

Prüfbericht-Nr.: <i>Test report no.:</i>	IN24778M 001	Auftrags-Nr.: <i>Order no.:</i>	146873078 090	Seite 1 von 62 Page 1 of 62
Kunden-Referenz-Nr.: <i>Client reference no.:</i>	2026143	Auftragsdatum: <i>Order date:</i>	2024-01-19	
Auftraggeber: <i>Client:</i>	Schneider Electric 7262 Marconi Street Montreal, QC H2R 2Z5 Canada			
Prüfgegenstand: <i>Test item:</i>	Ecostruxure Flex-Server			
Bezeichnung.: <i>Identification .:</i>	Main Model: ESXBFXSVRBCW008 Associated model: ESXBFXSVRBCW016, ESXBFXSVRBCW032			
Auftrags-Inhalt: <i>Order content:</i>	Testing and issue of Test Report with Grant Certificate			
Prüfgrundlage: <i>Test specification:</i>	47 CFR Part2, 47 CFR Part 22 Subpart H, FCC Part15 Subpart C 15.207 RSS Gen Issue 5, RSS 132 Issue 4			
Wareneingangsdatum: <i>Date of sample receipt:</i>	2024-01-23			
Prüfmuster-Nr & Serien-Nr.: <i>Test sample no & serial no.:</i>	A003649514-001 Engineering Sample			
Prüfzeitraum: <i>Testing period:</i>	2024-01-24 - 2024-02-09			
Ort der Prüfung: <i>Place of testing:</i>	Wireless laboratory, Bangalore			
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (India) Pvt.Ltd., 27/B, 2nd Cross, Electronic City Phase1 Bangalore -560 100, India FCC Test site registration number: 496599 ISED Test site registration number: 27711			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft von: <i>tested by:</i>	genehmigt von: <i>authorized by:</i>			
Datum: <i>Date:</i> 2024-07-17	Ausstellatum: <i>Issue date:</i> 2024-07-17			
Stellung / Position:	M.V.Naveen Kumar Senior Engineer	Stellung / Position:	Madhu K.N Assistant Manager	
Sonstiges / Other:	FCC ID: 2BATG-ESXBFXSVRBCW IC : 30486-ESXBFXSVRBCW HVIN: ESXBFXSVRBCW008; ESXBFXSVRBCW016; ESXBFXSVRBCW032			
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>	Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>			
* Legende: 1 = sehr gut P(ass) = entspricht o.g. Prüfgrundlage(n)	2 = gut F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	3 = befriedigend F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	4 = ausreichend N/A = nicht anwendbar	5 = mangelhaft N/T = nicht
* Legend: 1 = very good P(ass) = passed a.m. test specification(s)	2 = good F(ail) = failed a.m. test specification(s)	3 = satisfactory F(ail) = failed a.m. test specification(s)	4 = sufficient N/A = not applicable	5 = poor N/T = not tested
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				

Prüfbericht - Nr.:

Test Report No.:

IN24778M 001

Seite 2 von 62

Page 2 of 62

1	Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibrierungsprogramms unseres Prüfhauses kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben. Detaillierte Informationen bezüglich Prüfkonditionen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden. <i>The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system. Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request.</i>
2	Wie vertraglich vereinbart, wurde dieses Dokument nur digital unterzeichnet. Der TÜV Rheinland hat nicht überprüft, welche rechtlichen oder sonstigen diesbezüglichen Anforderungen für dieses Dokument gelten. Diese Überprüfung liegt in der Verantwortung des Benutzers dieses Dokuments. Auf Verlangen des Kunden kann der TÜV Rheinland die Gültigkeit der digitalen Signatur durch ein gesondertes Dokument bestätigen. Diese Anfrage ist an unseren Vertrieb zu richten. Eine Umweltgebühr für einen solchen zusätzlichen Service wird erhoben. <i>As contractually agreed, this document has been signed digitally only. TUV Rheinland has not verified and unable to verify which legal or other pertaining requirements are applicable for this document. Such verification is within the responsibility of the user of this document. Upon request by its client, TUV Rheinland can confirm the validity of the digital signature by a separate document. Such request shall be addressed to our Sales department. An environmental fee for such additional service will be charged.</i>
3	Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben. Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt. <i>Test clauses with remark of * are subcontracted to qualified subcontractors and described under the respective test clause in the report.</i> <i>Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.</i>
4	Die Entscheidungsregel für Konformitätserklärungen in diesem Prüfbericht basiert auf der "Null-Grenzwert-Regel" und der "Einfachen Akzeptanz" gemäß ILAC G8:2019 und IEC Guide 115:2021, es sei denn, in der auf Seite 1 dieses Berichts genannten angewandten Norm ist etwas anderes festgelegt oder vom Kunden gewünscht. Dies bedeutet, dass die Messunsicherheit nicht berücksichtigt wird und daher auch nicht im Prüfbericht angegeben wird. <i>The decision rule for statements of conformity in this test report is based on the "Zero Guard Band Rule" and "Simple Acceptance" in accordance with ILAC G8:2019 and IEC Guide 115:2021, unless otherwise specified in the applied standard mentioned on Page 1 of this report or requested by the customer. This means that measurement uncertainty is not taken in account and hence also not declared in the test report.</i>

Prüfbericht - Nr.:
Test Report No.:

IN24778M 001

Seite 3 von 62
Page 3 of 62

TEST SUMMARY

Test Item	FCC Clause	IC Clause	Results
Conducted Output Average Power and Peak to Average Power ratio	§2.1046 §22.913(a)(5)(d)	RSS-132, §5.4	Pass
Equivalent Isotropic Radiated Power (EIRP) / Effective Radiated Power (ERP)	§22.913 (a) (5)	RSS-Gen, §6.12; RSS-132, §5.4	Pass
Field strength of spurious radiation	§2.1053 §22.917	RSS-Gen, §6.13; RSS-132, §5.5	Pass
Frequency Stability	§2.1055 §22.355	RSS-Gen, §6.11 RSS-132, §5.3	N/T
Emission Bandwidth and Occupied Bandwidth	§2.1049	RSS-Gen, §6.6	N/T
Band Edge	§ 2.1051 §22.917	RSS-Gen, §6.13; RSS-132, §5.5	N/T
Spurious emissions at antenna terminals	§2.1051 §22.917	RSS-Gen, §6.13; RSS-132, §5.5	N/T
Conducted Emissions on A.C Power Lines	§15.207	RSS Gen Issue 5, Section 8.8	Pass

Note:

N/T: Not Tested, since Ecostruxure Flex-Server product uses certified RF modules with

FCC ID: XMR201903EG25G & IC: 10224A-201903EG25G , Hence the above mentioned test cases are excluded and which can be found in the module test report of respective FCC ID & IC.

Product	Applicant	FCC ID	IC	Report No	IC Report No	Issued By	Grant Date
EG25-G MINIPCIE	Quectel Wireless Solutions Company Limited	XMR201903EG25G	10224A- 201903EG25G	HR/2019/1001601	HR/2019/1001603	SGS-CSTC Standards Technical Service Co., Ltd. Shenzhen Branch	29/03/ 2019

Product Category: Electronics Testing
Test Discipline: EMC Test Facility

Prüfbericht - Nr.:
Test Report No.:

IN24778M 001

Seite 4 von 62
Page 4 of 62

REVISION HISTORY OF THIS REPORT

Report Number	Version	Description	Issue date
IN24778M 001	01	Initial Issue of Test Report	2024-07-17

Table of Contents

1	GENERAL REMARKS	6
1.1	Attachments	6
2	TEST SITES	7
2.1	Testing Facilities	7
2.2	List of Test and Measurement Instruments.....	7
3	GENERAL PRODUCT INFORMATION.....	8
3.1	Product Function and Intended Use	8
3.2	Ratings and System Details of Equipment under Test	8
3.3	Measurement Uncertainty	9
4	TEST SET-UP AND OPERATION MODE.....	10
4.1	Principle of Configuration Selection	10
4.2	UUT Operation and Software.....	10
4.3	Special Accessories and Auxiliary Equipment	10
4.4	Countermeasures to achieve EMC Compliance	10
4.5	Report references	10
5	Operational Description of the product	11
6	TEST METHODOLOGY	12
6.1	AC Power lines Conducted emission.....	12
6.1.1	Test Setup Configuration.....	12
6.2	Radiated Emission Test	13
6.2.1	Test Setup Configuration.....	13
7	TEST RESULTS	17
7.1	Peak-Average Ratio	17
7.2	Effective (Isotropic) Radiated Power.....	28
7.3	FIELD STRENGTH OF SPURIOUS RADIATION.....	39
7.4	AC Powerlines Conducted Emission	59
8	LIST OF TABLES.....	62
9	LIST OF FIGURES	62

Prüfbericht - Nr.:

Test Report No.:

IN24778M 001

Seite 6 von 62

Page 6 of 62

1 GENERAL REMARKS

1.1 Attachments

All attachments are part of this test report and are issued in separate document

1: TEST SETUP PHOTOS

2: EUT EXTERNAL PHOTOS

3: EUT INTERNAL PHOTOS

4: FCC LABEL AND LABEL LOCATION

5: BLOCK DIAGRAM

6: SPECIFICATION OF EUT

7: SCHEMATIC DIAGRAM

8: BILL OF MATERIAL

9: USER MANUAL

10: MAXIMUM PERMISSIBLE EXPOSURE INFORMATION

Prüfbericht - Nr.:
Test Report No.:

IN24778M 001

Seite 7 von 62
Page 7 of 62

2 TEST SITES

2.1 Testing Facilities

1. TÜV Rheinland (India) Pvt.Ltd.,
27/B, 2nd Cross,
ElectronicCityPhase1
Bangalore – 560 100,
India
2. TUV Rheinland (India) Private Limited
108 , Beside ISBR Business School,
Electronic city Phase I
Bangalore - 560 100.
India

2.2 List of Test and Measurement Instruments

Table 1: List of test and measurement instruments

Equipment	Manufacturer	Model Name	Serial Number	Firmware Versions	Calibration Due Date	Periodicity	Test Facility
EMI Receiver	Rohde & Schwarz	ESW 44	101773	1.72 SP5	26.01.2025	Yearly	Radiated Spurious Emission
Horn Antenna	Schwarzbeck	BBHA 9120 D	9120D-1944	-	28.10.2024	Yearly	
Baloon and Biconical Antenna	Schwarzbeck mess-elektronik	VHBB-9124 / BBA-9106	01028	-	08.02.2025	Yearly	
Log-Periodic Antenna	Schwarzbeck mess-elektronik	VUSLP-9111B	9111B-111	-	03.02.2025	Yearly	
Active loop antenna	Frankonia	LAX-10	LAX-10-800	-	02.03.2024	Yearly	
Fully Anechoic Chamber	Albatross	-	-	-	-	-	
EMI Receiver	Rohde & Schwarz	ESW 44	103384	4.73 SP5	10.05.2025	Yearly	Antenna – Port Conducted
30dB Attenuator	Mini Circuits	BW-N30W5+	938		12.10.2024		
Radio Communication tester	Rohde & Schwarz	CMW 500	1201.0002K50	-	28.10.2024	Yearly	
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100811	-	12-07-2024	Yearly	AC Powerlines Test Case
Two Line V-Network (LISN)	Rohde & Schwarz	ENV216	100022	-	05.10.2024	Yearly	
EMI Receiver	Rohde & Schwarz	ESR7	101133		29.07.2024	Yearly	

Table 2: Instrument application Software versions

SL. No.	Test Type	Application software	Version
1	Radiated spurious emission measurement in SAC	BATEMC	V2022.0.11.0
2	Radiated spurious emission measurement in FAC	EMC 32	10.60.20

3 GENERAL PRODUCT INFORMATION

3.1 Product Function and Intended Use

ESXB Flex-Server is a multiprotocol IoT gateway that has been designed specifically for industrial and commercial applications. It enables businesses to perform bi-directional data/control communication between a range of sensors and devices on-premise and cloud. Exposed physical interfaces include RS485, USB ports, power connector, LEDs, Switches and Ethernet.

3.2 Ratings and System Details of Equipment under Test

Table 3: Ratings and System Details as declared by Supplier*

Radio Protocol		GSM 850MHz/UMTS Band 5 & LTE Band 5/26				
LTE E-UTRA operating bands		Band	Bandwidth (MHz)	UL Frequency (MHz)	DL Frequency (MHz)	Modulation
		5	1.4, 3, 5, 10	824.7 – 848.3	869.7- 893.3	QPSK, 16QAM
		26	1.4 ,3 ,5, 10; 15	824.0 – 849.0	869 – 894	QPSK, 16QAM
WCDMA(UMTS)		5	-	824-849	869 - 894	QPSK
GSM 850MHz		850MHz	-	824-849	869 - 894	GMSK, 8PSK
Transmitted Power for LTE (dBm)		Band	Power Class	Max. Conducted Average. Output Power		
		5	Power Class 3: 23dBm	24.75dBm@3MHz,16QAM(836.5MHz)		
		26	Power Class 3: 23dBm	23.82dBm@CB3MHz, QPSK(825.50MHz)		
Transmitted Power for WCDMA(UMTS) (dBm)		5	Power class 3: 24dBm	22.61dBm@QPSK(846.60MHz)		
Transmitted Power for GSM 850MHz (dBm)		850MHz	Power class 5: 33dBm	28.70dBm@848.80MHz		
Modulation		GSM System, GSM/GPRS, GMSK modulation GSM System, EGPRS,8PSK modulation UMTS System, WCDMA, QPSK modulation UMTS System, WCDMA, 16QAM modulation LTE system, QPSK modulation LTE system, 16QAM modulation				
Antenna Type		Main Antenna – Dipole Antenna				
Number of Antenna		1				
Antenna Gain		Refer Table 4				
Supply Voltage to Product		12VDC through AC/DC Adapter				
Environmental conditions	Storage	-20°C to +65°C				
	Operating	0°C to +50°C				
EUT Dimension (L x W x H)		33.6 x 17.6 x 4.1 cm				

Antenna Type	Frequency Range (MHz)	Antenna Gain (dBi)
Primary Antenna (External)	600-700	-0.5
	700-810	1.4
	820-960	1.0
	1700-2170	2.3
	2300-2400	1.5
	2400-2500	1.6
	2500-2690	2.8

Table 4: Antenna Gain

***Disclaimer:**

The information/data is supplied by the client and the same is considered to arrive at the final value. Any changes made apart from the specified specification, can directly impact on the tests results. Refer the products user manual for more details.

3.3 Measurement Uncertainty

Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$

Table 5: Measurement Uncertainty

Parameter	Uncertainty
Occupied Channel Bandwidth	±5 %
RF output power, conducted	±1.5 dB
Power Spectral Density, conducted	±3 dB
Unwanted Emissions, conducted	±3 dB
All emissions, radiated	±6 dB
Temperature	±3 °C
Supply Voltages	±3 %
Time	±5 %

4 TEST SET-UP AND OPERATION MODE

4.1 Principle of Configuration Selection

Transmission was enabled with highest possible duty cycle on low, mid and high channels.

4.2 UUT Operation and Software

Hardware Name & version: Gateway CB V3.3

Software Name & version: Zenatix Gateway Image (v2.0)

Hardware version & Identification Number(HVIN) : Refer the cover Page

4.3 Special Accessories and Auxiliary Equipment

Product	Manufacture	Model	Specifications
AC/DC Adapter	Meanwell SMPS	RS-25-12	I/P Voltage: 100-240VAC 0.35A 50/60Hz O/P Voltage: +12V = 1.3A

4.4 Countermeasures to achieve EMC Compliance

- None

4.5 Report references

Note: Ecostruxure Flex-Server has multiple protocols. All the supported wireless protocols and their respective test results are issued in separate test reports, following table lists the report numbers.

Radio Protocol	Report Number
RF test report for FCC Part15 Subpart C & RSS 247 Issue 3, RSS Gen Issue 5	IN24TRDD 001
RF test report for FCC Part15 Subpart E & RSS 247 Issue 3, RSS Gen Issue 5	IN24QRE8 001
RF test report for FCC Part22 Subpart H & RSS Gen Issue 5, RSS 132 Issue 4	IN24778M 001
RF test report for FCC Part24 Subpart E & RSS Gen Issue 5, RSS-133 Issue 6	IN249G94 001
RF test report for FCC Part27 Subpart C & RSS Gen Issue 5, RSS 139 Issue 4, RSS 199 Issue 4, RSS 130 Issue 2	IN244I1B 001
RF test report for FCC Part90 Subpart S & RSS Gen Issue 5	IN2443F6 001

Prüfbericht - Nr.:

Test Report No.:

IN24778M 001

Seite 11 von 62

Page 11 of 62

5 Operational Description of the product

ESXB Flex-Server has support for multiple protocols, these devices can be configured and connected to the gateway using an online portal. The gateway connects to the cloud downloads the configuration and enables the communication between cloud and sensing and control devices.

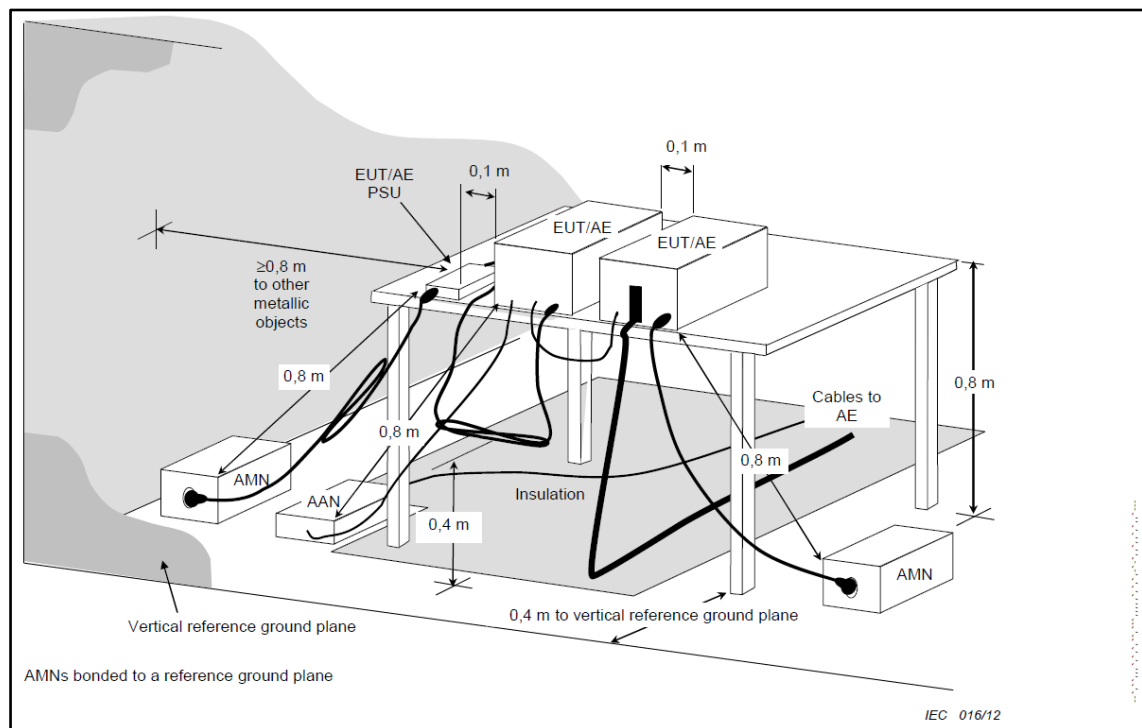
6 TEST METHODOLOGY

6.1 AC Power lines Conducted emission.

Measured levels of ac powerline conducted emission across the 50Ω LISN port (to which the EUT is connected). All emission voltage and current measurements shall be made on each current-carrying conductor at the plug end of the EUT power cord by the use of mating plugs and receptacles on the LISN, if used. Equipment shall be tested with power cords that are normally supplied or recommended by the manufacturer and that have electrical and shielding characteristics that are the same as those cords normally supplied or recommended by the manufacturer.

The device is placed on the test table, raised 80cm above the reference ground plane. The vertical conducting plane is located 40cm to the rear of the device. AC Conducted emission measurement is made over frequency range from 150kHz to 30MHz, this measurement was performed with EUT powered with an AC adaptor with 110V AC 60Hz supply.

