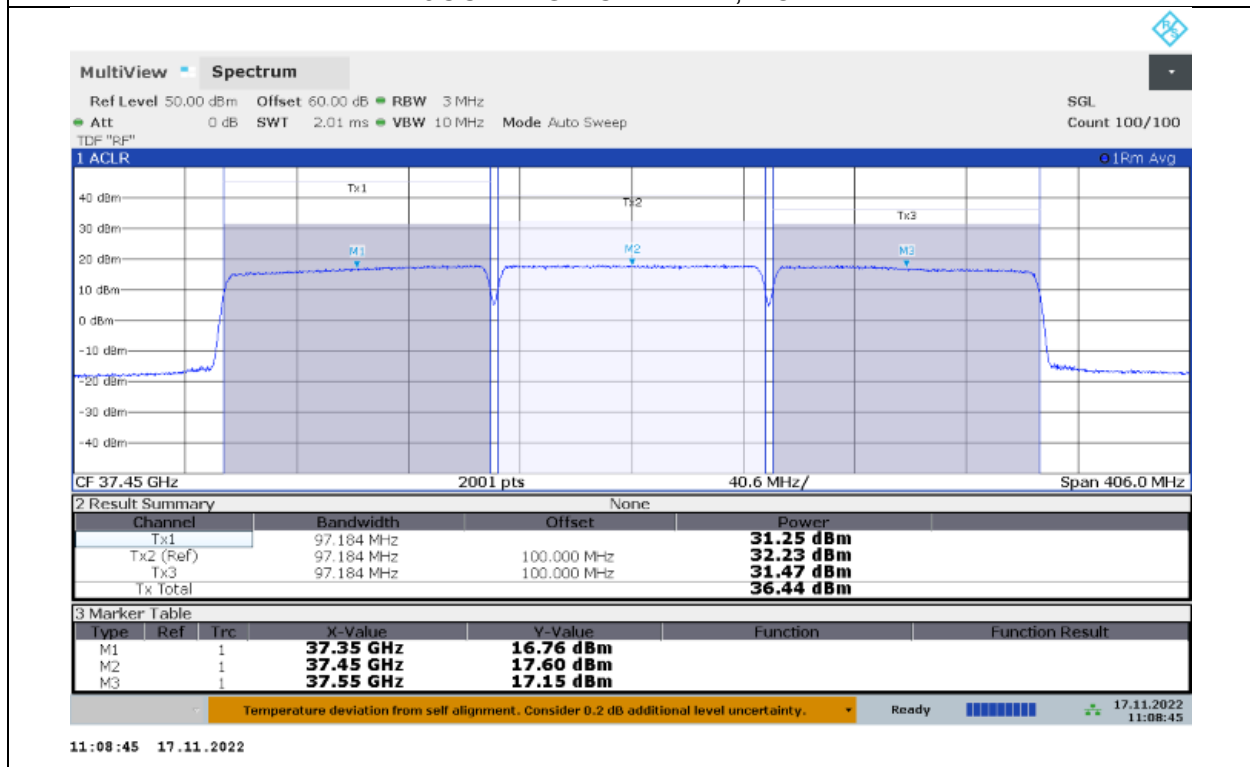
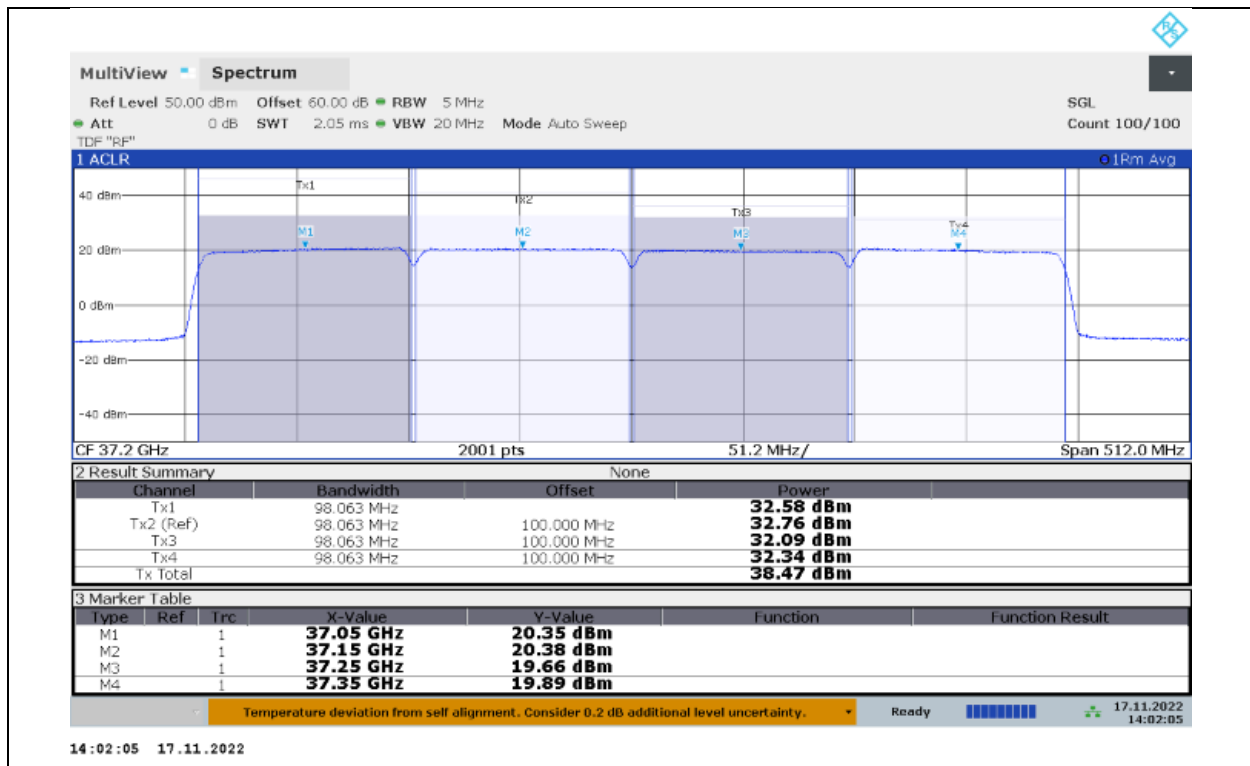


