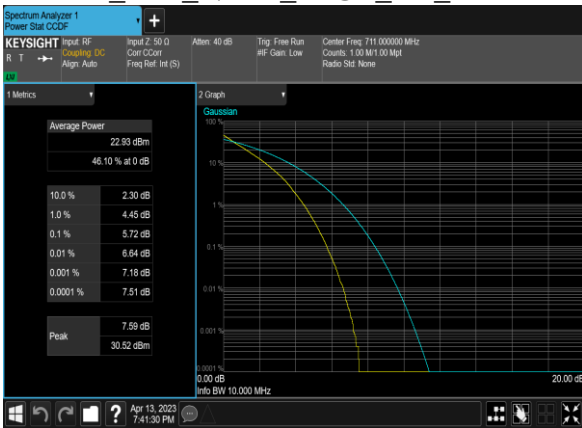


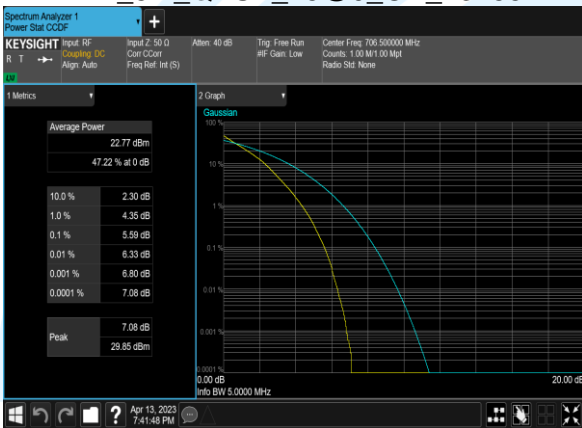
B17_10M_QPSK_50@0_CH_23800



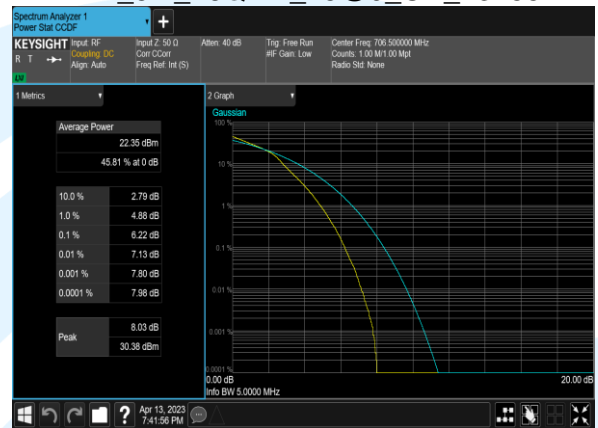
B17_10M_16QAM_50@0_CH_23800



B17_5M_QPSK_25@0_CH_23755



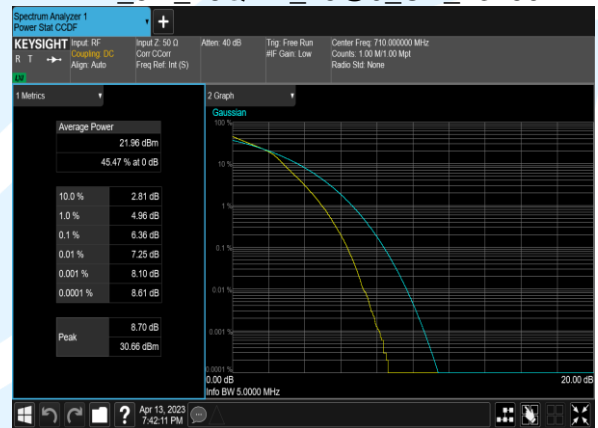
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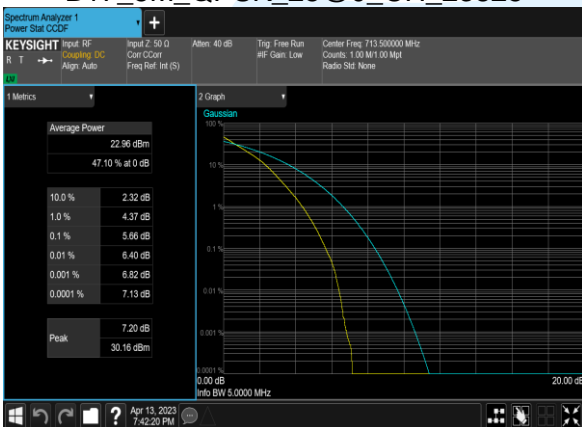
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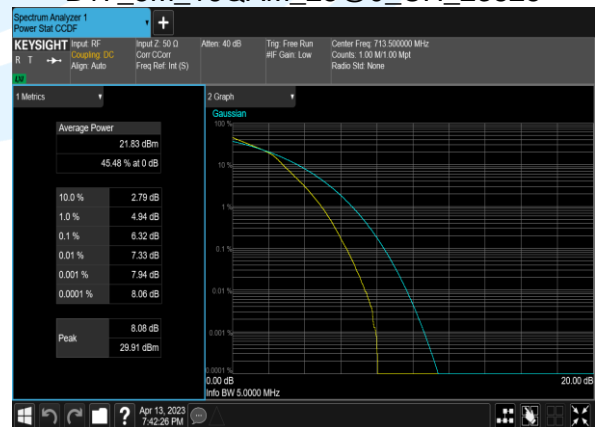
B17_5M_16QAM_25@0_CH_23790



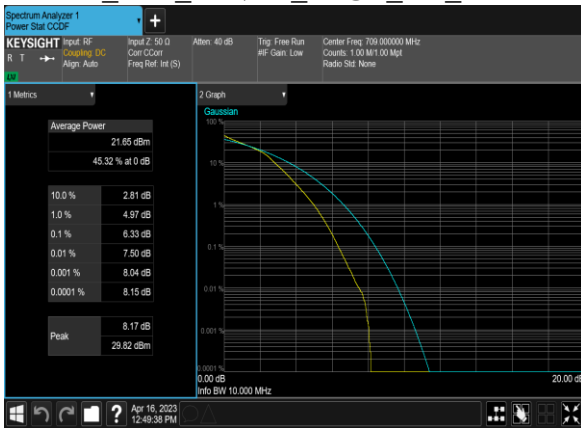
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B17_5M_16QAM_25@0_CH_23825



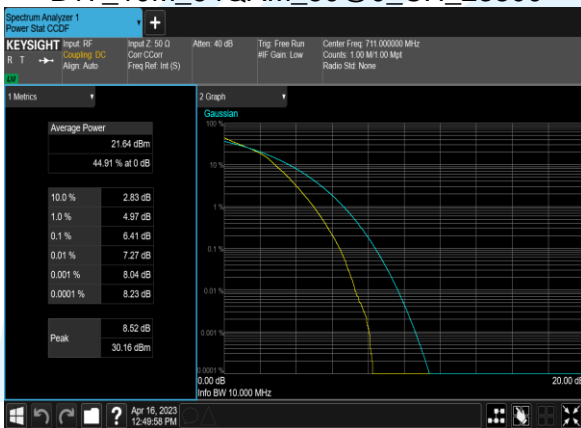
B17_10M_64QAM_50@0_CH_23780



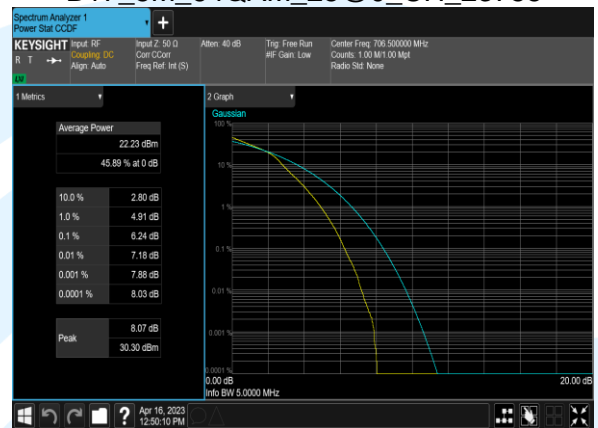
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B17_10M_64QAM_50@0_CH_23800



