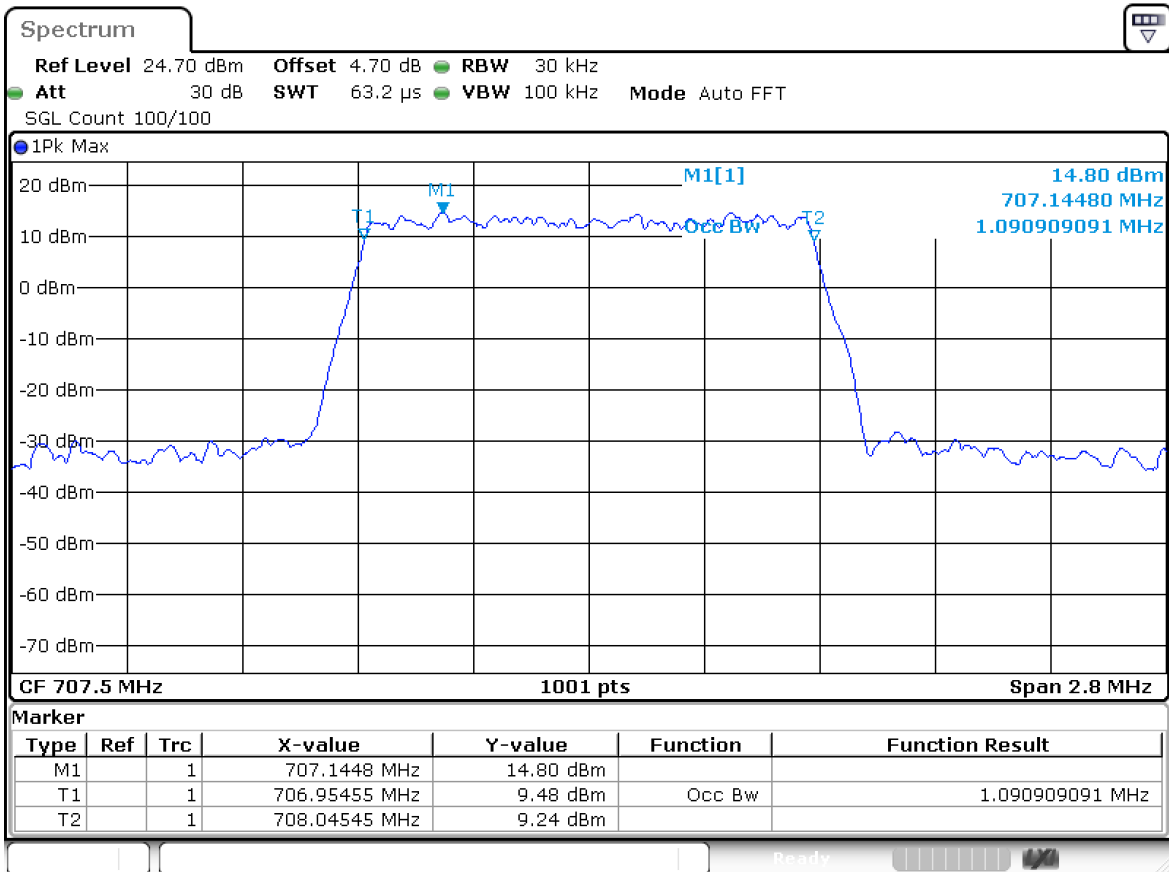
Date: 28.DEC.2021 04:38:52

Middle Channel / 1.4MHz / 16QAM



Date: 28.DEC.2021 04:39:34

Middle Channel / 1.4MHz / 64QAM

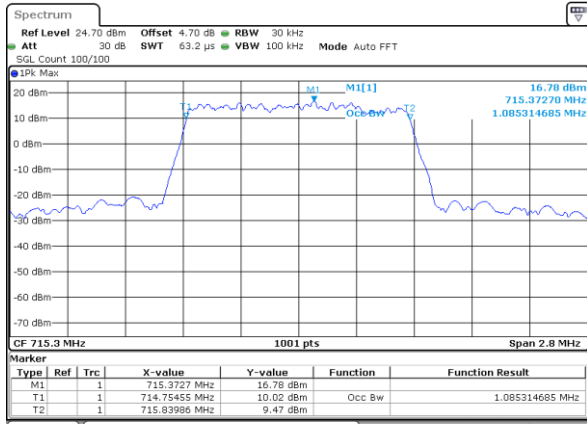


Date: 28.DEC.2021 04:40:16

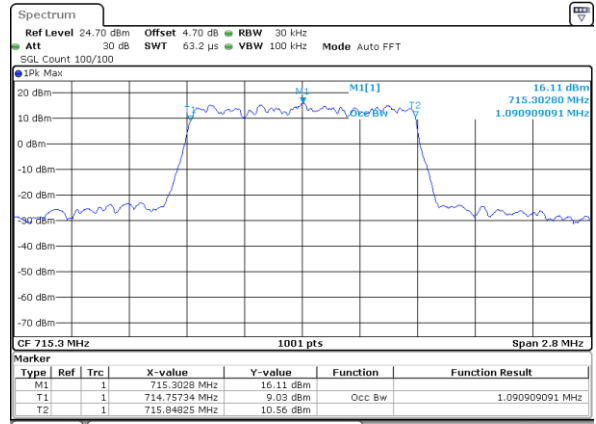


LTE Band 12

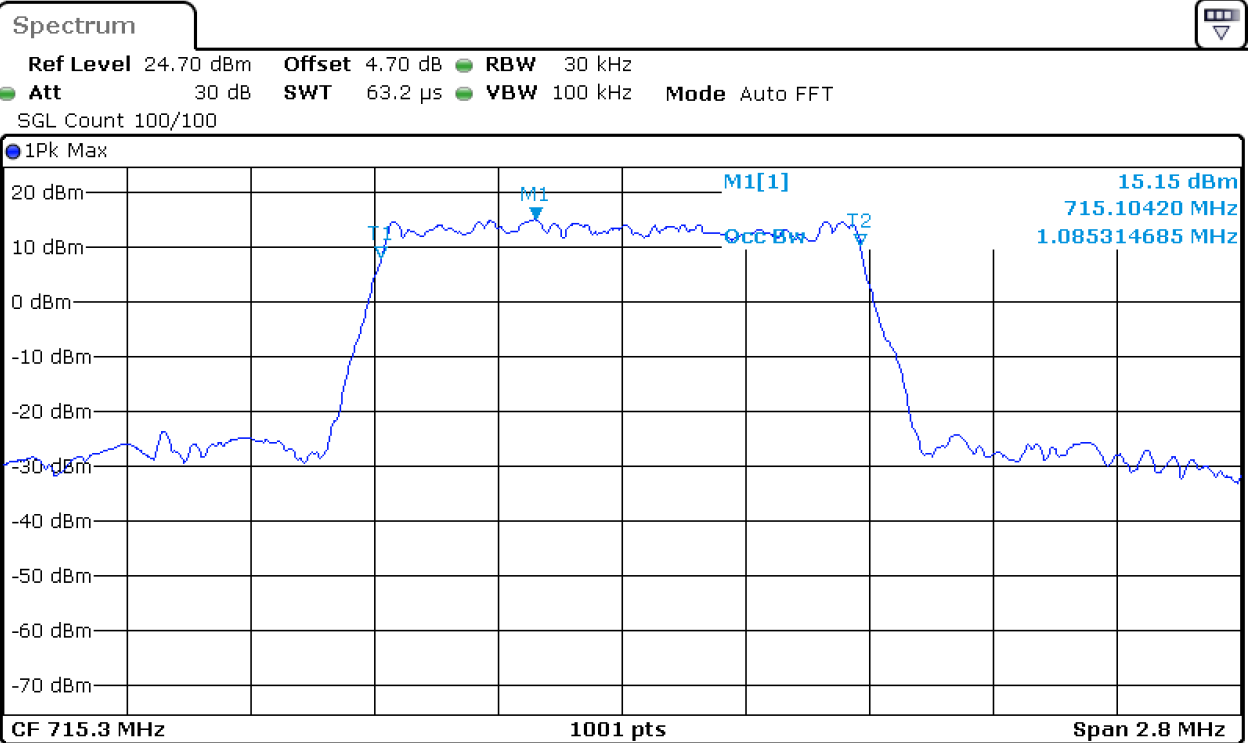
Highest Channel / 1.4MHz / QPSK



Highest Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / 64QAM

