

ETSI EN 301 511 V12.5.1 (2017-03)

TEST REPORT

For

Xiamen Milesight IoT Co., Ltd.

Building C09, Software Park Phase III, Xiamen 361024, Fujian, China

Tested Model: UR35-L04EU-G-P-W
Multiple Models: UR35-L04EU-P-W, UR35-L04EU-G-P,
UR35-L04EU-G-W, UR35-L04EU-W, UR35-L04EU-G,
UR35-L04EU-P, UR35-L04EU, UR35-L04EU-P-W-485,
UR35-L04EU-G-P-485, UR35-L04EU-G-W-485,
UR35-L04EU-W-485, UR35-L04EU-G-485,
UR35-L04EU-P-485, UR35-L04EU-485,
UR35-L04EU-G-P-W-485

Report Type: Original Report	Product Type: Industrial Cellular Router
Report Number:	XMDN220429-17582E-11
Report Date:	2022-08-02
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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

EUT Name:		Industrial Cellular Router
EUT Model:		UR35-L04EU-G-P-W
Multiple Models:		UR35-L04EU-P-W, UR35-L04EU-G-P, UR35-L04EU-G-W, UR35-L04EU-W, UR35-L04EU-G, UR35-L04EU-P, UR35-L04EU, UR35-L04EU-P-W-485, UR35-L04EU-G-P-485, UR35-L04EU-G-W-485, UR35-L04EU-W-485, UR35-L04EU-G-485, UR35-L04EU-P-485, UR35-L04EU-485, UR35-L04EU-G-P-W-485
Model Difference:		Please refer to the DoS
Rated Input Voltage:		9-48Vdc from Adapter
Adapter Information:	Model:	2ABF060R
	Input:	100-240Vac 50/60Hz 1.7A
	Output:	48Vdc 1.25A
Serial Number:		XMDN220429-17582E-RF-S1(UR35-L04EU-G-P-W)
EUT Received Date:		2022.05.06
EUT Received Status:		Good

Technical Specification

Operation Frequency Range (MHz)	Transmit:	E-GSM 900: 880-915 MHz DCS 1800: 1710-1785 MHz
	Receive:	E-GSM 900: 925-960 MHz DCS 1800: 1805-1880 MHz
Max. RF Output Power (Conducted) (dBm):		GSM 900: 32.62dBm(GMSK); 25.54dBm(8PSK) DCS 1800: 29.78dBm(GMSK); 26.04dBm(8PSK)
Antenna Gain (dBi)[▲]:		3.64(Max)
Modulation Type:		GMSK, 8PSK

Objective

This report is prepared on behalf of *Xiamen Milesight IoT Co., Ltd.* in accordance with ETSI EN 301 511 V12.5.1 (2017-03) Global System for Mobile communications (GSM); Mobile Stations (MS) equipment; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU.

The objective is to determine the compliance of EUT with:
ETSI EN 301 511 V12.5.1 (2017-03).

Test Methodology

All measurements contained in this report were conducted with ETSI EN 301 511 V12.5.1 (2017-03) Global System for Mobile communications (GSM); Mobile Stations (MS) equipment; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU.

Measurement Uncertainty

Parameter	Flab	Maximum allow uncertainty
RF Frequency	$\pm 0.082 \times 10^{-6}$	$\pm 1 \times 10^{-7}$
Conducted RF Power	$\pm 0.61 \text{ dB}$	$\pm 0.75 \text{ dB}$
Radiated RF Power	$\pm 3.58 \text{ dB}$	$\pm 6 \text{ dB}$
Maximum frequency deviation (within 300Hz and 5kHz audio frequency)	4.57%	$\pm 5\%$
Maximum frequency deviation (within 6kHz and 25kHz audio frequency)	$\pm 0.53 \text{ dB}$	$\pm 3 \text{ dB}$
Spurious emissions, conducted	$\pm 2.47 \text{ dB}$	$\pm 3 \text{ dB}$
Spurious emissions, radiated	$\pm 3.62 \text{ dB}$	$\pm 6 \text{ dB}$

Note: Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.