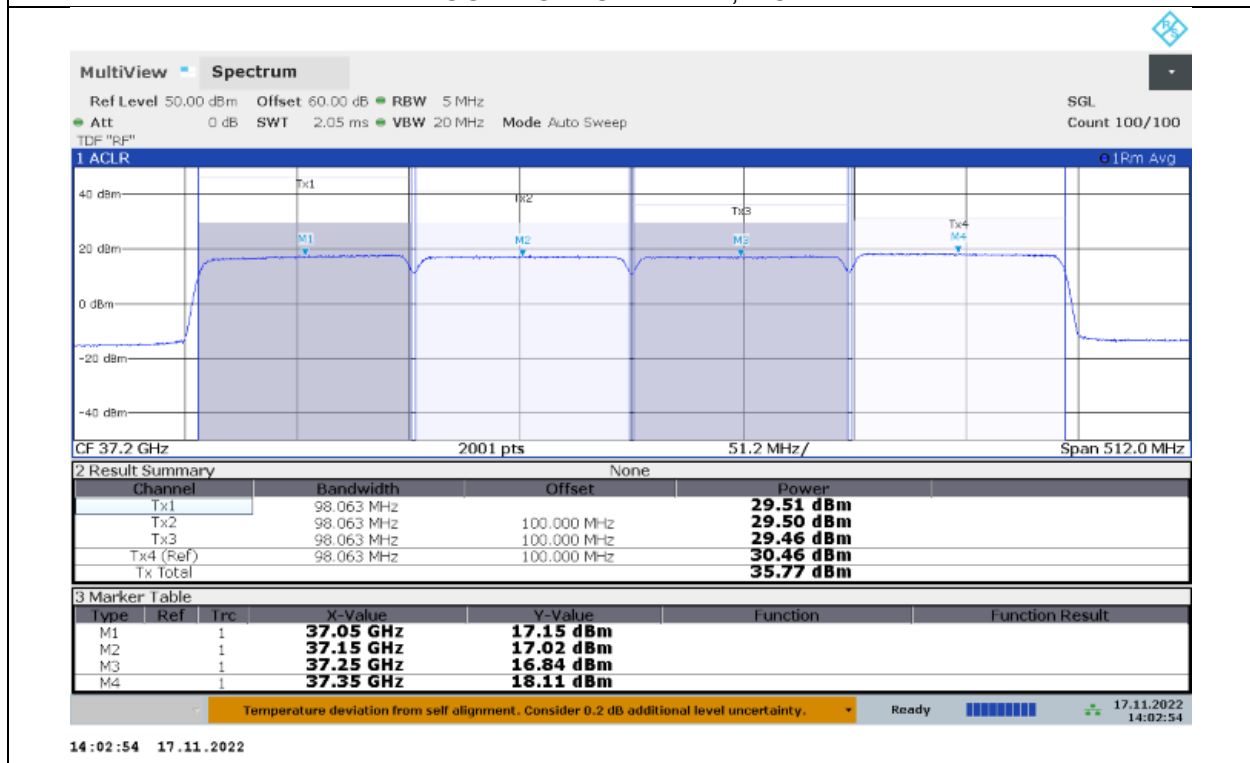
3CC – HIGH CHANNEL, HORIZ



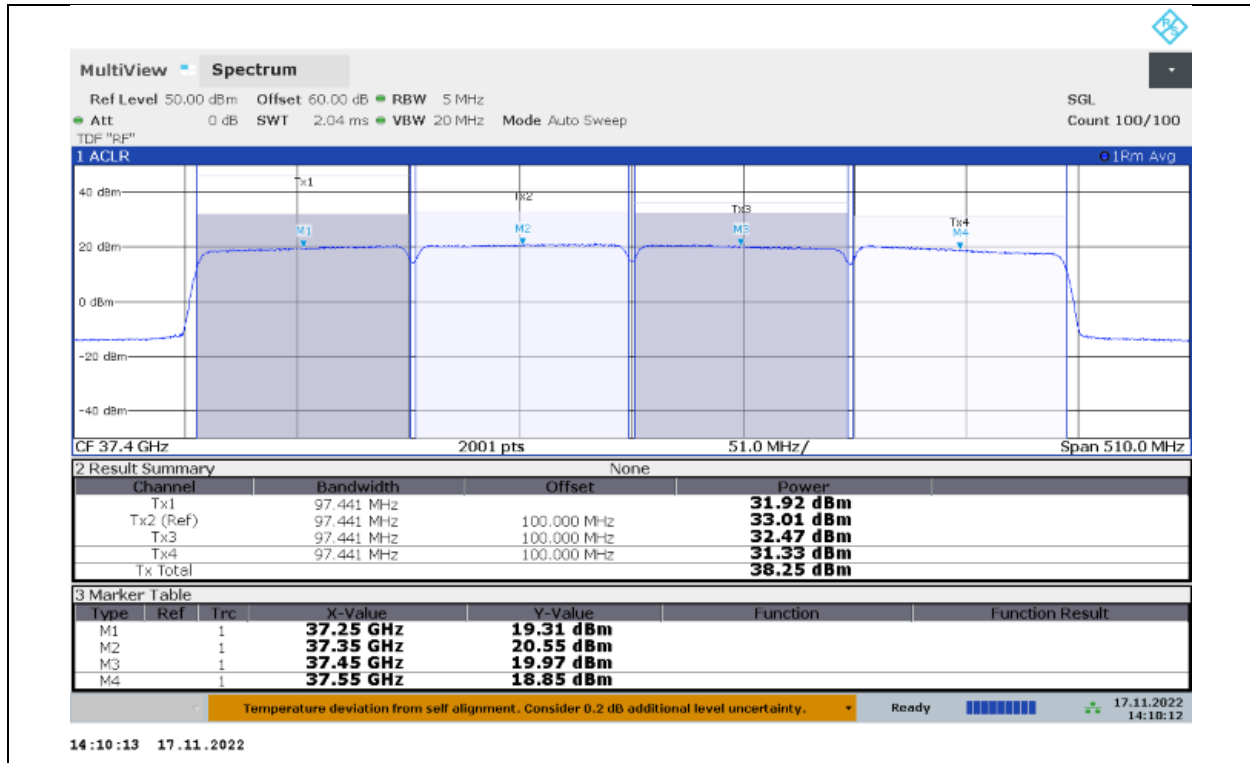
3CC – HIGH CHANNEL, VERT



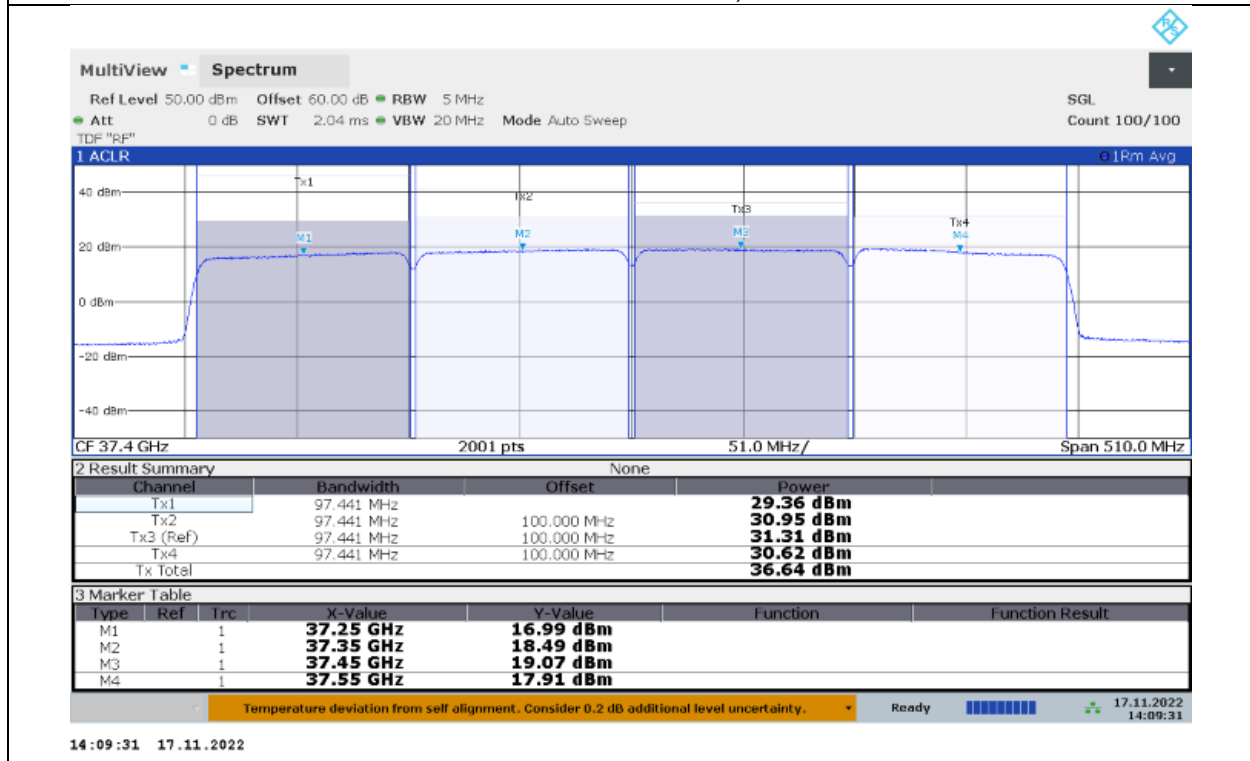
4CC – LOW CHANNEL, HORIZ



4CC – LOW CHANNEL, VERT



4CC – HIGH CHANNEL, HORIZ



4CC – HIGH CHANNEL, VERT

16QAM MCS10



1CC – LOW CHANNEL, HORIZ



1CC – LOW CHANNEL, VERT



1CC – MID CHANNEL, HORIZ



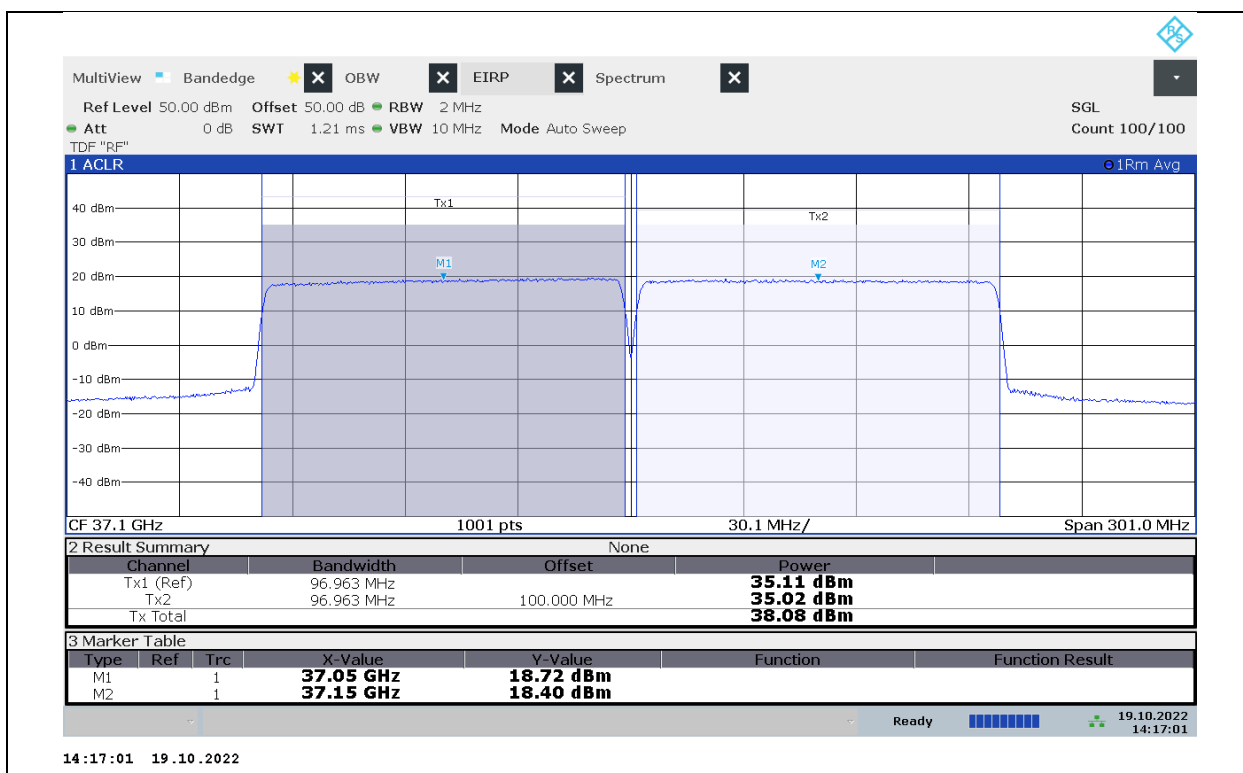
1CC – MID CHANNEL, VERT



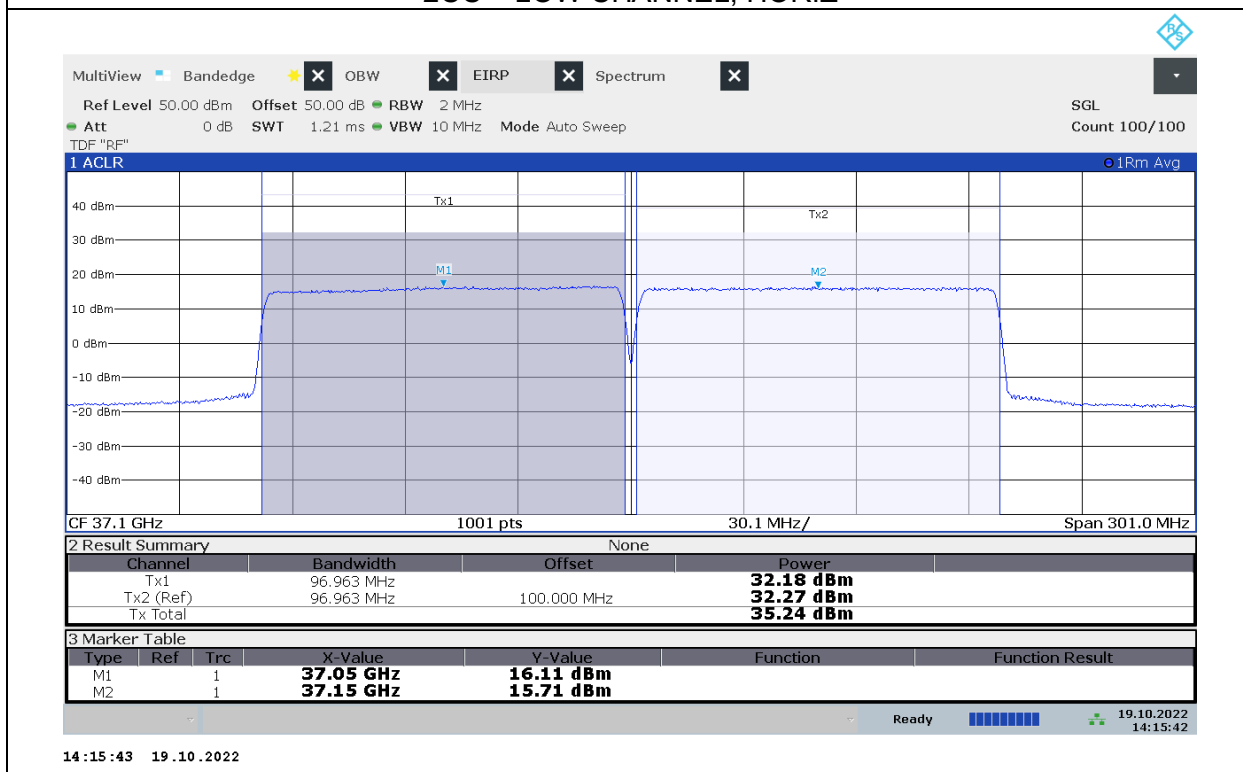
1CC – HIGH CHANNEL, HORIZ



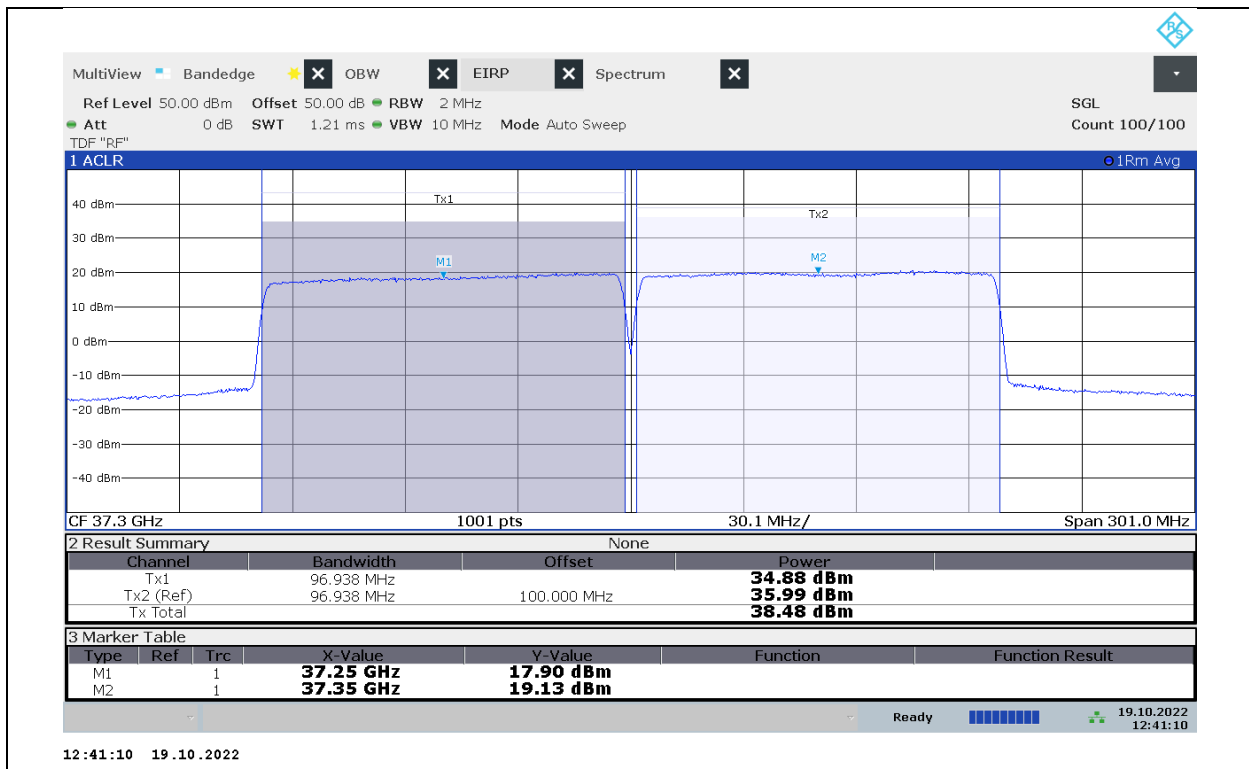
1CC – HIGH CHANNEL, VERT



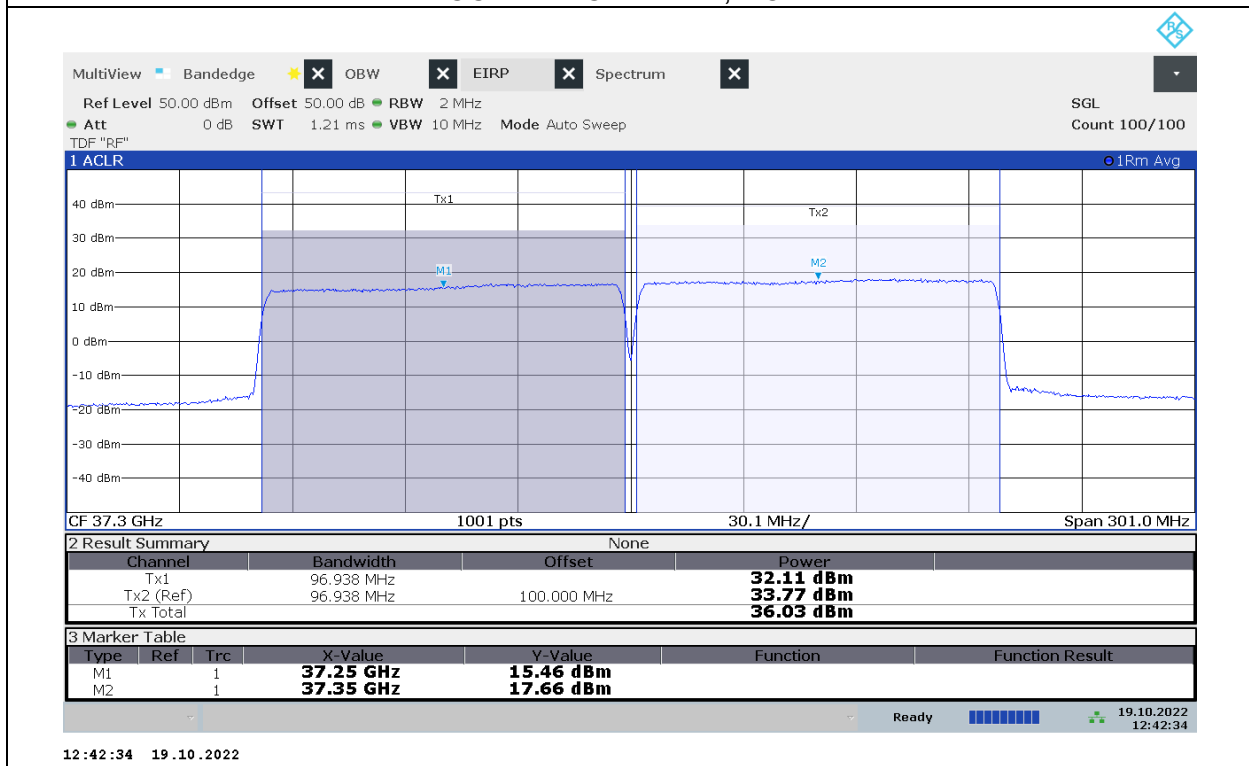
2CC – LOW CHANNEL, HORIZ



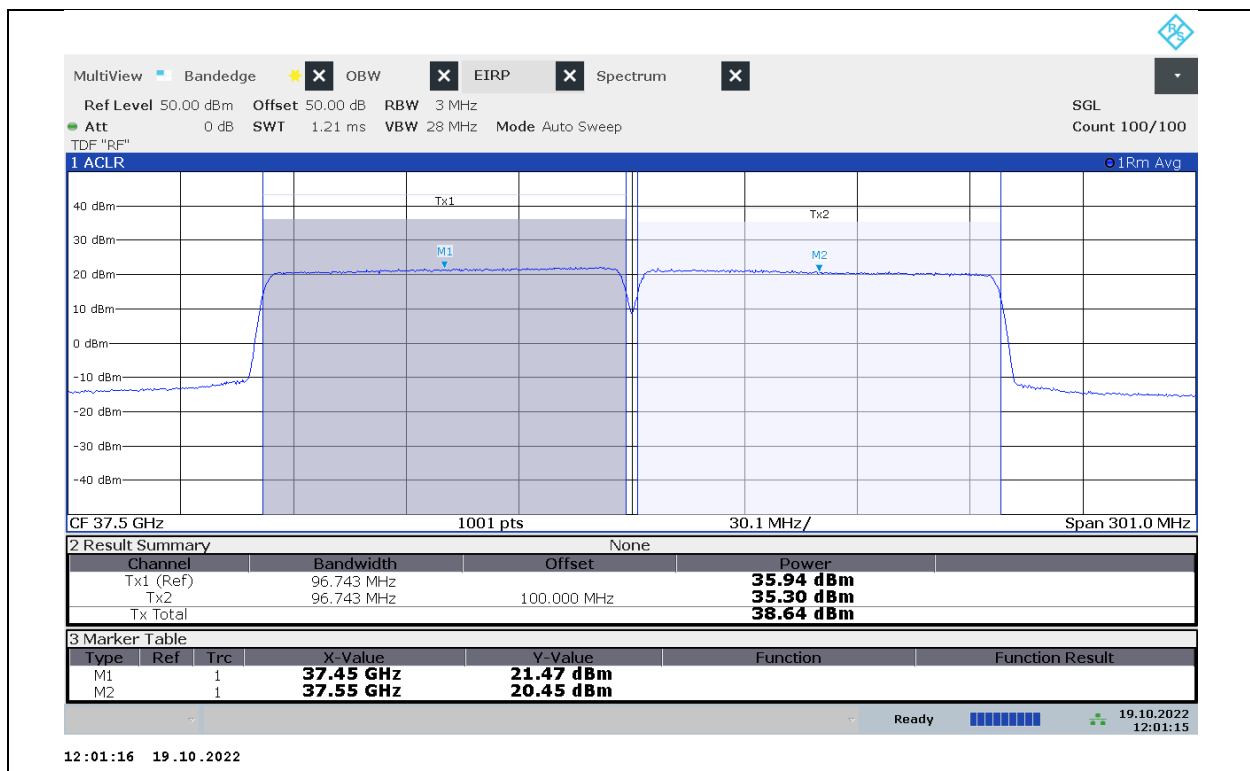
2CC – LOW CHANNEL, VERT



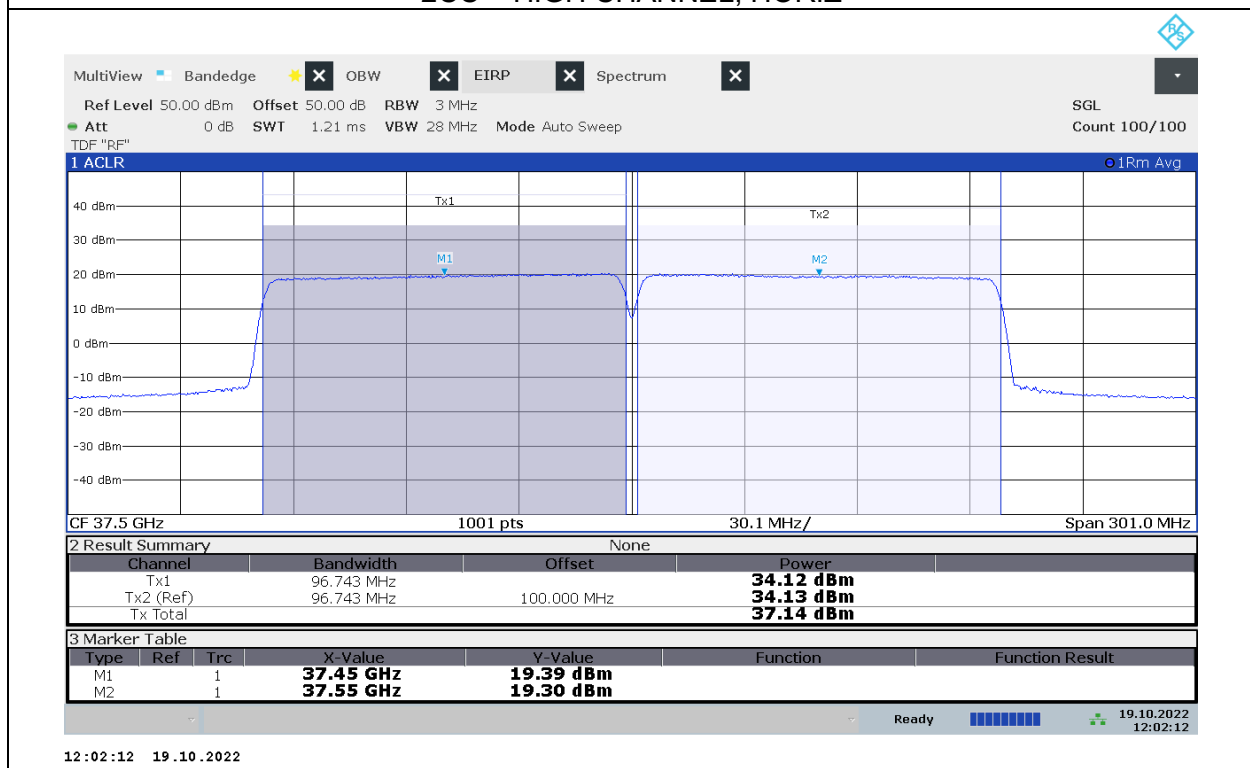
2CC – MID CHANNEL, HORIZ



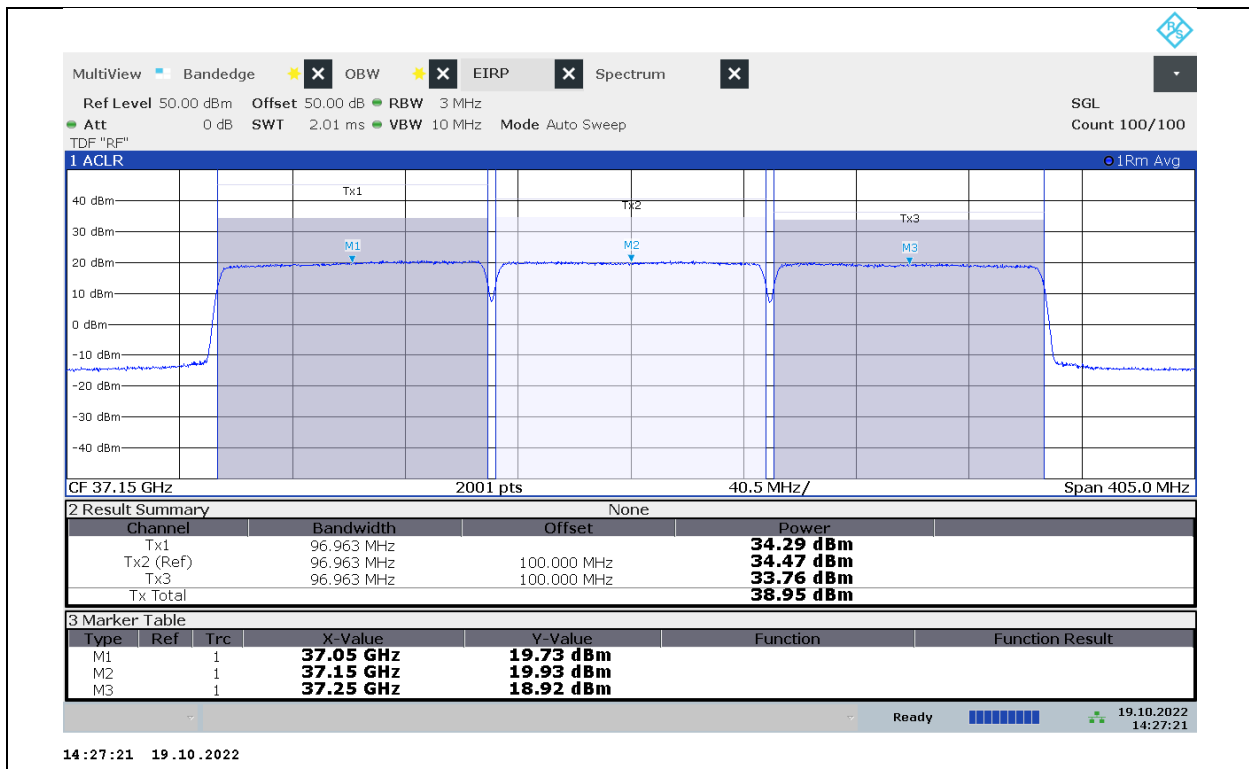
2CC – MID CHANNEL, VERT



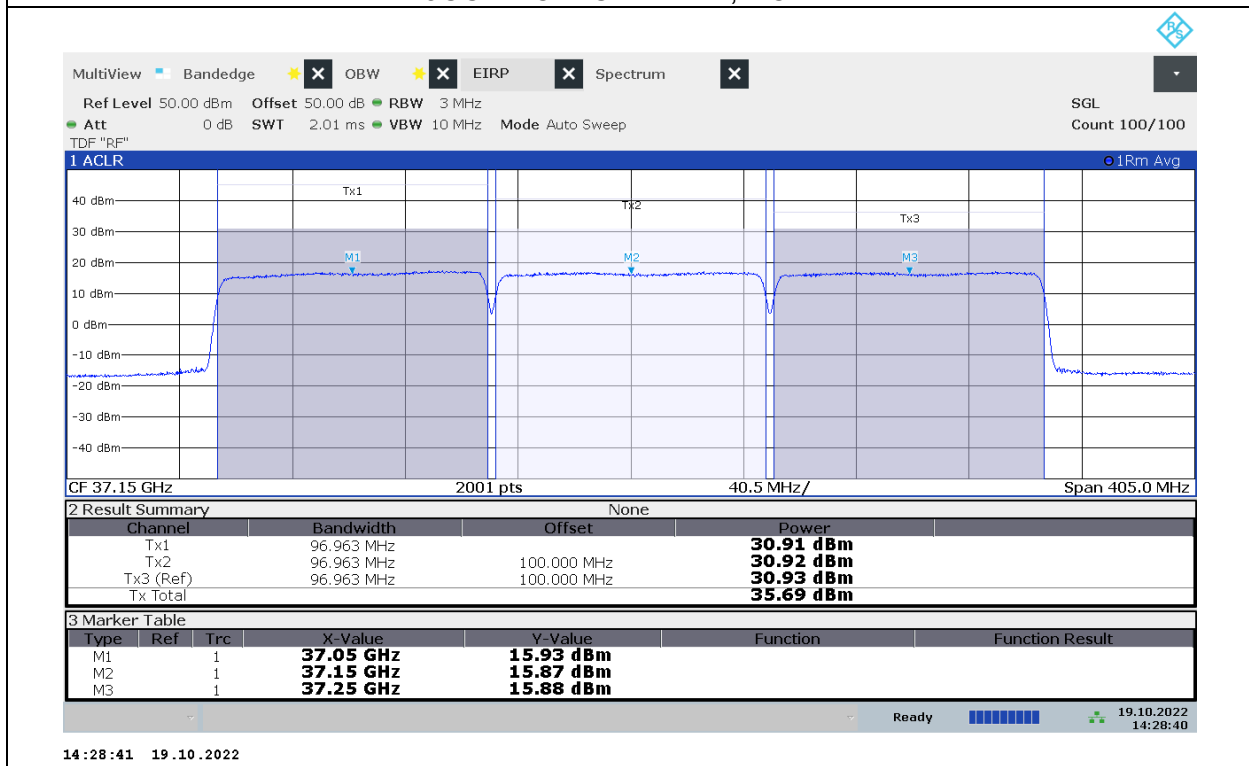
2CC – HIGH CHANNEL, HORIZ



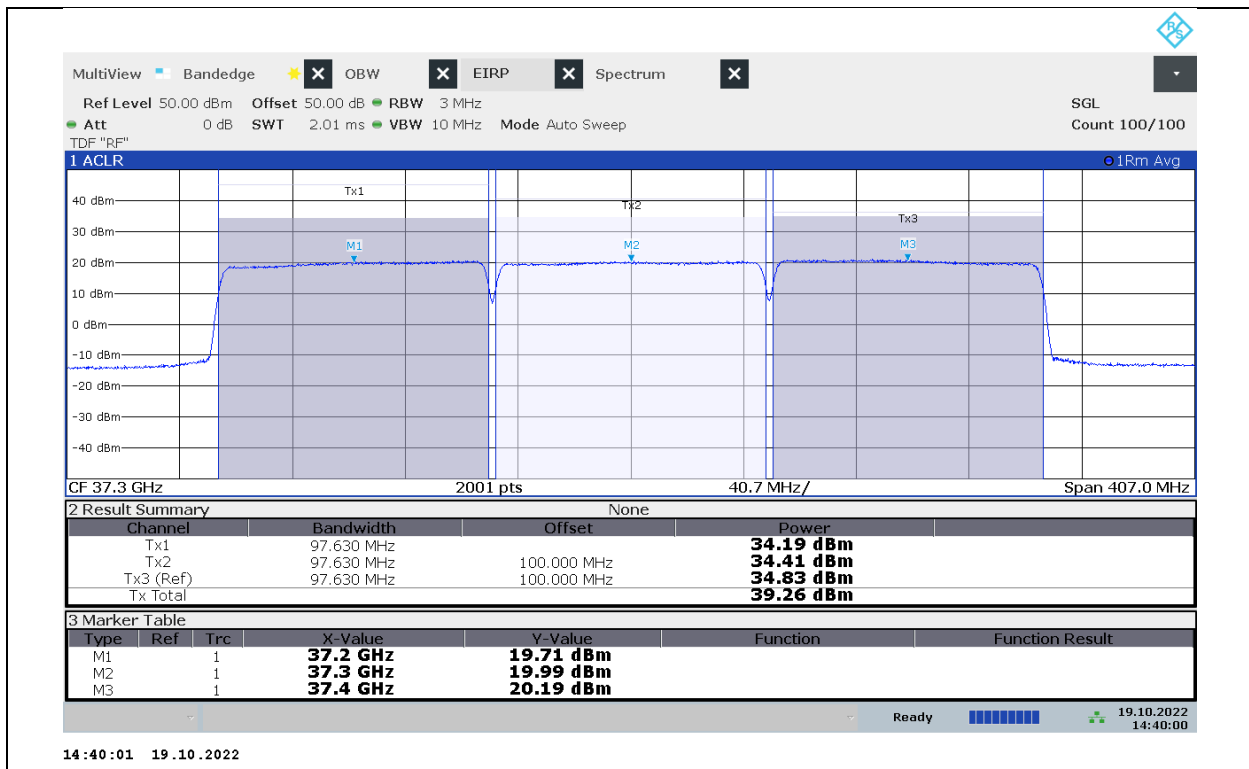
2CC – HIGH CHANNEL, VERT



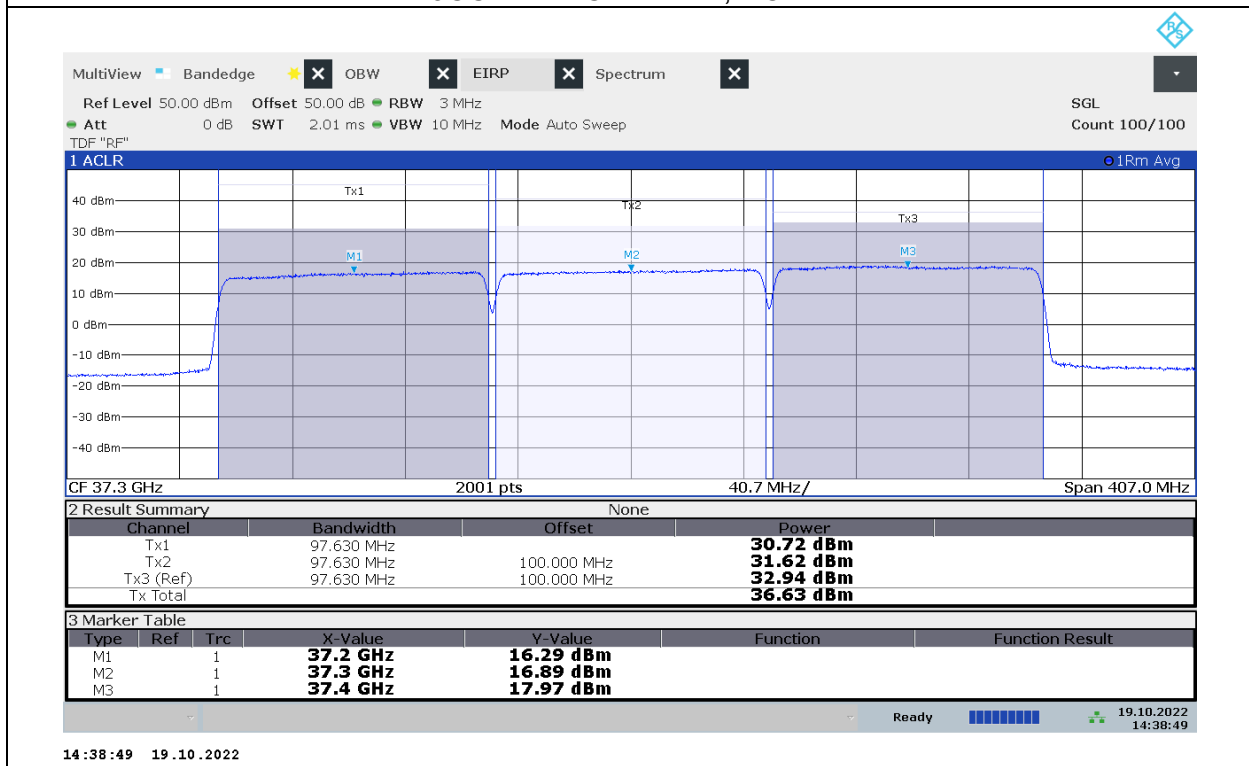
3CC – LOW CHANNEL, HORIZ



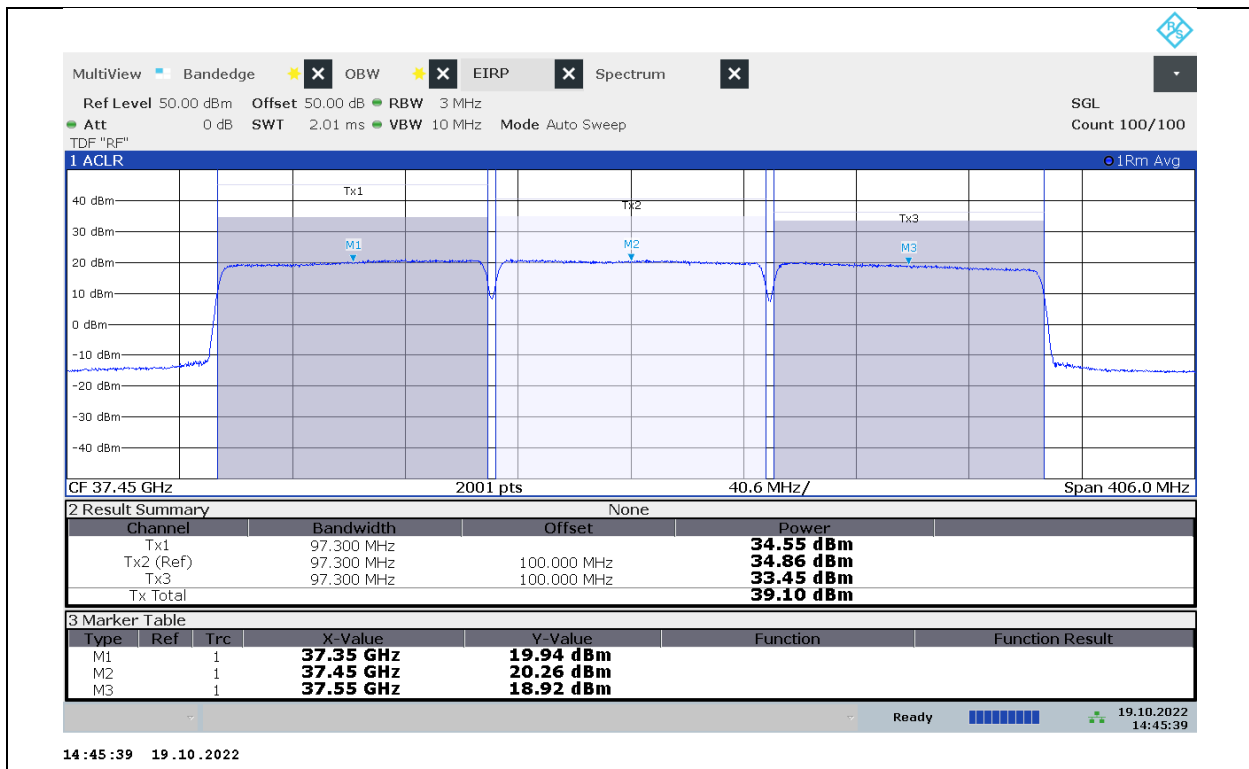
3CC – LOW CHANNEL, VERT



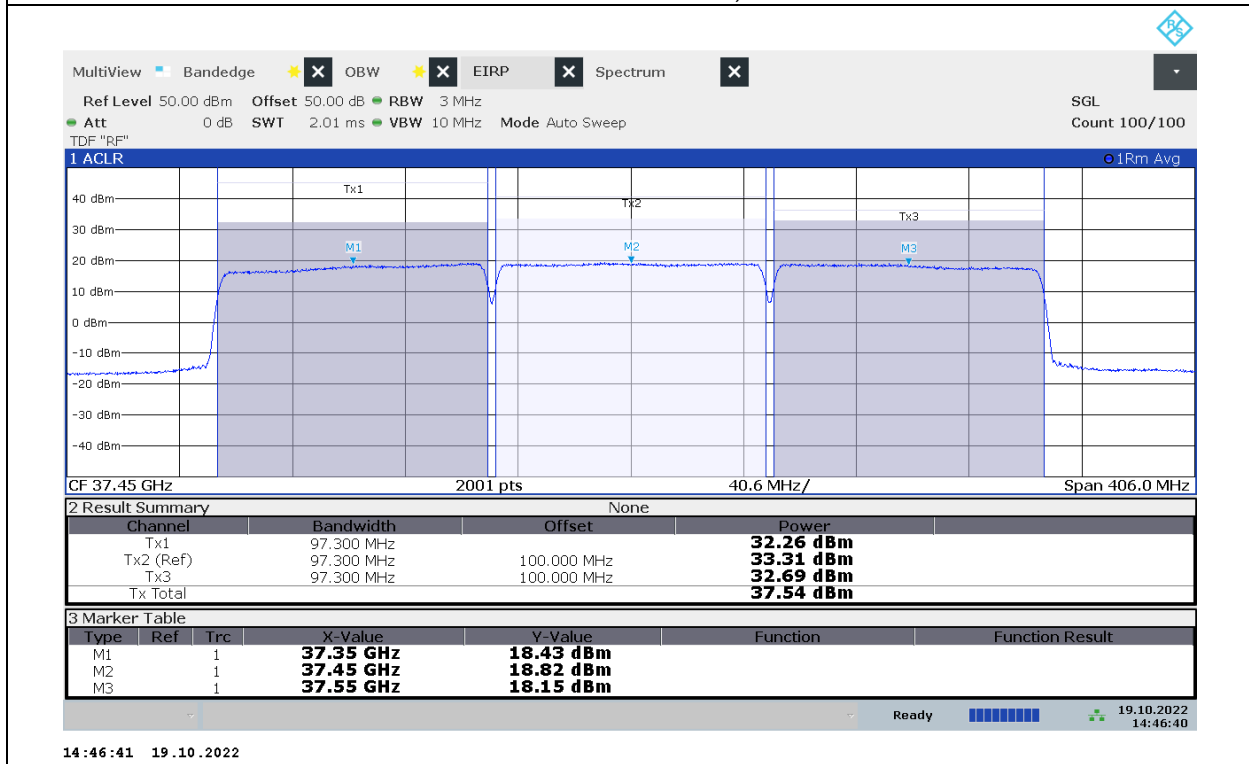
3CC – MID CHANNEL, HORIZ



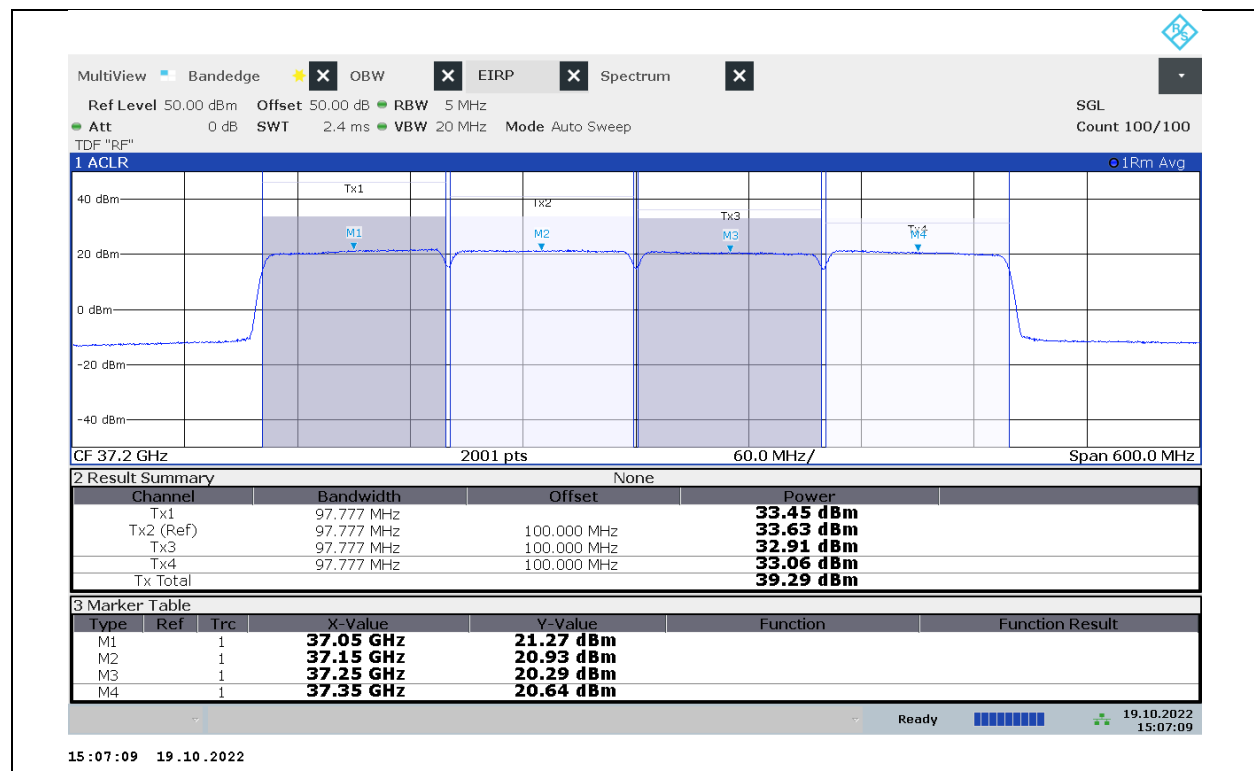
3CC – MID CHANNEL, VERT



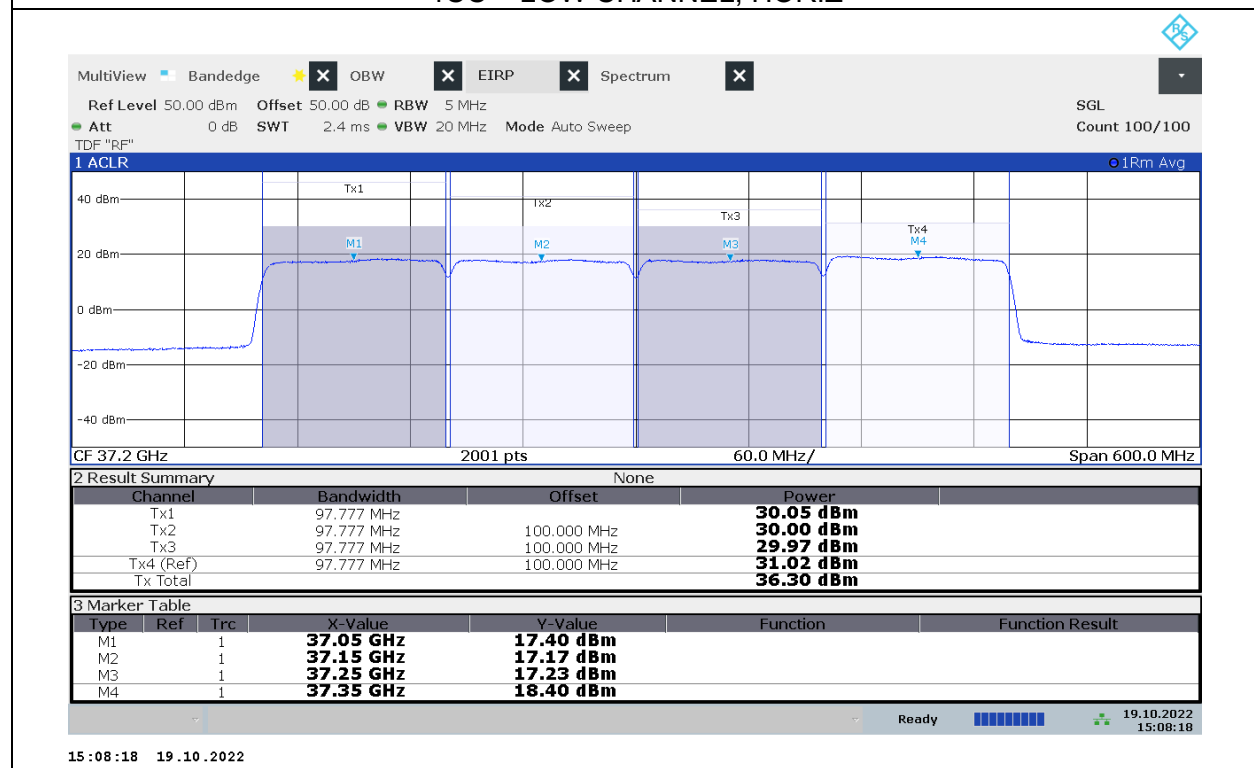
3CC – HIGH CHANNEL, HORIZ



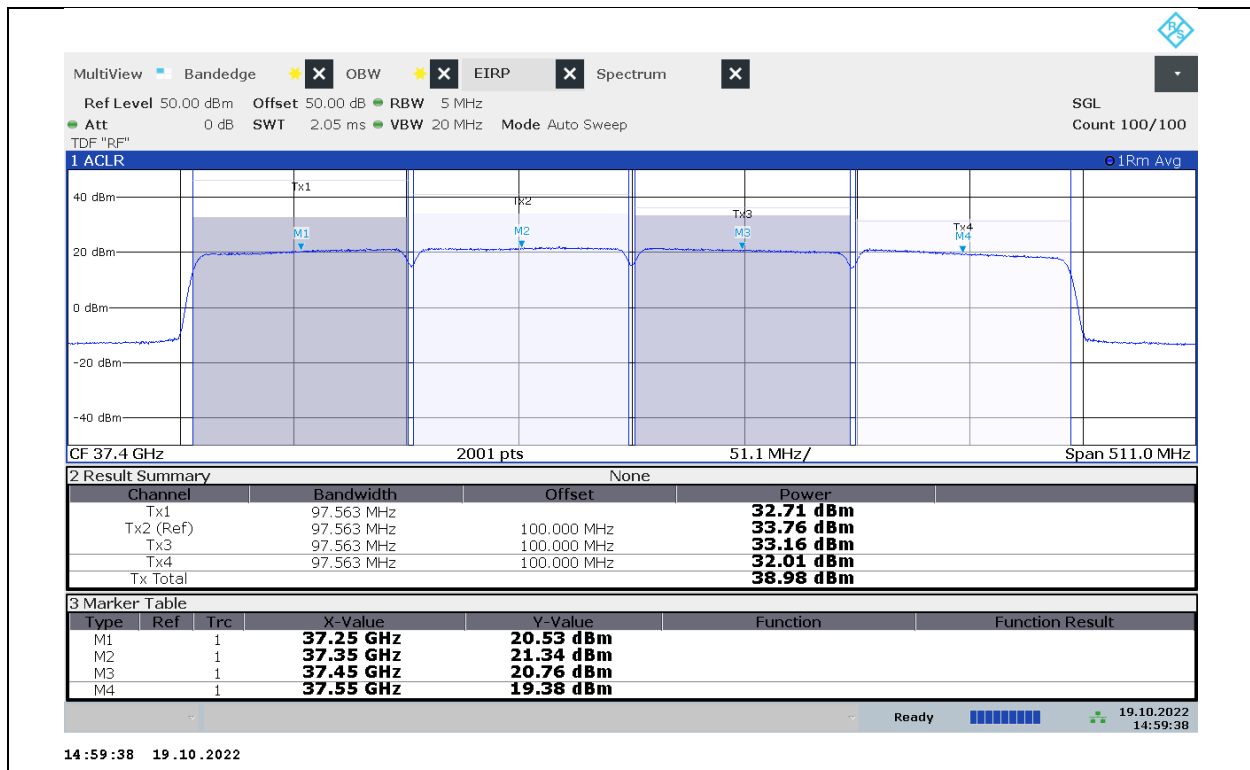
3CC – HIGH CHANNEL, VERT



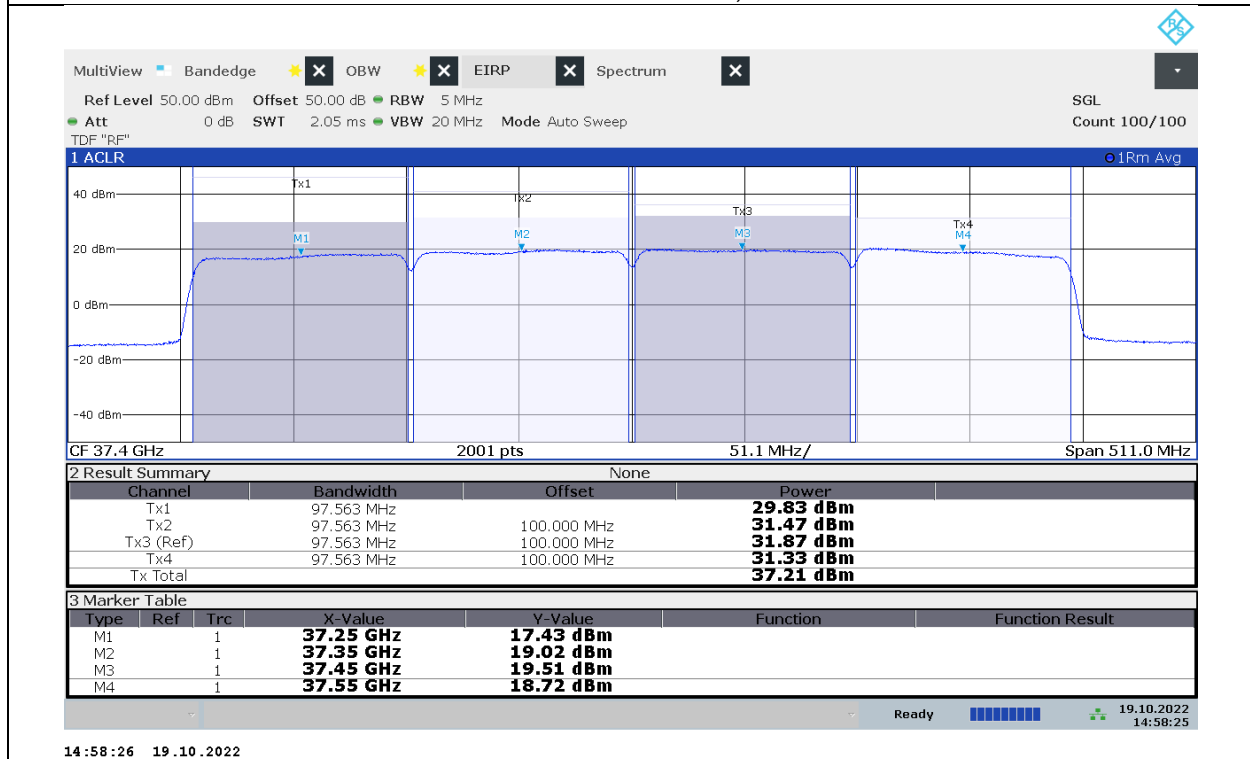
4CC – LOW CHANNEL, HORIZ



4CC – LOW CHANNEL, VERT

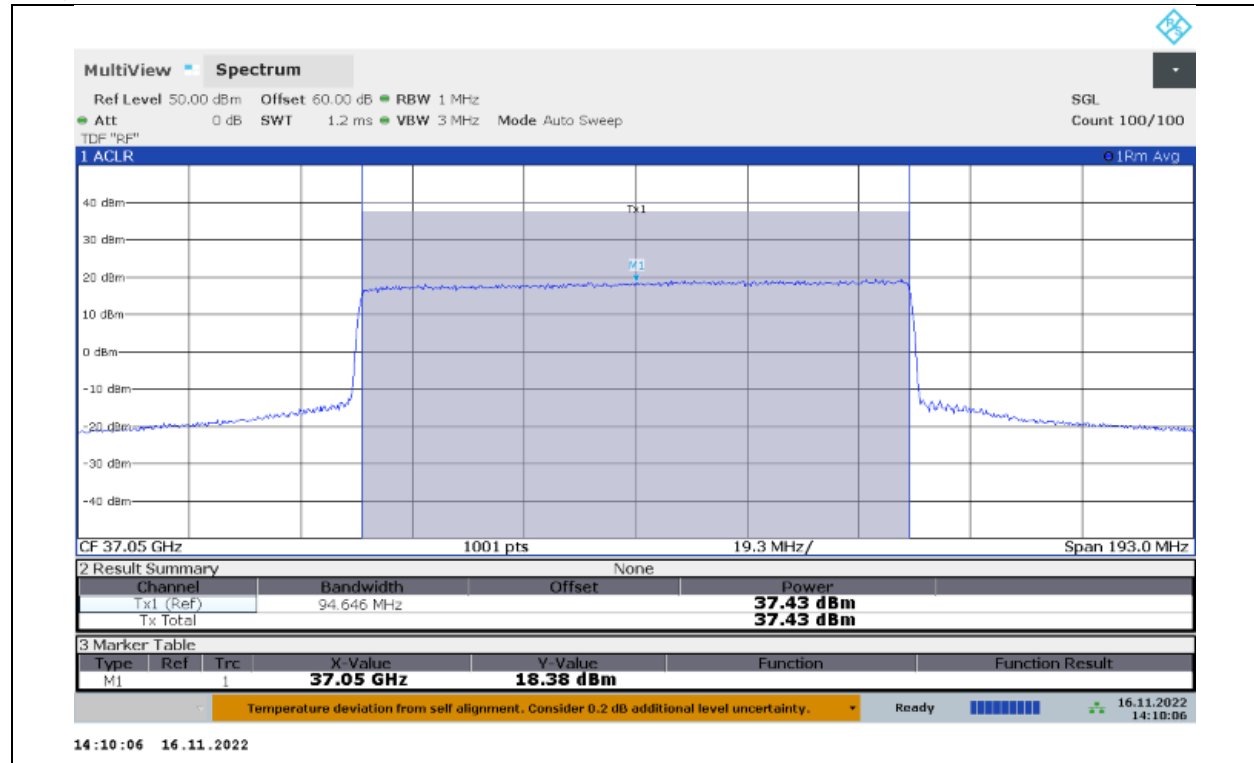


4CC – HIGH CHANNEL, HORIZ

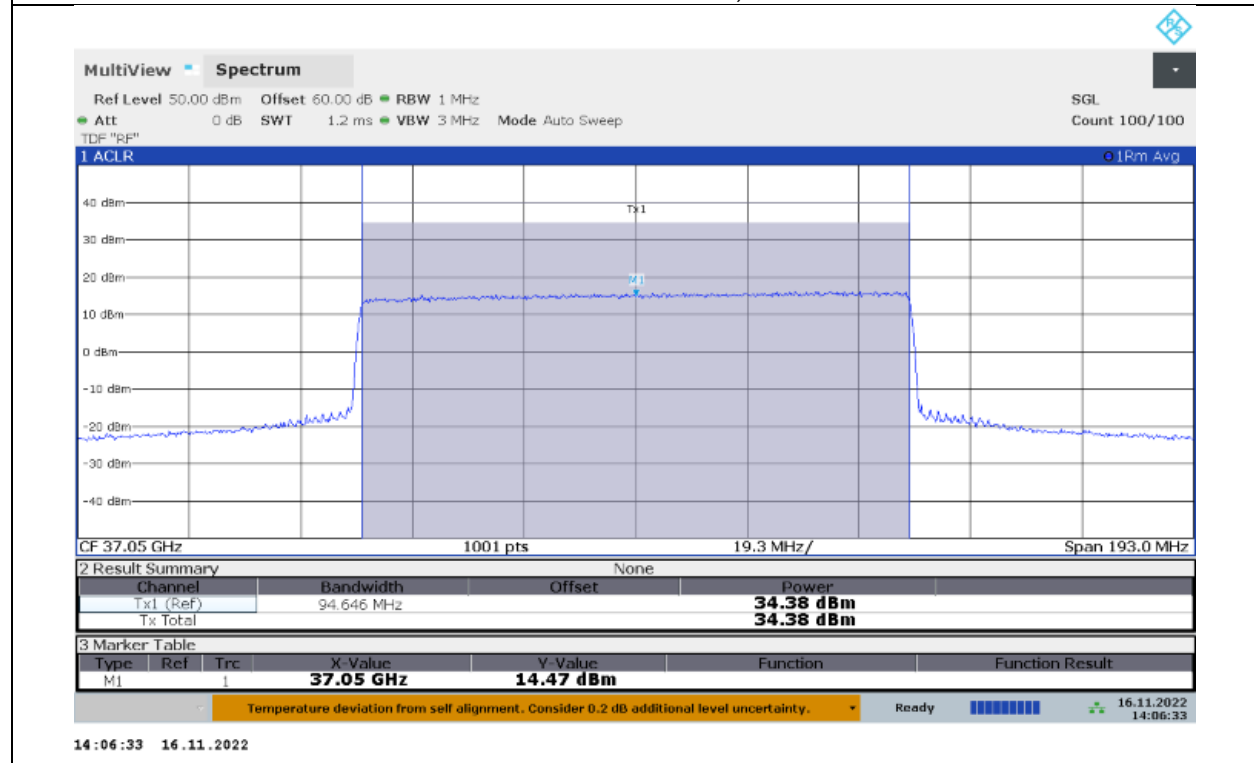


4CC – HIGH CHANNEL, VERT

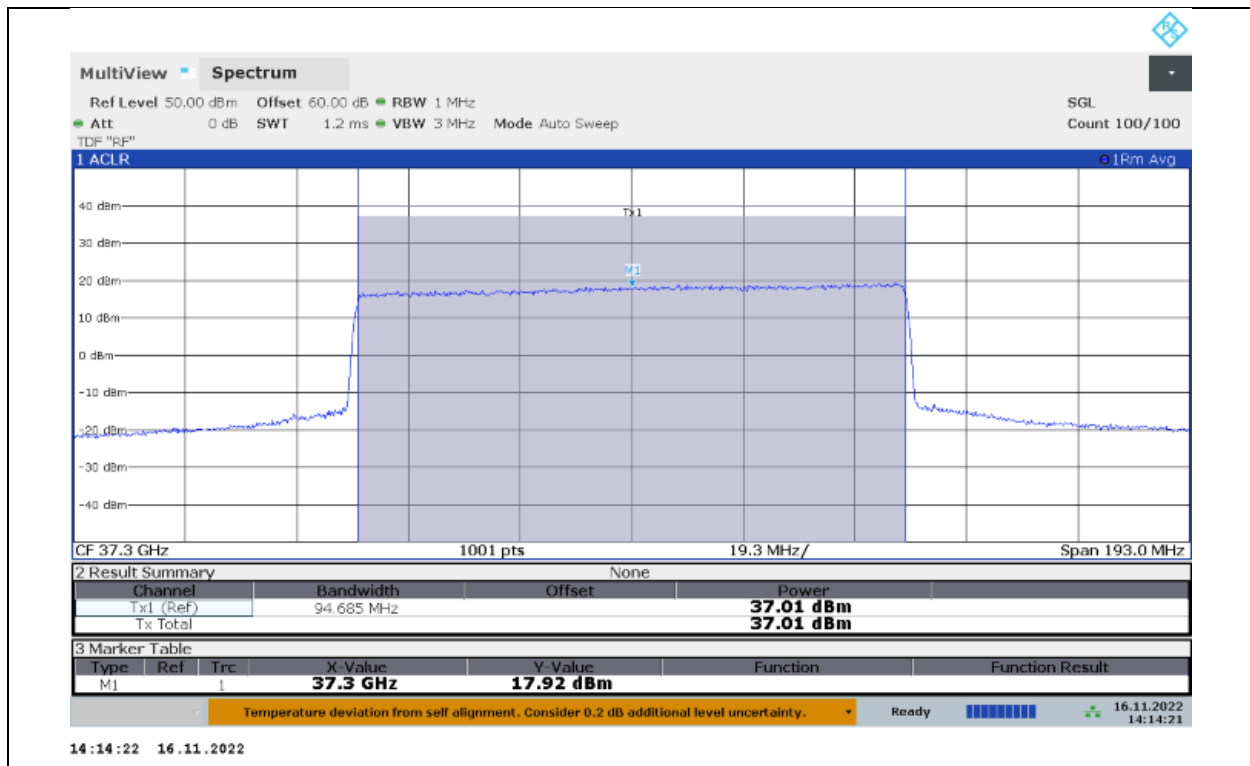
16QAM MCS16



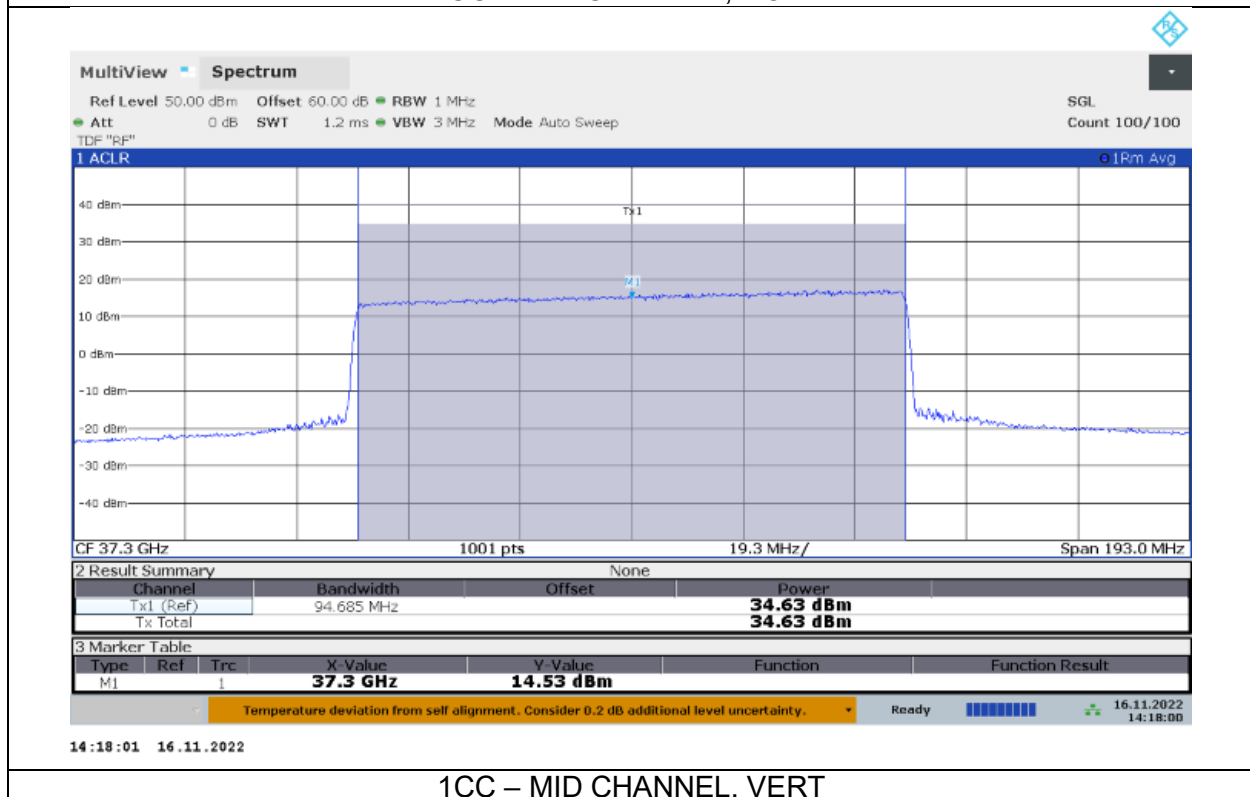
1CC – LOW CHANNEL, HORIZ



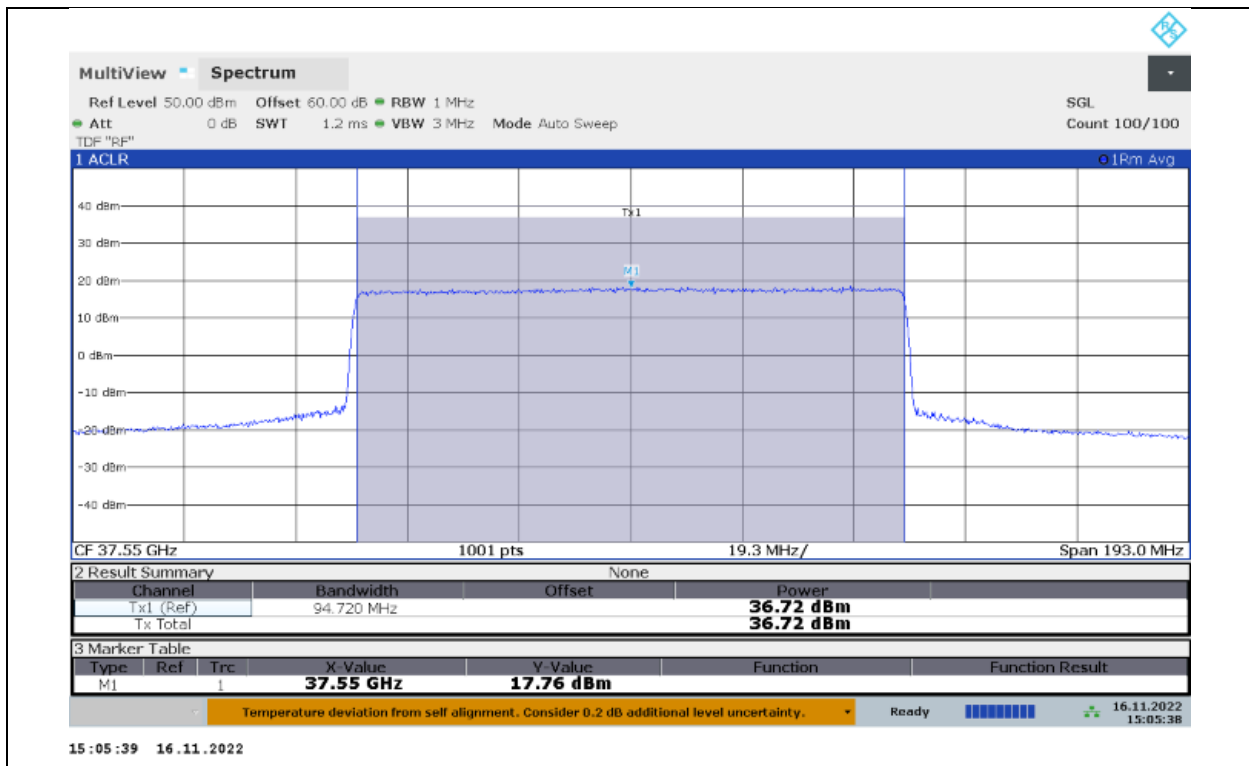
1CC – LOW CHANNEL, VERT



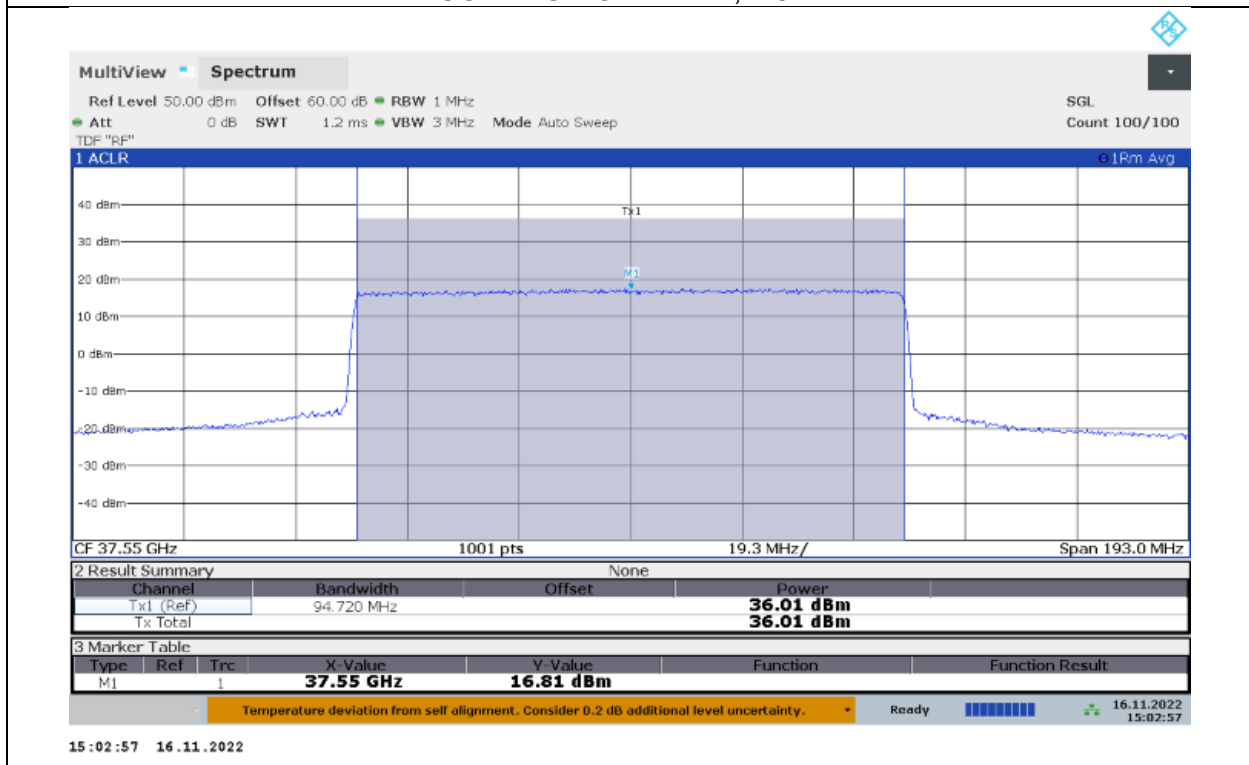
1CC - MID CHANNEL, HORIZ



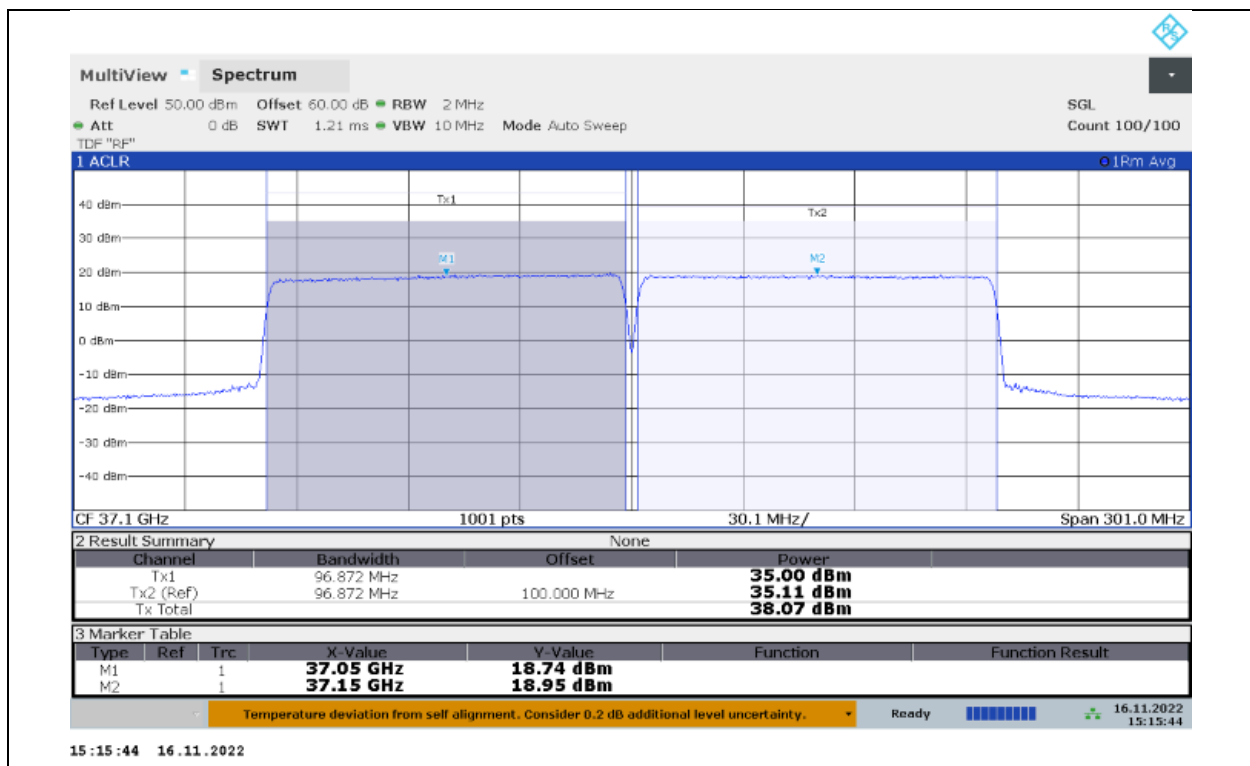
1CC - MID CHANNEL, VERT



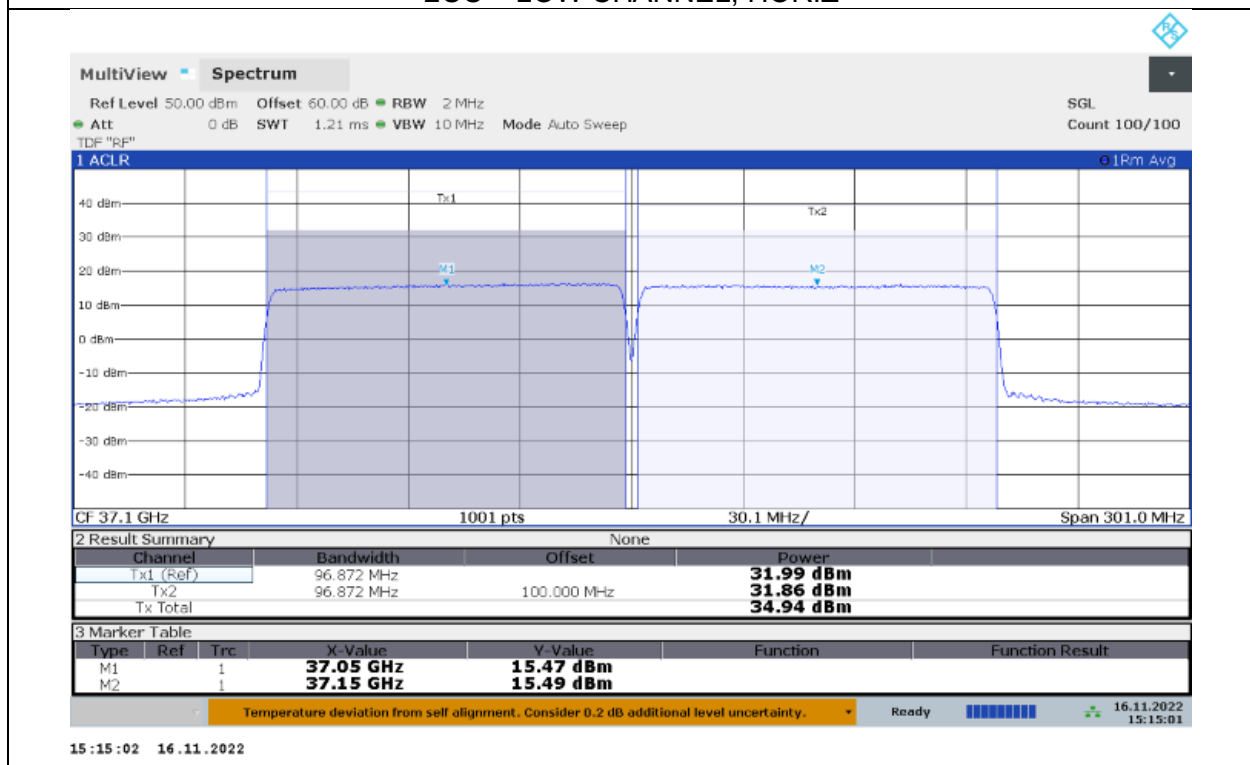
1CC – HIGH CHANNEL, HORIZ



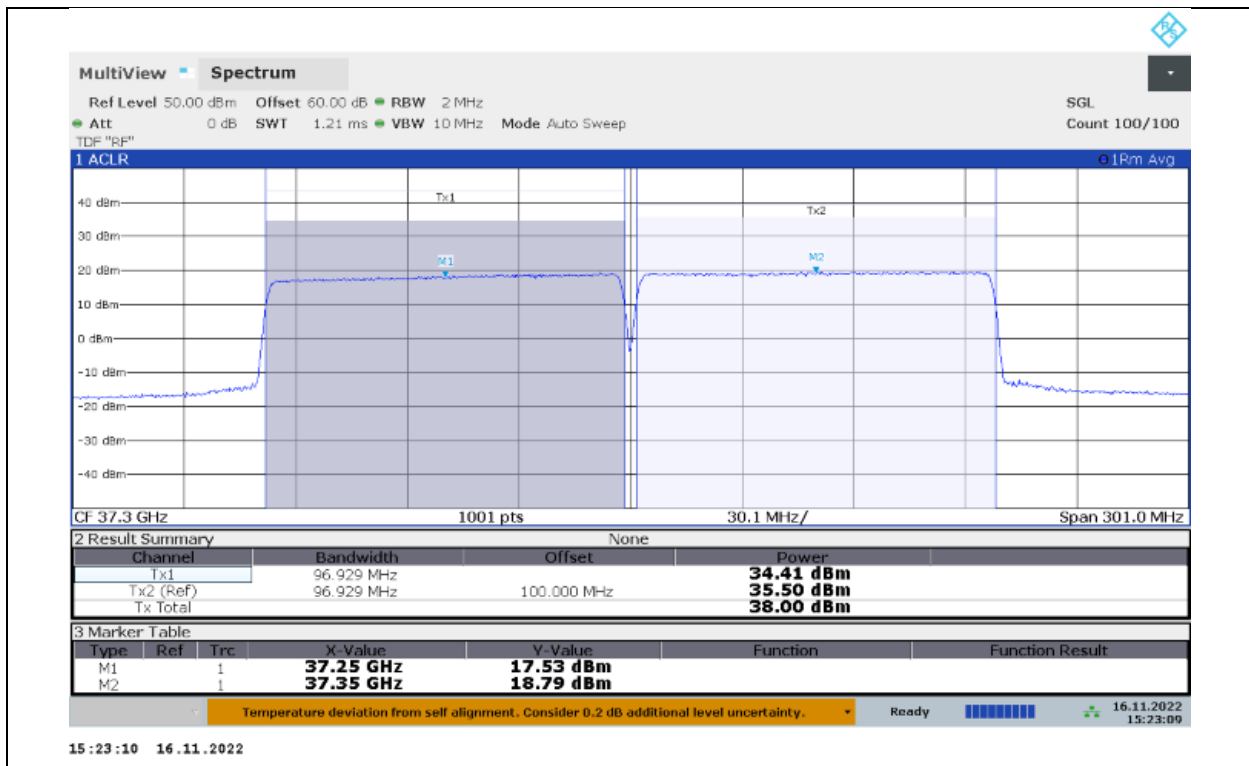
1CC – HIGH CHANNEL, VERT



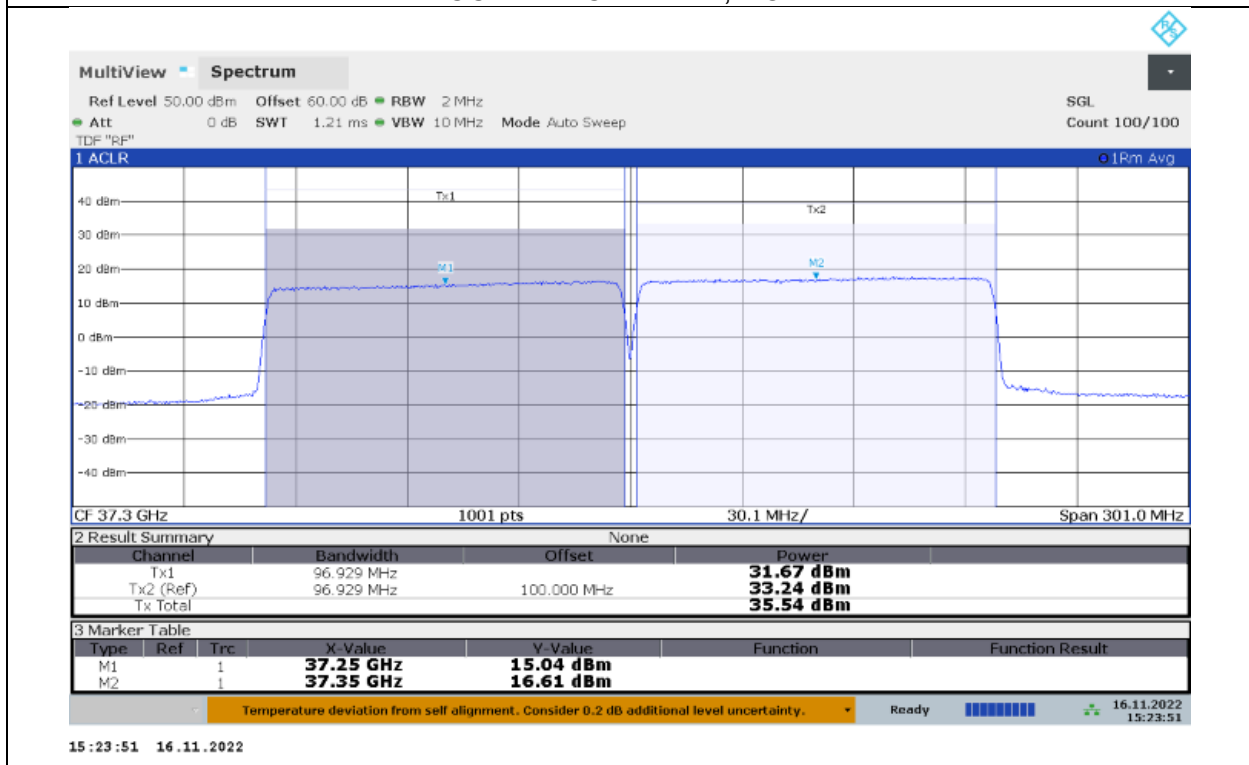
2CC – LOW CHANNEL, HORIZ



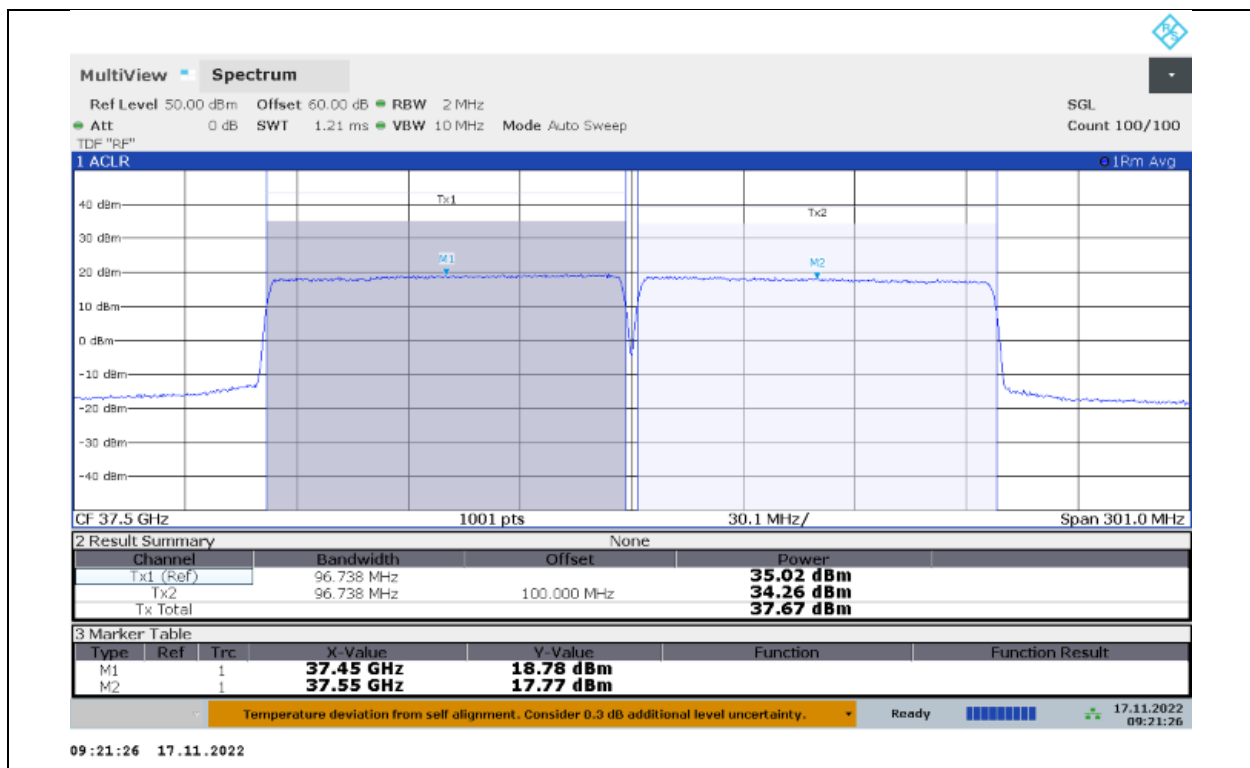
2CC – LOW CHANNEL, VERT



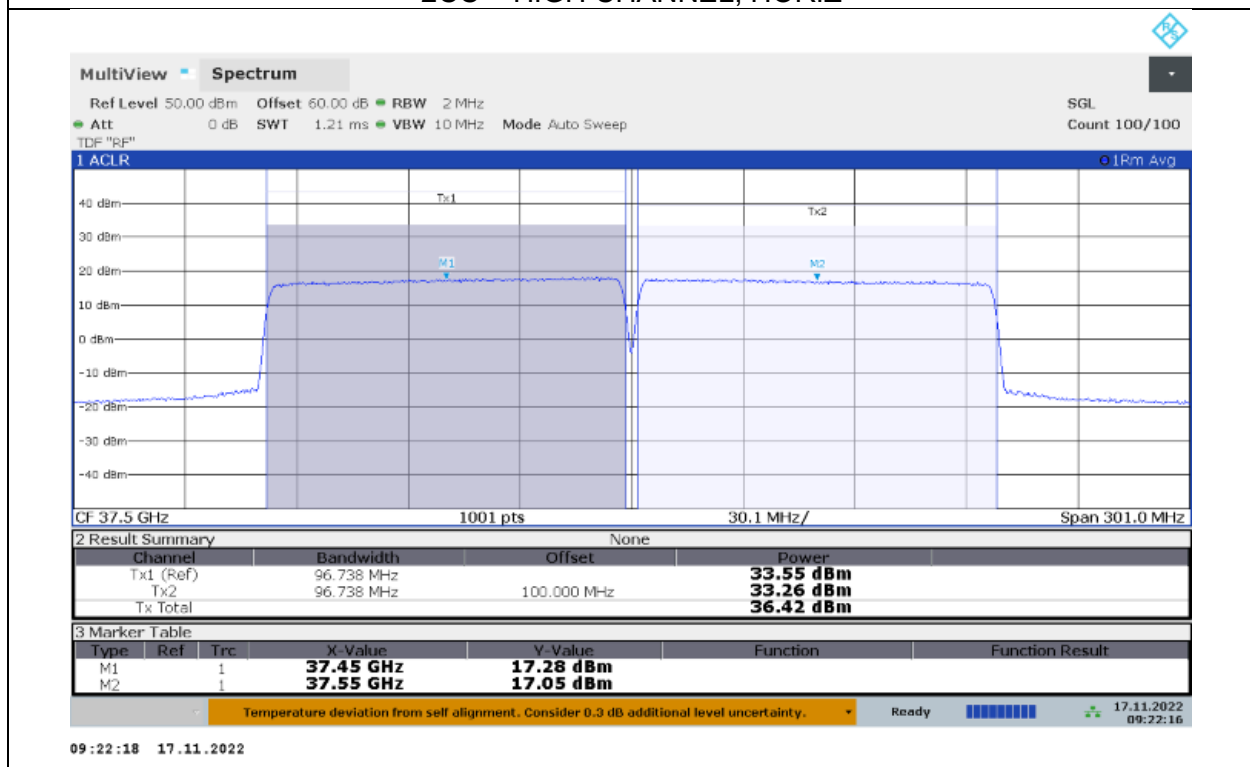
2CC – MID CHANNEL, HORIZ



