

KCTL Inc.

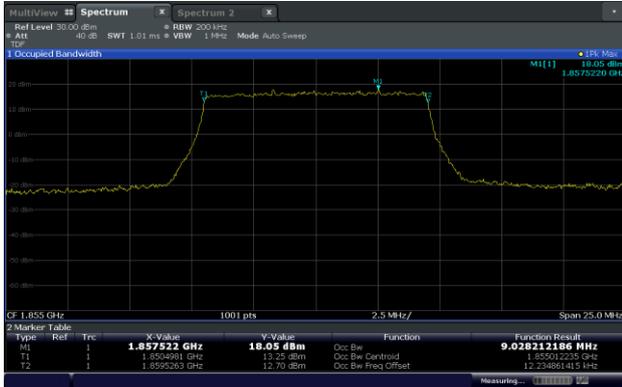
65, Sinwon-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do, 16677, Korea
TEL: 82-31-285-0894 FAX: 82-505-299-8311
www.kctl.co.kr

Report No.:
KR19-SRF0016-A

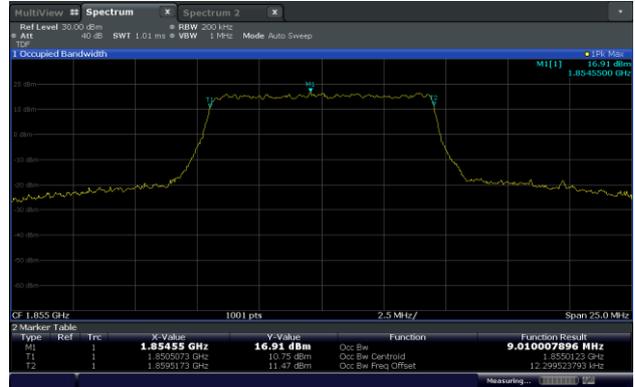
Page (56) of (279)



10M BW / QPSK / Low ch.



10M BW / 16QAM / Low ch.



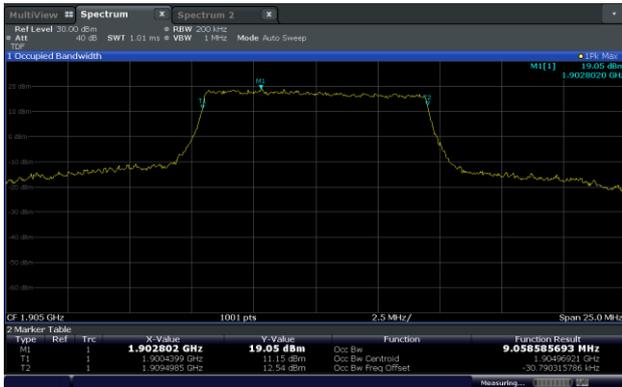
10M BW / QPSK / Mid ch.



10M BW / 16QAM / Mid ch.



10M BW / QPSK / High ch.



10M BW / 16QAM / High ch.



KCTL Inc.

65, Sinwon-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do, 16677, Korea
TEL: 82-31-285-0894 FAX: 82-505-299-8311
www.kctl.co.kr

Report No.:
KR19-SRF0016-A

Page (57) of (279)



15M BW / QPSK / Low ch.



15M BW / 16QAM / Low ch.



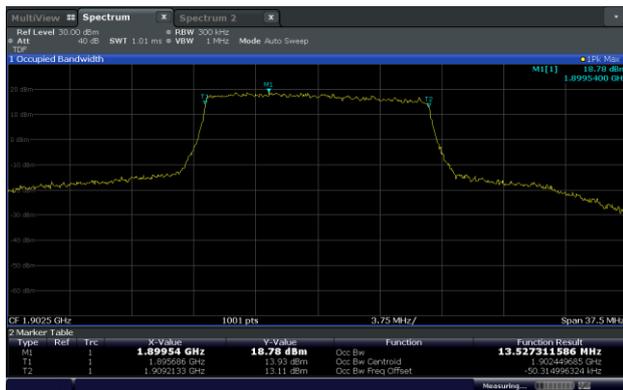
15M BW / QPSK / Mid ch.



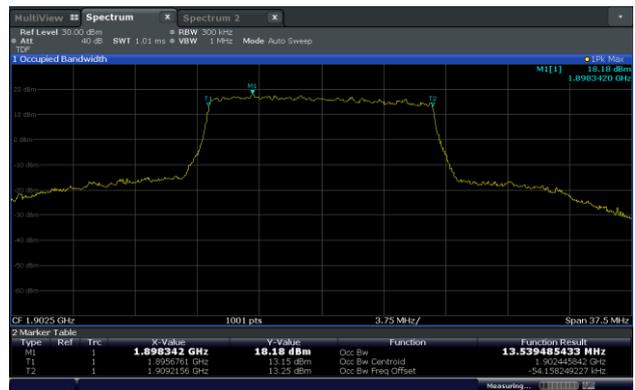
15M BW / 16QAM / Mid ch.



15M BW / QPSK / High ch.



15M BW / 16QAM / High ch.



KCTL Inc.

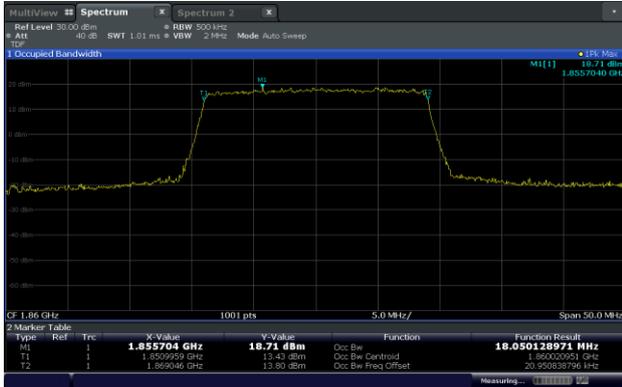
65, Sinwon-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do, 16677, Korea
TEL: 82-31-285-0894 FAX: 82-505-299-8311
www.kctl.co.kr

Report No.:
KR19-SRF0016-A

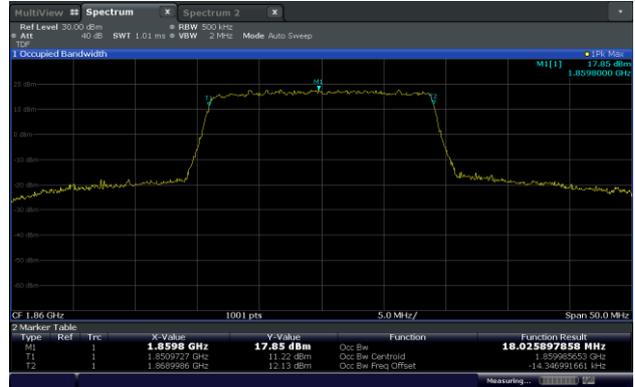
Page (58) of (279)



20M BW / QPSK / Low ch.



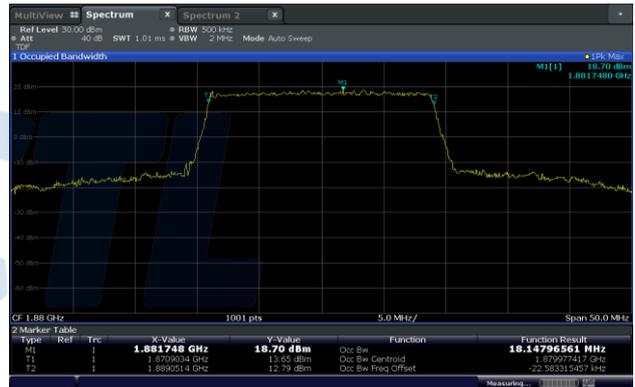
20M BW / 16QAM / Low ch.



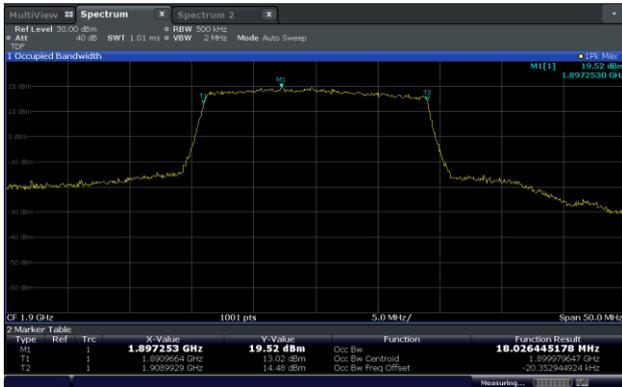
20M BW / QPSK / Mid ch.



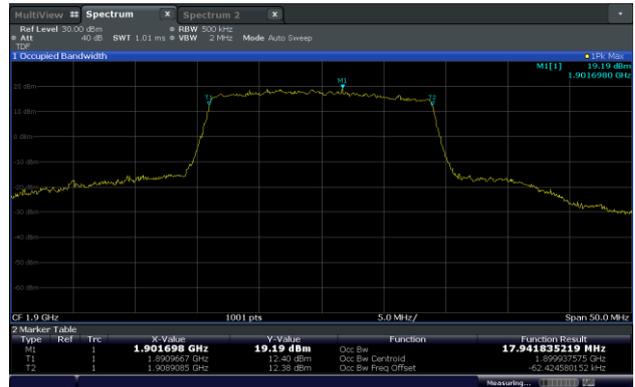
20M BW / 16QAM / Mid ch.



20M BW / QPSK / High ch.

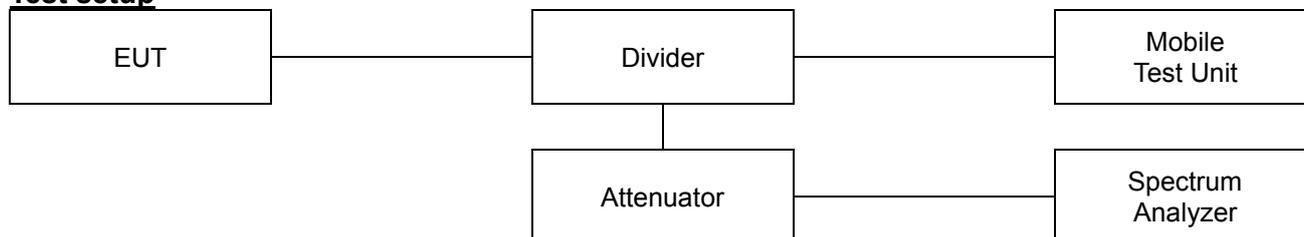


20M BW / 16QAM / High ch.



7.2. Spurious Emissions at Antenna Terminal

Test setup



Limit

According to §22.917(a), §24.238(a), the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10\log(P_{\text{Watts}})$ dB.

According to §27.53(g), for operations in the 600 MHz band and the 698~746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10\log(P_{\text{Watts}})$ dB.

According to §27.53(h), except as otherwise specified below, for operations in the 1695~1710 MHz, 1710 ~ 1755 MHz, 1755 ~ 1780 MHz, 1915~1920 MHz, 1995~2000 MHz, 2000~2020 MHz, 2110~2155 MHz, 2155~2180 MHz, and 2180~2200 bands, the power of an emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10\log(P_{\text{Watts}})$ dB.

Test procedure

971168 D01 v03r01 - Section 6
ANSI 63.26-2015 – Section 5.7

Test settings

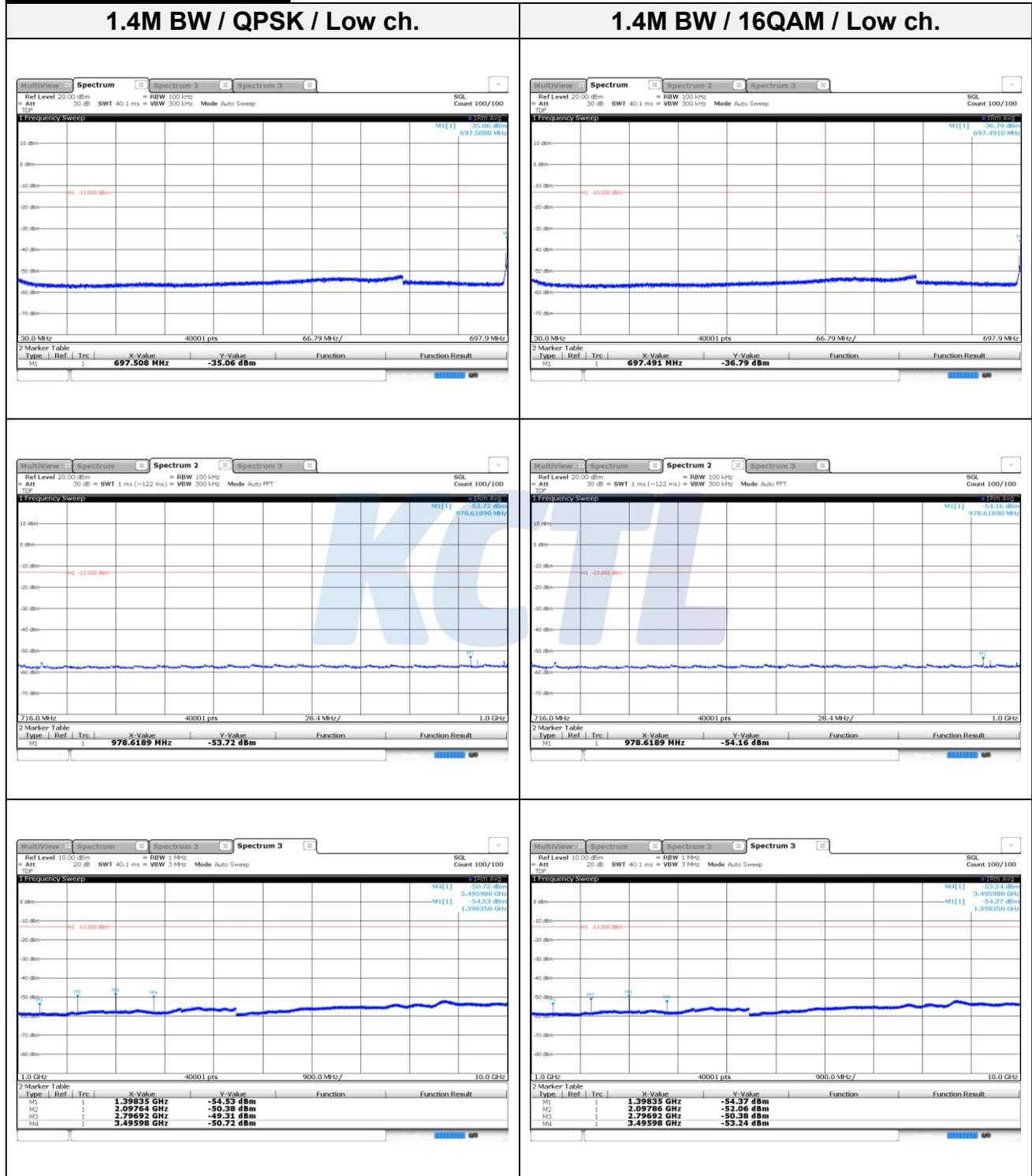
- 1) Start frequency was set to 30 MHz and stop frequency was set to at least 10th the fundamental frequency.
- 2) Detector = RMS
- 3) Sweep time = auto couple.
- 4) Trace mode = trace average
- 5) Allow trace to fully stabilize.
- 6) Please see test notes below RBW and VBW settings.

