



TEST REPORT

No. I19Z61105-WMD01

for

Ericsson AB Radio 4402 B66A KRC 161 742/1

Remote Radio Unit

FCC ID: TA8AKRC161742-1

IC: 287AB-AS1617421

In accordance with FCC CFR 47 Part 27 and

ISED RSS-139: Issue 3

Issued Date: 2019-07-31



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REPORT HISTORY

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1. Test Laboratory

1.1. Introduction & Accreditation

Telecommunication Technology Labs, CAICT is an ISO/IEC 17025:2005 accredited test laboratory under NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM (NVLAP) with lab code 600118-0, and is also an FCC accredited test laboratory (CN5017), and ISED accredited test laboratory (CN0066). The detail accreditation scope can be found on NVLAP website.

1.2. Testing Location

Location 1: CTTL(huayuan North Road)

Address: No. 52, Huayuan North Road, Haidian District, Beijing,
P. R. China 100191

Location 2: CTTL(Shouxiang)

Address: No. 51 Shouxiang Science Building, Xueyuan Road,
Haidian District, Beijing, P. R. China 100191

1.3. Project date

Testing Start Date: 2019-07-08

Testing End Date: 2019-07-24

1.4. Signature



Dong Yuan

(Prepared this test report)



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(Reviewed this test report)



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(Approved this test report)



2. Client Information

2.1. Applicant Information

Company Name: Ericsson (China) Communications Company Ltd.
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2.2. Manufacturer Information

Company Name: Ericsson AB
Address /Post: Isafjordsgatan 10, 164 80 Stockholm
Sweden
Contact: /
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3. Equipment Under Test (EUT)

3.1. About EUT

Description	Remote Radio Unit
Product Name	Radio 4402 B66A
Product Number	KRC 161 742/1
FCC ID	TA8AKRC161742-1
IC	287AB-AS1617421
HVIN	AS1617421
Integrated Antenna	KRE 105 280/1, Gain: 10.5dBi
Output power	Maximum 37.0 dBm (5W) per port. Maximum 34.0 dBm (2.5W) per port for LTE 1.4M and 3M single carrier. Maximum 33.0 dBm (2W) per port for NB-IoT-Standalone.
Power source	36V DC
Serial Number	D829027183
Hardware Version	R1A
Software Version	CXP9013268/15 R79EZ
Frequency range	RX: 1710-1780 MHz, TX: 2110-2180 MHz (LTE) RX: 1710-1755 MHz, TX: 2110-2155 MHz (WCDMA)
TX/RX configuration	4 TX / 4 RX
Maximum RF bandwidth (IBW)	20 MHz: NB-IoT Standalone 70 MHz: LTE 45 MHz: WCDMA
Total number of supported carriers per port	Maximum 6 carriers per port for all configuration (maximum 1 carrier for NB-IoT-Standalone).
Supported modulations	WCDMA: QPSK, 16QAM, 64QAM LTE: QPSK, 16QAM, 64QAM, 256QAM NB-IoT: QPSK
Date of receipt	2019-07-08

3.2. General Description

The Equipment Under Test (EUT) is an Ericsson Antenna Integrated Radio Unit working in the wireless communications services 2100MHz band which provides communication connections to network in WCDMA / LTE / NB-IoT modes and MSR modes. The Radio 4402 B66A KRC 161 742/1 operates from a -48V DC or a 120V AC power supply.

The EUT includes 4 TX/RX ports and it can be configured to transmit in MIMO mode for LTE carriers, and MIMO mode was used for measurements as the worst configuration. The complete testing was performed with the EUT transmitting at maximum RF power unless otherwise stated.

The Equipment Under Test (EUT) is shown in the photograph below. A full technical description can be found in the Manufacturer's documentation.



Equipment Under Test

3.3. Configuration Description

The following settings were used to representative for all traffic scenarios when settings with different modulations, channel bandwidths, number for carriers and RF configurations have been tested to find the worst case setting. The settings below were used for all measurements unless otherwise noted:

WCDMA

Configuration	Carrier	Carrier Frequency Configuration (MHz)		
		Bottom	Middle	Top
WCDMA-1C	1 Carrier	2112.4	2132.4	2152.6
WCDMA-2C	2 Carriers	-	2112.4 + 2152.6	-
WCDMA-3C	3 Carriers	-	2112.4 + 2117.4 + 2152.6	-
WCDMA-6C	6 Carriers	-	2112.4 + 2117.4 + 2122.4 + 2142.6 + 2147.6 + 2152.6	-
WCDMA-1C-BE	1 Carrier	2112.4	N/A	2152.6
WCDMA-2C-BE	2 Carriers	2112.4+2117.4	N/A	2147.6 + 2152.6

LTE

Configuration	Carrier	Carrier Bandwidth	Carrier Frequency Configuration (MHz)		
			Bottom	Middle	Top
LTE-MIMO-1C	1 Carrier	1.4M	2110.7	2145.0	2179.3
		3.0M	2111.5	2145.0	2178.5
		5MHz	2112.5	2145.0	2177.5
		10MHz	2115.0	2145.0	2175.0
		15MHz	2117.5	2145.0	2172.5
		20MHz	2120.0	2145.0	2170.0
LTE-MIMO-2C	2 Carriers	1.4M	2110.7+2129.3	2135.7+2154.3	2160.7+2179.3
		3.0M	2111.5+2128.5	2136.5+2153.5	2161.5+2178.5
		5MHz	-	2112.5+2177.5	-
		10MHz	-	2115+2175	-
		15MHz	-	2117.5+2172.5	-
		20MHz	-	2120+2170	-
LTE-MIMO-4C	4 Carriers	15MHz	-	2117.5+2132.5+2157.5+2172.5	-

Configuration	Carrier	Carrier Bandwidth	Carrier Frequency Configuration (MHz)		
			Bottom	Middle	Top
LTE-MIMO-6C	6 Carriers	1.4M	2110.7+2112.1+2113.5+2126.5+2127.9+2129.3	2135.7+2137.1+2138.5+2151.5+2152.9+2154.3	2160.7+2162.1+2163.5+2176.5+2177.9+2179.3
		3.0M	2111.5+2114.5+2117.5+2122.5+2125.5+2128.5	2136.5+2139.5+2142.5+2147.5+2150.5+2153.5	2161.5+2164.5+2167.5+2172.5+2175.5+2178.5
		5MHz	-	2112.5+2117.5+2122.5+2167.5+2172.5+2177.5	-
		10MHz	-	2115+2125+2135+2155+2165+2175	-
LTE-MIMO-1C-BE	1 Carriers	1.4M	2110.7	N/A	2179.3
		3.0M	2111.5	N/A	2178.5
		5MHz	2112.5	N/A	2177.5
		10MHz	2115.0	N/A	2175.0
		15MHz	2117.5	N/A	2172.5
		20MHz	2120.0	N/A	2170.0
LTE-MIMO-2C-BE	2 Carriers	1.4M	2110.7+2112.1	N/A	2177.9+2179.3
		3.0M	2111.5+2114.5	N/A	2175.5+2178.5
		5MHz	2112.5+2117.5	N/A	2167.5+2172.5
		10MHz	2115+2125	N/A	2165+2175
		15MHz	2117.5+2132.5	N/A	2157.5+2172.5
		20MHz	2120+2140	N/A	2150+2170

NB-IoT

Configuration	Carrier	Carrier Bandwidth (MHz)	Carrier Frequency Configuration (MHz)		
			Bottom	Middle	Top
NB-IoT-InBand-1C	1 Carrier	5MHz	2112.5	2145.0	2177.5
		10MHz	2115.0	2145.0	2175.0
		15MHz	2117.5	2145.0	2172.5
		20MHz	2120.0	2145.0	2170.0
NB-IoT-Inband-1C-BE	1 Carrier	5MHz	2112.5	N/A	2177.5
		10MHz	2115.0	N/A	2175.0
		15MHz	2117.5	N/A	2172.5
		20MHz	2120.0	N/A	2170.0

Configuration	Carrier	Carrier Bandwidth (MHz)	Carrier Frequency Configuration (MHz)		
			Bottom	Middle	Top
NB-IoT-GuardBand-1C	1 Carrier	10MHz	2115.0	2145.0	2175.0
		15MHz	2117.5	2145.0	2172.5
		20MHz	2120.0	2145.0	2170.0
NB-IoT-GuardBand-1C-BE	1 Carrier	10MHz	2115.0	N/A	2175.0
		15MHz	2117.5	N/A	2172.5
		20MHz	2120.0	N/A	2170.0

Configuration	Carrier	Carrier Frequency Configuration (MHz)		
		Bottom	Middle	Top
NB-IoT-Standalone-1C	1 Carrier	2110.2	2145.0	2179.8
NB-IoT-Standalone-1C-BE	1 Carrier	2110.2	N/A	2179.8

WCDMA+LTE

Configuration	Carrier	LTE Carrier Bandwidth	Carrier Frequency Configuration (MHz)		
			Bottom	Middle	Top
WCDMA+LTE-MC-1	1W+1L	1.4M	-	(W)2112.4 + (L)2179.3	-
		3.0M	-	(W)2112.4 + (L)2178.5	-
		5MHz	-	(W)2112.4 + (L)2177.5	-
		10MHz	-	(W)2112.4 + (L)2175	-
		15MHz	-	(W)2112.4 + (L)2172.5	-
		20MHz	-	(W)2112.4 + (L)2170	-
WCDMA+LTE-MC-6	1W+2L	1.4M	-	(W)2112.4+(L)2177.9+2179.3	-
		3.0M	-	(W)2112.4+(L)2175.5+2178.5	-
WCDMA+LTE-MC-2	2W+1L	5MHz	-	(W)2112.4+2117.4+(L)2177.5	-
		10MHz	-	(W)2112.4+2117.4+(L)2175	-
		15MHz	-	(W)2112.4+2117.4+(L)2172.5	-
		20MHz	-	(W)2112.4+2117.4+(L)2170	-

Configuration	Carrier	LTE Carrier Bandwidth	Carrier Frequency Configuration (MHz)		
			Bottom	Middle	Top
WCDMA+LTE-MIMO-MC-3	3W+3L	1.4M	-	(W)2112.4 + 2117.4 + 2122.4 + (L)2176.5 + 2177.9 + 2179.3	-
		3.0M	-	(W)2112.4 + 2117.4 + 2122.4 + (L)2172.5 + 2175.5 + 2178.5	-
		5MHz	-	(W)2112.4 + 2117.4 + 2122.4 + (L)2167.5 + 2172.5 + 2177.5	-
		10MHz	-	(W)2112.4 + 2117.4 + 2122.4 + (L)2155 + 2165 + 2175	-
		15MHz	-	(W)2112.4 + 2117.4 + 2122.4 + (L)2142.5 + 2157.5 + 2172.5	-
WCDMA+LTE-MIMO-MC-4	2W+3L	20MHz	-	(W)2112.4 + 2117.4 + (L)2130 + 2150 + 2170	-
WCDMA+LTE-MC-2-BE	1W+1L	1.4M	(L)2110.7+(W)2113.8	N/A	(W)2151.2+(L)2154.3
		3.0M	(L)2110.7+(W)2113.8	N/A	(W)2151.2+(L)2154.3
		5MHz	(L)2111.5+(W)2115.4	N/A	(W)2149.6+(L)2153.5
		10MHz	(W)2112.4 + (L)2117.5	N/A	(L)2147.5 + (W)2152.6
		15MHz	(W)2112.4 + (L)2120	N/A	(L)2145 + (W)2152.6
		20MHz	(W)2112.4 + (L)2122.5	N/A	(L)2142.5 + (W)2152.6
WCDMA+LTE-MC-4-BE	1W+2L	1.4M	(L)2110.7+2112.1+(W)2115.2	N/A	(W)2149.8+(L)2152.9+2154.3
		3.0M	(L)2111.5+2114.5+(W)2118.4	N/A	(W)2146.6+(L)2150.5+2153.5
WCDMA+LTE-MC-3-BE	2W+1L	5MHz	(W)2112.4+2117.4+(L)2122.5	N/A	(L)2142.5 + (W)2147.6 + 2152.6
		10MHz	(W)2112.4+2117.4+(L)2125	N/A	(L)2140 + (W)2147.6 + 2152.6
		15MHz	(W)2112.4+2117.4+(L)2127.5	N/A	(L)2137.5 + (W)2147.6 + 2152.6
		20MHz	(W)2112.4+2117.4+(L)2130	N/A	(L)2135 + (W)2147.6 + 2152.6

WCDMA+NB-IoT

Configuration	Carrier	Carrier Frequency Configuration (MHz)		
		Bottom	Middle	Top
WCDMA+NB-IoT-MC-1	1W+1SA	-	(W)2112.4 + (NB)2179.8	-
WCDMA+NB-IoT-MC-2	2W+1SA	-	(W)2112.4+2117.4+(NB)2179.8	-
WCDMA+NB-IoT-MC-4	5W+1SA	-	(W)2112.4+2117.4+2122.4+2127.4+2132.4+(NB)2179.8	-
WCDMA+NB-IoT-MC-3-BE	1W+1SA	(NB)2110.2+(W)2113	N/A	(W)2152.2 + (NB)2154.8
WCDMA+NB-IoT-MC-4-BE	2W+1SA	(NB)2110.2+(W)2112.8+2117.8	N/A	(W)2147.2+ 2152.2+(NB)2154.8

LTE+NB-IoT

Configuration	Carrier	LTE Carrier Bandwidth	Carrier Frequency Configuration (MHz)		
			Bottom	Middle	Top
LTE+NB-IoT-MC-1	1L+1SA	1.4M	(NB)2110.2+(L)2129.3	(NB)2135.2+(L)2154.3	(NB)2160.2+(L)2179.3
		3.0M	(NB)2110.2+(L)2128.5	(NB)2135.2+(L)2153.5	(NB)2160.2+(L)2178.5
		5MHz	-	(NB)2110.2+(L)2177.5	-
		10MHz	-	(NB)2110.2+(L)2175	-
		15MHz	-	(NB)2110.2+(L)2172.5	-
		20MHz	-	(NB)2110.2+(L)2170	-
LTE+NB-IoT-MC-2	2L+1SA	1.4M	(NB)2110.2+(L)2127.9+2129.3	(NB)2135.2+(L)2152.9+2154.3	(NB)2160.2+(L)2177.9+2179.3
		3.0M	(NB)2110.2+(L)2125.5+2128.5	(NB)2135.2+(L)2150.5+2153.5	(NB)2160.2+(L)2175.5+2178.5
		5MHz	-	(NB)2110.3+(L)2172.5+2177.5	-
		10MHz	-	(NB)2110.3+(L)2165+2175	-
		15MHz	-	(NB)2110.3+(L)2157.5+2172.5	-
		20MHz	-	(NB)2110.3+(L)2150+2170	-

