

### RF Exposure MPE exhibit

Device under this application (FCC ID: 2AJIF-MACH20001) will be collocated with an LTE/3G/2G module (FCC ID: RI7LE910NA).

From the original RF exposure exhibits on file with the FCC, highest power ratings are summarized below for different frequency bands.

FCC ID	Frequency (MHz)	Power		Antenna Gain (dBi)
2AJIF-MACH20001	DSS (2402-2480)	0.01318W		1.25
	DTS (2402-2480)	0.00589W		1.25
	DTS (2412-2462)	0.05861W		1.25
RI7LE910NA	706.5 - 713.5	25dBm = 0.31623W	100% Duty-Cycle	2
	824.2 - 848.2	33.5dBm = 2.23872W	25% Duty-Cycle	2
	1712.5 - 1752.5	25dBm = 0.31623W	100% Duty-Cycle	2
	1850.2 - 1909.8	25dBm = 0.31623W	100% Duty-Cycle	2

MPE calculations:

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

where: S = power density

P = power input to the antenna

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

FCC ID	Frequency (MHz)	Power Density (mW/cm <sup>2</sup> )	Limit	Power Density / Limit Ratio
2AJIF-MACH20001	DSS (2402-2480)	0.003497	1	0.0035
	DTS (2402-2480)	0.001562	1	0.0016
	DTS (2412-2462)	0.015550	1	0.0156
RI7LE910NA	706.5 - 713.5	0.099708	0.471	0.2117
	824.2 - 848.2	0.177309	0.5495	0.3227
	1712.5 - 1752.5	0.099708	1	0.0997
	1850.2 - 1909.8	0.099708	1	0.0997

Bluetooth, WiFi and cellular radios can transmit simultaneously.

Worst Case Bluetooth Power Density / Limit	0.0035		
Worst Case WiFi Power Density / Limit	0.0156		
Worst Case Cellular Power Density / Limit	0.3227		
TOTAL	0.3418	Limit < 1	PASS