

Radio Measurement and Test Report

For

Vonino Electronics LTD.

Miramar Tower 10F- NO.1010, 132 Nathan Road, Tsim Sha Tsui,

Kowloon, Hong Kong

Test Standard(s):	EN 301 908-1 V7.1.1 (2015-03) <u>EN 301 908-2 V6.2.1 (2013-10)</u>
Product Description:	<u>Smart Phone</u>
Tested Model:	<u>JAX S</u>
Report No.:	<u>STR16108061E-2</u>
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Note: This test report is limited to the above client company and the product model only. It may not be duplicated without prior permitted by Shenzhen SEM.Test Technology Co., Ltd.

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1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant: Vonino Electronics LTD.
 Address of applicant: Miramar Tower 10F- NO.1010, 132 Nathan Road, Tsim Sha Tsui, Kowloon, Hong Kong

Manufacturer: Shenzhen Fortuneship Technology Co., Ltd
 Address of manufacturer: Room 701-716, 7th Floor, Kanghesheng Building, No.1 ChuangSheng Road, Nanshan District, Shenzhen, Guangdong, P. R. China

General Description of EUT	
Product Name:	Smart Phone
Brand Name:	VONINO
Model No.:	JAX S
Adding Model(s):	/
Rated Voltage:	DC 3.8V Rechargeable Li-Polymer Battery
Battery Capacity:	2000mAh
Power Adapter:	VNA-V50JS
	Input: 100-240Vac, 50/60Hz, 0.2A; Output: 5.0V=== 1.0A, L.P.S
Software Version:	MEDIACOM_M_PPXG515_V01_20160409_171404_ZH066_CF9_KS671HD_DATAMATIC_W18_B65003_20160409_16G2G_64P8_DDR3_HD_W18_ALS_Hall_171404_OTA
Hardware Version:	ZH066V3.0
<i>Note: The test data is gathered from a production sample, provided by the manufacturer.</i>	

Technical Characteristics of EUT	
3G	
Support Networks:	WCDMA, HSDPA, HSUPA
Support Bands:	WCDMA Band I, WCDMA Band VIII
Frequency Range:	WCDMA Band I: Tx: 1920-1980MHz, Rx: 2110-2170MHz WCDMA Band VIII: Tx: 880-915MHz, Rx: 925-960MHz
RF Output Power:	WCDMA Band I:22.92dBm; WCDMA Band VIII: 22.52dBm
Modulation Type:	BPSK, QPSK, 16QAM
Antenna Type:	Integral Antenna
Antenna Gain:	Band I: 0.7dBi; Band VIII: 0.3dBi

1.2 Test Standards

The following report is prepared on behalf of the Vonino Electronics LTD. in accordance with ETSI EN 301908-1 V7.1.1, Electromagnetic compatibility and Radio spectrum Matters (ERM); Base Stations (BS), Repeaters and User Equipment (UE) for IMT-2000 Third-Generation cellular networks; Part 1: Harmonized EN for IMT-2000, introduction and common requirements, covering essential requirements of article 3.2 of the R&TTE Directive. And the harmonized standard ETSI EN 301908-2 V6.2.1, Electromagnetic compatibility and Radio spectrum Matters (ERM); Base Stations (BS), Repeaters and User Equipment (UE) for IMT-2000 Third-Generation cellular networks; Part 2: Harmonized EN for IMT-2000, CDMA Direct Spread (UTRA FDD) (UE) covering essential requirements of article 3.2 of the R&TTE Directive. This standard refers to ETSI TS 134 121-1 V9.1.0(2010-07), which is based on ETSI Specification Universal Mobile Telecommunications System (UMTS); User Equipment (UE) conformance specification; Radio transmission and reception (FDD); Part 1: Conformance specification (3GPP TS 34.121-1 version 9.1.0 Release 9). Every time when standard TS 134 121-1 is mentioned in this test report without version or date than TS 134 121-1 V9.1.0 (2010-07) is the only valid reference.

The objective of the manufacturer is to determine compliance with ETSI EN 301908-2 V6.2.1, Electromagnetic compatibility and Radio spectrum Matters (ERM); Base Stations (BS), Repeaters and User Equipment (UE) for IMT-2000 Third-Generation cellular networks; Part 2: Harmonized EN for IMT-2000, CDMA Direct Spread (UTRA FDD) (UE) covering essential requirements of article 3.2 of the R&TTE Directive.

Abbreviations and acronyms you may find in ETSI Technical Report ETR 350 November 1996.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product which maybe results in lowering the emission/immunity should be checked to ensure that compliance has been maintained.

1.3 Test Facility

- **FCC – Registration No.: 934118**

Shenzhen SEM.Test Technology Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files and the Registration is 934118.

- **Industry Canada (IC) Registration No.: 11464A**

The 3m Semi-anechoic chamber of Shenzhen SEM.Test Technology Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 11464A.

- **CNAS Registration No.: L4062**

Shenzhen SEM.Test Technology Co., Ltd. is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L4062. All measurement facilities used to collect the measurement data are located at 1/F, Building A, Hongwei Industrial Park, Liuxian 2nd Road, Bao'an District, Shenzhen, P.R.C (518101)

1.4 Test Equipment List and Details

Kind of Equipment	Manufacturer	Type	S/N	Cal Date	Due Date
Equipment list of <SEM.Test Compliance Service Co., Ltd.>					
Test SIM card	-		-	N/A	N/A
Wireless Communications Test Set	Agilent	E5515C	MY48365163	2016-06-04	2017-06-03
PSA Series Spectrum Analyzer	Agilent	E4440A	MY49420128	2016-06-04	2017-06-03
EPM Series Power Meter	Agilent	E4418B	MY50000188	2016-06-04	2017-06-03
E-Series Power Sensor	Agilent	E9304A	MY50000187	2016-06-04	2017-06-03
Mobile Communication DC Source	Agilent	66319D	MY43003946	2016-06-04	2017-06-03
Universal Switch Control Unit	Agilent	N9370A	MY46130177	N/A	N/A
RF Interface Box	Agilent	N1960-80103	MY45490191	N/A	N/A
GSM Filter Module	Agilent	N1960-80104	MY45490185	N/A	N/A
PSG Analog Signal Generator	Agilent	E8257D	MY44321116	2016-06-04	2017-06-03
ESG Vector Signal Generator	Agilent	E4438C	MY49070163	2016-06-04	2017-06-03
Temperature & Humidity Chamber	Agilent	TH-1P-B	WIT-05121302	2016-06-04	2017-06-03
Temperature/Humidity Meter	Agilent	ZC1-2	TR7-TH	2016-06-04	2017-06-03
Spectrum Analyzer	R&S	FSP	836079/035	2016-06-04	2017-06-03
Pre-amplifier	Agilent	8447F	3113A06717	2016-06-04	2017-06-03
Pre-amplifier	Compliance Direction	PAP-0118	24002	2016-06-04	2017-06-03
Trilog Broadband Antenna	SCHWARZBECK	VULB9163	9163-333	2016-06-04	2017-06-03
Horn Antenna	ETS	3117	00086197	2016-06-04	2017-06-03
Signal Generator	Rohde & Schwarz	SMR20	100047	2016-06-04	2017-06-03

1.5 Environmental conditions for testing

General conditions (GC) as stated in TS 134 121-1 V9.1.0 (2010-07) Annex G G1 This normative annex specifies the environmental requirements of the UE. Within these limits the requirements of the present documents shall be fulfilled.

For extreme test conditions (TC2.2) the manufacturer declared the low voltage to 3.3 V (for Lithium-Ion battery). Higher extreme voltages of 4.2V.

If not other noted, the temperature was in range of +15 °C to +35 °C, the relative humidity was in the range of 20% to 95% and the DC power supply voltage was set to 3.8V (normal test conditions TC2.1).

Note: The relative humidity during all the tests is higher than the mentioned 20%-75% in TS 134 121-1 V9.1.0 (2010-07) for test conditions. Since the weather situation in the testing area gives always this humidity level, all tests are performed within this range. No extra notification in the single test clauses is done.

Table 1 Parameters for normal test conditions TC2.1

Temperature:	+15 °C to + 35 °C
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Voltage	DC 3.8V
Humidity	20%-95%

Table 2 Parameters for extreme test conditions TC2.2

Temperature:	+55 °C	+55 °C	-10 °C	-10 °C
Voltage	DC 3.3V	DC 4.35V	DC 3.3V	DC 4.35V

For the Vibration requirements (TC4) as stated in TS 134 121-1 V9.1.0 (2010-07) Annex G G2.3.1 the following conditions apply

Table 3 Parameter for vibration requirements TC4

Frequency in Hz	ASD in m^2/s^3
5-20	0,96
20-500	0,96 at 20 Hz, thereafter -5dB/octave

2. SUMMARY OF TEST RESULTS

Conformance requirement according to EN 301 908-2				
No.	Reference	EN-R (note)	TS 134 121-1 Clause	Result
1	4.2.2	Transmitter maximum output power	5.2.4	Yes
2	4.2.3	Transmitter spectrum emission mask	5.9.4	Yes
3	4.2.4	Transmitter spurious emission	5.11.4	Yes
4	4.2.5	Transmitter minimum output power	5.2.4	Yes
5	4.2.6	Receiver adjacent channel selectivity	6.4.4	Yes
6	4.2.7	Receiver blocking characteristics	6.5.4	Yes
7	4.2.8	Receiver spurious response	6.6.4	Yes
8	4.2.9	Receiver intermeditation characteristics	6.7.4	Yes
9	4.2.10	Receiver spurious emission	6.8.4	Yes
10	4.2.11	Out-of-synchronization handling of output power	5.4.4	Yes
11	4.2.12	Transmitter adjacent channel leakage power ratio	5.10.4	Yes
Conformance requirement according to EN 301 908-1				
12	4.2.2	Radiated emissions	/	Yes
13	4.2.4	Control and monitoring functions	/	Yes
Yes Test shall be performed N/A Test not applicable <i>Detailed information's, which test data/plots are to find in Appendix 1.</i>				

3. Essential radio test suites

3.1 Transmitter maximum output power

Clause 5.2 of TS 134 121-1 V9.1.0 (2010-07) applies.

RESULT: Pass

3.1.1 Definition and applicability

The nominal maximum output power and its tolerance are defined according to the power class of the UE.

The nominal power defined is the broadband transmit power of the UE, i.e. the power in a bandwidth of at least $(1 + \alpha)$ times the chip rate of the radio access mode. The period of measurement shall be at least one timeslot.

3.1.2 Conformance requirements

Test environment: normal, TL/VL, TL/VH, TH/VL, TH/VH (see section 1.6).

The frequencies to be tested are low range, mid range and high range as defined in TS 134 108 [3]:

- 1) Connect the SS to the UE antenna connector.
- 2) A call is set up according to the Generic call setup procedure.
- 3) Enter the UE into loopback test mode and start the loopback test.

NOTE: When reference is made to test set up, call set up and loopback test mode, guidance on the applicability of these can be found in TS 134 121-1 [2], TS 134 108 [3] and TS 134 109 [4] respectively.

The UE maximum output power shall be within the shown value in table 4.2.2.2-1 even for the multi-code DPDCH transmission mode.

Table 4.2.2.2-1: UE power classes

Operating Band	Power Class 3		Power Class 3bis		Power Class 4	
	Power (dBm)	Tol (dB)	Power (dBm)	Tol (dB)	Power (dBm)	Tol (dB)
Band I	+24	+1,7/-3,7			+21	+2,7/-2,7
Band III	+24	+1,7/-3,7			+21	+2,7/-2,7
Band VII	+24	+1,7/-3,7	+23	+2,7/-2,7	+21	+2,7/-2,7
Band VIII	+24	+1,7/-3,7	+23	+2,7/-2,7	+21	+2,7/-2,7
Band XV	+24	+1,7/-3,7	+23	+2,7/-1,7	+21	+2,7/-1,7
Band XVI	+24	+1,7/-3,7	+23	+2,7/-1,7	+21	+2,7/-1,7

3.1.3 Set up for testing

- 1) Set and send continuously Up power control commands to the UE.
- 2) Measure the mean power of the UE in a bandwidth of at least $(1 + \alpha)$ times the chip rate of the radio access mode. The mean power shall be averaged over at least one timeslot.

3.1.4 Test result

Test result transmitter maximum output power.

WCDMA Band 1

Test conditions		Maximum output power in dBm		
		Maximum output power RMC (Power Class 3: 24dBm)		
	ARFCN	Channel 9612	Channel 9750	Channel 9888
Tnom(25 °C)	Vnom(3.8V)	22.67	22.92	22.17
Tmin(-10 °C)	Vmin(3.3V)	22.65	22.90	22.15
	Vmax(4.2V)	22.62	22.87	22.12
Tmax(+55 °)	Vmin(3.3V)	22.63	22.85	22.16
	Vmax(4.2V)	22.65	22.90	22.11
Max. permitted error		+1.7/-3.7dB		
Measurement uncertainty		<+/-0.6dB		

Test conditions		Maximum output power in dBm		
		Maximum output power HSDPA (Power Class 3: 24dBm)		
	ARFCN	Channel 9612	Channel 9750	Channel 9888
Tnom(25 °C)	Vnom(3.8V)	21.79	21.97	21.05
Tmin(-10 °C)	Vmin(3.3V)	21.37	21.89	21.12
	Vmax(4.2V)	21.69	21.72	21.03
Tmax(+55 °)	Vmin(3.3V)	21.94	21.87	21.13
	Vmax(4.2V)	21.09	21.75	21.07
Max. permitted error		+1.7/-3.7dB		
Measurement uncertainty		<+/-0.6dB		

Test conditions		Maximum output power in dBm		
		Maximum output power HSUPA (Power Class 3: 24dBm)		
	ARFCN	Channel 9612:10563	Channel 9750:10700	Channel 9888:10837
Tnom(25 °C)	Vnom(3.8V)	21.23	21.98	21.03
Tmin(-10 °C)	Vmin(3.6V)	21.25	21.92	21.11
	Vmax(4.2V)	21.39	21.63	21.15
Tmax(+55 °)	Vmin(3.6V)	21.27	21.94	21.15
	Vmax(4.2V)	21.14	21.81	21.10
Max. permitted error		+1.7/-3.7dB		
Measurement uncertainty		<+/-0.6dB		

WCDMA Band 8

Test conditions		Maximum output power in dBm		
		Maximum output power RMC (Power Class 3: 24dBm)		
	ARFCN	Channel 2712	Channel 2788	Channel 2863
Tnom(25 °C)	Vnom(3.8V)	22.52	22.26	21.99
Tmin(-10 °C)	Vmin(3.3V)	22.45	22.17	21.92
	Vmax(4.2V)	22.47	22.19	21.95
Tmax(+55 °)	Vmin(3.3V)	22.45	22.20	21.90
	Vmax(4.2V)	22.50	22.22	21.91
Max. permitted error		+1.7/-3.7dB		
Measurement uncertainty		<+/-0.6dB		

Test conditions		Maximum output power in dBm		
		Maximum output power HSDPA (Power Class 3: 24dBm)		
	ARFCN	Channel 2712	Channel 2788	Channel 2863
Tnom(25 °C)	Vnom(3.8V)	21.65	21.54	21.23
Tmin(-10 °C)	Vmin(3.3V)	21.38	21.56	21.01
	Vmax(4.2V)	21.64	21.21	21.01
Tmax(+55 °)	Vmin(3.3V)	21.83	21.16	21.03
	Vmax(4.2V)	21.55	21.48	21.17
Max. permitted error		+1.7/-3.7dB		
Measurement uncertainty		<+/-0.6dB		

Test conditions		Maximum output power in dBm		
		Maximum output power HSUPA (Power Class 3: 24dBm)		
	ARFCN	Channel 2712	Channel 2788	Channel 2863
Tnom(25 °C)	Vnom(3.8V)	21.66	21.51	21.13
Tmin(-10 °C)	Vmin(3.6V)	21.18	21.86	21.05
	Vmax(4.2V)	21.17	21.98	21.17
Tmax(+55 °)	Vmin(3.6V)	21.41	21.12	21.18
	Vmax(4.2V)	21.91	21.70	21.16
Max. permitted error		+1.7/-3.7dB		
Measurement uncertainty		<+/-0.6dB		

32 TRANSMITTER SPECTRUM EMISSION MASK

Clause 5.9 of TS 134 121-1 V9.1.0 (2010-07) applies.

RESULT: Pass

3.2.1 Definition and applicability

Spurious emissions are emissions, which are caused by unwanted transmitter effects such as harmonics emission, parasitic emission, intermodulation products and frequency conversion products, but exclude out-of-band emissions.

3.2.2 Conformance requirements

Test environment: normal (see section 1.6).

The frequencies to be tested are low range, mid range and high range as defined in TS 134 108 [3]:

- 1) Connect the SS to the UE antenna connector.
- 2) A call is set up according to the Generic call setup procedure.
- 3) Enter the UE into loopback test mode and start the loopback test.

NOTE: When reference is made to test set up, call set up and loopback test mode, guidance on the applicability of these can be found in TS 134 121-1 [2], TS 134 108 [3] and TS 134 109 [4] respectively.

The power of any UE emission shall not exceed the levels specified in table 4.2.3.2-1. The requirements are applicable for all for the values of β_c , β_d , β_{hs} , β_{ec} and β_{ed} defined in TS 125 214 [8].

