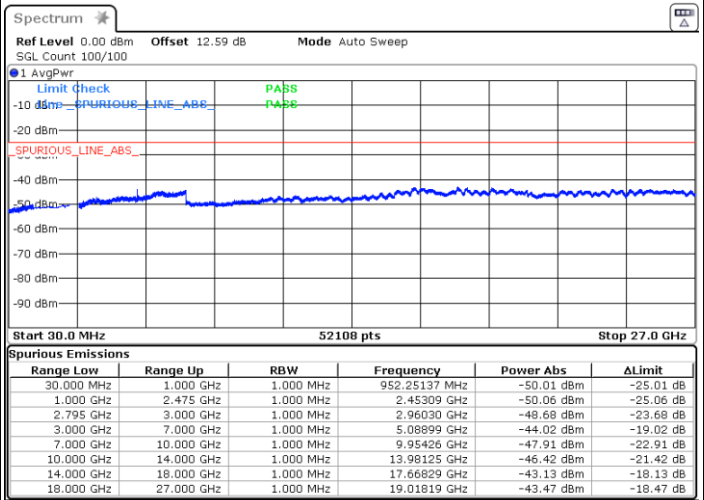
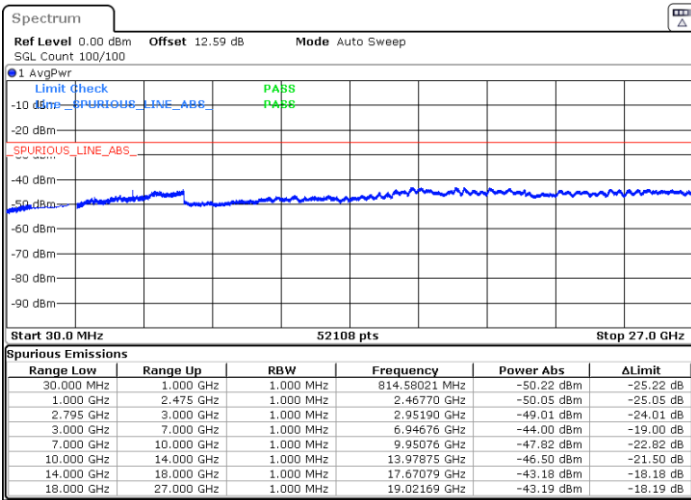




FR1 n41 /100MHz / DFT-S OFDM / BPSK

Lowest Channel / 1RB1

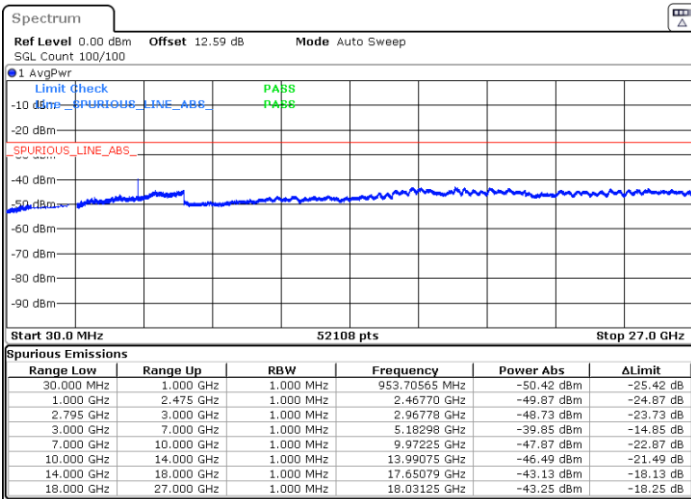
Middle Channel / 1RB1



Date: 14.JUN.2022 16:56:55

Date: 14.JUN.2022 16:51:41

Highest Channel / 1RB1



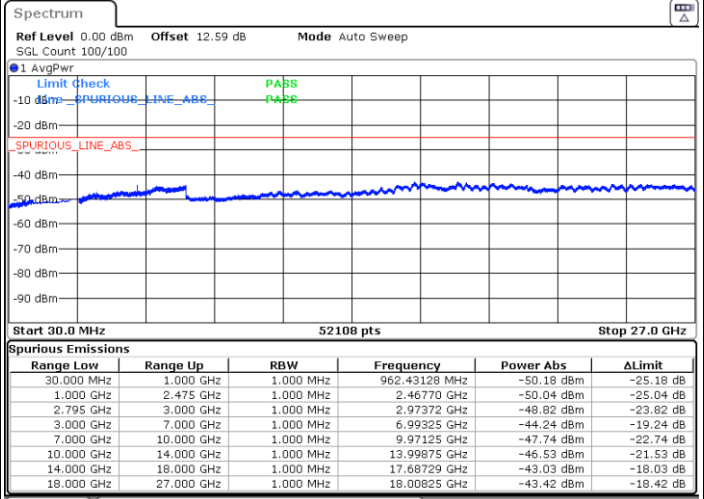
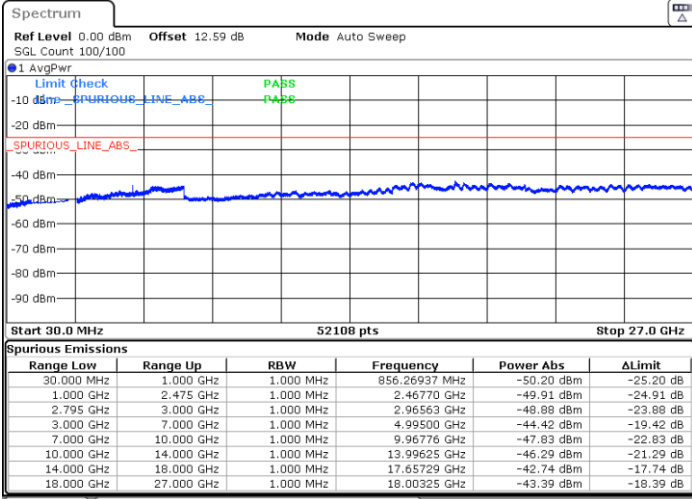
Date: 14.JUN.2022 17:13:55



FR1 n41 /100MHz / DFT-S OFDM /QPSK

Lowest Channel / 1RB1

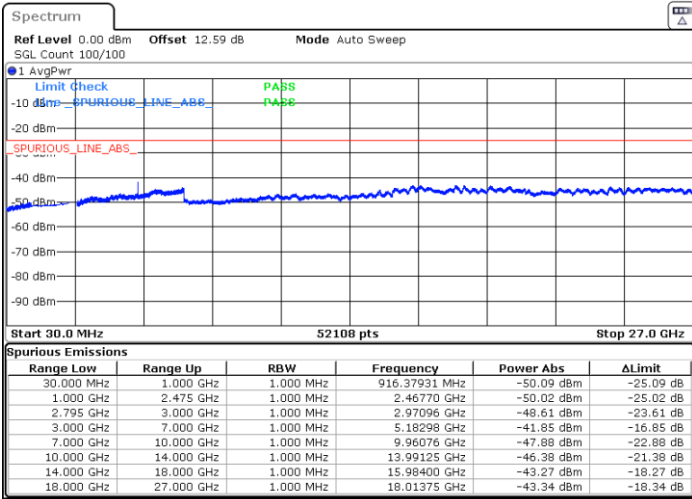
Middle Channel / 1RB1



Date: 14. JUN. 2022 16:55:40

Date: 14. JUN. 2022 16:53:25

Highest Channel / 1RB1



Date: 14. JUN. 2022 17:12:51



Frequency Stability

| Test Conditions | | FR1 n41 (QPSK) / Middle Channel | Limit |
|------------------|-------------------|---------------------------------|---------|
| Temperature (°C) | Voltage (Volt) | BW 20MHz | Note 2. |
| | | Deviation (ppm) | Result |
| 50 | Normal Voltage | 0.0021 | PASS |
| 40 | Normal Voltage | 0.0019 | |
| 30 | Normal Voltage | 0.0035 | |
| 20(Ref.) | Normal Voltage | 0.0000 | |
| 10 | Normal Voltage | 0.0010 | |
| 0 | Normal Voltage | 0.0011 | |
| -10 | Normal Voltage | 0.0006 | |
| -20 | Normal Voltage | 0.0021 | |
| -30 | Normal Voltage | 0.0030 | |
| 20 | Maximum Voltage | 0.0035 | |
| 20 | Normal Voltage | 0.0026 | |
| 20 | Battery End Point | 0.0001 | |

Note:

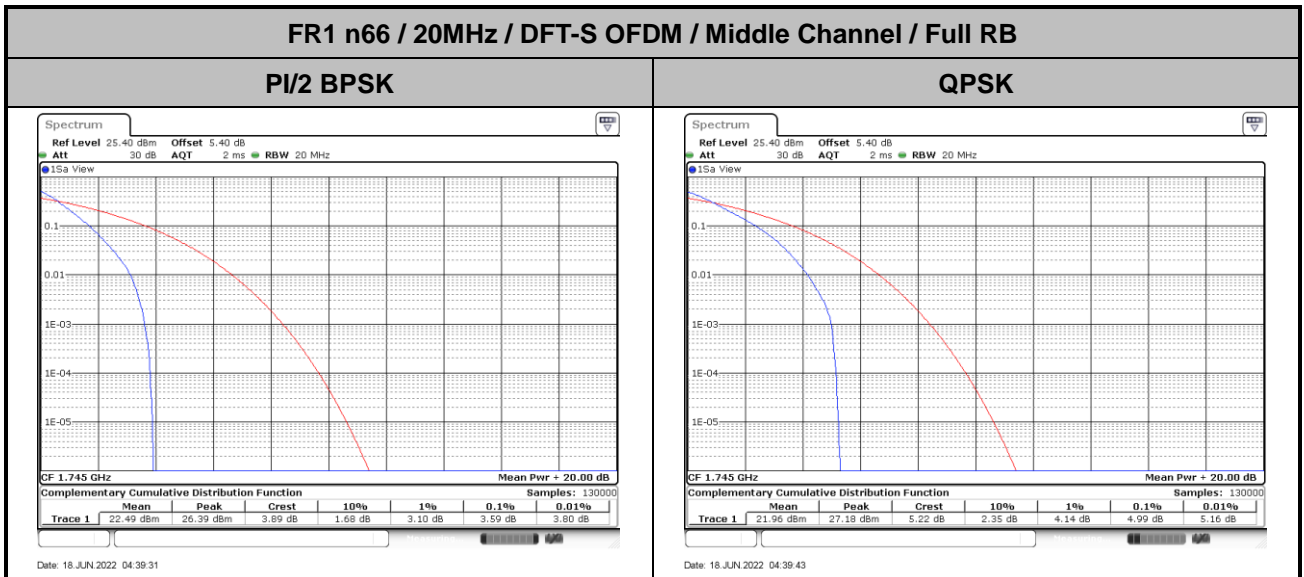
1. Normal Voltage =3.87 V. ; Battery End Point (BEP) =3.55 V. ; Maximum Voltage =4.45 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



FR1 n66

Peak-to-Average Ratio

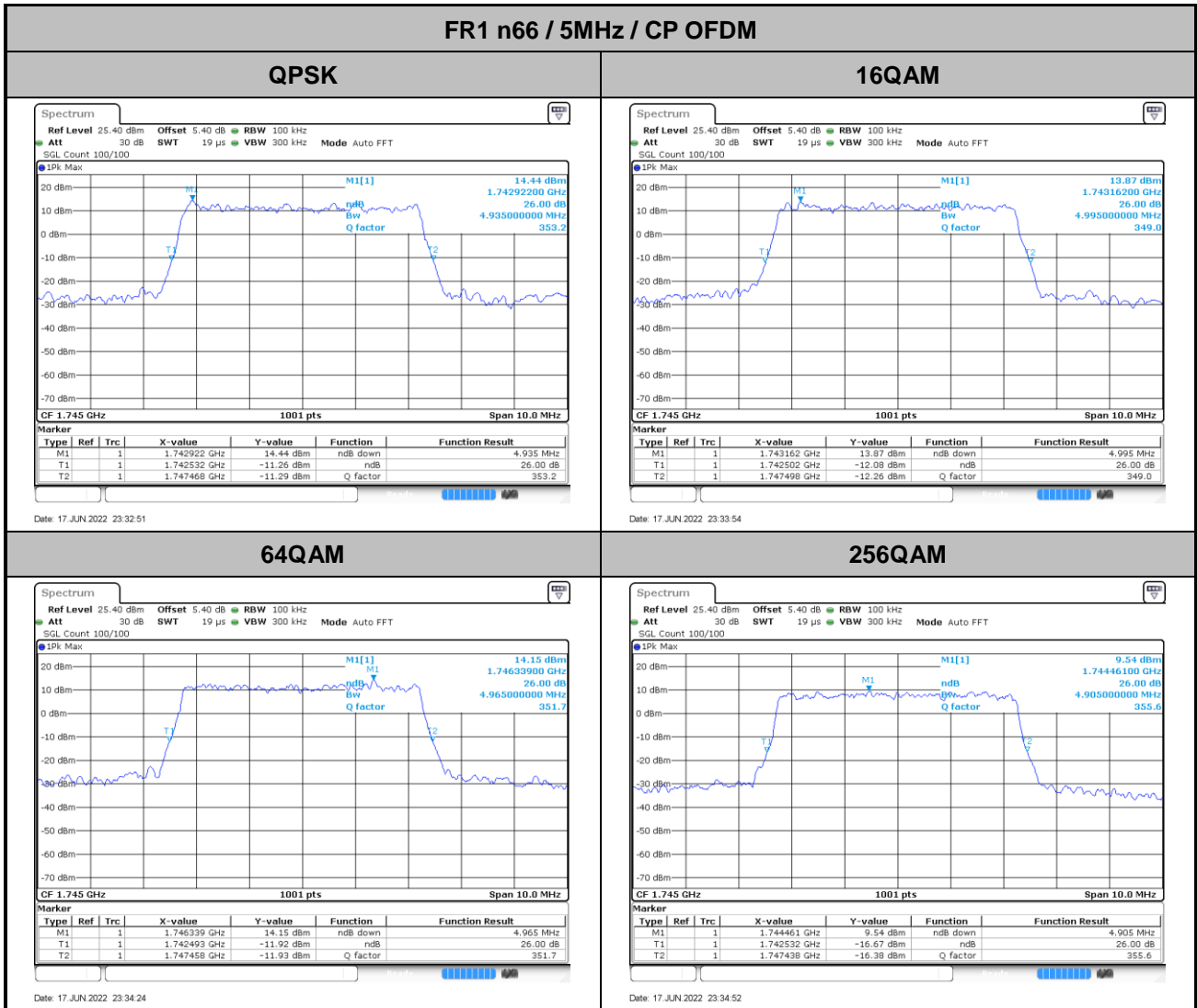
| | | | | | |
|-----------|------------------------------|---------|--|--|-------------|
| Mode | FR1 n66 / 20MHz / DFT-S OFDM | | | | |
| Mod. | PI/2 BPSK | QPSK | | | Limit: 13dB |
| RB Size | Full RB | Full RB | | | Result |
| Middle CH | 3.59 | 4.99 | | | PASS |





