

# TEST REPORT

EUT Description	Laptop
Brand Name	HP
Model Name	HSN-I32C
FCC/IC ID	FCC ID: B94HNI32CPD; IC ID: 21374-L850GL
Date of Test Start/End	2021-03-29 / 2021-03-30
Features	WWAN (LTE, UMTS) (see section 5)

Applicant	HP Inc.
Address	1501 Page Mill Road, Palo Alto CA 94304 USA
Contact Person	Sam Lin
Telephone/Fax/ Email	(TEL) +886 2 37896331/ (Email) <a href="mailto:sam.lin2@hp.com">sam.lin2@hp.com</a>

Reference Standards	FCC CFR Title 47 Part 2, 22, 24, 27, 90 RSS-Gen issue 5 A1, RSS 130 issue 2, RSS 132 issue 3, RSS 133 issue 6 A1, RSS 139 issue 3, RSS-195 issue 2, RSS 199 issue 3 (see section 1)
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Test Report identification	210222-02.TR04
Revision Control	Rev. 00 This test report revision replaces any previous test report revision (see section 8)

The test results relate only to the samples tested.

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Reference to accreditation shall be used only by full reproduction of test report.

Issued by

Reviewed by

Khodor RIDA  
(RF Test Engineer Lead)

Ines KHARRAT  
(Technical Manager)

Intel Corporation S.A.S  
425 rue de Goa – Le Cargo B6 - 06600, Antibes, France  
Tel. +33493001400 / Fax +33493001401

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## 1. Standards, reference documents and applicable test methods

FCC	<ol style="list-style-type: none"> <li>1. FCC Title 47 CFR part 2 - Subpart J - Equipment Authorization Procedures. 2019-10-01 Edition</li> <li>2. FCC Title 47 CFR part 22 - Subpart H - Cellular Radiotelephone Service. 2019-10-01 Edition</li> <li>3. FCC Title 47 CFR part 24 – Subpart E - Broadband PCS. 2019-10-01 Edition</li> <li>4. FCC Title 47 CFR part 27 – Subpart C - Technical Standards. 2019-10-01 Edition</li> <li>5. FCC Title 47 CFR part 27 – Subpart L - 1695-1710, 1710-1755 MHz, 1755-1780 MHz, 2110-2155 MHz, 2155-2180 MHz, 2180-2200 MHz Bands. 2019-10-01 Edition</li> <li>6. FCC Title 47 CFR Part 90 - Subpart R - Regulations governing the licensing and use of frequencies in the 763-775 and 793-805 MHz bands. 2019-10-01 Edition</li> <li>7. FCC Title 47 CFR Part 90 - Subpart S - Regulations governing licensing and use of frequencies in the 806-824, 851-869, 896-901, and 935-940 MHz bands. 2019-10-01 Edition</li> <li>8. FCC OET KDB 971168 D01 v03r01 Measurement guidance for certification of licensed digital transmitters.</li> <li>9. C63.26-2015 - IEEE/ANSI Standard for Compliance Testing of Transmitters Used in Licensed Radio Services</li> </ol>
ISED	<ol style="list-style-type: none"> <li>1. ISED RSS-Gen issue 5 A1 - General Requirements for Compliance of Radio Apparatus.</li> <li>2. ISED RSS-130 issue 2 - Equipment Operating in the Frequency Bands 617-652 MHz, 663-698 MHz, 698-756 MHz and 777-787 MHz</li> <li>3. ISED RSS 132 issue 3 - Cellular Telephone Systems Operating in the Bands 824-849 MHz and 869-894 MHz</li> <li>4. ISED RSS 133 issue 6 A1 - 2 GHz Personal Communications Services.</li> <li>5. ISED SRSP-510 — Technical Requirements for Personal Communications Services (PCS) in the Bands 1850-1915 MHz and 1930-1995 MHz</li> <li>6. ISED RSS 139 issue 3 - Advanced Wireless Services (AWS) Equipment Operating in the Bands 1710-1780 MHz and 2110-2180 MHz</li> <li>7. ISED RSS-195 issue 2 - Wireless Communication Service (WCS) Equipment Operating in the Bands 2305-2320 MHz and 2345-2360 MHz</li> <li>8. ISED RSS-199 issue 3 - Broadband Radio Services (BRS) Equipment Operating in the Bands 2500-2690 MHz</li> <li>9. FCC OET KDB 971168 D01 v03r01 Measurement guidance for certification of licensed digital transmitters.</li> <li>10. C63.26-2015 - IEEE/ANSI Standard for Compliance Testing of Transmitters Used in Licensed Radio Services</li> </ol>