LTE+NB-IoT-MC-3	5L+1SA	1.4M	(NB)2110.2+(L)2123.7+2 125.1+2126.5+2127.9+21 29.3	(NB)2135.2+(L)2148.7+2 150.1+2151.5+2152.9+21 54.3	(NB)2160.2+(L)2173.7+2 175.1+2176.5+2177.9+2 179.3
		3.0M	(NB)2110.2+(L)2116.5+2 119.5+2122.5+2125.5+21 28.5	(NB)2135.2+(L)2141.5+2 144.5+2147.5+2150.5+21 53.5	(NB)2160.2+(L)2166.5+2 169.5+2172.5+2175.5+2 178.5
		5MHz	-	(NB)2110.2+(L)2157.5+2 162.5+2167.5+2172.5+21 77.5	-
		10MHz	-	(NB)2110.2+(L)2135+214 5+2155+2165+2175	-
LTE+NB-IoT-MC-4	4L+1SA	15MHz	-	(NB)2110.2+(L)2127.5+2 142.5+2157.5+2172.5	-
LTE+NB-IoT-MC-5	3L+1SA	20MHz	-	(NB)2110.2+(L)2130+215 0+2170	-
LTE+NB-IoT-MC-3-BE	1L+1SA	1.4M	(NB)2110.2 + (L)2111.1	N/A	(L)2178.9 + (NB)2179.8
		3.0M	(NB)2110.2 + (L)2111.9	N/A	(L)2178.1 + (NB)2179.8
		5MHz	(NB)2110.2 + (L)2112.9	N/A	(L)2177.1 + (NB)2179.8
		10MHz	(NB)2110.2 + (L)2115.4	N/A	(L)2174.6 + (NB)2179.8
		15MHz	(NB)2110.2 + (L)2117.9	N/A	(L)2172.1 + (NB)2179.8
		20MHz	(NB)2110.2 + (L)2120.4	N/A	(L)2169.6 + (NB)2179.8
LTE+NB-IoT-MC-4-BE	2L+1SA	1.4M	(NB)2110.2+ (L)2111.1+2112.5	N/A	(L)2177.5+2178.9+ (NB)2179.8
		3.0M	(NB)2110.2+ (L)2111.9+2114.9	N/A	(L)2175.1+2178.1+ (NB)2179.8
		5MHz	(NB)2110.2+ (L)2112.9+2117.9	N/A	(L)2172.1+2177.1+ (NB)2179.8
		10MHz	(NB)2110.2+ (L)2115.4+2125.4	N/A	(L)2164.6+2174.6+ (NB)2179.8
		15MHz	(NB)2110.2+ (L)2117.9+2132.9	N/A	(L)2157.1+2172.1+ (NB)2179.8
		20MHz	(NB)2110.2+ (L)2120.4+2140.4	N/A	(L)2149.6+2169.6+ (NB)2179.8

WCDMA+LTE+NB-IoT

Configuration	Carrier	LTE Carrier Bandwidth	Carrier Frequency Configuration (MHz)		
			Bottom	Middle	Top
WCDMA+LTE+N B-IoT-MC-1	1W+1L +1SA	1.4M	(NB)2110.2 + (W)2120 + (L)2129.3	(NB)2122.7 + (W)2132.5 + (L)2141.8	(NB)2135.2 + (W)2145 + (L)2154.3
		3.0M	(NB)2110.2 + (W)2120 + (L)2128.5	(NB)2122.7 + (W)2132.5 + (L)2141	(NB)2135.2 + (W)2145 + (L)2153.5
		5MHz	-	(NB)2110.2 + (W)2145 + (L)2177.5	-
		10MHz	-	(NB)2110.2 + (W)2145 + (L)2175	-
		15MHz	-	(NB)2110.2 + (W)2145 + (L)2172.5	-
		20MHz	-	(NB)2110.2 + (W)2145 + (L)2170	-
WCDMA+LTE+N B-IoT-MC-2	1W+2L +1SA	1.4M	(NB)2110.2+(W)2117.4+(L)2120.7+2129.3	(NB)2122.7+(W)2130+(L) 2133.2+2141.8	(NB)2135.2+(W)2142.4+(L)2145.7+2154.3
		3.0M	(NB)2110.2+(W)2117.4+(L)2121.5+2128.5	(NB)2122.7+(W)2130+(L) 2134+2141	(NB)2135.2+(W)2142.4+(L)2146.5+2153.5
WCDMA+LTE+N B-IoT-MC-3	2W+1L +1SA	5MHz	-	(NB)2110.2+(W)2130+21 35+(L)2152.5	-
		10MHz	-	(NB)2110.2+(W)2130+21 35+(L)2150	-
		15MHz	-	(NB)2110.2+(W)2130+21 35+(L)2147.5	-
		20MHz	-	(NB)2110.2+(W)2127.4+ 2132.4+(L)2145	-
WCDMA+LTE+N B-IoT-MC-4	2W+3L +1SA	1.4M	(NB)2110.2+(W)2117.4 + 2122.4 +(L) 2125.7 + 2127.1 + 2129.3	(NB)2122.7+(W)2130+21 35+(L) 2138.2+2139.6+2141.8	(NB)2135.2+(W)2142.6 + 2147.6 +(L) 2150.7 + 2152.1+ 2154.3
		3.0M	(NB)2110.2+(W)2113.4 + 2118.4 +(L) 2122.5 + 2125.5 + 2128.5	(NB)2122.7+(W)2126+21 31+(L) 2135+ 2138+ 2141	(NB)2135.2+(W)2138.6 + 2143.6 +(L) 2147.5 + 2150.5+ 2153.5
WCDMA+LTE+N B-IoT-MC-5	3W+2L +1SA	5MHz	-	(NB)2110.2 + (W)2140 + 2145 + 2150 + (L)2172.5 + 2177.5	-
		10MHz	-	(NB)2110.2 + (W)2140 + 2145 + 2150 + (L)2165 + 2175	-

Configuration	Carrier	LTE Carrier Bandwidth	Carrier Frequency Configuration (MHz)		
			Bottom	Middle	Top
WCDMA+LTE+N B-IoT-MC-5	3W+2L +1SA	15MHz	-	(NB)2110.2 + (W)2135 + 2140 + 2145 + (L)2157.5 + 2172.5	-
		20MHz	-	(NB)2110.2 + (W)2127.4 + 2132.4 + 2137.4 + (L)2150 + 2170	-
WCDMA+LTE+N B-IoT-MC-3-BE	1W+1L +1SA	1.4M	(NB)2110.2+(L)2111.1+(W)2114.2	N/A	(W)2150.8 + (L)2153.9 + (NB)2154.8
		3.0M	(NB)2110.2+(L)2111.9+(W)2115.8	N/A	(W)2149.2 + (L)2153.1 + (NB)2154.8
		5MHz	(NB)2110.2+(W)2112.8+(L)2117.9	N/A	(L)2147.1 + (W)2152.2 + (NB)2154.8
		10MHz	(NB)2110.2+(W)2112.8+(L)2120.4	N/A	(L)2144.6 + (W)2152.2 + (NB)2154.8
		15MHz	(NB)2110.2+(W)2112.8+(L)2122.9	N/A	(L)2142.1 + (W)2152.2 + (NB)2154.8
		20MHz	(NB)2110.2+(W)2112.8+(L)2125.4	N/A	(L)2139.6 + (W)2152.2 + (NB)2154.8
WCDMA+LTE+N B-IoT-MC-4-BE	1W+2L +1SA	1.4M	(NB)2110.2+(L)2111.1+2 112.5+(W)2115.6	N/A	(W)2149.4 + (L)2152.5+2153.9 + (NB)2154.8
		3.0M	(NB)2110.2+(L)2111.9+2 114.9+(W)2118.8	N/A	(W)2146.2 + (L)2150.1+2153.1 + (NB)2154.8
WCDMA+LTE+N B-IoT-MC-5-BE	2W+1L +1SA	5MHz	(NB)2110.2+(W)2112.8+ 2117.8+(L)2122.9	N/A	(L)2142.1 + (W)2147.2+2152.2 + (NB)2154.8
		10MHz	(NB)2110.2+(W)2112.8+ 2117.8+(L)2125.4	N/A	(L)2139.6 + (W)2147.2+2152.2 + (NB)2154.8
		15MHz	(NB)2110.2+(W)2112.8+ 2117.8+(L)2127.9	N/A	(L)2137.1 + (W)2147.2+2152.2 + (NB)2154.8
		20MHz	(NB)2110.2+(W)2112.8+ 2117.8+(L)2130.4	N/A	(L)2134.6 + (W)2147.2+2152.2 + (NB)2154.8

N/A – Not Applicable

4. Reference Documents

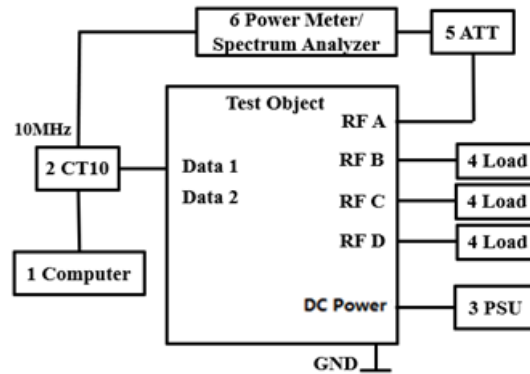
4.1. Reference Documents for testing

The following documents listed in this section are referred for testing.

Reference	Title	Version
FCC Part 27	MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES	10-1-18 Edition
FCC Part 2	FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS	10-1-18 Edition
ANSI/TIA-603-E	Land Mobile FM or PM Communications Equipment Measurement and Performance Standards	2016
ANSI C63.4	Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 KHz to 40 GHz	2014
ANSI 63.26	IEEE/ANSI Standard for Compliance Testing of Transmitters Used in Licensed Radio Services	2015
TIA 102.CAAA-E	Project 25 Digital C4FM/CQPSK Transceiver Measurement Methods	2016
KDB 971168 D01	MEASUREMENT GUIDANCE FOR CERTIFICATION OF LICENSED DIGITAL TRANSMITTERS	v03r01
KDB 662911 D01	Emissions Testing of Transmitters with Multiple Outputs in the Same Band	v02r01
RSS-GEN	General Requirements for Compliance of Radio Apparatus	Issue 5
RSS 139	Advanced Wireless Services (AWS) Equipment Operating in the Bands 1710-1780 MHz and 2110-2180 MHz	Issue 3 2015

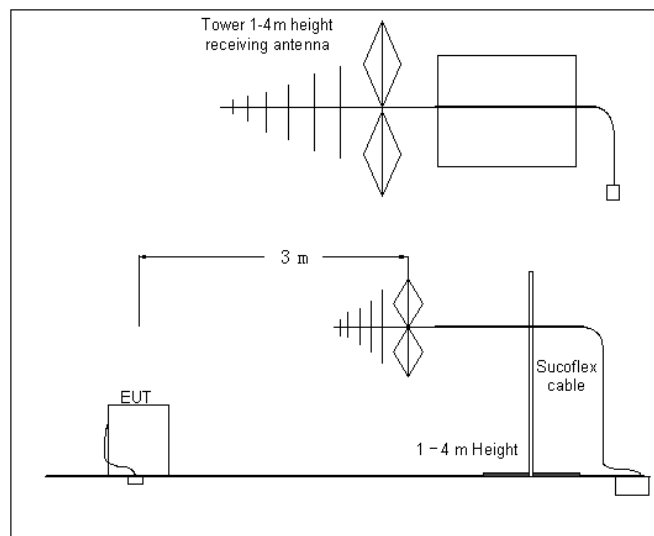
5. TEST SETUP

Test Setup, Conducted Measurement:



No.	Auxilliary Equipment	Model Type	Version
1	Computer	Dell Optiplex 3050	-
2	CT10	LPC 102 487/1	R1C
3	Power supply unit	-	-
4	Load	TF150	-
5	40dB Attenuator	Aeroflex / Weinschel	-

Test Setup, Radiated Measurement:



6. LABORATORY ENVIRONMENT

Control room / conducted chamber did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. = 20 %, Max. = 80 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 2 MΩ
Ground system resistance	< 0.5 Ω

Semi-anechoic chamber (10 meters×6.7 meters×6.15 meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 30 °C
Relative humidity	Min. = 35 %, Max. = 60 %
Shielding effectiveness	> 100 dB
Electrical insulation	> 2 MΩ
Ground system resistance	< 0.5 Ω
Normalised site attenuation (NSA)	< ± 3.5 dB, 3 m distance
Site voltage standing-wave ratio (S_{VSWR})	Between 0 and 6 dB, from 1GHz to 18GHz
Uniformity of field strength	Between 0 and 6 dB, from 80 to 3000 MHz

7. SUMMARY OF TEST RESULTS

Items	Test Name	Clause in FCC rules	Clause in ISSED rules	Verdict
1	Maximum Output Power and Peak-to-Average Power Ratio	27.50(d)	RSS-139 4.1, 6.5	Pass
2	Equivalent Isotropically Radiated Power (EIRP)	27.50(d)	RSS-139 4.1, 6.5	Pass
3	Occupied Bandwidth	27.53(h), 2.1049	RSS-GEN 6.7	Pass
4	Spurious Emissions at Band Edge	27.53(h)	RSS-139 6.6	Pass
5	Conducted Spurious Emission	27.53(h)	RSS-139 6.6	Pass
6	Radiated Spurious Emission	27.53(h)	RSS-139 6.6	Pass
7	Frequency Stability	27.54	RSS-139 6.4	Pass
8	Receiver Spurious Emission	-	-	N/A

N/A – Not Applicable

8. Test Equipments Utilized

NO.	Description	TYPE	series number	MANUFACTURE	CAL DUE DATE
1	Power Supply	PCR2000M	PJ000583	Kikusui	2020-02-22
2	40dB Attenuator	66-40-33	CD4019	Aeroflex / Weinschel	-
3	40dB Attenuator	TSG150R-4-40N11	1511040001	Nanjing Jiexi Technologies	-
4	Spectrum Analyzer	N9030	MY57142378	Keysight	2020-02-02
9	EMI Antenna	3115	00167250	ETS-LINDGREN	2020-05-21
10	EMI Antenna	3116	2661	ETS-LINDGREN	2020-07-27
11	EMI Antenna	VULB 9163	9163-514	SCHWARZBECK	2021-01-03
12	Test Receiver	ESU26	100376	Rohde & Schwarz	2019-11-27
13	Climate Chamber	SH-241	92001145	ESPEC	2019-12-21

9. MEASUREMENT UNCERTAINTY

For a 95% confidence level, the measurement uncertainties for defined systems are:

Test Discipline	Measurement Uncertainty
Conducted Maximum Peak Output Power	0.5dB
Occupied Bandwidth	1.1Hz
Conducted Spurious Emissions	2.3dB
Band Edge	2.3dB
Radiated Spurious Emissions	5.4dB
Frequency Stability	$<\pm 1 \times 10^{-7}$

ANNEX A: MEASUREMENT RESULTS

A.1 Maximum Output Power and Peak-to-Average Power Ratio

A.1.1 Reference

FCC CFR 47 Part 27, Clause 27.50(d)

RSS-Gen, Clause 6.12, RSS-139, Clause 4.1, Clause 6.5

A.1.2 Method of Measurements

During the process of testing, the EUT was configured to transmit on maximum power and proper modulation. In case of the EUT was configured to MIMO mode, since the EUT transmits on all antennas simultaneously in the same frequency range, using the Measure-and-Sum approach, the output power at all antennas were tested, and the total output power were then summed mathematically in linear power units according to FCC KDB 662911 D01.