Declarations

BACL is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with a triangle symbol “▲”. Customer model name, addresses, names, trademarks etc. are not considered data.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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SYSTEM TEST CONFIGURATION

Description of Test Configuration

The EUT and test equipment were configured for testing according to ETSI EN 301 511 V12.5.1 (2017-03).

Equipment Modifications

No modification was made to the EUT.

EUT Exercise Software

No software was used for testing.

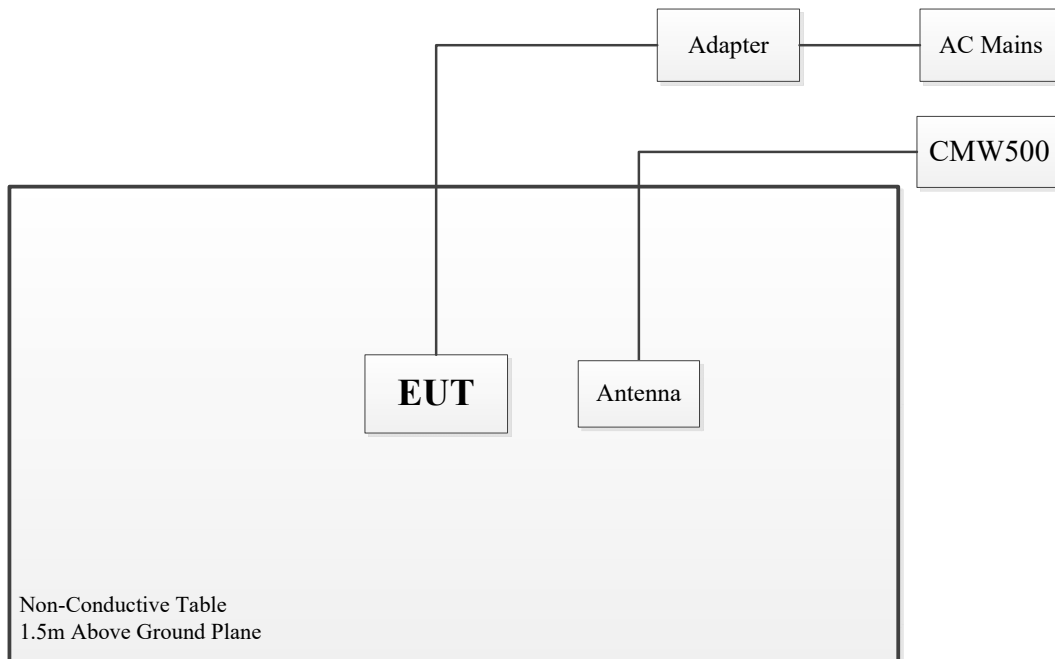
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
R&S	Wideband Radio Communication Tester	CMW500	144976

Support Cable List and Details

Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
DC Cable	No	No	1.5	Adapter	EUT

Block Diagram of Test Setup



Test Equipment List

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated emissions below 1GHz					
Sunol Sciences	Antenna	JB3	A060611-1	2020-11-10	2023-11-10
R&S	EMI Test Receiver	ESR3	102453	2021-10-26	2022-10-25
Unknown	Coaxial Cable	C-NJNJ-50	C-0075-01	2021-07-19	2022-07-18
Unknown	Coaxial Cable	C-NJNJ-50	C-0400-01	2021-07-19	2022-07-18
Unknown	Coaxial Cable	C-NJNJ-50	C-1400-01	2021-07-19	2022-07-18
Sonoma	Amplifier	310N	372193	2021-07-18	2022-07-17
EMCO	Adjustable Dipole Antenna	3121C	9109-753	N/A	N/A
Unknown	Coaxial Cable	C-NJNJ-50	C-0200-02	2021-09-04	2022-09-03
Agilent	Signal Generator	E8247C	MY43321350	2022-04-01	2023-03-31
Radiated emissions above 1GHz					
ETS-Lindgren	Horn Antenna	3115	000 527 35	2021-10-12	2024-10-11
Agilent	Spectrum Analyzer	E4440A	SG43360054	2021-07-22	2022-07-21
Unknown	Coaxial Cable	C-SJSJ-50	C-0800-01	2021-09-04	2022-09-03
AH	Preamplifier	PAM-0118	469	2021-10-13	2022-10-12
TDK RF	Horn Antenna	HRN-0118	130 084	2021-10-12	2024-10-11
Unknown	Coaxial Cable	C-NJNJ-50	C-0200-02	2021-09-04	2022-09-03
Agilent	Signal Generator	E8247C	MY43321350	2022-04-01	2023-03-31
Mini Circuits	High Pass Filter	VHF-6010+	31118	2021-06-16	2022-06-15
Sinoscite	Band-stop filter	BSF1710-1785MN-0383-003	0383003	2021-06-16	2022-06-15
Sinoscite	Band-stop filter	BSF880-915MN-0382-003	0382003	2021-06-16	2022-06-15

* Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Environmental Conditions

Test Item:	Radiated emissions
Temperature:	23.4~24.9℃
Relative Humidity:	49~59%
ATM Pressure:	100.1~100.9kPa
Tester:	Leo Yuan, Lucky Lu
Test Date:	2022-05-17~2022-06-10

SUMMARY OF TEST RESULTS

SN	Rule and Clause	Description of Test	Test Result
1	EN 301 511 Clause 4.2.1	Transmitter - frequency error and phase error	Not applicable
2	EN 301 511 Clause 4.2.2	Transmitter - frequency error under multi path and interference conditions	Compliant*
3	EN 301 511 Clause 4.2.3	Transmitter - Frequency error and Phase Error in HSCSD Multi slot Configuration	Not applicable
4	EN 301 511 Clause 4.2.4	Frequency error and phase error in GPRS multi slot configuration	Compliant*
5	EN 301 511 Clause 4.2.5	Transmitter output power and burst timing	Not applicable
6	EN 301 511 Clause 4.2.6	Transmitter - output RF spectrum	Not applicable
7	EN 301 511 Clause 4.2.7	Transmitter output power and burst timing in HSCSD multi slot configuration	Not applicable
8	EN 301 511 Clause 4.2.8	Transmitter - Output RF spectrum in HSCSD multi slot configuration	Not applicable
9	EN 301 511 Clause 4.2.9	Transmitter - Output RF spectrum for MS supporting the R-GSM or ER-GSM frequency band	Not applicable
10	EN 301 511 Clause 4.2.10	Transmitter output power in GPRS multi slot configuration	Compliant*
11	EN 301 511 Clause 4.2.11	Output RF spectrum in GPRS multi slot configuration	Compliant*
12	EN 301 511 Clause 4.2.12	Conducted spurious emissions - MS allocated a channel	Compliant*
13	EN 301 511 Clause 4.2.13	Conducted spurious emission - MS in idle mode	Compliant*
14	EN 301 511 Clause 4.2.14	Conducted spurious emissions for MS supporting the R-GSM or ER-GSM frequency band - MS allocated a channel	Not applicable
15	EN 301 511 Clause 4.2.15	Conducted spurious emissions for MS supporting the R-GSM or ER-GSM frequency band - MS in idle mode	Not applicable
16	EN 301 511 Clause 4.2.16	Radiated spurious emissions - MS allocated a channel	Compliant*
17	EN 301 511 Clause 4.2.17	Radiated spurious emissions - MS in idle mode	Compliant*
18	EN 301 511 Clause 4.2.18	Radiated spurious emissions for MS supporting the R-GSM or ER-GSM frequency band - MS allocated a channel	Not applicable
19	EN 301 511 Clause 4.2.19	Radiated spurious emissions for MS supporting the R-GSM or ER-GSM frequency band - MS in idle mode	Not applicable
20	EN 301 511 Clause 4.2.20	Receiver blocking and spurious responses - speech channels	Not applicable
21	EN 301 511 Clause 4.2.21	Receiver Blocking and spurious response - speech channels for MS supporting the R-GSM or ER-GSM frequency band	Not applicable
22	EN 301 511 Clause 4.2.22	Improved Receiver Blocking and spurious response - speech channels for 8W MS supporting the R-GSM or ER-GSM frequency band	Not applicable
23	EN 301 511 Clause 4.2.23	Improved Receiver Blocking and spurious response - speech channels for 2W MS supporting the R-GSM or ER-GSM frequency band	Not applicable
24	EN 301 511 Clause 4.2.24	Improved Receiver Blocking and spurious response - control channels for 8W MS supporting the R-GSM or ER-GSM frequency band not supporting speech	Not applicable
25	EN 301 511 Clause 4.2.25	Improved Receiver Blocking and spurious response - control channels for 2W MS supporting the R-GSM or ER-GSM frequency band not supporting speech	Not applicable
26	EN 301 511 Clause 4.2.26	Frequency error and modulation accuracy in EGPRS configuration	Compliant*
27	EN 301 511 Clause 4.2.27	Frequency error under multi path and interference conditions in EGPRS configuration	Compliant*