## 2. General conditions, competences and guarantees

- ✓ Tests performed under FCC standards identified in section 1 are covered by A2LA accreditation.
- ✓ Tests performed under ISED standards identified in section 1 are covered by Cofrac accreditation.
- ✓ Intel Corporation SAS Wireless RF Lab (Intel WRF Lab) is an ISO/IEC 17025:2017 laboratory accredited by the American Association for Laboratory Accreditation (A2LA) with the certificate number 3478.01.
- ✓ Intel Corporation SAS Wireless RF Lab (Intel WRF Lab) is an Accredited Test Firm recognized by the FCC, with Designation Number FR0011.
- ✓ Intel Corporation SAS Wireless RF Lab (Intel WRF Lab) is an ISO/IEC 17025:2017 testing laboratory accredited by the French Committee for Accreditation (Cofrac) with the certificate number 1-6736.
- ✓ Intel Corporation SAS Wireless RF Lab (Intel WRF Lab) is a Registered Test Site listed by ISED, with ISED #1000Y.
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### 3. Environmental Conditions

- ✓ At the site where the measurements were performed the following limits were not exceeded during the tests:

Temperature	$23.5^{\circ}\text{C} \pm 1^{\circ}\text{C}$
Humidity	$46\% \pm 10\%$

## 4. Test samples

Sample	Control #	Description	Model	Serial #	Date of receipt	Note
#01	210222-02.S02	Laptop	HSN-I32C	00007609JR	22/03/2021	N/A

## 5. EUT Features

The herein information is provided by the customer

Brand Name	HP							
Model Name								
Prototype / Production	Production							
Supported Radios	Mode	Bands	Supported Tx Mode					
			WCDMA	HSDPA	HSUPA	DC-HSDPA		
	WCDMA / HSPA+	FDD II (1850.0 – 1910.0 MHz)	✓	✓	✓	✓		
		FDD IV (1710.0 – 1755.0 MHz)	✓	✓	✓	✓		
		FDD V (824.0 – 849.0 MHz)	✓	✓	✓	✓		
		FDD VIII (880.0 – 915.0 MHz)	✓	✓	✓	✓		
	Mode	Bands	Supported Channel Bandwidth (MHz)					
			1.4	3	5	10	15	20
	LTE FDD	Band 2 (1850.0 – 1910.0 MHz)	✓	✓	✓	✓	✓	✓
		Band 4 (1710.0 – 1755.0 MHz)	✓	✓	✓	✓	✓	✓
		Band 5 (824.0 – 849.0 MHz)	✓	✓	✓	✓		
		Band 7 (2500.0 – 2570.0 MHz)			✓	✓	✓	✓
		Band 12 (699.0 – 716.0 MHz)	✓	✓	✓	✓		
		Band 13 (777.0 – 787.0 MHz)			✓	✓		
		Band 14 (788.0 – 798.0 MHz)						
		Band 17 (704.0 – 716.0 MHz)			✓	✓		
		Band 18 (815.0 – 830.0 MHz)			✓	✓	✓	
		Band 19 (830.0 – 845.0 MHz)			✓	✓	✓	
		Band 20 (832.0– 862.0 MHz)			✓	✓	✓	✓
		Band 25 (1850.0 – 1915.0 MHz)			✓	✓	✓	✓
		Band 26 (814.0 – 849.0 MHz)	✓	✓	✓	✓	✓	
		Band 28 (703.0 – 748.0 MHz)		✓	✓	✓	✓	✓
		Band 30 (2305.0 – 2315.0 MHz)			✓	✓		
		Band 66 (1710.0 – 1780.0 MHz)	✓	✓	✓	✓	✓	✓
	LTE TDD	Band 38 (2570.0 – 2620.0 MHz)			✓	✓	✓	✓
		Band 40 (2300.0 – 2400.0 MHz)			✓	✓	✓	✓
		Band 41 (2496.0 – 2690.0 MHz)			✓	✓	✓	✓

## 6. Remarks and comments

- No deviations were made from the test methods listed in section 1 of this report
- The smallest bandwidth and 1 RB offset 0 were selected in order to guarantee the worst case in terms of power density.

## 7. Test Verdicts summary

The statement of conformity to applicable standards in the table below are based on the measured values, without taking into account the measurement uncertainties.

