

1. RF Exposure Requirements

1.1 General Information

Client Information

Applicant: Global Telecom Engineering, Inc.
Address of applicant: 4695 MacArthur Court Suite 1100, Newport Beach CA 92660

Manufacturer: Global Telecom Engineering, Inc.
Address of manufacturer: 4695 MacArthur Court Suite 1100, Newport Beach CA 92660

General Description of EUT:

Product Name: TITAN 5400
Trade Name: TITAN 5400
Model No.: G5G-X62O
Adding Model(s): /
Rated Voltage: DC48V
Battery: /
Adapter Model: RP024W01-4800500YE
Input: AC100-240 50/60Hz 0.6A Output: DC48V 0.5A
FCC ID: S3K5GCPE3
Equipment Type: Mobile device

Technical Characteristics of EUT:	
3G	
Support Networks:	WCDMA, HSDPA, HSUPA
Support Band:	WCDMA Band 2, WCDMA Band 4, WCDMA Band 5
Uplink Frequency:	WCDMA Band 2: 1850~1910MHz WCDMA Band 4: 1710~1755MHz WCDMA Band 5: 824~849MHz
Downlink Frequency:	WCDMA Band 2: 1930~1990MHz WCDMA Band 4: 2110~2155MHz WCDMA Band 5: 869~894MHz
RF Output Power:	WCDMA Band 2: 22.69dBm, WCDMA Band 4: 22.93dBm WCDMA Band 5: 22.92dBm
Type of Emission:	WCDMA Band 2: 4M21F9W WCDMA Band 4: 4M21F9W WCDMA Band 5: 4M22F9W
Type of Modulation:	BPSK, QPSK, 16QAM
Antenna Type:	PCB Antenna
Antenna Gain:	WCDMA Band 2: 3.71dBi, WCDMA Band 4: 5.89dBi,

	WCDMA Band 5: 3.16dBi
4G	
Support Networks:	FDD-LTE, TDD-LTE
Support Band:	FDD-LTE Band 2, 4, 5, 7,12, 13, 17, 25, 26, 30, 66, 71 FDD-LTE Band 38, 41, 42, 43,
CA:	2C, 7C, 38C, 41C, 42C, 66C
Uplink Frequency:	FDD-LTE Band 2: Tx: 1850-1910MHz, FDD-LTE Band 4: Tx: 1710-1755MHz, FDD-LTE Band 5: Tx: 824-849MHz, FDD-LTE Band 7: Tx: 2500-2570MHz, FDD-LTE Band 12: Tx: 699-716MHz, FDD-LTE Band 13: Tx: 777-787MHz, FDD-LTE Band 17: Tx: 704-716MHz FDD-LTE Band 25: Tx: 1850-1915MHz FDD-LTE Band 26: Tx: 824-849MHz FDD-LTE Band 30: Tx: 2305-2315MHz TDD-LTE Band 38: Tx: 2570-2620MHz TDD-LTE Band 41: Tx: 2496-2690MHz TDD-LTE Band 42: Tx: 3450-3550MHz TDD-LTE Band 43: Tx: 3700-3800MHz FDD-LTE Band 66: Tx: 1710-1780MHz FDD-LTE Band 71: Tx: 663-698MHz
Uplink Frequency(CA):	FDD-LTE Band CA 2C: Tx: 1850-1910MHz, FDD-LTE Band CA 7C: Tx: 2500-2570MHz, TDD-LTE Band CA 38C: Tx: 2570-2620MHz TDD-LTE Band CA 41C: Tx: 2496-2690MHz TDD-LTE Band CA 42C: Tx: 3450-3550MHz FDD-LTE Band CA 66C: Tx: 1710-1780MHz
Downlink Frequency:	FDD-LTE Band 2: Rx: 1930-1990MHz, FDD-LTE Band 4: Rx: 2110-2155MHz, FDD-LTE Band 5: Rx: 869-894MHz, FDD-LTE Band 7: Rx: 2620-2690MHz, FDD-LTE Band 12: Rx: 729-746MHz, FDD-LTE Band 13: Rx: 746-756MHz, FDD-LTE Band 17: Rx: 734-746MHz FDD-LTE Band 25: Rx: 1930-1995MHz FDD-LTE Band 26: Rx: 869-894MHz FDD-LTE Band 30: Rx: 2350-2360MHz TDD-LTE Band 38: Rx: 2570-2620MHz TDD-LTE Band 41: Rx: 2496-2690MHz TDD-LTE Band 42: Rx: 3450-3550MHz TDD-LTE Band 43: Rx: 3700-3800MHz FDD-LTE Band 66: Rx: 2110-2200MHz FDD-LTE Band 71: Rx: 617-652MHz

