



# Appendix B

## E-UTRA BAND 12



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## 1. Effective (Isotropic) Radiated Power

### 1.1. Test Result

| BAND   | Bandwidth | Modulation | Channel | RB Configuration | Result (dBm) | ERP (dBm) | Limit (dBm) | Verdict |
|--------|-----------|------------|---------|------------------|--------------|-----------|-------------|---------|
| BAND12 | 1.4MHz    | QPSK       | 23017   | 1RB#0            | 23.29        | 24.14     | 34.77       | PASS    |
| BAND12 | 1.4MHz    | QPSK       | 23017   | 1RB#2            | 23.26        | 24.11     | 34.77       | PASS    |
| BAND12 | 1.4MHz    | QPSK       | 23017   | 1RB#5            | 23.30        | 24.15     | 34.77       | PASS    |
| BAND12 | 1.4MHz    | QPSK       | 23017   | 3RB#0            | 23.28        | 24.13     | 34.77       | PASS    |
| BAND12 | 1.4MHz    | QPSK       | 23017   | 3RB#1            | 23.26        | 24.11     | 34.77       | PASS    |
| BAND12 | 1.4MHz    | QPSK       | 23017   | 3RB#3            | 23.27        | 24.12     | 34.77       | PASS    |
| BAND12 | 1.4MHz    | QPSK       | 23017   | 6RB#0            | 22.28        | 23.13     | 34.77       | PASS    |
| BAND12 | 1.4MHz    | QPSK       | 23095   | 1RB#0            | 23.54        | 24.39     | 34.77       | PASS    |
| BAND12 | 1.4MHz    | QPSK       | 23095   | 1RB#2            | 23.53        | 24.38     | 34.77       | PASS    |
| BAND12 | 1.4MHz    | QPSK       | 23095   | 1RB#5            | 23.54        | 24.39     | 34.77       | PASS    |
| BAND12 | 1.4MHz    | QPSK       | 23095   | 3RB#0            | 23.53        | 24.38     | 34.77       | PASS    |
| BAND12 | 1.4MHz    | QPSK       | 23095   | 3RB#1            | 23.52        | 24.37     | 34.77       | PASS    |
| BAND12 | 1.4MHz    | QPSK       | 23095   | 3RB#3            | 23.51        | 24.36     | 34.77       | PASS    |
| BAND12 | 1.4MHz    | QPSK       | 23095   | 6RB#0            | 22.54        | 23.39     | 34.77       | PASS    |
| BAND12 | 1.4MHz    | QPSK       | 23173   | 1RB#0            | 23.82        | 24.67     | 34.77       | PASS    |
| BAND12 | 1.4MHz    | QPSK       | 23173   | 1RB#2            | 23.76        | 24.61     | 34.77       | PASS    |
| BAND12 | 1.4MHz    | QPSK       | 23173   | 1RB#5            | 23.85        | 24.70     | 34.77       | PASS    |
| BAND12 | 1.4MHz    | QPSK       | 23173   | 3RB#0            | 23.76        | 24.61     | 34.77       | PASS    |
| BAND12 | 1.4MHz    | QPSK       | 23173   | 3RB#1            | 23.75        | 24.60     | 34.77       | PASS    |
| BAND12 | 1.4MHz    | QPSK       | 23173   | 3RB#3            | 23.80        | 24.65     | 34.77       | PASS    |
| BAND12 | 1.4MHz    | QPSK       | 23173   | 6RB#0            | 22.80        | 23.65     | 34.77       | PASS    |
| BAND12 | 1.4MHz    | 16QAM      | 23017   | 1RB#0            | 22.55        | 23.40     | 34.77       | PASS    |
| BAND12 | 1.4MHz    | 16QAM      | 23017   | 1RB#2            | 22.37        | 23.22     | 34.77       | PASS    |
| BAND12 | 1.4MHz    | 16QAM      | 23017   | 1RB#5            | 22.47        | 23.32     | 34.77       | PASS    |
| BAND12 | 1.4MHz    | 16QAM      | 23017   | 3RB#0            | 22.31        | 23.16     | 34.77       | PASS    |
| BAND12 | 1.4MHz    | 16QAM      | 23017   | 3RB#1            | 22.33        | 23.18     | 34.77       | PASS    |
| BAND12 | 1.4MHz    | 16QAM      | 23017   | 3RB#3            | 22.32        | 23.17     | 34.77       | PASS    |
| BAND12 | 1.4MHz    | 16QAM      | 23017   | 6RB#0            | 21.30        | 22.15     | 34.77       | PASS    |
| BAND12 | 1.4MHz    | 16QAM      | 23095   | 1RB#0            | 22.77        | 23.62     | 34.77       | PASS    |
| BAND12 | 1.4MHz    | 16QAM      | 23095   | 1RB#2            | 22.62        | 23.47     | 34.77       | PASS    |
| BAND12 | 1.4MHz    | 16QAM      | 23095   | 1RB#5            | 22.77        | 23.62     | 34.77       | PASS    |
| BAND12 | 1.4MHz    | 16QAM      | 23095   | 3RB#0            | 22.63        | 23.48     | 34.77       | PASS    |
| BAND12 | 1.4MHz    | 16QAM      | 23095   | 3RB#1            | 22.62        | 23.47     | 34.77       | PASS    |
| BAND12 | 1.4MHz    | 16QAM      | 23095   | 3RB#3            | 22.53        | 23.38     | 34.77       | PASS    |



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|        |        |       |       |        |       |       |       |      |
|--------|--------|-------|-------|--------|-------|-------|-------|------|
| BAND12 | 1.4MHz | 16QAM | 23095 | 6RB#0  | 21.60 | 22.45 | 34.77 | PASS |
| BAND12 | 1.4MHz | 16QAM | 23173 | 1RB#0  | 22.86 | 23.71 | 34.77 | PASS |
| BAND12 | 1.4MHz | 16QAM | 23173 | 1RB#2  | 22.93 | 23.78 | 34.77 | PASS |
| BAND12 | 1.4MHz | 16QAM | 23173 | 1RB#5  | 22.93 | 23.78 | 34.77 | PASS |
| BAND12 | 1.4MHz | 16QAM | 23173 | 3RB#0  | 22.85 | 23.70 | 34.77 | PASS |
| BAND12 | 1.4MHz | 16QAM | 23173 | 3RB#1  | 22.81 | 23.66 | 34.77 | PASS |
| BAND12 | 1.4MHz | 16QAM | 23173 | 3RB#3  | 22.80 | 23.65 | 34.77 | PASS |
| BAND12 | 1.4MHz | 16QAM | 23173 | 6RB#0  | 21.81 | 22.66 | 34.77 | PASS |
| BAND12 | 1.4MHz | 64QAM | 23017 | 1RB#0  | 21.48 | 22.33 | 34.77 | PASS |
| BAND12 | 1.4MHz | 64QAM | 23017 | 1RB#2  | 21.36 | 22.21 | 34.77 | PASS |
| BAND12 | 1.4MHz | 64QAM | 23017 | 1RB#5  | 21.67 | 22.52 | 34.77 | PASS |
| BAND12 | 1.4MHz | 64QAM | 23017 | 3RB#0  | 21.14 | 21.99 | 34.77 | PASS |
| BAND12 | 1.4MHz | 64QAM | 23017 | 3RB#1  | 21.43 | 22.28 | 34.77 | PASS |
| BAND12 | 1.4MHz | 64QAM | 23017 | 3RB#3  | 21.16 | 22.01 | 34.77 | PASS |
| BAND12 | 1.4MHz | 64QAM | 23017 | 6RB#0  | 20.14 | 20.99 | 34.77 | PASS |
| BAND12 | 1.4MHz | 64QAM | 23095 | 1RB#0  | 21.77 | 22.62 | 34.77 | PASS |
| BAND12 | 1.4MHz | 64QAM | 23095 | 1RB#2  | 21.76 | 22.61 | 34.77 | PASS |
| BAND12 | 1.4MHz | 64QAM | 23095 | 1RB#5  | 21.94 | 22.79 | 34.77 | PASS |
| BAND12 | 1.4MHz | 64QAM | 23095 | 3RB#0  | 21.69 | 22.54 | 34.77 | PASS |
| BAND12 | 1.4MHz | 64QAM | 23095 | 3RB#1  | 21.62 | 22.47 | 34.77 | PASS |
| BAND12 | 1.4MHz | 64QAM | 23095 | 3RB#3  | 21.39 | 22.24 | 34.77 | PASS |
| BAND12 | 1.4MHz | 64QAM | 23095 | 6RB#0  | 20.61 | 21.46 | 34.77 | PASS |
| BAND12 | 1.4MHz | 64QAM | 23173 | 1RB#0  | 21.82 | 22.67 | 34.77 | PASS |
| BAND12 | 1.4MHz | 64QAM | 23173 | 1RB#2  | 21.88 | 22.73 | 34.77 | PASS |
| BAND12 | 1.4MHz | 64QAM | 23173 | 1RB#5  | 21.73 | 22.58 | 34.77 | PASS |
| BAND12 | 1.4MHz | 64QAM | 23173 | 3RB#0  | 21.77 | 22.62 | 34.77 | PASS |
| BAND12 | 1.4MHz | 64QAM | 23173 | 3RB#1  | 21.85 | 22.70 | 34.77 | PASS |
| BAND12 | 1.4MHz | 64QAM | 23173 | 3RB#3  | 21.64 | 22.49 | 34.77 | PASS |
| BAND12 | 1.4MHz | 64QAM | 23173 | 6RB#0  | 20.80 | 21.65 | 34.77 | PASS |
| BAND12 | 3MHz   | QPSK  | 23025 | 1RB#0  | 23.25 | 24.10 | 34.77 | PASS |
| BAND12 | 3MHz   | QPSK  | 23025 | 1RB#14 | 23.40 | 24.25 | 34.77 | PASS |
| BAND12 | 3MHz   | QPSK  | 23025 | 1RB#8  | 23.26 | 24.11 | 34.77 | PASS |
| BAND12 | 3MHz   | QPSK  | 23025 | 8RB#0  | 22.30 | 23.15 | 34.77 | PASS |
| BAND12 | 3MHz   | QPSK  | 23025 | 8RB#4  | 22.27 | 23.12 | 34.77 | PASS |
| BAND12 | 3MHz   | QPSK  | 23025 | 8RB#7  | 22.32 | 23.17 | 34.77 | PASS |
| BAND12 | 3MHz   | QPSK  | 23025 | 15RB#0 | 22.26 | 23.11 | 34.77 | PASS |
| BAND12 | 3MHz   | QPSK  | 23095 | 1RB#0  | 23.51 | 24.36 | 34.77 | PASS |
| BAND12 | 3MHz   | QPSK  | 23095 | 1RB#14 | 23.62 | 24.47 | 34.77 | PASS |
| BAND12 | 3MHz   | QPSK  | 23095 | 1RB#8  | 23.51 | 24.36 | 34.77 | PASS |
| BAND12 | 3MHz   | QPSK  | 23095 | 8RB#0  | 22.55 | 23.40 | 34.77 | PASS |
| BAND12 | 3MHz   | QPSK  | 23095 | 8RB#4  | 22.52 | 23.37 | 34.77 | PASS |

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|        |      |       |       |        |       |       |       |      |
|--------|------|-------|-------|--------|-------|-------|-------|------|
| BAND12 | 3MHz | QPSK  | 23095 | 8RB#7  | 22.58 | 23.43 | 34.77 | PASS |
| BAND12 | 3MHz | QPSK  | 23095 | 15RB#0 | 22.53 | 23.38 | 34.77 | PASS |
| BAND12 | 3MHz | QPSK  | 23165 | 1RB#0  | 23.63 | 24.48 | 34.77 | PASS |
| BAND12 | 3MHz | QPSK  | 23165 | 1RB#14 | 23.76 | 24.61 | 34.77 | PASS |
| BAND12 | 3MHz | QPSK  | 23165 | 1RB#8  | 23.76 | 24.61 | 34.77 | PASS |
| BAND12 | 3MHz | QPSK  | 23165 | 8RB#0  | 22.74 | 23.59 | 34.77 | PASS |
| BAND12 | 3MHz | QPSK  | 23165 | 8RB#4  | 22.78 | 23.63 | 34.77 | PASS |
| BAND12 | 3MHz | QPSK  | 23165 | 8RB#7  | 22.80 | 23.65 | 34.77 | PASS |
| BAND12 | 3MHz | QPSK  | 23165 | 15RB#0 | 22.79 | 23.64 | 34.77 | PASS |
| BAND12 | 3MHz | 16QAM | 23025 | 1RB#0  | 22.41 | 23.26 | 34.77 | PASS |
| BAND12 | 3MHz | 16QAM | 23025 | 1RB#14 | 22.57 | 23.42 | 34.77 | PASS |
| BAND12 | 3MHz | 16QAM | 23025 | 1RB#8  | 22.49 | 23.34 | 34.77 | PASS |
| BAND12 | 3MHz | 16QAM | 23025 | 8RB#0  | 21.31 | 22.16 | 34.77 | PASS |
| BAND12 | 3MHz | 16QAM | 23025 | 8RB#4  | 21.28 | 22.13 | 34.77 | PASS |
| BAND12 | 3MHz | 16QAM | 23025 | 8RB#7  | 21.26 | 22.11 | 34.77 | PASS |
| BAND12 | 3MHz | 16QAM | 23025 | 15RB#0 | 21.24 | 22.09 | 34.77 | PASS |
| BAND12 | 3MHz | 16QAM | 23095 | 1RB#0  | 22.64 | 23.49 | 34.77 | PASS |
| BAND12 | 3MHz | 16QAM | 23095 | 1RB#14 | 22.67 | 23.52 | 34.77 | PASS |
| BAND12 | 3MHz | 16QAM | 23095 | 1RB#8  | 22.70 | 23.55 | 34.77 | PASS |
| BAND12 | 3MHz | 16QAM | 23095 | 8RB#0  | 21.55 | 22.40 | 34.77 | PASS |
| BAND12 | 3MHz | 16QAM | 23095 | 8RB#4  | 21.53 | 22.38 | 34.77 | PASS |
| BAND12 | 3MHz | 16QAM | 23095 | 8RB#7  | 21.64 | 22.49 | 34.77 | PASS |
| BAND12 | 3MHz | 16QAM | 23095 | 15RB#0 | 21.53 | 22.38 | 34.77 | PASS |
| BAND12 | 3MHz | 16QAM | 23165 | 1RB#0  | 22.88 | 23.73 | 34.77 | PASS |
| BAND12 | 3MHz | 16QAM | 23165 | 1RB#14 | 22.82 | 23.67 | 34.77 | PASS |
| BAND12 | 3MHz | 16QAM | 23165 | 1RB#8  | 22.76 | 23.61 | 34.77 | PASS |
| BAND12 | 3MHz | 16QAM | 23165 | 8RB#0  | 21.73 | 22.58 | 34.77 | PASS |
| BAND12 | 3MHz | 16QAM | 23165 | 8RB#4  | 21.74 | 22.59 | 34.77 | PASS |
| BAND12 | 3MHz | 16QAM | 23165 | 8RB#7  | 21.73 | 22.58 | 34.77 | PASS |
| BAND12 | 3MHz | 16QAM | 23165 | 15RB#0 | 21.80 | 22.65 | 34.77 | PASS |
| BAND12 | 3MHz | 64QAM | 23025 | 1RB#0  | 21.59 | 22.44 | 34.77 | PASS |
| BAND12 | 3MHz | 64QAM | 23025 | 1RB#14 | 21.44 | 22.29 | 34.77 | PASS |
| BAND12 | 3MHz | 64QAM | 23025 | 1RB#8  | 21.39 | 22.24 | 34.77 | PASS |
| BAND12 | 3MHz | 64QAM | 23025 | 8RB#0  | 20.13 | 20.98 | 34.77 | PASS |
| BAND12 | 3MHz | 64QAM | 23025 | 8RB#4  | 20.29 | 21.14 | 34.77 | PASS |
| BAND12 | 3MHz | 64QAM | 23025 | 8RB#7  | 20.23 | 21.08 | 34.77 | PASS |
| BAND12 | 3MHz | 64QAM | 23025 | 15RB#0 | 20.20 | 21.05 | 34.77 | PASS |
| BAND12 | 3MHz | 64QAM | 23095 | 1RB#0  | 21.47 | 22.32 | 34.77 | PASS |
| BAND12 | 3MHz | 64QAM | 23095 | 1RB#14 | 21.73 | 22.58 | 34.77 | PASS |
| BAND12 | 3MHz | 64QAM | 23095 | 1RB#8  | 21.66 | 22.51 | 34.77 | PASS |
| BAND12 | 3MHz | 64QAM | 23095 | 8RB#0  | 20.53 | 21.38 | 34.77 | PASS |

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|--------|------|-------|-------|---------|-------|-------|-------|------|
| BAND12 | 3MHz | 64QAM | 23095 | 8RB#4   | 20.47 | 21.32 | 34.77 | PASS |
| BAND12 | 3MHz | 64QAM | 23095 | 8RB#7   | 20.71 | 21.56 | 34.77 | PASS |
| BAND12 | 3MHz | 64QAM | 23095 | 15RB#0  | 20.47 | 21.32 | 34.77 | PASS |
| BAND12 | 3MHz | 64QAM | 23165 | 1RB#0   | 21.79 | 22.64 | 34.77 | PASS |
| BAND12 | 3MHz | 64QAM | 23165 | 1RB#14  | 21.64 | 22.49 | 34.77 | PASS |
| BAND12 | 3MHz | 64QAM | 23165 | 1RB#8   | 21.73 | 22.58 | 34.77 | PASS |
| BAND12 | 3MHz | 64QAM | 23165 | 8RB#0   | 20.57 | 21.42 | 34.77 | PASS |
| BAND12 | 3MHz | 64QAM | 23165 | 8RB#4   | 20.58 | 21.43 | 34.77 | PASS |
| BAND12 | 3MHz | 64QAM | 23165 | 8RB#7   | 20.81 | 21.66 | 34.77 | PASS |
| BAND12 | 3MHz | 64QAM | 23165 | 15RB#0  | 20.88 | 21.73 | 34.77 | PASS |
| BAND12 | 5MHz | QPSK  | 23035 | 1RB#0   | 23.35 | 24.20 | 34.77 | PASS |
| BAND12 | 5MHz | QPSK  | 23035 | 1RB#12  | 23.38 | 24.23 | 34.77 | PASS |
| BAND12 | 5MHz | QPSK  | 23035 | 1RB#24  | 23.52 | 24.37 | 34.77 | PASS |
| BAND12 | 5MHz | QPSK  | 23035 | 12RB#0  | 22.41 | 23.26 | 34.77 | PASS |
| BAND12 | 5MHz | QPSK  | 23035 | 12RB#13 | 22.60 | 23.45 | 34.77 | PASS |
| BAND12 | 5MHz | QPSK  | 23035 | 12RB#6  | 22.52 | 23.37 | 34.77 | PASS |
| BAND12 | 5MHz | QPSK  | 23035 | 25RB#0  | 22.50 | 23.35 | 34.77 | PASS |
| BAND12 | 5MHz | QPSK  | 23095 | 1RB#0   | 23.60 | 24.45 | 34.77 | PASS |
| BAND12 | 5MHz | QPSK  | 23095 | 1RB#12  | 23.51 | 24.36 | 34.77 | PASS |
| BAND12 | 5MHz | QPSK  | 23095 | 1RB#24  | 23.73 | 24.58 | 34.77 | PASS |
| BAND12 | 5MHz | QPSK  | 23095 | 12RB#0  | 22.65 | 23.50 | 34.77 | PASS |
| BAND12 | 5MHz | QPSK  | 23095 | 12RB#13 | 22.74 | 23.59 | 34.77 | PASS |
| BAND12 | 5MHz | QPSK  | 23095 | 12RB#6  | 22.62 | 23.47 | 34.77 | PASS |
| BAND12 | 5MHz | QPSK  | 23095 | 25RB#0  | 22.64 | 23.49 | 34.77 | PASS |
| BAND12 | 5MHz | QPSK  | 23155 | 1RB#0   | 23.85 | 24.70 | 34.77 | PASS |
| BAND12 | 5MHz | QPSK  | 23155 | 1RB#12  | 23.85 | 24.70 | 34.77 | PASS |
| BAND12 | 5MHz | QPSK  | 23155 | 1RB#24  | 23.95 | 24.80 | 34.77 | PASS |
| BAND12 | 5MHz | QPSK  | 23155 | 12RB#0  | 22.97 | 23.82 | 34.77 | PASS |
| BAND12 | 5MHz | QPSK  | 23155 | 12RB#13 | 22.99 | 23.84 | 34.77 | PASS |
| BAND12 | 5MHz | QPSK  | 23155 | 12RB#6  | 22.86 | 23.71 | 34.77 | PASS |
| BAND12 | 5MHz | QPSK  | 23155 | 25RB#0  | 22.92 | 23.77 | 34.77 | PASS |
| BAND12 | 5MHz | 16QAM | 23035 | 1RB#0   | 22.55 | 23.40 | 34.77 | PASS |
| BAND12 | 5MHz | 16QAM | 23035 | 1RB#12  | 22.45 | 23.30 | 34.77 | PASS |
| BAND12 | 5MHz | 16QAM | 23035 | 1RB#24  | 22.56 | 23.41 | 34.77 | PASS |
| BAND12 | 5MHz | 16QAM | 23035 | 12RB#0  | 21.44 | 22.29 | 34.77 | PASS |
| BAND12 | 5MHz | 16QAM | 23035 | 12RB#13 | 21.65 | 22.50 | 34.77 | PASS |
| BAND12 | 5MHz | 16QAM | 23035 | 12RB#6  | 21.54 | 22.39 | 34.77 | PASS |
| BAND12 | 5MHz | 16QAM | 23035 | 25RB#0  | 21.55 | 22.40 | 34.77 | PASS |
| BAND12 | 5MHz | 16QAM | 23095 | 1RB#0   | 22.72 | 23.57 | 34.77 | PASS |
| BAND12 | 5MHz | 16QAM | 23095 | 1RB#12  | 22.75 | 23.60 | 34.77 | PASS |
| BAND12 | 5MHz | 16QAM | 23095 | 1RB#24  | 22.90 | 23.75 | 34.77 | PASS |