26dB Bandwidth

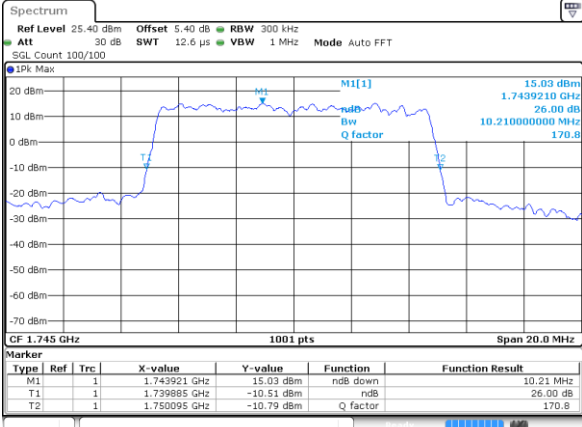
| Mode | FR1 n66 : 26dBW (MHz) / CP OFDM | | | | | | | | | |
|-----------|---------------------------------|-------|-------|--------|--|-------|-------|-------|--------|--|
| BW | 5M | | | | | 10M | | | | |
| Mod. | QPSK | 16QAM | 64QAM | 256QAM | | QPSK | 16QAM | 64QAM | 256QAM | |
| Middle CH | 4.94 | 5.00 | 4.97 | 4.91 | | 10.21 | 10.05 | 10.01 | 10.05 | |
| BW | 15M | | | | | 20M | | | | |
| Mod. | QPSK | 16QAM | 64QAM | 256QAM | | QPSK | 16QAM | 64QAM | 256QAM | |
| Middle CH | 14.99 | 14.84 | 14.93 | 14.93 | | 21.94 | 21.30 | 21.46 | 21.18 | |





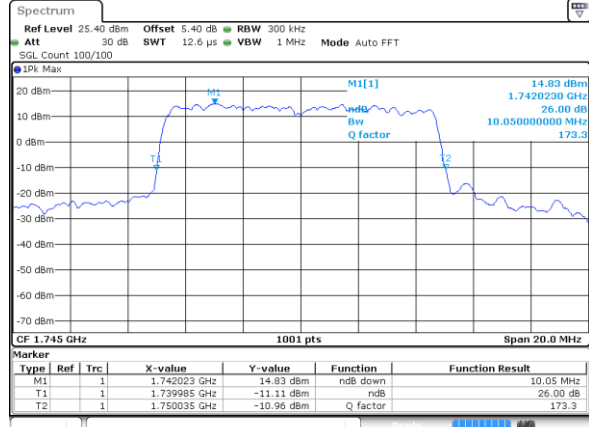
FR1 n66 / 10MHz / CP OFDM

QPSK



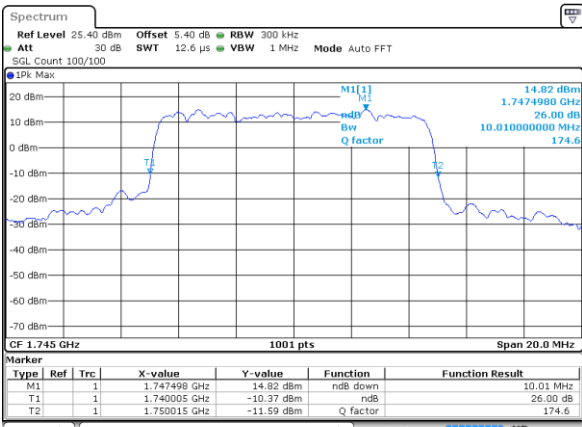
Date: 18 JUN 2022 00:30:40

16QAM



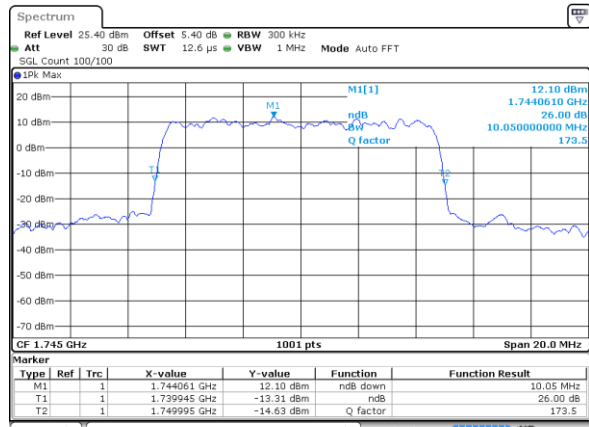
Date: 18 JUN 2022 00:31:36

64QAM



Date: 18 JUN 2022 00:33:16

256QAM

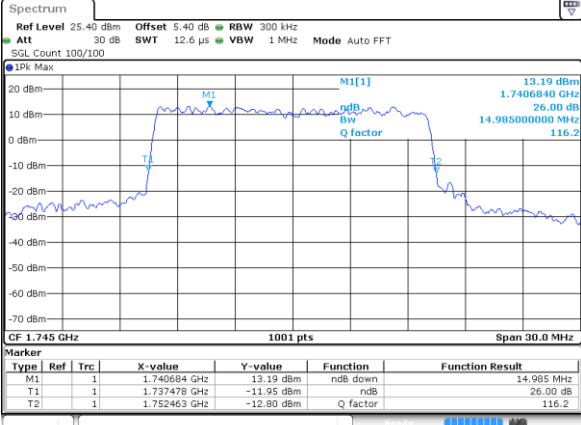


Date: 18 JUN 2022 00:34:02



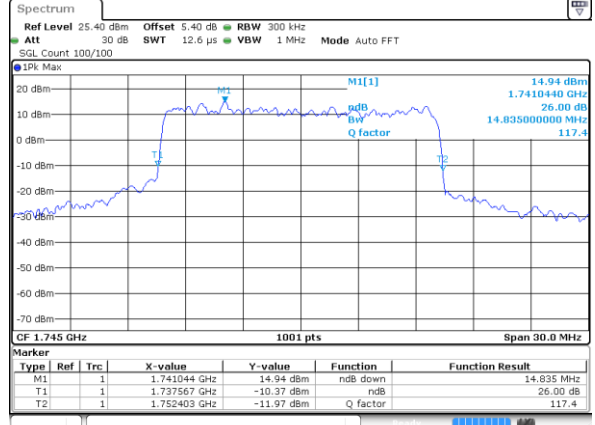
FR1 n66 / 15MHz / CP OFDM

QPSK



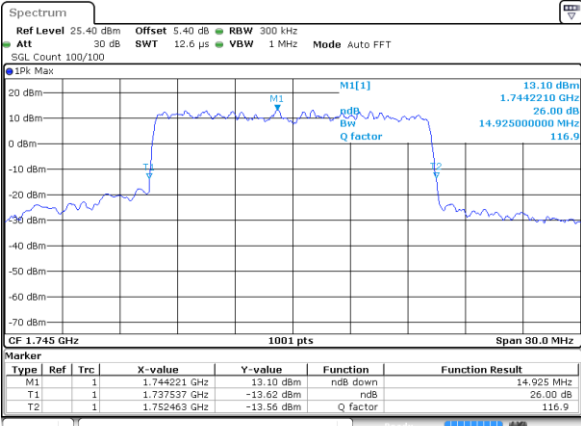
Date: 18 JUN 2022 00:55:39

16QAM



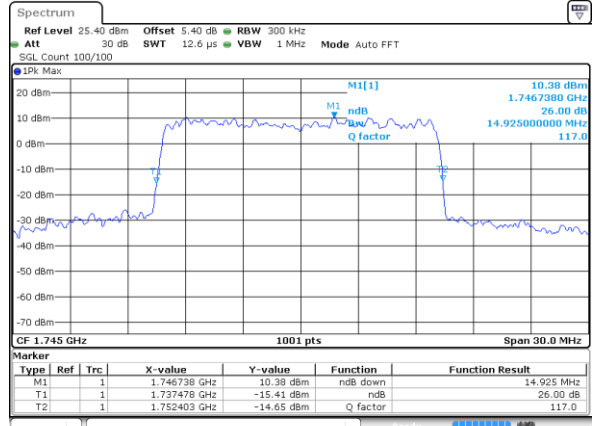
Date: 18 JUN 2022 00:59:44

64QAM



Date: 18 JUN 2022 01:00:11

256QAM

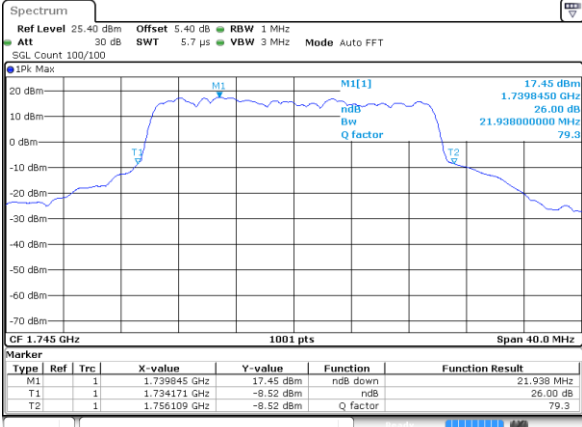


Date: 18 JUN 2022 01:02:50



FR1 n66 / 20MHz / CP OFDM

QPSK



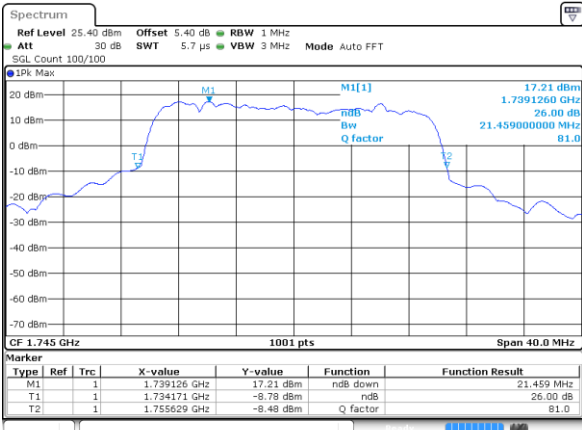
Date: 18 JUN 2022 02:25:42

16QAM



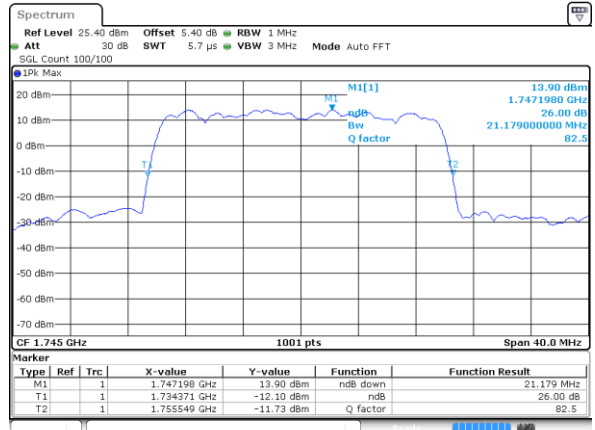
Date: 18 JUN 2022 02:26:40

64QAM



Date: 18 JUN 2022 02:27:01

256QAM

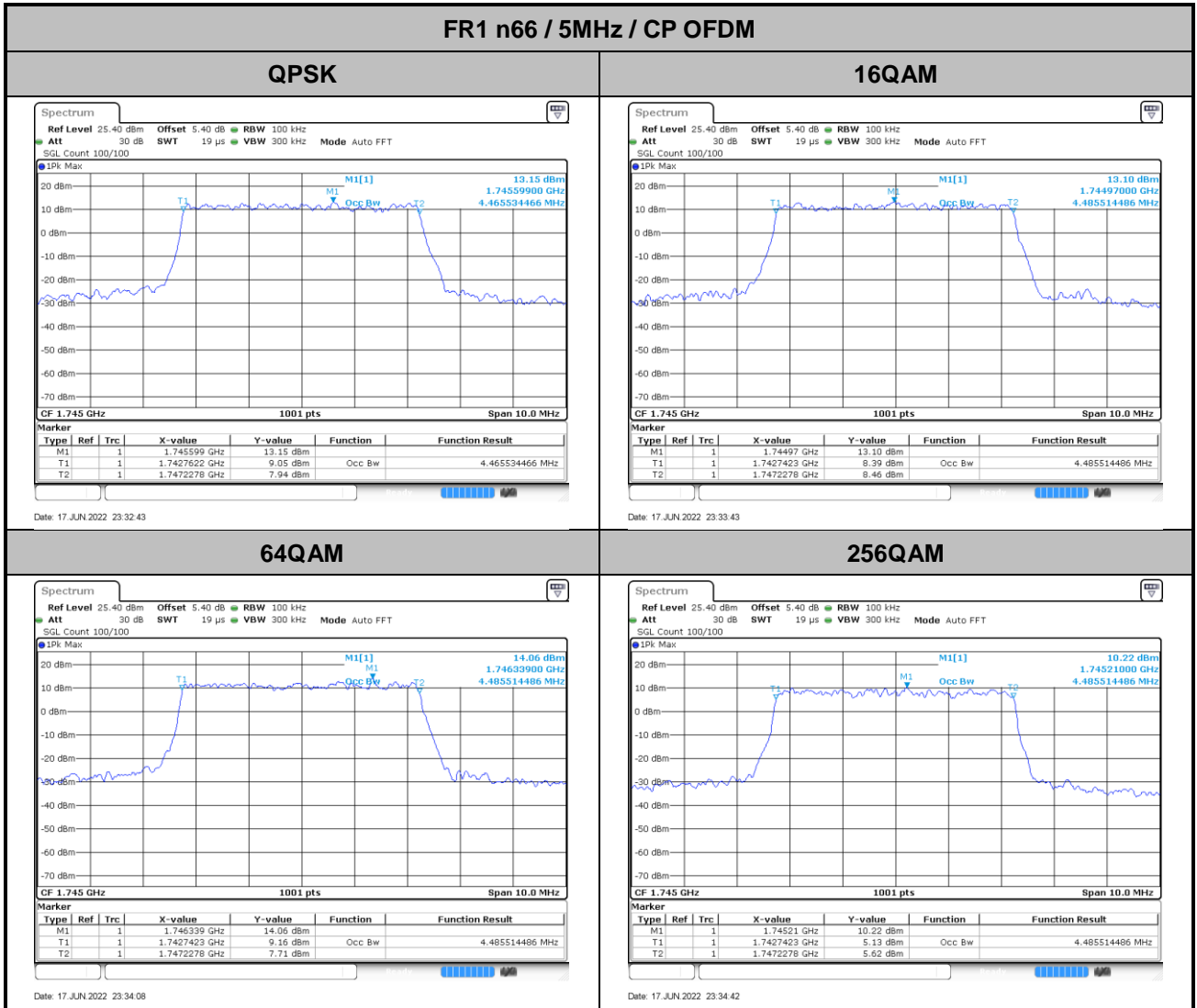


Date: 18 JUN 2022 02:27:33



Occupied Bandwidth

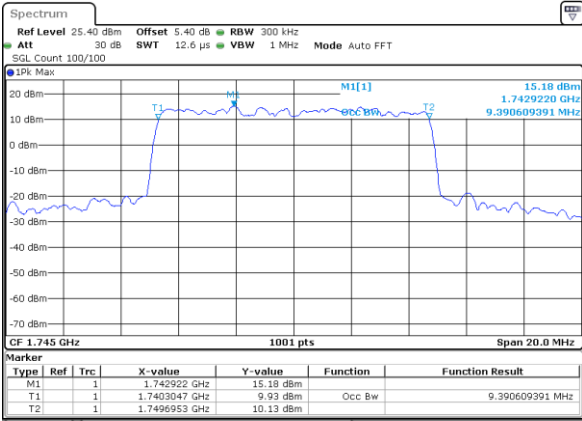
| Mode | FR1 n66 : OB (MHz) / CP OFDM | | | | | | | | | |
|-----------|------------------------------|-------|-------|-------|--------|-----|-------|-------|-------|--------|
| BW | 5M | | | | | 10M | | | | |
| Mod. | | QPSK | 16QAM | 64QAM | 256QAM | | QPSK | 16QAM | 64QAM | 256QAM |
| Middle CH | | 4.47 | 4.49 | 4.49 | 4.49 | | 9.39 | 9.35 | 9.39 | 9.43 |
| BW | 15M | | | | | 20M | | | | |
| Mod. | | QPSK | 16QAM | 64QAM | 256QAM | | QPSK | 16QAM | 64QAM | 256QAM |
| Middle CH | | 14.12 | 14.15 | 14.12 | 14.18 | | 19.46 | 19.50 | 19.62 | 19.58 |