28	EN 301 511 Clause 4.2.28	EGPRS Transmitter output power	Compliant*
29	EN 301 511 Clause 4.2.29	Output RF spectrum in EGPRS configuration	Compliant*
30	EN 301 511 Clause 4.2.30	Blocking and spurious response in EGPRS configuration	Compliant*
31	EN 301 511 Clause 4.2.31	Blocking and spurious response in DLMC configuration	Not applicable
32	EN 301 511 Clause 4.2.32	Intermodulation rejection - speech channels	Not applicable
33	EN 301 511 Clause 4.2.33	Intermodulation rejection - control channels	Compliant
34	EN 301 511 Clause 4.2.34	Intermodulation rejection - EGPRS	Compliant*
35	EN 301 511 Clause 4.2.35	AM suppression - speech channels	Not applicable
36	EN 301 511 Clause 4.2.36	AM suppression - control channels	Compliant
37	EN 301 511 Clause 4.2.37	AM suppression - packet channels	Compliant
38	EN 301 511 Clause 4.2.38	Adjacent channel rejection - speech channels (TCH/FS)	Not applicable
39	EN 301 511 Clause 4.2.39	Adjacent channel rejection - control channels	Compliant
40	EN 301 511 Clause 4.2.40	Adjacent channel rejection - EGPRS	Compliant*
41	EN 301 511 Clause 4.2.41	Adjacent channel rejection in DLMC configuration	Not applicable
42	EN 301 511 Clause 4.2.42	Reference sensitivity - TCH/FS	Not applicable
43	EN 301 511 Clause 4.2.43	Reference sensitivity - FACCH/F	Not applicable
44	EN 301 511 Clause 4.2.44	Minimum input level for Reference Performance - GPRS	Compliant*
45	EN 301 511 Clause 4.2.45	Minimum input level for Reference Performance - EGPRS	Compliant*
46	EN 301 511 Clause 4.2.46	Reference sensitivity - TCH/FS for MS supporting the R-GSM or ER-GSM band	Not applicable

Note:

Not applicable: The device support EGSM 900 and DCS 1800(GPRS/EDGE data, without Telephony Service), it's not HSCSD Multisport MS, DLMC MS, R-GSM MS or ER-GSM MS.

Compliant*: The Radio module (Name: LTE Cat.4 Module, Model: EC25-EUX) embedded to the EUT was already certified and without any Variation. The test results, please refer to the original report, No.: **GC190617W008, RE190617W008-1.**

16 - RADIATED SPURIOUS EMISSIONS - MS ALLOCATED A CHANNEL

Applicable Standard

Requirements: According to ETSI EN 301 511 V12.5.1 (2017-03), section 4.2.16, the radiated spurious power emitted by the MS, when allocated channel, shall be no more than the levels in table 5 under normal and extreme voltage conditions.

Table 5

Frequency range		Power level in dBm		
		GSM 400, GSM 700, GSM 850, GSM 900	DCS 1 800	PCS 1 900
30 MHz to	1 GHz	-36	-36	-36
1 GHz to	4 GHz	-30		-30
1 GHz to	1 710 MHz		-30	
1 710 MHz to	1 785 MHz		-36	
1 785 MHz to	4 GHz		-30	

Test Procedure

a) Initially the test antenna is closely coupled to the MS and any spurious emission radiated by the MS is detected by the test antenna and receiver in the range 30 MHz to 4 GHz.

