

ANNEX I. ELECTRICAL AND FUNCTIONAL TESTS AT CONSTANT TEMPERATURE

AMBIENT TEMPERATURE

First burst delay time: 66.0 sec (ambient)

*SMR ELECTRONIC PROVING GROUND, US ARMY, FORT HUACHUCA, ARIZONA

MANU: MMInc MODEL NO: MBT-040600 SERIAL NO: 097

BEACON CERTIFICATION TEST RESULTS - FULL PARAMETER AMBIENT

MEASUREMENT DATE: 8 Feb 1999 TIME: 11:24:11

TESTED BY:

APPROVED BY:

BEACON DIGITAL MESSAGE VERIFICATION

SYNCHRONIZATION BIT #: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Should be: 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

Decoded: 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

*** BIT SYNCHRONIZATION OK ***

FRAME SYNCHRONIZATION BIT #: 16 17 18 19 20 21 22 23 24

Should be: 0 0 0 1 0 1 1 1 1

Decoded: 0 0 0 1 0 1 1 1 1

*** FRAME SYNCHRONIZATION OK ***

MESSAGE TYPE: LONG MESSAGE (bit 25 = 1)

15 Hex Beacon ID (bits 26-85): 2DD60030BF81FE0

30 Hex Message (bits 25-144): 96EB00185FC0FF0057E8B59F3C0CD4

BCH CODE BIT #: 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01 02 03 04 05 06

Should be: 0 0 0 0 1 0 1 0 1 1 1 1 1 1 0 1 0 0 0 1 0

Decoded: 0 0 0 0 1 0 1 0 1 1 1 1 1 1 0 1 0 0 0 1 0

*** BCH CODE OK ***

BCH CODE BIT #: 33 34 35 36 37 38 39 40 41 42 43 44

Should be: 1 1 0 0 1 1 0 1 0 1 0 0

Decoded: 1 1 0 0 1 1 0 1 0 1 0 0

*** BCH CODE OK ***

WSMR ELECTRONIC PROVING GROUND, US ARMY, FORT HUACHUCA, ARIZONA
MANU: MMInc MODEL NO: MBT-040600 SERIAL NO: 097
BEACON CERTIFICATION TEST RESULTS - FULL PARAMETER AMBIENT
MEASUREMENT DATE: 8 Feb 1999 TIME: 11:55:02

TESTED BY: J.C. Holt

APPROVED BY: Edmund Long

MESSAGE DATA:

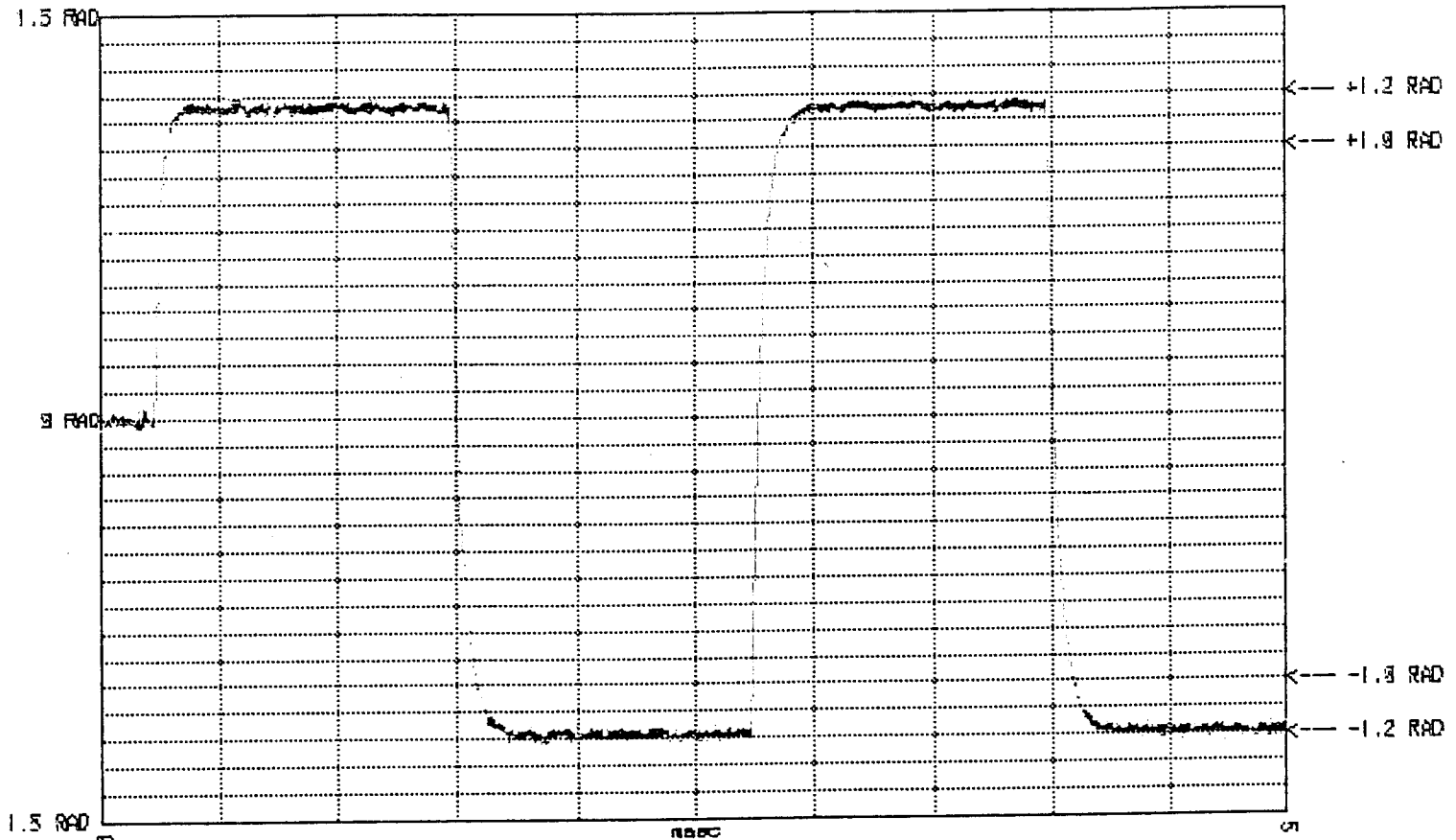
Message Format: 1
Protocol Flag: 0
Country Code: 0101101110
Protocol Code: 1011
Serial Number: 000000000001100001
Reported Latitude: N127 0
Reported Longitude: E255 0
Position Data Source Flag: 1
Spare (108): 1
Homing Device Flag: 0
Additional Data Flag: 1
Spare (111,112):
01
Delta Latitude (min): 0
Delta Latitude (sec): 60
Delta Longitude (min): 0
Delta Longitude (sec): 60
Spare (127-132): 000000