6.1.1 Test Setup Configuration



6.2 Radiated Emission Test

Frequency Range 9 kHz - 30 MHz

Test performed as per ANSI C63.4-2014 section 8.3

The loop Antenna was placed at 1m above the ground plane & EUT is 3 meters far from the measuring antenna. With 3m measurement distance, correction data were applied to the measured results. The test arrangement, measuring antenna guidelines and operational configurations in 8.2.1 and 8.2.2, shall be followed. The measurement antenna shall be positioned with its plane perpendicular to the ground at the Specified distance, when perpendicular to the ground plane, the lowest height of the magnetic antenna shall be 1 m above the ground and shall be positioned at the specified distance from the EUT. EUT & its associates are placed on non-conducting table of 0.8m height which is placed on the turn table, For each measurement antenna alignment, the EUT shall be rotated through 0° to 360° on a turntable. The report shall list worst case emission results, for each of the parallel & perpendicular orientations.

6.2.1 Test Setup Configuration

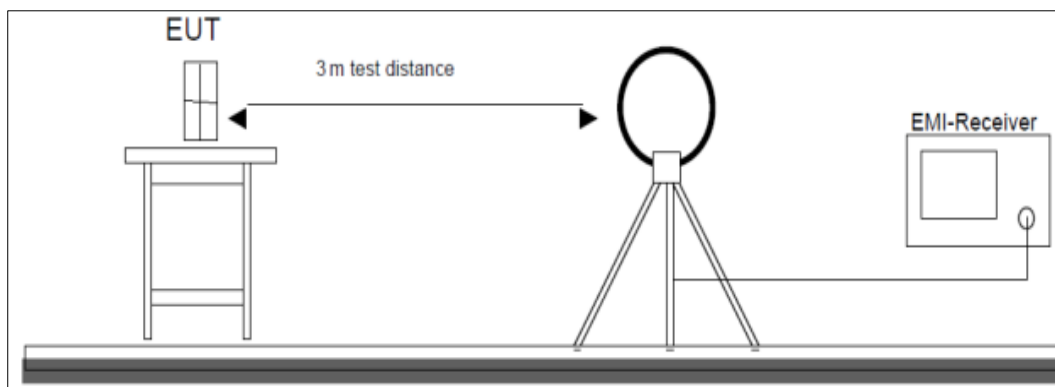


Figure 1: Frequency Range 9 kHz- 30 MHz

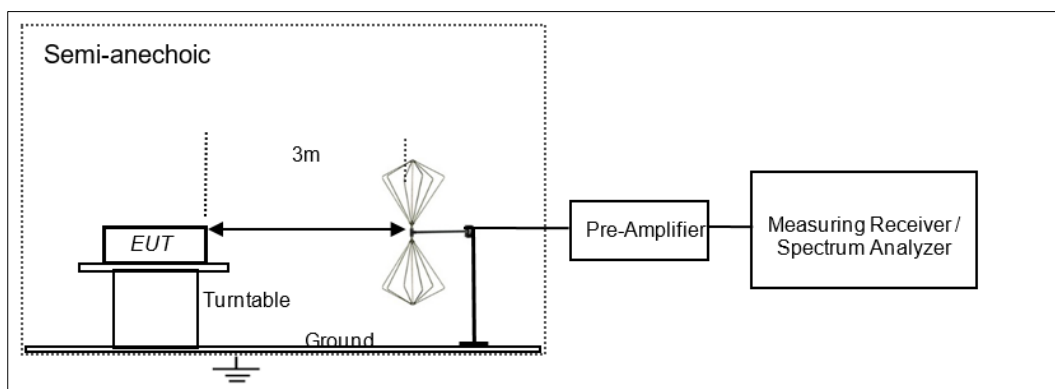


Figure 2: Frequency Range 30 MHz – 200 MHz

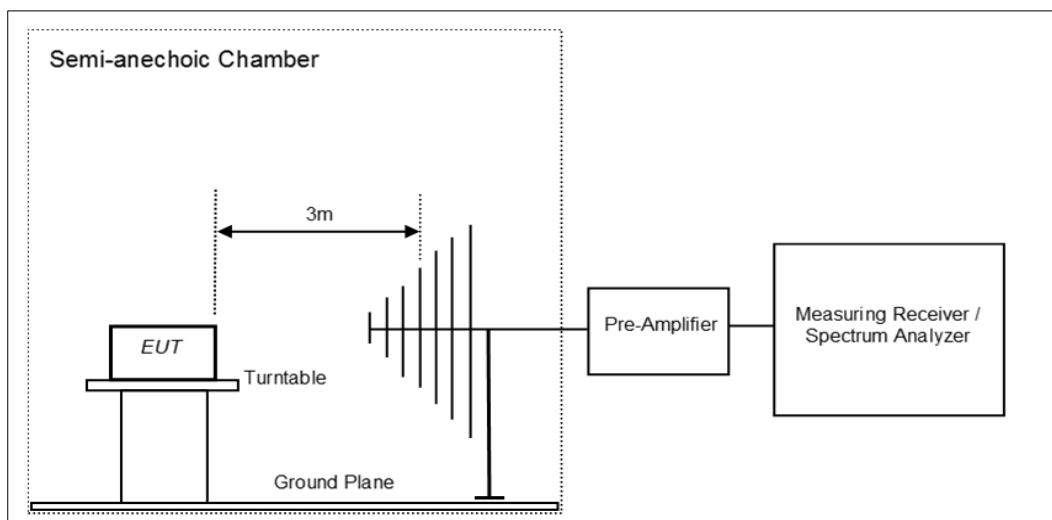


Figure 3: Frequency Range 200 MHz - 1GHz

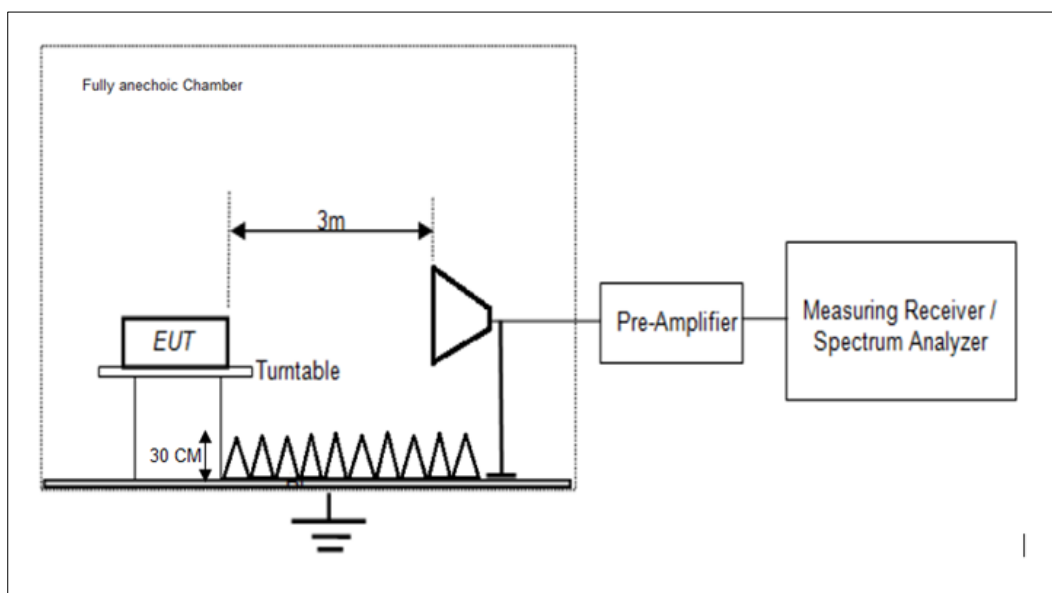


Figure 4: Frequency Range above 1 GHz

Prüfbericht - Nr.:
Test Report No.:

IN24778M 001

Seite 15 von 62
Page 15 of 62

Frequency Range 30MHz to 10th harmonics of the highest fundamental frequency

Test performed as per ANSI C63.26-2015

Radiated spurious emission test are performed as below.

All the radiated emission measurements are performed in accordance with common requirement specified in 5.5.2 and Pre-test site path loss correction factors are used to adjust the EUT emission data in place of two step substitution method (as defined in Annex B of ANSI C63.26-2015).

The equipment under test is placed on non-conductive table at 3m away from the receive antenna in accordance with above mentioned standard. Turn table is rotated through 360 degree, and receiver antenna height is varied in order to determine the level of maximum emission. The maximum emission level and position of the maximized emission is recorded with use of spectrum analyzer.

Using pre-test site path loss to determine EUT emission power:

- 1) EUT emission powers are calculated using the following equation:

$$\text{Emission Power} = \text{EUT}_{\text{Prec}} [\text{dBm EIRP/ ERP}] + \text{P}_L [\text{dB}]$$

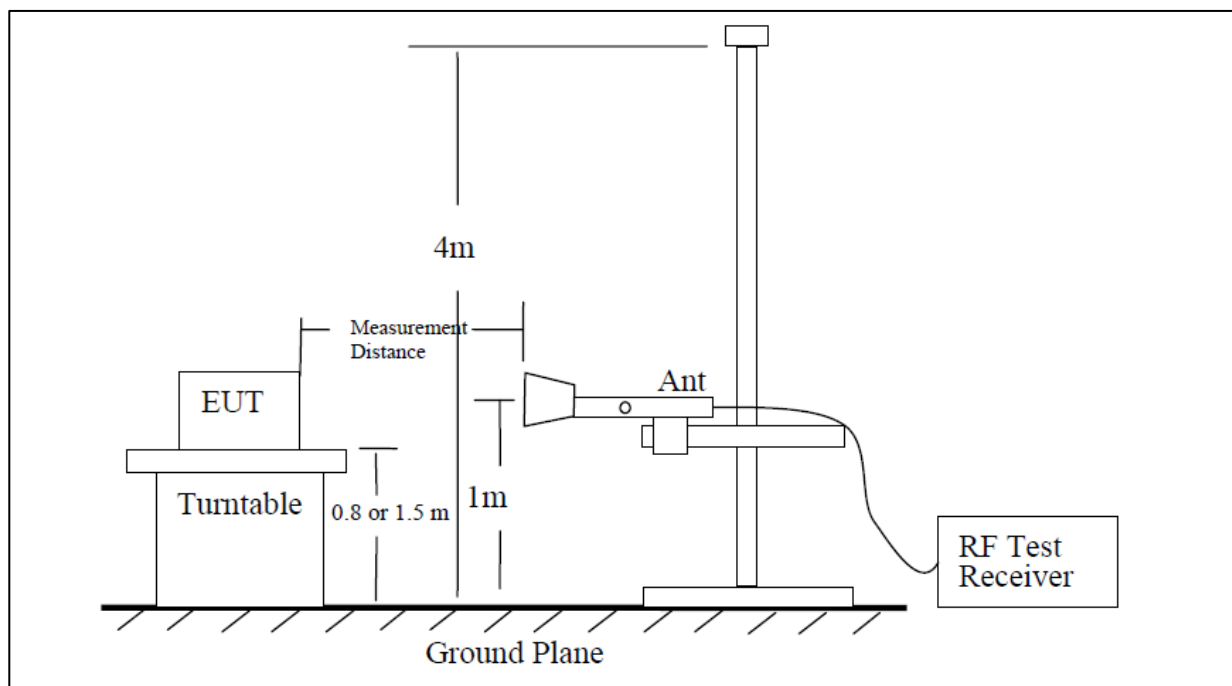
where

EUT_{Prec} = power of the emission measured at the test receiver during EUT measurements.

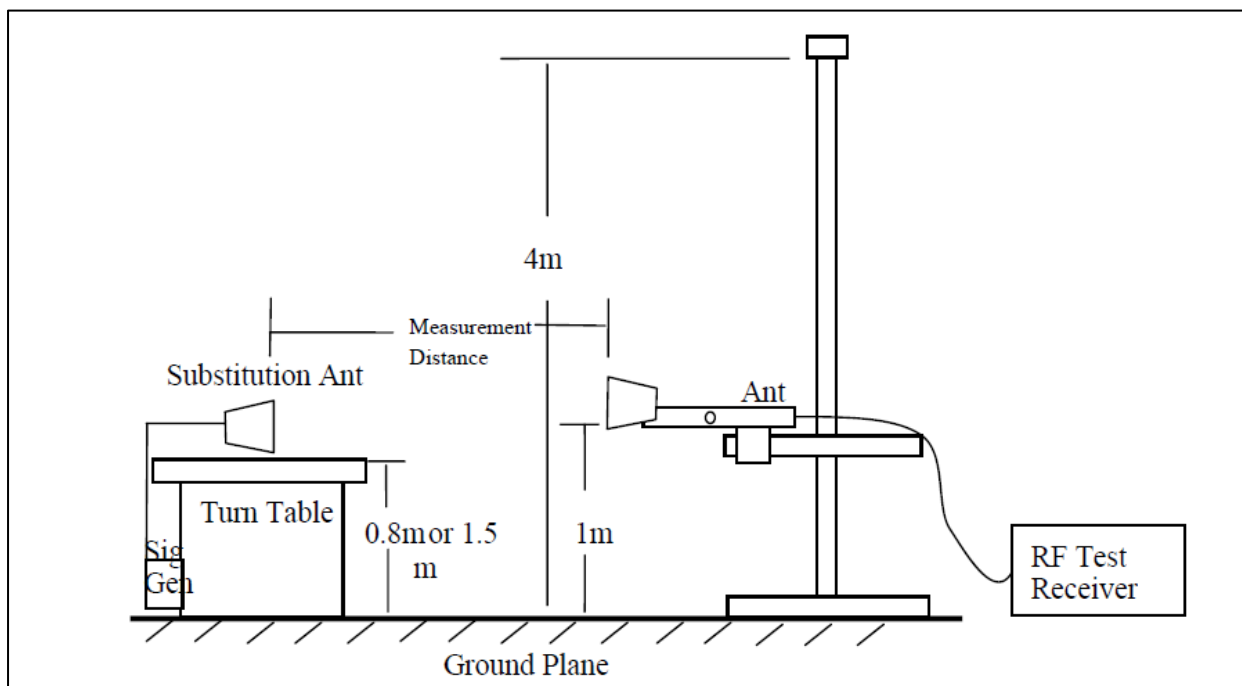
P_L = path loss determined on the frequency of the EUT emission or calculated using linear interpolation between site characterization frequencies.

- 2) This is the level to be compared against the regulatory limit as it is the emission power referenced back to the EUT on the test site.

Test site-up for radiated measurements



Substitution method set-up for radiated emission



Prüfbericht - Nr.:
Test Report No.:

IN24778M 001

Seite 17 von 62
Page 17 of 62

7 TEST RESULTS

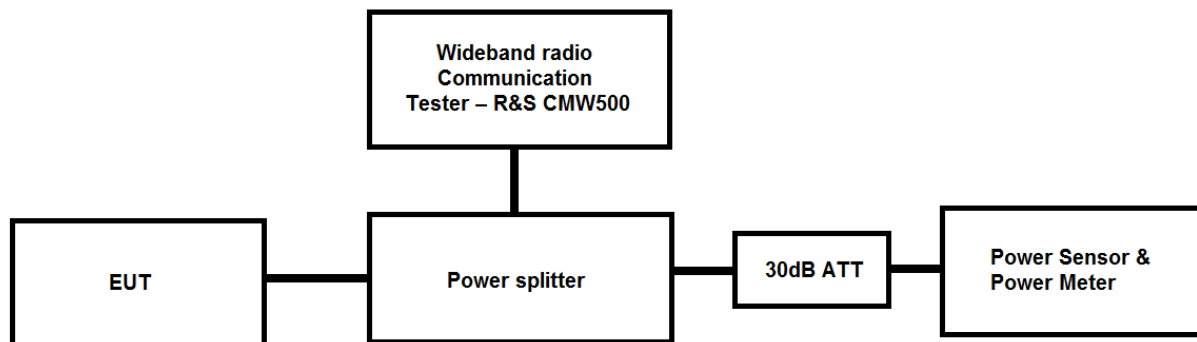
7.1 Peak-Average Ratio

Result

Pass

Specification	FCC Part §2.1046 & §22.913(a)(5)(d) RSS-132, §5.4 ANSI C63.26-2015
Test Method / Procedure	As per subclause 5 in 971168 D01 Power Meas License Digital Systems v03r01
Detector Function	Peak/Average
Requirement	PAPR ≤ 13dB

Test Setup:



Environmental Conditions:

Temperature: +22.5°C

Voltage: 12VDC through AC-DC Adapter

Relative Humidity: 62%

KDB Guidelines applied:

Measurements were made as per section 5.2.4 in KDB 971168 D01 Power Meas License Digital Systems v03r01

Prüfbericht - Nr.:
Test Report No.:

IN24778M 001

Seite 18 von 62
Page 18 of 62

Test results:

Note:

- 1 All the losses are included during measurement and final values are mentioned in the test report.
2. Total Average Output power (dBm) = Measured Average power (dBm) + Attenuator factor (30dB) + Power Splitter (6 dB) + Cable loss (1dB)
3. PAPR (dB) = Measured Peak Power(dBm) – Measured Average Power(dBm)

PAPR Test Results

Band	Bandwidth	Modulation	Channel No	RB Position & RB Allocation	Measured Peak Power (dBm)	Measured Average Power (dBm)	PAPR (dB)	Limit (dB)
5	1.4MHz	QPSK	20407	1RB#0	27.16	22.17	4.99	13.00
			20407	1RB#2	28.05	23.07	4.98	13.00
			20407	1RB#5	28.40	23.39	5.01	13.00
			20407	3RB#0	29.05	23.99	5.06	13.00
			20407	3RB#1	28.38	23.24	5.14	13.00
			20407	3RB#3	28.37	23.45	4.92	13.00
			20407	6RB#0	29.01	23.29	5.72	13.00
			20525	1RB#0	27.18	22.32	4.86	13.00
			20525	1RB#5	27.16	22.89	4.27	13.00
			20525	1RB#2	27.91	22.18	5.73	13.00
			20525	3RB#0	28.37	23.33	5.04	13.00
			20525	3RB#1	28.31	23.27	5.04	13.00
			20525	3RB#3	28.30	23.87	4.43	13.00
			20525	6RB#0	28.71	23.42	5.29	13.00
			20643	1RB#5	27.94	22.75	5.19	13.00
			20643	1RB#0	27.75	23.07	4.68	13.00
	1.4MHz	16QAM	20407	1RB#2	27.76	23.00	4.76	13.00
			20643	3RB#0	28.76	23.82	4.94	13.00
			20643	3RB#1	28.86	23.93	4.93	13.00
			20643	3RB#3	28.85	23.92	4.93	13.00
			20643	6RB#0	29.11	23.86	5.25	13.00
			20407	1RB#0	29.00	23.24	5.76	13.00
			20407	1RB#2	29.17	23.28	5.89	13.00
			20407	1RB#5	29.42	23.57	5.85	13.00
			20407	3RB#1	29.09	23.25	5.84	13.00
			20407	3RB#0	29.54	23.69	5.85	13.00
			20407	3RB#3	29.47	23.57	5.90	13.00
			20407	6RB#0	30.37	24.09	6.28	13.00
			20525	1RB#0	27.85	22.52	5.33	13.00
			20525	1RB#2	27.84	22.60	5.24	13.00
			20525	1RB#5	27.85	22.84	5.01	13.00
			20525	3RB#3	29.40	23.87	5.53	13.00
			20525	3RB#0	29.33	23.34	5.99	13.00
			20525	3RB#1	29.31	23.49	5.82	13.00
			20525	6RB#0	30.18	23.99	6.19	13.00
			20643	1RB#2	28.35	22.81	5.54	13.00
			20643	1RB#0	28.60	23.12	5.48	13.00
			20643	1RB#5	28.58	23.09	5.49	13.00
			20643	3RB#0	29.57	24.09	5.48	13.00
			20643	3RB#1	28.78	23.10	5.68	13.00
			20643	3RB#3	28.76	23.18	5.58	13.00
			20643	6RB#0	29.85	23.97	5.88	13.00

Prüfbericht - Nr.:
Test Report No.:

