9. Peak Output Power (ESMR)

9.1 Test Specification

FCC Rule Part 20.21

9.2 Test Procedure

The E.U.T. antenna terminal was connected to the Spectrum Analyzer through an external attenuator and an appropriate coaxial cable (loss=31.3 dB). The E.U.T. RF output was modulated. Special attention was taken to prevent Spectrum Analyzer RF input overload. The output power level was measured at the low and high channels of each modulation.

9.3 Test Results

Modulation	Operation Frequency (MHz)	Reading (dBm)
LTE 64QAM	864.5	31.2
	866.5	31.7
GSM	863.2	31.8
	867.8	32.3
W-CDMA	864.5	32.2
	866.5	31.9

Figure 58 Peak Output Power ESMR

See additional information in *Figure 59* to *Figure 64.*

JUDGEMENT: Passed

Peak Output Power (ESMR)

E.U.T Description	ONE- Optical Network Evolution Wireless Platform
Type	MRU (Mid Power Remote Unit)
Serial Number:	Not Designated

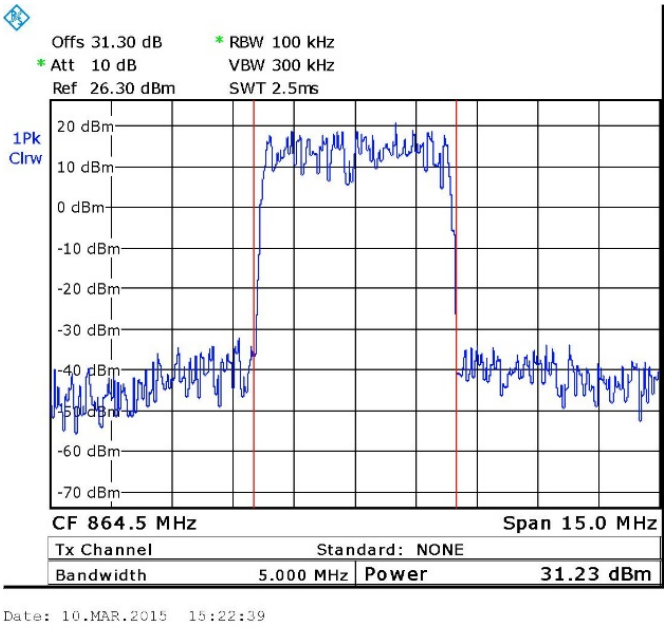


Figure 59. — 864.5 MHz – LTE 64QAM

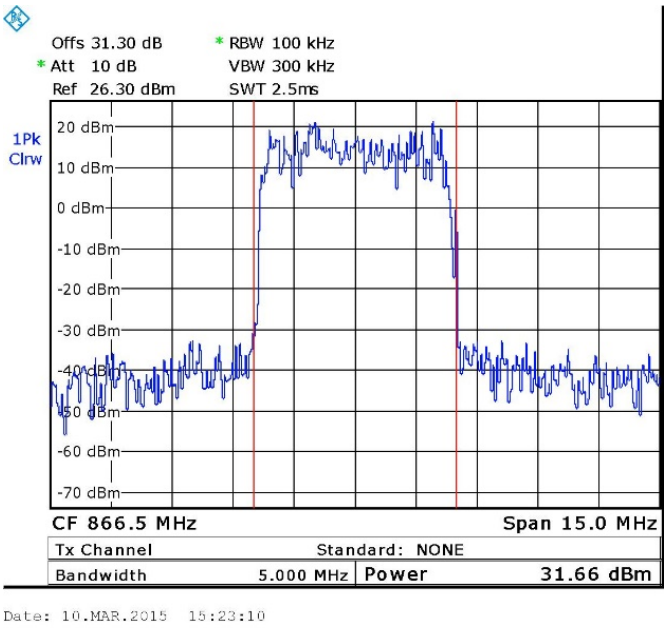


Figure 60. — 866.5 MHz – LTE 64QAM

Peak Output Power (ESMR)

E.U.T Description	ONE- Optical Network Evolution Wireless Platform
Type	MRU (Mid Power Remote Unit)
Serial Number:	Not Designated

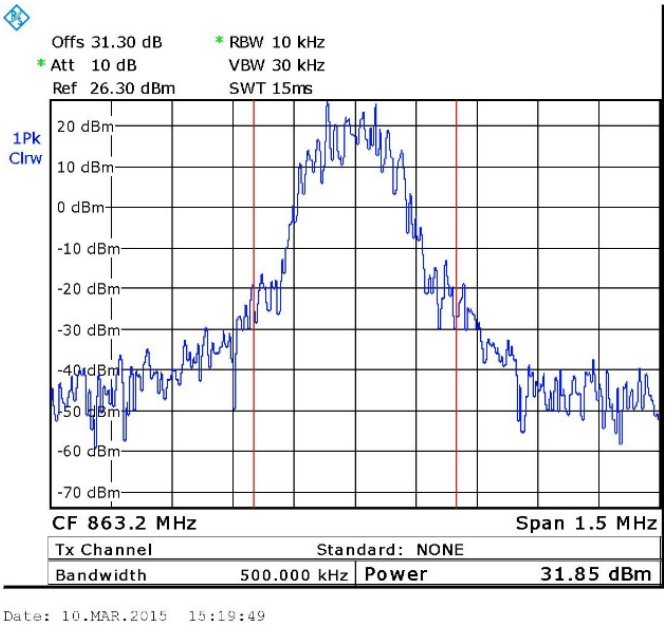


Figure 61. — 863.2 MHz – GSM

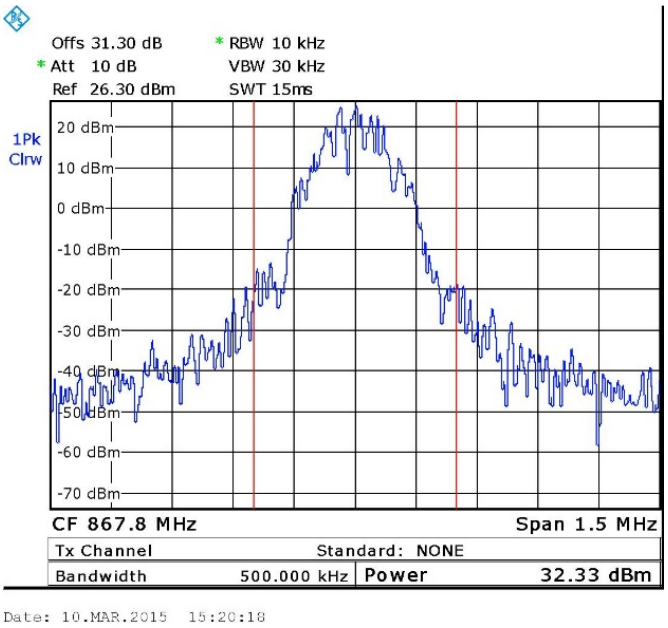


Figure 62. — 867.8 MHz – GSM

Peak Output Power (ESMR)

E.U.T Description	ONE- Optical Network Evolution Wireless Platform
Type	MRU (Mid Power Remote Unit)
Serial Number:	Not Designated

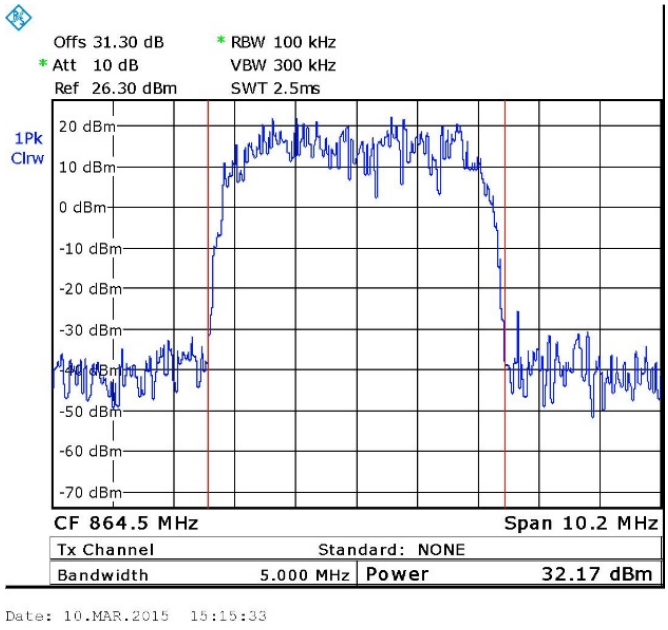


Figure 63.—864.5 MHz – WCDMA

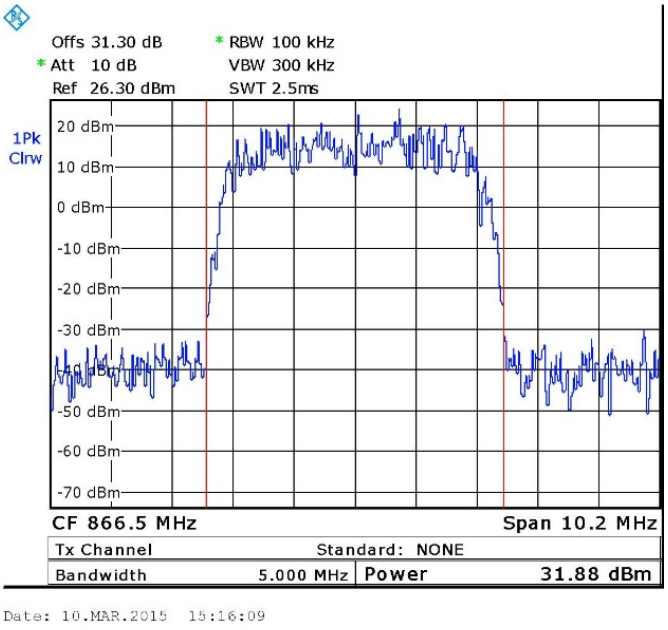


Figure 64. — 866.5 MHz – WCDMA

9.4 Test Equipment Used; Peak Power (ESMR)

Instrument	Manufacturer	Model	Serial Number	Calibration	
				Last Calibration	Period
Spectrum Analyzer	HP	8592L	3826A01204	March 4, 2015	1 year
Spectrum Analyzer	R&S	FSL6	100194	January 1, 2015	1 year
Signal Generator	Agilent	N5172B	MY48180244	July 16, 2014	1 year
30 dB Attenuator	JFW	50FHC-030-50	43608 46-140-1	March 8, 2015	1 month