Downlink Frequency(CA):	FDD-LTE Band CA 2C: Rx: 1930-1990MHz, FDD-LTE Band CA 7C: Rx: 2620-2690MHz, TDD-LTE Band CA 38C: Rx: 2570-2620MHz TDD-LTE Band CA 41C: Rx: 2496-2690MHz TDD-LTE Band CA 42C: Rx: 3450-3550MHz FDD-LTE Band CA 66C: Rx: 2110-2200MHz
RF Output Power:	FDD-LTE Band 2: 21.16dBm, FDD-LTE Band 4: 21.97dBm, FDD-LTE Band 5: 21.92dBm, FDD-LTE Band 7: 21.27dBm, FDD-LTE Band 12: 22.17dBm, FDD-LTE Band 13: 22.54dBm, FDD-LTE Band 17: 22.89dBm FDD-LTE Band 25: 21.24dBm FDD-LTE Band 26: 22.47dBm FDD-LTE Band 30: 20.65dBm TDD-LTE Band 38: 20.80dBm TDD-LTE Band 41: 21.25dBm TDD-LTE Band 42: 21.75dBm TDD-LTE Band 43: 21.67dBm FDD-LTE Band 66: 21.42dBm FDD-LTE Band 71: 21.99dBm
RF Output Power(CA):	FDD-LTE Band CA 2C: 21.7dBm, FDD-LTE Band CA 7C: 20.6dBm, TDD-LTE Band CA 38C: 20.56dBm, TDD-LTE Band CA 41C: 21.28dBm, TDD-LTE Band CA 42C: 22.72dBm, FDD-LTE Band CA 66C: 22dBm,
Type of Emission:	FDD-LTE Band 2: 18M1G7D, 18M1W7D FDD-LTE Band 4: 18M1G7D, 18M2W7D FDD-LTE Band 5: 9M02G7D, 9M02W7D FDD-LTE Band 7: 18M1G7D, 18M1W7D FDD-LTE Band 12: 9M02G7D, 9M05W7D FDD-LTE Band13: 8M99G7D, 8M95W7D FDD-LTE Band 17: 9M05G7D, 9M05W7D FDD-LTE Band 25: 18M1G7D, 18M1W7D FDD-LTE Band 26: 13M6G7D, 13M6W7D FDD-LTE Band 30: 19M8G7D, 8M99W7D TDD-LTE Band 38: 18M1G7D, 18M1W7D TDD-LTE Band 41: 18M1G7D, 18M1W7D TDD-LTE Band 42: 18M1G7D, 18M1W7D TDD-LTE Band 43: 18M0G7D, 18M0W7D FDD-LTE Band 66: 18M2G7D, 18M2W7D FDD-LTE Band 71: 18M4G7D, 18M3W7D

Type of Emission(CA):	FDD-LTE Band CA 2C: 37M9G7D, 37M9W7D FDD-LTE Band CA 7C: 37M9G7D, 37M9W7D TDD-LTE Band CA 38C: 37M9G7D, 38M0W7D TDD-LTE Band CA 41C: 37M9G7D, 37M8W7D TDD-LTE Band CA 42C: 37M9G7D, 37M8W7D FDD-LTE Band CA 66C: 38M0G7D, 37M9W7D
Type of Modulation:	QPSK, 16QAM
Antenna Type:	PCB Antenna
Antenna Gain:	FDD-LTE Band 2: 3.71dBi FDD-LTE Band 4: 5.89dBi FDD-LTE Band 5: 3.16dBi FDD-LTE Band 7: 4.6dBi FDD-LTE Band 12: -2.13dBi FDD-LTE Band 13: 1.37dBi FDD-LTE Band 17: -2.13dBi FDD-LTE Band 25: 1.56dBi FDD-LTE Band 26: 3.16dBi FDD-LTE Band 30: 4.79dBi TDD-LTE Band 38: 1.83dBi TDD-LTE Band 41: 2.45dBi TDD-LTE Band 42: 8.62dBi TDD-LTE Band 43: 8.15dBi FDD-LTE Band 66: 5.89dBi FDD-LTE Band 71: -2.83dBi
4G(Part 90)	
Uplink Frequency:	FDD-LTE Band 14: Tx: 788-798MHz, FDD-LTE Band 26: Tx: 814-824MHz,
Downlink Frequency:	FDD-LTE Band 14: Rx: 758-768MHz, FDD-LTE Band 26: Rx: 859-869MHz,
RF Output Power:	FDD-LTE Band 14: 22.82dBm, FDD-LTE Band 26: 22.63dBm,
Type of Emission:	FDD-LTE Band 14: 9M05G7D, 9M05W7D FDD-LTE Band 26: 9M02G7D, 8M99W7D
Type of Modulation:	QPSK, 16QAM
Antenna Type:	PCB Antenna
Antenna Gain:	FDD-LTE Band 14: 4.1dBi, FDD-LTE Band 26: 3.16dBi,
5G NR	
Support Networks:	5G NR
Support Band:	N2, n5, n7, n12, n13, n25, n26, n30, n38, n41, n66, n70, n71, n77, n78
EN-DC Mode	DC_12A_n25A; DC_12A_n2A; DC_12A_n2A-n38A; DC_12A_n2A-n41A; DC_12A_n2A-n78A; DC_12A_n30A; DC_12A_n38A; DC_12A_n38A-n78A; DC_12A_n41A; DC_12A_n41A-n78A; DC_12A_n77A; DC_12A_n77A-n77A;