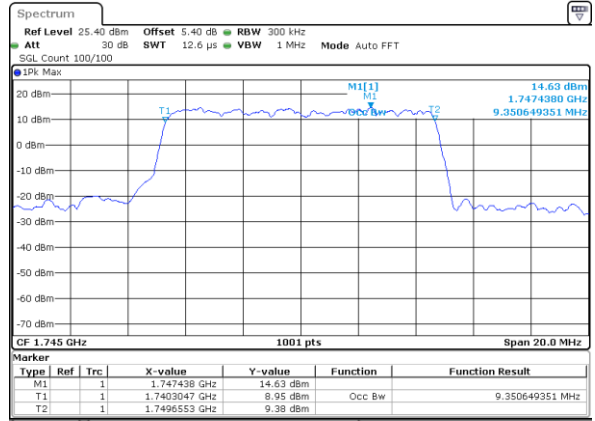
FR1 n66 / 10MHz / CP OFDM

QPSK



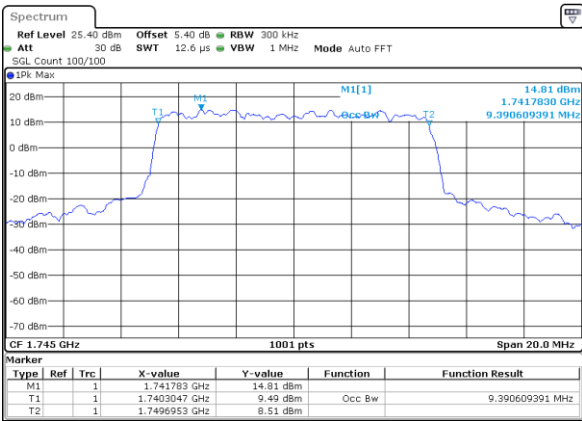
Date: 18 JUN 2022 00:30:30

16QAM



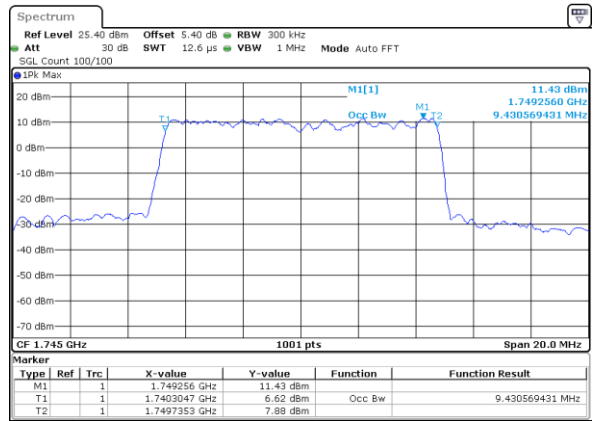
Date: 18 JUN 2022 00:30:54

64QAM



Date: 18 JUN 2022 00:31:51

256QAM

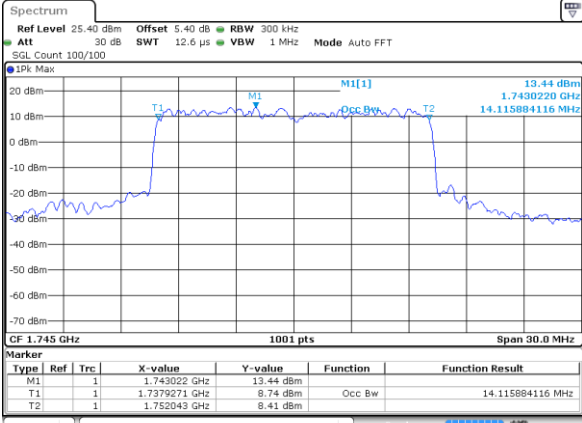


Date: 18 JUN 2022 00:33:54



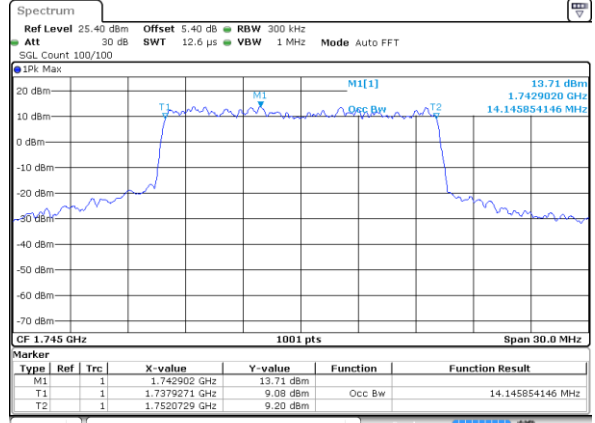
FR1 n66 / 15MHz / CP OFDM

QPSK



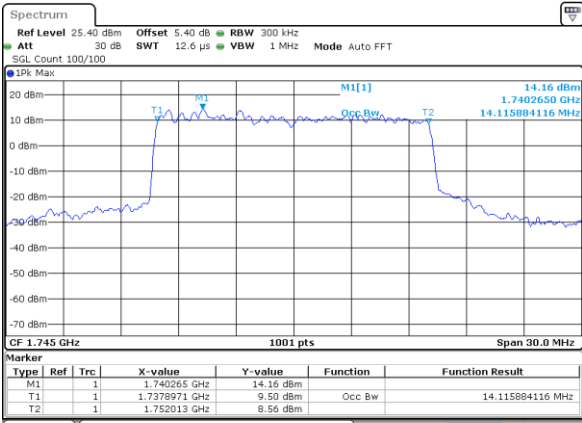
Date: 18 JUN 2022 00:55:30

16QAM



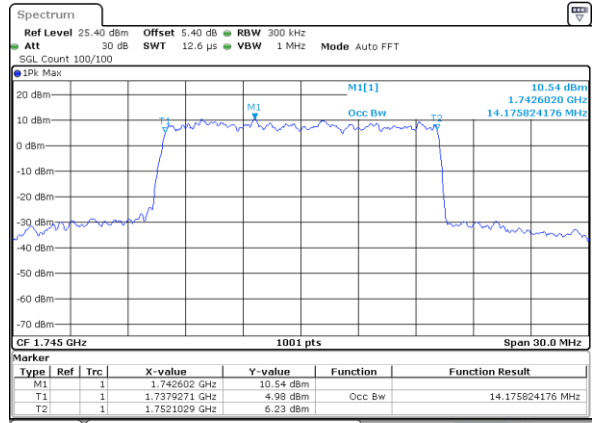
Date: 18 JUN 2022 00:59:26

64QAM



Date: 18 JUN 2022 00:59:59

256QAM

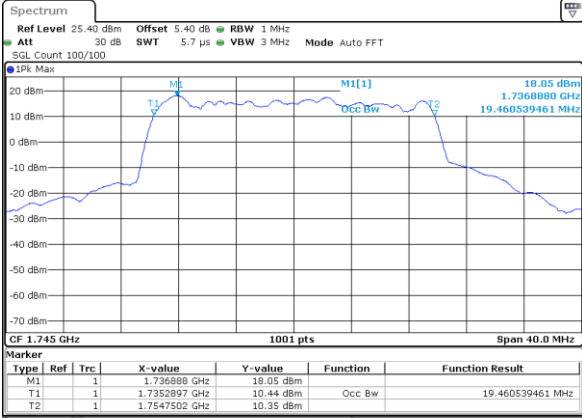


Date: 18 JUN 2022 01:00:24



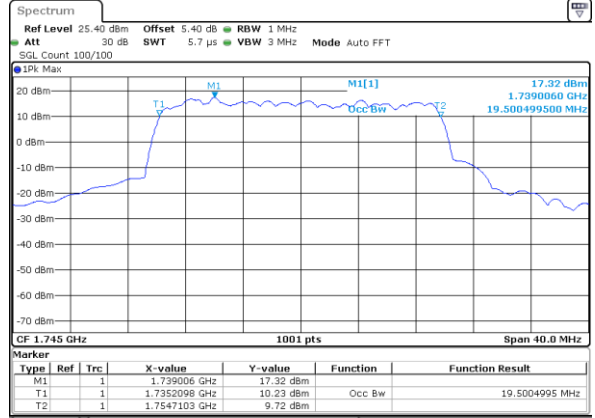
FR1 n66 / 20MHz / CP OFDM

QPSK



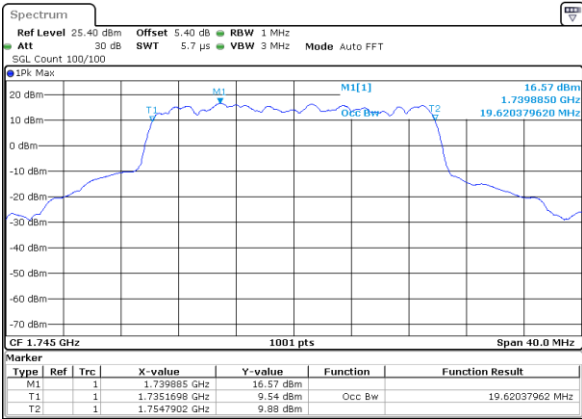
Date: 18 JUN 2022 02:25:04

16QAM



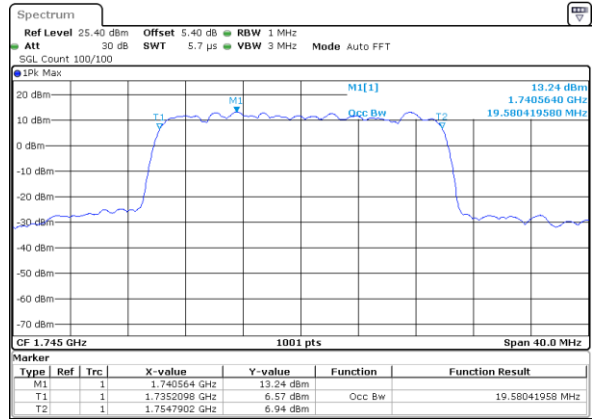
Date: 18 JUN 2022 02:26:31

64QAM



Date: 18 JUN 2022 02:26:53

256QAM



Date: 18 JUN 2022 02:27:21

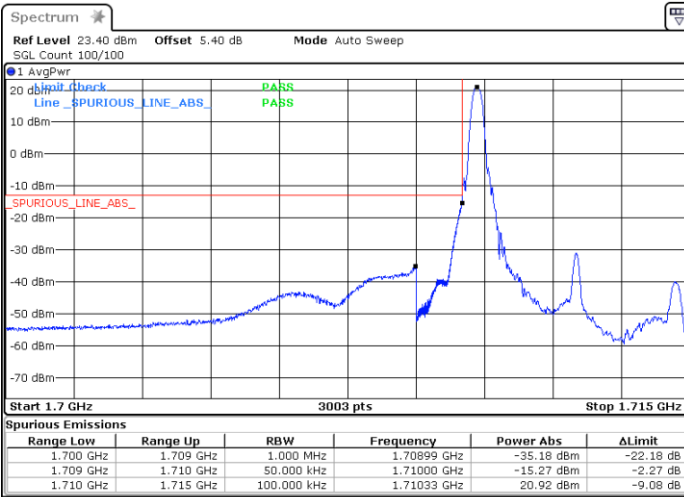


Conducted Band Edge

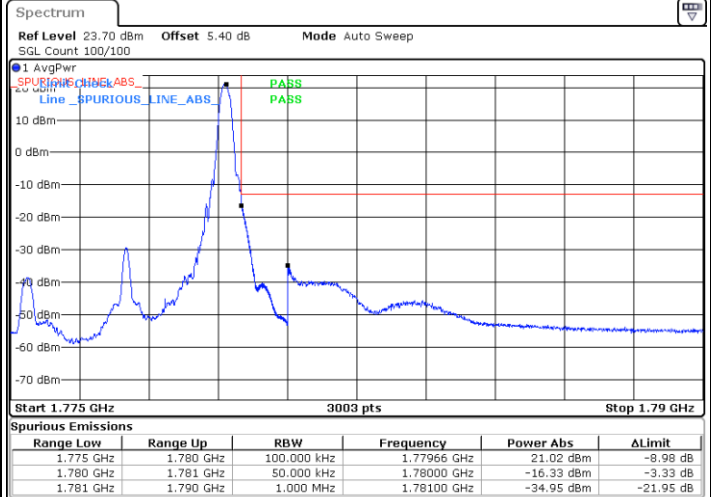
FR1 n66 / 5MHz / DFT-S OFDM / PI/2 BPSK

Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax



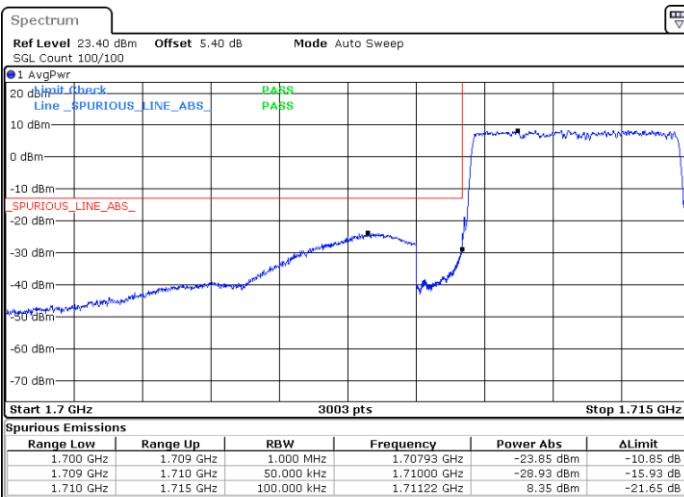
Date: 17 JUN 2022 23:04:04



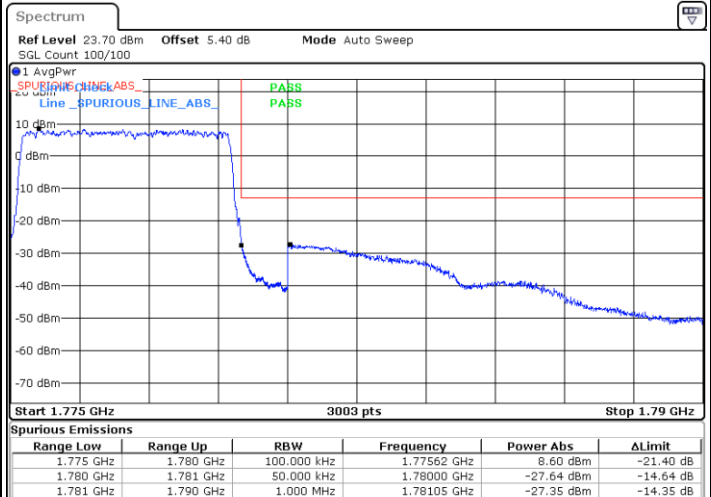
Date: 18 JUN 2022 00:22:46

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 17 JUN 2022 23:06:12



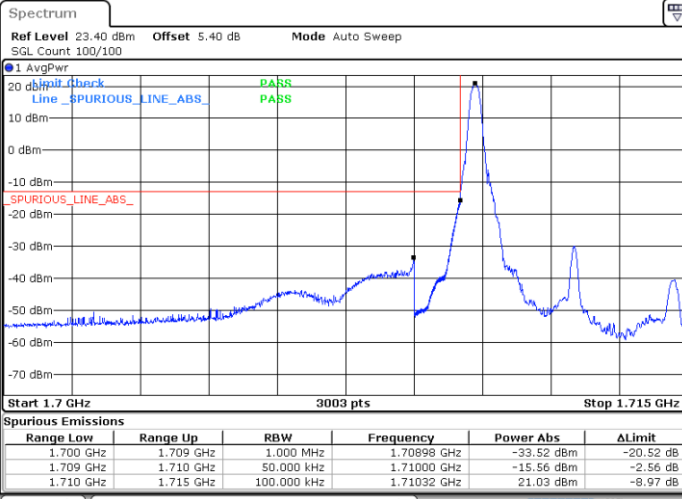
Date: 18 JUN 2022 00:21:19



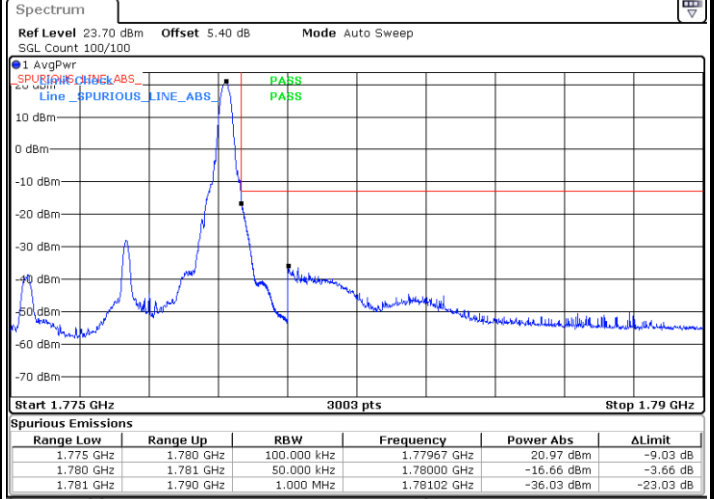
FR1 n66 / 5MHz / DFT-S OFDM / QPSK

Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax



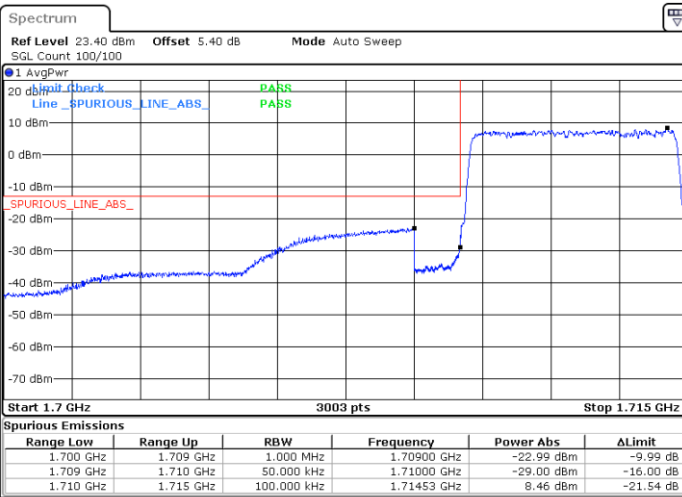
Date: 17 JUN 2022 23:05:09



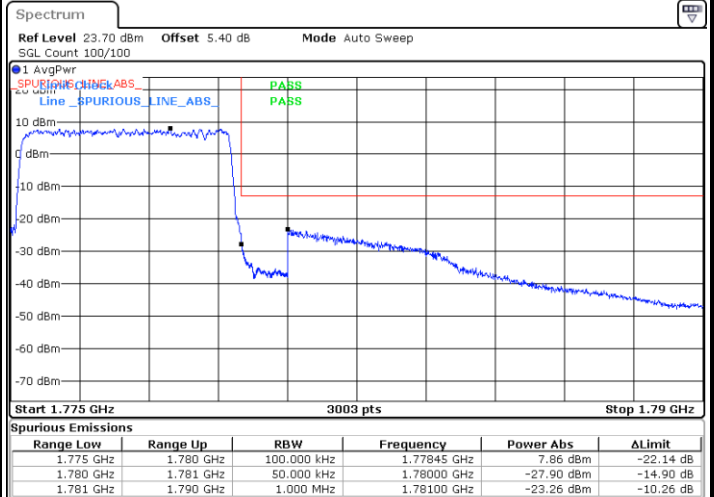
Date: 18 JUN 2022 00:22:20

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 17 JUN 2022 23:05:46



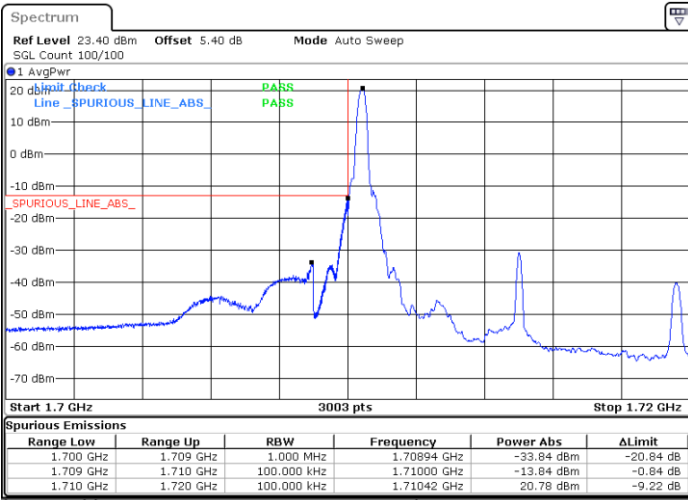
Date: 18 JUN 2022 00:21:44



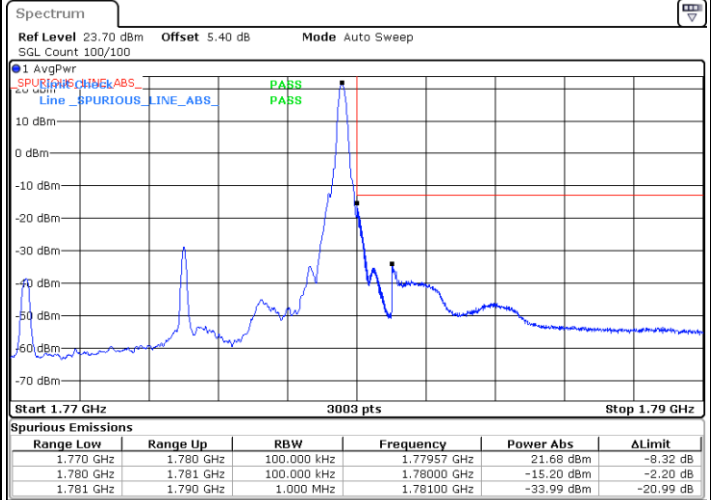
FR1 n66 / 10MHz / DFT-s-OFDM / PI/2 BPSK

Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax



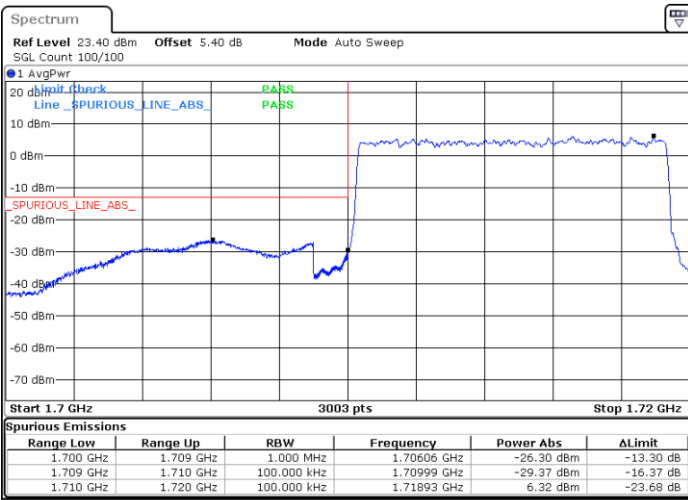
Date: 18 JUN 2022 00:25:47



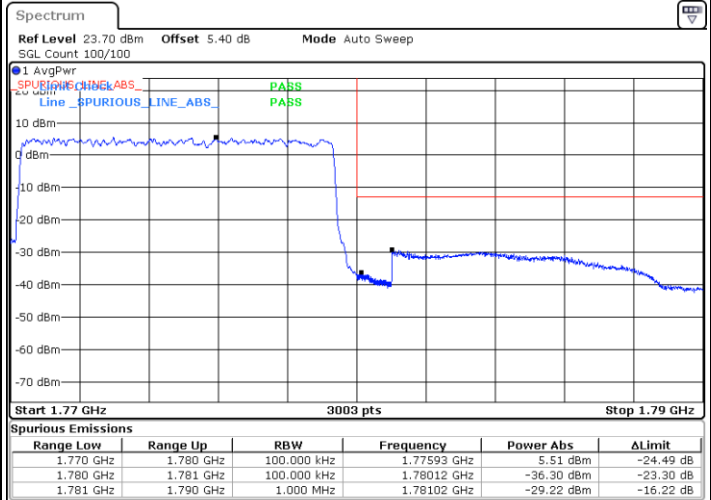
Date: 18 JUN 2022 00:44:41

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 18 JUN 2022 00:29:14



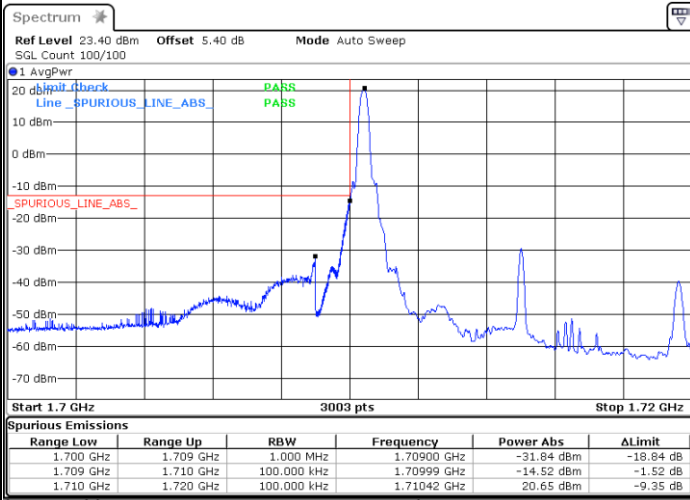
Date: 18 JUN 2022 00:44:09



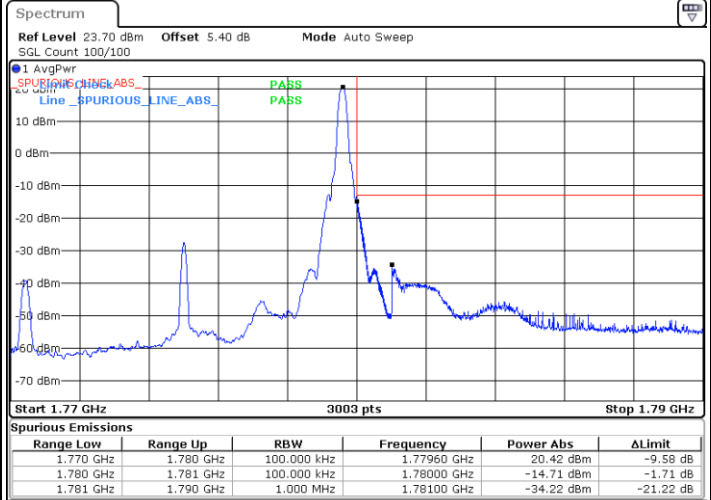
FR1 n66 / 10MHz / DFT-s-OFDM / QPSK

Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax



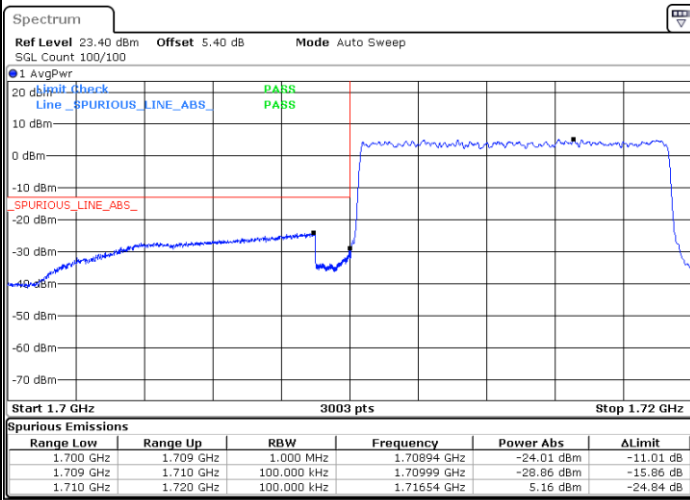
Date: 18 JUN 2022 00:26:30



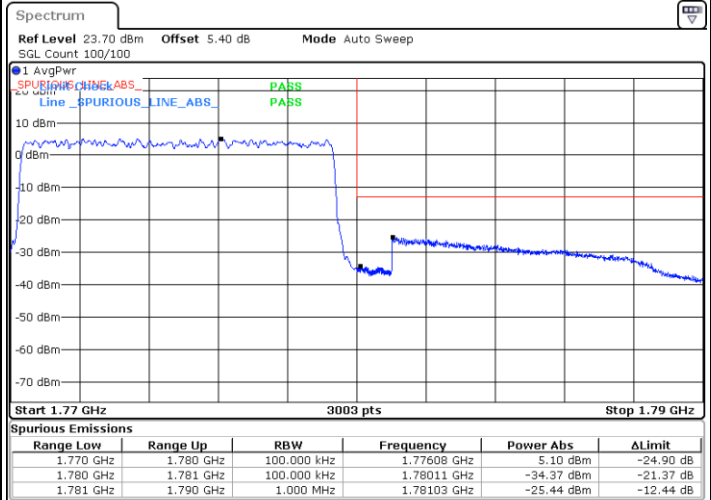
Date: 18 JUN 2022 00:45:01

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 18 JUN 2022 00:28:02



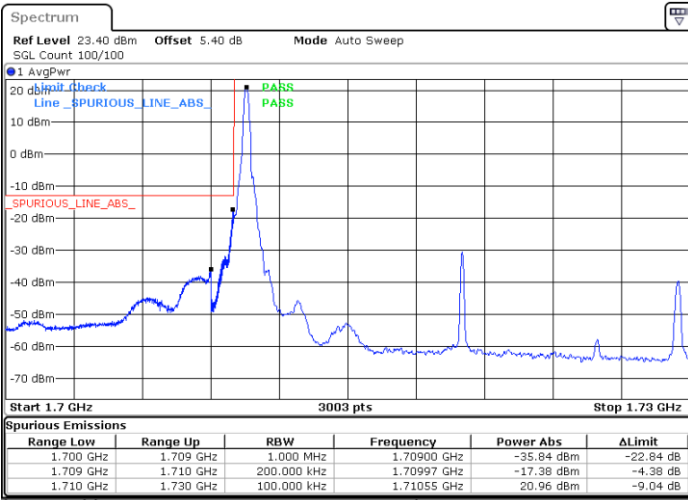
Date: 18 JUN 2022 00:43:53



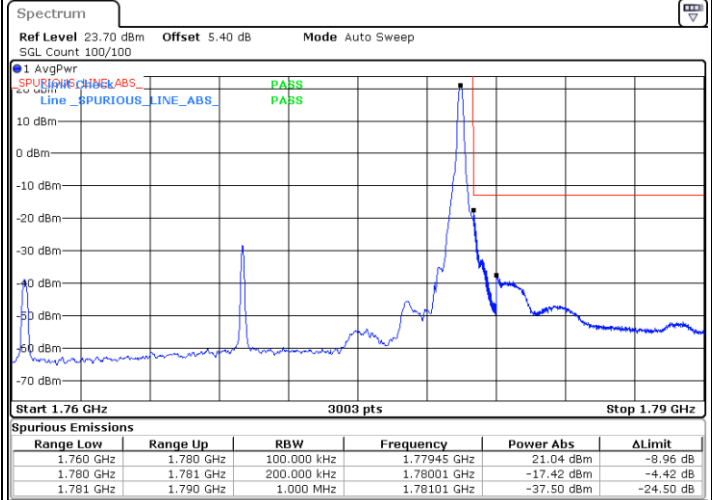
FR1 n66 / 20MHz / DFT-s-OFDM / PI/2 BPSK

Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax



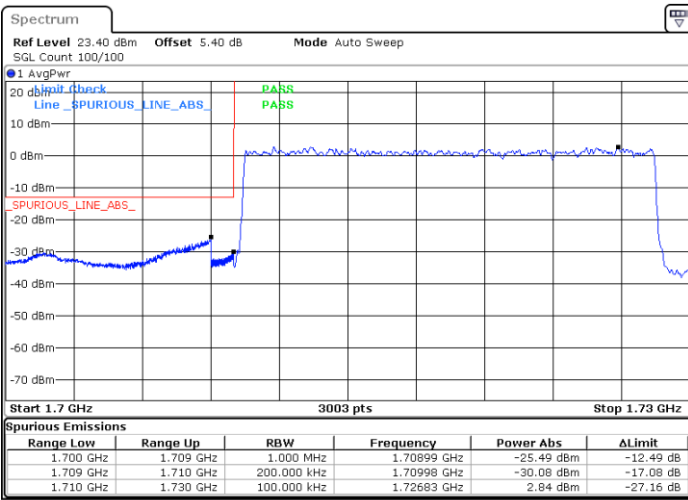
Date: 18 JUN 2022 02:12:41



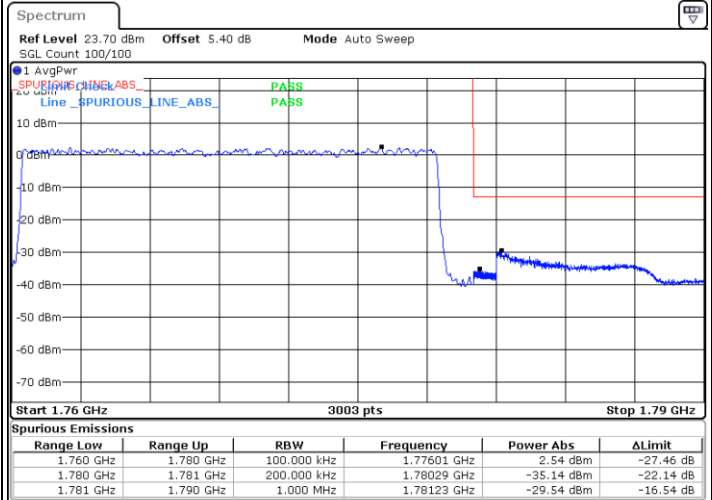