NOTE 1: This is a qualitative step to identify the frequency and presence of spurious emissions which are to be measured in subsequent steps.

b) The test antenna separation is set to the appropriate measurement distance and at each frequency at which an emission has been detected, the MS shall be rotated to obtain maximum response and the effective radiated power of the emission determined by a substitution measurement. In case of an anechoic shielded chamber pre-calibration may be used instead of a substitution measurement.

c) The measurement bandwidth, based on a 5 pole synchronously tuned filter, is set according to table 6. The power indication is the peak power detected by the measuring system. The measurement on any frequency shall be performed for at least one TDMA frame period, with the exception of the idle frame.

NOTE 2: This ensures that both the active times (MS transmitting) and the quiet times are measured.

NOTE 3: For these filter bandwidths some difficulties may be experienced with noise floor above required measurement limit. This will depend on the gain of the test antenna, and adjustment of the measuring system bandwidth is permissible. Alternatively, for test frequencies above 900 MHz, the test antenna separation from the MS may be reduced to 1 meter.

d) The measurements are repeated with the test antenna in the orthogonal polarization plane.

e) The test is repeated under extreme voltage test conditions (see [annex 1, TC2.2]).

Table 6

Frequency range	Frequency offset	Filter bandwidth	Approx video bandwidth
30 MHz to 50 MHz	-	10 kHz	30 kHz
50 MHz to 500 MHz	-	100 kHz	300 kHz
excl. relevant TX band: GSM 450: 450,4 MHz to 457,6 MHz; GSM 480: 478,8 MHz to 486 MHz 500 MHz to 4 GHz,	0 to 10 MHz ≥ 10 MHz	100 kHz 300 kHz	300 kHz 1 MHz
Excl. relevant TX band: GSM 750: 777 MHz to 792 MHz GSM 850: 824 MHz to 849 MHz P-GSM: 890 MHz to 915 MHz; E-GSM: 880 MHz to 915 MHz; DCS: 1 710 MHz to 1 785 MHz. PCS 1 900: 1 850 MHz to 1 910 MHz	≥ 20 MHz ≥ 30 MHz (offset from edge of relevant TX band)	1 MHz 3 MHz	3 MHz 3 MHz
Relevant TX band: GSM 450: 450,4 MHz to 457,6 MHz GSM 480: 478,8 MHz to 486 MHz GSM 750: 777 MHz to 792 MHz GSM 850: 824 MHz to 849 MHz P-GSM: 890 MHz to 915 MHz E-GSM: 880 MHz to 915 MHz DCS: 1 710 MHz to 1 785 MHz PCS 1 900: 1 850 MHz to 1 910 MHz	1,8 MHz to 6,0 MHz > 6,0 MHz (offset from carrier)	30 kHz 100 kHz	100 kHz 300 kHz
NOTE 1: The filter and video bandwidths, and frequency offsets are only correct for measurements on an MS transmitting on a channel in the Mid ARFCN range.			
NOTE 2: Due to practical implementation of a SS, the video bandwidth is restricted to a maximum of 3 MHz.			

Test Data

Please refer to following table:

Note: Pre-scan 30MHz -4GHz, Normal & High Voltage Condition and Low Voltage Condition, and the worst case as below:

GSM900 middle channel			902 MHz			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method					
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1804.00	H	60.25	-57.54	11.13	0.69	-47.10	-30.00	17.10
1804.00	V	61.41	-56.97	11.13	0.69	-46.53	-30.00	16.53
2706.00	H	53.16	-62.45	13.10	1.26	-50.61	-30.00	20.61
2706.00	V	54.12	-61.60	13.10	1.26	-49.76	-30.00	19.76
3608.00	H	50.74	-61.78	14.09	1.53	-49.22	-30.00	19.22
3608.00	V	50.16	-62.35	14.09	1.53	-49.79	-30.00	19.79
221.60	H	62.88	-52.59	0.00	0.50	-53.09	-36.00	17.09
241.30	V	68.21	-50.71	0.00	0.50	-51.21	-36.00	15.21