Figure 65 Test Equipment Used Peak Output Power (ESMR)

10. Occupied Bandwidth (ESMR)

10.1 Test Specification

FCC Parts 2.1049; 90.2.09

10.2 Test Procedure

The E.U.T. was set to the applicable test frequency in the 862-869MHz band.

The E.U.T. antenna terminal was connected to the spectrum analyzer through an external attenuator (at the output test) and an appropriate coaxial cable

(loss=31.3 dB). The spectrum analyzer was set to proper resolution B.W.

OBW function (99%) was employed for these evaluation
Occupied bandwidth measured was repeated in the input terminal of the E.U.T.

10.3 Test Results

Modulation		Operating Frequency (MHz)	Reading (MHz)
LTE	Input	864.5	4.53
LTE	Output	864.5	4.52
LTE	Input	866.5	4.53
LTE	Output	866.5	4.52
W-CDMA	Input	864.5	4.19
W-CDMA	Output	864.5	4.17
W-CDMA	Input	866.5	4.17
W-CDMA	Output	866.5	4.17
GSM	Input	863.2	0.24
GSM	Output	863.2	0.24
GSM	Input	867.8	0.24
GSM	Output	867.8	0.24

Figure 66 Occupied Bandwidth Test Results Table

See additional information in *Figure 67* to *Figure 78*.

Occupied Bandwidth (ESMR)

E.U.T Description	ONE- Optical Network Evolution Wireless Platform
Type	MRU (Mid Power Remote Unit)
Serial Number:	Not Designated

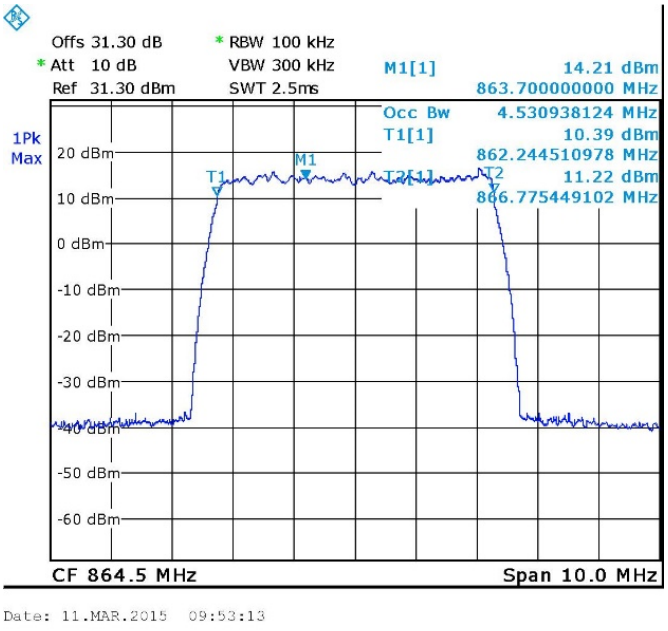


Figure 67. — 864.5MHz LTE 64QAM Input

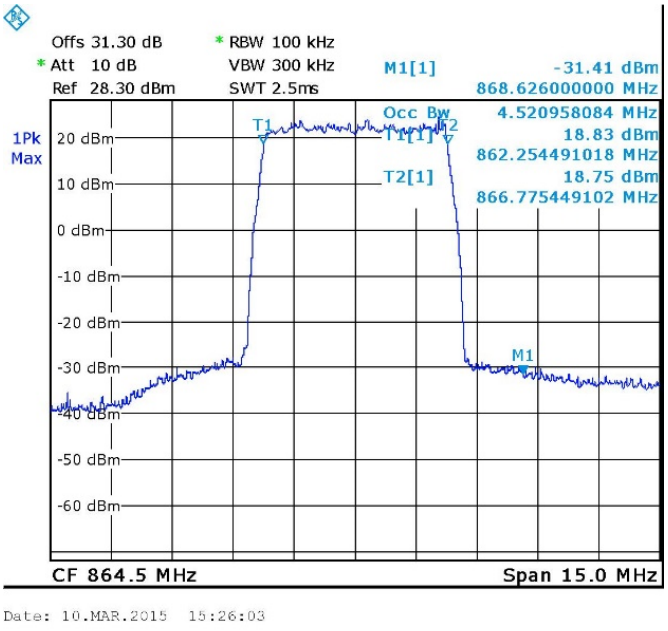
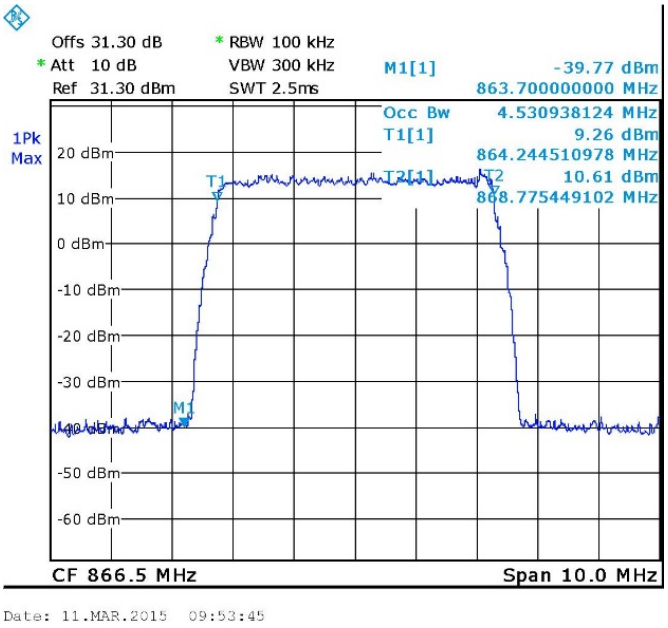


Figure 68. — 864.5MHz LTE 64QAM Output

Occupied Bandwidth (ESMR)

E.U.T Description	ONE- Optical Network Evolution Wireless Platform
Type	MRU (Mid Power Remote Unit)
Serial Number:	Not Designated



igure 69. — 866.5MHz LTE 64QAM Input

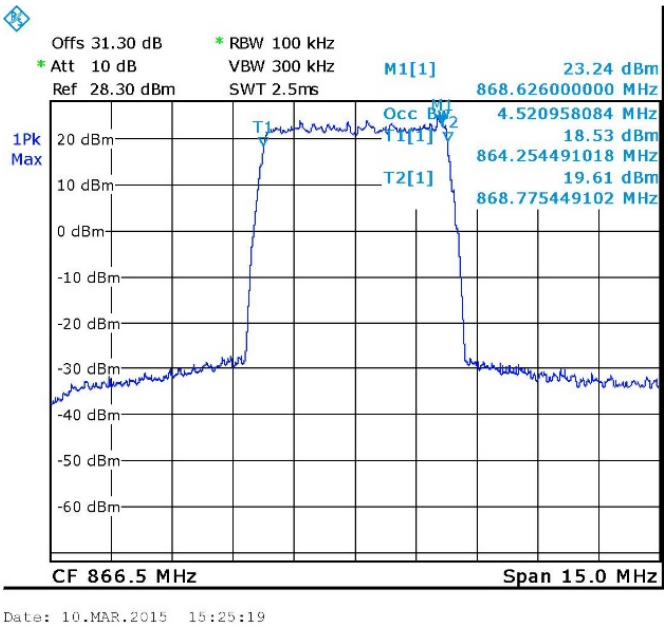


Figure 70. — 866.5MHz LTE 64QAM Output

Occupied Bandwidth (ESMR)

E.U.T Description	ONE- Optical Network Evolution Wireless Platform
Type	MRU (Mid Power Remote Unit)
Serial Number:	Not Designated