Table 4.2.3.2-1: Spectrum emission mask requirement

Δf in MHz (note 1)	Minimum requirement (note 2)		Measurement bandwidth (note 5)
	Relative requirement	Absolute requirement (in measurement bandwidth)	
2,5 MHz to 3,5 MHz	$\left\{ -33,5 - 15 \cdot \left(\frac{\Delta f}{MHz} - 2,5 \right) \right\} dBc$	-69,6 dBm	30 kHz (see note 3)
3,5 MHz to 7,5 MHz	$\left\{ -33,5 - 1 \cdot \left(\frac{\Delta f}{MHz} - 3,5 \right) \right\} dBc$	-54,3 dBm	1 MHz (see note 4)
7,5 MHz to 8,5 MHz	$\left\{ -37,5 - 10 \cdot \left(\frac{\Delta f}{MHz} - 7,5 \right) \right\} dBc$	-54,3 dBm	1 MHz (see note 4)
8,5 MHz to 12,5 MHz	-47,5 dBc	-54,3 dBm	1 MHz (see note 4)

NOTE 1: Δf is the separation between the carrier frequency and the centre of the measurement bandwidth.
 NOTE 2: The minimum requirement is calculated from the relative requirement or the absolute requirement, whichever is the higher power.
 NOTE 3: The first and last measurement position with a 30 kHz filter is at Δf equals to 2,515 MHz and 3,485 MHz.
 NOTE 4: The first and last measurement position with a 1 MHz filter is at Δf equals to 4 MHz and 12 MHz.
 NOTE 5: As a general rule, the resolution bandwidth of the measuring equipment should be equal to the measurement bandwidth. However, to improve measurement accuracy, sensitivity and efficiency, the resolution bandwidth may be smaller than the measurement bandwidth. When the resolution bandwidth is smaller than the measurement bandwidth, the result should be integrated over the measurement bandwidth in order to obtain the equivalent noise bandwidth of the measurement bandwidth.

3.2.3 Set up for testing

- 1) Set and send continuously Up power control commands to the UE until the UE output power shall be at the maximum level.
- 2) Measure the power of the transmitted signal with a measurement filter of bandwidths according to table 4.2.3.2-1. Measurements with an offset from the carrier centre frequency between 2,515 MHz and 3,485 MHz shall use a 30 kHz measurement filter. Measurements with an offset from the carrier centre frequency between 4 MHz and 12 MHz shall use 1 MHz measurement bandwidth and the result may be calculated by integrating multiple 50 kHz or narrower filter measurements. The characteristic of the filter shall be approximately Gaussian (typical spectrum analyzer filter). The centre frequency of the filter shall be stepped in contiguous steps according to table 4.2.3.2-1. The measured power shall be recorded for each step.
- 3) Measure the RRC filtered mean power centred on the assigned channel frequency.
- 4) Calculate the ratio of the power 2) with respect to 3) in dBc.

3.2.4 Test result

Test result transmitter spectrum emission mask

Band 1

requirements		Transmitter spectrum emission mask – Max. emission value (dBc) in the measure frequency band			
		Measure range	Low channel	Mid. Channel	High Channel
T _{nom} (25 °C)	V _{nom} (3.8V)	2.5MHz to 3.5MHz	Pass	Pass	Pass
		3.5MHz to 7.5MHz	Pass	Pass	Pass
		7.5MHz to 8.5MHz	Pass	Pass	Pass
		8.5MHz to 12.5MHz	Pass	Pass	Pass
Measurement uncertainty		+/-1.5dB			

Band 8

requirements Test Condition		Transmitter spectrum emission mask – Max. emission value (dBc) in the measure frequency band			
		Measure range	Low channel	Mid. Channel	High Channel
T _{nom} (25 °C)	V _{nom} (3.8V)	2.5MHz to 3.5MHz	Pass	Pass	Pass
		3.5MHz to 7.5MHz	Pass	Pass	Pass
		7.5MHz to 8.5MHz	Pass	Pass	Pass
		8.5MHz to 12.5MHz	Pass	Pass	Pass
Measurement uncertainty		+/-1.5dB			

3.3 Transmitter spurious emissions

Clause 5.11 of ETSI TS 134 121-1 V9.1.0 (2010-07) applies.

RESULT: Pass

3.3.1 Definition and applicability

Spurious emissions are emissions, which are caused by unwanted transmitter effects such as harmonics emission, parasitic emission, intermediation products and frequency conversion products, but exclude out-of-band emissions.

3.3.2 Conformance requirements

Test environment: normal condition (see section 1.6).

The frequencies to be tested are low range, mid range and high range as defined in TS 134 108 [3]:

- 1) Connect the SS to the UE antenna connector.
- 2) A call is set up according to the Generic call setup procedure.
- 3) Enter the UE into loopback test mode and start the loopback test.

NOTE: When reference is made to test set up, call set up and loopback test mode, guidance on the applicability of these can be found in TS 134 121-1 [2], TS 134 108 [3] and TS 134 109 [4] respectively.

The power of spurious emissions shall not exceed the limits defined in tables 4.2.4.2-1 and 4.2.4.2-2. The limits shown in tables 4.2.4.2-1 and 4.2.4.2-2 are only applicable for frequencies, which are greater than 12,5 MHz away from the UE centre carrier frequency.

Table 4.2.4.1.2-1: General spurious emissions requirements

Frequency bandwidth	Measurement bandwidth	Minimum requirement
$9 \text{ kHz} \leq f < 150 \text{ kHz}$	1 kHz	-36 dBm
$150 \text{ kHz} \leq f < 30 \text{ MHz}$	10 kHz	-36 dBm
$30 \text{ MHz} \leq f < 1\,000 \text{ MHz}$	100 kHz	-36 dBm
$1 \text{ GHz} \leq f < 12,75 \text{ GHz}$	1 MHz	-30 dBm
$12,75 \text{ GHz} \leq f < 5^{\text{th}}$ harmonic of the upper frequency edge of the UL operating band in GHz	1 MHz	-30 dBm (note)

NOTE: Applies only for Band XXII.

Table 4.2.4.1.2-2: Additional spurious emissions requirements

Operating band	Frequency bandwidth	Measurement bandwidth	Minimum requirement
I	$791 \text{ MHz} \leq f \leq 821 \text{ MHz}$	3,84 MHz	-60 dBm
	$921 \text{ MHz} \leq f < 925 \text{ MHz}$	100 kHz	-60 dBm (note 1)
	$925 \text{ MHz} \leq f \leq 935 \text{ MHz}$	100 kHz	-67 dBm (note 1)
	$935 \text{ MHz} < f \leq 960 \text{ MHz}$	100 kHz	-79 dBm (note 1)
	$1\,805 \text{ MHz} \leq f \leq 1\,880 \text{ MHz}$	100 kHz	-71 dBm (note 1)
	$2\,110 \text{ MHz} \leq f \leq 2\,170 \text{ MHz}$	3,84 MHz	-60 dBm
III	$2\,585 \text{ MHz} \leq f \leq 2\,690 \text{ MHz}$	3,84 MHz	-60 dBm
	$791 \text{ MHz} \leq f \leq 821 \text{ MHz}$	3,84 MHz	-60 dBm
	$921 \text{ MHz} \leq f < 925 \text{ MHz}$	100 kHz	-60 dBm (note 1)
	$925 \text{ MHz} \leq f \leq 935 \text{ MHz}$	100 kHz	-67 dBm (note 1)
	$935 \text{ MHz} < f \leq 960 \text{ MHz}$	100 kHz	-79 dBm (note 1)
	$1\,805 \text{ MHz} \leq f \leq 1\,880 \text{ MHz}$	3,84 MHz	-60 dBm
$2\,110 \text{ MHz} \leq f \leq 2\,170 \text{ MHz}$	3,84 MHz	-60 dBm	
$2\,585 \text{ MHz} \leq f \leq 2\,690 \text{ MHz}$	3,84 MHz	-60 dBm	

VII	921 MHz $\leq f <$ 925 MHz	100 kHz	-60 dBm (note 1)
	925 MHz $\leq f \leq$ 935 MHz	100 kHz	-67 dBm (note 1)
	935 MHz $< f \leq$ 960 MHz	100 kHz	-79 dBm (note 1)
	1 805 MHz $\leq f \leq$ 1 880 MHz	100 kHz	-71 dBm (note 1)
	2 110 MHz $\leq f \leq$ 2 170 MHz	3,84 MHz	-60 dBm
	2 620 MHz $\leq f \leq$ 2 690 MHz	3,84 MHz	-60 dBm
	2 590 MHz $\leq f \leq$ 2 620 MHz	3,84 MHz	-50 dBm
VIII	791 MHz $\leq f \leq$ 821 MHz	3,84 MHz	-60 dBm
	925 MHz $\leq f \leq$ 935 MHz	100 kHz 3,84 MHz	-67 dBm (note 1) -60 dBm
	935 MHz $< f \leq$ 960 MHz	100 kHz 3,84 MHz	-79 dBm (note 1) -60 dBm
	1 805 MHz $< f \leq$ 1 830 MHz	100 kHz 3,84 MHz	-71 dBm (notes 1 and 2) -60 dBm (note 2)
	1 830 MHz $< f \leq$ 1 880 MHz	100 kHz 3,84 MHz	-71 dBm (note 1) -60 dBm
	2 110 MHz $\leq f \leq$ 2 170 MHz	3,84 MHz	-60 dBm
	2 585 MHz $\leq f \leq$ 2 640 MHz	3,84 MHz	-60 dBm
	2 640 MHz $\leq f \leq$ 2 690 MHz	3,84 MHz	-60 dBm (note 2)
XV	791 MHz $\leq f \leq$ 821 MHz	3,84 MHz	-60 dBm
	921 MHz $\leq f \leq$ 925 MHz	100 kHz	-60 dBm (note 1)
	925 MHz $\leq f \leq$ 935 MHz	100 kHz 3,84 MHz	-67 dBm (note 1) -60 dBm
	935 MHz $\leq f \leq$ 960 MHz	100 kHz	-79 dBm (note 1)
	1 805 MHz $\leq f \leq$ 1 880 MHz	100 kHz	-71 dBm (note 1)
	2 110 MHz $\leq f \leq$ 2 170 MHz	3,84 MHz	-60 dBm
	2 585 MHz $\leq f \leq$ 2 620 MHz	3,84 MHz	-50 dBm
	2 620 MHz $\leq f \leq$ 2 690 MHz	3,84 MHz	-60 dBm
XVI	791 MHz $\leq f \leq$ 821 MHz	3,84 MHz	-60 dBm
	921 MHz $\leq f \leq$ 925 MHz	100 kHz	-60 dBm (note 1)
	925 MHz $\leq f \leq$ 935 MHz	100 kHz 3,84 MHz	-67 dBm (note 1) -60 dBm
	935 MHz $\leq f \leq$ 960 MHz	100 kHz	-79 dBm (note 1)
	1 805 MHz $\leq f \leq$ 1 880 MHz	100 kHz	-71 dBm (note 1)
	2 110 MHz $\leq f \leq$ 2 170 MHz	3,84 MHz	-60 dBm
	2 585 MHz $\leq f \leq$ 2 620 MHz	3,84 MHz	-50 dBm
	2 620 MHz $\leq f \leq$ 2 690 MHz	3,84 MHz	-60 dBm

Operating band	Frequency bandwidth	Measurement bandwidth	Minimum requirement
XX	470 MHz $\leq f \leq$ 790 MHz	8 MHz	-85 dBm (note 3)
	791 MHz $\leq f \leq$ 821 MHz	3,84 MHz	-60 dBm
	921 MHz $\leq f \leq$ 925 MHz	100 kHz	-60 dBm (note 1)
	925 MHz $\leq f \leq$ 935 MHz	100 kHz 3,84 MHz	-67 dBm (note 1) -60 dBm
	935 MHz $\leq f \leq$ 960 MHz	100 kHz	-79 dBm (note 1)
	1 805 MHz $\leq f \leq$ 1 880 MHz	100 kHz	-71 dBm (note 1)
	2 110 MHz $\leq f \leq$ 2 170 MHz	3,84 MHz	-60 dBm
	2 585 MHz $\leq f \leq$ 2 620 MHz	3,84 MHz	-50 dBm
XXII	2 620 MHz $\leq f \leq$ 2 690 MHz	3,84 MHz	-60 dBm
	791 MHz $\leq f \leq$ 821 MHz	3,84 MHz	-60 dBm
	921 MHz $\leq f <$ 925 MHz	100 kHz	-60 dBm (note 1)
	925 MHz $\leq f \leq$ 935 MHz	100 kHz 3,84 MHz	-67 dBm (note 1) -60 dBm
	935 MHz $< f \leq$ 960 MHz	100 kHz	-79 dBm (note 1)
	1 805 MHz $\leq f \leq$ 1 880 MHz	100 kHz	-71 dBm (note 1)
	2 110 MHz $\leq f \leq$ 2 170 MHz	3,84 MHz	-60 dBm
	2 585 MHz $\leq f \leq$ 2 620 MHz	3,84 MHz	-50 dBm
	2 620 MHz $\leq f \leq$ 2 690 MHz	3,84 MHz	-60 dBm
	3 510 MHz $\leq f \leq$ 3 525 MHz	1 MHz	-40 dBm
3 525 MHz $\leq f \leq$ 3 590 MHz	1 MHz	-50 dBm	
3 600 MHz $\leq f \leq$ 3 800 MHz	3,84 MHz	-50 dBm	

NOTE 1: The measurements are made on frequencies which are integer multiples of 200 kHz. As exceptions, up to five measurements with a level up to the applicable requirements defined in table 4.2.4.1.2-1 are permitted for each UARFCN used in the measurement.

NOTE 2: The measurements are made on frequencies which are integer multiples of 200 kHz. As exceptions, measurements with a level up to the applicable requirements defined in table 4.2.4.1.2-1 are permitted for each UARFCN used in the measurement due to 2nd or 3rd harmonic spurious emissions.

NOTE 3: The conformance shall be assessed using the measurement position placed at the following centre frequencies: 474 MHz, 586 MHz, 690 MHz, 754 MHz, 770 MHz and 786 MHz.

3.3.3 Set up for testing

- 1) Set and send continuously Up power control commands to the UE until the UE output power shall be maximum level.
- 2) Sweep the spectrum analyser (or equivalent equipment) over a frequency range and measure the average power of spurious emission.

3.3.4 Test result

For WCDMA Band I:

Measurement frequency range	Max. spurious emission frequency (MHz)	Measured value dBm	Limit dBm	Result
Low Channel 9612:10563				
9k~150kHz	0.107	-53.68	-36	Pass
150kHz~30MHz	20.12	-52.51	-36	Pass
30MHz~791MHz	732.46	-45.75	-36	Pass
791MHz~821MHz	812.89	-73.01	-60	Pass
821MHz~921MHz	885.61	-53.41	-36	Pass
921MHz~925MHz	924.58	-71.19	-60	Pass
925MHz~935MHz	928.8	-73.68	-67	Pass
935MHz~960MHz	953.33	-86.53	-79	Pass
960MHz~1000MHz	967.45	-52.25	-36	Pass
1000MHz~1805MHz	1702.42	-44.36	-30	Pass
1805MHz~1880MHz	1850.87	-77.77	-71	Pass
1880MHz~2110MHz	2019.02	-55.15	-30	Pass
2110MHz~2170MHz	2119.27	-68.59	-60	Pass
2170MHz~2585MHz	2492.63	-41.43	-30	Pass
2585MHz~2690MHz	2662.68	-73.31	-60	Pass
2690MHz~12.75GHz	3853.22	-42.27	-30	Pass
Middle Channel 9750:10700				
9k~150kHz	0.113	-55.74	-36	Pass
150kHz~30MHz	25.32	-50.64	-36	Pass
30MHz~791MHz	731.64	-48.33	-36	Pass
791MHz~821MHz	807.03	-72.58	-60	Pass
821MHz~921MHz	892.39	-54.09	-36	Pass
921MHz~925MHz	924.6	-73.45	-60	Pass
925MHz~935MHz	933.49	-74.71	-67	Pass
935MHz~960MHz	951.23	-84.75	-79	Pass
960MHz~1000MHz	986.86	-51.24	-36	Pass
1000MHz~1805MHz	1704.48	-41.23	-30	Pass
1805MHz~1880MHz	1854.38	-77.05	-71	Pass
1880MHz~2110MHz	2028.13	-54.47	-30	Pass

2110MHz~2170MHz	2133.4	-70.06	-60	Pass
2170MHz~2585MHz	2467.7	-42.67	-30	Pass
2585MHz~2690MHz	2666.52	-71.56	-60	Pass
2690MHz~12.75GHz	3845.19	-42.3	-30	Pass
High Channel 9888:10837				
9k~150kHz	0.135	-51.63	-36	Pass
150kHz~30MHz	24.92	-54.35	-36	Pass
30MHz~791MHz	726.54	-44.54	-36	Pass
791MHz~821MHz	812.82	-71.01	-60	Pass
821MHz~921MHz	891.15	-51.01	-36	Pass
921MHz~925MHz	924.41	-71.88	-60	Pass
925MHz~935MHz	928.6	-70.15	-67	Pass
935MHz~960MHz	949.59	-83.14	-79	Pass
960MHz~1000MHz	976.34	-55.72	-36	Pass
1000MHz~1805MHz	1704.68	-40.57	-30	Pass
1805MHz~1880MHz	1865.36	-75.39	-71	Pass
1880MHz~2110MHz	2025.4	-52.76	-30	Pass
2110MHz~2170MHz	2145.21	-71.77	-60	Pass
2170MHz~2585MHz	2460.55	-44.5	-30	Pass
2585MHz~2690MHz	2607.02	-71.43	-60	Pass
2690MHz~12.75GHz	3820.44	-42.66	-30	Pass

For WCDMA Band VIII:

Measurement frequency range	Max. spurious emission frequency	Measured value dBm	Limit dBm	Result
Low Channel 2712:2937				
9k~150kHz	0.14	-55.22	-36	Pass
150kHz~30MHz	22.27	-48.13	-36	Pass
30MHz~791MHz	731.9	-47.62	-36	Pass
791MHz~821MHz	810.65	-74.46	-60	Pass
821MHz~925MHz	914.7	-73.16	-36	Pass
925MHz~935MHz	929.35	-71.05	-67	Pass
935MHz~960MHz	953.34	-85.54	-79	Pass
960MHz~1000MHz	970.86	-54.34	-36	Pass
1000MHz~1805MHz	1711.37	-43.61	-30	Pass
1805MHz~1830MHz	1820.01	-74.57	-71	Pass
1830MHz~1880MHz	1847.87	-78.23	-71	Pass
1880MHz~2110MHz	2009.16	-53.06	-30	Pass
2110MHz~2170MHz	2144.77	-67.08	-60	Pass
2170MHz~2585MHz	2470.23	-44.66	-30	Pass
2585MHz~2640MHz	2601.85	-73.74	-60	Pass
2640MHz~2690MHz	2661.87	-71.54	-60	Pass
2690MHz~12.75GHz	3552.03	-43.12	-30	Pass