Notes:

1. Per 22.917(b),24.238(b),27.53(g),(h), compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater for frequencies less than 1 GHz and 1 MHz or greater for frequencies greater than 1 GHz.
2. All path loss of frequency range was investigated and compensated to spectrum analyzer as TDF function. Please refer to the page 12.

Test results

Test mode: LTE Band12



KCTL Inc.

65, Sinwon-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do, 16677, Korea
TEL: 82-31-285-0894 FAX: 82-505-299-8311
www.kctl.co.kr

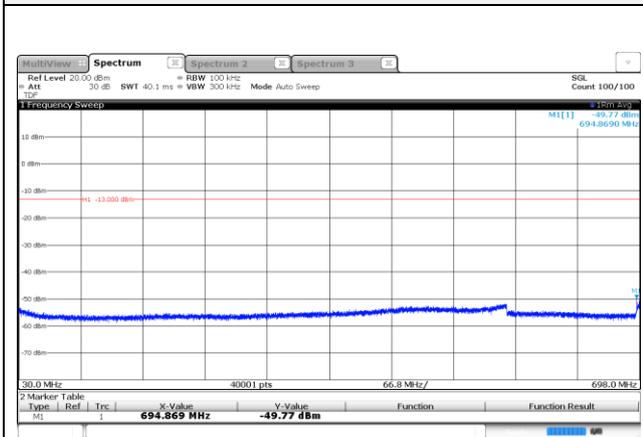
Report No.:
KR19-SRF0016-A

Page (61) of (279)

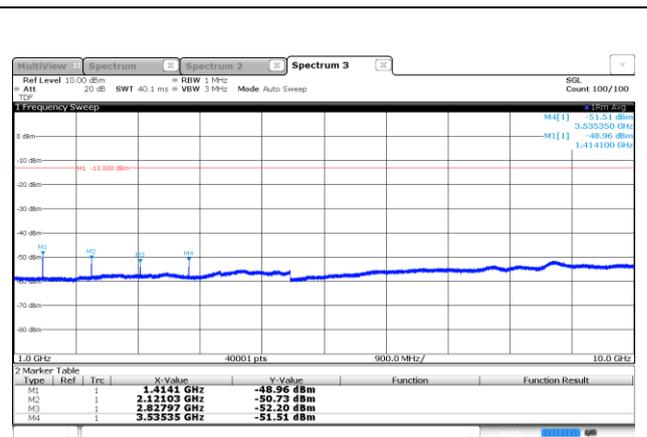
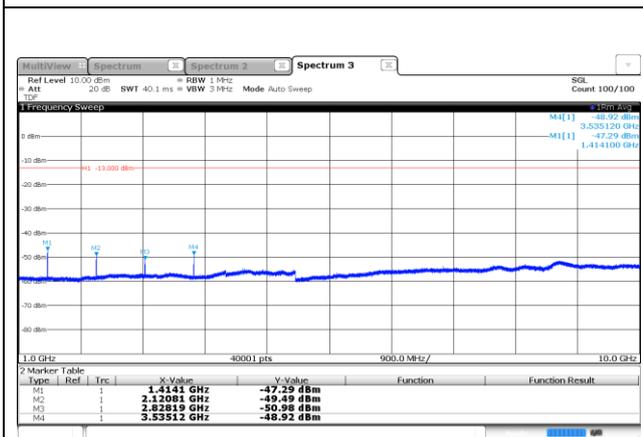
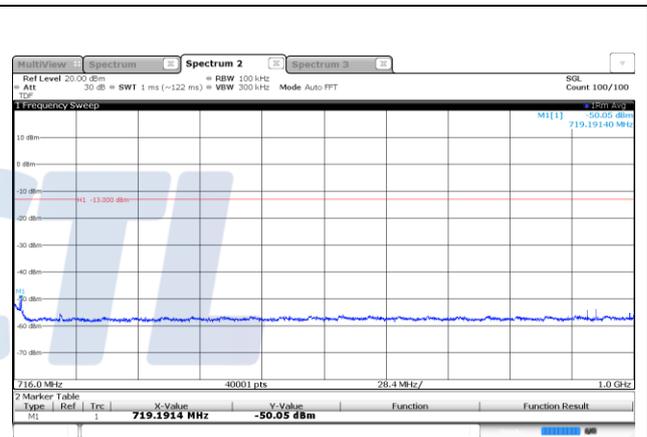
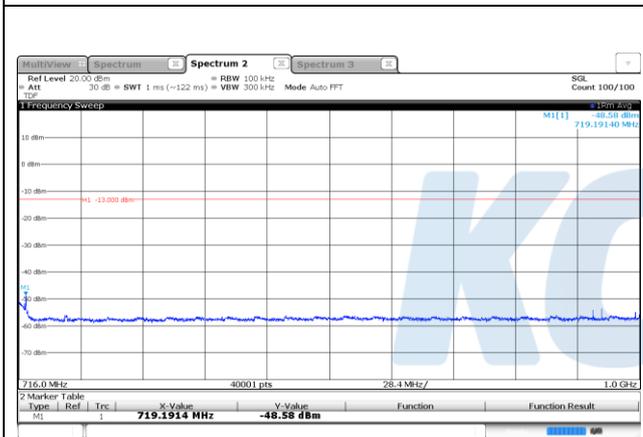
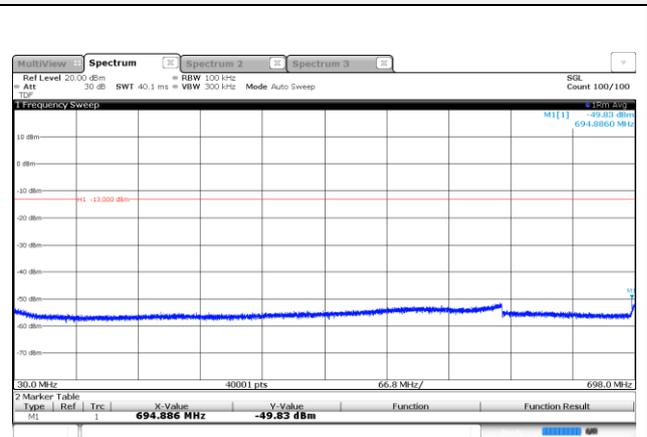


Test mode: LTE Band12

1.4M BW / QPSK / Mid ch.



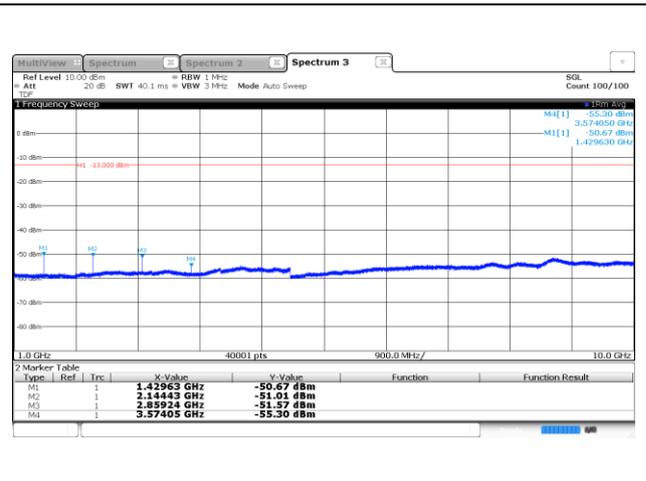
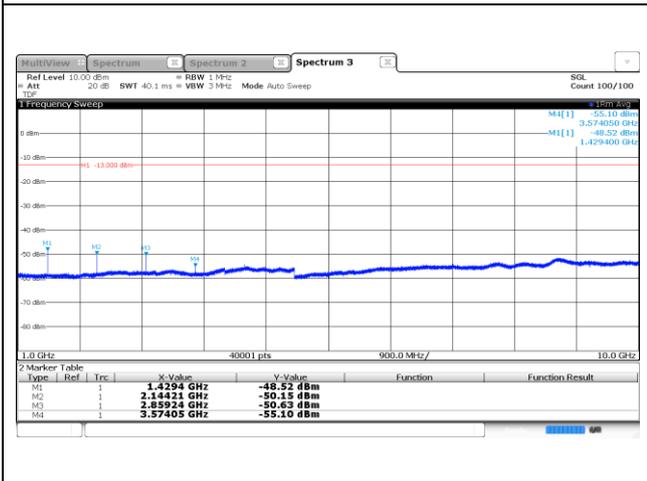
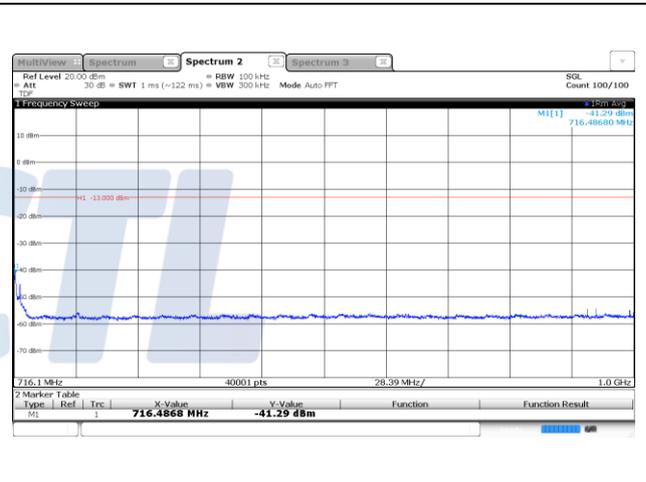
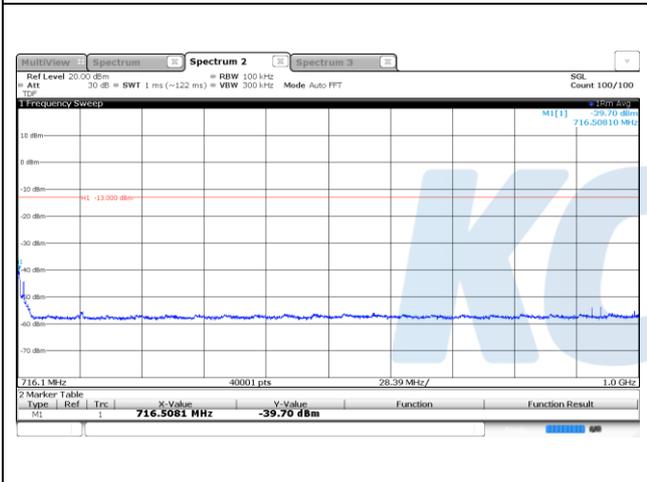
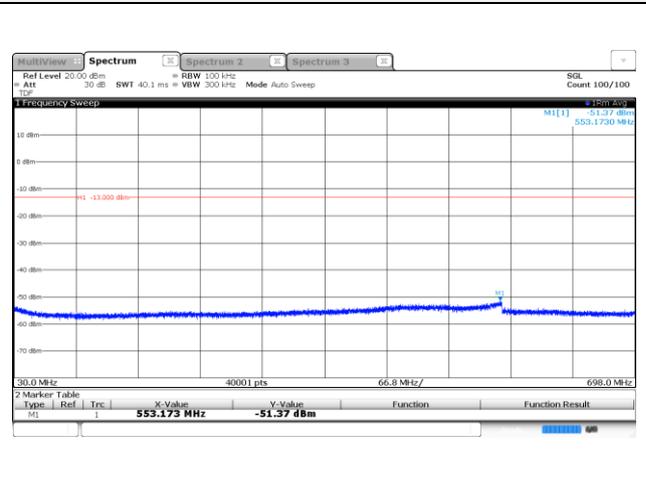
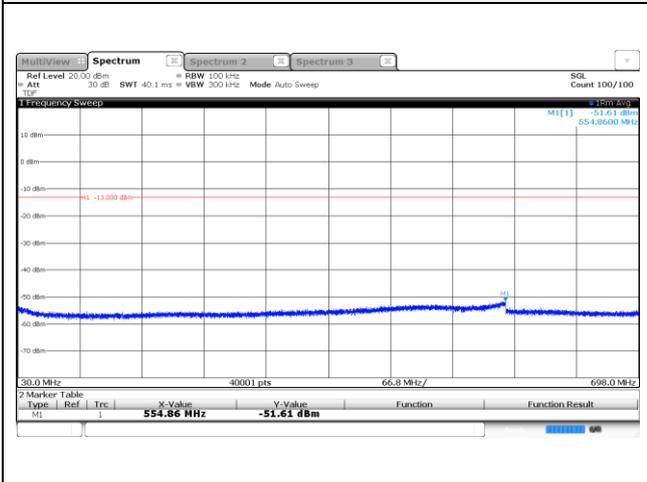
1.4M BW / 16QAM / Mid ch.



