

Date: May 19, 2022

Office of Engineering and Technology  
Laboratory Division  
Equipment Authorization Branch  
Federal Communications Commission Laboratory  
7435 Oakland Mills Road  
Columbia, MD 21046

Subject: Application for Class 2 Permissive Change to FCC Authorized Transceiver with FCC ID: AZ489FT7125

Dear Sir/Madam,

A permissive change is requested for the subject transceiver which is marketed in the United States and elsewhere.

**A. DESCRIPTION OF PRODUCT CHANGES:**

1. Replacing the current WLAN/BT IC and its supporting circuitries with new replacement and supporting design optimization circuitries. The components changes are made within the Bluetooth (BT)/ WLAN circuitries as below:
  - i) BT/WLAN chipset for BT/WLAN functionality.
    - o IC001201A01 has 2 Vendor P/N listed: 88W8987-A2-EAHE/AZ from NXP Semiconductor and 88W8987-A2-EAH2E005-P123 from Marvell Semiconductor. Both Vendor P/N are referring to the same chipset/part. Marvell BT/WiFi business was acquired by NXP.
  - ii) Inclusion of LDO regulator and 38.4MHz temperature compensated crystal oscillator (TCXO) to support the new chipset.
  - iii) Dual sourcing of current temperature compensated crystal oscillator (TCXO) with new supplier to ease up supply constraint on current TCXO supplier. Second source supplier TCXO is a drop-in pin to pin compatible part.
  - iv) BT/WLAN bandpass filter (passive components) changed to cater for new BT/WLAN IC requirements.
  - v) Value change on the passive components (capacitors, resistors and inductors).
  - vi) Adding BTLE 5.0 feature
2. Part changes on other sections in main RF LMR board including Peripheral, Controller and Power management which does not impact the RF performance.
3. Dual sourcing of current temperature compensated crystal oscillator (TCXO) with new supplier to ease up supply constraint on current TCXO supplier. Second source supplier TCXO is a drop-in pin to pin compatible part.
4. Added UL protection diode in Harmonic Filter & Receiver layout area. No change to overall Harmonic filter & Receiver schematics & performance.
5. Added UL protection diode in Controller layout area to reduce the total capacitance of the board.
6. Added ferrite beads in FGU & RFIC section on Non-TIA4950 model for UL protection.

**B. PERFORMANCE DIFFERENCES:**

There is no degradation observed on EMC for LMR, BT and WIFI 2.4GHz except BTLE has degraded as compared to the previous filing but the data continues to be compliant to the FCC limits.

No degradation found on EME.

**C. CONCLUSION:**

This radio continues to meet all FCC requirements for which authorization was granted, thus this change does meet requirements of a Class-2 Permissive Change.

Sincerely,



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