

* RF Exposure

1. Regulation

According to §15.247(i), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines. See § 1.1307(b)(1) of this Chapter.

Limits for Maximum Permissive Exposure: RF exposure is calculated.

Emilies for Maximum 1 emiliosive Exposure. At exposure is calculated.										
Eraguanay Panga	Electric Field	Magnetic Field	Power Density	Averaging Time						
Frequency Range	Strength [V/m]	Strength [A/m]	$[mW/cm^2]$	[minute]						
	Limits for General	d 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 ~ 1 500	/	/	f/1 500	30						
1 500 ~ 15 000	/	/	1.0	30						

f=frequency in Mz, *= plane-wave equivalent power density

MPE (Maximum Permissive Exposure) Prediction

Predication of MPE limit at a given distance: Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG/4\pi R^2 \quad \left(\Rightarrow R = \sqrt{PG/4\pi S} \right)$$

 $S = power density [mW/cm^2]$

P = Power input to antenna [mW]

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna [cm]



Mode	Target power	Tune up tolerance	Max tune up power	Max tune up power	Ant Gain	Ant Gain	Power Density at 20 cm	Limit
	[dB]	[dB]	[dB]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
Wifi (802.11b)	16.00	±2	18.00	63.10	4.12	2.58	0.032 41	1.000 00
Wifi (802.11g)	12.00	±2	14.00	25.12	4.12	2.58	0.012 90	1.000 00
Wifi (802.11n_HT20)	12.00	±2	14.00	25.12	4.12	2.58	0.012 90	1.000 00
Bluetooth	2.00	±2	4.00	2.51	-3.26	0.47	0.000 24	1.000 00
CDMA 1xRTT Cellular	24.00	±1	26.00	398.11	4.27	2.67	0.168 16	0.557 68
CDMA 1xRTT PCS	24.00	±1	26.00	398.11	1.95	1.57	0.098 57	1.000 00
CDMA EV-DO Cellular	24.00	±1	26.00	398.11	4.27	2.67	0.168 16	0.557 68
CDMA EV-DO PCS	24.00	±1	26.00	398.11	1.95	1.57	0.098 57	1.000 00
LTE BAND 13	23.00	±1.5	25.70	371.54	1.87	1.54	0.086 24	0.521 33
LTE BAND 4	23.00	±1.5	25.70	371.54	2.64	1.84	0.102 97	1.000 00
		Wil	Fi+ Bluetooth +	CDMA 1xRTT Ce	ellular		0.334 19	1.000 00
		V	ViFi+Bluetooth-	+CDMA 1xRTT P	PCS		0.131 22	1.000 00
T 1		WiF	0.334 19	1.000 00				
Total		W	iFi+ Bluetooth	0.131 22	1.000 00			
			WiFi+ Bluetoo		0.198 08	1.000 00		
			WiFi+ Bluetoo	oth +LTE BAND	4		0.135 62	1.000 00

Note: Total = (MPE 1 / MPE 1 Limit)+ (MPE 2 / MPE 2 Limit)+ ··· + (MPE n / MPE n Limit)

2. RF Exposure Compliance Issue

The information should be included in the user's manual:

This appliance and its antenna must not be co-located or operation in conjunction with any other antenna or transmitter. A minimum separation distance of 20 cm must be maintained between the antenna and the person for this appliance to satisfy the RF exposure requirements.



3. Calculation Result of RF Exposure

-WiFi 2.4 GHz Band

* 802.11b

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	$[mW/cm^2]$
Lowest	2 412	2.58	4.12	17.07	50.93	0.026 17	1.000
Middle	2 437	2.58	4.12	16.94	49.43	0.025 39	1.000
Highest	2 462	2.58	4.12	16.54	45.08	0.023 16	1.000

* 802.11g

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	2 412	2.58	4.12	12.24	16.75	0.008 60	1.000
Middle	2 437	2.58	4.12	12.25	16.79	0.008 62	1.000
Highest	2 462	2.58	4.12	12.20	16.60	0.008 53	1.000

* 802.11n HT20

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Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	2 412	2.58	4.12	12.56	18.03	0.009 26	1.000
Middle	2 437	2.58	4.12	12.01	15.89	0.008 16	1.000
Highest	2 462	2.58	4.12	12.21	16.63	0.008 55	1.000