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|        |       |       |       |         |       |       |       |      |
|--------|-------|-------|-------|---------|-------|-------|-------|------|
| BAND12 | 5MHz  | 16QAM | 23095 | 12RB#0  | 21.73 | 22.58 | 34.77 | PASS |
| BAND12 | 5MHz  | 16QAM | 23095 | 12RB#13 | 21.81 | 22.66 | 34.77 | PASS |
| BAND12 | 5MHz  | 16QAM | 23095 | 12RB#6  | 21.72 | 22.57 | 34.77 | PASS |
| BAND12 | 5MHz  | 16QAM | 23095 | 25RB#0  | 21.69 | 22.54 | 34.77 | PASS |
| BAND12 | 5MHz  | 16QAM | 23155 | 1RB#0   | 22.97 | 23.82 | 34.77 | PASS |
| BAND12 | 5MHz  | 16QAM | 23155 | 1RB#12  | 22.89 | 23.74 | 34.77 | PASS |
| BAND12 | 5MHz  | 16QAM | 23155 | 1RB#24  | 22.92 | 23.77 | 34.77 | PASS |
| BAND12 | 5MHz  | 16QAM | 23155 | 12RB#0  | 21.89 | 22.74 | 34.77 | PASS |
| BAND12 | 5MHz  | 16QAM | 23155 | 12RB#13 | 21.96 | 22.81 | 34.77 | PASS |
| BAND12 | 5MHz  | 16QAM | 23155 | 12RB#6  | 21.92 | 22.77 | 34.77 | PASS |
| BAND12 | 5MHz  | 16QAM | 23155 | 25RB#0  | 21.98 | 22.83 | 34.77 | PASS |
| BAND12 | 5MHz  | 64QAM | 23035 | 1RB#0   | 21.62 | 22.47 | 34.77 | PASS |
| BAND12 | 5MHz  | 64QAM | 23035 | 1RB#12  | 21.50 | 22.35 | 34.77 | PASS |
| BAND12 | 5MHz  | 64QAM | 23035 | 1RB#24  | 21.56 | 22.41 | 34.77 | PASS |
| BAND12 | 5MHz  | 64QAM | 23035 | 12RB#0  | 20.59 | 21.44 | 34.77 | PASS |
| BAND12 | 5MHz  | 64QAM | 23035 | 12RB#13 | 20.47 | 21.32 | 34.77 | PASS |
| BAND12 | 5MHz  | 64QAM | 23035 | 12RB#6  | 20.35 | 21.20 | 34.77 | PASS |
| BAND12 | 5MHz  | 64QAM | 23035 | 25RB#0  | 20.68 | 21.53 | 34.77 | PASS |
| BAND12 | 5MHz  | 64QAM | 23095 | 1RB#0   | 21.54 | 22.39 | 34.77 | PASS |
| BAND12 | 5MHz  | 64QAM | 23095 | 1RB#12  | 21.74 | 22.59 | 34.77 | PASS |
| BAND12 | 5MHz  | 64QAM | 23095 | 1RB#24  | 21.94 | 22.79 | 34.77 | PASS |
| BAND12 | 5MHz  | 64QAM | 23095 | 12RB#0  | 20.87 | 21.72 | 34.77 | PASS |
| BAND12 | 5MHz  | 64QAM | 23095 | 12RB#13 | 20.79 | 21.64 | 34.77 | PASS |
| BAND12 | 5MHz  | 64QAM | 23095 | 12RB#6  | 20.69 | 21.54 | 34.77 | PASS |
| BAND12 | 5MHz  | 64QAM | 23095 | 25RB#0  | 20.61 | 21.46 | 34.77 | PASS |
| BAND12 | 5MHz  | 64QAM | 23155 | 1RB#0   | 21.91 | 22.76 | 34.77 | PASS |
| BAND12 | 5MHz  | 64QAM | 23155 | 1RB#12  | 21.93 | 22.78 | 34.77 | PASS |
| BAND12 | 5MHz  | 64QAM | 23155 | 1RB#24  | 21.89 | 22.74 | 34.77 | PASS |
| BAND12 | 5MHz  | 64QAM | 23155 | 12RB#0  | 20.72 | 21.57 | 34.77 | PASS |
| BAND12 | 5MHz  | 64QAM | 23155 | 12RB#13 | 20.78 | 21.63 | 34.77 | PASS |
| BAND12 | 5MHz  | 64QAM | 23155 | 12RB#6  | 20.92 | 21.77 | 34.77 | PASS |
| BAND12 | 5MHz  | 64QAM | 23155 | 25RB#0  | 20.89 | 21.74 | 34.77 | PASS |
| BAND12 | 10MHz | QPSK  | 23060 | 1RB#0   | 23.44 | 24.29 | 34.77 | PASS |
| BAND12 | 10MHz | QPSK  | 23060 | 1RB#24  | 23.63 | 24.48 | 34.77 | PASS |
| BAND12 | 10MHz | QPSK  | 23060 | 1RB#49  | 23.78 | 24.63 | 34.77 | PASS |
| BAND12 | 10MHz | QPSK  | 23060 | 25RB#0  | 22.60 | 23.45 | 34.77 | PASS |
| BAND12 | 10MHz | QPSK  | 23060 | 25RB#12 | 22.64 | 23.49 | 34.77 | PASS |
| BAND12 | 10MHz | QPSK  | 23060 | 25RB#25 | 22.70 | 23.55 | 34.77 | PASS |
| BAND12 | 10MHz | QPSK  | 23060 | 50RB#0  | 22.71 | 23.56 | 34.77 | PASS |
| BAND12 | 10MHz | QPSK  | 23095 | 1RB#0   | 23.63 | 24.48 | 34.77 | PASS |
| BAND12 | 10MHz | QPSK  | 23095 | 1RB#24  | 23.76 | 24.61 | 34.77 | PASS |

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|        |       |       |       |         |       |       |       |      |
|--------|-------|-------|-------|---------|-------|-------|-------|------|
| BAND12 | 10MHz | QPSK  | 23095 | 1RB#49  | 23.85 | 24.70 | 34.77 | PASS |
| BAND12 | 10MHz | QPSK  | 23095 | 25RB#0  | 22.74 | 23.59 | 34.77 | PASS |
| BAND12 | 10MHz | QPSK  | 23095 | 25RB#12 | 22.70 | 23.55 | 34.77 | PASS |
| BAND12 | 10MHz | QPSK  | 23095 | 25RB#25 | 22.86 | 23.71 | 34.77 | PASS |
| BAND12 | 10MHz | QPSK  | 23095 | 50RB#0  | 22.69 | 23.54 | 34.77 | PASS |
| BAND12 | 10MHz | QPSK  | 23130 | 1RB#0   | 23.75 | 24.60 | 34.77 | PASS |
| BAND12 | 10MHz | QPSK  | 23130 | 1RB#24  | 23.87 | 24.72 | 34.77 | PASS |
| BAND12 | 10MHz | QPSK  | 23130 | 1RB#49  | 23.93 | 24.78 | 34.77 | PASS |
| BAND12 | 10MHz | QPSK  | 23130 | 25RB#0  | 22.83 | 23.68 | 34.77 | PASS |
| BAND12 | 10MHz | QPSK  | 23130 | 25RB#12 | 22.85 | 23.70 | 34.77 | PASS |
| BAND12 | 10MHz | QPSK  | 23130 | 25RB#25 | 22.85 | 23.70 | 34.77 | PASS |
| BAND12 | 10MHz | QPSK  | 23130 | 50RB#0  | 22.88 | 23.73 | 34.77 | PASS |
| BAND12 | 10MHz | 16QAM | 23060 | 1RB#0   | 22.58 | 23.43 | 34.77 | PASS |
| BAND12 | 10MHz | 16QAM | 23060 | 1RB#24  | 22.69 | 23.54 | 34.77 | PASS |
| BAND12 | 10MHz | 16QAM | 23060 | 1RB#49  | 22.91 | 23.76 | 34.77 | PASS |
| BAND12 | 10MHz | 16QAM | 23060 | 25RB#0  | 21.68 | 22.53 | 34.77 | PASS |
| BAND12 | 10MHz | 16QAM | 23060 | 25RB#12 | 21.71 | 22.56 | 34.77 | PASS |
| BAND12 | 10MHz | 16QAM | 23060 | 25RB#25 | 21.77 | 22.62 | 34.77 | PASS |
| BAND12 | 10MHz | 16QAM | 23060 | 50RB#0  | 21.73 | 22.58 | 34.77 | PASS |
| BAND12 | 10MHz | 16QAM | 23095 | 1RB#0   | 22.72 | 23.57 | 34.77 | PASS |
| BAND12 | 10MHz | 16QAM | 23095 | 1RB#24  | 22.80 | 23.65 | 34.77 | PASS |
| BAND12 | 10MHz | 16QAM | 23095 | 1RB#49  | 22.85 | 23.70 | 34.77 | PASS |
| BAND12 | 10MHz | 16QAM | 23095 | 25RB#0  | 21.80 | 22.65 | 34.77 | PASS |
| BAND12 | 10MHz | 16QAM | 23095 | 25RB#12 | 21.75 | 22.60 | 34.77 | PASS |
| BAND12 | 10MHz | 16QAM | 23095 | 25RB#25 | 21.92 | 22.77 | 34.77 | PASS |
| BAND12 | 10MHz | 16QAM | 23095 | 50RB#0  | 21.74 | 22.59 | 34.77 | PASS |
| BAND12 | 10MHz | 16QAM | 23130 | 1RB#0   | 22.95 | 23.80 | 34.77 | PASS |
| BAND12 | 10MHz | 16QAM | 23130 | 1RB#24  | 22.89 | 23.74 | 34.77 | PASS |
| BAND12 | 10MHz | 16QAM | 23130 | 1RB#49  | 22.99 | 23.84 | 34.77 | PASS |
| BAND12 | 10MHz | 16QAM | 23130 | 25RB#0  | 21.90 | 22.75 | 34.77 | PASS |
| BAND12 | 10MHz | 16QAM | 23130 | 25RB#12 | 21.90 | 22.75 | 34.77 | PASS |
| BAND12 | 10MHz | 16QAM | 23130 | 25RB#25 | 21.91 | 22.76 | 34.77 | PASS |
| BAND12 | 10MHz | 16QAM | 23130 | 50RB#0  | 21.91 | 22.76 | 34.77 | PASS |
| BAND12 | 10MHz | 64QAM | 23060 | 1RB#0   | 21.46 | 22.31 | 34.77 | PASS |
| BAND12 | 10MHz | 64QAM | 23060 | 1RB#24  | 21.63 | 22.48 | 34.77 | PASS |
| BAND12 | 10MHz | 64QAM | 23060 | 1RB#49  | 21.74 | 22.59 | 34.77 | PASS |
| BAND12 | 10MHz | 64QAM | 23060 | 25RB#0  | 20.64 | 21.49 | 34.77 | PASS |
| BAND12 | 10MHz | 64QAM | 23060 | 25RB#12 | 20.52 | 21.37 | 34.77 | PASS |
| BAND12 | 10MHz | 64QAM | 23060 | 25RB#25 | 20.59 | 21.44 | 34.77 | PASS |
| BAND12 | 10MHz | 64QAM | 23060 | 50RB#0  | 20.76 | 21.61 | 34.77 | PASS |
| BAND12 | 10MHz | 64QAM | 23095 | 1RB#0   | 21.91 | 22.76 | 34.77 | PASS |

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|        |       |       |       |         |       |       |       |      |
|--------|-------|-------|-------|---------|-------|-------|-------|------|
| BAND12 | 10MHz | 64QAM | 23095 | 1RB#24  | 21.78 | 22.63 | 34.77 | PASS |
| BAND12 | 10MHz | 64QAM | 23095 | 1RB#49  | 21.83 | 22.68 | 34.77 | PASS |
| BAND12 | 10MHz | 64QAM | 23095 | 25RB#0  | 20.66 | 21.51 | 34.77 | PASS |
| BAND12 | 10MHz | 64QAM | 23095 | 25RB#12 | 20.58 | 21.43 | 34.77 | PASS |
| BAND12 | 10MHz | 64QAM | 23095 | 25RB#25 | 20.78 | 21.63 | 34.77 | PASS |
| BAND12 | 10MHz | 64QAM | 23095 | 50RB#0  | 20.66 | 21.51 | 34.77 | PASS |
| BAND12 | 10MHz | 64QAM | 23130 | 1RB#0   | 21.83 | 22.68 | 34.77 | PASS |
| BAND12 | 10MHz | 64QAM | 23130 | 1RB#24  | 21.85 | 22.70 | 34.77 | PASS |
| BAND12 | 10MHz | 64QAM | 23130 | 1RB#49  | 21.99 | 22.84 | 34.77 | PASS |
| BAND12 | 10MHz | 64QAM | 23130 | 25RB#0  | 20.94 | 21.79 | 34.77 | PASS |
| BAND12 | 10MHz | 64QAM | 23130 | 25RB#12 | 20.89 | 21.74 | 34.77 | PASS |
| BAND12 | 10MHz | 64QAM | 23130 | 25RB#25 | 20.83 | 21.68 | 34.77 | PASS |
| BAND12 | 10MHz | 64QAM | 23130 | 50RB#0  | 20.73 | 21.58 | 34.77 | PASS |

Note:

a: For getting the EIRP (Efficient Isotropic Radiated Power) in substitution method, the following formula should be taken to calculate it,

$$\text{ERP [dBm]} = \text{SGP [dBm]} - \text{Cable Loss [dB]} + \text{Gain [dBd]}$$

$$\text{EIRP [dBm]} = \text{SGP [dBm]} - \text{Cable Loss [dB]} + \text{Gain [dBi]}$$

b: SGP=Signal Generator Level

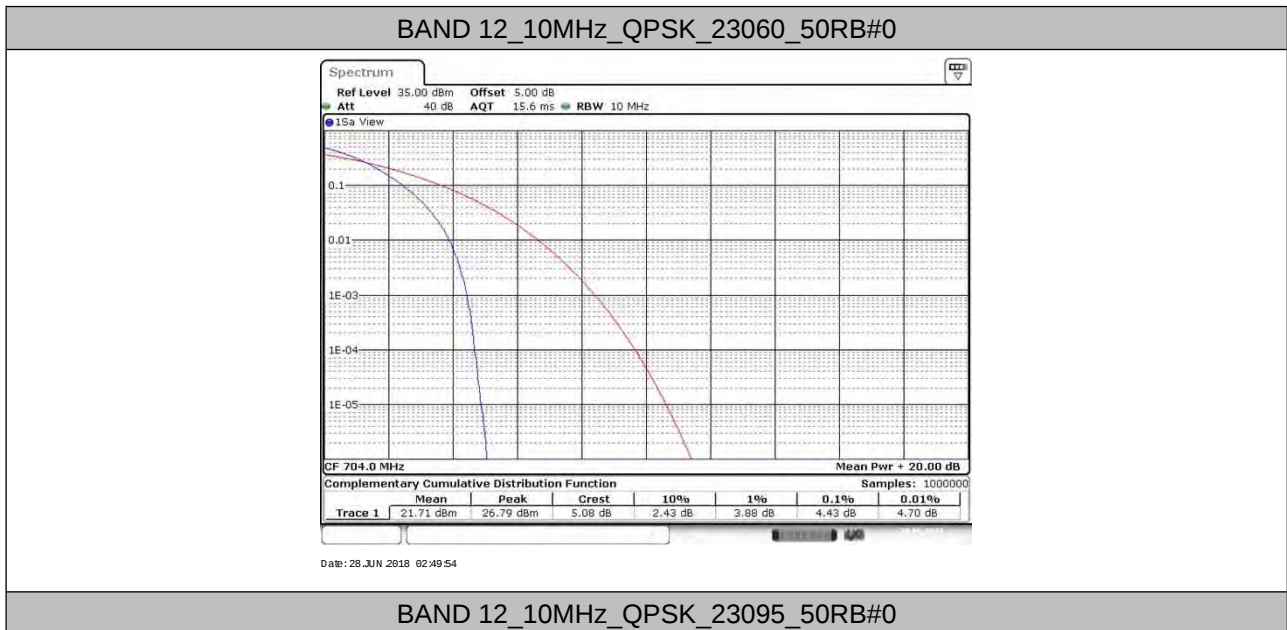


## 2. Peak-to-Average Ratio(CCDF)

### 2.1. Test Result

| BAND    | Bandwidth | Modulation | Channel | RB Configuration | Result(dB) | Limit(dB) | Verdict |
|---------|-----------|------------|---------|------------------|------------|-----------|---------|
| BAND 12 | 10MHz     | QPSK       | 23060   | 50RB#0           | 4.43       | 13        | PASS    |
|         |           |            | 23095   | 50RB#0           | 4.90       | 13        | PASS    |
|         |           |            | 23130   | 50RB#0           | 4.29       | 13        | PASS    |
|         |           | 16QAM      | 23060   | 50RB#0           | 4.81       | 13        | PASS    |
|         |           |            | 23095   | 50RB#0           | 5.39       | 13        | PASS    |
|         |           |            | 23130   | 50RB#0           | 4.84       | 13        | PASS    |
|         |           | 64QAM      | 23060   | 50RB#0           | 4.78       | 13        | PASS    |
|         |           |            | 23095   | 50RB#0           | 5.57       | 13        | PASS    |
|         |           |            | 23130   | 50RB#0           | 4.96       | 13        | PASS    |

### 2.2. Test Plots

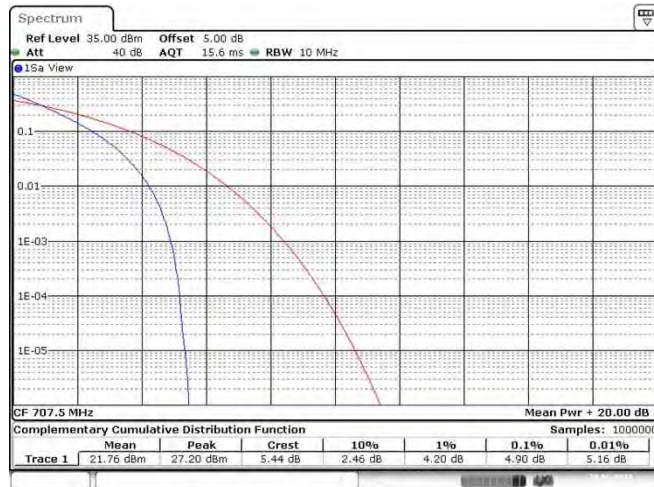




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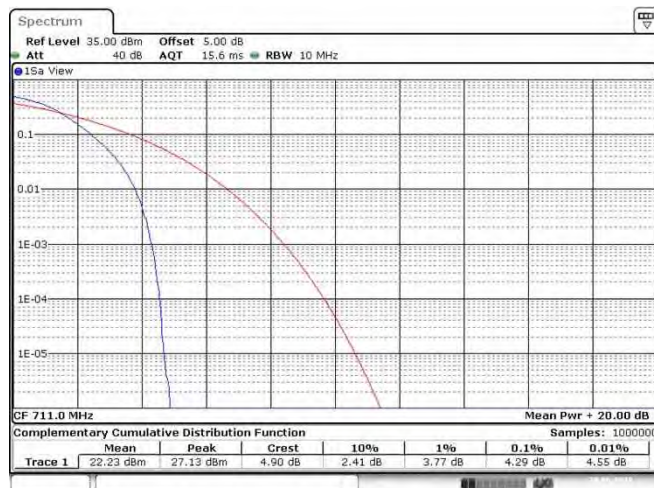
Report No.: SZEM180500437001

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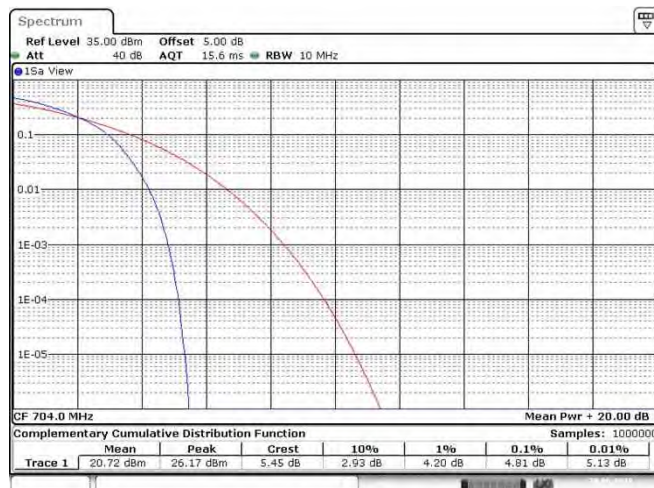
Date: 28 JUN 2018 02:58:29