	DC_12A_n78A; DC_12A_n78A-n78A; DC_12A_n7A; DC_12A_n7A-n78A; DC_12A-30A_n2A; DC_12A-30A_n77A; DC_12A-30A_n77A-n77A; DC_13A_n25A; DC_13A_n2A; DC_13A_n2A-n77A; DC_13A_n77A; DC_13A_n77C; DC_13A_n78A; DC_13A_n78A-n78A; DC_13A_n7A; DC_13A_n7A-n78A; DC_13A-2A_n2A-n77A; DC_13A-46A_n2A; DC_13A-46A_n77A; DC_13A-46A-46A_n77A; DC_14A_n2A; DC_14A_n30A; DC_14A_n77A; DC_14A_n77A-n77A; DC_14A-30A_n2A; DC_14A-30A_n77A; DC_14A-30A_n77A-n77A; DC_1C_n78A; DC_25A_n41A; DC_25A_n77A; DC_25A_n78A; DC_25A-25A_n41A; DC_25A-25A_n77A; DC_25A-25A_n78A; DC_25A-41C_n41A; DC_26A_n25A; DC_26A_n41A; DC_26A_n78A; DC_26A_n78A-n78A; DC_2A_n12A; DC_2A_n14A; DC_2A_n30A; DC_2A_n38A; DC_2A_n38A-n71A; DC_2A_n38A-n78A; DC_2A_n41A; DC_2A_n41A-n41A; DC_2A_n41A-n71A; DC_2A_n41A-n78A; DC_2A_n41C; DC_2A_n5A; DC_2A_n5A-n77A; DC_2A_n71A; DC_2A_n71A-n78A; DC_2A_n77A; DC_2A_n77A-n77A; DC_2A_n77C; DC_2A_n78A; DC_2A_n78A-n78A; DC_2A_n7A; DC_2A_n7A-n78A; DC_2A-12A_n25A; DC_2A-12A_n2A; DC_2A-12A_n30A; DC_2A-12A_n41A; DC_2A-12A_n77A; DC_2A-12A_n78A; DC_2A-12A_n78A-n78A; DC_2A-12A_n7A; DC_2A-12A-30A_n2A; DC_2A-12A-30A_n77A; DC_2A-13A_n25A; DC_2A-13A_n2A; DC_2A-13A_n77A; DC_2A-13A_n77C; DC_2A-14A_n2A; DC_2A-14A_n30A; DC_2A-14A_n77A; DC_2A-14A-30A_n2A; DC_2A-14A-30A_n77A; DC_2A-2A_n12A; DC_2A-2A_n14A; DC_2A-2A_n30A; DC_2A-2A_n38A; DC_2A-2A_n41A; DC_2A-2A_n5A; DC_2A-2A_n5A-n77A; DC_2A-2A_n71A; DC_2A-2A_n77A; DC_2A-2A_n77C; DC_2A-2A_n78A; DC_2A-2A_n7A; DC_2A-2A-12A_n30A; DC_2A-2A-12A_n38A; DC_2A-2A-12A_n41A; DC_2A-2A-12A_n77A; DC_2A-2A-12A_n78A; DC_2A-2A-12A_n7A; DC_2A-2A-12A-30A_n77A; DC_2A-2A-13A_n77A; DC_2A-2A-13A_n77C; DC_2A-2A-14A_n30A; DC_2A-2A-14A_n77A; DC_2A-2A-2A_n14A; DC_2A-2A-30A_n12A; DC_2A-2A-30A_n14A; DC_2A-2A-30A_n5A; DC_2A-2A-30A_n77A; DC_2A-2A-46A_n5A; DC_2A-2A-46C_n5A; DC_2A-2A-46D_n5A; DC_2A-2A-5A_n30A; DC_2A-2A-5A_n41A; DC_2A-2A-5A_n5A; DC_2A-2A-5A_n77A; DC_2A-2A-5A_n77C; DC_2A-2A-5A_n78A; DC_2A-2A-5A_n7A; DC_2A-2A-5A-30A_n5A; DC_2A-2A-5A-30A_n77A; DC_2A-2A-5A-7A_n78A; DC_2A-2A-71A_n38A; DC_2A-2A-71A_n41A; DC_2A-2A-71A_n78A; DC_2A-2A-71A_n7A; DC_2A-2A-7A_n12A; DC_2A-2A-7A_n71A; DC_2A-2A-7A_n78A; DC_2A-2A-7A-12A_n78A; DC_2A-2A-7A-71A_n78A; DC_2A-30A_n12A; DC_2A-30A_n14A; DC_2A-30A_n2A; DC_2A-30A_n5A; DC_2A-30A_n77A;
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	DC_2A-46A_n41A; DC_2A-46A_n41A-n41A; DC_2A-46A_n5A; DC_2A-46A_n71A; DC_2A-46A_n71A-n41A; DC_2A-46A_n77A; DC_2A-46A-46A_n77A; DC_2A-46C_n41A; DC_2A-46C_n41A-n41A; DC_2A-46C_n5A; DC_2A-46C_n71A; DC_2A-46D_n41A; DC_2A-46D_n41A-n41A; DC_2A-46D_n5A; DC_2A-46D_n71A; DC_2A-46E_n5A; DC_2A-4A_n38A; DC_2A-4A_n41A; DC_2A-4A-7A-7A_n5A; DC_2A-4A-7A-7A_n71A; DC_2A-4A-7A-7A_n78A; DC_2A-5A_n25A; DC_2A-5A_n2A; DC_2A-5A_n30A; DC_2A-5A_n38A; DC_2A-5A_n41A; DC_2A-5A_n5A; DC_2A-5A_n77A; DC_2A-5A_n77C; DC_2A-5A_n78A; DC_2A-5A_n78A-n78A; DC_2A-5A_n7A; DC_2A-5A-30A_n2A; DC_2A-5A-30A_n5A; DC_2A-5A-30A_n77A; DC_2A-5A-5A_n2A; DC_2A-5A-7A_n25A; DC_2A-5A-7A_n2A; DC_2A-5A-7A_n78A; DC_2A-5B_n2A; DC_2A-71A_n25A; DC_2A-71A_n2A; DC_2A-71A_n38A; DC_2A-71A_n41A; DC_2A-71A_n71A; DC_2A-71A_n77A; DC_2A-71A_n78A; DC_2A-71A_n7A; DC_2A-7A_n12A; DC_2A-7A_n25A; DC_2A-7A_n2A; DC_2A-7A_n5A; DC_2A-7A_n71A; DC_2A-7A_n78A; DC_2A-7A_n78A-n78A; DC_2A-7A_n7A; DC_2A-7A-12A_n25A; DC_2A-7A-12A_n2A; DC_2A-7A-12A_n78A; DC_2A-7A-71A_n25A; DC_2A-7A-71A_n2A; DC_2A-7A-71A_n78A; DC_2A-7A-7A_n25A; DC_2A-7A-7A_n5A; DC_2A-7A-7A_n78A-n78A; DC_2A-7C_n25A; DC_2A-7C_n5A; DC_2A-7C_n78A; DC_2A-7C_n78A-n78A; DC_2C_n41A; DC_2C_n71A; DC_30A_n12A; DC_30A_n14A; DC_30A_n2A; DC_30A_n5A; DC_30A_n5A-n77A; DC_30A_n77A; DC_30A_n77A-n77A; DC_38A_n78A; DC_41A_n77A; DC_41A_n77A-n77A; DC_41A_n78A; DC_41A_n78A-n78A; DC_41A-41A_n78A; DC_41A-42A_n77A; DC_41A-42A_n77A-n77A; DC_41A-42A_n78A; DC_41A-42C_n77A; DC_41A-42C_n77A-n77A; DC_41A-42C_n78A; DC_41C_n77A; DC_41C_n77A-n77A; DC_41C_n78A; DC_41C_n78A-n78A; DC_41C-42A_n77A; DC_41C-42A_n77A-n77A; DC_41C-42A_n78A; DC_41C-42C_n77A; DC_41C-42C_n77A-n77A; DC_41C-42C_n78A; DC_41D_n78A; DC_4A_n2A; DC_4A_n38A; DC_4A_n41A; DC_4A_n78A; DC_4A_n78A-n78A; DC_4A_n7A; DC_5A_n25A; DC_5A_n2A; DC_5A_n2A-n38A; DC_5A_n2A-n41A; DC_5A_n2A-n77A; DC_5A_n2A-n78A; DC_5A_n30A; DC_5A_n38A; DC_5A_n38A-n78A; DC_5A_n41A; DC_5A_n41A-n78A; DC_5A_n77A; DC_5A_n77A-n77A; DC_5A_n77C; DC_5A_n78A; DC_5A_n78A-n78A; DC_5A_n7A; DC_5A_n7A-n78A; DC_5A-2A_n2A-n77A; DC_5A-30A_n2A; DC_5A-30A_n5A; DC_5A-30A_n77A; DC_5A-30A_n77A-n77A; DC_5A-5A_n2A; DC_5A-7A_n25A; DC_5A-7A_n2A; DC_5A-7A_n77A; DC_5A-7A_n78A; DC_5A-7A_n7A; DC_5A-7A-7A_n78A; DC_5A-7C_n78A; DC_5A-7C_n7A; DC_5B_n2A; DC_71A_n25A;
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	DC_71A_n2A; DC_71A_n2A-n38A; DC_71A_n2A-n41A; DC_71A_n2A-n78A; DC_71A_n38A; DC_71A_n38A-n78A; DC_71A_n41A; DC_71A_n41A-n78A; DC_71A_n77A; DC_71A_n78A; DC_71A_n7A; DC_71A_n7A-n78A; DC_7A_n12A; DC_7A_n25A; DC_7A_n2A; DC_7A_n2A-n78A; DC_7A_n5A; DC_7A_n5A-n78A; DC_7A_n71A; DC_7A_n71A-n78A; DC_7A_n77A; DC_7A_n77A-n77A; DC_7A_n78A; DC_7A_n78A-n78A; DC_7A_n78C; DC_7A-12A_n25A; DC_7A-12A_n2A; DC_7A-12A_n77A; DC_7A-12A_n78A; DC_7A-12A_n7A; DC_7A-25A_n77A; DC_7A-25A_n78A; DC_7A-25A-25A_n77A; DC_7A-25A-25A_n78A; DC_7A-26A_n78A; DC_7A-46A_n78A; DC_7A-46C_n78A; DC_7A-46D_n78A; DC_7A-46E_n78A; DC_7A-71A_n25A; DC_7A-71A_n2A; DC_7A-71A_n77A; DC_7A-71A_n78A; DC_7A-71A_n7A; DC_7A-7A_n25A; DC_7A-7A_n5A; DC_7A-7A_n77A; DC_7A-7A_n77A-n77A; DC_7A-7A_n78A; DC_7A-7A_n78A-n78A; DC_7A-7A-25A_n77A; DC_7A-7A-25A_n78A; DC_7A-7A-25A-25A_n77A; DC_7A-7A-25A-25A_n78A; DC_7A-7A-26A_n78A; DC_7C_n25A; DC_7C_n2A; DC_7C_n5A; DC_7C_n77A; DC_7C_n77A-n77A; DC_7C_n78A; DC_7C_n78A-n78A; DC_7C-25A_n77A; DC_7C-25A_n78A; DC_7C-25A-25A_n77A; DC_7C-25A-25A_n78A
Uplink Frequency:	5G NR n2: 1850-1910MHz, 5G NR n5: 824-849MHz, 5G NR n7: 2500-2570MHz, 5G NR n12: 699-716MHz, 5G NR n13: 777-787MHz, 5G NR n25: 1850-1915MHz 5G NR n26: 824-849MHz 5G NR n30: 2305-2315MHz 5G NR n38: 2570-2620MHz 5G NR n41: 2496-2690MHz, 5G NR n66: 1710-1780MHz 5G NR n70: 1695-1710MHz 5G NR n71: 663-698MHz 5G NR n77: 3450-3550MHz 5G NR n77: 3700-3980MHz 5G NR n78: 3450-3550MHz 5G NR n78: 3700-3800MHz
Downlink Frequency:	5G NR n2: 1930-1990MHz, 5G NR n5: 869-894MHz, 5G NR n7: 2620-2690MHz, 5G NR n12: 729-746MHz, 5G NR n13: 746-756MHz, 5G NR n25: 1930-1995MHz 5G NR n26: 869-894MHz