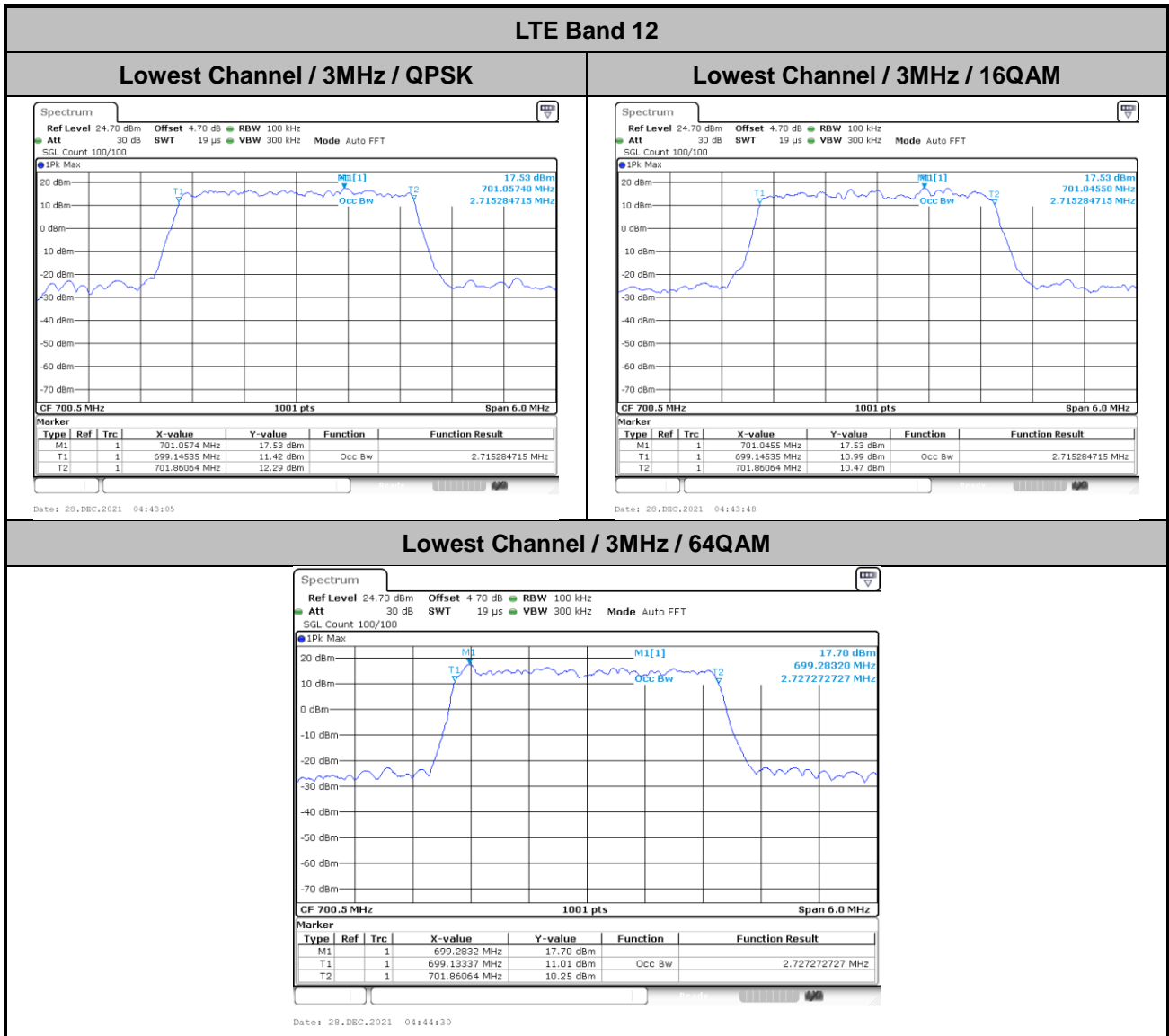


Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	715.1042 MHz	15.15 dBm		
T1		1	714.75455 MHz	8.19 dBm	Occ Bw	1.085314685 MHz
T2		1	715.83986 MHz	10.47 dBm		

Date: 28.DEC.2021 04:42:22



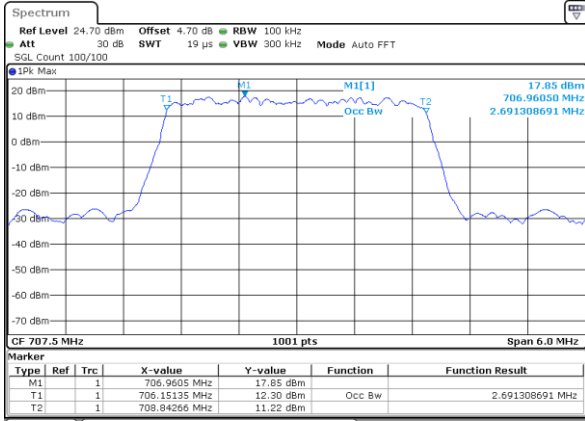
Mode	LTE Band 12 : 99%OBW(MHz)		
BW	3 MHz		
Mod.	QPSK	16QAM	64QAM
Lowest CH	2.72	2.72	2.73
Middle CH	2.69	2.71	2.72
Highest CH	2.72	2.72	2.73