Band	FCC part	RSS part	Test name	Verdict
WCDMA II	24.238, 2.1053	133-ch 6.5.1	Tx Radiated spurious emission	P
WCDMA IV	27.53 (h), 2.1053	139-ch.6.5	Tx Radiated spurious emission	P
WCDMA V	22.917, 2.1053	132-ch.5.5	Tx Radiated spurious emission	P
LTE 2	24.238, 2.1053	133-ch 6.5.1	Tx Radiated spurious emission	P
LTE 5	22.917, 2.1053	132-ch.5.5	Tx Radiated spurious emission	P
LTE 13	27.53 (g)(f), 2.1053	130-ch.4.7	Tx Radiated spurious emission	P
LTE 26	90.691, 22.917, 2.1053	132-ch.5.5	Tx Radiated spurious emission	P
LTE 30	27.53 (a)(4), 2.1053	195- ch.5.6.2	Tx Radiated spurious emission	P
LTE 41	27.53 (m), 2.1053	199-ch.4.5	Tx Radiated spurious emission	P

P: Pass  
F: Fail  
NM: Not Measured  
NA: Not Applicable

## 8. Document Revision History

Revision #	Modified by	Revision Details
Rev. 00	A.Lounes	First Issue

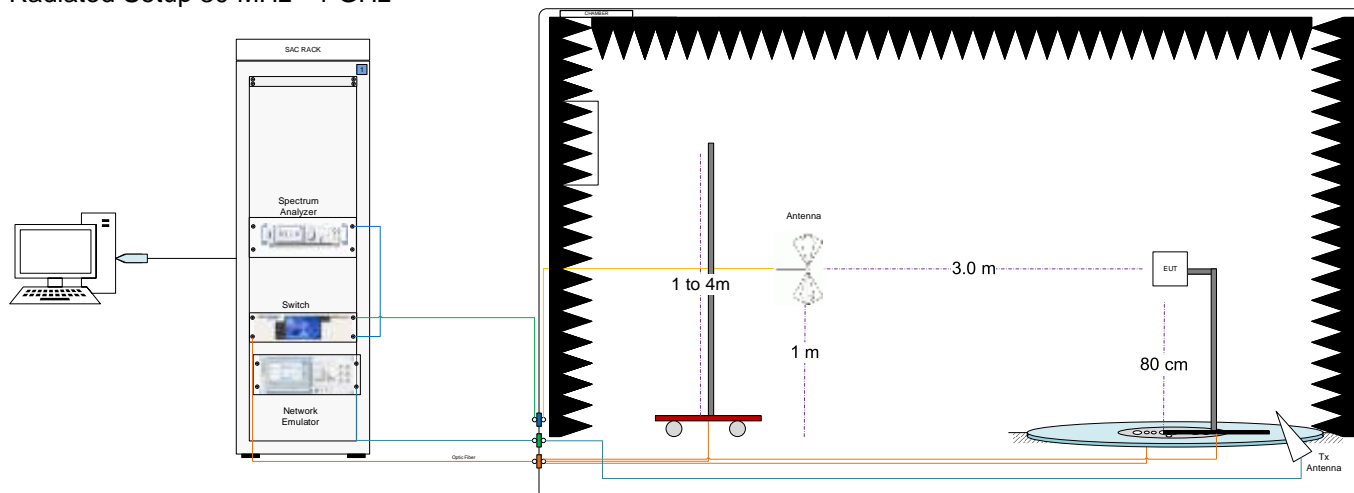
