



LTE Band 12 / 1.4MHz / 64QAM

Lowest Band Edge / 1 RB



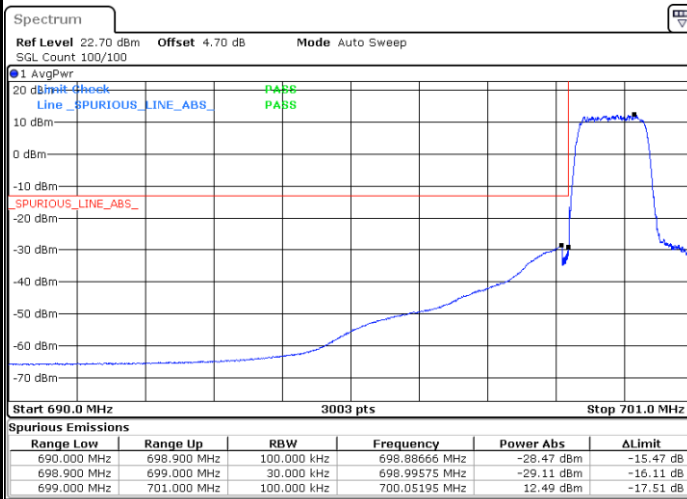
Date: 10.MAR.2020 20:56:17

Highest Band Edge / 1 RB



Date: 10.MAR.2020 20:54:02

Lowest Band Edge / Full RB



Date: 10.MAR.2020 20:57:25

Highest Band Edge / Full RB

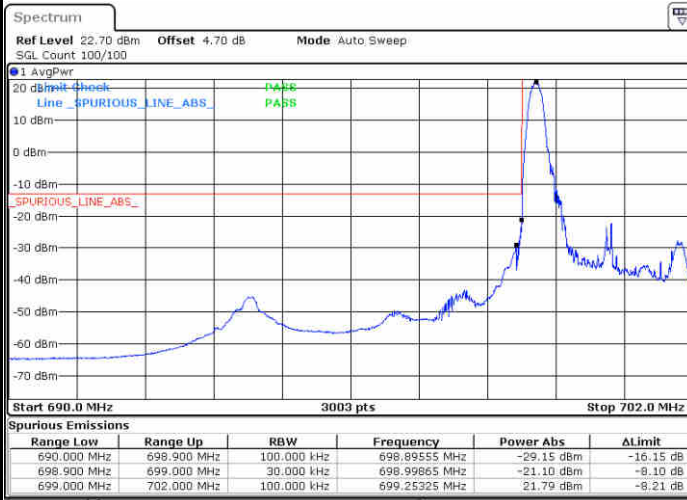


Date: 10.MAR.2020 20:55:10



LTE Band 12 / 3MHz / QPSK

Lowest Band Edge / 1RB



Date: 4 FEB 2020 10:00:44

Highest Band Edge / 1 RB



Date: 4 FEB 2020 10:06:22

Lowest Band Edge / Full RB



Date: 4 FEB 2020 10:01:52

Highest Band Edge / Full RB

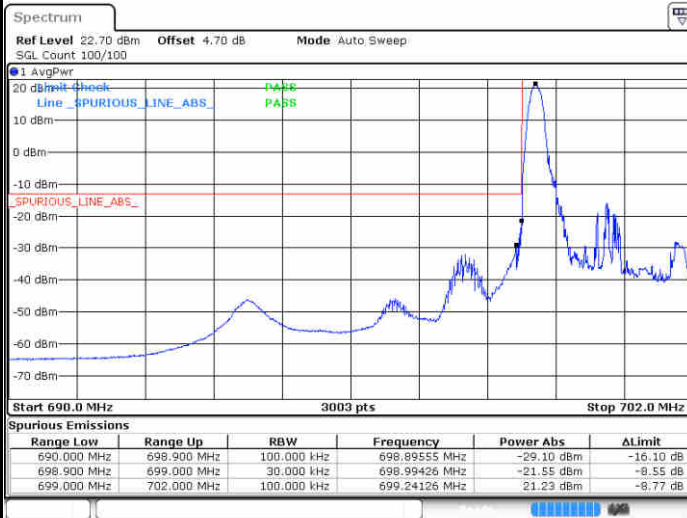


Date: 4 FEB 2020 10:05:14



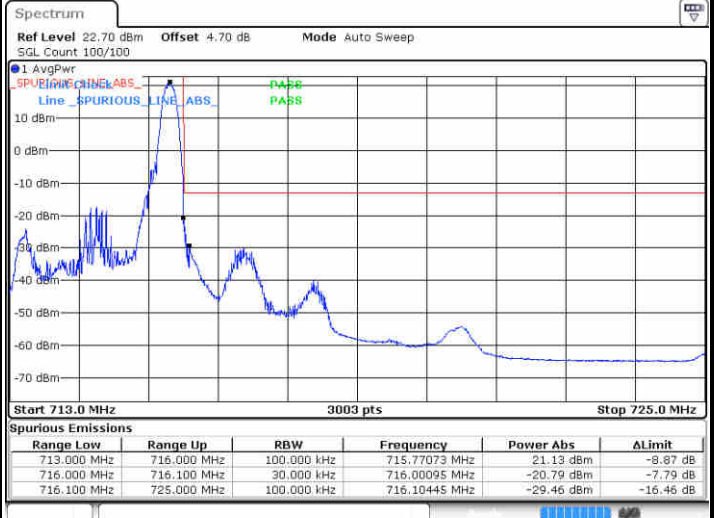
LTE Band 12 / 3MHz / 16QAM

Lowest Band Edge / 1 RB



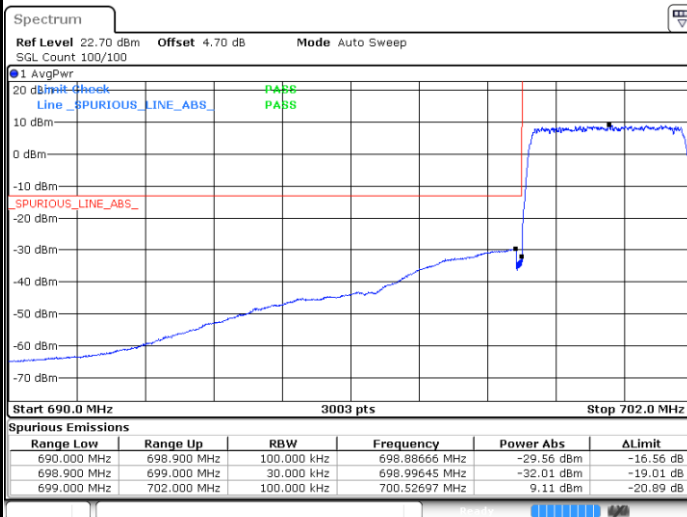
Date: 4 FEB 2020 09:59:36

Highest Band Edge / 1 RB



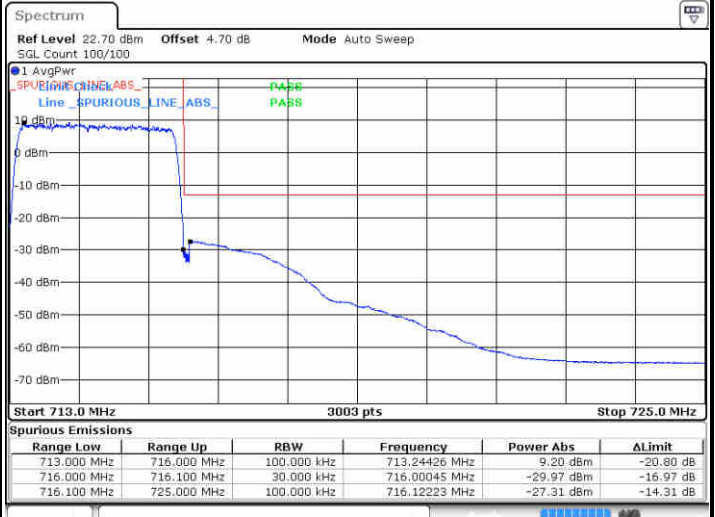
Date: 4 FEB 2020 10:07:30

Lowest Band Edge / Full RB



Date: 4 FEB 2020 10:02:59

Highest Band Edge / Full RB

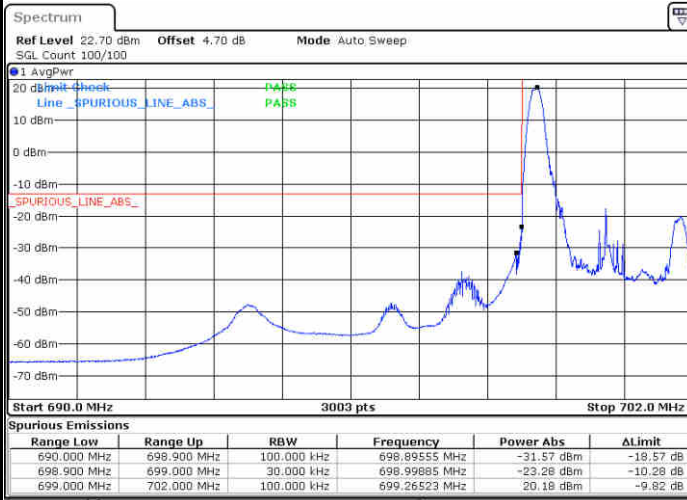


Date: 4 FEB 2020 10:04:07



LTE Band 12 / 3MHz / 64QAM

Lowest Band Edge / 1 RB



Date: 10.MAR.2020 21:04:57

Highest Band Edge / 1 RB



Date: 10.MAR.2020 21:08:19

Lowest Band Edge / Full RB



Date: 10.MAR.2020 21:06:05

Highest Band Edge / Full RB



Date: 10.MAR.2020 21:07:12



LTE Band 12 / 5MHz / QPSK

Lowest Band Edge / 1 RB



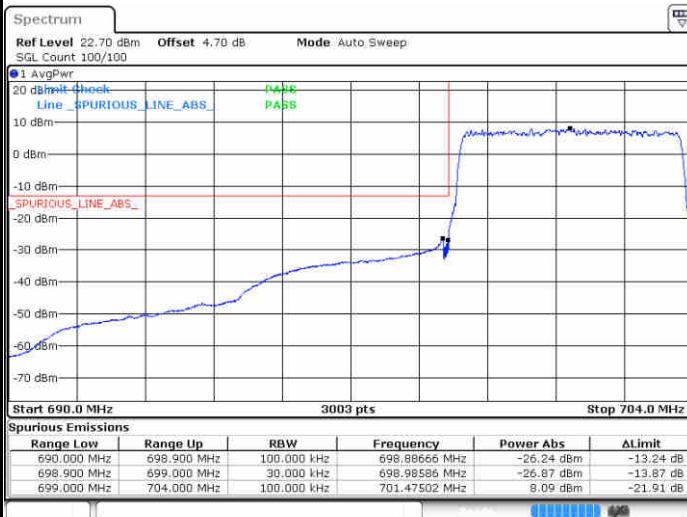
Date: 4 FEB 2020 10:17:14

Highest Band Edge / 1 RB



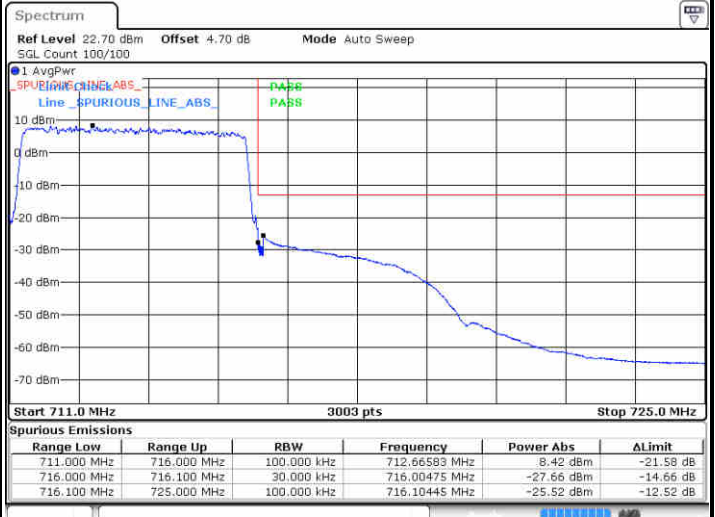
Date: 4 FEB 2020 10:22:52