Middle Channel 2788:3013				
9k~150kHz	0.092	-52.22	-36	Pass
150kHz~30MHz	23.77	-46.52	-36	Pass
30MHz~791MHz	727.03	-46.22	-36	Pass
791MHz~821MHz	808.09	-74.99	-60	Pass
821MHz~925MHz	912.74	-73.74	-36	Pass
925MHz~935MHz	930.33	-74.69	-67	Pass
935MHz~960MHz	952.61	-84.01	-79	Pass
960MHz~1000MHz	990.31	-52.09	-36	Pass
1000MHz~1805MHz	1736.27	-41.65	-30	Pass
1805MHz~1830MHz	1823.38	-78.84	-71	Pass
1830MHz~1880MHz	1839.63	-77.05	-71	Pass
1880MHz~2110MHz	2001.39	-52.28	-30	Pass
2110MHz~2170MHz	2129.66	-70.61	-60	Pass
2170MHz~2585MHz	2480.39	-43.36	-30	Pass
2585MHz~2640MHz	2610.88	-70.48	-60	Pass
2640MHz~2690MHz	2660.3	-70.52	-60	Pass
2690MHz ~12.75GHz	3592.27	-45.44	-30	Pass
High Channel 2863:3088				
9k~150kHz	0.12	-51.62	-36	Pass
150kHz~30MHz	25.13	-49.05	-36	Pass
30MHz~791MHz	725.77	-46.9	-36	Pass
791MHz~821MHz	812.59	-73.04	-60	Pass
821MHz~925MHz	917.82	-71.57	-36	Pass
925MHz~935MHz	929.9	-74.96	-67	Pass
935MHz~960MHz	941.3	-87.41	-79	Pass
960MHz~1000MHz	978.83	-52.19	-36	Pass
1000MHz~1805MHz	1775.68	-44.37	-30	Pass
1805MHz~1830MHz	1822.82	-74.78	-71	Pass
1830MHz~1880MHz	1843.89	-77.23	-71	Pass
1880MHz~2110MHz	2019.17	-53.79	-30	Pass
2110MHz~2170MHz	2120.5	-71.97	-60	Pass
2170MHz~2585MHz	2487.2	-43.32	-30	Pass
2585MHz~2640MHz	2628.92	-70.97	-60	Pass
2640MHz~2690MHz	2656.14	-71.72	-60	Pass
2690MHz ~12.75GHz	3650.85	-42.81	-30	Pass

Measurement uncertainty	
$f \leq 2,2 \text{ GHz}$	+/-1.5dB
$2,2 \text{ GHz} < f \leq 4 \text{ GHz}$	+/-2.0dB
$f > 4 \text{ GHz}$	+/-4.0dB
Co-existence band ($\geq -60 \text{ dBm}$)	+/-2.0dB
Co-existence band ($< -60 \text{ dBm}$)	+/-3.0dB

3.4 Transmitter minimum output power

Clause 4.2.5 of EN 301 908-2 V6.2.1 (2013-10) applies.

RESULT: Pass

3.4.1 Definition and applicability

The minimum controlled output power of the UE is when the power is set to a minimum value. The minimum transmit power is defined as a mean power in one time slot.

3.4.2 Conformance requirements

Test environment: normal, TL/VL, TL/VH, TH/VL, TH/VH (see section 1.6)

The frequencies to be tested are mid range as defined in TS 134 108 [3]:

- 1) Connect the SS to the UE antenna connector.
- 2) A call is set up according to the Generic call setup procedure.
- 3) Enter the UE into loopback test mode and start the loopback test.

NOTE: When reference is made to test set up, call set up and loopback test mode, guidance on the applicability of these can be found in TS 134 121-1 [2], TS 134 108 [3] and TS 134 109 [4].

The minimum output power shall be less than -49 dBm.

3.4.3 Set up for testing

- 1) Set and send continuously Down power control commands to the UE.
- 2) Measure the mean power of the UE.

3.4.4 Test result

Test est result transmitter minimum output power

Test conditions		Minimum output power in dBm		
		Minimum output power WCDMA Band I		
	ARFCN	Channel 9612:10562	Channel 9750:10700	Channel 9887:10837
Tnom(25 °C)	Vnom(3.8V)	-56.32	-56.19	-56.46
Tmin(-10 °C)	Vmin(3.3V)	-56.26	-57.71	-57.67
	Vmax(4.2V)	-56.32	-57.90	-56.15
Tmax(+55 °)	Vmin(3.3V)	-56.34	-57.13	-57.48
	Vmax(4.2V)	-56.64	-57.42	-57.84
Max. permitted value		-49dBm		
Measurement uncertainty		<+/-1.0dB		

Test conditions		Minimum output power in dBm		
		Minimum output power HSDPA Band I		
	ARFCN	Channel 9612	Channel 9750	Channel 9888
Tnom(25 °C)	Vnom(3.8V)	-57.28	-57.63	-56.56
Tmin(-10 °C)	Vmin(3.3V)	-57.49	-56.51	-57.79
	Vmax(4.2V)	-56.18	-56.91	-56.77
Tmax(+55 °)	Vmin(3.3V)	-56.88	-56.91	-56.51
	Vmax(4.2V)	-56.17	-56.09	-57.35
Max. permitted value		-49dBm		
Measurement uncertainty		<+/-1.0dB		

Test conditions		Minimum output power in dBm		
		Minimum output power HSUPA Band I		
	ARFCN	Channel 9613:10563	Channel 9750:10700	Channel 9887:10837
Tnom(25 °C)	Vnom(3.8V)	-56.56	-57.07	-56.39
Tmin(-10 °C)	Vmin(3.6V)	-56.28	-57.77	-56.05
	Vmax(4.2V)	-56.72	-57.33	-56.92
Tmax(+55 °)	Vmin(3.6V)	-56.69	-56.57	-57.72
	Vmax(4.2V)	-56.57	-56.66	-56.83
Max. permitted value		-49dBm		
Measurement uncertainty		<+/-1.0dB		

Test conditions		Minimum output power in dBm		
		Minimum output power WCDMA Band VIII		
	ARFCN	Channel 9612:10562	Channel 9750:10700	Channel 9887:10837
Tnom(25 °C)	Vnom(3.8V)	-56.76	-57.33	-57.51
Tmin(-10 °C)	Vmin(3.3V)	-56.23	-57.59	-56.67
	Vmax(4.2V)	-57.31	-57.05	-56.44
Tmax(+55 °)	Vmin(3.3V)	-56.55	-56.64	-56.08
	Vmax(4.2V)	-56.28	-56.65	-56.37
Max. permitted value		-49dBm		
Measurement uncertainty		<+/-1.0dB		

Test conditions		Minimum output power in dBm		
		Minimum output power HSDPA Band VIII		
	ARFCN	Channel 9612	Channel 9750	Channel 9888
Tnom(25 °C)	Vnom(3.8V)	-56.39	-56.17	-57.75
Tmin(-10 °C)	Vmin(3.3V)	-57.42	-57.08	-56.82
	Vmax(4.2V)	-56.87	-57.74	-56.45
Tmax(+55 °)	Vmin(3.3V)	-56.72	-56.97	-57.76
	Vmax(4.2V)	-56.53	-57.32	-57.84
Max. permitted value		-49dBm		
Measurement uncertainty		<+/-1.0dB		

Test conditions		Minimum output power in dBm		
		Minimum output power HSUPA Band VIII		
	ARFCN	Channel 9613:10563	Channel 9750:10700	Channel 9887:10837
Tnom(25 °C)	Vnom(3.8V)	-56.92	-56.47	-56.79
Tmin(-10 °C)	Vmin(3.6V)	-57.6	-56.31	-56.83
	Vmax(4.2V)	-57.71	-57.73	-56.76
Tmax(+55 °)	Vmin(3.6V)	-57.25	-57.65	-57.68
	Vmax(4.2V)	-57.81	-57.87	-56.66
Max. permitted value		-49dBm		
Measurement uncertainty		<+/-1.0dB		

3.5 Receiver adjacent channel selectivity

Clause 6.4 of TS 134 121-1 V9.1.0(2010-07) applies.

RESULT: Pass

3.5.1 Definition and applicability

Adjacent Channel Selectivity (ACS) is a measure of a receiver's ability to receive a WCDMA signal at its assigned channel frequency in the presence of an adjacent channel signal at a given frequency offset from the centre frequency of the assigned channel. ACS is the ratio of the receive filter attenuation on the assigned channel frequency to the receive filter attenuation on the adjacent channel(s).

3.5.2 Conformance requirements

Test environment: normal (see section 1.6).

The frequencies to be tested are mid range as defined in TS 134 108 [3]:

- 1) Connect the SS to the UE antenna connector.
- 2) A call is set up according to the Generic call setup procedure, and RF parameters are set up according to table 4.2.6.2-1.
- 3) Enter the UE into loopback test mode and start the loopback test.

NOTE: When reference is made to test set up, call set up and loopback test mode, guidance on the applicability of these can be found in TS 134 121-1 [2], TS 134 108 [3] and TS 134 109 [4] respectively.

For the UE of power class 3 and 4, the BER shall not exceed 0,001 for the parameters specified in table 4.2.6.2-1. This test condition is equivalent to the ACS value 33 dB.

Table 4.2.6.2-1: Test parameters for adjacent channel selectivity

Parameter	Unit	Case 1	Case 2
DPCH E_c	dBm/3,84 MHz	<REFSENS> + 14 dB	<REFSENS> + 41 dB
I_{or}	dBm/3,84 MHz	<REF I_{or} > + 14 dB	<REF I_{or} > + 41 dB
I_{oac} mean power (modulated)	dBm	-52	-25
F_{uw} (offset)	MHz	+5 or -5	+5 or -5
UE transmitted mean power	dBm	20 (for Power class 3) 18 (for Power class 4)	20 (for Power class 3) 18 (for Power class 4)
NOTE 1: <REFSENS> and <REF I_{or} > as specified in TS 134 121-1 [2].			
NOTE 2: The I_{oac} (modulated) signal consists of the common channels and the 16 dedicated data channels as specified in TS 125 101 [5].			

3.5.3 Set up for testing

- 1) Set the parameters of the interference signal generator as shown in table 4.2.6.2-1 case 1.
- 2) Set the power level of UE according to the table 4.2.6.2-1 case 1 with ± 1 dB tolerance.

- 3) Measure the BER of DCH received from the UE at the SS.
- 4) Set the parameters of the interference signal generator as shown in table 4.2.6.2-1 case 2.
- 5) Set the power level of UE according to the table 4.2.6.2-1 case 2 with ± 1 dB tolerance.
- 6) Measure the BER of DCH received from the UE at the SS.

3.5.4 Test result

Band I

Test conditions		WCDMA Band 1 - Receiver adjacent channel selectivity for Power Class 3				
T	V	Case	Fuw (offset)	BER	Limit	Test Result
Tnom(25 °C)	Vnom(3.8V)	Case 1	-5MHz	0	0.001	Pass
			+5MHz	0	0.001	Pass
		Case 2	-5MHz	0	0.001	Pass
			+5MHz	0	0.001	Pass
Measurement uncertainty		<+/-0.5dB				

Band VIII

Test conditions		WCDMA Band 8 - Receiver adjacent channel selectivity for Power Class 3				
T	V	Case	Fuw (offset)	BER	Limit	Test Result
Tnom(25 °C)	Vnom(3.8V)	Case 1	-5MHz	0	0.001	Pass
			+5MHz	0	0.001	Pass
		Case 2	-5MHz	0	0.001	Pass
			+5MHz	0	0.001	Pass
Measurement uncertainty		<+/-0.5dB				

The equipment complied with the requirement of this clause.

3.6 Receiver blocking characteristics

Clause 6.5 of TS 134 121-1 V9.1.0(2010-07) applies.

RESULT: Pass

3.6.1 Definition and applicability

The blocking characteristic is a measure of the receiver's ability to receive a wanted signal at its assigned channel frequency in the presence of an unwanted interferer on frequencies other than those of the spurious response or the adjacent channels, without this unwanted input signal causing a degradation of the performance of the receiver beyond a specified limit. The blocking performance shall apply at all frequencies except those at which a spurious response occur.

3.6.2 Conformance requirements

Test environment: normal (see section 1.6).

For in-band case, the frequencies to be tested are mid range as defined in TS 134 108 [3]. For out-of-band case, frequencies to be tested are mid range as defined in TS 134 108 [3].

For narrow band case, frequencies to be tested are mid range as defined in TS 134 108 [3]:

- 1) Connect the SS to the UE antenna connector.
- 2) A call is set up according to the Generic call setup procedure, and RF parameters are set up according to tables 4.2.7.2-1, 4.2.7.2-2 and 4.2.7.2-3.
- 3) Enter the UE into loopback test mode and start the loopback test.

NOTE: When reference is made to test set up, call set up and loopback test mode, guidance on the applicability of these can be found in TS 134 121-1 [2], TS 134 108 [3] and TS 134 109 [4] respectively.

The BER shall not exceed 0,001 for the parameters specified in tables 4.2.7.2-1 and 4.2.7.2-2. For table 4.2.7.2-2 up to 24 exceptions are allowed for spurious response frequencies in each assigned frequency channel when measured using a 1 MHz step size.

Table 4.2.7.2-1: Test parameters for in-band blocking characteristics

Parameter	Unit	Level	
DPCH E_c	dBm/3,84 MHz	<REFSENS> + 3 dB	
I_{or}	dBm/3,84 MHz	<REF I_{or} > + 3 dB	
$I_{blocking}$ mean power (modulated)	dBm	-56 (for F_{uw} offset ± 10 MHz)	-44 (for F_{uw} offset ± 15 MHz)
UE transmitted mean power	dBm	20 (for Power class 3) 18 (for Power class 4)	
NOTE 1: <REFSENS> and <REF I_{or} > as specified in TS 134 121-1 [2].			
NOTE 2: The $I_{blocking}$ (modulated) signal consists of the common channels and the 16 dedicated data channels as specified in TS 125 101 [5].			

Table 4.2.7.2-2: Test parameters for out-of-band blocking characteristics

Parameter	Unit	Frequency range 1	Frequency range 2	Frequency range 3
DPCH Ec	dBm/3,84 MHz	<REFSENS> + 3 dB	<REFSENS> + 3 dB	<REFSENS> + 3 dB
I _{or}	dBm/3,84 MHz	<REFI _{or} > + 3 dB	<REFI _{or} > + 3 dB	<REFI _{or} > + 3 dB
I _{blocking} (CW)	dBm	-44	-30	-15
F _{uw} (Band I operation)	MHz	2 050 < f < 2 095 2 185 < f < 2 230	2 025 < f ≤ 2 050 2 230 ≤ f < 2 255	1 < f ≤ 2 025 2 255 ≤ f < 12 750
F _{uw} (Band III operation)	MHz	1 745 < f < 1 790 1 895 < f < 1 940	1 720 < f ≤ 1 745 1 940 ≤ f < 1 965	1 < f ≤ 1 720 1 965 ≤ f < 12 750
F _{uw} (Band VII operation)	MHz	2 570 < f < 2 605 2 705 < f < 2 750	Na 2 750 ≤ f < 2 775	1 < f ≤ 2 570 2 775 ≤ f < 12 750
F _{uw} (Band VIII operation)	MHz	865 < f < 910 975 < f < 1 020	840 < f < 865 1 020 ≤ f < 1 045	1 < f ≤ 840 1 045 ≤ f < 12 750
F _{uw} (Band XV operation)	MHz	2 570 < f < 2 585 2 705 < f < 2 750	Na 2 750 ≤ f < 2 775	1 < f ≤ 2 570 2 775 ≤ f < 12 750
F _{uw} (Band XVI operation)	MHz	Na 2 705 < f < 2 750	2 500 < f ≤ 2 570 2 750 ≤ f < 2 775	1 < f ≤ 2 500 2 775 ≤ f < 12 750
UE transmitted mean power	dBm	20 (for Power class 3) 18 (for Power class 4)		
Band I operation	For 2 095 MHz ≤ f ≤ 2 185 MHz, the appropriate in-band blocking or adjacent channel selectivity in clause 4.2.6 and table 4.2.7.2-1 shall be applied.			
Band III operation	For 1 790 MHz ≤ f ≤ 1 895 MHz, the appropriate in-band blocking or adjacent channel selectivity in clause 4.2.6 and table 4.2.7.2-1 shall be applied.			
Parameter	Unit	Frequency range 1	Frequency range 2	Frequency range 3
Band VII operation	For 2 605 MHz ≤ f ≤ 2 705 MHz, the appropriate in-band blocking or adjacent channel selectivity in clause 4.2.6 and table 4.2.7.2-1 shall be applied.			
Band VIII operation	For 910 MHz ≤ f ≤ 975 MHz, the appropriate in-band blocking or adjacent channel selectivity in clause 4.2.6 and table 4.2.7.2-1 shall be applied.			
Band XV operation	For 2 585 ≤ f ≤ 2 705 MHz, the appropriate in-band blocking or adjacent channel selectivity in clause 4.2.6 and table 4.2.7.2-1 shall be applied.			
Band XVI operation	For 2 570 ≤ f ≤ 2 705 MHz, the appropriate in-band blocking or adjacent channel selectivity in clause 4.2.6 and table 4.2.7.2-1 shall be applied.			
NOTE:	<REFSENS> and <REFI _{or} > as specified in TS 134 121-1 [2].			

Table 4.2.7.2-3: Test parameters for narrow band blocking

Parameter	Unit	Band III, VIII
DPCH Ec	dBm/3,84 MHz	<REFSENS> + 10 dB
I _{or}	dBm/3,84 MHz	<REFI _{or} > + 10 dB
I _{blocking} (GMSK)	dBm	-56
F _{uw} (offset)	MHz	2,8
UE transmitted mean power	dBm	20 (for Power class 3) 18 (for Power class 4)
NOTE 1:	<REFSENS> and <REFI _{or} > as specified in TS 134 121-1 [2].	
NOTE 2:	I _{blocking} (GMSK) is an interfering signal as defined in TS 145 004 [9]. It is a continuous GMSK modulated carrier following the structure of the GSM signals, but with all modulating bits (including the midamble period) derived directly from a random or any pseudo random data stream.	