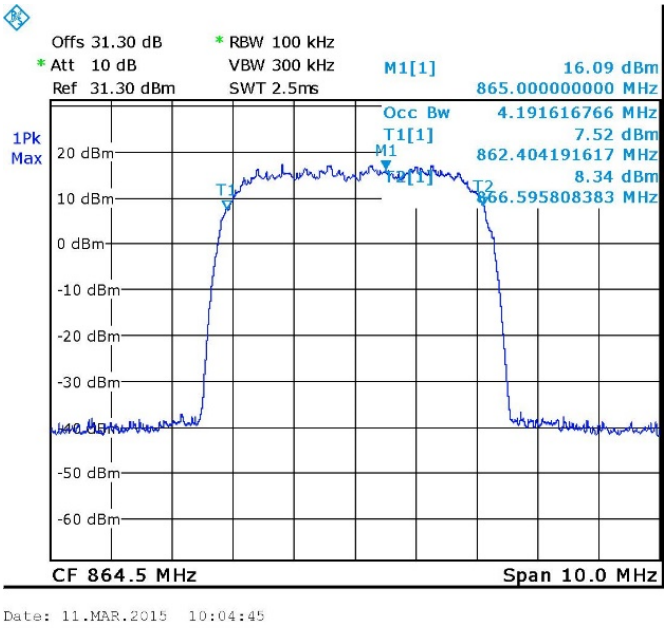


Figure 71. — 864.5MHz WCDMA Input

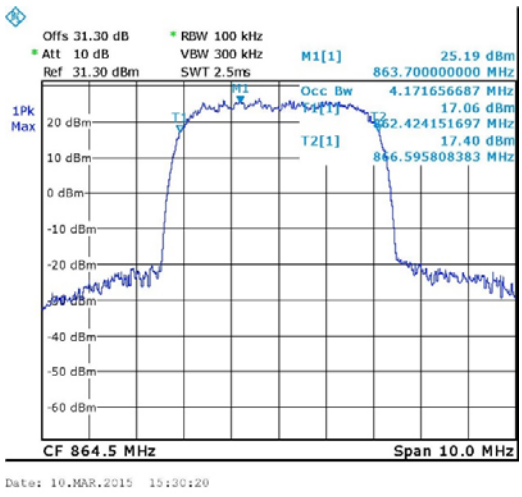


Figure 72. — 864.5MHz WCDMA Output

Occupied Bandwidth (ESMR)

E.U.T Description	ONE- Optical Network Evolution Wireless Platform
Type	MRU (Mid Power Remote Unit)
Serial Number:	Not Designated

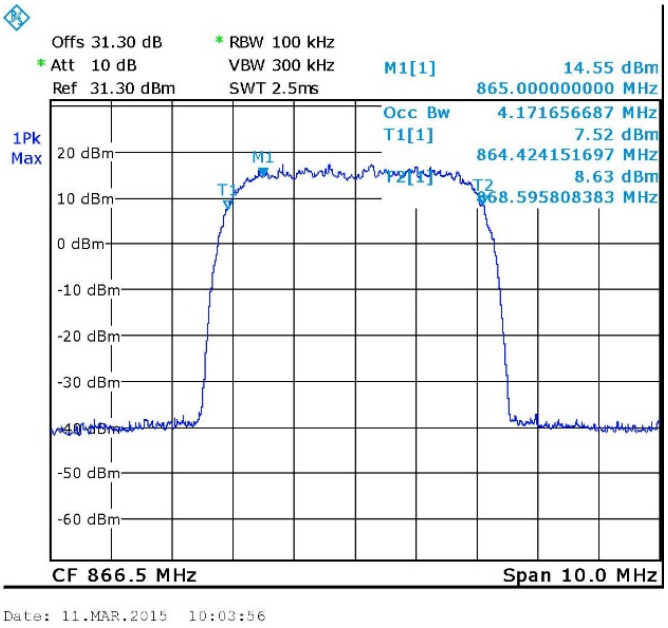


Figure 73. — 866.5MHz WCDMA Input

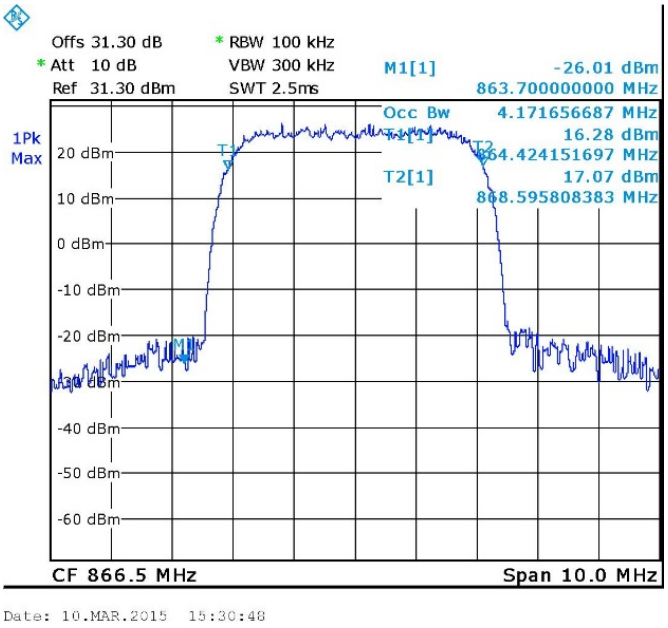


Figure 74. — 866.5MHz WCDMA Output

Occupied Bandwidth (ESMR)

E.U.T Description	ONE- Optical Network Evolution Wireless Platform
Type	MRU (Mid Power Remote Unit)
Serial Number:	Not Designated

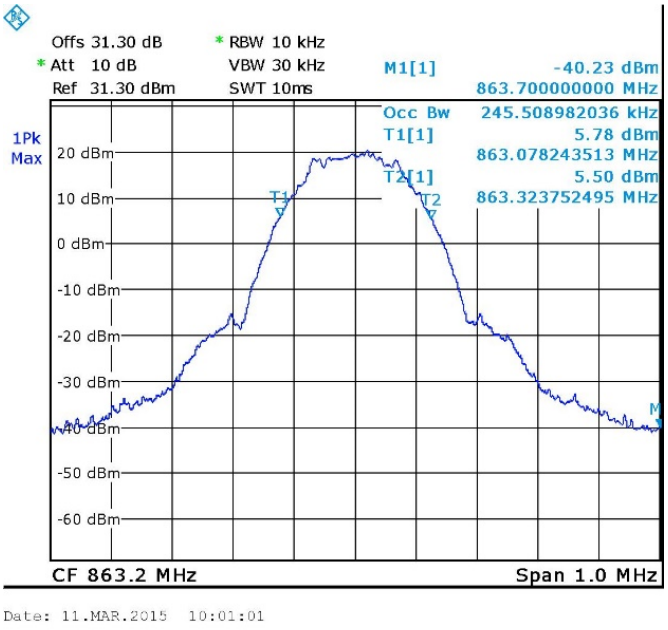


Figure 75. — 863.2MHz GSM Input

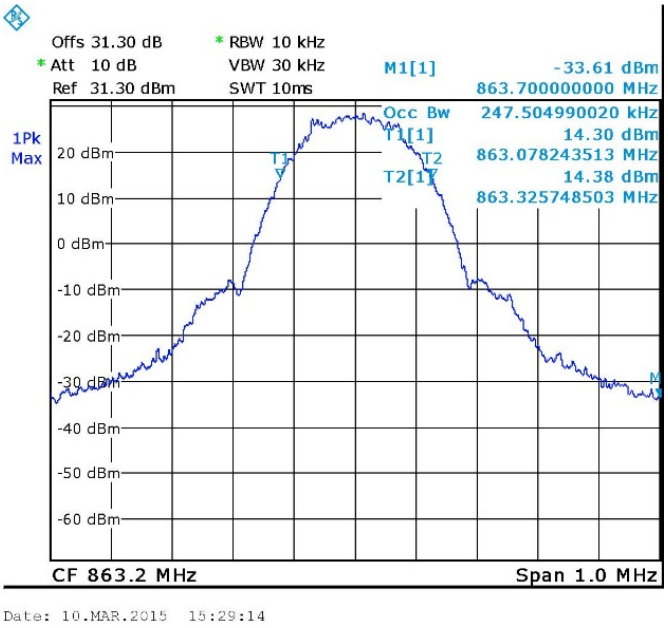


Figure 76. — 863.2MHz GSM Output

Occupied Bandwidth (ESMR)

E.U.T Description	ONE- Optical Network Evolution Wireless Platform
Type	MRU (Mid Power Remote Unit)
Serial Number:	Not Designated

