

5. RF EXPOSURE EVALUATION

5.1 Applicable Standard

FCC §1.1307(b)(3)(i)(A)

a single RF source is exempt RF device (from the requirement to show data demonstrating compliance to RF exposure limits, as previously mentioned) if the available maximum time-averaged power is no more than 1 mW, regardless of separation distance.

5.2 Procedure

According to 447498 D04 Interim General RF Exposure Guidance v01, clause 2.1.2- 1-mW Test Exemption:

Per §1.1307(b)(3)(i)(A), a single RF source is *exempt RF device* (from the requirement to show data demonstrating compliance to RF exposure limits, as previously mentioned) if the available maximum time-averaged power is no more than 1 mW, regardless of separation distance.

This exemption applies to all operating configurations and exposure conditions, for the frequency range 100 kHz to 100 GHz, regardless of fixed, mobile, or portable device exposure conditions. This is a standalone exemption, and it cannot be applied in conjunction with any other test exemption.

5.3 Measurement Result

Radio	Frequency (MHz)	Conducted output power including Tune-up Tolerance	Antenna Gain (dBi)	The Greater of Conducted Power or ERP		1-mW Test Exemption
		(dBm)		dBm	mW	
BLE	2402-2480	-6	2.72	-5.43	0.286	Compliant
24GHz Radar	24010-24245	/	/	-6.37	0.231	Compliant

Note:

1. Chose the maximum power to do MPE analysis.
2. The maximum E-Field level for 24GHz Radar is 90.98dBμV/m at 3m, so the EIRP power is -4.22dBm.
3. Pout EIRP (dBm)=Field Strength of Fundamental(dBuV/m)-95.2
4. ERP (dBm) = EIRP (dBm)-2.15dB
5. The Value of Maximum Conducted Power including Tune-up Tolerance was declared by the customer.
6. The 24GHz Radar and BLE can transmit simultaneously.

Total power $P_{\text{total}} = P_{\text{BLE}} + P_{\text{24GHz Radar}} = 0.286 + 0.231 = 0.517 < 1 \text{ mW}$.

Result: Compliant. RF Exposure is exemption.

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