DCS1800 middle channel			1747.8 MHz			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method					
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
3495.60	H	50.41	-61.92	13.81	1.61	-49.72	-30.00	19.72
3495.60	V	50.48	-61.85	13.81	1.61	-49.65	-30.00	19.65
221.59	H	62.90	-52.57	0.00	0.50	-53.07	-36.00	17.07
241.55	V	68.33	-50.60	0.00	0.50	-51.10	-36.00	15.10

Note 1: The unit of antenna gain is dBd for frequency below 1GHz and is dBi for frequency above 1GHz.

Note 2:

Absolute Level = Substituted Level - Cable loss + Antenna Gain

Margin = Limit - Absolute Level

17 - RADIATED SPURIOUS EMISSIONS - MS IN IDLE MODE

Applicable Standard

Requirements: According to ETSI EN 301 511 V12.5.1 (2017-03), section 4.2.17, the radiated spurious power emitted by the MS, when in idle mode, shall be no more than the levels in table 7 under normal and extreme voltage conditions.

Table 7

Frequency range		Power level in dBm	
		GSM 400, GSM 900, DCS 1 800	GSM 700, GSM 850, PCS 1 900
30 MHz to	880 MHz	-57	-57
880 MHz to	915 MHz	-59	-57
915 MHz to	1 000 MHz	-57	-57
1 GHz to	1 710 MHz	-47	
1 710 MHz to	1 785 MHz	-53	
1 785 MHz to	4 GHz	-47	
1 GHz to	1 850 MHz		-47
1 850 MHz to	1 910 MHz		-53
1 910 MHz to	4GHz		-47

Test Procedure

a) Initially the test antenna is closely coupled to the MS and any spurious emission radiated by the MS is detected by the test antenna and receiver in the range 30 MHz to 4 GHz.

NOTE 1: This is a qualitative step to identify the frequency and presence of spurious emissions which are to be measured in subsequent steps.

b) The test antenna separation is set to the appropriate measurement distance and at each frequency at which a spurious emission has been detected the MS is rotated to obtain a maximum response. The effective radiated power of the emission is determined by a substitution measurement. In case of an anechoic shielded chamber pre-calibration may be used instead of a substitution measurement.

c) The measurement bandwidth based on a 5 pole synchronously tuned filter shall be according to table 8. The power indication is the peak power detected by the measuring system.

The measurement time on any frequency shall be such that it includes the time during which the MS receives a TDMA frame containing the paging channel.

NOTE 2: For these filter bandwidths some difficulties may be experienced with noise floor above required measurement limit. This will depend on the gain of the test antenna, and adjustment of the measuring system bandwidth is permissible. Alternatively, for test frequencies above 900 MHz, the test antenna separation from the MS may be reduced to 1 meter.

Table 8

Frequency range	Filter bandwidth	Video bandwidth
30 MHz to 50 MHz	10 kHz	30 kHz
50 MHz to 4 GHz	100 kHz	300 kHz

d) The measurements are repeated with the test antenna in the orthogonal polarization plane.

e) The test is repeated under extreme voltage test conditions (see [Annex 1, TC2.2]).

Test Data

Please refer to following table:

Note: Pre-scan 30MHz -4GHz, Normal & High Voltage Condition and Low Voltage Condition, and the worst case as below:

GSM900 idle mode**902 MHz**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1648.25	H	52.35	-65.77	10.44	0.71	-56.04	-47.00	9.04
1879.54	V	53.36	-63.77	11.66	0.95	-53.06	-47.00	6.06
214.89	H	58.52	-56.84	0.00	0.49	-57.33	-57.00	0.33
241.30	V	59.12	-59.80	0.00	0.50	-60.30	-57.00	3.30

DCS1800 idle mode**1747.8 MHz**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1900.65	H	54.25	-62.25	11.80	1.02	-51.47	-47.00	4.47
1810.54	V	53.64	-64.63	11.17	0.72	-54.18	-47.00	7.18
214.90	H	58.55	-56.81	0.00	0.49	-57.30	-57.00	0.30
242.52	V	59.43	-59.55	0.00	0.50	-60.05	-57.00	3.05

Note 1: The unit of antenna gain is dBd for frequency below 1GHz and is dBi for frequency above 1GHz.