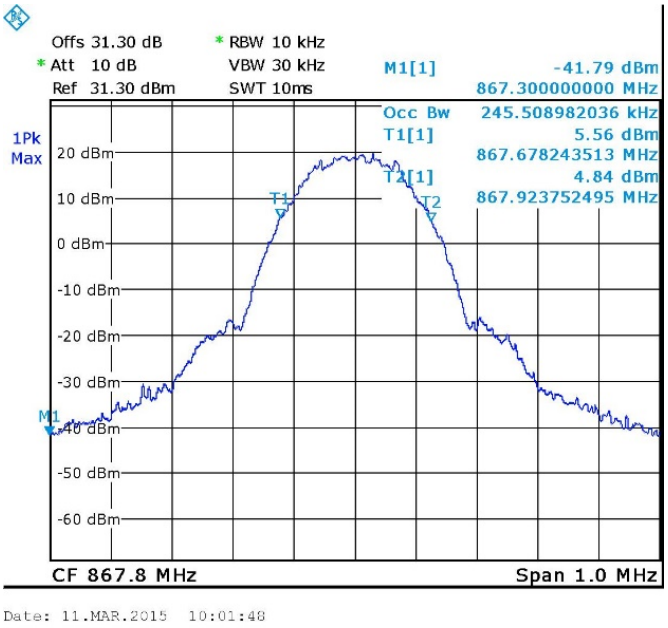


Figure 77. — 867.8MHz GSM Input

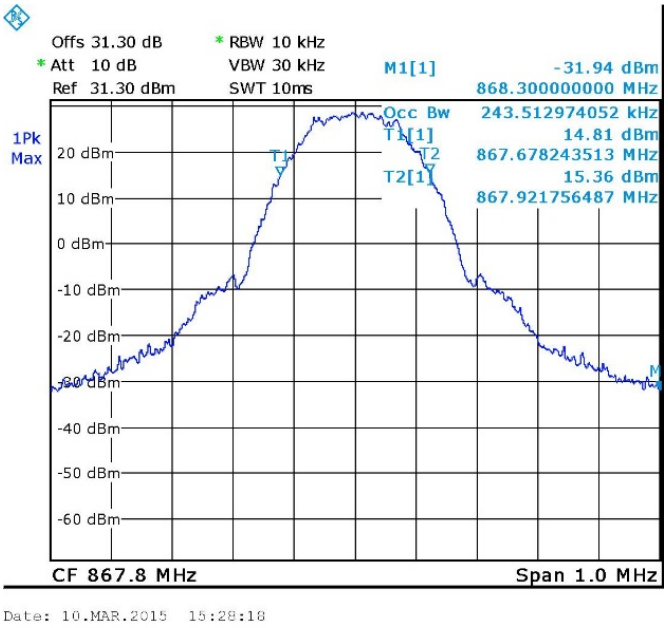


Figure 78. — 867.8MHz GSM Output

10.4 Test Equipment Used; Occupied Bandwidth (ESMR)

Instrument	Manufacturer	Model	Serial Number	Calibration	
				Last Calibration	Period
Spectrum Analyzer	HP	8592L	3826A01204	March 4, 2015	1 year
Spectrum Analyzer	R&S	FSL6	100194	January 1, 2015	1 year
Signal Generator	Agilent	N5172B	MY48180244	July 16, 2014	1 year
30 dB Attenuator	JFW	50FHC-030-50	43608 46-140-1	March 8, 2015	1 month

Figure 79 Test Equipment Used Occupied Bandwidth (ESMR)

11. Spurious Emissions at Antenna Terminals (ESMR)

11.1 Test Specification

FCC Part 90, Section 90.210

11.2 Test Procedure

The power of any emission outside of the authorized bandwidth must be attenuated below the transmitting power (P) by a factor of at least 43 + log (P) dB, yielding –13dBm. The resolution bandwidth was set to 1.0 kHz for the frequency range 9 kHz – 1 MHz, 100 kHz for the frequency range 1 MHz to 1 GHz, and 1 MHz in the frequency range 1.0 – 10.0 GHz.

The E.U.T. antenna terminal was connected to the spectrum analyzer through an external attenuator and an appropriate coaxial cable (Loss= 31.3 dB).

11.3 Test Results

See additional information in *Figure 80* to *Figure 85*.

JUDGEMENT: Passed

Spurious Emissions at Antenna Terminals (ESMR)

E.U.T Description	ONE- Optical Network Evolution Wireless Platform
Type	MRU (Mid Power Remote Unit)
Serial Number:	Not Designated