A peak to average ratio measurement is performed at the conducted ports of the EUT for single carrier for single RAT mode. The spectrum analyzers Complementary Cumulative Distribution Function (CCDF) was used and 0.1% probability value recorded.

A.1.3 Limit

Output Power:

(EIRP) 1640 W(62.15dBm) or 3280W(65.16dBm) for emission bandwidth $\leq$ 1MHz

1640 W/MHz(62.15dBm/MHz) or 3280W/MHz(65.16dBm/MHz) for emission bandwidth $>$

1MHz

Peak to Average Ratio: 13 dB

A.1.4 Measurement result

Maximum Output Power 37.0dBm per port

	Antenna	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR(db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR(db)
64QAM	A	37.16	30.18	7.22	37.18	30.19	7.23	37.05	30.13	7.22
	B	36.81	29.85	7.21	36.78	29.83	7.23	36.82	29.83	7.22
	C	37.13	30.13	7.23	37.18	30.20	7.23	37.05	30.09	7.22
	D	37.00	30.04	7.23	37.14	30.12	7.22	37.08	30.06	7.22
Total		43.05	36.07	-	43.09	36.11	-	43.02	36.05	-
Total Power+10.5 dBi		53.55	46.57	-	53.59	46.61	-	53.52	46.55	-

	Antenna	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
16QAM	A	37.22	30.19	7.21	37.19	30.19	7.23	37.14	30.14	7.21

	Antenna	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
QPSK	A	37.17	30.16	7.24	37.16	30.16	7.26	37.09	30.07	7.24

Configuration WCDMA-2C

Maximum Output Power 37.0dBm per port

Antenna	Modulation	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK	-	-	-	36.88	-	-	-	-	-
	16QAM	-	-	-	36.89	-	-	-	-	-
	64QAM	-	-	-	36.87	-	-	-	-	-

Configuration WCDMA-6C

Maximum Output Power 37.0dBm per port

Antenna	Modulation	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR(db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR(db)
A	QPSK	-	-	-	36.93	-	-	-	-	-
	16QAM	-	-	-	36.95	-	-	-	-	-
	64QAM	-	-	-	36.94	-	-	-	-	-

Configuration LTE-MIMO-1C

Maximum Output Power 34.0dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/1.4	34.06	33.12	8.34	34.06	33.14	8.30	33.92	33.01	8.37
B		34.08	33.98	8.32	34.10	33.06	8.29	33.98	33.07	8.28
C		33.72	32.63	8.34	33.76	32.58	8.35	33.61	32.53	8.34
D		33.89	33.95	8.24	33.99	33.12	8.25	33.87	33.06	8.24
Total		39.96	39.48	-	40.00	39.00	-	39.87	38.94	-
Total Power+10.5 dBi		50.46	49.98	-	50.5	49.5	-	50.37	49.44	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	16QAM/1.4	-	-	-	33.88	33.10	8.38	-	-	-
B		-	-	-	34.02	32.49	8.12	-	-	-
C		-	-	-	33.77	32.57	8.22	-	-	-
D		-	-	-	34.00	33.10	8.46	-	-	-
Total		-	-	-	39.94	38.85	-	-	-	-
Total Power+10.5 dBi		-	-	-	50.44	49.35	-	-	-	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	64QAM/1.4	-	-	-	34.02	33.12	8.27	-	-	-
B		-	-	-	34.02	31.06	8.31	-	-	-
C		-	-	-	33.75	32.23	8.28	-	-	-
D		-	-	-	34.00	33.16	8.30	-	-	-
Total		-	-	-	39.97	38.49	-	-	-	-
Total Power+10.5 dBi		-	-	-	50.47	48.99	-	-	-	-



Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	256QAM/1. 4	-	-	-	34.01	33.21	8.34	-	-	-
B		-	-	-	33.98	32.70	8.14	-	-	-
C		-	-	-	33.72	32.53	8.32	-	-	-
D		-	-	-	33.98	33.06	8.32	-	-	-
Total		-	-	-	39.94	38.90	-	-	-	-
Total Power+10.5 dBi		-	-	-	50.44	49.40	-	-	-	-

Maximum Output Power 34.0dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/3.0	34.11	30.28	8.37	34.08	30.17	8.37	34.00	30.09	8.37
B		34.08	30.08	8.20	34.11	29.90	8.20	34.02	30.00	8.23
C		33.78	29.65	8.31	33.85	29.70	8.30	33.74	29.55	8.31
D		33.99	30.10	8.40	34.02	30.18	8.37	33.94	30.17	8.35
Total		40.01	36.05	-	40.04	36.01	-	39.95	35.98	-
Total Power+10.5 dBi		50.51	46.55	-	50.54	46.51	-	50.45	46.48	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	16QAM/3.0	-	-	-	34.11	30.52	8.35	-	-	-
B		-	-	-	34.08	30.51	8.30	-	-	-
C		-	-	-	33.83	30.21	8.36	-	-	-
D		-	-	-	34.00	30.51	8.30	-	-	-
Total		-	-	-	40.03	36.46	-	-	-	-
Total Power+10.5 dBi		-	-	-	50.53	46.96	-	-	-	-



Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	64QAM/3.0	-	-	-	34.08	30.17	8.25	-	-	-
B		-	-	-	34.06	29.98	8.41	-	-	-
C		-	-	-	33.85	29.74	8.29	-	-	-
D		-	-	-	34.00	30.15	8.28	-	-	-
Total		-	-	-	40.02	36.03	-	-	-	-
Total Power+10.5 dBi		-	-	-	50.52	46.53	-	-	-	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	256QAM /3.0	-	-	-	34.04	30.16	8.30	-	-	-
B		-	-	-	34.03	30.31	8.30	-	-	-
C		-	-	-	33.84	29.90	8.31	-	-	-
D		-	-	-	34.00	30.15	8.17	-	-	-
Total		-	-	-	40.00	36.15	-	-	-	-
Total Power+10.5 dBi		-	-	-	50.5	46.65	-	-	-	-

Maximum Output Power 37.0dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/5.0	37.13	31.20	7.30	37.09	31.06	7.27	36.99	31.10	7.30
B		37.12	31.97	7.32	37.05	31.05	7.31	36.94	31.19	7.32
C		36.84	30.75	7.31	36.88	30.67	7.28	36.72	30.64	7.30
D		36.98	31.02	7.30	37.04	31.09	7.28	36.98	31.04	7.31
Total		43.04	37.28	-	43.04	36.99	-	42.93	37.02	-
Total Power+10.5 dBi		53.54	47.78	-	53.54	47.49	-	53.43	47.52	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	16QAM/5.0	-	-	-	37.03	31.48	7.27	-	-	-
B		-	-	-	36.81	31.28	7.29	-	-	-
C		-	-	-	36.98	30.88	7.28	-	-	-
D		-	-	-	37.03	31.42	7.28	-	-	-
Total		-	-	-	42.98	37.29	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.48	47.79	-	-	-	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	64QAM/5.0	-	-	-	37.05	31.09	7.27	-	-	-
B		-	-	-	37.00	31.05	7.30	-	-	-
C		-	-	-	36.81	30.59	7.30	-	-	-
D		-	-	-	37.05	31.08	7.28	-	-	-
Total		-	-	-	43.00	36.98	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.5	47.48	-	-	-	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	256QAM /5.0	-	-	-	37.01	30.88	7.31	-	-	-
B		-	-	-	37.00	30.88	7.30	-	-	-
C		-	-	-	36.80	30.60	7.28	-	-	-
D		-	-	-	37.01	31.06	7.27	-	-	-
Total		-	-	-	42.98	36.88	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.48	47.38	-	-	-	-



Maximum Output Power 37.0dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/ 10.0	37.20	28.17	7.31	37.11	28.00	7.27	37.05	28.07	7.31
B		37.06	28.14	7.32	37.01	28.00	7.29	36.95	27.91	7.32
C		36.81	27.86	7.31	36.83	27.76	7.28	36.70	27.79	7.32
D		36.92	26.40	7.31	36.94	27.79	7.28	36.90	28.02	7.31
Total		43.02	33.72	-	42.99	33.91	-	42.92	33.97	-
Total Power+10.5 dBi		53.52	44.22	-	53.49	44.41	-	53.42	44.47	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	16QAM/ 10.0	-	-	-	37.07	28.27	7.27	-	-	-
B		-	-	-	36.97	28.21	7.28	-	-	-
C		-	-	-	36.79	27.99	2.38	-	-	-
D		-	-	-	36.95	28.09	7.27	-	-	-
Total		-	-	-	42.97	34.16	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.47	44.66	-	-	-	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	64QAM/ 10.0	-	-	-	37.06	28.02	7.28	-	-	-
B		-	-	-	36.97	27.92	7.28	-	-	-
C		-	-	-	36.77	27.64	7.30	-	-	-
D		-	-	-	36.97	27.86	7.28	-	-	-
Total		-	-	-	42.96	33.88	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.46	44.38	-	-	-	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	256QAM /10.0	-	-	-	37.08	28.03	7.29	-	-	-
B		-	-	-	36.96	27.88	7.28	-	-	-
C		-	-	-	36.78	27.61	7.31	-	-	-
D		-	-	-	36.99	27.82	7.29	-	-	-
Total		-	-	-	42.97	33.86	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.47	44.36	-	-	-	-

Maximum Output Power 37.0dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/ 15.0	37.11	26.43	7.32	37.13	26.32	7.29	36.97	26.28	7.34
B		36.96	26.30	7.33	37.00	26.25	7.30	36.92	26.24	7.36
C		36.75	25.95	7.34	36.83	25.95	7.30	36.72	26.04	7.35
D		36.95	24.71	7.32	37.00	26.06	7.29	36.90	26.24	7.34
Total		42.96	31.92	-	43.01	32.17	-	42.90	32.22	-
Total Power+10.5 dBi		53.46	42.42	-	53.51	42.67	-	53.4	42.72	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	16QAM/ 15.0	-	-	-	37.10	27.07	7.28	-	-	-
B		-	-	-	36.96	26.97	7.30	-	-	-
C		-	-	-	36.79	26.70	7.29	-	-	-
D		-	-	-	37.00	27.03	7.28	-	-	-
Total		-	-	-	42.98	32.97	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.48	43.47	-	-	-	-



Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	64QAM/ 15.0	-	-	-	37.09	26.35	7.30	-	-	-
B		-	-	-	36.97	26.21	7.29	-	-	-
C		-	-	-	36.78	25.99	7.31	-	-	-
D		-	-	-	37.00	26.24	7.29	-	-	-
Total		-	-	-	42.98	32.22	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.48	42.72	-	-	-	-

Antenna	Modulation/ Carrier	Output Power / Peak to Average Ratio (PAR)								
	Bandwidth (MHz)	Channel position B			Channel position M			Channel position T		
		POWER	POWER	PAR	POWER	POWER	PAR	POWER	POWER	PAR
		(dBm)	(dBm/MHz)	(db)	(dBm)	(dBm/MHz)	(db)	(dBm)	(dBm/MHz)	(db)
A	256QAM /15.0	-	-	-	37.10	26.32	7.30	-	-	-
B		-	-	-	36.97	26.14	7.30	-	-	-
C		-	-	-	36.78	25.99	7.31	-	-	-
D		-	-	-	36.99	26.17	7.30	-	-	-
Total		-	-	-	42.98	32.18	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.48	42.68	-	-	-	-

Maximum Output Power 37.0dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/ 20.0	36.98	25.18	7.34	37.12	25.10	7.30	37.01	25.19	7.37
B		36.97	25.01	7.33	36.98	25.10	7.29	36.90	25.03	7.36
C		36.77	24.80	7.35	36.69	24.70	7.29	36.70	24.77	7.37
D		37.12	25.07	7.34	37.02	24.97	7.29	36.92	25.11	7.35
Total		42.98	31.04	-	42.98	30.99	-	42.90	31.05	-
Total Power+10.5 dBi		53.48	41.54	-	53.48	41.49	-	53.4	41.55	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	16QAM/ 20.0	-	-	-	37.14	25.59	7.29	-	-	-
B		-	-	-	36.97	25.41	7.29	-	-	-
C		-	-	-	36.80	25.12	7.29	-	-	-
D		-	-	-	37.04	25.41	7.29	-	-	-
Total		-	-	-	43.01	31.41	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.51	41.91	-	-	-	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
	A	64QAM/ 20.0	-	-	-	37.12	25.09	7.29	-	-
B	-		-	-	36.98	25.01	7.29	-	-	-
C	-		-	-	36.80	24.62	7.30	-	-	-
D	-		-	-	37.05	24.95	7.29	-	-	-
Total		-	-	-	43.01	30.94	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.51	41.44	-	-	-	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	256QAM /20.0	-	-	-	37.12	25.12	7.30	-	-	-
B		-	-	-	36.97	24.94	7.29	-	-	-
C		-	-	-	36.80	24.70	7.29	-	-	-
D		-	-	-	37.04	24.99	7.30	-	-	-
Total		-	-	-	43.00	30.96	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.5	41.46	-	-	-	-