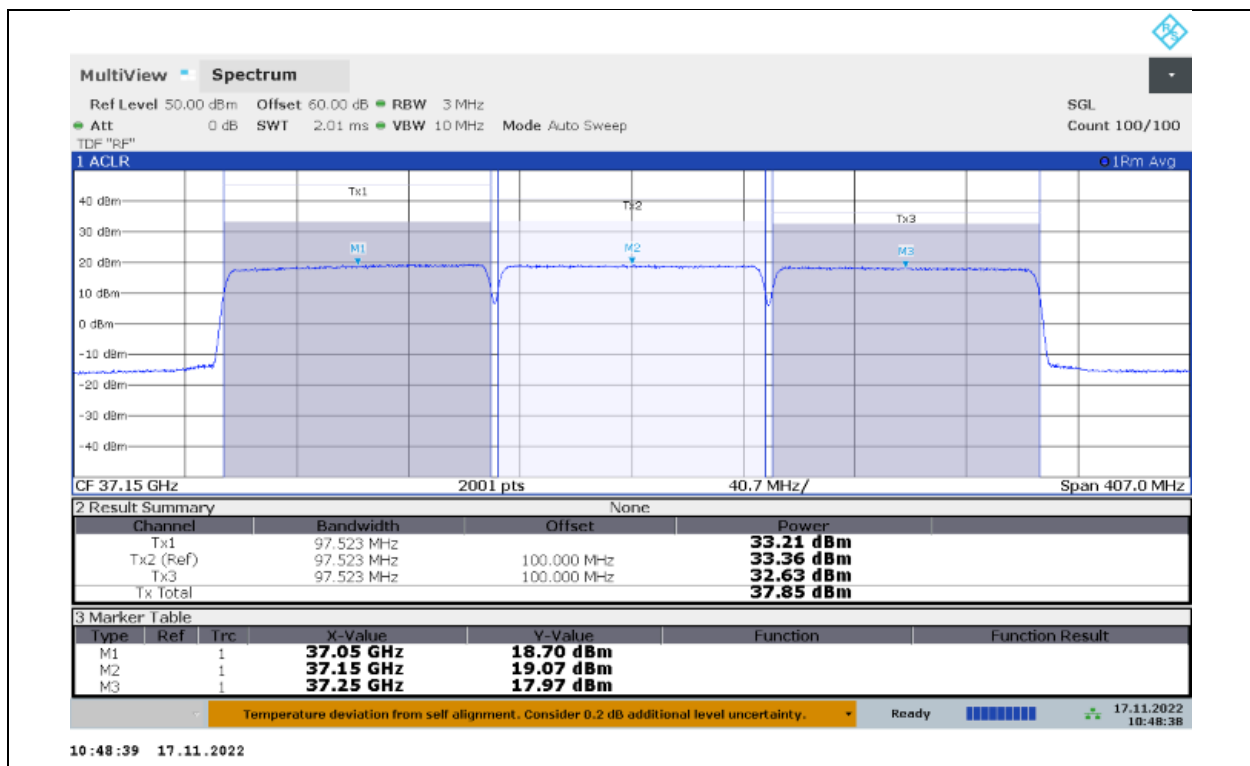
2CC – MID CHANNEL, VERT



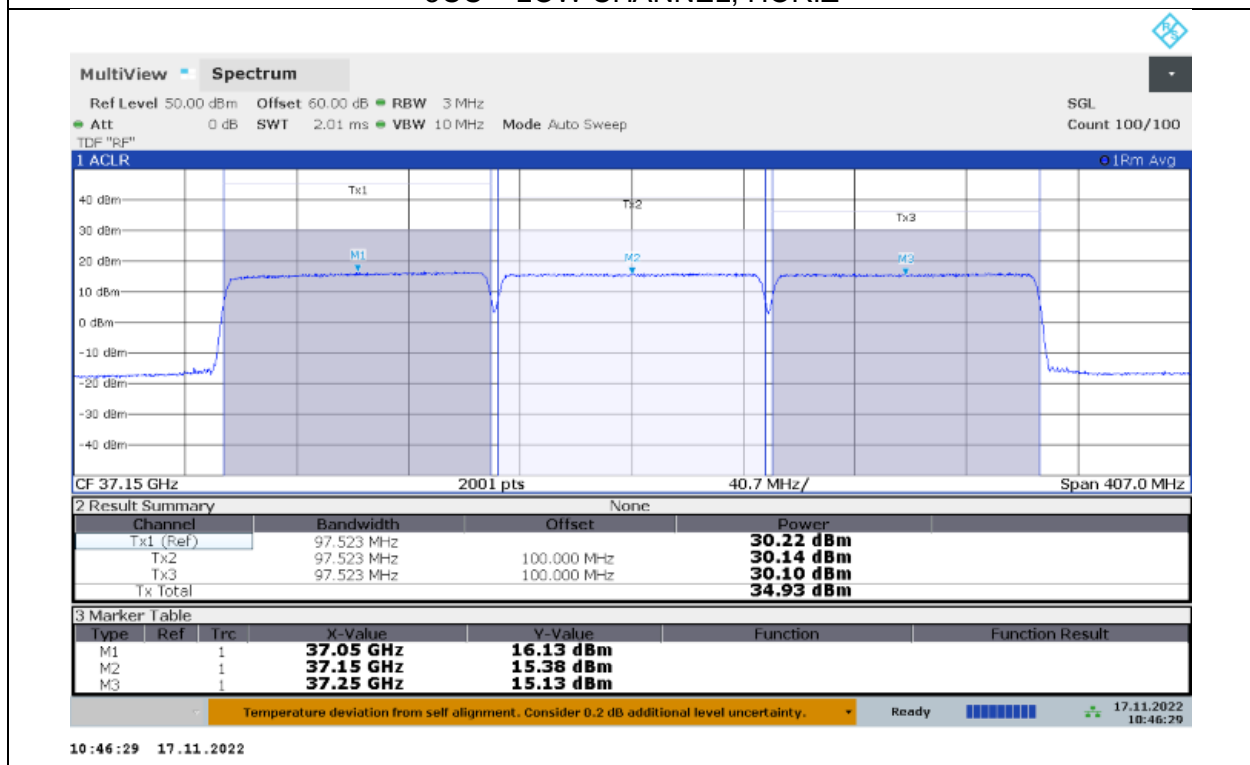
2CC – HIGH CHANNEL, HORIZ



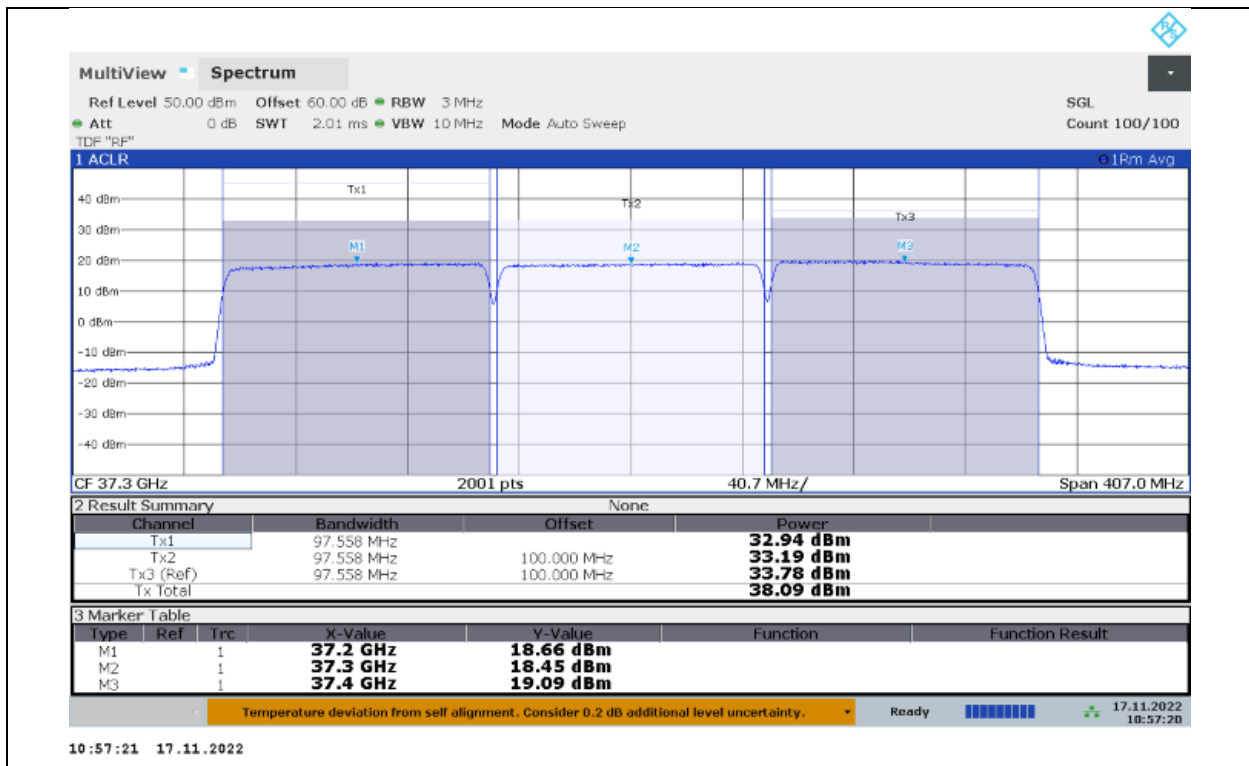
2CC – HIGH CHANNEL, VERT



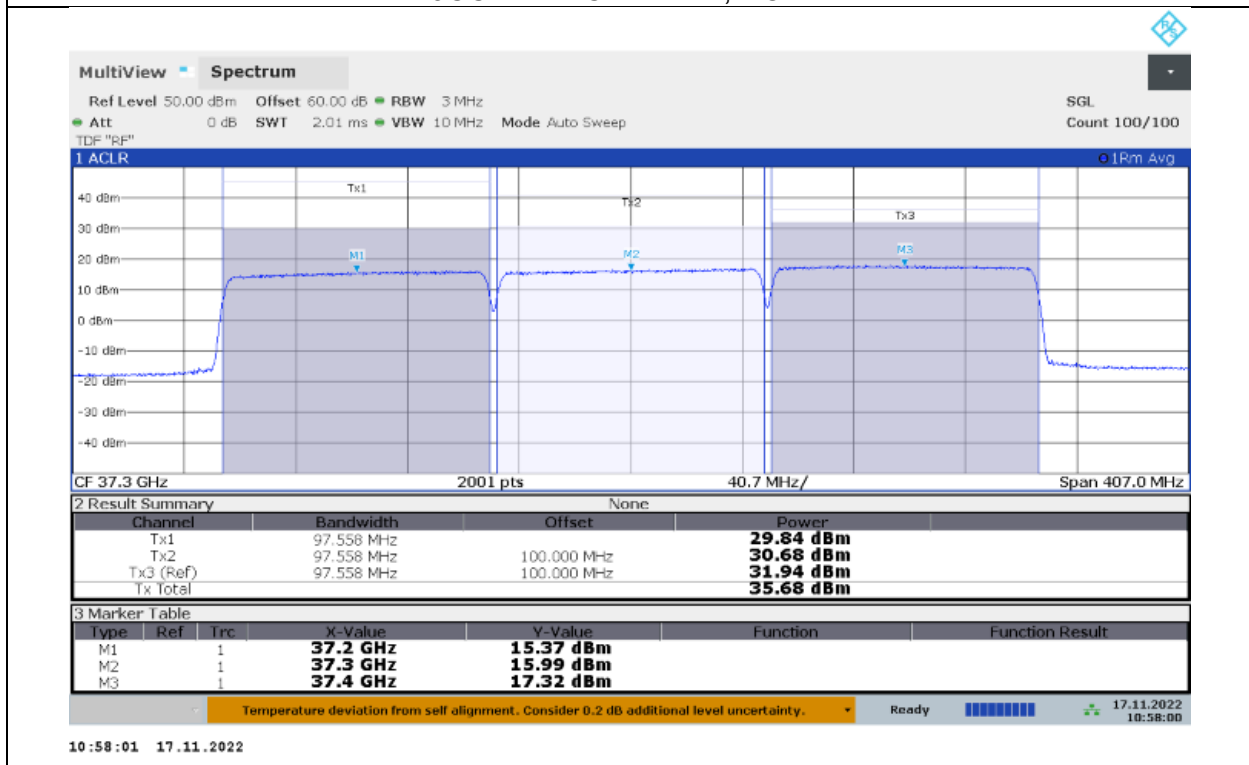
3CC – LOW CHANNEL, HORIZ



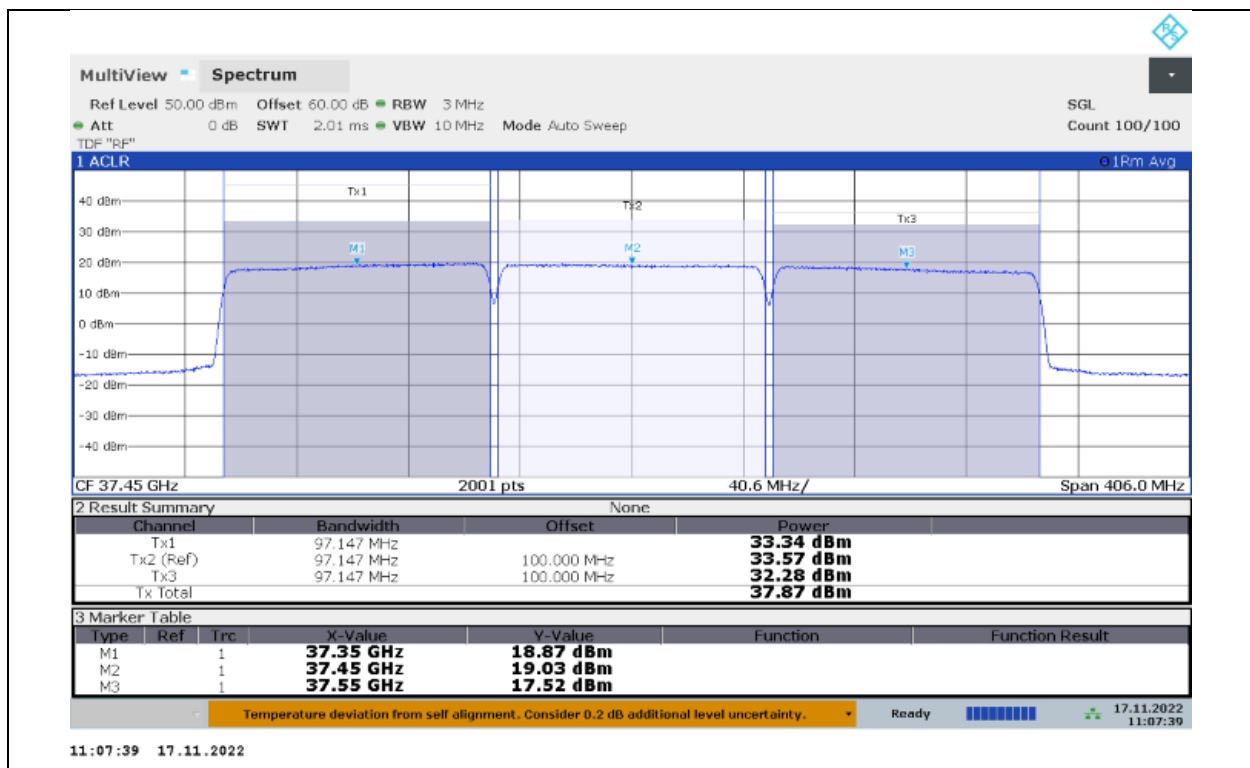
3CC – LOW CHANNEL, VERT



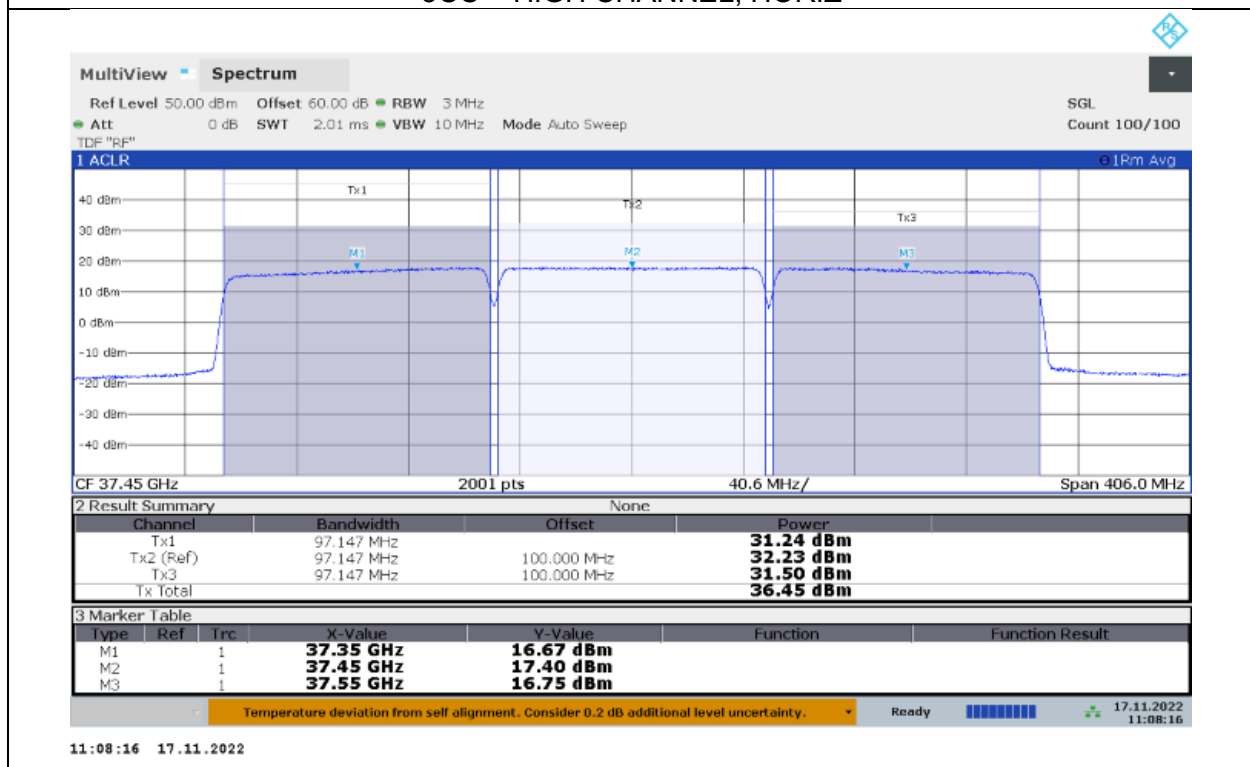
3CC – MID CHANNEL, HORIZ



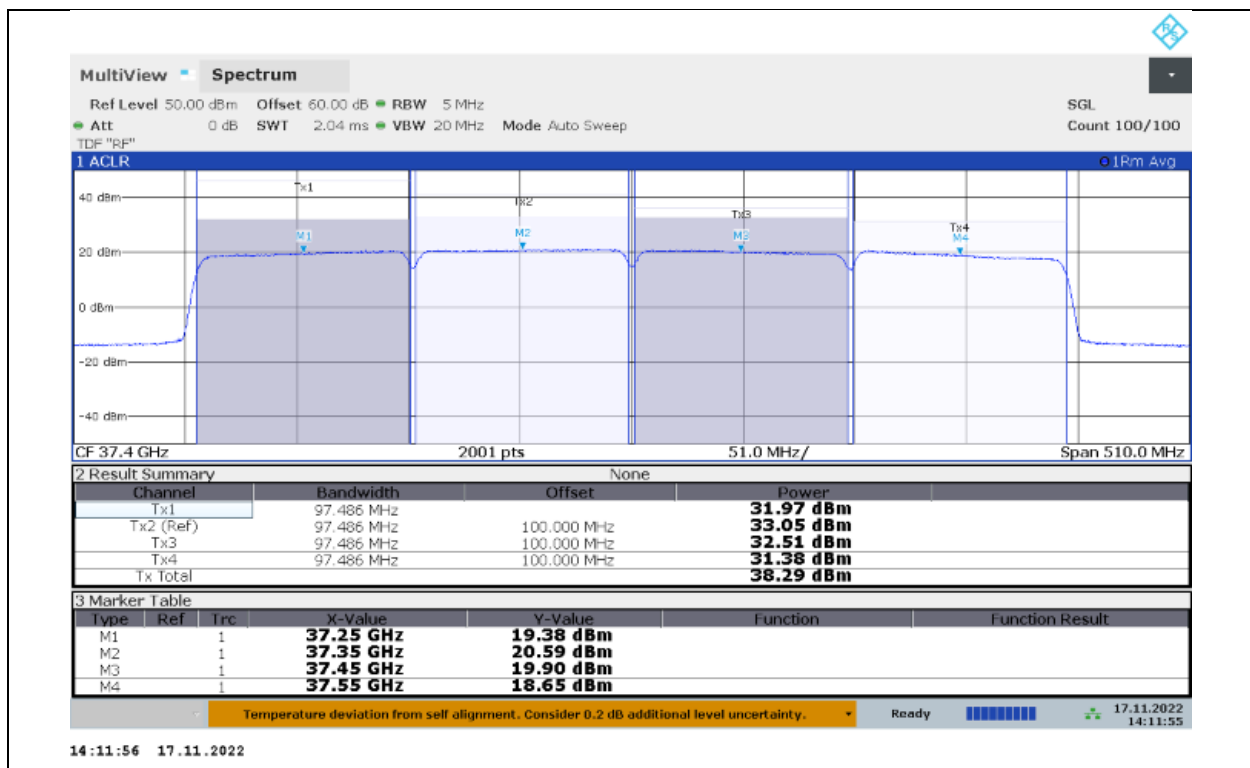
3CC – MID CHANNEL, VERT



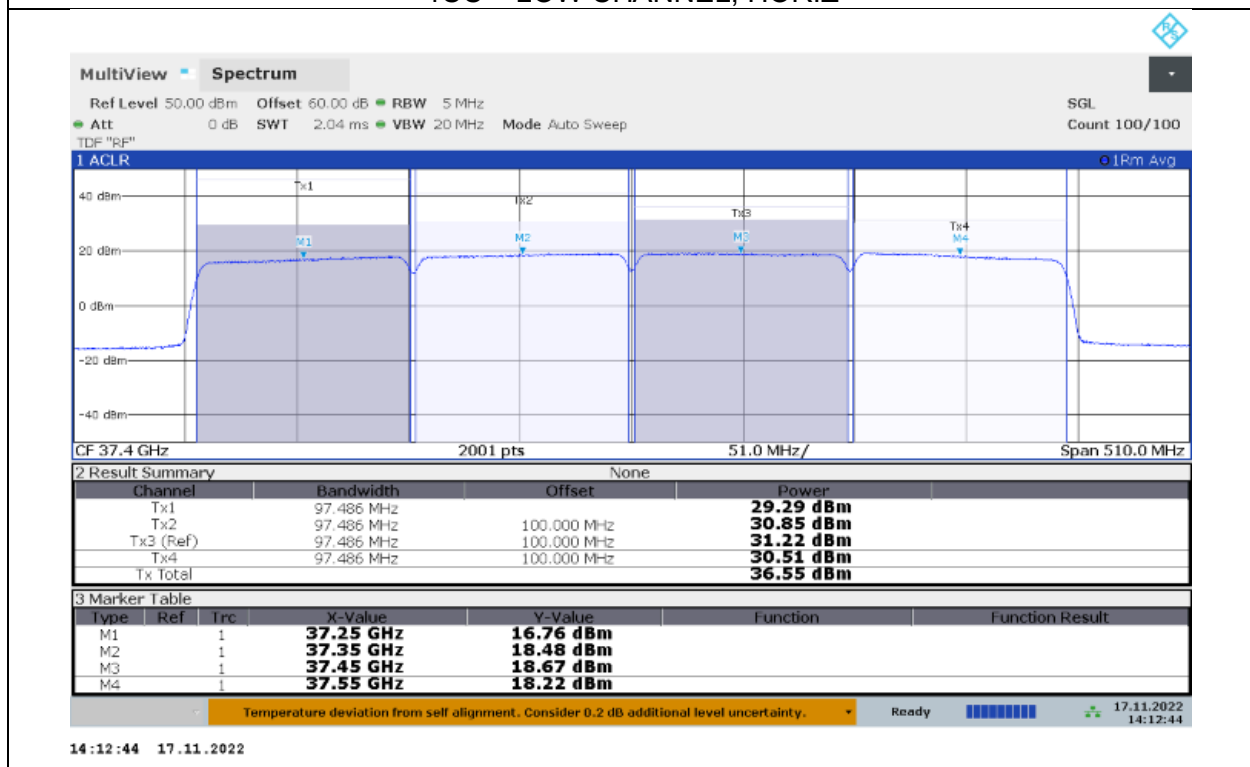
3CC – HIGH CHANNEL, HORIZ



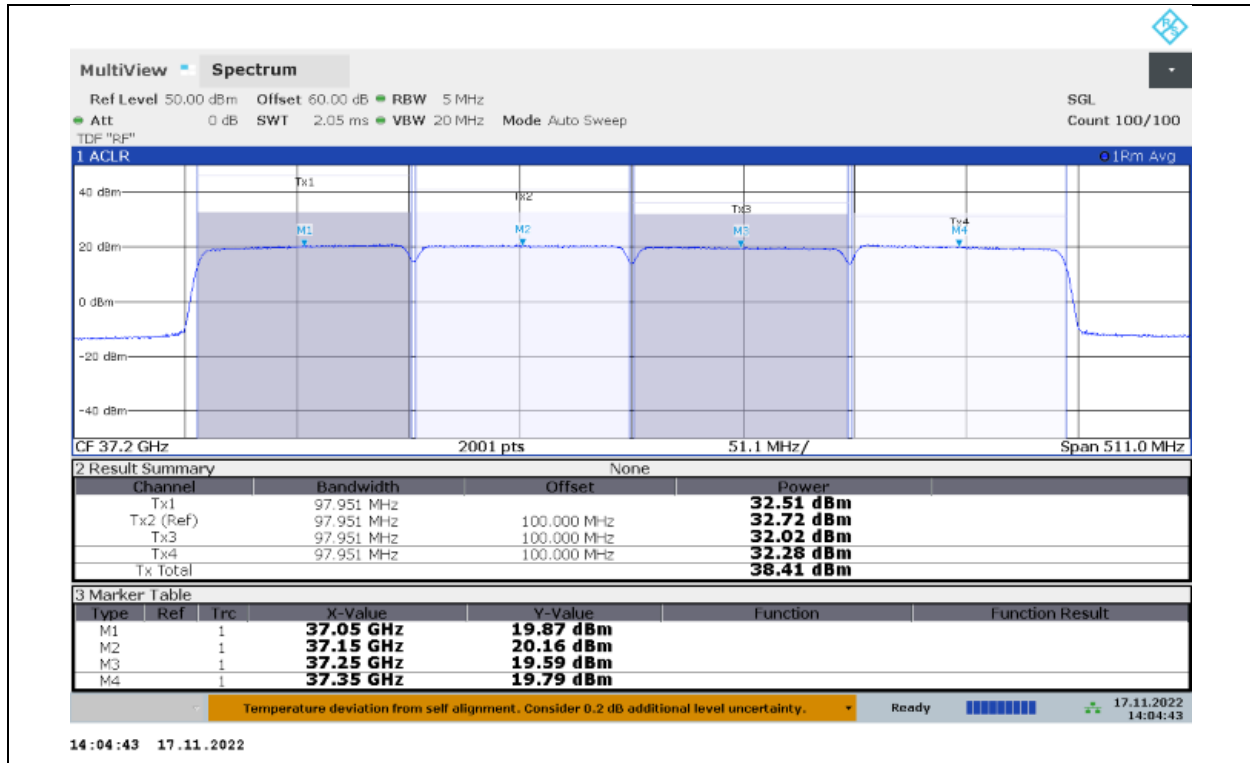
3CC – HIGH CHANNEL, VERT



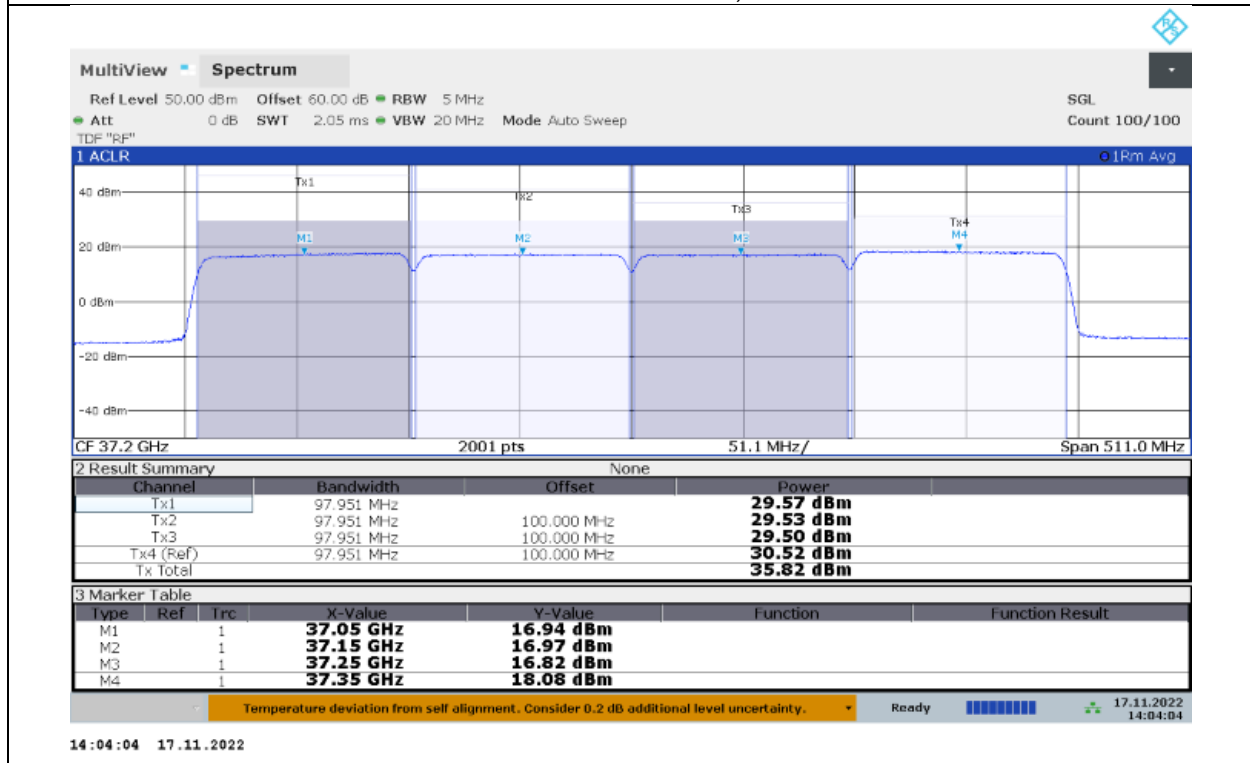
4CC – LOW CHANNEL, HORIZ



4CC – LOW CHANNEL, VERT

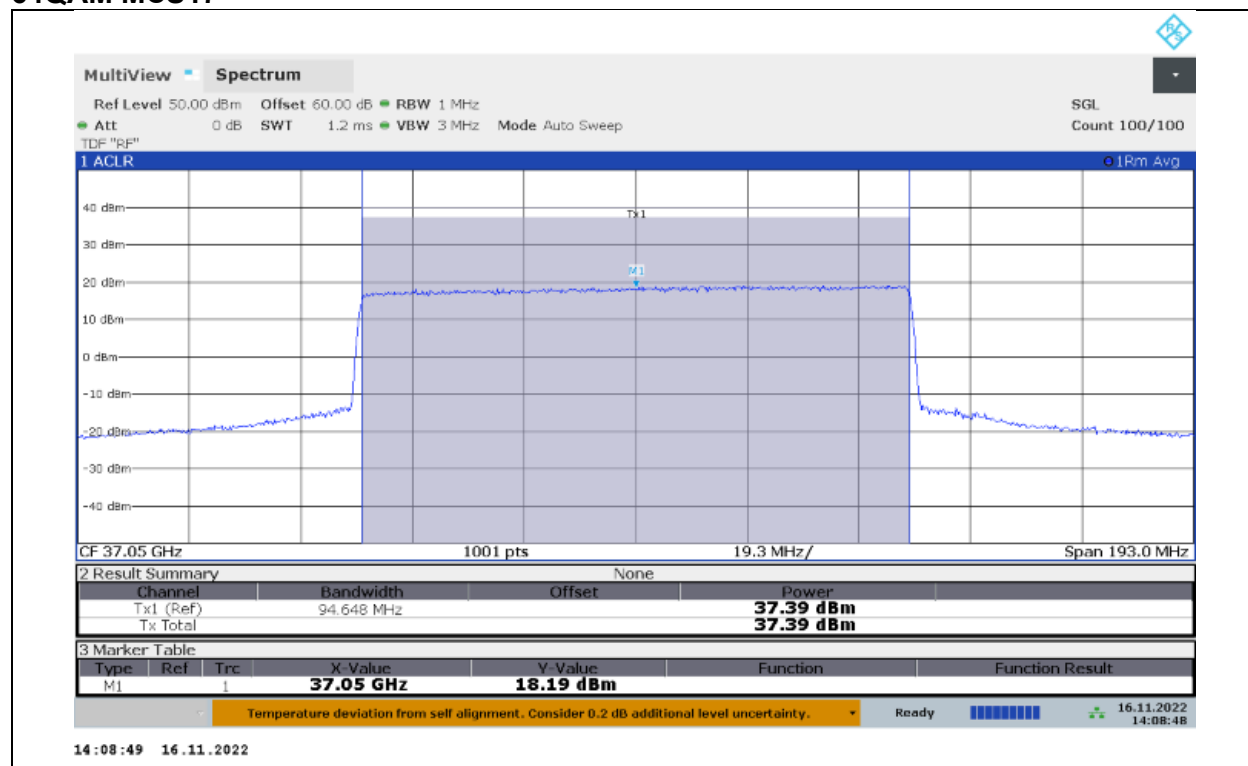


4CC – HIGH CHANNEL, HORIZ

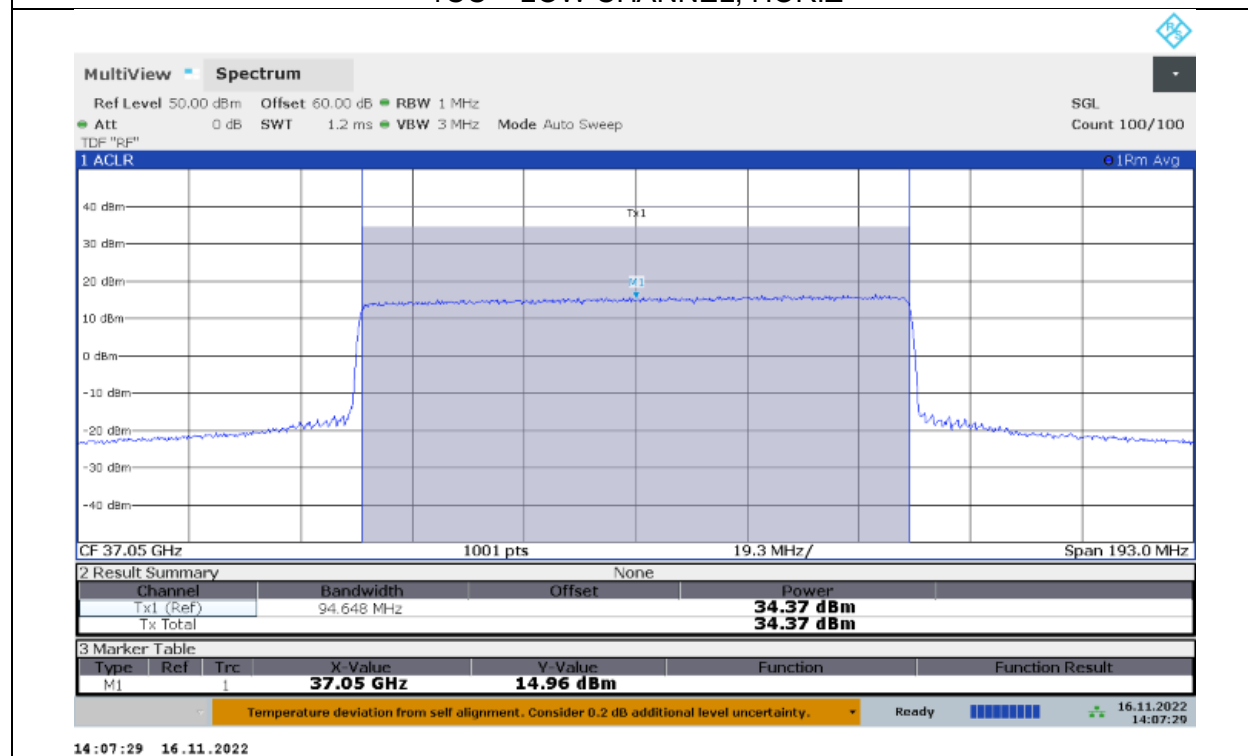


4CC – HIGH CHANNEL, VERT

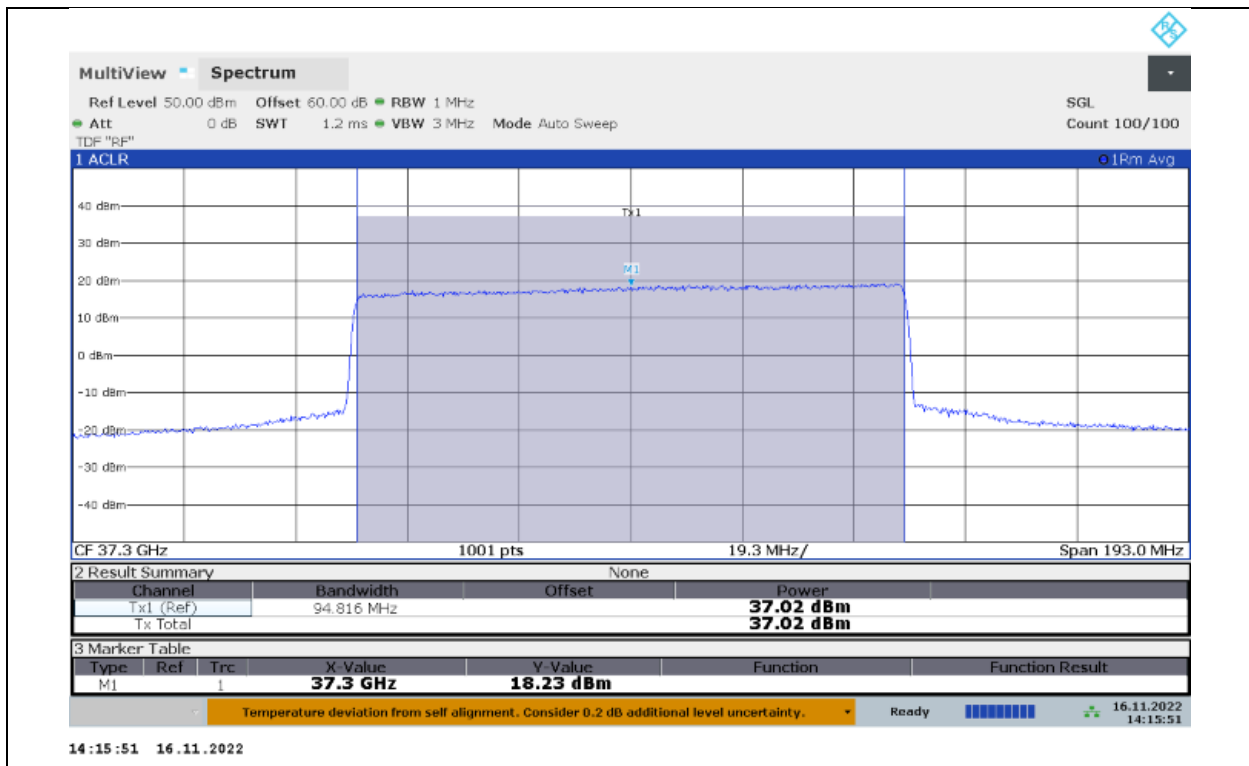
64QAM MCS17



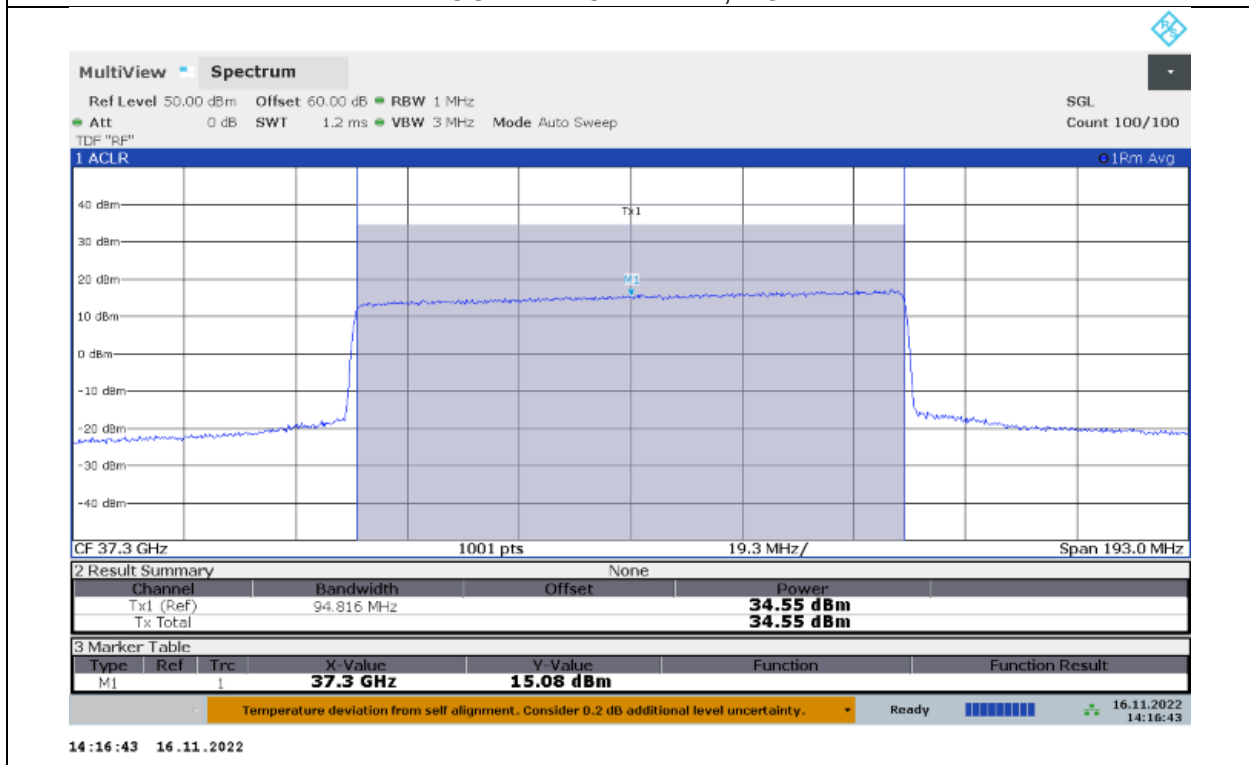
1CC – LOW CHANNEL, HORIZ



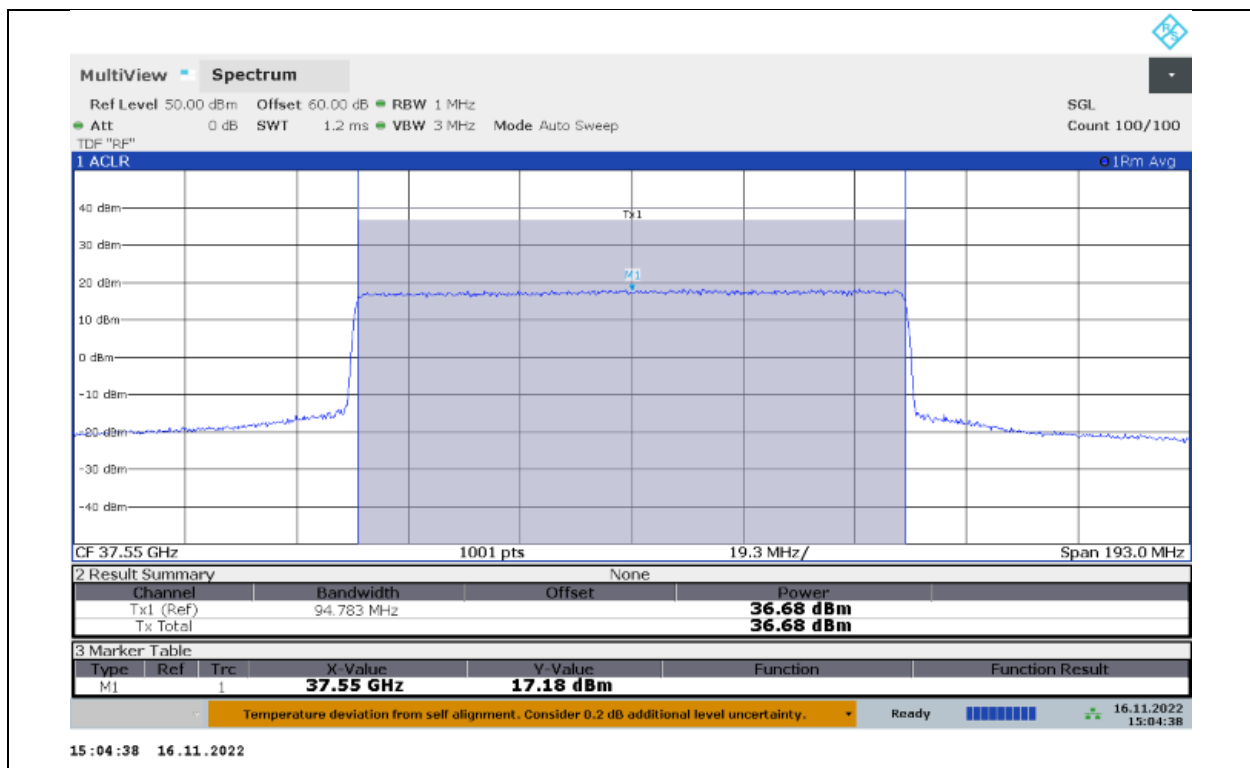
1CC – LOW CHANNEL, VERT



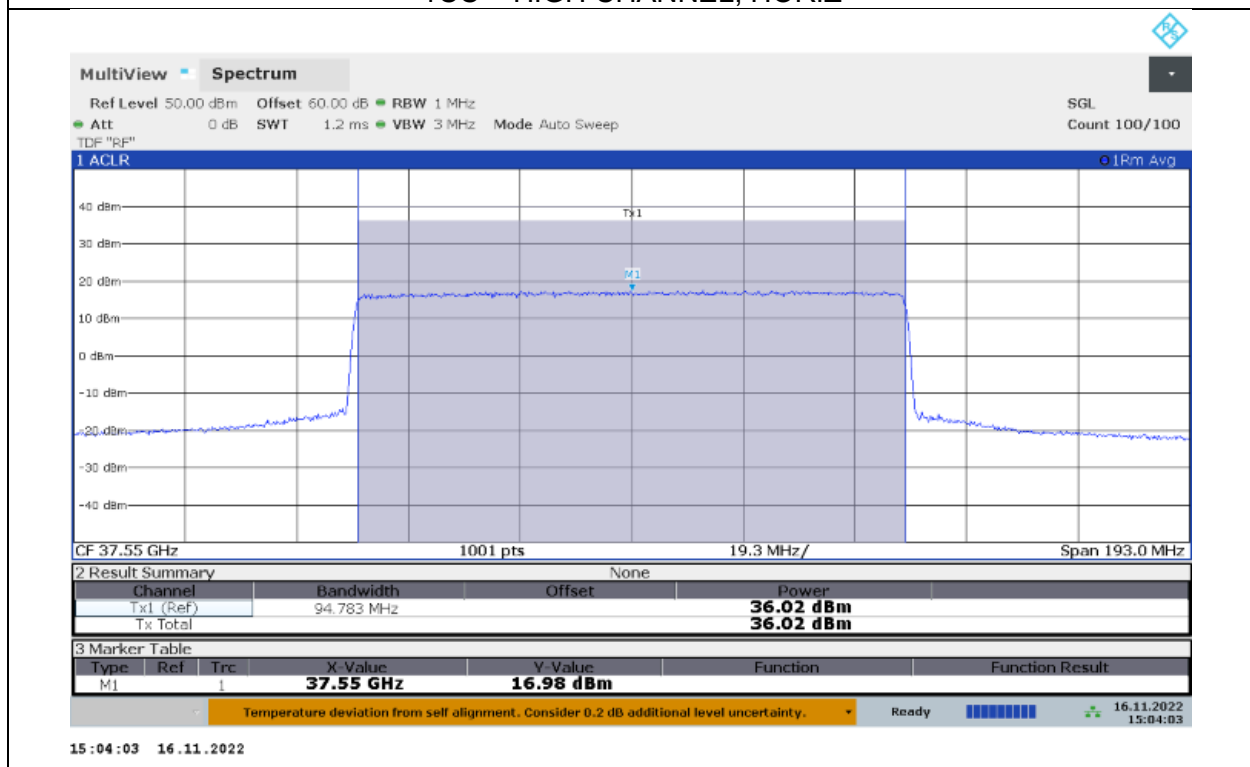
1CC – MID CHANNEL, HORIZ



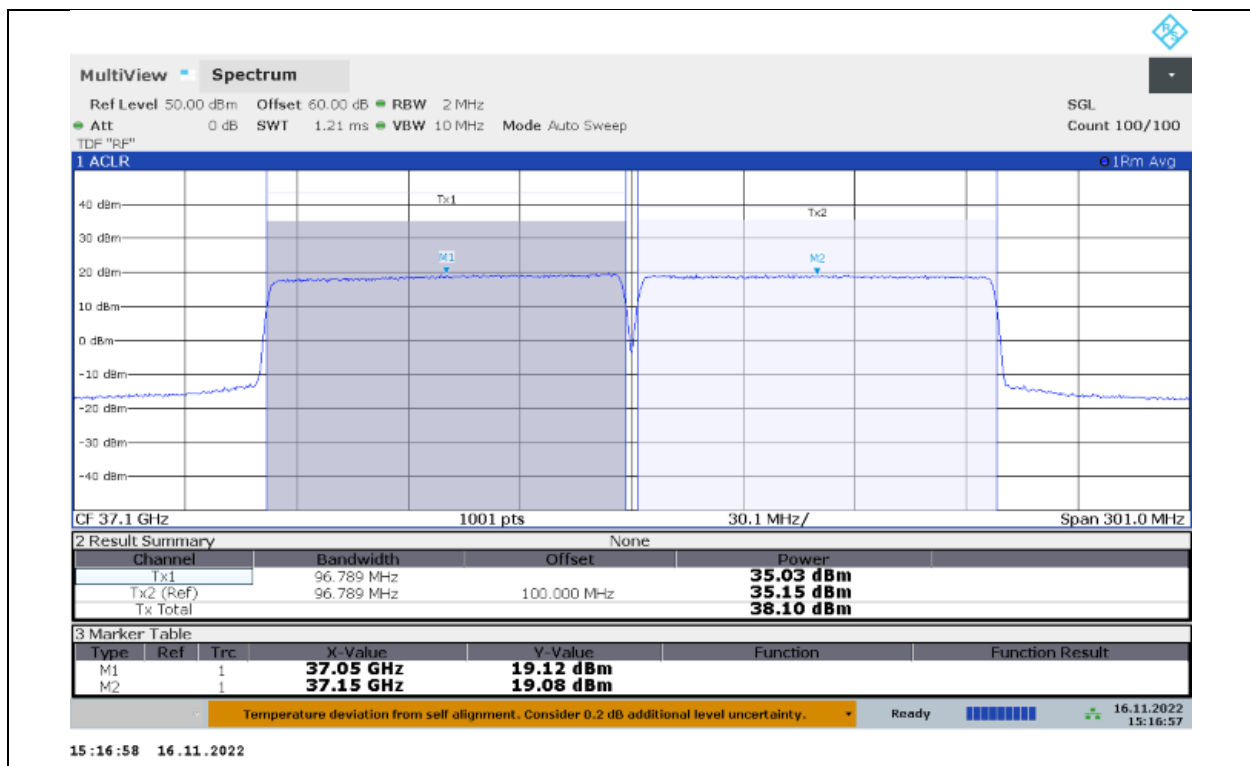
1CC – MID CHANNEL, VERT



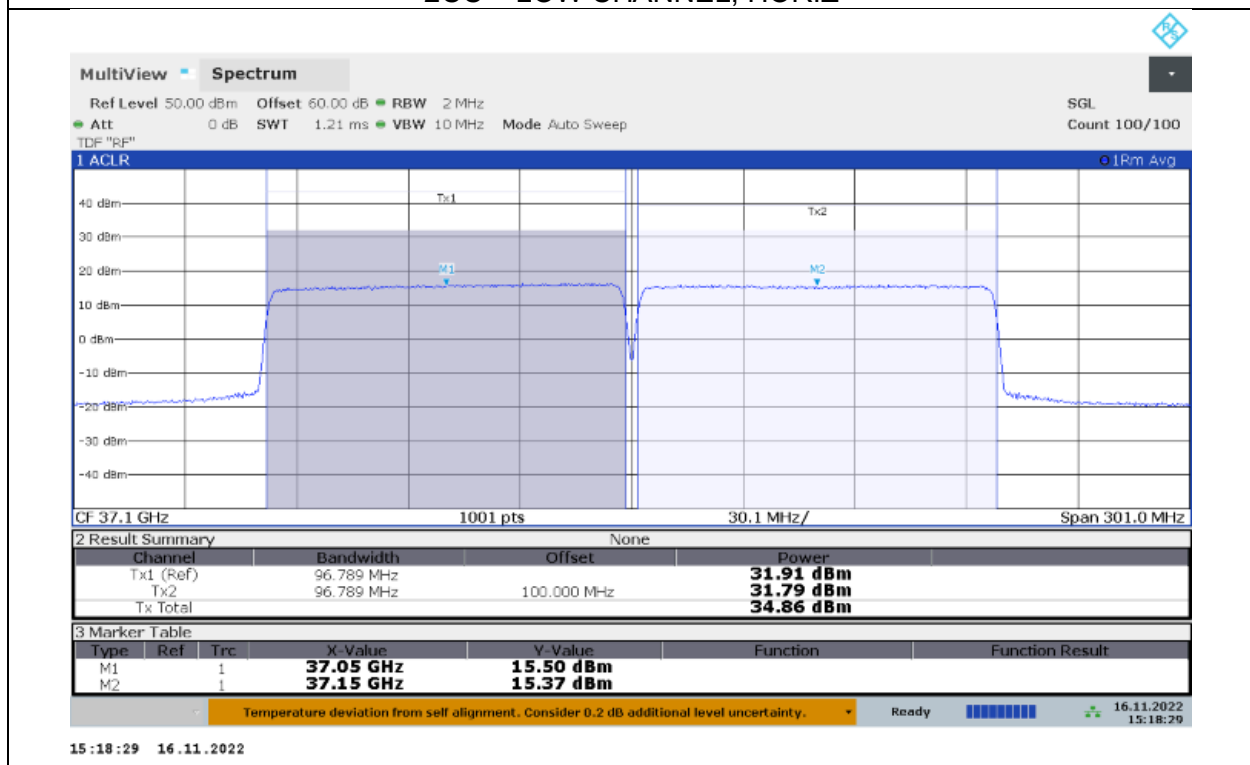
1CC – HIGH CHANNEL, HORIZ



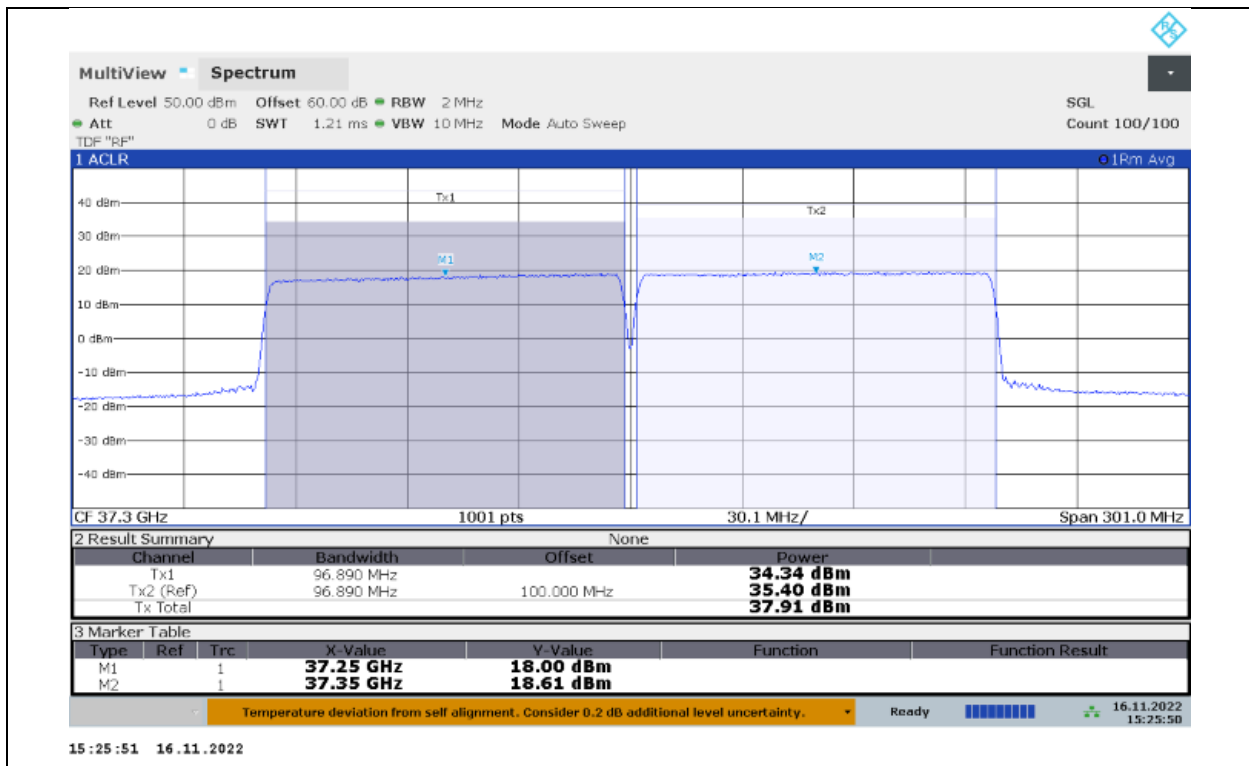
1CC – HIGH CHANNEL, VERT



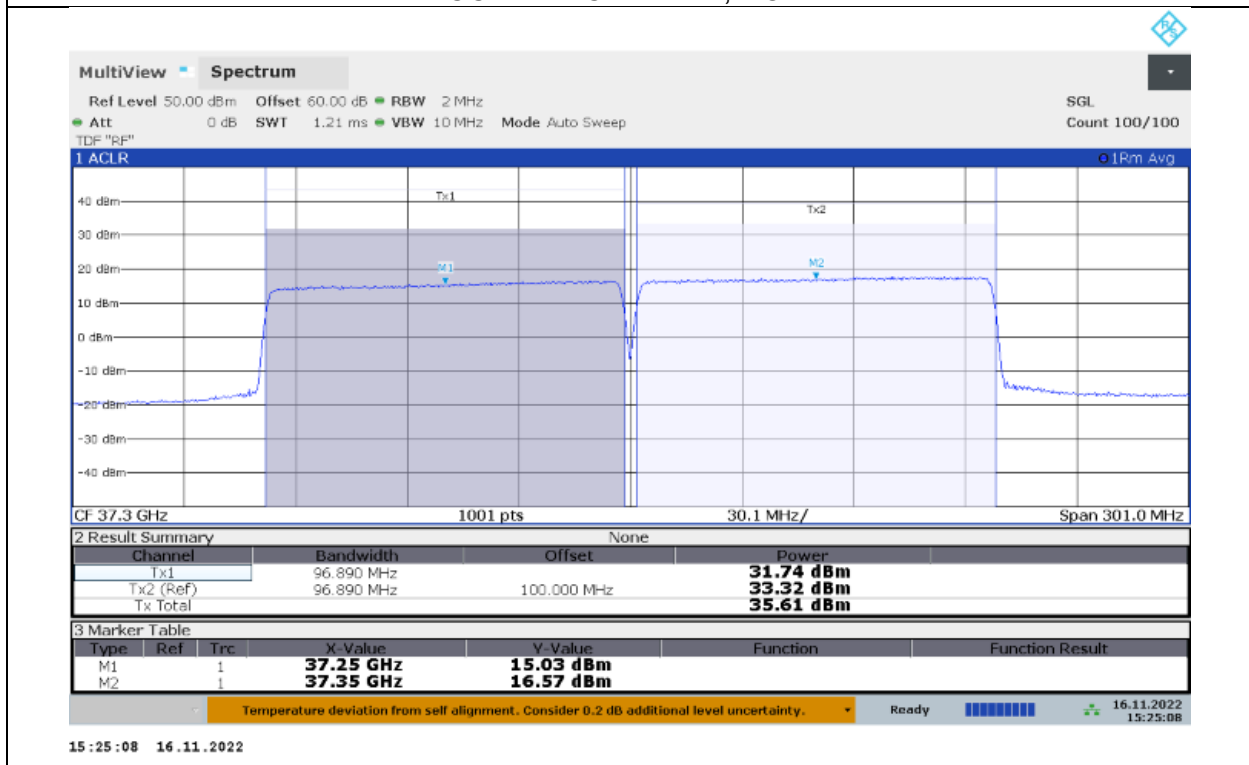
2CC – LOW CHANNEL, HORIZ



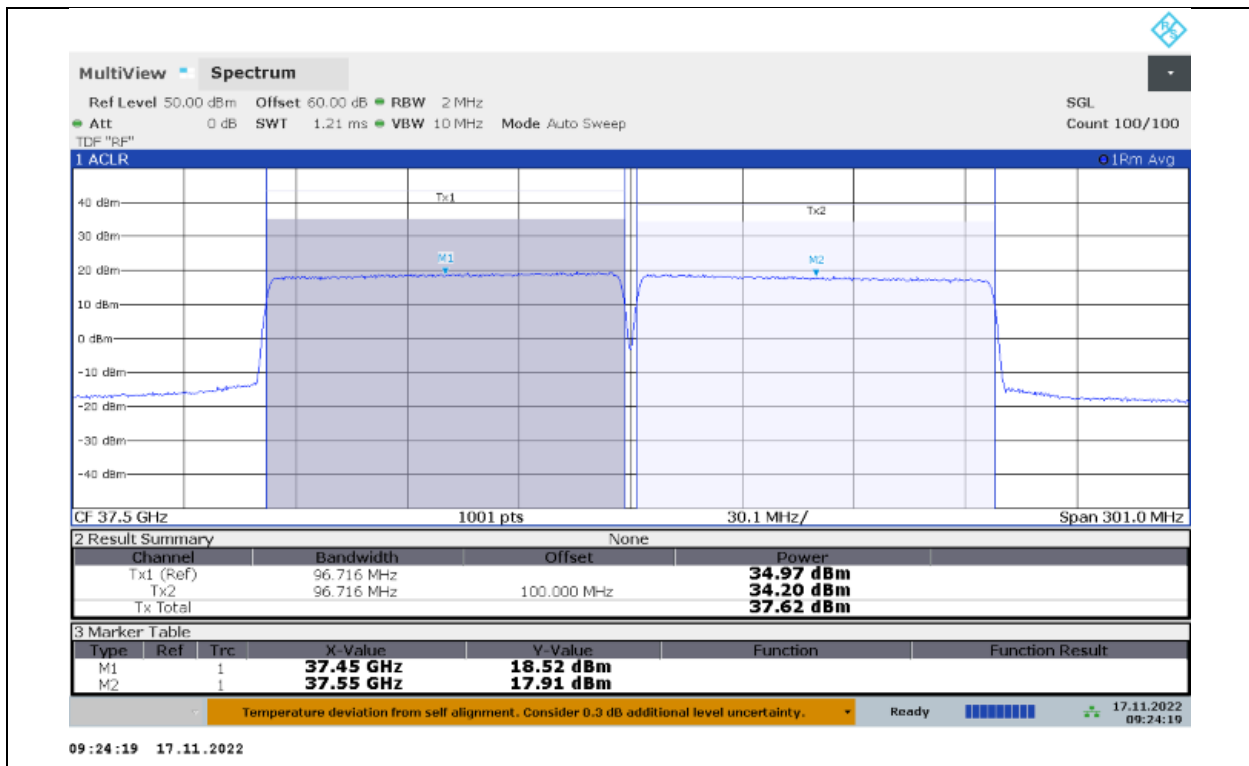
2CC – LOW CHANNEL, VERT



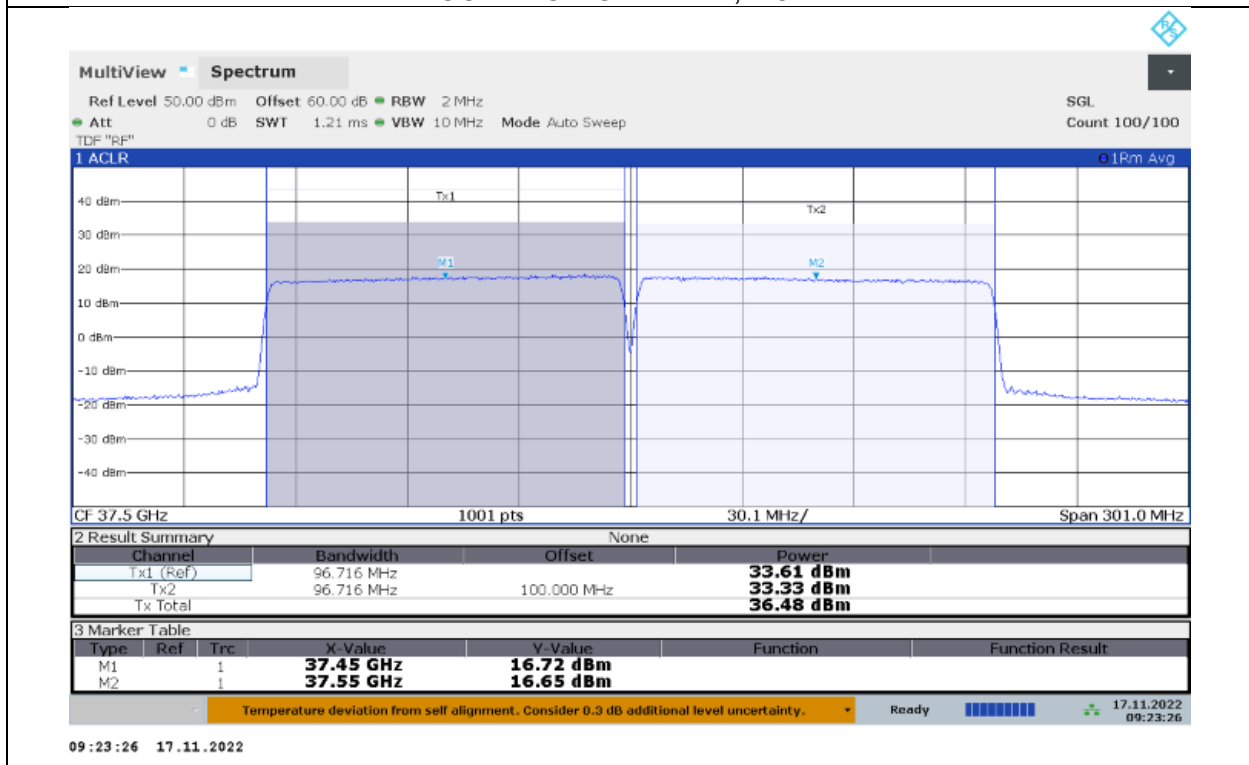
2CC – MID CHANNEL, HORIZ



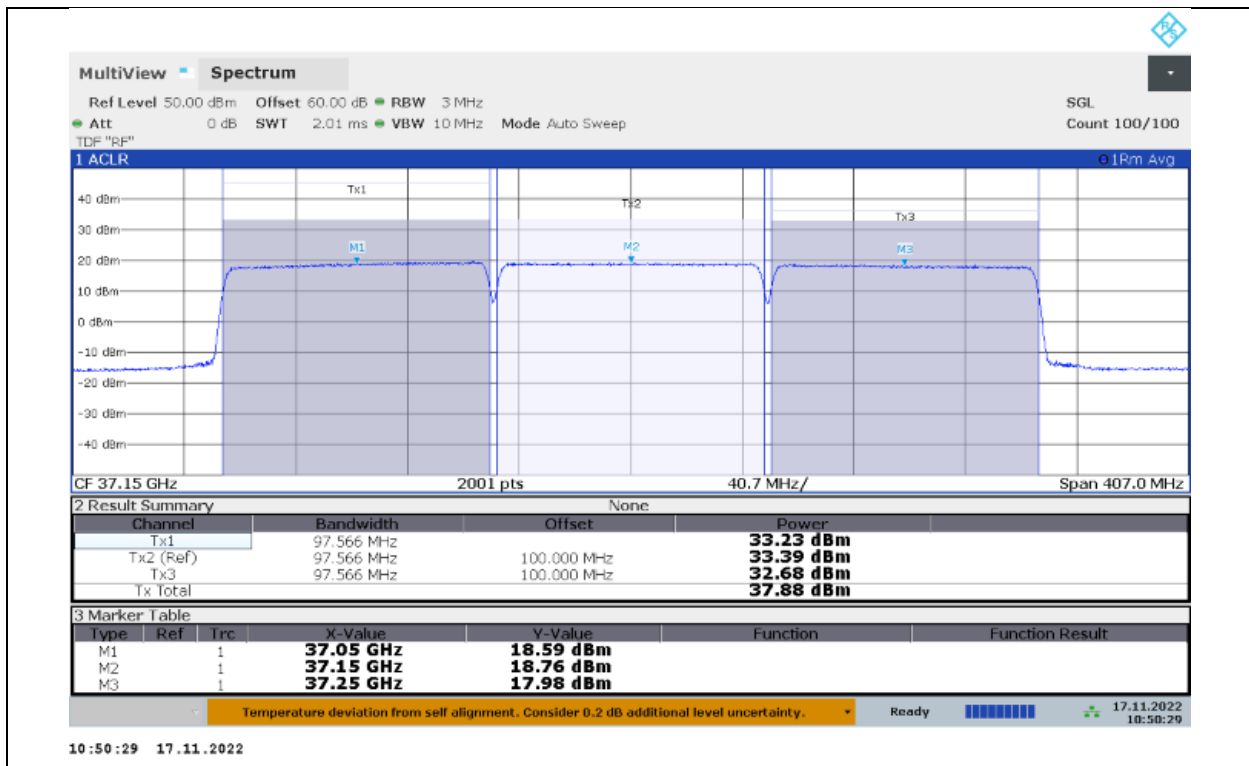
2CC – MID CHANNEL, VERT



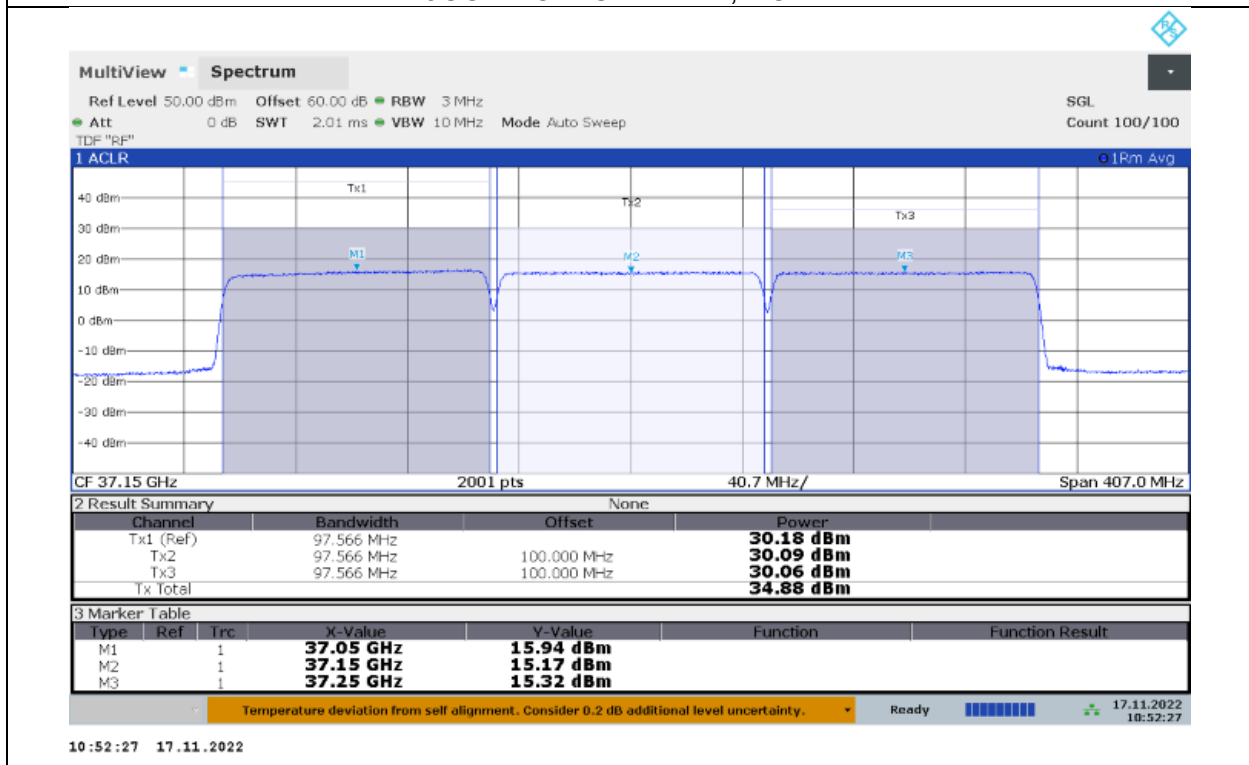
2CC – HIGH CHANNEL, HORIZ



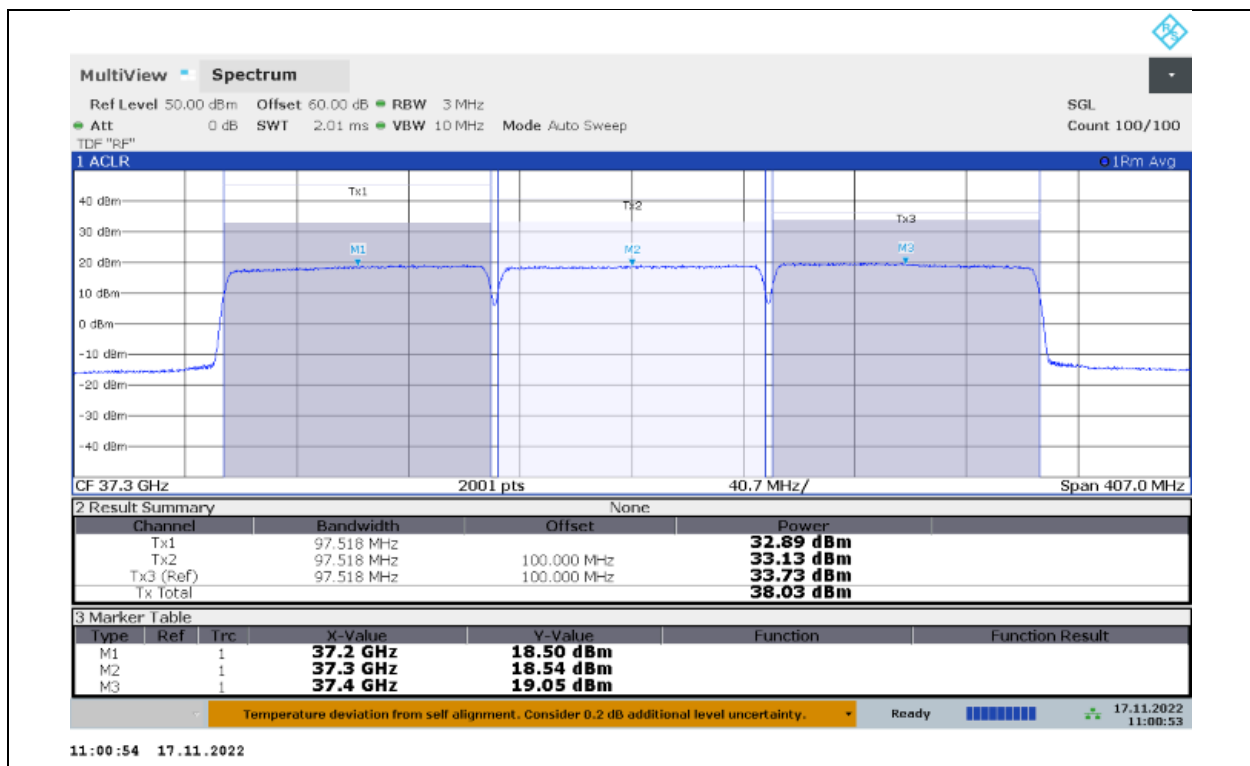
2CC – HIGH CHANNEL, VERT



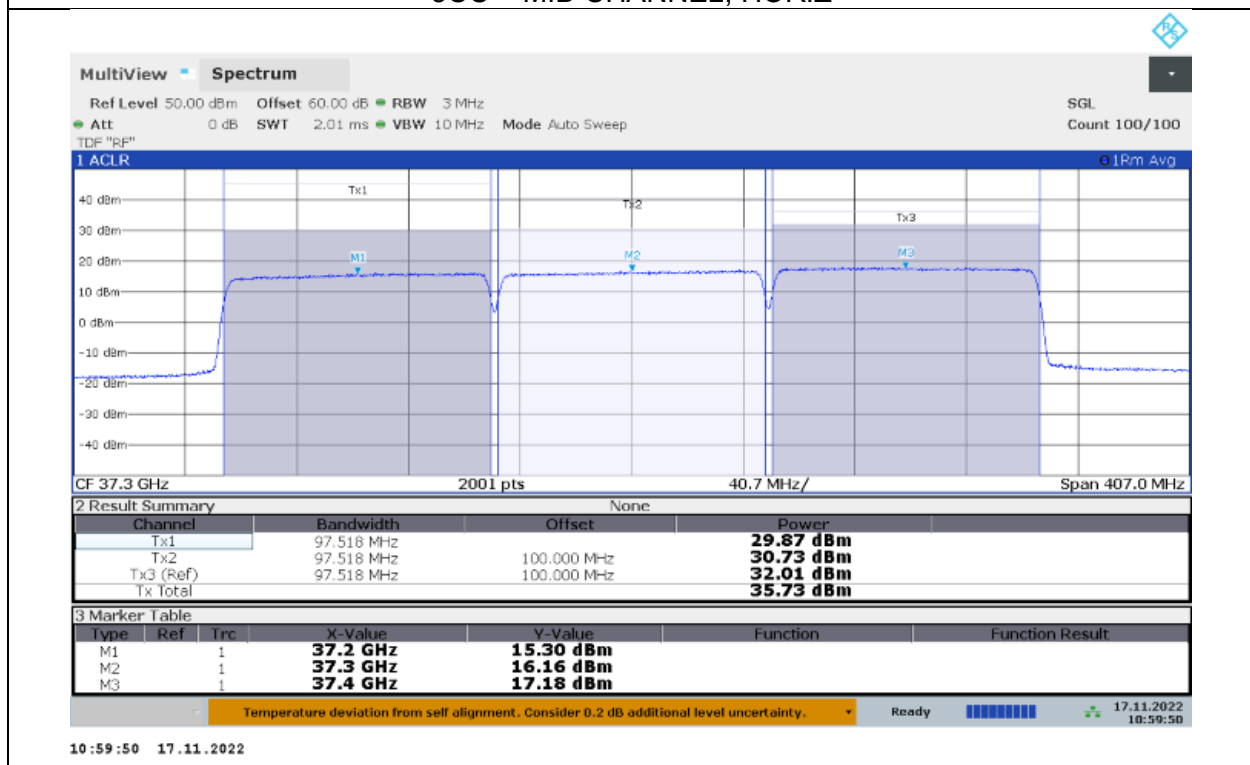
3CC – LOW CHANNEL, HORIZ



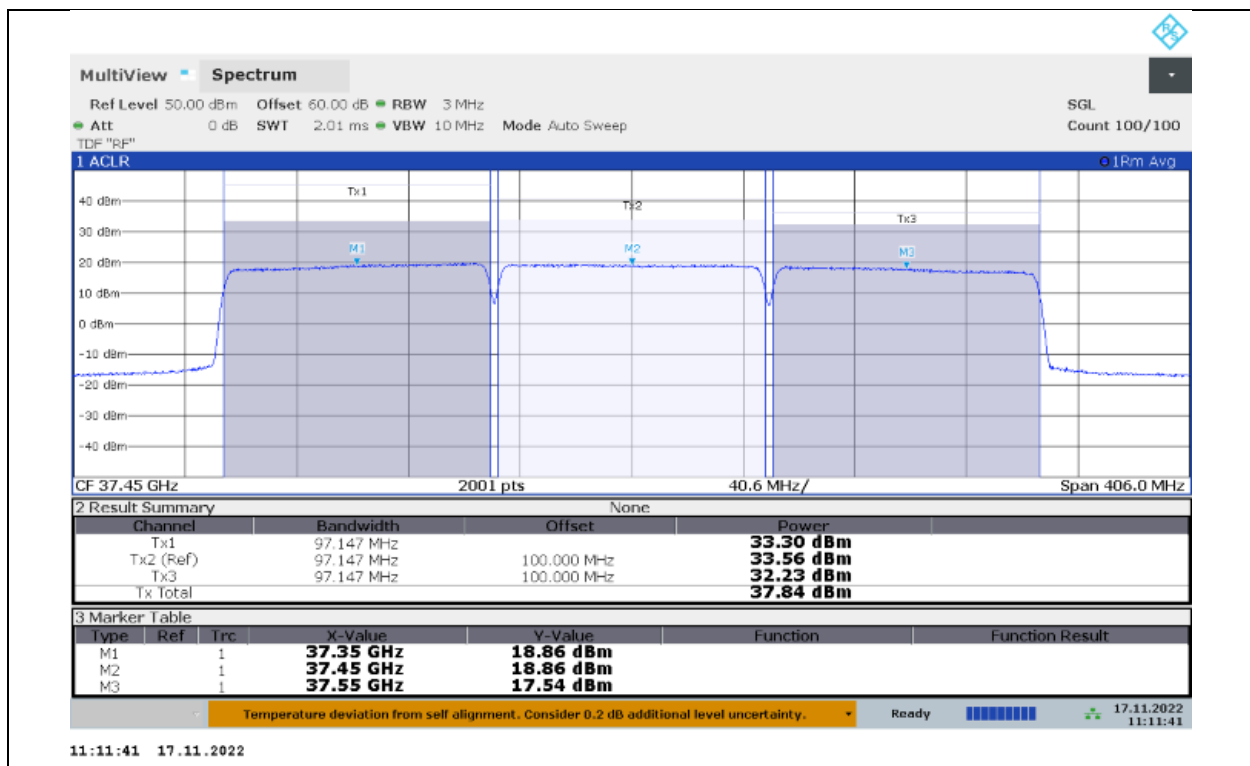
3CC – LOW CHANNEL, VERT



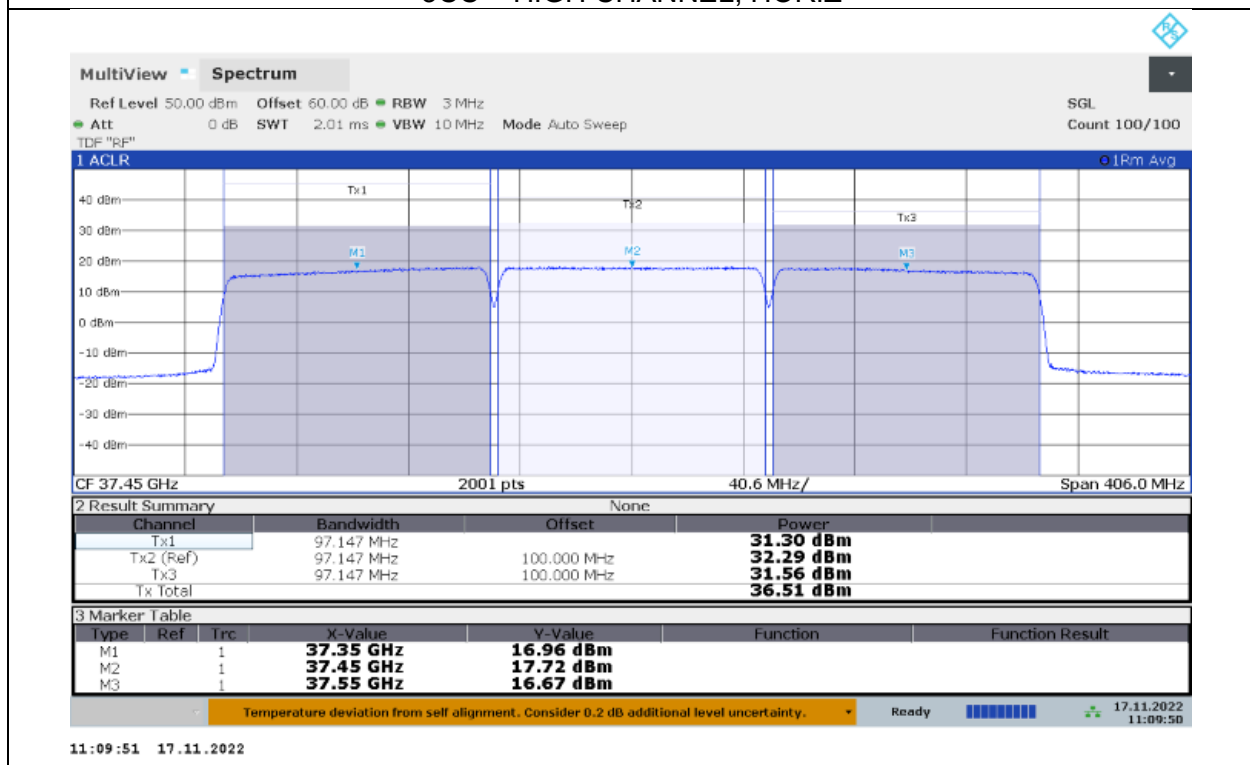
3CC – MID CHANNEL, HORIZ



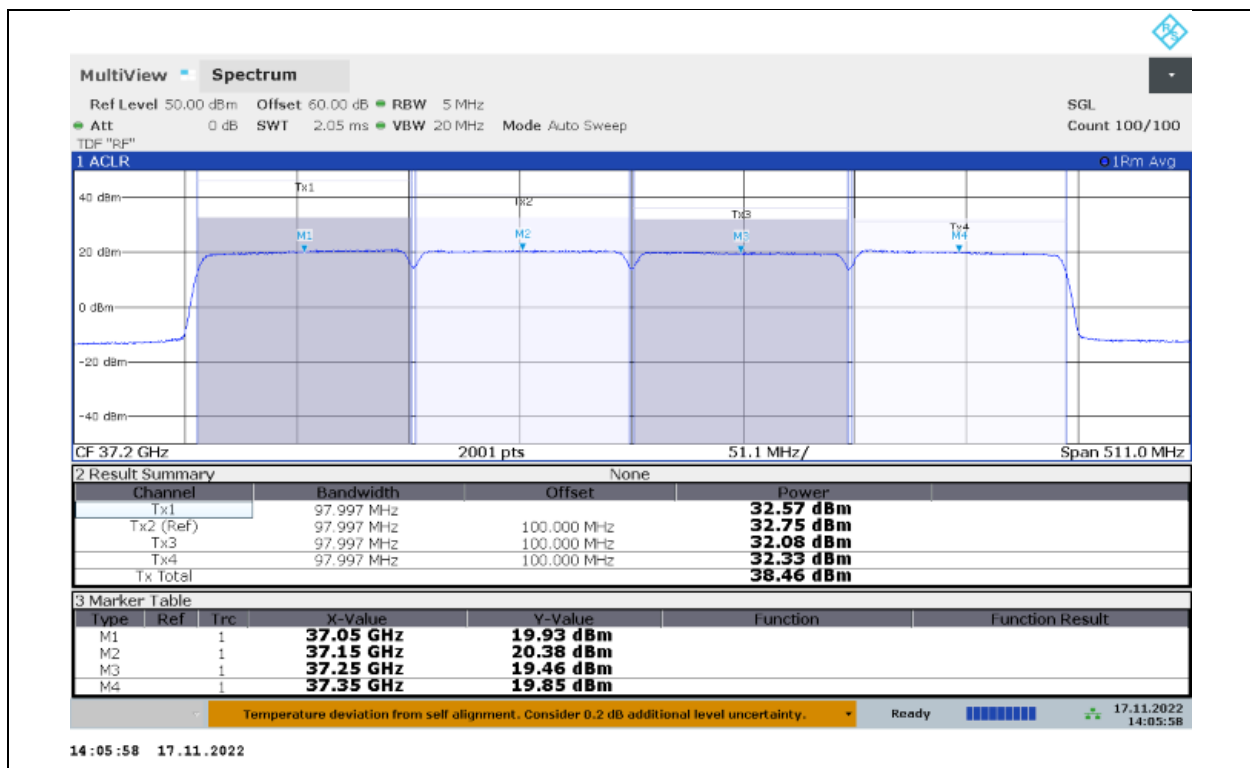
3CC – MID CHANNEL, VERT



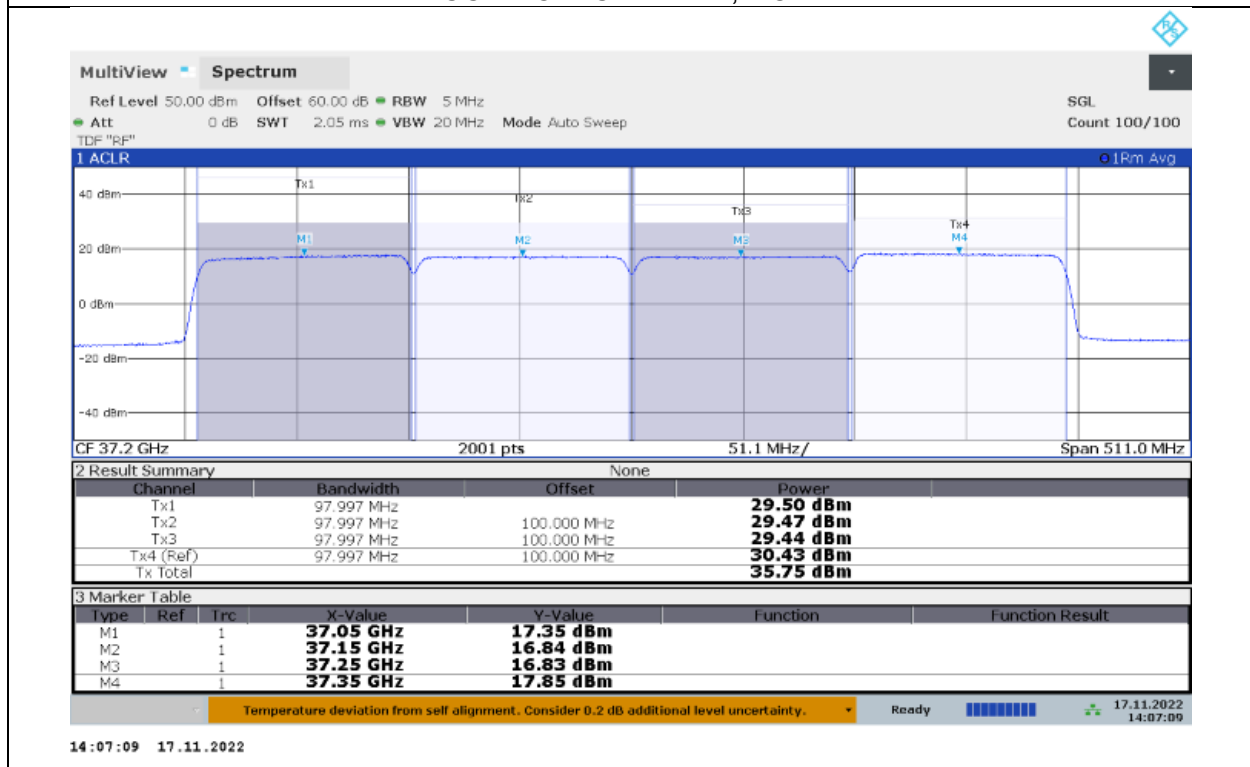
3CC – HIGH CHANNEL, HORIZ



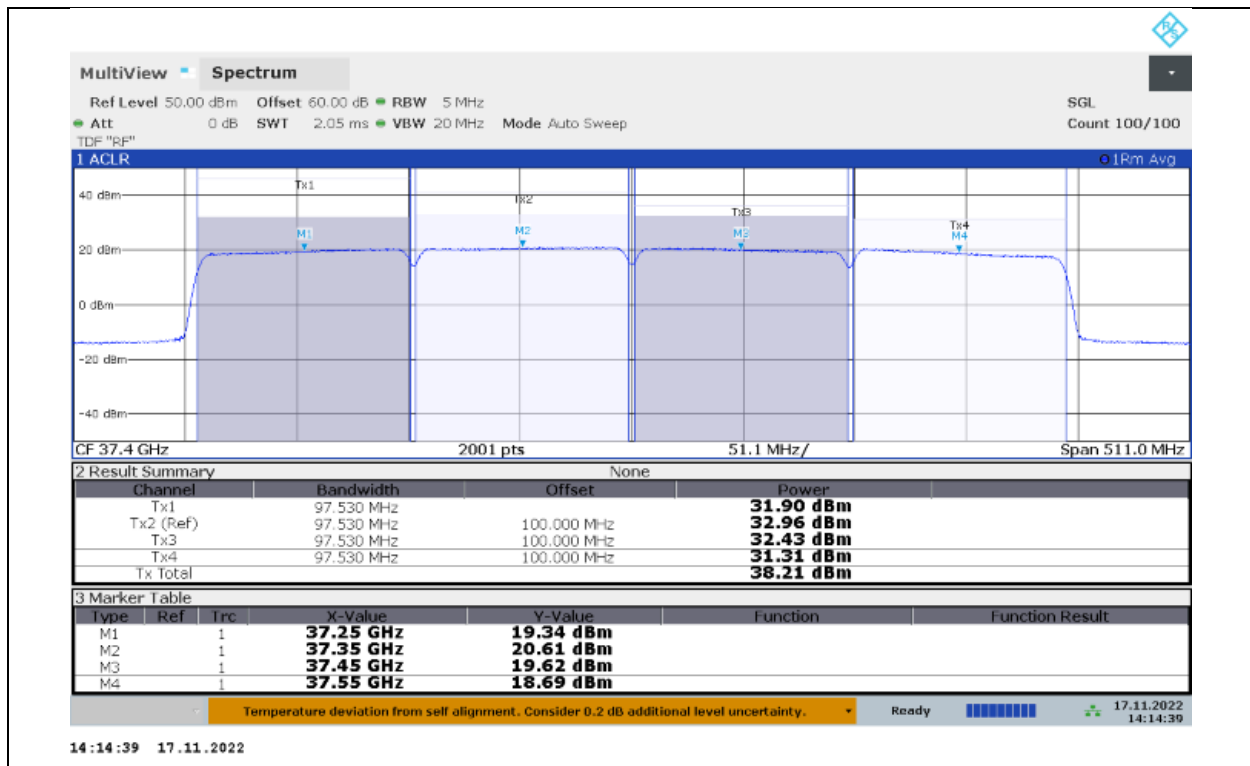
3CC – HIGH CHANNEL, VERT



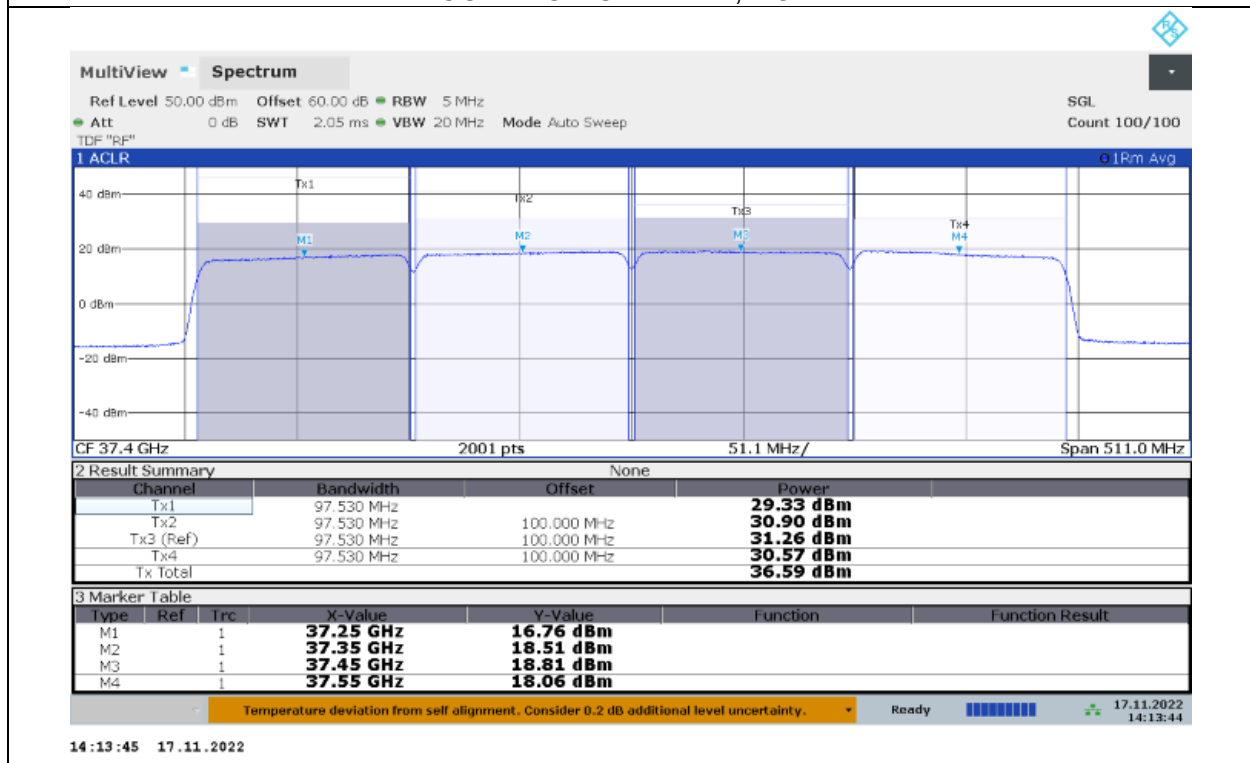
4CC – LOW CHANNEL, HORIZ



4CC – LOW CHANNEL, VERT

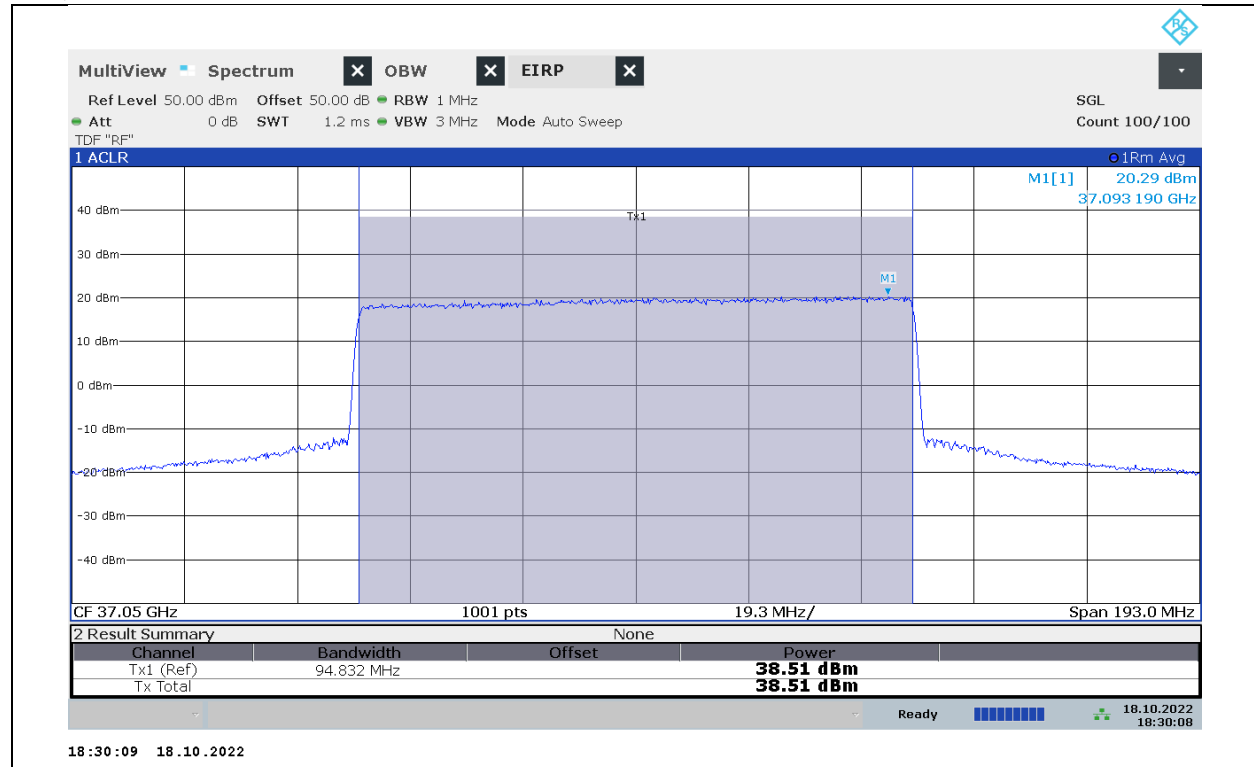


4CC – HIGH CHANNEL, HORIZ

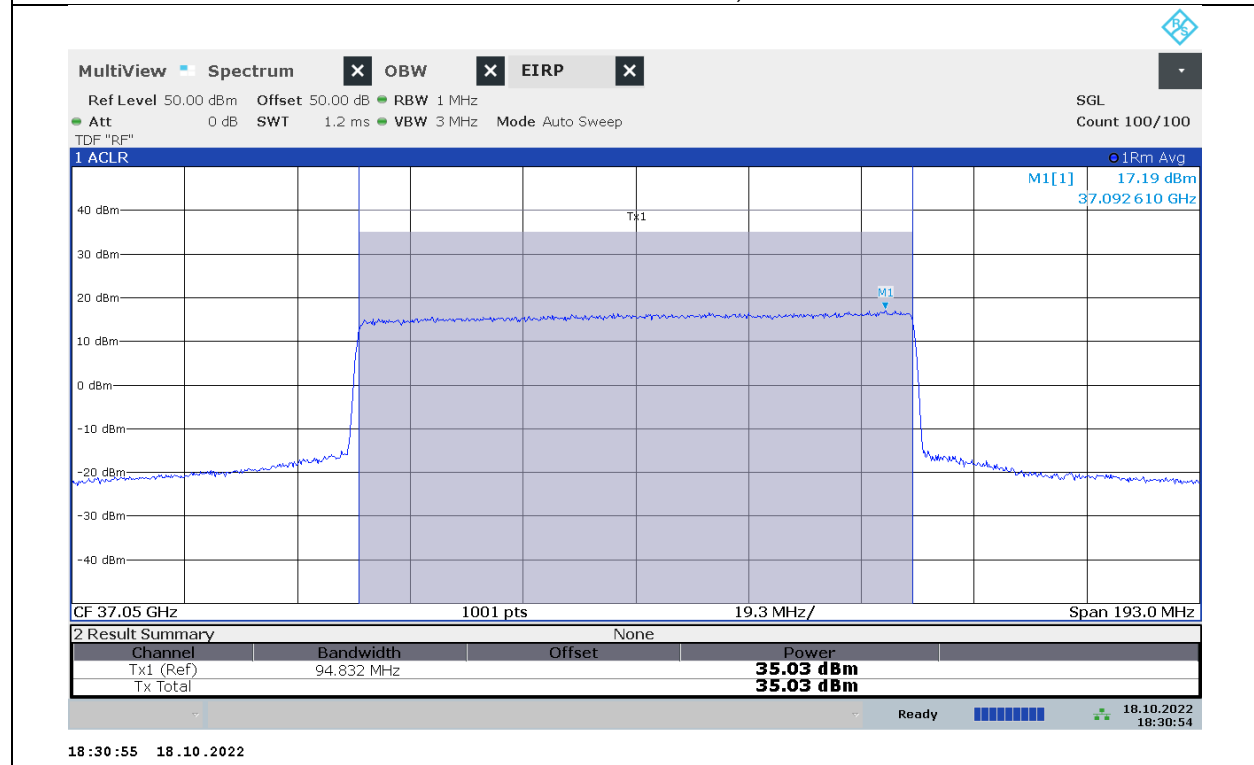