Corrected latitude: N127 1 0
Corrected longitude: E255 1 0

WSMR ELECTRONIC PROVING GROUND, US ARMY, FORT HUACHUCA, ARIZONA
 MANU: MMInc MODEL NO: MBT-040600 SERIAL NO: 097
 BEACON CERTIFICATION TEST RESULTS - FULL PARAMETER AMBIENT
 MEASUREMENT DATE: 8 Feb 1999 TIME: 11:55:03

TESTED BY: *[Signature]* APPROVED BY: *[Signature]*

PHASE MODULATION vs TIME



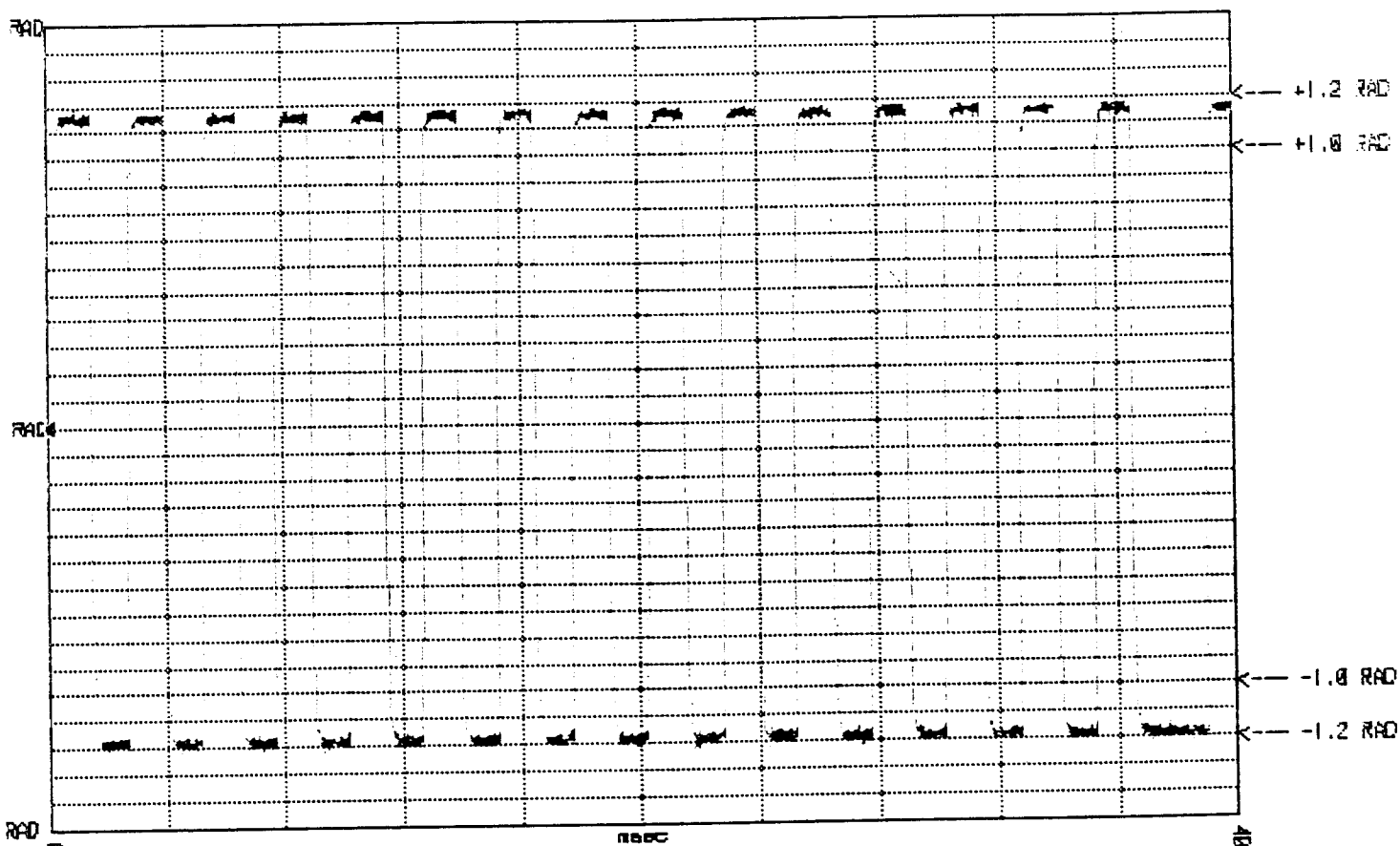
SPECIFICATIONS TESTED	LIMITS	RESULTS	UNITS	COMMENTS
Modulation: symmetry	< 0.05	.0016		passed
Modulation: rise time	150 $\pm$ 100	127.6	us	passed
fall time	150 $\pm$ 100	123.8	us	passed

WMSR ELECTRONIC PROVING GROUND, US ARMY, FORT HUACHUCA, ARIZONA
 MANU: MMinc MODEL NO: MBT-040600 SERIAL NO: 097
 BEACON CERTIFICATION TEST RESULTS - FULL PARAMETER AMBIENT
 MEASUREMENT DATE: 8 Feb 1999 TIME: 11:56:42

TESTED BY: *J. C. Holt*

APPROVED BY: *Edmund Dwyer*

PHASE MODULATION vs TIME



SPECIFICATIONS TESTED	LIMITS	RESULTS	UNITS	COMMENTS
Phase modulation: + AVG	+1.1 ±0.1	1.16	rad	passed
- AVG	-1.1 ±0.1	-1.18	rad	passed

Peak positive phase modulation: 1.20 rad
 Peak negative phase modulation: -1.22 rad