Configuration LTE-MIMO-2C

Maximum Output Power 37.0dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/1.4	36.60	32.92	-	36.78	33.01	-	36.58	32.97	-
B		36.52	32.72	-	36.64	32.74	-	36.59	32.91	-
C		36.30	32.50	-	36.47	32.42	-	36.33	32.54	-
D		36.52	32.58	-	36.67	32.70	-	36.53	32.82	-
Total		42.51	38.70	-	42.66	38.74	-	42.53	38.83	-
Total Power+10.5 dBi		53.01	49.2	-	53.16	49.24	-	53.03	49.33	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	16QAM/1.4	-	-	-	36.88	32.90	-	-	-	-
B		-	-	-	36.70	32.81	-	-	-	-
C		-	-	-	36.51	32.41	-	-	-	-
D		-	-	-	36.70	32.71	-	-	-	-
Total		-	-	-	42.72	38.73	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.22	49.23	-	-	-	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	64QAM/1.4	-	-	-	36.77	32.87	-	-	-	-
B		-	-	-	36.66	32.83	-	-	-	-
C		-	-	-	36.49	32.54	-	-	-	-
D		-	-	-	36.70	32.61	-	-	-	-
Total		-	-	-	42.68	38.74	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.18	49.24	-	-	-	-



Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	256QAM /1.4		-	-	36.87	32.96	-		-	-
B			-	-	36.66	32.72	-		-	-
C			-	-	36.45	32.49	-		-	-
D			-	-	36.70	32.67	-		-	-
Total		-	-	-	42.69	38.73	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.19	49.23	-	-	-	-

Maximum Output Power 37.0dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/3.0	36.70	29.87	-	36.86	29.99	-	36.70	29.93	-
B		36.61	30.01	-	36.71	29.84	-	36.61	29.90	-
C		36.41	29.55	-	36.52	29.51	-	36.38	29.60	-
D		36.57	29.74	-	36.75	29.74	-	36.60	29.80	-
Total		42.59	35.82	-	42.73	35.79	-	42.59	35.83	-
Total Power+10.5 dBi		53.09	46.32	-	53.23	46.29	-	53.09	46.33	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	16QAM/3.0	-	-	-	36.87	30.24	-	-	-	-
B		-	-	-	36.71	30.13	-	-	-	-
C		-	-	-	36.52	29.90	-	-	-	-
D		-	-	-	36.72	30.10	-	-	-	-
Total		-	-	-	42.73	36.11	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.23	46.61	-	-	-	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	64QAM/3.0	-	-	-	36.86	29.99	-	-	-	-
B		-	-	-	36.69	29.79	-	-	-	-
C		-	-	-	36.53	29.43	-	-	-	-
D		-	-	-	36.74	29.79	-	-	-	-
Total		-	-	-	42.73	35.78	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.23	46.28	-	-	-	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	256QAM /3.0	-			36.90	29.96		-		-
B		-			36.71	29.78		-		-
C		-			36.52	29.48		-		-
D		-			36.70	29.76		-		-
Total		-	-	-	42.73	35.77	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.23	46.27	-	-	-	-

Maximum Output Power 37.0dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/5.0	-	-	-	36.31	27.37	-	-	-	-
B		-	-	-	36.32	27.35	-	-	-	-
C		-	-	-	36.04	26.91	-	-	-	-
D		-	-	-	36.04	27.09	-	-	-	-
Total		-	-	-	42.20	33.20	-	-	-	-
Total Power+10.5 dBi		-	-	-	52.7	43.7	-	-	-	-



Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	16QAM/5.0	-	-	-	36.23	27.72	-	-	-	-
B		-	-	-	36.25	27.62	-	-	-	-
C		-	-	-	36.01	27.38	-	-	-	-
D		-	-	-	36.12	27.40	-	-	-	-
Total		-	-	-	42.17	33.55	-	-	-	-
Total Power+10.5 dBi		-	-	-	52.67	44.05	-	-	-	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
	A	64QAM/5.0	-	-	-	36.32	27.30	-	-	-
B	-		-	-	36.24	27.20	-	-	-	-
C	-		-	-	35.99	26.90	-	-	-	-
D	-		-	-	36.12	27.05	-	-	-	-
Total		-	-	-	42.19	33.14	-	-	-	-
Total Power+10.5 dBi		-	-	-	52.69	43.64	-	-	-	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	256QAM /5.0	-	-	-	36.29	27.27	-	-	-	-
B		-	-	-	36.24	27.19	-	-	-	-
C		-	-	-	35.97	26.88	-	-	-	-
D		-	-	-	36.10	27.04	-	-	-	-
Total		-	-	-	42.17	33.12	-	-	-	-
Total Power+10.5 dBi		-	-	-	52.67	43.62	-	-	-	-

Maximum Output Power 37.0dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/ 10.0	-	-	-	36.54	24.78	-	-	-	-
B		-	-	-	36.48	24.60	-	-	-	-
C		-	-	-	36.18	24.24	-	-	-	-
D		-	-	-	36.35	24.43	-	-	-	-
Total		-	-	-	42.41	30.54	-	-	-	-
Total Power+10.5 dBi		-	-	-	52.91	41.04	-	-	-	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
	A	16QAM/ 10.0	-	-	-	36.53	24.99	-	-	-
B	-		-	-	36.47	24.91	-	-	-	-
C	-		-	-	36.21	24.56	-	-	-	-
D	-		-	-	36.37	24.87	-	-	-	-
Total		-	-	-	42.42	30.86	-	-	-	-
Total Power+10.5 dBi		-	-	-	52.92	41.36	-	-	-	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	64QAM/ 10.0	-	-	-	36.53	24.77	-	-	-	-
B		-	-	-	36.47	24.61	-	-	-	-
C		-	-	-	36.22	24.25	-	-	-	-
D		-	-	-	36.37	24.43	-	-	-	-
Total		-	-	-	42.42	30.54	-	-	-	-
Total Power+10.5 dBi		-	-	-	52.92	41.04	-	-	-	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	256QAM /10.0	-	-	-	36.50	24.83	-	-	-	-
B		-	-	-	36.46	24.61	-	-	-	-
C		-	-	-	36.21	24.23	-	-	-	-
D		-	-	-	36.40	24.42	-	-	-	-
Total		-	-	-	42.41	30.55	-	-	-	-
Total Power+10.5 dBi		-	-	-	52.91	41.05	-	-	-	-

Maximum Output Power 37.0dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/ 15.0	-	-	-	36.59	23.05	-	-	-	-
B		-	-	-	36.52	22.90	-	-	-	-
C		-	-	-	36.29	22.56	-	-	-	-
D		-	-	-	36.50	22.78	-	-	-	-
Total		-	-	-	42.50	28.85	-	-	-	-
Total Power+10.5 dBi		-	-	-	53	39.35	-	-	-	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	16QAM/ 15.0	-	-	-	36.66	23.74	-	-	-	-
B		-	-	-	36.52	23.60	-	-	-	-
C		-	-	-	36.29	23.38	-	-	-	-
D		-	-	-	36.51	23.61	-	-	-	-
Total		-	-	-	42.52	29.61	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.02	40.11	-	-	-	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	64QAM/ 15.0	-	-	-	36.65	23.05	-	-	-	-
B		-	-	-	36.56	22.92	-	-	-	-
C		-	-	-	36.28	22.62	-	-	-	-
D		-	-	-	36.50	22.83	-	-	-	-
Total		-	-	-	42.52	28.88	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.02	39.38	-	-	-	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	256QAM /15.0	-	-	-	36.64	23.06	-	-	-	-
B		-	-	-	36.51	22.87	-	-	-	-
C		-	-	-	36.27	22.53	-	-	-	-
D		-	-	-	36.51	22.89	-	-	-	-
Total		-	-	-	42.51	28.86	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.01	39.36	-	-	-	-

Maximum Output Power 37.0dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/ 20.0	-	-	-	36.70	21.90	-	-	-	-
B		-	-	-	36.57	21.61	-	-	-	-
C		-	-	-	36.37	21.41	-	-	-	-
D		-	-	-	36.57	21.67	-	-	-	-
Total		-	-	-	42.57	27.67	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.07	38.17	-	-	-	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	16QAM/ 20.0	-	-	-	36.69	22.06	-	-	-	-
B		-	-	-	36.57	22.01	-	-	-	-
C		-	-	-	36.36	21.71	-	-	-	-
D		-	-	-	36.56	21.95	-	-	-	-
Total		-	-	-	42.57	27.96	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.07	38.46	-	-	-	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	64QAM/ 20.0	-	-	-	36.69	21.84	-	-	-	-
B		-	-	-	36.57	21.62	-	-	-	-
C		-	-	-	36.37	21.52	-	-	-	-
D		-	-	-	36.57	21.71	-	-	-	-
Total		-	-	-	42.57	27.69	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.07	38.19	-	-	-	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	256QAM /20.0	-	-	-	36.70	22.00	-	-	-	-
B		-	-	-	36.56	21.80	-	-	-	-
C		-	-	-	36.36	21.47	-	-	-	-
D		-	-	-	36.56	21.64	-	-	-	-
Total		-	-	-	42.57	27.75	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.07	38.25	-	-	-	-

Configuration LTE-MIMO-6C

Maximum Output Power 37.0dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/1.4	36.73	28.36	-	36.83	28.37	-	36.66	28.42	-
B		36.61	28.27	-	36.70	28.32	-	36.59	28.42	-
C		36.38	28.07	-	36.50	27.90	-	36.38	28.02	-
D		36.52	28.21	-	36.65	28.22	-	36.52	28.19	-
Total		42.58	34.25	-	42.69	34.23	-	42.56	34.29	-
Total Power+10.5 dBi		53.08	44.75	-	53.19	44.73	-	53.06	44.79	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	16QAM/1.4	-	-	-	36.87	28.40	-	-	-	-
B		-	-	-	36.72	28.28	-	-	-	-
C		-	-	-	36.49	27.95	-	-	-	-
D		-	-	-	36.65	28.31	-	-	-	-
Total		-	-	-	42.71	34.26	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.21	44.76	-	-	-	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	64QAM/1.4	-	-	-	36.80	28.31	-	-	-	-
B		-	-	-	36.64	28.21	-	-	-	-
C		-	-	-	36.47	27.92	-	-	-	-
D		-	-	-	36.62	28.36	-	-	-	-
Total		-	-	-	42.65	34.22	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.15	44.72	-	-	-	-



Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	256QAM /1.4	-	-	-	36.90	28.40	-	-	-	-
B		-	-	-	36.67	28.21	-	-	-	-
C		-	-	-	36.44	27.92	-	-	-	-
D		-	-	-	36.70	28.30	-	-	-	-
Total		-	-	-	42.70	34.23	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.2	44.73	-	-	-	-

Maximum Output Power 37.0dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/3.0	36.97	25.48	-	37.30	25.42	-	37.01	25.52	-
B		37.01	25.33	-	37.01	25.21	-	36.91	25.45	-
C		36.76	25.15	-	36.80	25.07	-	36.71	25.25	-
D		37.12	25.46	-	37.03	25.38	-	36.95	25.46	-
Total		42.99	31.38	-	43.06	31.29	-	42.92	31.44	-
Total Power+10.5 dBi		53.49	41.88	-	53.56	41.79	-	53.42	41.94	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	16QAM/3.0	-	-	-	37.14	25.90	-	-	-	-
B		-	-	-	37.01	25.72	-	-	-	-
C		-	-	-	36.82	25.42	-	-	-	-
D		-	-	-	37.02	25.81	-	-	-	-
Total		-	-	-	43.02	31.74	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.52	42.24	-	-	-	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	64QAM/3.0	-	-	-	37.22	25.43	-	-	-	-
B		-	-	-	36.66	25.35	-	-	-	-
C		-	-	-	37.00	25.05	-	-	-	-
D		-	-	-	37.02	25.41	-	-	-	-
Total		-	-	-	43.00	31.33	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.5	41.83	-	-	-	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	256QAM /3.0	-	-	-	37.18	25.52	-	-	-	-
B		-	-	-	36.97	25.29	-	-	-	-
C		-	-	-	36.64	25.02	-	-	-	-
D		-	-	-	37.01	25.44	-	-	-	-
Total		-	-	-	42.97	31.34	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.47	41.84	-	-	-	-

Maximum Output Power 37.0dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/5.0	-	-	-	36.23	22.60	-	-	-	-
B		-	-	-	36.07	22.40	-	-	-	-
C		-	-	-	35.85	22.09	-	-	-	-
D		-	-	-	36.06	22.50	-	-	-	-
Total		-	-	-	42.08	28.42	-	-	-	-
Total Power+10.5 dBi		-	-	-	52.58	38.92	-	-	-	-



Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	16QAM/5.0	-	-	-	36.21	22.90	-	-	-	-
B		-	-	-	36.07	22.73	-	-	-	-
C		-	-	-	35.85	22.59	-	-	-	-
D		-	-	-	36.03	22.77	-	-	-	-
Total		-	-	-	42.06	28.77	-	-	-	-
Total Power+10.5 dBi		-	-	-	52.56	39.27	-	-	-	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
	A	64QAM/5.0	-	-	-	36.20	22.59	-	-	-
B	-		-	-	36.07	22.40	-	-	-	-
C	-		-	-	35.84	22.05	-	-	-	-
D	-		-	-	36.02	22.45	-	-	-	-
Total		-	-	-	42.06	28.40	-	-	-	-
Total Power+10.5 dBi		-	-	-	52.56	38.9	-	-	-	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	256QAM /5.0	-	-	-	36.19	22.57	-	-	-	-
B		-	-	-	36.08	22.51	-	-	-	-
C		-	-	-	35.85	22.10	-	-	-	-
D		-	-	-	36.06	22.43	-	-	-	-
Total		-	-	-	42.07	28.43	-	-	-	-
Total Power+10.5 dBi		-	-	-	52.57	38.93	-	-	-	-

