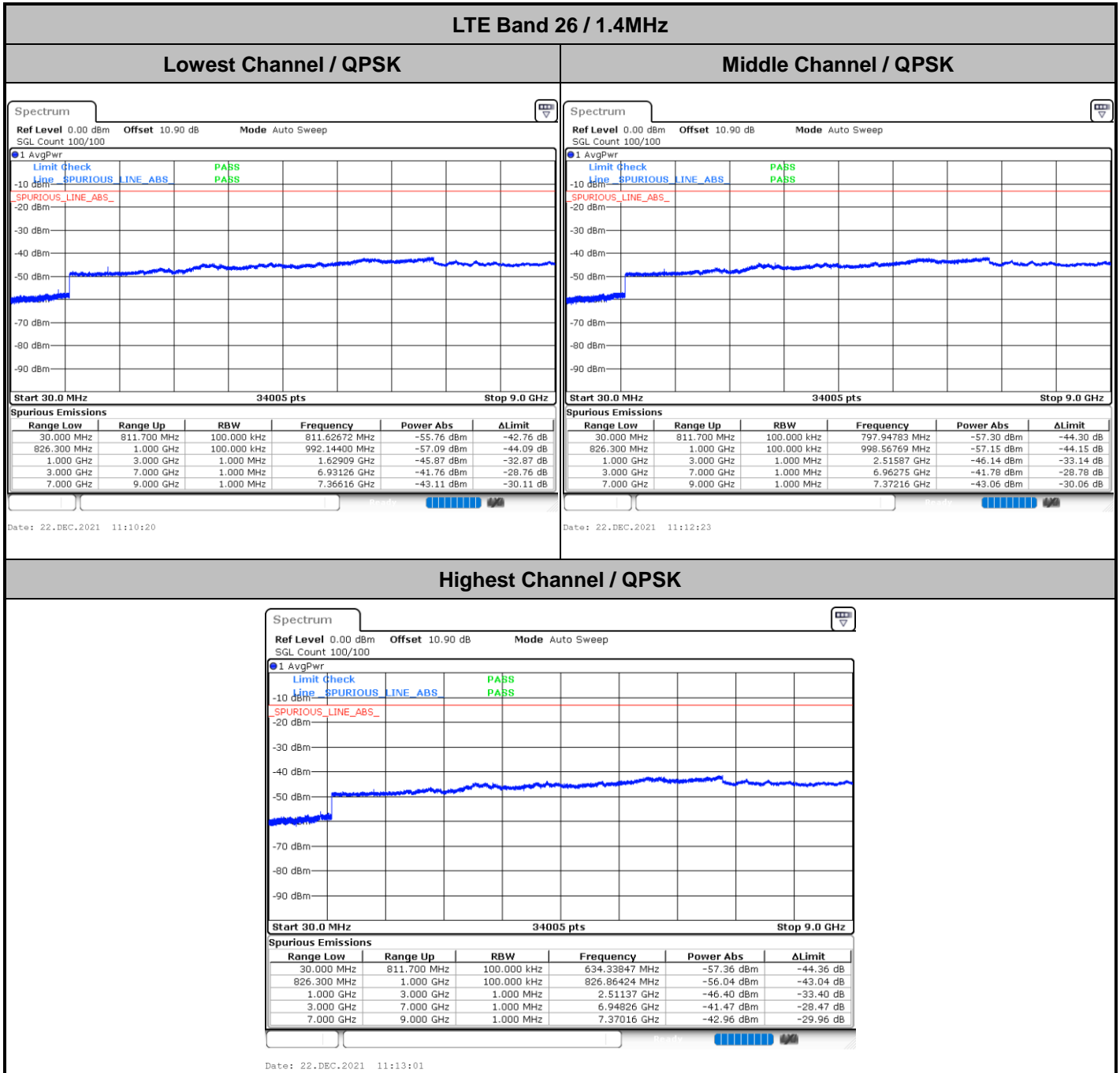




# Emission masks – Out of band emissions

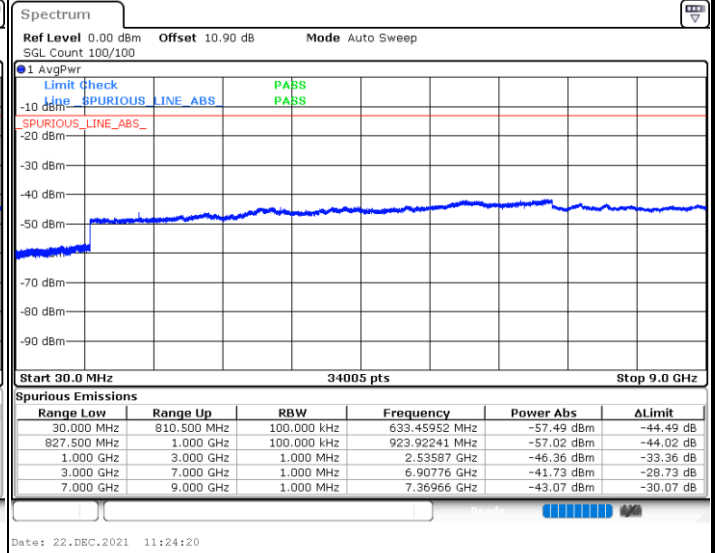
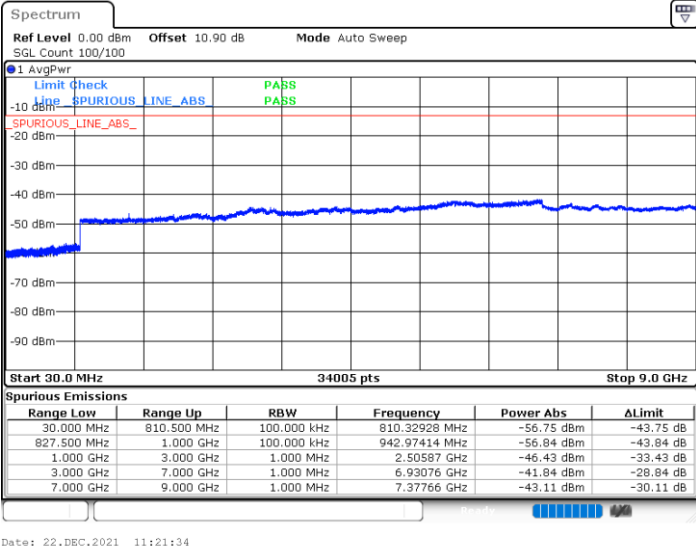