IN24778M 001

Seite 19 von 62
Page 19 of 62

Band	Bandwidth	Modulation	Channel No	RB Position & RB Allocation	Measured Peak Power (dBm)	Measured Average Power (dBm)	PAPR (dB)	Limit (dB)
5	3MHz	QPSK	20415	1RB#8	27.29	22.40	4.89	13.00
			20415	1RB#14	27.01	22.22	4.79	13.00
			20415	1RB#0	28.91	23.82	5.09	13.00
			20415	8RB#0	29.17	23.82	5.35	13.00
			20415	8RB#4	29.35	24.21	5.14	13.00
			20415	8RB#7	29.27	24.20	5.07	13.00
			20415	15RB#0	29.69	23.93	5.76	13.00
			20525	1RB#0	27.26	22.34	4.92	13.00
			20525	1RB#14	27.25	22.60	4.65	13.00
			20525	1RB#8	27.34	22.39	4.95	13.00
			20525	8RB#7	28.74	23.56	5.18	13.00
			20525	8RB#0	28.66	23.52	5.14	13.00
			20525	8RB#4	27.92	22.71	5.21	13.00
			20525	15RB#0	29.14	23.64	5.50	13.00
			20635	1RB#8	27.42	22.58	4.84	13.00
			20635	1RB#0	27.36	22.75	4.61	13.00
			20635	1RB#14	27.35	22.32	5.03	13.00
			20635	8RB#0	28.67	23.53	5.14	13.00
			20635	8RB#7	28.54	23.75	4.79	13.00
			20635	8RB#4	28.53	23.33	5.20	13.00
			20635	15RB#0	28.99	23.46	5.53	13.00
	3MHz	16QAM	20415	1RB#14	28.09	23.97	4.12	13.00
			20415	1RB#0	27.93	22.24	5.69	13.00
			20415	1RB#8	28.82	23.09	5.73	13.00
			20415	8RB#7	29.68	23.70	5.98	13.00
			20415	8RB#4	29.91	24.06	5.85	13.00
			20415	8RB#0	29.82	23.88	5.94	13.00
			20415	15RB#0	30.26	23.82	6.44	13.00
			20525	1RB#14	28.27	22.91	5.36	13.00
			20525	1RB#0	28.27	23.05	5.22	13.00
			20525	1RB#8	28.39	22.87	5.52	13.00
			20525	8RB#7	28.82	23.99	4.83	13.00
			20525	8RB#0	29.88	23.92	5.96	13.00
			20525	8RB#4	30.02	24.24	5.78	13.00
			20525	15RB#0	30.32	24.75	5.57	13.00
			20635	1RB#8	28.17	23.16	5.01	13.00
			20635	1RB#0	28.13	23.65	4.48	13.00
			20635	1RB#14	28.17	23.55	4.62	13.00
			20635	8RB#0	29.57	23.16	6.41	13.00
			20635	8RB#4	29.69	24.14	5.55	13.00
			20635	8RB#7	29.17	24.29	4.88	13.00
			20635	15RB#0	30.27	23.98	6.29	13.00

Prüfbericht - Nr.:
Test Report No.:

IN24778M 001

Seite 20 von 62
Page 20 of 62

Band	Bandwidth	Modulation	Channel No	RB Position & RB Allocation	Measured Peak Power (dBm)	Measured Average Power (dBm)	PAPR (dB)	Limit (dB)
5	5MHz	QPSK	20425	1RB#0	27.35	22.44	4.91	13.00
			20425	1RB#12	27.13	22.33	4.80	13.00
			20425	1RB#24	27.99	23.15	4.84	13.00
			20425	12RB#0	29.41	24.03	5.38	13.00
			20425	12RB#6	28.76	23.54	5.22	13.00
			20425	12RB#13	28.64	23.67	4.97	13.00
			20425	25RB#0	30.03	24.19	5.84	13.00
			20525	1RB#0	28.03	23.20	4.83	13.00
			20525	1RB#24	28.24	23.67	4.57	13.00
			20525	1RB#12	28.35	23.52	4.83	13.00
			20525	12RB#0	27.75	22.52	5.23	13.00
			20525	12RB#6	27.71	23.53	4.18	13.00
			20525	12RB#13	27.67	22.45	5.22	13.00
			20525	25RB#0	29.05	23.46	5.59	13.00
			20625	1RB#24	27.74	23.07	4.67	13.00
			20625	1RB#0	28.03	23.42	4.61	13.00
			20625	1RB#12	27.75	22.98	4.77	13.00
			20625	12RB#0	29.13	24.13	5.00	13.00
			20625	12RB#6	29.19	24.10	5.09	13.00
			20625	12RB#13	29.06	24.05	5.01	13.00
			20625	25RB#0	29.95	24.01	5.94	13.00
	5MHz	16QAM	20425	1RB#0	29.05	23.31	5.74	13.00
			20425	1RB#12	28.93	23.22	5.71	13.00
			20425	1RB#24	28.81	23.04	5.77	13.00
			20425	12RB#6	29.71	23.62	6.09	13.00
			20425	12RB#0	29.88	23.82	6.06	13.00
			20425	12RB#13	29.89	23.83	6.06	13.00
			20425	25RB#0	30.30	23.78	6.52	13.00
			20525	1RB#0	28.82	23.21	5.61	13.00
			20525	1RB#12	29.17	23.67	5.50	13.00
			20525	1RB#24	29.10	23.52	5.58	13.00
			20525	12RB#13	29.67	23.53	6.14	13.00
			20525	12RB#0	29.91	23.72	6.19	13.00
			20525	12RB#6	29.75	23.62	6.13	13.00
			20525	25RB#0	30.45	23.96	6.49	13.00
			20625	1RB#12	28.61	23.29	5.32	13.00
			20625	1RB#0	29.60	23.19	6.41	13.00
			20625	1RB#24	28.82	23.66	5.16	13.00
			20625	12RB#0	29.56	23.70	5.86	13.00
			20625	12RB#6	29.51	23.69	5.82	13.00
			20625	12RB#13	29.46	23.67	5.79	13.00
			20625	25RB#0	29.98	23.91	6.07	13.00

Prüfbericht - Nr.:
Test Report No.:

IN24778M 001

Seite 21 von 62
Page 21 of 62

Band	Bandwidth	Modulation	Channel No	RB Position & RB Allocation	Measured Peak Power (dBm)	Measured Average Power (dBm)	PAPR (dB)	Limit (dB)
5	10MHz	QPSK	20450	1RB#49	27.91	23.02	4.89	13.00
			20450	1RB#24	28.16	23.17	4.99	13.00
			20450	1RB#0	27.84	23.01	4.83	13.00
			20450	25RB#0	29.94	24.25	5.69	13.00
			20450	25RB#12	29.80	24.24	5.56	13.00
			20450	25RB#25	27.33	22.46	4.87	13.00
			20450	50RB#0	28.81	23.85	4.96	13.00
			20525	1RB#0	27.79	22.85	4.94	13.00
			20525	1RB#49	28.58	23.76	4.82	13.00
			20525	1RB#24	27.77	22.93	4.84	13.00
			20525	25RB#25	28.77	23.36	5.41	13.00
			20525	25RB#0	28.87	23.53	5.34	13.00
			20525	25RB#12	28.89	23.53	5.36	13.00
			20525	50RB#0	29.73	23.50	6.23	13.00
			20600	1RB#24	27.73	22.86	4.87	13.00
			20600	1RB#0	27.93	23.29	4.64	13.00
			20600	1RB#49	27.54	22.42	5.12	13.00
			20600	25RB#0	28.55	23.55	5.00	13.00
			20600	25RB#25	28.36	23.07	5.29	13.00
			20600	25RB#12	28.35	23.07	5.28	13.00
			20600	50RB#0	29.85	23.99	5.86	13.00
	10MHz	16QAM	20450	1RB#49	28.88	23.45	5.43	13.00
			20450	1RB#0	29.11	23.93	5.18	13.00
			20450	1RB#24	29.20	23.95	5.25	13.00
			20450	25RB#25	30.13	23.76	6.37	13.00
			20450	25RB#12	29.90	23.76	6.14	13.00
			20450	25RB#0	29.83	23.64	6.19	13.00
			20450	50RB#0	30.54	23.84	6.70	13.00
			20525	1RB#49	28.36	23.17	5.19	13.00
			20525	1RB#0	28.54	23.36	5.18	13.00
			20525	1RB#24	28.73	23.51	5.22	13.00
			20525	25RB#25	29.77	23.41	6.36	13.00
			20525	25RB#0	28.98	22.65	6.33	13.00
			20525	25RB#12	28.93	22.74	6.19	13.00
			20525	50RB#0	28.92	22.64	6.28	13.00
			20600	1RB#24	29.07	23.79	5.28	13.00
			20600	1RB#0	28.54	23.28	5.26	13.00
			20600	1RB#49	28.43	23.42	5.01	13.00
			20600	25RB#0	29.94	23.74	6.20	13.00
			20600	25RB#12	29.84	23.93	5.91	13.00
			20600	25RB#25	29.80	23.93	5.87	13.00
			20600	50RB#0	30.24	23.73	6.51	13.00

Prüfbericht - Nr.:
Test Report No.:

IN24778M 001

Seite 22 von 62
Page 22 of 62

Band-26: (824MHz-849MHz)

Cellular Band	Channel Bandwidth (MHz)	Modulation Technique	Channel Number	RB Pos/RB allocation	Measured peak Power (dBm)	Measured Average Power (dBm)	PAPR (dB)	Limit (dB)
Band26	1.4MHz	QPSK	26797	1RB#0	27.47	22.51	4.96	13.00
			26797	1RB#2	28.12	23.59	4.53	
			26797	1RB#5	27.37	22.43	4.94	
			26797	3RB#0	28.20	23.53	4.67	
			26797	3RB#1	27.77	23.05	4.72	
			26797	3RB#3	27.95	23.20	4.75	
			26797	6RB#0	27.98	22.67	5.31	
			26915	1RB#0	27.25	22.44	4.81	
			26915	1RB#5	27.19	22.42	4.77	
			26915	1RB#2	27.15	22.53	4.62	
			26915	3RB#0	27.93	23.17	4.76	
			26915	3RB#1	27.95	23.26	4.69	
			26915	3RB#3	28.09	23.35	4.74	
			26915	6RB#0	27.70	22.42	5.28	
			27033	1RB#5	27.15	22.37	4.78	
			27033	1RB#0	27.18	22.33	4.85	
			27033	1RB#2	27.05	22.41	4.64	
			27033	3RB#0	28.42	23.66	4.76	
			27033	3RB#1	28.36	23.68	4.68	
			27033	3RB#3	28.46	23.74	4.72	
			27033	6RB#0	28.17	22.78	5.39	
		16QAM	26797	1RB#0	28.11	22.98	5.13	
			26797	1RB#2	28.07	23.04	5.03	
			26797	1RB#5	28.24	22.98	5.26	
			26797	3RB#1	28.02	23.05	4.97	
			26797	3RB#0	27.74	22.88	4.86	
			26797	3RB#3	28.28	23.05	5.23	
			26797	6RB#0	27.54	21.88	5.66	
			26915	1RB#0	27.75	22.40	5.35	
			26915	1RB#2	27.74	22.27	5.47	
			26915	1RB#5	27.72	22.40	5.32	
			26915	3RB#3	28.11	22.75	5.36	
			26915	3RB#0	28.23	22.78	5.45	
			26915	3RB#1	28.16	22.83	5.33	
			26915	6RB#0	27.73	21.50	6.23	
			27033	1RB#2	27.35	22.44	4.91	
			27033	1RB#0	27.43	22.58	4.85	
			27033	1RB#5	27.42	22.56	4.86	
			27033	3RB#0	27.58	22.56	5.02	
			27033	3RB#1	27.56	22.70	4.86	
			27033	3RB#3	27.61	22.50	5.11	
			27033	6RB#0	27.33	21.24	6.09	

Prüfbericht - Nr.:
Test Report No.:

IN24778M 001

Seite 23 von 62
Page 23 of 62

Cellular Band	Channel Bandwidth (MHz)	Modulation Technique	Channel Number	RB Pos/RB allocation	Measured peak Power (dBm)	Measured Average Power (dBm)	PAPR (dB)	Limit (dB)
Band26	3MHz	QPSK	26805	1RB#8	28.15	23.82	4.33	13.00
			26805	1RB#14	28.16	23.70	4.46	
			26805	1RB#0	27.50	23.25	4.25	
			26805	8RB#0	27.73	22.91	4.82	
			26805	8RB#4	27.45	22.79	4.66	
			26805	8RB#7	27.63	22.77	4.86	
			26805	15RB#0	28.33	22.85	5.48	
			26915	1RB#0	27.73	22.82	4.91	
			26915	1RB#14	27.52	22.63	4.89	
			26915	1RB#8	27.64	22.90	4.74	
			26915	8RB#7	27.65	22.60	5.05	
			26915	8RB#0	27.65	22.47	5.18	
			26915	8RB#4	27.58	22.55	5.03	
			26915	15RB#0	27.86	22.50	5.36	
			27025	1RB#8	26.78	22.67	4.11	
			27025	1RB#0	27.20	23.07	4.13	
			27025	1RB#14	26.96	22.74	4.22	
			27025	8RB#0	27.30	22.62	4.68	
			27025	8RB#7	27.12	22.59	4.53	
			27025	8RB#4	27.19	22.60	4.59	
			27025	15RB#0	27.70	22.59	5.11	
		16QAM	26805	1RB#14	28.32	23.16	5.16	
			26805	1RB#0	27.87	22.63	5.24	
			26805	1RB#8	27.96	22.51	5.45	
			26805	8RB#7	27.67	21.92	5.75	
			26805	8RB#4	27.72	22.00	5.72	
			26805	8RB#0	27.78	21.81	5.97	
			26805	15RB#0	28.05	21.88	6.17	
			26915	1RB#14	27.76	22.50	5.26	
			26915	1RB#0	27.74	22.41	5.33	
			26915	1RB#8	27.67	22.45	5.22	
			26915	8RB#7	27.60	21.74	5.86	
			26915	8RB#0	27.86	21.83	6.03	
			26915	8RB#4	27.71	21.84	5.87	
			26915	15RB#0	27.85	21.73	6.12	
			27025	1RB#8	27.28	22.35	4.93	
			27025	1RB#0	27.50	22.54	4.96	
			27025	1RB#14	27.36	22.36	5.00	
			27025	8RB#0	27.23	21.59	5.64	
			27025	8RB#4	26.96	21.40	5.56	
			27025	8RB#7	26.97	21.38	5.59	
			27025	15RB#0	27.80	21.61	6.19	

Prüfbericht - Nr.:
Test Report No.:

IN24778M 001

Seite 24 von 62
Page 24 of 62

Cellular Band	Channel Bandwidth (MHz)	Modulation Technique	Channel Number	RB Pos/RB allocation	Measured peak Power (dBm)	Measured Average Power (dBm)	PAPR (dB)	Limit (dB)
Band26	5MHz	QPSK	26815	1RB#0	27.09	22.75	4.34	13.00
			26815	1RB#12	27.68	23.36	4.32	
			26815	1RB#24	27.93	23.45	4.48	
			26815	12RB#0	27.51	22.84	4.67	
			26815	12RB#6	27.59	22.66	4.93	
			26815	12RB#13	27.63	22.62	5.01	
			26815	25RB#0	28.17	22.60	5.57	
			26915	1RB#0	27.12	22.37	4.75	
			26915	1RB#24	27.30	22.54	4.76	
			26915	1RB#12	27.28	22.67	4.61	
			26915	12RB#0	27.72	22.64	5.08	
			26915	12RB#6	27.60	22.69	4.91	
			26915	12RB#13	27.62	22.54	5.08	
			26915	25RB#0	28.06	22.53	5.53	
			27015	1RB#24	26.97	23.23	3.74	
			27015	1RB#0	27.28	23.05	4.23	
			27015	1RB#12	27.24	23.16	4.08	
			27015	12RB#0	27.39	22.56	4.83	
			27015	12RB#6	27.19	22.48	4.71	
			27015	12RB#13	27.21	22.24	4.97	
			27015	25RB#0	28.09	22.74	5.35	
		16QAM	26815	1RB#0	27.43	22.32	5.11	
			26815	1RB#12	27.57	22.61	4.96	
			26815	1RB#24	27.40	22.25	5.15	
			26815	12RB#6	27.54	21.57	5.97	
			26815	12RB#0	27.53	21.66	5.87	
			26815	12RB#13	27.53	21.67	5.86	
			26815	25RB#0	28.15	22.90	5.25	
			26915	1RB#0	27.80	22.37	5.43	
			26915	1RB#12	27.94	22.67	5.27	
			26915	1RB#24	27.76	22.37	5.39	
			26915	12RB#13	27.43	21.59	5.84	
			26915	12RB#0	27.57	21.62	5.95	
			26915	12RB#6	27.43	21.57	5.86	
			26915	25RB#0	27.88	21.54	6.34	
			27015	1RB#12	27.42	22.22	5.2	
			27015	1RB#0	27.13	21.81	5.32	
			27015	1RB#24	27.16	21.22	5.94	
			27015	12RB#0	27.30	21.53	5.77	
			27015	12RB#6	27.10	21.49	5.61	
			27015	12RB#13	27.33	21.63	5.7	
			27015	25RB#0	27.80	21.85	5.95	

Prüfbericht - Nr.:
Test Report No.:

IN24778M 001

Seite 25 von 62
Page 25 of 62

Cellular Band	Channel Bandwidth (MHz)	Modulation Technique	Channel Number	RB Pos/RB allocation	Measured peak Power (dBm)	Measured Average Power (dBm)	PAPR (dB)	Limit (dB)
Band26	10MHz	QPSK	26840	1RB#49	27.65	23.01	4.64	13.00
			26840	1RB#24	28.09	23.64	4.45	
			26840	1RB#0	27.26	22.70	4.56	
			26840	25RB#0	27.84	22.78	5.06	
			26840	25RB#12	27.84	22.80	5.04	
			26840	25RB#25	27.90	22.78	5.12	
			26840	50RB#0	27.78	22.75	5.03	
			26915	1RB#0	27.07	22.21	4.86	
			26915	1RB#49	27.68	23.12	4.56	
			26915	1RB#24	28.20	23.71	4.49	
			26915	25RB#25	27.66	22.49	5.17	
			26915	25RB#0	27.99	22.73	5.26	
			26915	25RB#12	27.86	22.73	5.13	
			26915	50RB#0	27.80	22.67	5.13	
			26990	1RB#24	27.45	22.95	4.5	
			26990	1RB#0	27.02	22.24	4.78	
			26990	1RB#49	27.11	22.58	4.53	
			26990	25RB#0	27.69	22.73	4.96	
			26990	25RB#25	27.56	22.72	4.84	
			26990	25RB#12	27.62	22.79	4.83	
			26990	50RB#0	28.58	22.77	5.81	
		16QAM	26840	1RB#49	27.83	22.54	5.29	
			26840	1RB#0	27.57	22.43	5.14	
			26840	1RB#24	27.75	22.50	5.25	
			26840	25RB#25	27.83	21.76	6.07	
			26840	25RB#12	27.82	21.98	5.84	
			26840	25RB#0	27.77	21.78	5.99	
			26840	50RB#0	27.54	21.69	5.85	
			26915	1RB#49	28.04	22.75	5.29	
			26915	1RB#0	28.09	22.74	5.35	
			26915	1RB#24	28.29	23.03	5.26	
			26915	25RB#25	27.63	21.69	5.94	
			26915	25RB#0	27.72	21.70	6.02	
			26915	25RB#12	27.62	21.73	5.89	
			26915	50RB#0	27.78	21.68	6.1	
			26990	1RB#24	28.05	23.45	4.6	
			26990	1RB#0	27.93	22.44	5.49	
			26990	1RB#49	27.57	22.49	5.08	
			26990	25RB#0	27.75	21.68	6.07	
			26990	25RB#12	27.57	21.70	5.87	
			26990	25RB#25	27.63	21.71	5.92	
			26990	50RB#0	28.53	21.69	6.84	

Prüfbericht - Nr.:
Test Report No.:

IN24778M 001

Seite 26 von 62
Page 26 of 62

Cellular Band	Channel Bandwidth (MHz)	Modulation Technique	Channel Number	RB Pos/RB allocation	Measured peak Power (dBm)	Measured Average Power (dBm)	PAPR (dB)	Limit (dB)
26	15MHz	QPSK	26865	1RB#0	27.60	22.89	4.71	13
			26865	1RB#38	27.69	22.95	4.74	
			26865	1RB#74	27.35	22.65	4.70	
			26865	36RB#0	27.27	21.89	5.38	
			26865	36RB#18	27.20	21.89	5.31	
			26865	36RB#39	27.24	21.92	5.32	
			26865	75RB#0	27.60	21.79	5.81	
			26915	1RB#0	27.07	22.21	4.86	
			26915	1RB#38	27.68	23.12	4.56	
			26915	1RB#74	28.20	23.71	4.49	
			26915	36RB#0	27.66	22.49	5.17	
			26915	36RB#18	27.99	22.73	5.26	
			26915	36RB#39	27.86	22.73	5.13	
			26915	75RB#0	27.80	22.67	5.13	
			26965	1RB#0	27.24	22.54	4.70	
			26965	1RB#38	27.42	23.01	4.41	
			26965	1RB#74	27.08	22.78	4.30	
			26965	36RB#0	27.18	21.92	5.26	
			26965	36RB#18	27.05	21.95	5.10	
			26965	36RB#39	27.01	21.90	5.11	
			26965	75RB#0	27.84	21.97	5.87	
		16QAM	26865	1RB#0	27.33	22.24	5.09	
			26865	1RB#38	27.94	23.00	4.94	
			26865	1RB#74	27.26	22.05	5.21	
			26865	36RB#0	27.09	20.82	6.27	
			26865	36RB#18	27.04	20.06	6.98	
			26865	36RB#39	27.02	20.69	6.33	
			26865	75RB#0	27.43	20.90	6.53	
			26915	1RB#0	28.04	22.75	5.29	
			26915	1RB#38	28.09	22.74	5.35	
			26915	1RB#74	28.29	23.03	5.26	
			26915	36RB#0	27.63	21.69	5.94	
			26915	36RB#18	27.72	21.70	6.02	
			26915	36RB#39	27.62	21.73	5.89	
			26915	75RB#0	27.78	21.68	6.10	
			26965	1RB#0	27.22	21.98	5.24	
			26965	1RB#38	27.15	22.00	5.15	
			26965	1RB#74	26.89	21.92	4.97	
			26965	36RB#0	27.09	20.68	6.41	
			26965	36RB#18	27.02	20.69	6.33	
			26965	36RB#39	26.97	20.62	6.35	
			26965	75RB#0	27.37	20.67	6.70	