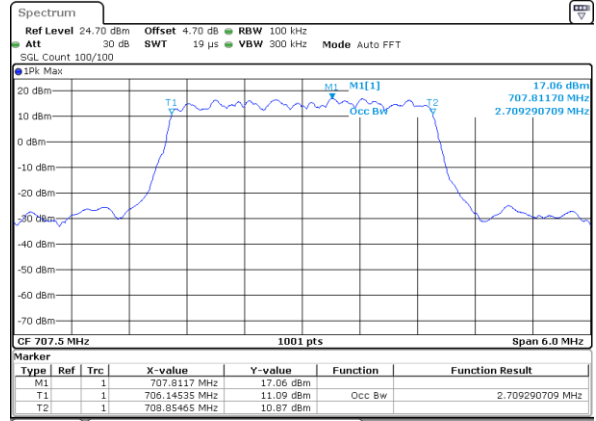
LTE Band 12

Middle Channel / 3MHz / QPSK



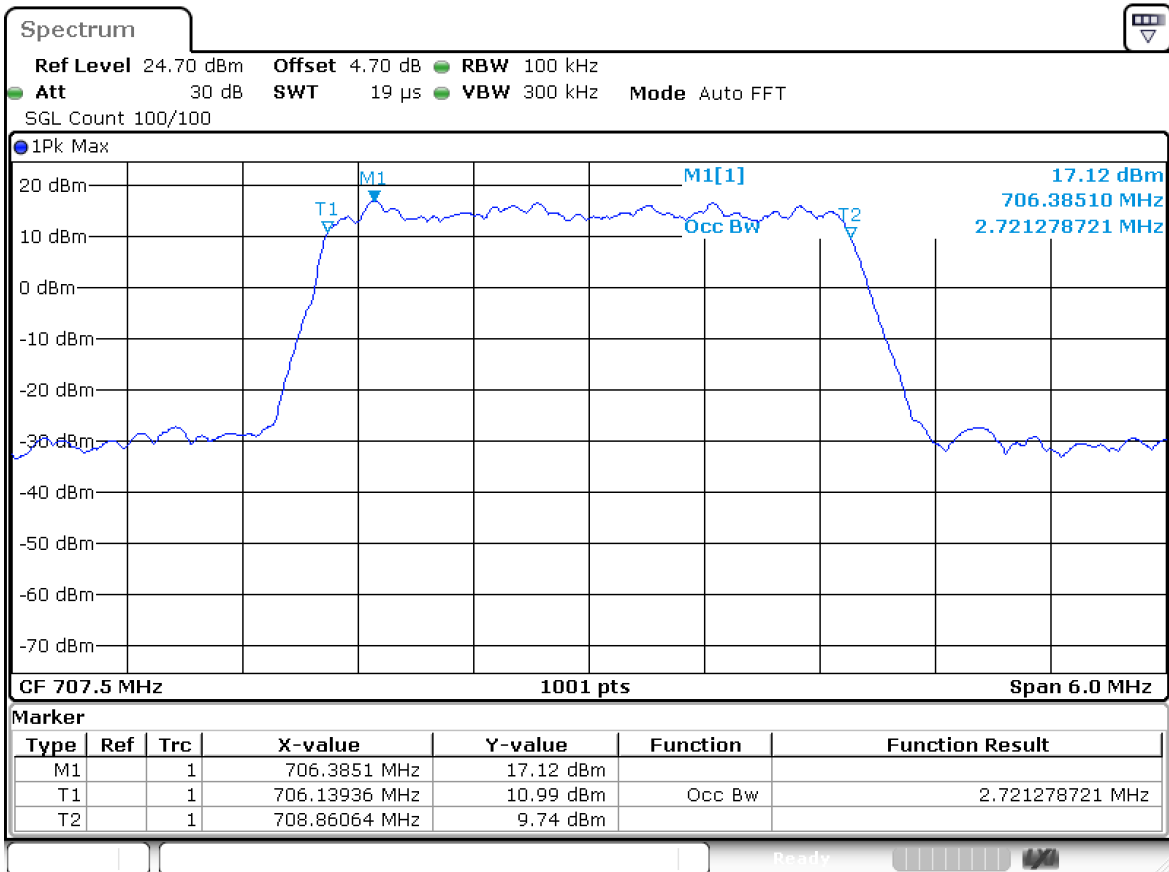
Date: 28.DEC.2021 04:45:12

Middle Channel / 3MHz / 16QAM



Date: 28.DEC.2021 04:45:14

Middle Channel / 3MHz / 64QAM

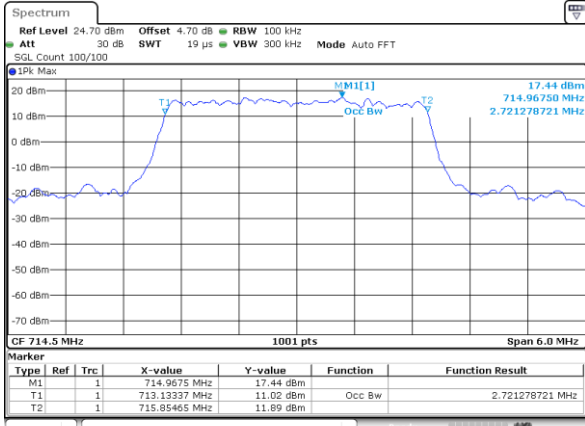


Date: 28.DEC.2021 04:46:35



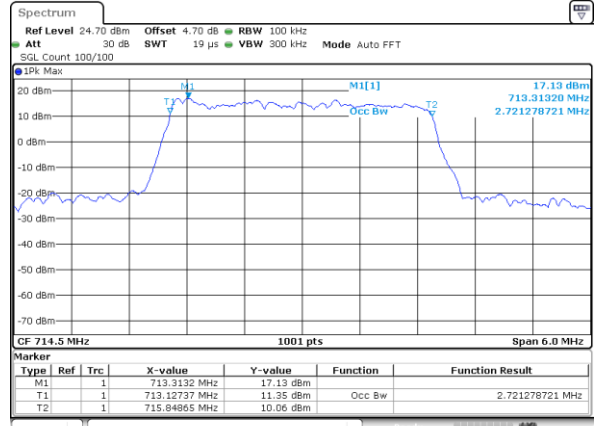
LTE Band 12

Highest Channel / 3MHz / QPSK