	5G NR n30: 2350-2360MHz 5G NR n38: 2570-2620MHz 5G NR n41: 2496-2690MHz, 5G NR n66: 2110-2200MHz 5G NR n70: 1995-2020MHz 5G NR n71: 617-652MHz 5G NR n77: 3450-3550MHz 5G NR n77: 3700-3980MHz 5G NR n78: 3450-3550MHz 5G NR n78: 3700-3800MHz
RF Output Power:	5G NR n2:23.61dBm 5G NR n5:24.97dBm 5G NR n7:23.84dBm 5G NR n12:24.55dBm 5G NR n13:24.32dBm 5G NR n25:23.78dBm 5G NR n26: 23.14dBm 5G NR n30:22.97dBm 5G NR n38:23.68dBm 5G NR n41:25.87dBm 5G NR n66:23.53dBm 5G NR n70:23.80dBm 5G NR n71: 24.79dBm 5G NR n77(3450-3550MHz): 27.38dBm 5G NR n77(3700-3980MHz): 27.31dBm 5G NR n78(3450-3550MHz): 27.36dBm 5G NR n78(3700-3980MHz): 25.94dBm
RF Output Power(DC):	5G NR DC_2A_n71A: 24.86dBm 5G NR DC_4A_n41A: 24.52dBm 5G NR DC_5A_n7A: 23.91dBm 5G NR DC_7A_n12A: 24.75dBm 5G NR DC_12A_n30A: 22.69dBm 5G NR DC_13A_n66A: 23.54dBm 5G NR DC_14A_n2A: 23.71dBm 5G NR DC_26A_n25A: 23.67dBm 5G NR DC_30A_n14A: 24.97dBm 5G NR DC_38A_n78A(3450-3550MHz): 26.32dBm 5G NR DC_38A_n78A(3700-3800MHz): 26.26dBm 5G NR DC_41A_n77A(3450-3550MHz): 26.37dBm 5G NR DC_41A_n77A(3700-3980MHz): 26.36dBm 5G NR DC_66A_n5A: 25.08dBm
Type of Emission:	5G NR n2: 17M9G7D, 17M9W7D 5G NR n5:17M8G7D, 17M8W7D 5G NR n7: 17M9G7D, 17M9W7D 5G NR n12: 13M4G7D, 13M4W7D