4CC – HIGH CHANNEL, VERT

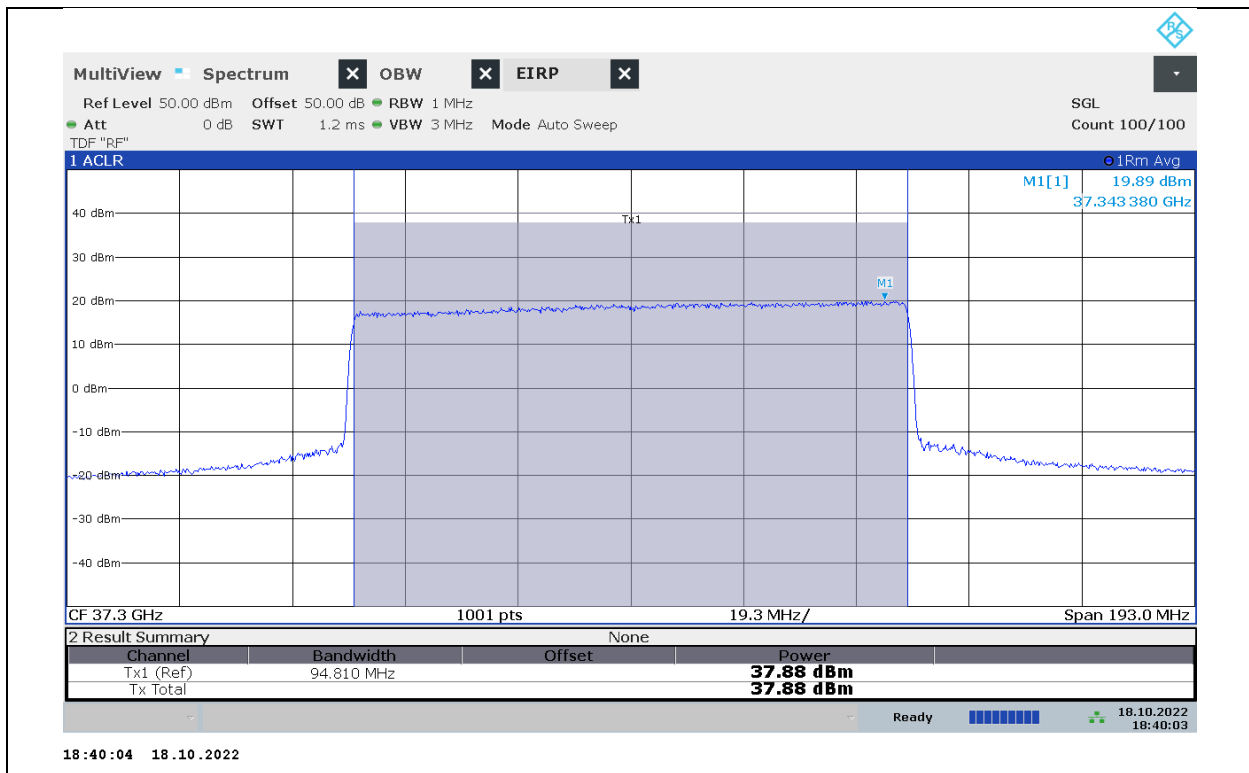
64QAM MCS28



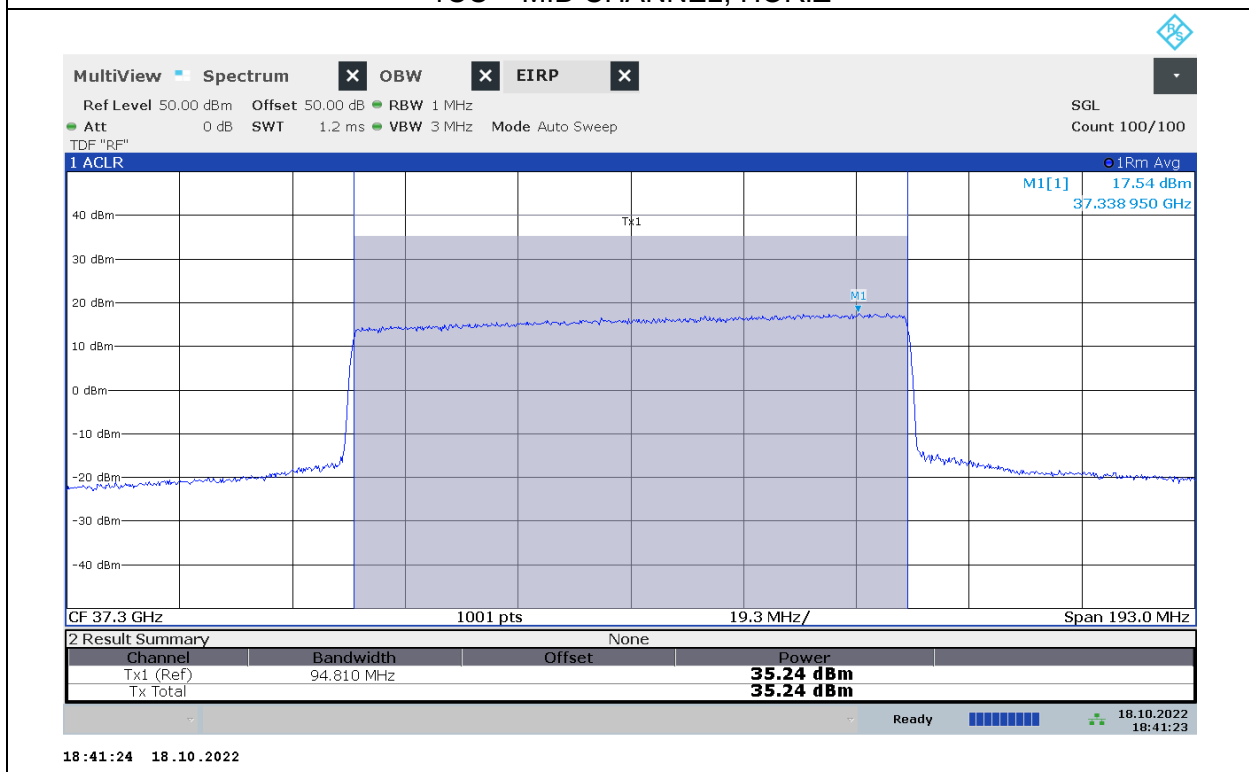
1CC – LOW CHANNEL, HORIZ



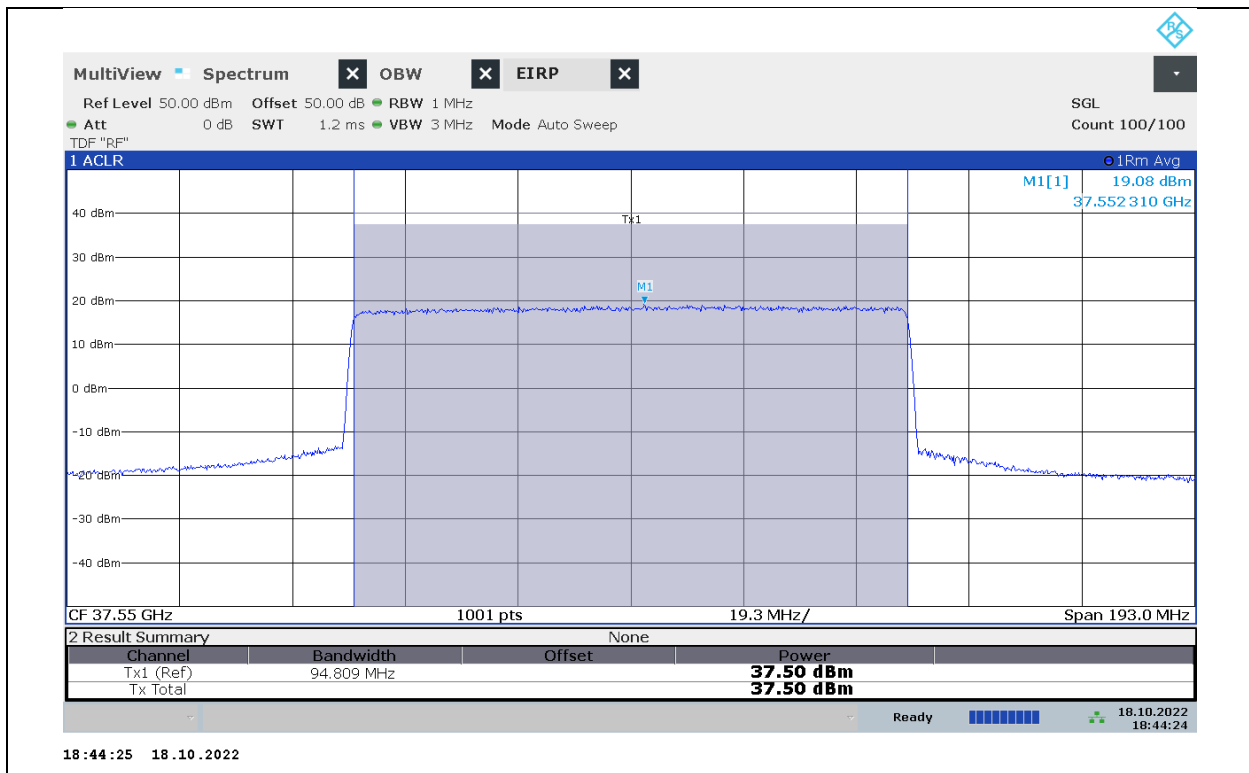
1CC – LOW CHANNEL, VERT



1CC – MID CHANNEL, HORIZ



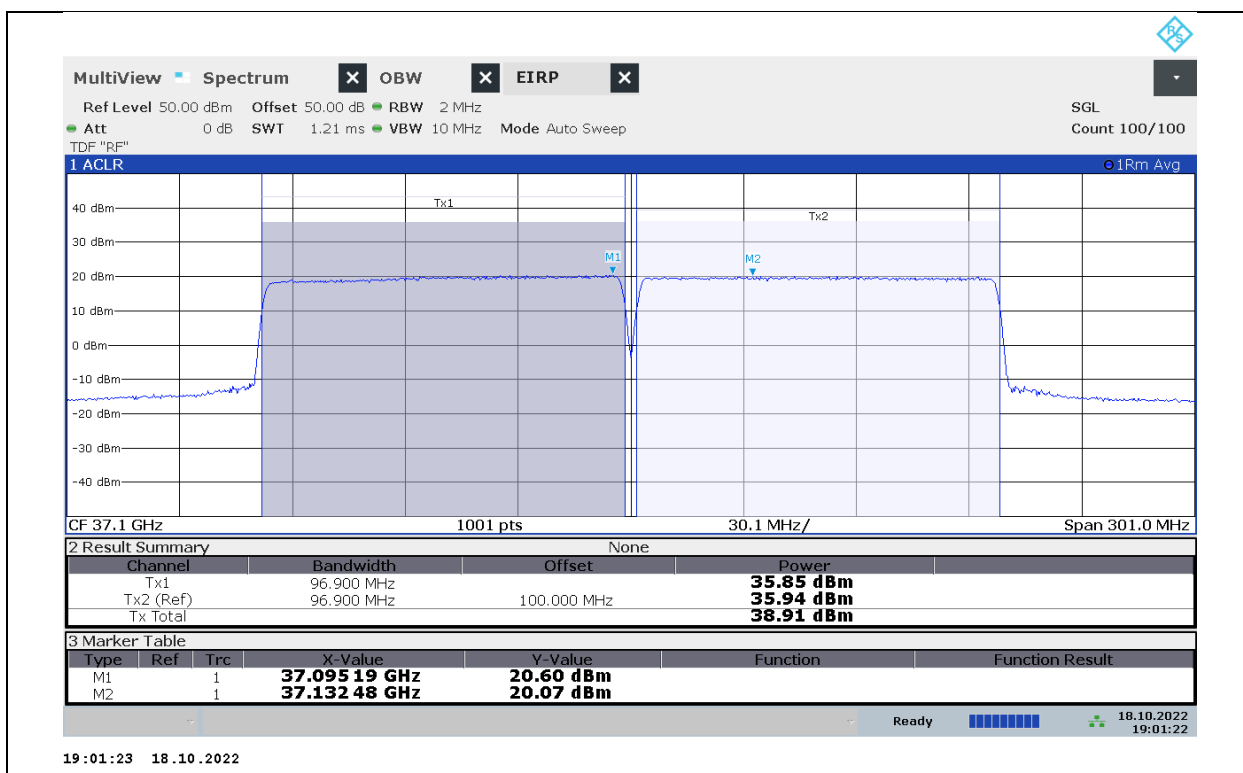
1CC – MID CHANNEL, VERT



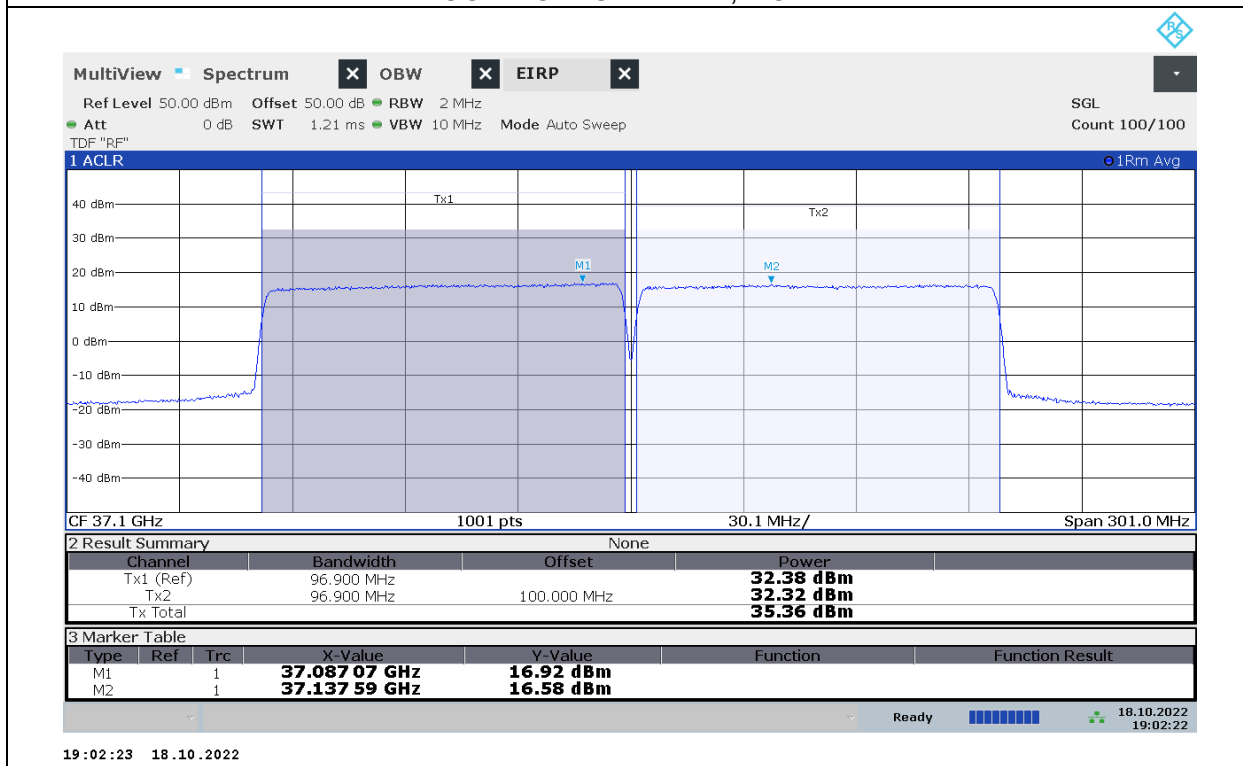
1CC – HIGH CHANNEL, HORIZ



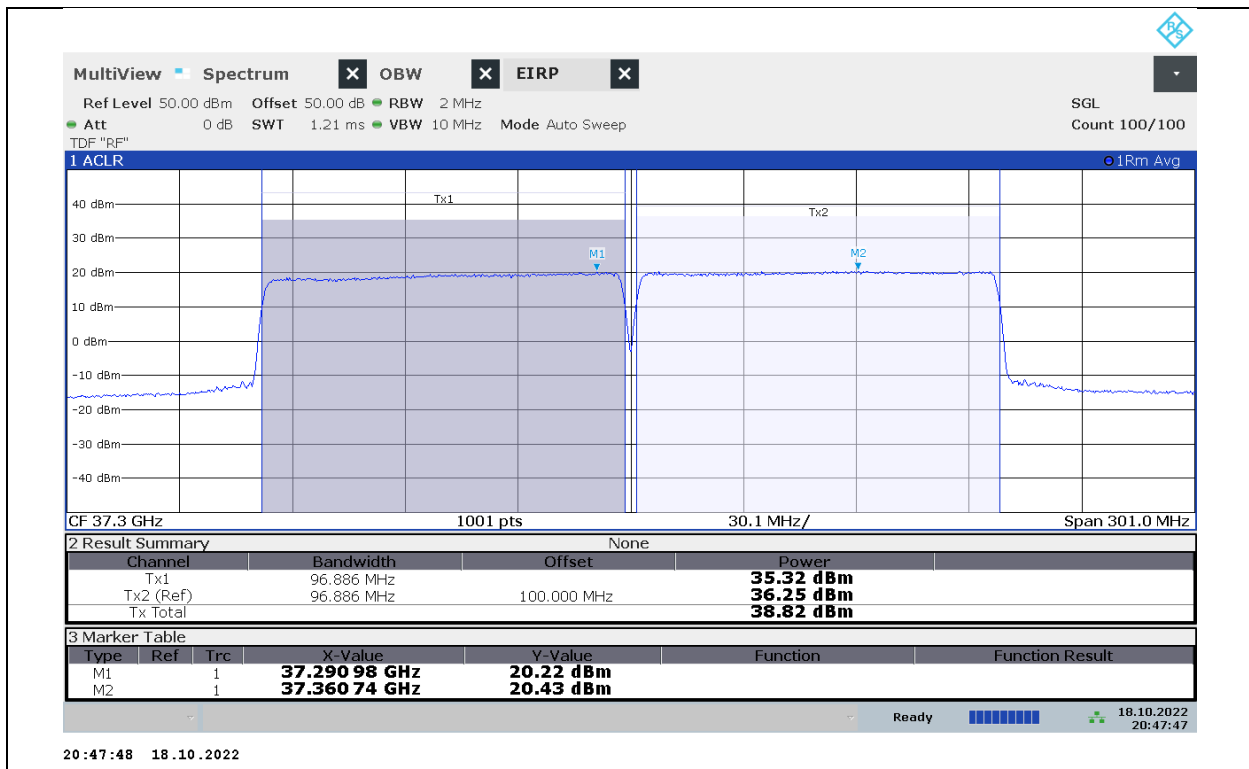
1CC – HIGH CHANNEL, VERT



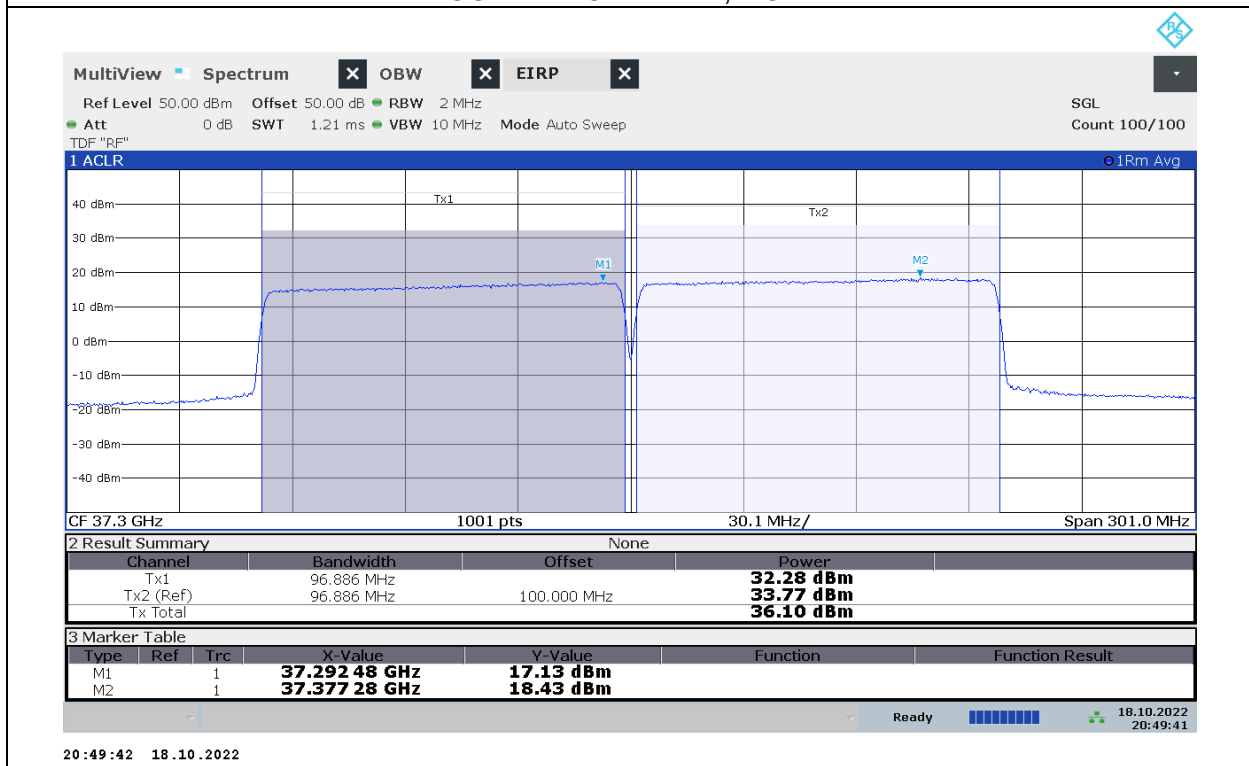
2CC – LOW CHANNEL, HORIZ



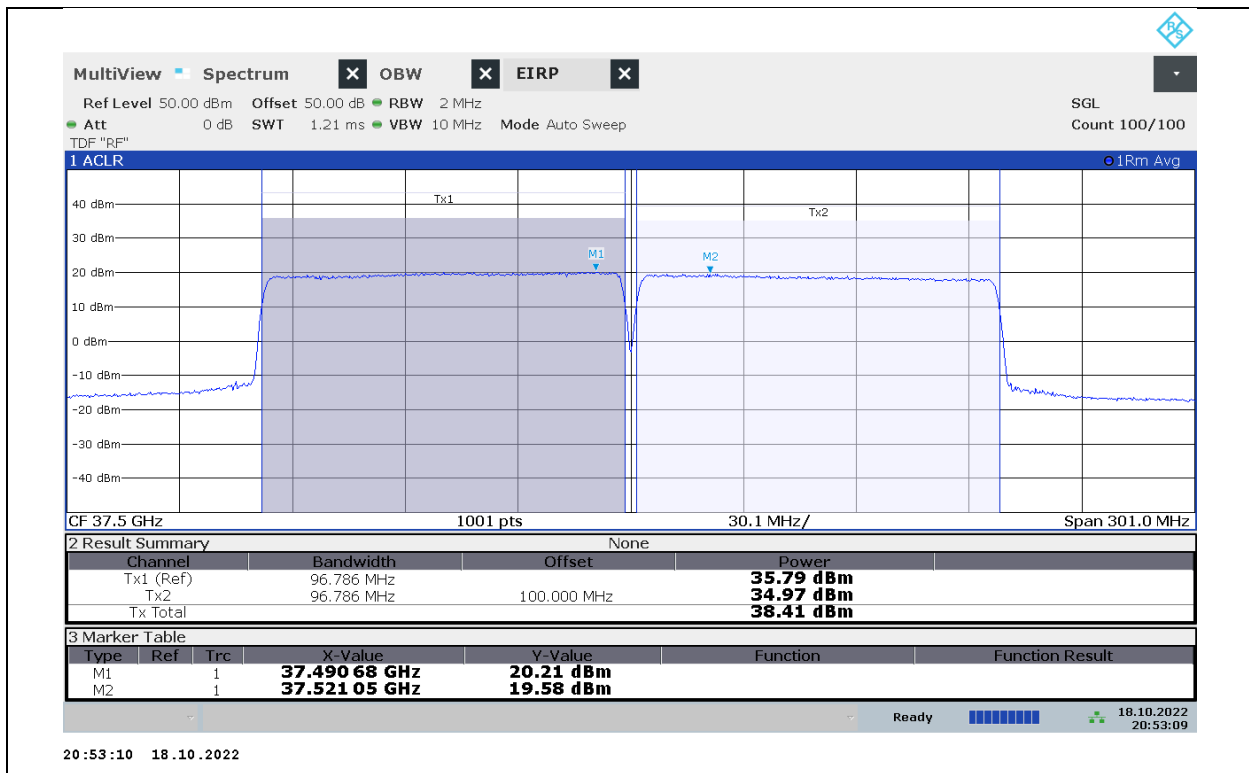
2CC – LOW CHANNEL, VERT



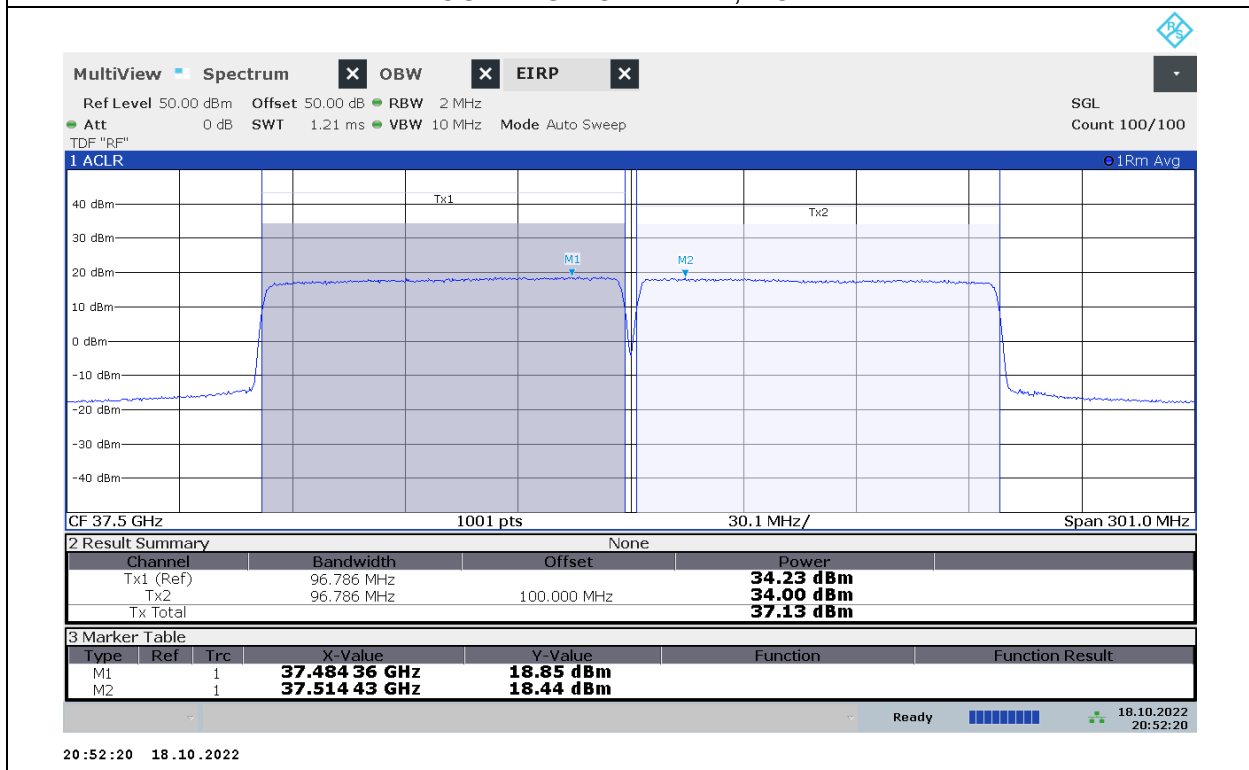
2CC – MID CHANNEL, HORIZ



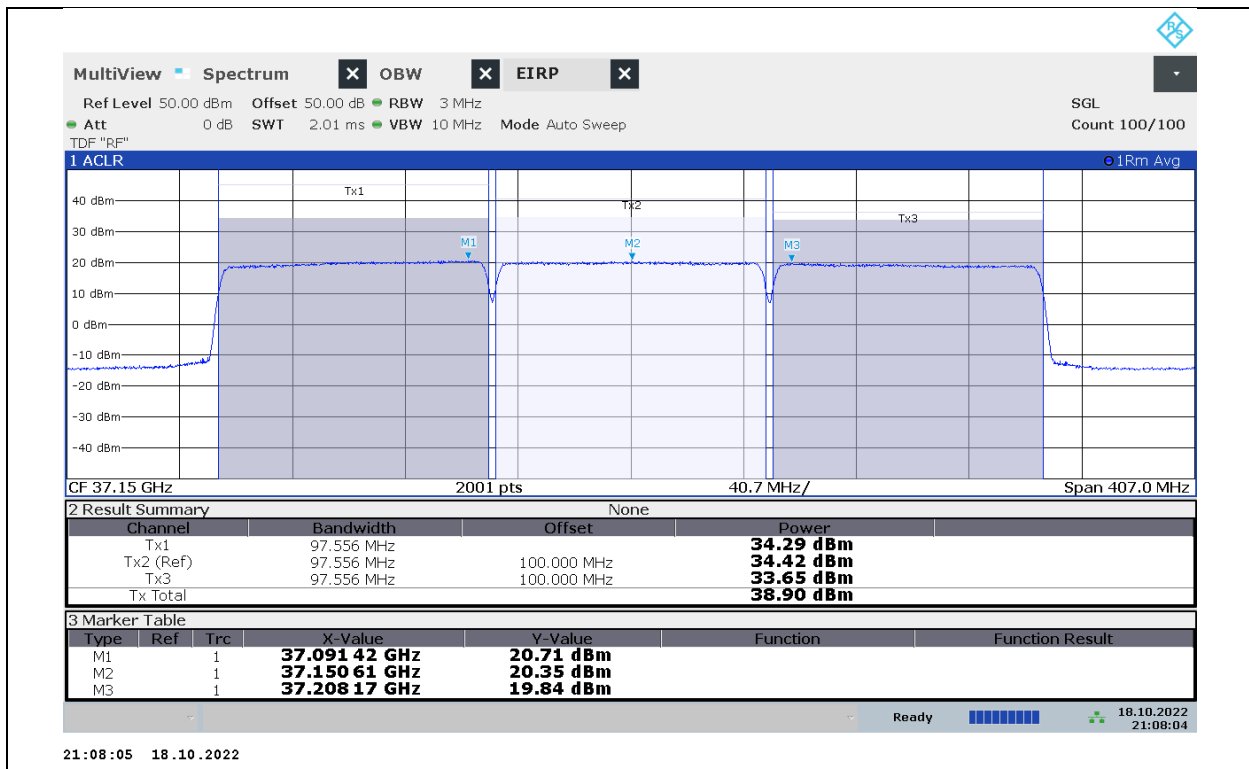
2CC – MID CHANNEL, VERT



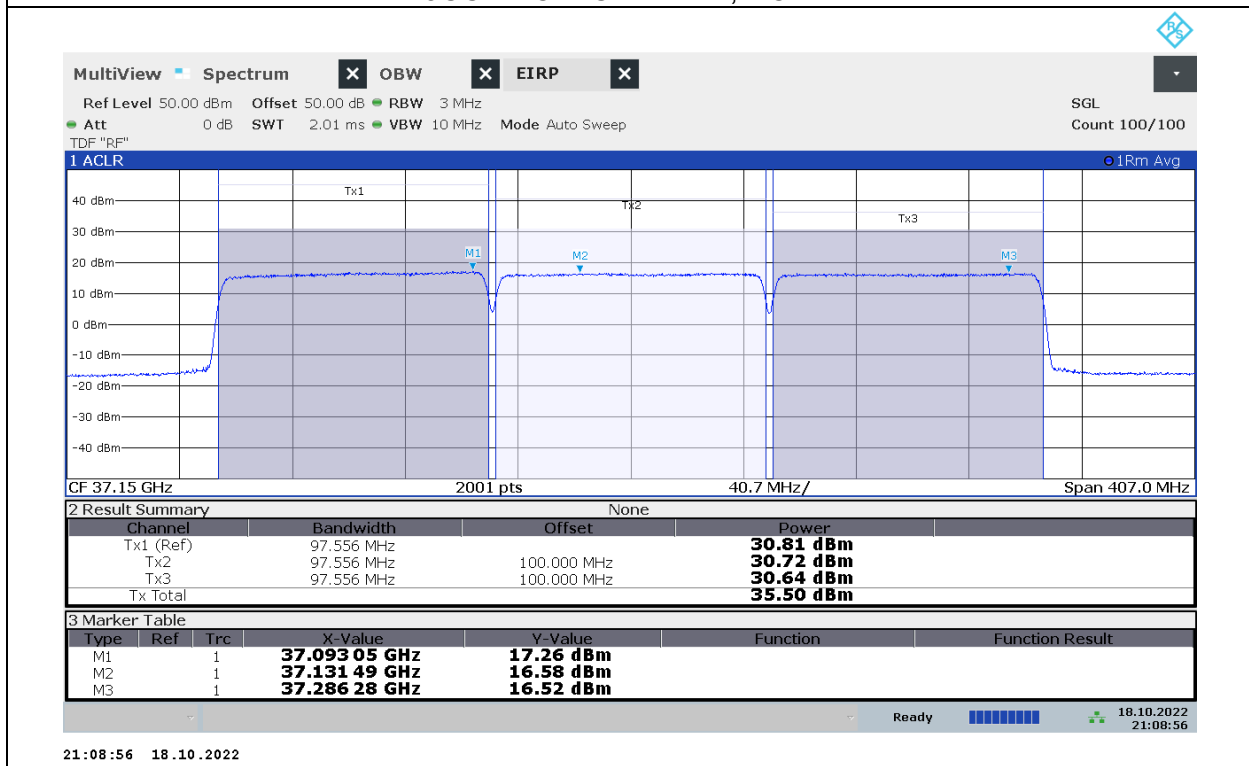
2CC – HIGH CHANNEL, HORIZ



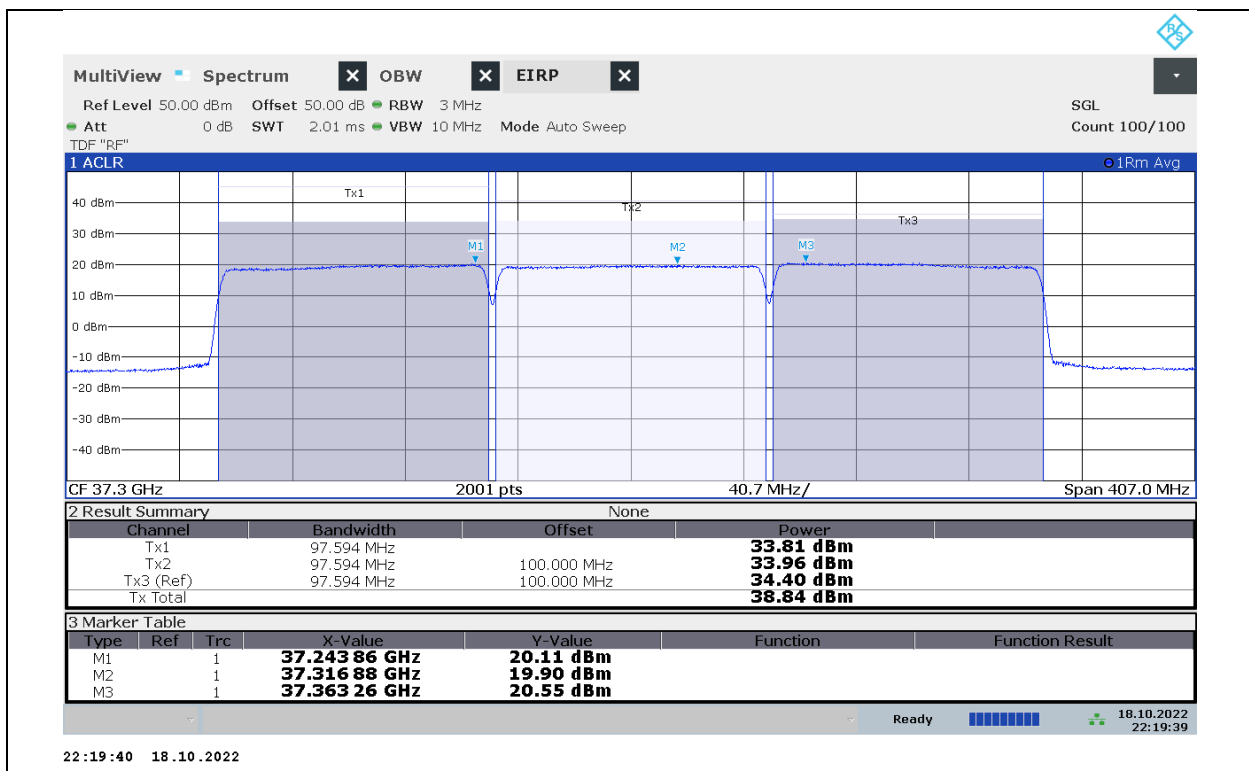
2CC – HIGH CHANNEL, VERT



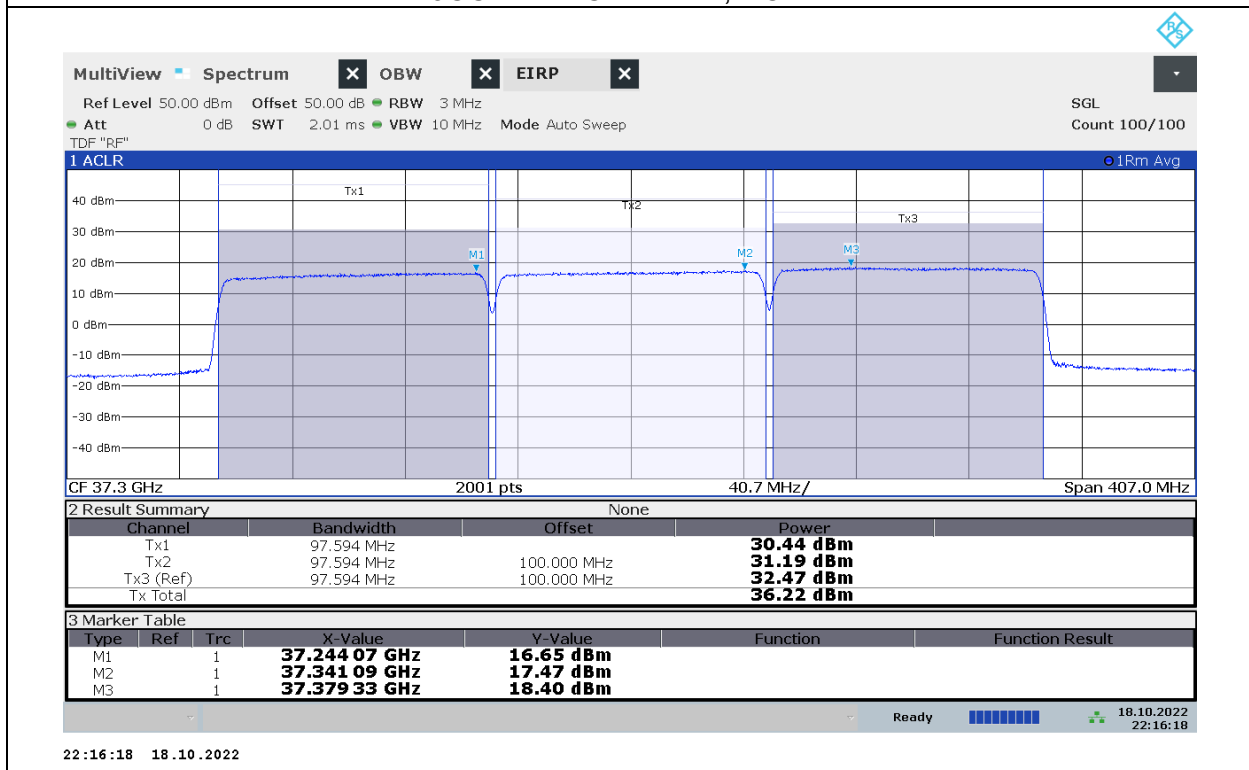
3CC – LOW CHANNEL, HORIZ



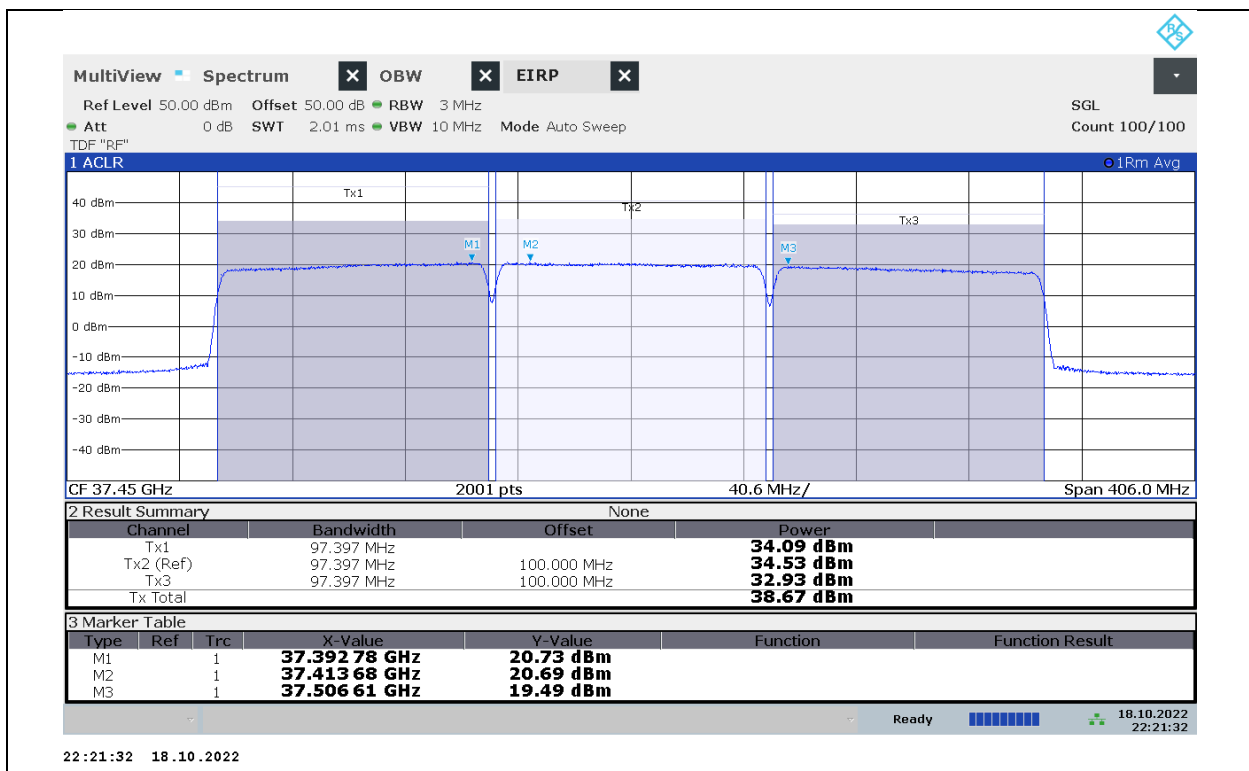
3CC – LOW CHANNEL, VERT



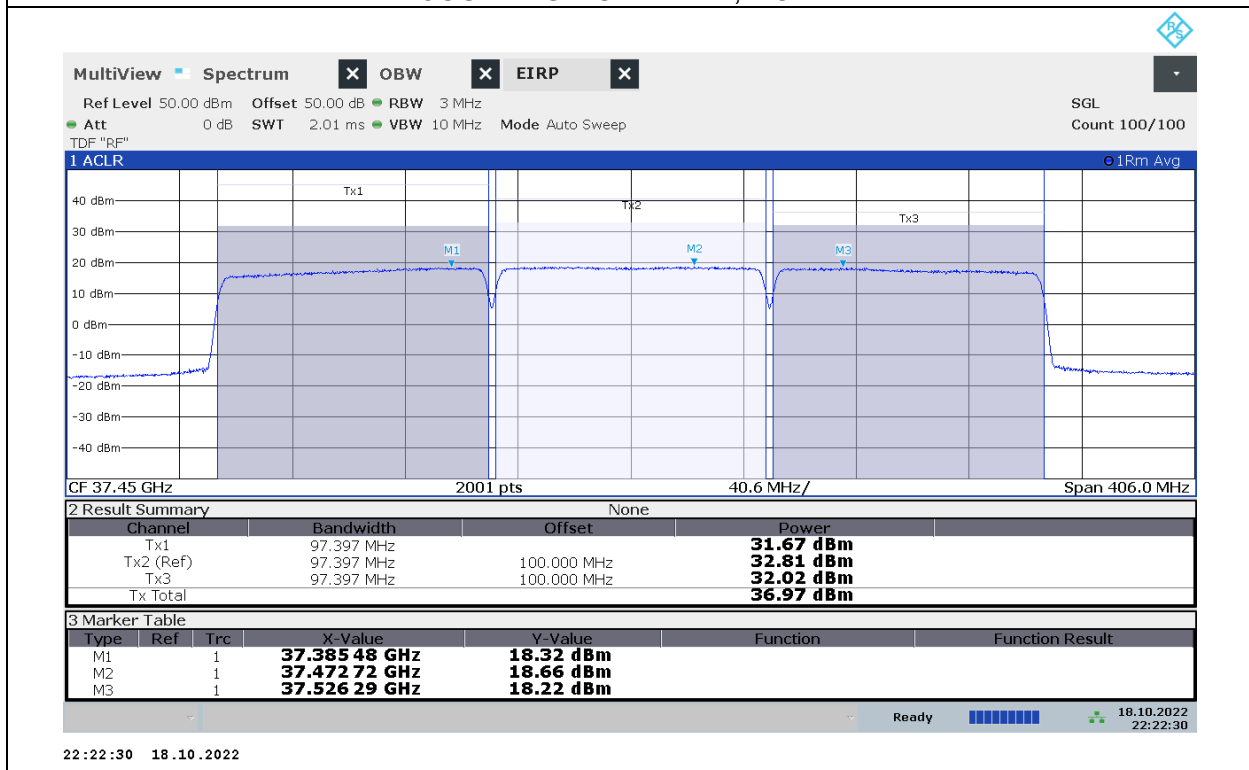
3CC – MID CHANNEL, HORIZ



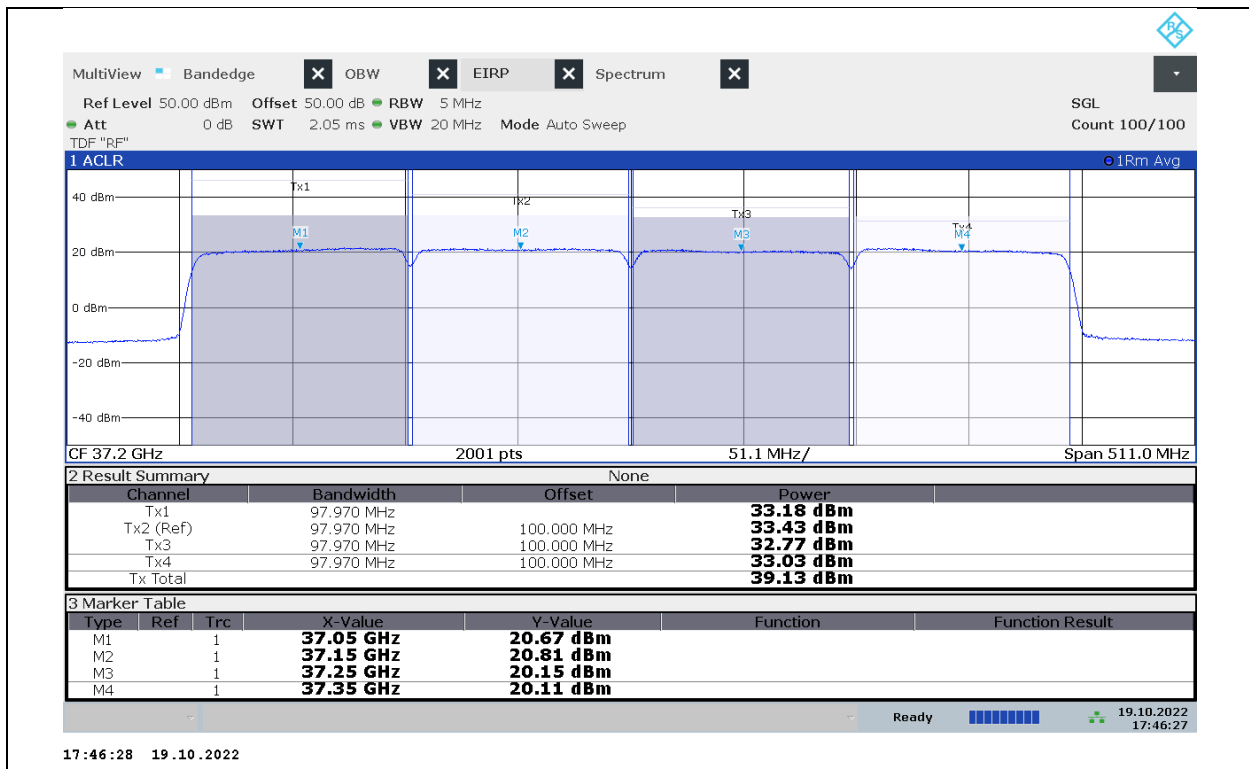
3CC – MID CHANNEL, VERT



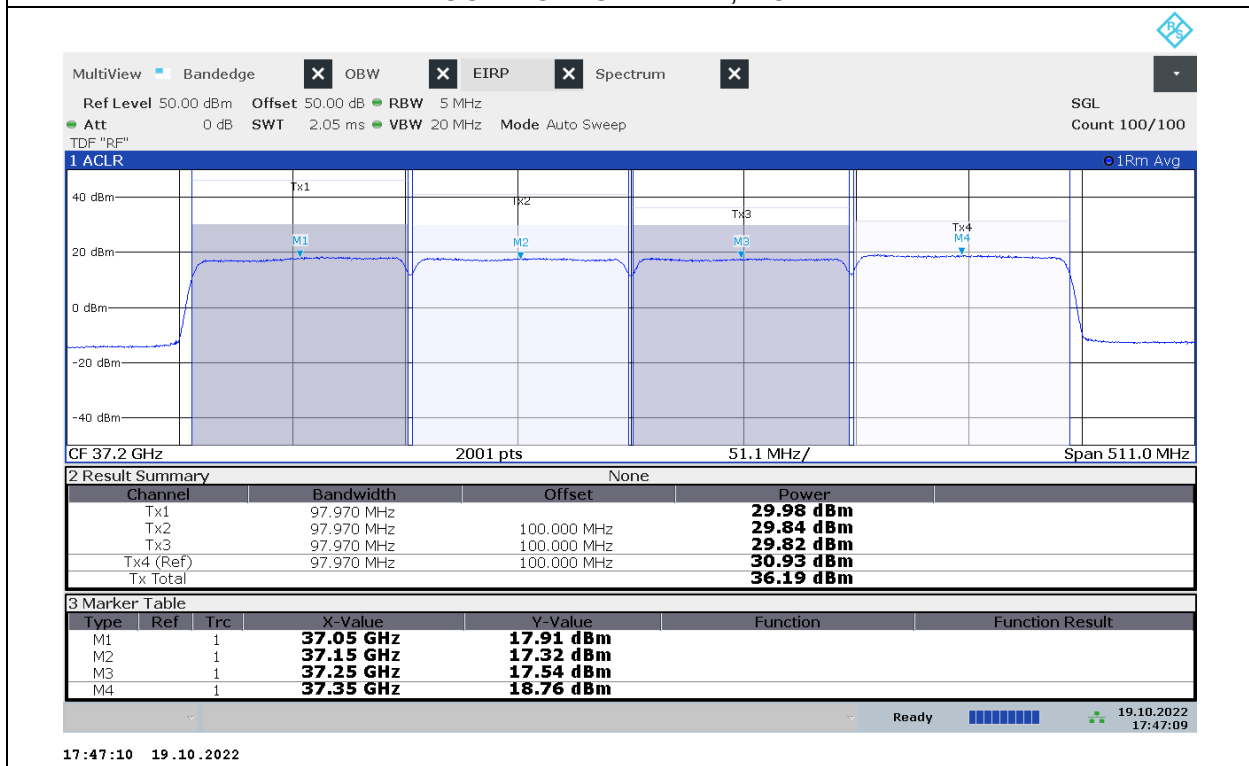
3CC – HIGH CHANNEL, HORIZ



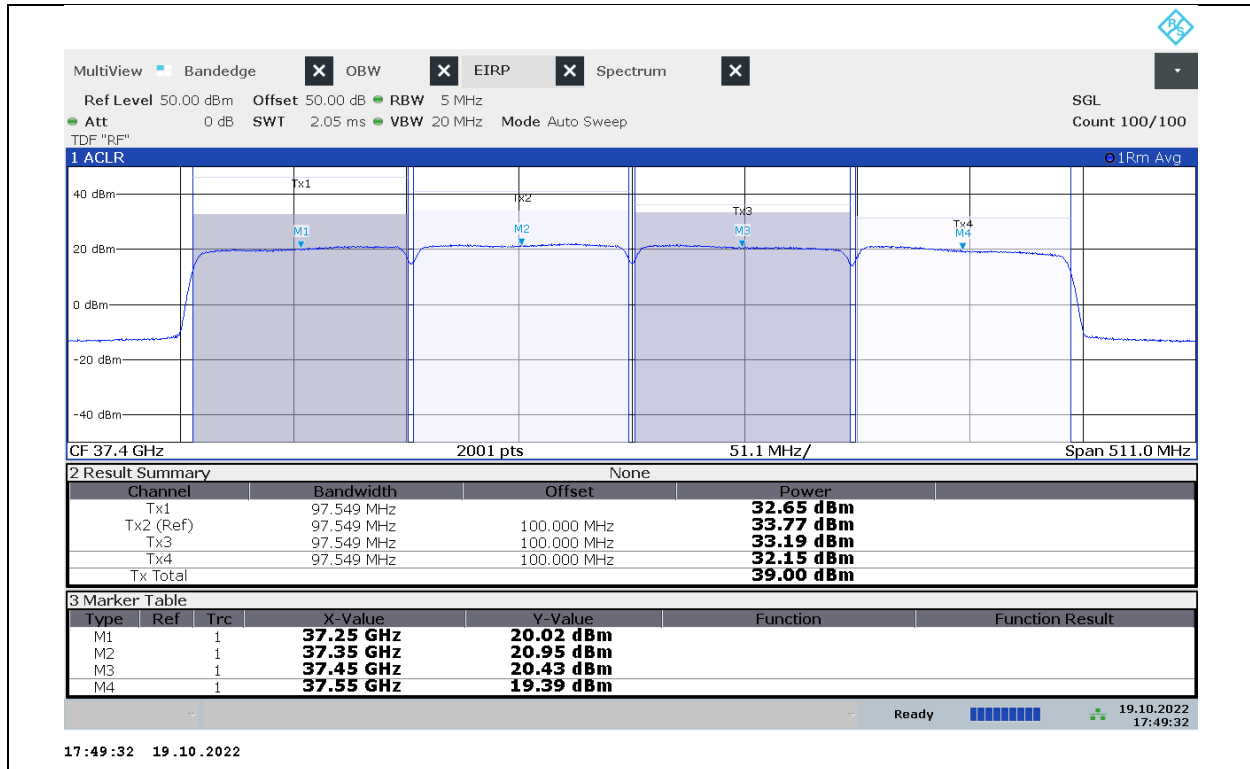
3CC – HIGH CHANNEL, VERT



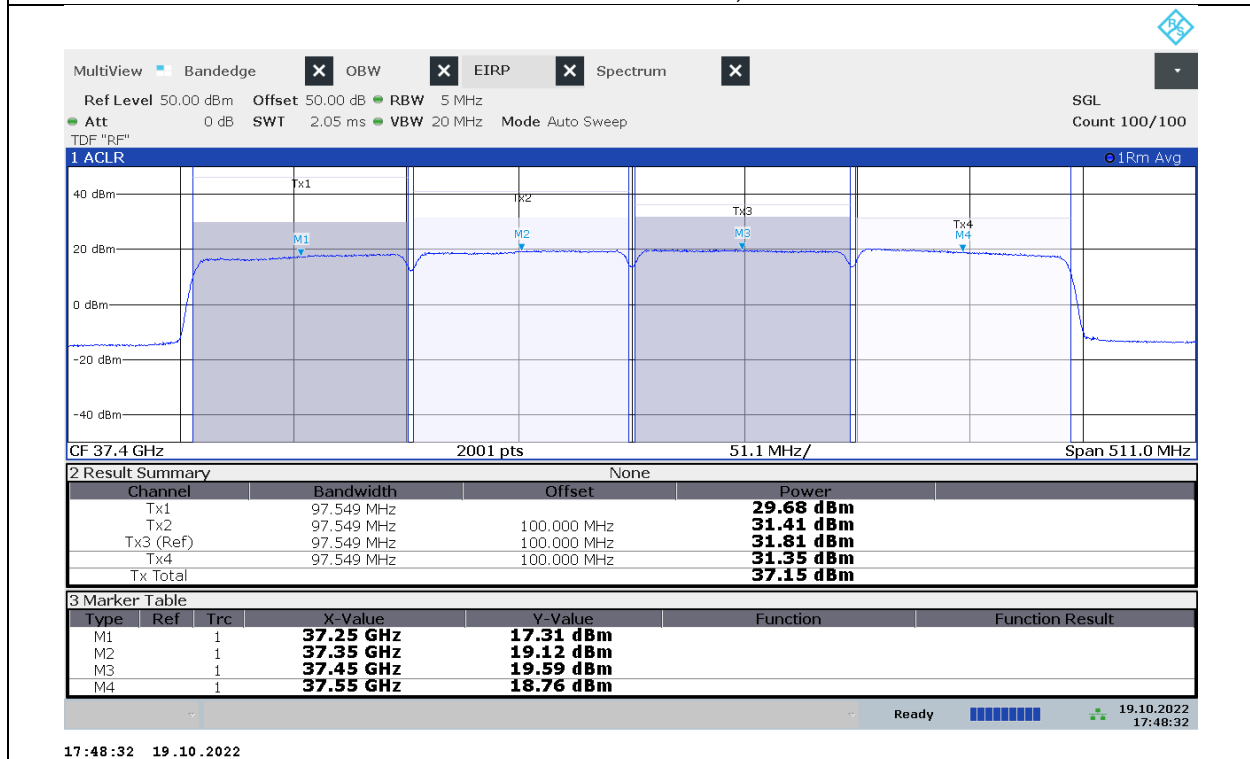
4CC – LOW CHANNEL, HORIZ



4CC – LOW CHANNEL, VERT



4CC – HIGH CHANNEL, HORIZ



4CC – HIGH CHANNEL, VERT

8.5. BAND EDGE EMISSIONS

RULE PART(S)

FCC: §2.1051, §30.203

LIMITS

30.203 (a) - The conductive power or the total radiated power of any emission outside a licensee's frequency block shall be -13 dBm/MHz or lower. However, in the bands immediately outside and adjacent to the licensee's frequency block, having a bandwidth equal to 10 percent of the channel bandwidth, the conductive power or the total radiated power of any emission shall be -5 dBm/MHz or lower.

TEST PROCEDURE

- RBW = 1 MHz
- VBW $\geq 3 \times$ RBW
- Number of measurement points in sweep $> 2 \times$ span / RBW
- Sweep time = auto-couple
- Detector = RMS
- Trace mode = Average

KDB 842590 D01 Upper Microwave Flexible Use Service v01 Section 4.2
ANSI C63.26-2015 Clause 5.2, Clause 5.5, Clause 6.4, and Annex C.5.2

Band Edge measurements were performed at the far field test distance listed in Section 8.1.