# Annex A. Test & System Description

## A.1 Measurement System

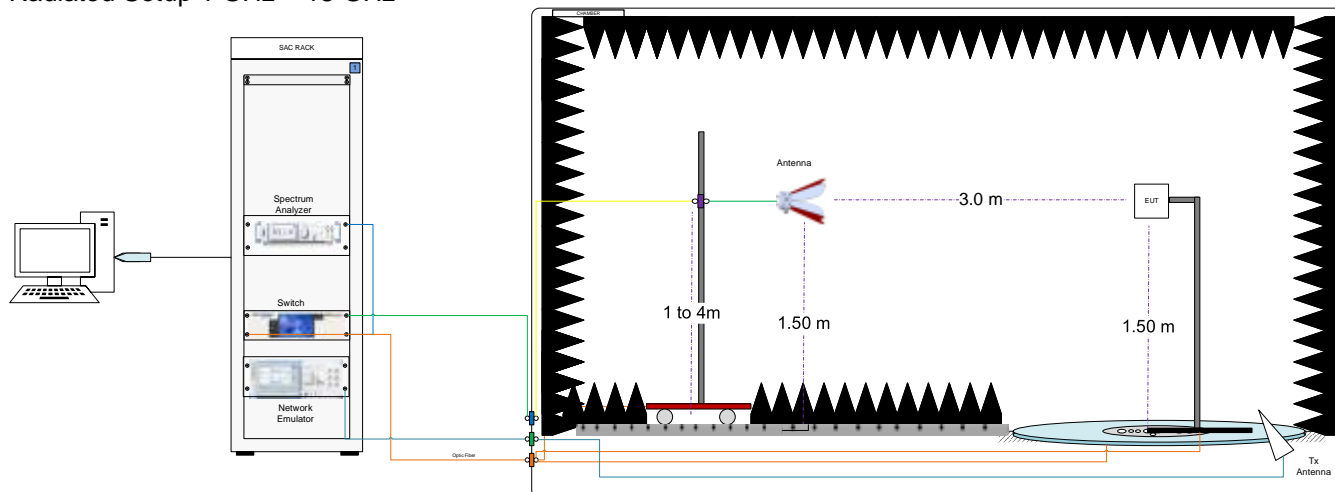
Measurements were performed using the following setups. A communication tester was used to establish a communication link with the EUT, and the communication tester parameters were set to get the maximum output power from the EUT.

### Radiated test setup

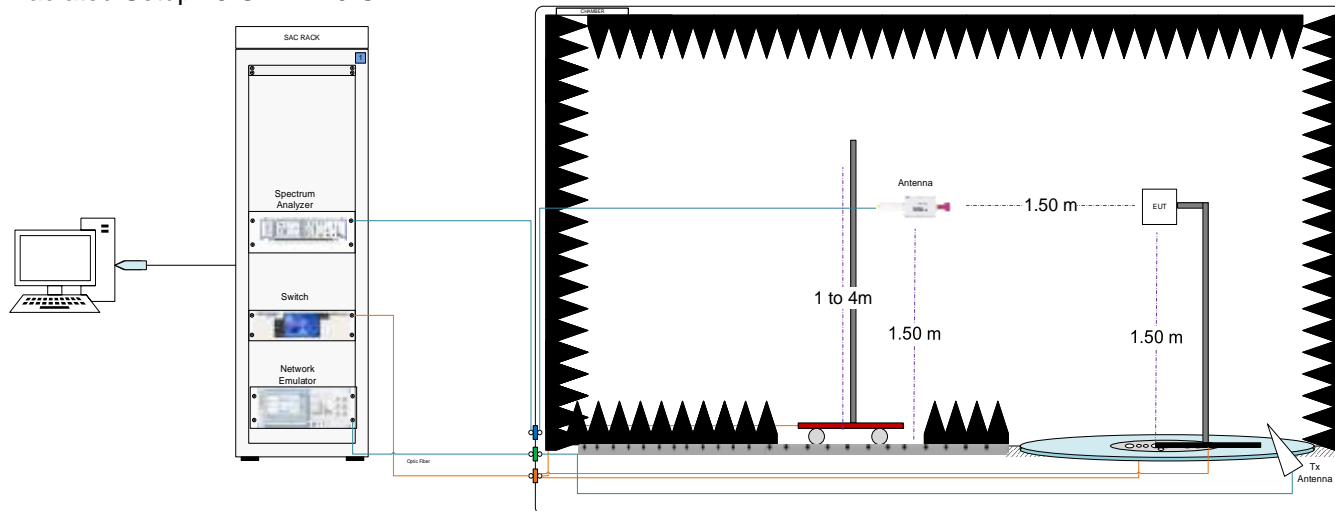
#### Radiated Setup 30 MHz - 1 GHz



#### Radiated Setup 1 GHz – 18 GHz



#### Radiated Setup 18 GHz – 40 GHz



Sample Calculation

The spurious received power P at the spectrum Analyzer is converted to EIRP the equivalent isotropically radiated power, in dBm using the transducer factor F corresponding to the Rx path Loss:

$$F \text{ (dB)} = \text{Free Space Attenuation (dB)} + \text{Cable losses (dB)} - \text{Amplifiers Gain (dB)} - \text{Rx Antenna Gain (dBi)}$$
$$\text{EIRP (dBm)} = P(\text{dBm}) + F \text{ (dB)}$$