3.6.3 Set up for testing

- 1) Set the parameters of the CW generator or the interference signal generator as shown in tables 4.2.7.2-1, 4.2.7.2-2 and 4.2.7.2-3. For table 4.2.7.2-2 the frequency step size is 1 MHz.
- 2) Set the power level of the UE according to tables 4.2.7.2-1, 4.2.7.2-2 and 4.2.7.2-3 with a ± 1 dB tolerance.
- 3) Measure the BER of DCH received from the UE at the SS.
- 4) For table 4.2.7.2-2, record the frequencies for which the BER exceeds the test requirements.

3.6.4 Test result

In-band blocking test In-band blocking test

Test conditions		WCDMA Band 1 - Receiver blocking characteristics for Power Class 3			
T	V	Parameter	Level		Unit
Tnom(25 °C)	Vnom(3.8V)	DPCH_Ec	-114		dBm/3.84MHz
		Ior	-103.7		dBm/3.84MHz
		Iblocking mean power (modulated)	-56 (for F _{uw} offse \pm 10MHz)	-44 (for F _{uw} offse \pm 15MHz)	MHz
		UE transmitted mean power	20		dBm
		BER	0	0	%
		Limit	0.1	0.1	%
		Result	Pass	Pass	

Out-of-band blocking test

Test conditions		WCDMA Band 1 – Receiver blocking characteristics for Power Class 3				
T	V	Parameter	Frequency range1	Frequency range2	Frequency range3	Unit
Tnom(25 °C)	Vnom(3.8V)	DPCH_Ec	-114	-114	-114	dBm/3.84MHz
		Ior	-103.7	-103.7	-103.7	dBm/3.84MHz
		Iblocking (cw)	-44	-30	-15	dBm
		F _{uw}	2050<f<2095 2185<f<2230	2025<f<2050 2230<f<2255	1<f<2025 2255<f<12750	MHz
		Spurious response frequency	No	No	188, 1763, 4088, 6042	MHz
		Result	Pass	Pass	Pass	

Test conditions		WCDMA Band 8 - Receiver blocking characteristics for Power Class 3			
T	V	Parameter	Level		Unit
Tnom(25 °C)	Vnom(3.8V)	DPCH_Ec	-115		dBm/3.84MHz
		Ior	-103.5		dBm/3.84MHz
		Iblocking mean power (modulated)	-56 (for F _{uw} offse ± 10MHz)	-44 (for F _{uw} offse ± 15MHz)	MHz
		UE transmitted mean power	20		dBm
		BER	0	0	%
		Limit	0.1	0.1	%
		Result	Pass	Pass	

Out-of-band blocking test

Test conditions		WCDMA Band 8 – Receiver blocking characteristics for Power Class 3				
T	V	Parameter	Frequency range1	Frequency range2	Frequency range3	Unit
Tnom(25 °C)	Vnom(3.8V)	DPCH_Ec	-115	-115	-115	dBm/3.84MHz
		Ior	-103.5	-103.5	-103.5	dBm/3.84MHz
		Iblocking (cw)	-44	-30	-15	dBm
		F _{uw}	2050<f<2095 2185<f<2230	2025<f<2050 2230<f<2255	1<f<2025 2255<f<12750	MHz
		Spurious response frequency	No	No	188, 1763, 4088, 6042	MHz
		Result	Pass	Pass	Pass	

Measurement uncertainty	
f < 15 MHz offset:	+/-1.3dB
15 MHz offset ≤ f ≤ 2,2 GHz	+/-1.0dB
2,2 GHz < f ≤ 4 GHz	+/-1.7dB
f > 4 GHz	+/-2.7dB

The equipment complied with the requirement of this clause.

3.7 Receiver spurious response

Clause 6.6 of TS 134 121-1 V9.1.0 (2010-07) applies.

RESULT: Pass

3.7.1 Definition and applicability

Spurious response is a measure of the receiver's ability to receive a wanted signal on its assigned channel frequency without exceeding a given degradation due to the presence of an unwanted CW interfering signal at any other frequency at which a response is obtained i.e. for which the out-of-band blocking limit as specified in table 4.2.7.2-2 is not met.

3.7.2 Conformance requirements

Test environment: normal (see section 1.6).

The frequencies to be tested are mid range as defined in TS 134 108 [3]:

- 1) Connect the SS to the UE antenna connector.
- 2) A call is set up according to the Generic call setup procedure, and RF parameters are set up according to table 4.2.8.2-1.
- 3) Enter the UE into loopback test mode and start the loopback test.

NOTE: When reference is made to test set up, call set up and loopback test mode, guidance on the applicability of these can be found in TS 134 121-1 [2], TS 134 108 [3] and TS 134 109 [4] respectively.

The BER shall not exceed 0,001 for the parameters specified in table 4.2.8.2-1.

Table 4.2.8.2-1: Test parameters for spurious response

Parameter	Level	Unit
DPCH E_c	$\langle \text{REFSENS} \rangle + 3 \text{ dB}$	dBm/3,84 MHz
I_{or}	$\langle \text{REFI}_{or} \rangle + 3 \text{ dB}$	dBm/3,84 MHz
$I_{\text{blocking(CW)}}$	-44	dBm
F_{uw}	Spurious response frequencies	MHz
UE transmitted mean power	20 (for Power class 3) 18 (for Power class 4)	dBm
NOTE: $\langle \text{REFSENS} \rangle$ and $\langle \text{REFI}_{or} \rangle$ as specified in TS 134 121-1 [2].		

3.7.3 Set up for testing

- 1) Set the parameter of the CW generator as shown in table 4.2.8.2-1. The spurious response frequencies are determined in step 4) of clause 5.3.6.1.2.
- 2) Set the power level of the UE according to table 4.2.8.2-1 with a ± 1 dB tolerance.
- 3) Measure the BER of DCH received from the UE at the SS.

3.7.3 Test result

Test conditions		WCDMA Band 1 - Receiver spurious response for power class 3			
T	V	Spurious response frequencies (MHz)	BER	Limit	Result
Tnom(25 °C)	Vnom(3.8V)	185	0	0.001	Pass
		1757	0	0.001	Pass
		4089	0	0.001	Pass
		6054	0	0.001	Pass

Test conditions		WCDMA Band 8 - Receiver spurious response for power class 3			
T	V	Spurious response frequencies (MHz)	BER	Limit	Result
Tnom(25 °C)	Vnom(3.8V)	185	0	0.001	Pass
		1757	0	0.001	Pass
		4089	0	0.001	Pass
		6054	0	0.001	Pass

Measurement uncertainty	
$f \leq 2,2$ GHz	+/-1.0dB
$2,2$ GHz < $f \leq 4$ GHz	+/-1.7dB
$f > 4$ GHz	+/-2.7dB

The equipment complied with the requirement of this clause.

3.8 Receiver intermodulation characteristics

Clause 6.7 of TS 134 121-1 V9.1.0 (2010-07) applies.

RESULT: Pass

3.8.1 Definition and applicability

Third and higher order mixing of the two interfering RF signals can produce an interfering signal in the band of the desired channel. Intermodulation response rejection is a measure of the capability of the receiver to receive a wanted signal on its assigned channel frequency in the presence of two or more interfering signals which have a specific frequency relationship to the wanted signal.

3.8.2 Conformance requirements

Test environment: normal (see section 1.6).

The frequencies to be tested are mid range as defined in TS 134 108 [3]:

- 1) Connect the SS to the UE antenna connector.
- 2) A call is set up according to the Generic call setup procedure as per TS 134 108 [3], and RF parameters are set up according to tables 4.2.9.2-1 and 4.2.9.2-2.
- 3) Enter the UE into loopback test mode and start the loopback test using the procedure defined in TS 134 109 [4].

NOTE: When reference is made to test set up, call set up and loopback test mode, guidance on the applicability of these can be found in TS 134 121-1 [2], TS 134 108 [3] and TS 134 109 [4].

The BER shall not exceed 0,001 for the parameters specified in table 4.2.9.2-1.

Table 4.2.9.2-1: Receive intermodulation characteristics

Parameter	Level		Unit
DPCH Ec	<REFSENS> + 3 dB		dBm/3,84 MHz
I _{or}	<REFI _{or} > + 3 dB		dBm/3,84 MHz
I _{ouw1} (CW)	-46		dBm
I _{ouw2} mean power (modulated)	-46		dBm
F _{uw1} (offset)	10	-10	MHz
F _{uw2} (offset)	20	-20	MHz
UE transmitted mean power	20 (for Power class 3) 18 (for Power class 4)		dBm
NOTE 1: I _{ouw2} (modulated) consists of the common channels and the 16 dedicated data channels as specified in TS 125 101 [5].			
NOTE 2: <REFSENS> and <REFI _{or} > as specified in TS 134 121-1 [2].			

3.8.3 Set up for testing

- 1) Set the parameters of the CW generator and interference generator as shown in tables 4.2.9.2-1 and 4.2.9.2-2.
- 2) Set the power level of the UE according to tables 4.2.9.2-1 and 4.2.9.2-2 with a ± 1 dB tolerance.
- 3) Measure the BER of DCH received from the UE at the SS.

3.8.4 Test result

Test conditions		WCDMA Band I – intermodulation characteristics for Power Class 3			
T	V	Channel	Level		Unit
Tnom(25 °C)	Vnom(3.8V)	DPCH_Ec	-114		dBm/3.84MHz
		\hat{b}_r	-103.7		dBm/3.84MHz
		Iouw1 (CW)	-46		dBm
		Iouw2 (Modulated)	-46		dBm/3.84MHz
		Fuw1 (offset)	10	-10	MHz
		Fuw2 (offset)	20	-20	MHz
		UE transmitted mean power	20		dBm
		BER	0	0	%
		Limit	0.1	0.1	%
		Result	Pass	Pass	
Measurement uncertainty		<+/-1.3dB			

Test conditions		WCDMA Band VIII – intermodulation characteristics for Power Class 3			
T	V	Channel	Level		Unit
Tnom(25 °C)	Vnom(3.8V)	DPCH_Ec	-118		dBm/3.84MHz
		\hat{b}_r	-103.8		dBm/3.84MHz
		Iouw1 (CW)	-46		dBm
		Iouw2 (Modulated)	-46		dBm/3.84MHz
		Fuw1 (offset)	10	-10	MHz
		Fuw2 (offset)	20	-20	MHz
		UE transmitted mean power	20		dBm
		BER	0	0	%
		Limit	0.1	0.1	%
		Result	Pass	Pass	
Measurement uncertainty		<+/-1.3dB			

The equipment complied with the requirement of this clause

3.9 Receiver spurious emissions

Clause 6.8 of TS 134 121-1 V9.1.0 (2010-07) applies.

RESULT: Pass

3.9.1 Definition and applicability

The spurious emissions power is the power of emissions, generated or amplified in a receiver, which appear at the UE antenna connector. The requirements in UE transmit bands are valid in URA_PCH, Cell_PCH and idle state.

3.9.2 Conformance requirements

Test environment: normal (see section 1.6).

The frequencies to be tested are mid range as defined in TS 134 108 [3]:

- 1) Connect a spectrum analyser (or other suitable test equipment) to the UE antenna connector.
- 2) UE shall be in CELL_FACH state.
- 3) The UE shall be setup such that UE will not transmit during the measurement. (For guidance see TS 134 121-1 [2]).

The power of any narrow band CW spurious emission shall not exceed the maximum level specified in tables 4.2.10.2-1 and 4.2.10.2-2.

Table 4.2.10.2-1: General receiver spurious emission requirements

Frequency band	Measurement bandwidth	Maximum level
$30 \text{ MHz} \leq f < 1 \text{ GHz}$	100 kHz	-57 dBm
$1 \text{ GHz} \leq f \leq 12,75 \text{ GHz}$	1 MHz	-47 dBm

Table 4.2.10.2-2: Additional receiver spurious emission requirements

Band	Frequency Range	Measurement Bandwidth	Maximum level
I	$791 \text{ MHz} \leq f \leq 821 \text{ MHz}$	3,84 MHz	-60 dBm
	$921 \text{ MHz} \leq f < 925 \text{ MHz}$	100 kHz	-60 dBm (see note)
	$925 \text{ MHz} \leq f \leq 935 \text{ MHz}$	100 kHz	-67 dBm (see note)
	$935 \text{ MHz} < f \leq 960 \text{ MHz}$	100 kHz	-79 dBm (see note)
	$1\ 805 \text{ MHz} \leq f \leq 1\ 880 \text{ MHz}$	100 kHz	-71 dBm (see note)
	$1\ 920 \text{ MHz} \leq f \leq 1\ 980 \text{ MHz}$	3,84 MHz	-60 dBm
	$2\ 110 \text{ MHz} \leq f \leq 2\ 170 \text{ MHz}$	3,84 MHz	-60 dBm
	$2\ 585 \text{ MHz} \leq f \leq 2\ 690 \text{ MHz}$	3,84 MHz	-60 dBm
III	$791 \text{ MHz} \leq f \leq 821 \text{ MHz}$	3,84 MHz	-60 dBm
	$921 \text{ MHz} \leq f < 925 \text{ MHz}$	100 kHz	-60 dBm (see note)
	$925 \text{ MHz} \leq f \leq 935 \text{ MHz}$	100 kHz	-67 dBm (see note)
	$935 \text{ MHz} < f \leq 960 \text{ MHz}$	100 kHz	-79 dBm (see note)
	$1\ 710 \text{ MHz} \leq f \leq 1\ 785 \text{ MHz}$	3,84 MHz	-60 dBm
	$1\ 805 \text{ MHz} \leq f \leq 1\ 880 \text{ MHz}$	3,84 MHz	-60 dBm
	$2\ 110 \text{ MHz} \leq f \leq 2\ 170 \text{ MHz}$	3,84 MHz	-60 dBm

Band	Frequency Range	Measurement Bandwidth	Maximum level
	2 585 MHz ≤ f ≤ 2 690 MHz	3,84 MHz	-60 dBm
VII	791 MHz ≤ f ≤ 821 MHz	3,84 MHz	-60 dBm
	921 MHz ≤ f < 925 MHz	100 kHz	-60 dBm (see note)
	925 MHz ≤ f ≤ 935 MHz	100 kHz	-67 dBm (see note)
	935 MHz < f ≤ 960 MHz	100 kHz	-79 dBm (see note)
	1 805 MHz ≤ f ≤ 1 880 MHz	100 kHz	-71 dBm (see note)
	2 110 MHz ≤ f ≤ 2 170 MHz	3,84 MHz	-60 dBm
	2 500 MHz ≤ f ≤ 2 570 MHz	3,84 MHz	-60 dBm
	2 620 MHz ≤ f ≤ 2 690 MHz	3,84 MHz	-60 dBm
VIII	791 MHz ≤ f < 821 MHz	3,84 MHz	-60 dBm
	880 MHz ≤ f ≤ 915 MHz	3,84 MHz	-60 dBm
	921 MHz ≤ f < 925 MHz	100 kHz	-60 dBm (see note)
	925 MHz ≤ f ≤ 935 MHz	100 kHz 3,84 MHz	-67 dBm (see note) -60 dBm
	935 MHz < f ≤ 960 MHz	100 kHz	-79 dBm (see note)
	1 805 MHz < f ≤ 1 880 MHz	3,84 MHz	-60 dBm
	2 110 MHz ≤ f ≤ 2 170 MHz	3,84 MHz	-60 dBm
	2 585 MHz ≤ f ≤ 2 690 MHz	3,84 MHz	-60 dBm
XV	791 MHz ≤ f < 821 MHz	3,84 MHz	-60 dBm
	921 MHz ≤ f < 925 MHz	100 kHz	-60 dBm (see note)
	925 MHz ≤ f < 935 MHz	100 kHz 3,84 MHz	-67 dBm (see note) -60 dBm
	935 MHz ≤ f ≤ 960 MHz	100 kHz	-79 dBm (see note)
	1 805 MHz ≤ f ≤ 1 880 MHz	100 kHz	-71 dBm (see note)
	1 900 MHz ≤ f ≤ 1 920 MHz	3,84 MHz	-60 dBm
	2 110 MHz ≤ f ≤ 2 170 MHz	3,84 MHz	-60 dBm
	2 585 MHz ≤ f ≤ 2 690 MHz	3,84 MHz	-60 dBm
XVI	791 MHz ≤ f < 821 MHz	3,84 MHz	-60 dBm
	921 MHz ≤ f < 925 MHz	100 kHz	-60 dBm (see note)
	925 MHz ≤ f < 935 MHz	100 kHz 3,84 MHz	-67 dBm (see note) -60 dBm
	935 MHz ≤ f ≤ 960 MHz	100 kHz	-79 dBm (see note)
	1 805 MHz ≤ f ≤ 1 880 MHz	100 kHz	-71 dBm (see note)
	2 010 MHz ≤ f ≤ 2 025 MHz	3,84 MHz	-60 dBm
	2 110 MHz ≤ f ≤ 2 170 MHz	3,84 MHz	-60 dBm
	2 585 MHz ≤ f ≤ 2 690 MHz	3,84 MHz	-60 dBm
XX	791 MHz ≤ f < 821 MHz	3,84 MHz	-60 dBm
	832 MHz ≤ f ≤ 862 MHz	3,84 MHz	-60 dBm
	921 MHz ≤ f < 925 MHz	100 kHz	-60 dBm (see note)
	925 MHz ≤ f ≤ 935 MHz	100 kHz 3,84 MHz	-67 dBm (see note) -60 dBm
	935 MHz < f ≤ 960 MHz	100 kHz	-79 dBm (see note)
	1 805 MHz ≤ f ≤ 1 880 MHz	3,84 MHz	-60 dBm
	2 110 MHz ≤ f ≤ 2 170 MHz	3,84 MHz	-60 dBm
	2 585 MHz ≤ f ≤ 2 690 MHz	3,84 MHz	-60 dBm
XXII	791 MHz ≤ f < 821 MHz	3,84 MHz	-60 dBm
	921 MHz ≤ f < 925 MHz	100 kHz	-60 dBm (see note)
	925 MHz ≤ f ≤ 935 MHz	100 kHz 3,84 MHz	-67 dBm (see note 1) -60 dBm
	935 MHz < f ≤ 960 MHz	100 kHz	-79 dBm (see note)
	1 805 MHz ≤ f ≤ 1 880 MHz	3,84 MHz	-60 dBm
	2 110 MHz ≤ f ≤ 2 170 MHz	3,84 MHz	-60 dBm
	2 585 MHz ≤ f ≤ 2 690 MHz	3,84 MHz	-60 dBm
	3 410 MHz ≤ f ≤ 3 490 MHz	3,84 MHz	-60 dBm
3 510 MHz ≤ f ≤ 3 590 MHz	3,84 MHz	-60 dBm	
3 600 MHz ≤ f ≤ 3 800 MHz	3,84 MHz	-50 dBm	
NOTE:	The measurements are made on frequencies which are integer multiples of 200 kHz. As exceptions, up to five measurements with a level up to the applicable requirements defined in table 4.2.10.2-1 are permitted for each UARFCN used in the measurement.		