Maximum Output Power 37.0dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/ 10.0	-	-	-	36.84	20.22	-	-	-	-
B		-	-	-	36.68	20.01	-	-	-	-
C		-	-	-	36.42	19.74	-	-	-	-
D		-	-	-	36.61	20.19	-	-	-	-
Total		-	-	-	42.66	26.06	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.16	36.56	-	-	-	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
	A	16QAM/ 10.0	-	-	-	36.79	20.44	-	-	-
B	-		-	-	36.62	20.36	-	-	-	-
C	-		-	-	36.41	20.09	-	-	-	-
D	-		-	-	36.60	20.33	-	-	-	-
Total		-	-	-	42.63	26.33	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.13	36.83	-	-	-	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	64QAM/ 10.0	-	-	-	36.80	20.22	-	-	-	-
B		-	-	-	36.64	20.02	-	-	-	-
C		-	-	-	36.44	19.72	-	-	-	-
D		-	-	-	36.60	20.05	-	-	-	-
Total		-	-	-	42.64	26.03	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.14	36.53	-	-	-	-



Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	256QAM /10.0	-	-	-	36.85	20.22	-	-	-	-
B		-	-	-	36.64	20.01	-	-	-	-
C		-	-	-	36.43	19.97	-	-	-	-
D		-	-	-	36.62	20.02	-	-	-	-
Total		-	-	-	42.66	26.08	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.16	36.58	-	-	-	-

Configuration LTE-MIMO-4C

Maximum Output Power 37.0dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/ 15.0	-	-	-	36.83	20.35	-	-	-	-
B		-	-	-	36.72	20.04	-	-	-	-
C		-	-	-	36.50	19.83	-	-	-	-
D		-	-	-	36.64	20.05	-	-	-	-
Total		-	-	-	42.69	26.09	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.19	36.59	-	-	-	-

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	16QAM/ 15.0	-	-	-	36.80	21.05	-	-	-	-
B		-	-	-	36.72	21.04	-	-	-	-
C		-	-	-	36.50	20.62	-	-	-	-
D		-	-	-	36.66	20.72	-	-	-	-
Total		-	-	-	42.69	26.88	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.19	37.38	-	-	-	-



Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	64QAM/ 15.0	-	-	-	36.88	20.24	-	-	-	-
B		-	-	-	36.66	20.10	-	-	-	-
C		-	-	-	36.45	19.81	-	-	-	-
D		-	-	-	36.66	20.2	-	-	-	-
Total		-	-	-	42.69	26.11	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.19	36.61	-	-	-	-

Antenna	Modulation/ Carrier Bandwidth	Output Power / Peak to Average Ratio (PAR)								
	(MHz)	Channel position B			Channel position M			Channel position T		
		POWER	POWER	PAR	POWER	POWER	PAR	POWER	POWER	PAR
		(dBm)	(dBm/MHz)	(db)	(dBm)	(dBm/MHz)	(db)	(dBm)	(dBm/MHz)	(db)
A	256QAM /15.0	-	-	-	36.85	20.24	-	-	-	-
B		-	-	-	36.69	20.06	-	-	-	-
C		-	-	-	36.47	19.77	-	-	-	-
D		-	-	-	36.66	20.17	-	-	-	-
Total		-	-	-	42.69	26.08	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.19	36.58	-	-	-	-

Configuration NB-IoT-InBand-1C

Maximum Output Power 37.0dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/5.0	36.72	31.35	7.72	36.69	31.21	7.72	36.66	31.31	7.70
	QPSK/10.0	36.86	27.90	7.63	36.84	28.14	7.62	36.72	28.38	7.63
	QPSK/15.0	36.82	26.08	7.64	36.85	26.15	7.65	36.66	26.15	7.65
	QPSK/20.0	36.78	24.78	7.63	36.81	25.01	7.63	36.68	25.35	7.66

Configuration NB-IoT-GuardBand-1C

Maximum Output Power 37.0dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/10.0	36.86	27.90	7.63	37.04	28.22	7.43	36.71	28.20	7.64
	QPSK/15.0	36.80	26.02	7.64	37.00	26.56	7.45	36.67	26.16	7.64
	QPSK/20.0	36.79	24.87	7.64	36.99	25.51	7.48	36.68	25.31	7.68

Configuration NB-IoT-StandAlone-1C

Maximum Output Power 33.0dBm per port

Antenna	Modulation/ Carrier	Output Power / Peak to Average Ratio (PAR)								
	Bandwidth (KHz)	Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR(db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR(db)
A	QPSK/ 250.0	32.62	32.71	4.62	32.69	32.73	4.61	32.50	32.51	4.52

Configuration WCDMA+LTE-MC-1 (1WCDMA +1LTE)

Maximum Output Power 37.0dBm per port

Antenna	WCDMA Mod./ LTE Mod. Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	16QAM/ QPSK 1.4	-	-	-	36.52	32.25	-	-	-	-
B	16QAM/ QPSK 1.4	-	-	-	36.57	32.30	-	-	-	-
C	16QAM/ QPSK 1.4	-	-	-	36.25	31.93	-	-	-	-
D	16QAM/ QPSK 1.4	-	-	-	36.24	32.12	-	-	-	-
Total		-	-	-	42.42	38.17	-	-	-	-
Total Power+10.5 dBi		-	-	-	52.92	48.67	-	-	-	-

Antenna	WCDMA Mod./ LTE Mod. Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	16QAM/ QPSK 3.0	-	-	-	36.54	29.33	-	-	-	-
B	16QAM/ QPSK 3.0	-	-	-	36.59	29.42	-	-	-	-
C	16QAM/ QPSK 3.0	-	-	-	36.29	28.10	-	-	-	-
D	16QAM/ QPSK 3.0	-	-	-	36.32	29.25	-	-	-	-
Total		-	-	-	42.46	35.08	-	-	-	-
Total Power+10.5 dBi		-	-	-	52.96	45.58	-	-	-	-



Antenna	WCDMA Mod./ LTE Mod. Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	16QAM/ QPSK 5.0	-	-	-	36.56	28.25	-	-	-	-
B	16QAM/ QPSK 5.0	-	-	-	36.62	28.26	-	-	-	-
C	16QAM/ QPSK 5.0	-	-	-	36.30	27.76	-	-	-	-
D	16QAM/ QPSK 5.0	-	-	-	36.35	28.06	-	-	-	-
Total		-	-	-	42.48	34.11	-	-	-	-
Total Power+10.5 dBi		-	-	-	52.98	44.61	-	-	-	-

Antenna	WCDMA Mod./ LTE Mod. Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	16QAM/ QPSK 10	-	-	-	36.61	28.25	-	-	-	-
B	16QAM/ QPSK 10	-	-	-	36.61	28.12	-	-	-	-
C	16QAM/ QPSK 10	-	-	-	36.33	27.88	-	-	-	-
D	16QAM/ QPSK 10	-	-	-	36.40	27.98	-	-	-	-
Total		-	-	-	42.51	34.08	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.01	44.58	-	-	-	-

Antenna	WCDMA Mod./ LTE Mod. Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	16QAM/ QPSK 15	-	-	-	36.60	28.12	-	-	-	-
B	16QAM/ QPSK 15	-	-	-	36.64	28.09	-	-	-	-
C	16QAM/ QPSK 15	-	-	-	36.39	27.73	-	-	-	-
D	16QAM/ QPSK 15	-	-	-	36.42	27.90	-	-	-	-
Total		-	-	-	42.53	33.98	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.03	44.48	-	-	-	-

Antenna	WCDMA Mod./ LTE Mod. Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	16QAM/ QPSK 20	-	-	-	36.60	28.13	-	-	-	-
B	16QAM/ QPSK 20	-	-	-	36.67	28.12	-	-	-	-
C	16QAM/ QPSK 20	-	-	-	36.40	27.72	-	-	-	-
D	16QAM/ QPSK 20	-	-	-	36.44	27.89	-	-	-	-
Total		-	-	-	42.55	33.99	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.05	44.49	-	-	-	-

Configuration WCDMA+LTE-MC-3 (3WCDMA+3LTE)

Maximum Output Power 37.0dBm per port

Antenna	WCDMA Mod./ LTE Mod. Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	16QAM QPSK 1.4	-	-	-	36.64	27.24	-	-	-	-
B	16QAM QPSK 1.4	-	-	-	36.65	27.92	-	-	-	-
C	16QAM QPSK 1.4	-	-	-	36.36	27.42	-	-	-	-
D	16QAM QPSK 1.4	-	-	-	36.45	27.62	-	-	-	-
Total		-	-	-	42.55	33.58	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.05	44.08	-	-	-	-

Antenna	WCDMA Mod./ LTE Mod. Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	16QAM QPSK 3.0	-	-	-	36.69	24.82	-	-	-	-
B	16QAM QPSK 3.0	-	-	-	36.67	24.95	-	-	-	-
C	16QAM QPSK 3.0	-	-	-	36.42	24.55	-	-	-	-
D	16QAM QPSK 3.0	-	-	-	36.50	24.80	-	-	-	-
Total		-	-	-	42.59	30.80	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.09	41.3	-	-	-	-

Antenna	WCDMA Mod./ LTE Mod. Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	16QAM QPSK 5.0	-	-	-	36.80	23.89	-	-	-	-
B	16QAM QPSK 5.0	-	-	-	36.77	23.80	-	-	-	-
C	16QAM QPSK 5.0	-	-	-	36.49	23.53	-	-	-	-
D	16QAM QPSK 5.0	-	-	-	36.54	23.60	-	-	-	-
Total		-	-	-	42.67	29.73	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.17	40.23	-	-	-	-

Antenna	WCDMA Mod./ LTE Mod. Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	16QAM QPSK 10	-	-	-	36.86	23.81	-	-	-	-
B	16QAM QPSK 10	-	-	-	36.82	23.77	-	-	-	-
C	16QAM QPSK 10	-	-	-	36.57	23.30	-	-	-	-
D	16QAM QPSK 10	-	-	-	36.59	23.69	-	-	-	-
Total		-	-	-	42.73	29.67	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.23	40.17	-	-	-	-

Antenna	WCDMA Mod./ LTE Mod. Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	16QAM QPSK 15	-	-	-	36.84	23.78	-	-	-	-
B	16QAM QPSK 15	-	-	-	36.89	23.70	-	-	-	-
C	16QAM QPSK 15	-	-	-	36.60	23.37	-	-	-	-
D	16QAM QPSK 15	-	-	-	36.66	23.60	-	-	-	-
Total		-	-	-	42.77	29.64	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.27	40.14	-	-	-	-

Configuration WCDMA+LTE-MC-4 (2WCDMA+3LTE)

Maximum Output Power 37.0dBm per port

Antenna	WCDMA Mod./ LTE Mod. Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	16QAM/ QPSK 20.0	-	-	-	36.84	24.40	-	-	-	-
B	16QAM/ QPSK 20.0	-	-	-	36.90	24.40	-	-	-	-
C	16QAM/ QPSK 20.0	-	-	-	36.61	24.02	-	-	-	-
D	16QAM/ QPSK 20.0	-	-	-	36.65	24.17	-	-	-	-
Total		-	-	-	42.77	30.27	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.27	40.77	-	-	-	-

Configuration WCDMA+NB-IoT-MC-1 (1WCDMA+1SA)

Maximum Output Power 37.0dBm per port

Antenna	WCDMA Mod./SA Mod.	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	16QAM/QP SK	-	-	-	36.04	31.30	7.82	-	-	-

Configuration WCDMA+NB-IoT-MC-4 (5WCDMA+1SA)

Maximum Output Power 37.0dBm per port

Antenna	WCDMA Mod./SA Mod.	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	16QAM/QP SK	-	-	-	36.19	27.40	7.47	-	-	-

Configuration LTE+NB-IoT-MC-1 (1LTE+1SA)

Maximum Output Power 37.0dBm per port

Antenna	LTE Mod. Bandwidth (MHz)/ SA Mod.	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK 1.4 /QPSK	36.35	33.12	-	36.41	33.01	-	36.20	33.09	-
B	QPSK 1.4 /QPSK	36.39	33.30	-	36.34	32.79	-	36.18	32.70	-
C	QPSK 1.4 /QPSK	36.11	32.90	-	36.10	32.56	-	35.90	32.53	-
D	QPSK 1.4 /QPSK	36.23	33.04	-	36.32	32.70	-	36.15	32.70	-
Total		42.29	39.11	-	42.31	38.79	-	42.13	38.78	-
Total Power+10.5 dBi		52.79	49.61	-	52.81	49.29	-	52.63	49.28	-

Antenna	LTE Mod. Bandwidth (MHz)/ SA Mod.	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK 3.0 /QPSK	36.35	32.20	-	36.66	32.89	-	36.25	32.80	-
B	QPSK 3.0 /QPSK	36.32	32.19	-	36.29	32.55	-	36.17	32.70	-
C	QPSK 3.0 /QPSK	36.07	32.82	-	36.17	32.33	-	35.96	32.39	-
D	QPSK 3.0 /QPSK	36.09	32.11	-	36.31	32.57	-	36.18	32.69	-
Total		42.23	38.36	-	42.38	38.61	-	42.16	38.67	-
Total Power+10.5 dBi		52.73	48.86	-	52.88	49.11	-	52.66	49.17	-

Antenna	LTE Mod. Bandwidth (MHz)/ SA Mod.	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK 5.0 /QPSK	-	-	-	35.91	31.85				
B	QPSK 5.0 /QPSK	-	-	-	35.90	31.51				
C	QPSK 5.0 /QPSK	-	-	-	35.60	31.25				
D	QPSK 5.0 /QPSK	-	-	-	35.70	31.60				
Total		-	-	-	41.80	37.58	-	-	-	-
Total Power+10.5 dBi		-	-	-	52.3	48.08	-	-	-	-