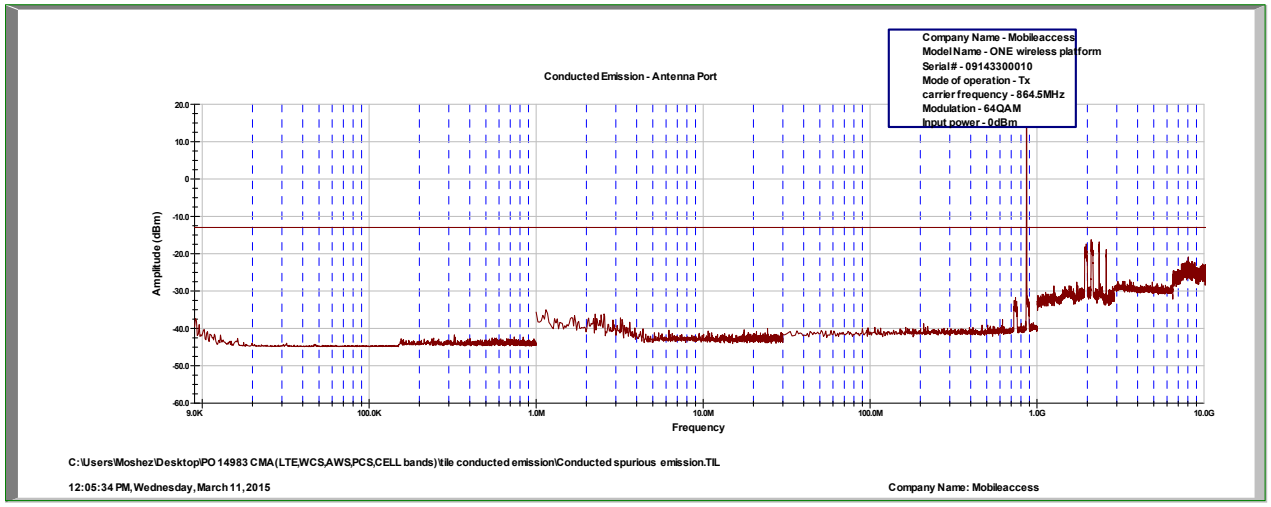


Figure 80. — 864.5 LTE 64QAM

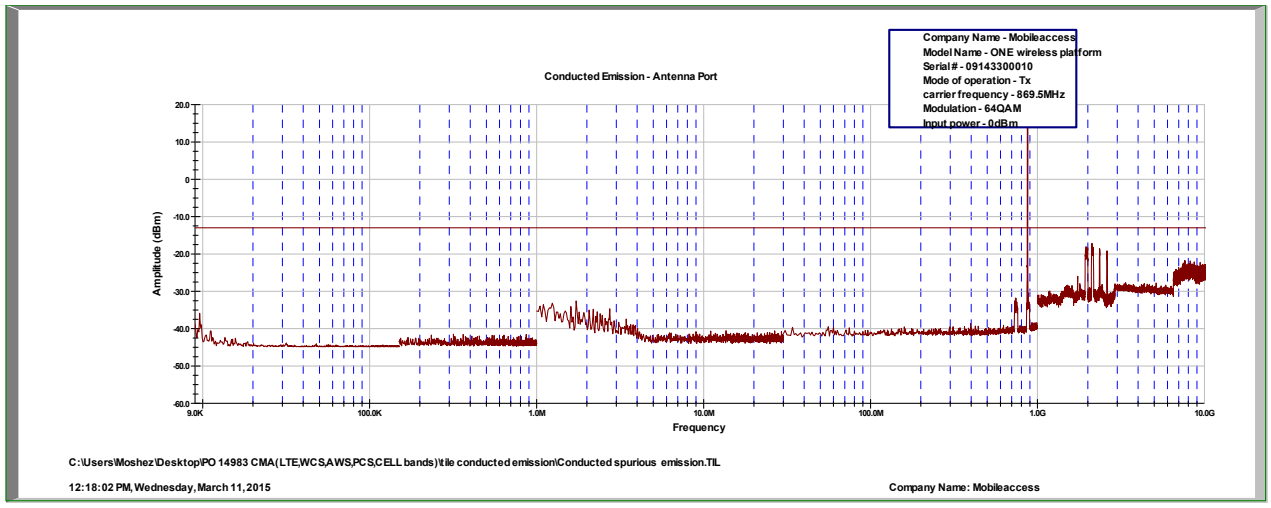


Figure 81. — 866.5 LTE 64QAM

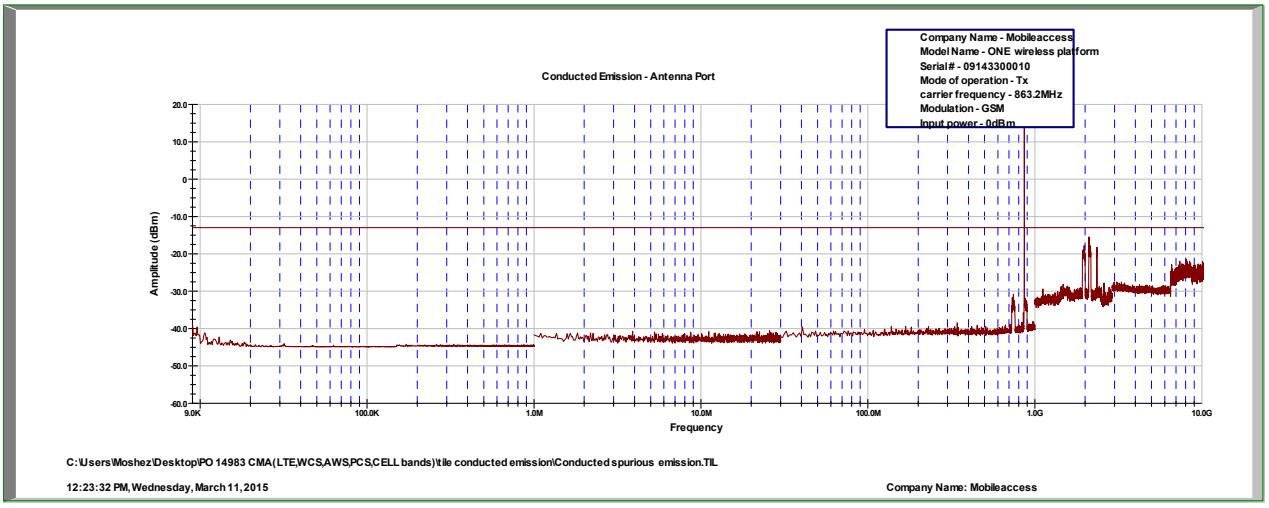


Figure 82. — 863.2 GSM

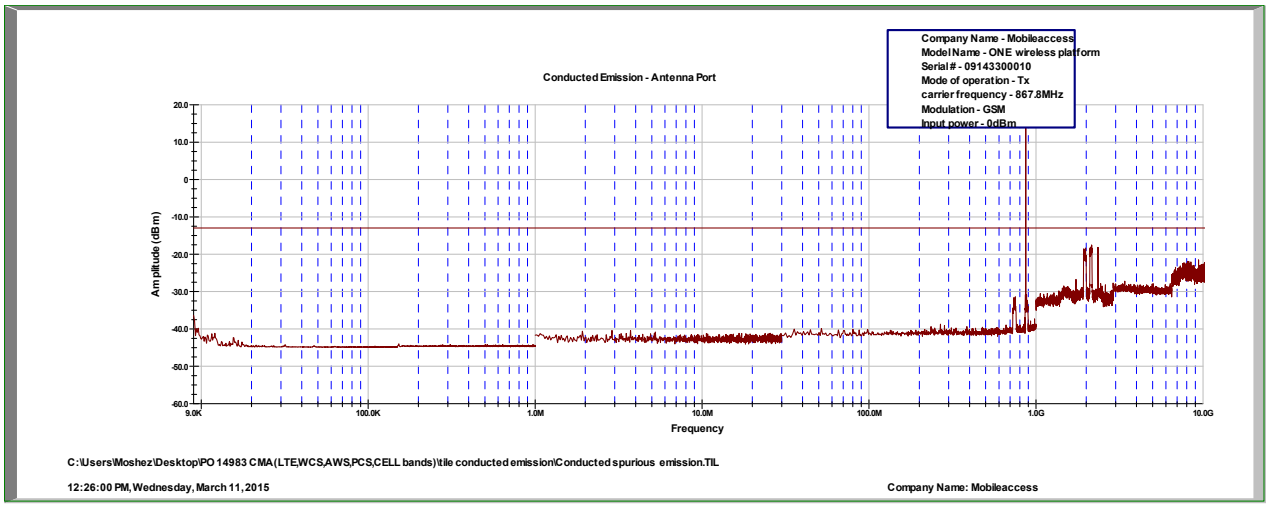


Figure 83. — 867.8 GSM

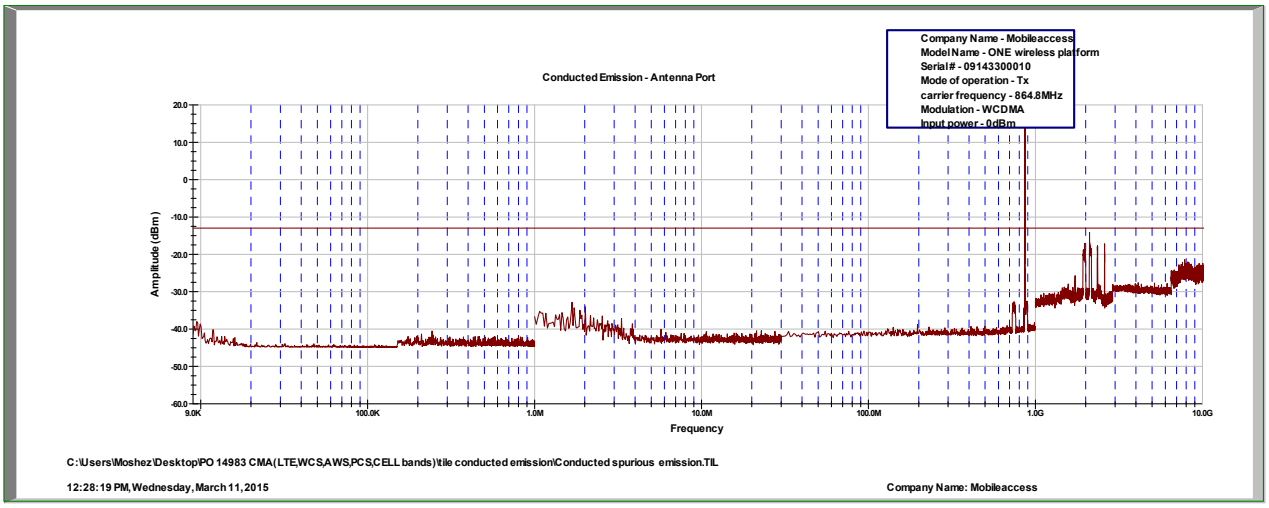


Figure 84. — 864.5 WCDMA

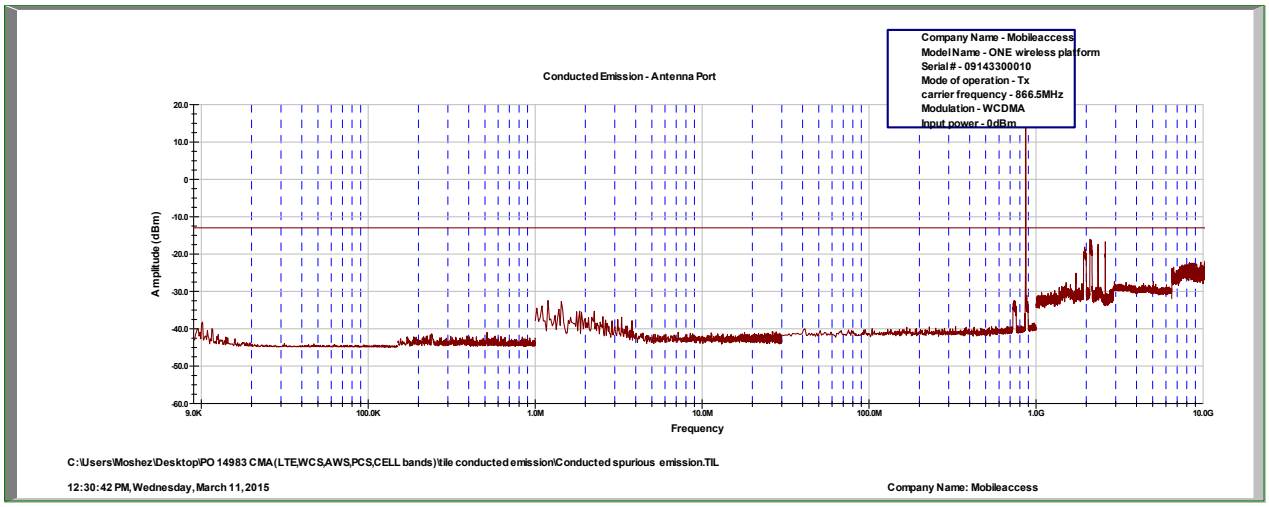


Figure 85. — 866.5 WCDMA

11.4 Test Equipment Used; Spurious Emissions at Antenna Terminals (ESMR)

Instrument	Manufacturer	Model	Serial Number	Calibration	
				Last Calibration	Period
Spectrum Analyzer	HP	8592L	3826A01204	March 4, 2015	1 year
Spectrum Analyzer	R&S	FSL6	100194	January 1, 2015	1 year
Signal Generator	Agilent	N5172B	MY48180244	July 16, 2014	1 year
30 dB Attenuator	JFW	50FHC-030-50	43608 46-140-1	March 8, 2015	1 month

Figure 86 Test Equipment Used

12. Band Edge Spectrum ESMR

12.1 Test Specification

FCC Part 2.1051

12.2 Test procedure

Enclosed are spectrum analyzer plots for the lowest operation frequency and the highest operation frequency in which the E.U.T. is planned to be used. 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 + log (P) dB, yielding –13dBm.
The E.U.T. antenna terminal was connected to the spectrum analyzer through an external attenuator and an appropriate coaxial cable (31.3 dB).

