

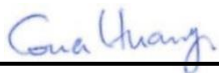
RF EXPOSURE EVALUATION REPORT

FCC ID : TVE-240703
Equipment : Secured Network Extension Device
Brand Name : 
Model Name : FortiExtender 511G-WiFixxxxxxxxxxx,
FORTIEXTENDER-511G-WiFixxxxxxxxxxx, FEX-511G-WiFixxxxxxxxxxx
(where "x" can be used as "A-Z", or "0-9", or "-", or blank for software
changes or marketing purposes only)
Marketing Name : FortiExtender 511G-WiFi
Applicant : Fortinet, Inc.
909 Kifer Road, Sunnyvale, CA. 94086 USA
Manufacturer : Fortinet, Inc.
909 Kifer Road, Sunnyvale, CA. 94086 USA
Standard : 47 CFR Part 2.1091

We, SPORTON INTERNATIONAL INC has been evaluated this product in accordance with 47 CFR Part2.1091 and it complies with applicable limit.

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 3786) and the FCC designation No. TW3786 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC evaluation.

The results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. Laboratory, the test report shall not be reproduced except in full



Approved by: Cona Huang / Deputy Manager



SPORTON INTERNATIONAL INC. Wensan Laboratory

No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan



Table of Contents

1. DESCRIPTION OF EQUIPMENT UNDER TEST (EUT)	4
2. MAXIMUM RF AVERAGE OUTPUT POWER AMONG PRODUCTION UNITS	5
3. RF EXPOSURE LIMIT INTRODUCTION	14
4. RADIO FREQUENCY RADIATION EXPOSURE EVALUATION	15
4.1. Standalone Power Density Calculation	15
4.2. Collocated Power Density Calculation.....	16



History of this test report

Report No.	Version	Description	Issued Date
FA490210	Rev. 01	Initial issue of report	Nov. 11, 2024

1. Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT Type	Secured Network Extension Device
Brand Name	FORTINET 
Model Name	FortiExtender 511G-WiFixxxxxxxxxxx, FORTIEXTENDER-511G-WiFixxxxxxxxxxx, FEX-511G-WiFixxxxxxxxxxx (where "x" can be used as "A-Z", or "0-9", or "-", or blank for software changes or marketing purposes only)
Marketing Name	FortiExtender 511G-WiFi
FCC ID	TVE-240703
Wireless Technology and Frequency Range	WCDMA Band II: 1850 MHz ~ 1910 MHz WCDMA Band IV: 1710 MHz ~ 1755 MHz WCDMA Band V: 824 MHz ~ 849 MHz LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 14: 788 MHz ~ 798 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 42: 3550 MHz ~ 3550 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 MHz 5G NR n2 : 1850 MHz ~ 1910 MHz 5G NR n5 : 824 MHz ~ 849 MHz 5G NR n7 : 2500 MHz ~ 2570 MHz 5G NR n12 : 699 MHz ~ 716 MHz 5G NR n13: 777 MHz ~ 787 MHz 5G NR n14 : 788 MHz ~ 798 MHz 5G NR n25 : 1850 MHz ~ 1915 MHz 5G NR n26 : 814 MHz ~ 849 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz 5G NR n70 : 1695 MHz ~ 1710 MHz 5G NR n71 : 663 MHz ~ 698 MHz 5G NR n77: 3700 MHz ~ 3980 MHz, 3450MHz ~ 3550MHz 5G NR n78: 3700 MHz ~ 3800 MHz, 3450MHz ~ 3550MHz WLAN 2.4 GHz Band: 2400 MHz ~ 2483.5 MHz WLAN 5.2 GHz Band: 5150 MHz ~ 5250 MHz WLAN 5.3 GHz Band: 5250 MHz ~ 5350 MHz WLAN 5.6 GHz Band: 5470 MHz ~ 5725 MHz WLAN 5.8 GHz Band: 5725 MHz ~ 5850 MHz Bluetooth: 2400 MHz ~ 2483.5 MHz
Mode	RMC 12.2Kbps HSDPA HSUPA DC-HSDPA HSPA+ (16QAM uplink) LTE: QPSK, 16QAM, 64QAM 5G NR: DFT-s-OFDM/CP-OFDM, Pi/2 BPSK/QPSK/16QAM/64QAM/256QAM WLAN: 802.11a/b/g/n/ac/ax HT20/HT40/VHT20/VHT40/VHT80/HE20/HE40/HE80 Bluetooth LE
HW Version	v1.0
EUT Stage	Production Unit