Prüfbericht - Nr.:

Test Report No.:

IN24778M 001

Seite 27 von 62

Page 27 of 62

WCDMA:

WCDMA	Channel No.	Average Output Power (dBm)	Peak Output Power (dBm)	PAPR (dB)	Limit (dB)
Band 5	4132	22.56	26.55	3.99	13
	4182	22.4	26.45	4.05	13
	4233	22.61	27.2	4.59	13

GSM/GPRS 850MHz:

Band	Channel No.	Average output power (dBm)	Peak output Power (dBm)	PAPR (dB)	Limit (dB)
GSM850	128	28.2	33.40	5.20	13
	190	28.4	33.60	5.20	13
	251	28.4	33.60	5.20	13
EGPRS850	128	28.1	33.30	5.20	13
	190	28.7	34.00	5.30	13
	251	28.3	33.50	5.20	13

Prüfbericht - Nr.:
Test Report No.:

IN24778M 001

Seite 28 von 62
Page 28 of 62

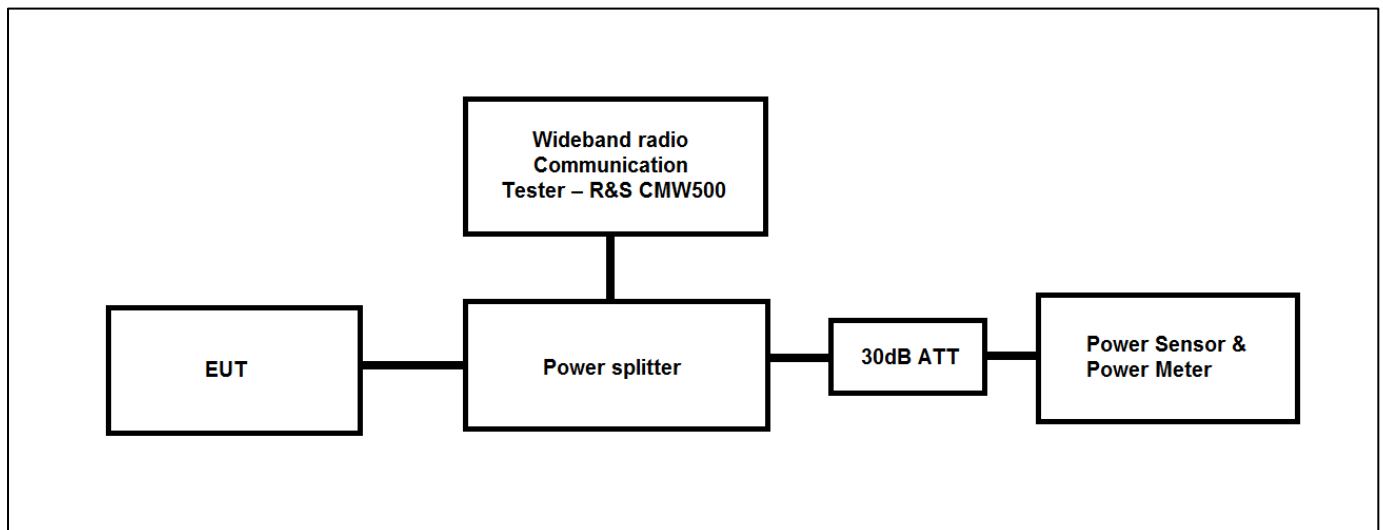
7.2 Effective (Isotropic) Radiated Power

Result

Pass

Specification	FCC Part §2.1046 & Part §22.913 RSS-Gen, §6.12; RSS-132, §5.4 ANSI C63.26-2015
Test Method / Procedure	As per subclause 5 in 971168 D01 Power Meas License Digital Systems v03r01
Detector Function	Average
Requirement	The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts

Test Setup:



Environmental Conditions:

Temperature: +22.5°C

Voltage: 12VDC through AC-DC Adapter

Relative Humidity: 62%

KDB Guidelines applied:

Measurements were made as per section 5.2.4 in KDB 971168 D01 Power Meas License Digital Systems v03r01

Prüfbericht - Nr.:

Test Report No.:

IN24778M 001

Seite 29 von 62

Page 29 of 62

Test Results:

Note:

1. All the losses are included during measurement and final values are mentioned in the test report.
2. Total Average Output power (dBm) = Measured Average power (dBm) + Attenuator factor (30dB) + Power Splitter (3.3 dB) + Cable loss (1dB)
3. For getting the EIRP(Equivalent Isotropic Radiated Power), the following formula should be taken to calculate it,

ERP (dBm) = Conducted power (dBm) + Antenna gain (dBd)

EIRP (dBm) = Conducted power (dBm) + Antenna gain (dBi)

Band	Bandwidth	Modulation	Channel No	RB Position & RB Allocation	Measured Average Power (dBm)	ERP (dBm)	limit (dBm)
5	1.4MHz	QPSK	20407	1RB#0	22.17	20.92	38.45
			20407	1RB#2	23.07	21.82	38.45
			20407	1RB#5	23.39	22.14	38.45
			20407	3RB#0	23.99	22.74	38.45
			20407	3RB#1	23.24	21.99	38.45
			20407	3RB#3	23.45	22.20	38.45
			20407	6RB#0	23.29	22.04	38.45
			20525	1RB#0	22.32	21.07	38.45
			20525	1RB#5	22.89	21.64	38.45
			20525	1RB#2	22.18	20.93	38.45
			20525	3RB#0	23.33	22.08	38.45
			20525	3RB#1	23.27	22.02	38.45
			20525	3RB#3	23.87	22.62	38.45
			20525	6RB#0	23.42	22.17	38.45
			20643	1RB#5	22.75	21.50	38.45
			20643	1RB#0	23.07	21.82	38.45
			20643	1RB#2	23.00	21.75	38.45
			20643	3RB#0	23.82	22.57	38.45
			20643	3RB#1	23.93	22.68	38.45
			20643	3RB#3	23.92	22.67	38.45
			20643	6RB#0	23.86	22.61	38.45
	1.4MHz	16QAM	20407	1RB#0	23.24	21.99	38.45
			20407	1RB#2	23.28	22.03	38.45
			20407	1RB#5	23.57	22.32	38.45
			20407	3RB#1	23.25	22.00	38.45
			20407	3RB#0	23.69	22.44	38.45
			20407	3RB#3	23.57	22.32	38.45
			20407	6RB#0	24.09	22.84	38.45
			20525	1RB#0	22.52	21.27	38.45
			20525	1RB#2	22.60	21.35	38.45
			20525	1RB#5	22.84	21.59	38.45
			20525	3RB#3	23.87	22.62	38.45
			20525	3RB#0	23.34	22.09	38.45
			20525	3RB#1	23.49	22.24	38.45
			20525	6RB#0	23.99	22.74	38.45
			20643	1RB#2	22.81	21.56	38.45
			20643	1RB#0	23.12	21.87	38.45
			20643	1RB#5	23.09	21.84	38.45
			20643	3RB#0	24.09	22.84	38.45
			20643	3RB#1	23.10	21.85	38.45
			20643	3RB#3	23.18	21.93	38.45
			20643	6RB#0	23.97	22.72	38.45

Prüfbericht - Nr.:
Test Report No.:

IN24778M 001

Seite 30 von 62
Page 30 of 62

Band	Bandwidth	Modulation	Channel No	RB Position & RB Allocation	Measured Average Power (dBm)	ERP (dBm)	limit (dBm)
5	3MHz	QPSK	20415	1RB#8	22.40	21.15	38.45
			20415	1RB#14	22.22	20.97	38.45
			20415	1RB#0	23.82	22.57	38.45
			20415	8RB#0	23.82	22.57	38.45
			20415	8RB#4	24.21	22.96	38.45
			20415	8RB#7	24.20	22.95	38.45
			20415	15RB#0	23.93	22.68	38.45
			20525	1RB#0	22.34	21.09	38.45
			20525	1RB#14	22.60	21.35	38.45
			20525	1RB#8	22.39	21.14	38.45
			20525	8RB#7	23.56	22.31	38.45
			20525	8RB#0	23.52	22.27	38.45
			20525	8RB#4	22.71	21.46	38.45
			20525	15RB#0	23.64	22.39	38.45
			20635	1RB#8	22.58	21.33	38.45
			20635	1RB#0	22.75	21.50	38.45
			20635	1RB#14	22.32	21.07	38.45
			20635	8RB#0	23.53	22.28	38.45
			20635	8RB#7	23.75	22.50	38.45
			20635	8RB#4	23.33	22.08	38.45
			20635	15RB#0	23.46	22.21	38.45
	3MHz	16QAM	20415	1RB#14	23.97	22.72	38.45
			20415	1RB#0	22.24	20.99	38.45
			20415	1RB#8	23.09	21.84	38.45
			20415	8RB#7	23.70	22.45	38.45
			20415	8RB#4	24.06	22.81	38.45
			20415	8RB#0	23.88	22.63	38.45
			20415	15RB#0	23.82	22.57	38.45
			20525	1RB#14	22.91	21.66	38.45
			20525	1RB#0	23.05	21.80	38.45
			20525	1RB#8	22.87	21.62	38.45
			20525	8RB#7	23.99	22.74	38.45
			20525	8RB#0	23.92	22.67	38.45
			20525	8RB#4	24.24	22.99	38.45
			20525	15RB#0	24.75	23.50	38.45
			20635	1RB#8	23.16	21.91	38.45
			20635	1RB#0	23.65	22.40	38.45
			20635	1RB#14	23.55	22.30	38.45
			20635	8RB#0	23.16	21.91	38.45
			20635	8RB#4	24.14	22.89	38.45
			20635	8RB#7	24.29	23.04	38.45
			20635	15RB#0	23.98	22.73	38.45

Prüfbericht - Nr.:
Test Report No.:

IN24778M 001

Seite 31 von 62
Page 31 of 62

Band	Bandwidth	Modulation	Channel No	RB Position & RB Allocation	Measured Average Power (dBm)	ERP (dBm)	limit (dBm)
5	5MHz	QPSK	20425	1RB#0	22.44	21.19	38.45
			20425	1RB#12	22.33	21.08	38.45
			20425	1RB#24	23.15	21.90	38.45
			20425	12RB#0	24.03	22.78	38.45
			20425	12RB#6	23.54	22.29	38.45
			20425	12RB#13	23.67	22.42	38.45
			20425	25RB#0	24.19	22.94	38.45
			20525	1RB#0	23.20	21.95	38.45
			20525	1RB#24	23.67	22.42	38.45
			20525	1RB#12	23.52	22.27	38.45
			20525	12RB#0	22.52	21.27	38.45
			20525	12RB#6	23.53	22.28	38.45
			20525	12RB#13	22.45	21.20	38.45
			20525	25RB#0	23.46	22.21	38.45
			20625	1RB#24	23.07	21.82	38.45
			20625	1RB#0	23.42	22.17	38.45
			20625	1RB#12	22.98	21.73	38.45
			20625	12RB#0	24.13	22.88	38.45
			20625	12RB#6	24.10	22.85	38.45
			20625	12RB#13	24.05	22.80	38.45
			20625	25RB#0	24.01	22.76	38.45
	5MHz	16QAM	20425	1RB#0	23.31	22.06	38.45
			20425	1RB#12	23.22	21.97	38.45
			20425	1RB#24	23.04	21.79	38.45
			20425	12RB#6	23.62	22.37	38.45
			20425	12RB#0	23.82	22.57	38.45
			20425	12RB#13	23.83	22.58	38.45
			20425	25RB#0	23.78	22.53	38.45
			20525	1RB#0	23.21	21.96	38.45
			20525	1RB#12	23.67	22.42	38.45
			20525	1RB#24	23.52	22.27	38.45
			20525	12RB#13	23.53	22.28	38.45
			20525	12RB#0	23.72	22.47	38.45
			20525	12RB#6	23.62	22.37	38.45
			20525	25RB#0	23.96	22.71	38.45
			20625	1RB#12	23.29	22.04	38.45
			20625	1RB#0	23.19	21.94	38.45
			20625	1RB#24	23.66	22.41	38.45
			20625	12RB#0	23.70	22.45	38.45
			20625	12RB#6	23.69	22.44	38.45
			20625	12RB#13	23.67	22.42	38.45
			20625	25RB#0	23.91	22.66	38.45

Prüfbericht - Nr.:
Test Report No.:

IN24778M 001

Seite 32 von 62
Page 32 of 62

Band	Bandwidth	Modulation	Channel No	RB Position & RB Allocation	Measured Average Power (dBm)	ERP (dBm)	limit (dBm)
5	10MHz	QPSK	20450	1RB#49	23.02	21.77	38.45
			20450	1RB#24	23.17	21.92	38.45
			20450	1RB#0	23.01	21.76	38.45
			20450	25RB#0	24.25	23.00	38.45
			20450	25RB#12	24.24	22.99	38.45
			20450	25RB#25	22.46	21.21	38.45
			20450	50RB#0	23.85	22.60	38.45
			20525	1RB#0	22.85	21.60	38.45
			20525	1RB#49	23.76	22.51	38.45
			20525	1RB#24	22.93	21.68	38.45
			20525	25RB#25	23.36	22.11	38.45
			20525	25RB#0	23.53	22.28	38.45
			20525	25RB#12	23.53	22.28	38.45
			20525	50RB#0	23.50	22.25	38.45
			20600	1RB#24	22.86	21.61	38.45
			20600	1RB#0	23.29	22.04	38.45
			20600	1RB#49	22.42	21.17	38.45
			20600	25RB#0	23.55	22.30	38.45
			20600	25RB#25	23.07	21.82	38.45
			20600	25RB#12	23.07	21.82	38.45
			20600	50RB#0	23.99	22.74	38.45
	10MHz	16QAM	20450	1RB#49	23.45	22.20	38.45
			20450	1RB#0	23.93	22.68	38.45
			20450	1RB#24	23.95	22.70	38.45
			20450	25RB#25	23.76	22.51	38.45
			20450	25RB#12	23.76	22.51	38.45
			20450	25RB#0	23.64	22.39	38.45
			20450	50RB#0	23.84	22.59	38.45
			20525	1RB#49	23.17	21.92	38.45
			20525	1RB#0	23.36	22.11	38.45
			20525	1RB#24	23.51	22.26	38.45
			20525	25RB#25	23.41	22.16	38.45
			20525	25RB#0	22.65	21.40	38.45
			20525	25RB#12	22.74	21.49	38.45
			20525	50RB#0	22.64	21.39	38.45
			20600	1RB#24	23.79	22.54	38.45
			20600	1RB#0	23.28	22.03	38.45
			20600	1RB#49	23.42	22.17	38.45
			20600	25RB#0	23.74	22.49	38.45
			20600	25RB#12	23.93	22.68	38.45
			20600	25RB#25	23.93	22.68	38.45
			20600	50RB#0	23.73	22.48	38.45

Prüfbericht - Nr.:
Test Report No.:

IN24778M 001

Seite 33 von 62
Page 33 of 62

Band 26: 824MHz to 849MHz

Cellular Band	Channel Bandwidth (MHz)	Modulation Technique	Channel Number	RB Pos/RB allocation	ERP (dBm)	limit (dBm)
Band26	1.4MHz	QPSK	26697	1RB#0	21.70	38.45
			26697	1RB#2	21.67	38.45
			26697	1RB#5	21.57	38.45
			26697	3RB#0	22.52	38.45
			26697	3RB#1	22.37	38.45
			26697	3RB#3	22.35	38.45
			26697	6RB#0	22.36	38.45
			26740	1RB#0	21.49	38.45
			26740	1RB#5	21.30	38.45
			26740	1RB#2	21.17	38.45
			26740	3RB#0	22.32	38.45
			26740	3RB#1	22.16	38.45
			26740	3RB#3	22.20	38.45
			26740	6RB#0	23.12	38.45
			26783	1RB#5	21.31	38.45
			26783	1RB#0	21.62	38.45
			26783	1RB#2	21.56	38.45
			26783	3RB#0	22.28	38.45
			26783	3RB#1	22.41	38.45
			26783	3RB#3	22.30	38.45
Band26	1.4MHz	16QAM	26783	6RB#0	22.32	38.45
			26697	1RB#0	21.62	38.45
			26697	1RB#2	21.49	38.45
			26697	1RB#5	21.34	38.45
			26697	3RB#1	22.29	38.45
			26697	3RB#0	22.54	38.45
			26697	3RB#3	22.51	38.45
			26697	6RB#0	22.61	38.45
			26740	1RB#0	21.29	38.45
			26740	1RB#2	21.37	38.45
			26740	1RB#5	21.70	38.45
			26740	3RB#3	22.66	38.45
			26740	3RB#0	22.13	38.45
			26740	3RB#1	22.03	38.45
			26740	6RB#0	22.76	38.45
			26783	1RB#2	20.89	38.45
			26783	1RB#0	21.50	38.45
			26783	1RB#5	21.48	38.45
			26783	3RB#0	22.69	38.45
			26783	3RB#1	22.77	38.45
26783	3RB#3	22.76	38.45			
26783	6RB#0	22.75	38.45			

Prüfbericht - Nr.:
Test Report No.:

IN24778M 001

Seite 34 von 62
Page 34 of 62

Cellular Band	Channel Bandwidth (MHz)	Modulation Technique	Channel Number	RB Pos/RB allocation	ERP (dBm)	limit (dBm)
Band26	3MHz	QPSK	26705	1RB#8	21.28	38.45
			26705	1RB#14	21.49	38.45
			26705	1RB#0	21.33	38.45
			26705	8RB#0	22.43	38.45
			26705	8RB#4	22.05	38.45
			26705	8RB#7	22.01	38.45
			26705	15RB#0	22.87	38.45
			26740	1RB#0	21.22	38.45
			26740	1RB#14	21.42	38.45
			26740	1RB#8	21.37	38.45
			26740	8RB#7	22.56	38.45
			26740	8RB#0	22.28	38.45
			26740	8RB#4	22.22	38.45
			26740	15RB#0	22.25	38.45
			26775	1RB#8	21.99	38.45
			26775	1RB#0	21.79	38.45
			26775	1RB#14	21.57	38.45
			26775	8RB#0	22.79	38.45
			26775	8RB#7	22.43	38.45
			26775	8RB#4	22.42	38.45
			26775	15RB#0	22.58	38.45
Band26	3MHz	16QAM	26705	1RB#14	21.78	38.45
			26705	1RB#0	22.30	38.45
			26705	1RB#8	22.21	38.45
			26705	8RB#7	22.76	38.45
			26705	8RB#4	22.72	38.45
			26705	8RB#0	22.65	38.45
			26705	15RB#0	22.44	38.45
			26740	1RB#14	21.39	38.45
			26740	1RB#0	21.58	38.45
			26740	1RB#8	21.34	38.45
			26740	8RB#7	22.56	38.45
			26740	8RB#0	22.36	38.45
			26740	8RB#4	22.42	38.45
			26740	15RB#0	22.43	38.45
			26775	1RB#8	21.85	38.45
			26775	1RB#0	21.64	38.45
			26775	1RB#14	21.45	38.45
			26775	8RB#0	22.20	38.45
			26775	8RB#4	22.50	38.45
			26775	8RB#7	22.56	38.45
			26775	15RB#0	22.79	38.45

Prüfbericht - Nr.:
Test Report No.:

IN24778M 001

Seite 35 von 62
Page 35 of 62

Cellular Band	Channel Bandwidth (MHz)	Modulation Technique	Channel Number	RB Pos/RB allocation	ERP (dBm)	limit (dBm)
Band26	5MHz	QPSK	26715	1RB#0	22.16	38.45
			26715	1RB#12	21.26	38.45
			26715	1RB#24	22.10	38.45
			26715	12RB#0	22.14	38.45
			26715	12RB#6	22.12	38.45
			26715	12RB#13	22.14	38.45
			26715	25RB#0	22.04	38.45
			26740	1RB#0	21.82	38.45
			26740	1RB#24	22.39	38.45
			26740	1RB#12	22.60	38.45
			26740	12RB#0	22.43	38.45
			26740	12RB#6	22.53	38.45
			26740	12RB#13	22.56	38.45
			26740	25RB#0	22.60	38.45
			26765	1RB#24	22.05	38.45
			26765	1RB#0	21.88	38.45
			26765	1RB#12	22.32	38.45
			26765	12RB#0	22.76	38.45
			26765	12RB#6	22.30	38.45
			26765	12RB#13	22.52	38.45
Band26		16QAM	26765	25RB#0	22.72	38.45
			26715	1RB#0	22.03	38.45
			26715	1RB#12	22.04	38.45
			26715	1RB#24	22.01	38.45
			26715	12RB#6	22.36	38.45
			26715	12RB#0	22.08	38.45
			26715	12RB#13	22.07	38.45
			26715	25RB#0	22.90	38.45
			26740	1RB#0	21.87	38.45
			26740	1RB#12	22.64	38.45
			26740	1RB#24	21.66	38.45
			26740	12RB#13	22.47	38.45
			26740	12RB#0	21.92	38.45
			26740	12RB#6	22.42	38.45
			26740	25RB#0	22.38	38.45
			26765	1RB#12	21.80	38.45
			26765	1RB#0	22.33	38.45
			26765	1RB#24	21.62	38.45
			26765	12RB#0	22.45	38.45
			26765	12RB#6	22.57	38.45
26765	12RB#13	22.65	38.45			
26765	25RB#0	22.70	38.45			

Prüfbericht - Nr.:
Test Report No.:

IN24778M 001

Seite 36 von 62
Page 36 of 62

Cellular Band	Channel Bandwidth (MHz)	Modulation Technique	Channel Number	RB Pos/RB allocation	ERP (dBm)	limit (dBm)
Band26	10MHz	QPSK	26740	1RB#49	23.49	38.45
			26740	1RB#24	22.27	38.45
			26740	1RB#0	21.61	38.45
			26740	25RB#0	22.60	38.45
			26740	25RB#12	22.85	38.45
			26740	25RB#25	22.80	38.45
			26740	50RB#0	22.54	38.45
			26915	1RB#0	21.47	38.45
			26915	1RB#49	22.55	38.45
			26915	1RB#24	21.68	38.45
			26915	25RB#25	22.93	38.45
			26915	25RB#0	22.25	38.45
			26915	25RB#12	22.24	38.45
			26915	50RB#0	22.19	38.45
			26990	1RB#24	21.75	38.45
			26990	1RB#0	22.34	38.45
			26990	1RB#49	21.74	38.45
			26990	25RB#0	22.99	38.45
			26990	25RB#25	22.68	38.45
			26990	25RB#12	22.66	38.45
26990		50RB#0	22.77	38.45		
Band26		16QAM	26740	1RB#49	22.69	38.45
			26740	1RB#0	22.47	38.45
			26740	1RB#24	22.83	38.45
			26740	25RB#25	22.42	38.45
			26740	25RB#12	22.74	38.45
			26740	25RB#0	22.69	38.45
			26740	50RB#0	22.41	38.45
			26915	1RB#49	22.42	38.45
			26915	1RB#0	22.73	38.45
			26915	1RB#24	21.77	38.45
			26915	25RB#25	22.55	38.45
			26915	25RB#0	22.68	38.45
			26915	25RB#12	22.53	38.45
			26915	50RB#0	22.59	38.45
			26990	1RB#24	21.62	38.45
			26990	1RB#0	22.17	38.45
			26990	1RB#49	22.06	38.45
			26990	25RB#0	22.96	38.45
			26990	25RB#12	22.88	38.45
	26990		25RB#25	22.96	38.45	
26990	50RB#0	22.68	38.45			

Prüfbericht - Nr.:
Test Report No.:

IN24778M 001

Seite 37 von 62
Page 37 of 62

Cellular Band	Channel Bandwidth (MHz)	Modulation Technique	Channel Number	RB Pos/RB allocation	ERP (dBm)	limit (dBm)
26	15MHz	QPSK	26865	1RB#0	21.64	38.45
			26865	1RB#38	21.70	38.45
			26865	1RB#74	21.40	38.45
			26865	36RB#0	20.64	38.45
			26865	36RB#18	20.64	38.45
			26865	36RB#39	20.67	38.45
			26865	75RB#0	20.54	38.45
			26915	1RB#0	20.96	38.45
			26915	1RB#38	21.87	38.45
			26915	1RB#74	22.46	38.45
			26915	36RB#0	21.24	38.45
			26915	36RB#18	21.48	38.45
			26915	36RB#39	21.48	38.45
			26915	75RB#0	21.42	38.45
			26965	1RB#0	21.29	38.45
			26965	1RB#38	21.76	38.45
			26965	1RB#74	21.53	38.45
			26965	36RB#0	20.67	38.45
			26965	36RB#18	20.70	38.45
			26965	36RB#39	20.65	38.45
			26965	75RB#0	20.72	38.45
		16QAM	26865	1RB#0	20.99	38.45
			26865	1RB#38	21.75	38.45
			26865	1RB#74	20.80	38.45
			26865	36RB#0	19.57	38.45
			26865	36RB#18	18.81	38.45
			26865	36RB#39	19.44	38.45
			26865	75RB#0	19.65	38.45
			26915	1RB#0	21.50	38.45
			26915	1RB#38	21.49	38.45
			26915	1RB#74	21.78	38.45
			26915	36RB#0	20.44	38.45
			26915	36RB#18	20.45	38.45
			26915	36RB#39	20.48	38.45
			26915	75RB#0	20.43	38.45
			26965	1RB#0	20.73	38.45
			26965	1RB#38	20.75	38.45
			26965	1RB#74	20.67	38.45
			26965	36RB#0	19.43	38.45
			26965	36RB#18	19.44	38.45
			26965	36RB#39	19.37	38.45
			26965	75RB#0	19.42	38.45

Prüfbericht - Nr.:

Test Report No.:

IN24778M 001

Seite 38 von 62

Page 38 of 62

Test Results for WCDMA:

WCDMA	Channel No.	Average Output Power (dBm)	Peak Output Power (dBm)	e.r.p (dBm)	Limit (dBm)
Band 5	4132	22.56	26.55	21.31	38.45
	4182	22.40	26.45	21.15	38.45
	4233	22.61	27.20	21.36	38.45

Test Results for GSM/E-GPRS 850MHz:

Band	Channel No.	Average Output Power (dBm)	Peak Output Power (dBm)	e.r.p (dBm)	Limit (dBm)
GSM850	128	28.20	33.40	27.05	38.45
	190	28.40	33.60	27.25	38.45
	251	28.40	33.60	27.25	38.45
EGPRS850	128	28.10	33.30	26.95	38.45
	190	28.70	34.00	27.55	38.45
	251	28.30	33.50	27.15	38.45

Prüfbericht - Nr.:
Test Report No.:

IN24778M 001

Seite 39 von 62
Page 39 of 62

7.3 FIELD STRENGTH OF SPURIOUS RADIATION

Result

Pass

Specification	FCC Part §2.1053, §22.917 (a) RSS-Gen, §6.13; RSS-132, §5.5
Test Method / Procedure	ANSI C63.26-2015
Measurement Bandwidth (RBW)	100 kHz for frequency range < 1GHz 1 MHz for Frequency range >1GHz
Detector Function	Peak
Measuring Distance	3 m
Requirement	The power of any emission outside the authorized frequency range must be attenuated below the transmitting power (P) by a factor of at least 43+10log(P) dB
Test setup	Refer TEST METHODOLOGY

Environmental conditions:

Temperature (Norm) = + 24 °C Voltage = 12VDC through AC-DC Adapter Relative humidity = 62 %

KDB Guidelines applied:

All the radiated emission measurements are performed in accordance with common requirement specified in 7 971168 D01 Power Meas License Digital Systems v03r01 and Pre-test site path loss correction factors are used to adjust the EUT emission data in place of two step substitution method (as defined in Annex B of ANSI C63.26-2015)

Prüfbericht - Nr.:
Test Report No.:

IN24778M 001

Seite 40 von 62
Page 40 of 62

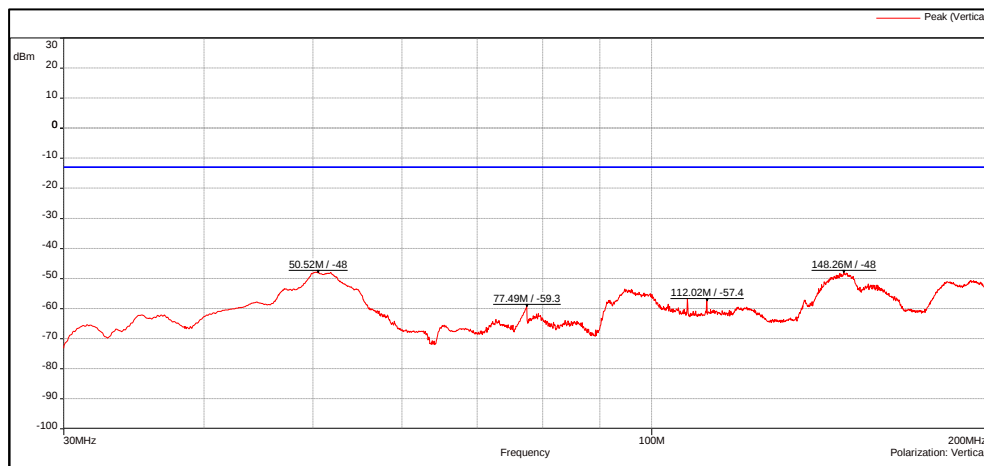
Test results:

Note: All the losses are included during measurement and final values are mentioned in the test report. Refer TEST METHODOLOGY for more details

Test Results for frequency range 30MHz to 200MHz

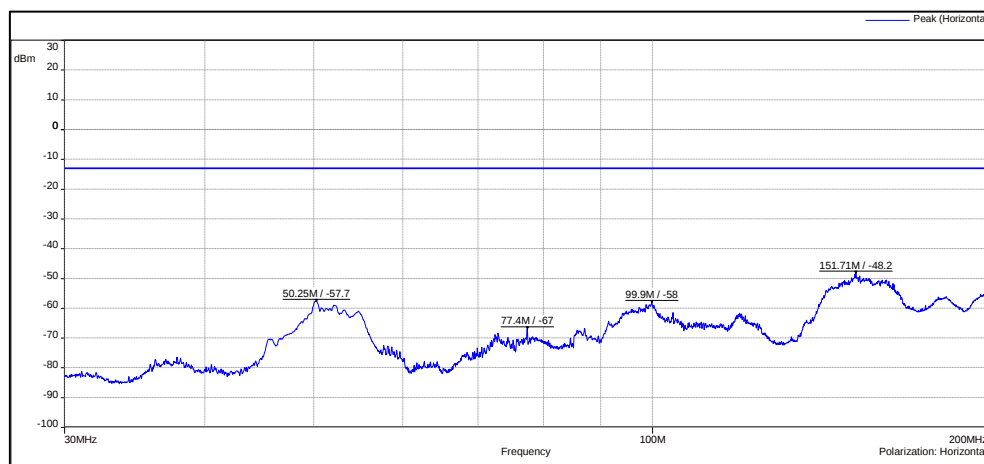
Antenna Polarization	Measured Frequency (MHz)	Measured emission (dBm)	Limit (dBm)	Margin (dB)
Vertical	50.52	-48.00	-13.00	-35.00
	77.49	-59.30	-13.00	-46.30
	112.02	-57.40	-13.00	-44.40
	148.26	-48.00	-13.00	-35.00
Horizontal	50.25	-57.70	-13.00	-44.70
	77.40	-67.00	-13.00	-54.00
	99.90	-58.00	-13.00	-45.00
	151.71	-48.20	-13.00	-35.20

Plots for frequency range 30MHz to 200MHz:



Frequency Range: 30MHz-200MHz

Polarization: Vertical



Frequency Range: 30MHz-200MHz

Polarization: Horizontal

Prüfbericht - Nr.:
Test Report No.:

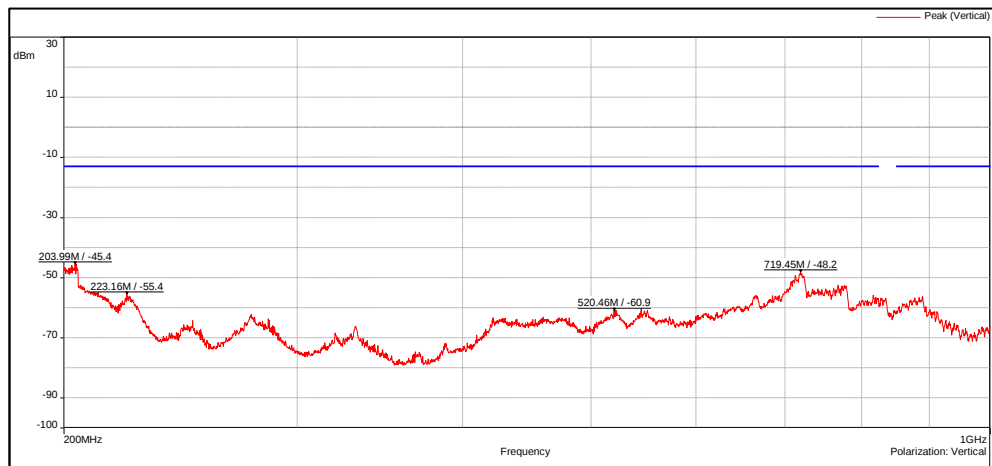
IN24778M 001

Seite 41 von 62
Page 41 of 62

Frequency range 200MHz to 1GHz

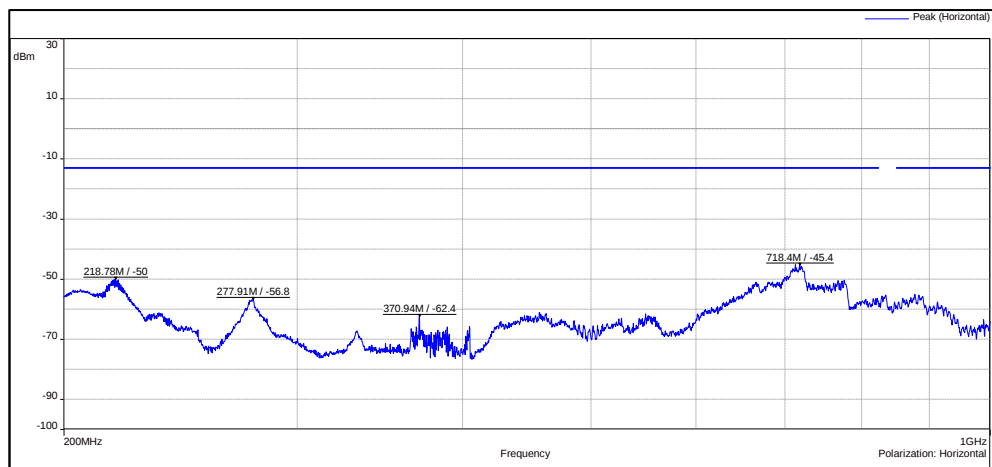
Antenna Polarization	Measured Frequency (MHz)	Measured emission (dBm)	Limit (dBm)	Margin (dB)
Vertical	203.99	-45.40	-13.00	-32.40
	223.16	-55.40	-13.00	-42.40
	520.46	-60.90	-13.00	-47.90
	719.45	-48.20	-13.00	-35.20
Horizontal	218.78	-50.00	-13.00	-37.00
	277.91	-56.80	-13.00	-43.80
	370.94	-62.40	-13.00	-49.40
	718.40	-45.40	-13.00	-32.40

Test Plots for Frequency range of 200MHz to 1GHz:



Frequency Range: 200MHz-1GHz

Polarization: Vertical



Frequency Range: 200MHz-1GHz

Polarization: Horizontal

Prüfbericht - Nr.:

Test Report No.:

IN24778M 001

Seite 42 von 62

Page 42 of 62

Frequency range above 1GHz:

Band	Modulation	Cell BW	No. of RB	RB Pos	Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission Level (dBm)	Limit (dBm)	Margin (dB)
5	QPSK	1.4	6	0	824.70	1649.40	Vertical	-60.05	-13	-47.05
						2474.10		-56.61	-13	-43.61
						3298.80		-56.15	-13	-43.15
						1649.40	Horizontal	-58.87	-13	-45.87
						2474.10		-56.39	-13	-43.39
						3298.80		-55.29	-13	-42.29
			6	0	836.50	1673.00	Vertical	-59.74	-13	-46.74
						2509.50		-56.92	-13	-43.92
						3346.00		-56.40	-13	-43.40
						1673.00	Horizontal	-57.72	-13	-44.72
						2509.50		-54.88	-13	-41.88
						3346.00		-56.43	-13	-43.43
			3	0	848.20	1696.40	Vertical	-59.23	-13	-46.23
						2544.60		-55.55	-13	-42.55
						3392.80		-56.77	-13	-43.77
						1696.40	Horizontal	-56.76	-13	-43.76
						2544.60		-56.38	-13	-43.38
						3392.80		-56.18	-13	-43.18
		3	8	7	825.50	1651.00	Vertical	-60.48	-13	-47.48
						2476.50		-57.20	-13	-44.20
						3302.00		-55.53	-13	-42.53
						1651.00	Horizontal	-60.03	-13	-47.03
						2476.50		-55.85	-13	-42.85
						3302.00		-55.71	-13	-42.71
			8	4	836.50	1673.00	Vertical	-60.36	-13	-47.36
						2509.50		-57.22	-13	-44.22
						3346.00		-56.68	-13	-43.68
						1673.00	Horizontal	-56.51	-13	-43.51
						2509.50		-59.21	-13	-46.21
						3346.00		-56.64	-13	-43.64
			8	7	847.40	1694.80	Vertical	-60.49	-13	-47.49
						2542.20		-56.95	-13	-43.95
						3389.60		-56.64	-13	-43.64
						1694.80	Horizontal	-57.19	-13	-44.19
						2542.20		-57.85	-13	-44.85
						3389.60		-56.15	-13	-43.15

Prüfbericht - Nr.:
Test Report No.:

IN24778M 001

Seite 43 von 62
Page 43 of 62

Band	Modulation	Cell BW	No. of RB	RB Pos	Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission Level (dBm)	Limit (dBm)	Margin (dB)
5	QPSK	5	25	0	826.50	1653.00	Vertical	-61.40	-13.00	-48.40
						2479.50		-56.60	-13.00	-43.60
						3306.00		-56.59	-13.00	-43.59
						1653.00	Horizontal	-60.08	-13.00	-47.08
						2479.50		-56.80	-13.00	-43.80
						3306.00		-55.89	-13.00	-42.89
			1	24	836.50	1673.00	Vertical	-59.97	-13.00	-46.97
						2509.50		-56.58	-13.00	-43.58
						3346.00		-56.60	-13.00	-43.60
						1673.00	Horizontal	-59.08	-13.00	-46.08
						2509.50		-57.56	-13.00	-44.56
						3346.00		-57.65	-13.00	-44.65
			12	0	846.40	1692.80	Vertical	-61.65	-13.00	-48.65
						2539.20		-55.87	-13.00	-42.87
						3385.60		-56.78	-13.00	-43.78
						1692.80	Horizontal	-59.78	-13.00	-46.78
						2539.20		-56.77	-13.00	-43.77
						3385.60		-56.70	-13.00	-43.70
		10	25	0	829.00	1658.00	Vertical	-57.24	-13.00	-44.24
						2487.00		-56.36	-13.00	-43.36
						3316.00		-56.34	-13.00	-43.34
						1658.00	Horizontal	-56.36	-13.00	-43.36
						2487.00		-56.40	-13.00	-43.40
						3316.00		-55.49	-13.00	-42.49
			1	49	836.50	1673.00	Vertical	-60.45	-13.00	-47.45
						2509.50		-56.02	-13.00	-43.02
						3346.00		-56.81	-13.00	-43.81
						1673.00	Horizontal	-60.35	-13.00	-47.35
						2509.50		-57.71	-13.00	-44.71
						3346.00		-55.86	-13.00	-42.86
			50	0	843.90	1687.80	Vertical	-60.43	-13.00	-47.43
						2531.70		-56.00	-13.00	-43.00
						3375.60		-56.30	-13.00	-43.30
						1687.80	Horizontal	-57.69	-13.00	-44.69
						2531.70		-56.25	-13.00	-43.25
						3375.60		-56.43	-13.00	-43.43