12.3 Test Results

Modulation	Operation Frequency (MHz)	Band Edge Frequency (MHz)	Reading (dBm)	Specification (dBm)	Margin (dB)
LTE 64QAM	864.5	862.0	-17.4	-13.0	-4.4
	866.5	869.0	-15.0	-13.0	-2.0
GSM	863.2	862.0	-29.0	-13.0	-16.0
	867.8	869.0	-28.6	-13.0	-15.6
W-CDMA	864.5	862.0	-20.3	-13.0	-7.3
	866.5	869.0	-17.5	-13.0	-4.5

Figure 87 Band Edge Spectrum Results ESMR

See additional information in *Figure 88* to *Figure 93*.

JUDGEMENT: Passed by 2.0 dB

ESMR:

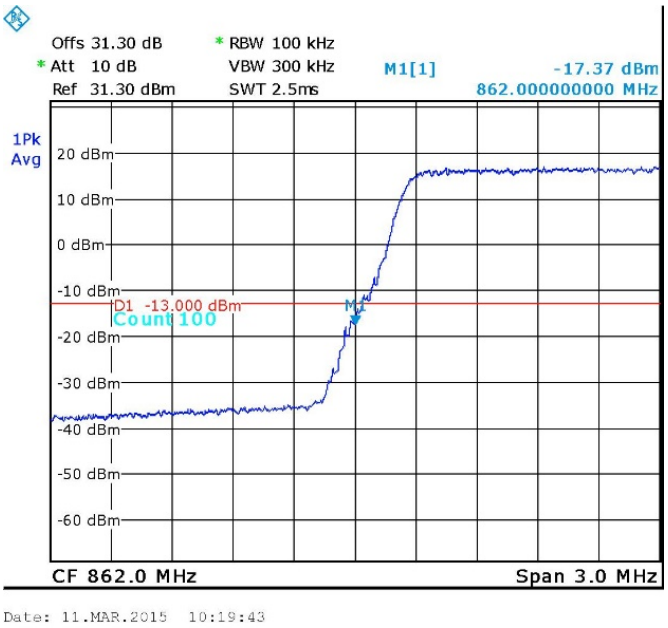


Figure 88. — LTE 64QAM 864.5MHz

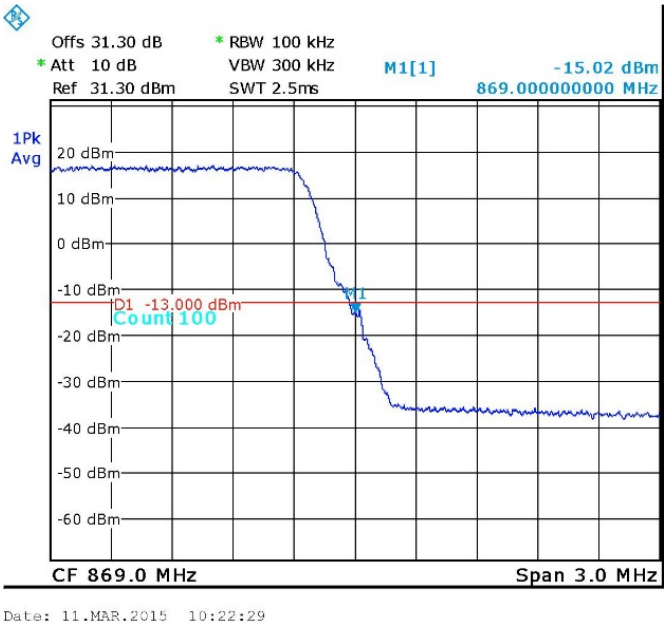


Figure 89. — LTE 64QAM 866.5 MHz

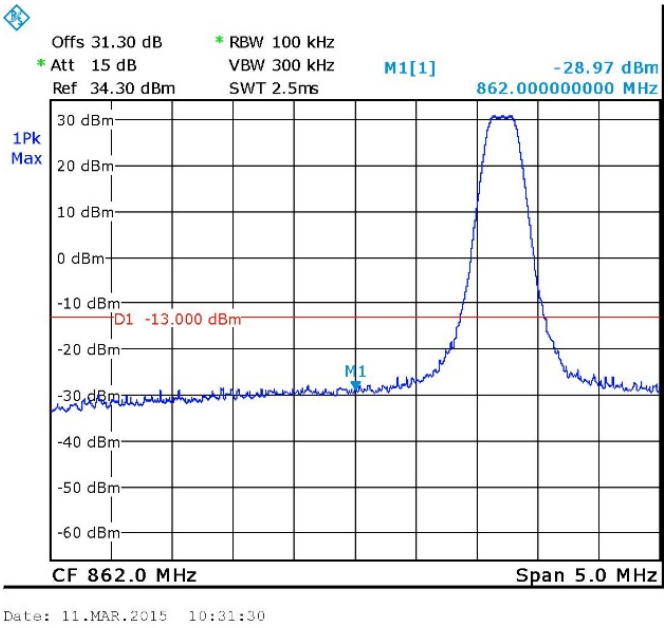


Figure 90. — GSM - 863.2MHz

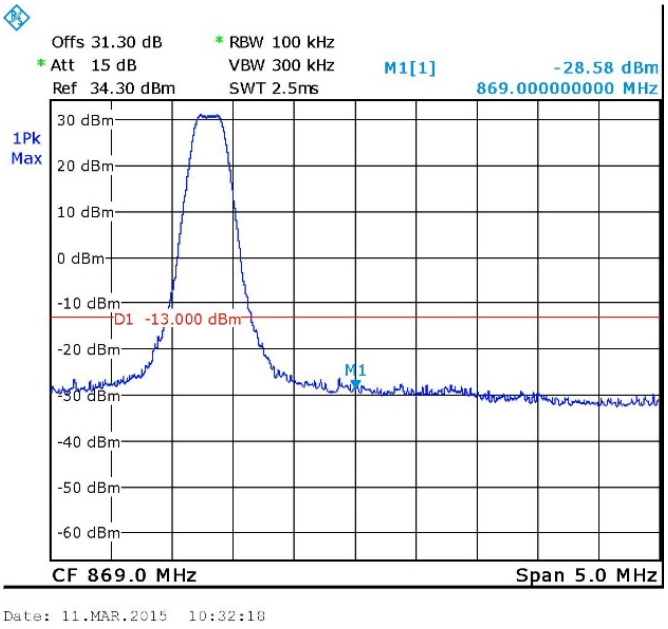


Figure 91. — GSM - 867.8 MHz

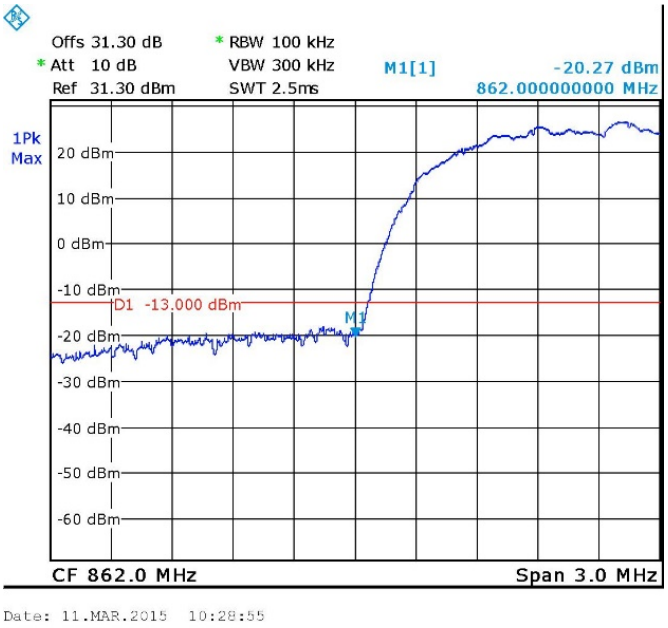


Figure 92. — W-CDMA - 864.5 MHz

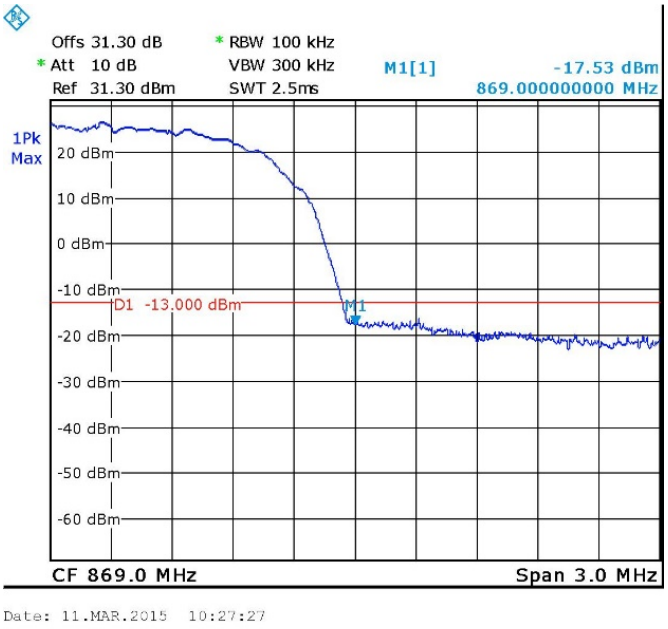


Figure 93. — W-CDMA - 866.5 MHz

12.4 Test Equipment Used; Band Edge Spectrum ESMR

Instrument	Manufacturer	Model	Serial Number	Calibration	
				Last Calibration	Period
Spectrum Analyzer	HP	8592L	3826A01204	March 4, 2015	1 year
Spectrum Analyzer	R&S	FSL6	100194	January 1, 2015	1 year
Signal Generator	Agilent	N5172B	MY48180244	July 16, 2014	1 year
30 dB Attenuator	JFW	50FHC-030-50	43608 46-140-1	March 8, 2015	1 month

Figure 94 Test Equipment Used

13. Spurious Emissions (Radiated) (ESMR)

13.1 Test Specification

FCC, Part 90, Section 90.210

13.2 Test Procedure

The power of any emission outside of the authorized bandwidth must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB, yielding –13dBm.