Reviewed by: Jason Wang

Report Producer: Daisy Peng

**2. Maximum RF average output power among production units**

MODE		Maximum Power(dBm)
WCAMA	BAND 2	24.5
	BAND 4	24.5
	BAND 5	24.5
LTE	BAND 2	24.5
	BAND 4	24.5
	BAND 5	24.5
	BAND 7	24
	BAND 12	24
	BAND 13	24.5
	BAND 14	24
	BAND 17	24
	BAND 25	24
	BAND 26	24
	BAND 41_PC3	24
	BAND 41_PC2	26
	BAND 42_PC3	24
	BAND 42_PC2	26
	BAND 66	24.5
	BAND 71	24
5G NR	n2	25.5
	n5	25.5
	n7	25.5
	n12	25.5
	n13	25.5
	n14	25.5
	n25	25.5
	n26	25.5
	n41_PC3	25.5
	n41_PC2	27.5
	n66	25.5
	n70	25.5
	n71	25.5
	n77_PC3	25.5
	n77_PC2	27.5
	n78_PC3	25.5
	n78_PC2	27.5

**<2.4GHz WLAN CDD>**

Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)		
					Ant 1	Ant 2	SUM
11b	1Mbps	2	1	2412	26	25.2	28.63
11b	1Mbps	2	6	2437	26.7	26.7	29.71
11b	1Mbps	2	10	2457	22.1	22.4	25.26
11b	1Mbps	2	11	2462	22.1	22.4	25.26
11g	6Mbps	2	1	2412	18.8	18	21.43
11g	6Mbps	2	2	2417	22.2	21.4	24.83
11g	6Mbps	2	6	2437	25.8	25.4	28.61
11g	6Mbps	2	10	2457	21.6	21.7	24.66
11g	6Mbps	2	11	2462	17.8	18	20.91
HT20	MCS0	2	1	2412	17.9	17.4	20.67
HT20	MCS0	2	2	2417	21.8	21	24.43
HT20	MCS0	2	6	2437	26.9	26.8	29.86
HT20	MCS0	2	10	2457	21.3	21.4	24.36
HT20	MCS0	2	11	2462	17.3	17.4	20.36
HT40	MCS0	2	3	2422	15.6	15	18.32
HT40	MCS0	2	4	2427	15.9	15.3	18.62
HT40	MCS0	2	6	2437	20.3	20.1	23.21
HT40	MCS0	2	8	2447	16.2	16.2	19.21
HT40	MCS0	2	9	2452	14.6	14.8	17.71
VHT20	MCS0	2	1	2412	17.8	17.3	20.57
VHT20	MCS0	2	2	2417	21.7	20.9	24.33
VHT20	MCS0	2	6	2437	26.8	26.7	29.76
VHT20	MCS0	2	10	2457	21.2	21.3	24.26
VHT20	MCS0	2	11	2462	17.2	17.3	20.26
VHT40	MCS0	2	3	2422	15.5	14.9	18.22
VHT40	MCS0	2	4	2427	15.8	15.2	18.52
VHT40	MCS0	2	6	2437	20.2	20	23.11
VHT40	MCS0	2	8	2447	16.1	16.1	19.11
VHT40	MCS0	2	9	2452	14.5	14.7	17.61
HE20	MCS0	2	1	2412	18	17.5	20.77
HE20	MCS0	2	2	2417	21.2	20.5	23.87
HE20	MCS0	2	6	2437	25.4	25.2	28.31
HE20	MCS0	2	10	2457	21.2	21	24.11
HE20	MCS0	2	11	2462	17.4	17.5	20.46
HE40	MCS0	2	3	2422	15.7	15.1	18.42
HE40	MCS0	2	6	2437	18.2	17.9	21.06
HE40	MCS0	2	8	2447	15.4	15.4	18.41
HE40	MCS0	2	9	2452	13.9	14.1	17.01