NSMR ELECTRONIC PROVING GROUND, US ARMY, FORT HUACHUCA, ARIZONA
 MANU: MMInc MODEL NO: MBT-040600 SERIAL NO: 097
 BEACON CERTIFICATION TEST RESULTS - FULL PARAMETER AMBIENT
 MEASUREMENT DATE: 8 Feb 1999 TIME: 11:58:24

TESTED BY: J.C. [Signature] APPROVED BY: Edwin [Signature]

SPECIFICATIONS TESTED	LIMITS	RESULTS	UNITS	COMMENTS
Nominal transmitted frequency	406.025 ±.002	406.025213	MHz	passed
Short term frequency stability	< 2.0E-9	1.97E-10		passed
Medium term: mean slope	< 1.0E-9	-9.18E-11	/min	passed
residual deviation	< 3.0E-9	5.72E-10		passed
Tx output power level	3.15 TO 7.93	4.09	W	passed
Burst envelope: rise time	< 5	.15	ms	passed
fall time	< 5	.07	ms	passed
Phase modulation: + AVG	+1.1 ±0.1	1.16	rad	passed
- AVG	-1.1 ±0.1	-1.18	rad	passed
Modulation: symmetry	< 0.05	.0016		passed
Modulation: rise time	150 ±100	127.6	us	passed
fall time	150 ±100	123.8	us	passed
Repetition period minimum	47.5 TO 52.5	48.5	s	passed
Repetition period maximum	47.5 TO 52.5	51.4	s	passed
Repetition period (max - min)	>1	2.9	s	passed
Total transmission time minimum	514.8 TO 525.2	521.0	ms	passed
Total transmission time maximum	514.8 TO 525.2	521.1	ms	passed
Cw preamble minimum	158.4 TO 161.6	159.2	ms	passed
Cw preamble maximum	158.4 TO 161.6	159.2	ms	passed
Message bit rate minimum	396.0 TO 404.0	399.4	bps	passed
Message bit rate maximum	396.0 TO 404.0	399.5	bps	passed

WSMR ELECTRONIC PROVING GROUND, US ARMY, FORT HUACHUCA, ARIZONA
MANU: MMInc MODEL NO: MBT-040600 SERIAL NO: 097
BEACON CERTIFICATION TEST RESULTS - 406 SIGNAL SPURIOUS EMISSIONS
MEASUREMENT DATE: 8 Feb 1999 TIME: 12:14:23

TESTED BY: *[Signature]*

APPROVED BY: *[Signature]*

SPURIOUS EMISSIONS

FREQUENCY (MHz)	RESULTS (dBc)	LIMITS (dBc)
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*** SPURIOUS TEST OK ***

WSMR ELECTRONIC PROVING GROUND, US ARMY, FORT HUACHUCA, ARIZONA
MANU: MMinC MODEL NO: MBT-040600 SERIAL NO: 097
BEACON CERTIFICATION TEST RESULTS - 406 SIGNAL SPURIOUS EMISSIONS
MEASUREMENT DATE: 8 Feb 1999 TIME: 14:28:48

TESTED BY: *[Signature]*

APPROVED BY: *[Signature]*

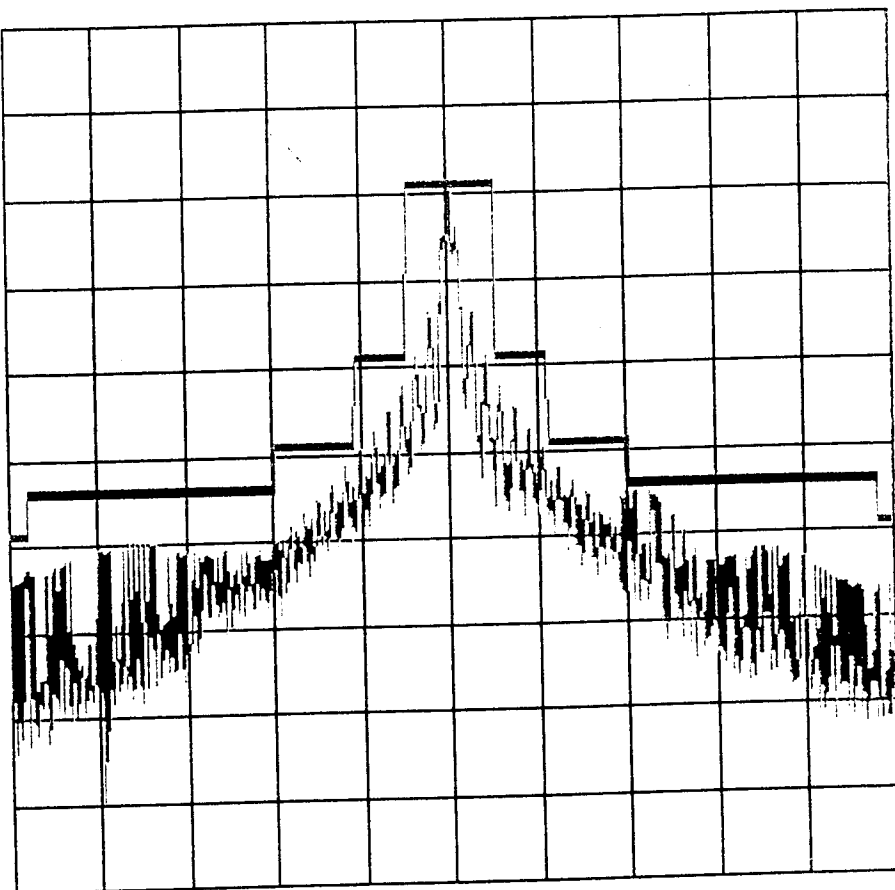
REF 20 dBm

8 Feb 1999

10 dB/

CENTER: 406.025MHz

SPAN: 50KHz



SPURIOUS EMISSIONS SPECTRUM

TED BY:

APPROVED BY:

CHRONIZATION BIT #: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

[illegible]AME SYNCHRONIZATION BIT #: 16 17 18 19 20 21 22 23 24

Should be:	0	0	0	1	0	1	1	1	1
Decoded:	0	0	0	1	0	1	1	1	1

MESSAGE TYPE: LONG MESSAGE (bit 25 = 1)