B17_5M_64QAM_25@0_CH_23755



B17_5M_64QAM_25@0_CH_23790



B17_5M_64QAM_25@0_CH_23825

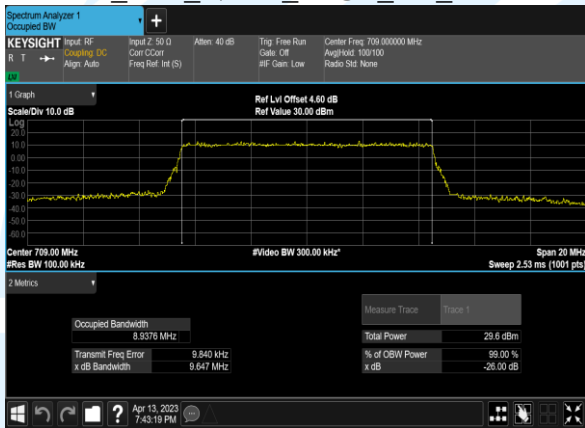


Occupied Bandwidth

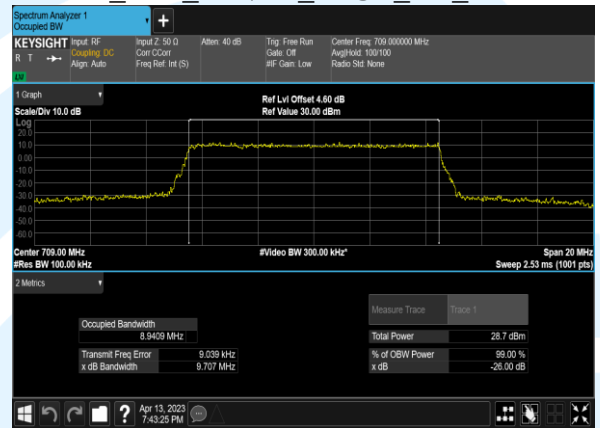
| Band | Bandwidth (MHz) | Channel | Freq (MHz) | Modulation | RB | OBW (MHz) | 26dB BW (MHz) |
|------|-----------------|---------|------------|------------|------|-----------|---------------|
| 17 | 10.0 | 23780 | 709.0 | QPSK | 50@0 | 8.9376 | 9.647 |
| 17 | 10.0 | 23780 | 709.0 | 16QAM | 50@0 | 8.9409 | 9.707 |
| 17 | 10.0 | 23790 | 710.0 | QPSK | 50@0 | 8.9442 | 9.589 |
| 17 | 10.0 | 23790 | 710.0 | 16QAM | 50@0 | 8.9481 | 9.634 |
| 17 | 10.0 | 23800 | 711.0 | QPSK | 50@0 | 8.9513 | 9.670 |
| 17 | 10.0 | 23800 | 711.0 | 16QAM | 50@0 | 8.9612 | 9.662 |
| 17 | 5.0 | 23755 | 706.5 | QPSK | 25@0 | 4.4600 | 4.891 |
| 17 | 5.0 | 23755 | 706.5 | 16QAM | 25@0 | 4.4636 | 4.851 |
| 17 | 5.0 | 23790 | 710.0 | QPSK | 25@0 | 4.4517 | 4.837 |
| 17 | 5.0 | 23790 | 710.0 | 16QAM | 25@0 | 4.4595 | 4.870 |
| 17 | 5.0 | 23825 | 713.5 | QPSK | 25@0 | 4.4555 | 4.876 |
| 17 | 5.0 | 23825 | 713.5 | 16QAM | 25@0 | 4.4557 | 4.871 |
| 17 | 10.0 | 23780 | 709.0 | 64QAM | 50@0 | 8.9291 | 9.631 |
| 17 | 10.0 | 23790 | 710.0 | 64QAM | 50@0 | 8.9361 | 9.559 |
| 17 | 10.0 | 23800 | 711.0 | 64QAM | 50@0 | 8.9420 | 9.712 |
| 17 | 5.0 | 23755 | 706.5 | 64QAM | 25@0 | 4.4516 | 4.844 |
| 17 | 5.0 | 23790 | 710.0 | 64QAM | 25@0 | 4.4603 | 4.847 |
| 17 | 5.0 | 23825 | 713.5 | 64QAM | 25@0 | 4.4632 | 4.912 |