Test mode: LTE Band12

1.4M BW / QPSK / High ch.

1.4M BW / 16QAM / High ch.



KCTL Inc.

65, Sinwon-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do, 16677, Korea
TEL: 82-31-285-0894 FAX: 82-505-299-8311
www.kctl.co.kr

Report No.:
KR19-SRF0016-A

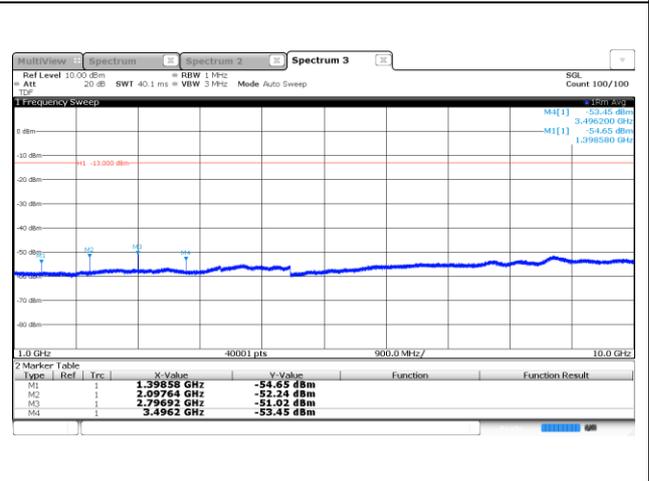
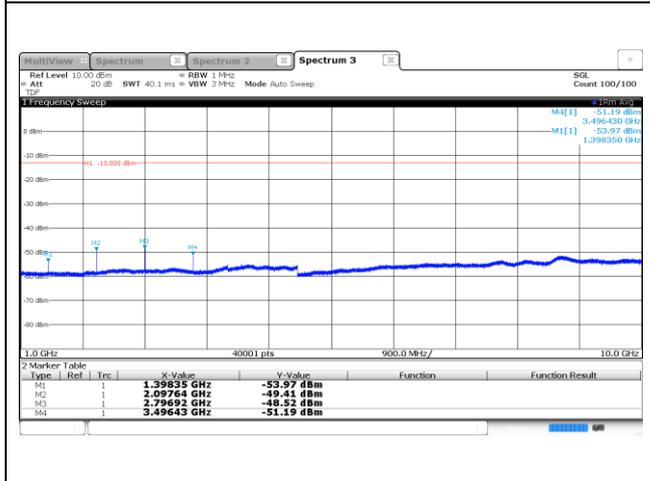
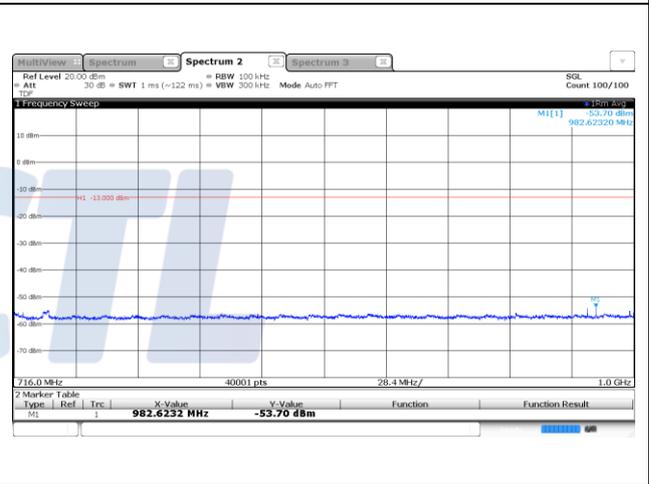
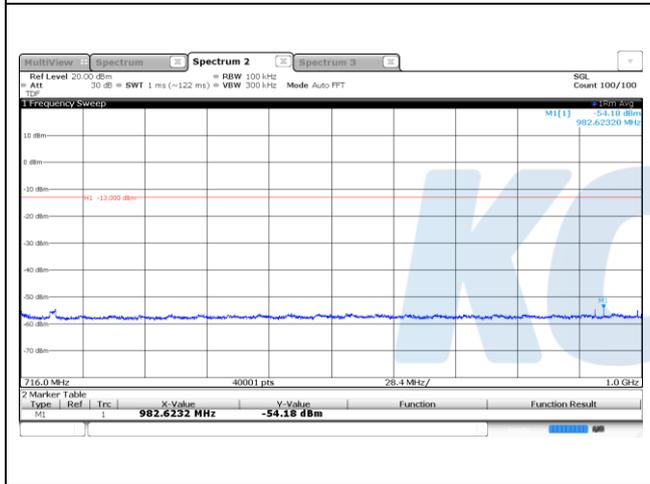
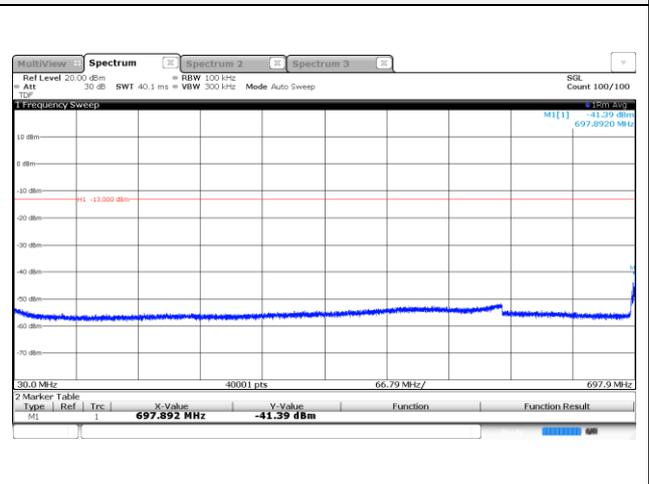
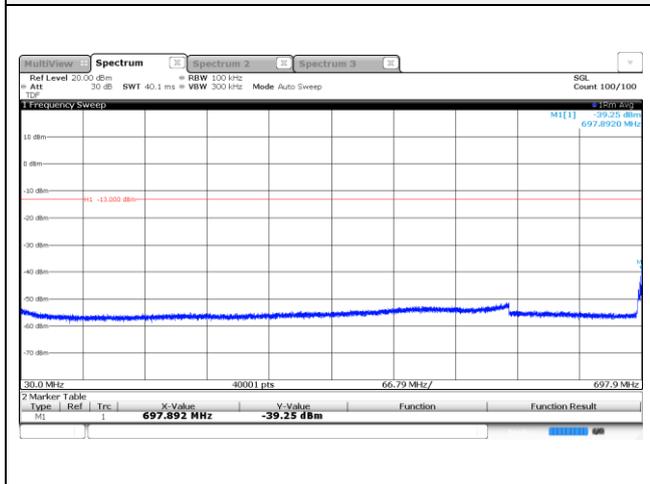
Page (63) of (279)



Test mode: LTE Band12

3M BW / QPSK / Low ch.

3M BW / 16QAM / Low ch.



KCTL Inc.

65, Sinwon-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do, 16677, Korea
TEL: 82-31-285-0894 FAX: 82-505-299-8311
www.kctl.co.kr

Report No.:
KR19-SRF0016-A

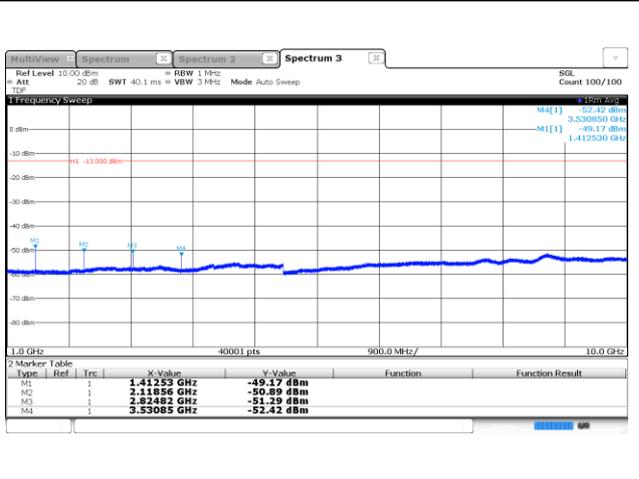
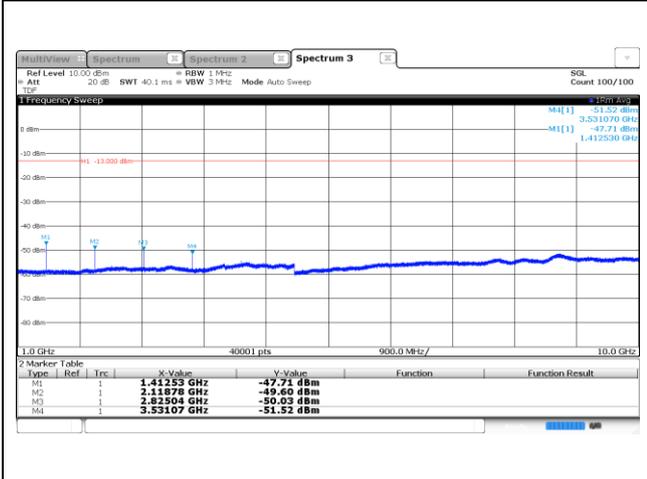
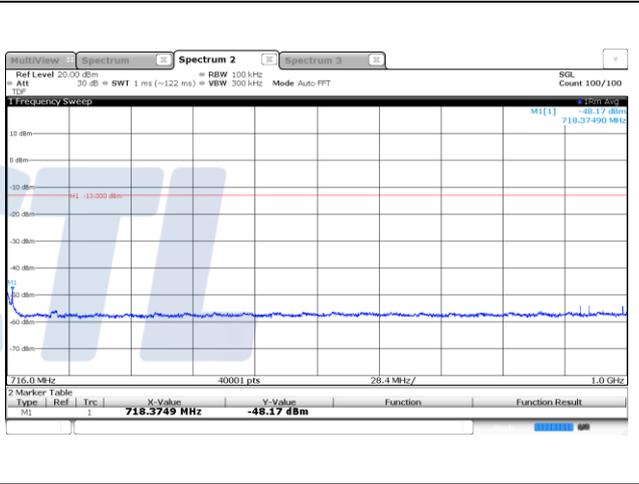
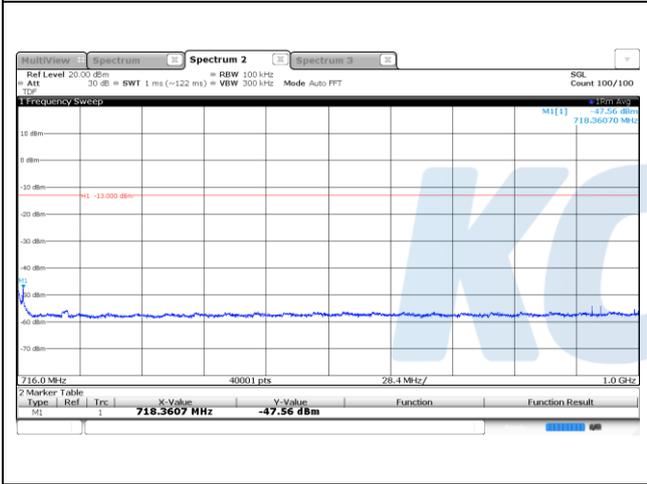
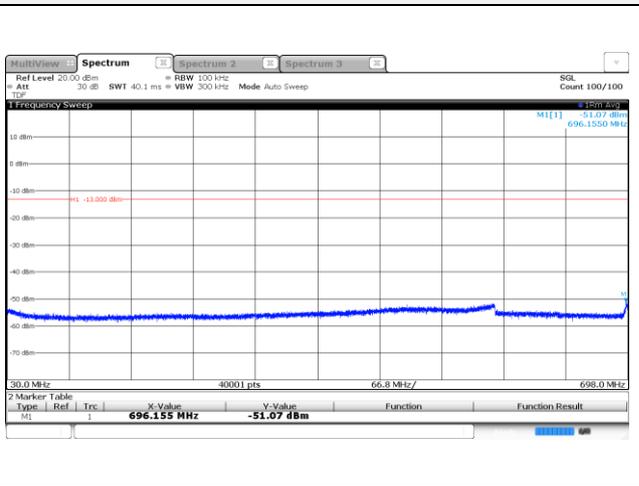
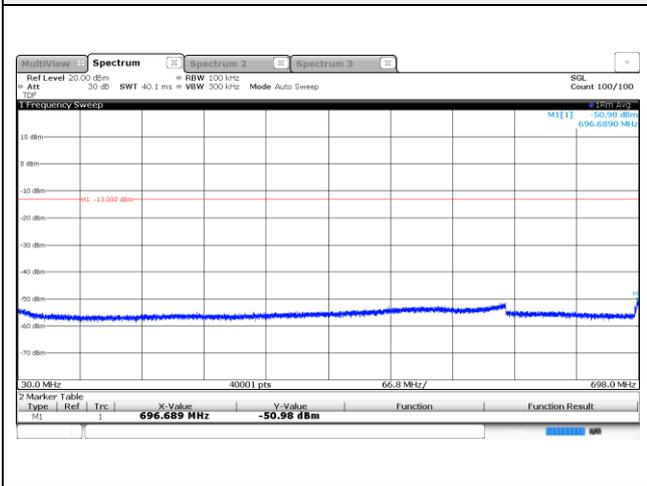
Page (64) of (279)



Test mode: LTE Band12

3M BW / QPSK / Mid ch.