5 Hex Beacon ID (bits 26-85): 2DD60030BF81FE0
0 Hex Message (bits 25-144): 96EB00185FC0FF0057E8B59F3C0CD4

CH CODE BIT #: 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01 02 03 04 05 06

```

Should be: 0 0 0 0 1 0 1 0 1 1 1 1 1 1 0 1 0 0 0 1 0
Decoded:  0 0 0 0 1 0 1 0 1 1 1 1 1 1 0 1 0 0 0 1 0

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CH CODE BIT #: 33 34 35 36 37 38 39 40 41 42 43 44

Should be:	1	1	0	0	1	1	0	1	0	1	0	0
Decoded:	1	1	0	0	1	1	0	1	0	1	0	0

A-1-8

WSMR ELECTRONIC PROVING GROUND, US ARMY, FORT HUACHUCA, ARIZONA

MANU: MMInc MODEL NO: MBT-040600 SERIAL NO: 097

BEACON CERTIFICATION TEST RESULTS - OPEN / SHORT / 3:1 VSWR PERFORMANCE

MEASUREMENT DATE: 8 Feb 1999 TIME: 15:03:36

TESTED BY: *J-C [Signature]*

APPROVED BY: *Edwin [Signature]*

MESSAGE DATA:

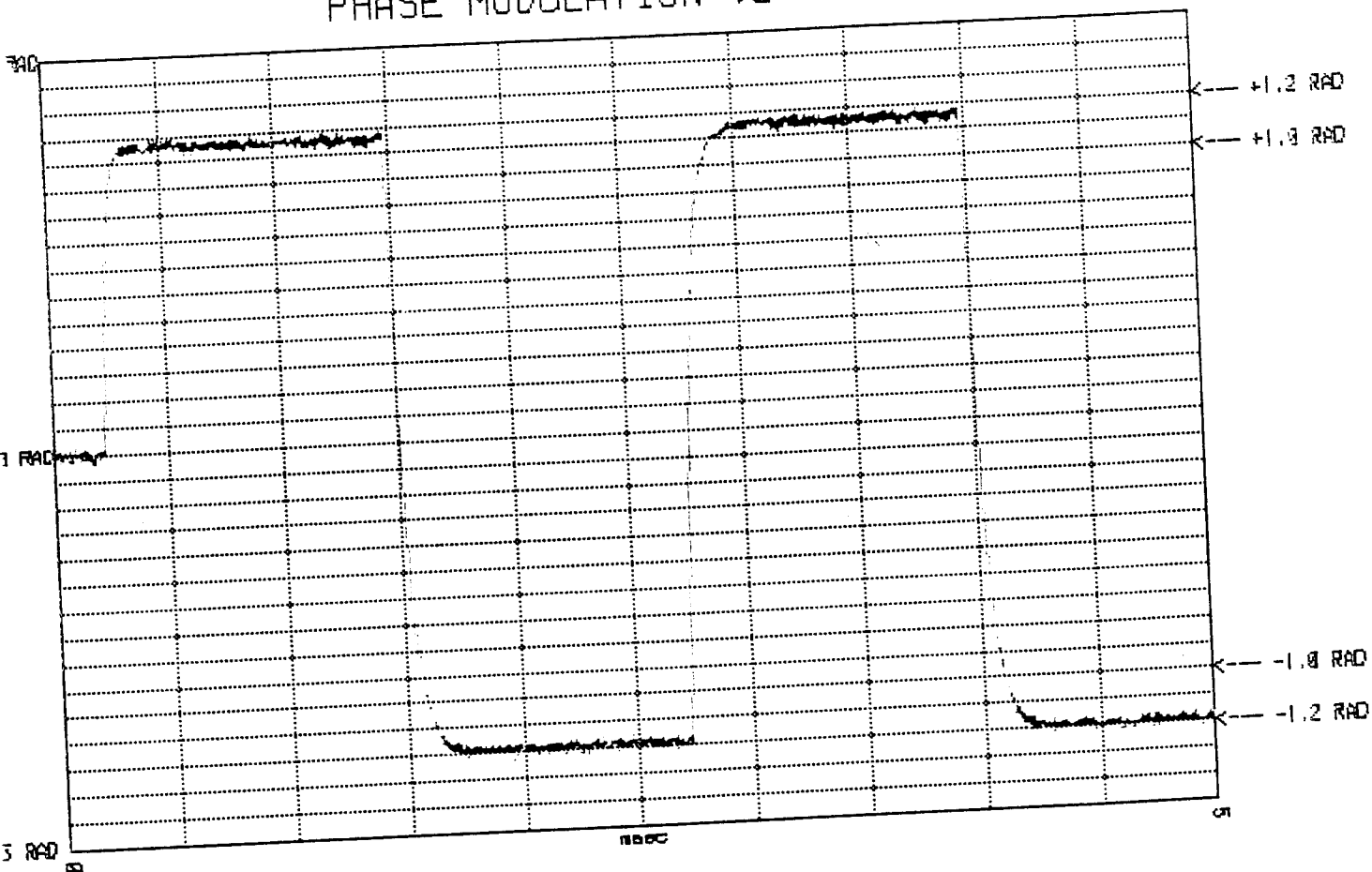
Message Format: 1
Protocol Flag: 0
Country Code: 0101101110
Protocol Code: 1011
Serial Number: 000000000001100001
Reported Latitude: N127 0
Reported Longitude: E255 0
Position Data Source Flag: 1
Spare (108): 1
Homing Device Flag: 0
Additional Data Flag: 1
Spare (111,112):
01
Delta Latitude (min): 0
Delta Latitude (sec): 60
Delta Longitude (min): 0
Delta Longitude (sec): 60
Spare (127-132): 000000

Corrected latitude: N127 1 0
Corrected longitude: E255 1 0

WEMR ELECTRONIC PROVING GROUND, US ARMY, FORT HUACHUCA, ARIZONA
 MANU: MMinc MODEL NO: MBT-040600 SERIAL NO: 097
 BEACON CERTIFICATION TEST RESULTS - OPEN / SHORT / 3:1 VSWR PERFORMANCE
 MEASUREMENT DATE: 8 Feb 1999 TIME: 15:03:37

TESTED BY: *[Signature]* APPROVED BY: *[Signature]*

PHASE MODULATION vs TIME



SPECIFICATIONS TESTED	LIMITS	RESULTS	UNITS	COMMENTS
Modulation: symmetry	< 0.05	.0008		passed
Modulation: rise time	150 ±100	130.2	us	passed
Modulation: fall time	150 ±100	122.5	us	passed