## BAND 12\_10MHz\_QPSK\_23130\_50RB#0



Date: 28 JUN 2018 02:58:45

## BAND 12\_10MHz\_16QAM\_23060\_50RB#0



Date: 28 JUN 2018 02:58:02

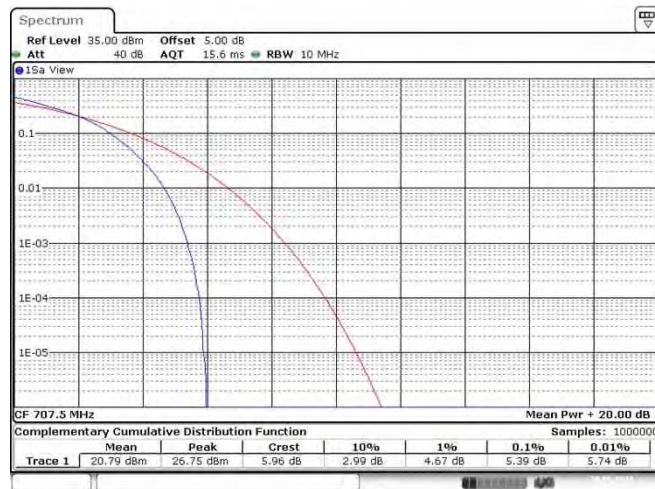
## BAND 12\_10MHz\_16QAM\_23095\_50RB#0



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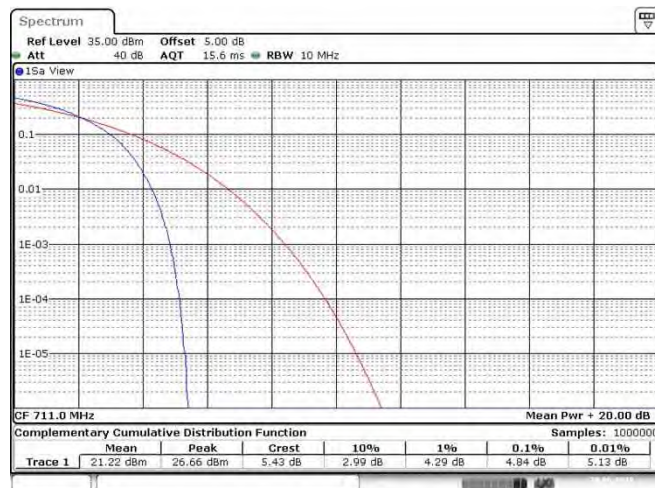
Report No.: SZEM180500437001

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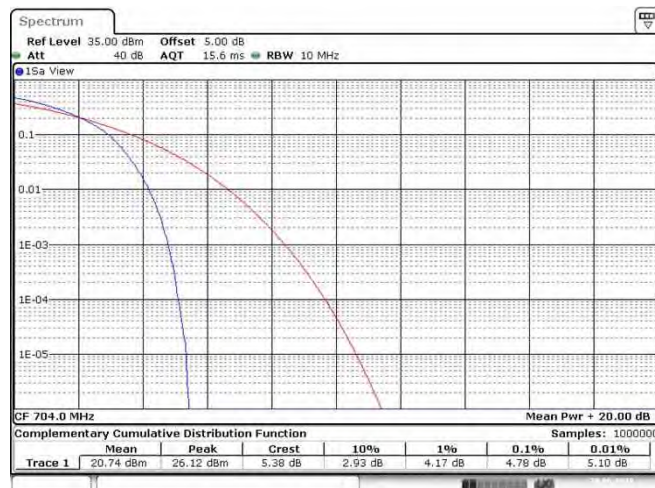
Date: 28 JUN 2018 02:58:28

## BAND 12\_10MHz\_16QAM\_23130\_50RB#0



Date: 28 JUN 2018 02:58:54

## BAND 12\_10MHz\_64QAM\_23060\_50RB#0



Date: 28 JUN 2018 02:58:11

## BAND 12\_10MHz\_64QAM\_23095\_50RB#0

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Date: 28 JUN 2018 02:58:37

BAND 12\_10MHz\_64QAM\_23130\_50RB#0



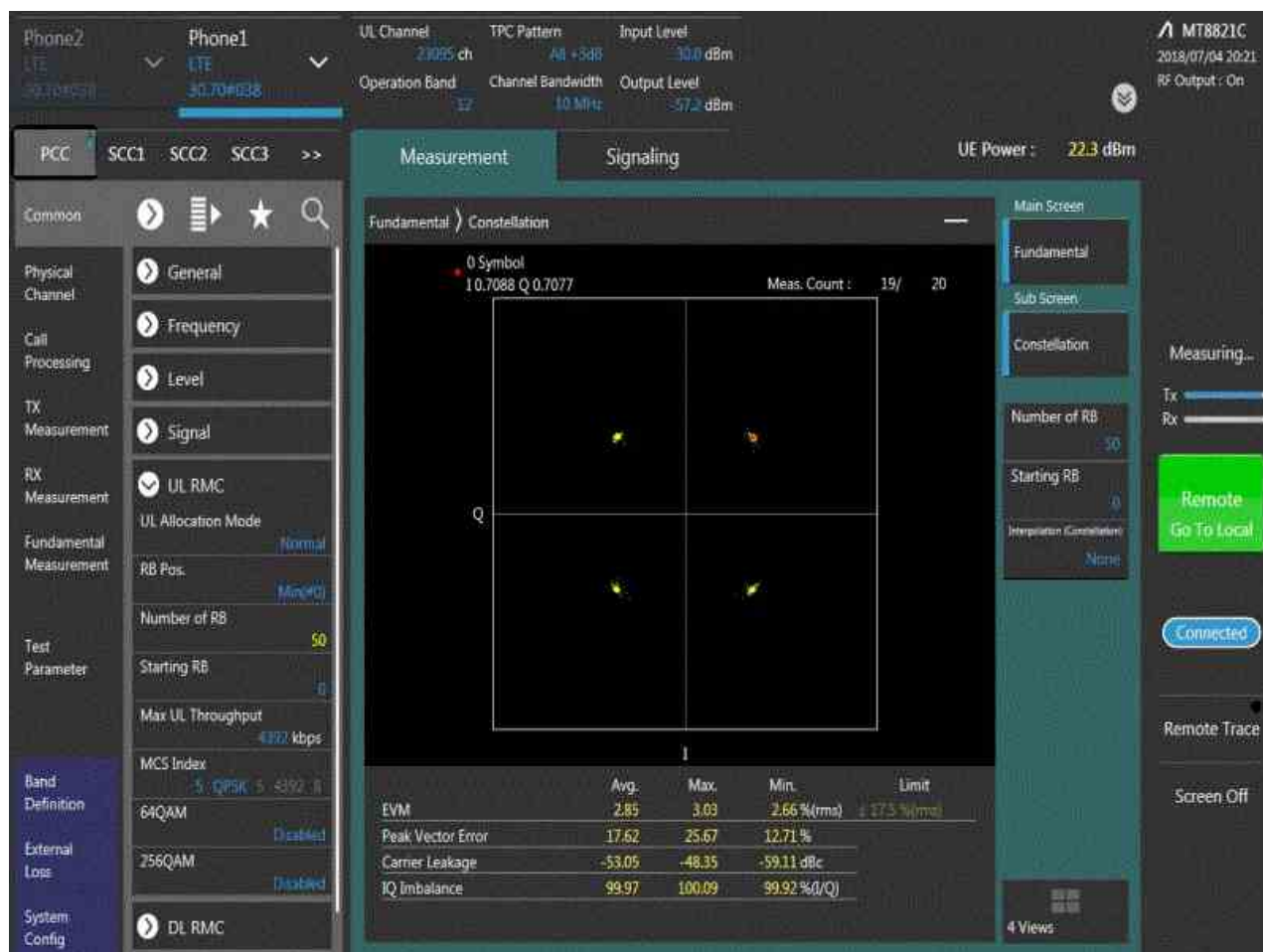
Date: 28 JUN 2018 02:51:03

### 3. Modulation Characteristics

#### 3.1. Test BAND = LTE BAND 12

##### 3.1.1. Test Mode = LTE /TM1 10MHz

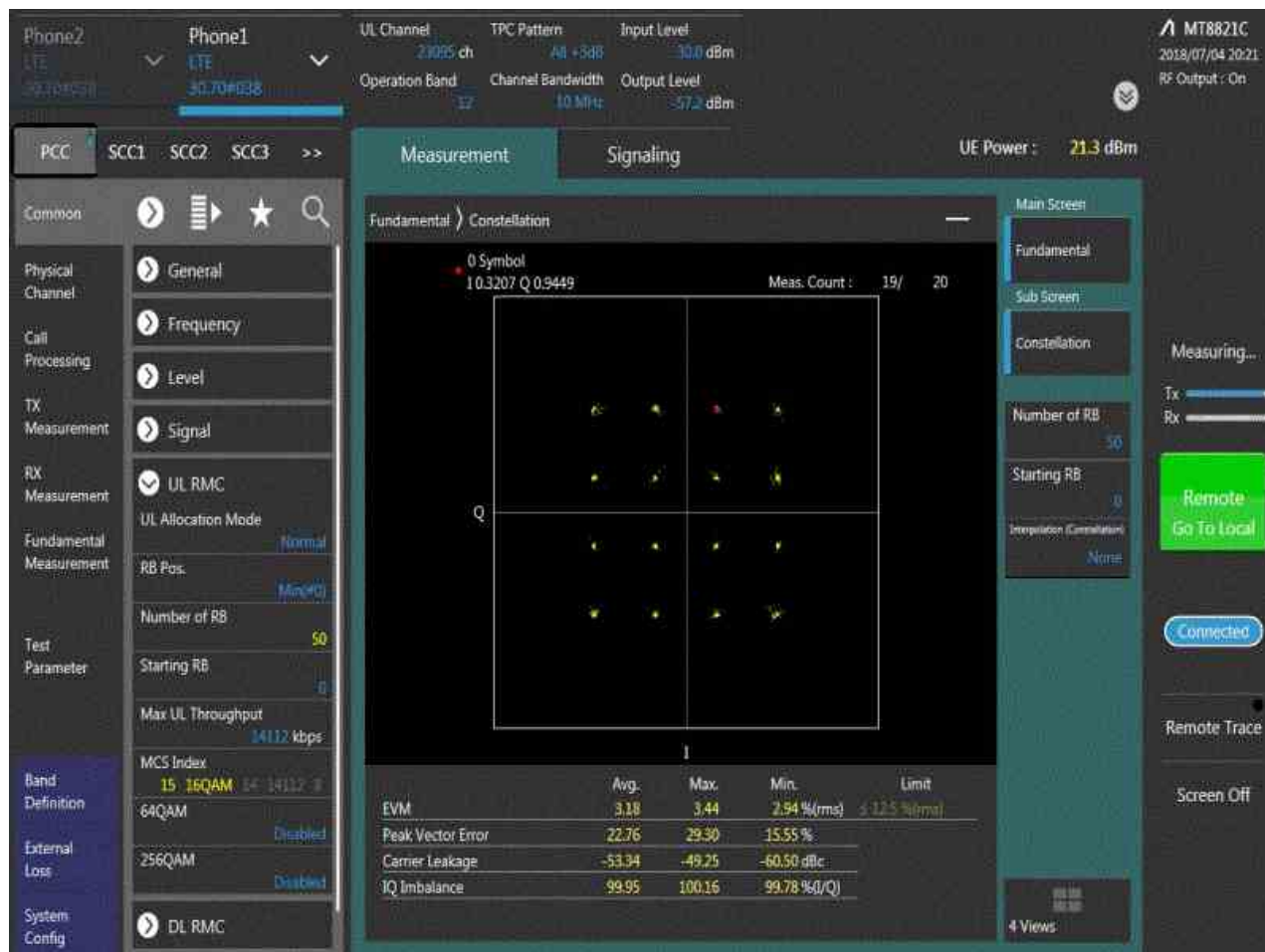
##### 3.1.1.1. Test Channel = MCH





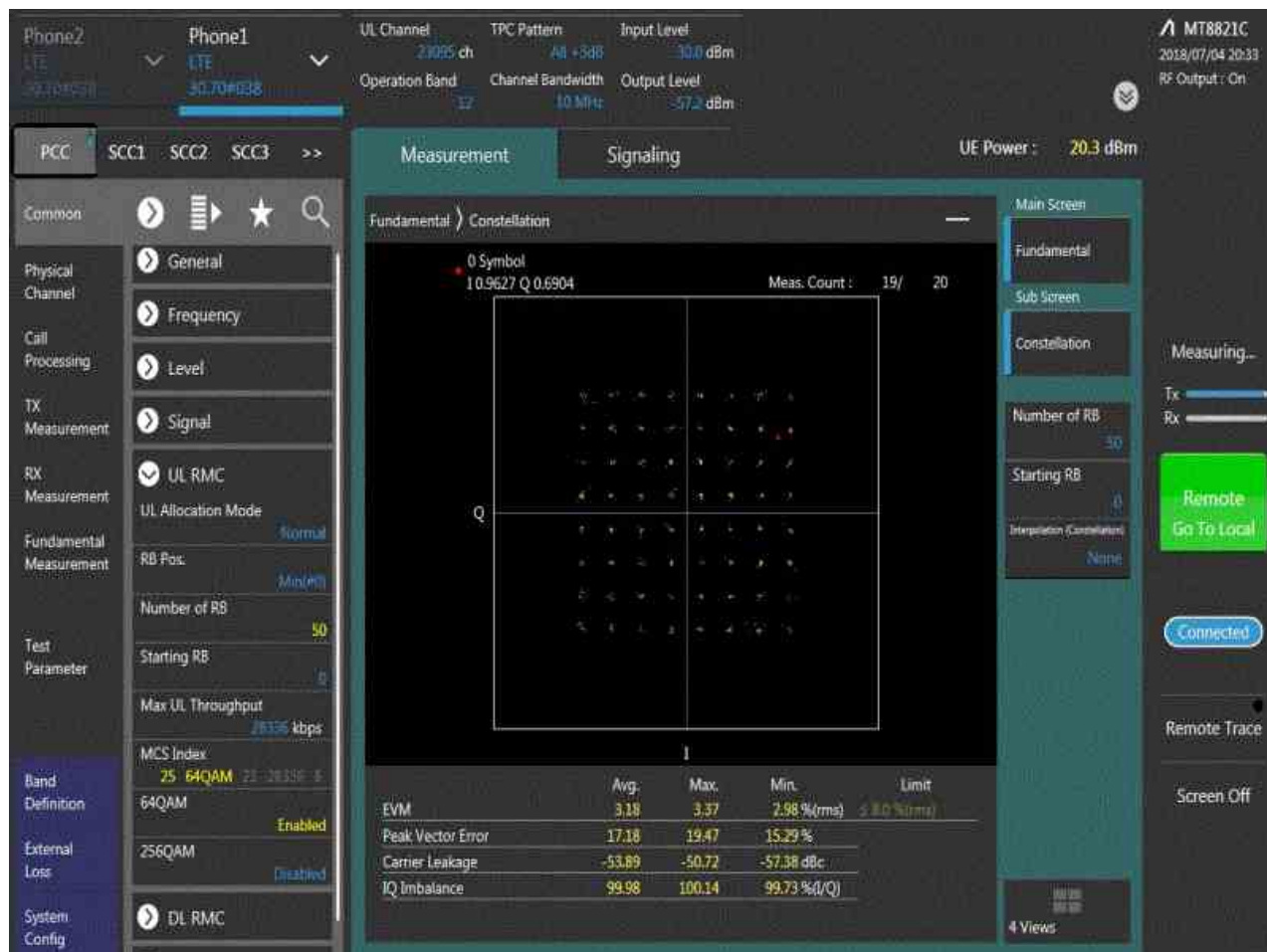
### 3.1.2. Test Mode = LTE /TM2 10MHz

#### 3.1.2.1. Test Channel = MCH



### 3.1.1. Test Mode = LTE /TM3 10MHz

#### 3.1.1.1. Test Channel = MCH





## 4. 26dB Bandwidth and Occupied Bandwidth

### 4.1. Test Result

| BAND   | Bandwidth | Modulation | Channel | RB Configuration | Occupied Bandwidth (MHz) | 26dB Bandwidth (MHz) | Verdict |
|--------|-----------|------------|---------|------------------|--------------------------|----------------------|---------|
| BAND12 | 1.4MHz    | QPSK       | 23017   | 6RB#0            | 1.088                    | 1.260                | PASS    |
|        |           |            | 23095   | 6RB#0            | 1.088                    | 1.251                | PASS    |
|        |           |            | 23173   | 6RB#0            | 1.091                    | 1.320                | PASS    |
|        |           | 64QAM      | 23017   | 6RB#0            | 1.091                    | 1.341                | PASS    |
|        |           |            | 23095   | 6RB#0            | 1.085                    | 1.251                | PASS    |
|        |           |            | 23173   | 6RB#0            | 1.097                    | 1.491                | PASS    |
|        |           | 16QAM      | 23017   | 6RB#0            | 1.091                    | 1.473                | PASS    |
|        |           |            | 23095   | 6RB#0            | 1.088                    | 1.245                | PASS    |
|        |           |            | 23173   | 6RB#0            | 1.094                    | 1.533                | PASS    |
|        | 3MHz      | QPSK       | 23025   | 15RB#0           | 2.685                    | 3.000                | PASS    |
|        |           |            | 23095   | 15RB#0           | 2.685                    | 2.988                | PASS    |
|        |           |            | 23165   | 15RB#0           | 2.697                    | 3.156                | PASS    |
|        |           | 64QAM      | 23025   | 15RB#0           | 2.685                    | 3.168                | PASS    |
|        |           |            | 23095   | 15RB#0           | 2.685                    | 2.976                | PASS    |
|        |           |            | 23165   | 15RB#0           | 2.703                    | 3.852                | PASS    |
|        |           | 16QAM      | 23025   | 15RB#0           | 2.691                    | 3.288                | PASS    |
|        |           |            | 23095   | 15RB#0           | 2.685                    | 2.976                | PASS    |
|        |           |            | 23165   | 15RB#0           | 2.697                    | 3.654                | PASS    |
|        | 5MHz      | QPSK       | 23035   | 25RB#0           | 4.456                    | 4.890                | PASS    |
|        |           |            | 23095   | 25RB#0           | 4.466                    | 4.870                | PASS    |
|        |           |            | 23155   | 25RB#0           | 4.466                    | 4.940                | PASS    |
|        |           | 64QAM      | 23035   | 25RB#0           | 4.466                    | 5.510                | PASS    |
|        |           |            | 23095   | 25RB#0           | 4.466                    | 4.860                | PASS    |
|        |           |            | 23155   | 25RB#0           | 4.466                    | 6.030                | PASS    |
|        |           | 16QAM      | 23035   | 25RB#0           | 4.466                    | 5.550                | PASS    |
|        |           |            | 23095   | 25RB#0           | 4.466                    | 4.860                | PASS    |
|        |           |            | 23155   | 25RB#0           | 4.466                    | 5.790                | PASS    |
|        | 10MHz     | QPSK       | 23060   | 50RB#0           | 8.931                    | 10.060               | PASS    |
|        |           |            | 23095   | 50RB#0           | 8.971                    | 10.220               | PASS    |
|        |           |            | 23130   | 50RB#0           | 8.891                    | 9.900                | PASS    |
|        |           | 64QAM      | 23060   | 50RB#0           | 8.951                    | 10.220               | PASS    |
|        |           |            | 23095   | 50RB#0           | 8.971                    | 10.280               | PASS    |
|        |           |            | 23130   | 50RB#0           | 8.891                    | 10.040               | PASS    |