Bluetooth

* GFSK

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	2402	0.47	-3.26	3.49	2.23	0.000 21	1.000
Middle	2441	0.47	-3.26	3.47	2.22	0.000 21	1.000
Highest	2480	0.47	-3.26	3.04	2.01	0.000 19	1.000

* π /4DQPSK

7.12 42.011							
Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	$[mW/cm^2]$
Lowest	2402	0.47	-3.26	2.69	1.86	0.000 17	1.000
Middle	2441	0.47	-3.26	2.41	1.74	0.000 16	1.000
Highest	2480	0.47	-3.26	2.74	1.88	0.000 18	1.000

* 8DPSK

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	2402	0.47	-3.26	2.71	1.87	0.000 18	1.000
Middle	2441	0.47	-3.26	2.73	1.87	0.000 18	1.000
Highest	2480	0.47	-3.26	2.72	1.87	0.000 18	1.000



CDMA 1xRTT Cellular

* RC1(Fwd1,Rvs1) SO2(Loopback)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dB m]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	824.70	2.67	4.27	24.46	279.25	0.148 50	0.549 80
Middle	836.52	2.67	4.27	24.62	289.73	0.154 07	0.557 68
Highest	848.31	2.67	4.27	24.23	264.85	0.140 84	0.565 54

* RC1(Fwd1,Rvs1) SO55(Loopback)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dB m]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	824.70	2.67	4.27	24.47	279.90	0.148 84	0.549 80
Middle	836.52	2.67	4.27	24.52	283.14	0.150 57	0.557 68
Highest	848.31	2.67	4.27	24.28	267.92	0.142 47	0.565 54

* RC2(Fwd2,Rvs2) SO9(Loopback)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dB m]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	824.70	2.67	4.27	24.45	278.61	824.70	0.549 80
Middle	836.52	2.67	4.27	24.53	283.79	836.52	0.557 68
Highest	848.31	2.67	4.27	24.26	266.69	848.31	0.565 54

* RC2(Fwd2,Rvs2) SO55(Loopback)

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Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	824.70	2.67	4.27	24.43	277.33	0.147 48	0.549 80
Middle	836.52	2.67	4.27	24.51	282.49	0.150 22	0.557 68
Highest	848.31	2.67	4.27	24.25	266.07	0.141 49	0.565 54

* RC3(Fwd3,Rvs3) SO2(Loopback)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dB m]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	824.70	2.67	4.27	24.43	277.33	0.147 48	0.549 80
Middle	836.52	2.67	4.27	24.67	293.09	0.155 86	0.557 68
Highest	848.31	2.67	4.27	24.24	265.46	0.141 17	0.565 54



* RC3(Fwd3,Rvs3) SO55(Loopback	* RC3	(Fwd3	Rvs3)	SO55(Loop	pback)
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Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	824.70	2.67	4.27	24.44	277.97	0.147 82	0.549 80
Middle	836.52	2.67	4.27	24.66	292.42	0.155 50	0.557 68
Highest	848.31	2.67	4.27	24.26	266.69	0.141 82	0.565 54

* RC3(Fwd3,Rvs3) SO32(+F-SCH)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	824.70	2.67	4.27	24.47	279.90	0.148 84	0.549 80
Middle	836.52	2.67	4.27	24.68	293.76	0.156 22	0.557 68
Highest	848.31	2.67	4.27	24.24	265.46	0.141 17	0.565 54

* RC3(Fwd3,Rvs3) SO32(+SCH)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	824.70	2.67	4.27	24.50	281.84	0.149 88	0.549 80
Middle	836.52	2.67	4.27	24.73	297.17	0.158 03	0.557 68
Highest	848.31	2.67	4.27	24.26	266.69	0.141 82	0.565 54

* RC4(Fwd4,Rvs3) SO2(Loopback)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dB m]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	824.70	2.67	4.27	24.51	282.49	0.150 22	0.549 80
Middle	836.52	2.67	4.27	24.71	295.80	0.157 30	0.557 68
Highest	848.31	2.67	4.27	24.27	267.30	0.142 14	0.565 54

* RC4(Fwd4,Rvs3) SO55(Loopback)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	824.70	2.67	4.27	24.56	285.76	0.151 96	0.549 80
Middle	836.52	2.67	4.27	24.66	292.42	0.155 50	0.557 68
Highest	848.31	2.67	4.27	24.36	272.90	0.145 12	0.565 54