Lowest Band Edge / Full RB



Date: 4 FEB 2020 10:18:21

Highest Band Edge / Full RB

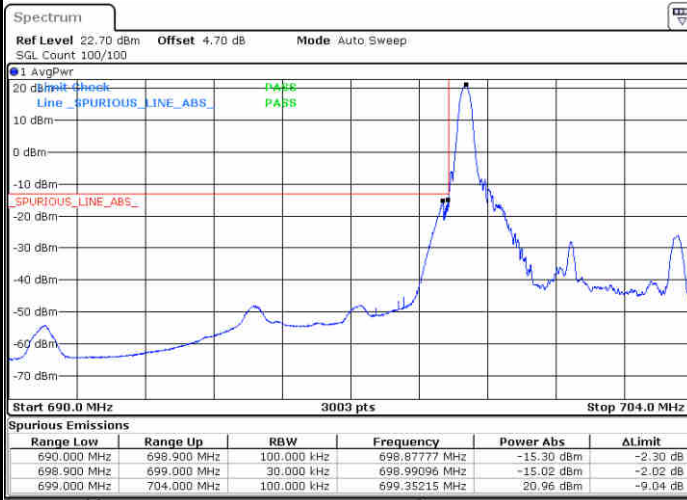


Date: 4 FEB 2020 10:21:44



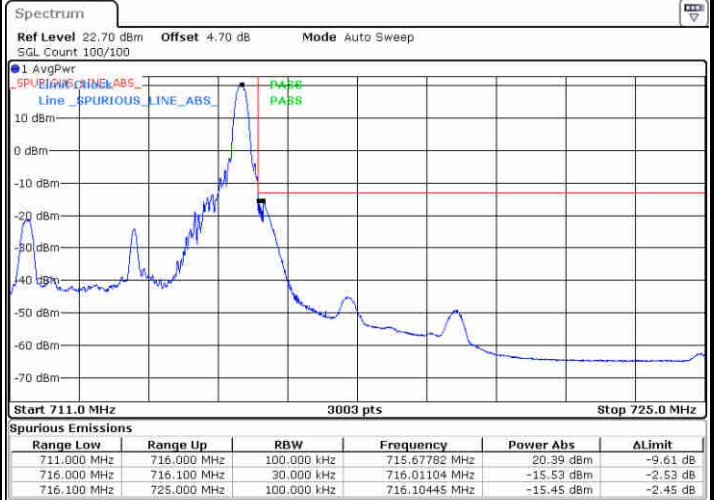
LTE Band 12 / 5MHz / 16QAM

Lowest Band Edge / 1RB



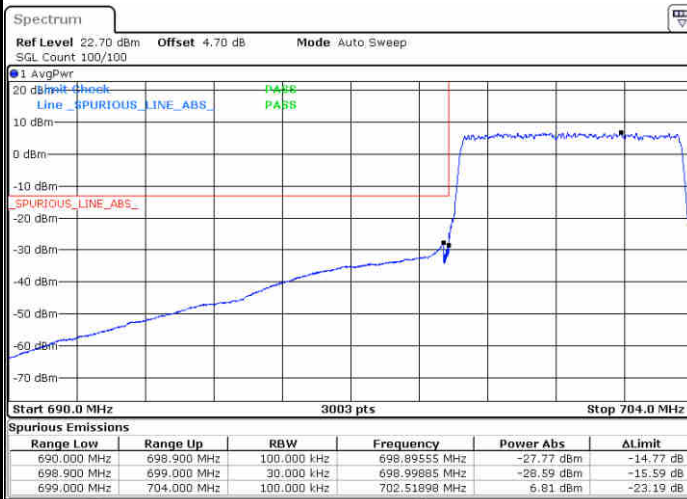
Date: 4 FEB 2020 10:16:06

Highest Band Edge / 1 RB



Date: 4 FEB 2020 10:23:59

Lowest Band Edge / Full RB



Date: 4 FEB 2020 10:19:29

Highest Band Edge / Full RB

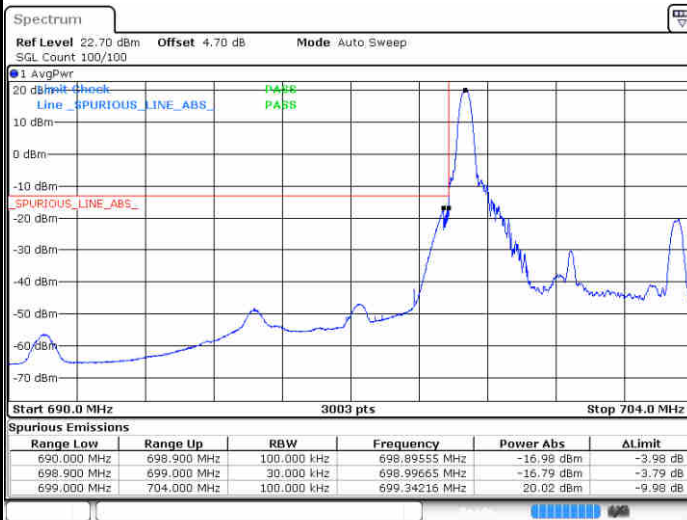


Date: 4 FEB 2020 10:20:36



LTE Band 12 / 5MHz / 64QAM

Lowest Band Edge / 1RB



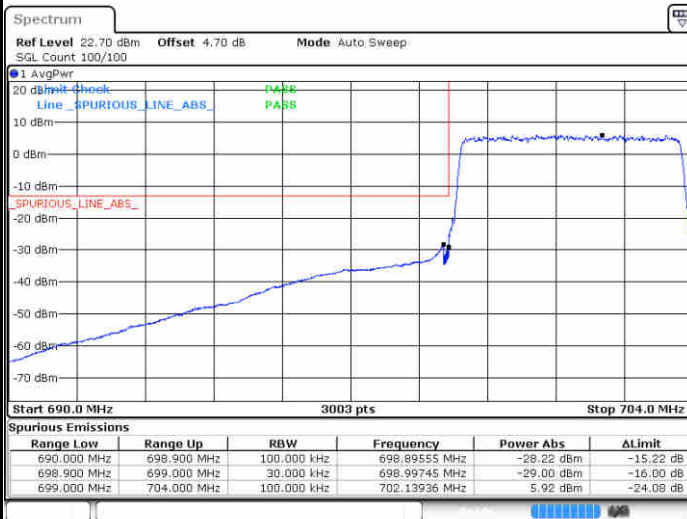
Date: 10.MAR.2020 21:12:41

Highest Band Edge / 1 RB



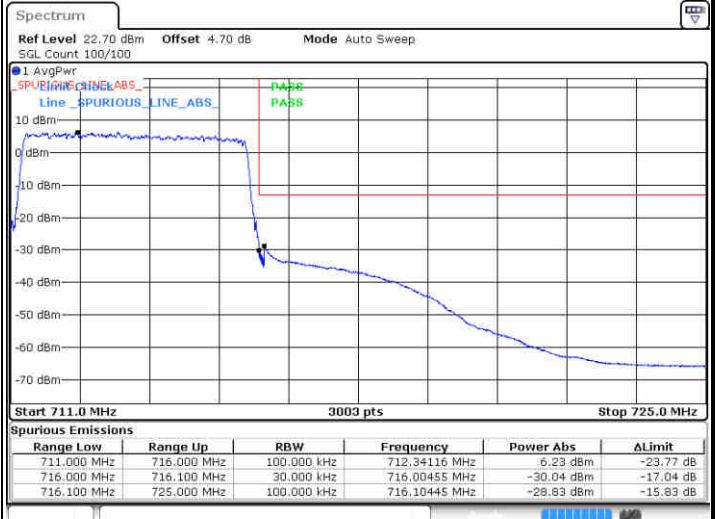
Date: 10.MAR.2020 21:11:34

Lowest Band Edge / Full RB



Date: 10.MAR.2020 21:13:49

Highest Band Edge / Full RB

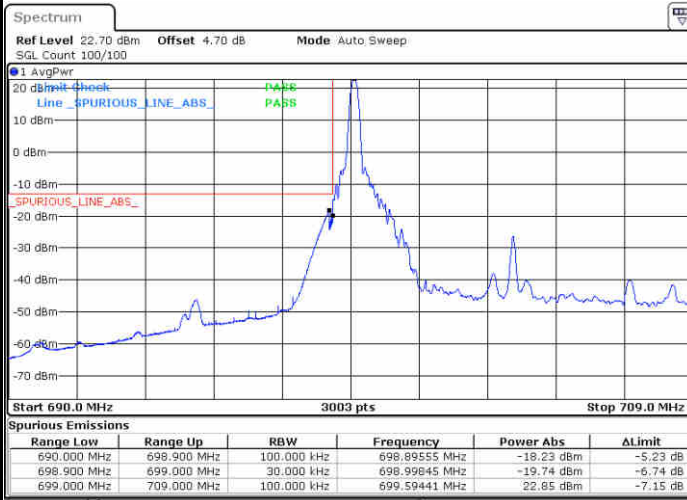


Date: 10.MAR.2020 21:10:27



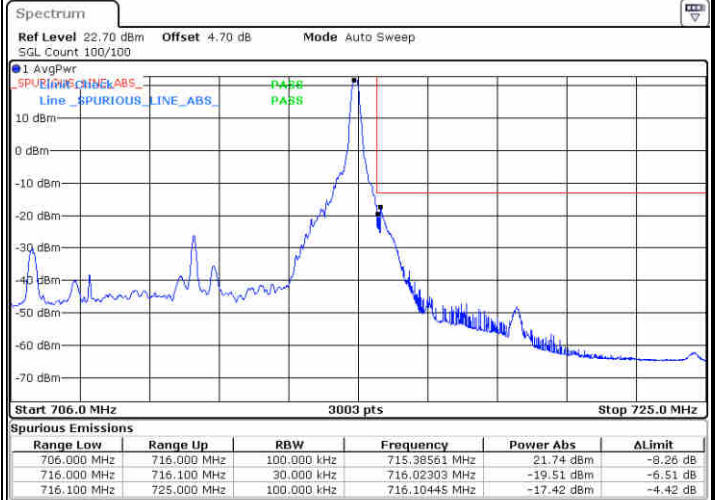
LTE Band 12 / 10MHz / QPSK

Lowest Band Edge / 1 RB



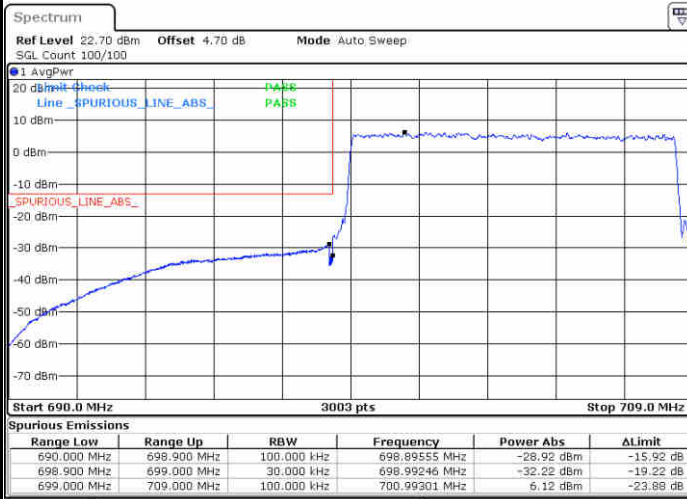
Date: 4 FEB 2020 22:54:08

Highest Band Edge / 1 RB



Date: 4 FEB 2020 22:59:45

Lowest Band Edge / Full RB



Date: 4 FEB 2020 22:55:15

Highest Band Edge / Full RB

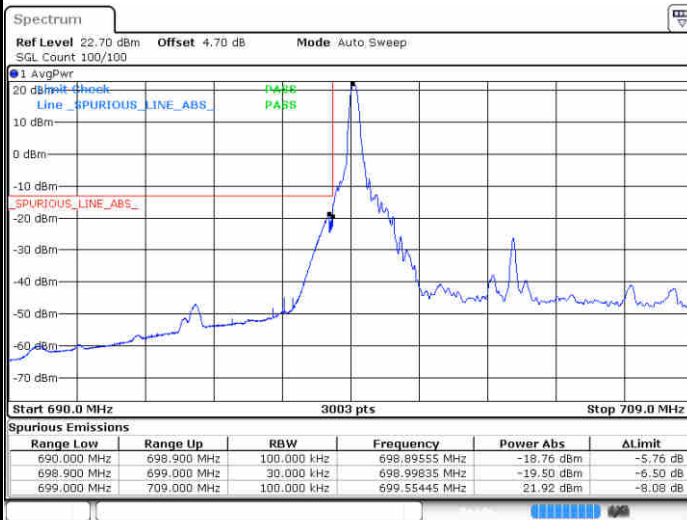


Date: 4 FEB 2020 22:58:38



LTE Band 12 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



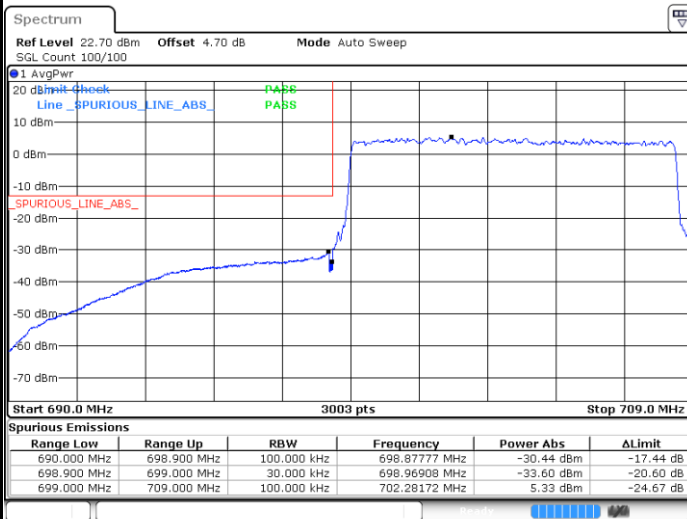
Date: 4 FEB 2020 22:53:00

Highest Band Edge / 1 RB



Date: 4 FEB 2020 23:00:53

Lowest Band Edge / Full RB



Date: 4 FEB 2020 22:56:23