## A.2 Test Equipment List

### A.2.1 Radiated Setup

ID#	Device	Type/Model	Serial #	Manufacturer	Cal. Date	Cal. Due Date
1076	Spectrum analyzer	FSW43	101847	Rohde & Schwarz	2020-11-02	2022-11-02
0993	BiConical antenna 30 MHz – 1 GHz	UBAA9115+BBVU9135+D GA9552N	0286+CH 9044	Schwarzbeck	2019-11-22	2021-11-22
0141	Double Ridged Horn Antenna 1 GHz – 18 GHz	3117	00157736	ETS Lindgren	2020-04-01	2022-04-01
0325	Double Ridged Horn Antenna 1 GHz – 18 GHz	3117	00157734	ETS Lindgren	2019-08-12	2021-08-12
0139	Horn Antenna 3116+ Amplifier 18GHz – 26.5GHz	3116	00167100	ETS Lindgren	2020-03-19	2022-03-19
0140	Horn Antenna + Amplifier 26.5GHz – 40GHz	120722	00169638	ETS Lindgren	2020-04-06	2022-04-06
0135	Anechoic chamber	FACT 3	5720	ETS Lindgren	2020-07-06	2022-01-07
0530	Measurement Software	EMC32 V10.40.10	100401	Rohde & Schwarz	N/A	N/A
0996	Communication tester	CMW500	163104	Rohde & Schwarz	N/A	N/A
0797	Temperature & Humidity logger	RA12E-TH1-RAS	RA12-D0EB1A	AVTECH	2019-07-04	2021-07-04
0147	Switch & Positioning	EMC center	00159757	ETS Lindgren	N/A	N/A
1033	Antenna tower	BAM 4.0-P	P/278/2890.01	Maturo	N/A	N/A
0136	Turntable	-		ETS Lindgren	N/A	N/A
0859	RF Cable 2.5m	0500990992500KE	19.23.395	Radiall	2021-02-24	2021-08-24
0809	RF Cable 7.0m	R286304009	-	Radiall	2021-02-15	2021-08-15
1098	RF Cable 1.5m	CBL-1.5M-SMSM+	202879	Mini-Circuit	2021-02-25	2021-08-25
1099	RF Cable 7.0m	0501051057000GX	19.35.850	Radiall	2021-02-24	2021-08-24
0371	RF Cable 1.0m	UFB311A-0-0590-50U50U	MFR 64639 223230-001	MICRO-COAX	2021-02-24	2021-08-24
0263	RF Cable 1.0m	UFA147A	-	Utilflex	2021-02-19	2021-08-19
0206	RF Cable 1.0m	UFA147A-0-0480-200200	MFR 64639223720-003	Micro-Coax	2021-02-15	2021-08-15

## A.3 Measurement Uncertainty Evaluation

The system uncertainty evaluation is shown in the table below with a coverage factor of  $k = 2$  to indicate a 95% level of confidence:

Measurement type	Uncertainty	Unit
Tx Radiated test < 1GHz	$\pm 5.26$	dB
Tx Radiated test 1GHz - 40 GHz	$\pm 4.85$	dB

# Annex B. Test Results

The herein test results were performed by:

Test case measurement	Test Engineer
Tx spurious emissions	Adel Lounes

## B.1 Radiated spurious emission

### B.1.1 Standard references

Band	FCC part	RSS Part	FCC Limit	IC Limit
WCDMA II LTE 2	24.238, 2.1053	133-ch 6.5.1	The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB	(ii) After the first 1.0 MHz, the emission power in any 1 MHz bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least $43 + 10 \log_{10} p$ (watts). If the measurement is performed using 1% of the emission bandwidth, power integration over 1 MHz is required.
WCDMA IV	27.53 (h), 2.1053	139-ch.6.5	The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB	(ii) After the first 1.0 MHz outside the equipment's smallest operating frequency block, which can contain the equipment's occupied bandwidth, the emission power in any 1 MHz bandwidth shall be attenuated below the transmitter output power P (in dBW) by at least $43 + 10 \log_{10} p$ (watts) dB.
WCDMA V LTE 5 LTE 26	22.917, 2.1053 90.691, 22.917, 2.1053	132-ch.5.5	The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB	(ii) After the first 1.0 MHz immediately outside and adjacent to each of the sub-bands, the power of emissions in any 100 kHz bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least $43 + 10 \log_{10} p$ (watts). If the measurement is performed using 1% of the occupied bandwidth, power integration over 100 kHz is required.
LTE 13	27.53 (g)(f), 2.1053	130-ch.4.7	The power of any emission outside a licensee's frequency block shall be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.	<p>The power of any emission outside a licensee's frequency block shall be attenuated below the transmitting power (P) by a factor of at least <math>43 + 10 \log(P)</math> dB.</p> <p>In addition, equipment operating in the frequency bands 746-756 MHz and 777-787 MHz shall also comply with the following restrictions:</p> <p>a) The power of any unwanted emissions in any 6.25 kHz bandwidth for all frequencies between 763-775 MHz and 793-806 MHz shall be attenuated below the transmitter power, P (dBW), by at least:</p> <p>(i) <math>76 + 10 \log_{10} p</math> (watts), dB, for base and fixed equipment, and</p> <p>(ii) <math>65 + 10 \log_{10} p</math> (watts), dB, for mobile and portable equipment.</p> <p>b) The e.i.r.p. in the band 1559-1610 MHz shall not exceed -70 dBW/MHz for wideband signal and -80 dBW for discrete emission with bandwidth less than 700 Hz.</p>