EIRP was calculated using the equations on ANSI C63.26-2015 Annex C.5.2 and was compared to TRP limits. The total correction factors of horn antenna gain, cable loss and far-field path loss were calculated using equations C.8 and C.9, and pre-loaded into spectrum analyzer.

Sample calculation of EIRP:

$$\begin{aligned} \text{Total Correction Factor} &= \text{Cable Loss (dB)} - \text{Horn Ant Gain (dBi)} + \text{Path Loss @ 3m (dB)} \\ &\quad - \text{EUT Antenna Gain (dBi)} \\ &= 4 - 23 + 71 - 29 \\ &= 23 \text{ dB} \end{aligned}$$

EIRP = P_{measured} (dBm), where Total Correction Factor preloaded.

To properly display of signal level on the plots, the pre-loaded correction factors were intentional lowered by 50 or 60 dB and an offset factor of 50 or 60 dB was applied on spectrum analyzer to compensate the true correction factors across the frequency range of measurement.

Worse-Case Configuration

All supported CC configurations and modulations were tested at low and high channels.

Per KDB 842590 Section 4.4.2.5, EUT antenna gain correction was applied to all Bandedge measurements.

RESULTS

See the following pages.

TESTED BY

Employee IDs: 84445
Test Dates: 2022-10-18 to 2022-11-02
Test Location: Chamber 3

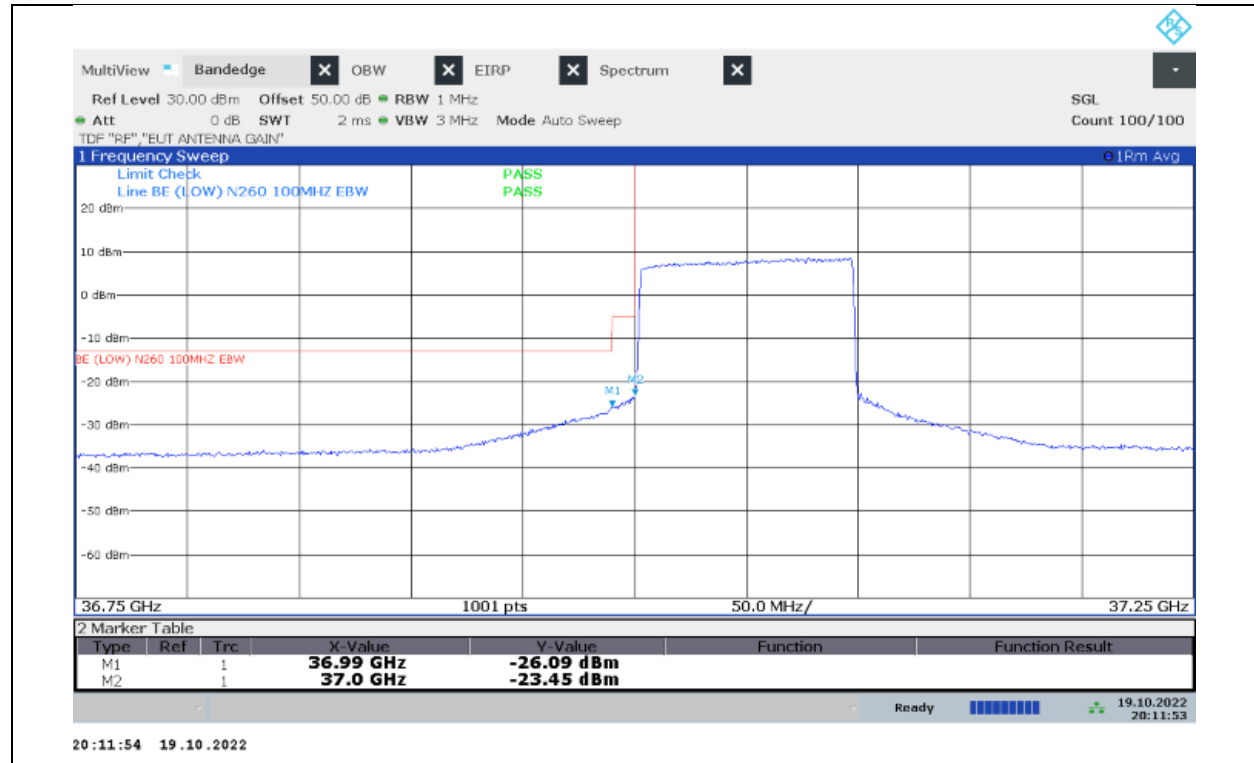
8.5.1. BAND EDGE RESULTS

| Modulation | Channel | Channel BW (MHz) | No. of CC's | Measurement Distance (m) | Frequency (GHz) | Avg EIRP (dBm) | EIRP Limit (dBm) | Margin (dB) |
|------------|---------|------------------|-------------|--------------------------|-----------------|----------------|------------------|-------------|
| QPSK MCS0 | Low | 100 | 1 | 3 | 36.99 | -26.09 | -13 | -13.09 |
| | | 100 | 1 | | 37 | -23.45 | -5 | -18.45 |
| | | 100 | 2 | | 36.99 | -27.88 | -13 | -14.88 |
| | | 100 | 2 | | 37 | -25.07 | -5 | -20.07 |
| | | 100 | 3 | | 36.99 | -29.46 | -13 | -16.46 |
| | | 100 | 3 | | 37 | -26.45 | -5 | -21.45 |
| | | 100 | 4 | | 36.99 | -30.26 | -13 | -17.26 |
| | | 100 | 4 | | 37 | -27.7 | -5 | -22.70 |
| | High | 100 | 1 | | 40 | -32.01 | -5 | -27.01 |
| | | 100 | 1 | | 40.01 | -31.75 | -13 | -18.75 |
| | | 100 | 2 | | 40 | -32 | -5 | -27.00 |
| | | 100 | 2 | | 40.01 | -31.93 | -13 | -18.93 |
| | | 100 | 3 | | 40 | -31.79 | -5 | -26.79 |
| | | 100 | 3 | | 40.01 | -31.87 | -13 | -18.87 |
| | | 100 | 4 | | 40 | -32.3 | -5 | -27.30 |