Highest Band Edge / Full RB

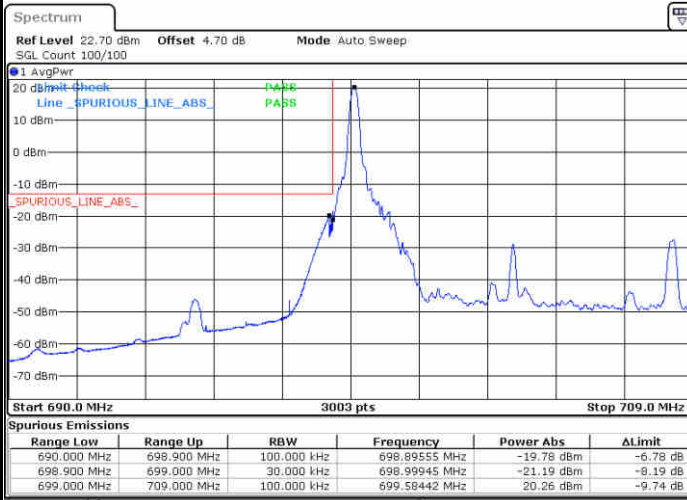


Date: 4 FEB 2020 22:57:30



LTE Band 12 / 10MHz / 64QAM

Lowest Band Edge / 1 RB



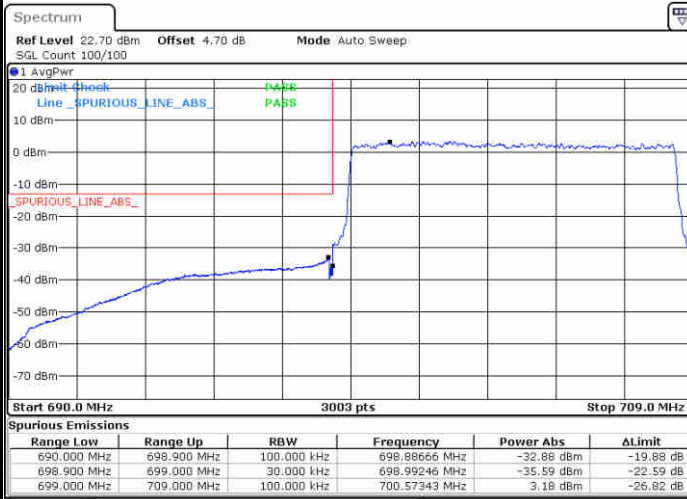
Date: 10.MAR.2020 21:23:36

Highest Band Edge / 1 RB



Date: 10.MAR.2020 21:22:29

Lowest Band Edge / Full RB



Date: 10.MAR.2020 21:24:43

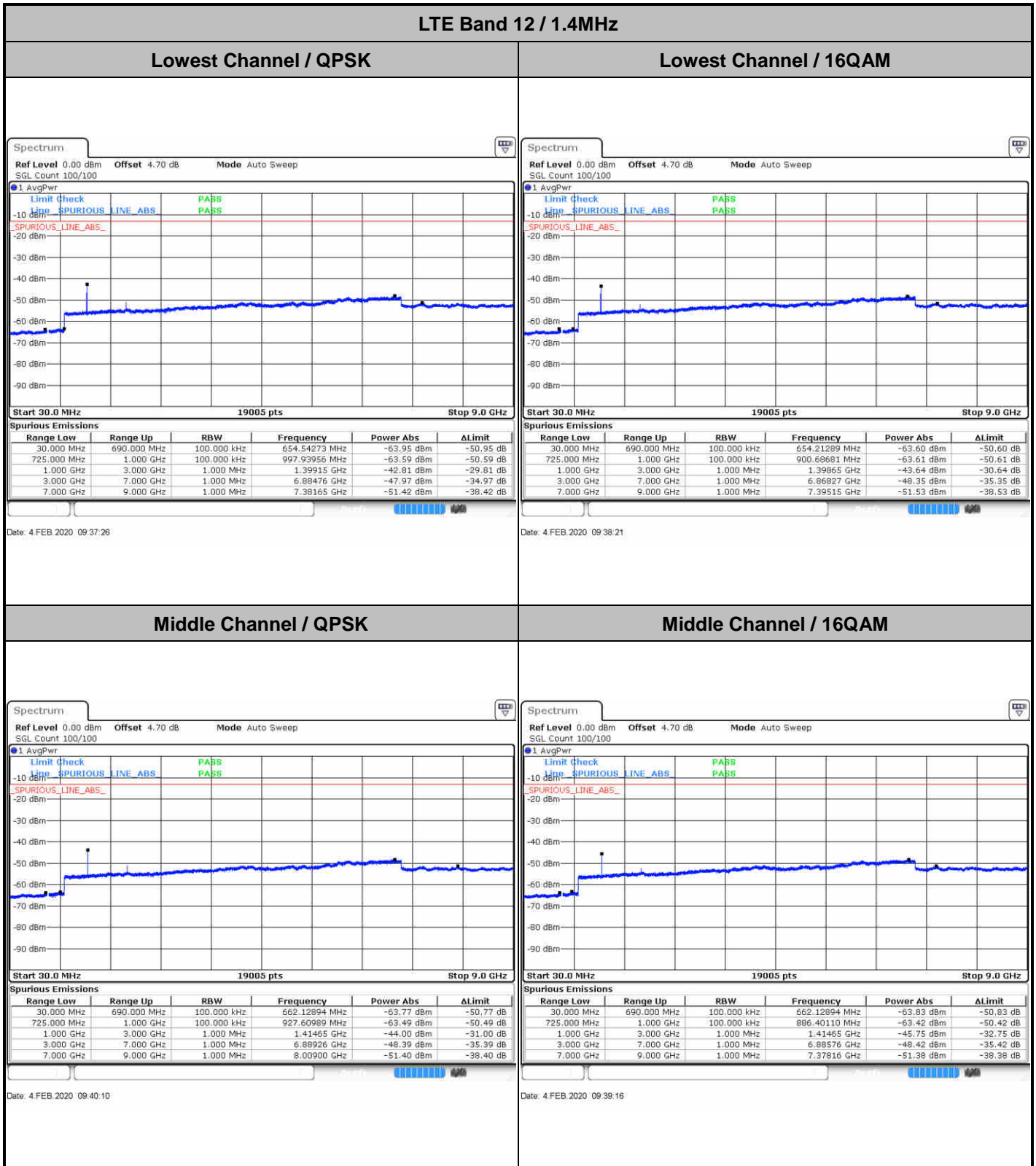
Highest Band Edge / Full RB



Date: 10.MAR.2020 21:21:21



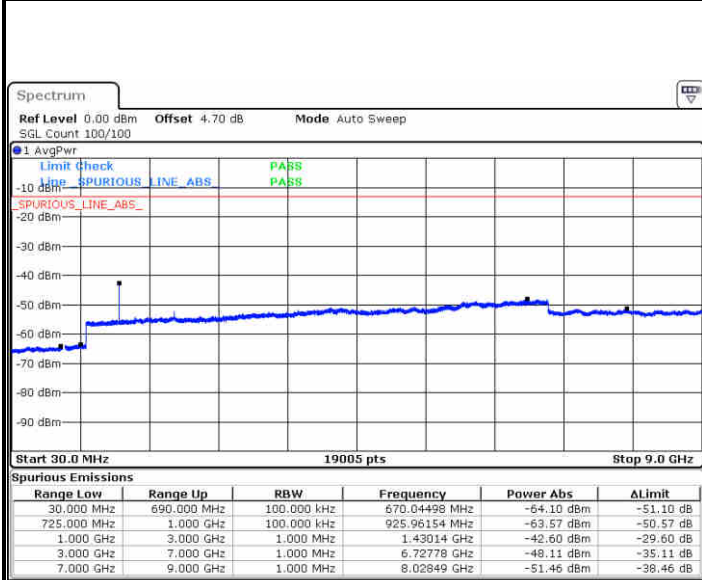
Conducted Spurious Emission





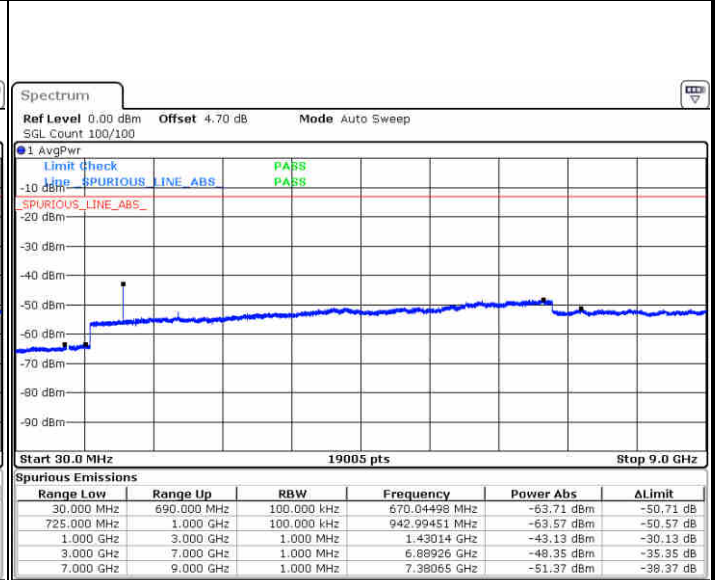
LTE Band 12 / 1.4MHz

Highest Channel / QPSK



Date: 4 FEB 2020 09:41:05

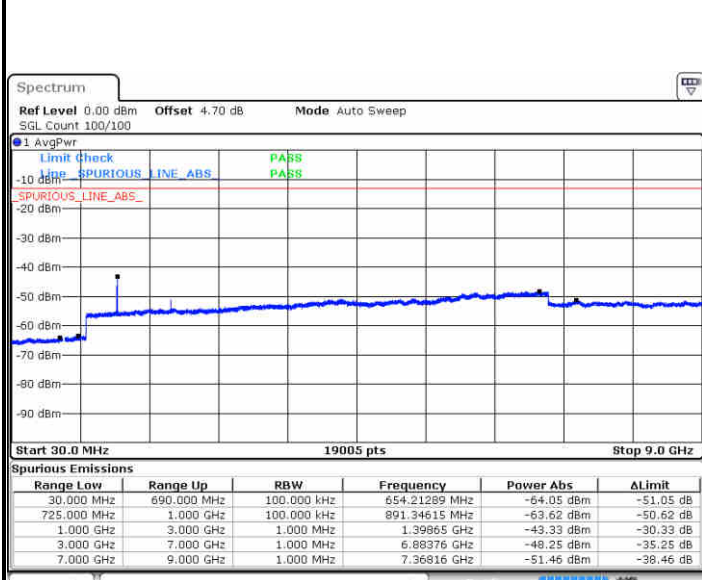
Highest Channel / 16QAM



Date: 4 FEB 2020 09:42:00

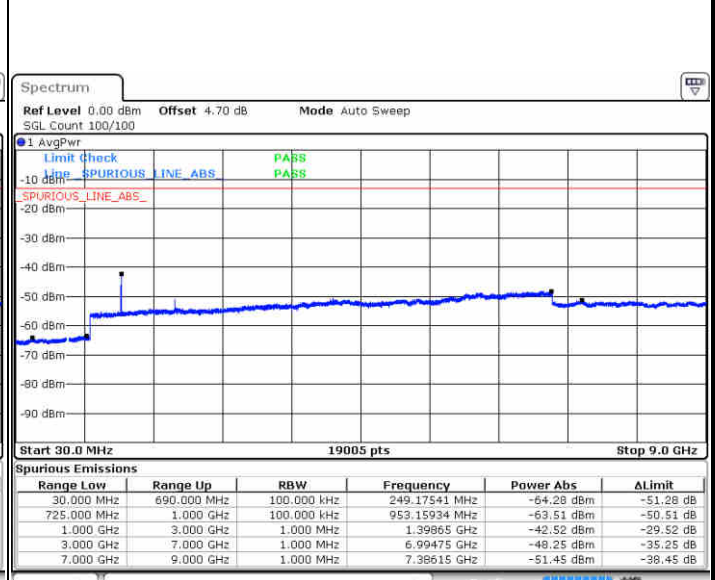
LTE Band 12 / 3MHz

Lowest Channel / QPSK



Date: 4 FEB 2020 09:53:55

Lowest Channel / 16QAM



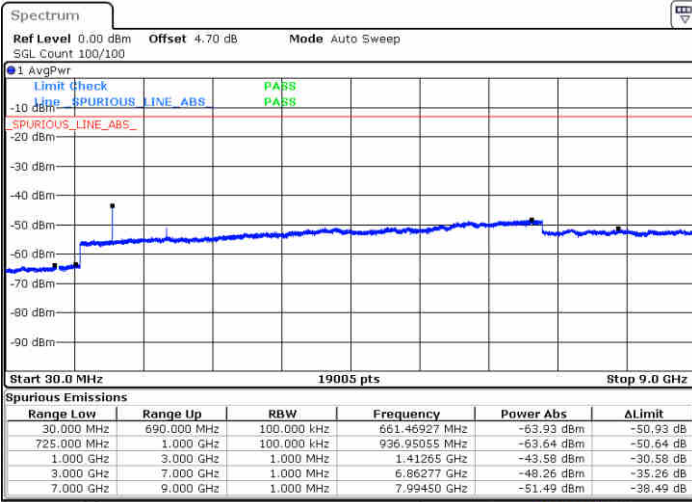
Date: 4 FEB 2020 09:54:49



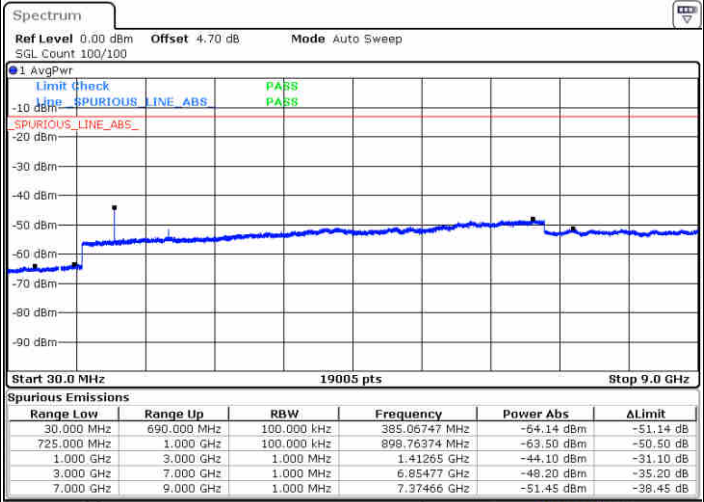
LTE Band 12 / 3MHz

Middle Channel / QPSK

Middle Channel / 16QAM



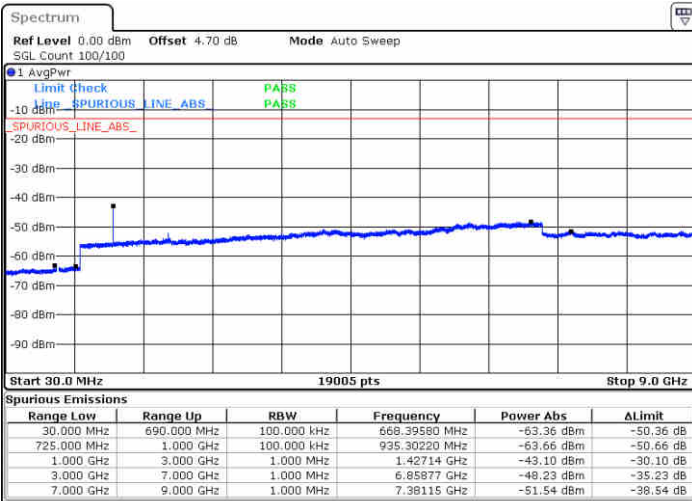
Date: 4 FEB 2020 09:56:39



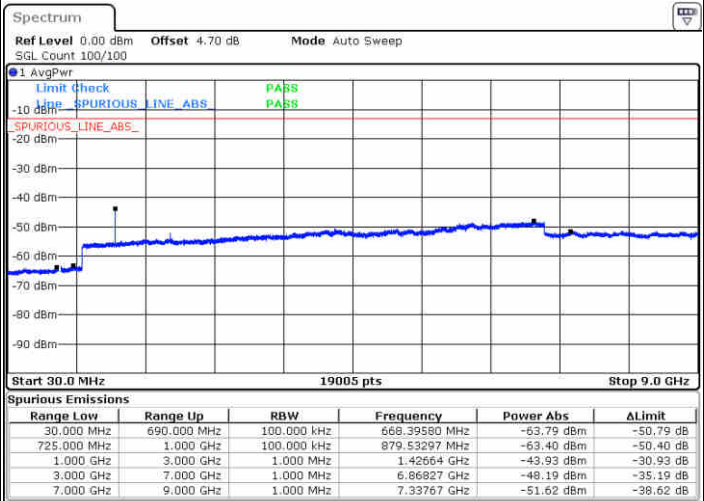
Date: 4 FEB 2020 09:55:44

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 4 FEB 2020 09:57:33



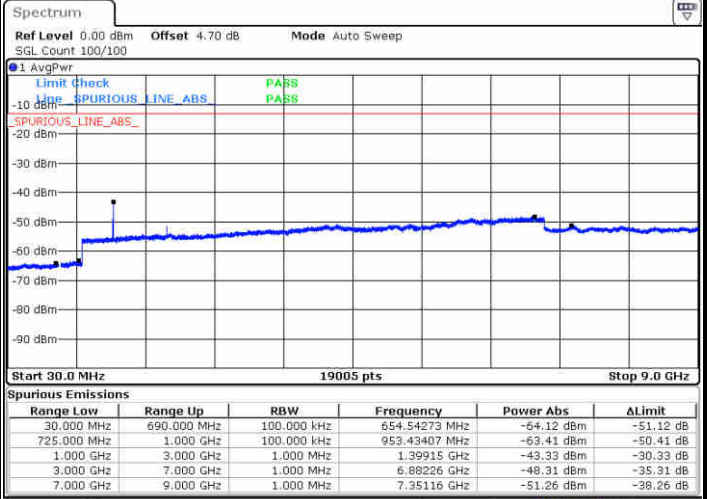
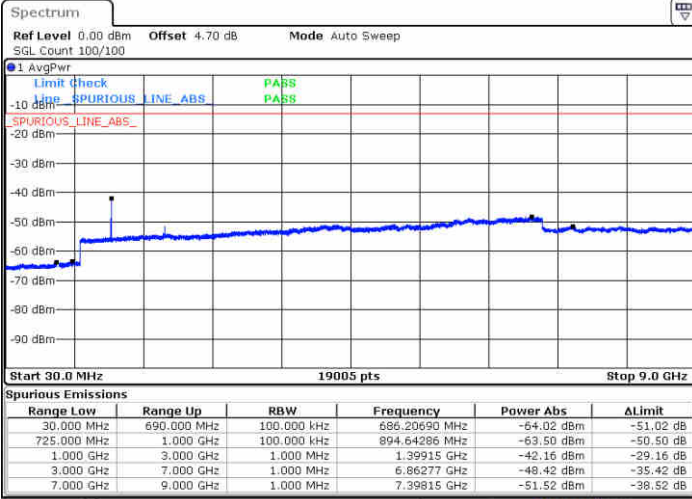
Date: 4 FEB 2020 09:58:28



LTE Band 12 / 5MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

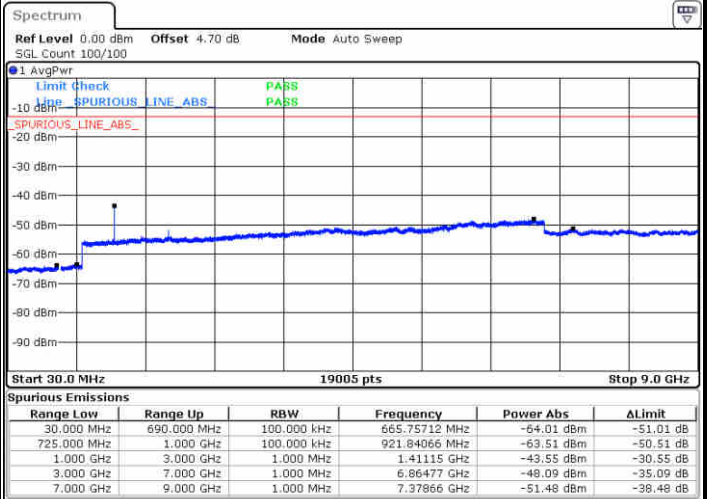
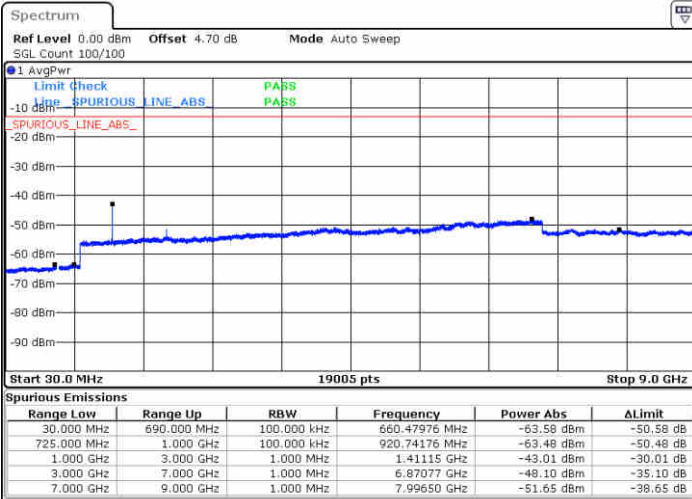