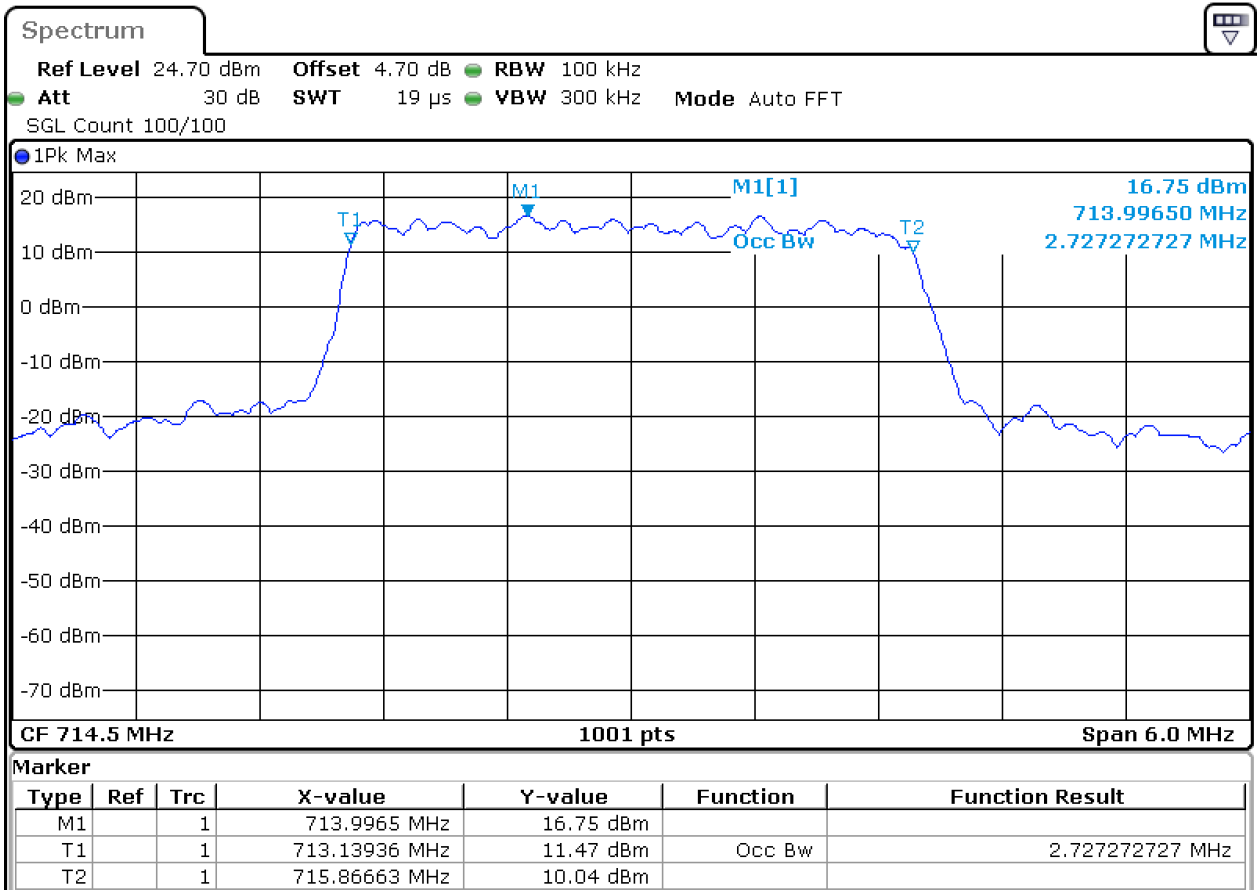
Date: 28.DEC.2021 04:47:19

Highest Channel / 3MHz / 16QAM



Date: 28.DEC.2021 04:48:00

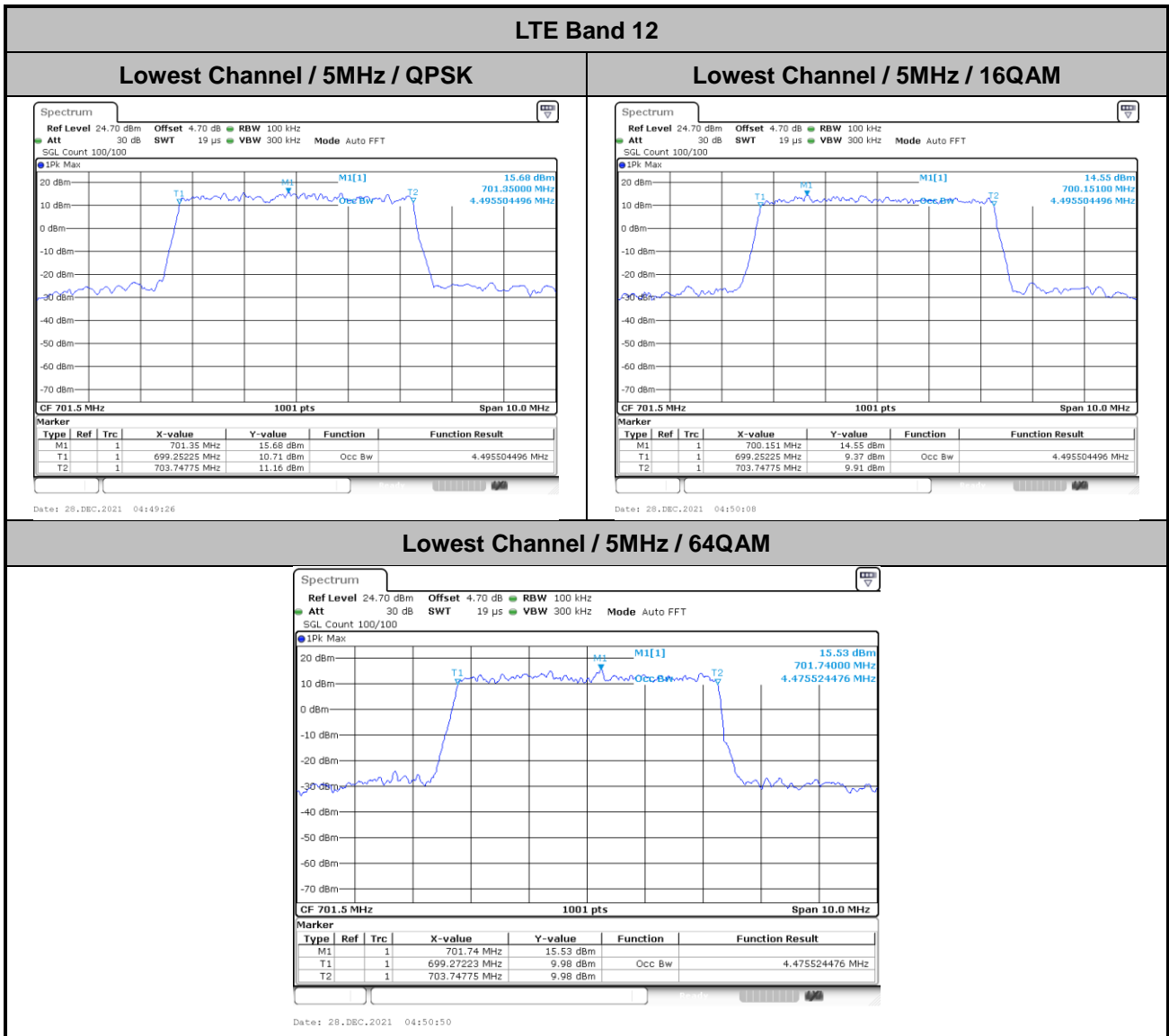
Highest Channel / 3MHz / 64QAM



Date: 28.DEC.2021 04:48:43



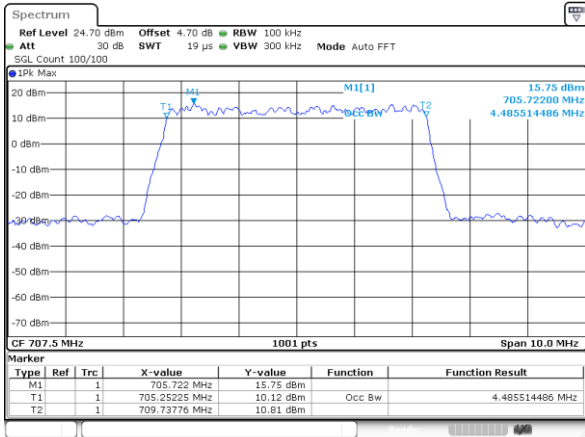
Mode	LTE Band 12 : 99%OBW(MHz)		
BW	5 MHz		
Mod.	QPSK	16QAM	64QAM
Lowest CH	4.50	4.50	4.48
Middle CH	4.49	4.51	4.50
Highest CH	4.49	4.48	4.49





