

ANNEX A
TEST DATA Section Rule Part Number: 2.1033 (c)(14)

ANNEX A0- Test reports section. General

All applicable test data according to:

- Part 2: 2.1046, 2.1047, 2.1049, 2.1051, 2.1053 and 2.1057
- Part 90, Subpart R: 90.521 to 90.555
- Part 27, Subpart C: 25.50 to 27.54

are provided in this section of the Engineering Report, as shown detailed below:

part-pages	Data Contents	FCC parts	Laboratory
A0-2	General. Not applicable requirements: • Data efficiency • Frequency Stability • Occupied bandwidth Emissions in the band 1559-1610MHz	2.1033 (c)(14) 90.535(a)(c) 2.1055(a),(d), 90.539,27.54 2.1049, 90.543(d),27.53(d)(4) (90.543(e),27.54(e))	
A1-1	Transmitter Rated Power Output and PA gain	2.1046, 90.541, 27.50(a)(2)	R&D Dataradio Inc
A2-1	F1D Digital Modulation characteristics	2.1047, 90.535	R&D Dataradio Inc
A3- 11	Emission Limitations (ACCP)	90.543(a),(b),27.53(d)	R&D Dataradio Inc
A4 –29	Spurious Radiation and Spurious Emissions at Antenna Terminals	2.1051,90.543(c),(e), 27.53(d)(3),(e)	Aprel Laboratories
44	Total number of report pages		

The following reports have been generated for FCC Certification of the Dataradio 762-773 MHz 70W /12.5dB Power Amplifier, part number BDP3- 87S-RBPPPSM. Unless otherwise noted, all of the measurements were conducted following the procedures set forth in the TIA/EIA-603 rev B standards.

Set-up and equipment identification

Unit under tests (UUT): 70W / 12.5 dB Power Amplifier BDP3-AMP power amplifier assembly

4W input RF generator : Exciter module adjusted to 4W power level: T881-10-0020 s/n: 13012187 FCC ID EOTBDP3-T881
Dataradio modulation source for the Generator above: prototype P3 , banner ID 200+DATARADIO Paragon-III G3[02]
v1.00(Build:1) (CodeBase:SWINT_040520) +(Steve 200 P:1), DSP built DSP_1737Beta_RC4

Open Area Test Site (OATS): FCC certified Open Area Test Site at the Aprel Laboratories located at 51 Spectrum Way Nepean Ontario, Canada

Emissions in the band 1559-1610MHz (90.543(e),27.54(e))

The unit does not present any spurious products above the noise floor of the instrument in the mentioned band while set for frequencies in bands 762-764MHz or 767-773MHz. The noise floor of the instrument (Agilent 8563EC) was found to be –90dBW/MHz also equated to –120dBm/Hz, this is 30dB better than required specification.

Not applicable standards:**Modulation and Spectrum Usage Efficiency (90.535 (a)(c)), Occupied Bandwidth and Frequency Stability**

UUT is a 12.5 dB power amplifier, it does not perform the frequency generation or modulation processes.

Nevertheless this requirement are applicable for the RF input signal which was part of the set-up, therefore a related explanation follows.

The RF input generator generated digital modulation as per 90.535 (a). The generator is set-up for a channel size of 50 kHz as per 90.531(c) with a spectrum efficiency of 128kbps/50kHz . This equates to $128 \times 3 \text{ kbps} / 50 \times 3 \text{ kHz} = 384 \text{ kbps} / 150 \text{ kHz}$ as required by 90.535(c)

The part 90.531(d)(2) states that two or three contiguous wideband (50 kHz) channels may be used in combination as 100 kHz or 150 kHz channels. Rates of 256kbps/100kHz and 384kbps/150 kHz respectively can be achieved running 3 units having appropriately programmed generators. The amplifier UUT is a single carrier amplifier, the power combining must be a distinct circuit block of the system.