Date: 4 FEB 2020 10:10:24

Date: 4 FEB 2020 10:11:19

Middle Channel / QPSK

Middle Channel / 16QAM



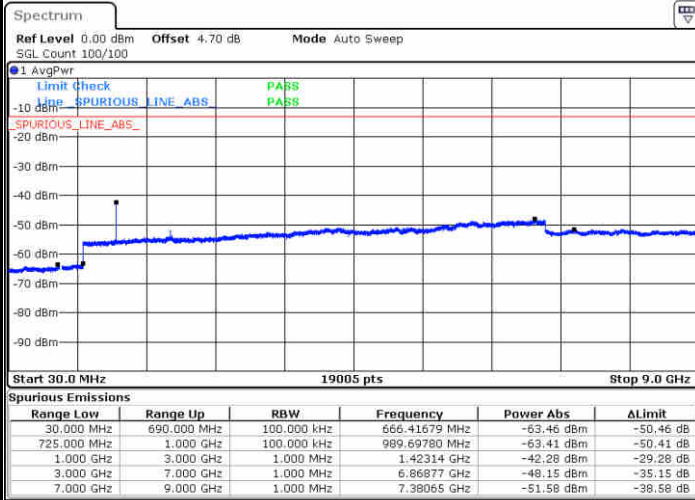
Date: 4 FEB 2020 10:13:08

Date: 4 FEB 2020 10:12:14



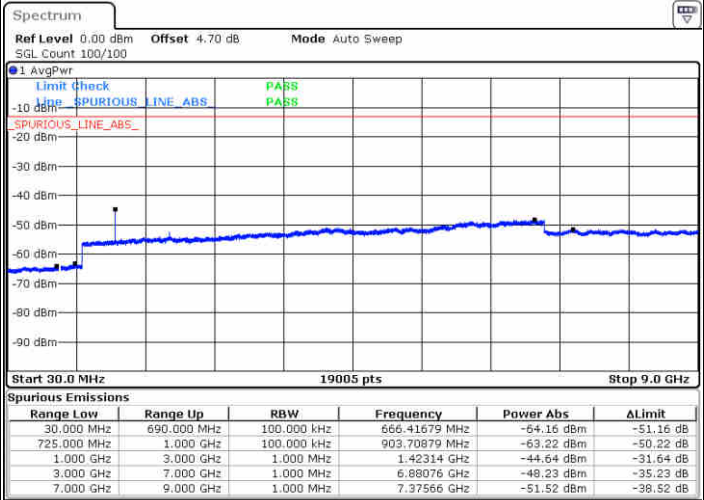
LTE Band 12 / 5MHz

Highest Channel / QPSK



Date: 4 FEB 2020 10:14:03

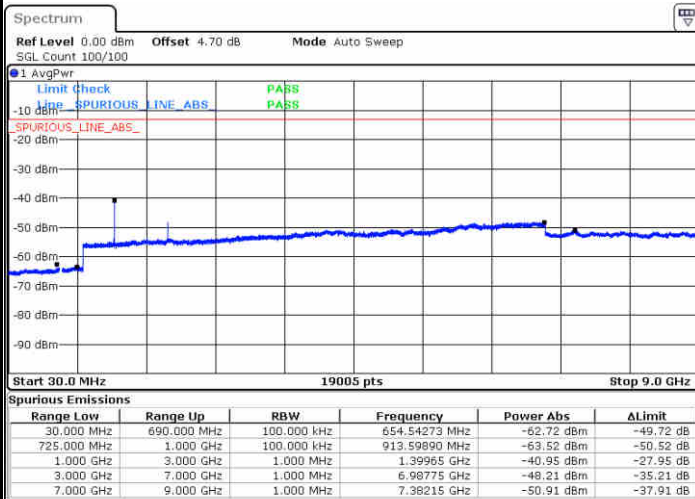
Highest Channel / 16QAM



Date: 4 FEB 2020 10:14:58

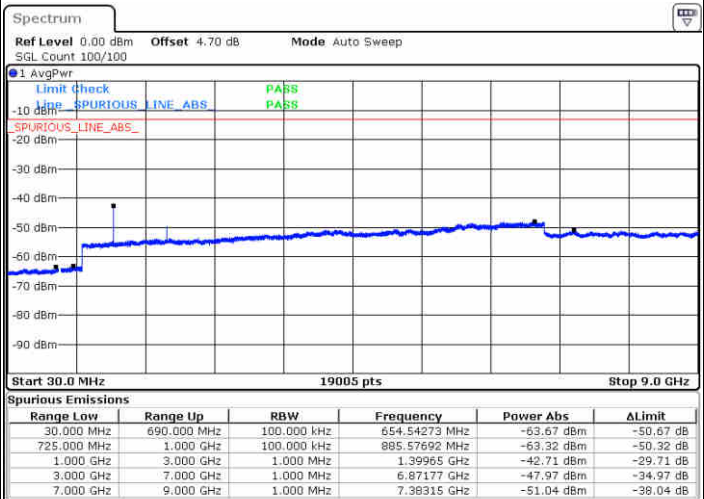
LTE Band 12 / 10MHz

Lowest Channel / QPSK



Date: 4 FEB 2020 22:47:18

Lowest Channel / 16QAM



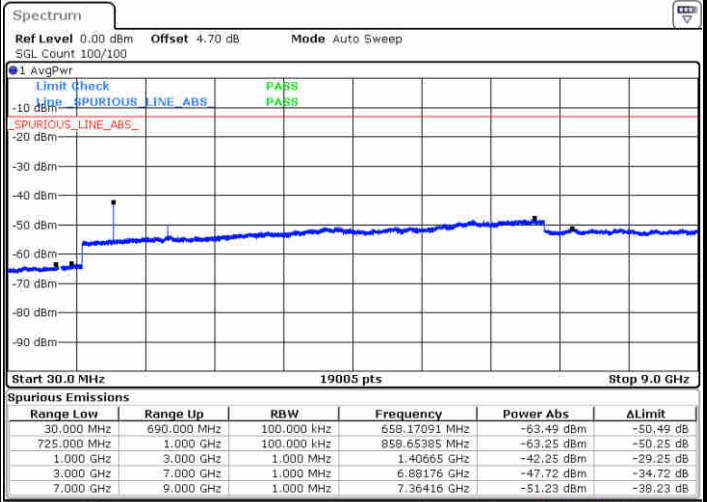
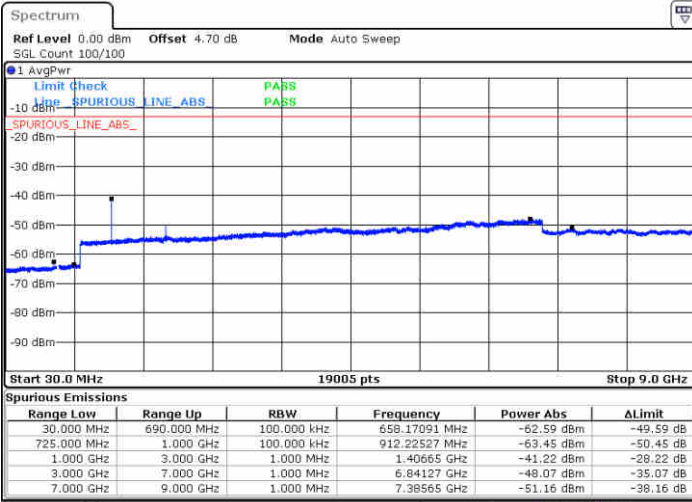
Date: 4 FEB 2020 22:48:13



LTE Band 12 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM

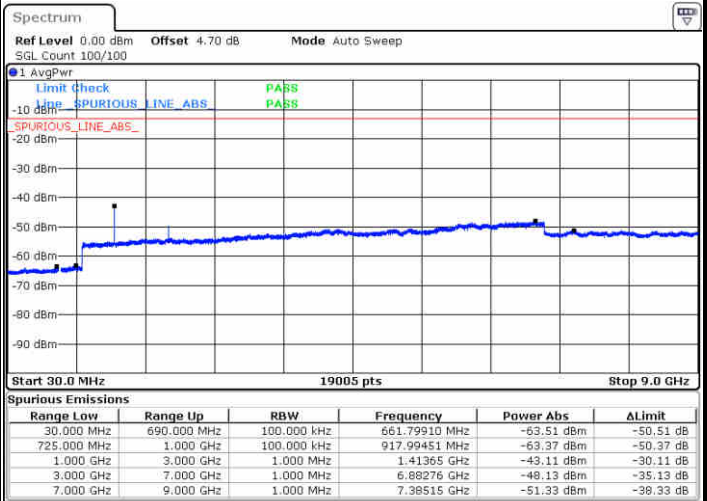
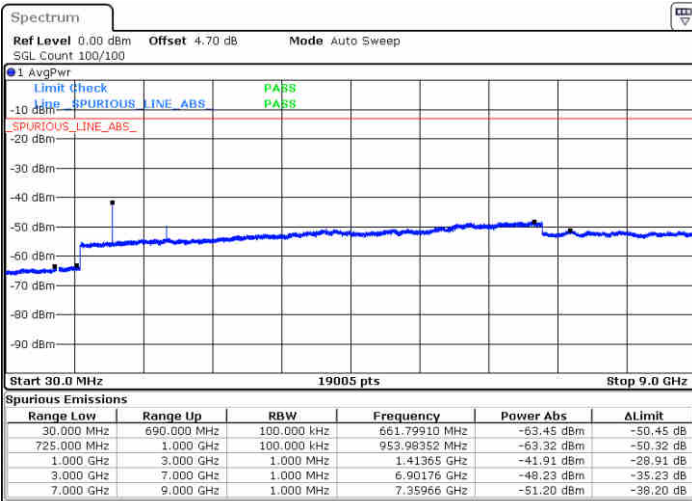


Date: 4 FEB 2020 22:50:02

Date: 4 FEB 2020 22:49:08

Highest Channel / QPSK

Highest Channel / 16QAM

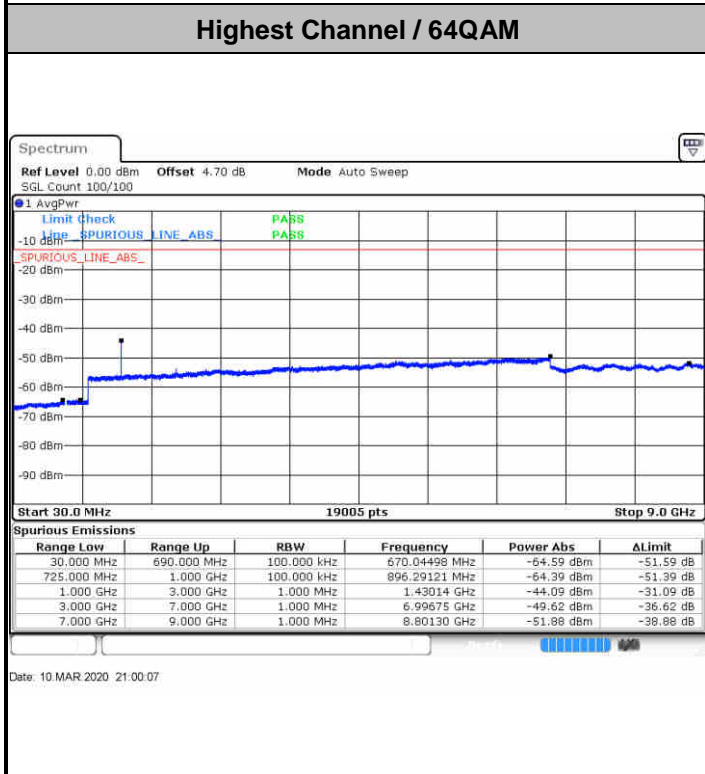
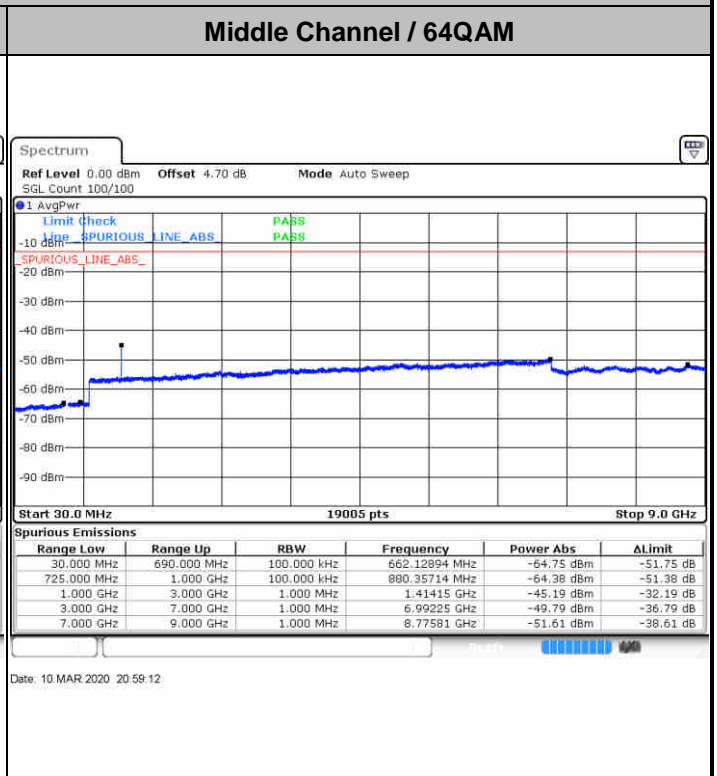
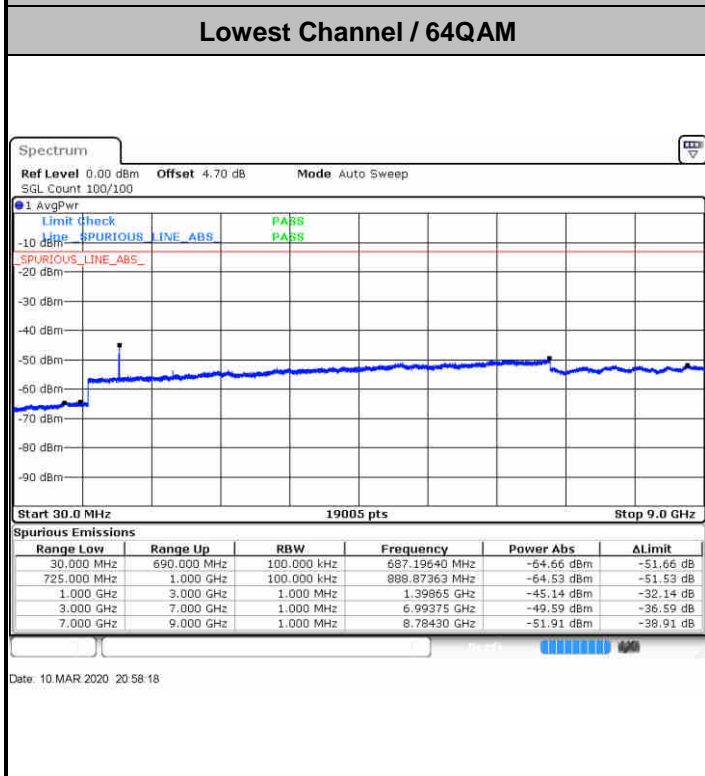