	5G NR n13: 8M91G7D, 8M91W7D 5G NR n25: 17M9G7D, 17M9W7D 5G NR n26: 17M8G7D, 17M8W7D 5G NR n30: 8M95G7D, 8M95W7D 5G NR n38: 35M8G7D, 35M8W7D 5G NR n41: 96M5G7D, 96M4W7D 5G NR n66: 38M6G7D, 38M6W7D 5G NR n70: 13M4G7D, 13M4W7D 5G NR n71: 17M8G7D, 17M8W7D 5G NR n77(3450-3550MHz): 96M2G7D, 96M3W7D 5G NR n77(3700-3980MHz): 96M3G7D, 96M3W7D 5G NR n78(3450-3550MHz): 96M2G7D, 96M1W7D 5G NR n78(3700-3980MHz): 96M3G7D, 96M3W7D
Type of Emission(DC):	5G NR DC_2A_n71A: 17M8G7D, 17M8W7D 5G NR DC_4A_n41A: 95M8G7D, 95M7W7D 5G NR DC_5A_n7A: 17M9G7D, 17M9W7D 5G NR DC_7A_n12A: 13M4G7D, 13M4W7D 5G NR DC_12A_n30A: 8M96G7D, 8M94W7D 5G NR DC_13A_n66A: 38M5G7D, 38M5W7D 5G NR DC_14A_n2A: 17M9G7D, 17M9W7D 5G NR DC_26A_n25A: 17M9G7D, 17M9W7D 5G NR DC_30A_n14A: 8M93G7D, 8M92W7D 5G NR DC_38A_n78A(3450-3550MHz): 96M3G7D, 96M3W7D 5G NR DC_38A_n78A(3700-3800MHz): 96M3G7D, 96M3W7D 5G NR DC_41A_n77A(3450-3550MHz): 96M3G7D, 96M3W7D 5G NR DC_41A_n77A(3700-3980MHz): 96M4G7D, 96M4W7D 5G NR DC_66A_n5A: 17M8G7D, 17M8W7D
Type of Modulation:	DFT-s-OFDM: PI/2 BPSK QPSK / 16QAM / 64QAM / 256QAM CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM
Antenna Type:	PCB Antenna
Antenna Gain:	5G NR n2: 3.71dBi 5G NR n5: 3.16dBi 5G NR n7: 4.6dBi 5G NR n12: -2.13dBi 5G NR n13: 1.37dBi 5G NR n25: 1.56dBi 5G NR n26(824-849MHz): 3.16dBi 5G NR n30: 4.79dBi 5G NR n38: 1.83dBi 5G NR n41: 2.45dBi 5G NR n66: 5.89dBi 5G NR n70: 5.89dBi 5G NR n71: -2.83dBi 5G NR n77(3450-3550): 8.62dBi