Antenna	LTE Mod. Bandwidth (MHz)/ SA Mod.	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK 10.0 /QPSK	-	-	-	35.99	31.69	-	-	-	-
B	QPSK 10.0 /QPSK	-	-	-	35.88	31.51	-	-	-	-
C	QPSK 10.0 /QPSK	-	-	-	35.62	31.23	-	-	-	-
D	QPSK 10.0 /QPSK	-	-	-	35.81	31.55	-	-	-	-
Total		-	-	-	41.85	37.52	-	-	-	-
Total Power+10.5 dBi		-	-	-	52.35	48.02	-	-	-	-

Antenna	LTE Mod. Bandwidth (MHz)/ SA Mod.	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK 15.0 /QPSK	-	-	-	35.95	31.70	-	-	-	-
B	QPSK 15.0 /QPSK	-	-	-	35.85	31.54	-	-	-	-
C	QPSK 15.0 /QPSK	-	-	-	35.55	30.98	-	-	-	-
D	QPSK 15.0 /QPSK	-	-	-	35.88	31.50	-	-	-	-
Total		-	-	-	41.83	37.46	-	-	-	-
Total Power+10.5 dBi		-	-	-	52.33	47.96	-	-	-	-

Antenna	LTE Mod. Bandwidth (MHz)/ SA Mod.	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK 20.0 /QPSK	-	-	-	36.02	31.71	-	-	-	-
B	QPSK 20.0 /QPSK	-	-	-	35.98	31.46	-	-	-	-
C	QPSK 20.0 /QPSK	-	-	-	35.72	31.25	-	-	-	-
D	QPSK 20.0 /QPSK	-	-	-	35.92	31.33	-	-	-	-
Total		-	-	-	41.93	37.46	-	-	-	-
Total Power+10.5 dBi		-	-	-	52.43	47.96	-	-	-	-

Configuration LTE+NB-IoT-MC-3 (5LTE+1SA)

Maximum Output Power 37.0dBm per port

Antenna	LTE Mod. Bandwidth (MHz)/ SA Mod.	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK 1.4 /QPSK	36.26	27.71	-	36.15	28.13	-	35.94	28.22	-
B	QPSK 1.4 /QPSK	36.03	27.52	-	36.01	28.02	-	35.90	28.16	-
C	QPSK 1.4 /QPSK	35.81	27.50	-	35.77	27.69	-	35.52	27.91	-
D	QPSK 1.4 /QPSK	35.97	27.42	-	35.91	27.85	-	35.77	28.16	-
Total		42.04	33.56	-	41.98	33.95	-	41.81	34.13	-
Total Power+10.5 dBi		52.54	44.06	-	52.48	44.45	-	52.31	44.63	-

Antenna	LTE Mod. Bandwidth (MHz)/ SA Mod.	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK 3.0 /QPSK	36.20	27.32	-	36.25	28.11	-	36.00	28.19	-
B	QPSK 3.0 /QPSK	36.03	27.30	-	36.02	28.10	-	35.93	27.97	-
C	QPSK 3.0 /QPSK	35.78	27.14	-	35.81	27.74	-	35.63	27.83	-
D	QPSK 3.0 /QPSK	36.00	27.30	-	35.93	27.60	-	35.88	28.23	-
Total		42.03	33.29	-	42.03	33.91	-	41.88	34.08	-
Total Power+10.5 dBi		52.53	43.79	-	52.53	44.41	-	52.38	44.58	-

Antenna	LTE Mod. Bandwidth (MHz)/ SA Mod.	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK 5.0 /QPSK	-	-	-	36.12	27.80	-	-	-	-
B	QPSK 5.0 /QPSK	-	-	-	36.07	27.64	-	-	-	-
C	QPSK 5.0 /QPSK	-	-	-	35.85	27.17	-	-	-	-
D	QPSK 5.0 /QPSK	-	-	-	35.99	27.62	-	-	-	-
Total		-	-	-	42.03	33.58	-	-	-	-
Total Power+10.5 dBi		-	-	-	52.53	44.08	-	-	-	-

Antenna	LTE Mod. Bandwidth (MHz)/ SA Mod.	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK 10.0 /QPSK	-	-	-	36.77	28.40	-	-	-	-
B	QPSK 10.0 /QPSK	-	-	-	36.60	28.02	-	-	-	-
C	QPSK 10.0 /QPSK	-	-	-	36.44	27.74	-	-	-	-
D	QPSK 10.0 /QPSK	-	-	-	36.67	28.00	-	-	-	-
Total		-	-	-	42.64	34.07	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.14	44.57	-	-	-	-

Configuration LTE+NB-IoT-MC-4 (4LTE+1SA)

Maximum Output Power 37.0dBm per port

Antenna	LTE Mod. Bandwidth (MHz)/ SA Mod.	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK 15.0 /QPSK	-	-	-	36.78	28.92	-	-	-	-
B	QPSK 15.0 /QPSK	-	-	-	36.62	28.86	-	-	-	-
C	QPSK 15.0 /QPSK	-	-	-	36.49	28.45	-	-	-	-
D	QPSK 15.0 /QPSK	-	-	-	36.61	28.81	-	-	-	-
Total		-	-	-	42.65	34.78	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.15	45.28	-	-	-	-

Configuration LTE+NB-IoT-MC-5 (3LTE+1SA)

Maximum Output Power 37.0dBm per port

Antenna	LTE Mod. Bandwidth (MHz)/ SA Mod.	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK 20.0 /QPSK	-	-	-	36.80	29.92	-	-	-	-
B	QPSK 20.0 /QPSK	-	-	-	36.60	29.70	-	-	-	-
C	QPSK 20.0 /QPSK	-	-	-	36.47	29.63	-	-	-	-
D	QPSK 20.0 /QPSK	-	-	-	36.57	29.60	-	-	-	-
Total		-	-	-	42.63	35.73	-	-	-	-
Total Power+10.5 dBi		-	-	-	53.13	46.23	-	-	-	-

Configuration WCDMA+LTE+NB-IoT-MC-1(1WCDMA+1LTE+1SA)

Maximum Output Power 37.0dBm per port

Antenna	WCDMA Mod./ LTE Mod. BW(MHz)/ SA Mod.	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	16QAM/ QPSK 1.4/ QPSK	36.44	31.00	-	36.50	31.04	-	36.52	31.30	-
B	16QAM/ QPSK 1.4/ QPSK	36.27	30.87	-	36.25	31.00	-	36.31	31.24	-
C	16QAM/ QPSK 1.4/ QPSK	36.10	30.70	-	36.09	30.90	-	36.18	31.13	-
D	16QAM/ QPSK 1.4/ QPSK	36.21	30.67	-	36.29	31.20	-	36.33	31.43	-
Total		42.28	36.83	-	42.31	37.06	-	42.36	37.30	-
Total Power+10.5 dBi		52.78	47.33	-	52.81	47.56	-	52.86	47.8	-

Antenna	WCDMA	Output Power / Peak to Average Ratio (PAR)								
	Mod./	Channel position B			Channel position M			Channel position T		
	LTE Mod.	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
	BW(MHz)/ SA Mod.									
A	16QAM/ QPSK 3.0/ QPSK	36.45	30.90	-	36.61	31.30	-	36.73	31.66	-
B	16QAM/ QPSK 3.0/ QPSK	36.41	30.94	-	36.44	31.18	-	36.52	31.37	-
C	16QAM/ QPSK 3.0/ QPSK	36.18	30.80	-	36.23	31.01	-	36.31	31.25	-
D	16QAM/ QPSK 3.0/ QPSK	36.36	30.82	-	36.45	31.40	-	36.48	31.56	-
Total		42.37	36.89	-	42.46	37.25	-	42.53	37.48	-
Total Power+10.5 dBi		52.87	47.39	-	52.96	47.75	-	53.03	47.98	-

Antenna	WCDMA	Output Power / Peak to Average Ratio (PAR)								
	Mod./	Channel position B			Channel position M			Channel position T		
	LTE Mod.	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
	BW(MHz)/ SA Mod.									
A	16QAM/ QPSK 5.0/ QPSK	-	-	-	35.80	30.42	-	-	-	-
B	16QAM/ QPSK 5.0/ QPSK	-	-	-	35.67	30.37	-	-	-	-
C	16QAM/ QPSK 5.0/ QPSK	-	-	-	35.40	30.14	-	-	-	-
D	16QAM/ QPSK 5.0/ QPSK	-	-	-	35.62	30.30	-	-	-	-
Total		-	-	-	41.65	36.33	-	-	-	-
Total Power+10.5 dBi		-	-	-	52.15	46.83	-	-	-	-

Antenna	WCDMA Mod./ LTE Mod. BW (MHz)/ SA Mod.	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER	POWER	PAR	POWER	POWER	PAR	POWER	POWER	PAR
		(dBm)	(dBm/MHz)	(db)	(dBm)	(dBm/MHz)	(db)	(dBm)	(dBm/MHz)	(db)
A	16QAM/ QPSK 10.0/ QPSK	-	-	-	35.71	30.50	-	-	-	-
B	16QAM/ QPSK 10.0/ QPSK	-	-	-	35.61	30.10	-	-	-	-
C	16QAM/ QPSK 10.0/ QPSK	-	-	-	35.48	30.04	-	-	-	-
D	16QAM/ QPSK 10.0/ QPSK	-	-	-	35.59	30.17	-	-	-	-
Total		-	-	-	41.62	36.23	-	-	-	-
Total Power+10.5 dBi		-	-	-	52.12	46.73	-	-	-	-

Antenna	WCDMA Mod./ LTE Mod. BW (MHz)/ SA Mod.	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER	POWER	PAR	POWER	POWER	PAR	POWER	POWER	PAR
		(dBm)	(dBm/MHz)	(db)	(dBm)	(dBm/MHz)	(db)	(dBm)	(dBm/MHz)	(db)
A	16QAM/ QPSK 15.0/ QPSK	-	-	-	35.84	30.35	-	-	-	-
B	16QAM/ QPSK 15.0/ QPSK	-	-	-	35.72	30.27	-	-	-	-
C	16QAM/ QPSK 15.0/ QPSK	-	-	-	35.48	30.03	-	-	-	-
D	16QAM/ QPSK 15.0/ QPSK	-	-	-	35.68	30.14	-	-	-	-
Total		-	-	-	41.70	36.22	-	-	-	-
Total Power+10.5 dBi		-	-	-	52.2	46.72	-	-	-	-

Antenna	WCDMA	Output Power / Peak to Average Ratio (PAR)								
	Mod/.	Channel position B			Channel position M			Channel position T		
	LTE Mod.	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
	BW(MHz)/ SA Mod.									
A	16QAM/ QPSK 20.0/ QPSK	-	-	-	35.87	30.31	-	-	-	-
B	16QAM/ QPSK 20.0/ QPSK	-	-	-	35.71	30.23	-	-	-	-
C	16QAM/ QPSK 20.0/ QPSK	-	-	-	35.50	29.96	-	-	-	-
D	16QAM/ QPSK 20.0/ QPSK	-	-	-	35.67	30.32	-	-	-	-
Total		-	-	-	41.71	36.23	-	-	-	-
Total Power+10.5 dBi		-	-	-	52.21	46.73	-	-	-	-

Configuration WCDMA+LTE+NB-IoT-MC-4 (2WCDMA+3LTE+1SA)

Maximum Output Power 37.0dBm per port

Antenna	WCDMA	Output Power / Peak to Average Ratio (PAR)								
	Mod/.	Channel position B			Channel position M			Channel position T		
	LTE Mod.	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
	BW(MHz)/ SA Mod.									
A	16QAM/ QPSK 1.4/ QPSK	36.32	27.42	-	36.25	27.95	-	36.16	28.08	-
B	16QAM/ QPSK 1.4/ QPSK	36.01	27.43	-	35.98	27.71	-	35.97	27.74	-
C	16QAM/ QPSK 1.4/ QPSK	35.78	27.40	-	35.78	27.53	-	35.80	27.68	-
D	16QAM/ QPSK 1.4/ QPSK	36.01	27.40	-	36.00	27.94	-	35.94	27.73	-
Total		42.05	33.43	-	42.03	33.81	-	41.99	33.83	-
Total Power+10.5 dBi		52.55	43.93	-	52.53	44.31	-	52.49	44.33	-

Antenna	WCDMA Mod/ LTE Mod. BW(MHz)/ SA Mod.	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	16QAM/ QPSK 3.0/ QPSK	36.08	27.30	-	36.22	27.99	-	36.11	28.04	-
B	16QAM/ QPSK 3.0/ QPSK	35.97	27.25	-	35.92	27.73	-	35.97	27.94	-
C	16QAM/ QPSK 3.0/ QPSK	35.76	26.96	-	35.78	27.54	-	35.80	27.68	-
D	16QAM/ QPSK 3.0/ QPSK	35.94	27.42	-	36.02	27.85	-	36.03	27.90	-
Total		41.96	33.26	-	42.01	33.80	-	42.00	33.91	-
Total Power+10.5 dBi		52.46	43.76	-	52.51	44.3	-	52.5	44.41	-

Configuration WCDMA+LTE+NB-IoT-MC-5 (3WCDMA+2LTE+1SA)

Maximum Output Power 37.0dBm per port

Antenna	WCDMA Mod/ LTE Mod. BW (MHz)/ SA Mod.	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	16QAM/ QPSK 5.0/ QPSK	-	-	-	36.13	27.,52	-	-	-	-
B	16QAM/ QPSK 5.0/ QPSK	-	-	-	35.98	27.32	-	-	-	-
C	16QAM/ QPSK 5.0/ QPSK	-	-	-	35.74	26.95	-	-	-	-
D	16QAM/ QPSK 5.0/ QPSK	-	-	-	35.93	27.42	-	-	-	-
Total		-	-	-	41.97	33.33	-	-	-	-
Total Power+10.5 dBi		-	-	-	52.47	43.83	-	-	-	-

Antenna	WCDMA	Output Power / Peak to Average Ratio (PAR)								
	Mod/.	Channel position B			Channel position M			Channel position T		
	LTE Mod.	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
	BW (MHz)/ SA Mod.									
A	16QAM/ QPSK 10.0/ QPSK	-	-	-	35.99	27.48	-	-	-	-
B	16QAM/ QPSK 10.0/ QPSK	-	-	-	36.07	27.32	-	-	-	-
C	16QAM/ QPSK 10.0/ QPSK	-	-	-	35.78	27.14	-	-	-	-
D	16QAM/ QPSK 10.0/ QPSK	-	-	-	35.95	27.38	-	-	-	-
Total		-	-	-	41.97	33.35	-	-	-	-
Total Power+10.5 dBi		-	-	-	52.47	43.85	-	-	-	-