Date: 18 JUN 2022 02:32:44

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 18 JUN 2022 02:13:40



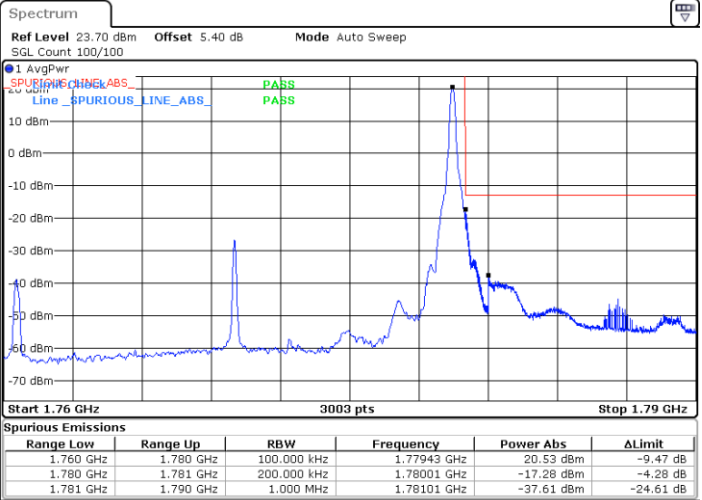
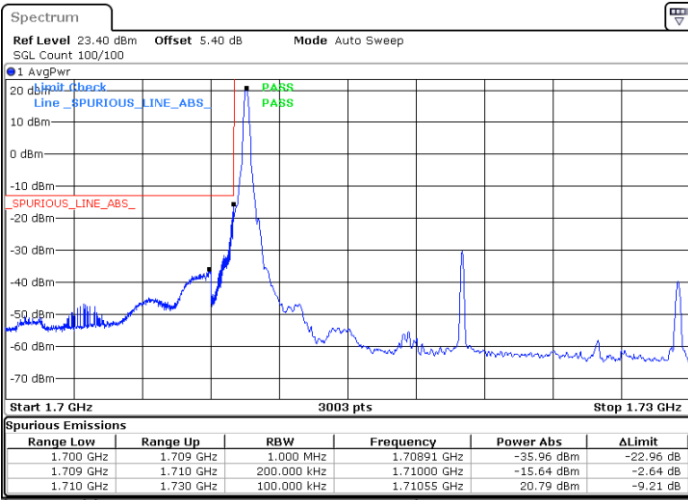
Date: 18 JUN 2022 02:28:32



FR1 n66 / 20MHz / DFT-s-OFDM / QPSK

Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax

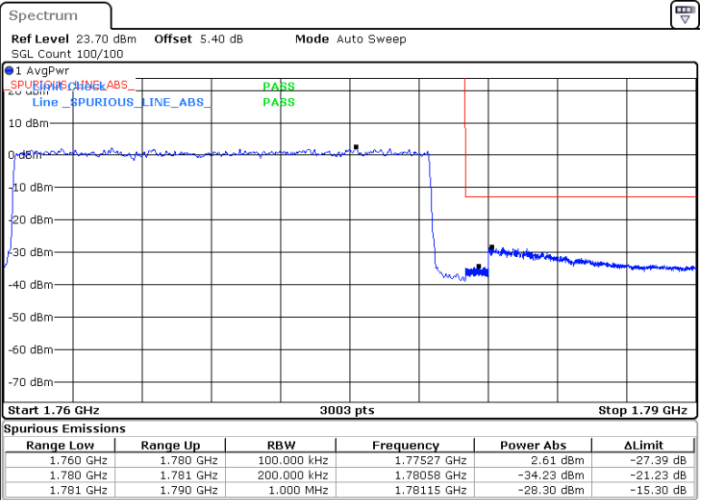
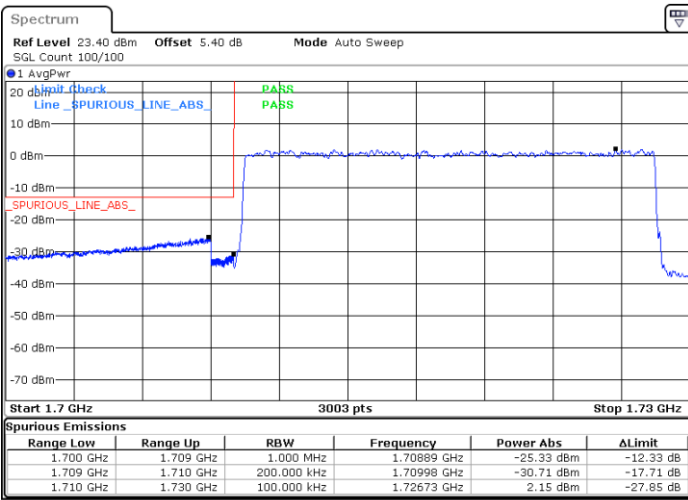


Date: 18 JUN 2022 02:12:58

Date: 18 JUN 2022 02:32:23

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 18 JUN 2022 02:13:17

Date: 18 JUN 2022 02:31:46

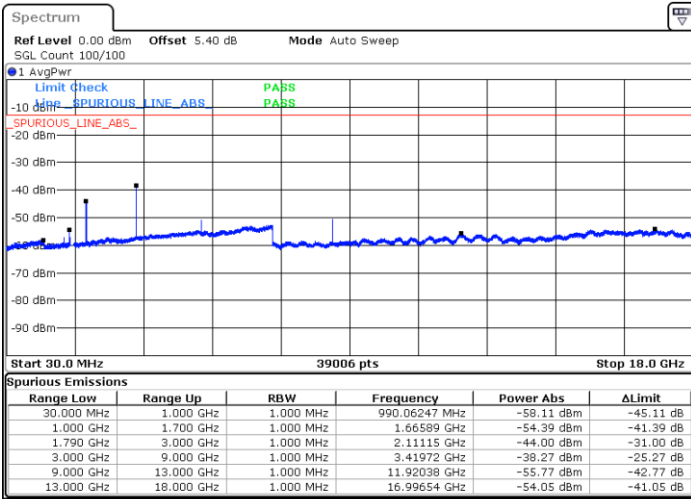


Conducted Spurious Emission

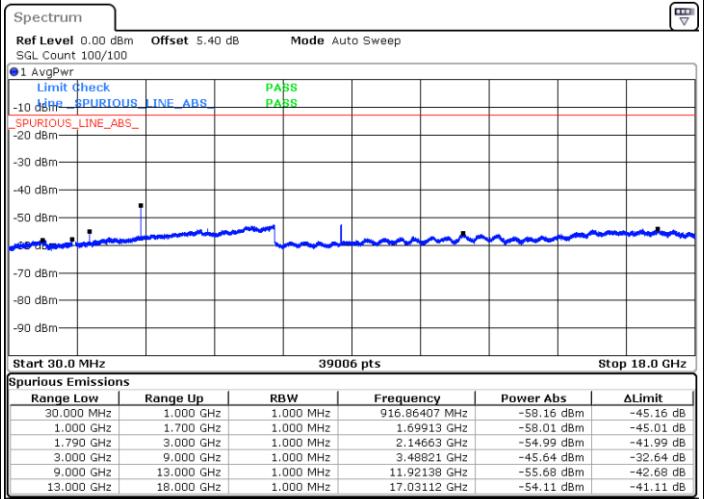
FR1 n66 / 5MHz / DFT-S OFDM / BPSK

Lowest Channel / 1RB1

Middle Channel / 1RB1

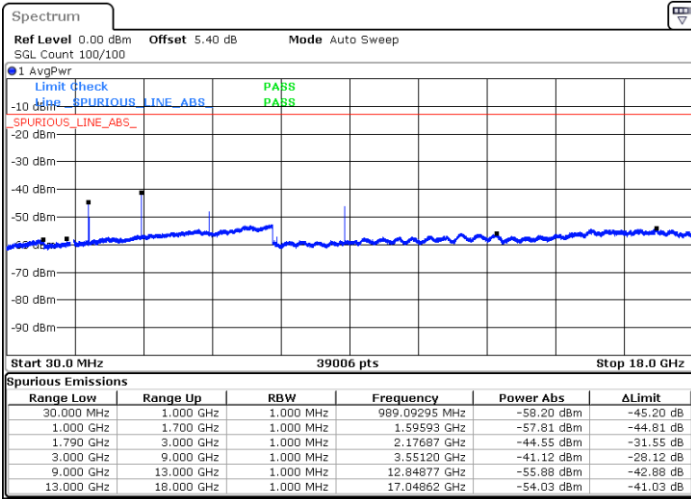


Date: 17 JUN 2022 23:15:10



Date: 17 JUN 2022 23:41:28

Highest Channel / 1RB1



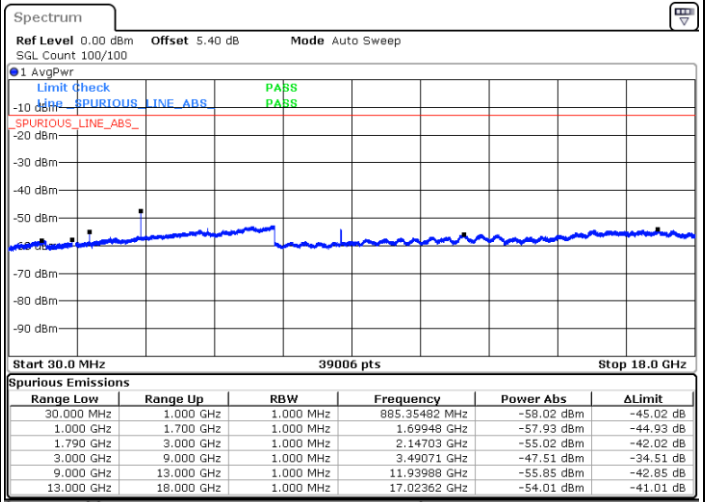
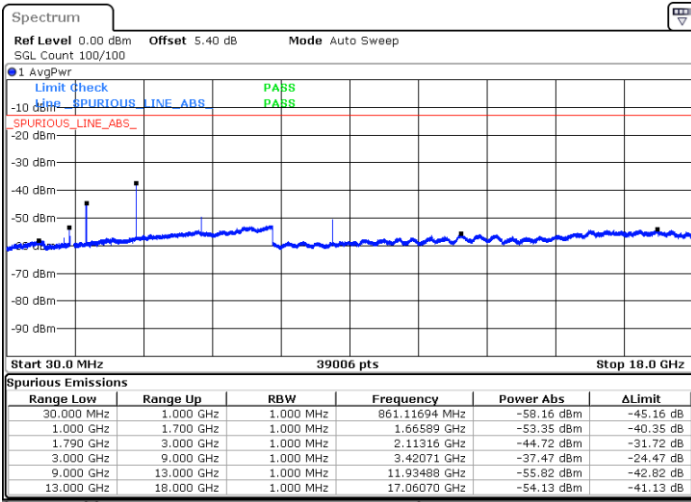
Date: 18 JUN 2022 00:18:29



