

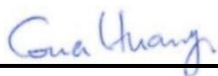
# RF EXPOSURE EVALUATION REPORT

FCC ID : Z64-CC33DBMOD  
Equipment : 802.11 a/b/g/n/ac/ax WLAN + BLE Radio Module  
Brand Name : Texas Instruments  
Model Name : CC33MOD-DB  
Applicant : Texas Instruments Incorporated  
12500 TI BLVD., Dallas, Texas, 75243  
Manufacturer : Texas Instruments Incorporated  
12500 TI BLVD., Dallas, Texas, 75243  
Standard : 47 CFR Part 2.1091

We, SPORTON INTERNATIONAL INC has been evaluated this product in accordance with 47 CFR Part2.1091 and it complies with applicable limit.

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 3786) and the FCC designation No. TW3786 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC evaluation.

The results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. Laboratory, the test report shall not be reproduced except in full.



Approved by: Cona Huang / Deputy Manager



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## History of this test report

| Report No. | Version | Description               | Issued Date   |
|------------|---------|---------------------------|---------------|
| FA550509   | Rev. 01 | Initial issue of report   | Jul. 10, 2025 |
| FA550509   | Rev. 02 | Update section 1, 2 and 4 | Jul. 14, 2025 |
| FA550509   | Rev. 03 | Update Model name         | Jul. 15, 2025 |
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**1. Description of Equipment Under Test (EUT)**

| Product Feature & Specification                                                           |                                                                                                                                                                                                                                                      |
|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EUT Type                                                                                  | 802.11 a/b/g/n/ac/ax WLAN + BLE Radio Module                                                                                                                                                                                                         |
| Brand Name                                                                                | Texas Instruments                                                                                                                                                                                                                                    |
| Model Name                                                                                | CC33MOD-DB                                                                                                                                                                                                                                           |
| FCC ID                                                                                    | Z64-CC33DBMOD                                                                                                                                                                                                                                        |
| Wireless Technology and Frequency Range                                                   | WLAN 2.4 GHz Band: 2400 MHz ~ 2483.5 MHz<br>WLAN 5.2 GHz Band: 5150 MHz ~ 5250 MHz<br>WLAN 5.3 GHz Band: 5250 MHz ~ 5350 MHz<br>WLAN 5.6 GHz Band: 5470 MHz ~ 5725 MHz<br>WLAN 5.8 GHz Band: 5725 MHz ~ 5850 MHz<br>Bluetooth: 2400 MHz ~ 2483.5 MHz |
| Mode                                                                                      | WLAN: 802.11a/b/g/n/ac/ax HT20/VHT20/HE20<br>Bluetooth LE                                                                                                                                                                                            |
| Remark:<br>1. The device supports several power levels, which differ in software version. |                                                                                                                                                                                                                                                      |

**Reviewed by: Jason Wang****Report Producer: Carlie Tsai****2. Maximum RF average output power among production units**

| Band         |                   | Tune-Up Limit (dBm) |
|--------------|-------------------|---------------------|
| WLAN 2.4GHz  |                   | 18.5                |
| WLAN 5.2GHz  |                   | 17.0                |
| WLAN 5.3GHz  |                   | 17.0                |
| WLAN 5.5GHz  |                   | 16.5                |
| WLAN 5.8GHz  |                   | 15.5                |
| Bluetooth LE | 125kbps / 500kbps | 7.0                 |
|              | 1 Mbps / 2 Mbps   | 7.0                 |

### 3. RF Exposure Limit Introduction

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

| Frequency range (MHz)                                          | Electric field strength (V/m) | Magnetic field strength (A/m) | Power density (mW/cm <sup>2</sup> ) | Averaging time (minutes) |
|----------------------------------------------------------------|-------------------------------|-------------------------------|-------------------------------------|--------------------------|
| <b>(A) Limits for Occupational/Controlled Exposures</b>        |                               |                               |                                     |                          |
| 0.3-3.0                                                        | 614                           | 1.63                          | *(100)                              | 6                        |
| 3.0-30                                                         | 1842/f                        | 4.89/f                        | *(900/f <sup>2</sup> )              | 6                        |
| 30-300                                                         | 61.4                          | 0.163                         | 1.0                                 | 6                        |
| 300-1500                                                       |                               |                               | f/300                               | 6                        |
| 1500-100,000                                                   |                               |                               | 5                                   | 6                        |
| <b>(B) Limits for General Population/Uncontrolled Exposure</b> |                               |                               |                                     |                          |
| 0.3-1.34                                                       | 614                           | 1.63                          | *(100)                              | 30                       |
| 1.34-30                                                        | 824/f                         | 2.19/f                        | *(180/f <sup>2</sup> )              | 30                       |
| 30-300                                                         | 27.5                          | 0.073                         | 0.2                                 | 30                       |
| 300-1500                                                       |                               |                               | f/1500                              | 30                       |
| 1500-100,000                                                   |                               |                               | 1.0                                 | 30                       |

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

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

Where:

S = Power Density

P = Output Power at Antenna Terminals

G = Gain of Transmit Antenna (linear gain)

R = Distance from Transmitting Antenna

### 4. Radio Frequency Radiation Exposure Evaluation

| Band            | Antenna Gain (dBi) | Maximum Power (dBm) | Maximum EIRP (dBm) | Maximum EIRP (W) | Maximum PG (mW) | Power Density at 20cm (mW/cm <sup>2</sup> ) | Limit (mW/cm <sup>2</sup> ) |
|-----------------|--------------------|---------------------|--------------------|------------------|-----------------|---------------------------------------------|-----------------------------|
| WLAN2.4GHz Band | 3.00               | 18.50               | 21.50              | 0.14             | 141.25          | 0.028                                       | 1.000                       |
| WLAN5GHz Band   | 4.00               | 17.00               | 21.00              | 0.13             | 125.89          | 0.025                                       | 1.000                       |
| Bluetooth LE    | 3.00               | 7.00                | 10.00              | 0.01             | 10.00           | 0.002                                       | 1.000                       |

### Conclusion:

According to 47 CFR §2.1091, the RF exposure analysis concludes that the RF Exposure is FCC compliant.