**<2.4GHz WLAN TxBF>**

Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)		
					Ant 1	Ant 2	SUM
HT20	MCS0	2	1	2412	17.60	17.30	20.46
HT20	MCS0	2	6	2437	26.40	26.30	29.36
HT20	MCS0	2	11	2462	17.10	17.20	20.16
HT40	MCS0	2	3	2422	15.30	14.90	18.11
HT40	MCS0	2	6	2437	20.30	20.00	23.16
HT40	MCS0	2	9	2452	14.50	14.50	17.51
VHT20	MCS0	2	1	2412	17.60	17.10	20.37
VHT20	MCS0	2	6	2437	26.20	26.10	29.16
VHT20	MCS0	2	11	2462	17.00	17.10	20.06
VHT40	MCS0	2	3	2422	15.30	14.70	18.02
VHT40	MCS0	2	6	2437	20.20	19.90	23.06
VHT40	MCS0	2	9	2452	14.30	14.50	17.41
HE20	MCS0	2	1	2412	17.80	17.30	20.57
HE20	MCS0	2	6	2437	25.30	25.10	28.21
HE20	MCS0	2	11	2462	17.20	17.20	20.21
HE40	MCS0	2	3	2422	15.50	14.90	18.22
HE40	MCS0	2	6	2437	18.00	17.70	20.86
HE40	MCS0	2	9	2452	13.80	13.90	16.86

<5GHz WLAN CDD>
5.2G

Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)		
					Ant 1	Ant 2	SUM
11a	6Mbps	2	36	5180	22.40	21.60	25.03
11a	6Mbps	2	44	5220	24.00	23.20	26.63
11a	6Mbps	2	48	5240	24.40	23.90	27.17
HT20	MCS0	2	36	5180	21.70	20.90	24.33
HT20	MCS0	2	44	5220	24.70	23.90	27.33
HT20	MCS0	2	48	5240	24.10	23.60	26.87
HT40	MCS0	2	38	5190	21.00	20.10	23.58
HT40	MCS0	2	46	5230	23.50	22.90	26.22
VHT20	MCS0	2	36	5180	21.60	20.80	24.23
VHT20	MCS0	2	44	5220	24.60	23.80	27.23
VHT20	MCS0	2	48	5240	24.00	23.50	26.77
VHT40	MCS0	2	38	5190	20.90	20.00	23.48
VHT40	MCS0	2	46	5230	23.40	22.80	26.12
VHT80	MCS0	2	42	5210	19.20	18.30	21.78
HE20	MCS0	2	36	5180	21.80	21.00	24.43
HE20	MCS0	2	44	5220	23.80	23.50	26.66
HE20	MCS0	2	48	5240	24.20	23.70	26.97
HE40	MCS0	2	38	5190	19.80	18.60	22.25
HE40	MCS0	2	46	5230	23.20	22.40	25.83
HE80	MCS0	2	42	5210	19.80	18.90	22.38

5.3G

Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)		
					Ant 1	Ant 2	SUM
11a	6Mbps	2	52	5260	17.80	17.50	20.66
11a	6Mbps	2	60	5300	18.10	17.50	20.82
11a	6Mbps	2	64	5320	18.20	17.60	20.92
HT20	MCS0	2	52	5260	18.70	18.10	21.42
HT20	MCS0	2	60	5300	19.10	18.30	21.73
HT20	MCS0	2	64	5320	18.60	17.90	21.27
HT40	MCS0	2	54	5270	21.10	20.50	23.82
HT40	MCS0	2	62	5310	19.90	19.40	22.67
VHT20	MCS0	2	52	5260	18.60	18.00	21.32
VHT20	MCS0	2	60	5300	19.00	18.20	21.63
VHT20	MCS0	2	64	5320	18.50	17.80	21.17
VHT40	MCS0	2	54	5270	21.00	20.40	23.72
VHT40	MCS0	2	62	5310	19.80	19.30	22.57
VHT80	MCS0	2	58	5290	20.60	20.10	23.37
HE20	MCS0	2	52	5260	18.80	18.20	21.52
HE20	MCS0	2	60	5300	19.20	18.40	21.83
HE20	MCS0	2	64	5320	18.70	18.00	21.37
HE40	MCS0	2	54	5270	21.20	20.60	23.92
HE40	MCS0	2	62	5310	19.00	18.50	21.77
HE80	MCS0	2	58	5290	20.20	19.70	22.97