* RC4(Fwd4,Rvs3) SO32(+F-SCH)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dB m]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	824.70	2.67	4.27	24.50	281.84	0.149 88	0.549 80
Middle	836.52	2.67	4.27	24.72	296.48	0.157 66	0.557 68
Highest	848.31	2.67	4.27	24.28	267.92	0.142 47	0.565 54

* RC4(Fwd4,Rvs3) SO32(+SCH)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	824.70	2.67	4.27	24.52	283.14	0.150 57	0.549 80
Middle	836.52	2.67	4.27	24.76	299.23	0.159 12	0.557 68
Highest	848.31	2.67	4.27	24.26	266.69	0.141 82	0.565 54

* RC5(Fwd5,Rvs4) SO9(Loopback)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	824.70	2.67	4.27	24.46	279.25	0.148 50	0.549 80
Middle	836.52	2.67	4.27	24.69	294.44	0.156 58	0.557 68
Highest	848.31	2.67	4.27	24.28	267.92	0.142 47	0.565 54

* RC5(Fwd5,Rvs4) SO55(Loopback)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[M]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	824.70	2.67	4.27	24.48	280.54	0.149 19	0.549 80
Middle	836.52	2.67	4.27	24.68	293.76	0.156 22	0.557 68
Highest	848.31	2.67	4.27	24.28	267.92	0.142 47	0.565 54



CDMA 1xRTT PCS

* RC1(Fwd1,Rvs1) SO2(Loopback)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dB m]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	1 851.25	1.57	1.95	24.46	279.25	0.087 04	1.000 00
Middle	1 880.00	1.57	1.95	24.62	289.73	0.090 31	1.000 00
Highest	1 908.75	1.57	1.95	24.23	264.85	0.082 55	1.000 00

* RC1(Fwd1,Rvs1) SO55(Loopback)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dB m]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	1 851.25	1.57	1.95	24.47	279.90	0.087 24	1.000 00
Middle	1 880.00	1.57	1.95	24.52	283.14	0.088 25	1.000 00
Highest	1 908.75	1.57	1.95	24.28	267.92	0.083 51	1.000 00

* RC2(Fwd2,Rvs2) SO9(Loopback)

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Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit	
	[MHz]	[dBi]	[mW]	[dB m]	[mW]	[mW/cm²]	[mW/cm²]	
Lowest	1 851.25	1.57	1.95	24.45	278.61	0.086 84	1.000 00	
Middle	1 880.00	1.57	1.95	24.53	283.79	0.088 46	1.000 00	
Highest	1 908.75	1.57	1.95	24.26	266.69	0.083 12	1.000 00	

* RC2(Fwd2,Rvs2) SO55(Loopback)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dB m]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	1 851.25	1.57	1.95	24.43	277.33	0.086 44	1.000 00
Middle	1 880.00	1.57	1.95	24.51	282.49	0.088 05	1.000 00
Highest	1 908.75	1.57	1.95	24.25	266.07	0.082 93	1.000 00

* RC3(Fwd3,Rvs3) SO2(Loopback)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dB m]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	1 851.25	1.57	1.95	24.43	277.33	0.086 44	1.000 00
Middle	1 880.00	1.57	1.95	24.67	293.09	0.091 35	1.000 00
Highest	1 908.75	1.57	1.95	24.24	265.46	0.082 74	1.000 00



* RC3(Fwd3,Rvs3) SO55(Loopback)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dB m]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	1 851.25	1.57	1.95	24.43	277.33	0.086 44	1.000 00
Middle	1 880.00	1.57	1.95	24.67	293.09	0.091 35	1.000 00
Highest	1 908.75	1.57	1.95	24.24	265.46	0.082 74	1.000 00

* RC3(Fwd3,Rvs3) SO55(Loopback)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	1 851.25	1.57	1.95	24.47	279.90	0.087 24	1.000 00
Middle	1 880.00	1.57	1.95	24.68	293.76	0.091 57	1.000 00
Highest	1 908.75	1.57	1.95	24.24	265.46	0.082 74	1.000 00

* RC3(Fwd3,Rvs3) SO32(+SCH)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dB m]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	1 851.25	1.57	1.95	24.50	281.84	0.087 85	1.000 00
Middle	1 880.00	1.57	1.95	24.73	297.17	0.092 63	1.000 00
Highest	1 908.75	1.57	1.95	24.26	266.69	0.083 12	1.000 00