	5G NR n77(3700-3980): 8.15dBi 5G NR n78(3450-3550): 8.62dBi 5G NR n 78(3700-3800): 8.15dBi
5G NR(Part 90)	
Support Networks:	5G NR
Support Band:	n14, n26
Uplink Frequency:	5G NR n14: Tx: 788-798MHz, 5G NR n26: Tx: 814-824MHz,
Downlink Frequency:	5G NR n14: Rx: 758-768MHz, 5G NR n26: Rx: 859-869MHz,
RF Output Power:	5G NR n14: 24.89dBm, 5G NR n26: 22.66dBm,
Type of Emission:	5G NR n14: 8M92G7D, 8M92W7D 5G NR n26: 8M92G7D, 8M94W7D
Type of Modulation:	DFT-s-OFDM: PI/2 BPSK QPSK / 16QAM / 64QAM / 256QAM CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM
Antenna Type:	PCB Antenna
Antenna Gain:	5G NR n14: 4.1dBi, 5G NR n26: 3.16dBi

1.2 RF Exposure Exemption

According to §1.1307(b)(3) and KDB 447498 D04 Interim General RF Exposure Guidance v01, system operating under the provisions of this section shall be operating in a manner that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure.

Option A: FCC Rule Part 1.1307 (b)(3)(i)(A): The available maximum time-averaged power is no more than 1mW, regardless of separation distance.

Option B: FCC Rule Part 1.1307 (b)(3)(i)(B): The available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold P_{th} (mW) described in the following formula. P_{th} is given by:

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

Where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right) \text{ and } f \text{ is in GHz;}$$

and

$$ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases}$$

d = the separation distance (cm);

Option C: FCC Rule Part 1.1307 (b)(3)(i)(C): The minimum separation distance (R in meters) from the body of a nearby person for the frequency (f in MHz) at which the source operates, the ERP (watts) is no more than the calculated value prescribed for that frequency. R must be at least $\lambda/2\pi$, where λ is the free-space operating wavelength in meters.

Single RF Sources Subject to Routine Environmental Evaluation	
RF Source frequency (MHz)	Threshold ERP (watts)
0.3-1.34	$1,920 R^2$
1.34-30	$3,450 R^2/f^2$
30-300	$3.83 R^2$
300-1,500	$0.0128 R^2 f$
1,500-100,000	$19.2 R^2$

For Multiple RF sources: FCC Rule Part 1.1307(b)(3)(ii):

- (A) The available maximum time-averaged power of each source is no more than 1 mW and there is a separation distance of two centimeters between any portion of a radiating structure operating and the nearest portion of any other radiating structure in the same device, except if the sum of multiple sources is less than 1 mW during the time-averaging period, in which case they may be treated as a single source (separation is not required).
- (B) In the case of fixed RF sources operating in the same time-averaging period, or of multiple mobile or portable RF sources within a device operating in the same time averaging period, if the sum of the fractional contributions to the applicable thresholds is less than or equal to 1 as indicated in the following equation.

$$\sum_{i=1}^a \frac{P_i}{P_{th,i}} + \sum_{j=1}^b \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^c \frac{Evaluated_k}{Exposure Limit_k} \leq 1$$