WSMR ELECTRONIC PROVING GROUND, US ARMY, FORT HUACHUCA, ARIZONA

MANU: MMinc

MODEL NO: MBT-040600

SERIAL NO: 097

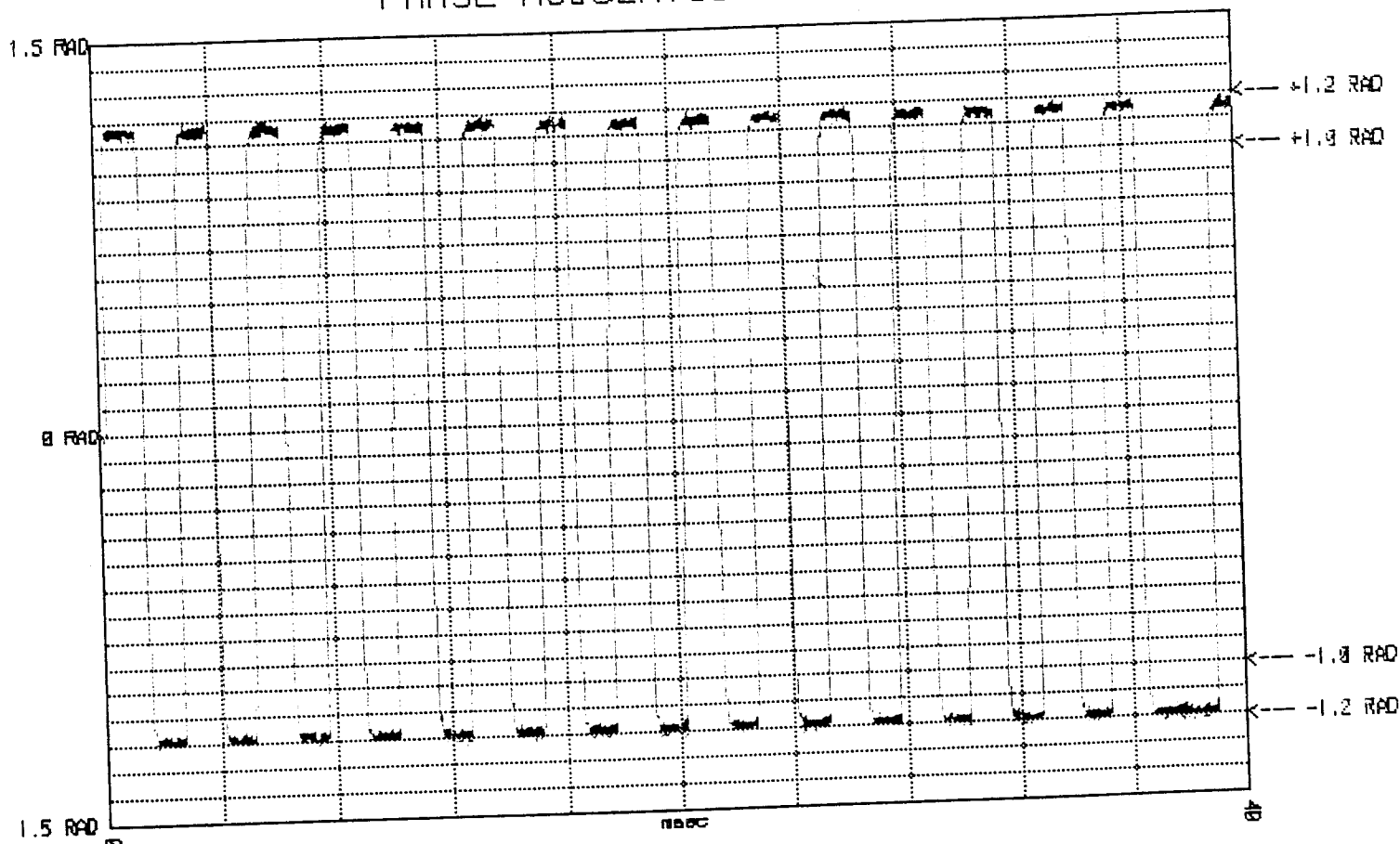
BEACON CERTIFICATION TEST RESULTS - OPEN / SHORT / 3:1 VSWR PERFORMANCE

MEASUREMENT DATE: 8 Feb 1999 TIME: 15:05:17

TESTED BY: HC 2/1

APPROVED BY: Edna Day

PHASE MODULATION vs TIME



SPECIFICATIONS TESTED	LIMITS	RESULTS	UNITS	COMMENTS
Phase modulation: + AVG	+1.1 ±0.1	1.16	rad	passed
- AVG	-1.1 ±0.1	-1.18	rad	passed

Peak positive phase modulation: 1.20 rad
Peak negative phase modulation: -1.23 rad

WSMR ELECTRONIC PROVING GROUND, US ARMY, FORT HUACHUCA, ARIZONA

MANU: MMinc MODEL NO: MBT-040600 SERIAL NO: 097

BEACON CERTIFICATION TEST RESULTS - OPEN / SHORT / 3:1 VSWR PERFORMANCE

MEASUREMENT DATE: 8 Feb 1999 TIME: 15:06:55

TESTED BY:

APPROVED BY:

SPECIFICATIONS TESTED	LIMITS	RESULTS	UNITS	COMMENTS
Nominal transmitted frequency	406.025 ±.002	406.025214	MHz	passed
Short term frequency stability	< 2.0E-9	2.71E-10		passed
Medium term: mean slope	< 1.0E-9	+7.03E-12	/min	passed
residual deviation	< 3.0E-9	4.72E-10		passed
Tx output power level	3.15 TO 7.93	4.08	W	passed
Burst envelope: rise time	< 5	.16	ms	passed
fall time	< 5	.07	ms	passed
Phase modulation: + AVG	+1.1 ±0.1	1.16	rad	passed
- AVG	-1.1 ±0.1	-1.18	rad	passed
Modulation: symmetry	< 0.05	.0008		passed
Modulation: rise time	150 ±100	130.2	us	passed
fall time	150 ±100	122.5	us	passed
Repetition period minimum	47.5 TO 52.5	48.3	s	passed
Repetition period maximum	47.5 TO 52.5	51.3	s	passed
Repetition period (max - min)	>1	3.0	s	passed
Total transmission time minimum	514.8 TO 525.2	521.0	ms	passed
Total transmission time maximum	514.8 TO 525.2	521.1	ms	passed
Cw preamble minimum	158.4 TO 161.6	159.2	ms	passed
Cw preamble maximum	158.4 TO 161.6	159.2	ms	passed
Message bit rate minimum	396.0 TO 404.0	399.4	bps	passed