Antenna	WCDMA	Output Power / Peak to Average Ratio (PAR)								
	Mod/.	Channel position B			Channel position M			Channel position T		
	LTE Mod.	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
	BW (MHz)/ SA Mod.									
A	16QAM/ QPSK 15.0/ QPSK	-	-	-	36.25	27.59	-	-	-	-
B	16QAM/ QPSK 15.0/ QPSK	-	-	-	36.10	27.30	-	-	-	-
C	16QAM/ QPSK 15.0/ QPSK	-	-	-	35.90	27.14	-	-	-	-
D	16QAM/ QPSK 15.0/ QPSK	-	-	-	36.05	27.50	-	-	-	-
Total		-	-	-	42.10	33.41	-	-	-	-
Total Power+10.5 dBi		-	-	-	52.6	43.91	-	-	-	-

Antenna	WCDMA	Output Power / Peak to Average Ratio (PAR)								
	Mod./	Channel position B			Channel position M			Channel position T		
	LTE Mod.	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
	BW (MHz)/ SA Mod.									
A	16QAM/ QPSK 20.0/ QPSK	-	-	-	36.13	27.67	-	-	-	-
B	16QAM/ QPSK 20.0/ QPSK	-	-	-	36.10	27.38	-	-	-	-
C	16QAM/ QPSK 20.0/ QPSK	-	-	-	35.89	27.15	-	-	-	-
D	16QAM/ QPSK 20.0/ QPSK	-	-	-	36.03	27.37	-	-	-	-
Total		-	-	-	42.06	33.42	-	-	-	-
Total Power+10.5 dBi		-	-	-	52.56	43.92	-	-	-	-

A.2 Occupied Bandwidth

A.2.1 Reference

FCC CFR 47 Part 2, Clause 2.1049

FCC CFR 47 Part 27, Clause 27.53 (h)

RSS-GEN, Clause 6.7

A.2.2 Method of Measurements

The EUT was set to transmit at maximum power and testing was carried out on bottom, middle and top channels. Using the Occupied Bandwidth measurement function in the spectrum analyser, the 26dB bandwidth was measured in accordance with FCC KDB 971168 D01 Clause 4.2. In addition, measurements of 99% occupied bandwidths were made in accordance with RSS-GEN Clause 6.7.

The measurement method is from KDB 971168 4.2:

- a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be set wide enough to capture all modulation products including the emission skirts (i.e., two to five times the OBW).
- b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
- c) Set the reference level of the instrument as required to keep the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope must be at least $10\log(\text{OBW} / \text{RBW})$ below the reference level.
- d) Set the detection mode to peak, and the trace mode to max hold.
- e) Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

A.2.3 Measurement result

Configuration WCDMA-1C

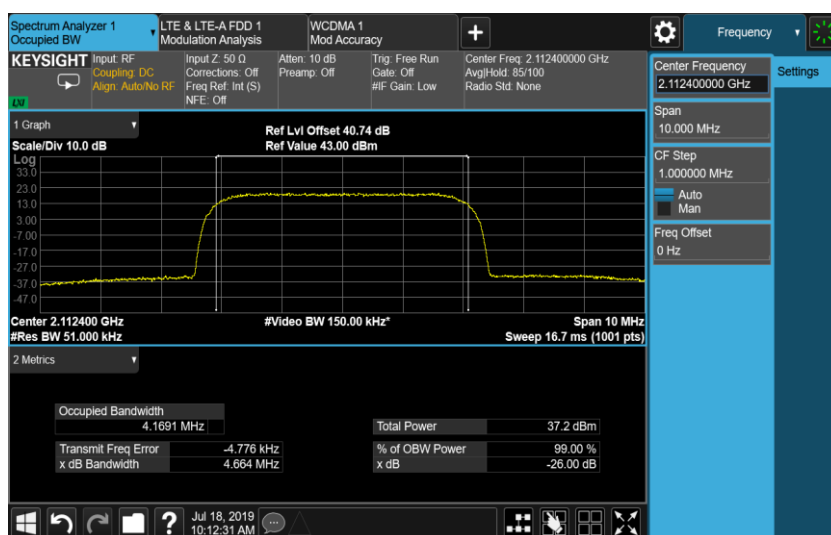
-26dBc Occupied Bandwidth

Modulation/ Bandwidth	Occupied Bandwidth (MHz)		
	Channel position B	Channel position M	Channel position T
QPSK/5.0MHz	4.664	4.662	4.667
16QAM/5.0MHz	4.660	4.662	4.656
64QAM/5.0MHz	4.663	4.666	4.666

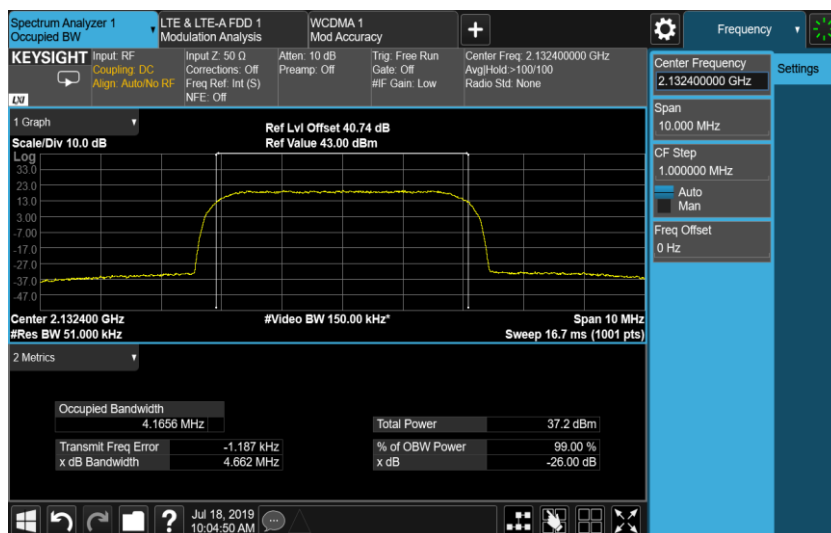
99% Occupied Bandwidth

Modulation/ Bandwidth	Occupied Bandwidth (MHz)		
	Channel position B	Channel position M	Channel position B
QPSK/5.0MHz	4.1691	4.1656	4.1683
16QAM/5.0MHz	4.1637	4.1668	4.1646
64QAM/5.0MHz	4.1678	4.1646	4.1695

Port A, QPSK/5.0MHz Channel Position B



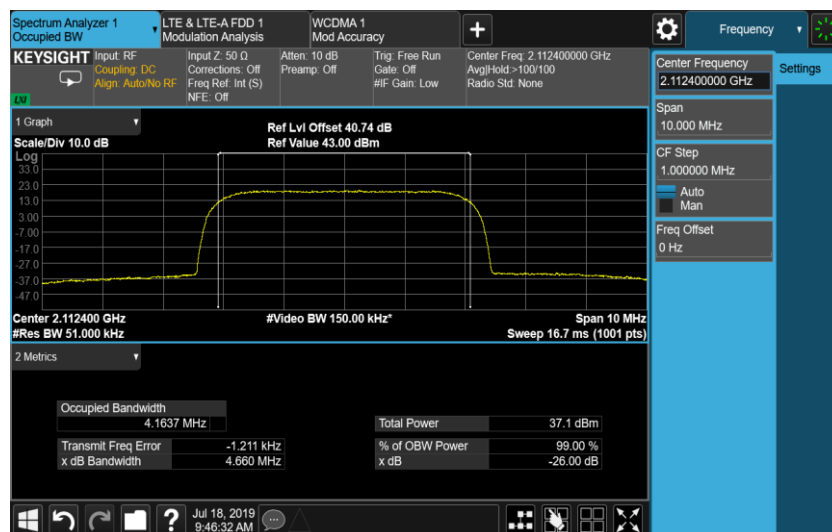
Port A, QPSK/5.0MHz Channel Position M



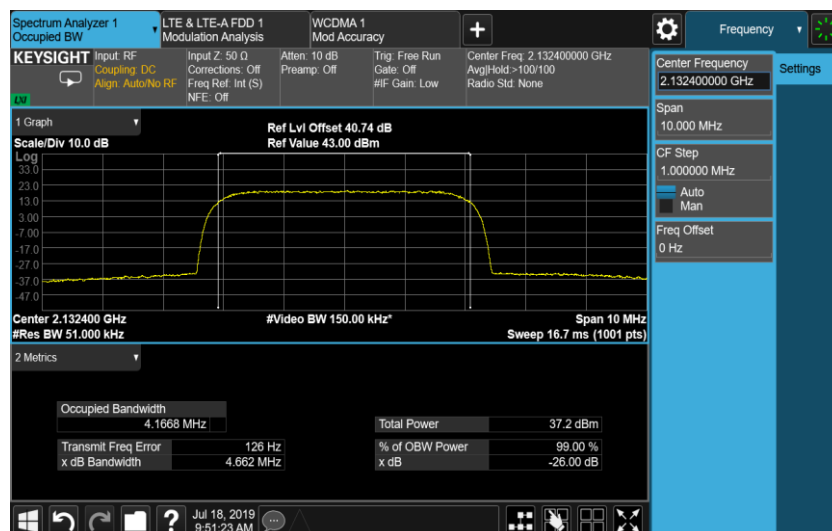
Port A, QPSK/5.0MHz Channel Position T



Port A, 16QAM/5.0MHz Channel Position B



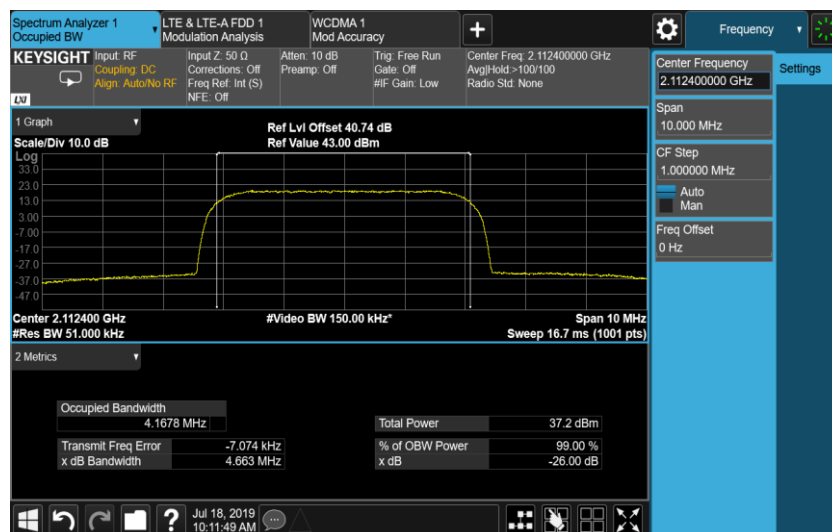
Port A, 16QAM/5.0MHz Channel Position M



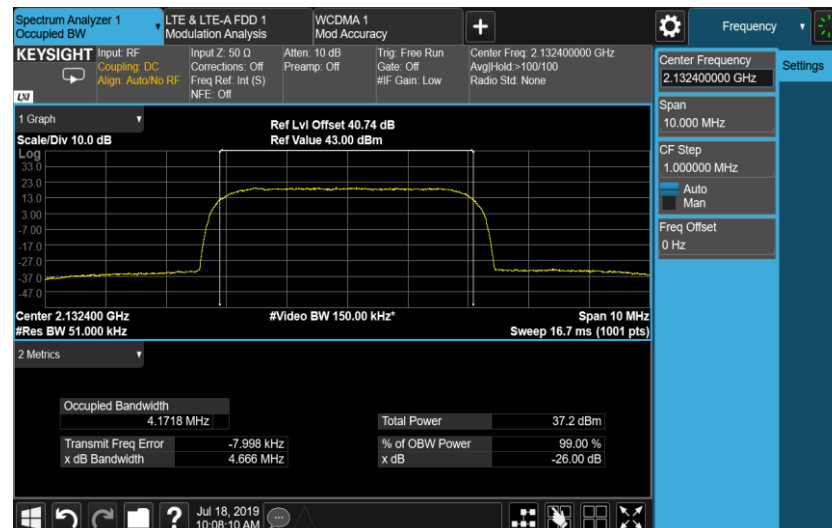
Port A, 16QAM/5.0MHz Channel Position T



Port A, 64QAM/5.0MHz Channel Position B

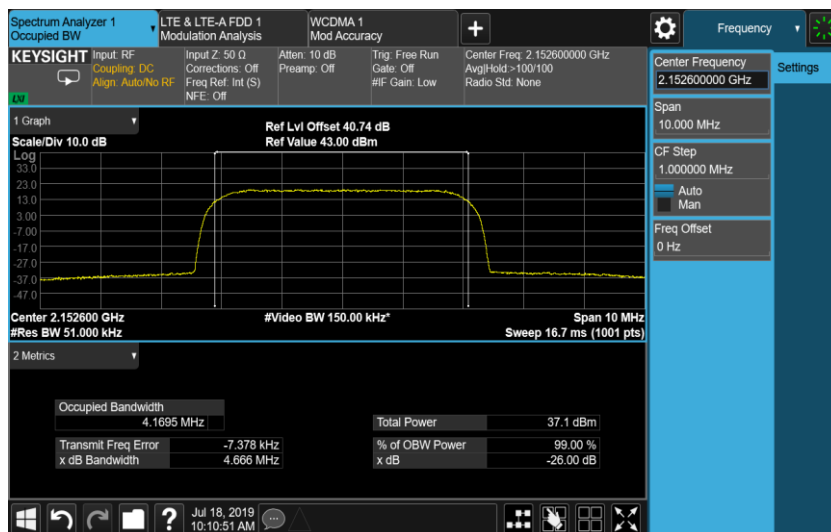


Port A, 64QAM/5.0MHz Channel Position M



Port A,

64QAM/5.0MHz Channel Position T



Configuration LTE-MIMO-1C -26dBc Occupied Bandwidth

Modulation/ Bandwidth	Occupied Bandwidth (MHz)		
	Channel position B	Channel position M	Channel position T
QPSK/ 1.4MHz	1.234	1.232	1.240
QPSK/ 3.0MHz	2.861	2.857	2.859
QPSK/ 5.0MHz	4.734	4.732	4.720
QPSK/ 10.0MHz	9.387	9.416	9.364
QPSK/ 15.0MHz	13.98	13.98	13.98
QPSK/ 20.0MHz	18.59	18.60	18.61