3.9.3 Set up for testing

Sweep the spectrum analyser (or other suitable test equipment) over a frequency range from 30 MHz to 12,75 GHz and measure the average power of the spurious emissions.

3.9.4 Test result

For WCDMA Band I

Measurement frequency range	Max. spurious emission frequency (MHz)	Measured value (dBm)	Limit (dBm)	Result
Low Channel 9613:10563				
30MHz~791MHz	505.92	-70.26	-57	Pass
791MHz~821MHz	802.78	-71.73	-60	Pass
821MHz ~921MHz	898.67	-66.75	-57	Pass
921MHz~925MHz	922.2	-68.69	-60	Pass
925MHz~935MHz	933.88	-73.47	-67	Pass
935MHz~960MHz	945.12	-83.88	-79	Pass
960MHz~1000MHz	989.46	-67.6	-57	Pass
1000MHz~1805MHz	1628.44	-57.45	-47	Pass
1805MHz~1880MHz	1817.97	-65.47	-60	Pass
1880MHz~1920MHz	1912.3	-69.62	-47	Pass
1920MHz~1980MHz	1950.98	-67.48	-60	Pass
1980MHz~2110MHz	2010.58	-69.87	-47	Pass
2110MHz~2170MHz	2147.08	-68.94	-60	Pass
2170MHz~2585MHz	2409.29	-68.4	-47	Pass
2585MHz~2690MHz	2628.62	-74.39	-60	Pass
2690MHz ~12.75GHz	5778.97	-68.29	-47	Pass
Middle Channel 9750:10700				
30MHz~791MHz	644.65	-71.81	-57	Pass
791MHz~821MHz	802.71	-72.67	-60	Pass
821MHz ~921MHz	865.89	-68.17	-57	Pass
921MHz~925MHz	922.62	-69.04	-60	Pass
925MHz~935MHz	932.05	-73.87	-67	Pass
935MHz~960MHz	951.23	-84.62	-79	Pass
960MHz~1000MHz	983.44	-67.82	-57	Pass
1000MHz~1805MHz	1483.36	-56.09	-47	Pass
1805MHz~1880MHz	1858.62	-67.91	-60	Pass
1880MHz~1920MHz	1911.77	-67.04	-47	Pass
1920MHz~1980MHz	1959.24	-67.21	-60	Pass
1980MHz~2110MHz	2081.9	-67.4	-47	Pass

2110MHz~2170MHz	2141.46	-68.17	-60	Pass
2170MHz~2585MHz	2299.35	-67.88	-47	Pass
2585MHz~2690MHz	2606.23	-70.6	-60	Pass
2690MHz ~12.75GHz	5780.03	-65.35	-47	Pass
High Channel 9887:10837				
30MHz~791MHz	437.17	-72.3	-57	Pass
791MHz~821MHz	804.25	-73.37	-60	Pass
821MHz ~921MHz	882.6	-69.66	-57	Pass
921MHz~925MHz	922.64	-68.75	-60	Pass
925MHz~935MHz	932.73	-72.73	-67	Pass
935MHz~960MHz	948.26	-82.84	-79	Pass
960MHz~1000MHz	975.67	-66.06	-57	Pass
1000MHz~1805MHz	1632.54	-56.68	-47	Pass
1805MHz~1880MHz	1843.84	-67.42	-60	Pass
1880MHz~1920MHz	1896.24	-66.45	-47	Pass
1920MHz~1980MHz	1961.73	-65.59	-60	Pass
1980MHz~2110MHz	2074.3	-65.44	-47	Pass
2110MHz~2170MHz	2149.66	-65.06	-60	Pass
2170MHz~2585MHz	2272.16	-67.15	-47	Pass
2585MHz~2690MHz	2591.89	-70.54	-60	Pass
2690MHz ~12.75GHz	6388.72	-69.23	-47	Pass

For WCDMA Band VIII

Measurement frequency range	Max. spurious emission frequency (MHz)	Measured value (dBm)	Limit (dBm)	Result
Low Channel 2712:2937				
30MHz~791MHz	671.48	-70.15	-57	Pass
791MHz~880MHz	860.24	-71.13	-60	Pass
880MHz~915MHz	864.49	-69.67	-60	Pass
915MHz~921MHz	919.93	-66.65	-57	Pass
921MHz~925MHz	923.83	-71.23	-60	Pass
925MHz~935MHz	934.77	-82.14	-67	Pass
935MHz ~960MHz	944.92	-84.57	-79	Pass
960MHz~1000MHz	988.59	-64.75	-57	Pass
1000MHz~1805MHz	1590.2	-62.12	-47	Pass
1805MHz~1880MHz	1866.7	-70.78	-60	Pass
1880MHz~2110MHz	1953.11	-57.38	-47	Pass
2110MHz~2170MHz	2132.18	-67.56	-60	Pass
2170MHz~2585MHz	2360.16	-58.76	-47	Pass
2585MHz~2690MHz	2599.98	-71.14	-60	Pass
2690MHz ~12.75GHz	5780.79	-68.8	-47	Pass
Middle Channel 2788:3013				
30MHz~791MHz	418.3	-71.06	-57	Pass
791MHz~880MHz	867.15	-70.82	-60	Pass
880MHz~915MHz	908.56	-67.88	-60	Pass
915MHz~921MHz	919.03	-66.37	-57	Pass
921MHz~925MHz	923.67	-75.49	-60	Pass
925MHz~935MHz	928.62	-84.72	-67	Pass
935MHz ~960MHz	941.18	-85.74	-79	Pass
960MHz~1000MHz	981.89	-67.14	-57	Pass
1000MHz~1805MHz	1655.59	-59.39	-47	Pass
1805MHz~1880MHz	1864.31	-74.94	-60	Pass
1880MHz~2110MHz	1982.05	-59.54	-47	Pass
2110MHz~2170MHz	2147.95	-68.02	-60	Pass
2170MHz~2585MHz	2215.66	-61.86	-47	Pass
2585MHz~2690MHz	2586.76	-71.17	-60	Pass
2690MHz ~12.75GHz	5778.27	-66.69	-47	Pass
High Channel 2863:3088				
30MHz~791MHz	631.54	-69.81	-57	Pass
791MHz~880MHz	842.14	-71.07	-60	Pass
880MHz~915MHz	878.56	-66.44	-60	Pass
915MHz~921MHz	918.58	-67.51	-57	Pass
921MHz~925MHz	924.25	-72.08	-60	Pass
925MHz~935MHz	931.25	-83.07	-67	Pass
935MHz ~960MHz	944	-86.38	-79	Pass

960MHz~1000MHz	997.62	-67.23	-57	Pass
1000MHz~1805MHz	1647.34	-60.49	-47	Pass
1805MHz~1880MHz	1849.45	-73.65	-60	Pass
1880MHz~2110MHz	1954.48	-55.06	-47	Pass
2110MHz~2170MHz	2140.73	-67.35	-60	Pass
2170MHz~2585MHz	2251.77	-60.82	-47	Pass
2585MHz~2690MHz	2588.66	-70.84	-60	Pass
2690MHz ~12.75GHz	5779.73	-68.22	-47	Pass

Measurement uncertainty	
$f \leq 2,2 \text{ GHz}$	+/-2.0dB
$2,2 \text{ GHz} < f \leq 4 \text{ GHz}$	+/-2.0dB
$f > 4 \text{ GHz}$	+/-4.0dB
For UE receive band (-78 dBm)	+/-3.0dB

3.10 OUT-OF-SYNCHRONIZATION HANDLING OF OUTPUT POWER

Clause 4.2.11 of EN 301 908 V6.2.1 (2013-10) applies.

RESULT: Pass

3.10.1 Definition and applicability

The UE shall monitor the DPCCH quality in order to detect a loss of the signal on Layer 1. The threshold Q_{out} specifies at what DPCCH quality levels the UE shall shut its power off. The threshold is not defined explicitly, but is defined by the conditions under which the UE shall shut its transmitter off, as stated in this clause.

The DPCCH quality shall be monitored in the UE and compared to the threshold Q_{out} for the purpose of monitoring synchronization. The threshold Q_{out} should correspond to a level of DPCCH quality where no reliable detection of the TPC commands transmitted on the downlink DPCCH can be made. This can be at a TPC command error ratio level of e.g. 20 %.

3.10.2 Conformance requirements

Test environment: normal (see section 1.6).

The frequencies to be tested are mid range as defined in TS 134 108 [3]:

- 1) Connect the SS to the UE antenna connector.
- 2) A call is set up according to the Generic call setup procedure, with the following exception according to table 5.3.10.1.1-1 for information elements in System Information Block type 1 found in TS 134 108 [3].
UE Timers and constants in connected mode

Table 5.3.10.1.1-1: System Information Block type 1 message

Information Element	Value
UE Timers and constants in connected mode	
- T313	15 s
- N313	200

- 3) RF parameters are set up according to table 4.2.11.2-1 with $DPCCH_{Ec/Ior}$ ratio level at -16,6 dB.

- 4) Enter the UE into loopback test mode and start the loopback test.

NOTE: When reference is made to test set up, call set up and loopback test mode, guidance on the applicability of these can be found in TS 134 121-1 [2], TS 134 108 [3] and TS 134 109 [4] respectively.

When the UE estimates the DPCCH quality over the last 160 ms period to be worse than a threshold Q_{out} , the UE shall shut its transmitter off within 40 ms.

The quality level at the thresholds Q_{out} correspond to different signal levels depending on the downlink conditions DCH parameters. For the conditions in table 4.2.11.2-1, a signal with the quality at the level Q_{out} can be generated by a $DPCCH_{Ec/Ior}$ ratio of -25 dB. The DL reference measurement channel 12,2 kbit/s is specified in TS 134 121-1 [2] and with static propagation conditions. The downlink physical channels, other than those specified in table 4.2.11.2-1, are as specified in TS 134 121-1 [2].

Table 4.2.11.2-1: DCH parameters for test of out-of-synchronization handling

Parameter	Value	Unit
I_{or}/I_{oc}	-1	dB
I_{oc}	-60	dBm/3,84 MHz
$\frac{DPDCH_{Ec}}{I_{or}}$	See figure 4.2.11.2-1: Before point A -16,6 After point A not defined	dB
$\frac{DPCCH_{Ec}}{I_{or}}$	See figure 4.2.11.2-1	dB
Information Data Rate	12,2	kbit/s

3.10.3 Set up for testing

- 1) The SS sends continuously up power control commands to the UE until the UE transmitter power reach maximum level.
- 2) The SS controls the DPCCH_Ec/I_{or} ratio level to -21,6 dB.
- 3) The SS controls the DPCCH_Ec/I_{or} ratio level to -28,4 dB. The SS waits 200 ms and then verifies that the UE transmitter has been switched off.
- 4) The SS monitors the UE transmitted power for 5 s and verifies that the UE transmitter is not switched on during this time.

3.10.4 Test result

Test conditions		WCDMA Band 1 – Out-of-synchronization handling of output power			
T	V	Test Item	Test data	Limit	Result
T _{nom} (25 °C)	V _{nom} (30V)	Switch off power	-77.25	-55dBm	Pass
Measurement uncertainty		+/-0.4dB			

Test conditions		WCDMA Band 8 - Out-of-synchronization handling of output power			
T	V	Test Item	Test data	Limit	Result
T _{nom} (25 °C)	V _{nom} (30V)	Switch off power	-72.19	-55dBm	Pass
Measurement uncertainty		+/-0.4dB			

The equipment complied with the requirement of this clause.

3.11 Transmitter adjacent channel power leakage ratio

Clause 5.10 of ETSI TS 134 121-1 V9.1.0 (2010-07) applies.

RESULT: Pass

3.11.1 Definition and applicability

Adjacent Channel Leakage power Ratio (ACLR) is the ratio of the RRC filtered mean power centred on the assigned channel frequency to the RRC filtered mean power centred on an adjacent channel frequency.

3.11.2 Conformance requirements

Test environment: normal, TL/VL, TL/VH, TH/VL, TH/VH (see section 1.6).

The frequencies to be tested are mid range as defined in TS 134 108 [3]:

- 1) Connect the SS to the UE antenna connector.
- 2) A call is set up according to the Generic call setup procedure.
- 3) Enter the UE into loopback test mode and start the loopback test.

NOTE: When reference is made to test set up, call set up and loopback test mode, guidance on the applicability of these can be found in TS 134 121-1 [2], TS 134 108 [3] and TS 134 109 [4] respectively.

If the adjacent channel power is greater than -50dBm then the ACLR shall be higher than the value specified in table 4.2.12.2-1. The requirements are applicable for all for the values of β_c , β_d , β_{hs} , β_{ec} and β_{ed} defined in TS 125 214 [8].

Table 4.2.12.2-1: UE ACLR

Power Class	Adjacent channel frequency relative to assigned channel frequency	ACLR limit
3	+5 MHz or -5 MHz	32,2 dB
3	+10 MHz or -10 MHz	42,2 dB
4	+5 MHz or -5 MHz	32,2 dB
4	+10 MHz or -10 MHz	42,2 dB
NOTE 1: The requirement shall still be met in the presence of switching transients.		
NOTE 2: The ACLR requirements reflect what can be achieved with present state of the art technology.		
NOTE 3: Requirement on the UE shall be reconsidered when the state of the art technology progresses.		

3.11.3 Set up for testing

- 1) The SS sends continuously Up power control commands to the UE until the UE transmitter power reach maximum level.
- 2) Measure the RRC filtered mean power.
- 3) Measure the RRC filtered mean power of the first adjacent channels and the second adjacent channels.
- 4) Calculate the ratio of the power between the values measured in 2) and 3) above.

3.11.4 Test result

Band I

Test conditions		Transmitter adjacent channel power leakage ratio for Power Class 3					
T	V	ACF	Low Channel/dBc	Middle Channel/dBc	High Channel/dBc	Limit dBc	Result
Tnom(25 °C)	Vnom(3.8V)	+5MHz	52.45	49.48	50.95	32.2	Pass
		-5MHz	51.26	52.35	48.51	32.2	Pass
		+10MHz	50.64	49.52	51.45	42.2	Pass
		-10MHz	48.86	52.63	51.28	42.2	Pass
Tmin(-10 °C)	Vmin(3.3V)	+5MHz	50.03	49.37	50.22	32.2	Pass
		-5MHz	49.23	50.18	50.07	32.2	Pass
		+10MHz	49.34	50.27	51.95	42.2	Pass
		-10MHz	52.25	51.45	49.08	42.2	Pass
	Vmax(4.2V)	+5MHz	49.09	48.49	51.41	32.2	Pass
		-5MHz	52.29	49.32	49.9	32.2	Pass
		+10MHz	52.54	48.09	52.69	42.2	Pass
		-10MHz	49.64	50.12	52.15	42.2	Pass
Tmax(+55 °C)	Vmin(3.3V)	+5MHz	49.39	50.1	50.75	32.2	Pass
		-5MHz	51.8	48.24	51.31	32.2	Pass
		+10MHz	52.6	51.12	50.09	42.2	Pass
		-10MHz	49.36	48.65	48.61	42.2	Pass
	Vmax(4.2V)	+5MHz	50.42	51.74	52.23	32.2	Pass
		-5MHz	49.13	50.76	49.56	32.2	Pass
		+10MHz	48.69	48.67	52.37	42.2	Pass
		-10MHz	52.41	50.86	50.78	42.2	Pass
Measurement uncertainty		+/-0.8dB					

Band VIII

Test conditions		Transmitter adjacent channel power leakage ratio for Power Class 3					
T	V	ACF	Low Channel/dBc	Middle Channel/dBc	High Channel/dBc	Limit dBc	Result
Tnom(25 °C)	Vnom(3.8V)	+5MHz	50.45	52.92	51.52	32.2	Pass
		-5MHz	51.13	51.7	50.33	32.2	Pass
		+10MHz	51.94	50.99	50.33	42.2	Pass
		-10MHz	50.1	52.73	50.29	42.2	Pass
Tmin(-10 °C)	Vmin(3.3V)	+5MHz	49.22	49.57	49.66	32.2	Pass
		-5MHz	48.17	51.71	51.72	32.2	Pass
		+10MHz	50.9	50.2	52.55	42.2	Pass
		-10MHz	49.4	50.2	49.56	42.2	Pass
	Vmax(4.2V)	+5MHz	50.98	51.92	50.26	32.2	Pass
		-5MHz	48.46	51.25	51.83	32.2	Pass
		+10MHz	48.17	50.6	50.96	42.2	Pass
		-10MHz	48.66	50.83	52.2	42.2	Pass
Tmax(+55 °C)	Vmin(3.3V)	+5MHz	48.49	51.82	50.5	32.2	Pass
		-5MHz	51.95	52.48	51.98	32.2	Pass
		+10MHz	48	49.31	49.45	42.2	Pass
		-10MHz	48.06	52.58	50.19	42.2	Pass
	Vmax(4.2V)	+5MHz	51.83	48.85	52.43	32.2	Pass
		-5MHz	48.88	48.92	49.37	32.2	Pass
		+10MHz	49.79	49.85	48.85	42.2	Pass
		-10MHz	49.05	48.68	48.36	42.2	Pass
Measurement uncertainty		+/-0.8dB					

The equipment complied with the requirement of this clause.

3.12 Radiated emissions

Clause 4.2.2.1 of ETSI EN 301 908-1 V6.2.1 (2013-10) applies.

RESULT: Pass

3.12.1 Definition and applicability

This test assesses the ability of radio communications equipment and ancillary equipment to limit unwanted emissions from the enclosure port.

This test is applicable to radio communications equipment and ancillary equipment.

This test shall be performed on the radio communications equipment and/or a representative configuration of the ancillary equipment.

