

FCC MPE CALCULATION (FCC ID: APV-3240LA)

RF Exposure Requirements:	47 CFR §1.1307(b)
RF Radiation Exposure Limits:	47 CFR §1.1310
RF Radiation Exposure Guidelines:	FCC OST/OET Bulletin Number 65
EUT Frequency Band:	BT/BLE: 2402-2480MHz WLAN 802.11b/g/n: 2412-2462MHz WLAN 802.11a/n/ac: 5725-2825MHz WCDMA Band II: 1852.4 – 1907.6 MHz WCDMA Band V: 826.4 – 846.6 MHz LTE Band 2: 1850.7-1909.3MHz LTE Band 4: 1710.7-1754.3MHz LTE Band 5: 824.7-848.3MHz LTE Band 12: 699.7-715.3MHz
Limits for General Population/Uncontrolled Exposure in the band of:	300 - 1500 MHz,
Power Density Limit:	f/1500 mW/cm ²
Limits for General Population/Uncontrolled Exposure in the band of:	1500 - 100,000 MHz
Power Density Limit:	1 mW / cm ²

Equation: $S = PG / 4\pi R^2$ or $R = \sqrt{PG / 4\pi S}$
Where, S = Power Density
P = Power Input to Antenna
G = Antenna Gain
R = distance to the center of radiated antenna

Prediction distance 20 cm

EUT: ATD310

Radio	Frequency (MHz)	Max Conducted Output Power (dBm)	Antenna Gain (dBi)	Separation distance (cm)	Power Density (mW/ cm ²)	MPE Limit (mW/ cm ²)
BT/BLE	2402-2480	10.078	0.52	20	0.0023	1
WLAN 11b/g	2412-2462	17.79	0.52	20	0.0135	1
WLAN 11a/n/ac	5725-2825	14.39	1.79	20	0.0083	1
WCDMA Band II	1852.4 – 1907.6	25.5	2.04	20	0.113	1
WCDMA Band V	826.4 – 846.6	25.5	-0.70	20	0.060	0.551
LTE Band2	1850.7-1909.3	24.5	2.04	20	0.090	1
LTE Band4	1710.7-1754.3	25.0	2.74	20	0.118	1
LTE Band5	824.7-848.3	25.0	-0.70	20	0.054	0.550
LTE Band12	699.7-715.3	25.0	-0.33	20	0.058	0.466

The above results show that the device complies with the MPE requirement.

The BLE is able to transmit simultaneously with WLAN, LTE.

The ratio = $0.0023/1 + 0.0135/1 + 0.058/0.466 = 0.140 < 1.0$

The above results show that the device complies with the simultaneous transmission MPE requirement.

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