Date: 4 FEB 2020 22:50:57

Date: 4 FEB 2020 22:51:52



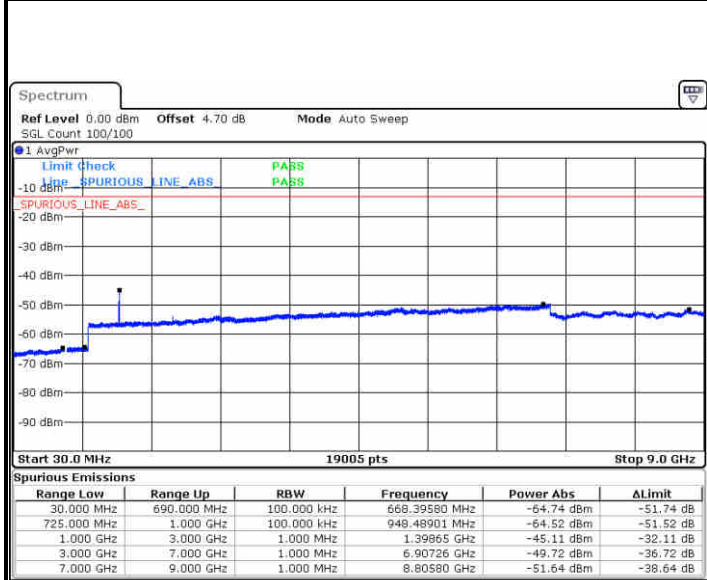
LTE Band 12 / 1.4MHz





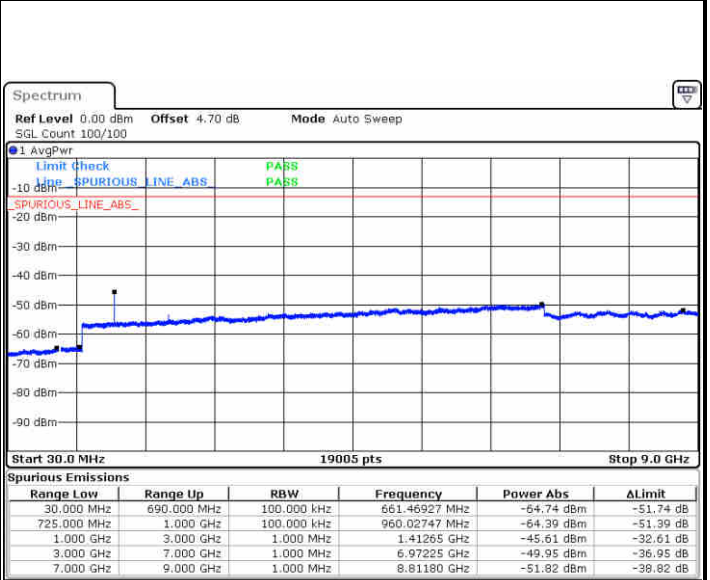
LTE Band 12 / 3MHz

Lowest Channel / 64QAM



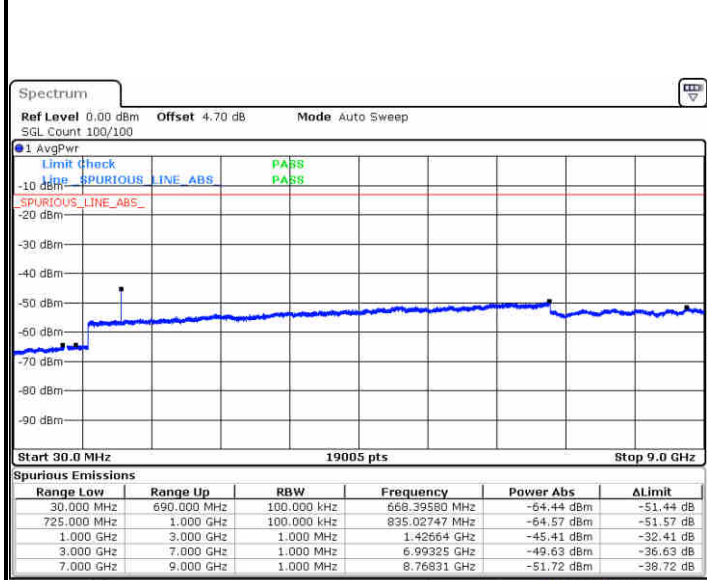
Date: 10 MAR 2020 21:01:01

Middle Channel / 64QAM



Date: 10 MAR 2020 21:01:55

Highest Channel / 64QAM



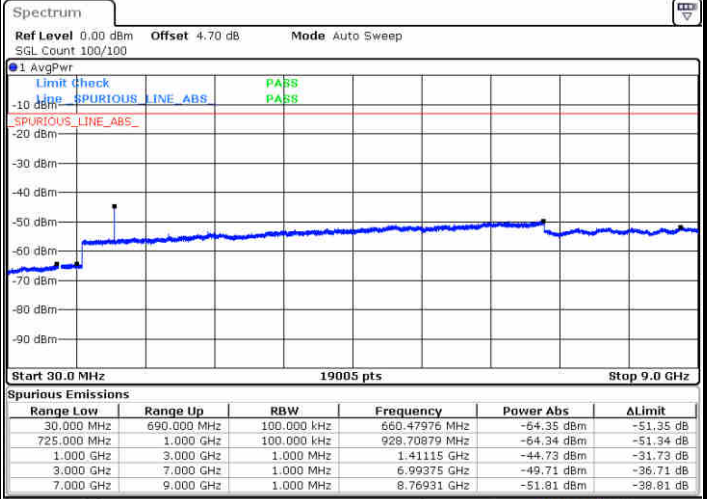
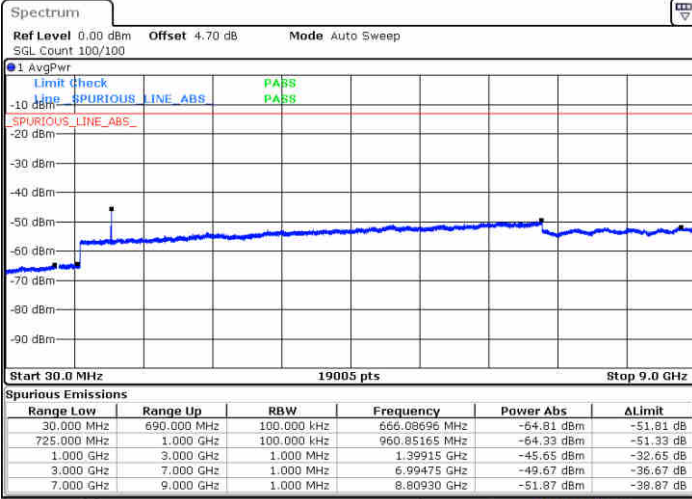
Date: 10 MAR 2020 21:02:50



LTE Band 12 / 5MHz

Lowest Channel / 64QAM

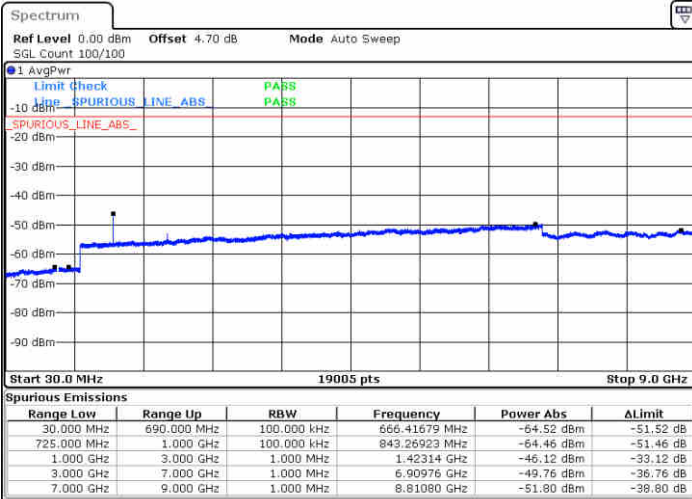
Middle Channel / 64QAM



Date: 10 MAR 2020 21:14:42

Date: 10 MAR 2020 21:15:36

Highest Channel / 64QAM



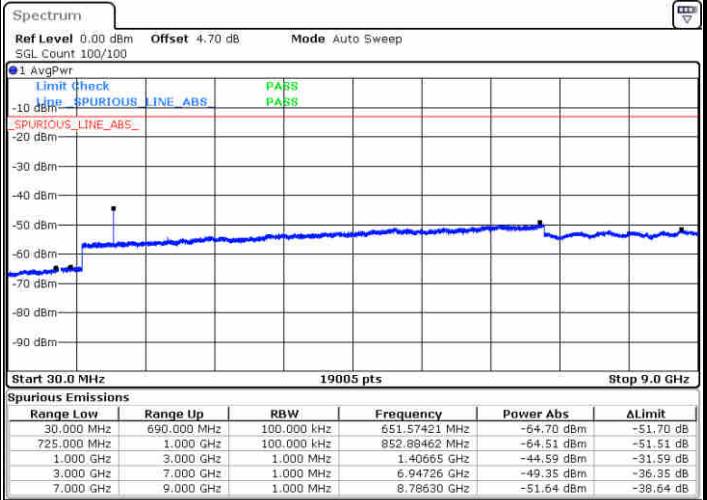
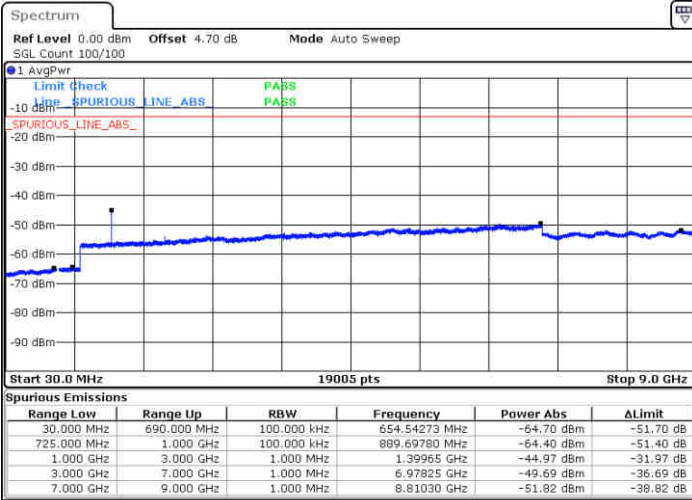
Date: 10 MAR 2020 21:16:31



LTE Band 12 / 10MHz

Lowest Channel / 64QAM

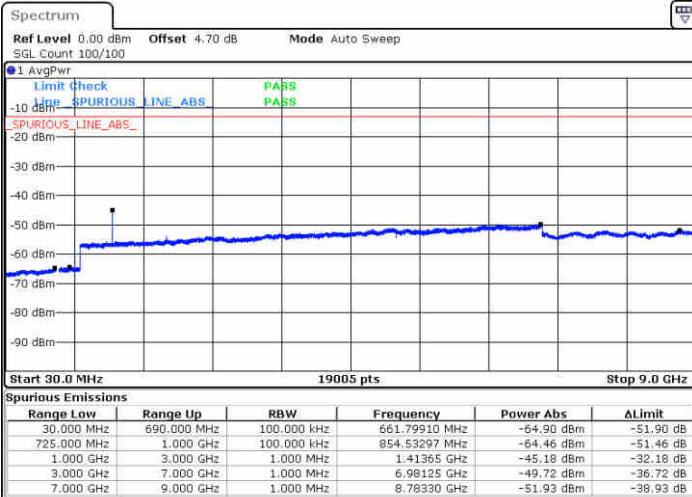
Middle Channel / 64QAM



Date: 10 MAR 2020 21:17:25

Date: 10 MAR 2020 21:18:19

Highest Channel / 64QAM



Date: 10 MAR 2020 21:19:14



Frequency Stability

| Test Conditions | | LTE Band 12 (QPSK) / Middle Channel | Limit |
|------------------|-------------------|-------------------------------------|---------|
| Temperature (°C) | Voltage (Volt) | BW 10MHz | Note 2. |
| | | Deviation (ppm) | Result |
| 50 | Normal Voltage | 0.0031 | PASS |
| 40 | Normal Voltage | 0.0055 | |
| 30 | Normal Voltage | 0.0071 | |
| 20(Ref.) | Normal Voltage | 0.0000 | |
| 10 | Normal Voltage | 0.0011 | |
| 0 | Normal Voltage | 0.0068 | |
| -10 | Normal Voltage | 0.0008 | |
| -20 | Normal Voltage | 0.0082 | |
| -30 | Normal Voltage | 0.0073 | |
| 20 | Maximum Voltage | 0.0083 | |
| 20 | Normal Voltage | 0.0020 | |
| 20 | Battery End Point | 0.0112 | |

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 13

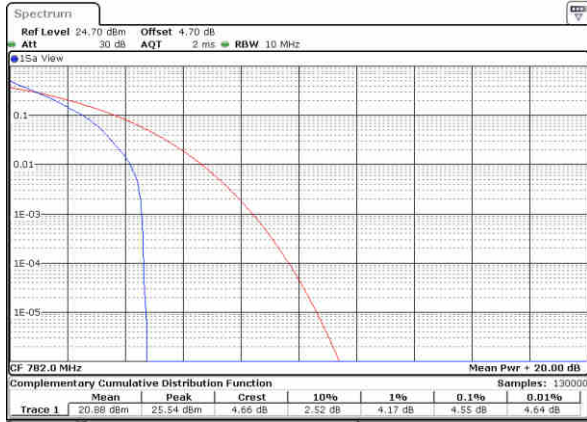
Peak-to-Average Ratio

| Mode | LTE Band 13 / 10MHz | | | | |
|------------|---------------------|---------|-------|---------|-------------|
| Mod. | QPSK | | 16QAM | | Limit: 13dB |
| RB Size | 1RB | Full RB | 1RB | Full RB | Result |
| Lowest CH | - | - | - | - | PASS |
| Middle CH | 4.55 | 5.10 | 5.28 | 5.86 | |
| Highest CH | - | - | - | - | |
| Mode | LTE Band 13 / 10MHz | | | | |
| Mod. | 64QAM | | | | Limit: 13dB |
| RB Size | 1RB | Full RB | | | Result |
| Lowest CH | - | - | - | - | PASS |
| Middle CH | 6.17 | 6.12 | - | - | |
| Highest CH | - | - | - | - | |



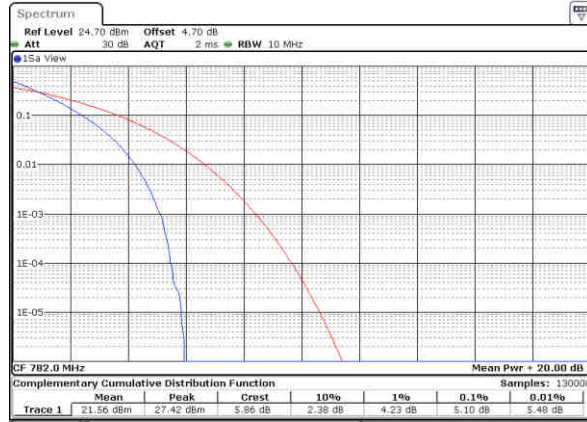
LTE Band 13 / 10MHz / QPSK

Middle Channel / 1RB



Date: 4 FEB 2020 09:33:06

Middle Channel / Full RB



Date: 4 FEB 2020 09:33:34

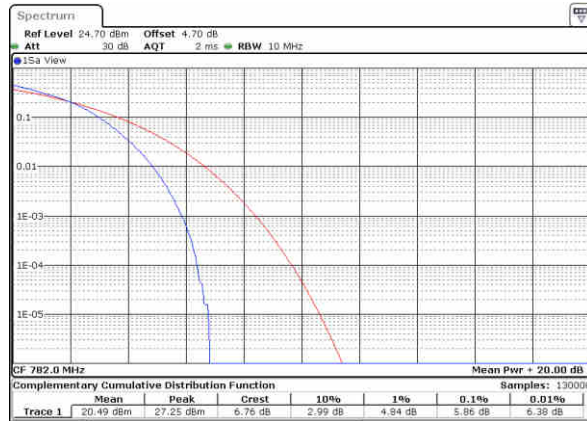
LTE Band 13 / 10MHz / 16QAM

Middle Channel / 1RB



Date: 4 FEB 2020 09:33:17

Middle Channel / Full RB



Date: 4 FEB 2020 09:33:25

LTE Band 13 / 10MHz / 64QAM

Middle Channel / 1RB



Date: 10 MAR 2020 21:53:44

Middle Channel / Full RB



Date: 10 MAR 2020 21:53:58



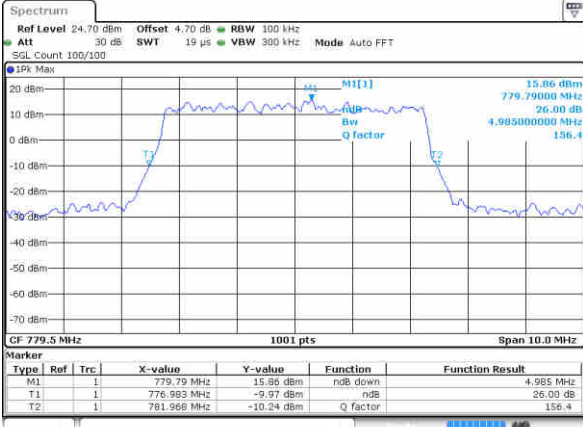
26dB Bandwidth

| Mode | LTE Band 13 : 26dB BW(MHz) | | | | | | | | | | | |
|------------|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| BW | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | |
| Mod. | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM |
| Lowest CH | - | - | - | - | 4.99 | 5.07 | - | - | - | - | - | - |
| Middle CH | - | - | - | - | 4.97 | 5.03 | 10.01 | 9.83 | - | - | - | - |
| Highest CH | - | - | - | - | 5.11 | 5.06 | - | - | - | - | - | - |
| Mode | LTE Band 13 : 26dB BW(MHz) | | | | | | | | | | | |
| BW | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | |
| Mod. | 64QAM | | 64QAM | | 64QAM | | 64QAM | | 64QAM | | 64QAM | |
| Lowest CH | - | - | - | - | 5.07 | - | - | - | - | - | - | - |
| Middle CH | - | - | - | - | 5.04 | - | 10.15 | - | - | - | - | - |
| Highest CH | - | - | - | - | 4.96 | - | - | - | - | - | - | - |