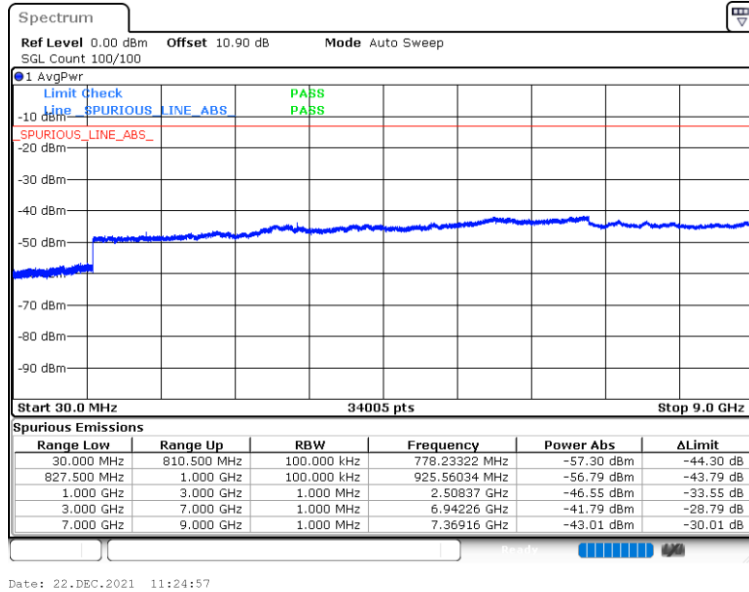
LTE Band 26 / 3MHz

Lowest Channel / QPSK

Middle Channel / QPSK



Highest Channel / QPSK

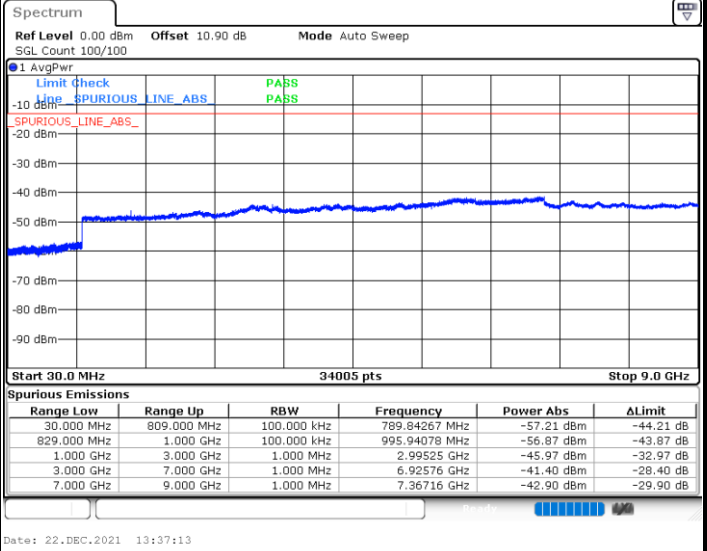
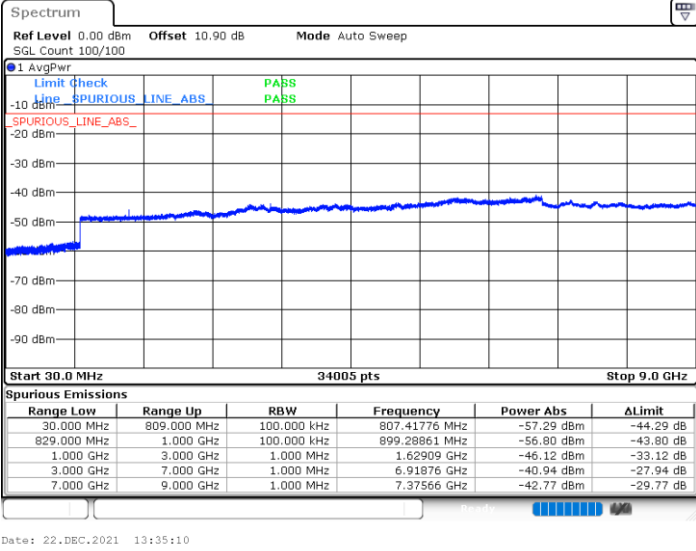




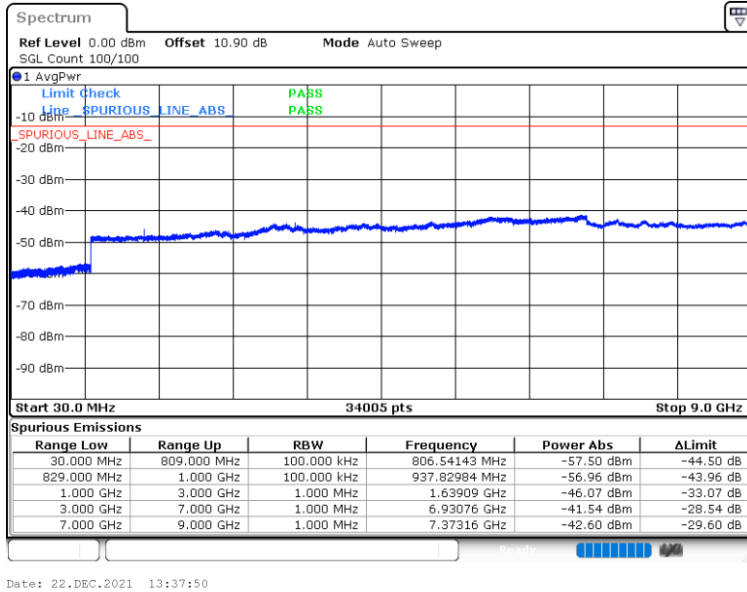
LTE Band 26 / 5MHz

Lowest Channel / QPSK

Middle Channel / QPSK



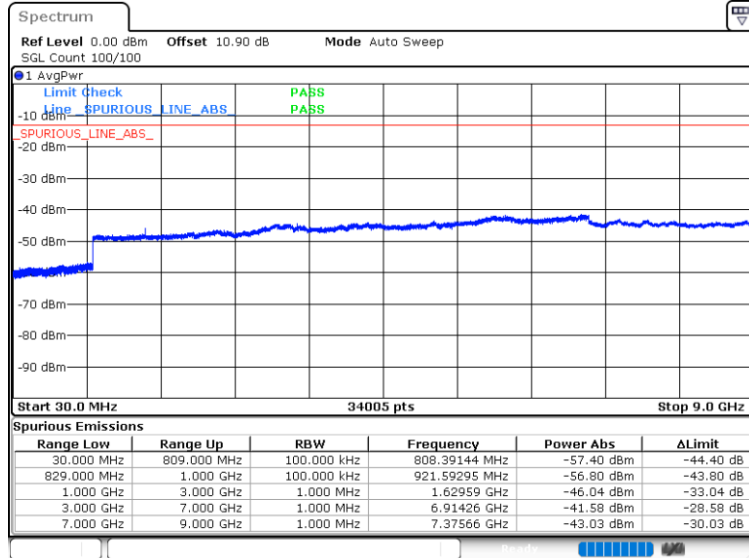
Highest Channel / QPSK





LTE Band 26 / 10MHz

Middle Channel / QPSK

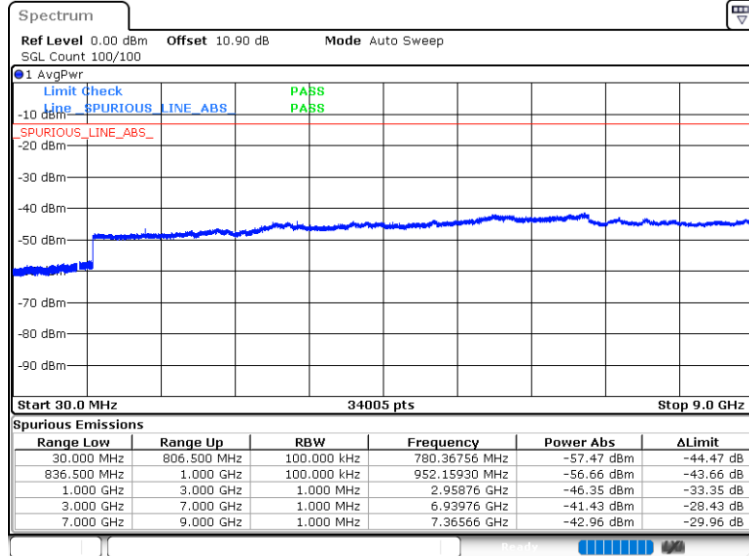


Date: 22.DEC.2021 13:51:15



LTE Band 26 / 15MHz

Middle Channel / QPSK



Date: 22.DEC.2021 14:45:15



### Frequency Stability

Test Conditions		LTE Band 26 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0128	PASS
40	Normal Voltage	0.0046	
30	Normal Voltage	0.0048	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0178	
0	Normal Voltage	0.0084	
-10	Normal Voltage	0.0176	
-20	Normal Voltage	0.0132	
-30	Normal Voltage	0.0176	
20	Maximum Voltage	0.0055	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0221	

**Note:**

- 1. Normal Voltage =14 V. ; Battery End Point (BEP) =12 V. ; Maximum Voltage =16 V.
- 2. The frequency fundamental emissions stay within the authorized frequency block.