3.12.2 Conformance requirements

The frequency boundary and reference bandwidths for the detailed transitions of the limits between the requirements for out of band emissions and spurious emissions are based on ITU-R Recommendations SM.329-10 [3] and SM.1539-1 [4].

The requirements shown in the following table are only applicable for frequencies in the spurious domain.

Frequency	Minimum requirement (e.r.p./ reference bandwidth idle mode)	Minimum requirement (e.r.p./ reference bandwidth traffic mode)	Applicability
$30 \text{ MHz} \leq f < 1\,000 \text{ MHz}$	-57 dBm/100 kHz	-36 dBm/100 kHz	All
$1 \text{ GHz} \leq f < 12,75 \text{ GHz}$	-47 dBm/1 MHz	-30 dBm/1 MHz	All
$f_c - 2,5 \times 5 \text{ MHz} < f < f_c + 2,5 \times 5 \text{ MHz}$		Not defined	UTRA FDD, UTRA TDD, 3,84 Mcps option, cdma2000, spreading rate 3
$f_c - 2,5 \times BW_{\text{Channel}} \text{ MHz} < f < f_c + 2,5 \times BW_{\text{Channel}} \text{ MHz}$		Not defined	E-UTRA FDD, E-UTRA TDD, UMB
$f_c - 2,5 \times 10 \text{ MHz} < f < f_c + 2,5 \times 10 \text{ MHz}$		Not defined	UTRA TDD, 7,68 Mcps option
$f_c - 4 \text{ MHz} < f < f_c + 4 \text{ MHz}$		Not defined	UTRA TDD, 1,28 Mcps option cdma2000, spreading rate 1
$f_c - 500 \text{ kHz} < f < f_c + 500 \text{ kHz}$		Not defined	UWC 136, 200 kHz option
$f_c - 250 \text{ kHz} < f < f_c + 250 \text{ kHz}$		Not defined	UWC 136, 30 kHz option

NOTE: f_c is the UE transmit centre frequency.

3.12.3 Set up for testing

Whenever possible the test site should be a fully anechoic chamber simulating the free-space conditions. EUT shall be placed on a non-conducting support. Mean power of any spurious components shall be detected by the test antenna and measuring receiver (e.g. a spectrum analyser).

At each frequency at which a component is detected, the EUT shall be rotated to obtain maximum response, and the effective radiated power (e.r.p.) of that component determined by a substitution measurement, which shall be the reference method. The measurement shall be repeated with the test antenna in the orthogonal polarization plane.

NOTE: Effective radiated power (e.r.p.) refers to the radiation of a half wave tuned dipole instead of an isotropic antenna. There is a constant difference of 2,15 dB between e.i.r.p. and e.r.p.

$e.r.p. (dBm) = e.i.r.p. (dBm) - 2,15$ (ITU-R Recommendation SM.329-10 [3], annex 1).

Measurements are made with a tuned dipole antenna or a reference antenna with a known gain referenced to an isotropic antenna. Unless otherwise stated, all measurements are done as mean power (RMS).

If a different test site or method is used, this shall be stated in the test report. The results shall be converted to the reference method values and the validity of the conversion shall be demonstrated.

3.12.4 Test result

Traffic Mode

Frequency range	Max. measure value (dBm)	Test result
30MHz to 1GHz	<-36	Pass
1GHz to 12.75GHz	<-30	Pass

Idle Mode

Frequency range	Max. measure value (dBm)	Test result
30MHz to 1GHz	<-57	Pass
1GHz to 12.75GHz	<-47	Pass

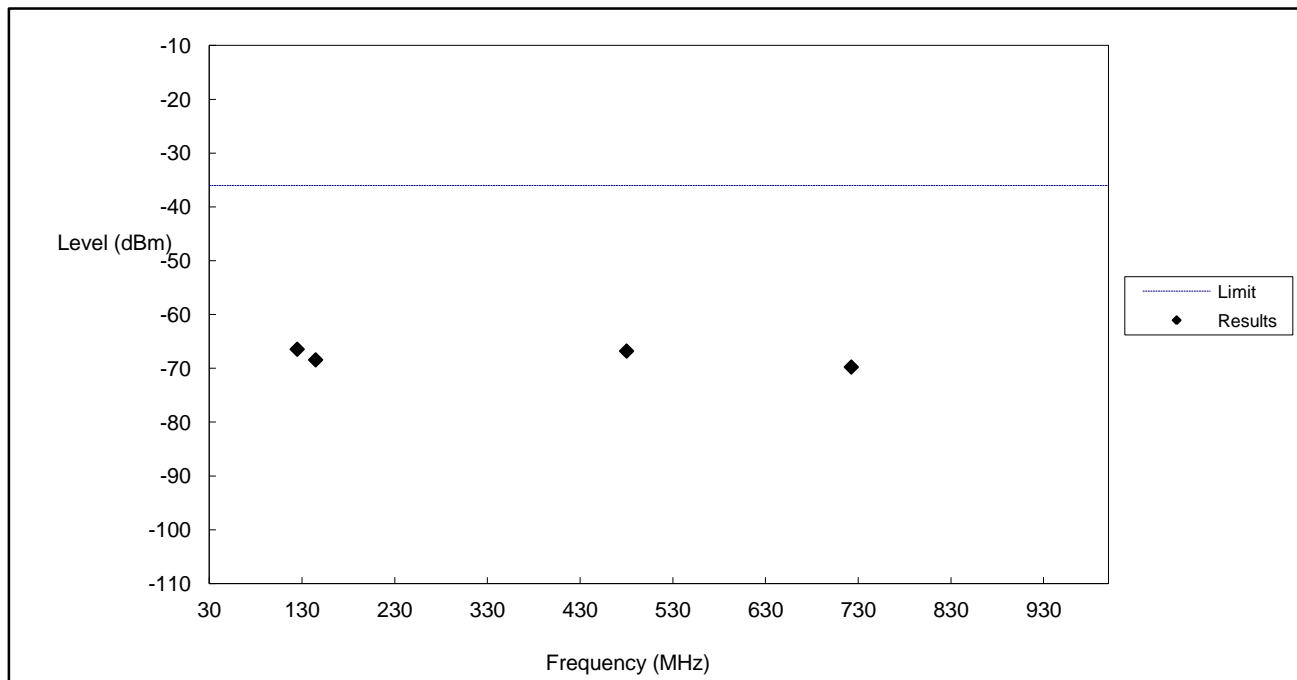
Measurement uncertainty	between 30 MHz and 180 MHz	+/-5.0dB
	between 180 MHz and 12,75 GHz	+/-3.0dB

Please refer to the following test plots and data

Radiated Spurious Emissions(30MHz-1GHz)

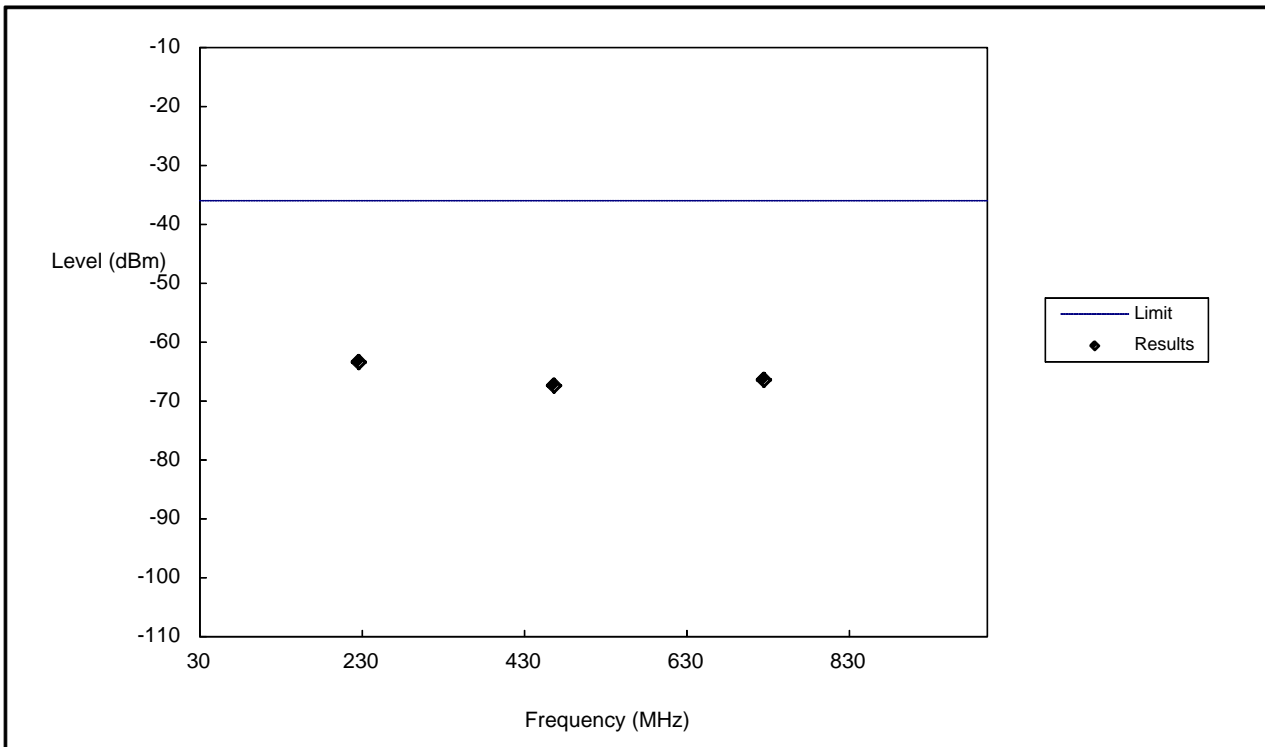
Test Mode: Traffic(Band 1-worst case)

Horizontal:



No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	124.7685	-66.45	-36.00	-30.45	RMS
2	144.6760	-68.43	-36.00	-32.43	RMS
3	480.1230	-66.79	-36.00	-30.79	RMS
4	722.5470	-69.76	-36.00	-33.76	RMS

Vertical:

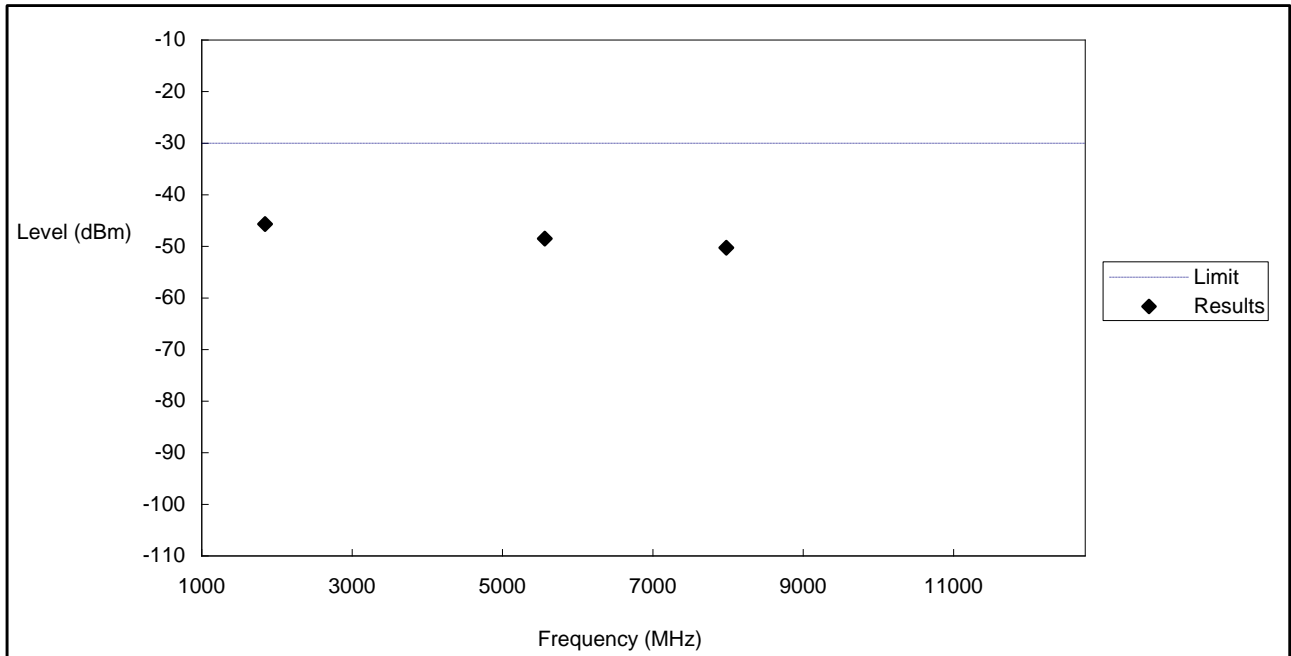


No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	225.7680	-63.39	-36.00	-27.39	RMS
2	466.3450	-67.37	-36.00	-31.37	RMS
3	724.7650	-66.39	-36.00	-30.39	RMS

Radiated Spurious Emissions(above 1GHz)

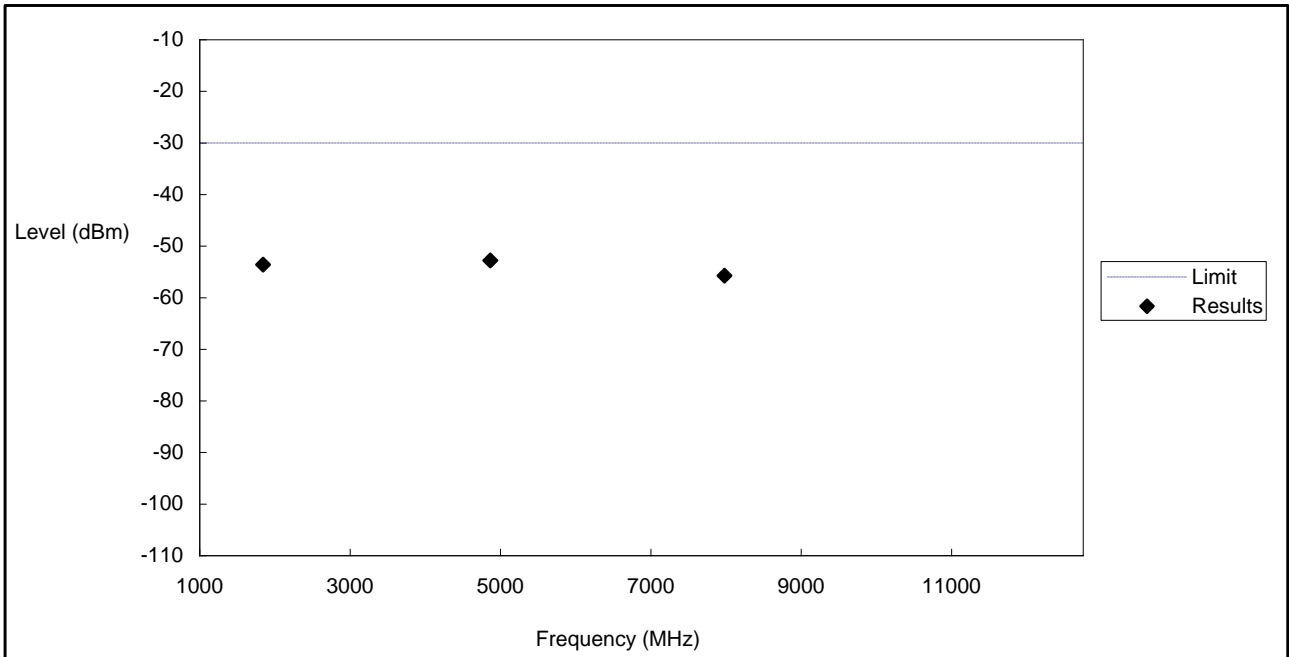
Test Mode: Traffic(Band 1-worst case)

Horizontal:



No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1842.400	-45.68	-30.00	-15.68	RMS
2	5564.627	-48.51	-30.00	-18.51	RMS
3	7977.500	-50.27	-30.00	-20.27	RMS

Vertical:

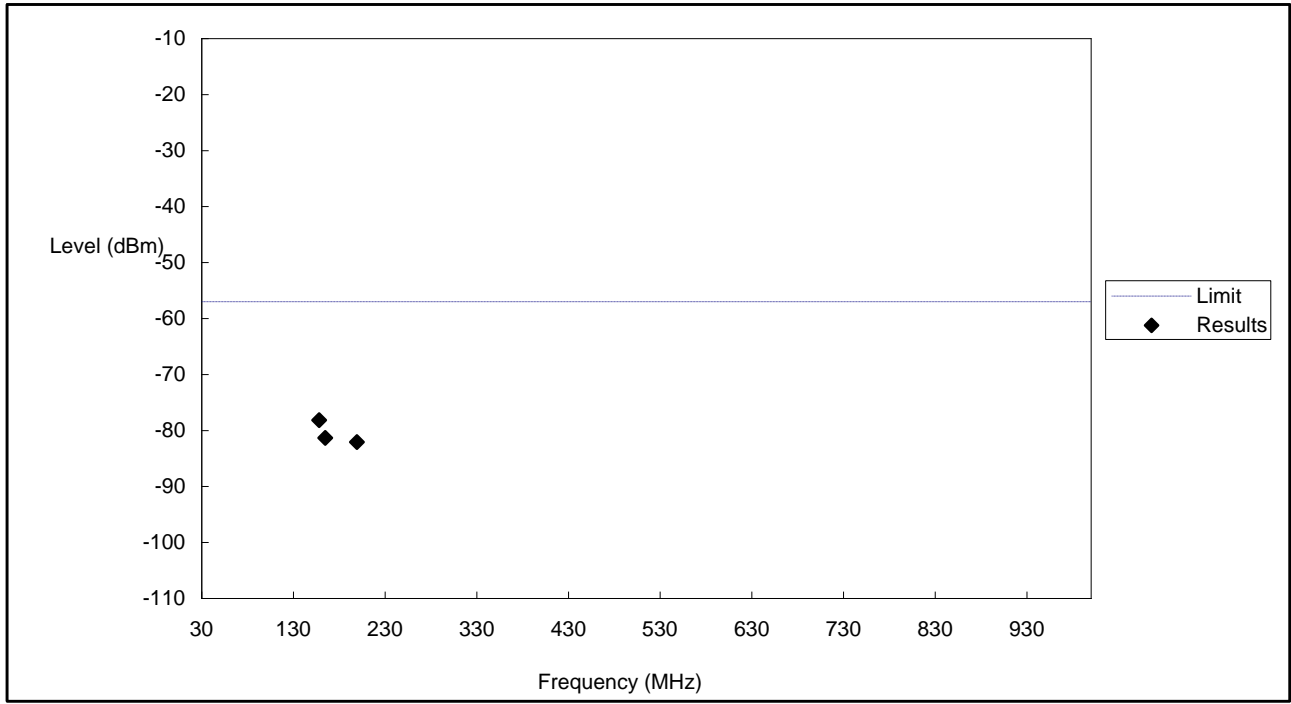


No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	2542.643	-56.17	-30.00	-26.17	RMS
2	3564.854	-49.57	-30.00	-19.57	RMS
3	8642.542	-51.57	-30.00	-21.57	RMS