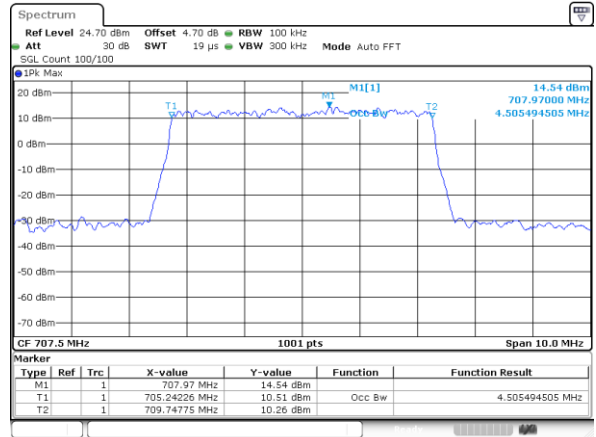
LTE Band 12

Middle Channel / 5MHz / QPSK



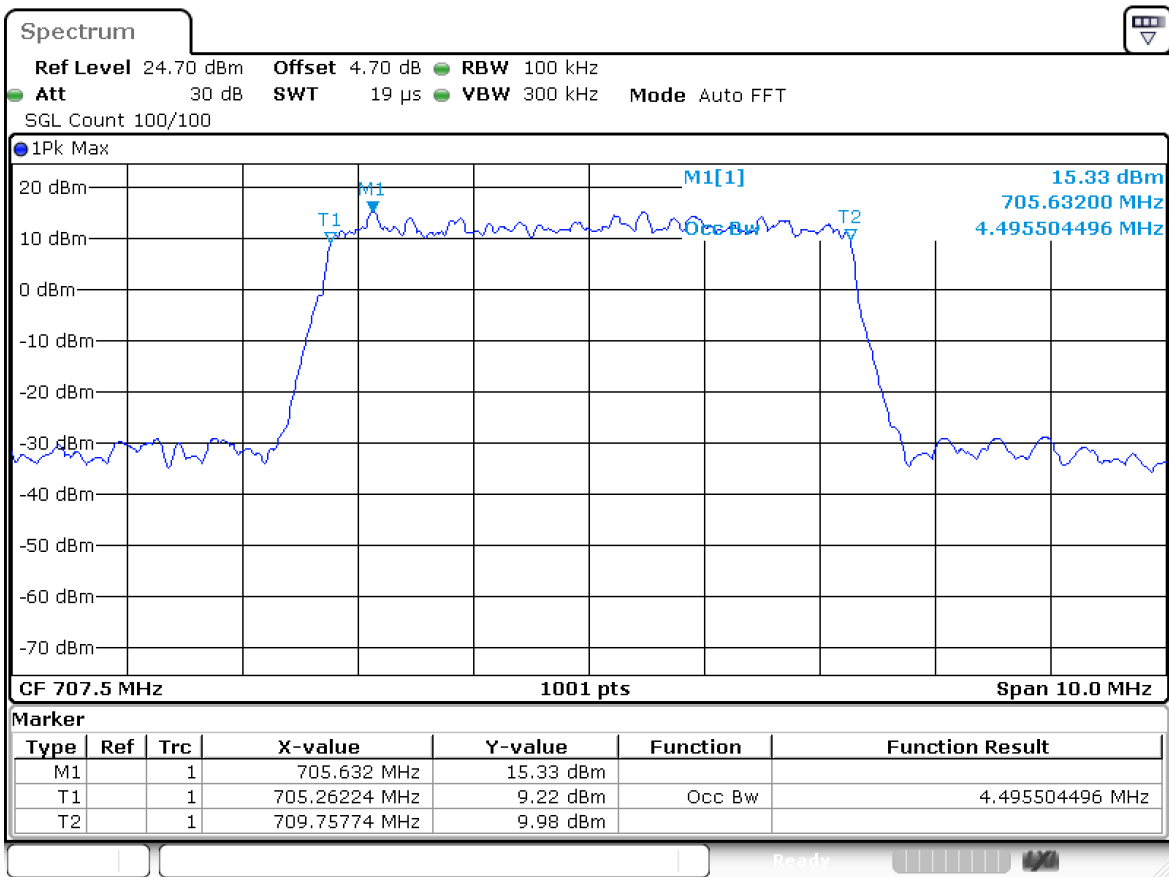
Date: 28.DEC.2021 04:51:33

Middle Channel / 5MHz / 16QAM



Date: 28.DEC.2021 04:52:14

Middle Channel / 5MHz / 64QAM



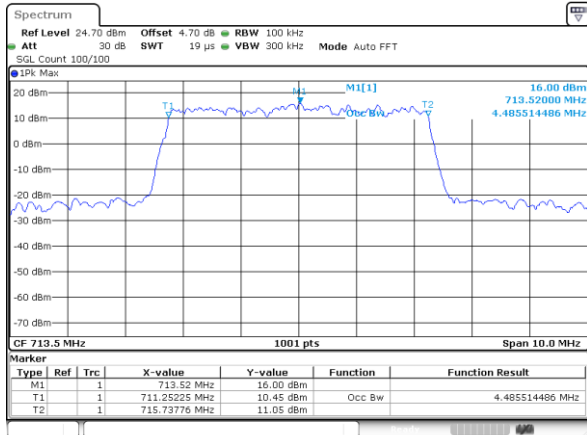
Date: 28.DEC.2021 04:52:56





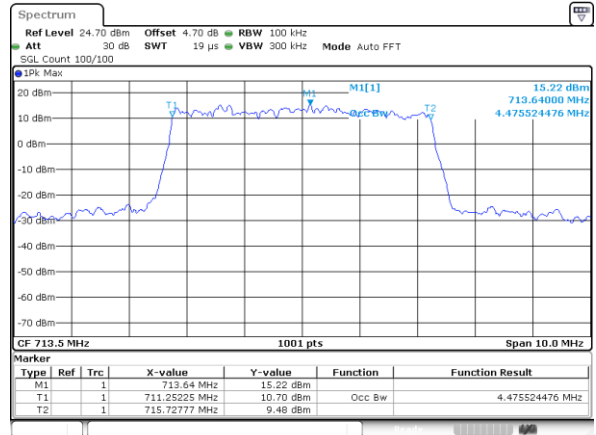
LTE Band 12

Highest Channel / 5MHz / QPSK



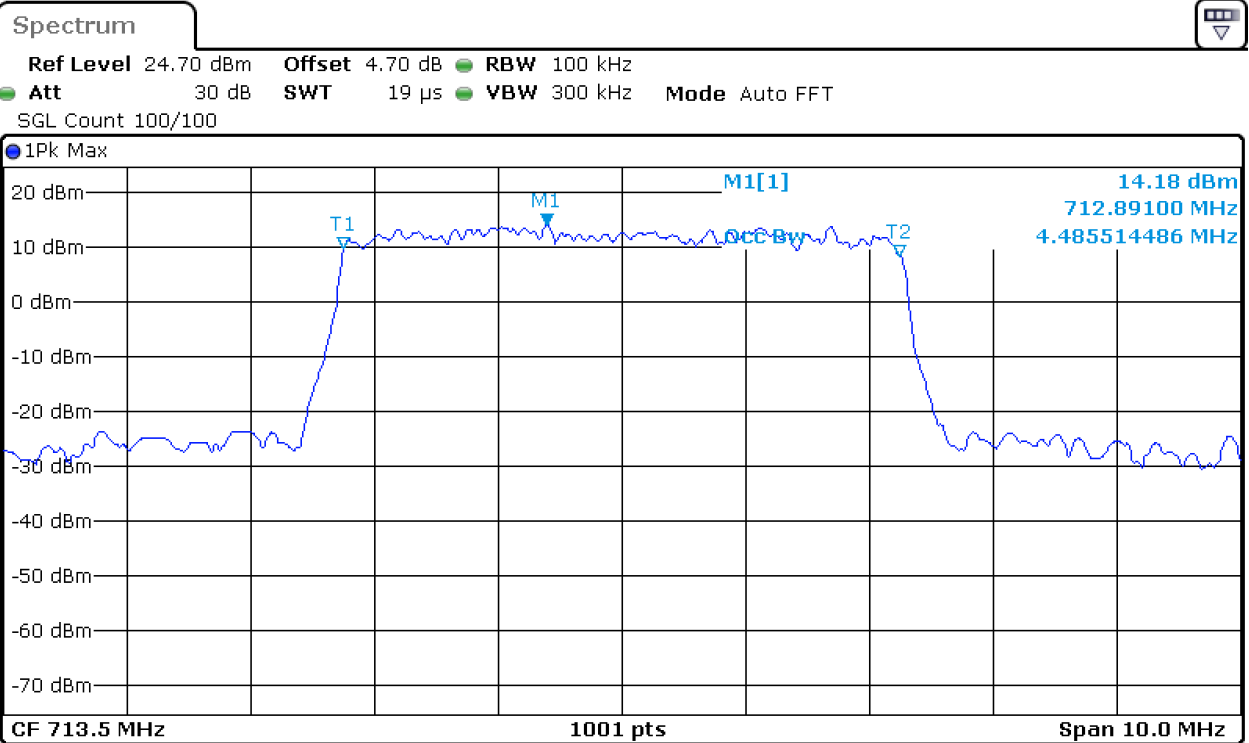
Date: 28.DEC.2021 04:53:39

Highest Channel / 5MHz / 16QAM



Date: 28.DEC.2021 04:54:21

Highest Channel / 5MHz / 64QAM

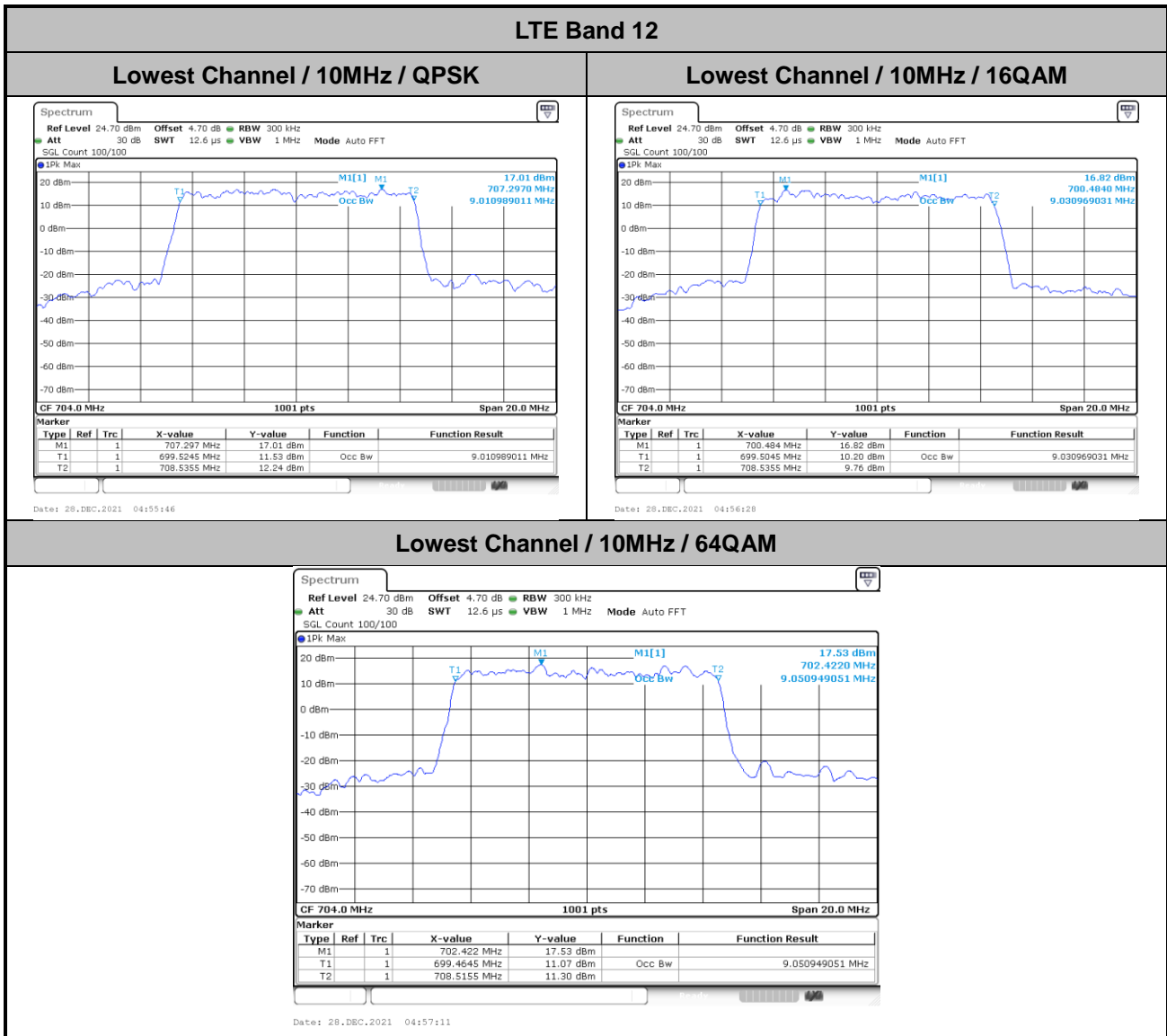


Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1	1		712.891 MHz	14.18 dBm		
T1	1		711.25225 MHz	9.91 dBm	Occ Bw	4.485514486 MHz
T2	1		715.73776 MHz	8.29 dBm		