FR1 n66 / 5MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB1

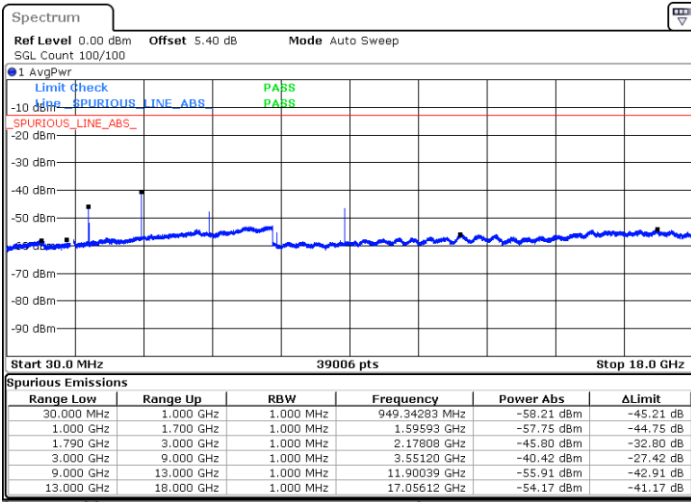
Middle Channel / 1RB1



Date: 17 JUN 2022 23:27:28

Date: 17 JUN 2022 23:53:44

Highest Channel / 1RB1



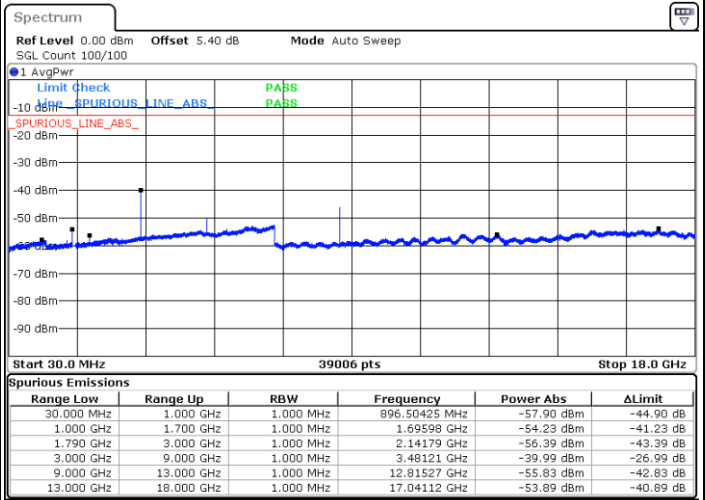
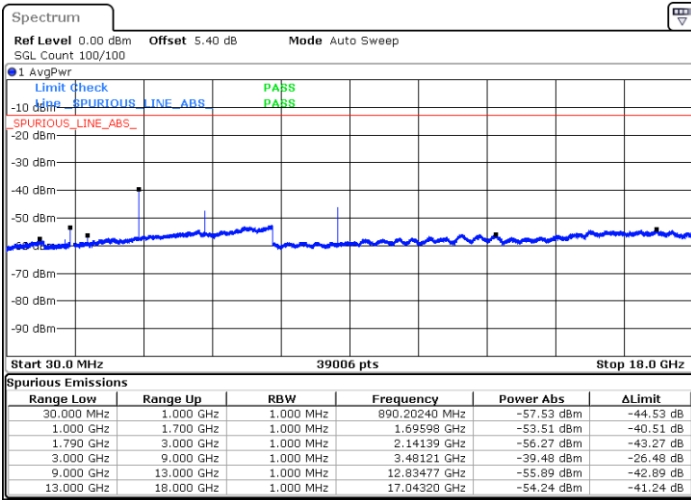
Date: 18 JUN 2022 00:20:39



FR1 n66 / 10MHz / DFT-S OFDM / BPSK

Lowest Channel / 1RB1

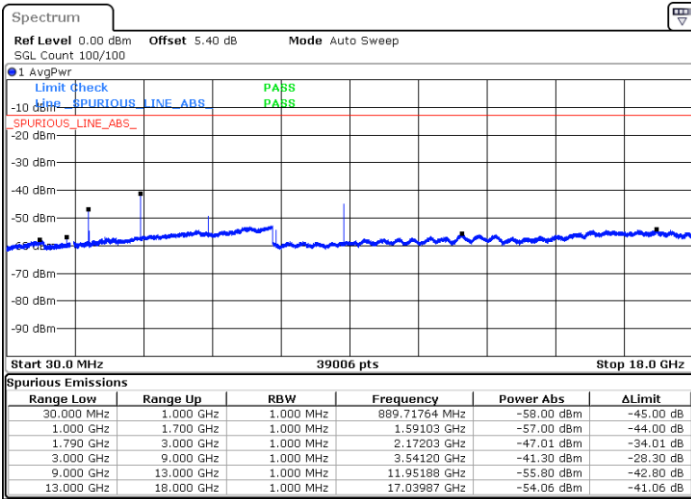
Middle Channel / 1RB1



Date: 18 JUN 2022 00:40:32

Date: 18 JUN 2022 00:35:32

Highest Channel / 1RB1



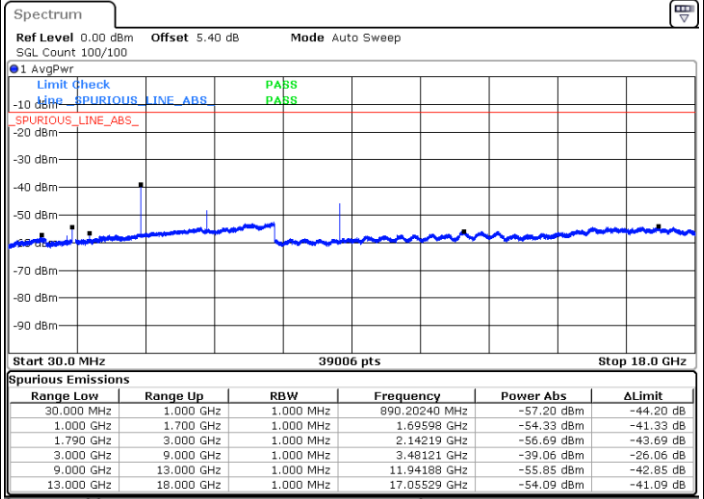
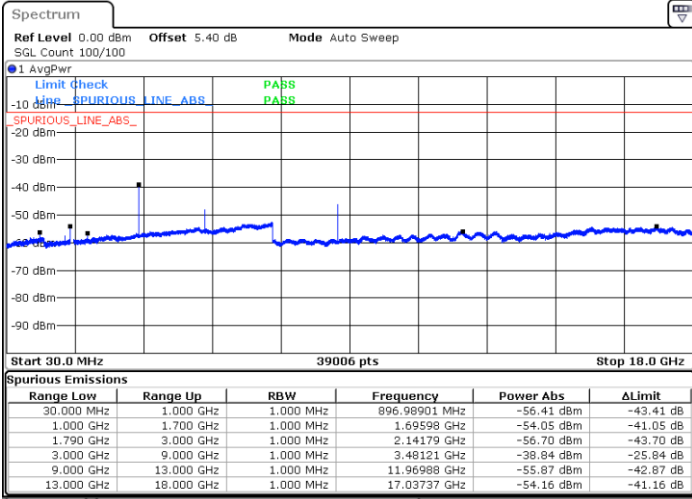
Date: 18 JUN 2022 00:42:09



FR1 n66 / 10MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB1

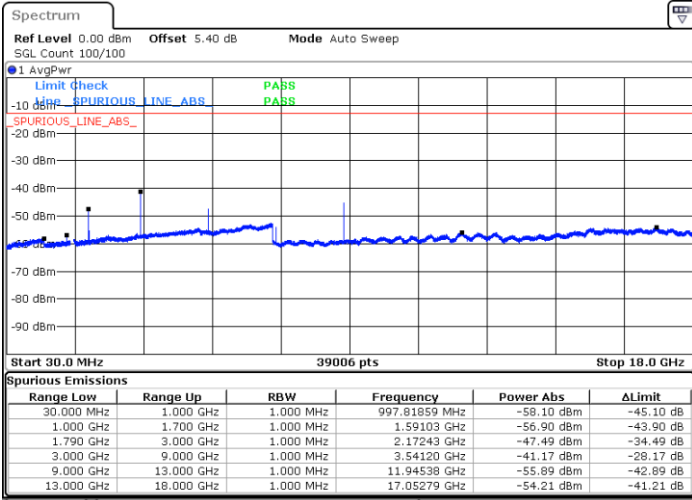
Middle Channel / 1RB1



Date: 18 JUN 2022 00:39:47

Date: 18 JUN 2022 00:37:06

Highest Channel / 1RB1



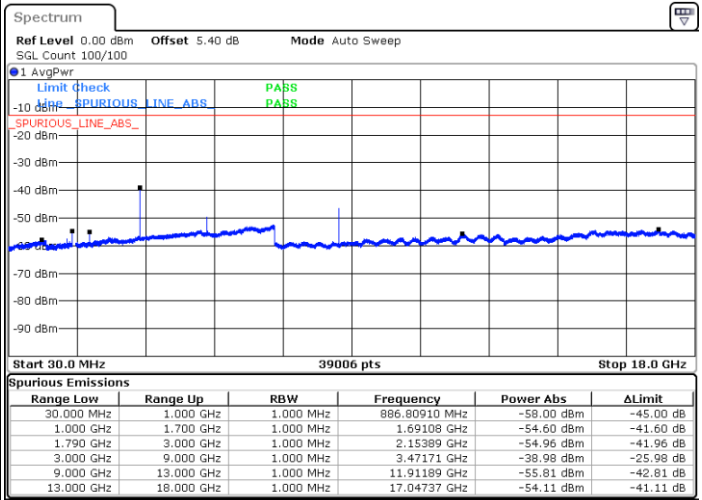
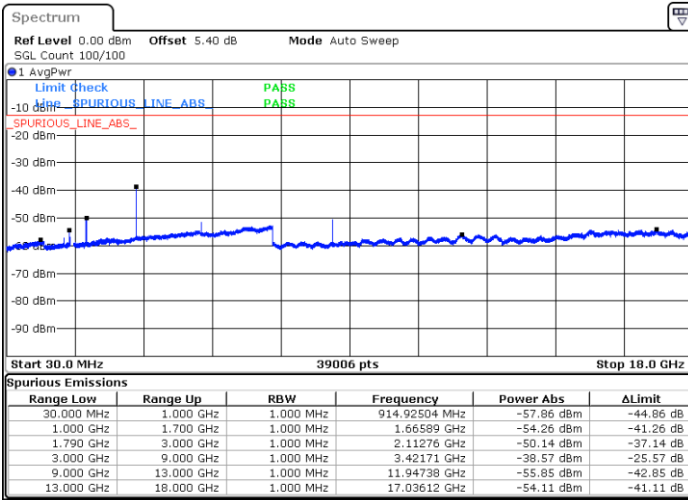
Date: 18 JUN 2022 00:43:15



FR1 n66 / 20MHz / DFT-S OFDM / BPSK

Lowest Channel / 1RB1

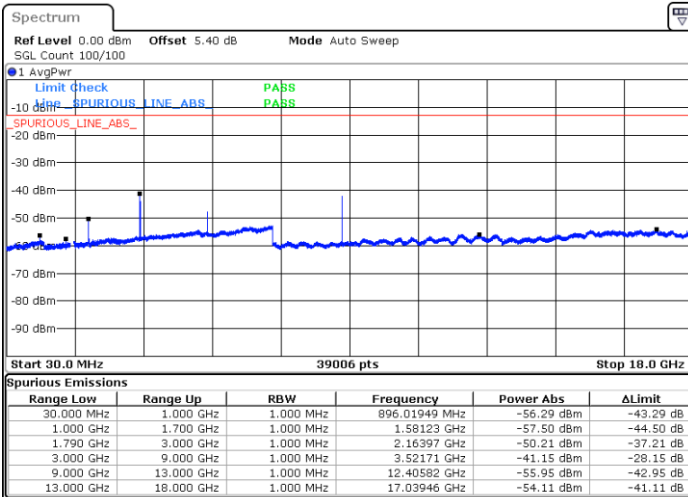
Middle Channel / 1RB1



Date: 18 JUN 2022 02:16:53

Date: 18 JUN 2022 02:24:00

Highest Channel / 1RB1



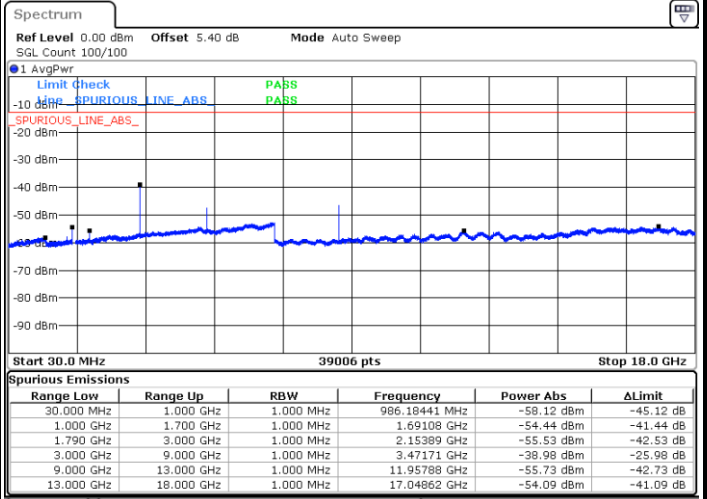
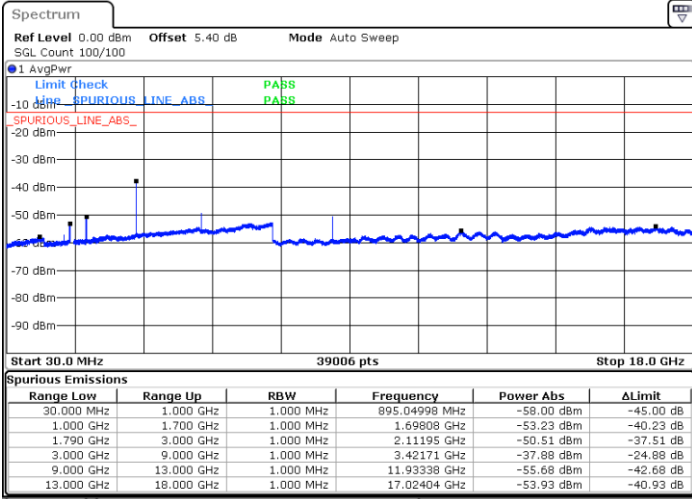
Date: 18 JUN 2022 02:34:57



