


CP_OFDM_QPSK Low channel FRB
DFT-s_OFDM_QPSK Low channel 1RB




CP_OFDM_16QAM Low channel FRB



### 8.4.2. EMISSION MASK RESULT

LTE Band 41(PC2)


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QPSK High channel FRB


16QAM Low channel FRB


QPSK High channel 1RB_Offset Low


QPSK High channel 1RB_Offset High


16QAM Low channel 1RB_Offset Low


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16QAM Mid channel FRB


16QAM High channel FRB


16QAM Mid channel 1RB_Offset Low


16QAM Mid channel 1RB_Offset High


16QAM High channel 1RB_Offset Low


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QPSK Mid channel FRB


QPSK Low channel 1RB_Offset Low


QPSK Low channel 1RB_Offset High


QPSK Mid channel 1RB_Offset Low


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QPSK High channel FRB


16QAM Low channel FRB


QPSK High channel 1RB_Offset Low


QPSK High channel 1RB_Offset High


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16QAM Mid channel FRB


16QAM High channel FRB


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QPSK Mid channel FRB


QPSK Low channel 1RB_Offset Low


QPSK Mid channel 1RB_Offset Low


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QPSK High channel FRB


16QAM Low channel FRB


QPSK High channel 1RB_Offset Low


QPSK High channel 1RB_Offset High


16QAM Low channel 1RB_Offset Low


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16QAM Mid channel FRB


16QAM High channel FRB


16QAM Mid channel 1RB_Offset High


16QAM High channel 1RB_Offset Low


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QPSK Mid channel FRB


QPSK Low channel 1RB_Offset Low


QPSK Mid channel 1RB_Offset Low


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QPSK High channel FRB


16QAM Low channel FRB


QPSK High channel 1RB_Offset Low


QPSK High channel 1RB_Offset High


16QAM Low channel 1RB_Offset Low


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16QAM Mid channel FRB


16QAM High channel FRB


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### 8.5. CONDUCTED SPURIOUS EMISSIONS

## RULE PART(S)

FCC: §27.53

## LIMITS

Part 27.53:
(c)(2) On any frequency outside the $776-788 \mathrm{MHz}$ band, the power of any emission shall be attenuated outside the band below the transmitter power $(P)$ by at least $43+10 \log (P) d B$.
(h) The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power $(P)$ in watts by at least $43+10 \log _{10}(P) d B$.
(m) (4) For mobile digital stations, the attenuation factor shall be not less than $40+10 \log (P) d B$ on all frequencies between the channel edge and 5 megahertz from the channel edge, $43+10 \log (P) d B$ on all frequencies between 5 megahertz and $X$ megahertz from the channel edge, and $55+10 \log (P) d B$ on all frequencies more than $X$ megahertz from the channel edge, where $X$ is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph $(m)(6)$ of this section. In addition, the attenuation factor shall not be less that $43+10 \log (P) d B$ on all frequencies between 2490.5 MHz and 2496 MHz and $55+10 \log (P) d B$ at or below 2490.5 MHz . Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

## TEST PROCEDURE

Per KDB 971168 D01 Power Meas License Digital Systems v03r01
The RF output of the transmitter was connected to a spectrum analyzer through a calibrated coaxial cable. Sufficient scans were taken to show the out-of-band Emissions, if any, up to 10th harmonic. Multiple sweeps were recorded in maximum hold mode using a peak detector to ensure that the worstcase emissions were caught.
a) Set the RBW $=100 \mathrm{kHz}$ for emission below 1 GHz and 1 MHz for emissions above 1 GHz (Tests were performed 1 MHz [Worst case], to sweep 1 time for all frequency range)
b) Set VBW $\geq 3 \times \mathrm{RBW}$;
c) Set span $\geq 1.5$ times the OBW;
d) Sweep time = auto couple;
e) Detector $=r m s$;
f) Ensure that the number of measurement points $=\operatorname{Max}(40001)$;
g) Trace mode $=$ average(WCDMA, LTE FDD, 5 G NR), Max Holtd(LTE TDD)

## NOTE1

5G NR: All Waveforms (CP-OFDM vs DFT-s_OFDM) and modulations ( $\pi / 2$ BPSK, QPSK, 16QAM, 64QAM, 256QAM) were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

## NOTE2

Please refer to section 5.4 for bandwidth and RB setting about LTE, 5G NR bands.

## RESULTS

See the following pages.
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### 8.5.1. OUT OF BAND EMISSIONS RESULT

WCDMA Band 4


LTE Band 12


LTE Band 13


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LTE Band 41(PC2)


LTE Band 66


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