3M BW / 16QAM / Mid ch.



KCTL Inc.

65, Sinwon-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do, 16677, Korea
TEL: 82-31-285-0894 FAX: 82-505-299-8311
www.kctl.co.kr

Report No.:
KR19-SRF0016-A

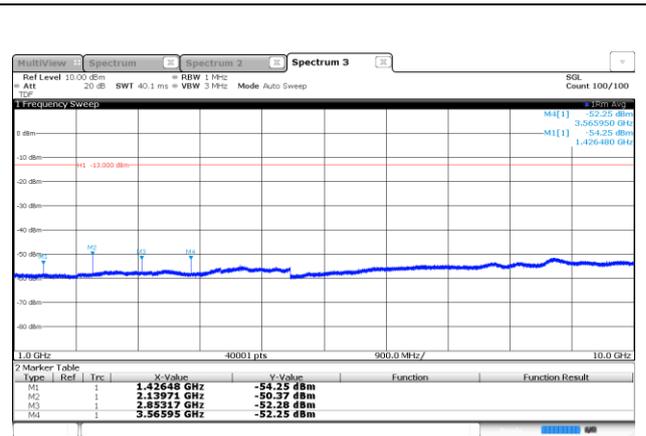
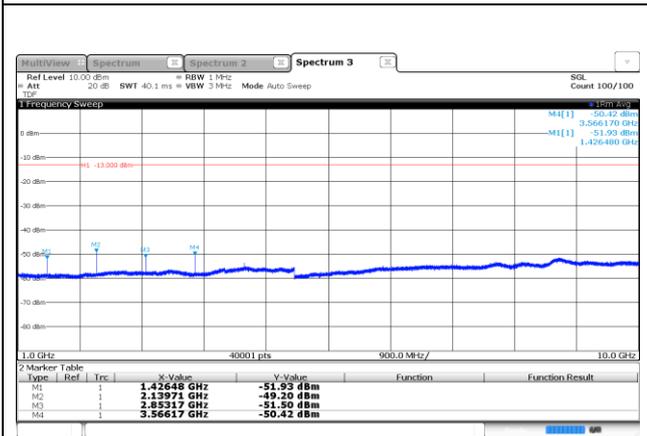
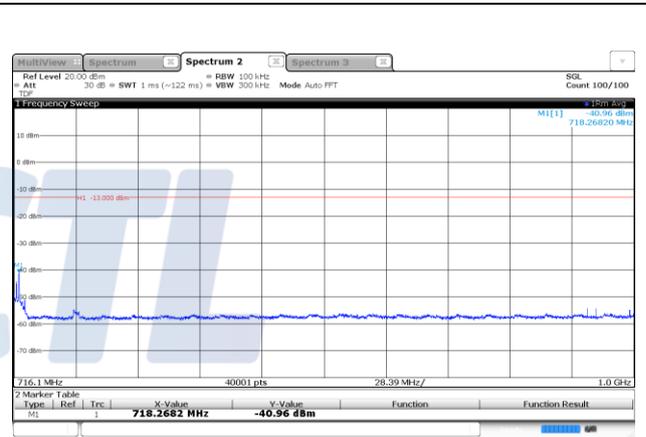
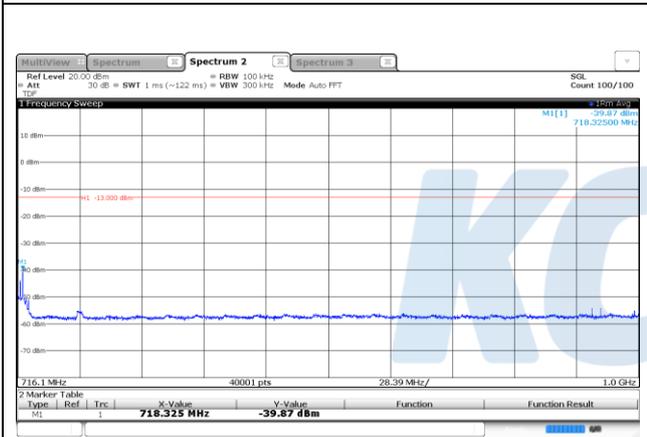
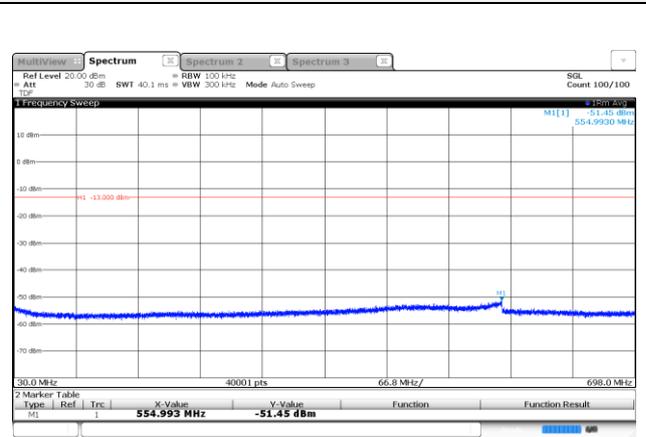
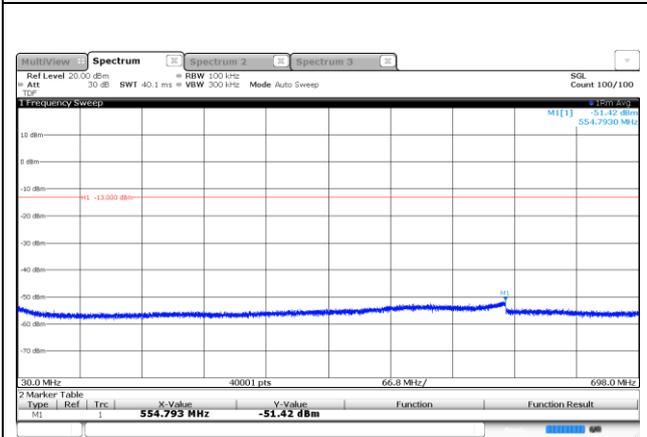
Page (65) of (279)



Test mode: LTE Band12

3M BW / QPSK / High ch.

3M BW / 16QAM / High ch.



KCTL Inc.

65, Sinwon-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do, 16677, Korea
TEL: 82-31-285-0894 FAX: 82-505-299-8311
www.kctl.co.kr

Report No.:
KR19-SRF0016-A

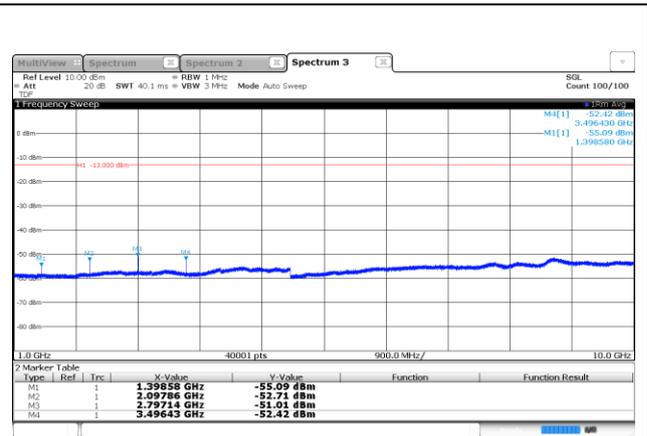
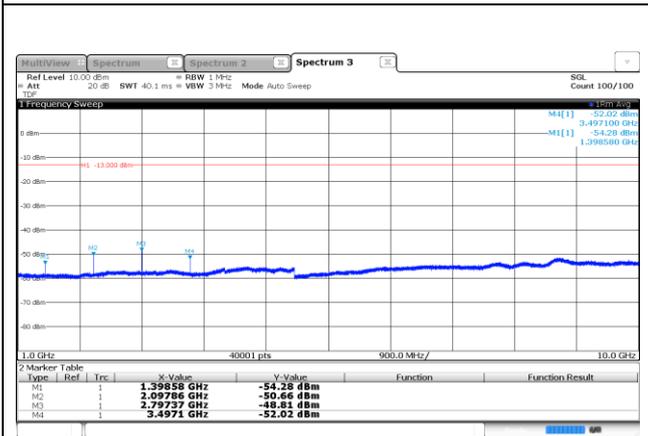
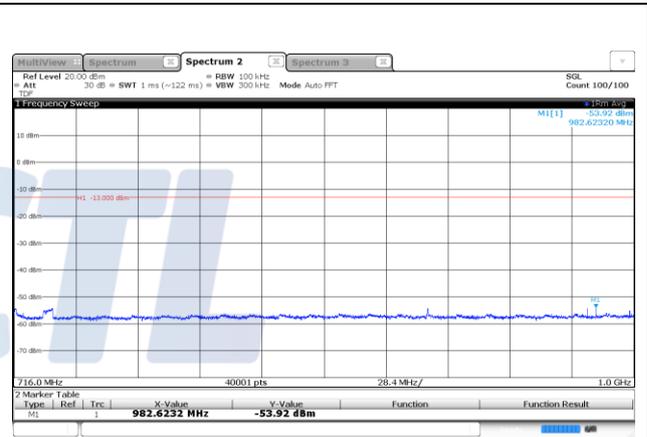
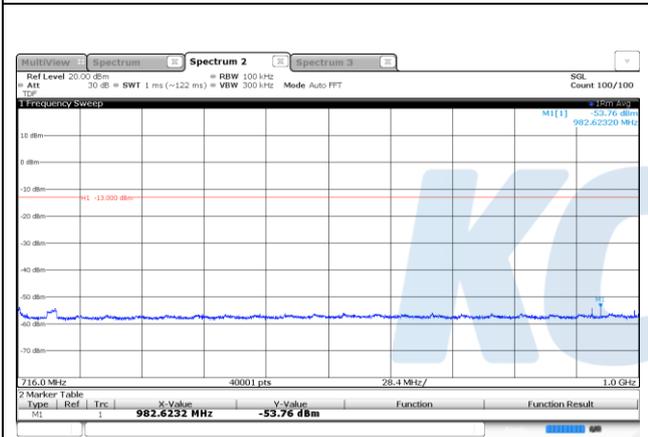
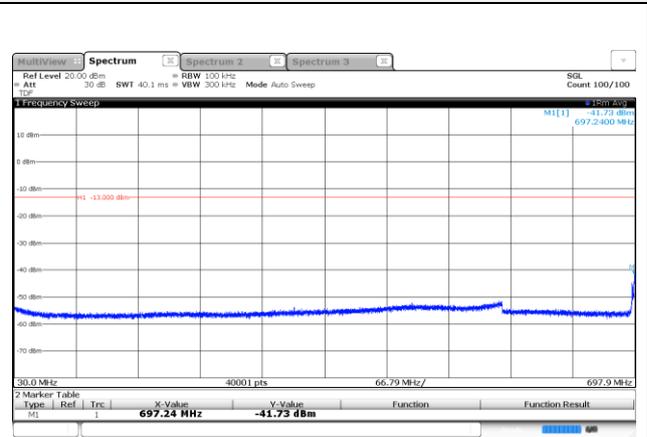
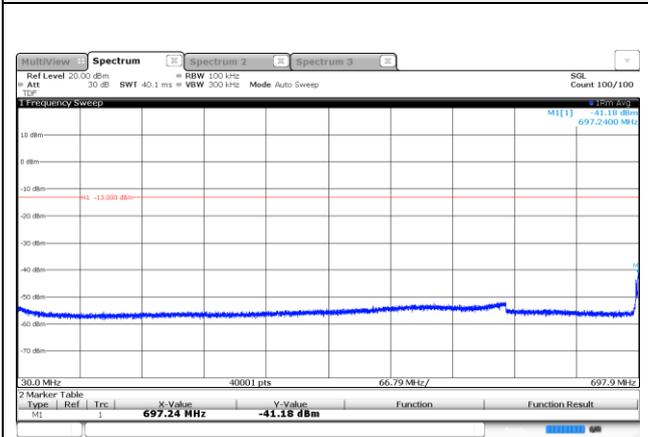
Page (66) of (279)



Test mode: LTE Band12/17

5M BW / QPSK / Low ch.

5M BW / 16QAM / Low ch.



KCTL Inc.

