

Date: December 20, 2021

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: AZ489FT7128

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 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).
2. Part changes on other sections in main RF LMR board including Peripheral, Controller, Power management, Interface board and Generic Option Board section 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. Adding four new CFS models (two new non-TIA4950 models and two new TIA4950 models) into the existing family as below. The existing 4 models (PMUE3681DBANKA, PMUE5770ABCNKA and PMUE5774ABANKA) will be obsolete with the 4 new models as a replacement.

New CFS Model	
Sales Model Number	Description
AAH56RDN9WA1AN	XPR 7550e 403-512 4W FKP GNSS CFS BT WiFi
AAH56RDC9WA1AN	XPR 7350e 403-512 4W NKP GNSS CFS BT WiFi
AAH56RDN9WA1AN	XPR 7550e 403-512 4W FKP GNSS CFS BT WiFi TIA4950
AAH56RDC9WA1AN	XPR 7350e 403-512 4W NKP GNSS CFS BT WiFi TIA4950

6. The new BT/WIFI chipset maximum power operates at the lower max power level for BTLE only due to the power shall saturate at maximum of 9mW. As for the previous chipset, the maximum power noted previously is still applicable for the units that were certified previously.

**B. PERFORMANCE DIFFERENCES:**

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