FR1 n66 / 20MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB1

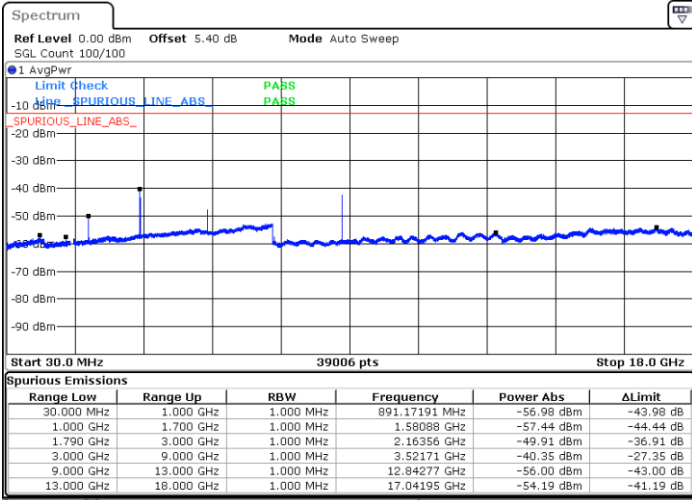
Middle Channel / 1RB1



Date: 18 JUN 2022 02:19:06

Date: 18 JUN 2022 02:21:06

Highest Channel / 1RB1



Date: 18 JUN 2022 02:36:36



Frequency Stability

| Test Conditions | | FR1 n66 (QPSK) / Middle Channel | Limit |
|------------------|-------------------|---------------------------------|---------|
| Temperature (°C) | Voltage (Volt) | BW 20MHz | Note 2. |
| | | Deviation (ppm) | Result |
| 50 | Normal Voltage | 0.0022 | PASS |
| 40 | Normal Voltage | 0.0011 | |
| 30 | Normal Voltage | 0.0005 | |
| 20(Ref.) | Normal Voltage | 0.0000 | |
| 10 | Normal Voltage | 0.0016 | |
| 0 | Normal Voltage | 0.0021 | |
| -10 | Normal Voltage | 0.0026 | |
| -20 | Normal Voltage | 0.0012 | |
| -30 | Normal Voltage | 0.0005 | |
| 20 | Maximum Voltage | 0.0029 | |
| 20 | Normal Voltage | 0.0014 | |
| 20 | Battery End Point | 0.0006 | |

Note:

1. Normal Voltage =3.87 V. ; Battery End Point (BEP) =3.55 V. ; Maximum Voltage =4.45 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

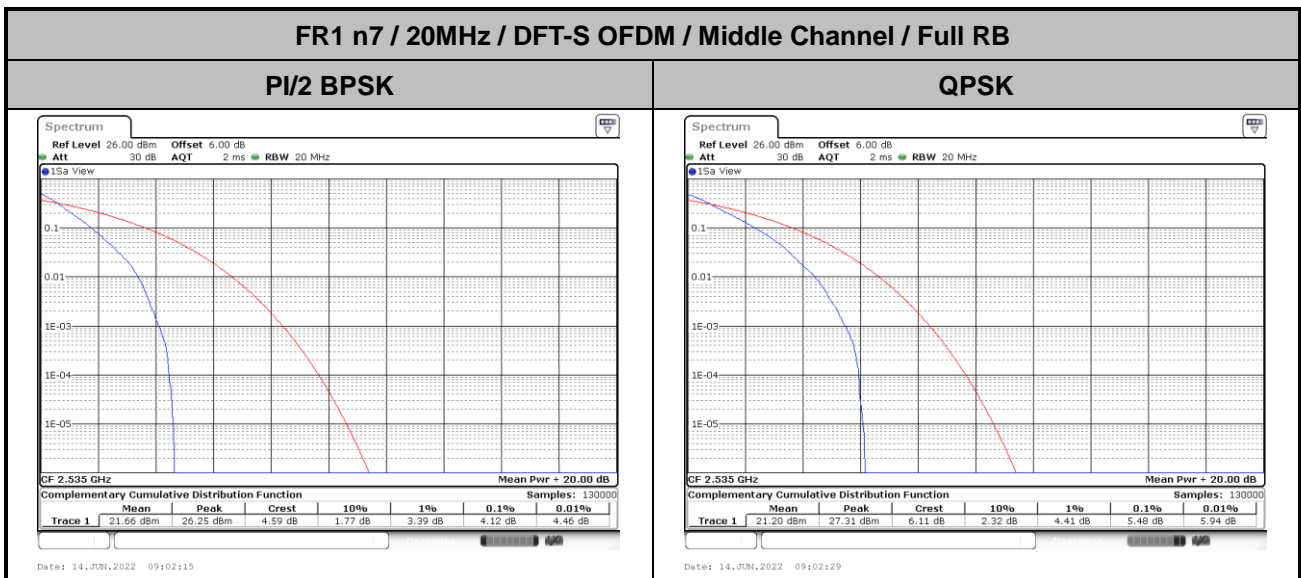


Other PA

FR1 5A_n7

Peak-to-Average Ratio

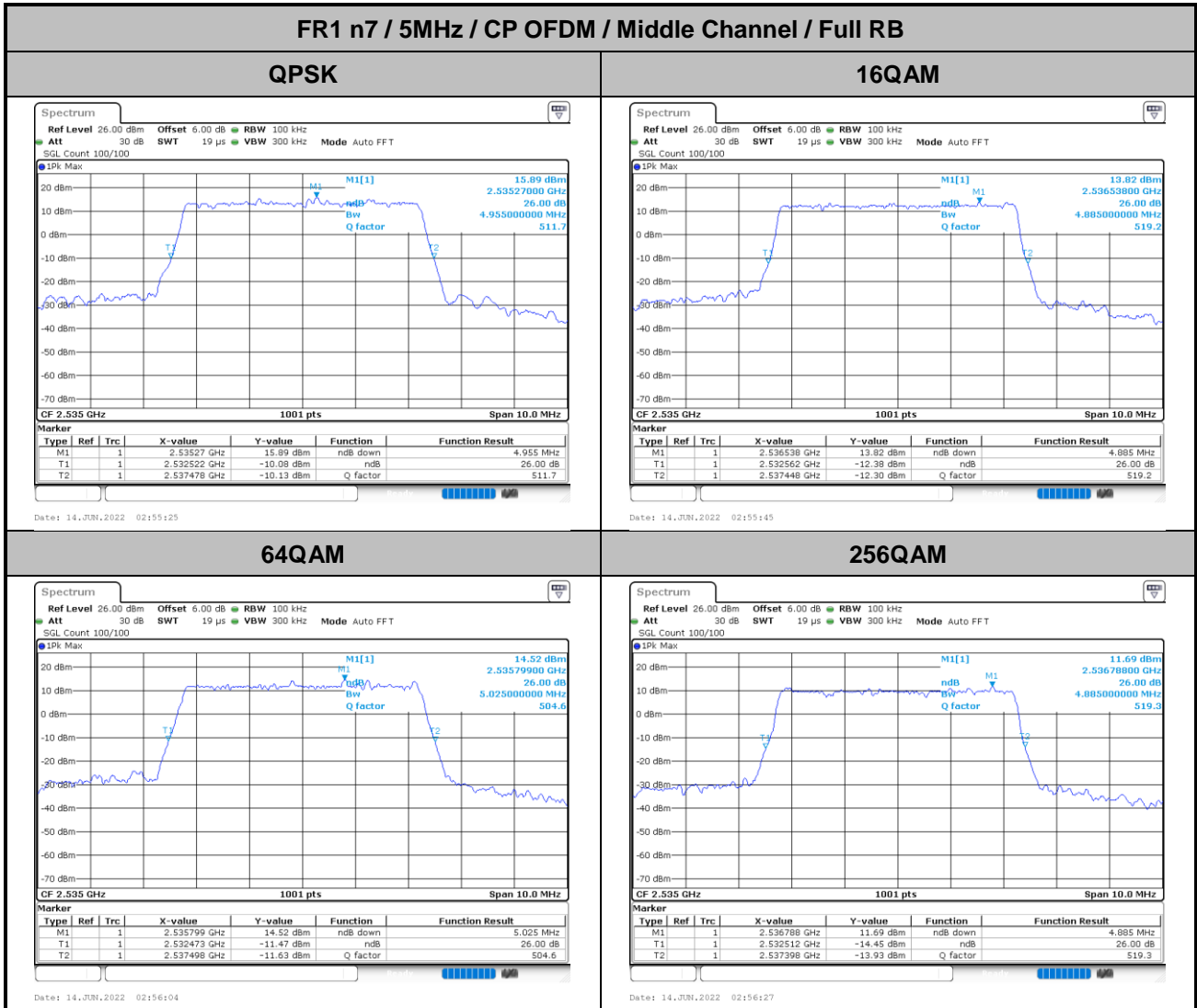
| | | | | | | |
|-----------|-----------------------------|---------|--|--|--|-------------|
| Mode | FR1 n7 / 20MHz / DFT-S OFDM | | | | | |
| Mod. | PI/2 BPSK | QPSK | | | | Limit: 13dB |
| RB Size | Full RB | Full RB | | | | Result |
| Middle CH | 4.12 | 5.48 | | | | PASS |





26dB Bandwidth

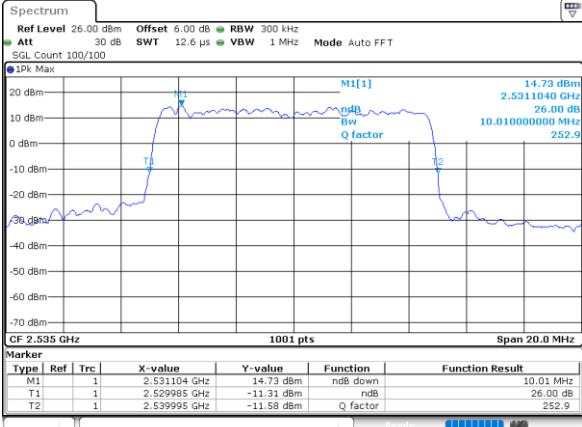
| Mode | FR1 n7 : 26dBW (MHz) / CP OFDM | | | | | | | | | |
|-----------|--------------------------------|-------|-------|--------|--|-------|-------|-------|--------|--|
| BW | 5M | | | | | 10M | | | | |
| Mod. | QPSK | 16QAM | 64QAM | 256QAM | | QPSK | 16QAM | 64QAM | 256QAM | |
| Middle CH | 4.96 | 4.89 | 5.03 | 4.89 | | 10.01 | 10.13 | 10.01 | 10.13 | |
| BW | 15M | | | | | 20M | | | | |
| Mod. | QPSK | 16QAM | 64QAM | 256QAM | | QPSK | 16QAM | 64QAM | 256QAM | |
| Middle CH | 14.99 | 14.84 | 15.02 | 14.99 | | 21.22 | 21.26 | 21.26 | 21.18 | |





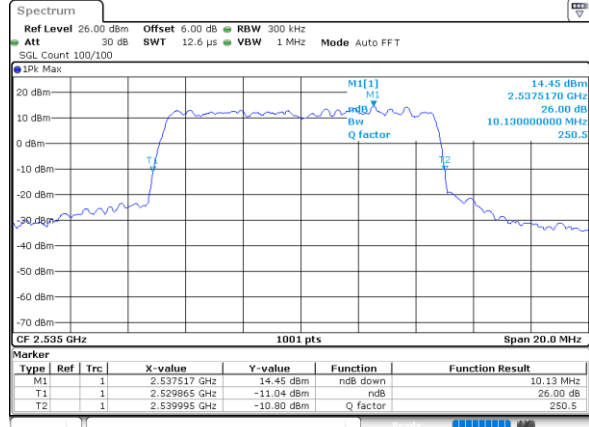
FR1 n7 / 10MHz / CP OFDM / Middle Channel / Full RB

QPSK



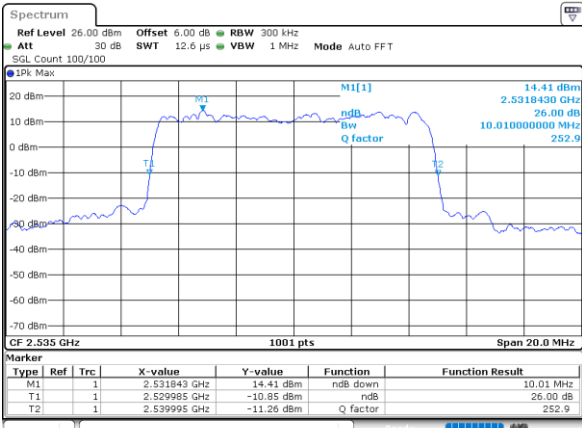
Date: 14 JUN 2022 08:49:22

16QAM



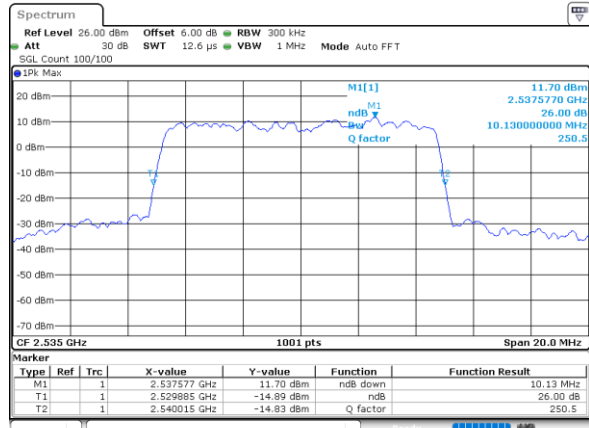
Date: 14 JUN 2022 08:49:42

64QAM



Date: 14 JUN 2022 08:50:01

256QAM

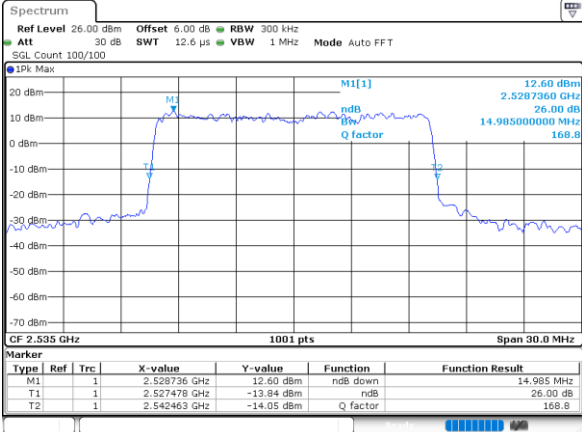


Date: 14 JUN 2022 08:50:32



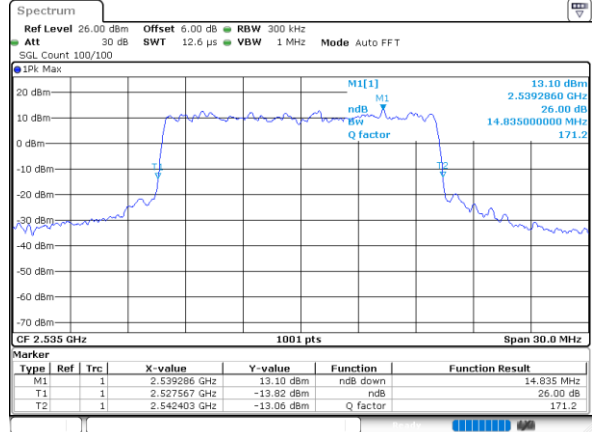
FR1 n7 / 15MHz / CP OFDM / Middle Channel / Full RB

