



Attn: Director of Certification

Cover letter regarding application for FCC ID: 2AG3JRF-2150

Part 15 Equipment Authorization

This same module was previously certified only for Part 15 rules under FCC ID 2AG3J-RF2150. Now the applicant is seeking to add Part 90 certification to the Part 15 certification under the new FCC ID 2AG3JRF-2150.

The output power levels used in SAR testing were not the same as the output power using the final power tables since the SAR testing was performed before the power tables were finalized for passing all other test requirements. Reported SAR results were based on a power level of 27dBm, which is higher than the final measurements for most channels, but lower than the final measurements for channels 6 and 7. The highest conducted power measurement was 28.6dBm for channel 7.

A KDB inquiry was submitted regarding this subject and approval was given for scaling the reported SAR results for the highest final power level. The KDB tracking number for this inquiry is 949177. KDB 447498 D01 section 4.1 d) & e) allows up to 2 dB of scaling for tune up tolerance. Therefore, below is shown the worst-case SAR result scaled up for the final power data.

Worst-case reported SAR = 0.78W/kg based on 27dBm conducted power (from SAR report)

Scaled SAR based on highest power of 28.6dBm = **1.13W/kg**

This is below the limit of 1.6W/kg for 1g SAR

Part 90 Equipment Authorization

This request is for a Limited Modular Approval (LMA) with the limitation being that the radio module cannot be tested in a stand-alone configuration. In this same application, the applicant is requesting approval for this limited module to be used in three different hosts, as described below.

- 1) MPU5 Dismount Kit (WR-5100)
- 2) Aircraft Kit (WR-AIR-SYS-1-02)
- 3) S-Band Integrated Sector Antenna (WR-INT-ANT-SYS-01)

These hosts are also manufactured by Persistent Systems LLC, and the radio module will be installed in the host only by professional installers.

The conducted testing was performed with the module installed in the MPU5 host, and radiated spurious emissions testing was done with the radio module installed in all three hosts.

Only the MPU5 Dismount Kit host is to be used in portable use cases, with a minimum separation distance of 5cm. A SAR report is provided for this, and MPE reports are provided for the other host configurations. The power had to be lowered significantly for the MPU5 portable host with equipment class TNT, with the other hosts falling under equipment class TNB.

Sincerely,

Martin Taylor
Agent for Persistent Systems LLC
SGS North America
Title: RF/EMC Engineer
Date: 28 February 2025