**5.6G**

Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)		
					Ant 1	Ant 2	SUM
11a	6Mbps	2	100	5500	18.70	17.20	21.02
11a	6Mbps	2	116	5580	17.80	17.20	20.52
11a	6Mbps	2	140	5700	17.50	17.50	20.51
HT20	MCS0	2	100	5500	19.00	17.50	21.32
HT20	MCS0	2	116	5580	18.00	17.20	20.63
HT20	MCS0	2	140	5700	18.10	18.00	21.06
HT40	MCS0	2	102	5510	21.20	19.90	23.61
HT40	MCS0	2	110	5550	21.10	19.80	23.51
HT40	MCS0	2	134	5670	20.70	20.50	23.61
VHT20	MCS0	2	100	5500	18.90	17.40	21.22
VHT20	MCS0	2	116	5580	17.90	17.10	20.53
VHT20	MCS0	2	140	5700	18.00	17.90	20.96
VHT40	MCS0	2	102	5510	21.10	19.80	23.51
VHT40	MCS0	2	110	5550	21.00	19.70	23.41
VHT40	MCS0	2	134	5670	20.60	20.40	23.51
VHT80	MCS0	2	106	5530	21.40	20.10	23.81
VHT80	MCS0	2	122	5610	20.90	20.20	23.57
11a	6Mbps	2	144	5720	18.10	17.50	20.82
HT20	MCS0	2	144	5720	18.70	18.00	21.37
HT40	MCS0	2	142	5710	21.00	20.50	23.77
VHT20	MCS0	2	144	5720	18.60	17.90	21.27
VHT40	MCS0	2	142	5710	20.90	20.40	23.67
VHT80	MCS0	2	138	5690	21.00	20.70	23.86
HE20	MCS0	2	100	5500	19.10	17.60	21.42
HE20	MCS0	2	116	5580	18.10	17.30	20.73
HE20	MCS0	2	140	5700	18.20	18.10	21.16
HE40	MCS0	2	102	5510	21.30	20.00	23.71
HE40	MCS0	2	110	5550	21.20	19.90	23.61
HE40	MCS0	2	134	5670	20.80	20.60	23.71
HE80	MCS0	2	106	5530	20.50	19.20	22.91
HE80	MCS0	2	122	5610	20.50	19.80	23.17
HE20	MCS0	2	144	5720	18.80	18.10	21.47
HE40	MCS0	2	142	5710	21.10	20.60	23.87
HE80	MCS0	2	138	5690	21.10	20.80	23.96

5.8G

Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)		
					Ant 1	Ant 2	SUM
11a	6Mbps	2	149	5745	26.80	26.40	29.61
11a	6Mbps	2	157	5785	27.00	26.30	29.67
11a	6Mbps	2	165	5825	27.10	26.40	29.77
HT20	MCS0	2	149	5745	26.60	26.90	29.76
HT20	MCS0	2	157	5785	26.80	26.00	29.43
HT20	MCS0	2	165	5825	27.20	26.30	29.78
HT40	MCS0	2	151	5755	22.20	21.90	25.06
HT40	MCS0	2	159	5795	24.10	23.20	26.68
VHT20	MCS0	2	149	5745	26.50	26.80	29.66
VHT20	MCS0	2	157	5785	26.70	25.90	29.33
VHT20	MCS0	2	165	5825	27.10	26.20	29.68
VHT40	MCS0	2	151	5755	22.10	21.80	24.96
VHT40	MCS0	2	159	5795	24.00	23.10	26.58
VHT80	MCS0	2	155	5775	21.30	20.60	23.97
HE20	MCS0	2	149	5745	26.70	27.00	29.86
HE20	MCS0	2	157	5785	26.90	26.10	29.53
HE20	MCS0	2	165	5825	27.30	26.40	29.88
HE40	MCS0	2	151	5755	22.80	22.50	25.66
HE40	MCS0	2	159	5795	23.70	22.80	26.28
HE80	MCS0	2	155	5775	21.40	20.70	24.07