Note 2:

Absolute Level = Substituted Level - Cable loss + Antenna Gain

Margin = Limit - Absolute Level

33- INTERMODULATION REJECTION – CONTROL CHANNELS

Applicable Standard

The intermodulation rejection is a measure of the capability of the receiver to receive a wanted modulated signal without exceeding a given degradation due to the presence of two or more unwanted signals with a specific frequency relationship to the wanted signal frequency.

For E-GSM 900, R-GSM 900 and ER-GSM 900 MS this test is only performed in the P-GSM band.

Test Procedure

According to ETSI TS 151 010-1 sub-clause 14.6.2.4.2.

Test Data

Mode	Test Frequency (MHz)	Test Condition					Result
GSM 900	890.2	NVNT	LVLT	LVHT	HVLT	HVHT	Compliant
	902	NVNT	LVLT	LVHT	HVLT	HVHT	Compliant
	914.8	NVNT	LVLT	LVHT	HVLT	HVHT	Compliant
DCS 1800	1710.4	NVNT	LVLT	LVHT	HVLT	HVHT	Compliant
	1747.8	NVNT	LVLT	LVHT	HVLT	HVHT	Compliant
	1784.6	NVNT	LVLT	LVHT	HVLT	HVHT	Compliant

Please refer to following plots (tables) for normal test condition:

Mode	Test Frequency (MHz)	Type of Channel	FER (%)	Number of test samples	Limit (%)
GSM 900	890.2	FACCH/F	1.10	8000	< 8.961
	902	FACCH/F	1.13	8000	< 8.961
	914.8	FACCH/F	0.97	8000	< 8.961
DCS 1800	1710.4	FACCH/F	1.04	20000	< 4.368
	1747.8	FACCH/F	1.03	20000	< 4.368
	1784.6	FACCH/F	1.07	20000	< 4.368

36 - AM SUPPRESSION - CONTROL CHANNELS

Applicable Standard

AM suppression is a measure of the ability of the receiver to receive a modulated wanted input signal in the presence of an unwanted TDMA modulated interferer.

Test Procedure

According to ETSI TS 151 010-1 sub-clause 14.8.2.4.

Test Data

Mode	Test Frequency (MHz)	FER (%)	Number of test samples	Limit (%)
GSM 900	902	0.20	8000	≤ 8.961
DCS 1800	1747.8	1.16	20000	≤ 4.368

Test Results: Compliant

37 - AM SUPPRESSION - PACKET CHANNELS

Applicable Standard

AM suppression is a measure of the ability of the receiver to receive a modulated wanted input signal in the presence of an unwanted TDMA modulated interferer.

Test Procedure

According to ETSI TS 151 010-1 sub-clause 14.8.3.4.

Test Data

Mode	Test Frequency (MHz)	Type of Channel	BLER (%)	Number of test samples	Limit (%)
GSM 900	890.2	PDTCH/MCS-9	1.23	4000	< 10
		USF/MCS-9	0.89	40000	< 1
DCS 1800	1710.4	PDTCH/MCS-9	1.22	4000	< 10
		USF/MCS-9	0.73	40000	< 1

Test Results: Compliant

39 - ADJACENT CHANNEL REJECTION - CONTROL CHANNELS

Applicable Standard

The adjacent channel selectivity is a measure of the capability of the receiver to receive a wanted modulated signal without exceeding a given degradation due to the presence of an unwanted signal in the adjacent channel.

The adjacent channel can be the adjacent in the RF spectrum or in time. There are therefore two types of adjacent channel selectivity:

- 1) Adjacent RF channel selectivity which is specifically tested in this subclause.
- 2) Adjacent Time Slot selectivity, which is implicitly tested in test 14.2.1.