(a) The E.U.T. operation mode and test set-up are as described in Section 3. A preliminary measurement to characterize the E.U.T was performed inside the shielded room at a distance of 3 meters, using peak detection mode and broadband antennas. The preliminary measurements produced a list of the highest emissions. The E.U.T was then transferred to the open site, and placed on a remote-controlled turntable. The E.U.T was placed on a non-metallic table, 1.5 meters above the ground. The configuration tested is shown in Figure 3.5.
The frequency range 30 MHz-10 GHz was scanned, and the list of the highest emissions was verified and updated accordingly.
The readings were maximized by adjusting the antenna height between 1-4 meters, the turntable azimuth between 0-360°, and the antenna polarization.
The emissions were measured at a distance of 3 meters.

(b) The E.U.T. was replaced by a substitution antenna (dipole 30MHz-1GHz, Horn Antenna above 1GHz) driven by a signal generator. The height was readjusted for maximum reading. The signal generator level was adjusted to obtain the same reading on the EMI receiver as in step (a).
The signals observed in step (a) were converted to radiated power using:
P (dBm) = P_g(dBm) – Cable Loss (dB) + Substitution Antenna Gain (dBi)
P = Equivalent Isotropic Radiated Power.
P_g = Signal Generator Output Level.

13.3 Test Results

Channel (MHz)	Freq. (MHz)	Antenna Pol.	Maximum Peak Level (dBµV/m)	Signal Generator RF Output (dBm)	Cable Loss (dB)	Antenna Gain (dBi)	Effective Radiated Power Level (dBm)	Spec. (dBm)	Margin (dB)
863.2	1726.4	V	70.8	-28.5	6.7	7.6	-27.6	-13.0	-14.6
863.2	1726.4	H	70.1	-29.2	6.7	8.0	-27.9	-13.0	-14.9
867.8	1735.9	V	69.2	-30.1	6.7	7.6	-29.2	-13.0	-16.2
867.8	1735.9	H	70.3	-28.8	6.7	8.0	-27.5	-13.0	-14.5

Figure 95 Spurious Emission (Radiated) (ESMR) Test Results Table

JUDGEMENT: Passed by 14.5 dB

The E.U.T met the requirements of the FCC, Part 90, Section 90.210 specifications.

13.4 Test Equipment Used; Spurious Emissions (Radiated) (ESMR)

Instrument	Manufacturer	Model	Serial Number	Calibration	Period
EMI Receiver	R&S	ESIB7	100120	January 4, 2015	1 year
Spectrum Analyzer	HP	8592L	3826A01204	March 4, 2015	1 year
Active Loop Antenna	EMCO	6502	2950	November 4, 2014	1 year
Biconical Log Antenna	EMCO	3142B	1078	May 22, 2014	2 years
Horn Antenna	ETS	3115	6142	March 14, 2012	3 years*
Horn Antenna	ARA	SWH-28	1007	March 30, 2014	2 years
40dB attenuator	Weinschel Engineering	WA-39-40-33	A1323	March 1, 2015	1 year
Signal Generator	HP	E4433B	GB40051245	July 16, 2014	1 year
Signal Generator	MARCONI	2022D	119196015	February 23, 2015	1 year
Signal Generator	HP	E4433B	GB40050702	May 16, 2013	2 years
Signal Generator	HP	E4436B	US39260774	January 7, 2015	2 years
Signal Generator	HP	ESG-4000A	1782	February 24, 2015	1 year
Low Noise Amplifier	Sophia Wireless	LNA 28-B	232	August 29, 2014	1 year
Low Noise Amplifier	DBS MICROWAVE	LNA-DBS-0411N313	013	August 22, 2014	1 year
Antenna Mast	ETS	2070-2	-	N/A	N/A
Turntable	ETS	2087	-	N/A	N/A
Mast & Table Controller	ETS/EMCO	2090	9608-1456	N/A	N/A

*Note – Extended to May 19, 2015

Figure 96 Test Equipment Spurious Emissions (Radiated) (ESMR)

14. Intermodulation Conducted

14.1 Test Procedure

The E.U.T. antenna terminal was connected to the spectrum analyzer through an external attenuator and an appropriate coaxial cable (loss = 31.3dB). The spectrum analyzer was set to 1 kHz resolution BW for the frequency range 9.0-150.0 kHz, 10 kHz for the frequency range 150 kHz–1.0 MHz, 100 kHz for the frequency range 1.0 MHz – 30 MHz, and 1MHz for the frequency range 30 MHz - 24.0 GHz.

5 input signals were sent simultaneously to the E.U.T. as follows:

LTE 747 MHz CW 0 dBm

CELL 881 MHz CW 0 dBm

PCS 1960 MHz CW 0 dBm

AWS: 2135 MHz CW 0 dBm

WCS: 2355MHz CW 0 dBm

The frequency range of 9 kHz – 24.0 GHz was scanned for unwanted signals.

14.2 Test Results

See additional information in Figure 97.

JUDGEMENT: Passed

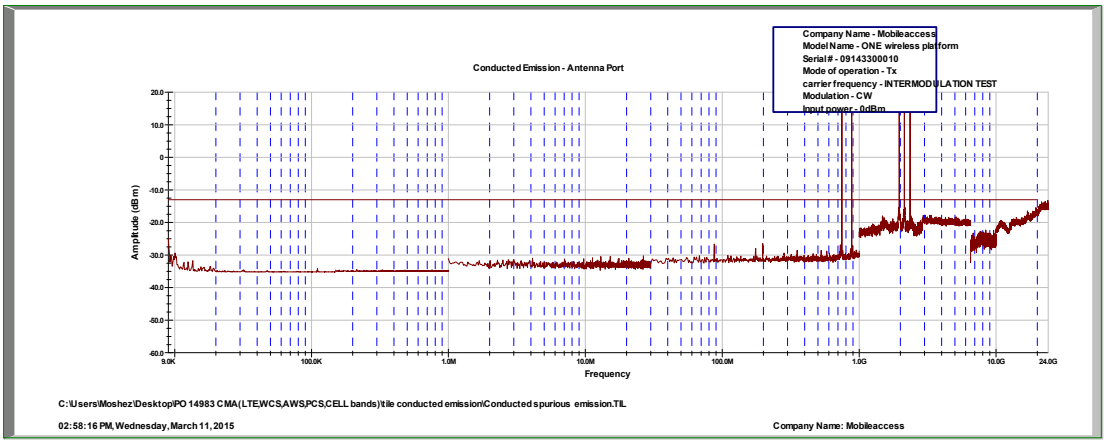


Figure 97 Intermodulation Conducted

14.3 Test Equipment Used; Intermodulation Conducted

Instrument	Manufacturer	Model	Serial Number	Calibration	
				Last Calibration	Period
Spectrum Analyzer	HP	8592L	3826A01204	March 4, 2015	1 year
Spectrum Analyzer	R&S	FSL6	100194	January 1, 2015	1 year
Vector Signal Generator	Agilent	N5182A	MY48180244	July 16, 2014	1 year
Vector Signal Generator	Agilent	N5172B	MY51350518	May 03, 2013	3 years
Vector Signal Generator	Agilent	N5172B	MY51350584	May 07, 2013	3 years
Signal Generator	HP	E4433B	GB40050702	May 16, 2013	2 years
Signal Generator	HP	E4436B	US39260774	January 07 2015	2 years
30 dB Attenuator	JFW	50FHC-030-50	43608 46-140-1	March 8, 2015	1 month

Figure 98 Test Equipment Used

15. Intermodulation Radiated

15.1 Test Procedure

The test method was based on ANSI/TIA-603-C: 2004, Section 2.2.12 Unwanted Emissions: Radiated Spurious.
The power of any emission outside of the authorized operating frequency ranges (728-758; 869-894; 1930-1990; 2110-2155 MHz 2350-2360MHz) must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB, yielding –13dBm.

(a) The E.U.T. operation mode and test set-up are as described in Section 2.
A preliminary measurement to characterize the E.U.T was performed inside the shielded room at a distance of 3 meters, using peak detection mode and broadband antennas. The preliminary measurements produced a list of the highest emissions. The E.U.T was then transferred to the open site, and placed on a remote-controlled turntable. The E.U.T was placed on a non-metallic table, 0.8 meters above the ground. The configuration tested is shown in Figure 1.

The E.U.T. was operated in Downlink mode at 4 different channels at center frequency of each band at the same time, transmitting at CW signal.

(b) The frequency range 9 kHz-24 GHz was scanned and the list of the highest emissions was verified and updated accordingly. The readings were maximized by adjusting the antenna height between 1-4 meters, the turntable azimuth between 0-360°, and the antenna polarization.
The emissions were measured at a distance of 3 meters.