<5GHz WLAN TxBF>
5.2G

Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)		
					Ant 1	Ant 2	SUM
HT20	MCS0	2	36	5180	21.60	20.90	24.27
HT20	MCS0	2	44	5220	24.60	23.90	27.27
HT20	MCS0	2	48	5240	24.10	23.50	26.82
HT40	MCS0	2	38	5190	20.90	20.10	23.53
HT40	MCS0	2	46	5230	23.40	22.90	26.17
VHT20	MCS0	2	36	5180	21.50	20.80	24.17
VHT20	MCS0	2	44	5220	24.50	23.80	27.17
VHT20	MCS0	2	48	5240	24.00	23.40	26.72
VHT40	MCS0	2	38	5190	20.80	20.00	23.43
VHT40	MCS0	2	46	5230	23.30	22.70	26.02
VHT80	MCS0	2	42	5210	19.10	18.30	21.73
HE20	MCS0	2	36	5180	21.70	21.00	24.37
HE20	MCS0	2	44	5220	23.70	23.50	26.61
HE20	MCS0	2	48	5240	24.10	23.70	26.91
HE40	MCS0	2	38	5190	19.60	18.50	22.10
HE40	MCS0	2	46	5230	23.10	22.40	25.77
HE80	MCS0	2	42	5210	19.70	18.90	22.33

**5.3G**

Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)		
					Ant 1	Ant 2	SUM
HT20	MCS0	2	52	5260	18.60	18.10	21.37
HT20	MCS0	2	60	5300	19.10	18.20	21.68
HT20	MCS0	2	64	5320	18.60	17.80	21.23
HT40	MCS0	2	54	5270	19.60	18.90	22.27
HT40	MCS0	2	62	5310	19.60	18.80	22.23
VHT20	MCS0	2	52	5260	18.50	18.00	21.27
VHT20	MCS0	2	60	5300	19.00	18.10	21.58
VHT20	MCS0	2	64	5320	18.50	17.70	21.13
VHT40	MCS0	2	54	5270	19.50	18.80	22.17
VHT40	MCS0	2	62	5310	19.50	18.70	22.13
VHT80	MCS0	2	58	5290	19.70	19.00	22.37
HE20	MCS0	2	52	5260	18.70	18.20	21.47
HE20	MCS0	2	60	5300	19.10	18.40	21.77
HE20	MCS0	2	64	5320	18.70	17.90	21.33
HE40	MCS0	2	54	5270	19.70	19.00	22.37
HE40	MCS0	2	62	5310	18.90	18.50	21.71
HE80	MCS0	2	58	5290	19.80	19.10	22.47

**5.6G**

Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)		
					Ant 1	Ant 2	SUM
HT20	MCS0	2	100	5500	18.90	17.50	21.27
HT20	MCS0	2	116	5580	17.90	17.20	20.57
HT20	MCS0	2	140	5700	18.00	18.00	21.01
HT40	MCS0	2	102	5510	19.50	17.90	21.78
HT40	MCS0	2	110	5550	19.30	17.80	21.62
HT40	MCS0	2	134	5670	18.70	18.40	21.56
VHT20	MCS0	2	100	5500	18.80	17.40	21.17
VHT20	MCS0	2	116	5580	17.80	17.10	20.47
VHT20	MCS0	2	140	5700	17.90	17.90	20.91
VHT40	MCS0	2	102	5510	19.40	17.80	21.68
VHT40	MCS0	2	110	5550	19.20	17.70	21.52
VHT40	MCS0	2	134	5670	18.60	18.30	21.46
VHT80	MCS0	2	106	5530	19.60	18.30	22.01
VHT80	MCS0	2	122	5610	19.00	18.30	21.67
HT20	MCS0	2	144	5720	18.70	17.90	21.33
HT40	MCS0	2	142	5710	19.10	18.40	21.77
VHT20	MCS0	2	144	5720	18.60	17.80	21.23
VHT40	MCS0	2	142	5710	19.00	18.30	21.67
VHT80	MCS0	2	138	5690	19.10	18.70	21.91
HE20	MCS0	2	100	5500	19.00	17.60	21.37
HE20	MCS0	2	116	5580	18.00	17.30	20.67
HE20	MCS0	2	140	5700	18.10	18.10	21.11
HE40	MCS0	2	102	5510	19.60	18.00	21.88
HE40	MCS0	2	110	5550	19.40	17.90	21.72
HE40	MCS0	2	134	5670	18.80	18.50	21.66
HE80	MCS0	2	106	5530	19.70	18.40	22.12
HE80	MCS0	2	122	5610	19.10	18.40	21.77
HE20	MCS0	2	144	5720	18.30	17.10	20.75
HE40	MCS0	2	142	5710	19.20	18.50	21.87
HE80	MCS0	2	138	5690	19.20	18.80	22.01