| | | 100 | 4 | | 40.01 | -31.99 | -13 | -18.99 |
| QPSK MCS9 | Low | 100 | 1 | 3 | 36.99 | -26.69 | -13 | -13.69 |
| | | 100 | 1 | | 37 | -23.66 | -5 | -18.66 |
| | | 100 | 2 | | 36.99 | -27.57 | -13 | -14.57 |
| | | 100 | 2 | | 37 | -26.04 | -5 | -21.04 |
| | | 100 | 3 | | 36.99 | -29.17 | -13 | -16.17 |
| | | 100 | 3 | | 37 | -27.09 | -5 | -22.09 |
| | | 100 | 4 | | 36.99 | -29.94 | -13 | -16.94 |
| | | 100 | 4 | | 37 | -27.24 | -5 | -22.24 |
| | High | 100 | 1 | | 40 | -31.93 | -5 | -26.93 |
| | | 100 | 1 | | 40.01 | -31.96 | -13 | -18.96 |
| | | 100 | 2 | | 40 | -31.93 | -5 | -26.93 |
| | | 100 | 2 | | 40.01 | -31.73 | -13 | -18.73 |
| | | 100 | 3 | | 40 | -31.9 | -5 | -26.90 |
| | | 100 | 3 | | 40.01 | -31.96 | -13 | -18.96 |
| | | 100 | 4 | | 40 | -31.83 | -5 | -26.83 |
| | | 100 | 4 | | 40.01 | -31.66 | -13 | -18.66 |

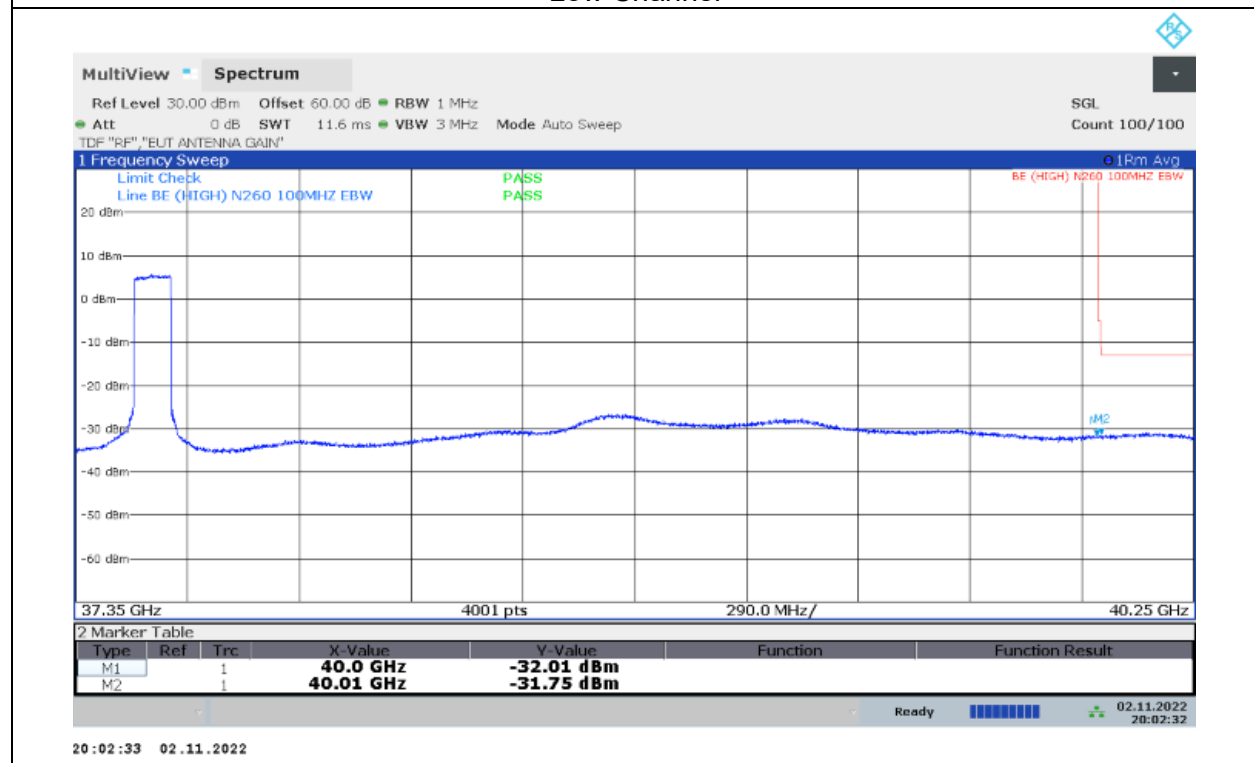
| Modulation | Channel | Channel BW (MHz) | No. of CC's | Measurement Distance (m) | Frequency (GHz) | Avg EIRP (dBm) | EIRP Limit (dBm) | Margin (dB) |
|----------------|---------|------------------|-------------|--------------------------|-----------------|----------------|------------------|-------------|
| 16QAM MCS10 | Low | 100 | 1 | 3 | 36.99 | -26.45 | -13 | -13.45 |
| | | 100 | 1 | | 37 | -23.56 | -5 | -18.56 |
| | | 100 | 2 | | 36.99 | -28.31 | -13 | -15.31 |
| | | 100 | 2 | | 37 | -25.89 | -5 | -20.89 |
| | | 100 | 3 | | 36.99 | -29.34 | -13 | -16.34 |
| | | 100 | 3 | | 37 | -27.81 | -5 | -22.81 |
| | | 100 | 4 | | 36.99 | -29.92 | -13 | -16.92 |
| | | 100 | 4 | | 37 | -28.46 | -5 | -23.46 |
| | High | 100 | 1 | | 40 | -31.84 | -5 | -26.84 |
| | | 100 | 1 | | 40.01 | -32.38 | -13 | -19.38 |
| | | 100 | 2 | | 40 | -32 | -5 | -27.00 |
| | | 100 | 2 | | 40.01 | -31.62 | -13 | -18.62 |
| | | 100 | 3 | | 40 | -32.23 | -5 | -27.23 |
| | | 100 | 3 | | 40.01 | -32.09 | -13 | -19.09 |
| | | 100 | 4 | | 40 | -31.9 | -5 | -26.90 |
| | | 100 | 4 | | 40.01 | -31.71 | -13 | -18.71 |
| 16QAM MCS16 | Low | 100 | 1 | 3 | 36.99 | -26.28 | -13 | -13.28 |
| | | 100 | 1 | | 37 | -24.16 | -5 | -19.16 |
| | | 100 | 2 | | 36.99 | -28.27 | -13 | -15.27 |
| | | 100 | 2 | | 37 | -25.64 | -5 | -20.64 |
| | | 100 | 3 | | 36.99 | -29.2 | -13 | -16.20 |
| | | 100 | 3 | | 37 | -27.28 | -5 | -22.28 |
| | | 100 | 4 | | 36.99 | -30.29 | -13 | -17.29 |