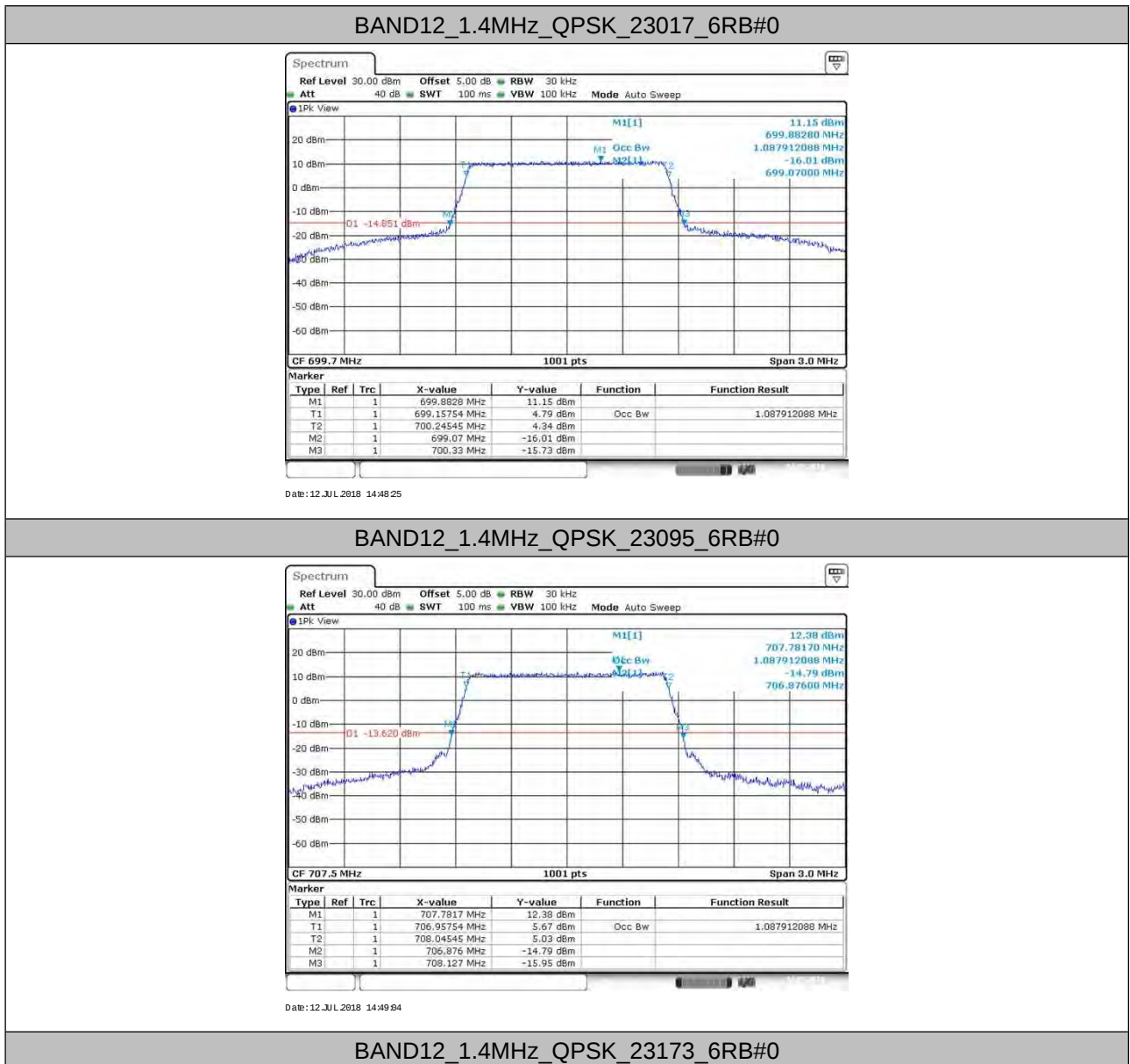
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|  |  |       |       |        |       |        |      |
|--|--|-------|-------|--------|-------|--------|------|
|  |  | 16QAM | 23060 | 50RB#0 | 8.971 | 10.320 | PASS |
|  |  |       | 23095 | 50RB#0 | 8.971 | 10.220 | PASS |
|  |  |       | 23130 | 50RB#0 | 8.891 | 10.000 | PASS |

## 4.2. Test Plots

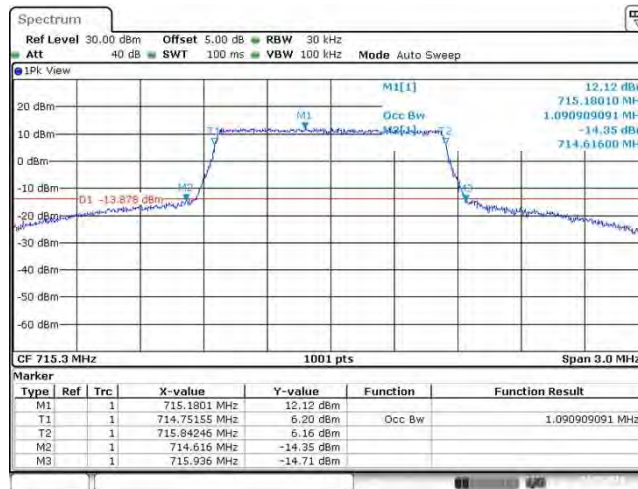




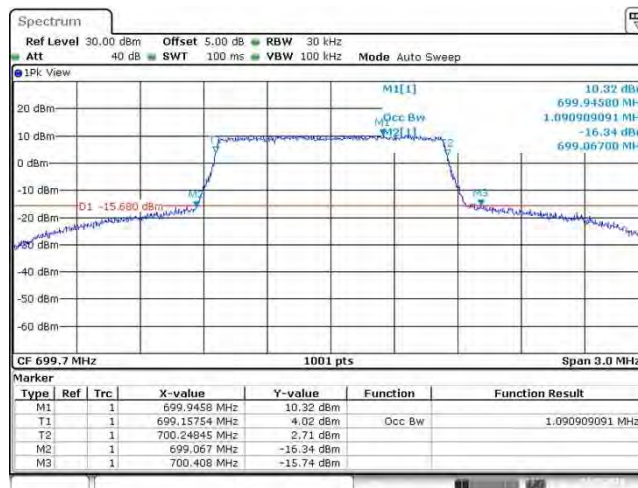
# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM180500437001

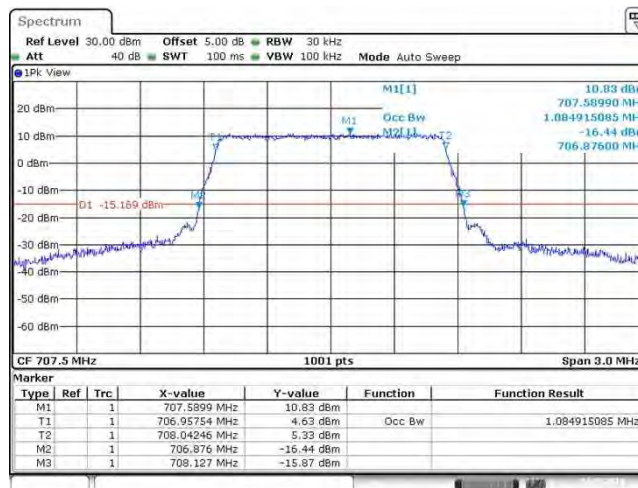
Page: 19 of 58



## BAND12\_1.4MHz\_64QAM\_23017\_6RB#0



## BAND12\_1.4MHz\_64QAM\_23095\_6RB#0



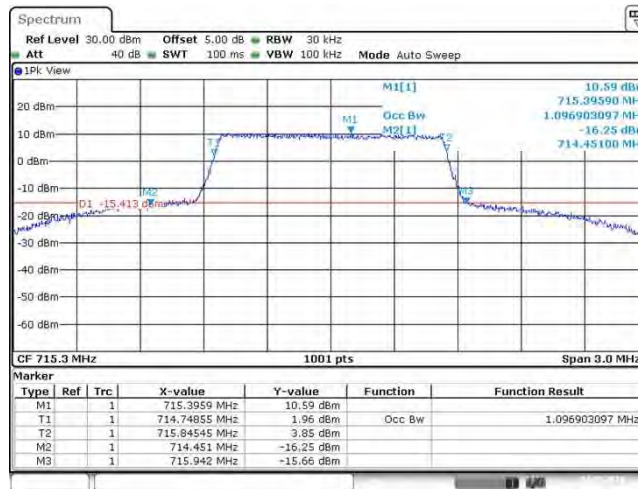
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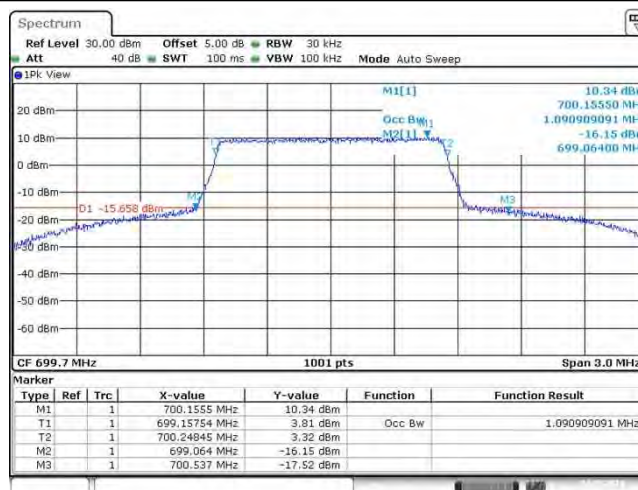
Report No.: SZEM180500437001

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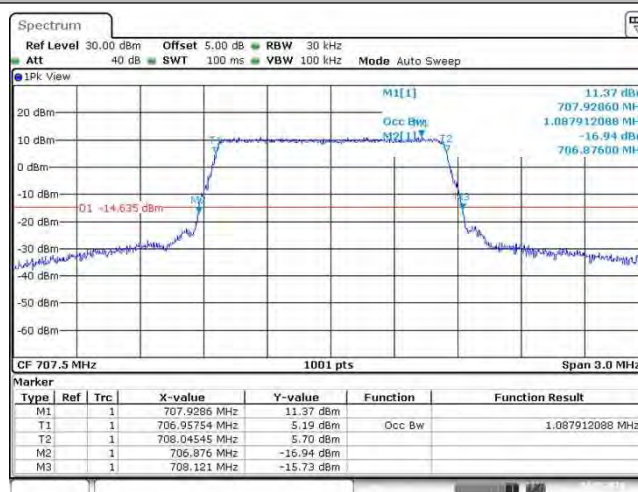
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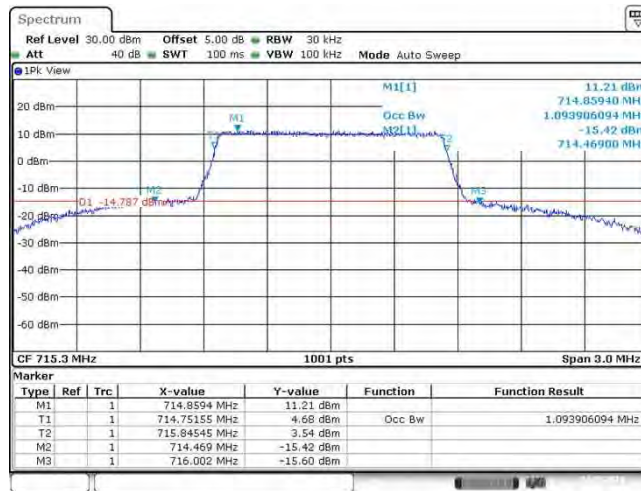
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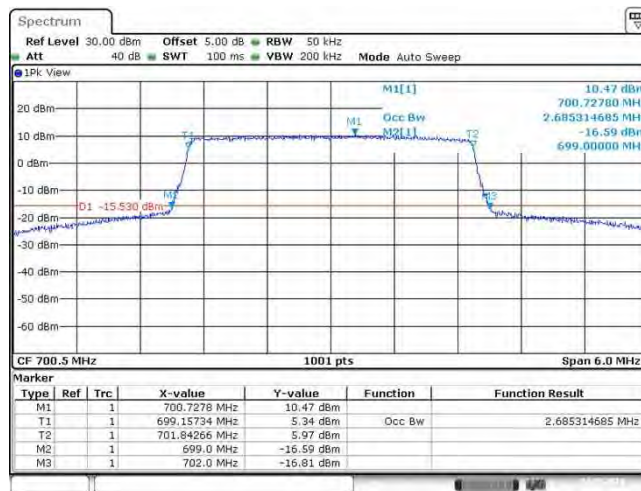
Report No.: SZEM180500437001

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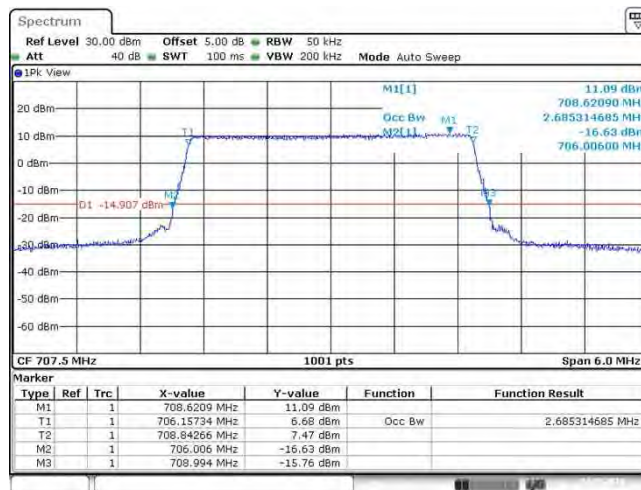
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## BAND12\_3MHz\_QPSK\_23025\_15RB#0



Date: 12 JUL 2018 14:50:26

## BAND12\_3MHz\_QPSK\_23095\_15RB#0



Date: 12 JUL 2018 14:51:05

## BAND12\_3MHz\_QPSK\_23165\_15RB#0

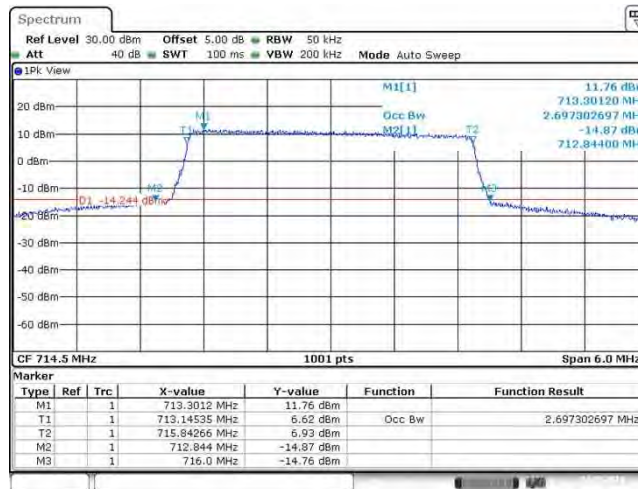
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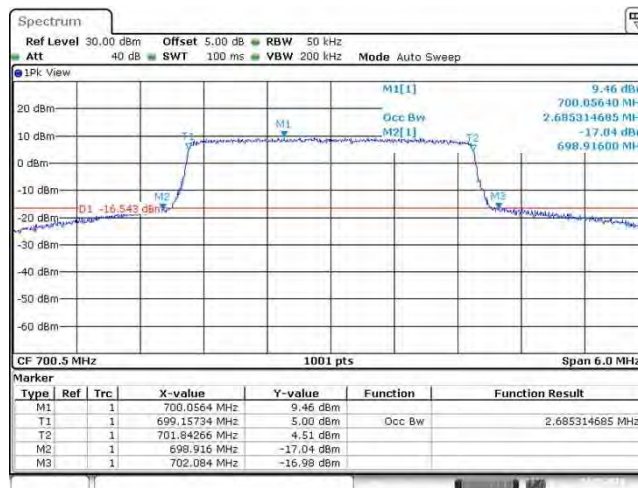
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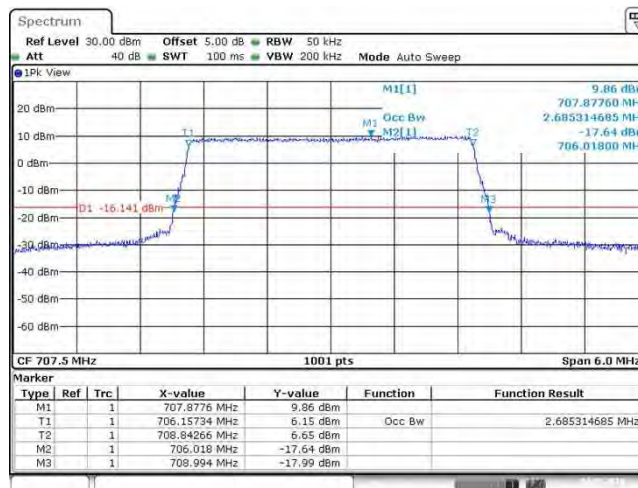
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Date: 12 JUL 2018 14:50:52

## BAND12\_3MHz\_64QAM\_23095\_15RB#0



Date: 12 JUL 2018 14:51:31

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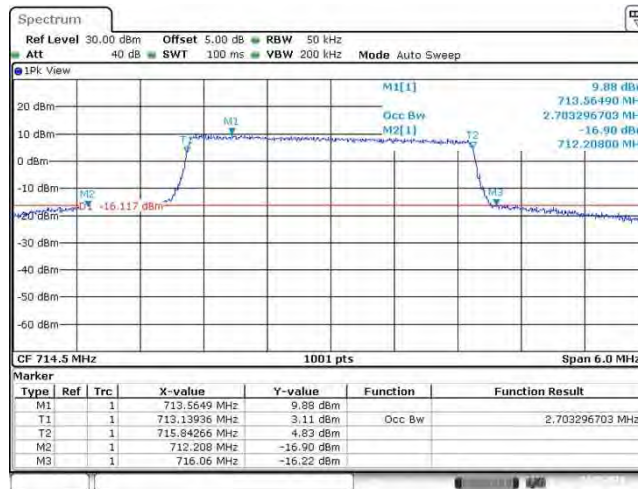
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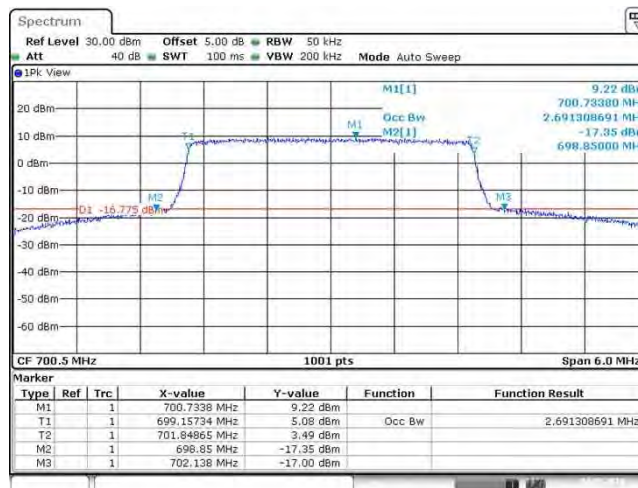
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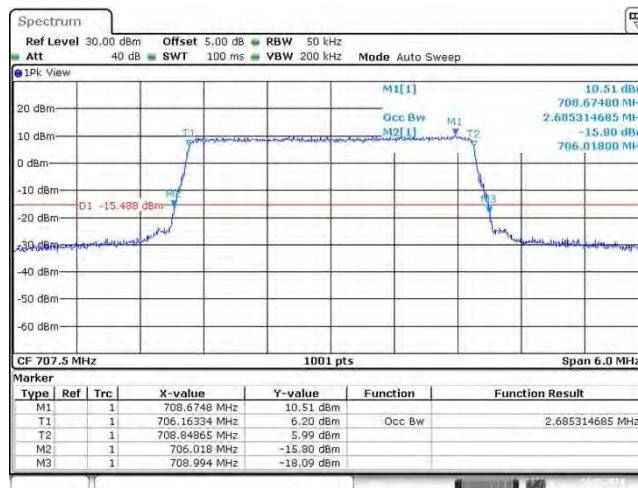
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Date: 12 JUL 2018 14:56:39

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Date: 12 JUL 2018 14:51:18

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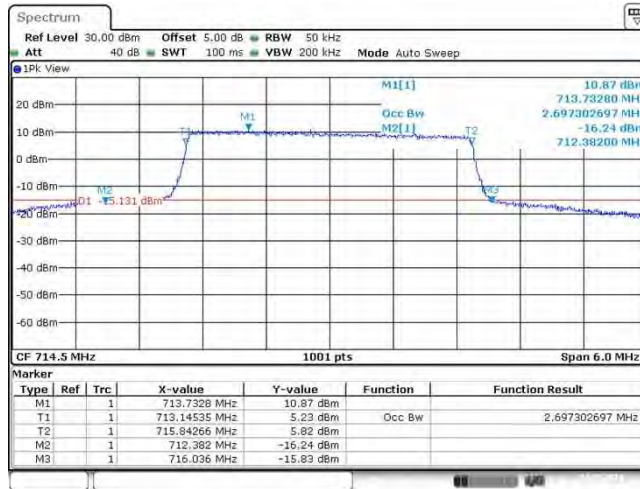
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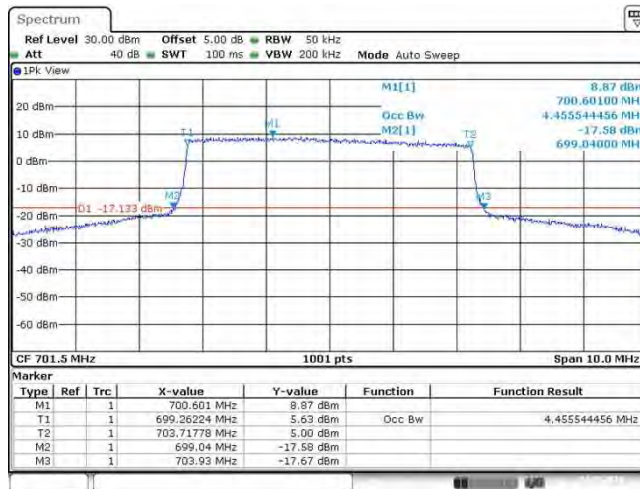
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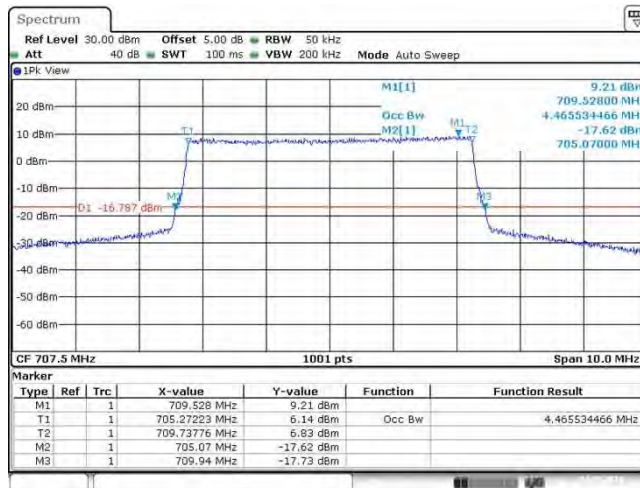
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## BAND12\_5MHz\_QPSK\_23035\_25RB#0