5.8G

Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)		
					Ant 1	Ant 2	SUM
HT20	MCS0	2	149	5745	26.20	26.70	29.47
HT20	MCS0	2	157	5785	26.30	25.70	29.02
HT20	MCS0	2	165	5825	27.20	26.10	29.70
HT40	MCS0	2	151	5755	22.20	21.80	25.01
HT40	MCS0	2	159	5795	24.10	23.10	26.64
VHT20	MCS0	2	149	5745	26.10	26.60	29.37
VHT20	MCS0	2	157	5785	26.20	25.60	28.92
VHT20	MCS0	2	165	5825	27.10	26.00	29.60
VHT40	MCS0	2	151	5755	22.10	21.70	24.91
VHT40	MCS0	2	159	5795	24.00	23.00	26.54
VHT80	MCS0	2	155	5775	21.30	20.40	23.88
HE20	MCS0	2	149	5745	26.30	26.80	29.57
HE20	MCS0	2	157	5785	26.40	25.80	29.12
HE20	MCS0	2	165	5825	27.30	26.20	29.80
HE40	MCS0	2	151	5755	22.40	22.00	25.21
HE40	MCS0	2	159	5795	23.30	22.40	25.88
HE80	MCS0	2	155	5775	21.40	20.50	23.98

BLE 1Mbps		
Channel	Frequency(MHz)	Maximum power(dBm)
0	2402	7.2
19	2440	4.8
39	2480	5.0

BLE 2Mbps		
Channel	Frequency(MHz)	Maximum power(dBm)
0	2402	7.2
19	2440	5.3
39	2480	6.1

3. RF Exposure Limit Introduction

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f ²)	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

The MPE was calculated at 21 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$S = \frac{PG}{4\pi R^2}$$

Where:

S = Power Density

P = Output Power at Antenna Terminals

G = Gain of Transmit Antenna (linear gain)

R = Distance from Transmitting Antenna

4. Radio Frequency Radiation Exposure Evaluation

4.1. Standalone Power Density Calculation

Band	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum EIRP (dBm)	Maximum PG (mW)	Power Density at 21cm (mW/cm ²)	Limit (mW/cm ²)	Power Density / Limit
WCDMA Band 2	3.80	24.50	28.3	676.08	0.122	1.000	0.122
WCDMA Band 4	3.80	24.50	28.3	676.08	0.122	1.000	0.122
WCDMA Band 5	1.64	24.50	26.1	411.15	0.074	0.536	0.138
LTE Band 2	3.80	24.50	28.3	676.08	0.122	1.000	0.122
LTE Band 4	3.80	24.50	28.3	676.08	0.122	1.000	0.122
LTE Band 5	1.64	24.50	26.1	411.15	0.074	0.549	0.135
LTE Band 7	3.80	24.00	27.8	602.56	0.109	1.000	0.109
LTE Band 12	1.64	24.00	25.6	366.44	0.066	0.466	0.142
LTE Band 13	1.64	24.50	26.1	411.15	0.074	0.518	0.143
LTE Band 14	1.64	24.00	25.6	366.44	0.066	0.525	0.126
LTE Band 17	1.64	24.00	25.6	366.44	0.066	0.469	0.141
LTE Band 25	3.80	24.00	27.8	602.56	0.109	1.000	0.109
LTE Band 26	1.64	24.00	25.6	366.44	0.066	0.543	0.122
LTE Band 41_PC3	3.80	24.00	27.8	602.56	0.109	1.000	0.109
LTE Band 41_PC2	3.80	26.00	29.8	954.99	0.172	1.000	0.172
LTE Band 42_PC3	3.35	24.00	27.4	543.25	0.098	1.000	0.098
LTE Band 42_PC2	3.35	26.00	29.4	860.99	0.155	1.000	0.155
LTE Band 66	3.80	24.50	28.3	676.08	0.122	1.000	0.122
LTE Band 71	1.64	24.00	25.6	366.44	0.066	0.442	0.150
5G NR n2	3.80	25.50	29.3	851.14	0.154	1.000	0.154
5G NR n5	1.64	25.50	27.1	517.61	0.093	0.549	0.170
5G NR n7	3.80	25.50	29.3	851.14	0.154	1.000	0.154
5G NR n12	1.64	25.50	27.1	517.61	0.093	0.466	0.201
5G NR n13	1.64	25.50	27.1	517.61	0.093	0.518	0.180
5G NR n14	1.64	25.50	27.1	517.61	0.093	0.525	0.178
5G NR n25	3.80	25.50	29.3	851.14	0.154	1.000	0.154
5G NR n26	1.64	25.50	27.1	517.61	0.093	0.543	0.172
5G NR n41_PC3	3.80	25.50	29.3	851.14	0.154	1.000	0.154
5G NR n41_PC2	3.80	27.50	31.3	1348.96	0.244	1.000	0.244
5G NR n66	3.80	25.50	29.3	851.14	0.154	1.000	0.154
5G NR n70	3.80	25.50	29.3	851.14	0.154	1.000	0.154
5G NR n71	1.64	25.50	27.1	517.61	0.093	0.442	0.211
5G NR n77_PC3	3.35	25.50	28.9	767.36	0.139	1.000	0.139
5G NR n77_PC2	3.35	27.50	30.9	1216.19	0.220	1.000	0.220
5G NR n78_PC3	3.35	25.50	28.9	767.36	0.139	1.000	0.139
5G NR n78_PC2	3.35	27.50	30.9	1216.19	0.220	1.000	0.220