Test Conditions		LTE Band 26 (QPSK) / Low Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 15MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0141	PASS
40	Normal Voltage	0.0075	
30	Normal Voltage	0.0002	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0006	
0	Normal Voltage	0.0001	
-10	Normal Voltage	0.0010	
-20	Normal Voltage	0.0128	
-30	Normal Voltage	0.0085	
20	Maximum Voltage	0.0039	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0103	

**Note:**

- 1. Normal Voltage =14 V. ; Battery End Point (BEP) =12 V. ; Maximum Voltage =16 V.
- 2. The frequency fundamental emissions stay within the authorized frequency block.



## LTE Band 26

### Peak-to-Average Ratio

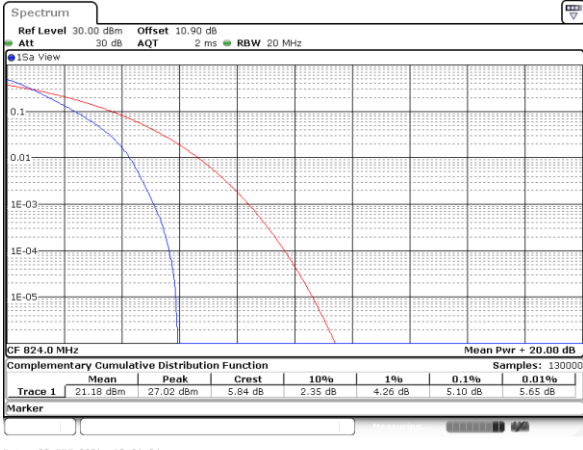
Mode	LTE Band 26 / 15MHz			
Mod.	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Result
Middle CH	5.10	5.94	6.55	<b>PASS</b>





LTE Band 26 / 15MHz / QPSK

Middle Channel / Full RB



Date: 22, DEC, 2021 15:21:34

LTE Band 26 / 15MHz / 16QAM

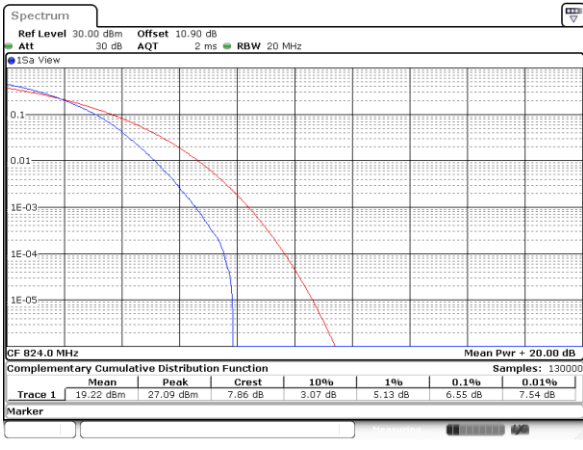
Middle Channel / Full RB



Date: 22, DEC, 2021 15:21:57

LTE Band 26 / 15MHz / 64QAM

Middle Channel / Full RB



Date: 22, DEC, 2021 15:22:20



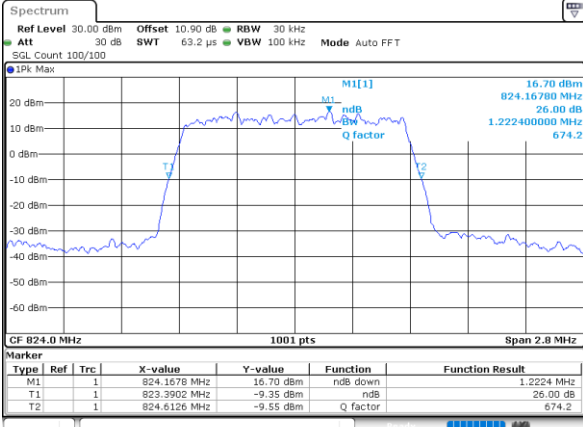
**26dB Bandwidth**

Mode	LTE Band 26 : 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	1.22	1.22	2.97	2.97	4.87	4.90	9.81	9.75	14.39	14.57	-	-
Mode	LTE Band 26 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM
Middle CH	1.22	-	3.02	-	4.92	-	9.77	-	14.42	-	-	-