65, Sinwon-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do, 16677, Korea
TEL: 82-31-285-0894 FAX: 82-505-299-8311
www.kctl.co.kr

Report No.:
KR19-SRF0016-A

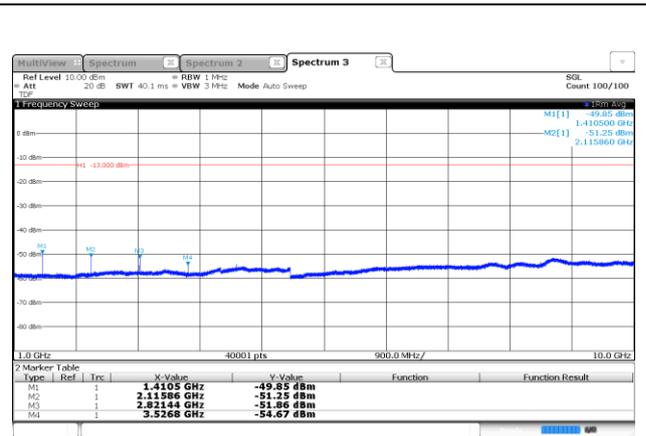
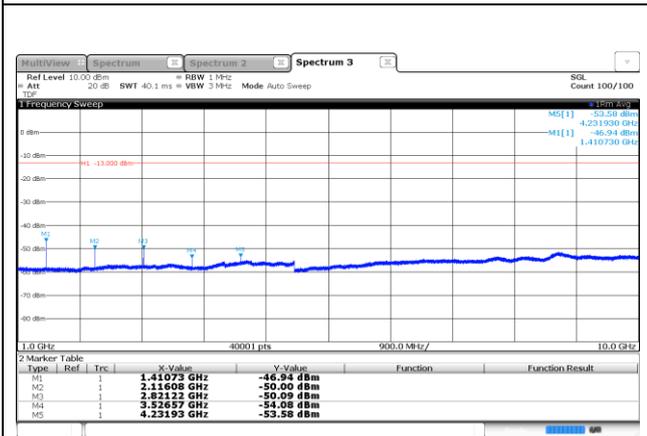
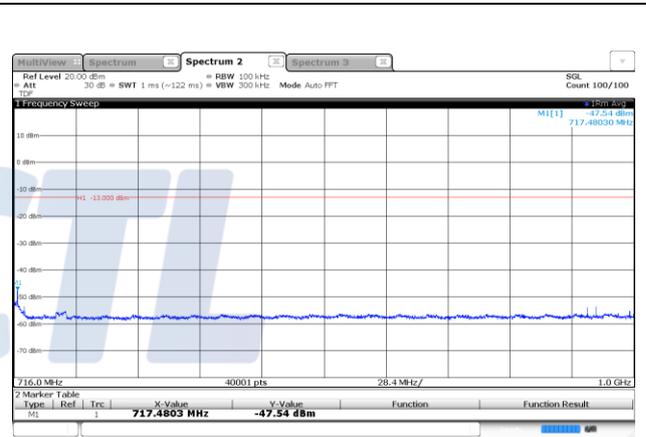
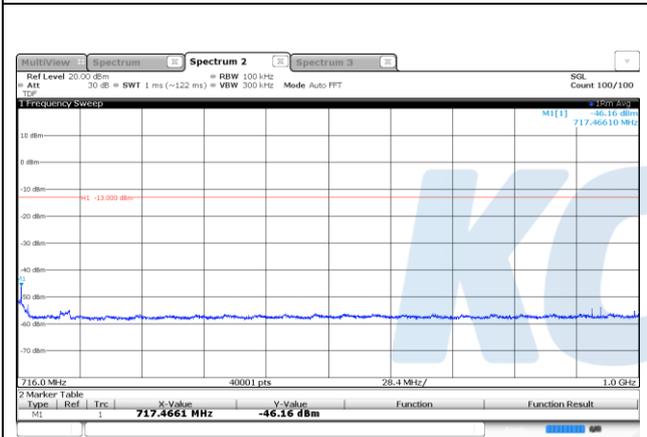
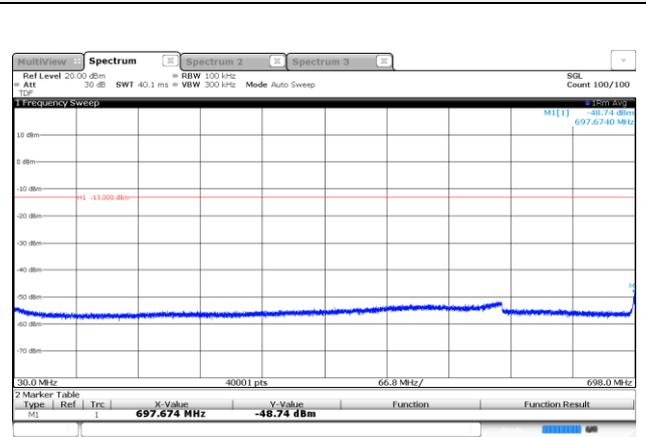
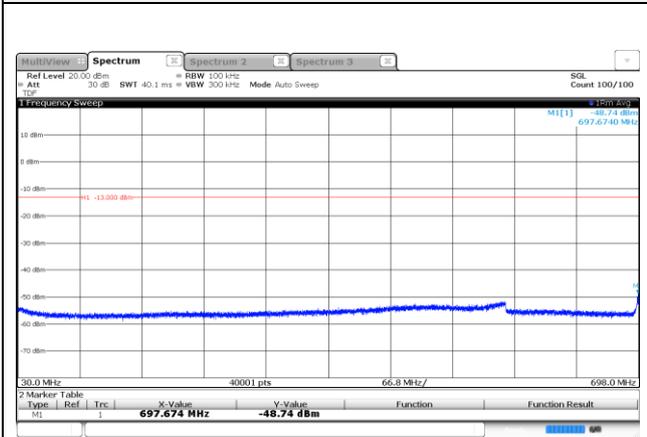
Page (67) of (279)



Test mode: LTE Band12/17

5M BW / QPSK / Mid ch.

5M BW / 16QAM / Mid ch.



KCTL Inc.

65, Sinwon-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do, 16677, Korea
TEL: 82-31-285-0894 FAX: 82-505-299-8311
www.kctl.co.kr

Report No.:
KR19-SRF0016-A

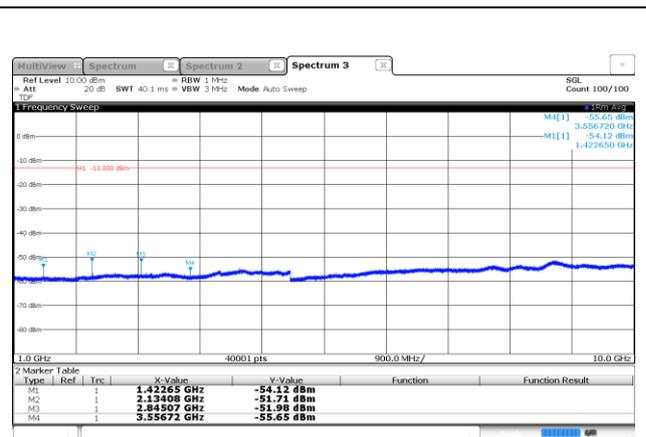
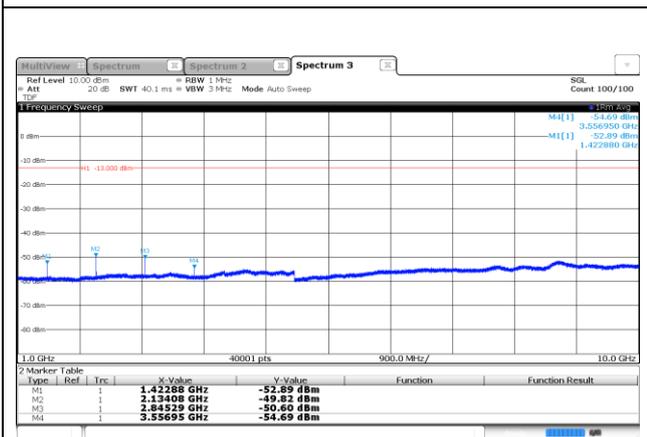
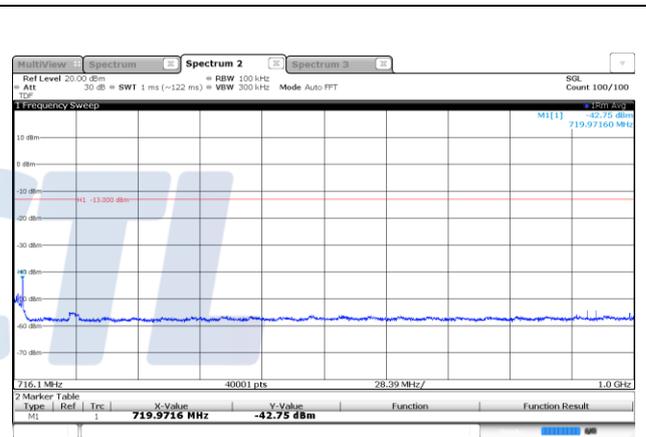
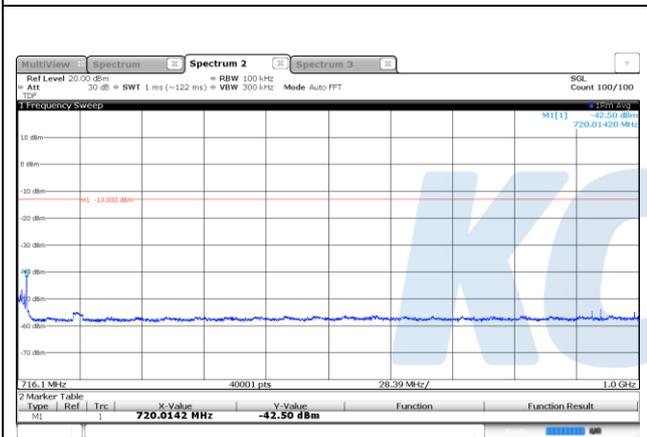
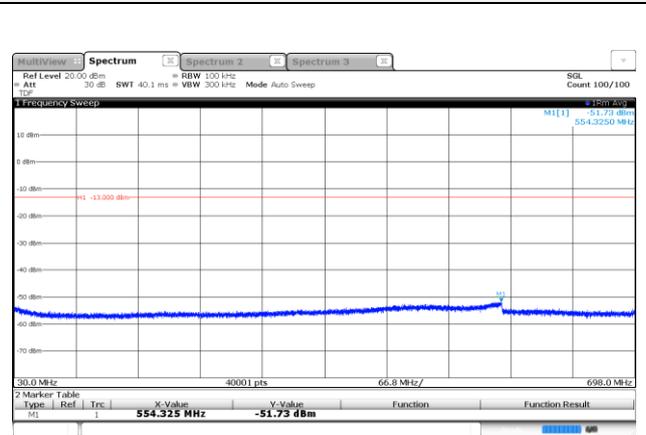
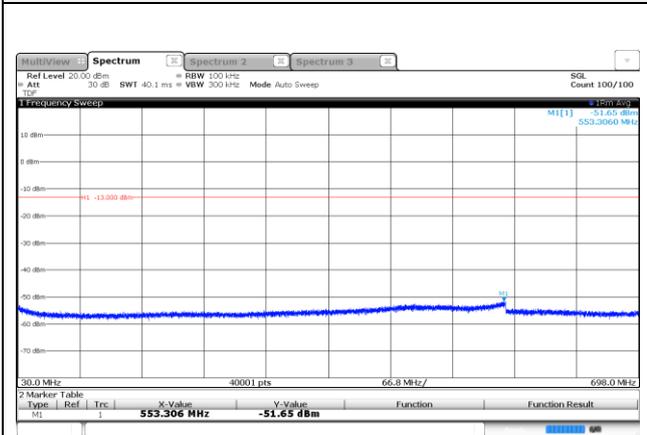
Page (68) of (279)



Test mode: LTE Band12/17

5M BW / QPSK / High ch.