Radiated Spurious Emissions(30MHz-1GHz)

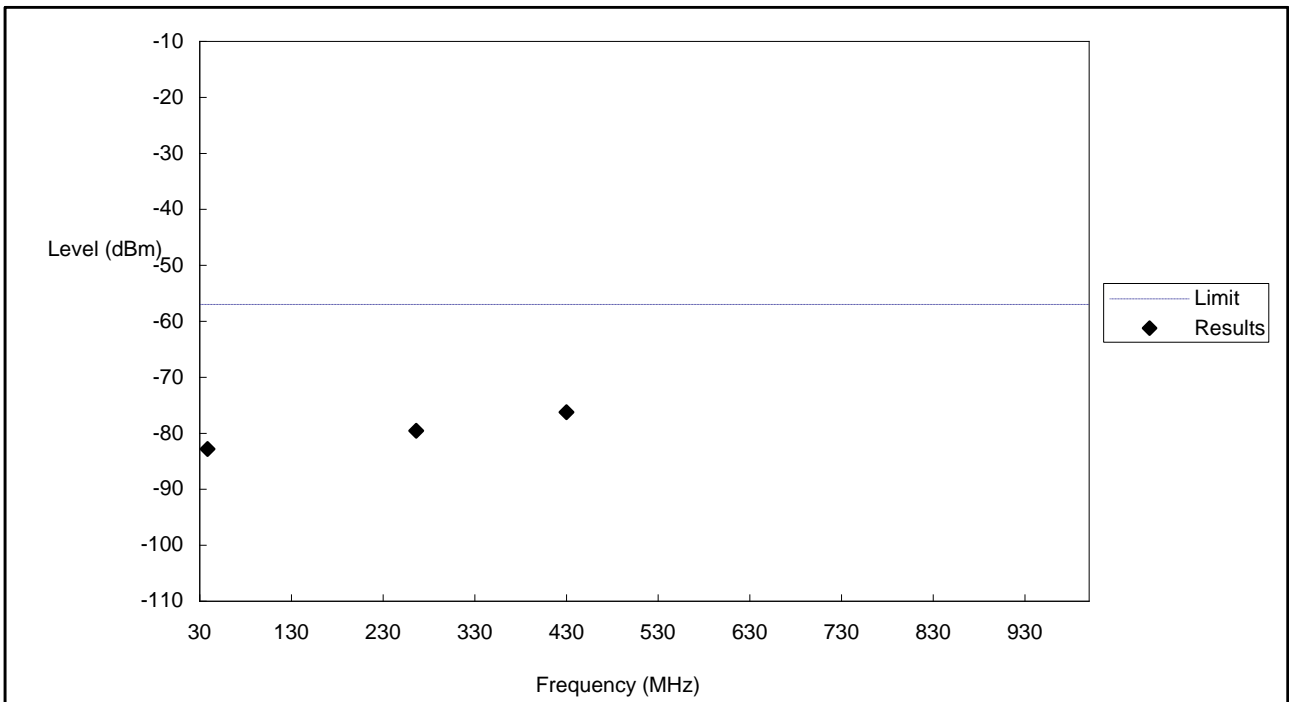
Test Mode: Idle(Band 1-worst case)

Horizontal:



No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	158.1552	-78.16	-57.00	-21.16	RMS
2	164.8304	-81.33	-57.00	-24.33	RMS
3	199.2656	-82.07	-57.00	-25.07	RMS

Vertical:

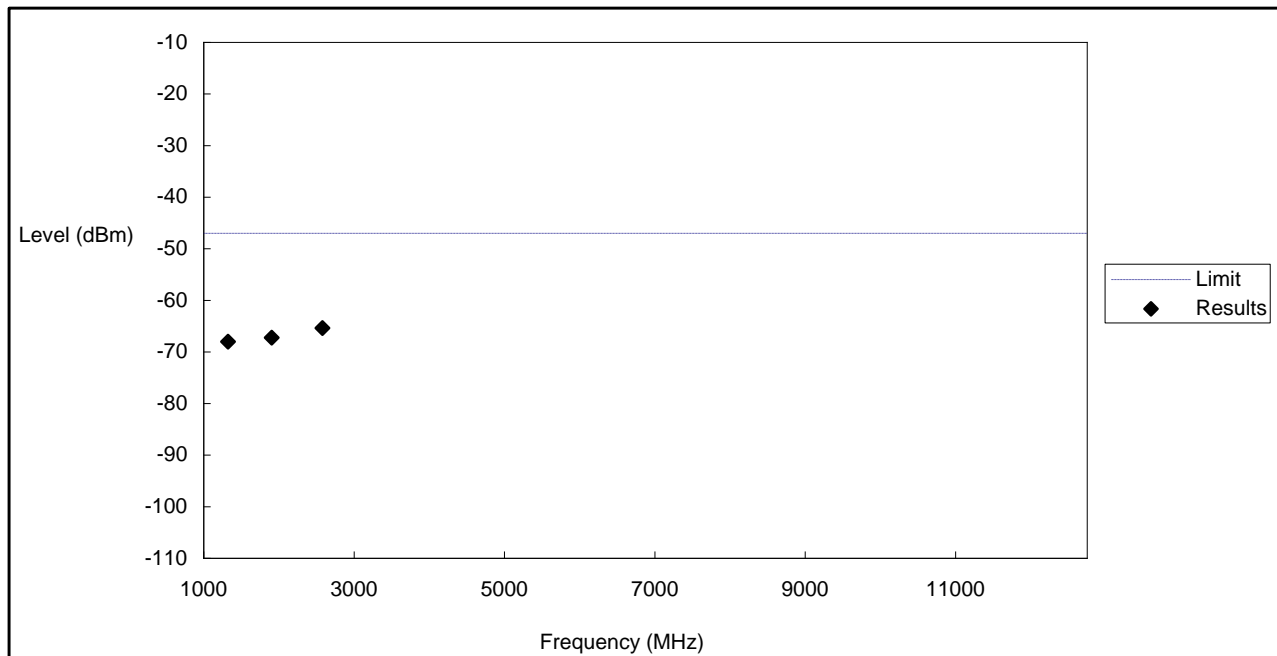


No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	38.550	-82.82	-57.00	-25.82	RMS
2	266.195	-79.56	-57.00	-22.56	RMS
3	430.125	-76.24	-57.00	-19.24	RMS

Radiated Spurious Emissions(above 1GHz)

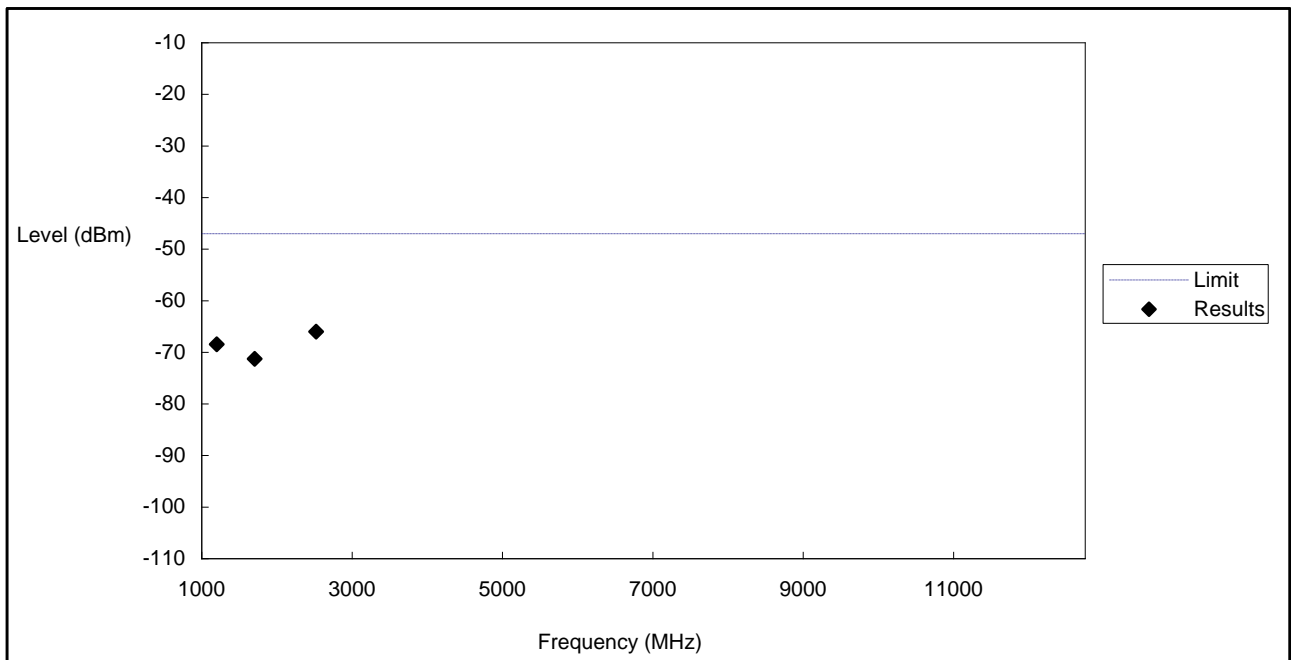
Test Mode: Idle(Band 1-worst case)

Horizontal:



No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1323.2560	-68.02	-47.00	-21.02	RMS
2	1904.6543	-67.25	-47.00	-20.25	RMS
4	2580.4695	-65.37	-47.00	-18.37	RMS

Vertical:



No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1199.5816	-68.47	-47.00	-21.47	RMS
2	1705.2563	-71.27	-47.00	-24.27	RMS
4	2521.7286	-66.00	-47.00	-19.00	RMS

3.13 Control and monitoring functions

Clause 4.2.4 of ETSI EN 301 908-1 V6.2.1 (2013-10) applies.

RESULT: Pass

3.13.1 Definition and applicability

This requirement, together with other control and monitoring technical requirements identified in the table of cross references in the applicable part, verifies that the control and monitoring functions of the UE prevent it from transmitting in the absence of a valid network.

This test is applicable to radio communications equipment and ancillary equipment in the operating band defined in the applicable part of this multipart harmonized standard.

This test shall be performed on the radio communications equipment and/or a representative configuration of the ancillary equipment.

3.13.2 Conformance requirements

The maximum measured power during the duration of the test shall not exceed -30 dBm.

3.13.3 Set up for testing

a) At the start of the test, the UE shall be switched off. The UE antenna connector shall be connected to a power measuring equipment, with the following characteristics:

- the RF bandwidth shall exceed the total operating transmit frequency range of the UE for operation with an applicable part;
- the response time of the power measuring equipment shall be such that the measured power has reached within 1 dB of its steady state value within 100 μ s of a CW signal being applied;
- it shall record the maximum power measured.

NOTE: The equipment may include a video low pass filter to minimize its response to transients or Gaussian noise peaks.

b) The UE shall be switched on for a period of approximately fifteen minutes, and then switched off.

c) The EUT shall remain switched off for a period of at least thirty seconds, and shall then be switched on for a period of approximately one minute.

d) The maximum power emitted from the UE throughout the duration of the test shall be recorded. The results obtained shall be compared to the limits in clause 3.13.2 in order to prove compliance.

3.13.4 Test result

Test conditions		WCDMA Band 1 – Control and monitoring functions						
T	V	Measured range	Test data (dBm)				Limit (dBm)	Result
			1st	2nd	3rd	4th		
Tnom(25 °C)	Vnom(3.7)	WCDMA Band 1 1920MHz to 1980MHz	-36.7	-36.6	-35.5	-36.0	-30	Pass

Test conditions		WCDMA Band 8 – Control and monitoring functions						
T	V	Measured range	Test data (dBm)				Limit (dBm)	Result
			1st	2nd	3rd	4th		
Tnom(25 °C)	Vnom(3.7)	WCDMA Band 8 880MHz to 915MHz	-37.2	-36.1	-36.9	-36.1	-30	Pass

Measurement uncertainty	+/-1.0dB
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The equipment complied with the requirement of this clause.

EXHIBIT 1 - PRODUCT LABELING

Proposed CE Label Format



Specifications: Text is Black in color and is justified. Labels are printed in indelible ink on permanent adhesive backing or silk-screened onto the EUT or shall be affixed at a conspicuous location on the EUT. The 'CE' marking must be affixed to the EUT or to its data plate. Where this is not possible or not warranted on account of the nature of the apparatus, it must be affixed to the packaging, if any, and to the accompanying documents. The 'CE' marking is allowed less than 5 mm but must clear. If the 'CE' marking is reduced or enlarged the proportions given in the above graduated drawing must be respected. The Importer name, address and Manufacturer name and address should indicate on marking label or packaging or in a document accompanying