1.3 Calculated Result

Radio Access Technology	Prediction Frequency	Output Power	Antenna Gain	Tune-up Power	ERP
	(MHz)	(dBm)	(dBi)	(dBm)	(dBm)
WCDMA Band 2	1850	22.69	3.71	23.00	24.56
WCDMA Band 4	1710	22.93	5.89	23.00	26.74
WCDMA Band 5	824	22.92	3.16	23.00	24.01
LTE Band 2	1850	21.16	3.71	22.00	23.56
LTE Band 4	1710	21.97	5.89	22.00	25.74
LTE Band 5	824	21.92	3.16	22.00	23.01
LTE Band 7	2500	21.27	4.6	22.00	24.45
LTE Band 12	699	22.17	-2.13	23.00	18.72
LTE Band 13	777	22.54	1.37	23.00	22.22
LTE Band 14	788	22.82	4.1	23.00	24.95
LTE Band 17	704	22.89	-2.13	23.00	18.72
LTE Band 25	1850	21.24	1.56	22.00	21.41
LTE Band 26	814	22.63	3.16	23.00	24.01
LTE Band 26	824	22.47	3.16	23.00	24.01
LTE Band 30	2305	20.65	4.79	21.00	23.64
LTE Band 38	2570	20.80	1.83	21.00	20.68
LTE Band 41	2496	21.25	2.45	22.00	22.30
LTE Band 42	3450	21.75	8.62	22.00	28.47
LTE Band 43	3700	21.67	8.15	22.00	28.00
LTE Band 66	1710	21.42	5.89	22.00	25.74
LTE Band 71	663	21.99	-2.83	22.00	17.02
5G NR n2	1850	23.61	3.71	24.00	25.56
5G NR n5	824	24.97	3.16	25.00	26.01

5G NR n7	2500	23.84	4.6	24.00	26.45
5G NR n12	699	24.55	-2.13	25.00	20.72
5G NR n13	777	24.32	1.37	25.00	24.22
5G NR n14	788	25.0	4.1	26.00	27.95
5G NR n25	1850	23.78	1.56	24.00	23.41
5G NR n26	814	23.0	3.16	24.00	25.01
5G NR n26	824	23.14	3.16	24.00	25.01
5G NR n30	2305	22.97	4.79	23.00	25.64
5G NR n38	2570	23.68	1.83	24.00	23.68
5G NR n41	2496	25.87	2.45	26.00	26.30
5G NR n66	1710	23.53	5.89	24.00	27.74
5G NR n70	1695	23.80	5.89	24.00	27.74
5G NR n71	663	24.79	-2.83	25.00	20.02
5G NR n77	3450	27.38	8.62	28.00	34.47
5G NR n77	3700	27.31	8.15	28.00	34.00
5G NR n78	3450	27.36	8.62	28.00	34.47
5G NR n78	3700	25.94	8.15	26.00	32.00
LTE Band CA 2C	1850	21.7	3.71	22.00	23.56
LTE Band CA 7C	2500	20.6	4.6	21.00	23.45
LTE Band CA 38C	2570	20.56	1.83	21.00	20.68
LTE Band CA 41C	2496	21.28	2.45	22.00	22.30
LTE Band CA 42C	3450	22.72	8.62	23.00	29.47
LTE Band CA 66C	1710	22	5.89	23.00	26.74
DC_2A_n71A	1850	24.86	3.71	25.00	26.56
DC_4A_n41A	2496	24.52	5.89	25.00	28.74
DC_5A_n7A	2500	23.91	4.6	24.00	26.45
DC_7A_n12A	2500	24.75	4.6	25.00	27.45
DC_12A_n30A	2305	22.69	4.79	23.00	25.64
DC_13A_n66A	1710	23.54	5.89	24.00	27.74
DC_14A_n2A	1850	23.71	4.1	24.00	25.95
DC_26A_n25A	1850	23.67	1.56	24.00	23.41
DC_30A_n14A	2305	24.97	4.79	25.00	27.64
DC_38A_n78A(3450-3550MHz)	3450	26.32	8.62	27.00	33.47
DC_38A_n78A(3700-3800MHz)	3700	26.26	8.15	27.00	33.00
DC_41A_n77A(3450-3550MHz)	3450	26.37	8.62	27.00	33.47
DC_41A_n77A(3700-3980MHz)	3700	26.36	8.15	27.00	33.00
DC_66A_n5A	1710	25.08	5.89	26.00	29.74

Radio Access Technology	Option	Min. Distance	Max. Power		Exposure Limit	Ratio	Result
		(cm)	(dBm)	(mW)	(mW)		Pass/Fail
WCDMA Band 2	B	20	24.56	285.76	3060.00	0.09	Pass