-26dBc Occupied Bandwidth

Bandwidth	Occupied Bandwidth (MHz)		
	Modulation 16QAM/ Channel position M	Modulation 64QAM/ Channel position M	Modulation 256QAM/ Channel position M
1.4MHz	1.231	1.223	1.224
3.0MHz	2.858	2.854	2.885
5.0MHz	4.728	4.729	4.729
10.0MHz	9.352	9.402	9.368
15.0MHz	13.94	14.01	14.00
20.0MHz	18.56	18.62	18.58

99% Occupied Bandwidth

Modulation/ Bandwidth	Occupied Bandwidth (MHz)		
	Channel position B	Channel position M	Channel position T
QPSK/ 1.4MHz	1.0890	1.08851	1.0893
QPSK/ 3.0MHz	2.6907	2.6920	2.6918
QPSK/ 5.0MHz	4.4766	4.4789	4.4750
QPSK/ 10.0MHz	8.9344	8.9386	8.9349
QPSK/ 15.0MHz	13.416	13.406	13.390
QPSK/ 20.0MHz	17.856	17.876	17.859

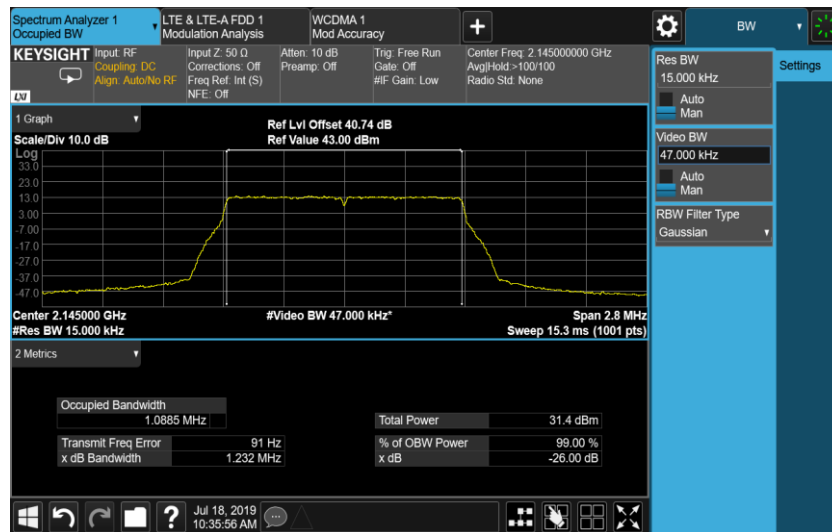
99% Occupied Bandwidth

Bandwidth	Occupied Bandwidth (MHz)		
	Modulation 16QAM/ Channel position M	Modulation 64QAM/ Channel position M	Modulation 256QAM/ Channel position M
1.4MHz	1.0876	1.0871	1.0890
3.0MHz	2.6913	2.6924	2.6913
5.0MHz	4.4792	4.4776	4.4782
10.0MHz	8.9391	8.9420	8.9414
15.0MHz	13.412	13.403	13.405
20.0MHz	17.837	17.874	17.852

Port A, QPSK/1.4MHz Channel Position B



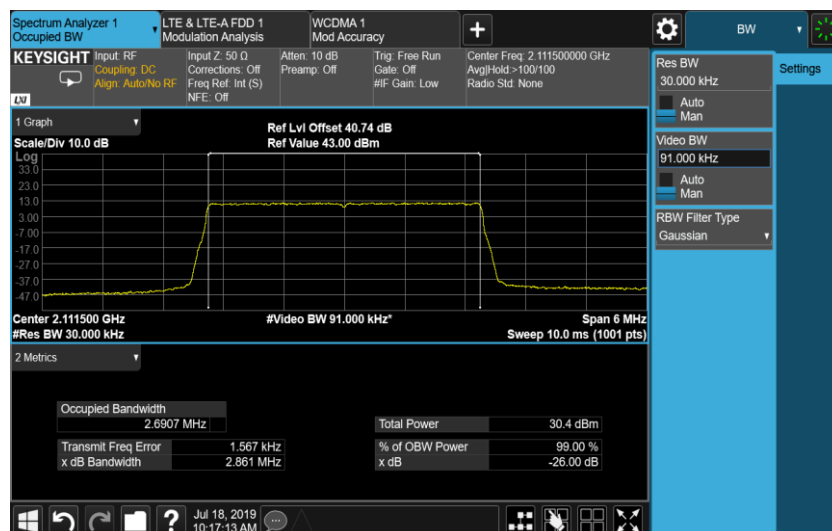
Port A, QPSK/1.4MHz Channel Position M



Port A, QPSK/1.4MHz Channel Position T



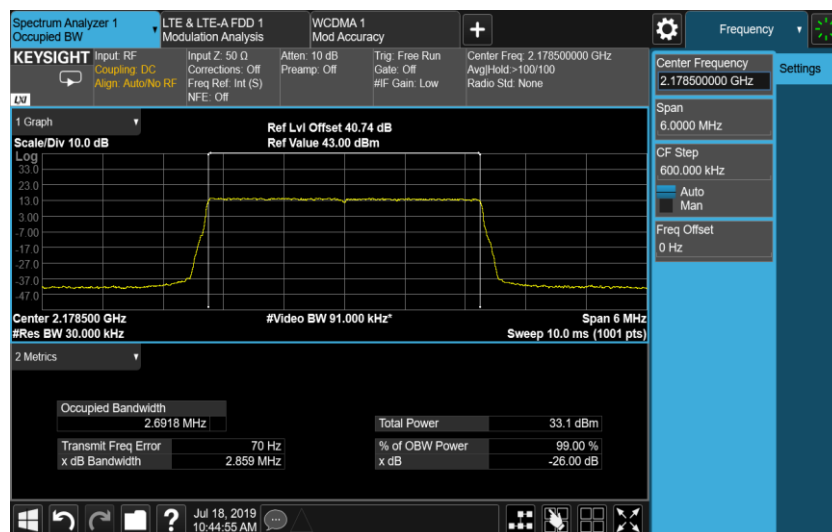
Port A, QPSK/3.0MHz Channel Position B



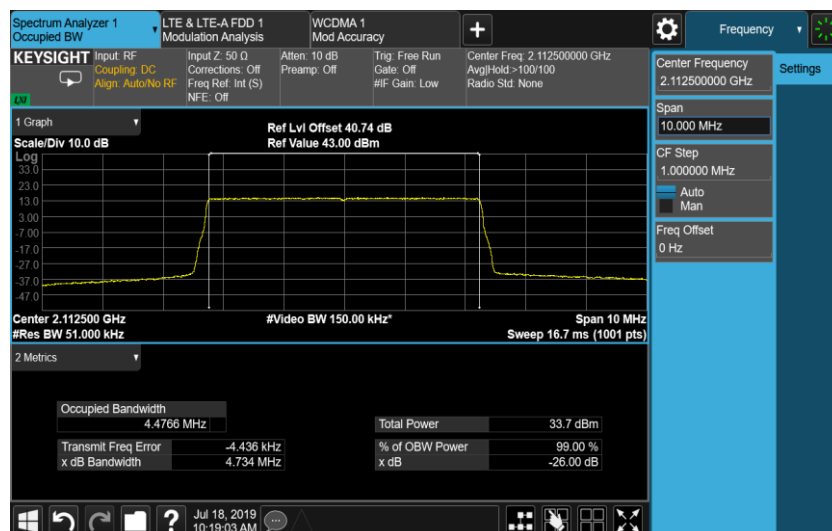
Port A, QPSK/3.0MHz Channel Position M



Port A, QPSK/3.0MHz Channel Position T



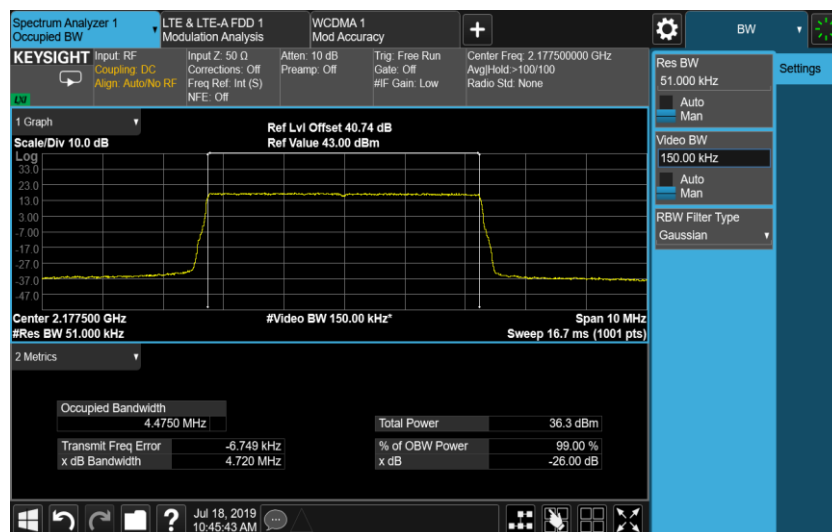
Port A, QPSK/5.0MHz Channel Position B



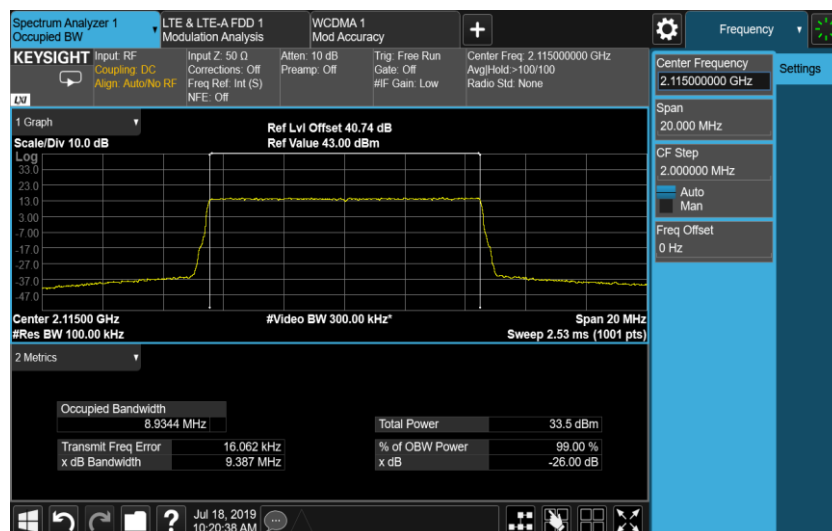
Port A, QPSK/5.0MHz Channel Position M



Port A, QPSK/5.0MHz Channel Position T



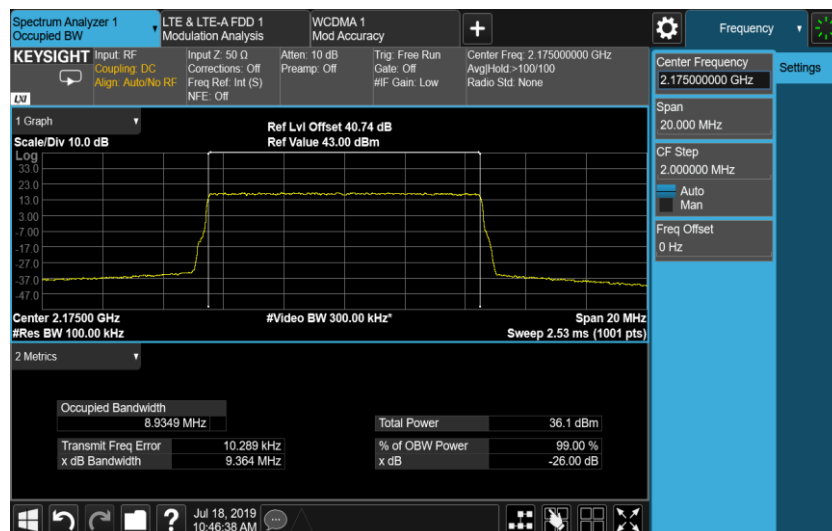
Port A, QPSK/10.0MHz Channel Position B



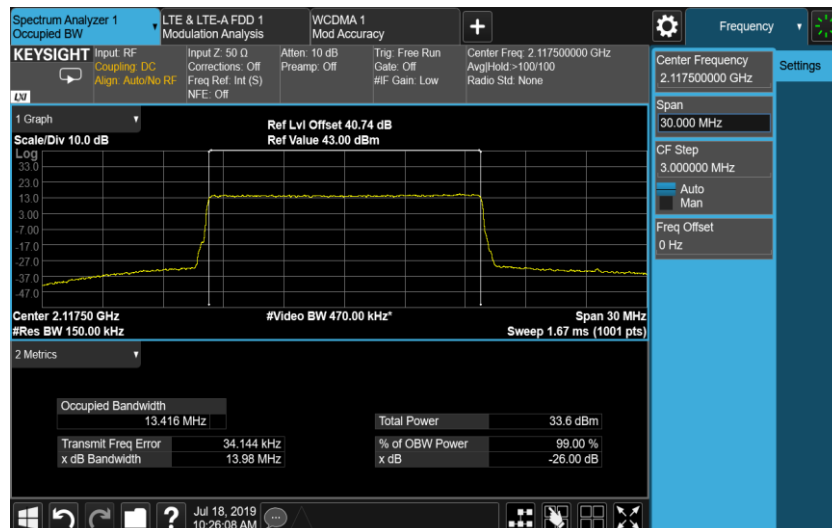
Port A, QPSK/10.0MHz Channel Position M



Port A, QPSK/10.0MHz Channel Position T



Port A, QPSK/15.0MHz Channel Position B



Port A, QPSK/15.0MHz Channel Position M



Port A, QPSK/15.0MHz Channel Position T



Port A, QPSK/20.0MHz Channel Position B