* RC4(Fwd4,Rvs3) SO2(Loopback)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dB m]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	1 851.25	1.57	1.95	24.51	282.49	0.088 05	1.000 00
Middle	1 880.00	1.57	1.95	24.71	295.80	0.092 20	1.000 00
Highest	1 908.75	1.57	1.95	24.27	267.30	0.083 32	1.000 00

* RC4(Fwd4,Rvs3) SO55(Loopback)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dB m]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	1 851.25	1.57	1.95	24.56	285.76	0.089 07	1.000 00
Middle	1 880.00	1.57	1.95	24.66	292.42	0.091 14	1.000 00
Highest	1 908.75	1.57	1.95	24.36	272.90	0.085 06	1.000 00



* RC4(Fwd4,Rvs3) SO32(+F-SCH)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	1 851.25	1.57	1.95	24.50	281.84	0.087 85	1.000 00
Middle	1 880.00	1.57	1.95	24.72	296.48	0.092 41	1.000 00
Highest	1 908.75	1.57	1.95	24.28	267.92	0.083 51	1.000 00

* RC4(Fwd4,Rvs3) SO32(+SCH)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dB m]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	1 851.25	1.57	1.95	24.52	283.14	0.088 25	1.000 00
Middle	1 880.00	1.57	1.95	24.76	299.23	0.093 27	1.000 00
Highest	1 908.75	1.57	1.95	24.26	266.69	0.083 12	1.000 00

* RC5(Fwd5,Rvs4) SO9(Loopback)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	1 851.25	1.57	1.95	24.46	279.25	0.087 04	1.000 00
Middle	1 880.00	1.57	1.95	24.69	294.44	0.091 78	1.000 00
Highest	1 908.75	1.57	1.95	24.28	267.92	0.083 51	1.000 00

* RC5(Fwd5,Rvs4) SO55(Loopback)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	1 851.25	1.57	1.95	24.48	280.54	0.087 44	1.000 00
Middle	1 880.00	1.57	1.95	24.68	293.76	0.091 57	1.000 00
Highest	1 908.75	1.57	1.95	24.28	267.92	0.083 51	1.000 00



CDMA EV-DO Cellular

* RETAP RATE(128)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	824.70	2.67	4.27	24.49	281.19	0.149 53	0.549 80
Middle	836.52	2.67	4.27	24.59	287.74	0.153 01	0.557 68
Highest	848.31	2.67	4.27	24.13	258.82	0.137 64	0.565 54

* **RETAP RATE(256)**

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dB m]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	824.70	2.67	4.27	24.47	279.90	0.148 84	0.549 80
Middle	836.52	2.67	4.27	24.52	283.14	0.150 57	0.557 68
Highest	848.31	2.67	4.27	24.13	258.82	0.137 64	0.565 54

* **RETAP RATE**(512)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	824.70	2.67	4.27	24.45	278.61	0.148 16	0.549 80
Middle	836.52	2.67	4.27	24.54	284.45	0.151 26	0.557 68
Highest	848.31	2.67	4.27	24.11	257.63	0.137 00	0.565 54

* **RETAP RATE**(768)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dB m]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	824.70	2.67	4.27	24.41	276.06	0.146 80	0.549 80
Middle	836.52	2.67	4.27	24.54	284.45	0.151 26	0.557 68
Highest	848.31	2.67	4.27	24.06	254.68	0.135 43	0.565 54

* **RETAP RATE**(1024)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dB m]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	824.70	2.67	4.27	24.46	279.25	0.148 50	0.549 80
Middle	836.52	2.67	4.27	24.56	285.76	0.151 96	0.557 68
Highest	848.31	2.67	4.27	24.08	255.86	0.136 06	0.565 54



* **RETAP RATE**(1536)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	824.70	2.67	4.27	24.48	280.54	0.149 19	0.549 80
Middle	836.52	2.67	4.27	24.57	286.42	0.152 31	0.557 68
Highest	848.31	2.67	4.27	24.07	255.27	0.135 75	0.565 54