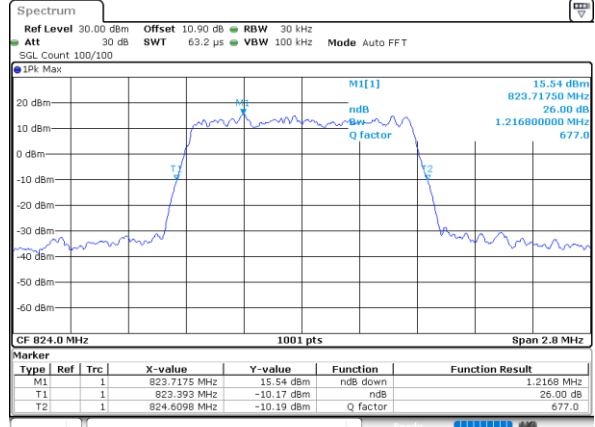
LTE Band 26

Middle Channel / 1.4MHz / QPSK



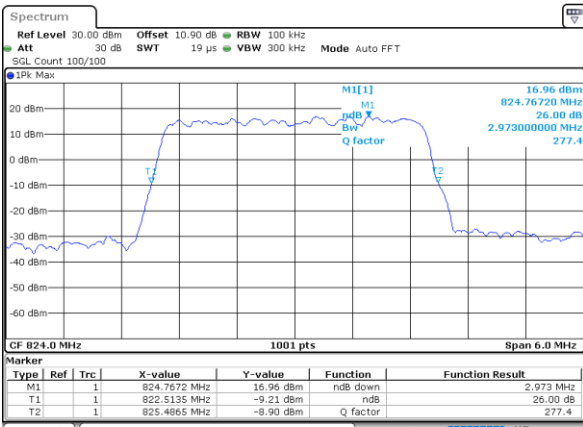
Date: 22.DEC.2021 14:49:49

Middle Channel / 1.4MHz / 16QAM



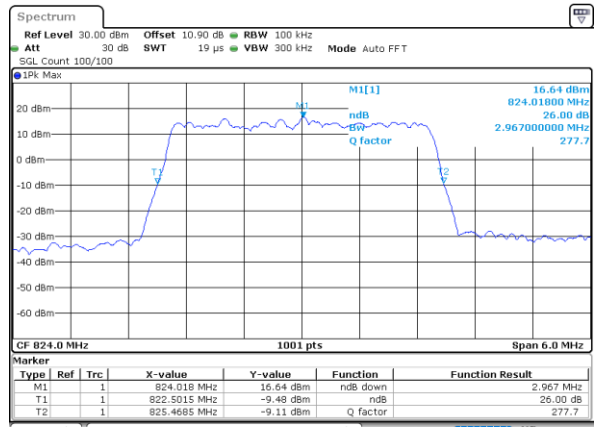
Date: 22.DEC.2021 14:50:10

Middle Channel / 3MHz / QPSK



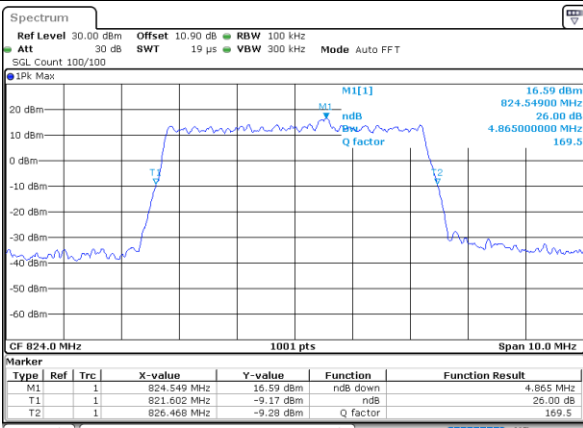
Date: 22.DEC.2021 14:53:24

Middle Channel / 3MHz / 16QAM



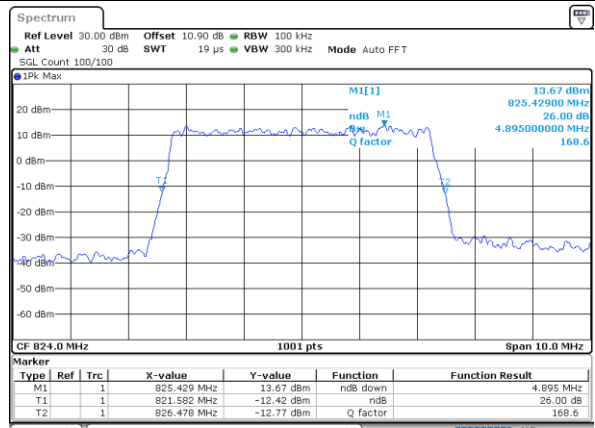
Date: 22.DEC.2021 14:53:45

Middle Channel / 5MHz / QPSK



Date: 22.DEC.2021 15:04:23

Middle Channel / 5MHz / 16QAM

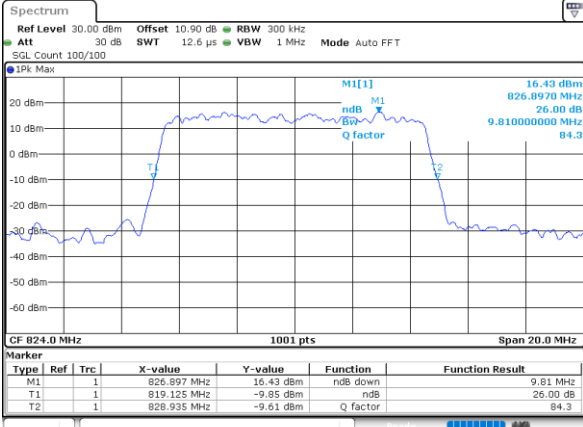


Date: 22.DEC.2021 15:04:45



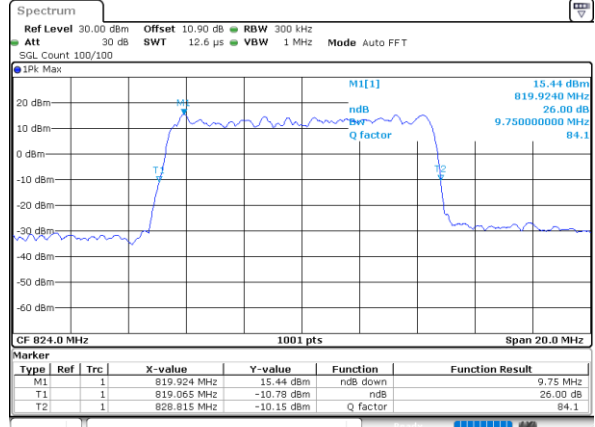
LTE Band 26

Middle Channel / 10MHz / QPSK



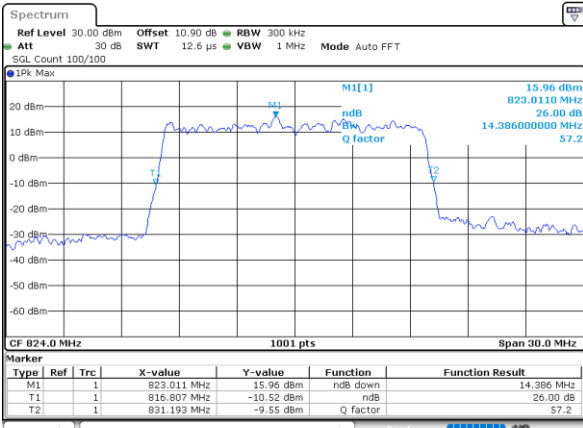
Date: 22.DEC.2021 15:11:34

Middle Channel / 10MHz / 16QAM



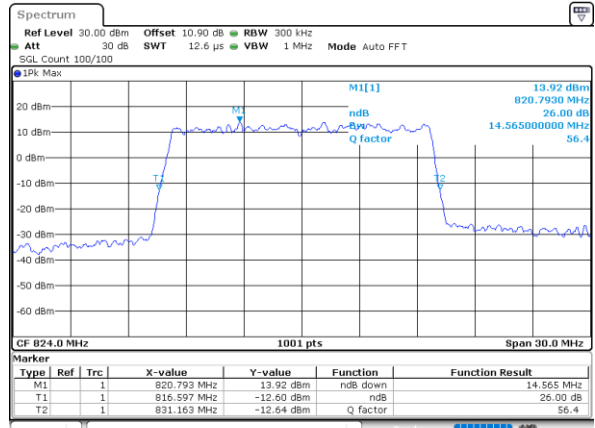
Date: 22.DEC.2021 15:11:55

Middle Channel / 15MHz / QPSK