| | | 100 | 4 | | 37 | -27.37 | -5 | -22.37 |
| | High | 100 | 1 | | 40 | -31.67 | -5 | -26.67 |
| | | 100 | 1 | | 40.01 | -31.67 | -13 | -18.67 |
| | | 100 | 2 | | 40 | -32.04 | -5 | -27.04 |
| | | 100 | 2 | | 40.01 | -32.13 | -13 | -19.13 |
| | | 100 | 3 | | 40 | -32.14 | -5 | -27.14 |
| | | 100 | 3 | | 40.01 | -32.12 | -13 | -19.12 |
| | | 100 | 4 | | 40 | -32.04 | -5 | -27.04 |
| | | 100 | 4 | | 40.01 | -31.48 | -13 | -18.48 |

| Modulation | Channel | Channel BW (MHz) | No. of CC's | Measurement Distance (m) | Frequency (GHz) | Avg EIRP (dBm) | EIRP Limit (dBm) | Margin (dB) |
|----------------|---------|------------------|-------------|--------------------------|-----------------|----------------|------------------|-------------|
| 64QAM MCS17 | Low | 100 | 1 | 3 | 36.99 | -26.37 | -13 | -13.37 |
| | | 100 | 1 | | 37 | -23.67 | -5 | -18.67 |
| | | 100 | 2 | | 36.99 | -28.35 | -13 | -15.35 |
| | | 100 | 2 | | 37 | -25.88 | -5 | -20.88 |
| | | 100 | 3 | | 36.99 | -29.33 | -13 | -16.33 |
| | | 100 | 3 | | 37 | -27.02 | -5 | -22.02 |
| | | 100 | 4 | | 36.99 | -30.33 | -13 | -17.33 |
| | | 100 | 4 | | 37 | -27.14 | -5 | -22.14 |
| | High | 100 | 1 | | 40 | -32.2 | -5 | -27.20 |
| | | 100 | 1 | | 40.01 | -31.51 | -13 | -18.51 |
| | | 100 | 2 | | 40 | -31.8 | -5 | -26.80 |
| | | 100 | 2 | | 40.01 | -31.66 | -13 | -18.66 |
| | | 100 | 3 | | 40 | -31.79 | -5 | -26.79 |
| | | 100 | 3 | | 40.01 | -31.88 | -13 | -18.88 |
| | | 100 | 4 | | 40 | -32.3 | -5 | -27.30 |
| | | 100 | 4 | | 40.01 | -31.76 | -13 | -18.76 |
| 64QAM MCS28 | Low | 100 | 1 | 3 | 36.99 | -26.78 | -13 | -13.78 |
| | | 100 | 1 | | 37 | -24.36 | -5 | -19.36 |
| | | 100 | 2 | | 36.99 | -28.15 | -13 | -15.15 |
| | | 100 | 2 | | 37 | -25.86 | -5 | -20.86 |
| | | 100 | 3 | | 36.99 | -29.43 | -13 | -16.43 |
| | | 100 | 3 | | 37 | -27.43 | -5 | -22.43 |
| | | 100 | 4 | | 36.99 | -30.53 | -13 | -17.53 |
| | | 100 | 4 | | 37 | -26.93 | -5 | -21.93 |
| | High | 100 | 1 | | 40 | -31.9 | -5 | -26.90 |
| | | 100 | 1 | | 40.01 | -32.06 | -13 | -19.06 |
| | | 100 | 2 | | 40 | -31.84 | -5 | -26.84 |
| | | 100 | 2 | | 40.01 | -31.7 | -13 | -18.70 |
| | | 100 | 3 | | 40 | -31.56 | -5 | -26.56 |
| | | 100 | 3 | | 40.01 | -32.03 | -13 | -19.03 |
| | | 100 | 4 | | 40 | -31.81 | -5 | -26.81 |
| | | 100 | 4 | | 40.01 | -31.64 | -13 | -18.64 |

