

Dataradio Inc., Montreal, Canada

Engineering Statement

OF CONSTANTIN PINTILEI

The application consists of the attached engineering exhibit and associated FCC form 731 which were prepared in support of a request for a Class II Permissive Change for CASTEL0016. All changes involved fall under the Class II Permissive Change type and they are entirely detailed within the current report.

The certificate CASTEL0016 has been granted to Tait Electronics Ltd. for the T86 200MHz (216-225MHz) base station made of a Exciter module T867 and a Power Amplifier module T869 . The Class II Permissive type of change is demonstrated with this filing. The original certificate has been granted for F3E type of modulations. The change consists of adding the digital modulation emission designator F1D. It was demonstrated that several sources of DGMSK and 4RCFSK digital modulation comply with the mask 90.210 (F). For those modulation sources their emission designator was found. This Class II permissive change involves the digital modulation source only and it is completely described with the current report.

EXISTING CONDITIONS

The unit utilized for these occupied bandwidth and mask-compliance measurements was a regular production sample. The digital input provided on the Pin 1 of SK200 "micro match to paging brd connector" was fed for the tests. A Dataradio BDLC was used to create the digital modulation scheme and test sequence.

The exciter operates on frequencies ranging from 216.000 MHz to 225.000 MHz. The frequency tolerance of the exciter is at least .00025% or 2.5 parts per million and the output power is 0.6W fixed. The Power Amplifier supplies 100W of power continuously adjustable down to 20W as granted in CASTEL0016.

PROPOSED CONDITIONS

It is proposed to accept the Class II permissive change request for the CASTEL0016 grant for F1D operations in the band of frequencies previously outlined. The applicant anticipates marketing the device for use in wireless transmission of data.

PERFORMANCE MEASUREMENTS

All measurements for Occupied Bandwidth and mask compliance as per 2.1043 (b)(2) were conducted in accordance with the Rules and Regulations Section 2.1041 and 2.1049 of Rules Service Co rev.2-164, Jan 15,2003. The measurements were made in the engineering laboratory located at 5500 Royalmount ave, Montreal, Canada. All measurements were made and recorded by myself or under my direction. The measurements were made between May 20th and May 27th, 2003.

CONCLUSION

Given the results of the measurements contained herein, the applicant requests to be applied a Class II Permissive Change for the Certificate CASTEL0016 to add the new emission designators 7K50F1D, 7K67F1D, and 7K84F1D to the existing one, 11K0F3E.



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