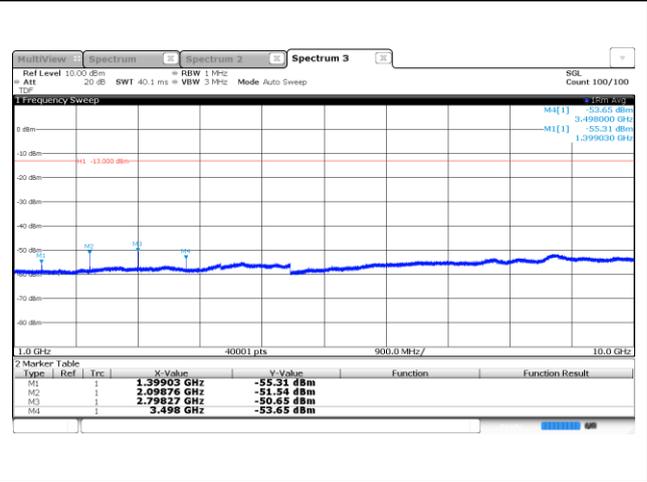
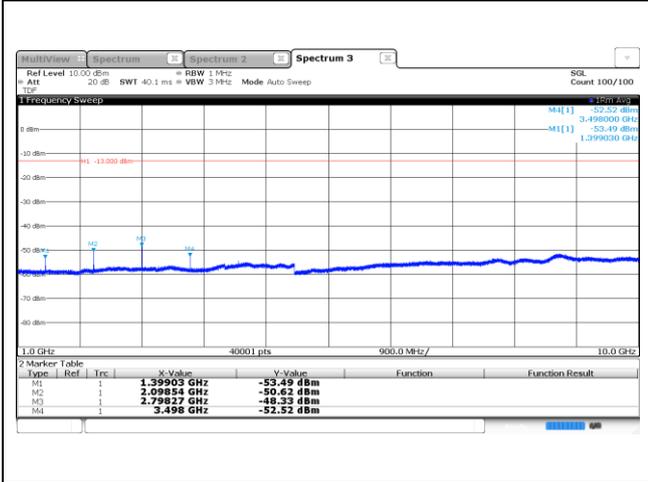
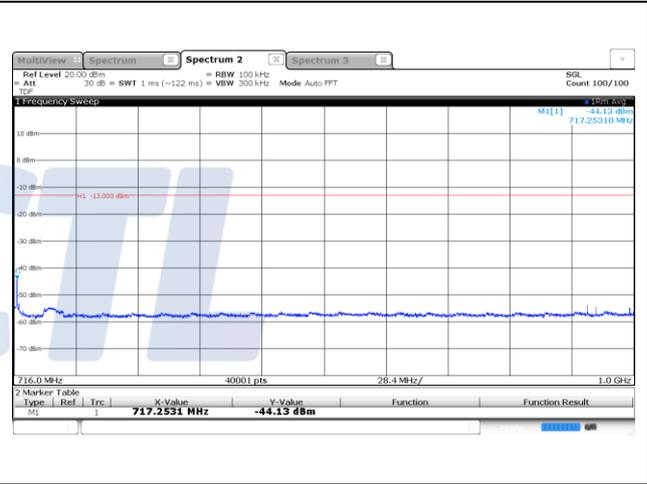
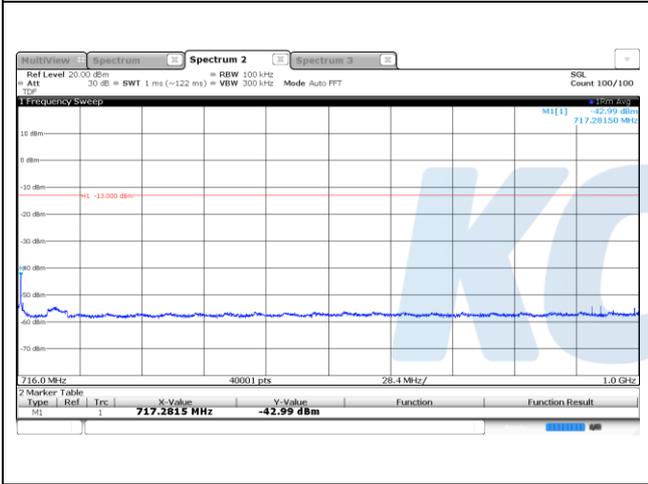
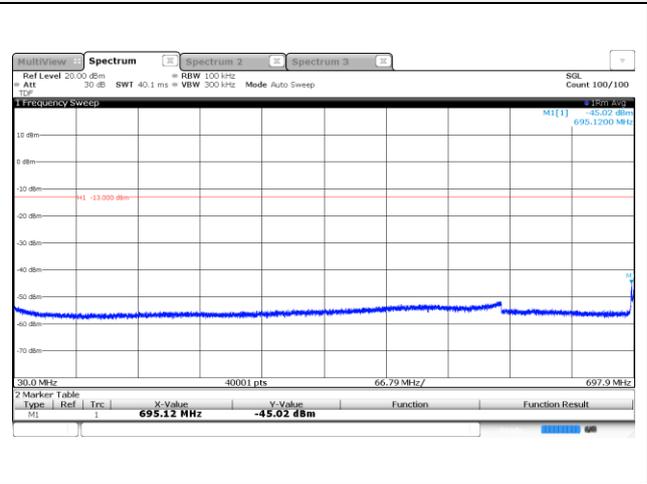
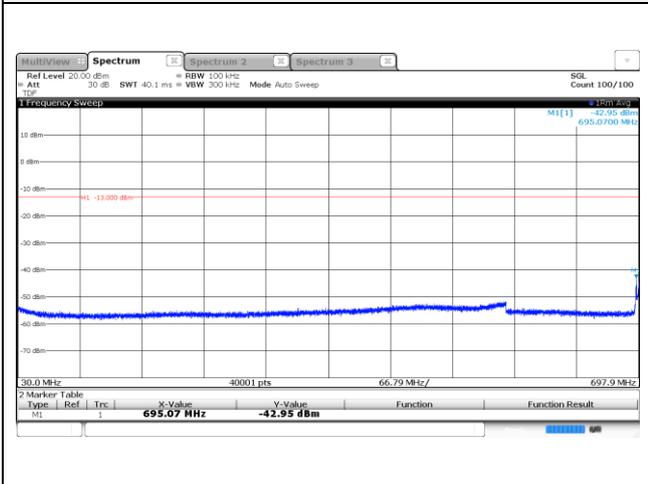
5M BW / 16QAM / High ch.



Test mode: LTE Band12/17

10M BW / QPSK / Low ch.

10M BW / 16QAM / Low ch.



KCTL Inc.

65, Sinwon-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do, 16677, Korea
TEL: 82-31-285-0894 FAX: 82-505-299-8311
www.kctl.co.kr

Report No.:
KR19-SRF0016-A

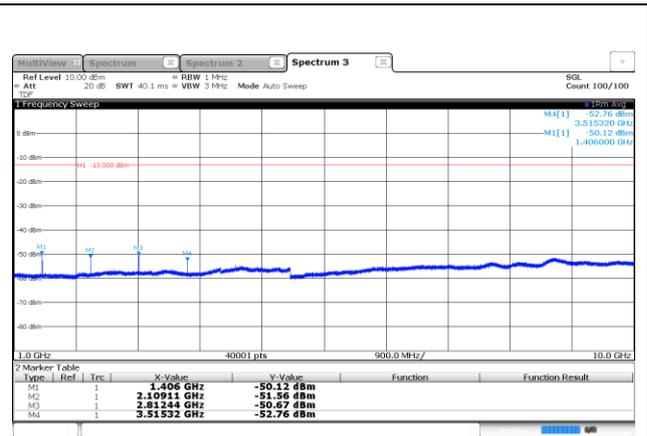
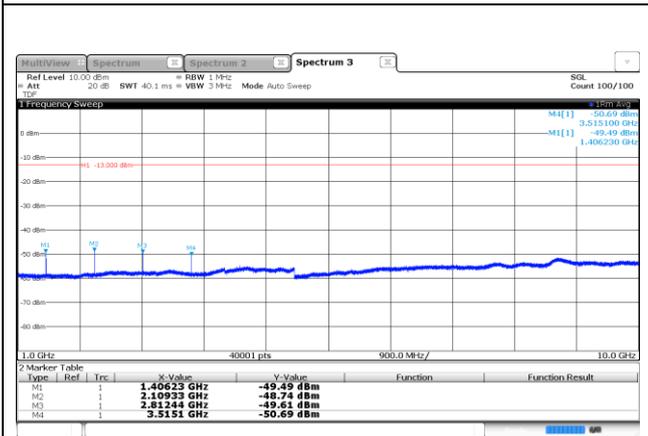
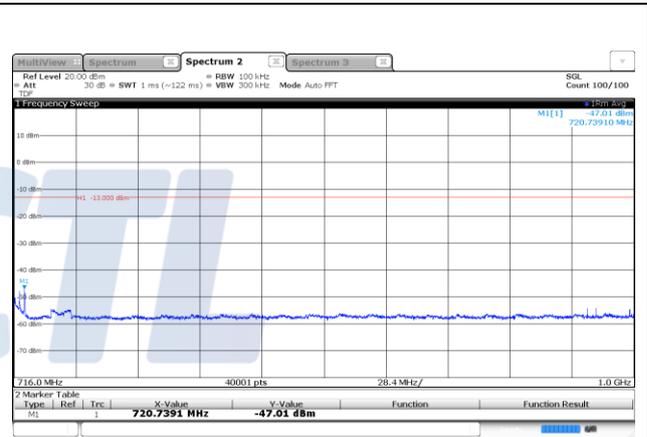
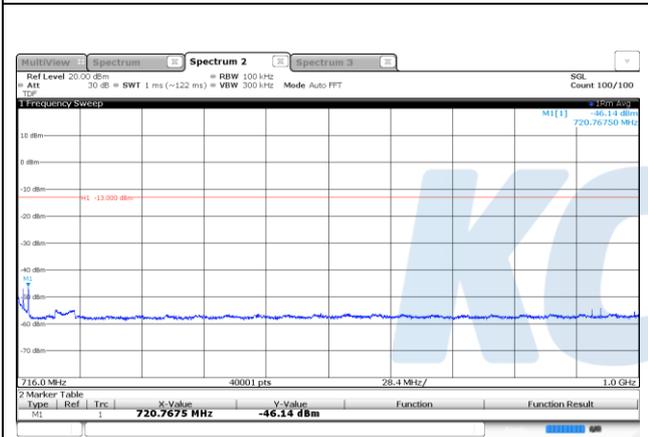
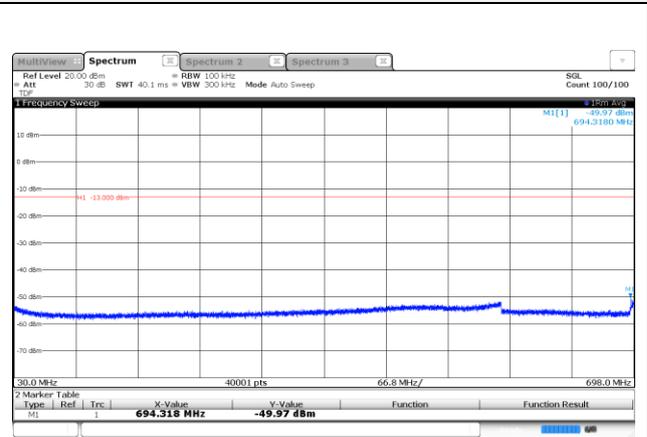
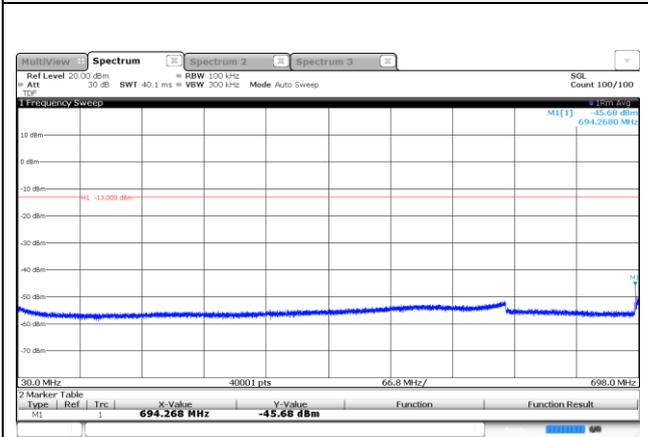
Page (70) of (279)



Test mode: LTE Band12/17

10M BW / QPSK / Mid ch.

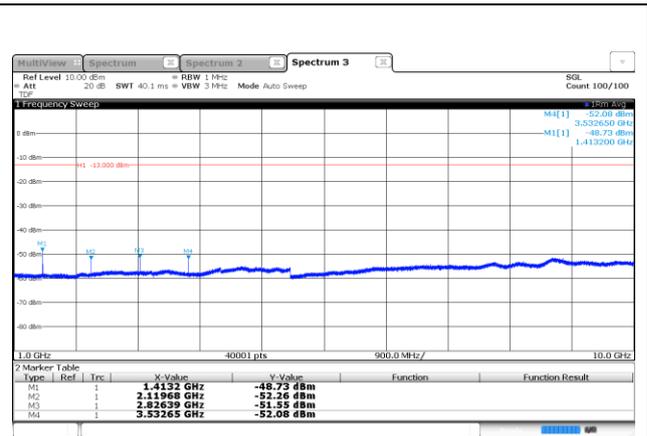
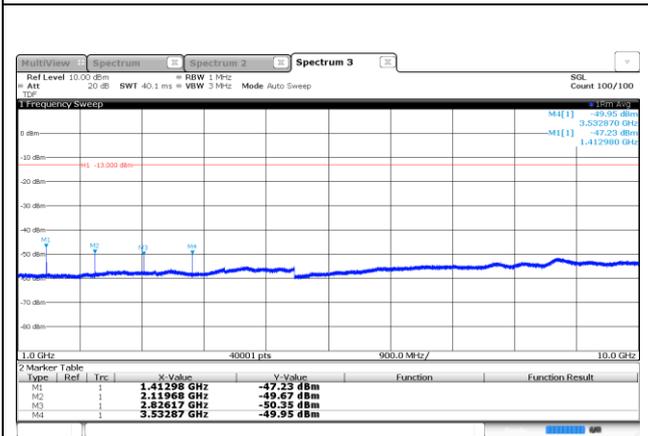
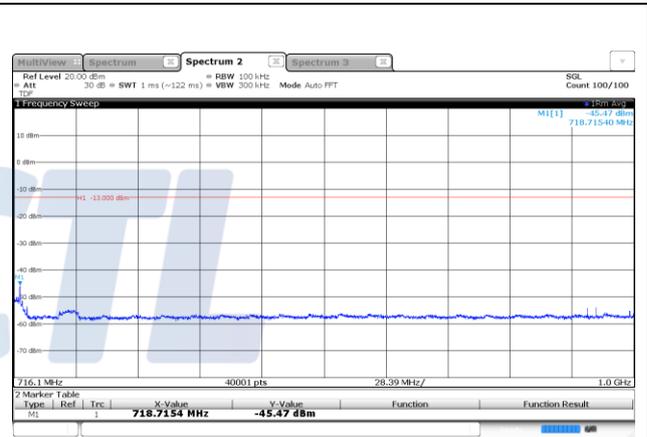
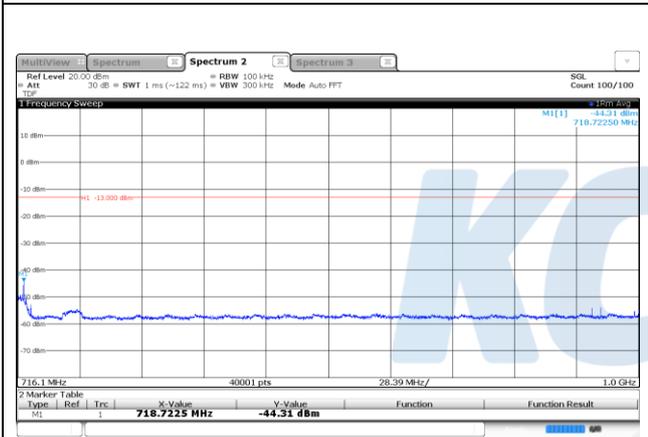
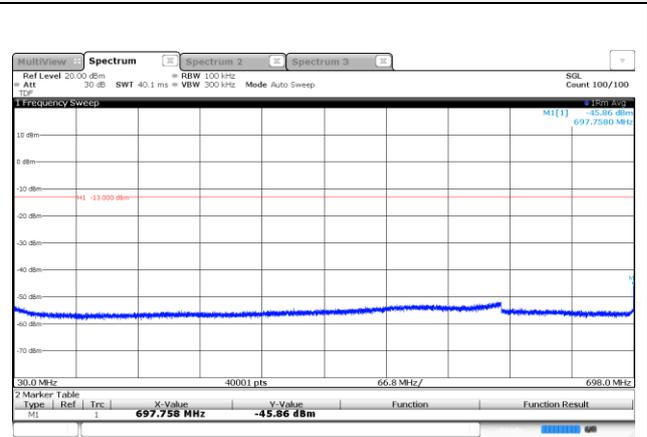
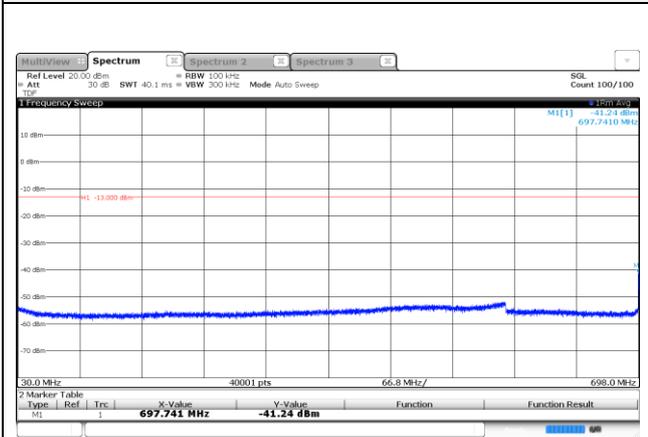
10M BW / 16QAM / Mid ch.