QPSK



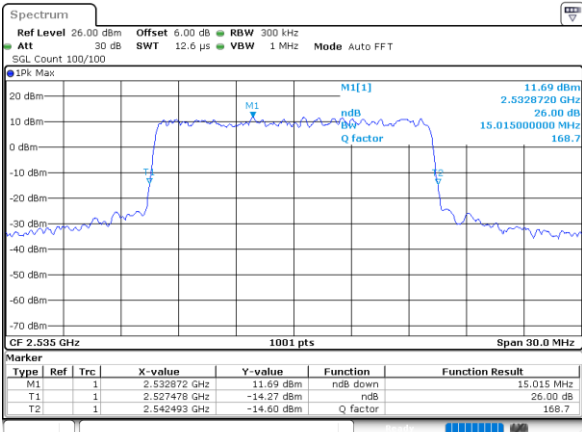
Date: 14 JUN 2022 08:57:56

16QAM



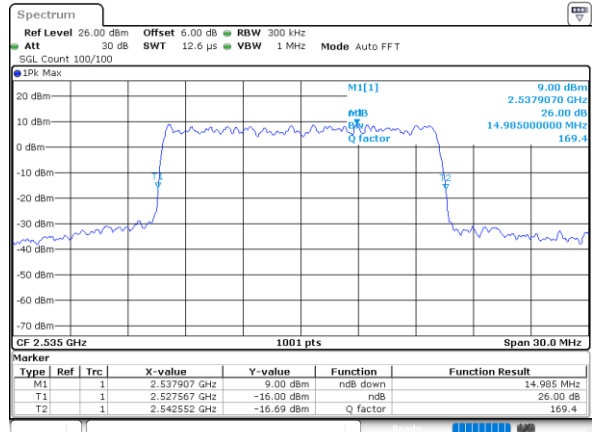
Date: 14 JUN 2022 08:58:15

64QAM



Date: 14 JUN 2022 08:58:34

256QAM

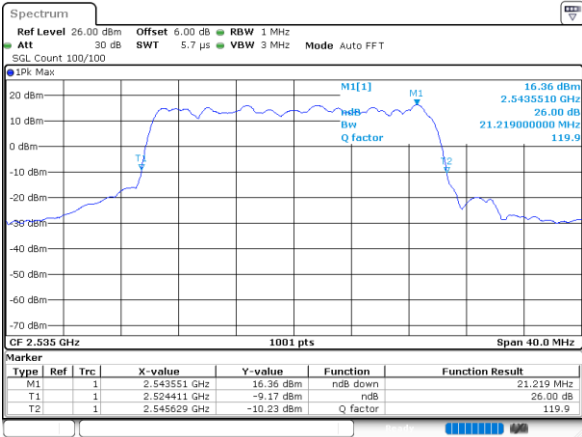


Date: 14 JUN 2022 08:58:59



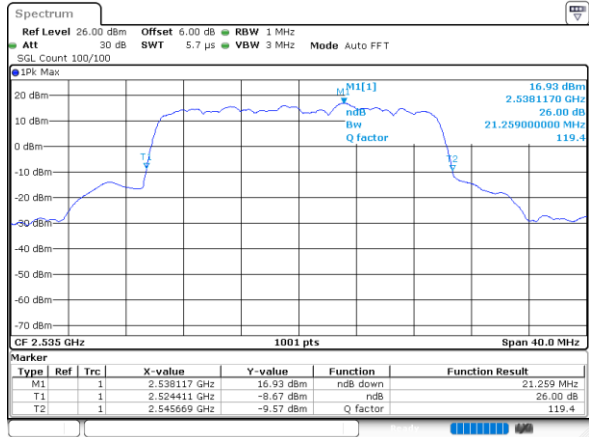
FR1 n7 / 20MHz / CP OFDM / Middle Channel / Full RB

QPSK



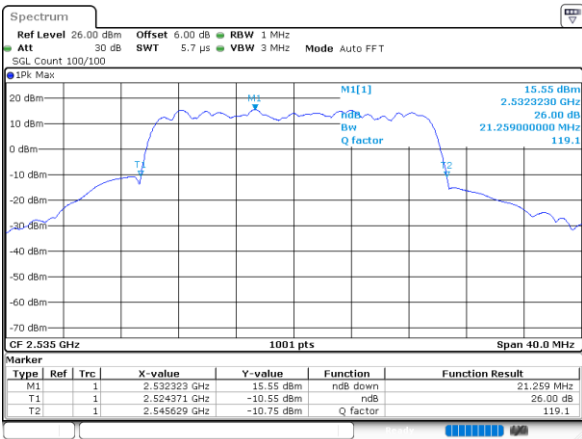
Date: 14 JUN 2022 09:00:14

16QAM



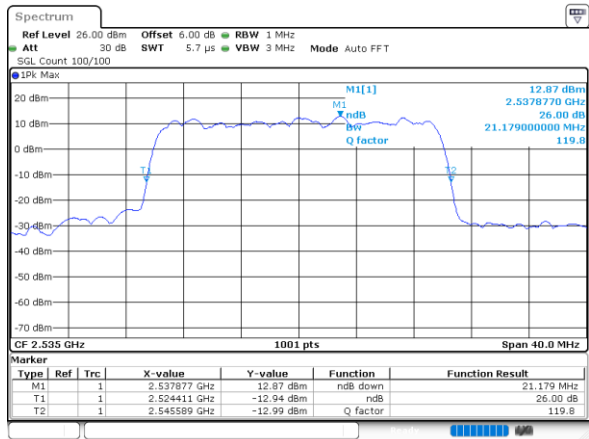
Date: 14 JUN 2022 09:00:18

64QAM



Date: 14 JUN 2022 09:00:14

256QAM



Date: 14 JUN 2022 09:00:22



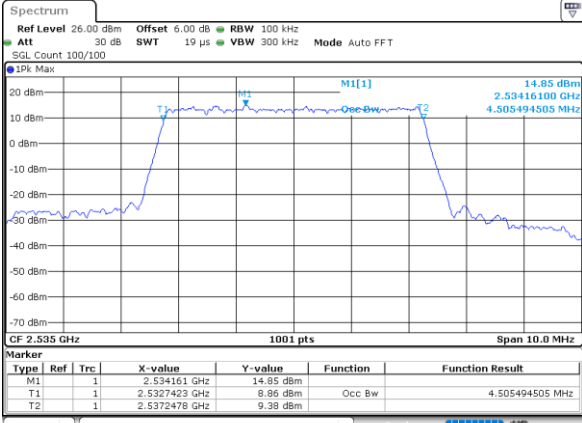
Occupied Bandwidth

| Mode | FR1 n5 : OB (MHz) / CP OFDM | | | | | | | | | |
|-----------|-----------------------------|-------|-------|--------|--|-------|-------|-------|--------|--|
| BW | 5M | | | | | 10M | | | | |
| Mod. | QPSK | 16QAM | 64QAM | 256QAM | | QPSK | 16QAM | 64QAM | 256QAM | |
| Middle CH | 4.51 | 4.50 | 4.50 | 4.48 | | 9.37 | 9.39 | 9.35 | 9.41 | |
| BW | 15M | | | | | 20M | | | | |
| Mod. | QPSK | 16QAM | 64QAM | 256QAM | | QPSK | 16QAM | 64QAM | 256QAM | |
| Middle CH | 14.18 | 14.15 | 14.09 | 14.21 | | 19.38 | 19.46 | 19.38 | 19.50 | |



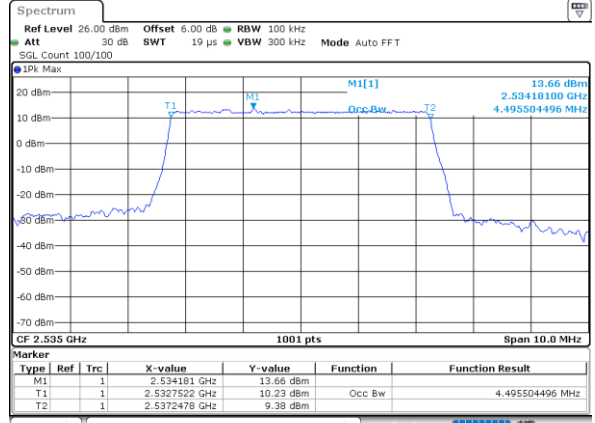
FR1 n7 / 5MHz / CP OFDM / Middle Channel / Full RB

QPSK



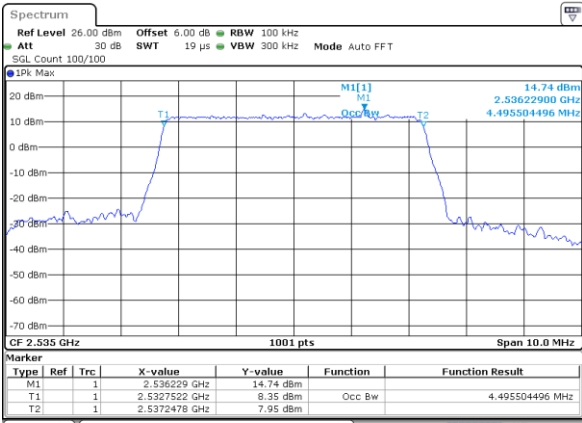
Date: 14 JUN 2022 02:55:13

16QAM



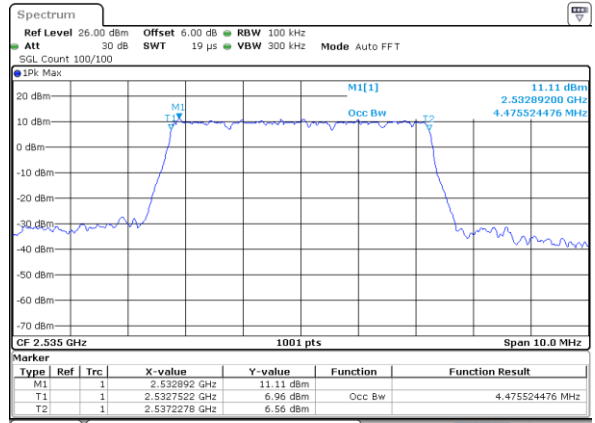
Date: 14 JUN 2022 02:55:51

64QAM



Date: 14 JUN 2022 02:56:10

256QAM

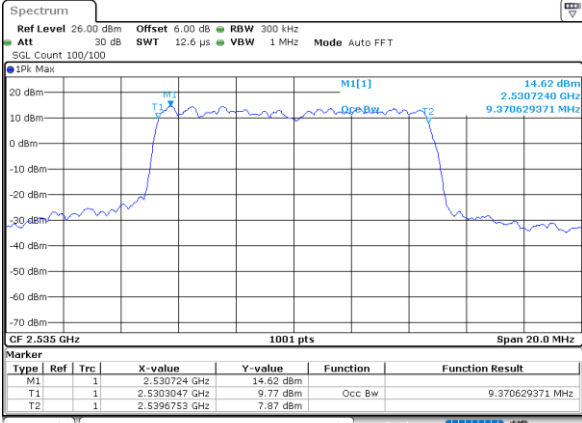


Date: 14 JUN 2022 02:56:33



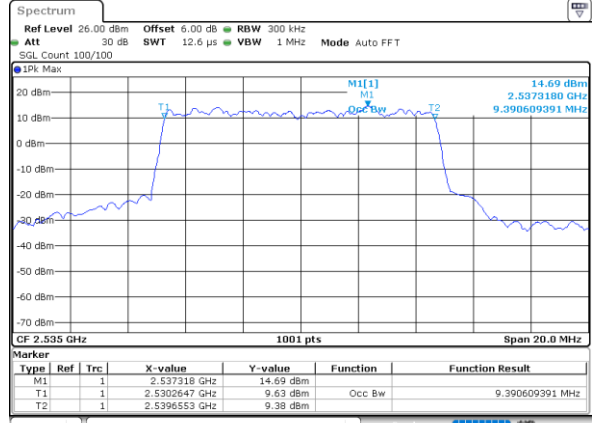
FR1 n7 / 10MHz / CP OFDM / Middle Channel / Full RB

QPSK



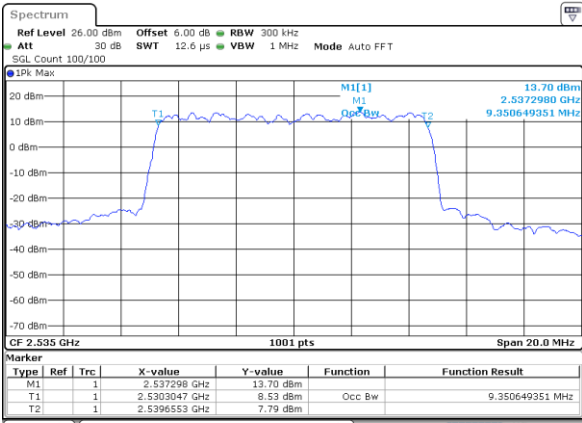
Date: 14 JUN 2022 08:49:29

16QAM



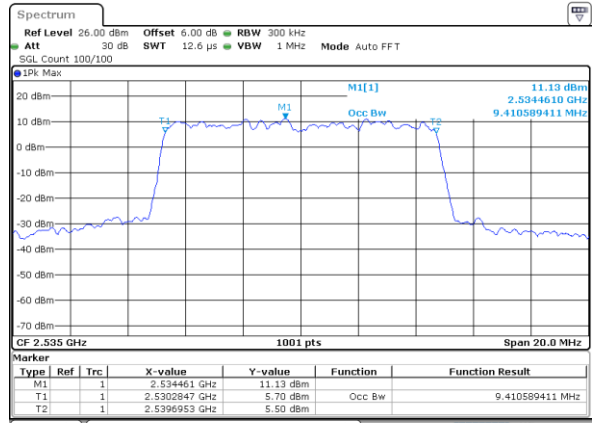
Date: 14 JUN 2022 08:49:48

64QAM



Date: 14 JUN 2022 08:50:08

256QAM



Date: 14 JUN 2022 08:50:39