Date: 28.DEC.2021 04:55:03



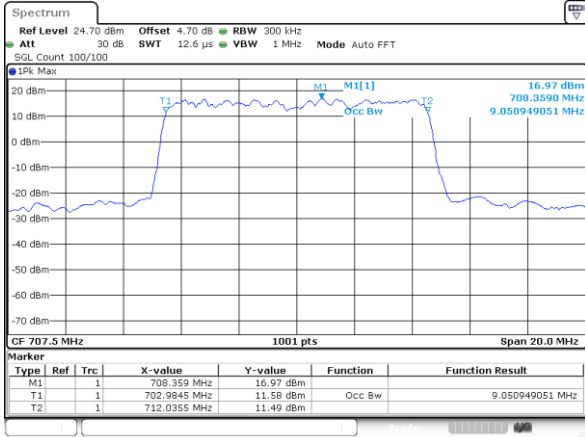
Mode	LTE Band 12 : 99%OBW(MHz)		
BW	10 MHz		
Mod.	QPSK	16QAM	64QAM
Lowest CH	9.01	9.03	9.05
Middle CH	9.05	8.97	9.03
Highest CH	9.05	8.97	8.99





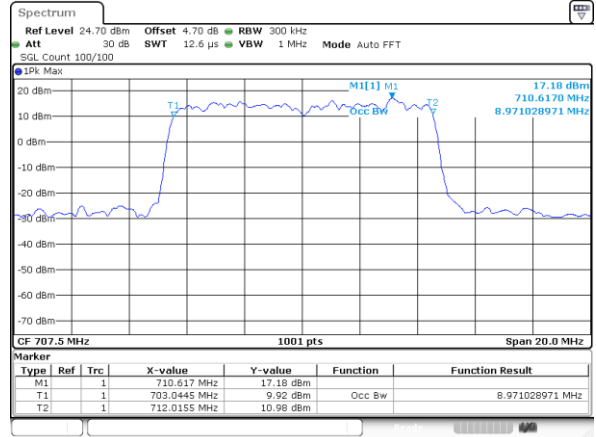
LTE Band 12

Middle Channel / 10MHz / QPSK



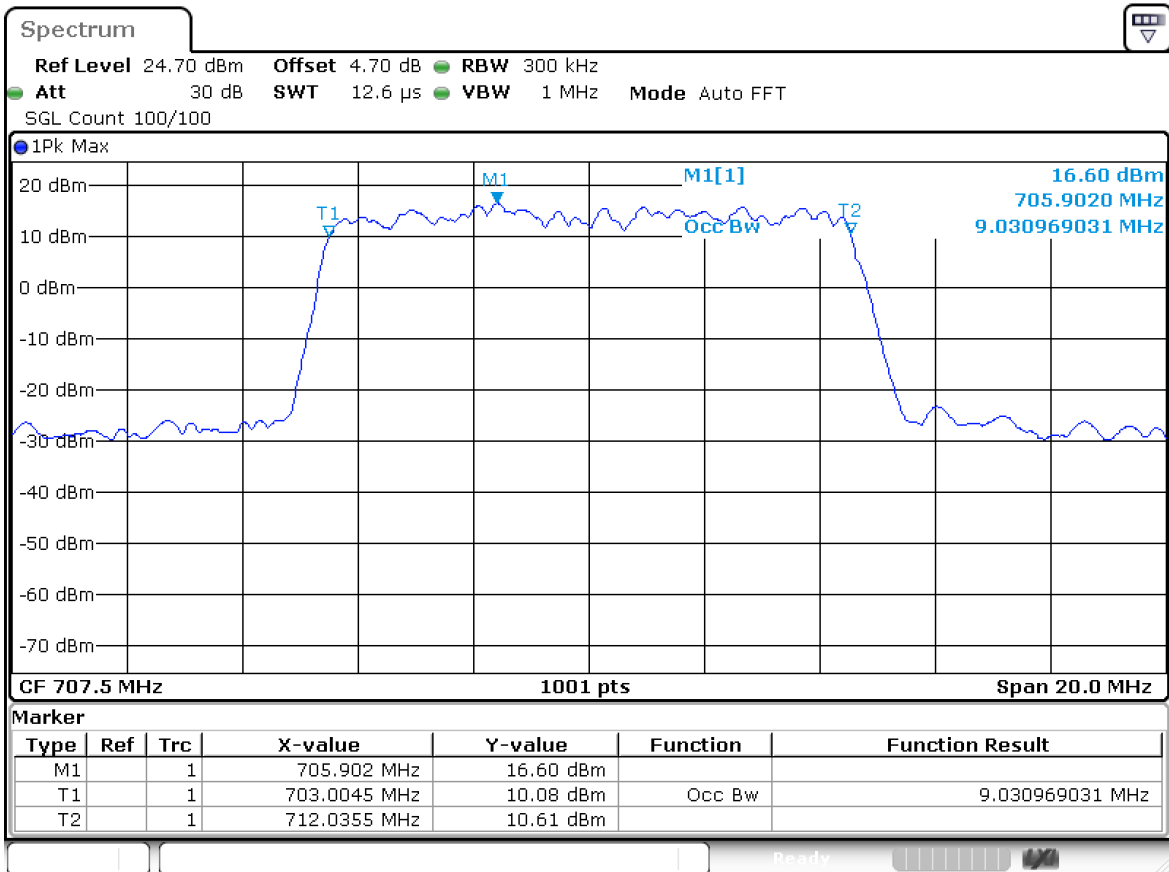
Date: 28.DEC.2021 04:57:52

Middle Channel / 10MHz / 16QAM



Date: 28.DEC.2021 04:58:34

Middle Channel / 10MHz / 64QAM

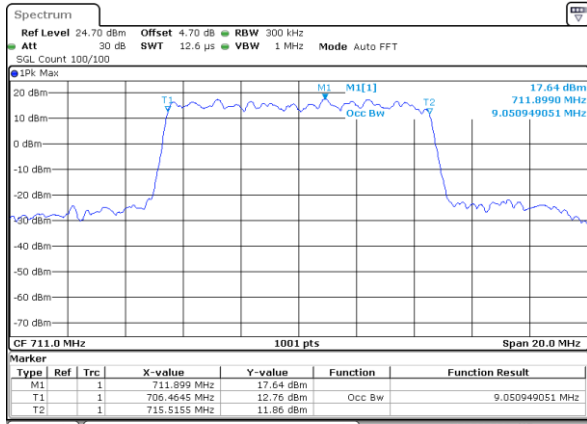


Date: 28.DEC.2021 04:59:16



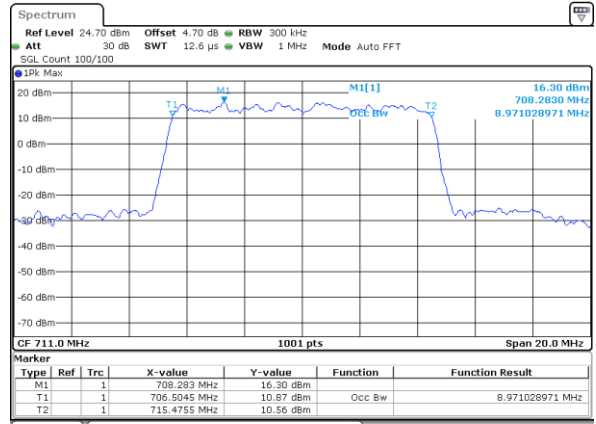