Date: 22.DEC.2021 15:17:12

Middle Channel / 15MHz / 16QAM

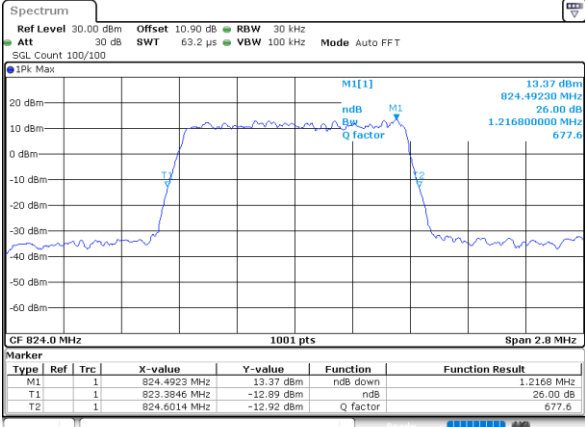


Date: 22.DEC.2021 15:17:33



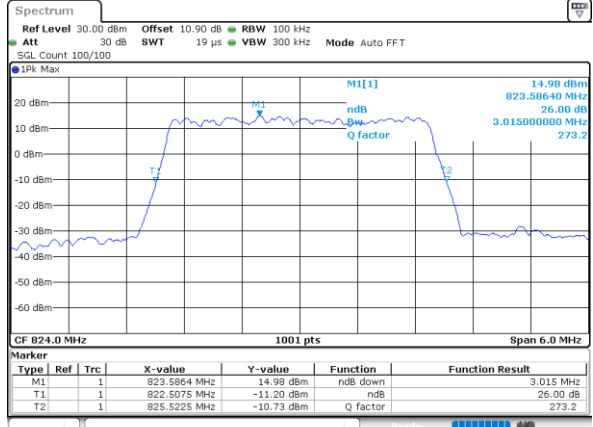
LTE Band 26

Middle Channel / 1.4MHz / 64QAM



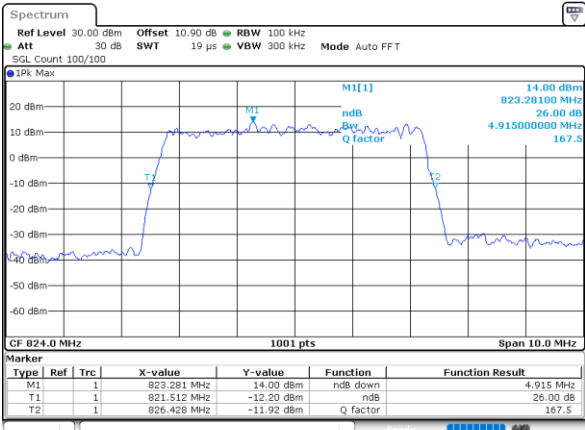
Date: 22. DEC. 2021 14:51:15

Middle Channel / 3MHz / 64QAM



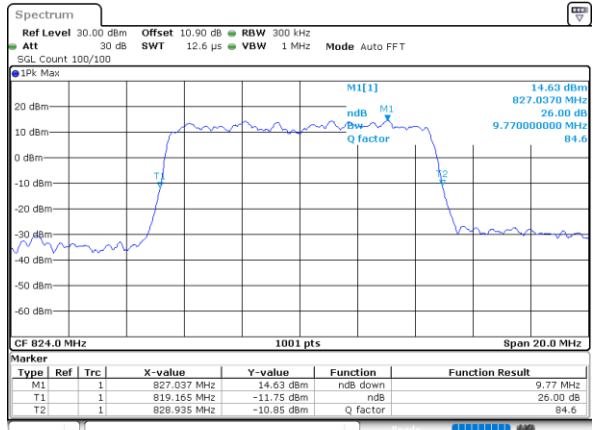
Date: 22. DEC. 2021 15:10:14

Middle Channel / 5MHz / 64QAM



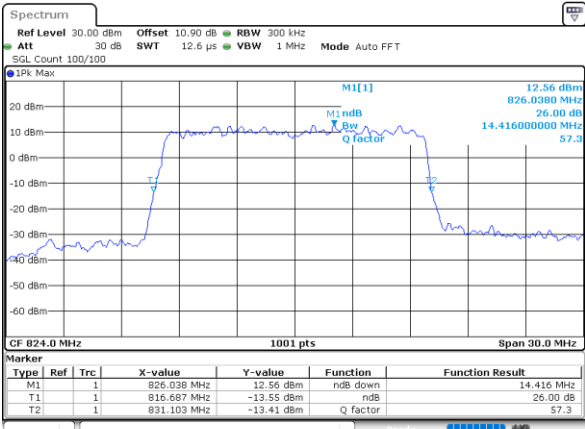
Date: 22. DEC. 2021 15:05:49

Middle Channel / 10MHz / 64QAM



Date: 22. DEC. 2021 15:15:03

Middle Channel / 15MHz / 64QAM



Date: 22. DEC. 2021 15:18:37

N/A



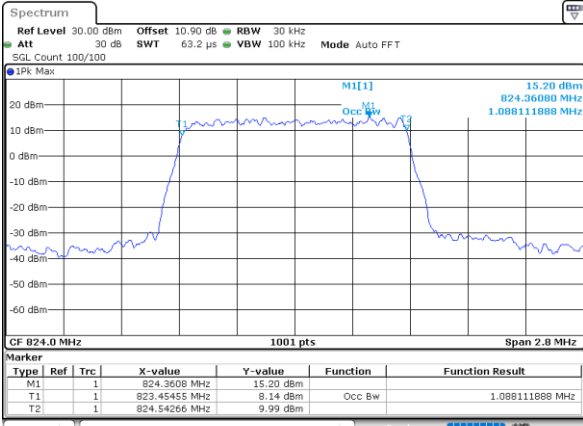
**Occupied Bandwidth**

Mode	LTE Band 26 : 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	2.72	2.70	4.48	4.50	8.95	8.97	13.52	13.43	-	-
Mode	LTE Band 26 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM
Middle CH	1.09	-	2.75	-	4.51	-	8.99	-	13.46	-	-	-