Test Graphs

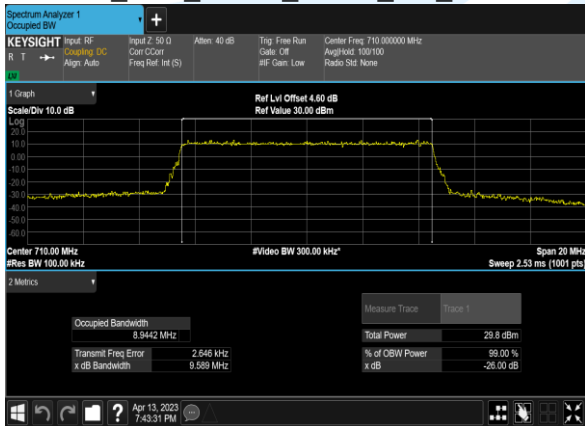
B17_10M_QPSK_50@0_CH_23780



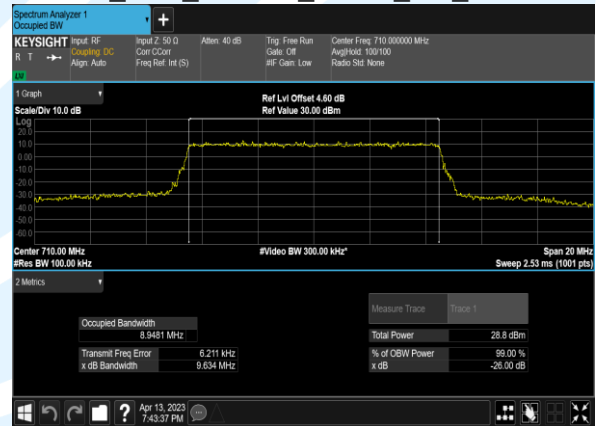
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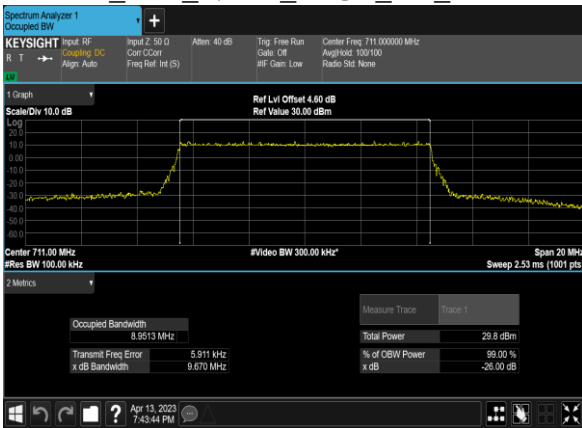
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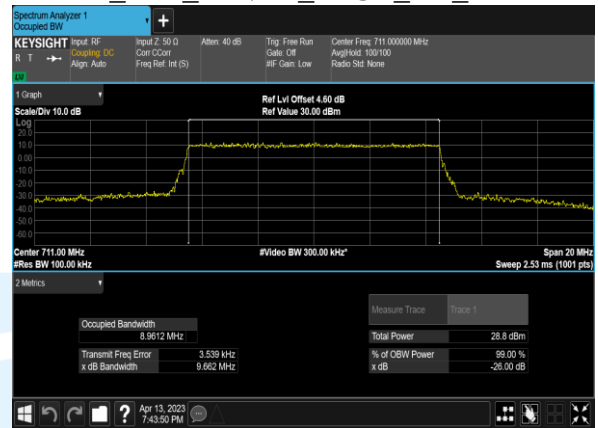
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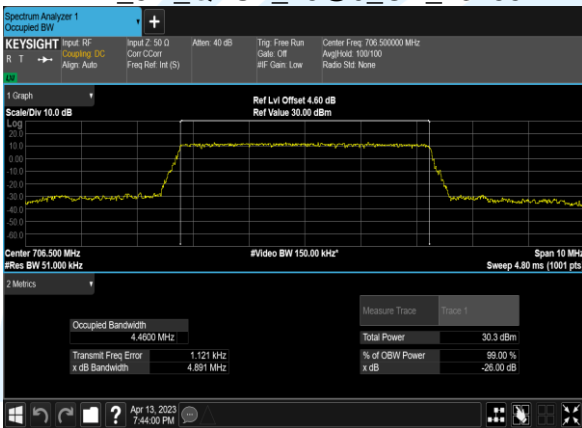
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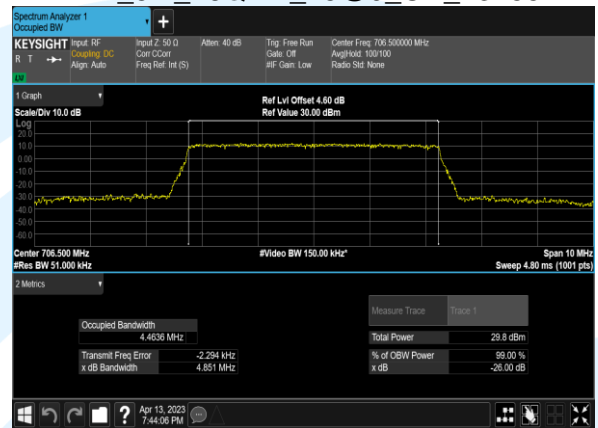
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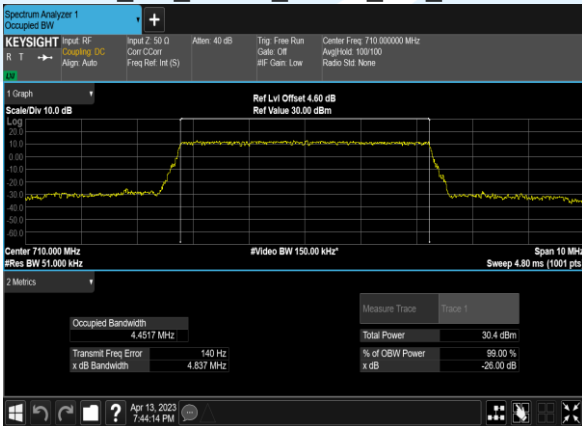
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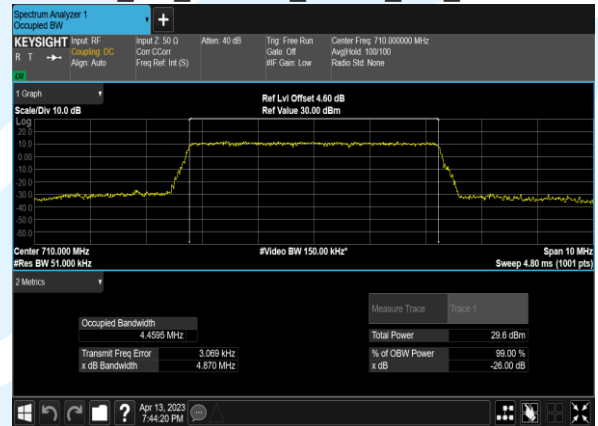
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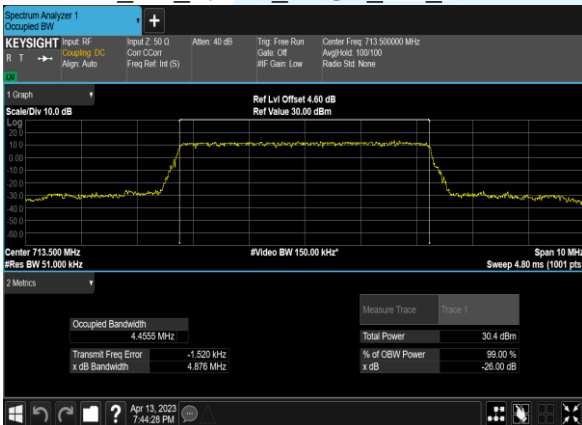
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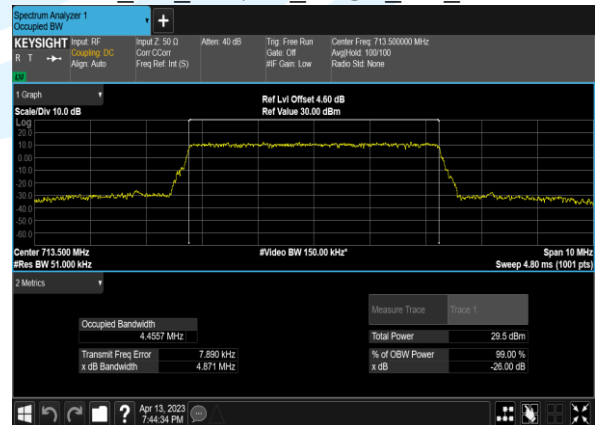
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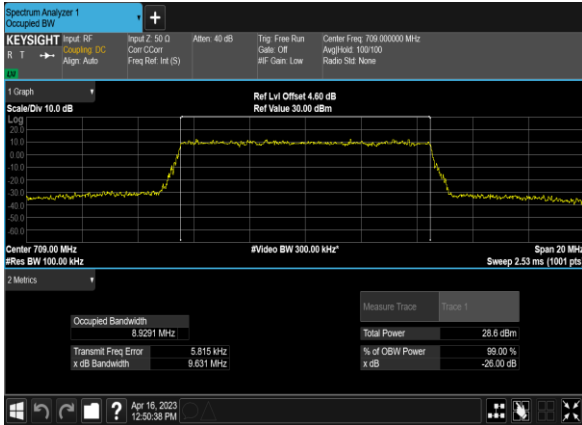
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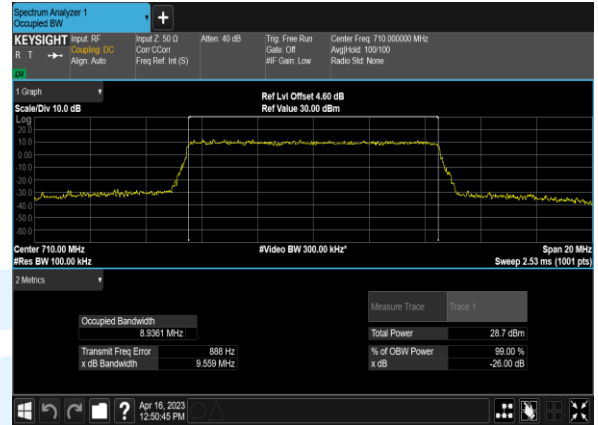
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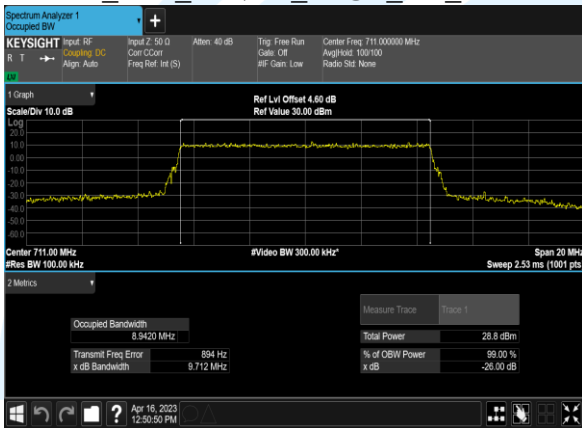
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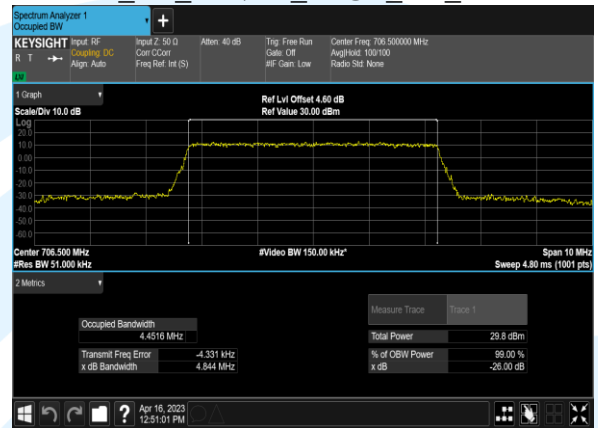
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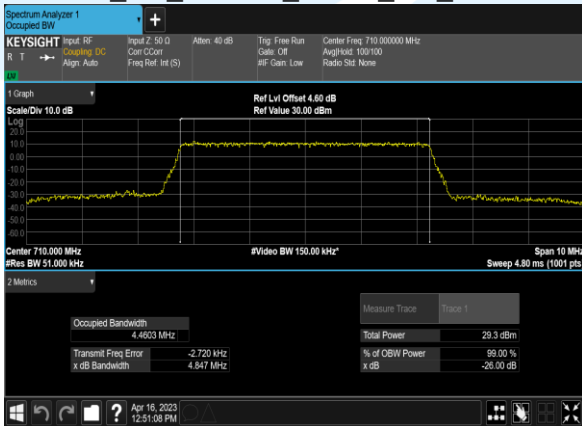
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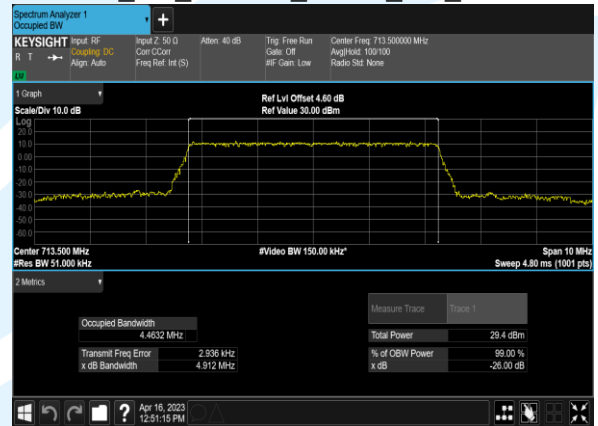
B17_5M_64QAM_25@0_CH_23755