Band	FCC part	RSS Part	FCC Limit	IC Limit																																		
LTE 30	27.53 (a)(4), 2.1053	195 ch.5.6.2	<p>By a factor of not less than: <math>43 + 10 \log (P)</math> dB on all frequencies between 2305 and 2320 MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation, not less than <math>55 + 10 \log (P)</math> dB on all frequencies between 2320 and 2324 MHz and on all frequencies between 2341 and 2345 MHz, not less than <math>61 + 10 \log (P)</math> dB on all frequencies between 2324 and 2328 MHz and on all frequencies between 2337 and 2341 MHz, and not less than <math>67 + 10 \log (P)</math> dB on all frequencies between 2328 and 2337 MHz;</p> <p>(ii) By a factor of not less than <math>43 + 10 \log (P)</math> dB on all frequencies between 2300 and 2305 MHz, <math>55 + 10 \log (P)</math> dB on all frequencies between 2296 and 2300 MHz, <math>61 + 10 \log (P)</math> dB on all frequencies between 2292 and 2296 MHz, <math>67 + 10 \log (P)</math> dB on all frequencies between 2288 and 2292 MHz, and <math>70 + 10 \log (P)</math> dB below 2288 MHz;</p> <p>(iii) By a factor of not less than <math>43 + 10 \log (P)</math> dB on all frequencies between 2360 and 2365 MHz, and not less than <math>70 + 10 \log (P)</math> dB above 2365 MHz.</p>	<table><tr><th>Frequency (MHz)</th><th>Attenuation (dB)</th></tr><tr><td>&lt;2200</td><td><math>43 + 10 \log_{10}(p)</math></td></tr><tr><td>2200 - 2288</td><td><math>70 + 10 \log_{10}(p)</math></td></tr><tr><td>2288 - 2292</td><td><math>67 + 10 \log_{10}(p)</math></td></tr><tr><td>2292 - 2296</td><td><math>61 + 10 \log_{10}(p)</math></td></tr><tr><td>2296 - 2300</td><td><math>55 + 10 \log_{10}(p)</math></td></tr><tr><td>2300 - 2305</td><td><math>43 + 10 \log_{10}(p)</math></td></tr><tr><td>2305 - 2320</td><td><math>43 + 10 \log_{10}(p)</math></td></tr><tr><td>2320 - 2324</td><td><math>55 + 10 \log_{10}(p)</math></td></tr><tr><td>2324 - 2328</td><td><math>61 + 10 \log_{10}(p)</math></td></tr><tr><td>2328 - 2337</td><td><math>67 + 10 \log_{10}(p)</math></td></tr><tr><td>2337 - 2341</td><td><math>61 + 10 \log_{10}(p)</math></td></tr><tr><td>2341 - 2345</td><td><math>55 + 10 \log_{10}(p)</math></td></tr><tr><td>2345 - 2360</td><td><math>43 + 10 \log_{10}(p)</math></td></tr><tr><td>2360 - 2365</td><td><math>43 + 10 \log_{10}(p)</math></td></tr><tr><td>2365 - 2395</td><td><math>70 + 10 \log_{10}(p)</math></td></tr><tr><td>&gt;2395</td><td><math>43 + 10 \log_{10}(p)</math></td></tr></table>	Frequency (MHz)	Attenuation (dB)	<2200	$43 + 10 \log_{10}(p)$	2200 - 2288	$70 + 10 \log_{10}(p)$	2288 - 2292	$67 + 10 \log_{10}(p)$	2292 - 2296	$61 + 10 \log_{10}(p)$	2296 - 2300	$55 + 10 \log_{10}(p)$	2300 - 2305	$43 + 10 \log_{10}(p)$	2305 - 2320	$43 + 10 \log_{10}(p)$	2320 - 2324	$55 + 10 \log_{10}(p)$	2324 - 2328	$61 + 10 \log_{10}(p)$	2328 - 2337	$67 + 10 \log_{10}(p)$	2337 - 2341	$61 + 10 \log_{10}(p)$	2341 - 2345	$55 + 10 \log_{10}(p)$	2345 - 2360	$43 + 10 \log_{10}(p)$	2360 - 2365	$43 + 10 \log_{10}(p)$	2365 - 2395	$70 + 10 \log_{10}(p)$	>2395	$43 + 10 \log_{10}(p)$
Frequency (MHz)	Attenuation (dB)																																					
<2200	$43 + 10 \log_{10}(p)$																																					
2200 - 2288	$70 + 10 \log_{10}(p)$																																					
2288 - 2292	$67 + 10 \log_{10}(p)$																																					
2292 - 2296	$61 + 10 \log_{10}(p)$																																					
2296 - 2300	$55 + 10 \log_{10}(p)$																																					
2300 - 2305	$43 + 10 \log_{10}(p)$																																					
2305 - 2320	$43 + 10 \log_{10}(p)$																																					
2320 - 2324	$55 + 10 \log_{10}(p)$																																					
2324 - 2328	$61 + 10 \log_{10}(p)$																																					
2328 - 2337	$67 + 10 \log_{10}(p)$																																					
2337 - 2341	$61 + 10 \log_{10}(p)$																																					
2341 - 2345	$55 + 10 \log_{10}(p)$																																					
2345 - 2360	$43 + 10 \log_{10}(p)$																																					
2360 - 2365	$43 + 10 \log_{10}(p)$																																					
2365 - 2395	$70 + 10 \log_{10}(p)$																																					
>2395	$43 + 10 \log_{10}(p)$																																					
LTE 41	27.53 (m), 2.1053	199- ch.4.5	<p>For mobile digital stations, the attenuation factor shall be not less than <math>40 + 10 \log (P)</math> dB on all frequencies between the channel edge and 5 megahertz from the channel edge, <math>43 + 10 \log (P)</math> dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and <math>55 + 10 \log (P)</math> dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than <math>43 + 10 \log (P)</math> dB on all frequencies between 2490.5 MHz and 2496 MHz and <math>55 + 10 \log (P)</math> dB at or below 2490.5 MHz.</p>	<p>for mobile subscriber equipment, the power of any unwanted emissions measured as above shall be attenuated (in dB) below the transmitter power, P (dBW), by at least:</p> <p>(i) <math>40 + 10 \log_{10} p</math> from the channel edges to 5 MHz away (ii) <math>43 + 10 \log_{10} p</math> between 5 MHz and X MHz from the channel edges, and (iii) <math>55 + 10 \log_{10} p</math> at X MHz and beyond from the channel edges In addition, the attenuation shall not be less than <math>43 + 10 \log_{10} p</math> on all frequencies between 2490.5 MHz and 2496 MHz, and <math>55 + 10 \log_{10} p</math> at or below 2490.5 MHz.</p>																																		

### B.1.2 Test procedure

The setup described in Test & System Description section was used to measure the radiated spurious emissions.

Depending of the frequency range and bands being tested, different antennas and filters were used.

The final measurement is done by varying the antenna height from 1 to 4 meters, the EUT azimuth over 360° and for both Vertical and Horizontal polarizations.