Test mode: LTE Band12/17

10M BW / QPSK / High ch.

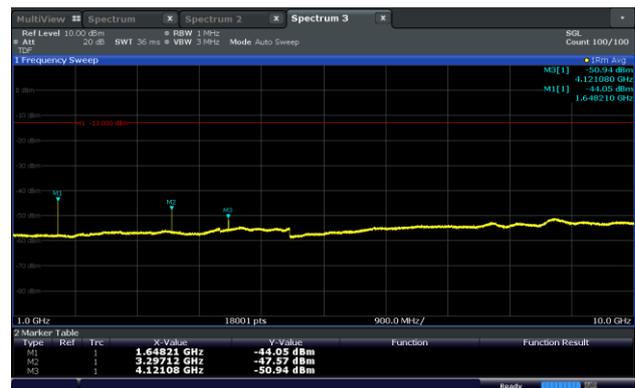
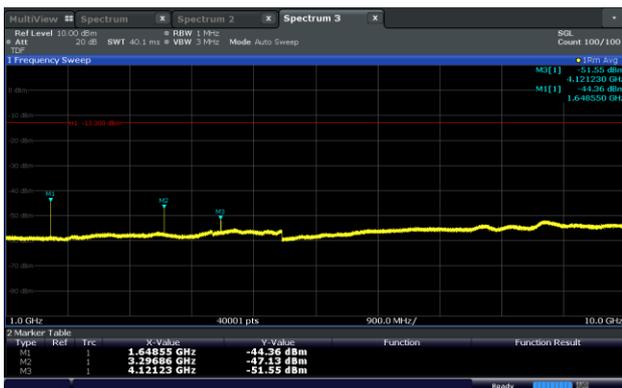
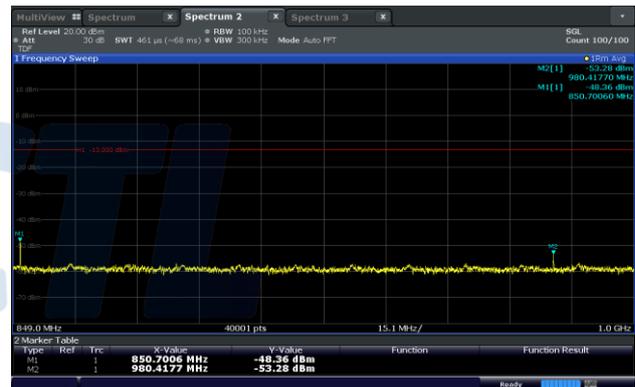
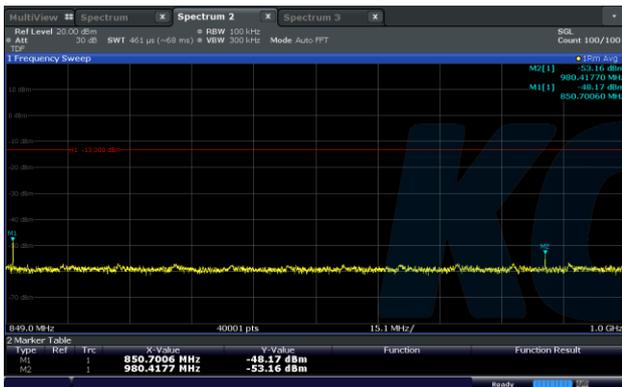
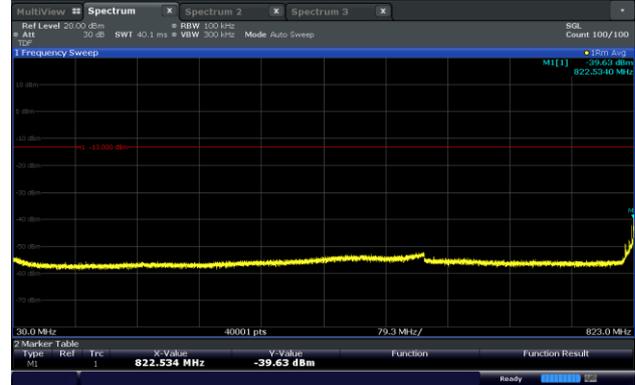
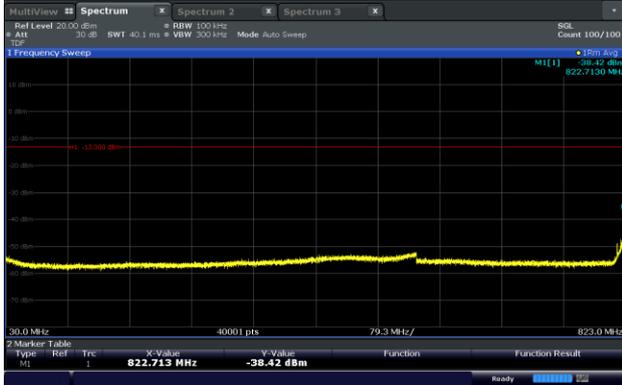
10M BW / 16QAM / High ch.



Test mode: LTE Band5

1.4M BW / QPSK / Low ch.

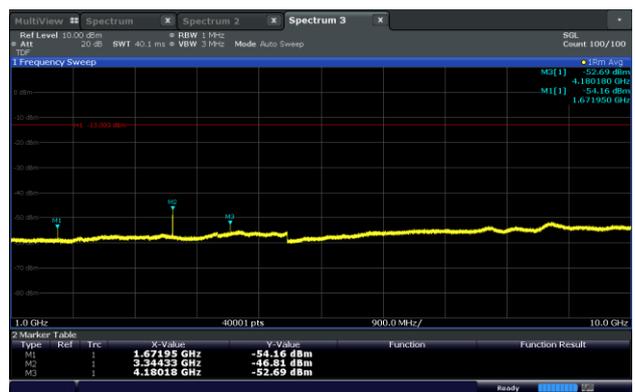
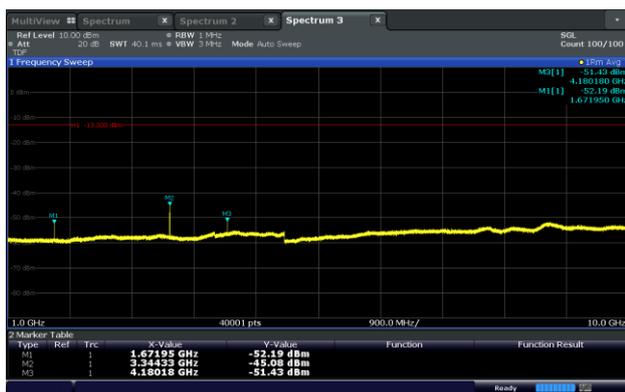
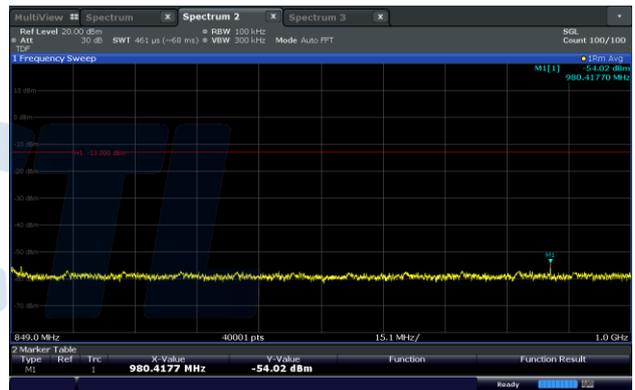
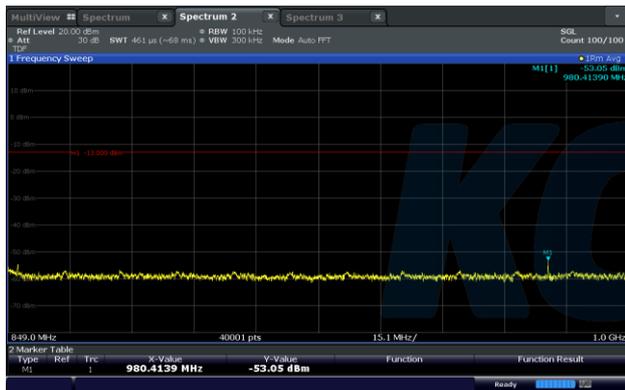
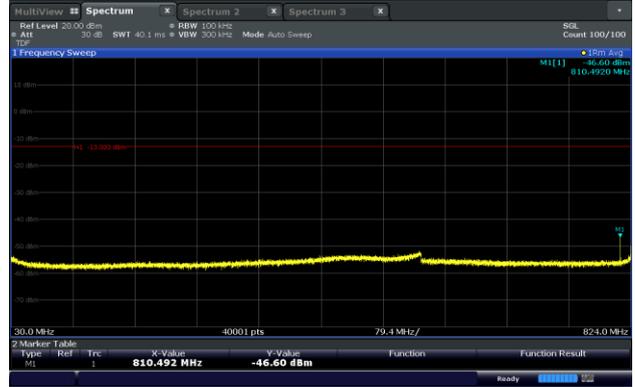
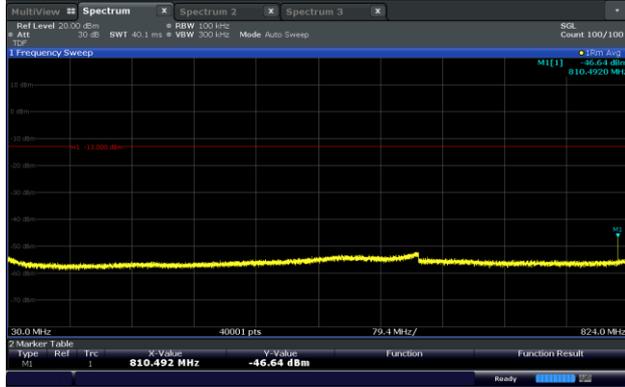
1.4M BW / 16QAM / Low ch.



Test mode: LTE Band5

1.4M BW / QPSK / Mid ch.