B17_5M_64QAM_25@0_CH_23790



B17_5M_64QAM_25@0_CH_23825

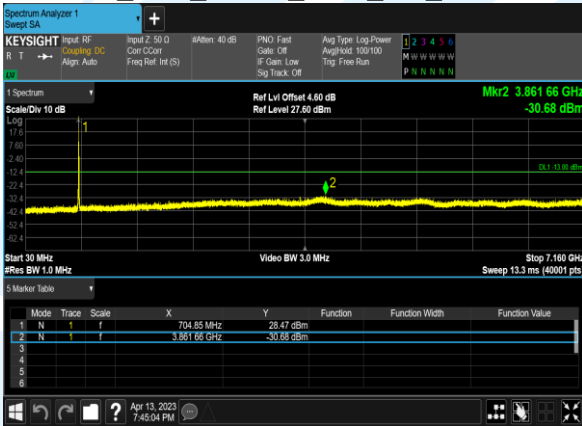


Conducted Spurious Emissions

| Band | Bandwidth (MHz) | Channel | Freq (MHz) | Modulation | RB | Result (dBm) | Limit (dBm) | Verdict |
|------|-----------------|---------|------------|------------|-----|--------------|-------------|---------|
| 17 | 10.0 | 23780 | 709.0 | QPSK | 1@0 | -30.68 | -13 | PASS |
| 17 | 10.0 | 23780 | 709.0 | 16QAM | 1@0 | -31.2 | -13 | PASS |
| 17 | 10.0 | 23790 | 710.0 | QPSK | 1@0 | -30.25 | -13 | PASS |
| 17 | 10.0 | 23790 | 710.0 | 16QAM | 1@0 | -31.17 | -13 | PASS |
| 17 | 10.0 | 23800 | 711.0 | QPSK | 1@0 | -31.61 | -13 | PASS |
| 17 | 10.0 | 23800 | 711.0 | 16QAM | 1@0 | -31.24 | -13 | PASS |
| 17 | 5.0 | 23755 | 706.5 | QPSK | 1@0 | -30.36 | -13 | PASS |
| 17 | 5.0 | 23755 | 706.5 | 16QAM | 1@0 | -30.61 | -13 | PASS |
| 17 | 5.0 | 23790 | 710.0 | QPSK | 1@0 | -30.99 | -13 | PASS |
| 17 | 5.0 | 23790 | 710.0 | 16QAM | 1@0 | -31.55 | -13 | PASS |
| 17 | 5.0 | 23825 | 713.5 | QPSK | 1@0 | -30.31 | -13 | PASS |
| 17 | 5.0 | 23825 | 713.5 | 16QAM | 1@0 | -31.12 | -13 | PASS |
| 17 | 10.0 | 23780 | 709.0 | 64QAM | 1@0 | -31.06 | -13 | PASS |
| 17 | 10.0 | 23790 | 710.0 | 64QAM | 1@0 | -31.69 | -13 | PASS |
| 17 | 10.0 | 23800 | 711.0 | 64QAM | 1@0 | -31.45 | -13 | PASS |
| 17 | 5.0 | 23755 | 706.5 | 64QAM | 1@0 | -30.55 | -13 | PASS |
| 17 | 5.0 | 23790 | 710.0 | 64QAM | 1@0 | -31.33 | -13 | PASS |
| 17 | 5.0 | 23825 | 713.5 | 64QAM | 1@0 | -31.25 | -13 | PASS |

Test Graphs

B17_10M_QPSK_1@0_CH_23780



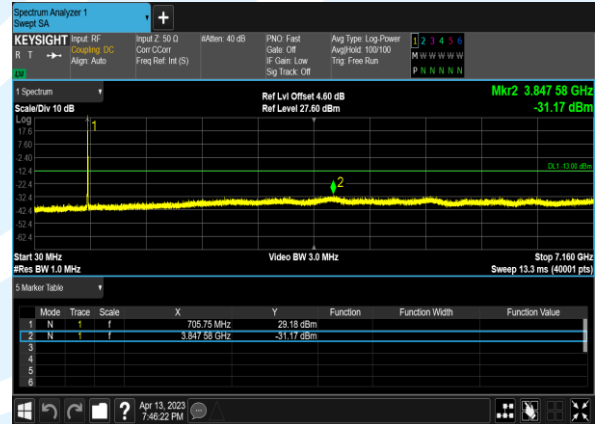
B17_10M_16QAM_1@0_CH_23780



B17_10M_QPSK_1@0_CH_23790



B17_10M_16QAM_1@0_CH_23790



B17_10M_QPSK_1@0_CH_23800



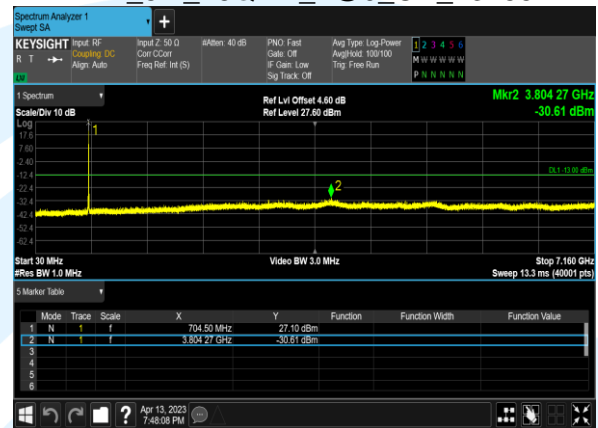
B17_10M_16QAM_1@0_CH_23800



B17_5M_QPSK_1@0_CH_23755



B17_5M_16QAM_1@0_CH_23755



B17_5M_QPSK_1@0_CH_23790



B17_5M_16QAM_1@0_CH_23790



B17_5M_QPSK_1@0_CH_23825



B17_5M_16QAM_1@0_CH_23825



Shenzhen UnionTrust Quality and Technology Co., Ltd.

Address: Unit D/E of 9/F and 16/F, Block A, Building 6, Baoneng science and technology park, Longhua district, Shenzhen, China

Tel: +86-755-28230888

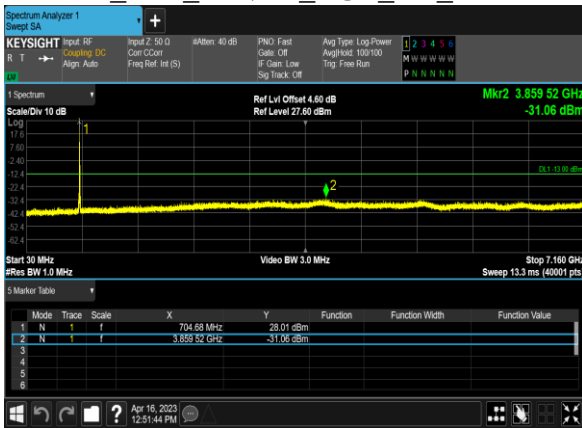
Fax: +86-755-28230886

E-mail: info@uttlab.com

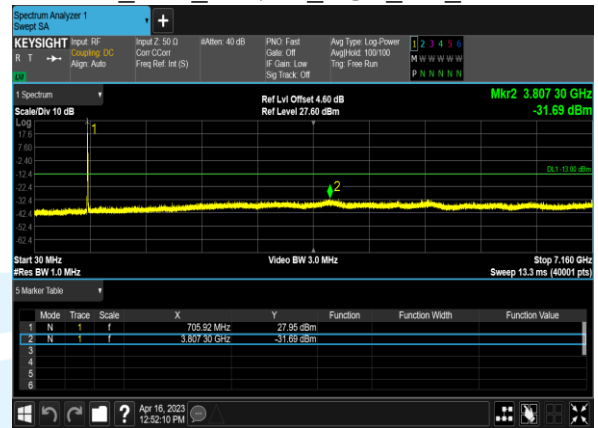
<http://www.uttlab.com>

UTTR-RF-FCC4G-V1.1

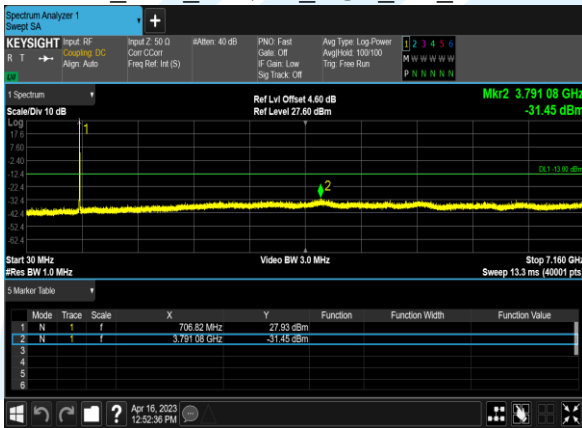
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B17_10M_64QAM_1@0_CH_23790