Date: 12 JUL 2018 14:52:35

## BAND12\_5MHz\_QPSK\_23095\_25RB#0



Date: 12 JUL 2018 14:53:35

## BAND12\_5MHz\_QPSK\_23155\_25RB#0

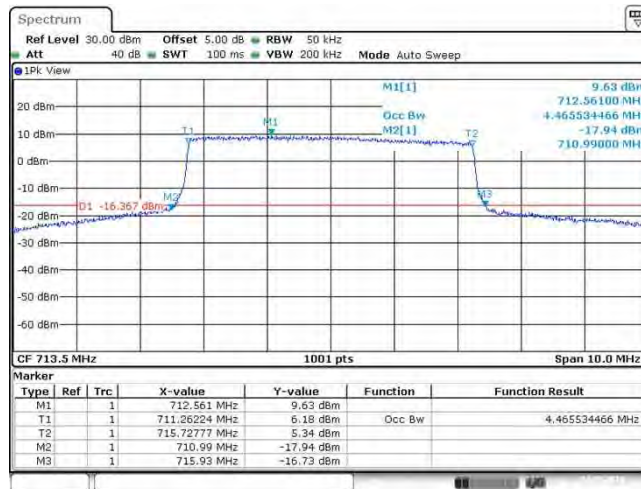
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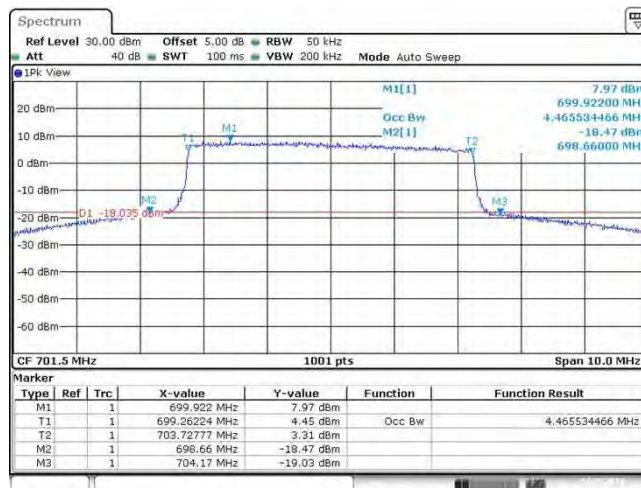
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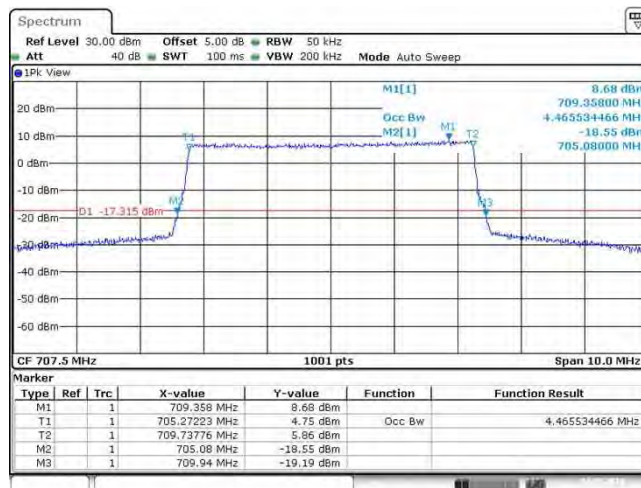
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Date: 12 JUL 2018 14:54:15

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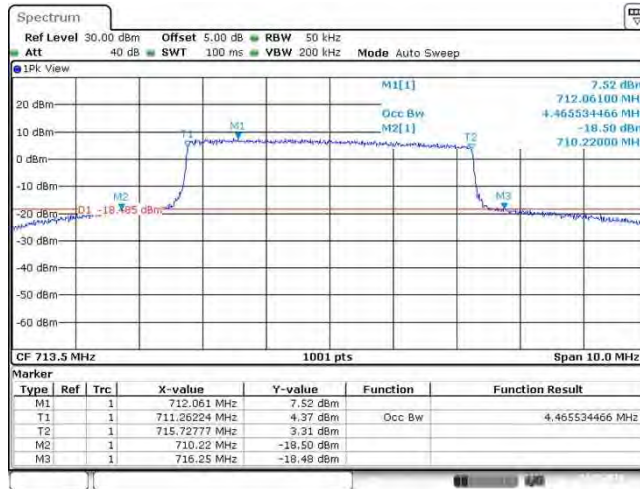
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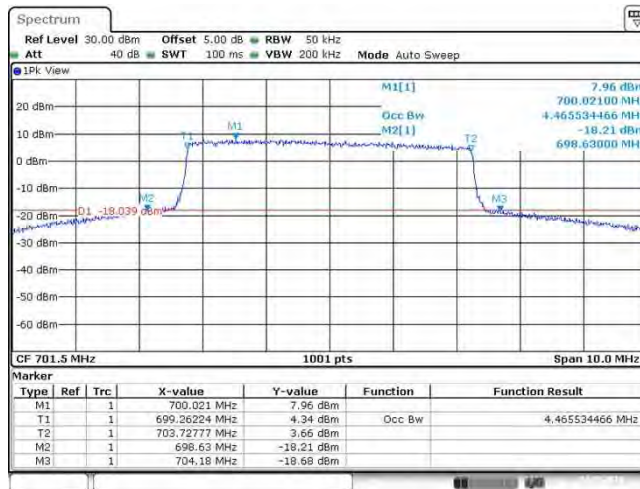
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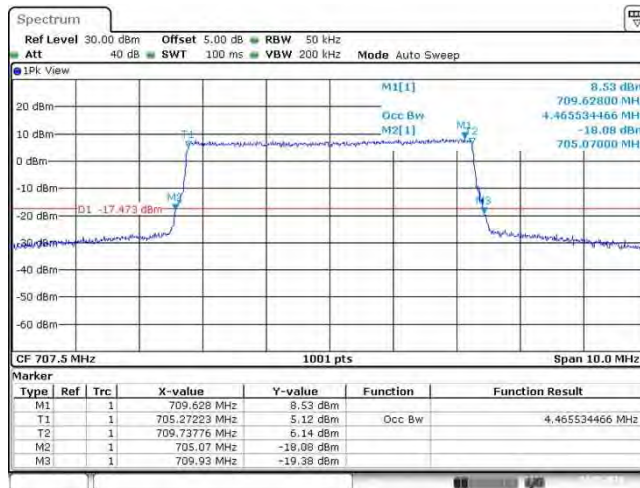
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Date: 12 JUL 2018 14:52:55

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Date: 12 JUL 2018 14:53:55

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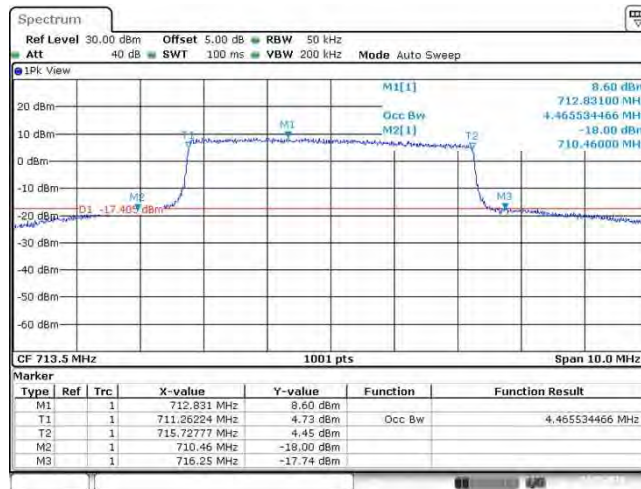
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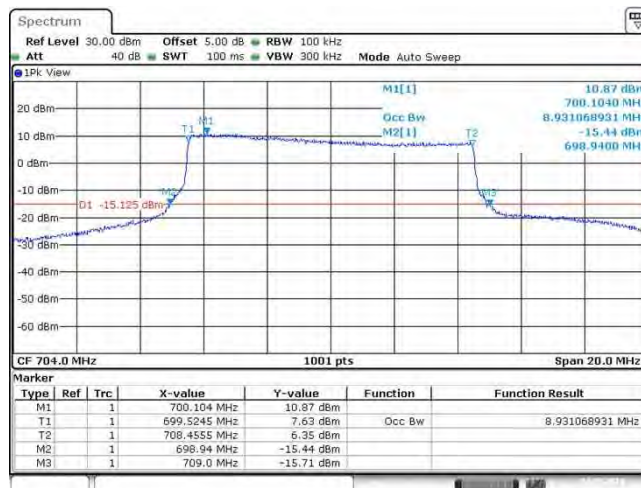
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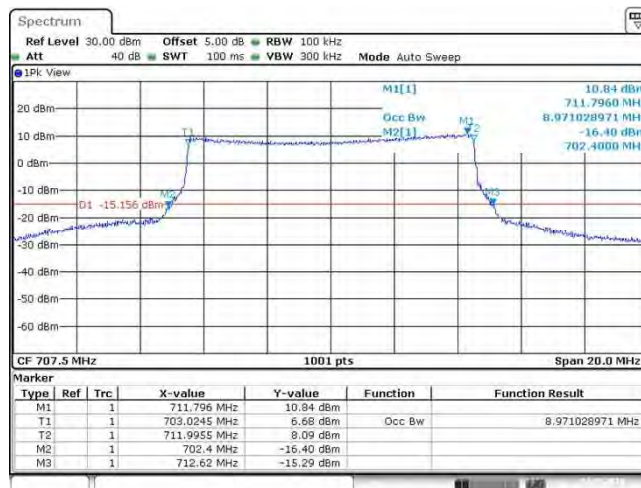
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Date: 12 JUL 2018 14:55:33

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Date: 12 JUL 2018 14:57:52

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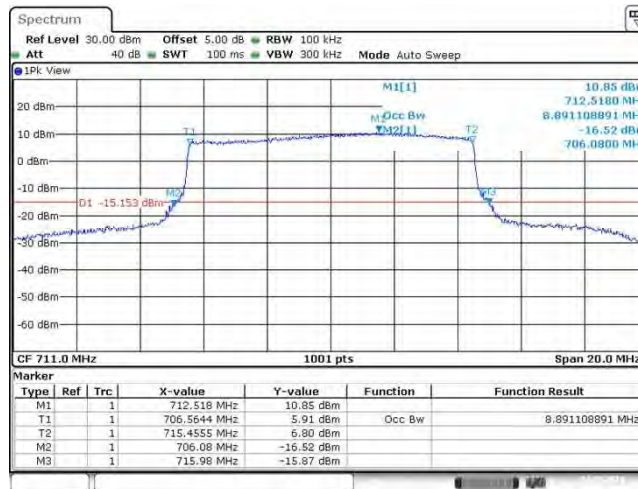
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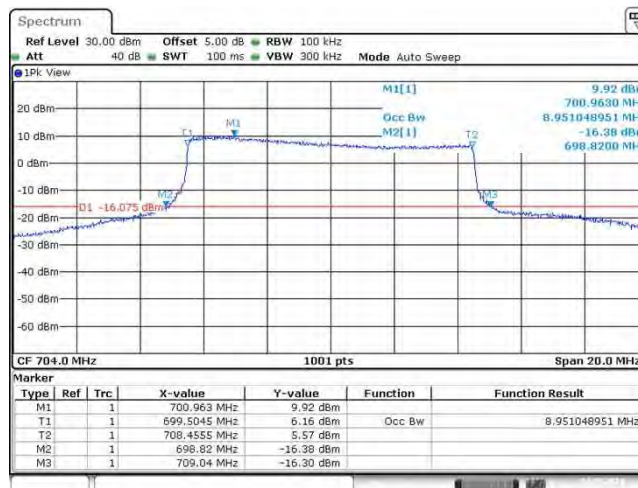
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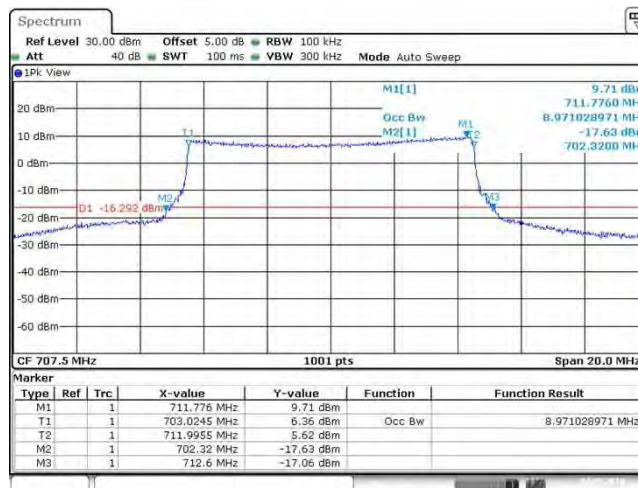
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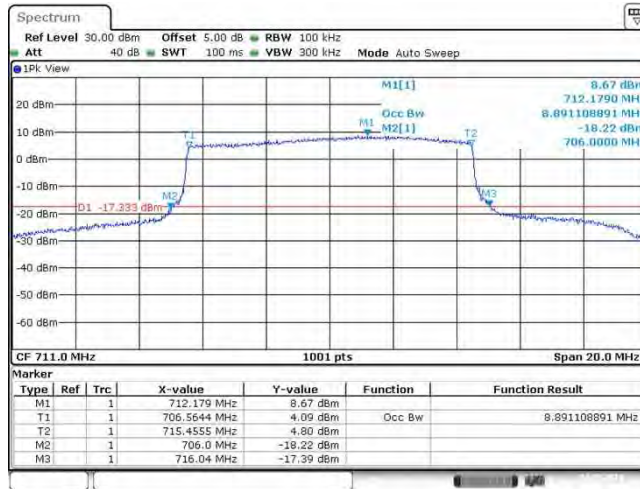
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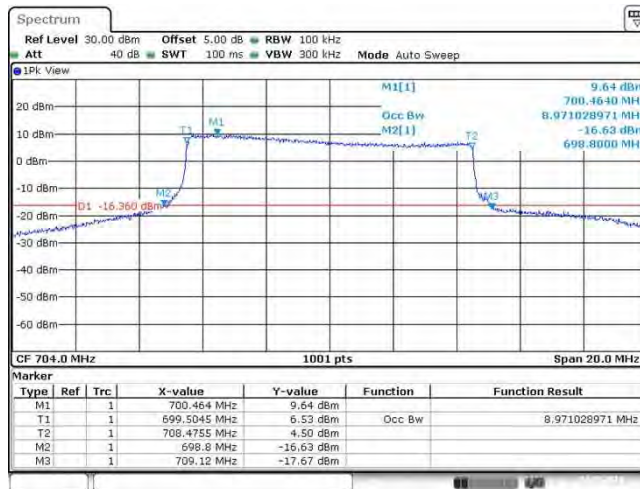
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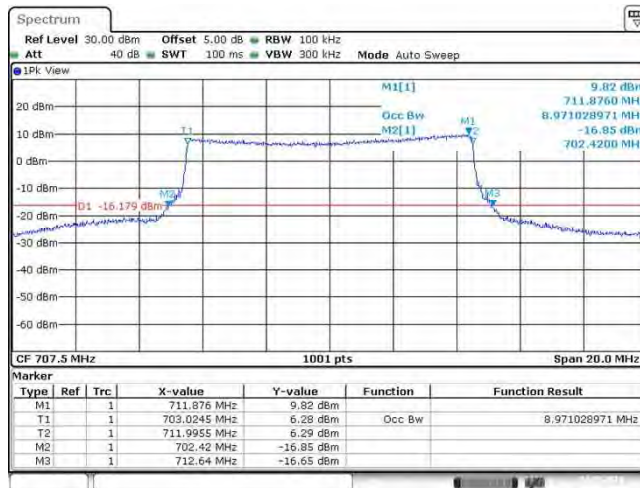
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## BAND12\_10MHz\_16QAM\_23060\_50RB#0



## BAND12\_10MHz\_16QAM\_23095\_50RB#0



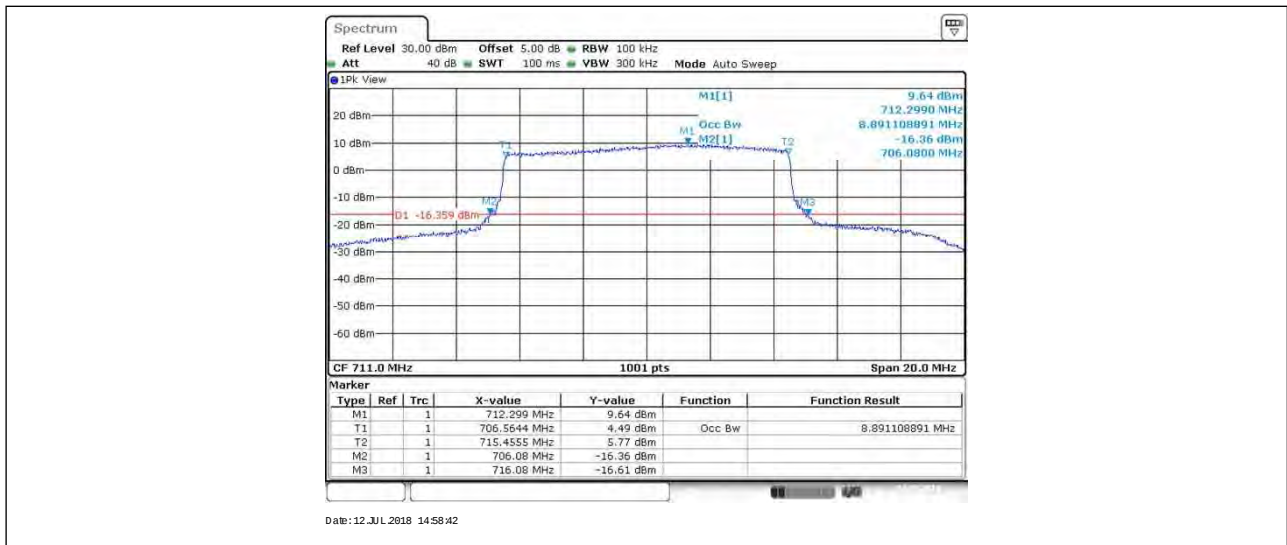
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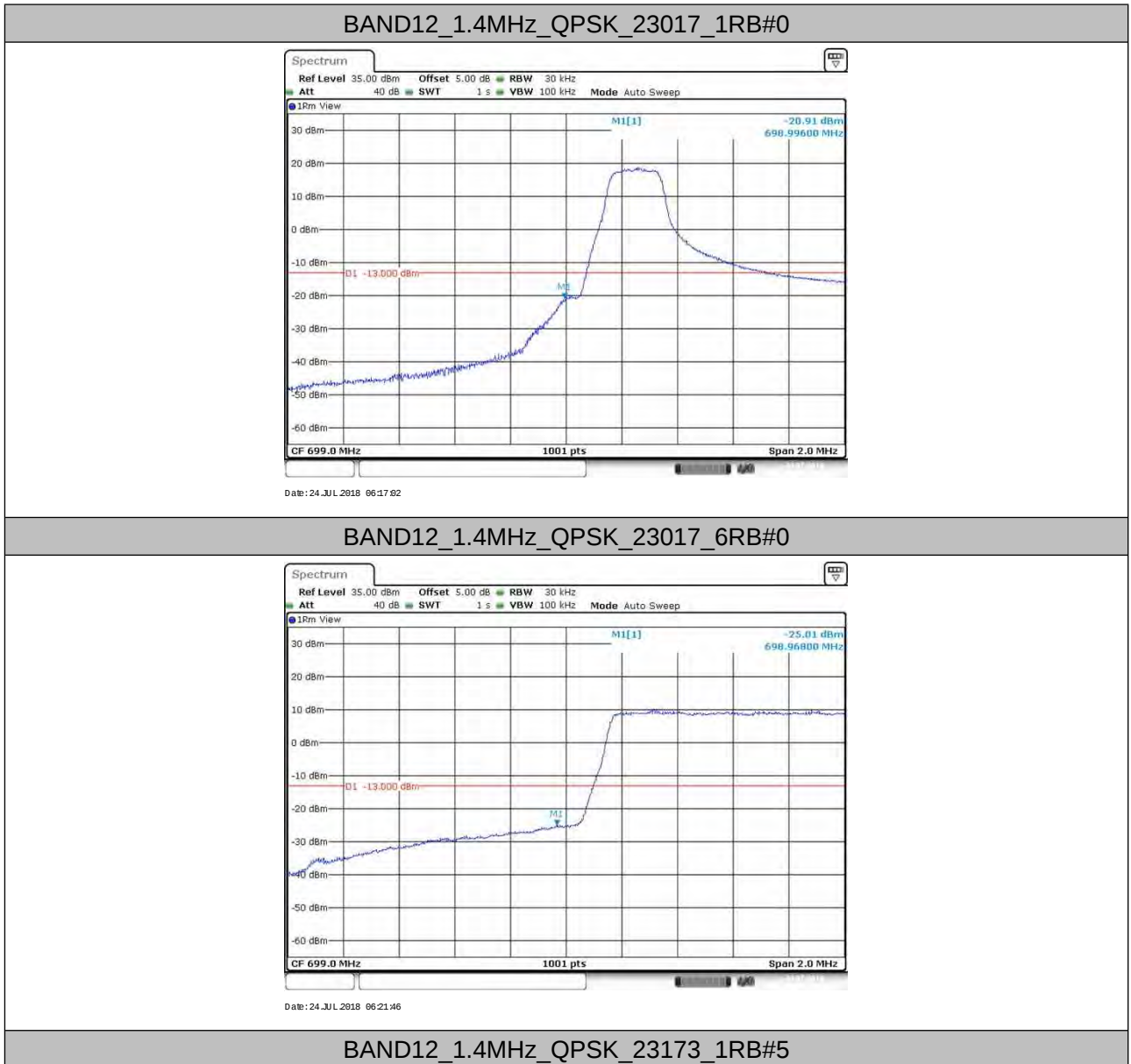
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## 5. Band Edge Compliance