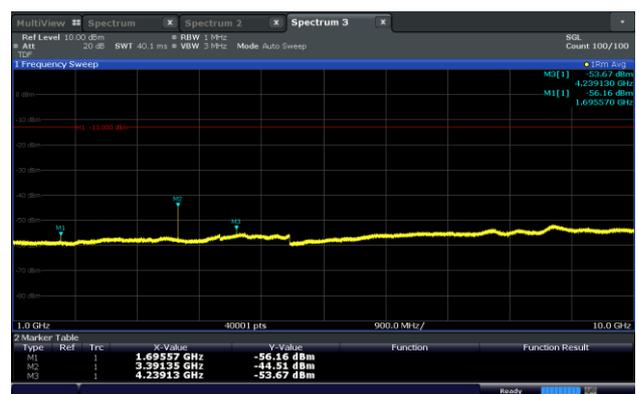
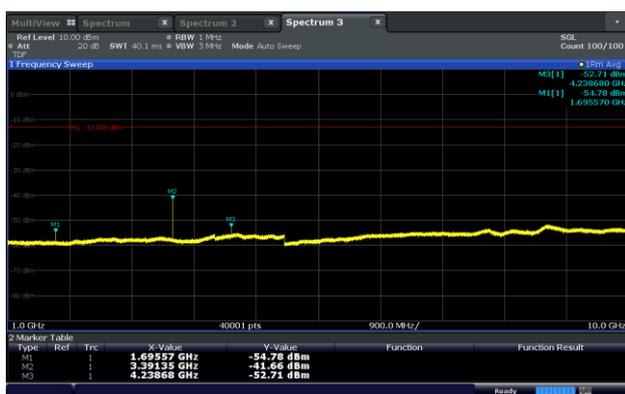
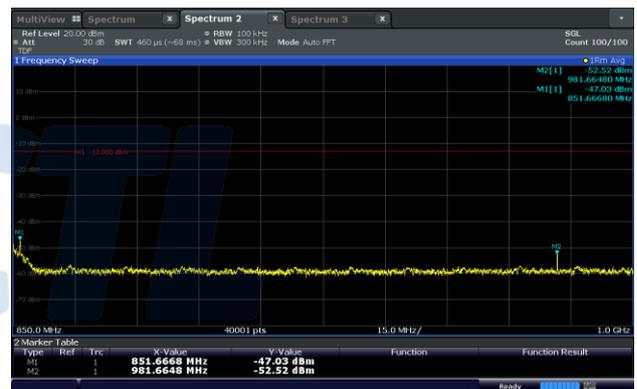
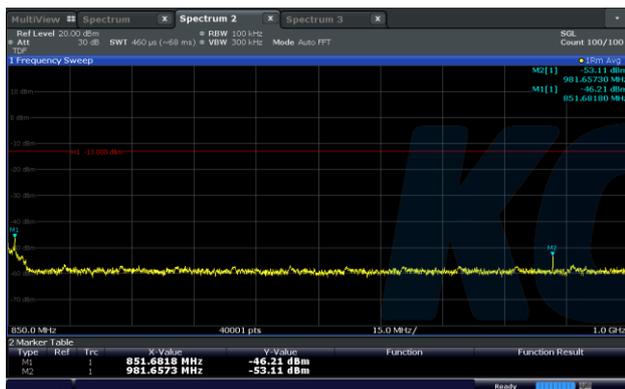
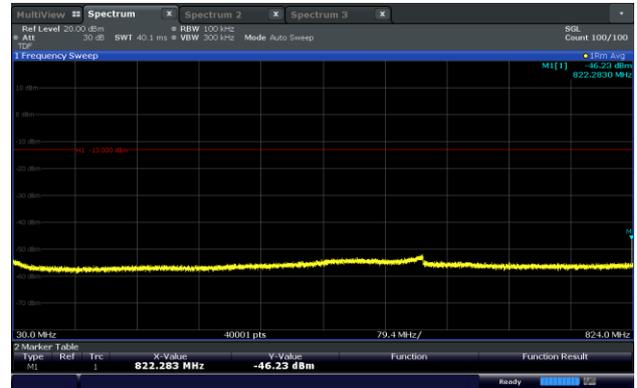
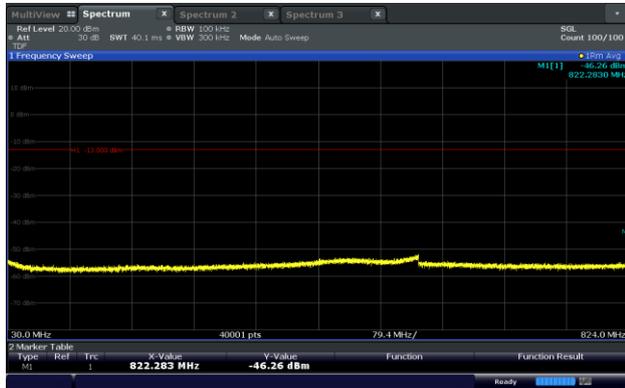
1.4M BW / 16QAM / Mid ch.



Test mode: LTE Band5

1.4M BW / QPSK / High ch.

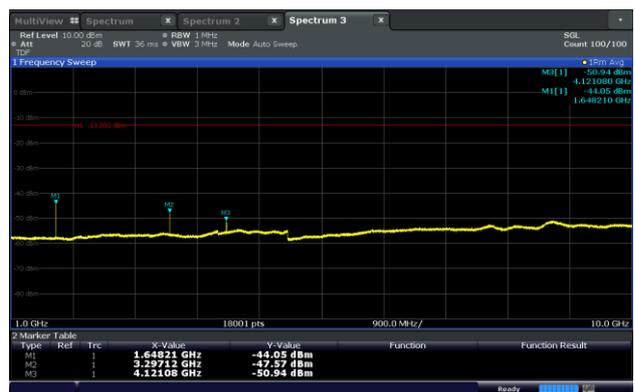
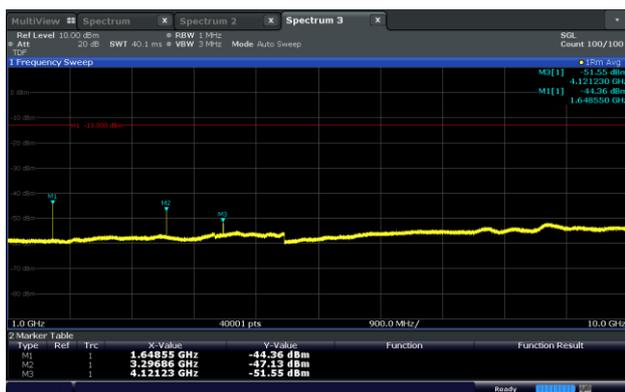
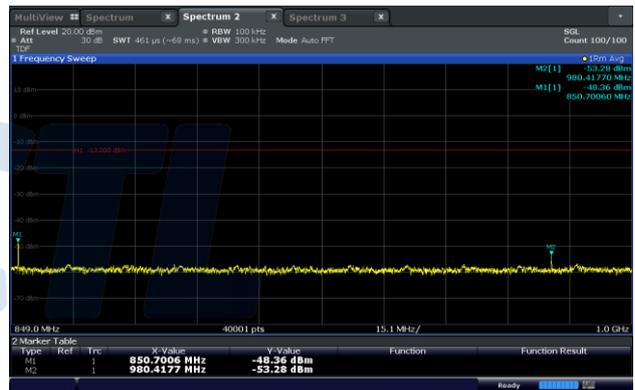
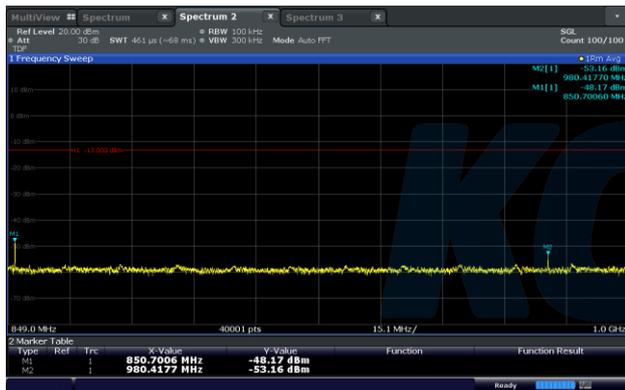
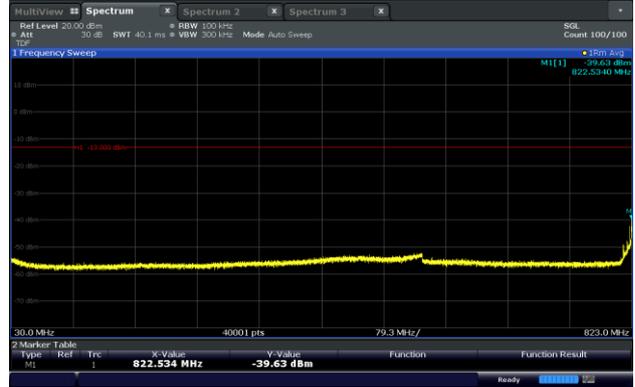
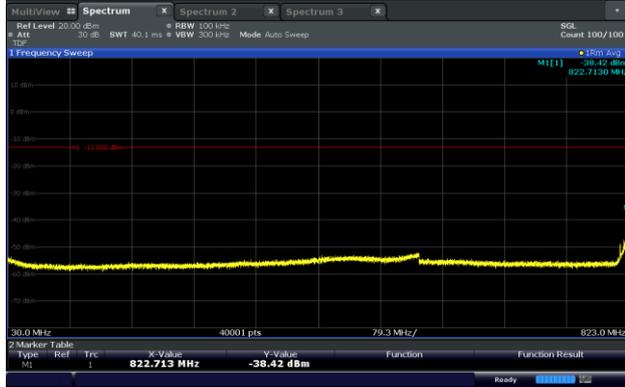
1.4M BW / 16QAM / High ch.



Test mode: LTE Band5

3M BW / QPSK / Low ch.

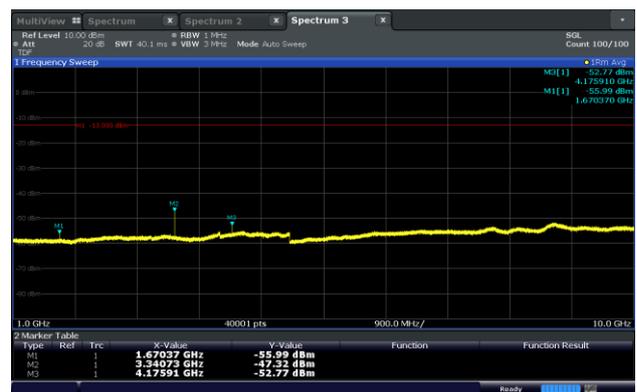
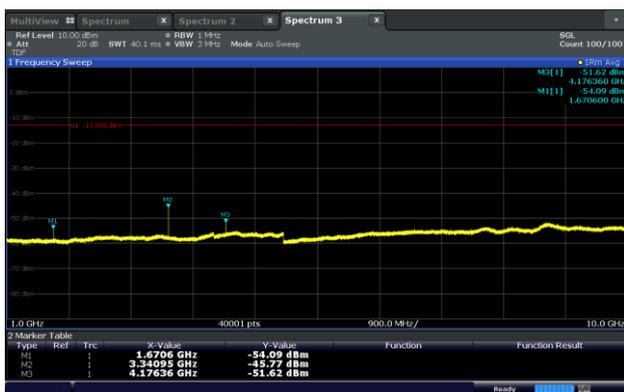
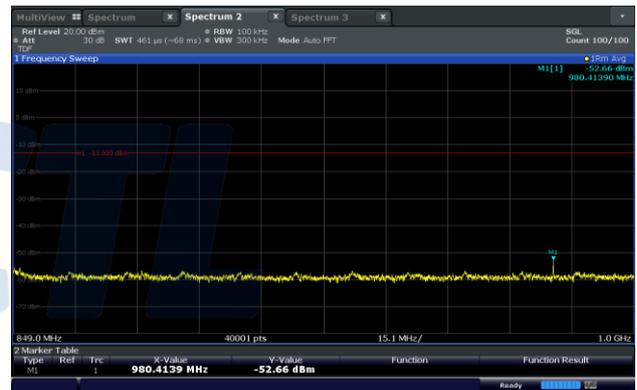
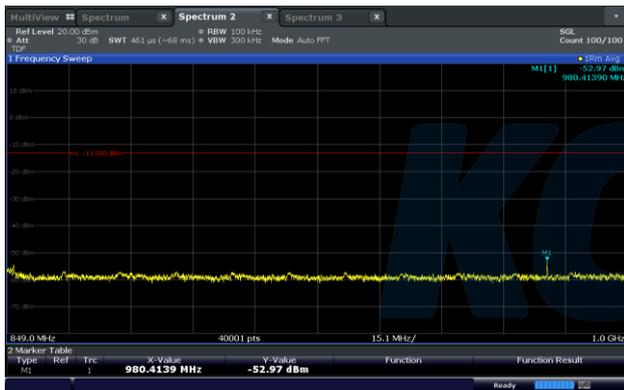
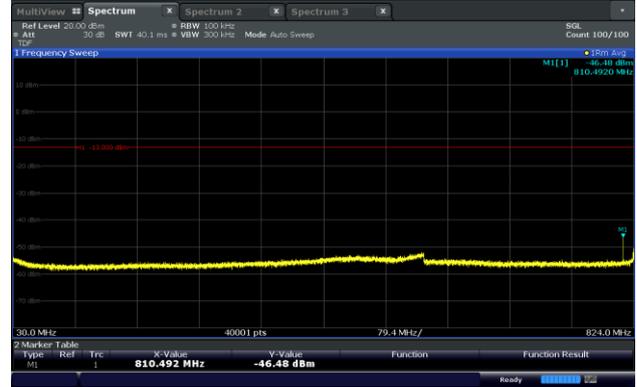
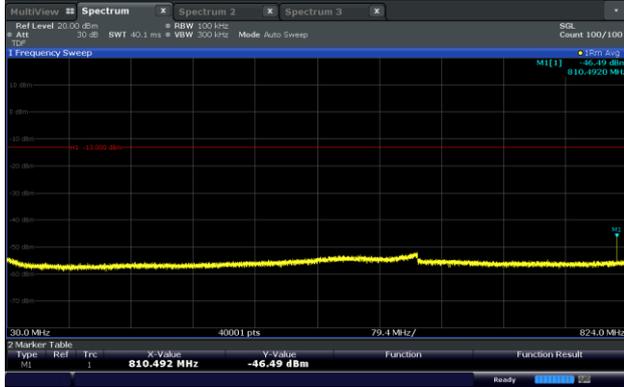
3M BW / 16QAM / Low ch.



Test mode: LTE Band5

3M BW / QPSK / Mid ch.

3M BW / 16QAM / Mid ch.



Test mode: LTE Band5

3M BW / QPSK / High ch.

3M BW / 16QAM / High ch.