Message bit rate maximum	396.0 TO 404.0	399.5	bps	passed

MINIMUM TEMPERATURE

First burst delay time: 64.0 sec (minimum)

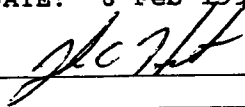
WSMR ELECTRONIC PROVING GROUND, US ARMY, FORT HUACHUCA, ARIZONA

MANU: MMInc MODEL NO: MBT-040600 SERIAL NO: 097

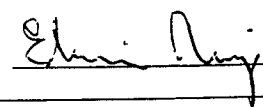
BEACON CERTIFICATION TEST RESULTS - 406 SIGNAL SPURIOUS EMISSIONS AT MINIMUM TEMP

MEASUREMENT DATE: 8 Feb 1999 TIME: 18:38:07

TESTED BY:



APPROVED BY:



SPURIOUS EMISSIONS

FREQUENCY (MHz)	RESULTS (dBc)	LIMITS (dBc)
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*** SPURIOUS TEST OK ***

NEAR ELECTRONIC PROVING GROUND, US ARMY, FORT HUACHUCA, ARIZONA

MANU: MMinc MODEL NO: MBT-040600 SERIAL NO: 097

BEACON CERTIFICATION TEST RESULTS - 406 SIGNAL SPURIOUS EMISSIONS AT MINIMUM TEMP

MEASUREMENT DATE: 8 Feb 1999 TIME: 21:53:47

TESTED BY: *[Signature]*

APPROVED BY: *[Signature]*

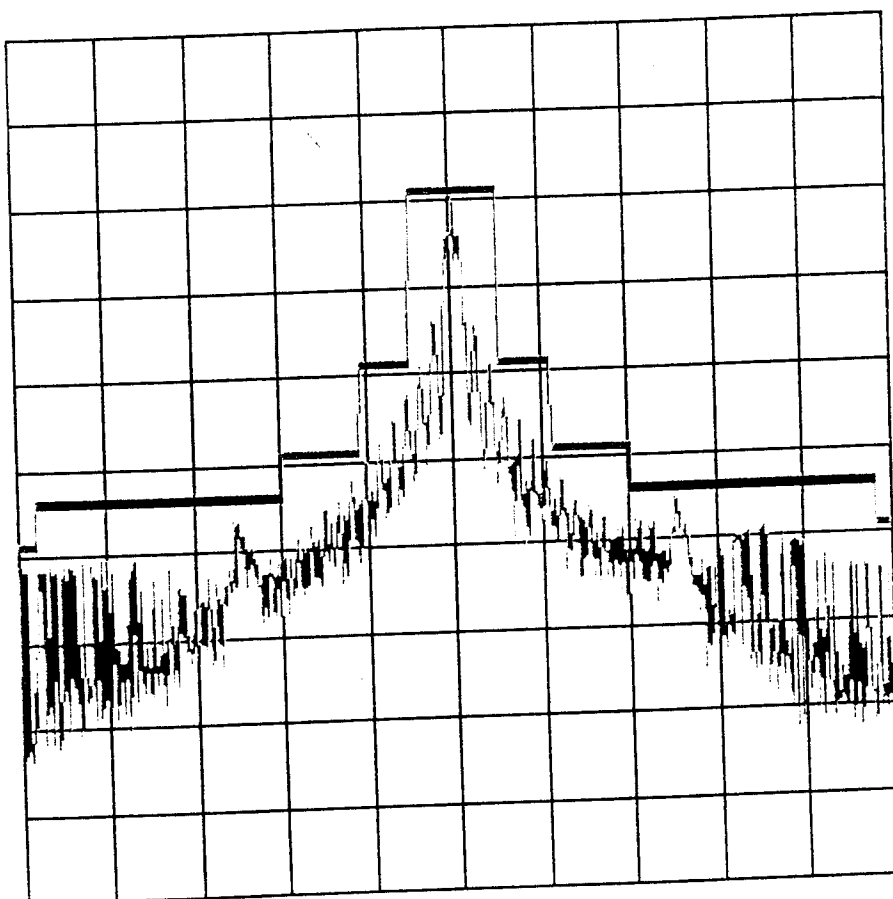
REF 20 dBm

8 Feb 1999

10 dB/

CENTER: 406.025MHz

SPAN: 50KHz



SPURIOUS EMISSIONS SPECTRUM

WSMR ELECTRONIC PROVING GROUND, US ARMY, FORT HUACHUCA, ARIZONA

MANU: MMinc MODEL NO: MBT-040600 SERIAL NO: 097

BEACON CERTIFICATION TEST RESULTS - OPEN / SHORT / 3:1 VSWR PERFORMANCE AT MIN

MEASUREMENT DATE: 9 Feb 1999 TIME: 12:02:14

TESTED BY:

APPROVED BY:

BEACON DIGITAL MESSAGE VERIFICATION

SYNCHRONIZATION BIT #: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Should be: 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Decoded: 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

*** BIT SYNCHRONIZATION OK ***

FRAME SYNCHRONIZATION BIT #: 16 17 18 19 20 21 22 23 24

Should be: 0 0 0 1 0 1 1 1 1
Decoded: 0 0 0 1 0 1 1 1 1

*** FRAME SYNCHRONIZATION OK ***

MESSAGE TYPE: LONG MESSAGE (bit 25 = 1)