### 5.1. Test Plots

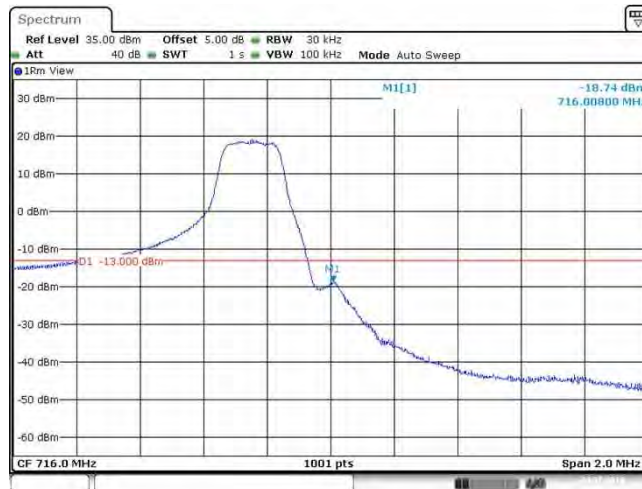




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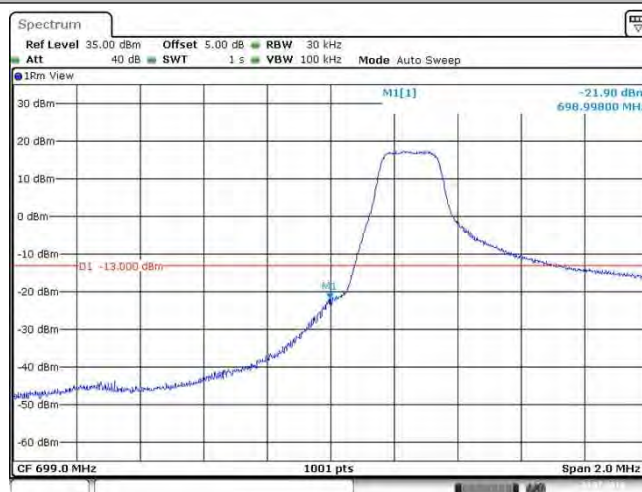
Date: 24 JUL 2018 06:19:24

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Date: 24 JUL 2018 06:24:03

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Date: 24 JUL 2018 06:18:34

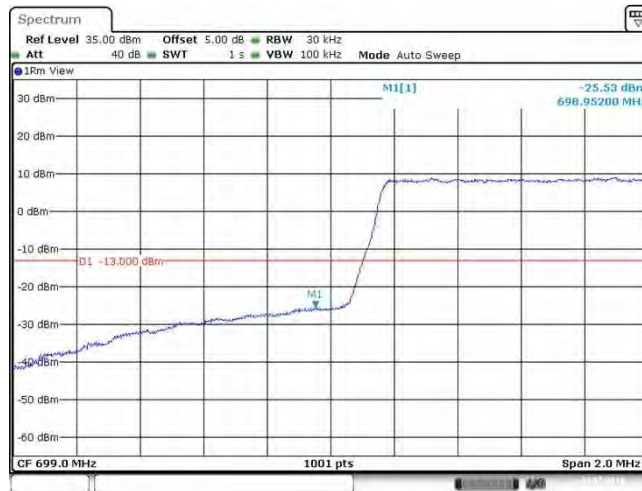
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Date: 24 JUL 2018 06:23:17

## BAND12\_1.4MHz\_64QAM\_23173\_1RB#5



Date: 24 JUL 2018 06:29:55

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Date: 24 JUL 2018 06:25:35

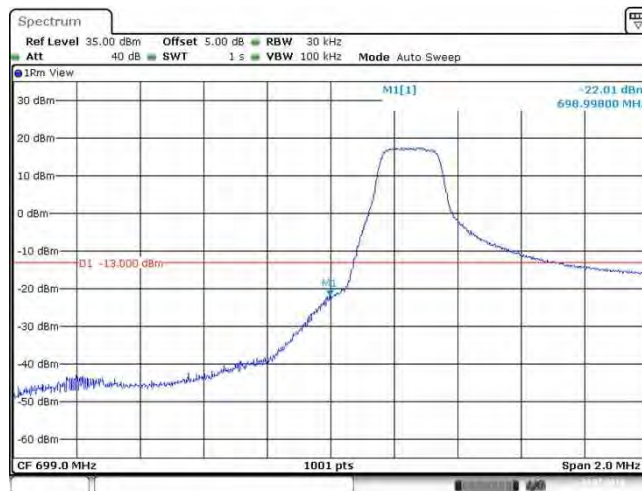
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# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

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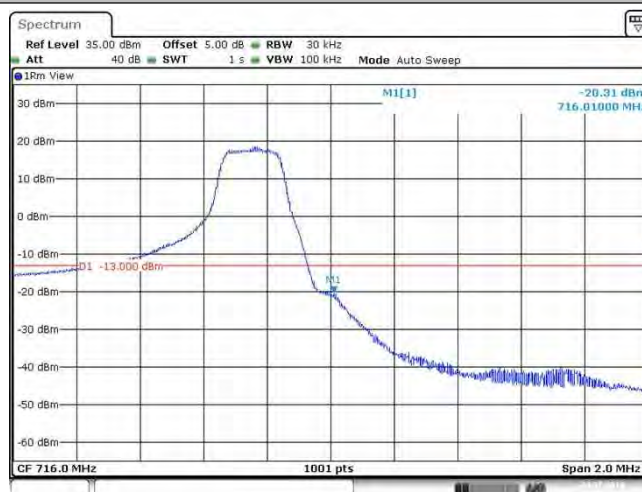
Date: 24 JUL 2018 06:17:48

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Date: 24 JUL 2018 06:22:31

## BAND12\_1.4MHz\_16QAM\_23173\_1RB#5



Date: 24 JUL 2018 06:28:18

## BAND12\_1.4MHz\_16QAM\_23173\_6RB#0

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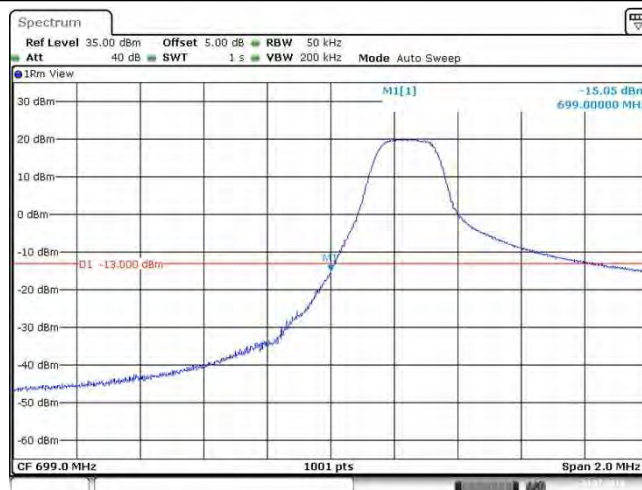
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Date: 24 JUL 2018 06:24:49

## BAND12\_3MHz\_QPSK\_23025\_1RB#0



Date: 24 JUL 2018 06:26:26

## BAND12\_3MHz\_QPSK\_23025\_15RB#0



Date: 24 JUL 2018 06:31:10

## BAND12\_3MHz\_QPSK\_23165\_1RB#14

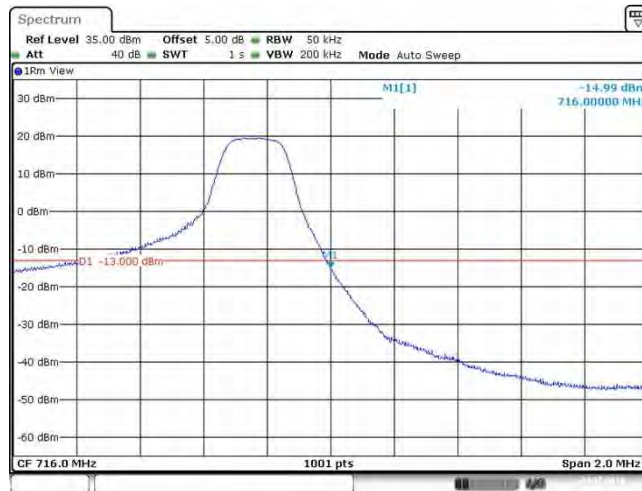
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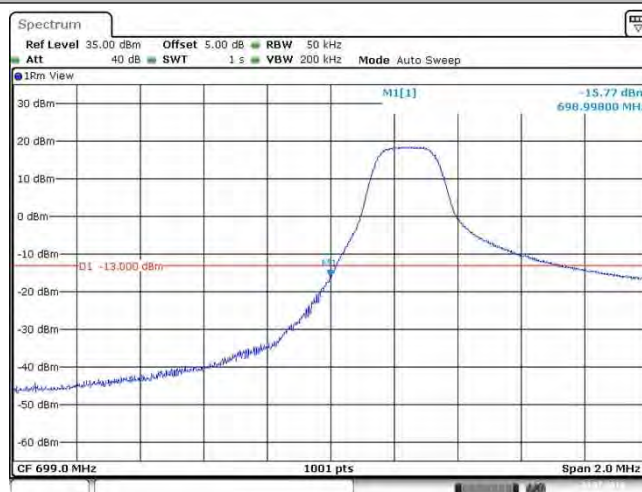
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Date: 24 JUL 2018 06:27:57

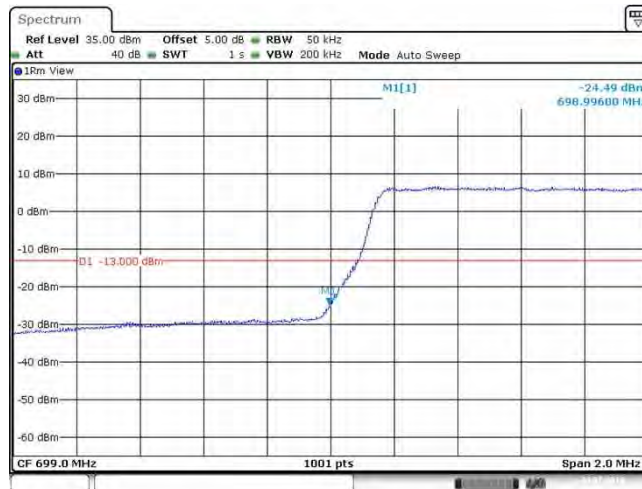
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# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

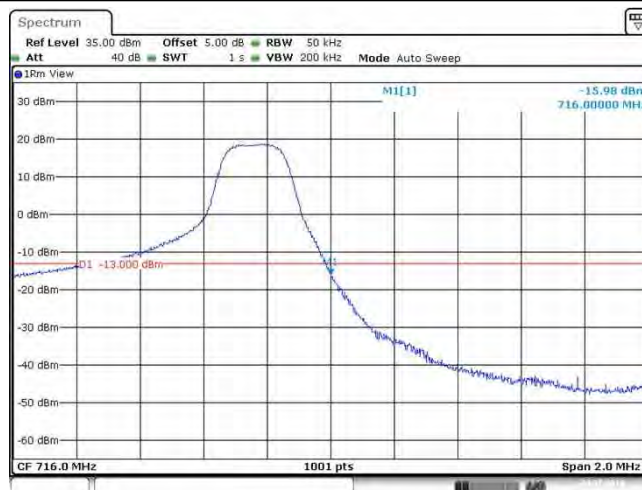
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Date: 24 JUL 2018 06:32:42

## BAND12\_3MHz\_64QAM\_23165\_1RB#14



Date: 24 JUL 2018 06:39:19

## BAND12\_3MHz\_64QAM\_23165\_15RB#0



Date: 24 JUL 2018 06:35:00

## BAND12\_3MHz\_16QAM\_23025\_1RB#0

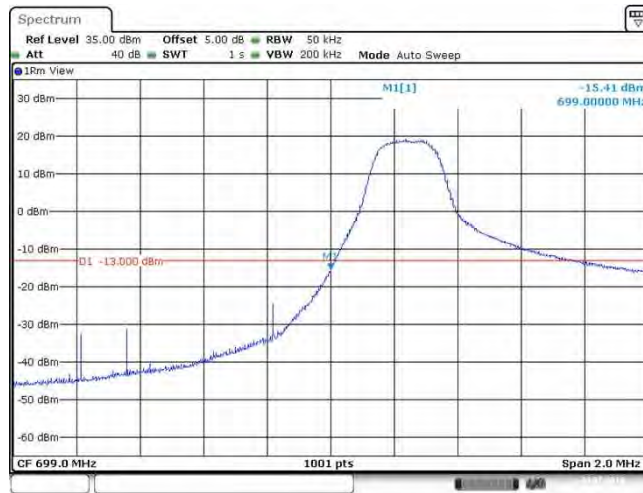
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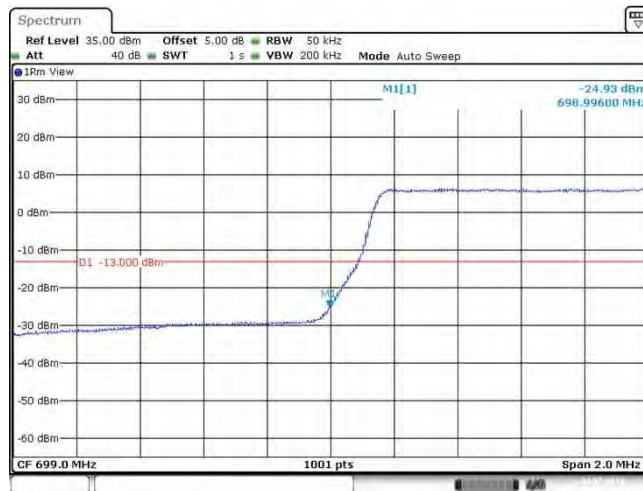
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Date: 24 JUL 2018 06:27:12

## BAND12\_3MHz\_16QAM\_23025\_15RB#0



Date: 24 JUL 2018 06:31:56

## BAND12\_3MHz\_16QAM\_23165\_1RB#14



Date: 24 JUL 2018 06:29:34

## BAND12\_3MHz\_16QAM\_23165\_15RB#0



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Date: 24 JUL 2018 06:34:14

## BAND12\_5MHz\_QPSK\_23035\_1RB#0



Date: 24 JUL 2018 06:35:59

## BAND12\_5MHz\_QPSK\_23035\_25RB#0



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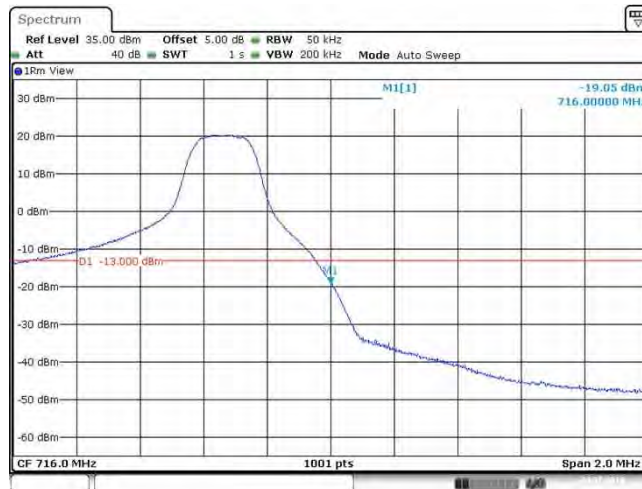
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# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

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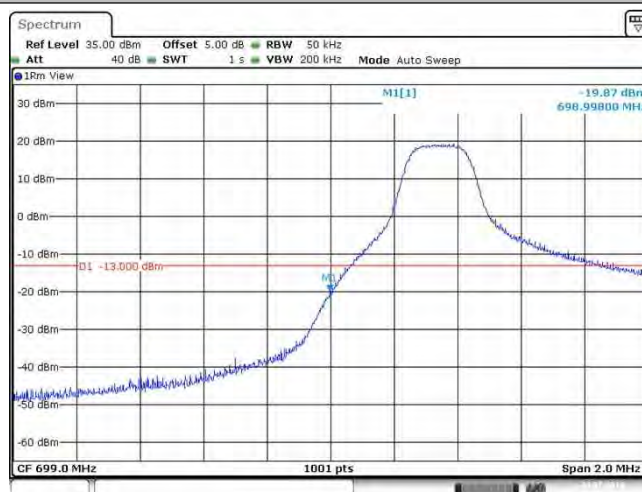
Date: 24 JUL 2018 06:38:13

## BAND12\_5MHz\_QPSK\_23155\_25RB#0



Date: 24 JUL 2018 06:42:53

## BAND12\_5MHz\_64QAM\_23035\_1RB#0



Date: 24 JUL 2018 06:37:22

## BAND12\_5MHz\_64QAM\_23035\_25RB#0

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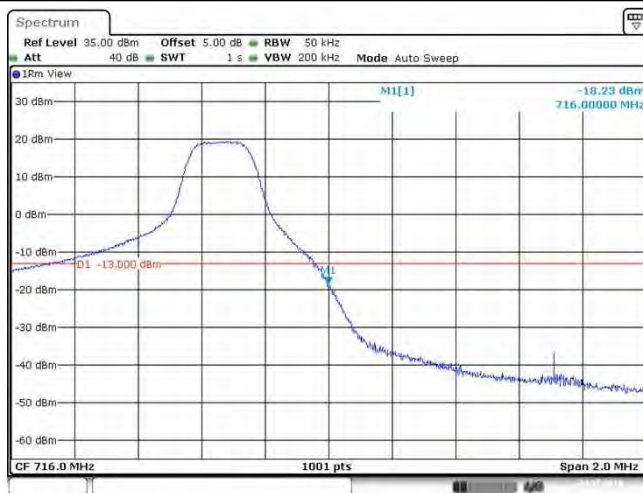
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Date: 24 JUL 2018 06:42:06

## BAND12\_5MHz\_64QAM\_23155\_1RB#24



Date: 24 JUL 2018 06:39:44

## BAND12\_5MHz\_64QAM\_23155\_25RB#0



Date: 24 JUL 2018 06:44:24

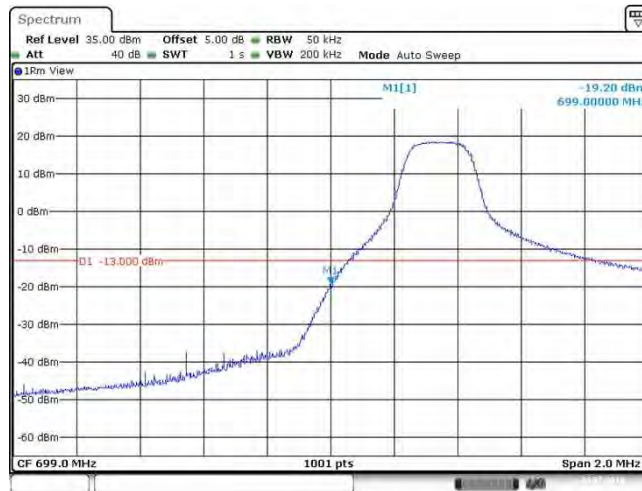
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# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