WCDMA Band 4	B	20	26.74	472.06	3060.00	0.15	Pass
WCDMA Band 5	B	20	24.01	251.77	1680.96	0.15	Pass
LTE Band 2	B	20	23.56	226.99	3060.00	0.07	Pass
LTE Band 4	B	20	25.74	374.97	3060.00	0.12	Pass
LTE Band 5	B	20	23.01	199.99	1680.96	0.12	Pass
LTE Band 7	B	20	24.45	278.61	3060.00	0.09	Pass
LTE Band 12	B	20	23.00	199.53	1425.96	0.14	Pass
LTE Band 13	B	20	23.00	199.53	1585.08	0.13	Pass
LTE Band 14	B	20	24.95	312.61	1607.52	0.19	Pass
LTE Band 17	B	20	23.00	199.53	1436.16	0.14	Pass
LTE Band 25	B	20	22.00	158.49	3060.00	0.05	Pass
LTE Band 26	B	20	24.01	251.77	1660.56	0.15	Pass
LTE Band 26	B	20	24.01	251.77	1680.96	0.15	Pass
LTE Band 30	B	20	23.64	231.21	3060.00	0.08	Pass
LTE Band 38	B	20	21.00	125.89	3060.00	0.04	Pass
LTE Band 41	B	20	22.30	169.82	3060.00	0.06	Pass
LTE Band 42	B	20	28.47	703.07	3060.00	0.23	Pass
LTE Band 43	B	20	28.00	630.96	3060.00	0.21	Pass
LTE Band 66	B	20	25.74	374.97	3060.00	0.12	Pass
LTE Band 71	B	20	22.00	158.49	1352.52	0.12	Pass
5G NR n2	B	20	25.56	359.75	3060.00	0.12	Pass
5G NR n5	B	20	26.01	399.02	1680.96	0.24	Pass
5G NR n7	B	20	26.45	441.57	3060.00	0.14	Pass
5G NR n12	B	20	25.00	316.23	1425.96	0.22	Pass
5G NR n13	B	20	25.00	316.23	1585.08	0.20	Pass
5G NR n14	B	20	27.95	623.73	1607.52	0.39	Pass
5G NR n25	B	20	24.00	251.19	3060.00	0.08	Pass
5G NR n26	B	20	25.01	316.96	1660.56	0.19	Pass
5G NR n26	B	20	25.01	316.96	1680.96	0.19	Pass
5G NR n30	B	20	25.64	366.44	3060.00	0.12	Pass
5G NR n38	B	20	24.00	251.19	3060.00	0.08	Pass
5G NR n41	B	20	26.30	426.58	3060.00	0.14	Pass
5G NR n66	B	20	27.74	594.29	3060.00	0.19	Pass
5G NR n70	B	20	27.74	594.29	3060.00	0.19	Pass
5G NR n71	B	20	25.00	316.23	1352.52	0.23	Pass
5G NR n77	B	20	34.47	2798.98	3060.00	0.91	Pass
5G NR n77	B	20	34.00	2511.89	3060.00	0.82	Pass
5G NR n78	B	20	34.47	2798.98	3060.00	0.91	Pass
5G NR n78	B	20	32.00	1584.89	3060.00	0.52	Pass
LTE Band CA 2C	B	20	23.56	226.99	3060.00	0.07	Pass
LTE Band CA 7C	B	20	23.45	221.31	3060.00	0.07	Pass
LTE Band CA 38C	B	20	21.00	125.89	3060.00	0.04	Pass
LTE Band CA 41C	B	20	22.30	169.82	3060.00	0.06	Pass

LTE Band CA 42C	B	20	29.47	885.12	3060.00	0.29	Pass
LTE Band CA 66C	B	20	26.74	472.06	3060.00	0.15	Pass
DC_2A_n71A	B	20	26.56	452.90	3060.00	0.15	Pass
DC_4A_n41A	B	20	28.74	748.17	3060.00	0.24	Pass
DC_5A_n7A	B	20	26.45	441.57	3060.00	0.14	Pass
DC_7A_n12A	B	20	27.45	555.90	3060.00	0.18	Pass
DC_12A_n30A	B	20	25.64	366.44	3060.00	0.12	Pass
DC_13A_n66A	B	20	27.74	594.29	3060.00	0.19	Pass
DC_14A_n2A	B	20	25.95	393.55	3060.00	0.13	Pass
DC_26A_n25A	B	20	24.00	251.19	3060.00	0.08	Pass
DC_30A_n14A	B	20	27.64	580.76	3060.00	0.19	Pass
DC_38A_n78A(3450-3550MHz)	B	20	33.47	2223.31	3060.00	0.73	Pass
DC_38A_n78A(3700-3800MHz)	B	20	33.00	1995.26	3060.00	0.65	Pass
DC_41A_n77A(3450-3550MHz)	B	20	33.47	2223.31	3060.00	0.73	Pass
DC_41A_n77A(3700-3980MHz)	B	20	33.00	1995.26	3060.00	0.65	Pass
DC_66A_n5A	B	20	29.74	941.89	3060.00	0.31	Pass

Note: 1. Tune-up time-average power = Tune-up Power - Duty cycle factor in dB

2. Output Power=EIRP- Antenna Gain; ERP=EIRP-2.15dB

3. Option A, B and C refers as clause 1.2.

4. For option B, Max (time-averaged power, effective radiated power (ERP)) converts to Max. Power. For option C, ERP converts to Max. Power;

5. For option B, P_{th} (mW) converts to Exposure Limit (mW); For option C, ERP (W) converts to Exposure Limit (mW).

6. Ratio= Tune-up ERP (mW)/ Exposure Limit (mW)

Mode for Simultaneous Multi-band Transmission:

Radio Access Technology	Ratio 1	Ratio 2	Simultaneous Ratio	Limit	Result
					Pass/Fail
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Result: Pass