Question #2

The output power for this design is selectable by the installation personnel. The actual power is limited by the restrictions stated on the license and limited by the FCC. The data included with this response shows the stability as a function of frequency, temperature, and output level setting. All measurements were measured with precision Hewlett Packard power sensors such as HP R8486A. The equipment under consideration for approval is a constant envelop FSK design, which has peak and average power the same. The spectrum analyzer power measurement procedure was used for measuring spurious emissions from the antenna and for evaluation of spurious radiation. In all cases, when using the spectrum analyzer for power measurements, the RBW was adjusted greater the occupied bandwidth during the calibration process but returned to the requirements of 101.11 to obtain the data as required by the commission.

With regard to power output, we are requesting the Rated RF Power Output to be .050 Watts instead of the original request for .0398 Watts. Please alter the 731 equipment specification item #12 to reflect this change!

[redacted]

Test Description:

The transmitter output power measurements were made utilizing an automated test setup. Output power measurements were made for both terminals at -33°C, +30°C, and +55°C. Measurements were taken with The link operating at a low channel, mid channel and high channel. The measurements are taken by simply setting The data rate (via The front panel or XPView), setting The frequency (via The front panel keypad or XPView), and Then simply scrolling/setting The output power (via The front panel or XPView) while at The same time viewing The actual output power reading (via The VB software program written for The automated test station). Performing this test at various output power settings also provides The necessary results for transmit output power accuracy of The front panel display.

Relevant Test Specifications:

Document	***TX Output Power Specification***	***TX Power Accuracy (Front Panel Display)***	***Minimum Output Power Specification***
DMC XP4 Radio Specification DOC 000-000025-SPC	+____dBm, MIN	+/- ____dB	-____dBm
~~European Transmission Standards~~ ~~Or~~ FCC Standards			N/A

Test Results:

Configuration: 4X *(-33 °C)*

Output Power Setting (Front Panel Display-dBm)	***Low Channel: MHz***	***Mid Channel: MHz***	***High Channel: MHz***
MAX POWER	22.37	21.53	21.85
+15dBm	14.8	14.68	15.32
+10dBm	9.9	9.85	9.5
+5dBm	4.58	4.76	5.3
0dBm	.35	.35	.46
-5dBm	-4.62	-4.67	-4.04
-10dBm	-8.8	-8.79	-8.6
MIN POWER	-19.85	-18.38	-18.48

Test Results (continued):

Configuration: 4X *(+30°C)*

Output Power Setting (Front Panel Display-dBm)	***Low Channel: MHz***	***Mid Channel: MHz***	***High Channel: MHz***
MAX POWER	~~19.74~~ 22.2	22.38	22.15
+15dBm	~~14.42~~ 15.02	14.36	14.46
+10dBm	~~9.22~~ 9.87	9.37	9.48
+5dBm	~~4.5~~ 4.58	4.67	4.73
0dBm	~~-.21~~ -.3	-.12	-.31
-5dBm	~~-5.82~~ -5.33	-5.07	-5.06
-10dBm	~~-10.42~~ -9.75	-9.63	-9.86
MIN POWER	~~-22.24~~ -25.54	-25.74	-26.61

Configuration: 4X *(+55°C)*

Output Power Setting (Front Panel Display-dBm)	***Low Channel: MHz***	***Mid Channel: MHz***	***High Channel: MHz***
MAX POWER	9.5	20.98	21.18
+15dBm	14.19	15.21	14.58
+10dBm	8.98	10.0	10.25
+5dBm	4.27	5.21	5.43
0dBm	-.43	.4	.05
-5dBm	-5.95	-5.19	-5.27
-10dBm	-10.64	-9.55	-10.04
MIN POWER	-22.42	-21.93	-21.4

Configuration: 8X *(-33°C)*

Output Power Setting (Front Panel Display-dBm)	***Low Channel: MHz***	***Mid Channel: MHz***	***High Channel: MHz***
MAX POWER	22.39	21.68	21.85
+15dBm	14.84	14.83	15.3
+10dBm	9.93	9.8	9.63
+5dBm	4.52	4.81	5.36
0dBm	.29	.36	.54
-5dBm	-4.54	-4.56	-4.12
-10dBm	-8.7	-8.71	-8.69
MIN POWER	-19.66	-18.68	-18.63

Test Results (continued):

Configuration: 8X *(+30 °C)*

Output Power Setting (Front Panel Display-dBm)	***Low Channel: MHz***	***Mid Channel: MHz***	***High Channel: MHz***
MAX POWER	22.21	22.51	22.01
+15dBm	14.92	14.67	14.27
+10dBm	9.78	9.27	9.28
+5dBm	4.47	4.7	4.66
0dBm	-.41	-.16	-.23
-5dBm	-5.21	-4.91	-4.93
-10dBm	-9.67	-9.52	-9.97
MIN POWER	-24.67	-24.77	-25.46

Configuration: 8X *(+55 °C)*

Output Power Setting (Front Panel Display-dBm)	***Low Channel: MHz***	***Mid Channel: MHz***	***High Channel: MHz***
MAX POWER	19.74	21.02	21.22
+15dBm	14.42	15.26	14.55
+10dBm	9.22	10.06	10.22
+5dBm	4.5	5.27	5.41
0dBm	-.21	.3	.15
-5dBm	-5.82	-5.24	-5.19
-10dBm	-10.42	-9.5	-10.09
MIN POWER	-22.24	-21.91	-21.46

Additional Comments:

Test Performed by: RC