In the frequency range 7-22.0 GHz, a spectrum analyzer including a low noise amplifier was used. During average measurements, the IF bandwidth was 1 MHz and the video bandwidth was 100 Hz. During peak measurements, the IF bandwidth was 1 MHz and the video bandwidth was 3 MHz.

(c) The E.U.T. was replaced by a substitution antenna (dipole 30MHz-1GHz, Horn Antenna above 1GHz) driven by a signal generator. The height was readjusted for maximum reading. The signal generator level was adjusted to obtain the same reading on the EMI receiver as in step (a).
The signals observed in step (a) were converted to radiated power using:
P_d(dBm) = P_g(dBm) – Cable Loss (dB) + Substitution Antenna Gain (dB)
P_d = Dipole equivalent power (result).
P_g = Signal generator output level.

5 input signals were sent simultaneously to the E.U.T. as follows:

LTE 747 MHz 0 dBm
CELL 881 MHz 0 dBm
PCS 1960 MHz 0 dBm
AWS: 2135 MHz 0 dBm
WCS: 2355 MHz CW 0 dBm

15.2 Test Results

JUDGEMENT: Passed

Freq. (MHz)	Antenna Pol.	Maximum Peak Level (dBµV/m)	Signal Generator RF Output (dBm)	Cable Loss (dB)	Antenna Gain (dBi)	Effective Radiated Power Level (dBm)	Spec. (dBm)	Margin (dB)
1565.0	V	68.0	-31.9	6.7	7.6	-30.9	-13.0	-17.9
1565.0	H	66.6	-30.7	6.7	8.0	-29.4	-13.0	-16.4
3039.0	V	75.7	-22.0	9.9	8.4	-23.6	-13.0	-10.6
3039.0	H	75.8	-22.8	9.9	9.6	-23.1	-13.0	-10.1
3434.0	V	75.0	-21.1	9.9	8.4	-22.7	-13.0	-9.7
3434.0	H	76.9	-20.8	9.9	9.6	-21.1	-13.0	-8.1
4118.0	V	79.9	-16.3	11.2	9.5	-18.0	-13.0	-5.0
4118.0	H	79.1	-16.6	11.2	8.6	-19.2	-13.0	-6.2
5303.0	V	81.5	-14.0	13.1	9.7	-17.4	-13.0	-4.4
5303.0	H	82.1	-12.8	13.1	10.4	-15.5	-13.0	-2.5
3523.0	V	74.9	-20.0	13.1	9.7	-23.4	-13.0	-10.4
3523.0	H	77.0	-16.8	13.1	10.4	-19.5	-13.0	-6.5
2249.0	V	69.8	-27.6	9.0	7.7	-28.9	-13.0	-15.9
2249.0	H	69.3	-28.4	9.0	8.5	-28.9	-13.0	-15.9
1915.0	V	70.6	-27.1	6.7	7.6	-26.2	-13.0	-13.2
1915.0	H	68.3	-28.6	6.7	8.0	-27.3	-13.0	14.3
5571.0	V	82.3	-11.7	13.5	9.9	-15.3	-13.0	-2.3
5571.0	H	82.5	-12.4	13.5	10.8	-15.0	-13.0	-2.0
3303.0	V	75.6	-20.1	9.9	8.4	-21.6	-13.0	-8.6
3303.0	H	75.9	-21.5	9.9	9.6	-21.7	-13.0	-8.7

Figure 99 Intermodulation Radiated Results

15.3 Test Instrumentation Used; Radiated Measurements Intermodulation

Instrument	Manufacturer	Model	Serial Number	Calibration	Period
EMI Receiver	R&S	ESIB7	100120	December 15, 2014	1 year
Spectrum Analyzer	HP	8592L	3826A01204	March 4, 2015	1 year
Active Loop Antenna	EMCO	6502	2950	November 4, 2014	1 year
Biconical Log Antenna	EMCO	3142B	1078	May 22, 2014	2 years
Horn Antenna	ETS	3115	6142	March 14, 2012	3 years*
Horn Antenna	A.R.A	SWH-28	1007	March 30, 2014	2 years
40dB attenuator	Weinschel Engineering	WA-39-40-33	A1323	March 1, 2015	1 year
Signal Generator	HP	E4433B	GB40051245	July 16, 2014	1 year
Signal Generator	MARCONI	2022D	119196015	February 23, 2015	1 year
Signal Generator	HP	E4433B	GB40050702	May 16, 2013	2 years
Signal Generator	HP	E4436B	US39260774	January 7, 2015	2 years
Signal Generator	HP	ESG-4000A	1782	February 24, 2015	1 year
Low Noise Amplifier	Sophia Wireless	LNA 28-B	232	August 29, 2014	1 year
Low Noise Amplifier	DBS MICROWAVE	LNA-DBS-0411N313	013	August 22, 2014	1 year
Antenna Mast	ETS	2070-2	-	N/A	N/A
Turntable	ETS	2087	-	N/A	N/A
Mast & Table Controller	ETS/EMCO	2090	9608-1456	N/A	N/A

*Note – Extended to May 19, 2015

Figure 100 Test Equipment Used

16. APPENDIX A - CORRECTION FACTORS

16.1 Correction factors for CABLE

from EMI receiver to test antenna at 3 meter range.

Frequency (MHz)	Cable Loss (dB)	Frequency (MHz)	Cable Loss (dB)
0.010	0.4	50.00	1.2
0.015	0.2	100.00	0.7
0.020	0.2	150.00	20.1
0.030	0.3	200.00	2.3
0.050	0.3	300.00	2.9
0.075	0.3	500.00	3.8
0.100	0.2	750.00	4.8
0.150	0.2	1000.00	5.4
0.200	0.3	1500.00	6.7
0.500	0.4	2000.00	9.0
1.00	0.4	2500.00	9.4
1.50	0.5	3000.00	9.9
2.00	0.5	3500.00	10.2
5.00	0.6	4000.00	11.2
10.00	0.8	4500.00	12.1
15.00	0.9	5000.00	13.1
20.00	0.8	5500.00	13.5
		6000.00	14.5

NOTES:

1. The cable type is SPUMA400 RF-11N(X2) and 39m long

2. The cable is manufactured by Huber + Suhner

16.2 Correction factors for Bilog ANTENNA

Model: 3142
Antenna serial number: 1250
3 meter range

FREQUENCY (MHz)	AFE (dB/m)	FREQUENCY (MHz)	AFE (dB/m)
30	18.4	1100	25
40	13.7	1200	24.9
50	9.9	1300	26
60	8.1	1400	26.1
70	7.4	1500	27.1
80	7.2	1600	27.2
90	7.5	1700	28.3
100	8.5	1800	28.1
120	7.8	1900	28.5
140	8.5	2000	28.9
160	10.8		
180	10.4		
200	10.5		
250	12.7		
300	14.3		
400	17		
500	18.6		
600	19.6		
700	21.1		
800	21.4		
900	23.5		
1000	24.3		

16.3 Correction factors for Horn ANTENNA

Model: 3115
Antenna serial number: 6142
3 meter range

FREQUENCY (MHz)	Antenna Factor (dB/m)	FREQUENCY (MHz)	Antenna Factor (dB/m)
1000	23.9	10500	38.4
1500	25.4	11000	38.5
2000	27.3	11500	39.4
2500	28.5	12000	39.2
3000	30.4	12500	39.4
3500	31.6	13000	40.7
4000	33	14000	42.1
4500	32.7	15000	40.1
5000	34.1	16000	38.2
5500	34.5	17000	41.7
6000	34.9	17500	45.7
6500	35.1	18000	47.7
7000	35.9		
7500	37.5		
8000	37.6		
8500	38.3		
9000	38.5		
9500	38.1		
10000	38.6		

16.4 Correction factors for Horn ANTENNA

Model: SWH-28
Antenna serial number: 1007
1 meter range

FREQUENCY	Antenna Factor
(MHz)	(dB/m)
18000	33.0
18500	32.9
19000	33.1
19500	33.3
20000	33.6
20500	33.6
21000	33.4
21500	33.8
22000	33.7
22500	33.9
23000	34.8
23500	34.5
24000	34.2
24500	34.8
25000	34.4
25500	35.2
26000	35.9
26500	36.0

16.5 Correction factors for ACTIVE LOOP ANTENNA

Model 6502
S/N 9506-2950

FREQUENCY	Magnetic Antenna Factor	Electric Antenna Factor
(MHz)	(dB)	(dB)
.009	-35.1	16.4
.010	-35.7	15.8
.020	-38.5	13.0
.050	-39.6	11.9
.075	-39.8	11.8
.100	-40.0	11.6
.150	-40.0	11.5
.250	-40.0	11.6
.500	-40.0	11.5
.750	-40.1	11.5
1.000	-39.9	11.7
2.000	-39.5	12.0
3.000	-39.4	12.1
4.000	-39.7	11.9
5.000	-39.7	11.8
10.000	40.2	11.3
15.000	-40.7	10.8
20.000	-40.5	11.0
25.000	-41.3	10.2
30.000	42.3	9.2