* **RETAP RATE**(2048)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	824.70	2.67	4.27	24.45	278.61	0.148 16	0.549 80
Middle	836.52	2.67	4.27	24.54	284.45	0.151 26	0.557 68
Highest	848.31	2.67	4.27	24.10	257.04	0.136 69	0.565 54

* **RETAP RATE**(3072)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	824.70	2.67	4.27	24.44	277.97	0.147 82	0.549 80
Middle	836.52	2.67	4.27	24.56	285.76	0.151 96	0.557 68
Highest	848.31	2.67	4.27	24.11	257.63	0.137 00	0.565 54

* **RETAP RATE**(4096)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	824.70	2.67	4.27	24.42	276.69	0.147 14	0.549 80
Middle	836.52	2.67	4.27	24.55	285.10	0.151 61	0.557 68
Highest	848.31	2.67	4.27	24.09	256.45	0.136 37	0.565 54

* **RETAP RATE**(6144)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	824.70	2.67	4.27	24.45	278.61	0.148 16	0.549 80
Middle	836.52	2.67	4.27	24.52	283.14	0.150 57	0.557 68
Highest	848.31	2.67	4.27	24.09	256.45	0.136 37	0.565 54



* **RETAP RATE**(8192)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	824.70	2.67	4.27	24.46	279.25	0.14850	0.549 80
Middle	836.52	2.67	4.27	24.51	282.49	0.15022	0.557 68
Highest	848.31	2.67	4.27	24.06	254.68	0.13543	0.565 54

* RETAP RATE(12288)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dB m]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	824.70	2.67	4.27	24.47	279.90	0.14884	0.549 80
Middle	836.52	2.67	4.27	24.53	283.79	0.15091	0.557 68
Highest	848.31	2.67	4.27	24.10	257.04	0.13669	0.565 54

* FETAP RATE4(1024,2,128)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	824.70	2.67	4.27	24.47	279.90	0.14884	0.549 80
Middle	836.52	2.67	4.27	24.58	287.08	0.15266	0.557 68
Highest	848.31	2.67	4.27	24.11	257.63	0.13700	0.565 54



CDMA EV-DO PCS

* RETAP RATE(128)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	1 851.25	1.57	1.95	24.61	289.07	0.090 10	1.000 00
Middle	1 880.00	1.57	1.95	24.40	275.42	0.085 85	1.000 00
Highest	1 908.75	1.57	1.95	24.52	283.14	0.088 25	1.000 00

* **RETAP RATE**(256)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dB m]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	1 851.25	1.57	1.95	24.59	287.74	0.089 69	1.000 00
Middle	1 880.00	1.57	1.95	24.35	272.27	0.084 87	1.000 00
Highest	1 908.75	1.57	1.95	24.40	275.42	0.085 85	1.000 00

* **RETAP RATE**(512)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	1 851.25	1.57	1.95	24.60	288.40	0.089 89	1.000 00
Middle	1 880.00	1.57	1.95	24.37	273.53	0.085 26	1.000 00
Highest	1 908.75	1.57	1.95	24.42	276.69	0.086 24	1.000 00

* **RETAP RATE**(768)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dB m]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	1 851.25	1.57	1.95	24.58	287.08	1 851.25	1.000 00
Middle	1 880.00	1.57	1.95	24.38	274.16	1 880.00	1.000 00
Highest	1 908.75	1.57	1.95	24.47	279.90	1 908.75	1.000 00

* **RETAP RATE**(1024)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	1 851.25	1.57	1.95	24.53	283.79	0.088 46	1.000 00
Middle	1 880.00	1.57	1.95	24.38	274.16	0.085 45	1.000 00
Highest	1 908.75	1.57	1.95	24.50	281.84	0.087 85	1.000 00



* **RETAP RATE**(1536)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dB m]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	1 851.25	1.57	1.95	24.54	284.45	0.088 66	1.000 00
Middle	1 880.00	1.57	1.95	24.39	274.79	0.085 65	1.000 00
Highest	1 908.75	1.57	1.95	24.39	274.79	0.085 65	1.000 00

* **RETAP RATE**(2048)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	1 851.25	1.57	1.95	24.56	285.76	0.089 07	1.000 00
Middle	1 880.00	1.57	1.95	24.36	272.90	0.085 06	1.000 00
Highest	1 908.75	1.57	1.95	24.34	271.64	0.084 67	1.000 00