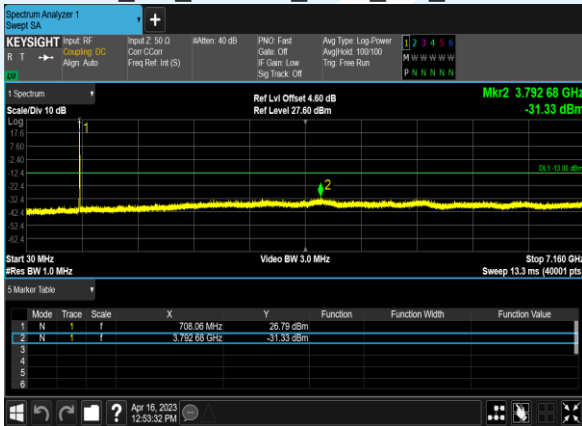
B17_10M_64QAM_1@0_CH_23800



B17_5M_64QAM_1@0_CH_23755



B17_5M_64QAM_1@0_CH_23790



B17_5M_64QAM_1@0_CH_23825

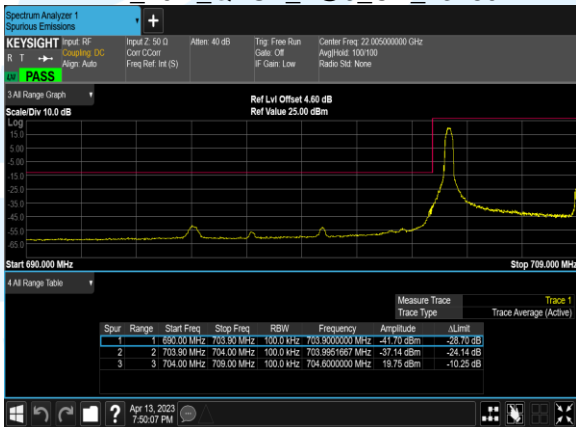


Conducted Band Edge

| Band | Bandwidth (MHz) | Channel | Freq (MHz) | Modulation | RB | Result | Verdict |
|------|-----------------|---------|------------|------------|------|-----------|---------|
| 17 | 10.0 | 23780 | 709.0 | QPSK | 1@0 | see graph | PASS |
| 17 | 10.0 | 23780 | 709.0 | QPSK | 50@0 | see graph | PASS |
| 17 | 10.0 | 23780 | 709.0 | 16QAM | 1@0 | see graph | PASS |
| 17 | 10.0 | 23780 | 709.0 | 16QAM | 50@0 | see graph | PASS |
| 17 | 10.0 | 23800 | 711.0 | QPSK | 1@49 | see graph | PASS |
| 17 | 10.0 | 23800 | 711.0 | QPSK | 50@0 | see graph | PASS |
| 17 | 10.0 | 23800 | 711.0 | 16QAM | 1@49 | see graph | PASS |
| 17 | 10.0 | 23800 | 711.0 | 16QAM | 50@0 | see graph | PASS |
| 17 | 5.0 | 23755 | 706.5 | QPSK | 1@0 | see graph | PASS |
| 17 | 5.0 | 23755 | 706.5 | QPSK | 25@0 | see graph | PASS |
| 17 | 5.0 | 23755 | 706.5 | 16QAM | 1@0 | see graph | PASS |
| 17 | 5.0 | 23755 | 706.5 | 16QAM | 25@0 | see graph | PASS |
| 17 | 5.0 | 23825 | 713.5 | QPSK | 1@24 | see graph | PASS |
| 17 | 5.0 | 23825 | 713.5 | QPSK | 25@0 | see graph | PASS |
| 17 | 5.0 | 23825 | 713.5 | 16QAM | 1@24 | see graph | PASS |
| 17 | 5.0 | 23825 | 713.5 | 16QAM | 25@0 | see graph | PASS |
| 17 | 10.0 | 23780 | 709.0 | 64QAM | 1@0 | see graph | PASS |
| 17 | 10.0 | 23780 | 709.0 | 64QAM | 50@0 | see graph | PASS |
| 17 | 10.0 | 23800 | 711.0 | 64QAM | 1@49 | see graph | PASS |
| 17 | 10.0 | 23800 | 711.0 | 64QAM | 50@0 | see graph | PASS |
| 17 | 5.0 | 23755 | 706.5 | 64QAM | 1@0 | see graph | PASS |
| 17 | 5.0 | 23755 | 706.5 | 64QAM | 25@0 | see graph | PASS |
| 17 | 5.0 | 23825 | 713.5 | 64QAM | 1@24 | see graph | PASS |
| 17 | 5.0 | 23825 | 713.5 | 64QAM | 25@0 | see graph | PASS |

Test Graphs

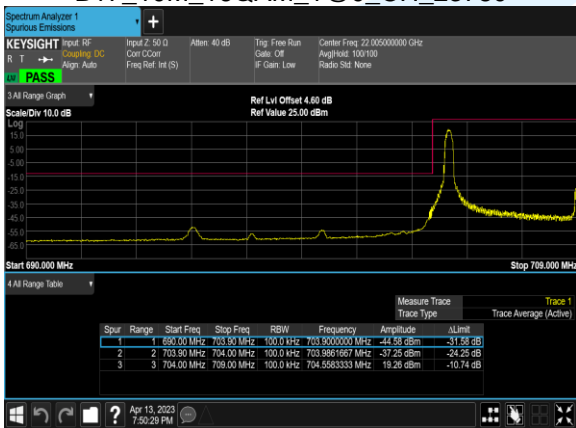
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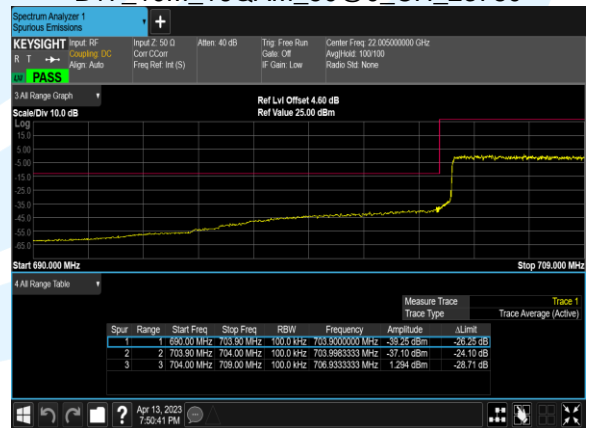
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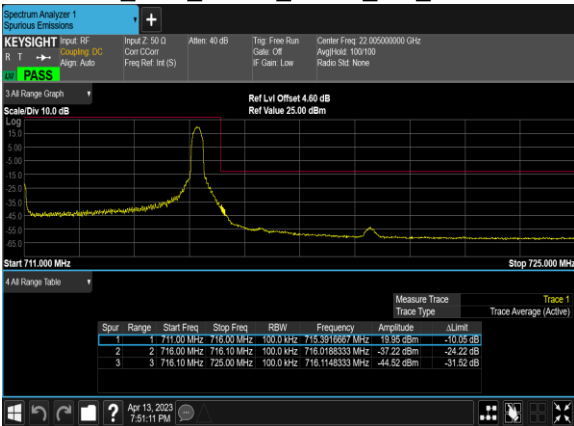
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B17_10M_16QAM_50@0_CH_23780



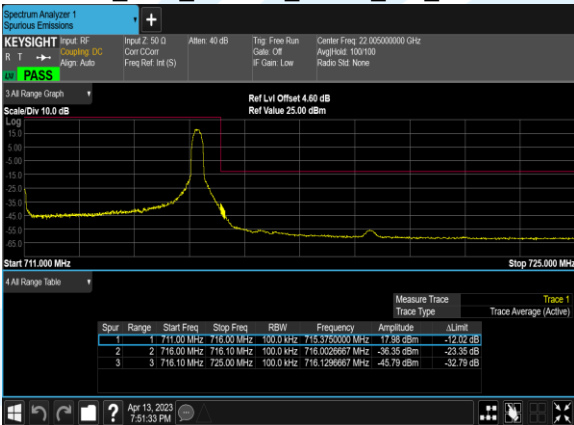
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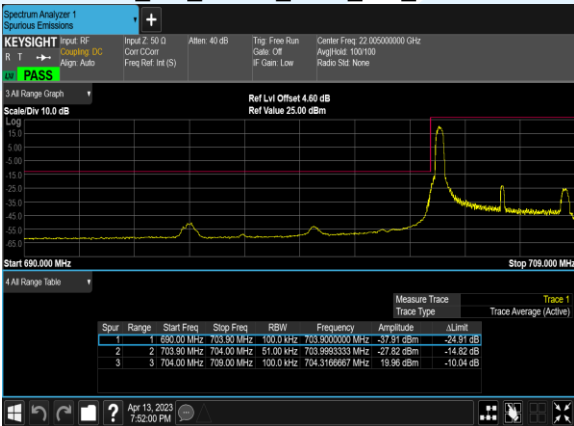
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B17_10M_16QAM_50@0_CH_23800



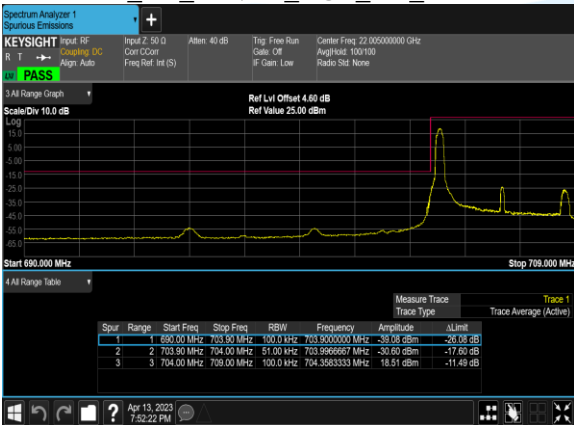
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B17_5M_QPSK_25@0_CH_23755