Prüfbericht - Nr.:
Test Report No.:

IN24778M 001

Seite 44 von 62
Page 44 of 62

Band 26: 824MHz to 849MHz

Modulation	Cell BW	No. of RB	RB Pos	Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission Level (dBm)	Limit (dBm)	Margin (dB)
QPSK	1.4	1	0	824.70	1649.40	Vertical	-61.23	-13.00	-48.23
					2474.10		-58.21	-13.00	-45.21
					3298.80		-57.45	-13.00	-44.45
					1649.40	Horizontal	-62.46	-13.00	-49.46
					2474.10		-58.33	-13.00	-45.33
					3298.80		-57.99	-13.00	-44.99
		1	2	836.50	1673.00	Vertical	-60.40	-13.00	-47.40
					2509.50		-57.99	-13.00	-44.99
					3346.00		-55.63	-13.00	-42.63
					1673.00	Horizontal	-56.27	-13.00	-43.27
					2509.50		-57.71	-13.00	-44.71
					3346.00		-56.76	-13.00	-43.76
		3	1	848.30	1696.60	Vertical	-60.58	-13.00	-47.58
					2544.90		-57.56	-13.00	-44.56
					3393.20		-56.51	-13.00	-43.51
					1696.60	Horizontal	-59.95	-13.00	-46.95
					2544.90		-57.77	-13.00	-44.77
					3393.20		-56.17	-13.00	-43.17
	3	8	0	825.50	1651.00	Vertical	-62.22	-13.00	-49.22
					2476.50		-58.99	-13.00	-45.99
					3302.00		-56.21	-13.00	-43.21
					1651.00	Horizontal	-62.31	-13.00	-49.31
					2476.50		-59.44	-13.00	-46.44
					3302.00		-57.94	-13.00	-44.94
		1	8	836.50	1673.00	Vertical	-60.40	-13.00	-47.40
					2509.50		-57.99	-13.00	-44.99
					3346.00		-55.63	-13.00	-42.63
					1673.00	Horizontal	-56.27	-13.00	-43.27
					2509.50		-57.71	-13.00	-44.71
					3346.00		-56.76	-13.00	-43.76
		8	0	847.50	1695.00	Vertical	-61.25	-13.00	-48.25
					2542.50		-58.03	-13.00	-45.03
					3390.00		-56.46	-13.00	-43.46
					1695.00	Horizontal	-60.50	-13.00	-47.50
					2542.50		-58.27	-13.00	-45.27
					3390.00		-56.09	-13.00	-43.09

Prüfbericht - Nr.:
Test Report No.:

IN24778M 001

Seite 45 von 62
Page 45 of 62

Modulation	Cell BW	No. of RB	RB Pos	Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission Level (dBm)	Limit (dBm)	Margin (dB)
QPSK	5	25	0	826.50	1653.00	Vertical	-61.55	-13.00	-48.55
					2479.50		-58.83	-13.00	-45.83
					3306.00		-57.32	-13.00	-44.32
					1653.00	Horizontal	-61.12	-13.00	-48.12
					2479.50		-58.45	-13.00	-45.45
					3306.00		-57.32	-13.00	-44.32
		25	0	836.50	1673.00	Vertical	-60.40	-13.00	-47.40
					2509.50		-57.99	-13.00	-44.99
					3346.00		-55.63	-13.00	-42.63
					1673.00	Horizontal	-56.27	-13.00	-43.27
					2509.50		-57.71	-13.00	-44.71
					3346.00		-56.76	-13.00	-43.76
		25	0	846.50	1693.00	Vertical	-62.15	-13.00	-49.15
					2539.50		-57.46	-13.00	-44.46
					3386.00		-56.10	-13.00	-43.10
					1693.00	Horizontal	-57.72	-13.00	-44.72
					2539.50		-58.00	-13.00	-45.00
					3386.00		-55.66	-13.00	-42.66
	10	25	25	829.00	1658.00	Vertical	-61.88	-13.00	-48.88
					2487.00		-58.92	-13.00	-45.92
					3316.00		-57.11	-13.00	-44.11
					1658.00	Horizontal	-61.43	-13.00	-48.43
					2487.00		-58.99	-13.00	-45.99
					3316.00		-57.21	-13.00	-44.21
		25	25	831.50	1663.00	Vertical	-60.40	-13.00	-47.40
					2494.50		-57.99	-13.00	-44.99
					3326.00		-55.63	-13.00	-42.63
					1663.00	Horizontal	-56.27	-13.00	-43.27
					2494.50		-57.71	-13.00	-44.71
					3326.00		-56.76	-13.00	-43.76
	15	25	25	836.50	1673.00	Vertical	-60.40	-13.00	-47.40
					2509.50		-57.99	-13.00	-44.99
					3346.00		-55.63	-13.00	-42.63
					1673.00	Horizontal	-56.27	-13.00	-43.27
					2509.50		-57.71	-13.00	-44.71
					3346.00		-56.76	-13.00	-43.76
		25	0	841.50	1683.00	Vertical	-61.23	-13.00	-48.23
					2524.50		-58.99	-13.00	-45.99
					3366.00		-57.63	-13.00	-44.63
					1683.00	Horizontal	-61.34	-13.00	-48.34
					2524.50		-59.43	-13.00	-46.43
					3366.00		-58.32	-13.00	-45.32

Prüfbericht - Nr.:

Test Report No.:

IN24778M 001

Seite 46 von 62

Page 46 of 62

Test Results for WCDMA:

Band	Antenna Polarization	Channel Frequency (MHz)	Measured Frequency (MHz)	Measured Emission (dBm)	Limit (dBm)	Margin (dB)
5	Vertical	826.40	1652.80	-58.43	-13.00	-45.43
			2479.20	-57.79	-13.00	-44.79
			3305.60	-56.84	-13.00	-43.84
	Horizontal	826.40	1652.80	-62.26	-13.00	-49.26
			2479.20	-59.56	-13.00	-46.56
			3305.60	-56.70	-13.00	-43.70
	Vertical	836.40	1672.80	-61.13	-13.00	-48.13
			2509.20	-56.83	-13.00	-43.83
			3345.60	-56.18	-13.00	-43.18
	Horizontal	836.40	1672.80	-59.40	-13.00	-46.40
			2509.20	-57.57	-13.00	-44.57
			3345.60	-56.23	-13.00	-43.23
	Vertical	846.40	1692.80	-60.91	-13.00	-47.91
			2539.20	-58.13	-13.00	-45.13
			3385.60	-56.22	-13.00	-43.22
	Horizontal	846.40	1692.80	-59.47	-13.00	-46.47
			2539.20	-56.06	-13.00	-43.06
			3385.60	-56.46	-13.00	-43.46

Test Results for GSM/E-GPRS:

Mode	Antenna Polarization	Channel Frequency (MHz)	Measured Frequency (MHz)	Measured emission (dBm)	Limit (dBm)	Margin (dB)
GSM 850MHz	Vertical	824.20	1648.4	-58.86	-13.00	-45.86
			2472.6	-54.14	-13.00	-41.14
	Horizontal		1648.40	-48.66	-13.00	-35.66
			2472.60	-56.38	-13.00	-43.38
	Vertical	836.60	1673.2	-47.35	-13.00	-34.35
			2509.8	-51.59	-13.00	-38.59
	Horizontal		1673.2	-49.31	-13.00	-36.31
			2509.8	-56.32	-13.00	-43.32
	Vertical	848.80	1697.60	-48.21	-13.00	-35.21
			2546.40	-45.17	-13.00	-32.17
	Horizontal		1697.60	-46.30	-13.00	-33.30
			2546.40	-56.63	-13.00	-43.63

Prüfbericht - Nr.:

Test Report No.:

IN24778M 001

Seite 47 von 62

Page 47 of 62

Mode	Antenna Polarization	Channel Frequency (MHz)	Measured Frequency (MHz)	Measured emission (dBm)	Limit (dBm)	Margin (dB)
EGPRS 850MHz	Vertical	824.20	1648.4	-49.11	-13.00	-36.11
			2472.6	-53.08	-13.00	-40.08
	Horizontal		1648.40	-54.03	-13.00	-41.03
			2472.60	-52.83	-13.00	-39.83
	Vertical	836.60	1673.2	-49.42	-13.00	-36.42
			2509.8	-52.44	-13.00	-39.44
	Horizontal		1673.2	-48.76	-13.00	-35.76
			2509.8	-53.09	-13.00	-40.09
	Vertical	848.80	1697.60	-51.10	-13.00	-38.10
			2546.40	-52.13	-13.00	-39.13
	Horizontal		1697.60	-47.05	-13.00	-34.05
			2546.40	-55.73	-13.00	-42.73

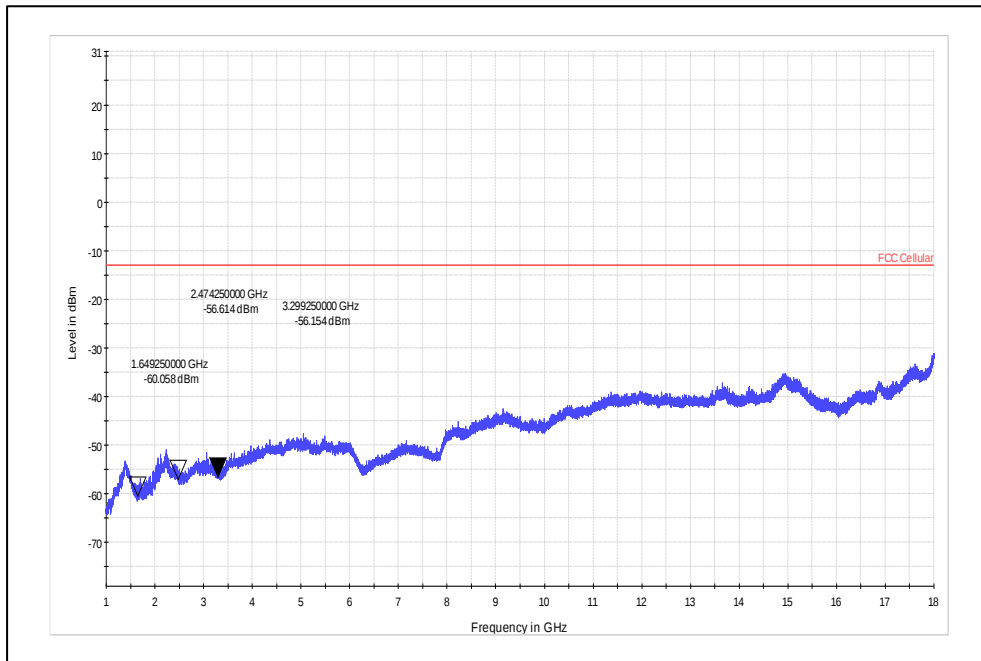
Prüfbericht - Nr.:
Test Report No.:

IN24778M 001

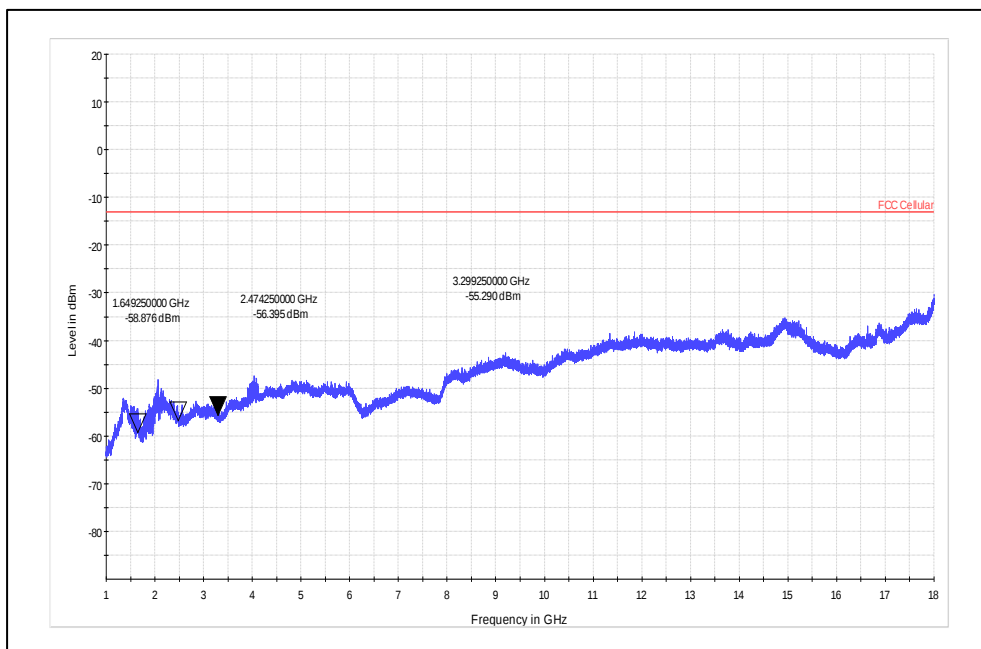
Seite 48 von 62
Page 48 of 62

LTE Test Plots:

Band 5_Channel 824.7MHz-QPSK-CB-1.4MHz-Vertical Polarization



Band5_Channel 824.7MHz-QPSK-CB-1.4MHz-Horizontal polarization

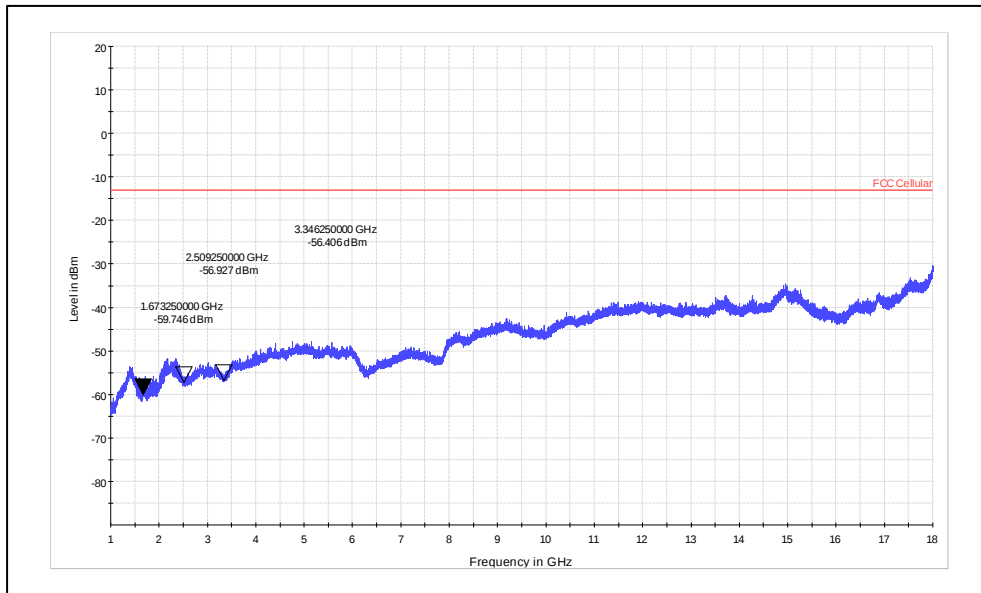


Prüfbericht - Nr.:
Test Report No.:

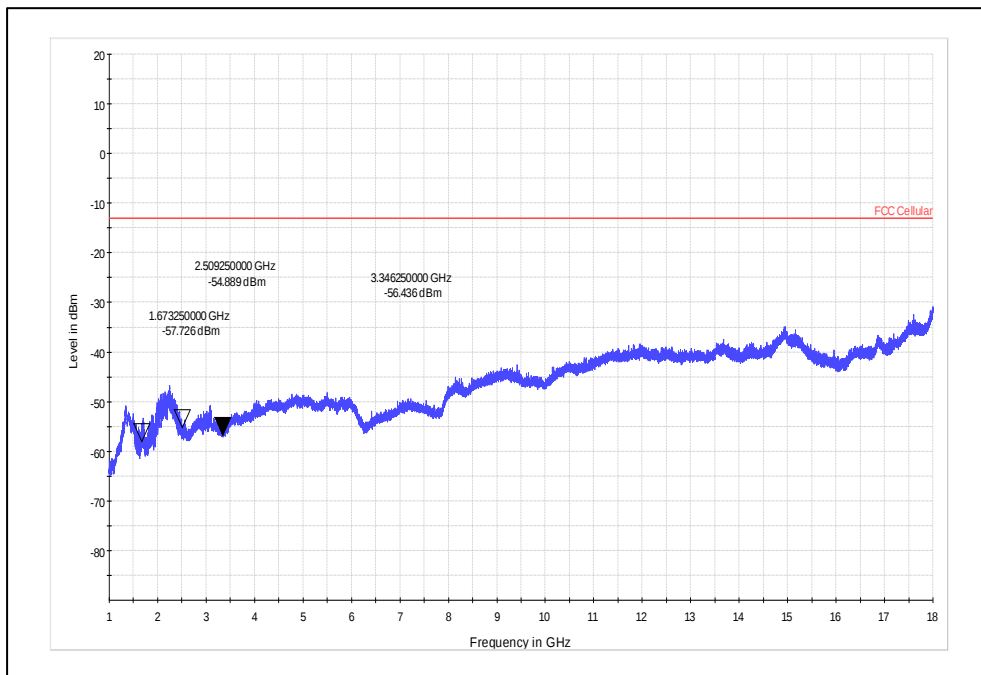
IN24778M 001

Seite 49 von 62
Page 49 of 62

Band 5_Channel 836.5MHz-QPSK-CB-1.4MHz-Vertical Polarization



Band 5_Channel 836.5MHz-QPSK-CB-1.4MHz-Horizontal Polarization



Prüfbericht - Nr.:

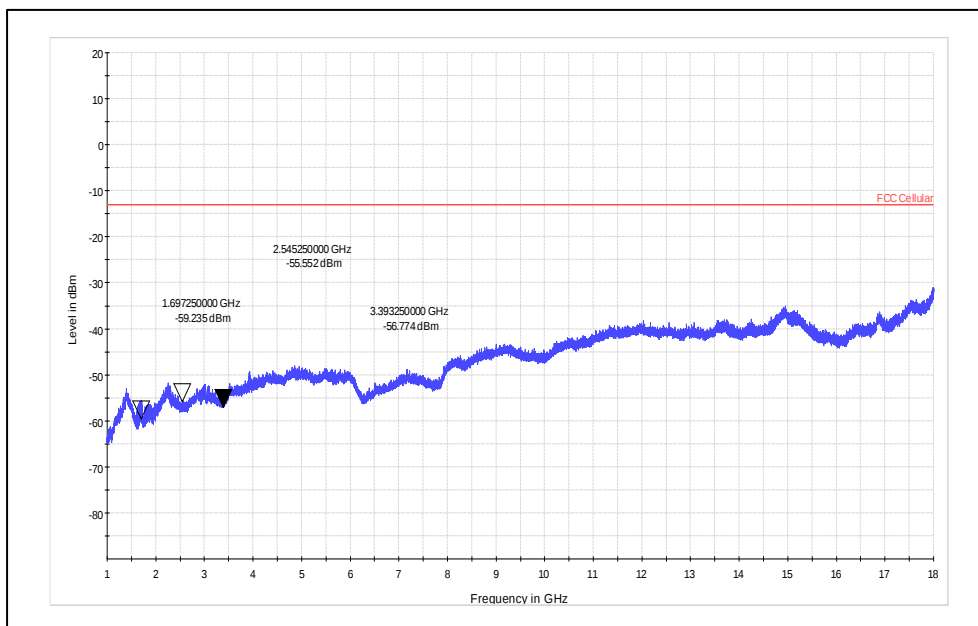
Test Report No.:

IN24778M 001

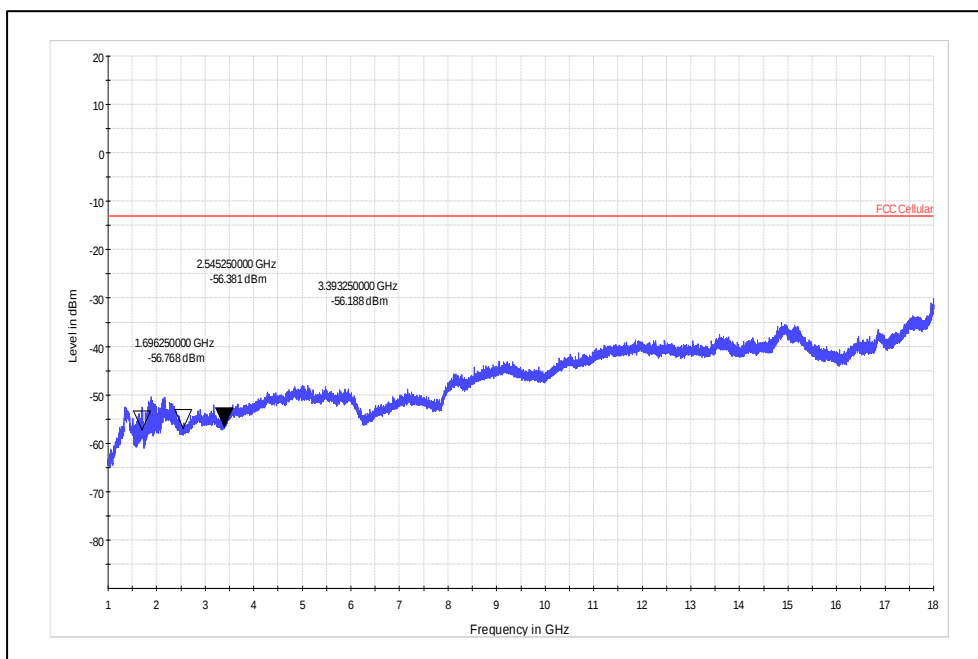
Seite 50 von 62

Page 50 of 62

Band 5_Channel 848.3MHz-QPSK-CB-1.4MHz-Vertical Polarization



Band 5_Channel 848.3MHz-QPSK-CB-1.4MHz-Horizontal Polarization



Prüfbericht - Nr.:

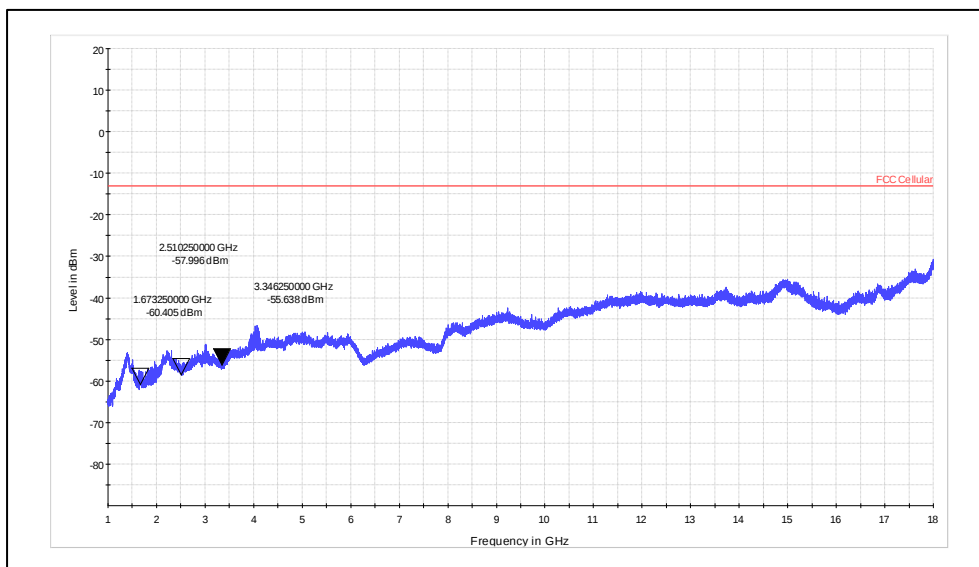
Test Report No.:

IN24778M 001

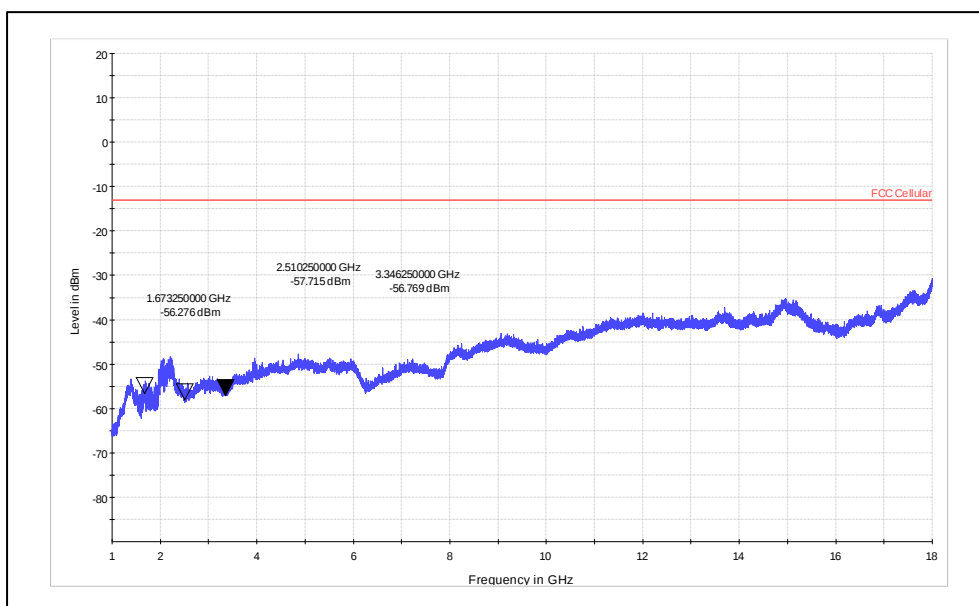
Seite 51 von 62

Page 51 of 62

Band 26_Channel 836.50MHz-QPSK-CB-1.4MHz-Vertical Polarization



Band 26_Channel 836.50MHz-QPSK-CB-1.4MHz-Horizontal Polarization

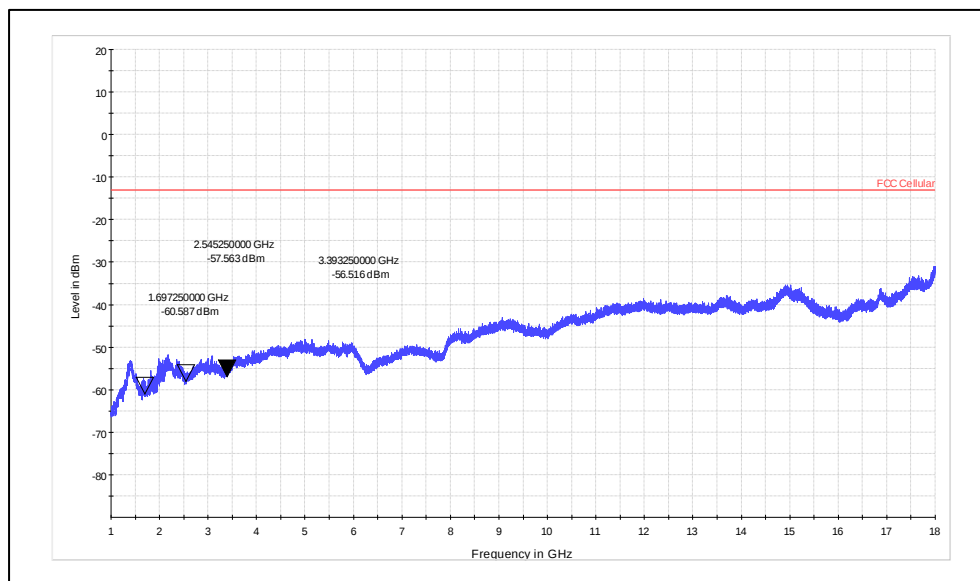


Prüfbericht - Nr.:
Test Report No.:

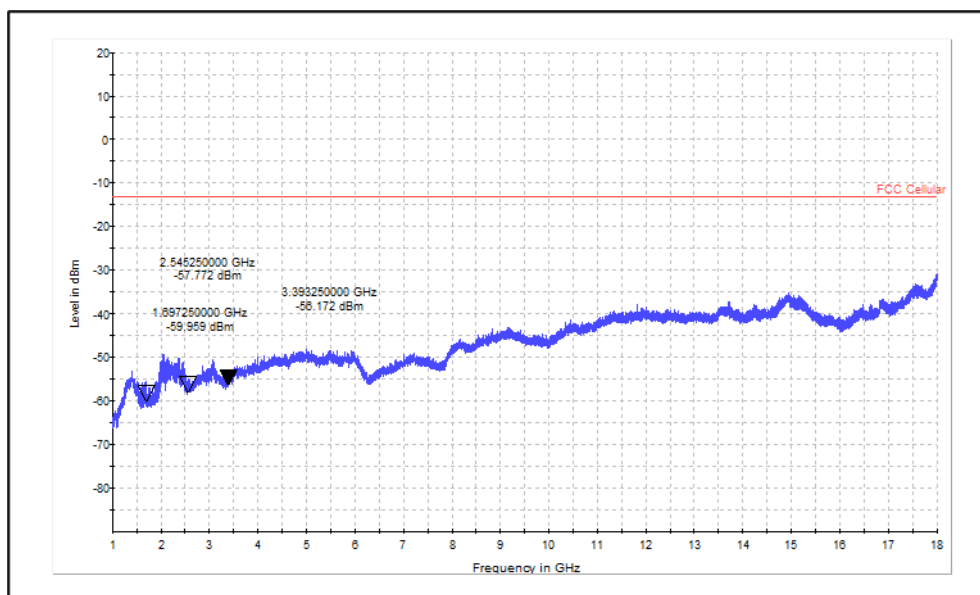
IN24778M 001

Seite 52 von 62
Page 52 of 62

Band 26_Channel 848.30MHz-QPSK-CB-1.4MHz-Vertical Polarization



Band 26_Channel 848.30MHz-QPSK-CB-1.4MHz-Horizontal Polarization



Prüfbericht - Nr.:

Test Report No.:

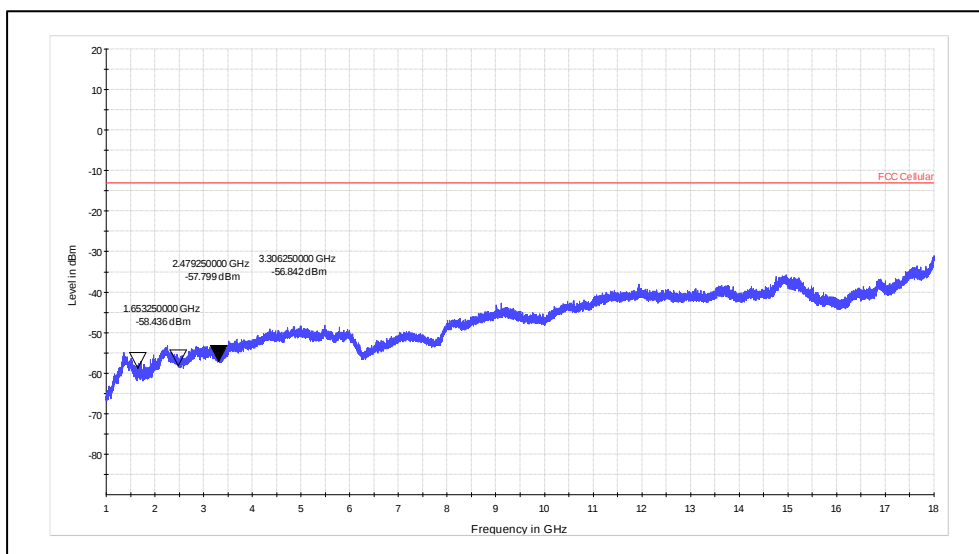
IN24778M 001

Seite 53 von 62

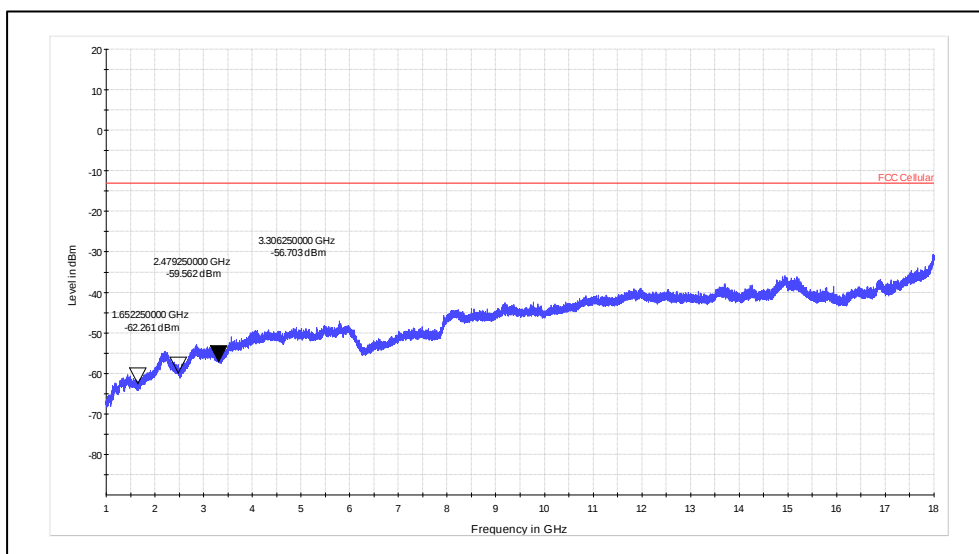
Page 53 of 62

WCDMA Test Plots:

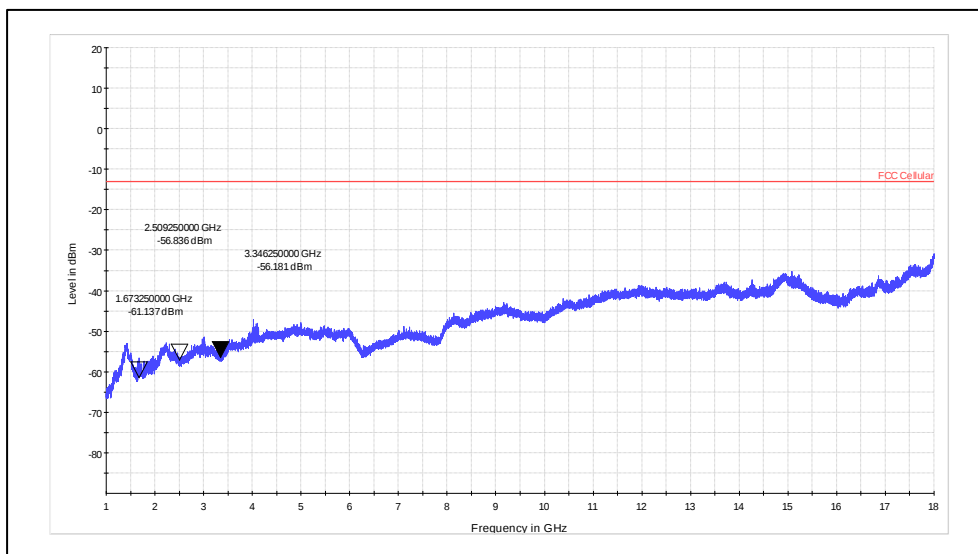
Band 5_Channel 826.4MHz-Vertical Polarization



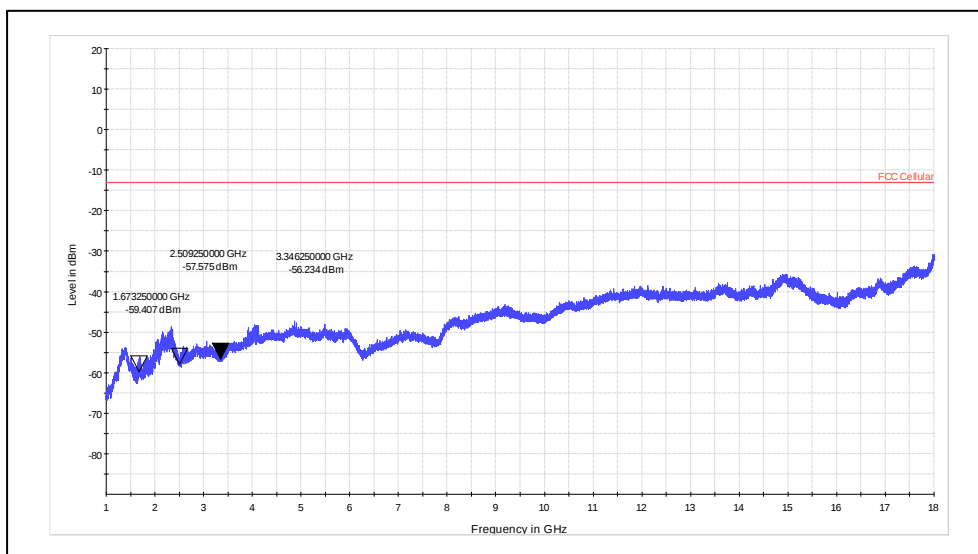
Band 5_Channel 826.4MHz-Horizontal Polarization



Band 5_Channel 836.4MHz-Vertical Polarization



Band 5_Channel 836.4MHz-Horizontal Polarization



Prüfbericht - Nr.:

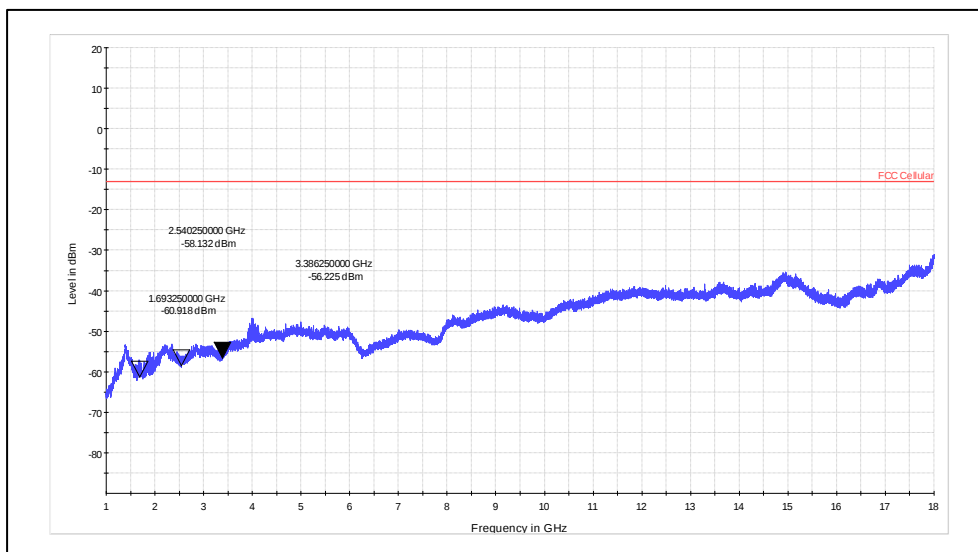
Test Report No.:

IN24778M 001

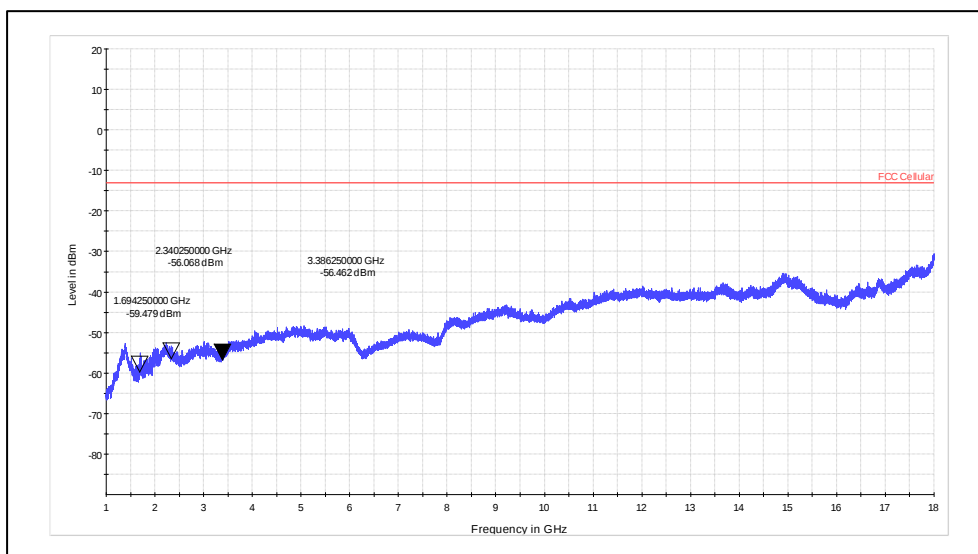
Seite 55 von 62

Page 55 of 62

Band 5_Channel 846.4MHz-Vertical Polarization



Band 5_Channel 846.4MHz-Horizontal Polarization



Prüfbericht - Nr.:

Test Report No.:

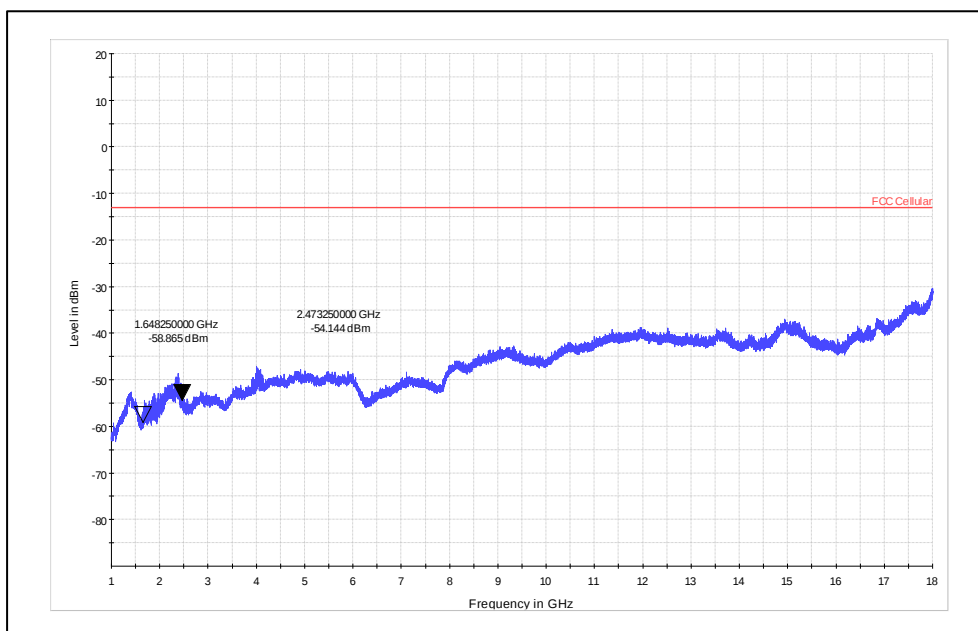
IN24778M 001

Seite 56 von 62

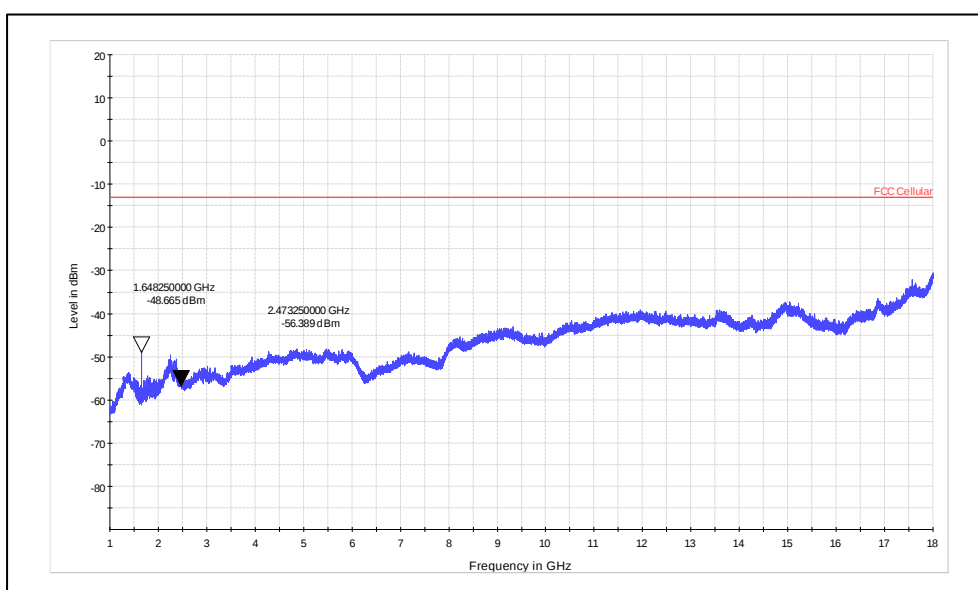
Page 56 of 62

GSM 850MHz Test Plots:

GPRS_GSM850MHz-Ch-824.20MHz_1GHz to 18GHz-Vertical



GPRS_GSM850MHz-Ch-824.20MHz_1GHz to 18GHz-Horizontal



Prüfbericht - Nr.:

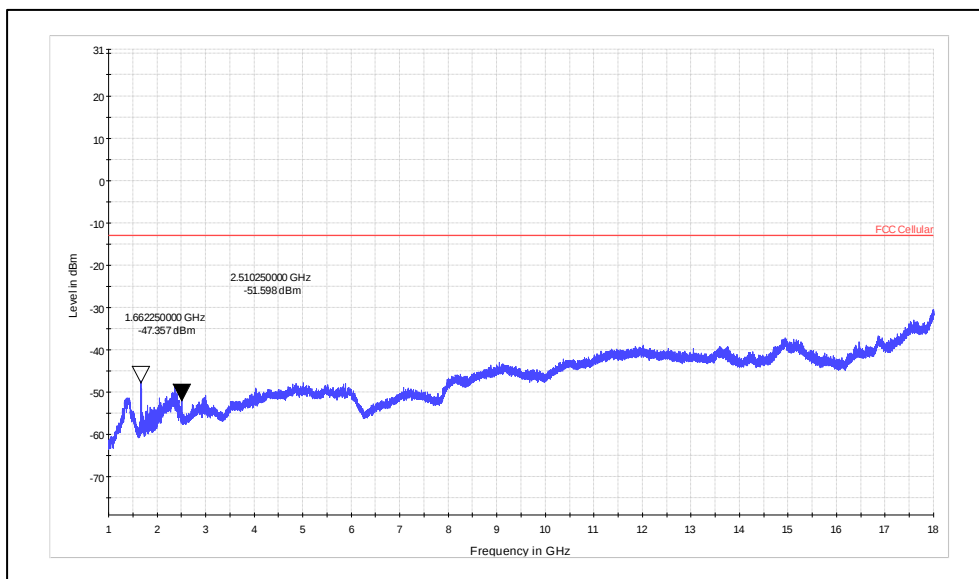
Test Report No.:

IN24778M 001

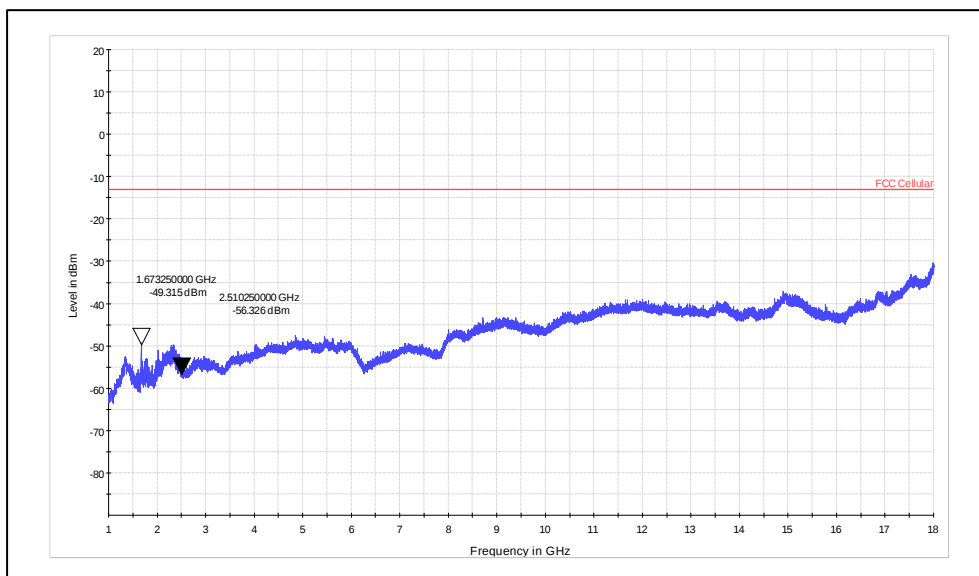
Seite 57 von 62

Page 57 of 62

GPRS_GSM850MHz-Ch-836.60MHz_1GHz to 18GHz-Vertical



GPRS_GSM850MHz-Ch-836.60MHz_1GHz to 18GHz-Horizontal



Prüfbericht - Nr.:

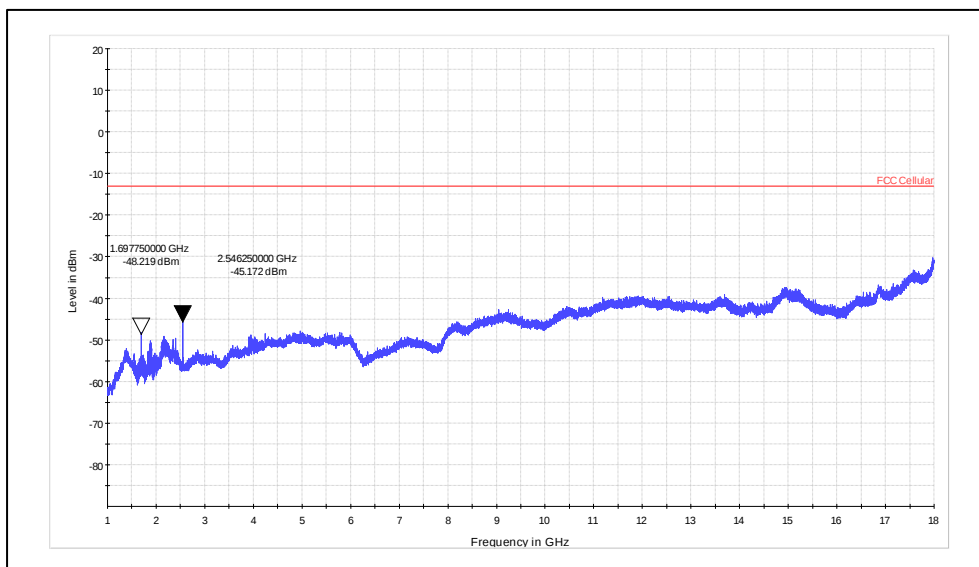
Test Report No.:

IN24778M 001

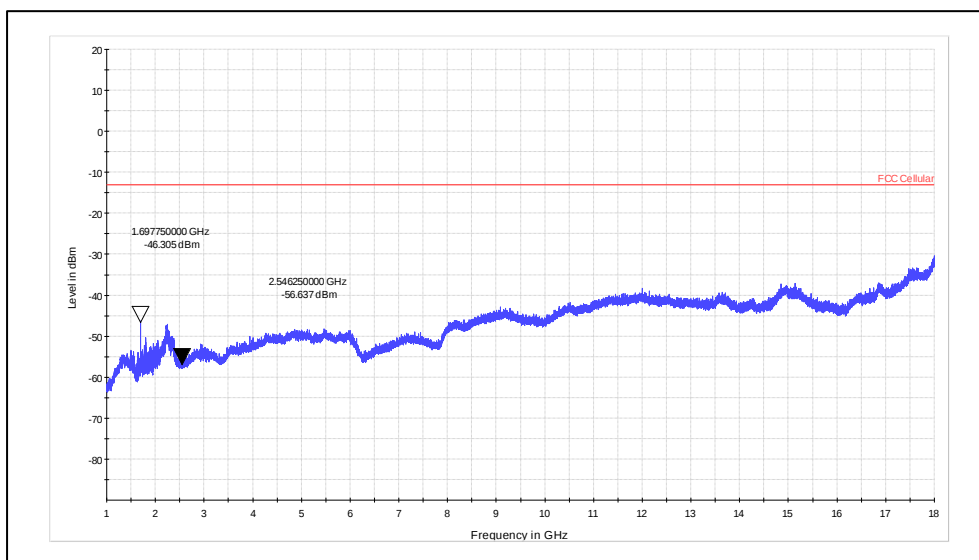
Seite 58 von 62

Page 58 of 62

GPRS_GSM850MHz-Ch-848.80MHz_1GHz to 18GHz-Vertical



GPRS_GSM850MHz-Ch-848.80MHz_1GHz to 18GHz-Horizontal



Prüfbericht - Nr.:
Test Report No.:

IN24778M 001

Seite 59 von 62
Page 59 of 62

7.4 AC Powerlines Conducted Emission

Result

Pass

Test Specification : FCC Part 15 Section 15.207
RSS Gen Issue 5, Section 8.8

Test Method : ANSI C 63.10-2013

Testing Location : Screened room

Measurement Bandwidth : 9kHz

Frequency Range : 150kHz – 30MHz

Supply Voltage : 110VAC,60Hz

Test Method : Refer TEST METHODOLOGY

Limits of section 15.207

Frequency of emission (MHz)	Conducted limit (dBµV)	
	Quasi-peak (dBµV)	Average (dBµV)
0.15-0.5	66-56*	56-46*
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency

Test Conditions:

Normal Temperature = +24°C Voltage (V norm) = 110VAC 60Hz through AC/DC Adapter Relative Humidity = 64%

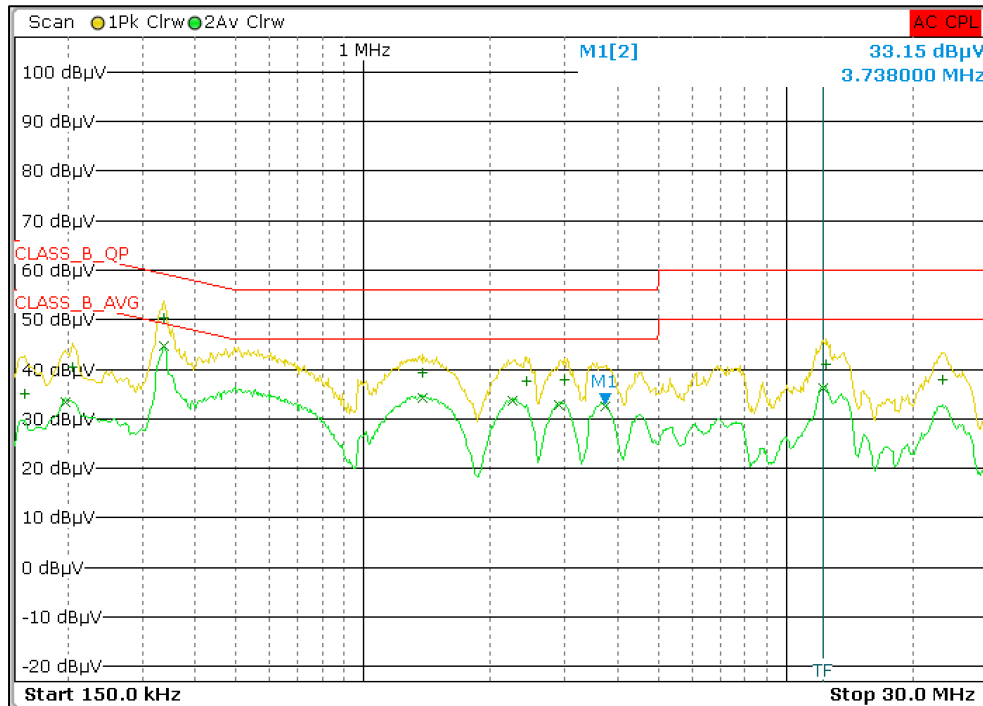
Prüfbericht - Nr.:
Test Report No.:

IN24778M 001

Seite 60 von 62
Page 60 of 62

Test Results:

Power: 110V 60Hz_LINE



Line Graph

Trace	Frequency	Level (dBμV)	Phase	Detector	Delta Limit/dB
2	338.000000000 kHz	44.61		Average	-4.64
1	338.000000000 kHz	50.30		Quasi Peak	-8.95
2	1.382000000 MHz	34.20		Average	-11.80
2	2.250000000 MHz	33.58		Average	-12.42
2	2.906000000 MHz	32.77		Average	-13.23
2	3.738000000 MHz	32.40		Average	-13.60
2	12.206000000 MHz	36.16		Average	-13.84
1	1.386000000 MHz	39.21		Quasi Peak	-16.79
1	2.998000000 MHz	37.84		Quasi Peak	-18.16
1	2.430000000 MHz	37.63		Quasi Peak	-18.37
1	12.454000000 MHz	40.90		Quasi Peak	-19.10
2	198.000000000 kHz	33.41		Average	-20.28
1	23.422000000 MHz	37.97		Quasi Peak	-22.03
1	206.000000000 kHz	40.54		Quasi Peak	-22.83
1	158.000000000 kHz	35.17		Quasi Peak	-30.40

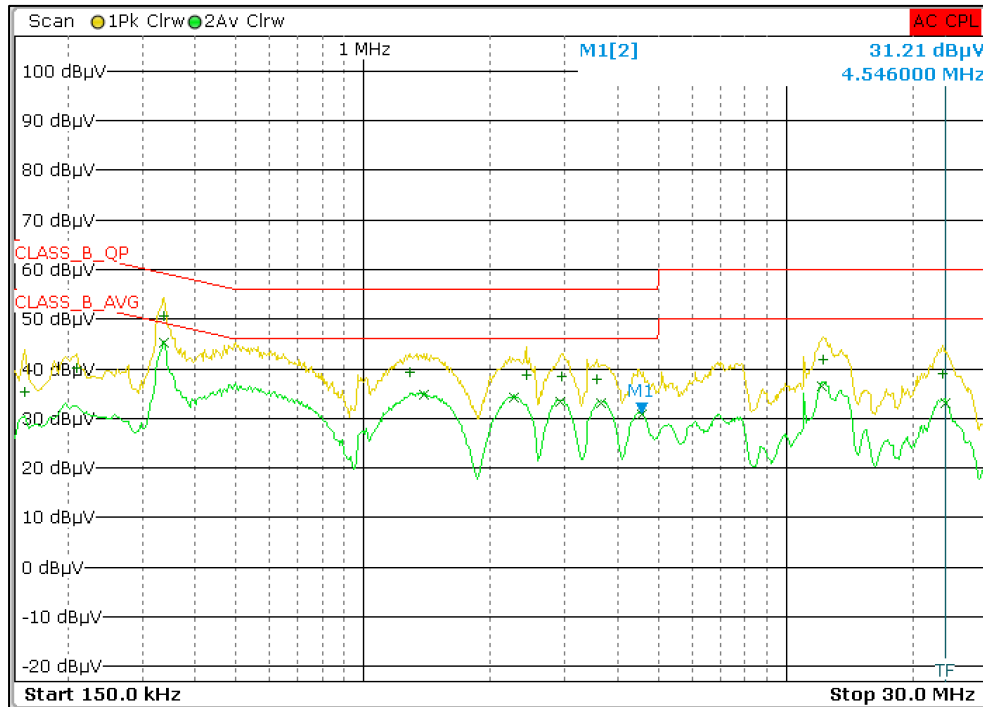
Line Table

Prüfbericht - Nr.:
Test Report No.:

IN24778M 001

Seite 61 von 62
Page 61 of 62

Power: 110V 60Hz_NEUTRAL



Neutral Graph

Trace	Frequency	Level (dBμV)	Phase	Detector	Delta Limit/dB
2	338.00000000 kHz	45.13		Average	-4.12
2	338.00000000 kHz	45.12		Average	-4.13
1	338.00000000 kHz	50.61		Quasi Peak	-8.64
1	338.00000000 kHz	50.60		Quasi Peak	-8.65
2	1.394000000 MHz	34.71		Average	-11.29
2	2.270000000 MHz	34.14		Average	-11.86
2	2.922000000 MHz	33.30		Average	-12.70
2	3.650000000 MHz	32.99		Average	-13.01
2	12.154000000 MHz	36.51		Average	-13.49
2	4.546000000 MHz	30.69		Average	-15.31
1	1.290000000 MHz	39.32		Quasi Peak	-16.68
2	23.798000000 MHz	33.15		Average	-16.85
1	2.426000000 MHz	38.62		Quasi Peak	-17.38
1	2.954000000 MHz	38.36		Quasi Peak	-17.64
1	3.558000000 MHz	37.96		Quasi Peak	-18.04
1	12.226000000 MHz	41.92		Quasi Peak	-18.08
1	23.426000000 MHz	39.09		Quasi Peak	-20.91
1	210.000000000 kHz	40.21		Quasi Peak	-23.00
1	158.000000000 kHz	35.40		Quasi Peak	-30.17

Neutral Table

Prüfbericht - Nr.:
Test Report No.:

IN24778M 001

Seite 62 von 62
Page 62 of 62

8 LIST OF TABLES

Table 1: List of test and measurement instruments	7
Table 2: Instrument application Software versions	7
Table 3: Ratings and System Details as declared by Supplier*	8
Table 4: Antenna Gain	9
Table 5: Measurement Uncertainty	9

9 LIST OF FIGURES

Figure 1: Frequency Range 9 kHz- 30 MHz	13
Figure 2: Frequency Range 30 MHz – 200 MHz	13
Figure 3: Frequency Range 200 MHz - 1GHz	14
Figure 4: Frequency Range above 1 GHz	14