LTE Band 12

Highest Channel / 10MHz / QPSK



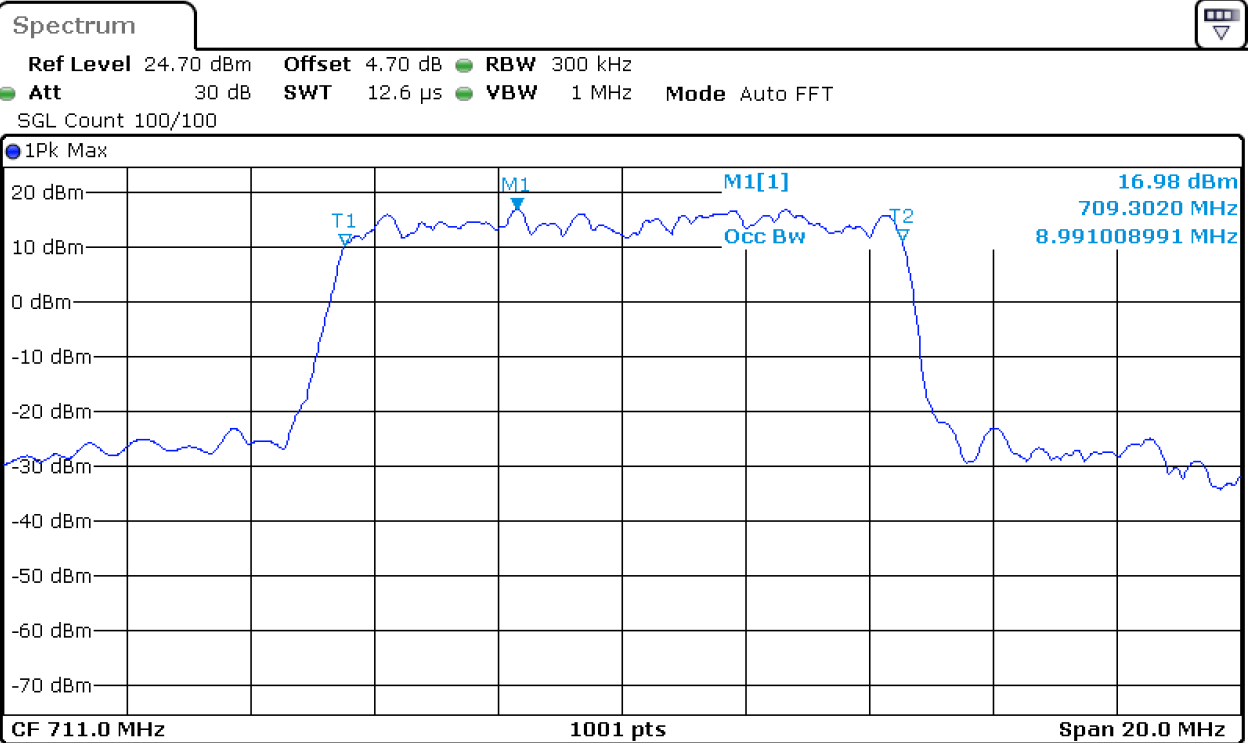
Date: 28.DEC.2021 04:59:57

Highest Channel / 10MHz / 16QAM



Date: 28.DEC.2021 05:00:39

Highest Channel / 10MHz / 64QAM

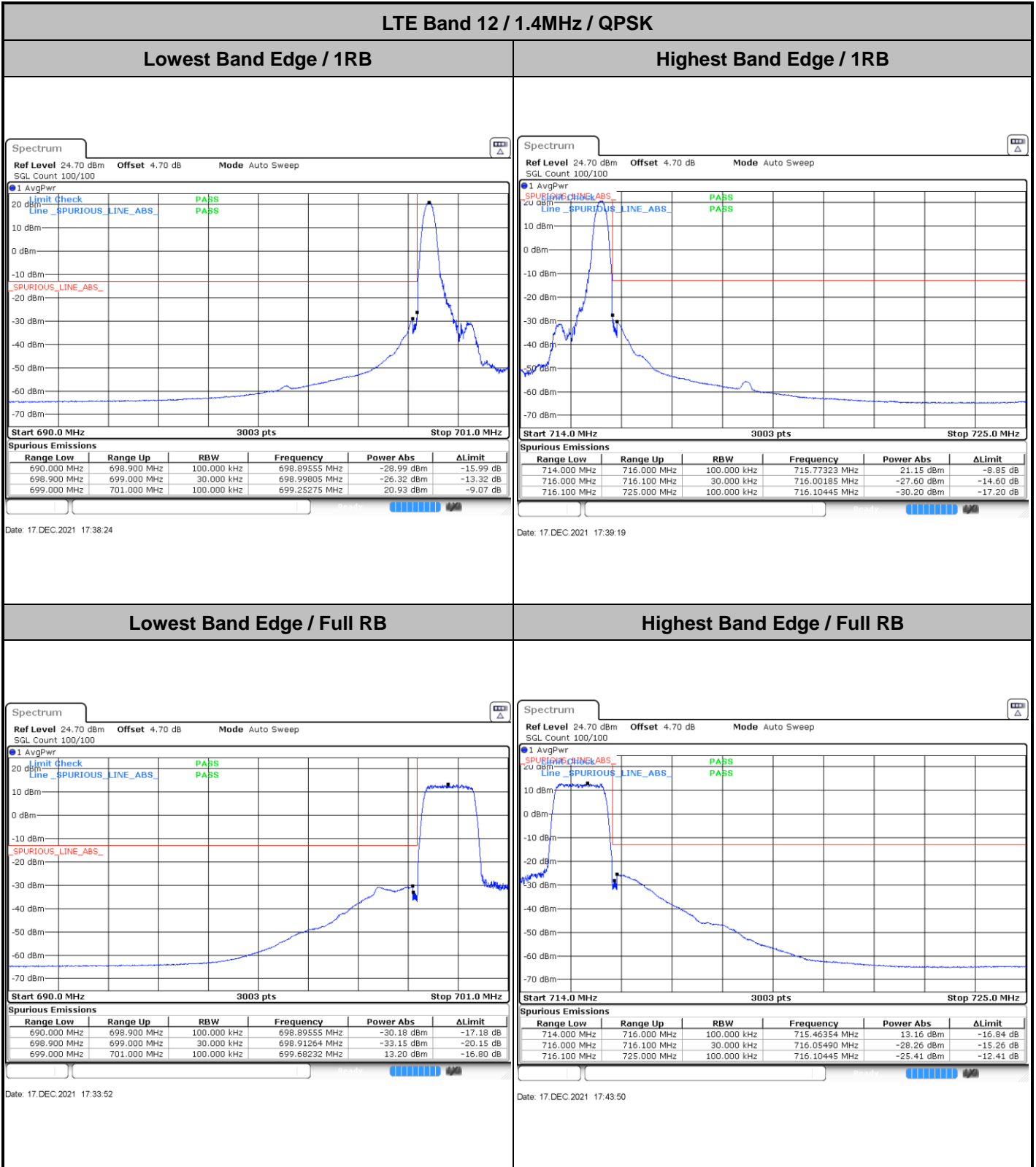


Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1	1		709.302 MHz	16.98 dBm		
T1	1		706.5245 MHz	10.40 dBm	Occ Bw	8.991008991 MHz
T2	1		715.5155 MHz	11.31 dBm		

Date: 28.DEC.2021 05:01:22



# Conducted Band Edge

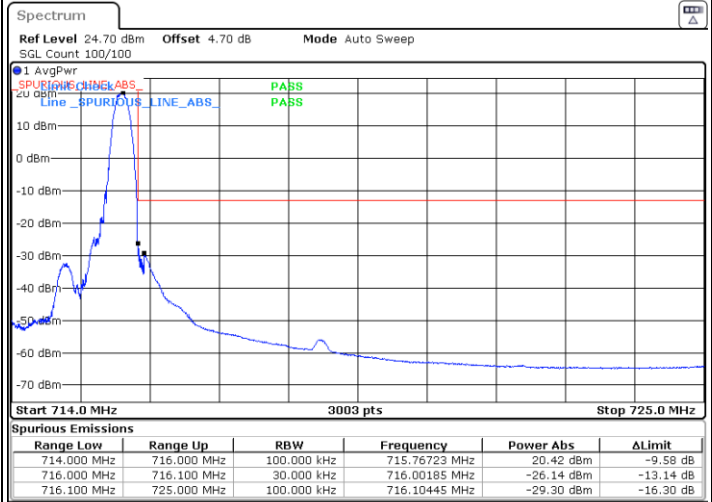
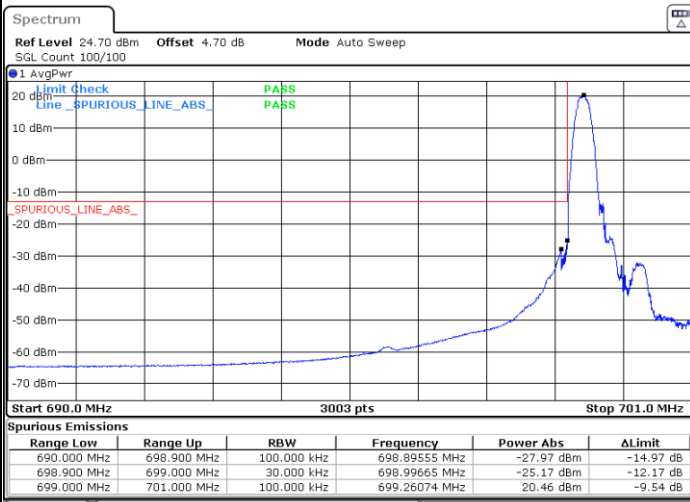