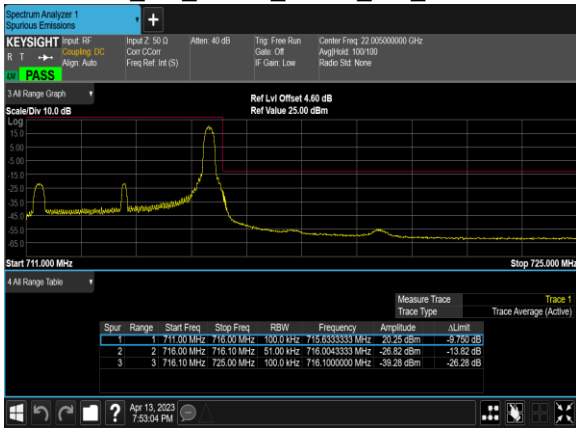
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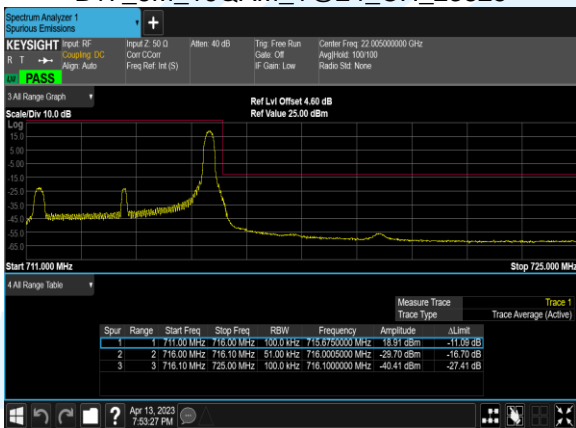
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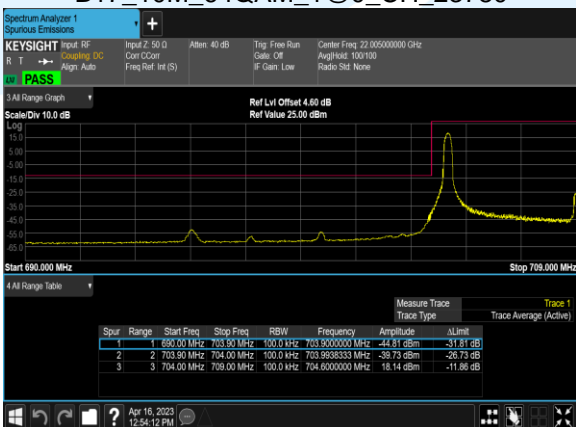
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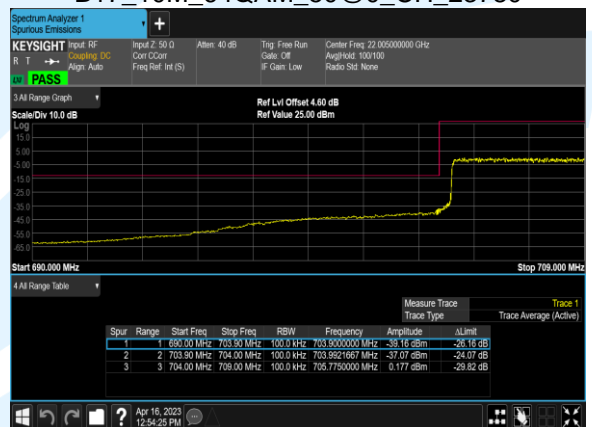
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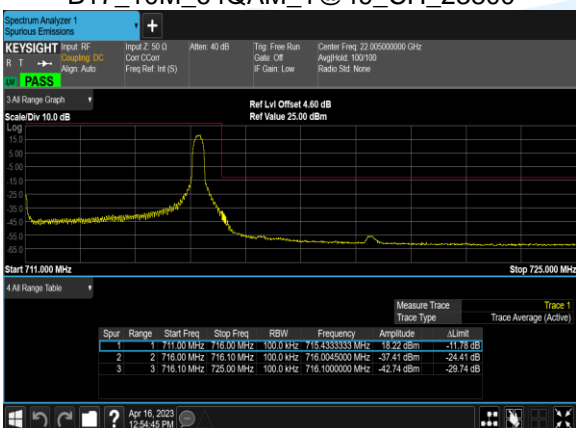
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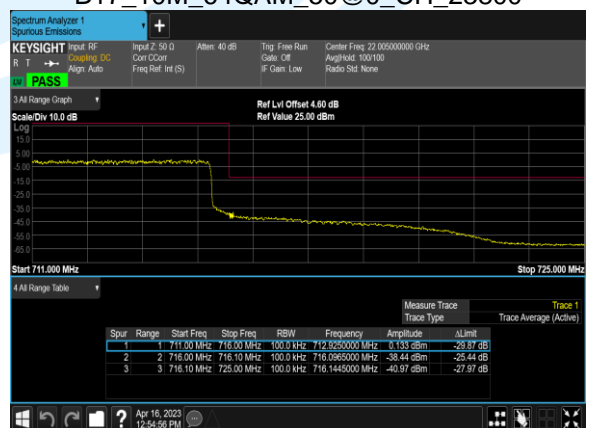
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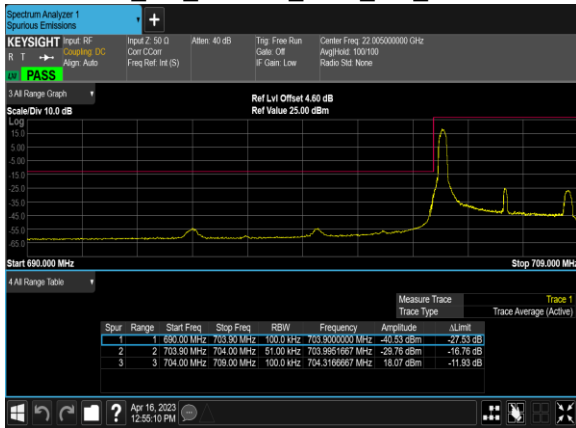
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B17_10M_64QAM_50@0_CH_23800



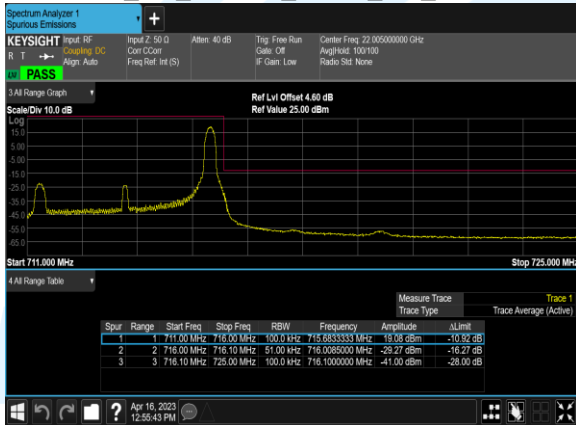
B17_5M_64QAM_1@0_CH_23755



B17_5M_64QAM_25@0_CH_23755



B17_5M_64QAM_1@24_CH_23825



B17_5M_64QAM_25@0_CH_23825



A.7 LTE BAND 38

Peak to Average Ratio

| Band | Bandwidth (MHz) | Channel | Freq (MHz) | Modulation | RB | Result (dB) | Limit (dB) | Verdict |
|------|-----------------|---------|------------|------------|-------|-------------|------------|---------|
| 38 | 20.0 | 37850 | 2580.0 | QPSK | 100@0 | 6.59 | 13 | PASS |
| 38 | 20.0 | 37850 | 2580.0 | 16QAM | 100@0 | 7.25 | 13 | PASS |
| 38 | 20.0 | 38000 | 2595.0 | QPSK | 100@0 | 6.74 | 13 | PASS |
| 38 | 20.0 | 38000 | 2595.0 | 16QAM | 100@0 | 7.32 | 13 | PASS |
| 38 | 20.0 | 38150 | 2610.0 | QPSK | 100@0 | 6.64 | 13 | PASS |
| 38 | 20.0 | 38150 | 2610.0 | 16QAM | 100@0 | 7.69 | 13 | PASS |
| 38 | 15.0 | 37825 | 2577.5 | QPSK | 75@0 | 6.60 | 13 | PASS |
| 38 | 15.0 | 37825 | 2577.5 | 16QAM | 75@0 | 7.58 | 13 | PASS |
| 38 | 15.0 | 38000 | 2595.0 | QPSK | 75@0 | 6.50 | 13 | PASS |
| 38 | 15.0 | 38000 | 2595.0 | 16QAM | 75@0 | 7.18 | 13 | PASS |
| 38 | 15.0 | 38175 | 2612.5 | QPSK | 75@0 | 6.79 | 13 | PASS |
| 38 | 15.0 | 38175 | 2612.5 | 16QAM | 75@0 | 7.47 | 13 | PASS |
| 38 | 10.0 | 37800 | 2575.0 | QPSK | 50@0 | 6.71 | 13 | PASS |
| 38 | 10.0 | 37800 | 2575.0 | 16QAM | 50@0 | 7.10 | 13 | PASS |
| 38 | 10.0 | 38000 | 2595.0 | QPSK | 50@0 | 6.56 | 13 | PASS |
| 38 | 10.0 | 38000 | 2595.0 | 16QAM | 50@0 | 7.11 | 13 | PASS |
| 38 | 10.0 | 38200 | 2615.0 | QPSK | 50@0 | 6.53 | 13 | PASS |
| 38 | 10.0 | 38200 | 2615.0 | 16QAM | 50@0 | 7.46 | 13 | PASS |
| 38 | 5.0 | 37775 | 2572.5 | QPSK | 25@0 | 6.03 | 13 | PASS |
| 38 | 5.0 | 37775 | 2572.5 | 16QAM | 25@0 | 7.00 | 13 | PASS |
| 38 | 5.0 | 38000 | 2595.0 | QPSK | 25@0 | 6.06 | 13 | PASS |
| 38 | 5.0 | 38000 | 2595.0 | 16QAM | 25@0 | 6.81 | 13 | PASS |
| 38 | 5.0 | 38225 | 2617.5 | QPSK | 25@0 | 6.06 | 13 | PASS |
| 38 | 5.0 | 38225 | 2617.5 | 16QAM | 25@0 | 6.77 | 13 | PASS |
| 38 | 20.0 | 37850 | 2580.0 | 64QAM | 100@0 | 7.34 | 13 | PASS |
| 38 | 20.0 | 38000 | 2595.0 | 64QAM | 100@0 | 7.12 | 13 | PASS |
| 38 | 20.0 | 38150 | 2610.0 | 64QAM | 100@0 | 7.65 | 13 | PASS |
| 38 | 15.0 | 37825 | 2577.5 | 64QAM | 75@0 | 7.52 | 13 | PASS |
| 38 | 15.0 | 38000 | 2595.0 | 64QAM | 75@0 | 7.14 | 13 | PASS |
| 38 | 15.0 | 38175 | 2612.5 | 64QAM | 75@0 | 7.32 | 13 | PASS |
| 38 | 10.0 | 37800 | 2575.0 | 64QAM | 50@0 | 6.99 | 13 | PASS |
| 38 | 10.0 | 38000 | 2595.0 | 64QAM | 50@0 | 6.82 | 13 | PASS |
| 38 | 10.0 | 38200 | 2615.0 | 64QAM | 50@0 | 7.44 | 13 | PASS |
| 38 | 5.0 | 37775 | 2572.5 | 64QAM | 25@0 | 6.61 | 13 | PASS |
| 38 | 5.0 | 38000 | 2595.0 | 64QAM | 25@0 | 6.53 | 13 | PASS |
| 38 | 5.0 | 38225 | 2617.5 | 64QAM | 25@0 | 6.74 | 13 | PASS |