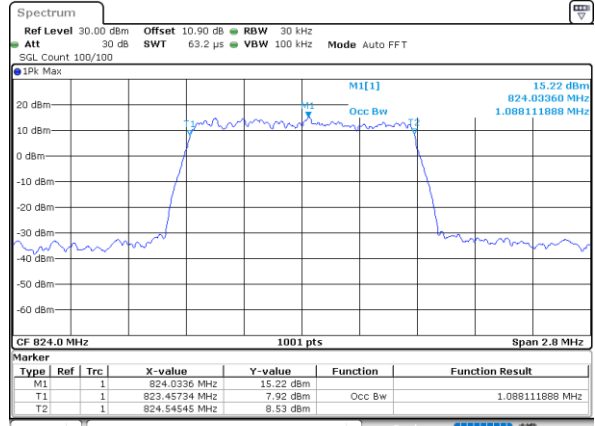
LTE Band 26

Middle Channel / 1.4MHz / QPSK



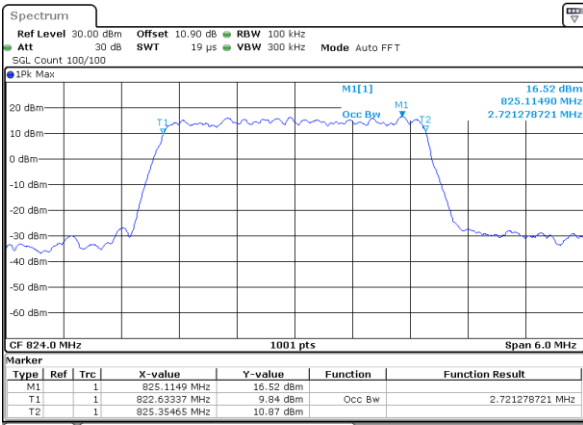
Date: 22.DEC.2021 14:49:28

Middle Channel / 1.4MHz / 16QAM



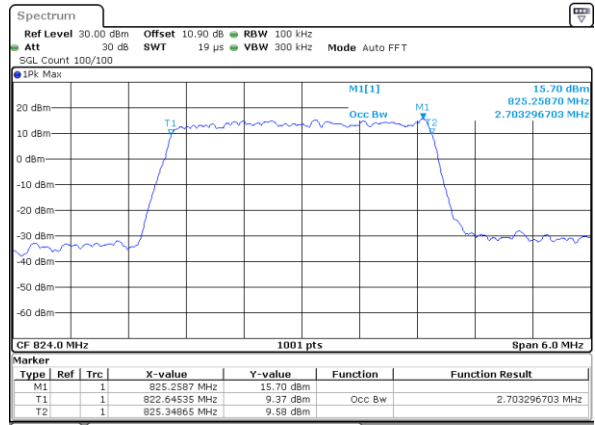
Date: 22.DEC.2021 14:50:32

Middle Channel / 3MHz / QPSK



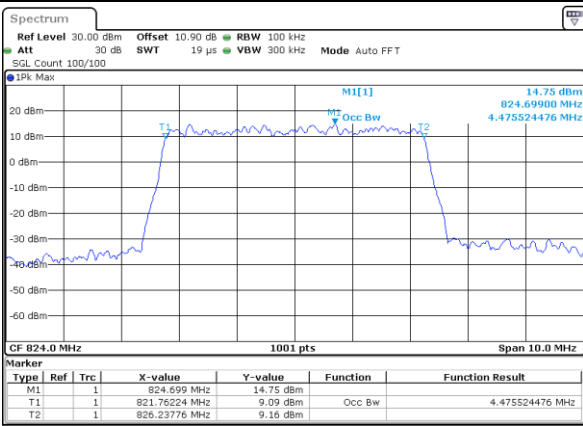
Date: 22.DEC.2021 14:53:03

Middle Channel / 3MHz / 16QAM



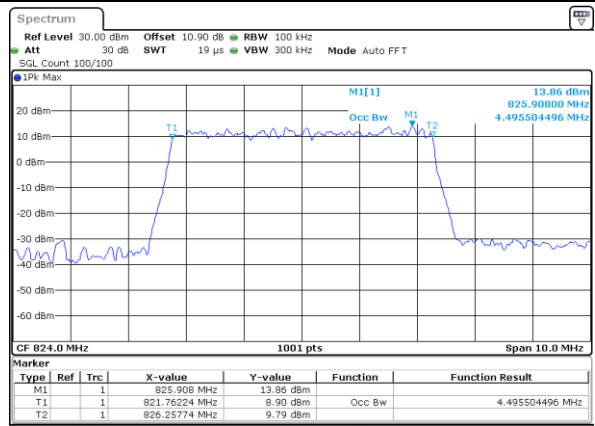
Date: 22.DEC.2021 15:01:31

Middle Channel / 5MHz / QPSK



Date: 22.DEC.2021 15:04:02

Middle Channel / 5MHz / 16QAM

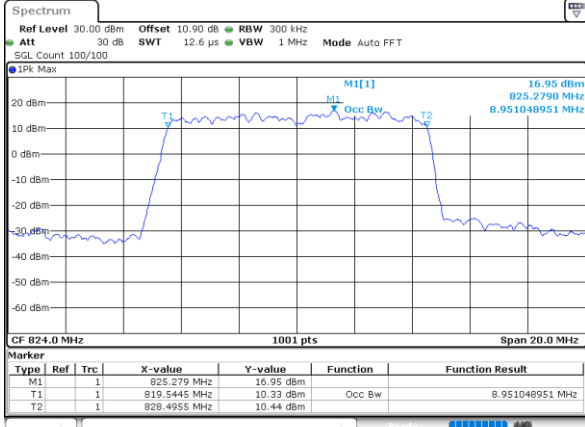


Date: 22.DEC.2021 15:05:06



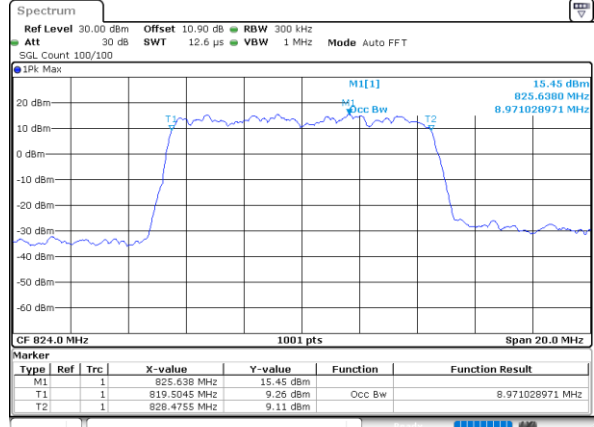
LTE Band 26

Middle Channel / 10MHz / QPSK



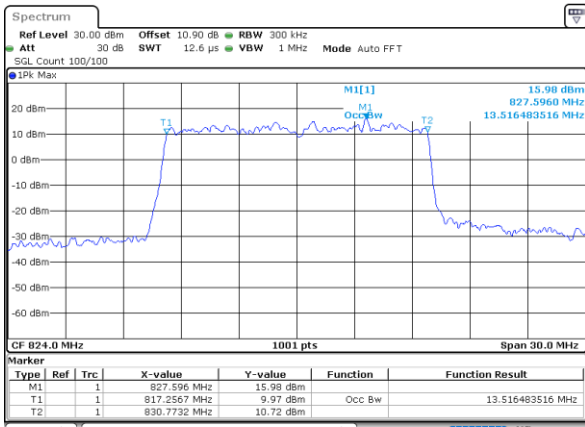
Date: 22.DEC.2021 15:11:13

Middle Channel / 10MHz / 16QAM



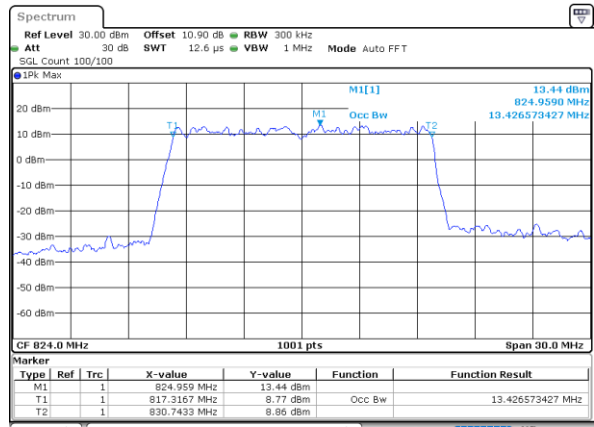
Date: 22.DEC.2021 15:11:20

Middle Channel / 15MHz / QPSK



Date: 22.DEC.2021 15:16:50

Middle Channel / 15MHz / 16QAM



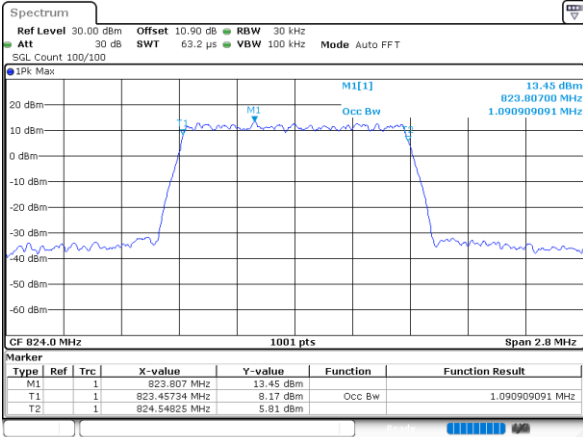
Date: 22.DEC.2021 15:17:54





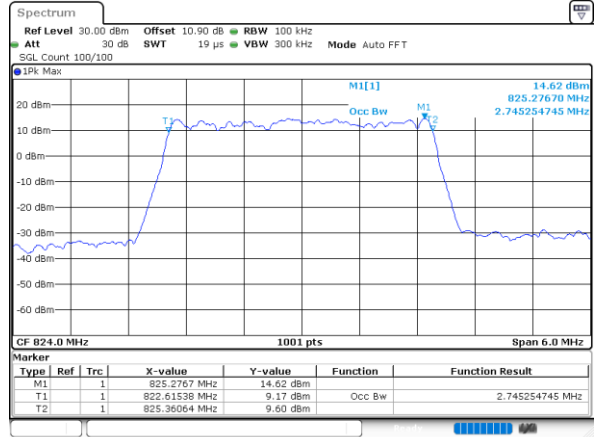
LTE Band 26

Middle Channel / 1.4MHz / 64QAM



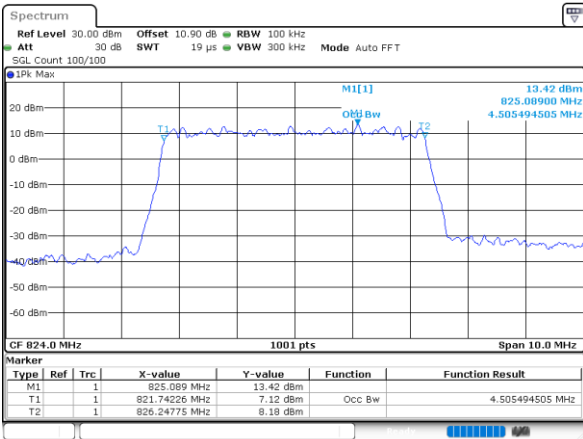
Date: 22.DEC.2021 14:50:53

Middle Channel / 3MHz / 64QAM



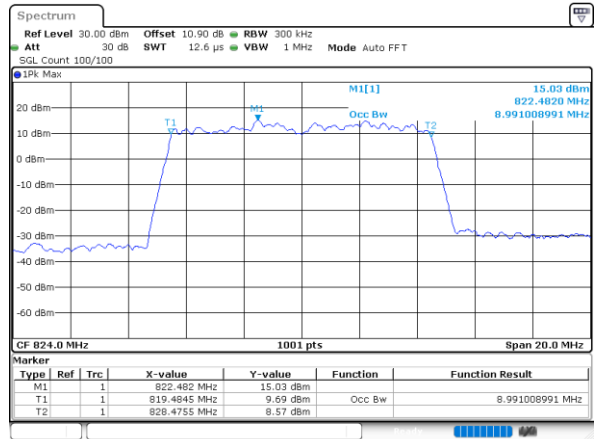
Date: 22.DEC.2021 15:01:52

Middle Channel / 5MHz / 64QAM



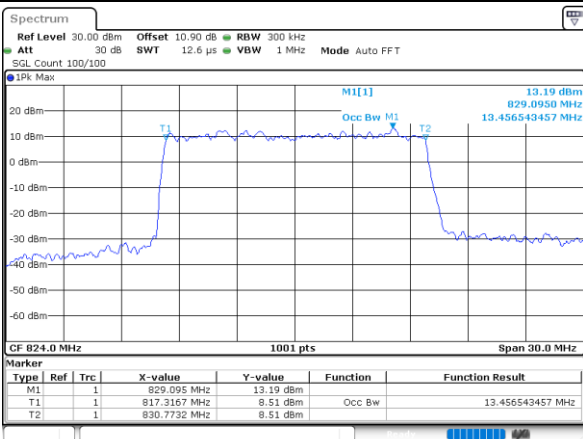
Date: 22.DEC.2021 15:05:27

Middle Channel / 10MHz / 64QAM



Date: 22.DEC.2021 15:14:41

Middle Channel / 15MHz / 64QAM



Date: 22.DEC.2021 15:18:16

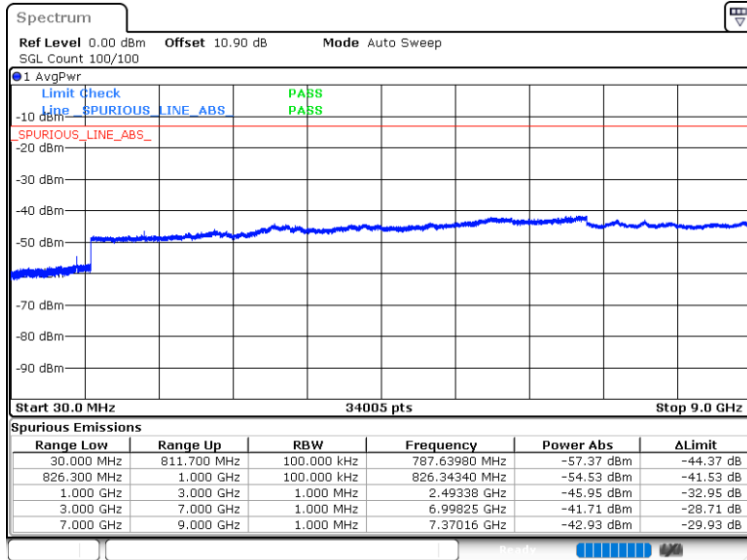
N/A



# Emission masks – Out of band emissions

## LTE Band 26 / 1.4MHz

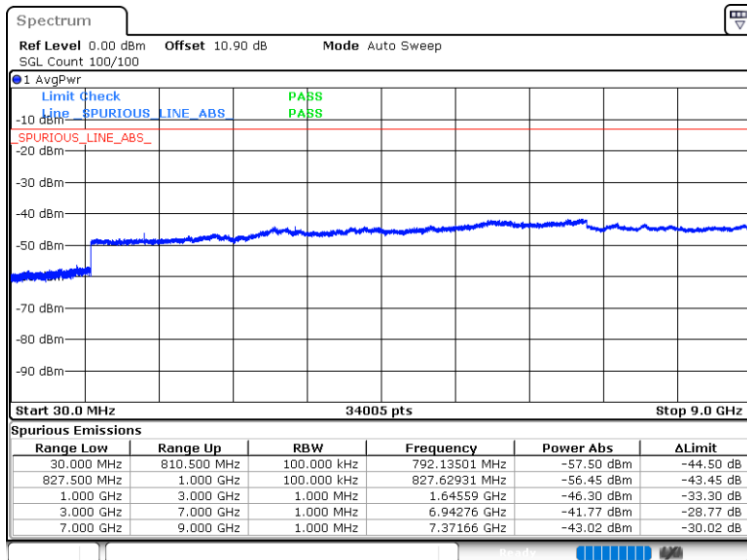
### Middle Channel / QPSK



Date: 22.DEC.2021 14:52:40