15 Hex Beacon ID (bits 26-85): 2DD60030BF81FE0

30 Hex Message (bits 25-144): 96EB00185FC0FF0057E8B59F3C0CD4

BCH CODE BIT #: 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01 02 03 04 05 06

Should be: 0 0 0 0 1 0 1 0 1 1 1 1 1 1 1 0 1 0 0 0 1 0
Decoded: 0 0 0 0 1 0 1 0 1 1 1 1 1 1 1 0 1 0 0 0 1 0

*** BCH CODE OK ***

BCH CODE BIT #: 1 1 1 1 1 1 1 1 1 1 1 1
33 34 35 36 37 38 39 40 41 42 43 44

Should be: 1 1 0 0 1 1 0 1 0 1 0 0
Decoded: 1 1 0 0 1 1 0 1 0 1 0 0

*** BCH CODE OK ***

WSMR ELECTRONIC PROVING GROUND, US ARMY, FORT HUACHUCA, ARIZONA
MANU: MMInc MODEL NO: MBT-040600 SERIAL NO: 097
BEACON CERTIFICATION TEST RESULTS - OPEN / SHORT / 3:1 VSWR PERFORMANCE
MEASUREMENT DATE: 9 Feb 1959 TIME: 12:36:54

TESTED BY: J.C. [Signature]

APPROVED BY: Edwin [Signature]

MESSAGE DATA:

Message Format: 1
Protocol Flag: 0
Country Code: 0101101110
Protocol Code: 1011
Serial Number: 000000000001100001
Reported Latitude: N127 0
Reported Longitude: E255 0
Position Data Source Flag: 1
Spare (108): 1
Homing Device Flag: 0
Additional Data Flag: 1
Spare (111,112):
01
Delta Latitude (min): 0
Delta Latitude (sec): 60
Delta Longitude (min): 0
Delta Longitude (sec): 60
Spare (127-132): 000000

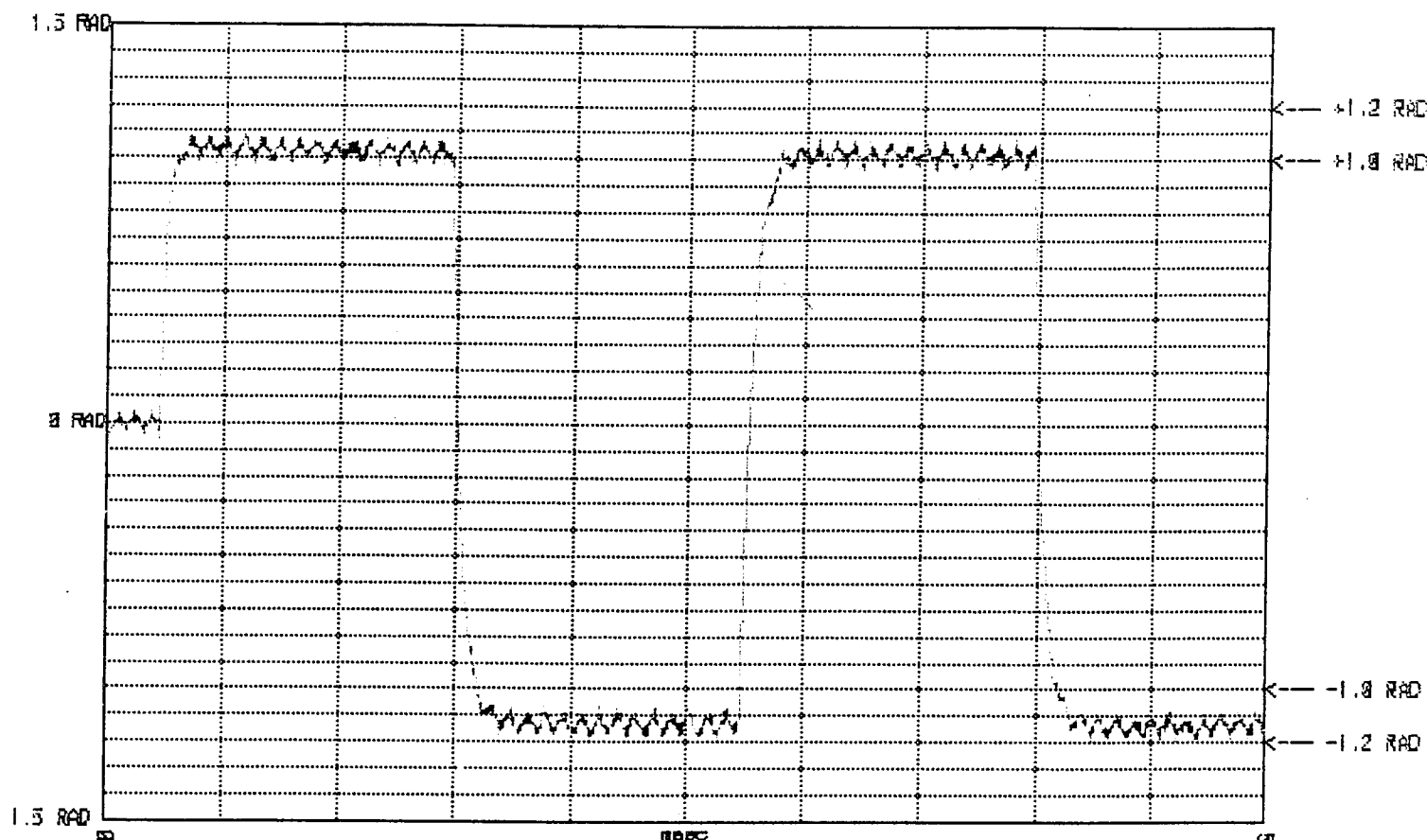
Corrected latitude: N127 1 0
Corrected longitude: E255 1 0

WSMR ELECTRONIC PROVING GROUND, US ARMY, FORT HUACHUCA, ARIZONA
 MANU: MMinc MODEL NO: MBT-040600 SERIAL NO: 097
 BEACON CERTIFICATION TEST RESULTS - OPEN / SHORT / 3:1 VSWR PERFORMANCE
 MEASUREMENT DATE: 9 Feb 1999 TIME: 12:36:55

TESTED BY: HCJH

APPROVED BY: Edna Day

PHASE MODULATION vs TIME



SPECIFICATIONS TESTED	LIMITS	RESULTS	UNITS	COMMENTS
Modulation: symmetry	< 0.05	.0024		passed
Modulation: rise time	150 ±100	128.2	us	passed
fall time	150 ±100	123.8	us	passed

WEMP ELECTRONIC PROVING GROUND, US ARMY, FORT HUACHUCA, ARIZONA

