As required by 2.1033(c)(9 a "Tune Up" document must be provided, i.e. a description of how and to what tolerance the power is adjusted during manufacturing.

Not applicable in our case:
There is no adjustment of the power during manufacturing because the electronic conception is designed so that the power is in conformity with the specifications.
Each beacon is checked in manufacturing:
- 406 MHz must be 37 dBm ± 2dB
- 121.5 MHz must be 23 dBm ± 3dB

A final inspection is performed on each beacon and Acceptance Test Reports are filled to prove that they are compliant with these specifications before release.

Example of Acceptance Test Reports filled on Final Inspection are displayed page 2 and 3.

FINAL CONTROL ON BEACON

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Beacon Test Results

file name: OK_2619362-0066_19-12-2007_15-31-43.PNG

Beacon P/N	1201641	Beacon	2619362-0066	Amdt	A
Beacon Type	☒ GPS ☐ No GPS	Type	XS-3 GPS		
Board P/N	5104518	Board		Amdt	D
Board P/N		Board		Amdt	
Battery type	WILPA1655	Battery batch		Flash Serial Number	

HF test OK

Remark:

Operator: A. LE LARDIC

Date: 19/12/2007

F3 Measurements

Max (dBm): 39
RF Power (dBm): 37,92
min (dBm): 35
Power OK

Frequency (hz): 406027723,36
Frequency OK
Max Delta Frequency (hz): 1000

Short term frequency stability
Allan Variance/100ms: 7,4E-11
Max Allan Variance: 2E-9
Short term OK

Medium term frequency stability
Slope/min: -2,97E-10
Max Slope/min: 1E-9
Slope OK

Test message (hex)

FF	FE	2F	8E	3E	22	93	E0	7F	DF	FD	F6	D2	37	83	E0	F6	6C

no error bit

Sigma/min: 1,46E-9
Max Sigma/min: 3E-9
Sigma OK

Burst N°: 18
Nb Burst OK for medium term
Lock GPS status valid if GPS option present
OK

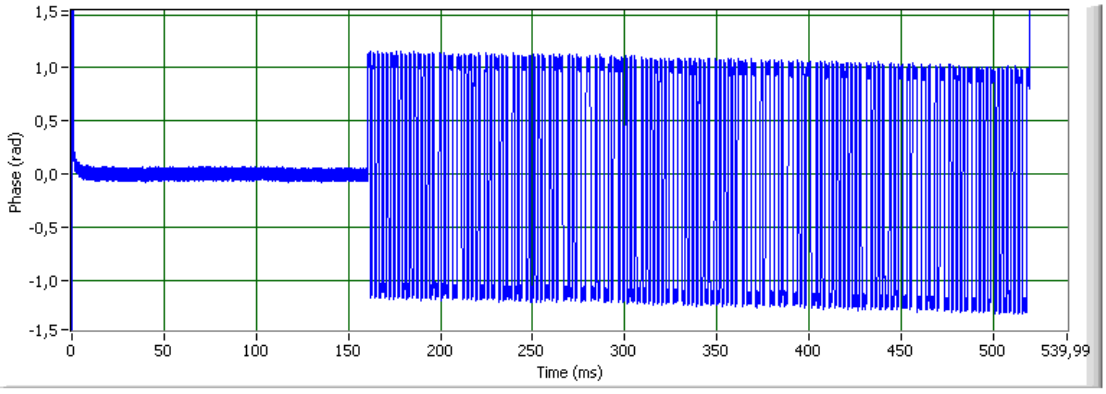
Max BitRate/s: 404 / 401,28
Min: 396
BitRate OK

Max (µs): 250
Rise time(µs): 203
Min (µs): 50
OK

Max (µs): 250
Fall time (µs): 197
Min (µs): 50
OK

Max pos. phase deviation (rad): 1,2
Positive phase deviation (rad): 1,076
Min Pos. phase deviation (rad): 1
OK

Max Neg. phase deviation (rad): -1
Negative phase deviation (rad): -1,082
Min Neg phase deviation (rad): -1,2
OK



F1 Measurements

Max (dBm): 20
RF power (dBm): 17,76
Min (dBm): 14
Power OK

Frequency (hz): 121501542,45
Max Delta Frequency (hz): 6000
Frequency OK

Modulation factor (%): 95,7031
Min Mod. factor (%): 80
Mod. Factor OK

F2 Measurements not available for this Beacon

RF power (dBm): 0
RF power (dBm): 0
RF power (dBm): 0
Power OK

Frequency (hz): 0
Max Delta Frequency (hz): 0
Frequency OK

Modulation factor (%): 0
Min Mod. factor (%): 0
Mod. Factor OK

FINAL CONTROL ON CORRESPONDING PCB