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FEDERAL COMMUNICATIONS COMMISSION

7435 Oakland Mills Road
Columbia, MD 21046
U.S.A.

Subject: ROR220 FCC Class 2 Permissive change for new RF amplifier

Applicant: Microwave Data Systems Inc.

Product: ROR220 Data Transceiver

Model: ROR220

FCC ID: E5MDS-ROR220

Dear Sir/Madam,

This FCC Class 2 permissive change is being requested because RFM. "RF Microdevices" has obsoleted the primary RF amplifier used as the 2 watt output device. MDS had to design in a new RF amplifier module also made by RFM, but of a different topology some impedance matching passive components to replace this obsolete part.

We have evaluated and tested the new artwork and found that in all cases the emissions are equal to, or better than, what was initially filed with the FCC. This should justify a Class 2 change and all us to keep the same FCC identifier.


Below is a summary of the changes that were required.

- 1) Replace the receiver MC13143 mixer (U200). This part was obsolete and not RoHS compliant. It is being replaced with the RFMD RF2861. The RF2861 includes an LNA so the transistor (BFP420) LNA is eliminated.
- 2) Replace the RF2117 power amplifier with the RF5110G. The RF2117 is at end of life and is not RoHS compliant. The RF5110G is RoHS compliant. The circuit is very similar to the RF2117 circuit. The RF5110 is just in a different package.
- 3) RX AGC. Reducing the RX gain for strong signals improves the adjacent channel rejection. Signal levels are sensed after the IF filter (U206). The output of U206 then biases a PIN diode in the IF CR205 and the shunt diode in the T/R switch CR301.

All FCC testing to show compliance has been completed and is being submitted with this Class 2 change request.

If you have any queries, please do not hesitate to contact me at 585 242-8440:

Yours truly,

Signed:  Name: Dennis McCarthy

Dennis McCarthy

Agency Compliance Engineer

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