* **RETAP RATE**(3072)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	1 851.25	1.57	1.95	24.55	285.10	0.088 86	1.000 00
Middle	1 880.00	1.57	1.95	24.37	273.53	0.085 26	1.000 00
Highest	1 908.75	1.57	1.95	24.29	268.53	0.083 70	1.000 00

* **RETAP RATE**(4096)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	1 851.25	1.57	1.95	24.59	287.74	0.089 69	1.000 00
Middle	1 880.00	1.57	1.95	24.35	272.27	0.084 87	1.000 00
Highest	1 908.75	1.57	1.95	24.34	271.64	0.084 67	1.000 00

* **RETAP RATE**(6144)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	1 851.25	1.57	1.95	24.51	282.49	0.088 05	1.000 00
Middle	1 880.00	1.57	1.95	24.37	273.53	0.085 26	1.000 00
Highest	1 908.75	1.57	1.95	24.38	274.16	0.085 45	1.000 00



* **RETAP RATE**(8192)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dB m]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	1 851.25	1.57	1.95	24.52	283.14	1 851.25	1.000 00
Middle	1 880.00	1.57	1.95	24.38	274.16	1 880.00	1.000 00
Highest	1 908.75	1.57	1.95	24.31	269.77	1 908.75	1.000 00

* RETAP RATE(12288)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dB m]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	1 851.25	1.57	1.95	24.51	282.49	0.088 05	1.000 00
Middle	1 880.00	1.57	1.95	24.36	272.90	0.085 06	1.000 00
Highest	1 908.75	1.57	1.95	24.44	277.97	0.086 64	1.000 00

* FETAP RATE4(1024,2,128)

Channel	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dB m]	[mW]	[mW/cm²]	[mW/cm²]
Lowest	1 851.25	1.57	1.95	24.52	283.14	0.088 25	1.000 00
Middle	1 880.00	1.57	1.95	24.18	261.82	0.081 61	1.000 00
Highest	1 908.75	1.57	1.95	24.41	276.06	0.086 05	1.000 00



LTE BAND 13

* 5 MHz

Modulation	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
QPSK	779.5 ~784.5	1.54	1.87	23.77	238.23	0.072 90	0.523 00
16QAM	779.5 ~784.5	1.54	1.87	22.65	184.08	0.056 33	0.521 33

* 10 MHz

Modulation	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
QPSK	779.5 ~784.5	1.54	1.87	23.65	231.74	0.070 91	0.523 00
16QAM	779.5 ~784.5	1.54	1.87	22.58	181.13	0.055 43	0.521 33

LTE BAND 4

* 1.4 M₺

Modulation	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
QPSK	779.5 ~784.5	1.54	1.87	23.90	245.47	0.089 69	5.739 98
16QAM	779.5 ~784.5	1.54	1.87	22.91	195.43	0.071 41	4.569 94

* 3 Mb

Modulation	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
QPSK	779.5 ~784.5	1.54	1.87	23.98	250.03	0.091 35	5.739 98
16QAM	779.5 ~784.5	1.54	1.87	22.92	195.88	0.071 57	4.569 94

* 5 Mb

Modulation	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
QPSK	779.5 ~784.5	1.54	1.87	24.04	253.51	0.092 63	5.739 98
16QAM	779.5 ~784.5	1.54	1.87	22.81	190.99	0.069 78	4.569 94



* 5 Mbz

Modulation	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
QPSK	779.5 ~784.5	1.54	1.87	24.03	252.93	0.092 41	5.739 98
16QAM	779.5 ~784.5	1.54	1.87	23.01	199.99	0.073 07	4.569 94

* 15 MHz

Modulation	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	[mW/cm²]	[mW/cm²]
QPSK	779.5 ~784.5	1.54	1.87	24.00	251.19	0.091 78	5.739 98
16QAM	779.5 ~784.5	1.54	1.87	23.00	199.53	0.072 90	4.569 94

* 20 MHz

Modulation	Frequency	Ant Gain	Ant Gain	power	power	Power Density at 20 cm	Limit
	[MHz]	[dBi]	[mW]	[dBm]	[mW]	$[mW/cm^2]$	[mW/cm²]
QPSK	779.5 ~784.5	1.54	1.87	24.03	252.93	0.092 41	5.739 98
16QAM	779.5 ~784.5	1.54	1.87	22.99	199.07	0.072 73	4.569 94