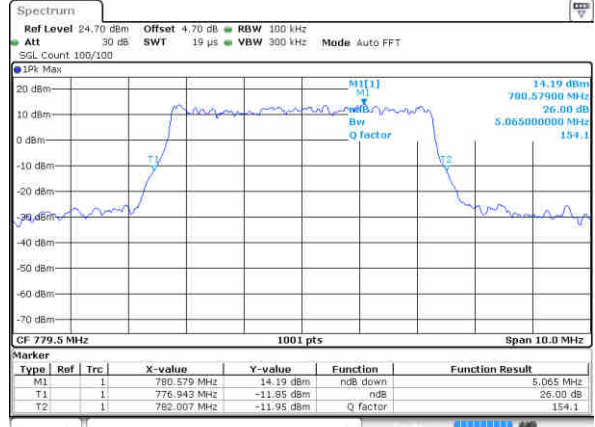
LTE Band 13

Lowest Channel / 5MHz / QPSK



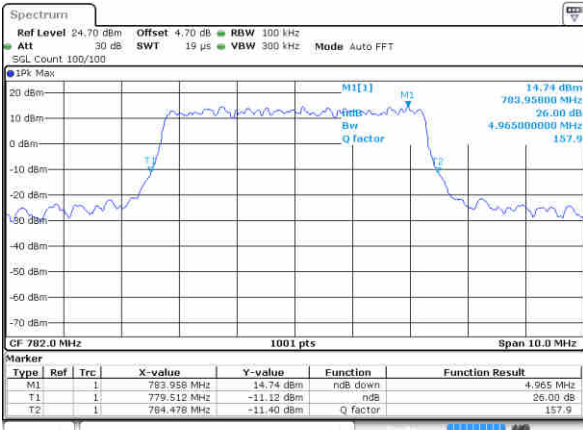
Date: 4 FEB 2020 08:46:09

Lowest Channel / 5MHz / 16QAM



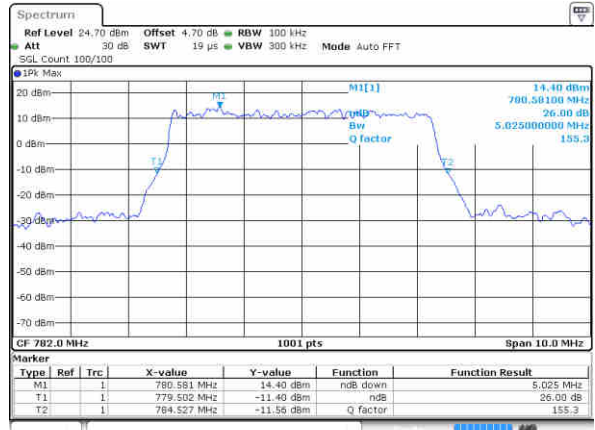
Date: 4 FEB 2020 08:46:19

Middle Channel / 5MHz / QPSK



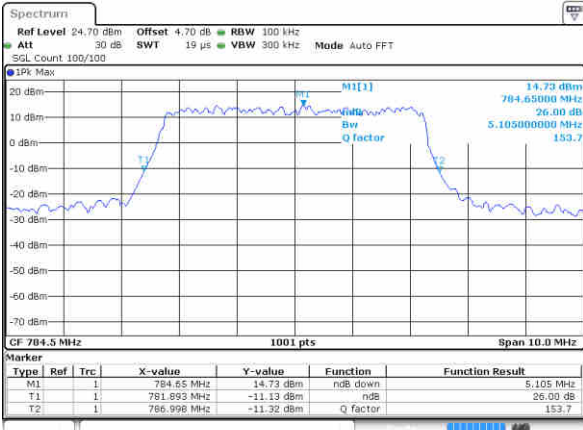
Date: 4 FEB 2020 08:55:08

Middle Channel / 5MHz / 16QAM



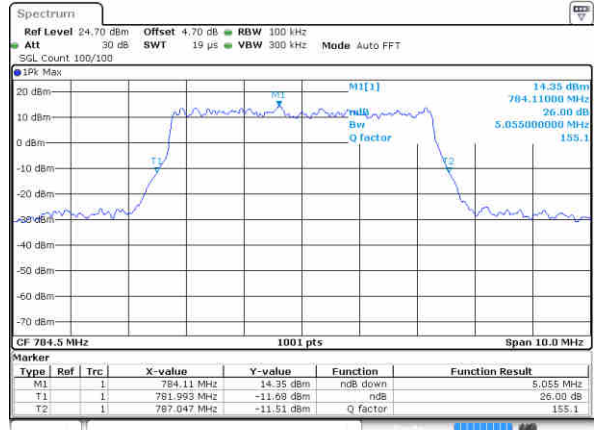
Date: 4 FEB 2020 08:55:16

Highest Channel / 5MHz / QPSK



Date: 4 FEB 2020 08:57:48

Highest Channel / 5MHz / 16QAM

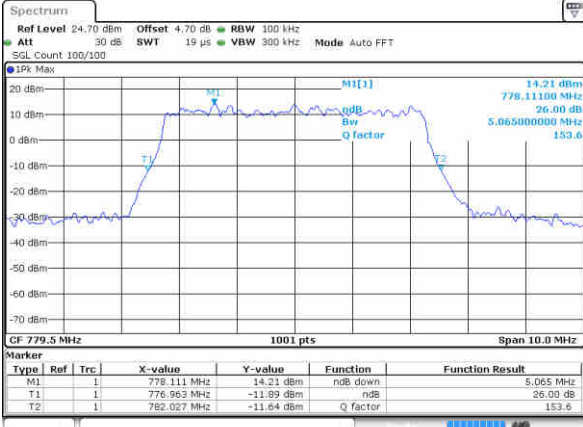


Date: 4 FEB 2020 08:57:37



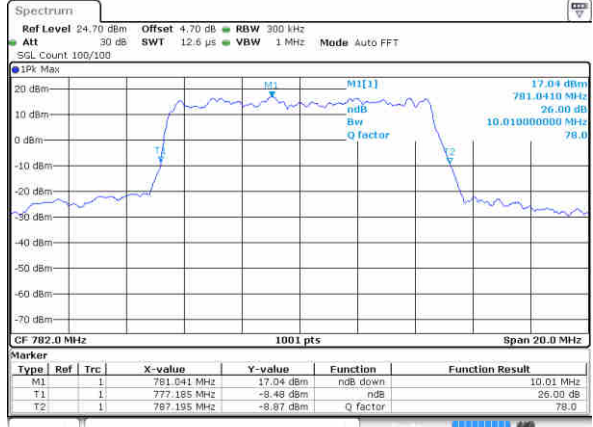
LTE Band 13

Lowest Channel / 5MHz / 64QAM



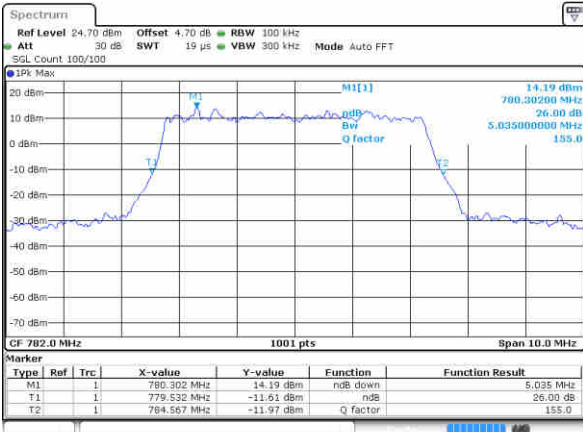
Date: 10 MAR 2020 21:31:57

Middle Channel / 10MHz / QPSK



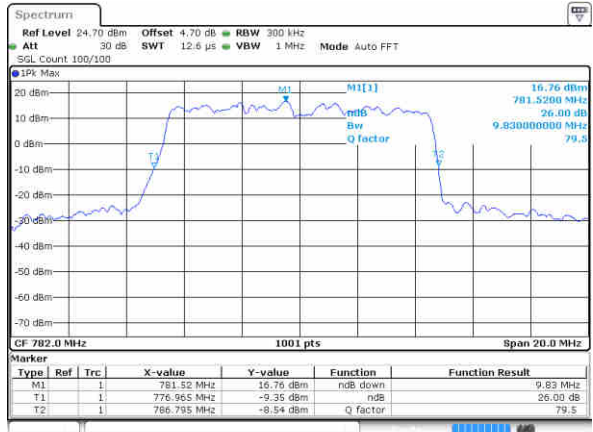
Date: 4 FEB 2020 09:08:36

Middle Channel / 5MHz / 64QAM



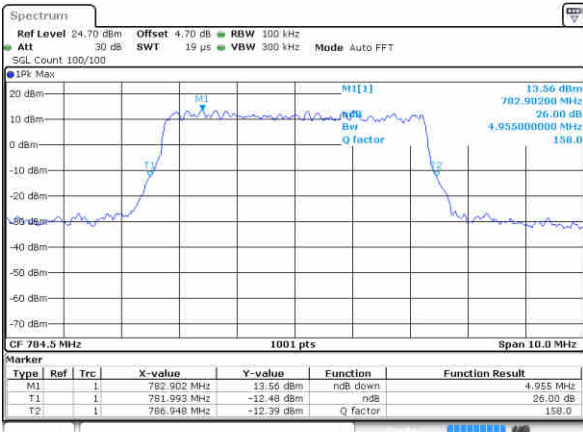
Date: 10 MAR 2020 21:32:07

Middle Channel / 10MHz / 16QAM



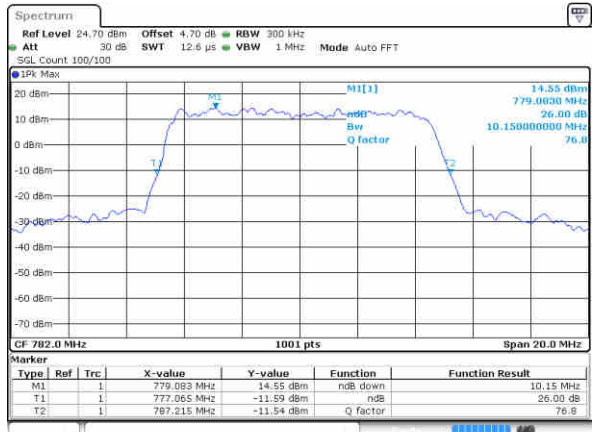
Date: 4 FEB 2020 09:08:26

Highest Channel / 5MHz / 64QAM



Date: 10 MAR 2020 21:32:17

Middle Channel / 10MHz / 64QAM



Date: 10 MAR 2020 21:41:49



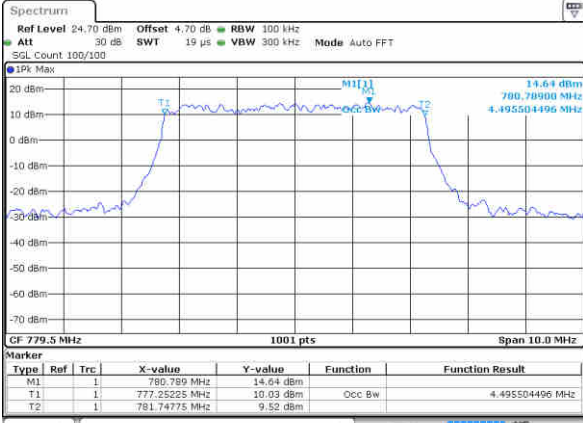
Occupied Bandwidth

| Mode | LTE Band 13 : 99%OBW(MHz) | | | | | | | | | | | |
|------------|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| BW | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | |
| Mod. | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM |
| Lowest CH | - | - | - | - | 4.50 | 4.49 | - | - | - | - | - | - |
| Middle CH | - | - | - | - | 4.51 | 4.52 | 9.15 | 9.03 | - | - | - | - |
| Highest CH | - | - | - | - | 4.50 | 4.49 | - | - | - | - | - | - |
| Mode | LTE Band 13 : 99%OBW(MHz) | | | | | | | | | | | |
| BW | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | |
| Mod. | 64QAM | | 64QAM | | 64QAM | | 64QAM | | 64QAM | | 64QAM | |
| Lowest CH | - | - | - | - | 4.51 | - | - | - | - | - | - | - |
| Middle CH | - | - | - | - | 4.51 | - | 9.05 | - | - | - | - | - |
| Highest CH | - | - | - | - | 4.53 | - | - | - | - | - | - | - |