Band		Antenna Gain (dBi)	Maximum Power (dBm)	Maximum EIRP (dBm)	Maximum PG (mW)	Power Density at 21cm (mW/cm ²)	Limit (mW/cm ²)	Power Density / Limit
CDD	WLAN2.4GHz Band	3.31	29.86	33.2	2074.91	0.375	1.000	0.375
	WLAN5.2GHz Band	4.44	27.33	31.8	1503.14	0.271	1.000	0.271
	WLAN5.3GHz Band	4.44	23.92	28.4	685.49	0.124	1.000	0.124
	WLAN5.5GHz Band	4.84	23.96	28.8	758.58	0.137	1.000	0.137
	WLAN5.8GHz Band	1.64	29.88	31.5	1419.06	0.256	1.000	0.256
TxBF	WLAN2.4GHz Band	6.32	29.36	35.7	3698.28	0.668	1.000	0.668
	WLAN5.2GHz Band	7.45	27.27	34.7	2964.83	0.535	1.000	0.535
	WLAN5.3GHz Band	7.45	22.47	29.9	981.75	0.177	1.000	0.177
	WLAN5.5GHz Band	7.85	22.12	30.0	993.12	0.179	1.000	0.179
	WLAN5.8GHz Band	4.65	29.80	34.5	2786.12	0.503	1.000	0.503
Bluetooth		3.57	7.20	10.8	11.94	0.002	1.000	0.002

4.2. Collocated Power Density Calculation

General Note:

1. The device support DPS (Dynamic Power Share) function to achieve higher uplink data rate keeping the total power unchanged in 5G NR NSA EN-DC mode according to 3GPP 38.213, when the equipment has a dynamic power sharing capability, it adjusts the LTE or NR transmission power so that the instantaneous total power does not exceed the specified value, when the maximum transmission power of NR (P_{LTE}, P_{NR}) and the specified total power (P_{total}) have been set and the instantaneous calculated total transmission power exceeds P_{total}, the NR transmission power is reduced so that the actual transmission power of the user equipment will not exceed P_{total} power. So if the LTE and NR standalone SAR is testing at total power level, the EN-DC combine MPE(LTE+NR) will not higher than the each standalone LTE and NR MPE, therefore, the simultaneous transmission analysis is used standalone MPE at total power level to show compliance.
2. $\Sigma(\text{Power Density} / \text{Limit})$: This is a summation of [(power density for each transmitter/antenna included in the simultaneous transmission) / (corresponding MPE limit)], for WWAN + WLAN + Bluetooth.
3. Considering the WWAN module collocation with the WLAN and Bluetooth transmitter of the EIRP performance listed in the table above, the aggregated (power density /limit) is smaller than 1, and MPE of 3 collocated transmitters is compliant

WWAN Power Density / Limit	WLAN Power Density / Limit	Bluetooth Power Density / Limit	$\Sigma(\text{Power Density} / \text{Limit})$ of WWAN+WLAN+Bluetooth
0.244	0.668	0.002	0.914

Conclusion:

According to 47 CFR §2.1091, the RF exposure analysis concludes that the RF Exposure is FCC compliant.