Test Procedure

According to ETSI TS 151 010-1 sub-clause 14.5.2.4.

Test Data

Mode	Test Frequency (MHz)	Test Condition					Result
GSM 900	902	NVNT	LVLT	LVHT	HVLT	HVHT	Compliant
DCS 1800	1747.8	NVNT	LVLT	LVHT	HVLT	HVHT	Compliant

Please refer to following plots (tables) for normal test condition:

Mode	Test Frequency (MHz)	Type of Channel	Interference at	FER (%)	Number of test samples	Limit (%)
GSM 900	902	FACCH/F	200 kHz	1.14	6000	< 10.640
		FACCH/F	200 kHz	0.15	16000	< 3.808
		FACCH/F	400 kHz	1.28	4000	< 19.152
		FACCH/F	400 kHz	1.33	10000	< 6.832
DCS 1800	1747.8	FACCH/F	200 kHz	0.13	6000	< 10.640
		FACCH/F	200 kHz	1.20	16000	< 3.808
		FACCH/F	400 kHz	2.38	4000	< 19.152
		FACCH/F	400 kHz	0.16	10000	< 6.832

EXHIBIT A - EUT PHOTOGRAPHS

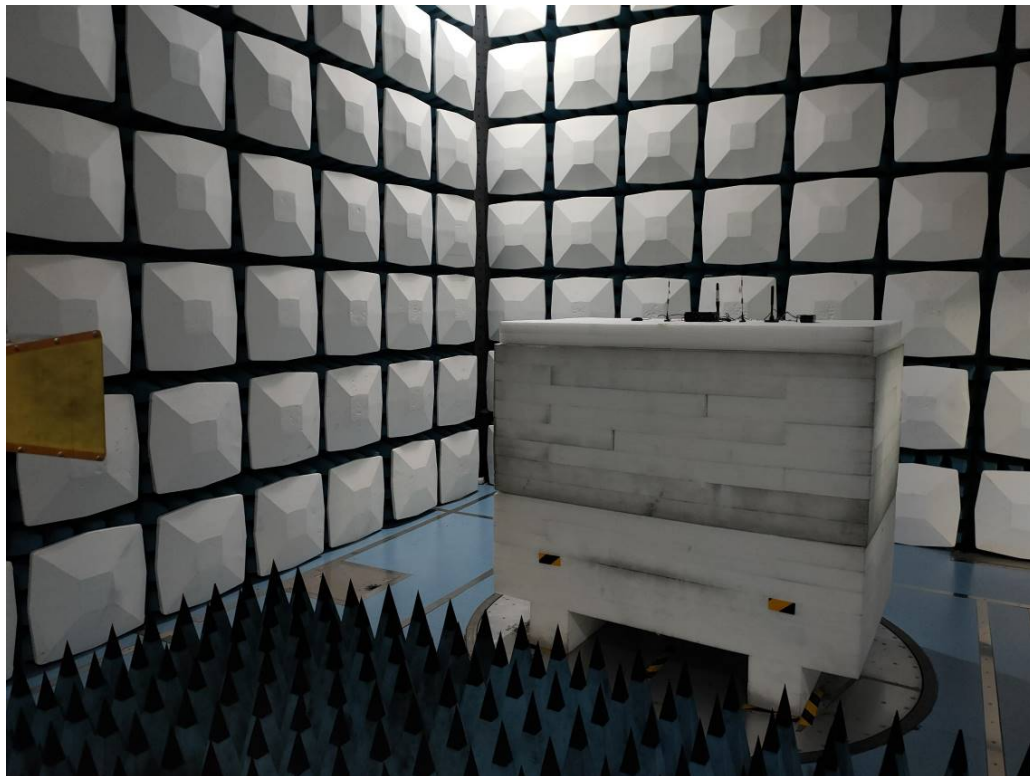
For photos in this section, please refer to report No.: XMDN220429-17582E-02 EXHIBIT A.

EXHIBIT B - TEST SETUP PHOTOGRAPHS

Radiated Emissions Below 1GHz View



Radiated Emissions Above 1GHz View



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