QPSK MCS0 1CC



Low Channel

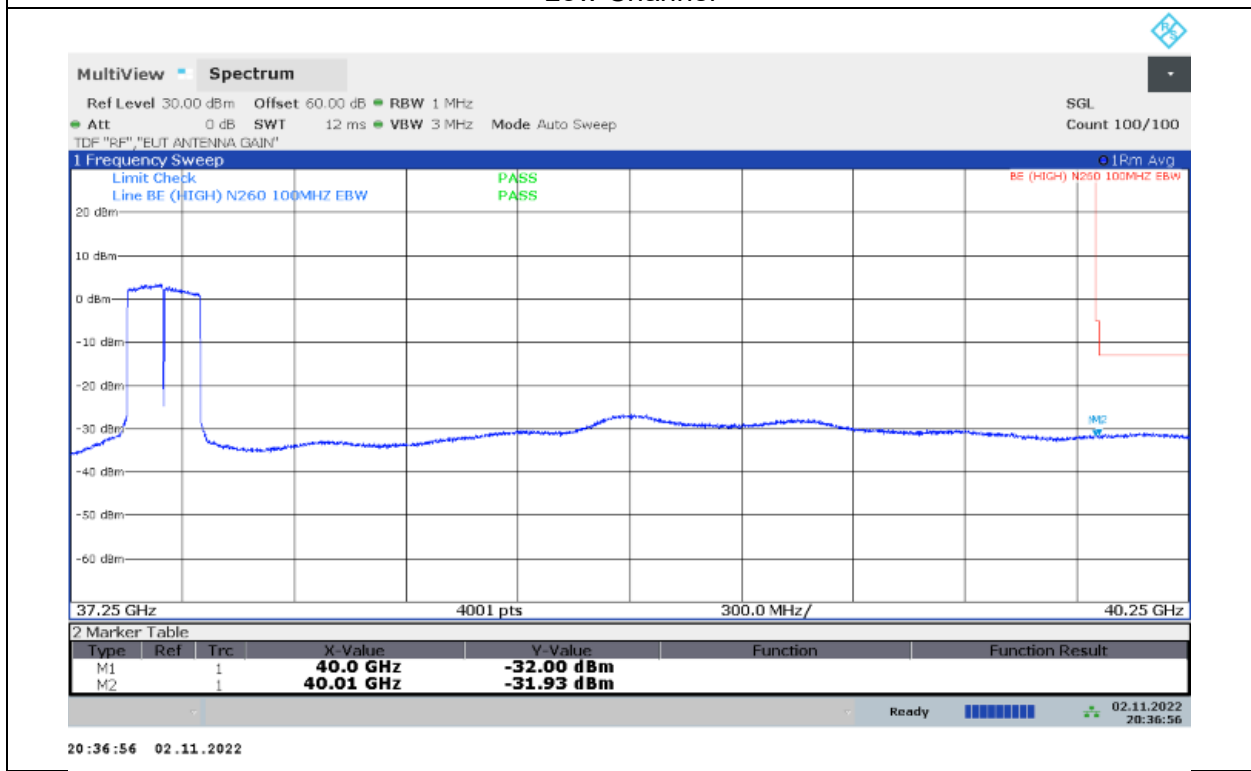


High Channel

QPSK MCS0 2CC



Low Channel

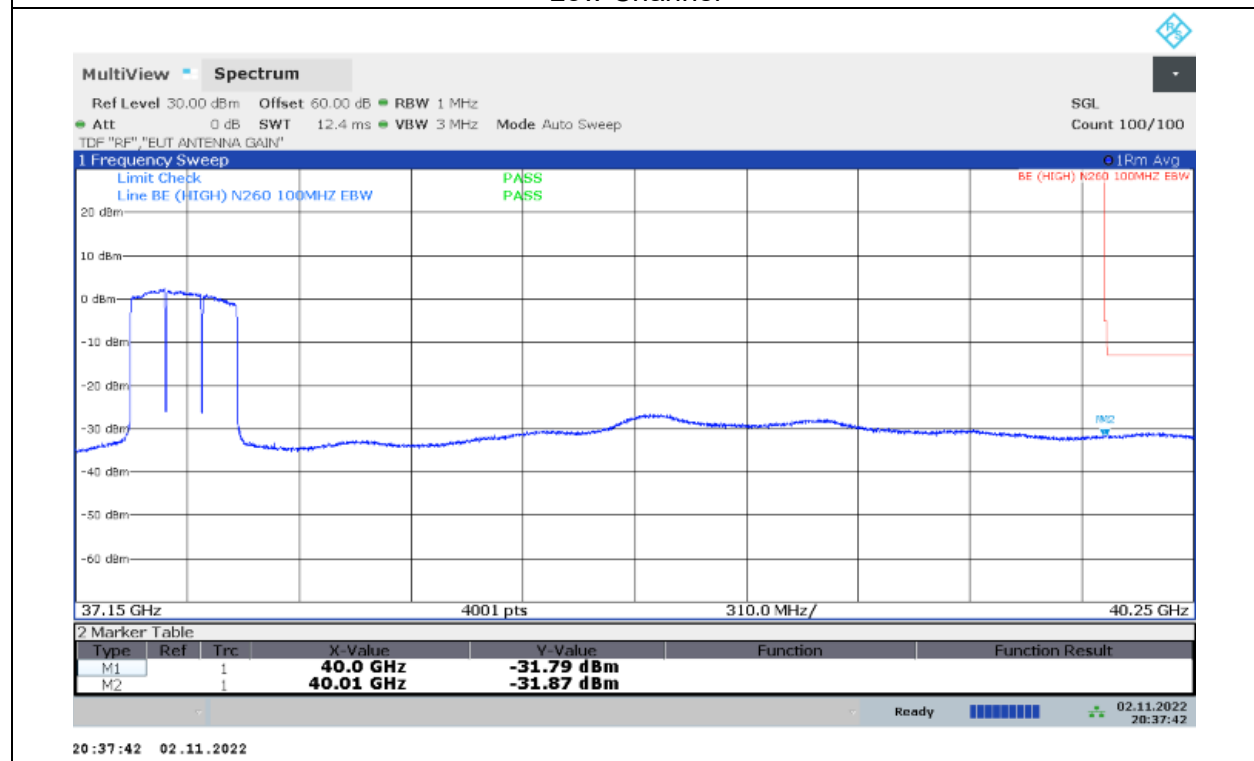


High Channel

QPSK MCS0 3CC



Low Channel

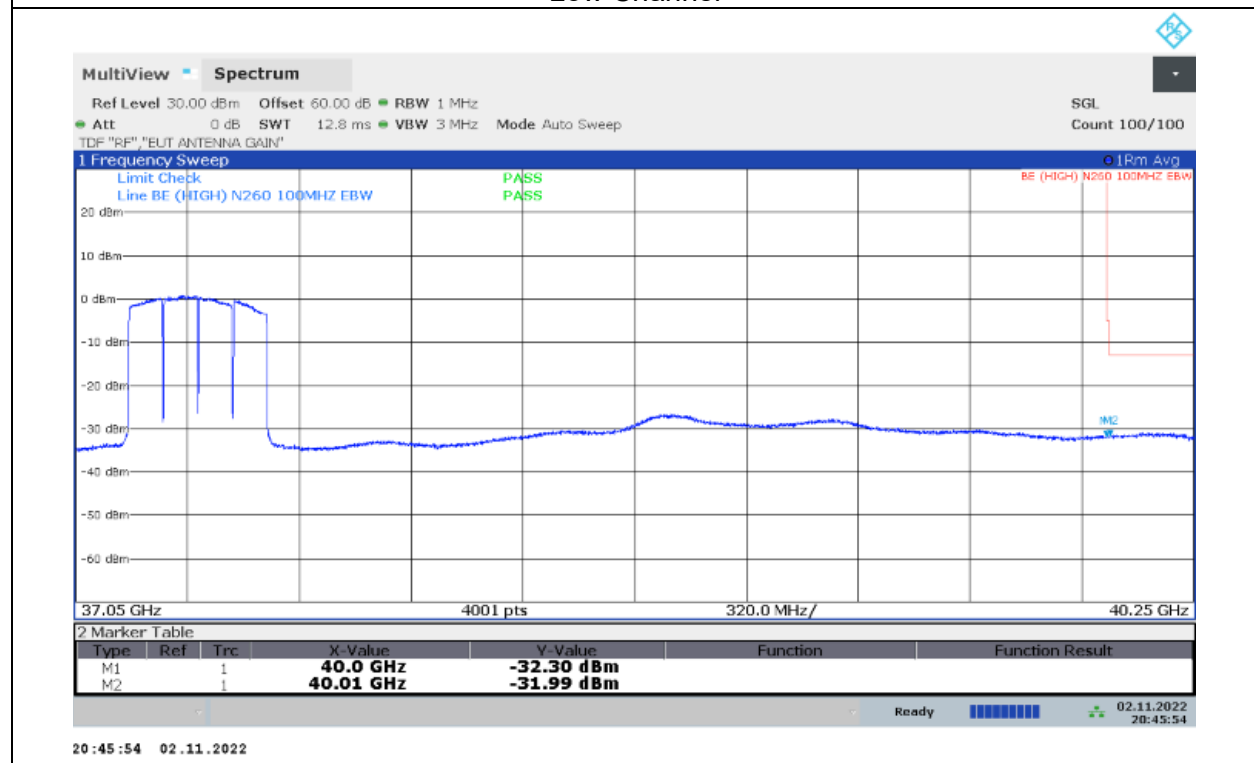


High Channel

QPSK MCS0 4CC

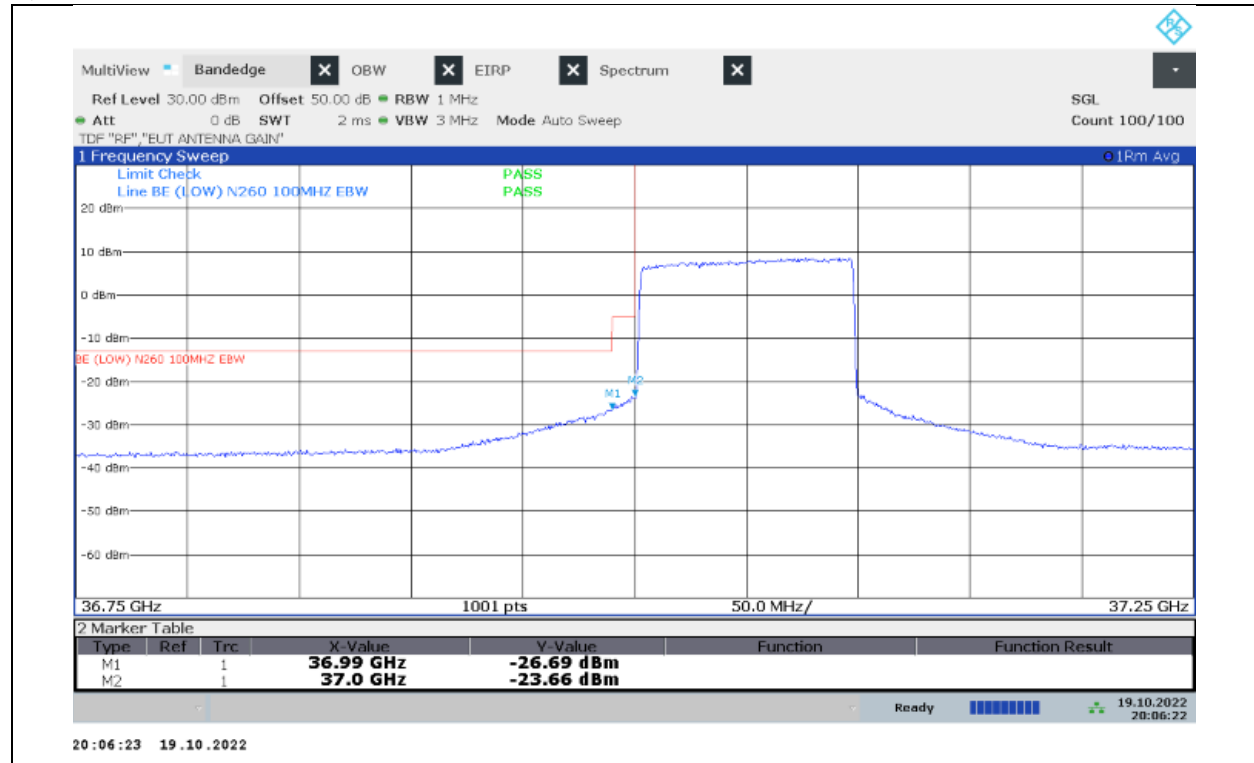


Low Channel

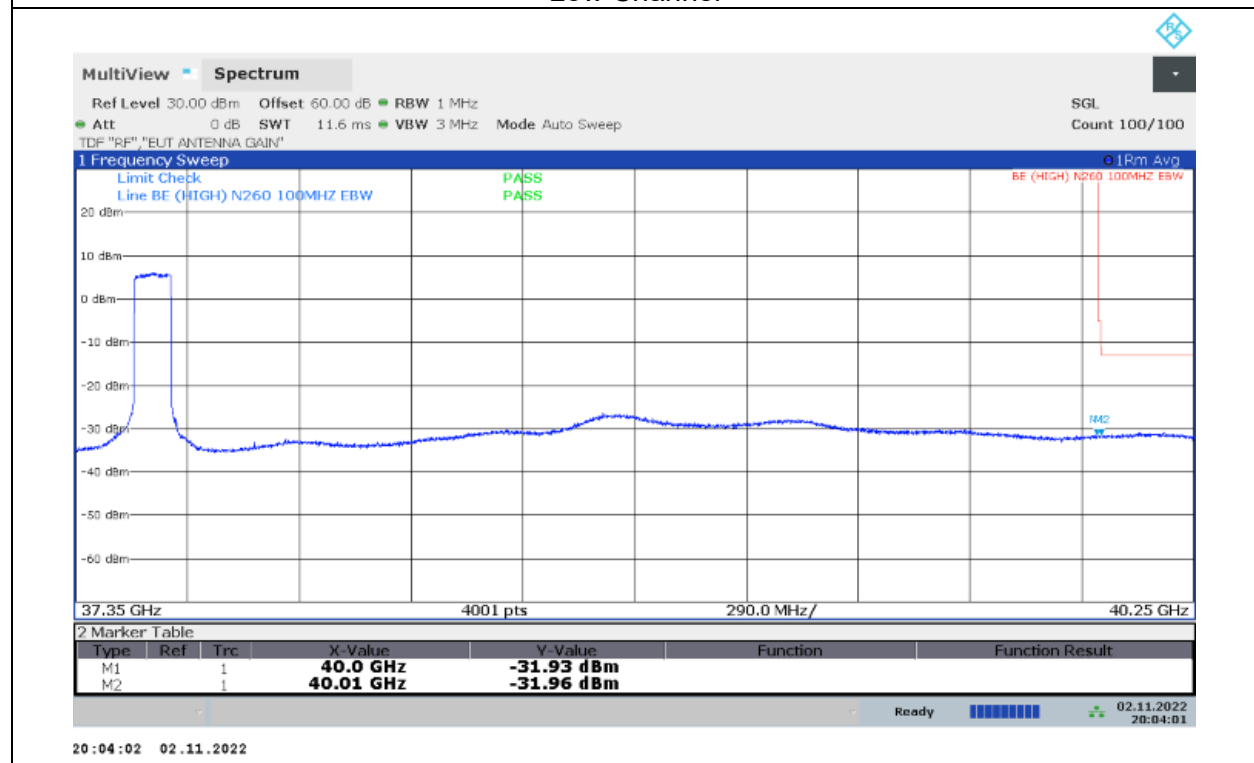


High Channel

QPSK MCS9 1CC



Low Channel

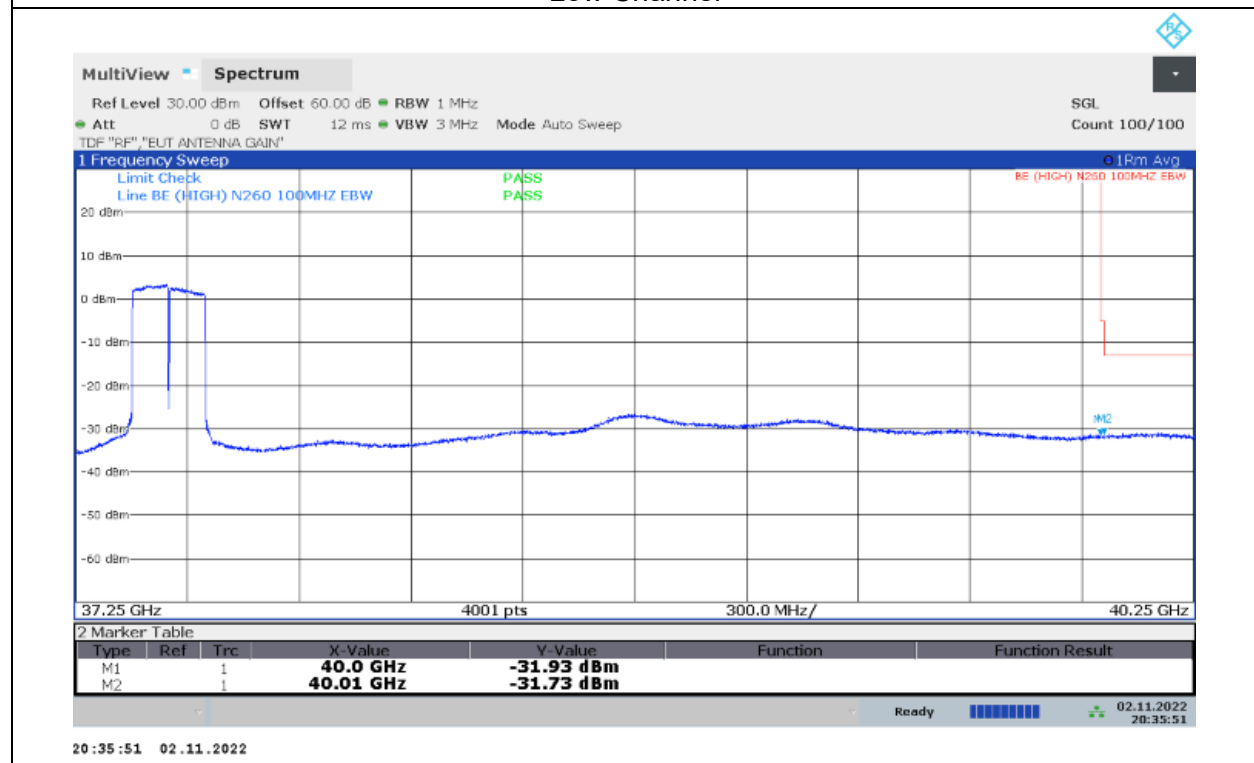


High Channel

QPSK MCS9 2CC

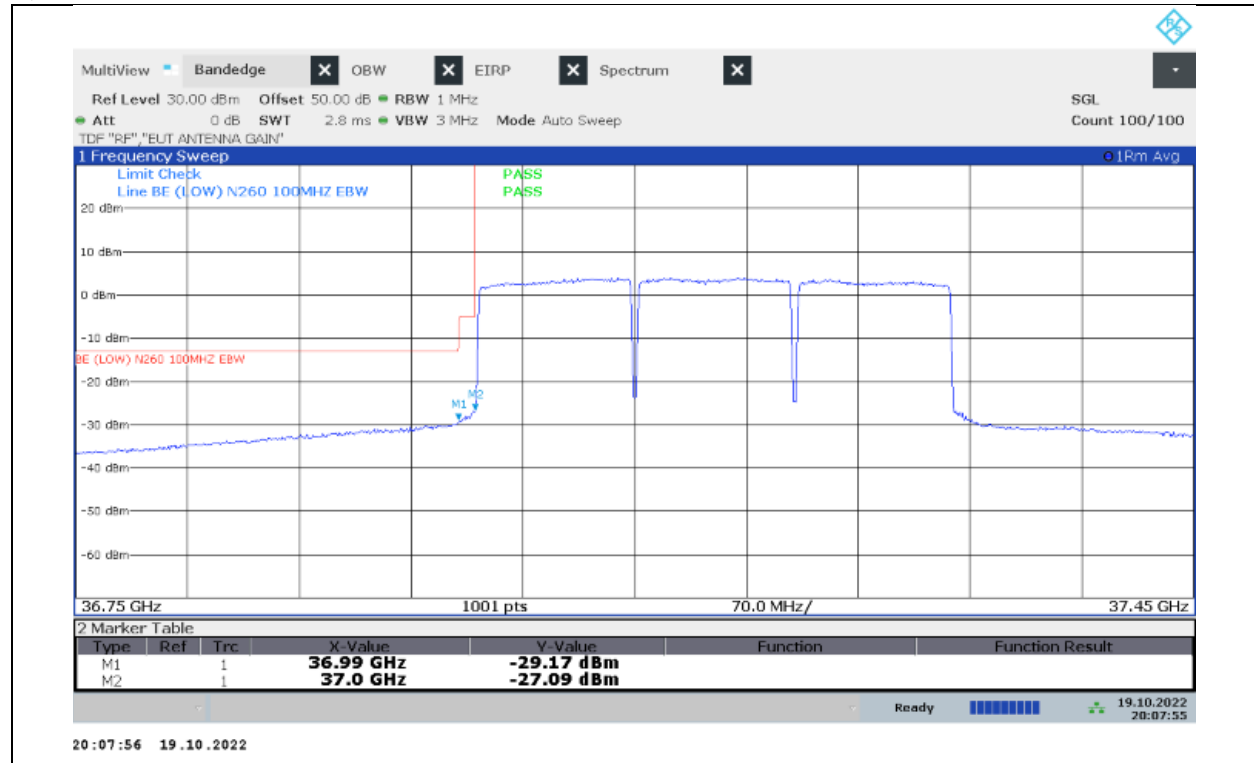


Low Channel

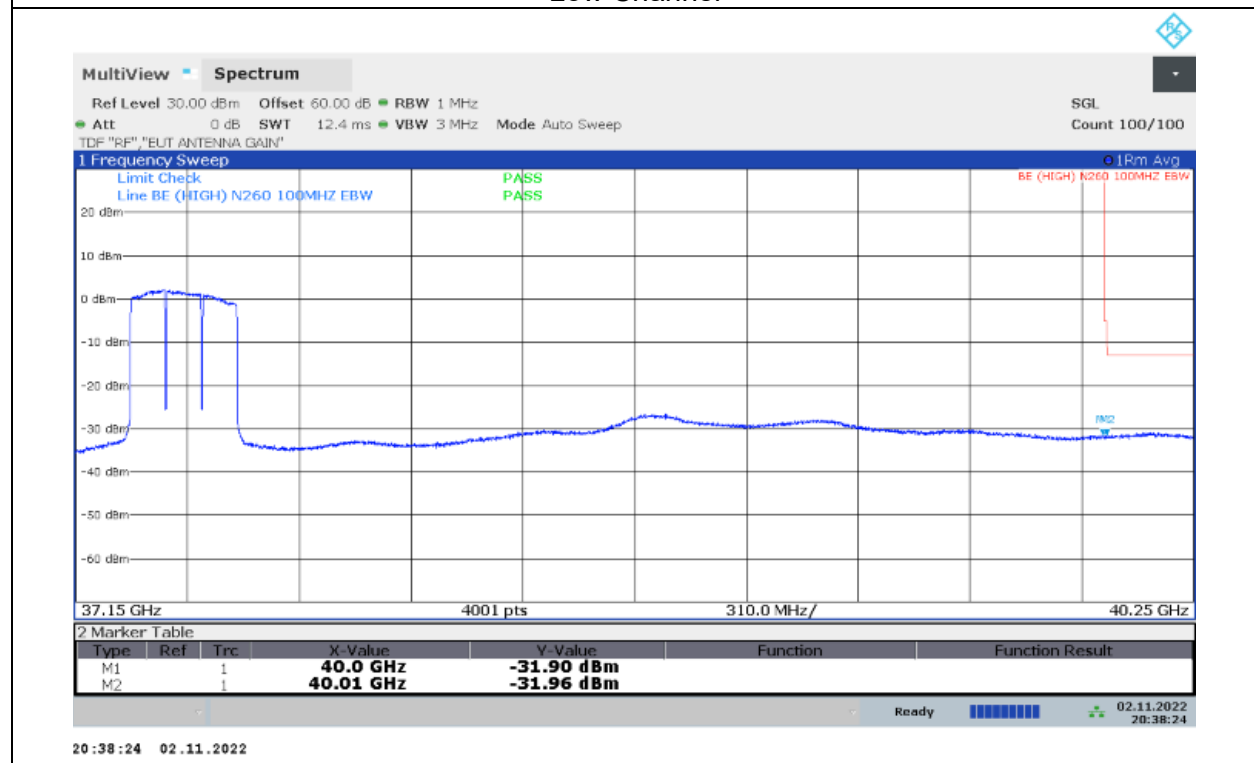


High Channel

QPSK MCS9 3CC



Low Channel

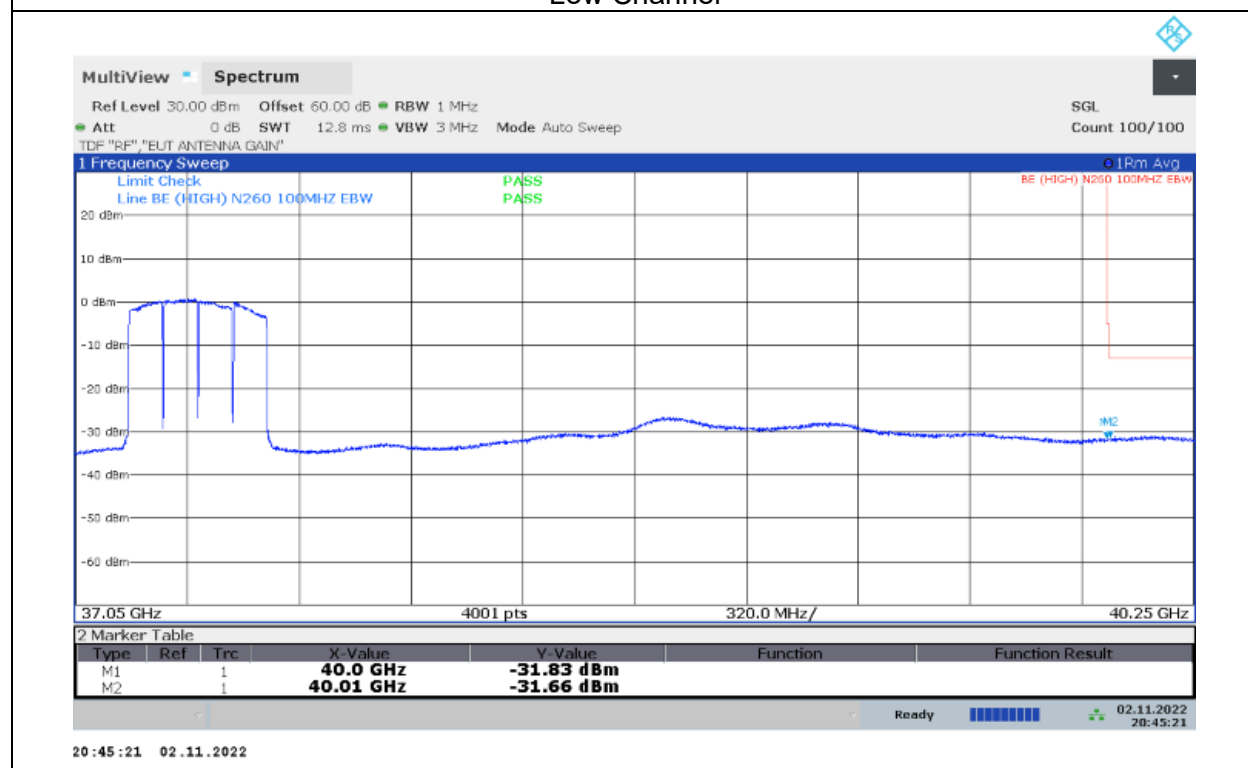


High Channel

QPSK MCS9 4CC



Low Channel

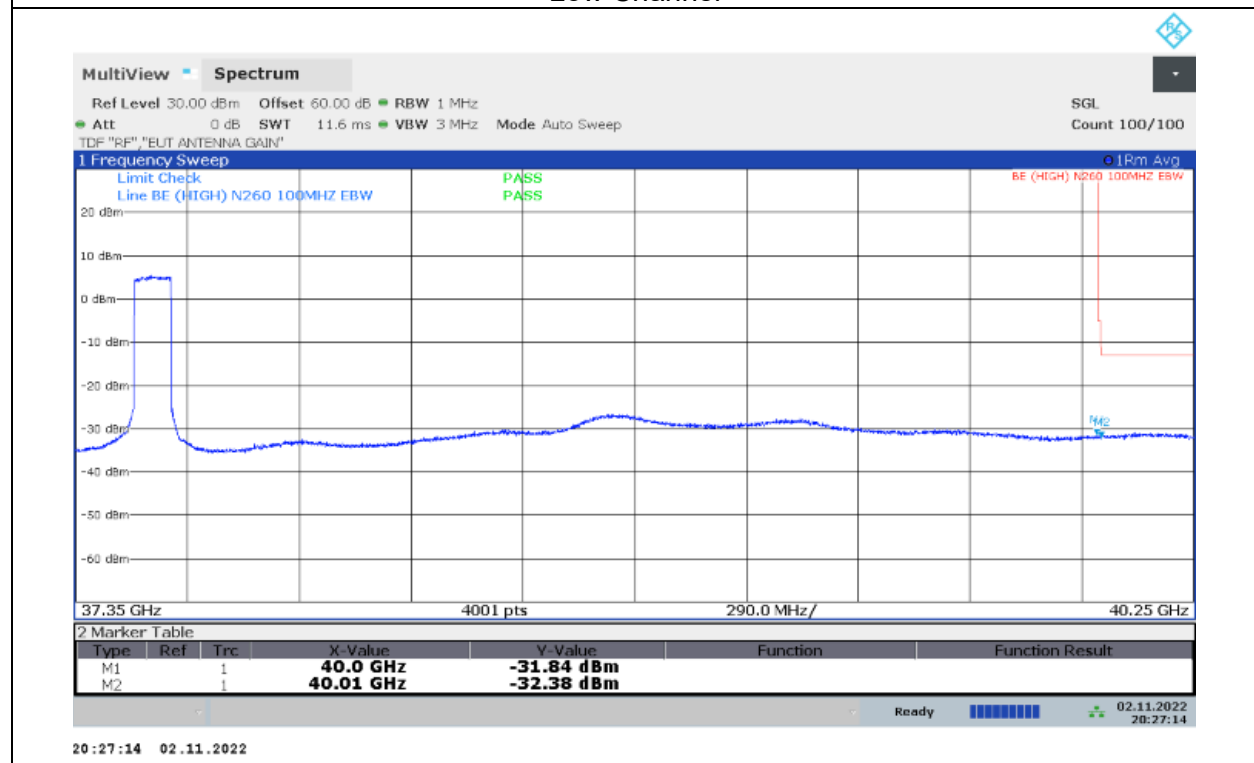


High Channel

16QAM MCS10 1CC



Low Channel

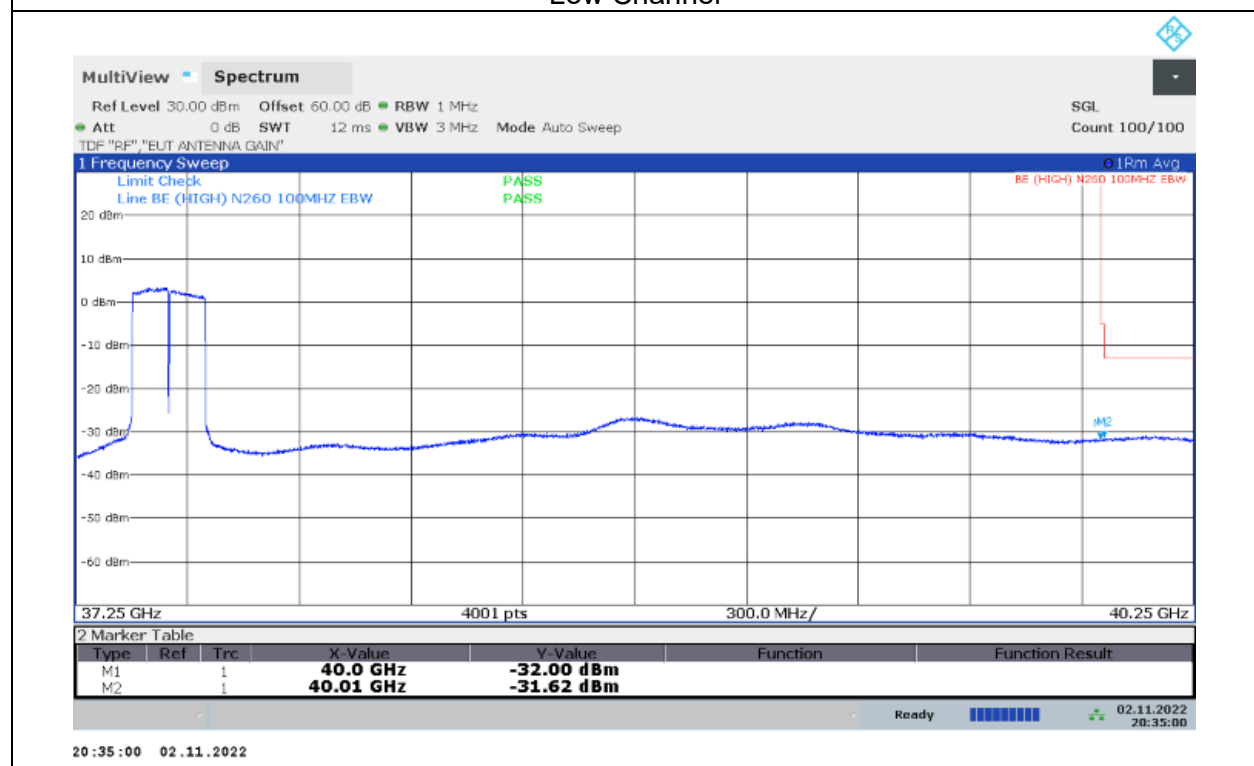


High Channel

16QAM MCS10 2CC



Low Channel

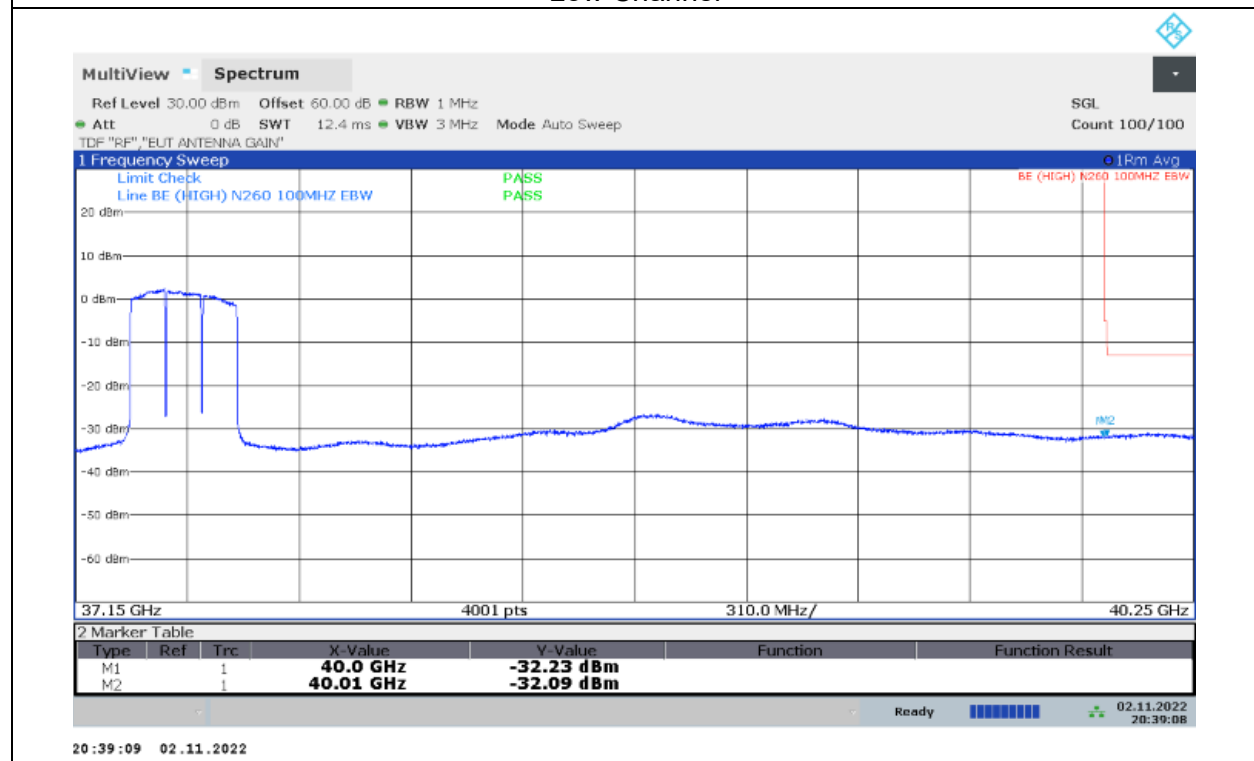


High Channel

16QAM MCS10 3CC



Low Channel

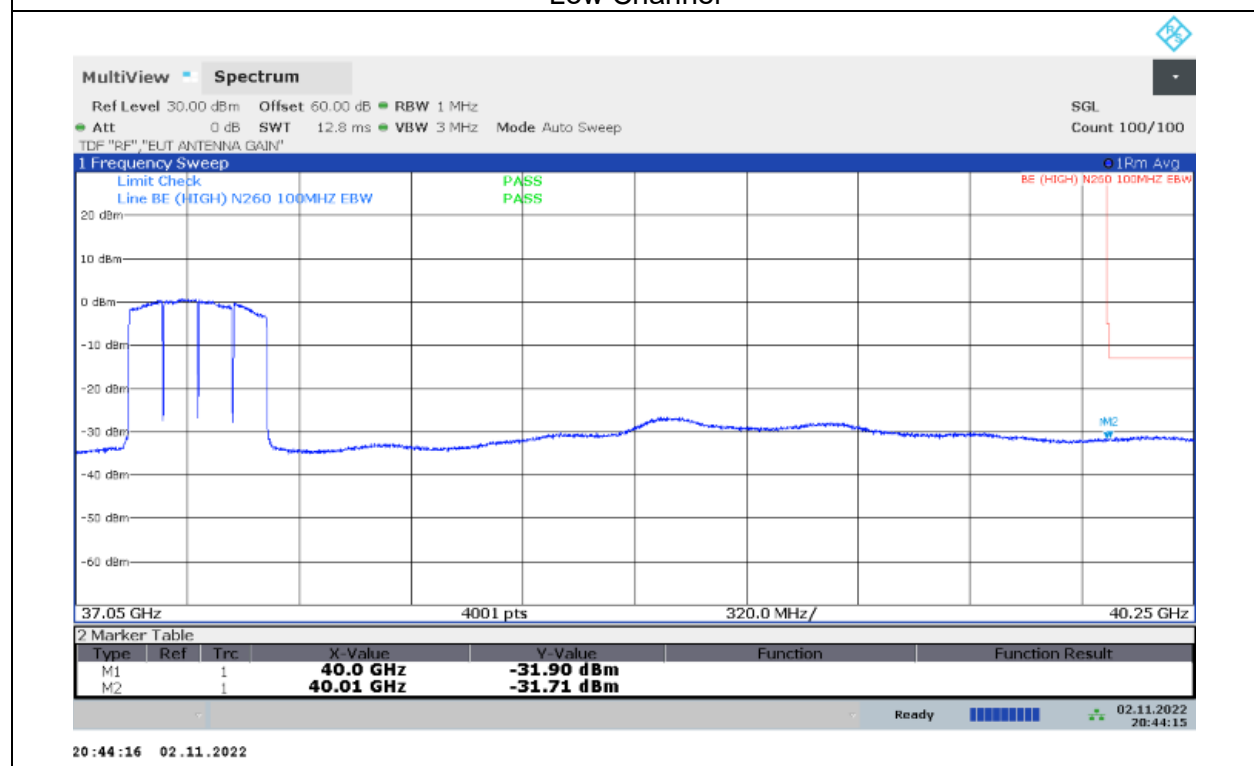


High Channel

16QAM MCS10 4CC

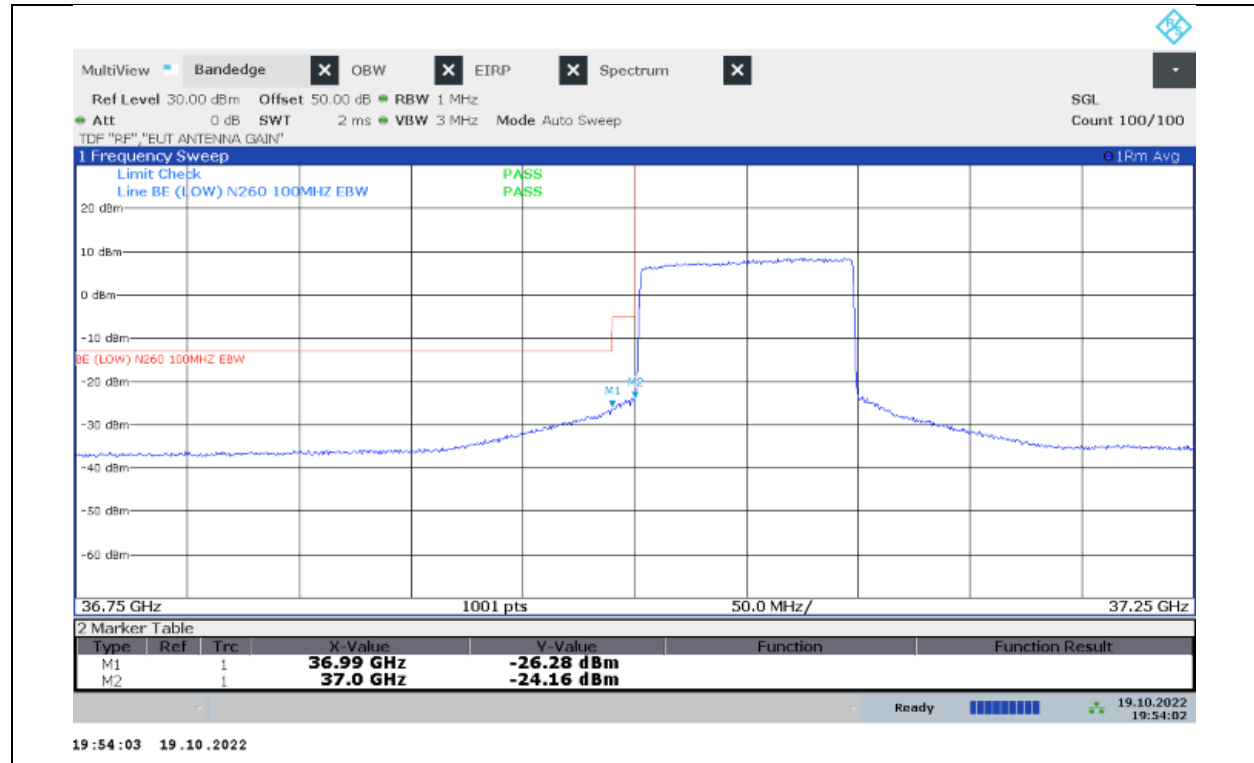


Low Channel

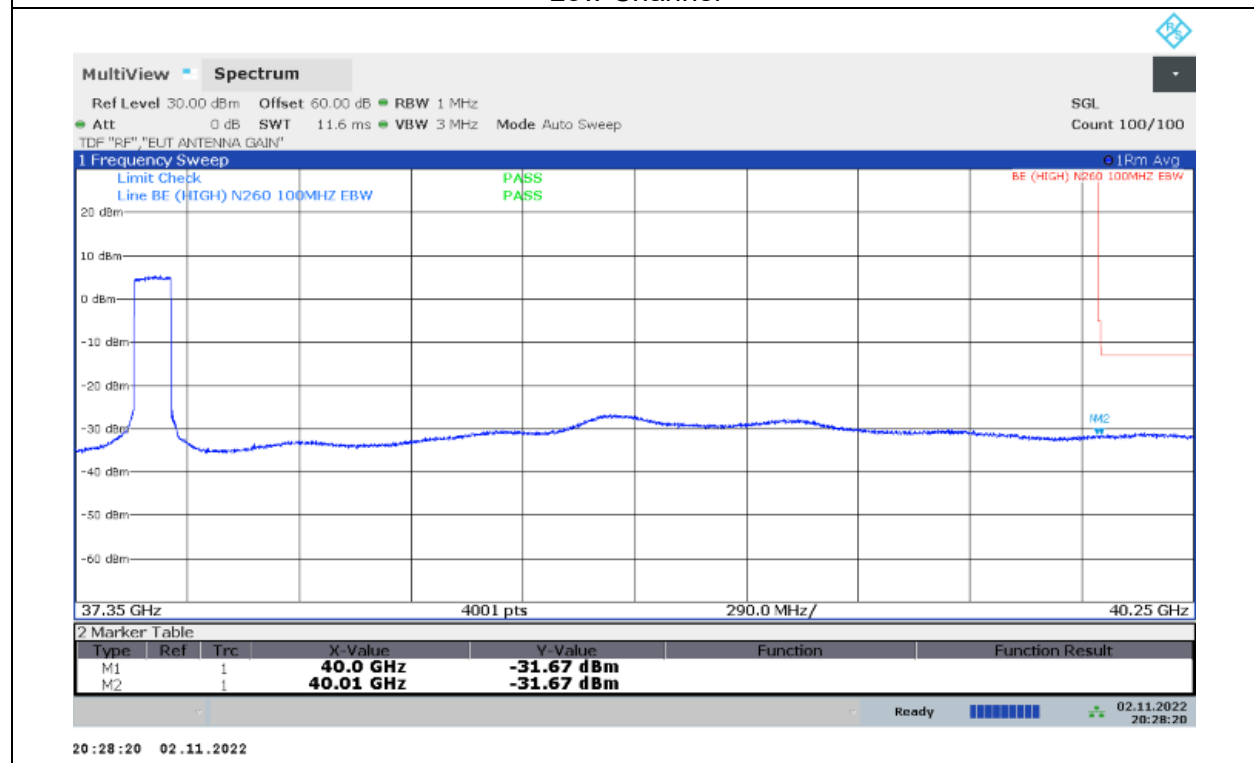


High Channel

16QAM MCS16 1CC



Low Channel



High Channel