Occupied Bandwidth

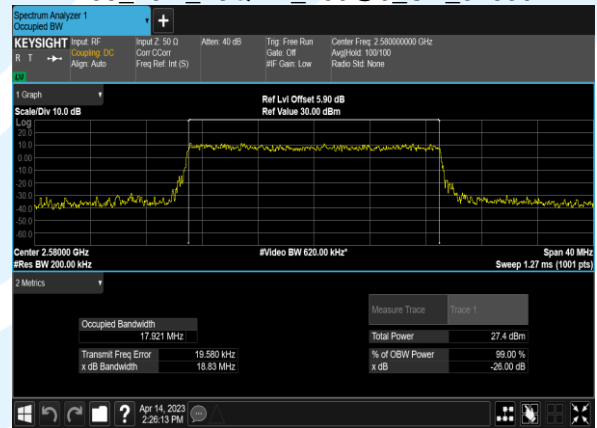
| Band | Bandwidth (MHz) | Channel | Freq (MHz) | Modulation | RB | OBW (MHz) | 26dB BW (MHz) |
|------|-----------------|---------|------------|------------|-------|-----------|---------------|
| 38 | 20.0 | 37850 | 2580.0 | QPSK | 100@0 | 17.879 | 18.97 |
| 38 | 20.0 | 37850 | 2580.0 | 16QAM | 100@0 | 17.921 | 18.83 |
| 38 | 20.0 | 38000 | 2595.0 | QPSK | 100@0 | 17.834 | 19.04 |
| 38 | 20.0 | 38000 | 2595.0 | 16QAM | 100@0 | 17.873 | 18.62 |
| 38 | 20.0 | 38150 | 2610.0 | QPSK | 100@0 | 17.882 | 19.18 |
| 38 | 20.0 | 38150 | 2610.0 | 16QAM | 100@0 | 17.867 | 19.10 |
| 38 | 15.0 | 37825 | 2577.5 | QPSK | 75@0 | 13.426 | 14.48 |
| 38 | 15.0 | 37825 | 2577.5 | 16QAM | 75@0 | 13.449 | 14.40 |
| 38 | 15.0 | 38000 | 2595.0 | QPSK | 75@0 | 13.410 | 14.21 |
| 38 | 15.0 | 38000 | 2595.0 | 16QAM | 75@0 | 13.424 | 14.70 |
| 38 | 15.0 | 38175 | 2612.5 | QPSK | 75@0 | 13.416 | 14.57 |
| 38 | 15.0 | 38175 | 2612.5 | 16QAM | 75@0 | 13.387 | 14.52 |
| 38 | 10.0 | 37800 | 2575.0 | QPSK | 50@0 | 8.9204 | 9.488 |
| 38 | 10.0 | 37800 | 2575.0 | 16QAM | 50@0 | 8.9482 | 9.467 |
| 38 | 10.0 | 38000 | 2595.0 | QPSK | 50@0 | 8.9181 | 9.898 |
| 38 | 10.0 | 38000 | 2595.0 | 16QAM | 50@0 | 8.9227 | 9.638 |
| 38 | 10.0 | 38200 | 2615.0 | QPSK | 50@0 | 8.9538 | 9.634 |
| 38 | 10.0 | 38200 | 2615.0 | 16QAM | 50@0 | 8.9377 | 9.541 |
| 38 | 5.0 | 37775 | 2572.5 | QPSK | 25@0 | 4.4561 | 4.894 |
| 38 | 5.0 | 37775 | 2572.5 | 16QAM | 25@0 | 4.4444 | 4.859 |
| 38 | 5.0 | 38000 | 2595.0 | QPSK | 25@0 | 4.4646 | 4.818 |
| 38 | 5.0 | 38000 | 2595.0 | 16QAM | 25@0 | 4.4515 | 4.865 |
| 38 | 5.0 | 38225 | 2617.5 | QPSK | 25@0 | 4.4641 | 4.776 |
| 38 | 5.0 | 38225 | 2617.5 | 16QAM | 25@0 | 4.4437 | 4.819 |
| 38 | 20.0 | 37850 | 2580.0 | 64QAM | 100@0 | 17.903 | 18.99 |
| 38 | 20.0 | 38000 | 2595.0 | 64QAM | 100@0 | 17.859 | 18.91 |
| 38 | 20.0 | 38150 | 2610.0 | 64QAM | 100@0 | 17.901 | 19.11 |
| 38 | 15.0 | 37825 | 2577.5 | 64QAM | 75@0 | 13.383 | 14.33 |
| 38 | 15.0 | 38000 | 2595.0 | 64QAM | 75@0 | 13.358 | 14.59 |
| 38 | 15.0 | 38175 | 2612.5 | 64QAM | 75@0 | 13.332 | 14.45 |
| 38 | 10.0 | 37800 | 2575.0 | 64QAM | 50@0 | 8.9309 | 9.516 |
| 38 | 10.0 | 38000 | 2595.0 | 64QAM | 50@0 | 8.9143 | 9.604 |
| 38 | 10.0 | 38200 | 2615.0 | 64QAM | 50@0 | 8.9351 | 9.579 |
| 38 | 5.0 | 37775 | 2572.5 | 64QAM | 25@0 | 4.4523 | 4.887 |
| 38 | 5.0 | 38000 | 2595.0 | 64QAM | 25@0 | 4.4622 | 4.809 |
| 38 | 5.0 | 38225 | 2617.5 | 64QAM | 25@0 | 4.4640 | 4.826 |

