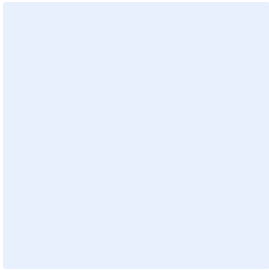


Prüfbericht-Nr.: <i>Test report no.:</i>	IN24CDFM 001/ IN24CGBD 001/ IN24O1Z3 001/ IN24BEGN 001	Auftrags-Nr.: <i>Order no.:</i>	146873078 090	Seite 1 von 5 Page 1 of 5
Kunden-Referenz-Nr.: <i>Client reference no.:</i>	2026143	Auftragsdatum: <i>Order date:</i>	2024-01-19	
Auftraggeber: <i>Client:</i>	Schneider Electric 7262 Marconi Street Montreal, QC H2R 2Z5 Canada			
Prüfgegenstand: <i>Test item:</i>	Ecostruxure Flex-Server			
Bezeichnung <i>Identification</i>	Main Model: ESXBFXSVR0BC008 Associated Model: ESXBFXSVR0BC016; ESXBFXSVR0BC032			
Auftrags-Inhalt: <i>Order content:</i>	Testing & Issue of Test Report			
Prüfgrundlage: <i>Test specification:</i>	FCC Part1 1.1310, KDB 447498 D01 RSS 102 Issue 6			
Wareneingangsdatum: <i>Date of sample receipt:</i>	2024-01-23			
Prüfmuster-Nr.: <i>Test sample no.:</i>	A003649514-001			
Serien -Nr.: <i>Serial no.:</i>	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 road, Electronic city Phase1, Bangalore-560100, India			
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-ESXBFXSVR0BC IC: 30486-ESXBFXSVR0BC HVIN: ESXBFXSVR0BC008; ESXBFXSVR0BC016; ESXBFXSVR0BC032			
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 N/A = nicht anwendbar	4 = ausreichend N/T = nicht getestet
* Legend:	1 = very good P(ass) = passed a.m. test specification(s)	2 = good F(ail) = failed a.m. test specification(s)	3 = satisfactory N/A = not applicable	4 = sufficient 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>				

V05

1 RF Exposure Evaluation

1.1 RF Exposure Compliance Requirement

The limit for Maximum Permissible Exposure (MPE) specified in FCC Part 1 Subpart I 1.1310 is followed. The gain of the antennas used in the product are extracted from the Antenna data sheets provided and also the maximum total power input to the antenna is measured. Through the Friis transmission formula and the maximum gain of the antenna, we can calculate the distance, away from the product, where the limit of MPE is reached.

Although the Friis Transmission formula is far field assumption, the calculated result of that is an over-prediction for near field power density. It is taken as worst case to specify the safety range.

1.2 Test Reference Limits

According to FCC Part 1 Subpart I 1.1310 The criteria listed in the following table shall be used to evaluate the environmental impact of the human exposure to radio-frequency (RF) radiation as specified in 1.1307 (b)

Table 1: Limits for Maximum Permissible Exposure (MPE) as per FCC

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)
Limits for Occupational / controlled Exposures			
300 - 1500	--	--	F/300
1500 – 100000	--	--	5.0
Limits for General population / Uncontrolled Exposure			
300 - 1500	--	--	F/1500
1500 – 100000	--	--	1.0

F or f = Frequency in MHz

Table 2: Limits for Maximum Permissible Exposure (MPE) as per ISED Canada

Frequency Range (MHz)	Electric Field (V/m rms)	Magnetic Field (A/m rms)	Power Density (W/m ²)
Limits for Occupational / controlled Exposures			
100-6000	$15.60f^{0.25}$	$0.04138f^{0.25}$	$0.6455f^{0.5}$
Limits for General population / Uncontrolled Exposure			
300-6000	$3.142 f^{0.3417}$	$0.008335f^{0.3417}$	$0.02619f^{0.6834}$

F or f = Frequency in MHz

Prüfbericht - Nr.:
Test Report No.:

IN24CDFM 001/ IN24CGBD 001/ IN24O1Z3 001/
IN24BEGN 001

Seite 3 von 5
Page 3 of 5

Friss Formula

Friss Transmission Formula: $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where,

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

R = Distance between observation point and the center of radiator in cm

If we know the maximum gain of the antenna and the total output power to the antenna, through calculation.