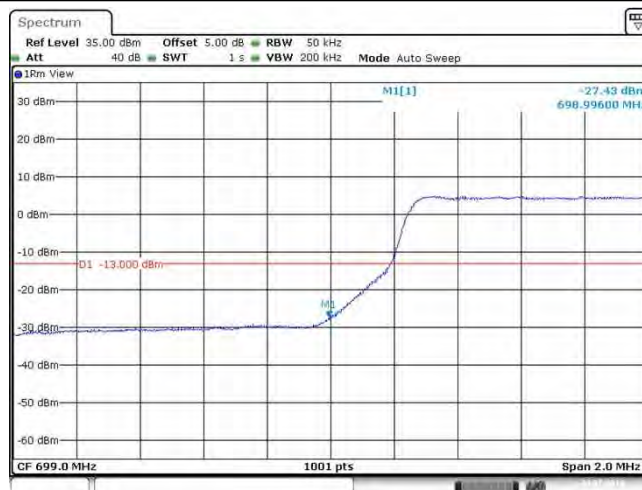
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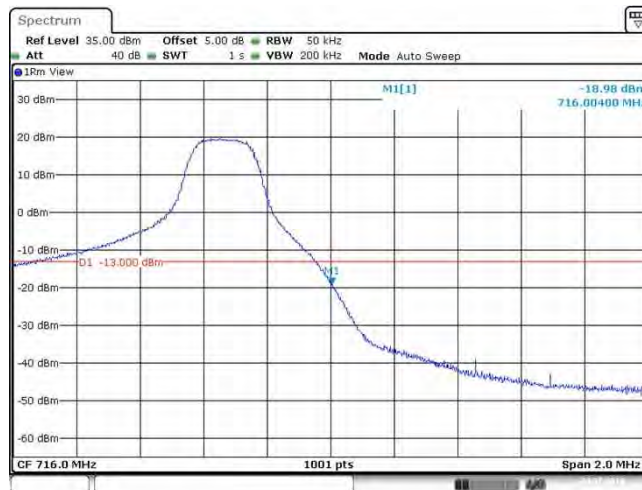
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Date: 24 JUL 2018 06:41:21

## BAND12\_5MHz\_16QAM\_23155\_1RB#24



Date: 24 JUL 2018 06:38:58

## BAND12\_5MHz\_16QAM\_23155\_25RB#0

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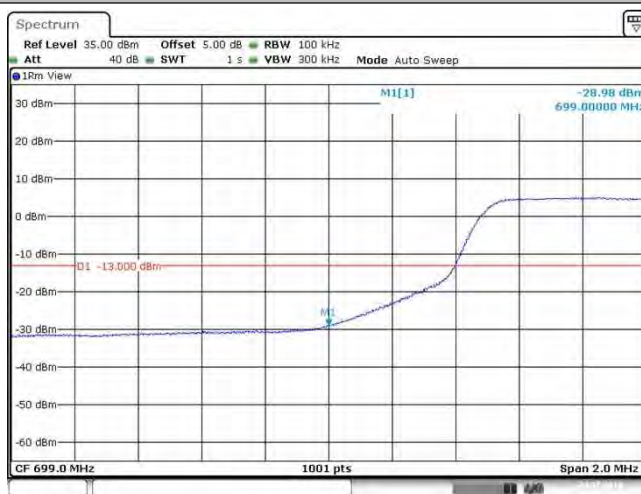
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## BAND12\_10MHz\_QPSK\_23060\_1RB#0



Date: 24 JUL 2018 06:45:15

## BAND12\_10MHz\_QPSK\_23060\_50RB#0



Date: 24 JUL 2018 06:50:00

## BAND12\_10MHz\_QPSK\_23130\_1RB#49



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Date: 24 JUL 2018 06:47:38

## BAND12\_10MHz\_QPSK\_23130\_50RB#0



Date: 24 JUL 2018 06:52:17

## BAND12\_10MHz\_64QAM\_23060\_1RB#0



Date: 24 JUL 2018 06:46:47

## BAND12\_10MHz\_64QAM\_23060\_50RB#0

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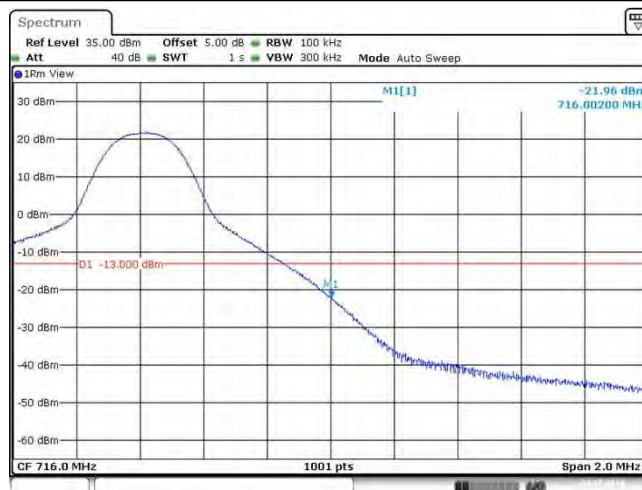
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Date: 24 JUL 2018 06:51:31

## BAND12\_10MHz\_64QAM\_23130\_1RB#49



Date: 24 JUL 2018 06:49:09

## BAND12\_10MHz\_64QAM\_23130\_50RB#0



Date: 24 JUL 2018 06:53:49

## BAND12\_10MHz\_16QAM\_23060\_1RB#0

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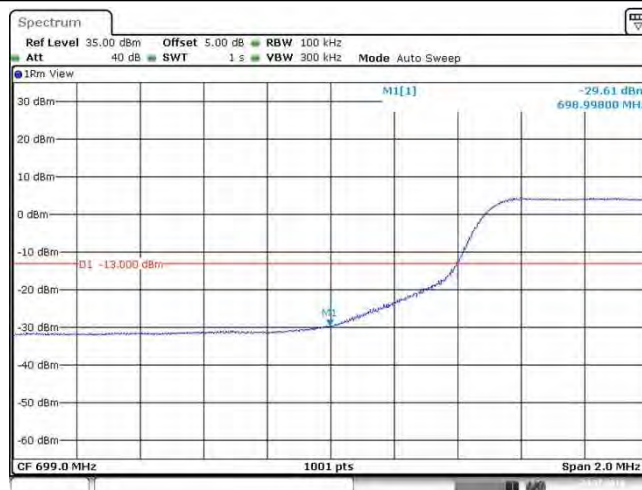
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Date: 24 JUL 2018 06:46:02

## BAND12\_10MHz\_16QAM\_23060\_50RB#0



Date: 24 JUL 2018 06:50:46

## BAND12\_10MHz\_16QAM\_23130\_1RB#49



Date: 24 JUL 2018 06:48:24

## BAND12\_10MHz\_16QAM\_23130\_50RB#0

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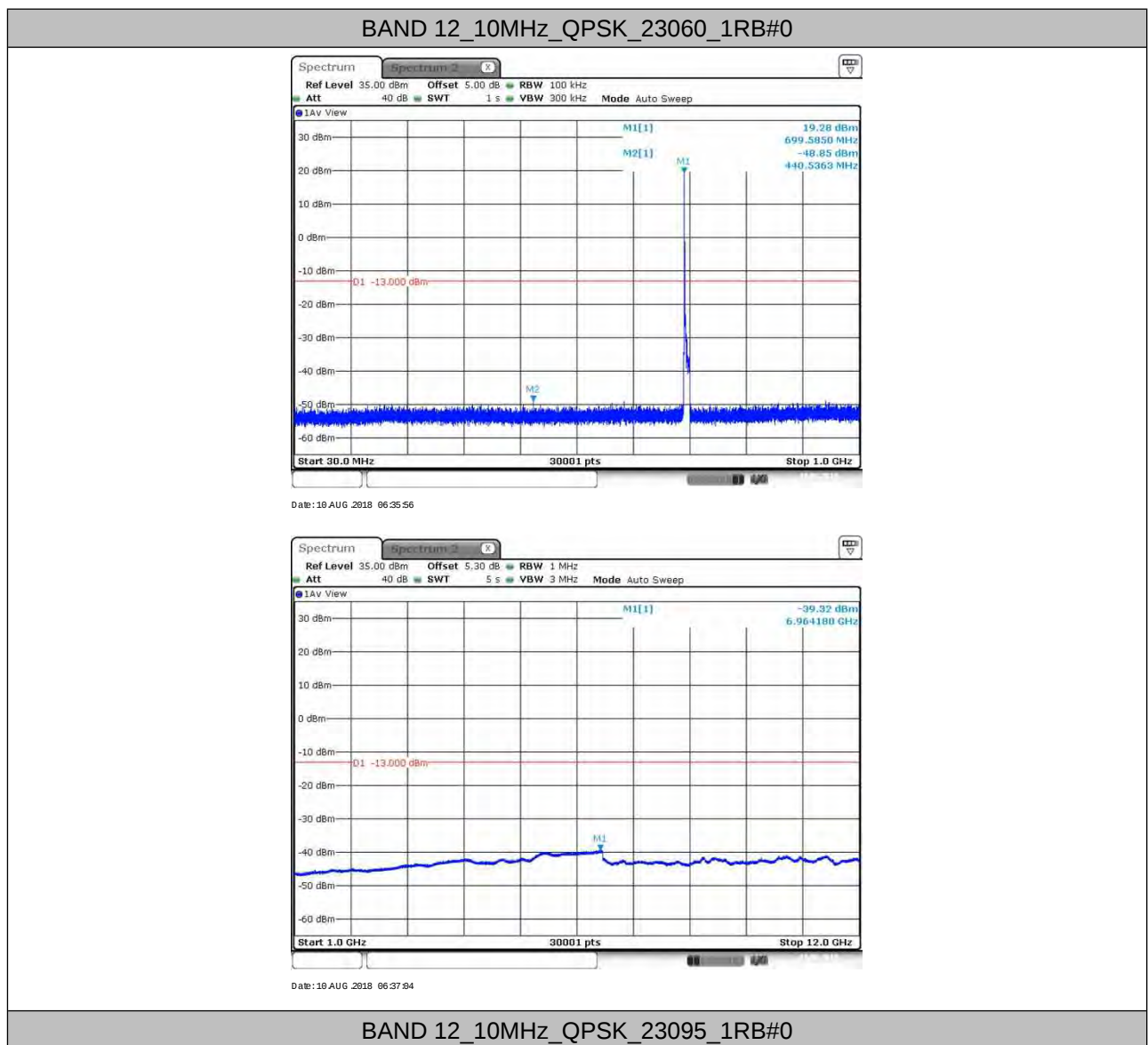


## 6. Spurious Emission at Antenna Terminal

NOTE1: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of  $< RBW/2$  so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points =  $k * (Span / RBW)$ " with  $k$  between 4 and 5, which results in an acceptable level error of less than 0.5 dB.

NOTE2: only the worst case data displayed in this report.

### 6.1. Test Plots

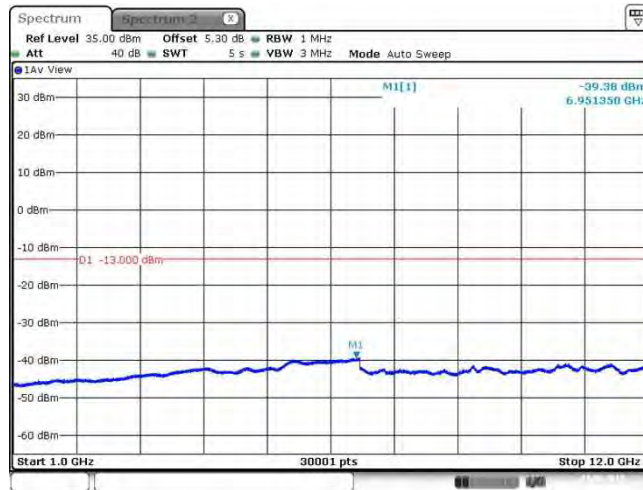
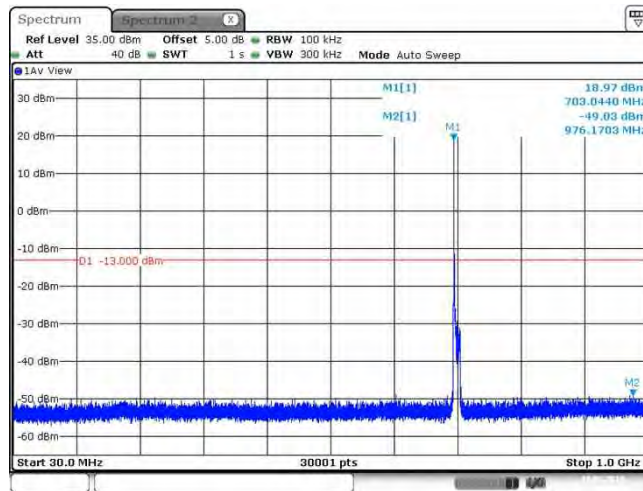




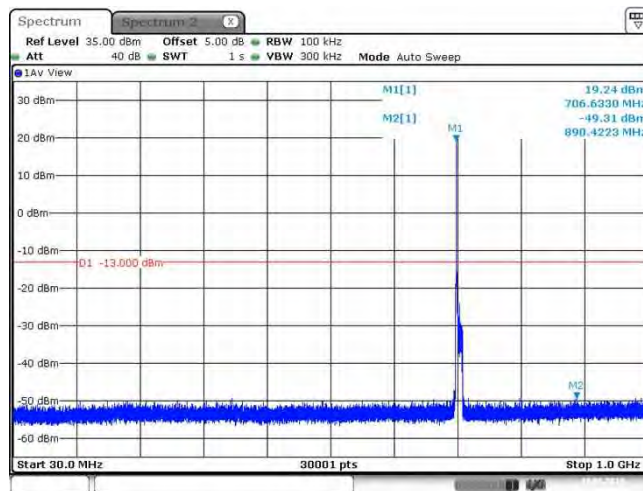
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## BAND 12\_10MHz\_QPSK\_23130\_1RB#0

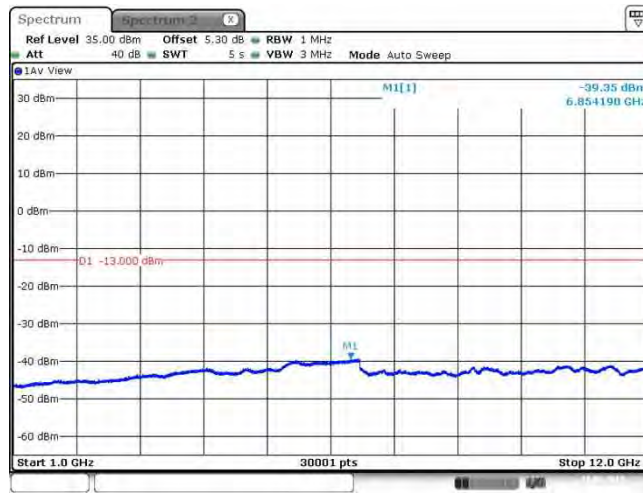




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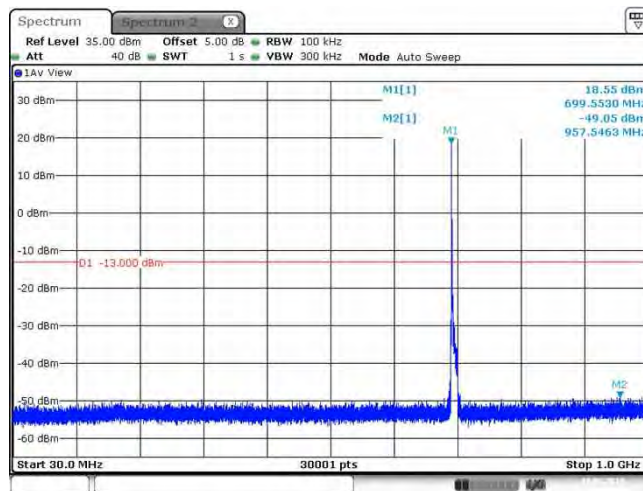
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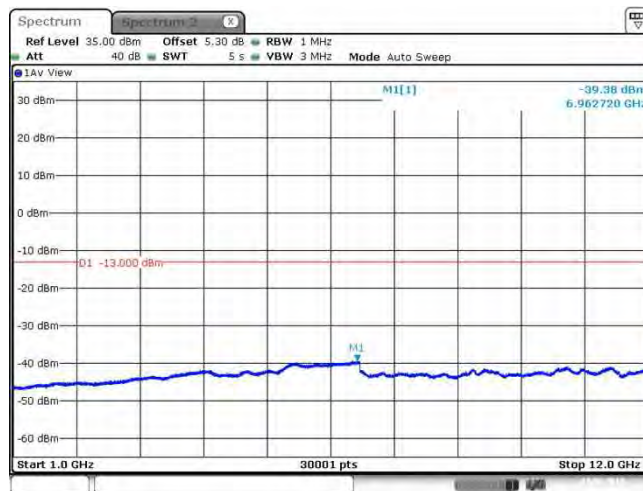


Date: 18 AUG 2018 06:45:46

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Date: 18 AUG 2018 06:39:57

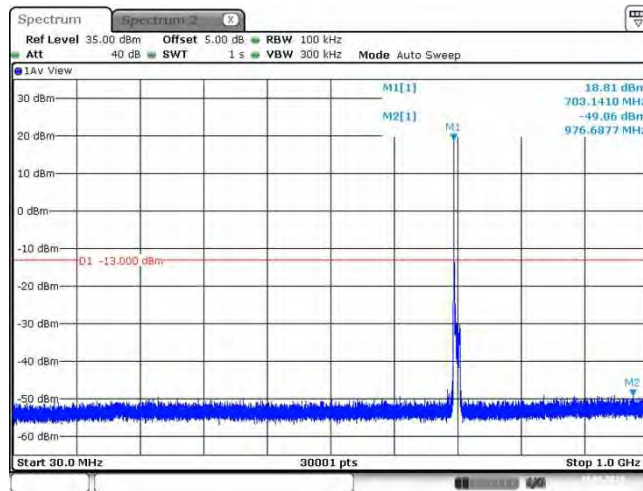
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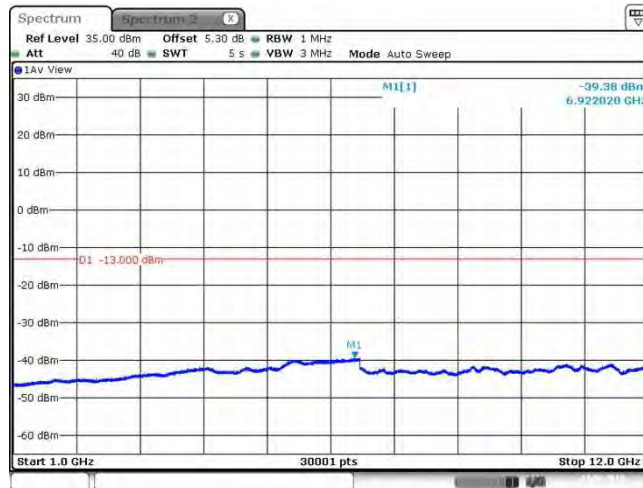
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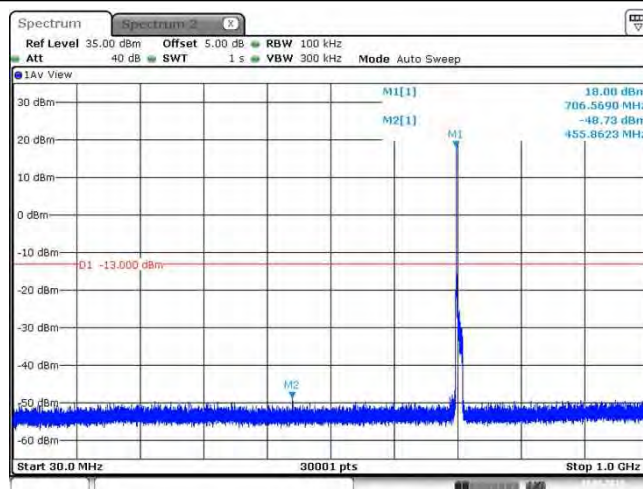