## LTE Band 26 / 3MHz

### Middle Channel / QPSK

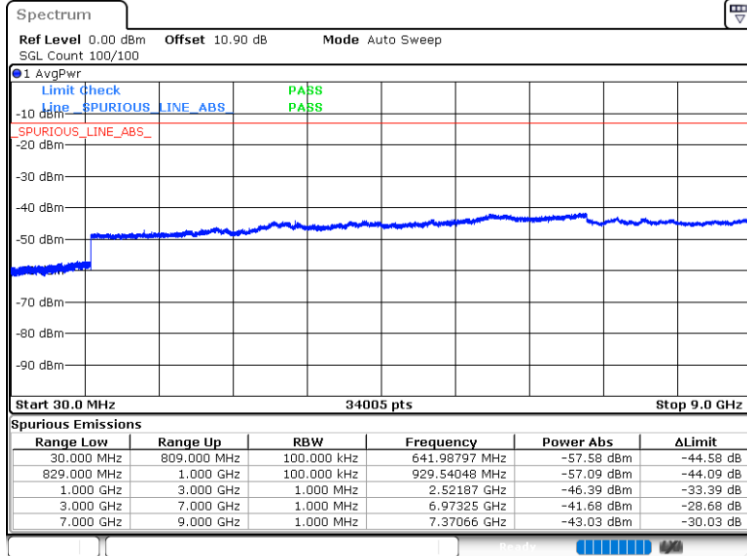


Date: 22.DEC.2021 15:03:40



LTE Band 26 / 5MHz

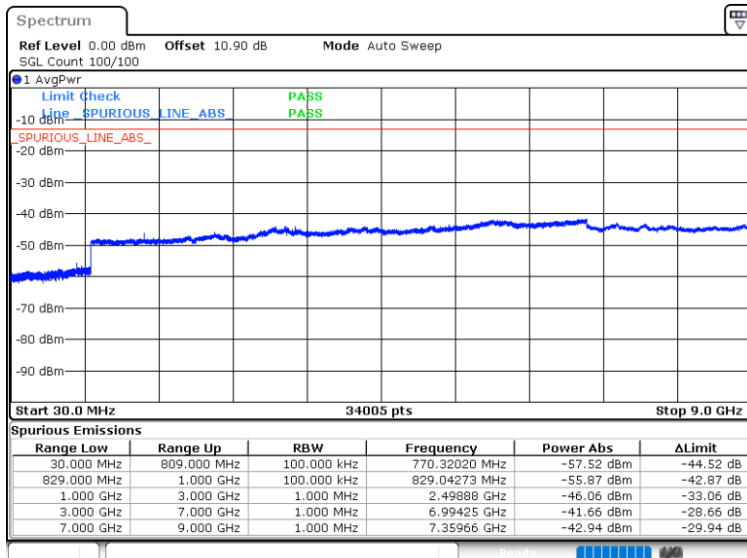
Middle Channel / QPSK



Date: 22.DEC.2021 15:10:51

LTE Band 26 / 10MHz

Middle Channel / QPSK

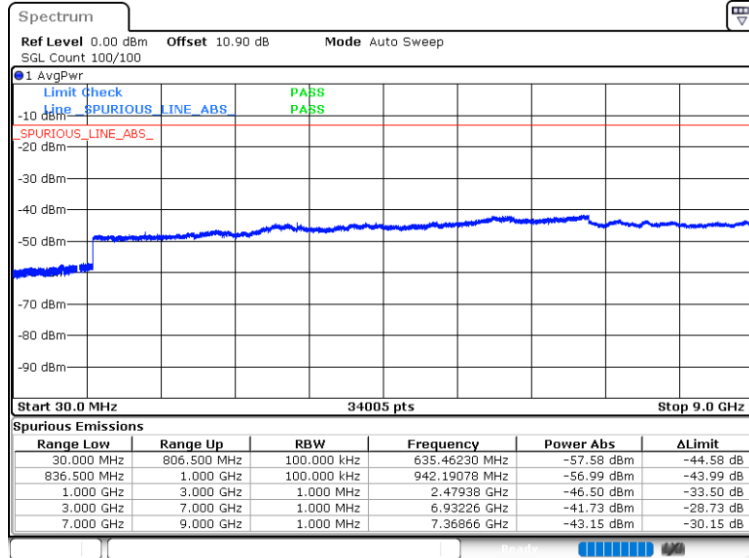


Date: 22.DEC.2021 15:16:28



LTE Band 26 / 15MHz

Middle Channel / QPSK



Date: 22.DEC.2021 15:23:22



## Appendix B. Test Results of Radiated Test

### LTE Band 26

LTE Band 26 / 5MHz / QPSK									
Channel	Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading (dBm)	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1629	-61.24	-13	-48.24	-70.84	-66.77	0.91	8.59	H
	2443	-57.30	-13	-44.30	-71.23	-64.63	1.14	10.62	H
	3257	-54.96	-13	-41.96	-71.1	-63.41	1.32	11.92	H
									H
									H
									H
	1629	-61.74	-13	-48.74	-70.88	-67.27	0.91	8.59	V
	2443	-57.30	-13	-44.30	-71.3	-64.63	1.14	10.62	V
	3257	-54.52	-13	-41.52	-71.15	-62.97	1.32	11.92	V
									V
									V
									V
Middle	1634	-61.14	-13	-48.14	-70.76	-66.68	0.92	8.61	H
	2451	-57.28	-13	-44.28	-71.23	-64.62	1.14	10.63	H
	3267	-55.08	-13	-42.08	-71.2	-63.55	1.32	11.94	H
									H
									H
									H
	1634	-61.23	-13	-48.23	-70.37	-66.77	0.92	8.61	V
	2451	-57.27	-13	-44.27	-71.31	-64.61	1.14	10.63	V
	3267	-54.79	-13	-41.79	-71.39	-63.26	1.32	11.94	V
									V
									V
									V



Highest	1639	-61.62	-13	-48.62	-71.24	-67.18	0.92	8.63	H
	2458	-56.50	-13	-43.50	-70.44	-63.85	1.14	10.64	H
	3277	-54.99	-13	-41.99	-71.09	-63.48	1.32	11.96	H
									H
									H
									H
	1639	-61.56	-13	-48.56	-70.68	-67.12	0.92	8.63	V
	2458	-56.88	-13	-43.88	-70.93	-64.23	1.14	10.64	V
	3277	-54.45	-13	-41.45	-71.03	-62.94	1.32	11.96	V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 26 / 10MHz / QPSK									