Proposed Label Location on EUT

CE Label Location



EXHIBIT 2 - EUT PHOTOGRAPHS

EUT View 1



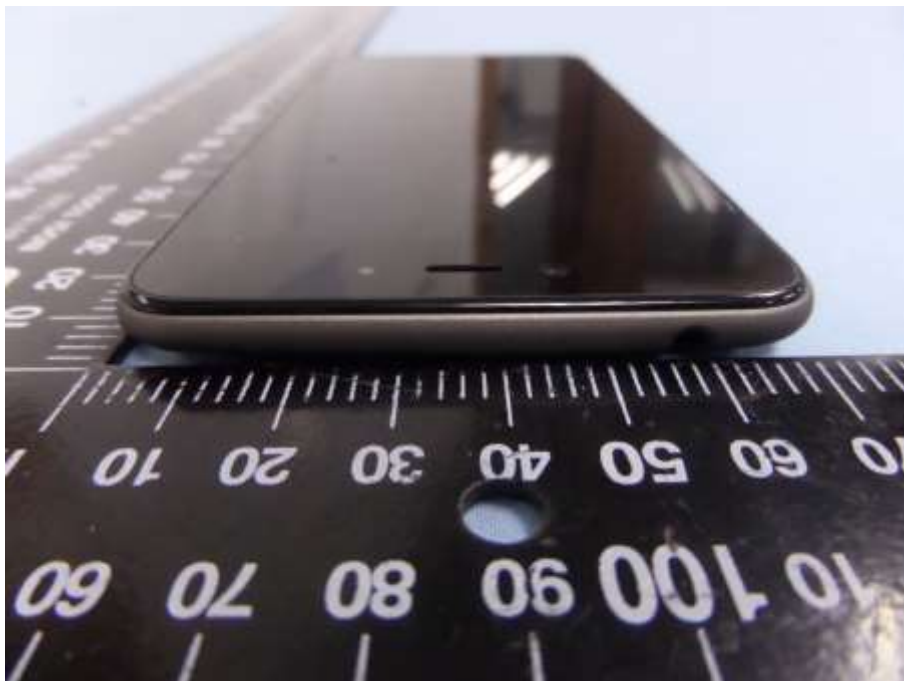
EUT View 2



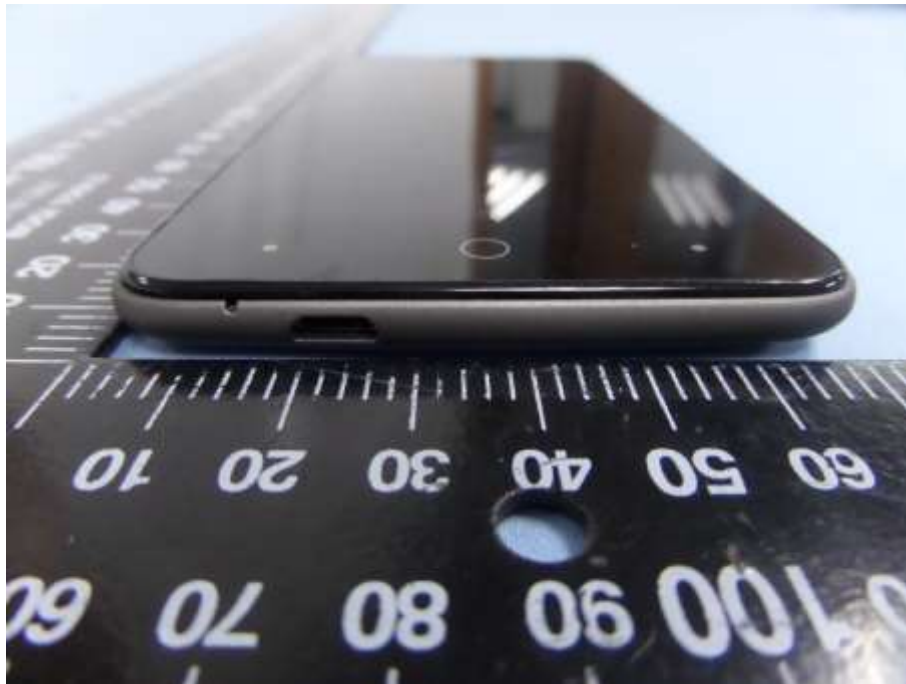
EUT View 3



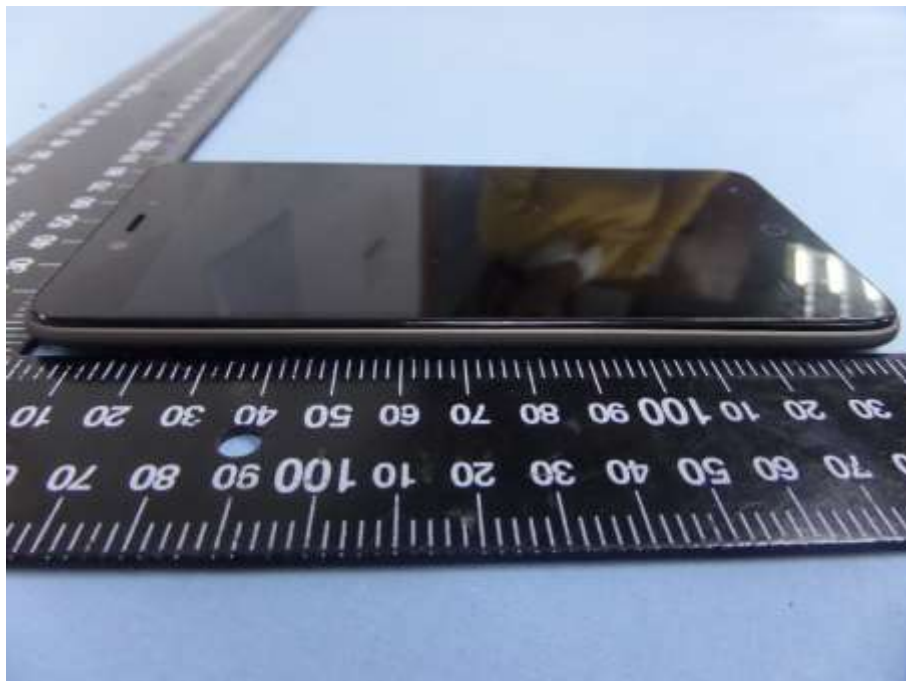
EUT View 4



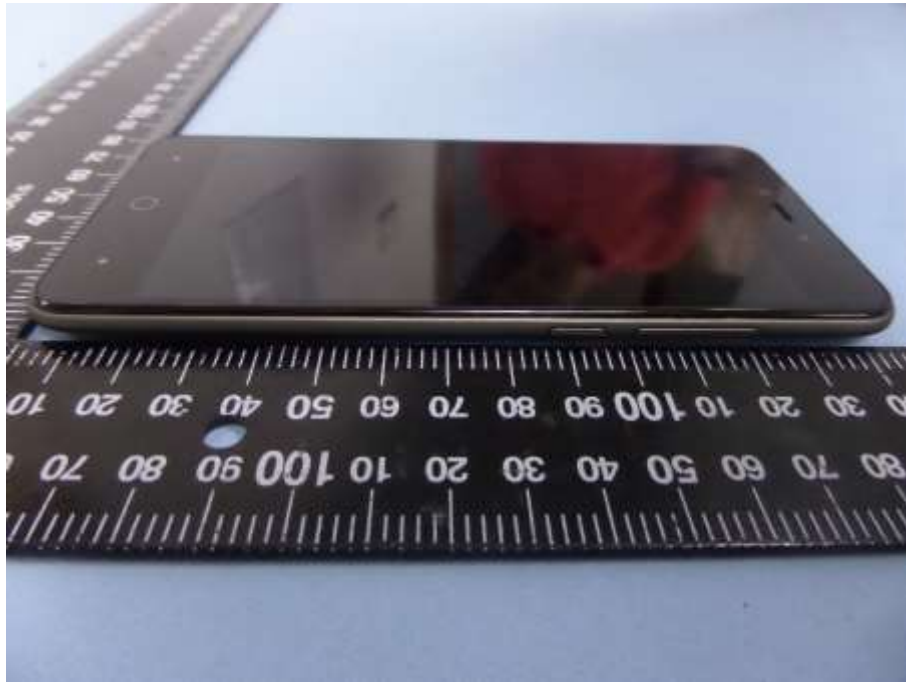
EUT View 5



EUT View 6



EUT View 7



EUT Housing and Board View 1



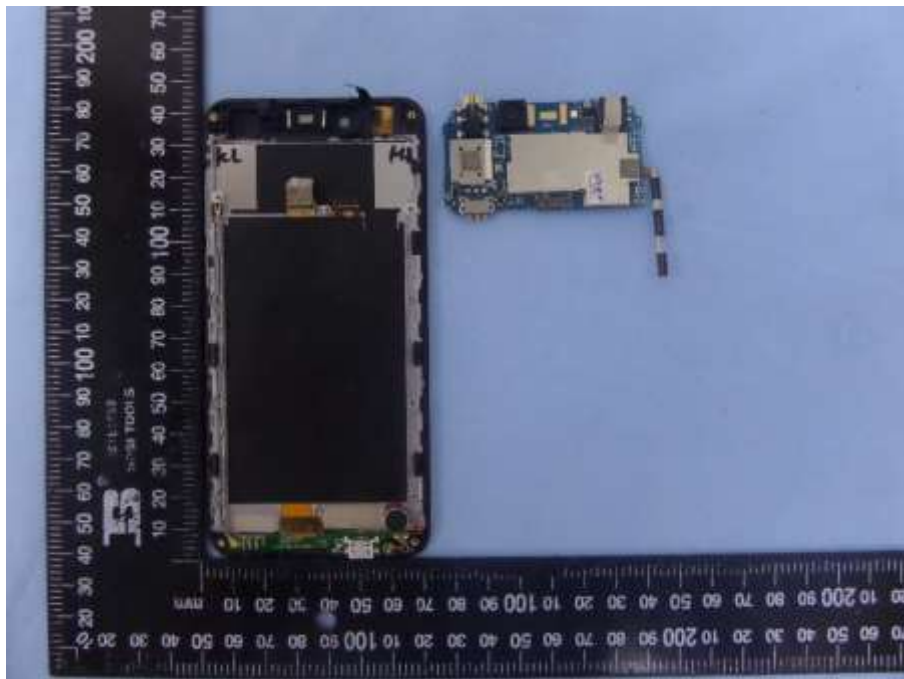
Wi-Fi/BT/GPS Ant.

GSM/WCDMA Ant.

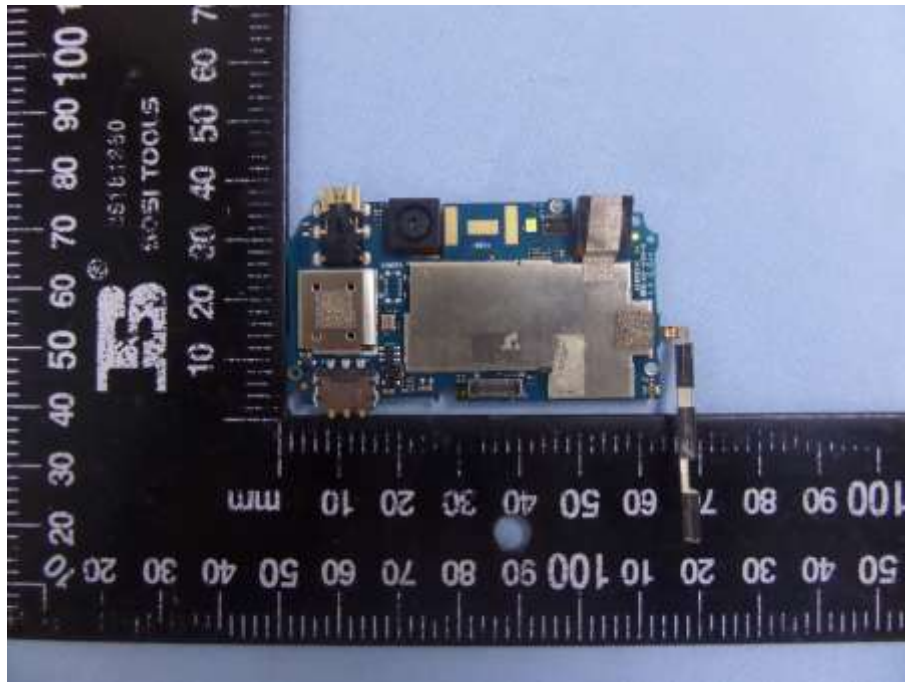
EUT Housing and Board View 2



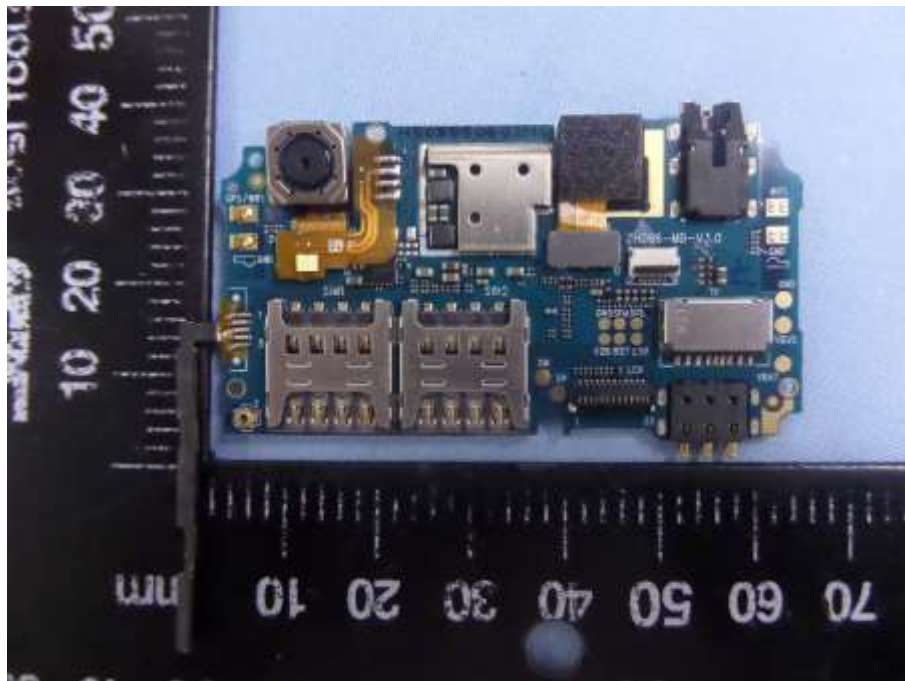
EUT Housing and Board View 3

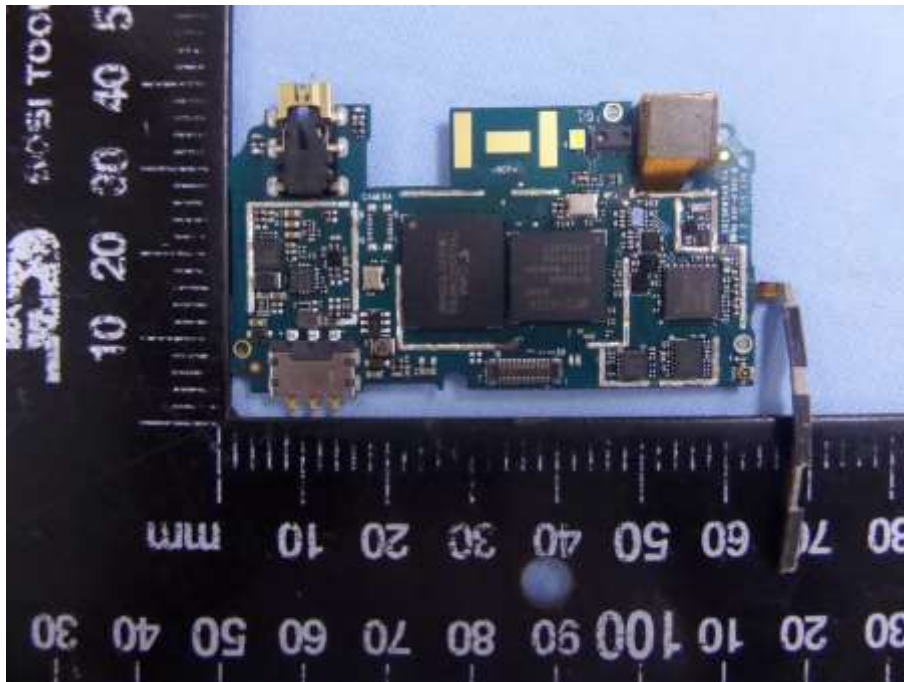
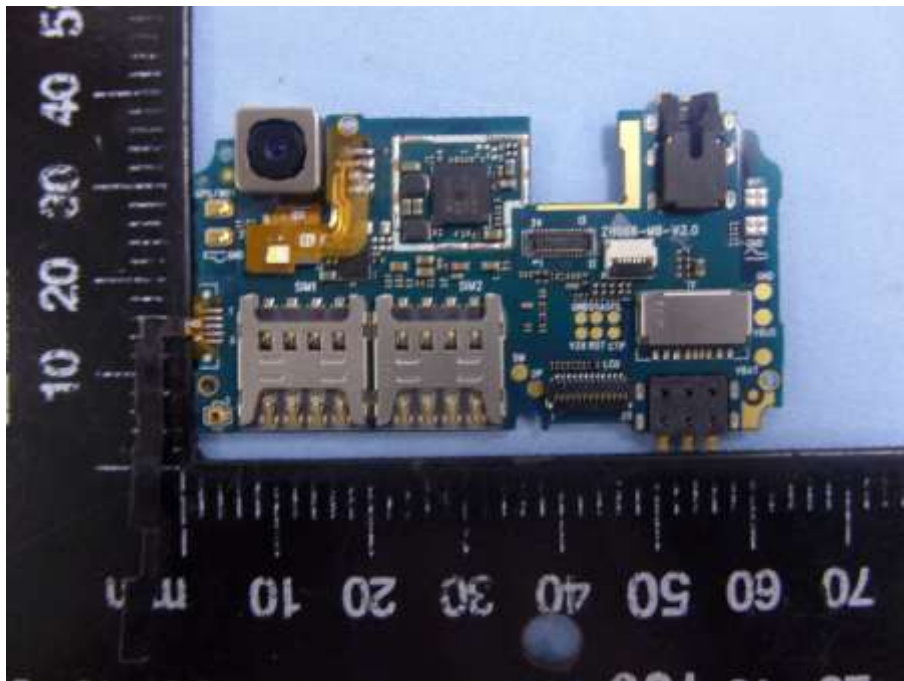


Solder Board-Component View 1



Solder Board-Component View 2



Solder Board-Component View 3**Solder Board-Component View 4**

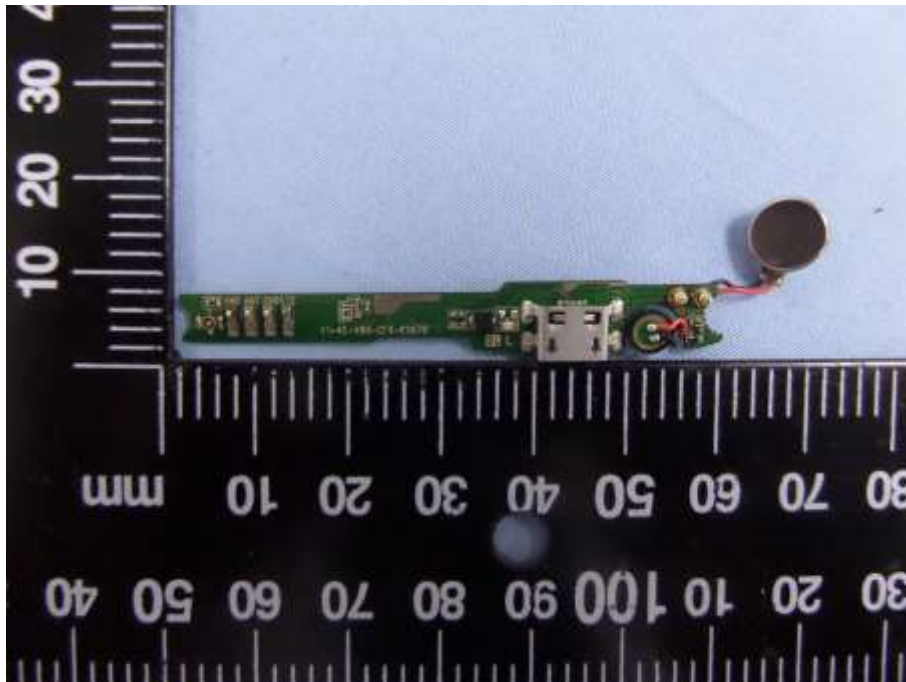
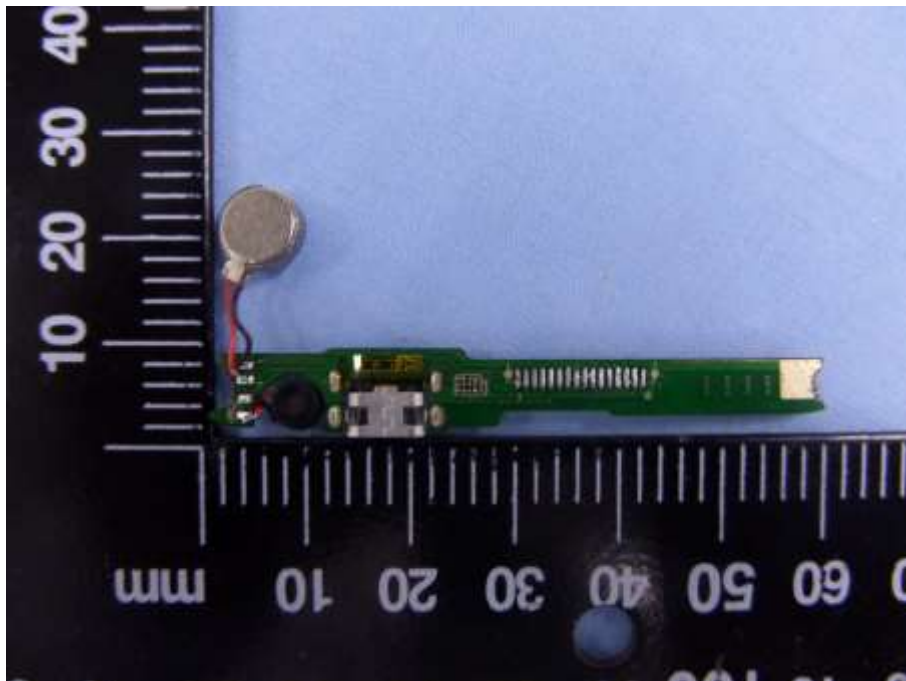
Solder Board-Component View 5**Solder Board-Component View 6**

EXHIBIT 3 - TEST SETUP PHOTO

Radio Test Suite 1



Spurious Emission Test Setup (Below 1GHz)



Spurious Emission Test Setup (Above 1GHz)



Extreme Condition Test Setup



***** END OF REPORT *****