Test Results:

Antenna details:

Protocol	Antenna Type	Frequency Range (MHz)	Antenna Gain (dBi)
LTE, WCDMA, GSM	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

Radio Protocol	Band	Frequency (MHz)	Maximum measured RF output power with tune-up procedure (dBm)	Max power Including tune-up tolerance * (mW)	Antenna Gain in linear	Min Separation distance (CM)	Power Density (Pd)(mW/cm ²)	Limit (mW/cm ²)
LTE	B2	1857.5	26.92	492.0395	1.6982	20	0.1662	1
	B4	1753.5	26.28	424.6196	1.6982	20	0.1435	1
	B5	836.5	26.75	473.1513	1.2589	20	0.1185	0.5577
	B7	2562.5	26.22	418.7936	1.9055	20	0.1588	1
	B12	700.50	25.76	376.7038	1.3804	20	0.1035	0.4670
	B13	782.00	26.17	413.9997	1.3804	20	0.1137	0.5213
	B25	1882.5	26.27	423.6430	1.6982	20	0.1431	1
	B26(814-824)	819.00	26.74	472.0630	1.3804	20	0.1296	0.5460
	B26(824-849)	825.50	26.82	480.8393	1.2589	20	0.1204	0.5503
	B38	2577.50	26.92	492.0395	1.9055	20	0.1865	1
	B41	2506.00	19.83	96.1612	1.9055	20	0.0365	1

Prüfbericht - Nr.:
Test Report No.:

IN24CDFM 001/ IN24CGBD 001/ IN24O1Z3 001/
IN24BEGN 001

Seite 4 von 5
Page 4 of 5

Radio Protocol	Band	Frequency (MHz)	Maximum measured RF output power with tune-up value (dBm)	Max power Including tune-up tolerance * (mW)	Antenna Gain in linear	Min Separation distance (CM)	Power Density (Pd)(mW/cm ²)	Limit (mW/cm ²)
WCDMA	B2	1907.6	24.93	311.1716	1.6982	20	0.1051	1
	B4	1752.60	24.38	274.1574	1.6982	20	0.0926	1
	B5	846.60	24.61	289.0680	1.2589	20	0.0724	0.5644
GSM	850	848.80	22.49	177.4966	1.2589	20	0.0445	0.5659
	PCS 1900	1909.8	23.09	203.7933	1.6982	20	0.0689	1

*Note: The duty correction factor of 9.21 dB is subtracted from the measured power for GSM.

Test Results for ISED:

Radio Protocol	Band	Frequency (MHz)	Maximum measured RF output power with tune-up value (dBm)	Max power Including tune-up tolerance * (mW)	Antenna Gain in linear	Min Separation distance (CM)	Power Density (Pd)(W/m ²)	Limit (W/m ²)
LTE	B2	1857.5	26.92	492.0395	1.6982	20	1.6623	4.4887
	B4	1753.5	26.28	424.6196	1.6982	20	1.4346	4.3154
	B5	836.5	26.75	473.1513	1.2589	20	1.1850	2.6022
	B7	2562.5	26.22	418.7936	1.9055	20	1.5876	5.5926
	B12	700.50	25.76	376.7038	1.3803	20	1.0345	2.3051
	B13	782.00	26.17	413.9997	1.3803	20	1.1369	2.4852
	B25	1882.5	26.27	423.6430	1.6982	20	1.4313	4.5299
	B26(814-824)	819.00	26.74	472.0630	1.3804	20	1.2964	2.5649
	B26(824-849)	825.50	26.82	480.8393	1.2589	20	1.2043	2.5788
	B38	2577.50	26.92	492.0395	1.9054	20	1.8653	5.6150
	B41	2506.00	19.83	96.1612	1.9054	20	0.3645	5.5081

Prüfbericht - Nr.:

Test Report No.:

IN24CDFM 001/ IN24CGBD 001/ IN24O1Z3 001/
IN24BEGN 001

Seite 5 von 5

Page 5 of 5

Radio Protocol	Band	Frequency (MHz)	Maximum measured RF output power with tune-up value (dBm)	Max power Including tune-up tolerance * (mW)	Antenna Gain in linear	Min Separation distance (CM)	Power Density (Pd)(W/m²)	Limit (W/m2)
WCDMA	B2	1907.6	24.93	311.1716	1.6982	20	1.0513	4.5711
	B4	1752.60	24.38	274.1574	1.6982	20	0.9262	4.3139
	B5	846.60	24.61	289.0680	1.2589	20	0.7240	2.6237
GSM	850	848.80	22.49	177.4966	1.2589	20	0.4443	2.6283
	PCS 1900	1909.8	23.09	203.7933	1.6982	20	0.6882	4.5747

***Note:**

1. The duty correction factor of 9.21 dB is subtracted from the measured power for GSM.

1.3 Conclusion

The Power density of the EUT is less than defined limit as shown above. Hence, it's meeting the RF Exposure evaluation.