**B.1.3 Test Results****WCDMA 2**

**30 MHz to 26.5 GHz - Radiated Spurious  
WCDMA 2- QPSK - Low channel – 1850 MHz  
BW 5 MHz**

Frequency	RMS	Limit	Margin
MHz	dBm	dBm	dB
958.5	-54.3	-13.0	41.3
969.7	-54.3	-13.0	41.3
2993.5	-36.3	-13.0	23.3
17356.7	-51.0	-13.0	38.0
18245.1	-62.0	-13.0	49.0
18371.6	-61.9	-13.0	48.9

**WCDMA 4**

**30 MHz to 18 GHz - Radiated Spurious  
WCDMA 4- QPSK - Mid channel – 1732.5 MHz  
BW 5 MHz**

Frequency	RMS	Limit	Margin
MHz	dBm	dBm	dB
962.6	-55.1	-13.0	42.1
968.9	-54.4	-13.0	41.4
978.2	-54.9	-13.0	41.9
6933.4	47.5	-13.0	34.5
10389.4	-46.6	-13.0	33.6
17320.9	-51.0	-13.0	38.0

**WCDMA 5**

**30 MHz to 9.5 GHz - Radiated Spurious  
WCDMA 5- QPSK - Mid channel – 836.5 MHz  
BW 5 MHz**

Frequency	RMS	Limit	Margin
MHz	dBm	dBm	dB
942.9	-40.7	-13.0	27.7
954.4	-40.1	-13.0	27.1
963.2	-39.8	-13.0	26.8
979.1	-40.5	-13.0	27.5
991.5	-40.1	-13.0	27.1
8960.3	-46.0	-13.0	33.0

**LTE 2**

**30MHz to 26.5 GHz - Radiated Spurious  
LTE 2- QPSK – High channel – 1910 MHz  
BW 1.4 MHz– RB 1**

Frequency	RMS	Limit	Margin
MHz	dBm	dBm	dB
961.2	-53.8	-13.0	40.8
992.0	-54.4	-13.0	41.4
7634.9	-56.1	-13.0	43.1
16765.6	-51.9	-13.0	38.9
18407.1	-61.9	-13.0	48.9
18763.6	-61.7	-13.0	48.7

**LTE 5**

**30MHz to 9.5 GHz - Radiated Spurious**  
**LTE 5 - QPSK - Mid channel – 836.5 MHz**  
**BW 1.4 MHz– RB 1**

Frequency	RMS	Limit	Margin
MHz	dBm	dBm	dB
944.7	-41.3	-13.0	28.3
951.3	-40.3	-13.0	27.3
968.4	-40.2	-13.0	27.2
984.2	-39.3	-13.0	26.3
992.4	-39.3	-13.0	26.3
9002.3	-46.0	-13.0	33.0

**LTE 13**

**30MHz to 9.5 GHz - Radiated Spurious**  
**LTE 13 - QPSK - Mid channel – 782 MHz**  
**BW 5 MHz– RB 1**

Frequency	RMS	Limit	Margin
MHz	dBm	dBm	dB
905.0	-41.3	-13.0	28.3
939.2	-40.5	-13.0	27.5
952.1	-40.1	-13.0	27.1
969.7	-39.4	-13.0	26.4
987.9	-39.8	-13.0	26.8
9152.4	-45.7	-13.0	32.7

**LTE 26**

**30MHz to 9.5 GHz – Radiated Spurious  
LTE 26 - QPSK - Mid channel – 831.5MHz  
BW 1.4 MHz– RB 1**

Frequency	RMS	Limit	Margin
MHz	dBm	dBm	dB
925.3	-42.0	-13.0	29.0
936.0	-42.2	-13.0	29.2
947.2	-40.0	-13.0	27.0
959.8	-39.5	-13.0	26.5
976.9	-40.6	-13.0	27.6
8952.2	-46.1	-13.0	33.1

**LTE 30**

**30MHz to 26.5 GHz –Radiated Spurious  
LTE 30 - QPSK - Mid channel – 2310.0MHz  
BW 5 MHz– RB 1**

Frequency	RMS	Limit	Margin
MHz	dBm	dBm	dB
985.1	-54.0	-40.0	14.0
6923.0	-54.3	-40.0	14.3
9231.4	-53.7	-40.0	13.7
13847.2	-51.7	-40.0	11.7
16155.1	-52.1	-40.0	12.1
21806.6	-62.0	-40.0	22.0

**LTE 41****30MHz to 26.5 GHz – Radiated Spurious  
LTE 41 - QPSK - High channel – 2690.0 MHz  
BW 5 MHz– RB 1**

Frequency	RMS	Limit	Margin
MHz	dBm	dBm	dB
958.5	-58.7	-25.0	33.7
970.3	-58.6	-25.0	33.6
978.0	-58.6	-25.0	33.6
2999.0	-45.9	-25.0	20.9
16844.0	-53.2	-25.0	28.2
26271.5	-62.2	-25.0	37.2