Test Graphs

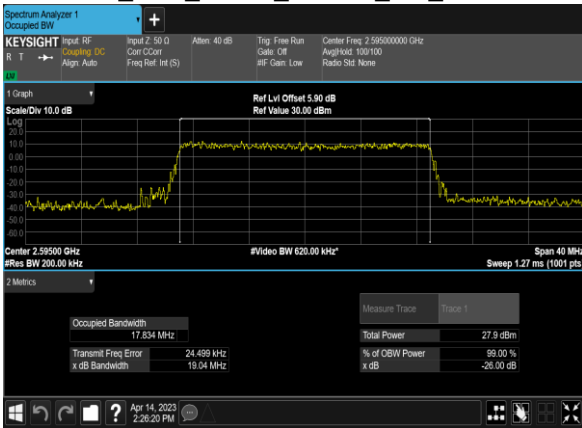
B38_20M_QPSK_100@0_CH_37850



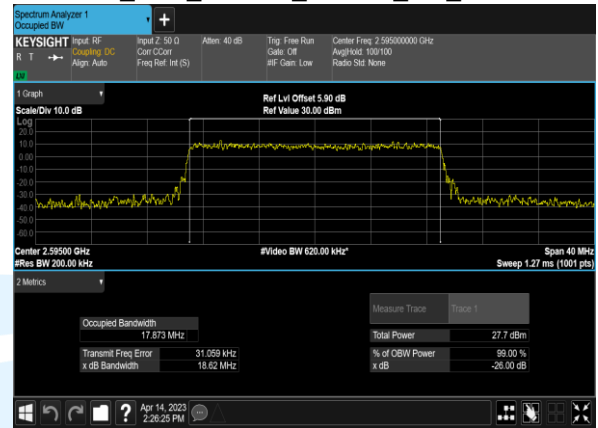
B38_20M_16QAM_100@0_CH_37850



B38_20M_QPSK_100@0_CH_38000



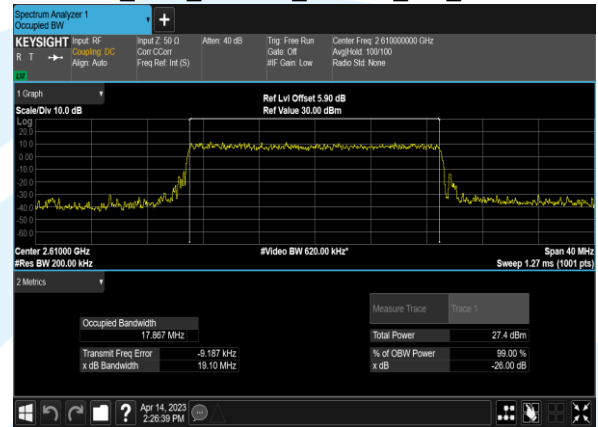
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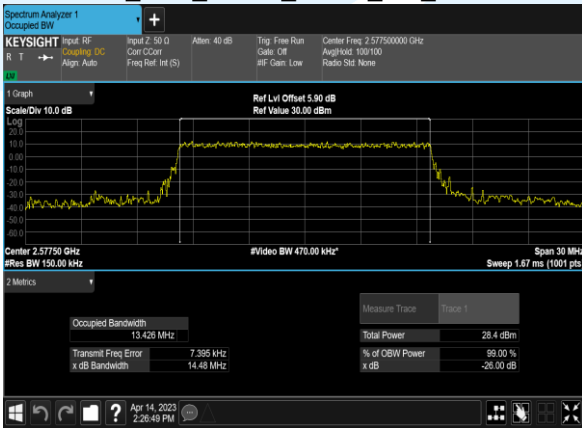
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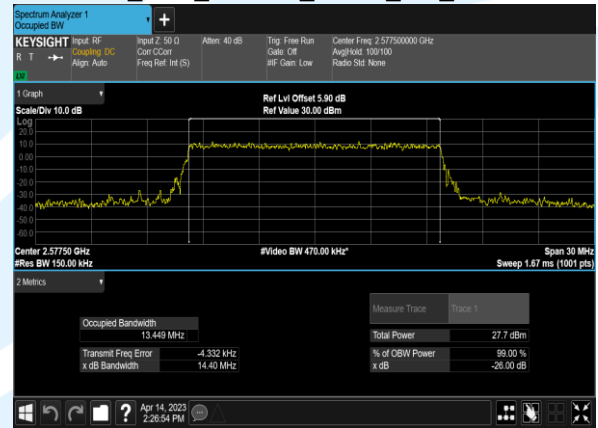
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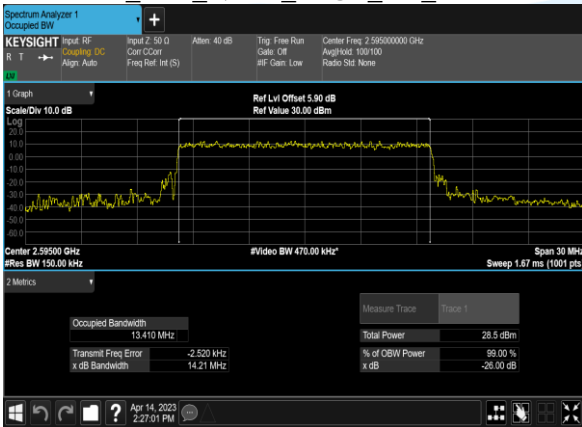
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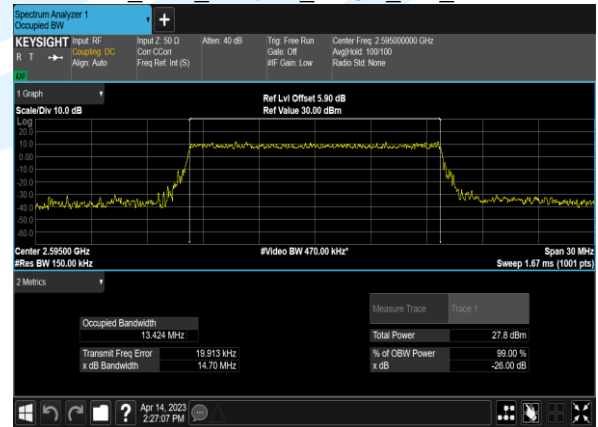
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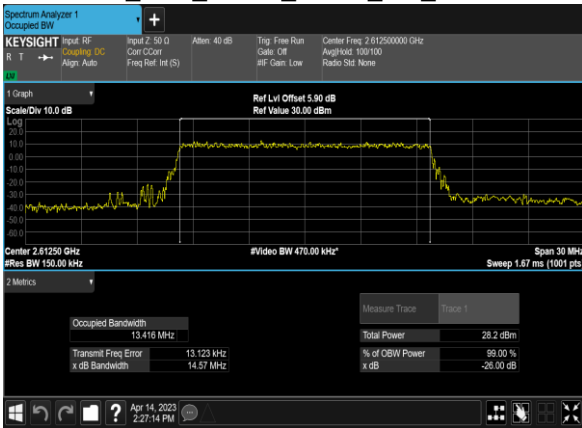
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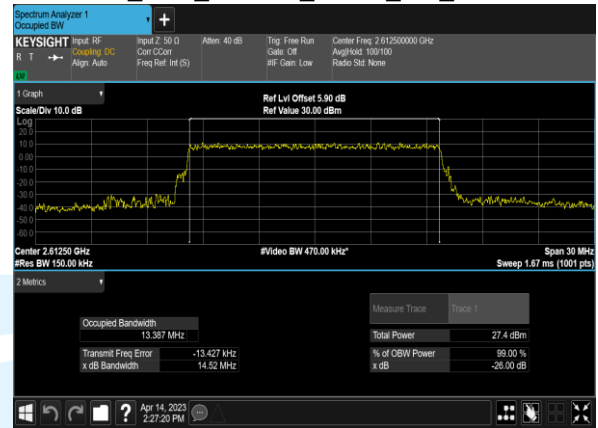
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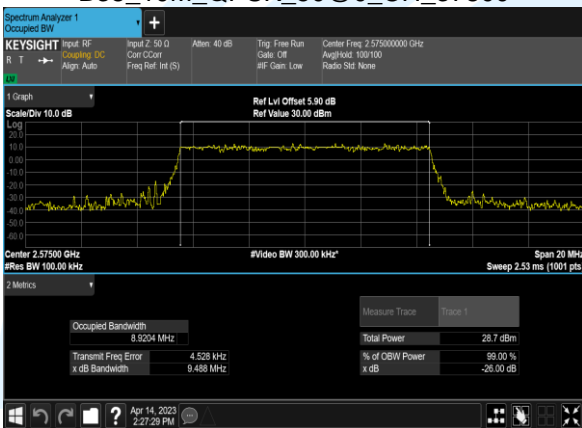
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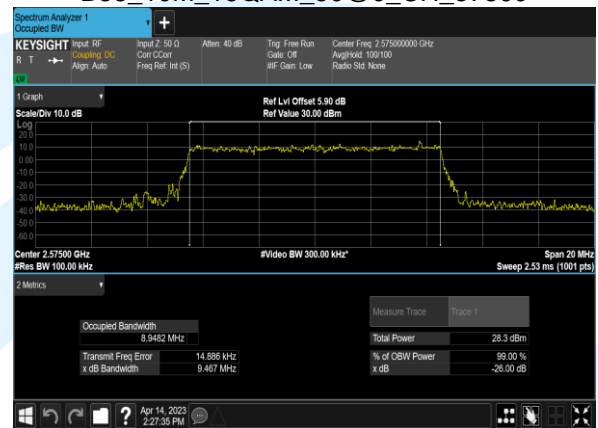
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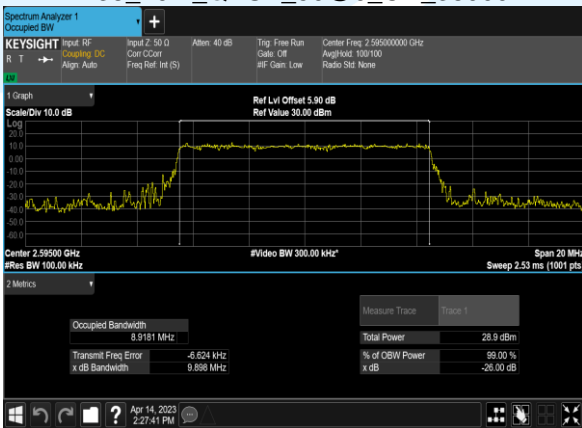
B38_10M_QPSK_50@0_CH_37800



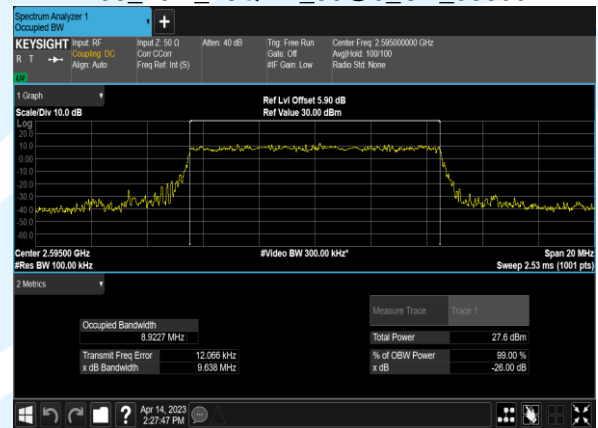
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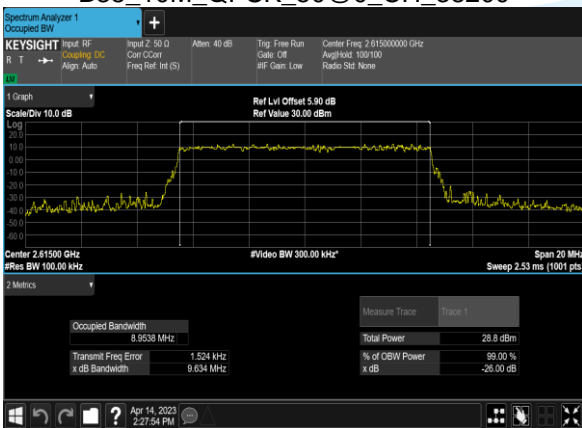
B38_10M_QPSK_50@0_CH_38000



B38_10M_16QAM_50@0_CH_38000



B38_10M_QPSK_50@0_CH_38200



B38_10M_16QAM_50@0_CH_38200