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Date: 19 AUG 2018 06:44:19

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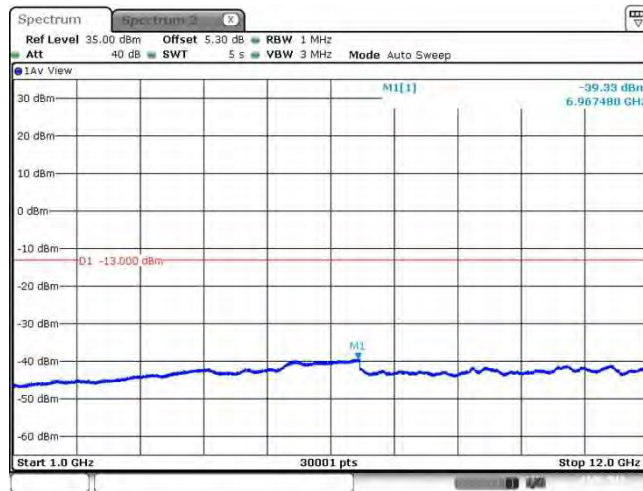
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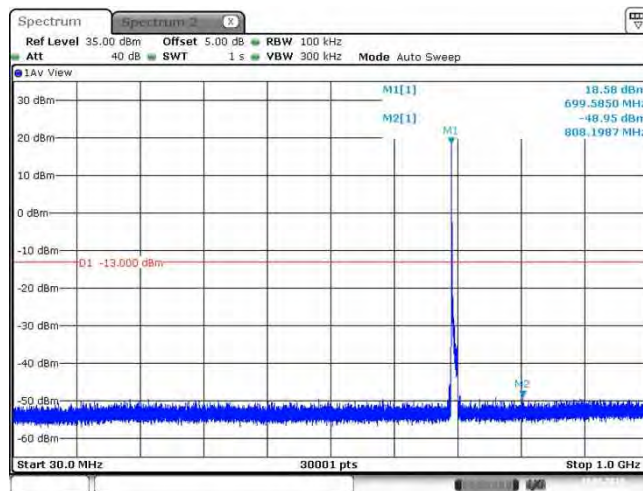
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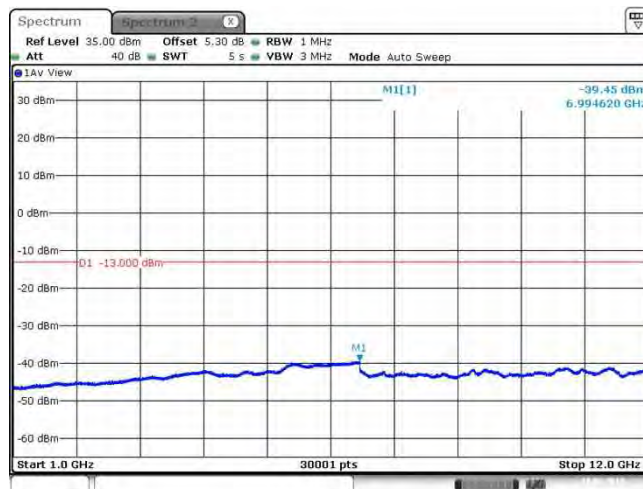


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Date: 18 AUG 2018 06:38:30

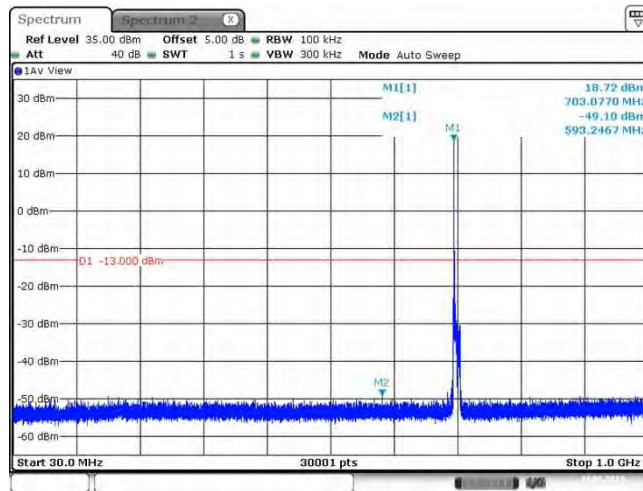
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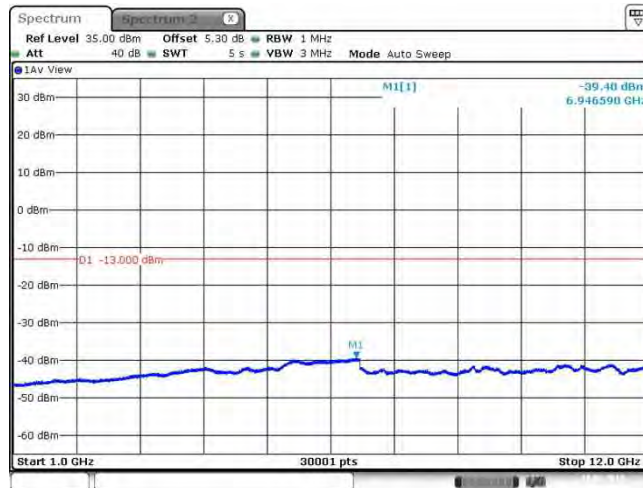
# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

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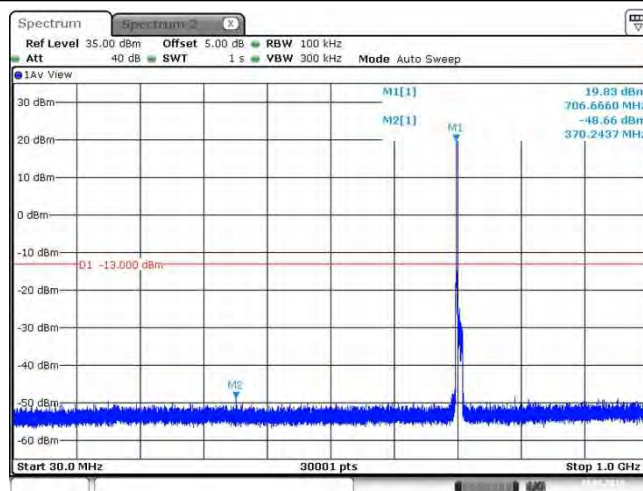


Date: 19 AUG 2018 06:41:44



Date: 19 AUG 2018 06:42:52

## BAND 12\_10MHz\_64QAM\_23130\_1RB#0



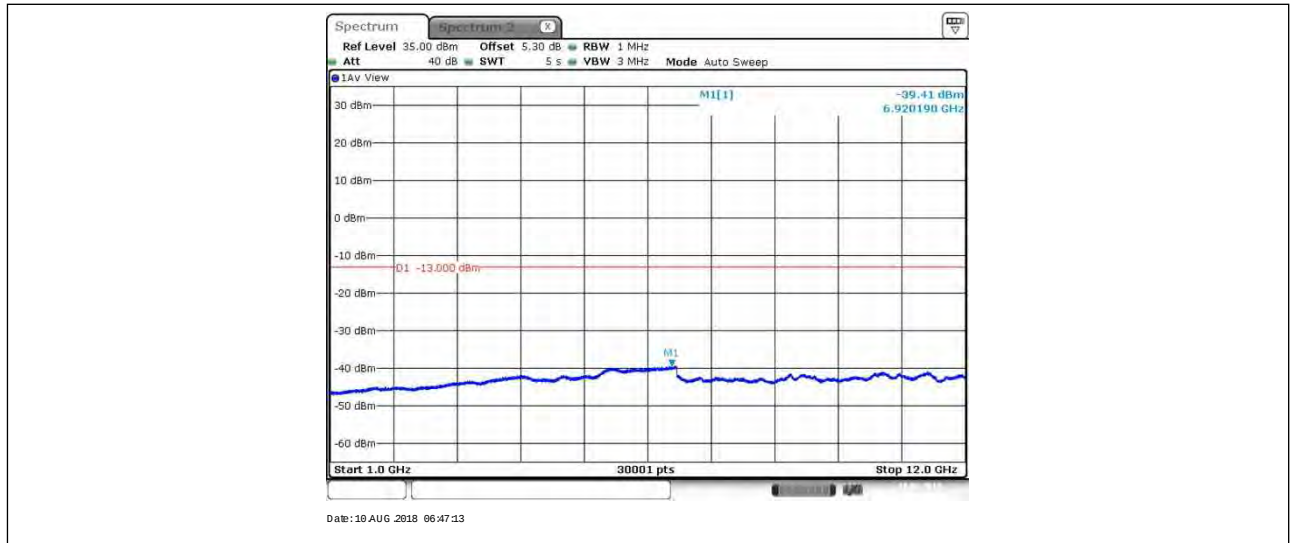
Date: 19 AUG 2018 06:46:05



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## 7. Field Strength of Spurious Radiation

### 7.1. Test BAND = LTE BAND 12

#### 7.1.1. Test Mode = LTE/TM1 10MHz

##### 7.1.1.1. Test Channel = LCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Margin (dB) | Polarization |
|-----------------|-------------|------------------|-------------|--------------|
| 64.486667       | -81.96      | -13.00           | 68.96       | Vertical     |
| 104.293333      | -83.76      | -13.00           | 70.76       | Vertical     |
| 342.480000      | -85.71      | -13.00           | 72.71       | Vertical     |
| 1403.000000     | -67.77      | -13.00           | 54.77       | Vertical     |
| 2111.000000     | -61.83      | -13.00           | 48.83       | Vertical     |
| 2881.000000     | -57.43      | -13.00           | 44.43       | Vertical     |
| 63.320000       | -78.24      | -13.00           | 65.24       | Horizontal   |
| 104.293333      | -88.86      | -13.00           | 75.86       | Horizontal   |
| 276.073333      | -87.56      | -13.00           | 74.56       | Horizontal   |
| 1403.000000     | -67.60      | -13.00           | 54.60       | Horizontal   |
| 2099.000000     | -62.23      | -13.00           | 49.23       | Horizontal   |
| 2834.500000     | -57.45      | -13.00           | 44.45       | Horizontal   |

##### 7.1.1.2. Test Channel = MCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Margin (dB) | Polarization |
|-----------------|-------------|------------------|-------------|--------------|
| 64.486667       | -82.36      | -13.00           | 69.36       | Vertical     |
| 104.293333      | -84.66      | -13.00           | 71.66       | Vertical     |
| 360.960000      | -85.47      | -13.00           | 72.47       | Vertical     |
| 1403.500000     | -67.72      | -13.00           | 54.72       | Vertical     |
| 2127.500000     | -61.85      | -13.00           | 48.85       | Vertical     |
| 2873.000000     | -57.46      | -13.00           | 44.46       | Vertical     |
| 62.760000       | -77.47      | -13.00           | 64.47       | Horizontal   |
| 104.293333      | -86.55      | -13.00           | 73.55       | Horizontal   |
| 264.173333      | -87.22      | -13.00           | 74.22       | Horizontal   |
| 1407.000000     | -67.44      | -13.00           | 54.44       | Horizontal   |



|             |        |        |       |            |
|-------------|--------|--------|-------|------------|
| 2312.500000 | -59.31 | -13.00 | 46.31 | Horizontal |
| 4299.187500 | -66.81 | -13.00 | 53.81 | Horizontal |

#### 7.1.1.3. Test Channel = HCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Margin (dB) | Polarization |
|-----------------|-------------|------------------|-------------|--------------|
| 64.813333       | -82.04      | -13.00           | 69.04       | Vertical     |
| 104.293333      | -83.57      | -13.00           | 70.57       | Vertical     |
| 339.353333      | -85.91      | -13.00           | 72.91       | Vertical     |
| 1416.000000     | -67.56      | -13.00           | 54.56       | Vertical     |
| 2104.500000     | -62.13      | -13.00           | 49.13       | Vertical     |
| 2800.000000     | -57.74      | -13.00           | 44.74       | Vertical     |
| 62.760000       | -77.99      | -13.00           | 64.99       | Horizontal   |
| 104.293333      | -89.28      | -13.00           | 76.28       | Horizontal   |
| 259.553333      | -87.54      | -13.00           | 74.54       | Horizontal   |
| 1416.000000     | -67.37      | -13.00           | 54.37       | Horizontal   |
| 2127.500000     | -62.38      | -13.00           | 49.38       | Horizontal   |
| 2881.500000     | -56.85      | -13.00           | 43.85       | Horizontal   |

#### NOTE:

- 1) All modes are tested, but the data presented above is the worst case.the disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.
- 2) We have tested all modulation and all Bandwidth, but only the worst case data presented in this report.



## 8. Frequency Stability

### 8.1. Frequency Vs Voltage

| Voltage |           |            |         |              |               |                  |                |                 |             |         |
|---------|-----------|------------|---------|--------------|---------------|------------------|----------------|-----------------|-------------|---------|
| BAND    | Bandwidth | Modulation | Channel | RB Configure | Voltage [Vdc] | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| BAND12  | 10MHz     | QPSK       | 23060   | 50RB#0       | VH            | NT               | 2.30           | 0.003267        | ±2.5        | PASS    |
|         |           |            |         | 50RB#0       | VL            | NT               | 2.80           | 0.003977        | ±2.5        | PASS    |
|         |           |            |         | 50RB#0       | VN            | NT               | 2.10           | 0.002983        | ±2.5        | PASS    |
|         |           |            | 23095   | 50RB#0       | VH            | NT               | 1.50           | 0.002120        | ±2.5        | PASS    |
|         |           |            |         | 50RB#0       | VL            | NT               | 3.40           | 0.004806        | ±2.5        | PASS    |
|         |           |            |         | 50RB#0       | VN            | NT               | 0.90           | 0.001272        | ±2.5        | PASS    |
|         |           |            | 23130   | 50RB#0       | VH            | NT               | 2.20           | 0.003094        | ±2.5        | PASS    |
|         |           |            |         | 50RB#0       | VL            | NT               | 2.20           | 0.003094        | ±2.5        | PASS    |
|         |           |            |         | 50RB#0       | VN            | NT               | 2.20           | 0.003094        | ±2.5        | PASS    |
|         |           | 16QAM      | 23060   | 50RB#0       | VH            | NT               | 2.00           | 0.002841        | ±2.5        | PASS    |
|         |           |            |         | 50RB#0       | VL            | NT               | 2.20           | 0.003125        | ±2.5        | PASS    |
|         |           |            |         | 50RB#0       | VN            | NT               | 1.50           | 0.002131        | ±2.5        | PASS    |
|         |           |            | 23095   | 50RB#0       | VH            | NT               | 2.20           | 0.003110        | ±2.5        | PASS    |
|         |           |            |         | 50RB#0       | VL            | NT               | 2.20           | 0.003110        | ±2.5        | PASS    |
|         |           |            |         | 50RB#0       | VN            | NT               | 2.20           | 0.003110        | ±2.5        | PASS    |
|         |           |            | 23130   | 50RB#0       | VH            | NT               | 2.20           | 0.003094        | ±2.5        | PASS    |
|         |           |            |         | 50RB#0       | VL            | NT               | 2.20           | 0.003094        | ±2.5        | PASS    |
|         |           |            |         | 50RB#0       | VN            | NT               | 2.20           | 0.003094        | ±2.5        | PASS    |
|         |           | 64QAM      | 23060   | 50RB#0       | VH            | NT               | 3.00           | 0.004261        | ±2.5        | PASS    |
|         |           |            |         | 50RB#0       | VL            | NT               | 0.60           | 0.000852        | ±2.5        | PASS    |
|         |           |            |         | 50RB#0       | VN            | NT               | 1.80           | 0.002557        | ±2.5        | PASS    |
|         |           |            | 23095   | 50RB#0       | VH            | NT               | 2.20           | 0.003110        | ±2.5        | PASS    |
|         |           |            |         | 50RB#0       | VL            | NT               | 2.20           | 0.003110        | ±2.5        | PASS    |
|         |           |            |         | 50RB#0       | VN            | NT               | 2.20           | 0.003110        | ±2.5        | PASS    |
|         |           |            | 23130   | 50RB#0       | VH            | NT               | 2.20           | 0.003094        | ±2.5        | PASS    |
|         |           |            |         | 50RB#0       | VL            | NT               | 2.20           | 0.003094        | ±2.5        | PASS    |
|         |           |            |         | 50RB#0       | VN            | NT               | 2.20           | 0.003094        | ±2.5        | PASS    |

### 8.2. Frequency Vs Temperature

| Temperature |           |            |         |              |               |                  |                |                 |             |         |
|-------------|-----------|------------|---------|--------------|---------------|------------------|----------------|-----------------|-------------|---------|
| BAND        | Bandwidth | Modulation | Channel | RB Configure | Voltage [Vdc] | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| BAND12      | 10MHz     | QPSK       | 23060   | 50RB#0       | NV            | 0                | 1.70           | 0.002415        | ±2.5        | PASS    |
|             |           |            |         | 50RB#0       | NV            | 10               | 1.90           | 0.002699        | ±2.5        | PASS    |
|             |           |            |         | 50RB#0       | NV            | 20               | 2.20           | 0.003125        | ±2.5        | PASS    |
|             |           |            |         | 50RB#0       | NV            | -20              | 2.40           | 0.003409        | ±2.5        | PASS    |
|             |           |            |         | 50RB#0       | NV            | -30              | 1.20           | 0.001705        | ±2.5        | PASS    |
|             |           |            | 23095   | 50RB#0       | NV            | 0                | 2.20           | 0.003110        | ±2.5        | PASS    |



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|  |  |       |       |        |    |     |      |          |      |      |
|--|--|-------|-------|--------|----|-----|------|----------|------|------|
|  |  |       |       | 50RB#0 | NV | 10  | 2.20 | 0.003110 | ±2.5 | PASS |
|  |  |       |       | 50RB#0 | NV | 20  | 2.20 | 0.003110 | ±2.5 | PASS |
|  |  |       |       | 50RB#0 | NV | -20 | 2.20 | 0.003110 | ±2.5 | PASS |
|  |  |       |       | 50RB#0 | NV | -30 | 2.20 | 0.003110 | ±2.5 | PASS |
|  |  |       | 23130 | 50RB#0 | NV | 0   | 2.20 | 0.003094 | ±2.5 | PASS |
|  |  |       |       | 50RB#0 | NV | 10  | 2.20 | 0.003094 | ±2.5 | PASS |
|  |  |       |       | 50RB#0 | NV | 20  | 2.20 | 0.003094 | ±2.5 | PASS |
|  |  |       |       | 50RB#0 | NV | -20 | 2.20 | 0.003094 | ±2.5 | PASS |
|  |  |       |       | 50RB#0 | NV | -30 | 2.20 | 0.003094 | ±2.5 | PASS |
|  |  | 16QAM | 23060 | 50RB#0 | NV | 0   | 3.20 | 0.004545 | ±2.5 | PASS |
|  |  |       |       | 50RB#0 | NV | 10  | 3.80 | 0.005398 | ±2.5 | PASS |
|  |  |       |       | 50RB#0 | NV | 20  | 2.60 | 0.003693 | ±2.5 | PASS |
|  |  |       |       | 50RB#0 | NV | -20 | 1.20 | 0.001705 | ±2.5 | PASS |
|  |  |       |       | 50RB#0 | NV | -30 | 1.50 | 0.002131 | ±2.5 | PASS |
|  |  |       | 23095 | 50RB#0 | NV | 0   | 2.20 | 0.003110 | ±2.5 | PASS |
|  |  |       |       | 50RB#0 | NV | 10  | 2.20 | 0.003110 | ±2.5 | PASS |
|  |  |       |       | 50RB#0 | NV | 20  | 2.20 | 0.003110 | ±2.5 | PASS |
|  |  |       |       | 50RB#0 | NV | -20 | 2.20 | 0.003110 | ±2.5 | PASS |
|  |  |       |       | 50RB#0 | NV | -30 | 2.20 | 0.003110 | ±2.5 | PASS |
|  |  |       | 23130 | 50RB#0 | NV | 0   | 2.20 | 0.003094 | ±2.5 | PASS |
|  |  |       |       | 50RB#0 | NV | 10  | 2.20 | 0.003094 | ±2.5 | PASS |
|  |  |       |       | 50RB#0 | NV | 20  | 2.20 | 0.003094 | ±2.5 | PASS |
|  |  |       |       | 50RB#0 | NV | -20 | 2.20 | 0.003094 | ±2.5 | PASS |
|  |  |       |       | 50RB#0 | NV | -30 | 2.20 | 0.003094 | ±2.5 | PASS |
|  |  | 64QAM | 23060 | 50RB#0 | NV | 0   | 1.30 | 0.001847 | ±2.5 | PASS |
|  |  |       |       | 50RB#0 | NV | 10  | 2.60 | 0.003693 | ±2.5 | PASS |
|  |  |       |       | 50RB#0 | NV | 20  | 2.50 | 0.003551 | ±2.5 | PASS |
|  |  |       |       | 50RB#0 | NV | -20 | 1.20 | 0.001705 | ±2.5 | PASS |
|  |  |       |       | 50RB#0 | NV | -30 | 1.90 | 0.002699 | ±2.5 | PASS |
|  |  |       | 23095 | 50RB#0 | NV | 0   | 2.20 | 0.003110 | ±2.5 | PASS |
|  |  |       |       | 50RB#0 | NV | 10  | 2.20 | 0.003110 | ±2.5 | PASS |
|  |  |       |       | 50RB#0 | NV | 20  | 2.20 | 0.003110 | ±2.5 | PASS |
|  |  |       |       | 50RB#0 | NV | -20 | 2.20 | 0.003110 | ±2.5 | PASS |
|  |  |       |       | 50RB#0 | NV | -30 | 2.20 | 0.003110 | ±2.5 | PASS |
|  |  |       | 23130 | 50RB#0 | NV | 0   | 2.20 | 0.003094 | ±2.5 | PASS |
|  |  |       |       | 50RB#0 | NV | 10  | 2.20 | 0.003094 | ±2.5 | PASS |
|  |  |       |       | 50RB#0 | NV | 20  | 2.20 | 0.003094 | ±2.5 | PASS |
|  |  |       |       | 50RB#0 | NV | -20 | 2.20 | 0.003094 | ±2.5 | PASS |
|  |  |       |       | 50RB#0 | NV | -30 | 2.20 | 0.003094 | ±2.5 | PASS |

The End

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