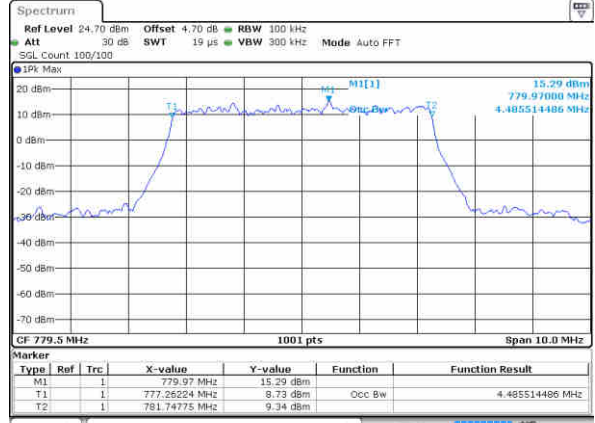
LTE Band 13

Lowest Channel / 5MHz / QPSK



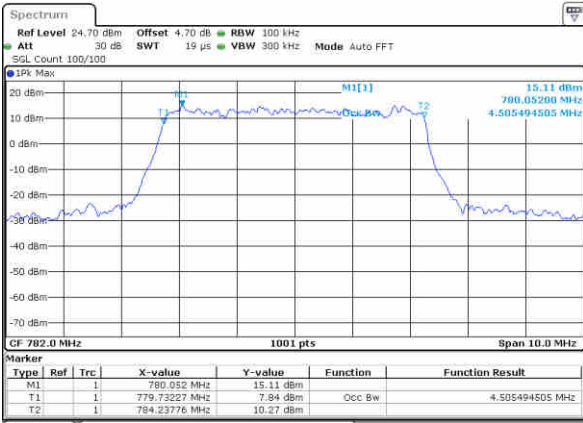
Date: 4 FEB 2020 08:46:39

Lowest Channel / 5MHz / 16QAM



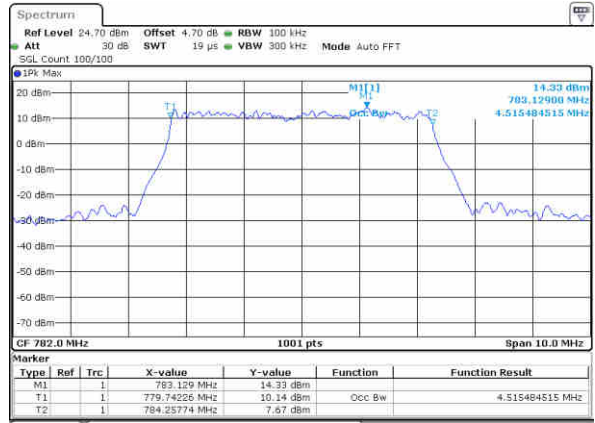
Date: 4 FEB 2020 08:46:29

Middle Channel / 5MHz / QPSK



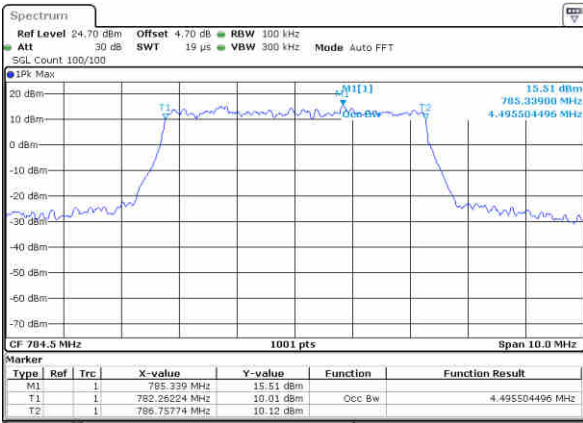
Date: 4 FEB 2020 08:55:29

Middle Channel / 5MHz / 16QAM



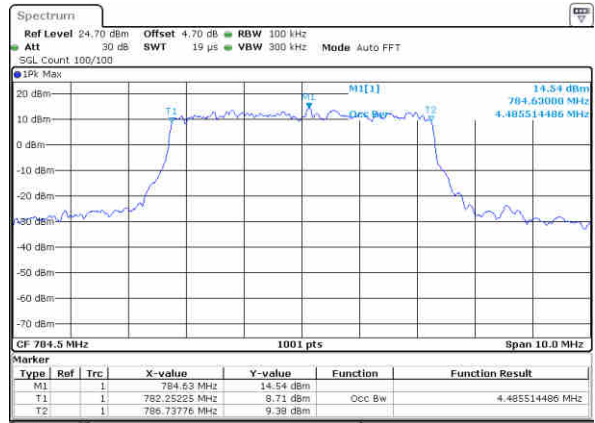
Date: 4 FEB 2020 08:55:39

Highest Channel / 5MHz / QPSK



Date: 4 FEB 2020 08:57:58

Highest Channel / 5MHz / 16QAM

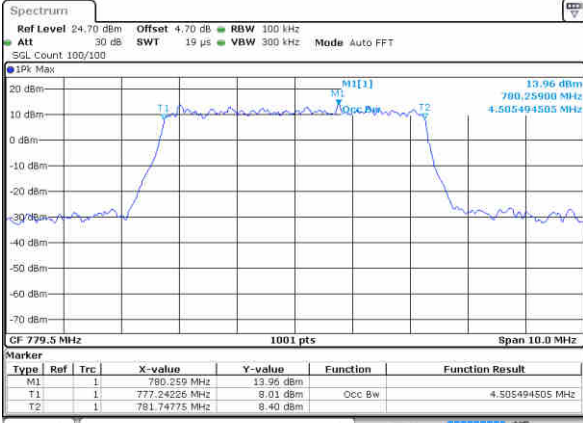


Date: 4 FEB 2020 08:58:08



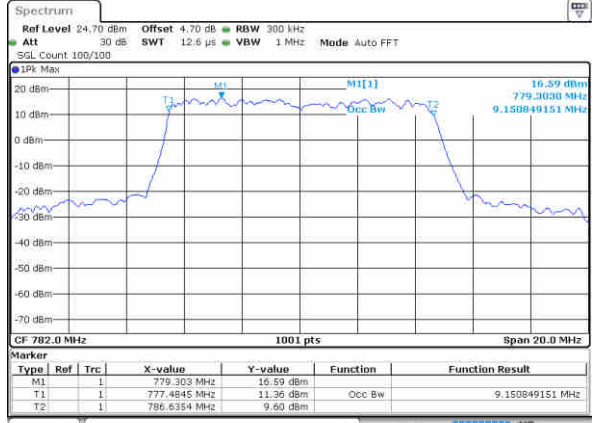
LTE Band 13

Lowest Channel / 5MHz / 64QAM



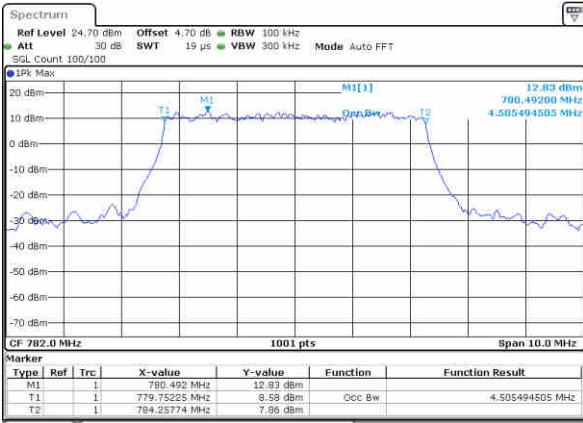
Date: 10 MAR 2020 21:31:27

Middle Channel / 10MHz / QPSK



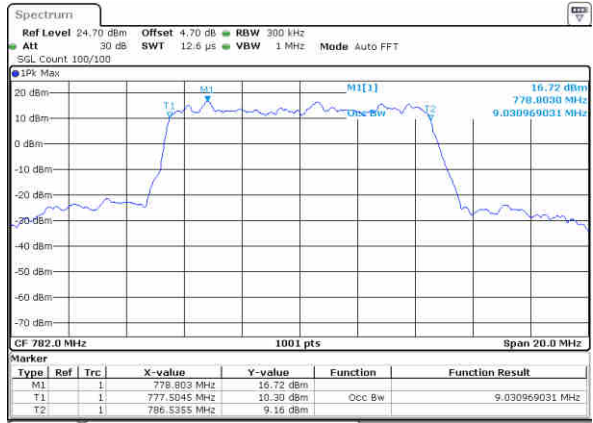
Date: 4 FEB 2020 09:08:46

Middle Channel / 5MHz / 64QAM



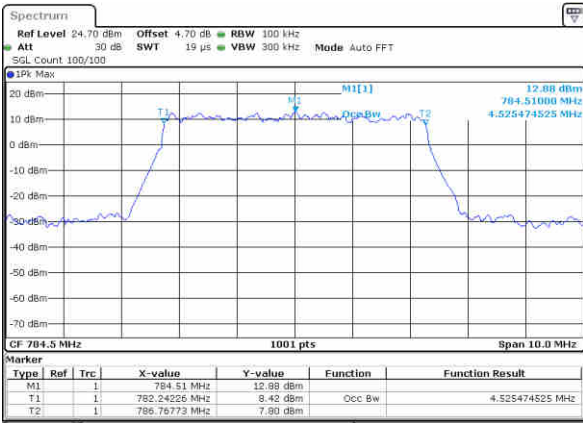
Date: 10 MAR 2020 21:31:37

Middle Channel / 10MHz / 16QAM



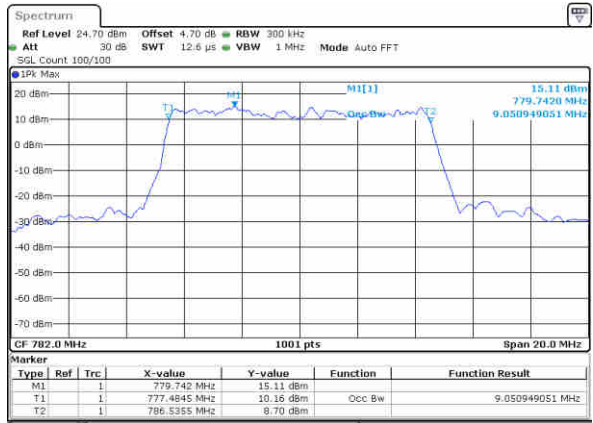
Date: 4 FEB 2020 09:08:56

Highest Channel / 5MHz / 64QAM



Date: 10 MAR 2020 21:31:47

Middle Channel / 10MHz / 64QAM



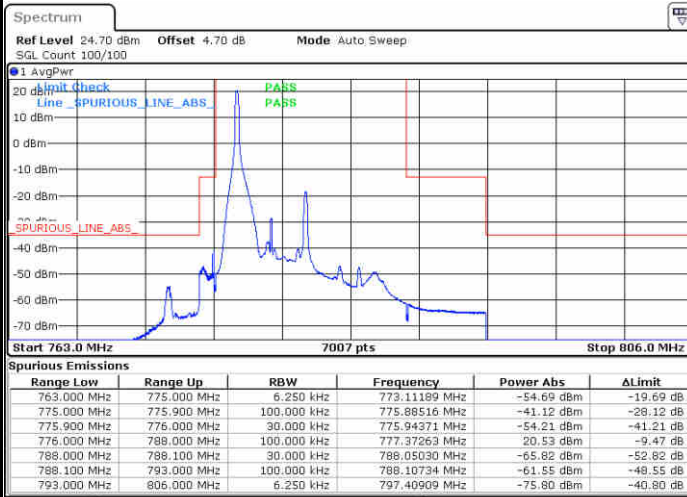
Date: 10 MAR 2020 21:41:39



Conducted Band Edge

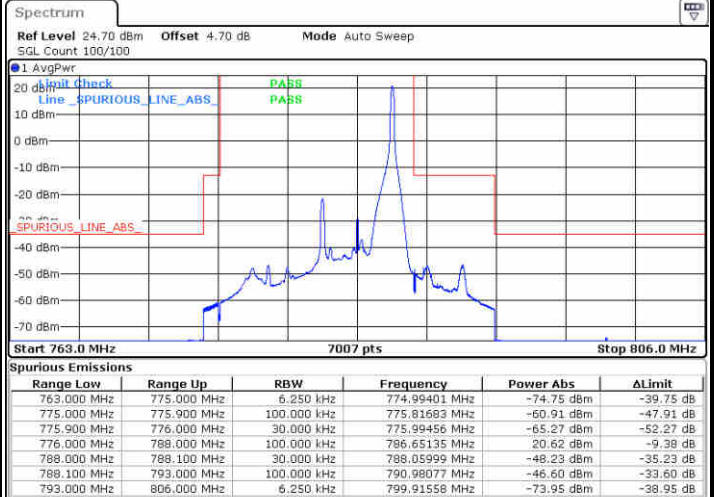
LTE Band 13 / 5MHz / QPSK

Lowest Band Edge / 1 RB



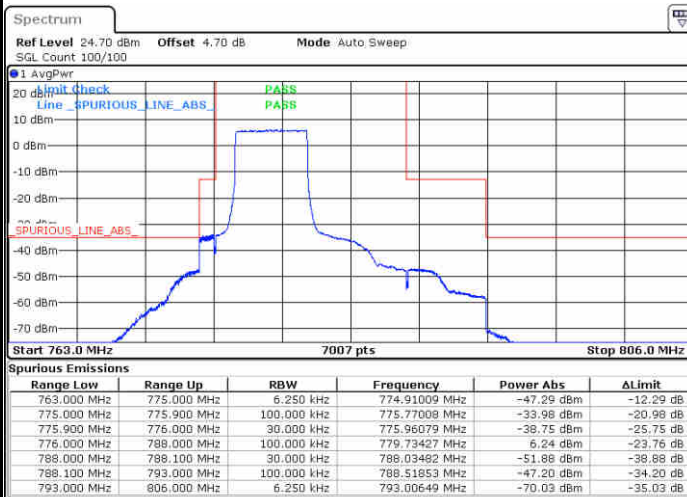
Date: 4 FEB 2020 08:51:32

Highest Band Edge / 1 RB



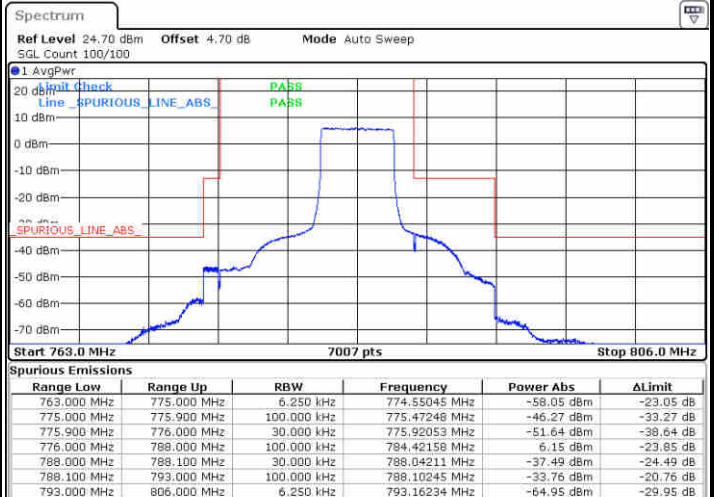
Date: 4 FEB 2020 09:03:01

Lowest Band Edge / Full RB



Date: 4 FEB 2020 08:49:54

Highest Band Edge / Full RB



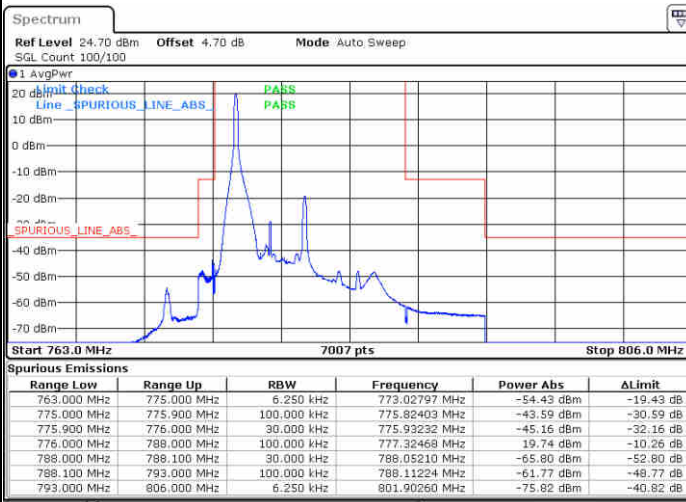
Date: 4 FEB 2020 09:01:23



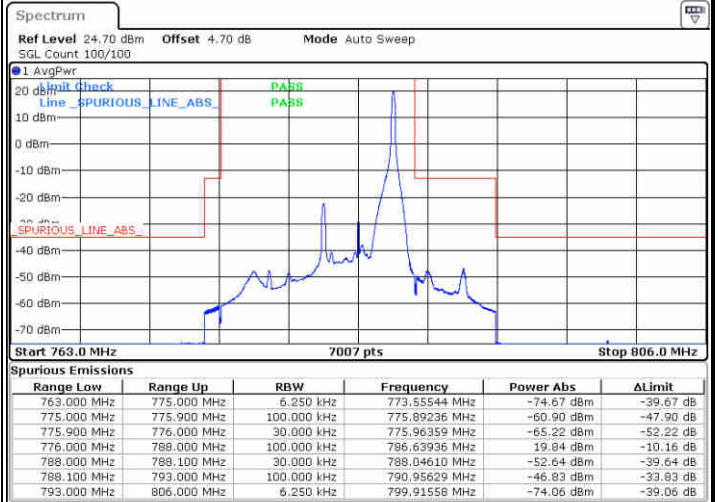
LTE Band 13 / 5MHz / 16QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB



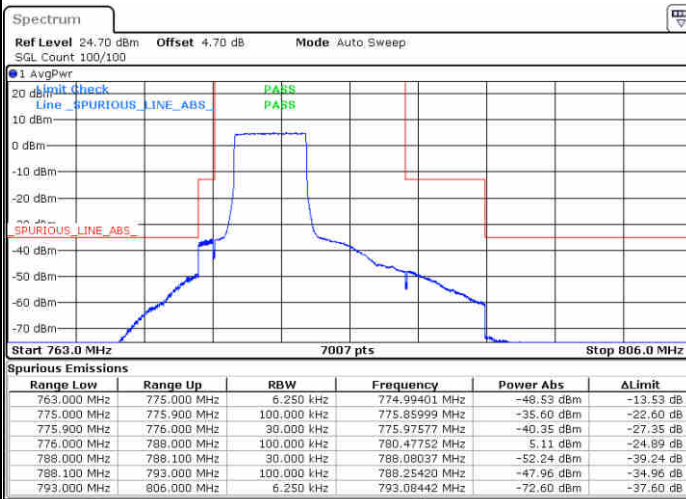
Date: 4 FEB 2020 08:53:10



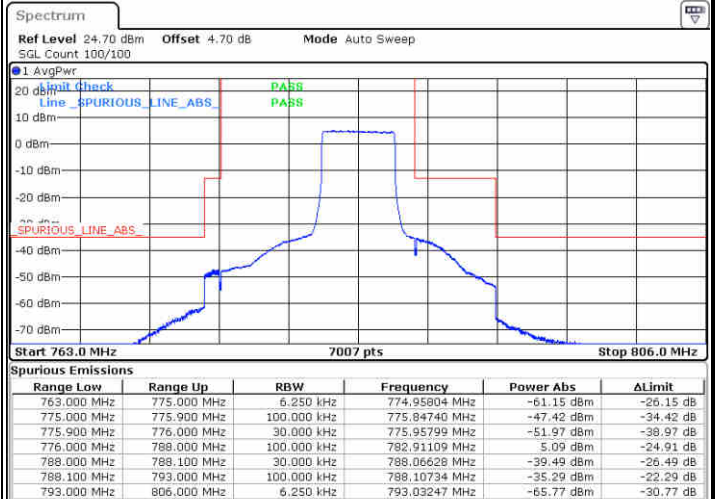
Date: 4 FEB 2020 09:04:39

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 4 FEB 2020 08:48:17



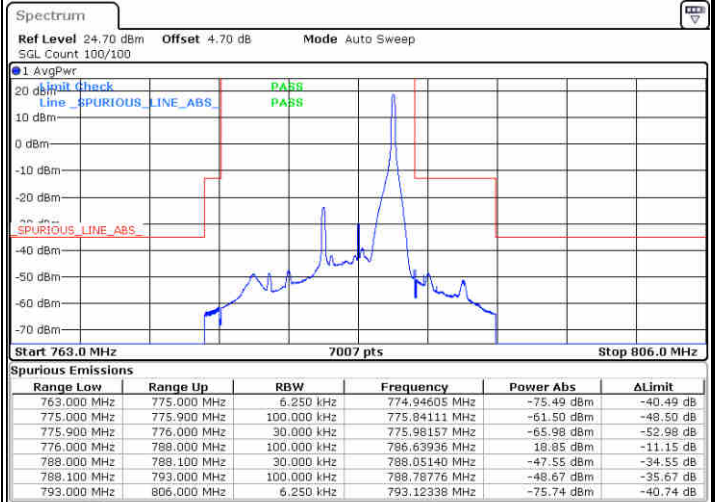
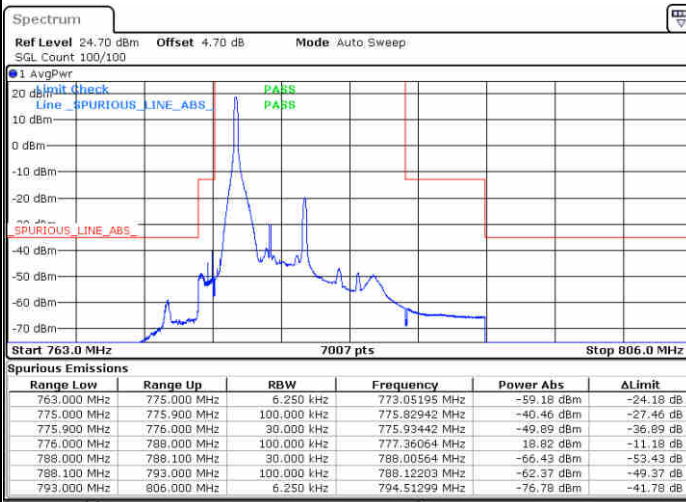
Date: 4 FEB 2020 08:59:46