LTE Band 12 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

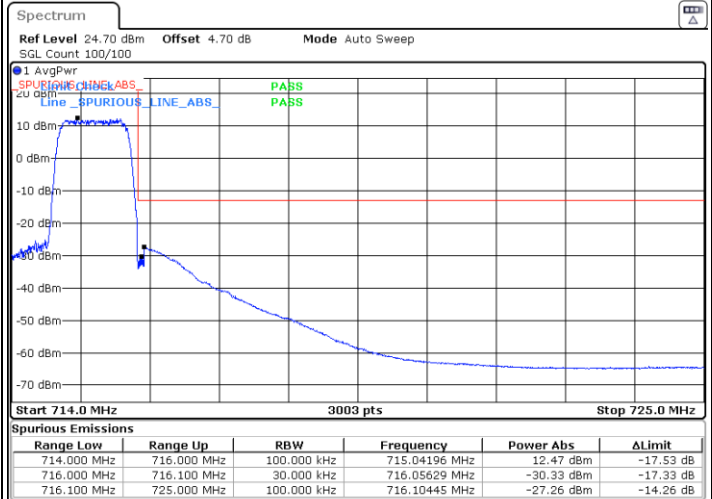
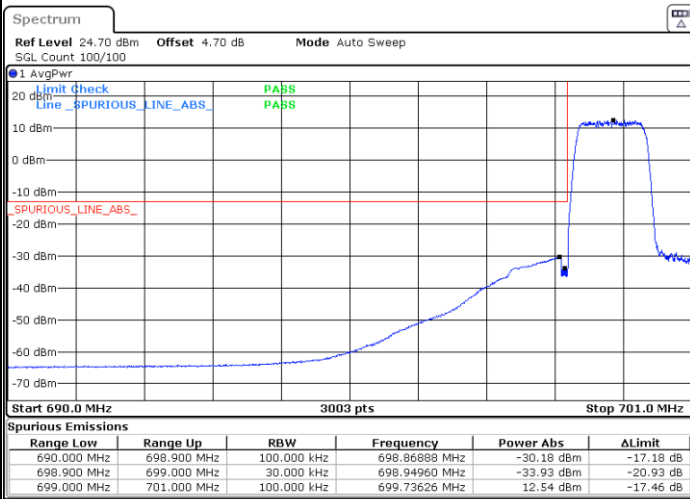


Date: 17.DEC.2021 17:37:30

Date: 17.DEC.2021 17:40:13

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



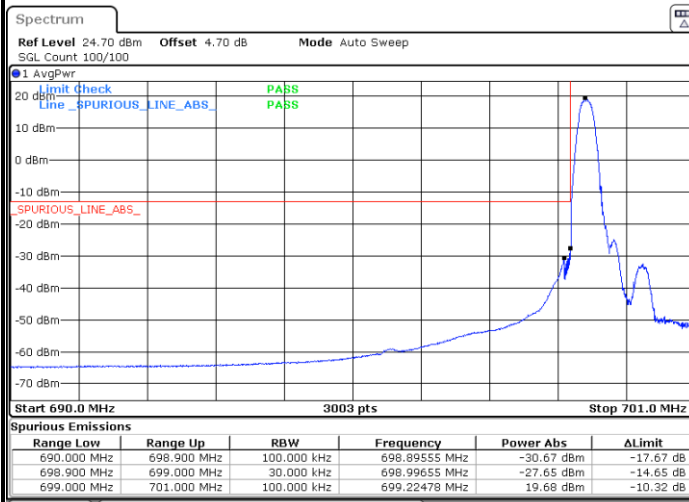
Date: 17.DEC.2021 17:34:47

Date: 17.DEC.2021 17:42:55



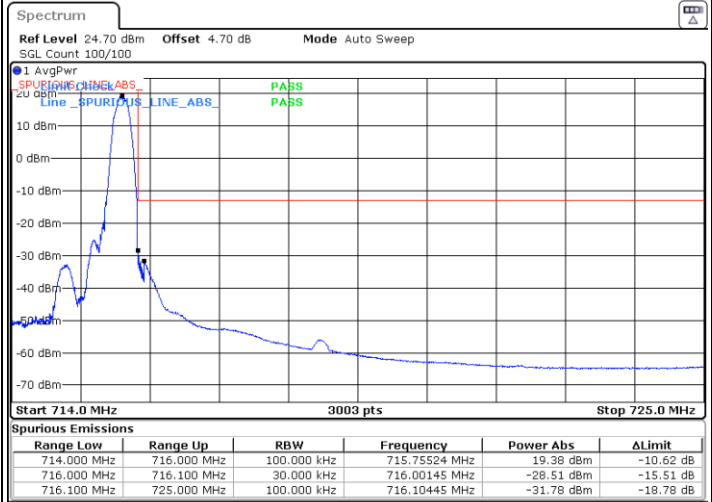
LTE Band 12 / 1.4MHz / 64QAM

Lowest Band Edge / 1 RB



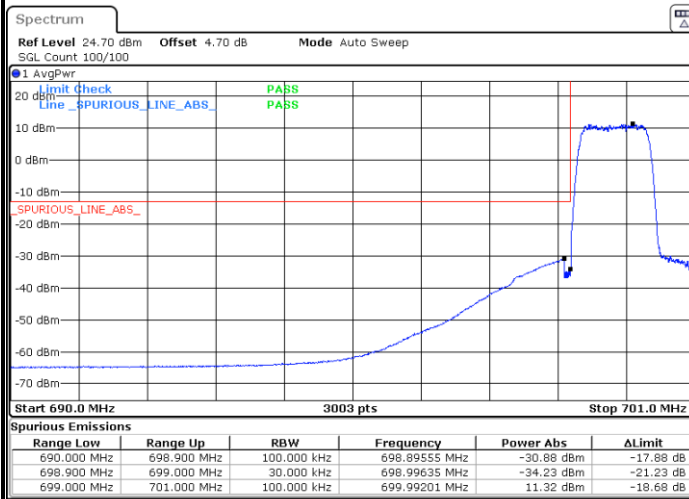
Date: 17.DEC.2021 17:36:36

Highest Band Edge / 1 RB



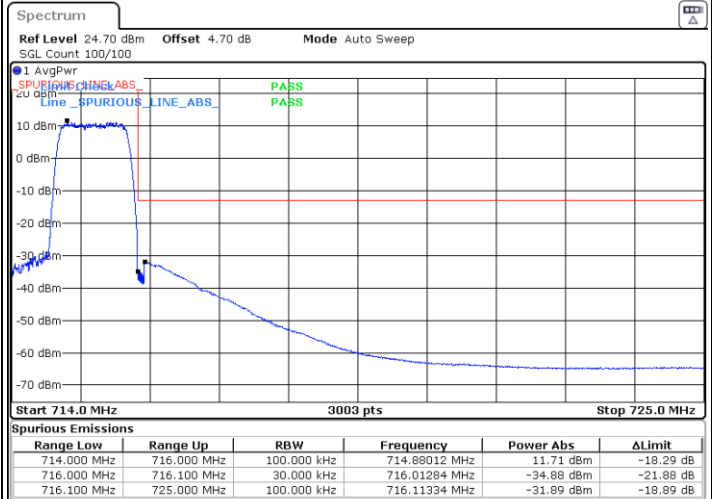
Date: 17.DEC.2021 17:41:06

Lowest Band Edge / Full RB



Date: 17.DEC.2021 17:35:41

Highest Band Edge / Full RB



Date: 17.DEC.2021 17:42:01