Channel	Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading (dBm)	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1629	-61.26	-13	-48.26	-70.86	-66.79	0.91	8.59	H
	2444	-57.34	-13	-44.34	-71.27	-64.67	1.14	10.62	H
	3258	-54.92	-13	-41.92	-71.06	-63.37	1.32	11.92	H
									H
									H
									H
									H
	1629	-61.67	-13	-48.67	-70.81	-67.20	0.91	8.59	V
	2444	-56.97	-13	-43.97	-70.98	-64.30	1.14	10.62	V
	3258	-54.55	-13	-41.55	-71.17	-63.00	1.32	11.92	V
									V
									V
									V
									V

**Remark:** Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 26 / 15MHz / QPSK									
Channel	Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading (dBm)	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1630	-61.41	-13	-48.41	-71.01	-66.94	0.91	8.59	H
	2445	-56.99	-13	-43.99	-70.92	-64.33	1.14	10.62	H
	3259	-55.29	-13	-42.29	-71.42	-63.74	1.32	11.92	H
									H
									H
									H
									H
	1630	-62.05	-13	-49.05	-71.19	-67.58	0.91	8.59	V
	2445	-56.79	-13	-43.79	-70.8	-64.13	1.14	10.62	V
	3259	-54.50	-13	-41.50	-71.12	-62.95	1.32	11.92	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.





LTE Band 26 / 15MHz / QPSK									
Channel	Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading (dBm)	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
CH26790 (824MHz)	1634	-58.73	-13	-45.73	-70.34	-65.09	0.81	9.32	H
	2452	-56.07	-13	-43.07	-70.74	-63.12	1.06	10.26	H
	3272	-53.12	-13	-40.12	-70.78	-61.76	1.11	11.90	H
									H
									H
									H
									H
	1634	-58.27	-13	-45.27	-69.77	-64.63	0.81	9.32	V
	2452	-54.60	-13	-41.60	-69.32	-61.65	1.06	10.26	V
	3272	-52.79	-13	-39.79	-70.74	-61.43	1.11	11.90	V
									V
									V
									V
									V

**Remark:** Spurious emissions within 30-1000MHz were found more than 20dB below limit line.