LTE Band 13 / 5MHz / 64QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

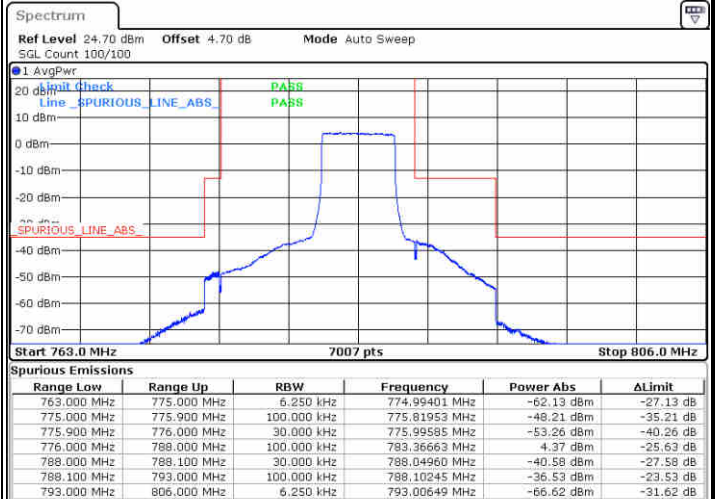
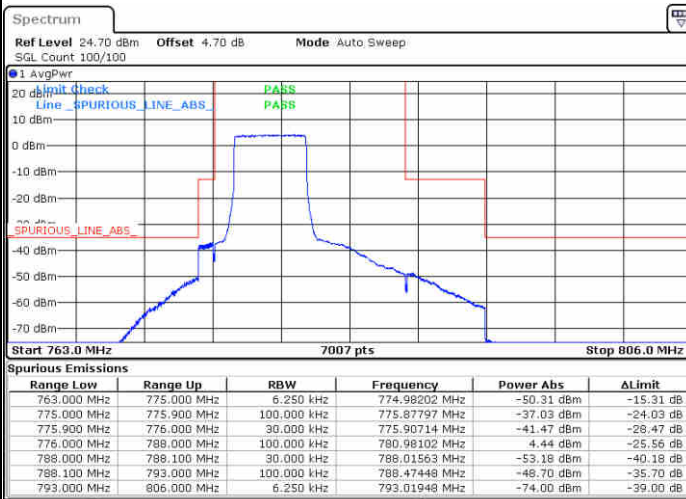


Date: 10.MAR.2020 21:33:55

Date: 10.MAR.2020 21:38:47

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



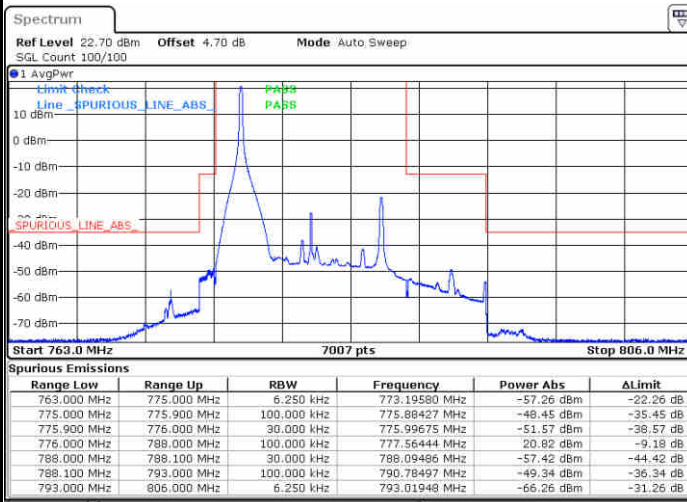
Date: 10.MAR.2020 21:35:32

Date: 10.MAR.2020 21:37:10



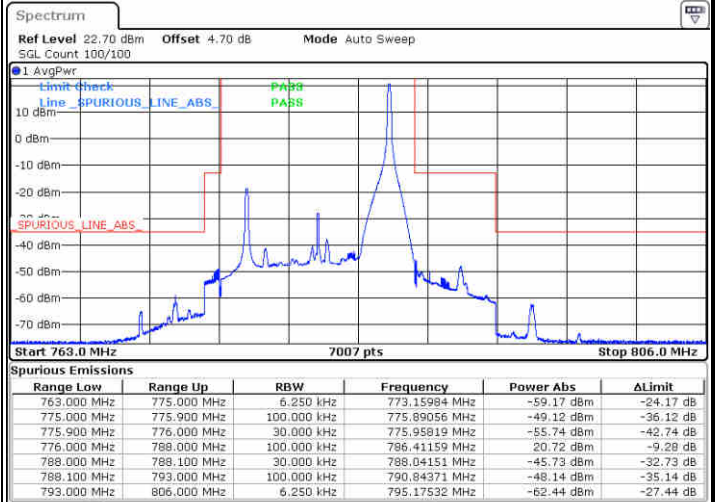
LTE Band 13 / 10MHz / QPSK

Lowest Band Edge / 1 RB



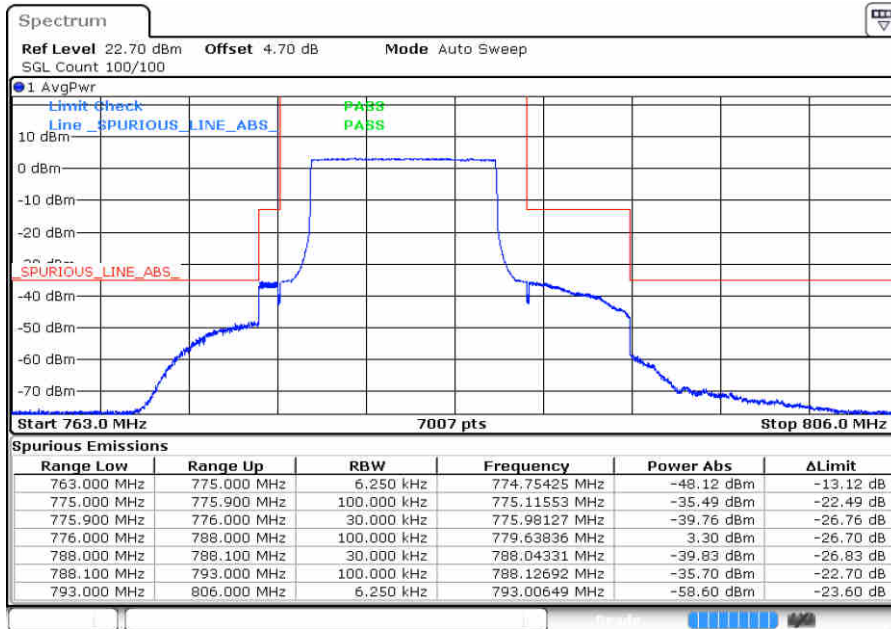
Date: 4 FEB 2020 09:12:12

Highest Band Edge / 1 RB



Date: 4 FEB 2020 09:18:43

Band Edge / Full RB

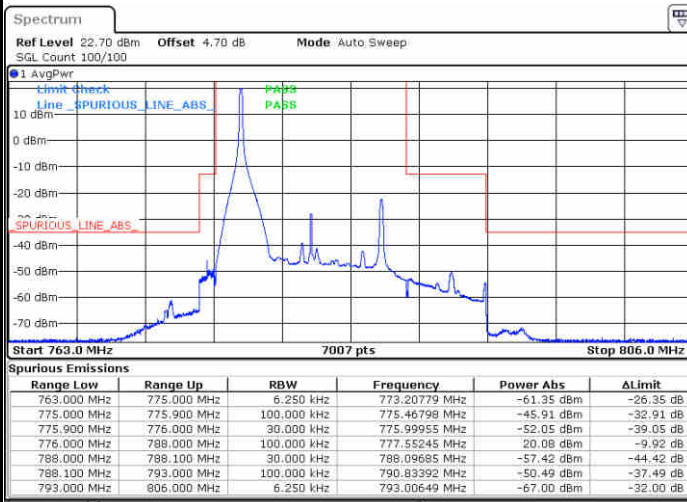


Date: 4.FEB.2020 09:13:50



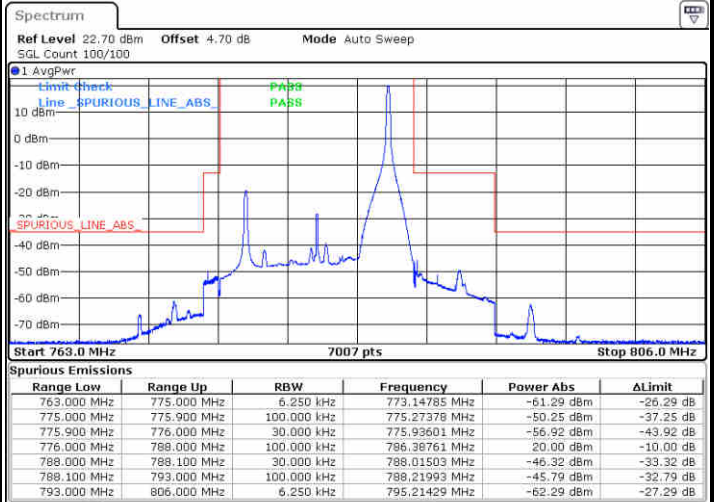
LTE Band 13 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



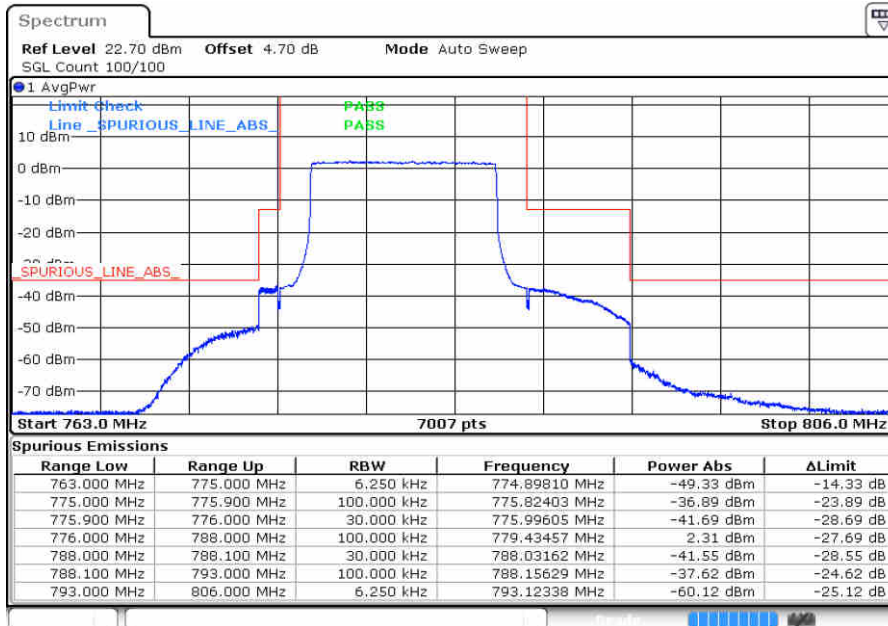
Date: 4 FEB 2020 09:10:34

Highest Band Edge / 1 RB



Date: 4 FEB 2020 09:17:05

Band Edge / Full RB

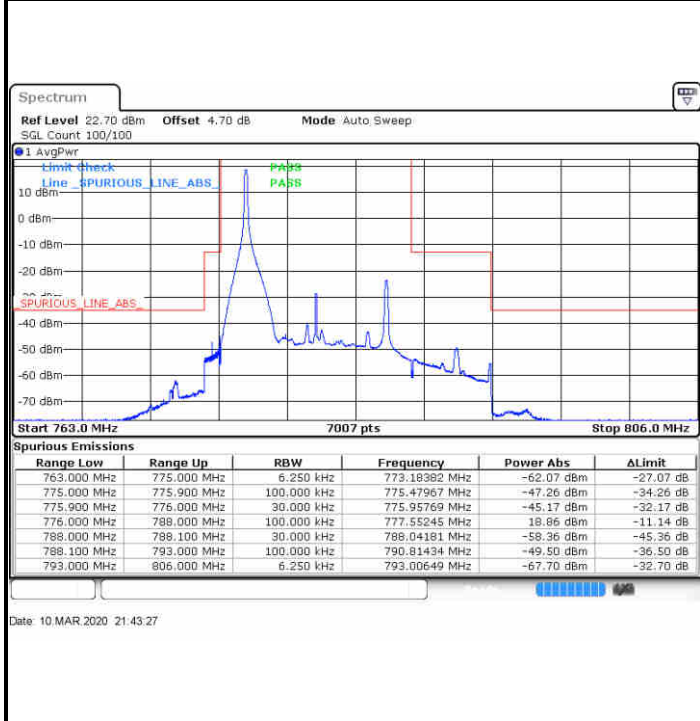


Date: 4.FEB.2020 09:15:28

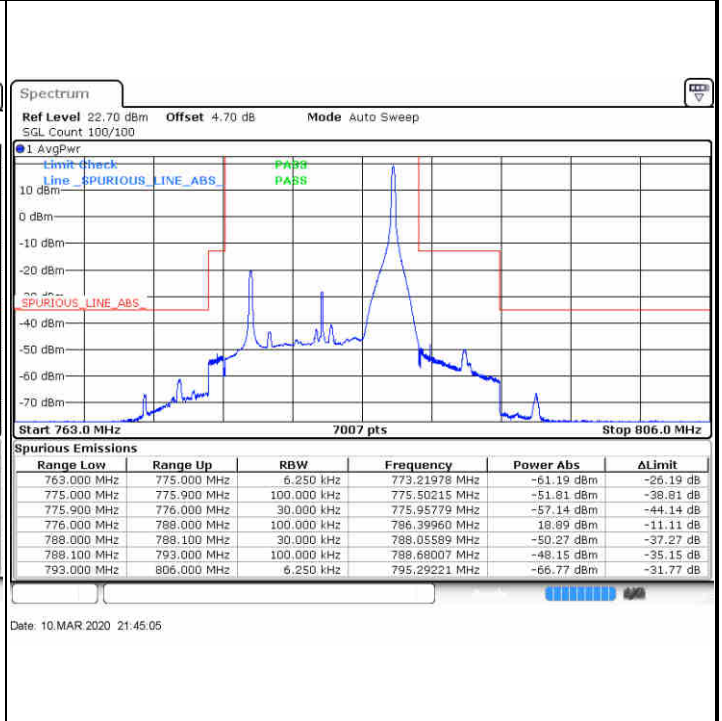


LTE Band 13 / 10MHz / 64QAM

Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Band Edge / Full RB