MANU: MMInc MODEL NO: MBT-040600 SERIAL NO: 097

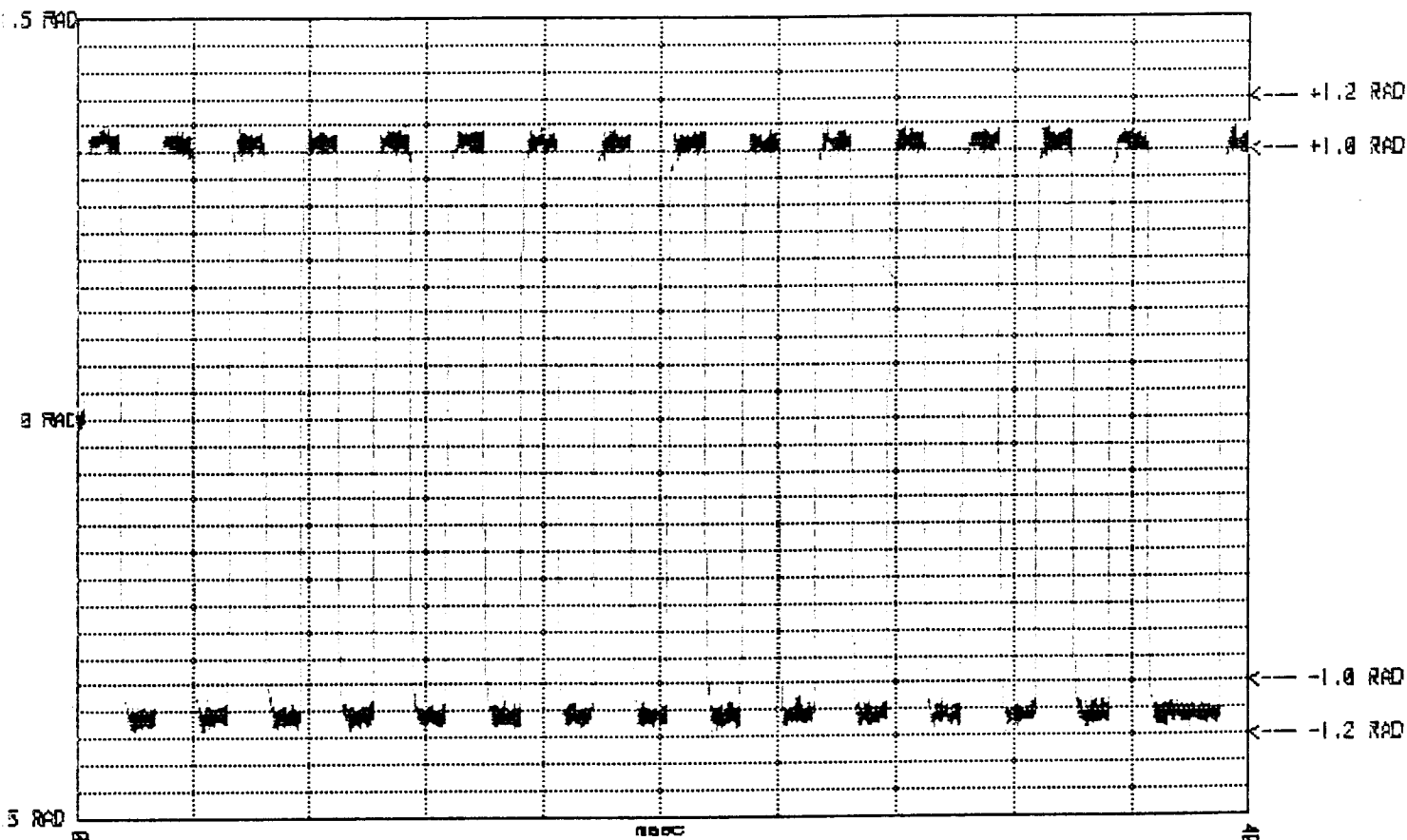
BEACON CERTIFICATION TEST RESULTS - OPEN / SHORT / 3:1 VSWR PERFORMANCE

MEASUREMENT DATE: 9 Feb 1999 TIME: 12:38:34

TESTED BY:

APPROVED BY:

PHASE MODULATION vs TIME



SPECIFICATIONS TESTED

LIMITS

RESULTS

UNITS

COMMENTS

Phase modulation: + AVG	+1.1 ±0.1	1.04	rad	passed
- AVG	-1.1 ±0.1	-1.12	rad	passed

Peak positive phase modulation: 1.11 rad

Peak negative phase modulation: -1.19 rad

WSMR ELECTRONIC PROVING GROUND, US ARMY, FORT HUACHUCA, ARIZONA

MANU: MMInc MODEL NO: MBT-040600 SERIAL NO: 097

BEACON CERTIFICATION TEST RESULTS - OPEN / SHORT / 3:1 VSWR PERFORMANCE

MEASUREMENT DATE: 9 Feb 1999 TIME: 12:40:16

TESTED BY:

APPROVED BY:

SPECIFICATIONS TESTED	LIMITS	RESULTS	UNITS	COMMENTS
Nominal transmitted frequency	406.025 $\pm$.002	406.025211	MHz	passed
Short term frequency stability	< 2.0E-9	2.44E-10		passed
Medium term: mean slope	< 1.0E-9	-2.61E-11	/min	passed
residual deviation	< 3.0E-9	3.57E-10		passed
Tx output power level	3.15 TO 7.93	4.06	W	passed
Burst envelope: rise time	< 5	.15	ms	passed
fall time	< 5	.07	ms	passed
Phase modulation: + AVG	+1.1 $\pm$ 0.1	1.04	rad	passed
- AVG	-1.1 $\pm$ 0.1	-1.12	rad	passed
Modulation: symmetry	< 0.05	.0024		passed
Modulation: rise time	150 $\pm$ 100	128.2	us	passed
fall time	150 $\pm$ 100	123.8	us	passed
Repetition period minimum	47.5 TO 52.5	48.3	s	passed
Repetition period maximum	47.5 TO 52.5	51.7	s	passed
Repetition period (max - min)	> 1	3.3	s	passed
Total transmission time minimum	514.8 TO 525.2	520.9	ms	passed
Total transmission time maximum	514.8 TO 525.2	520.9	ms	passed
Cw preamble minimum	158.4 TO 161.6	159.1	ms	passed
Cw preamble maximum	158.4 TO 161.6	159.1	ms	passed
Message bit rate minimum	396.0 TO 404.0	399.4	bps	passed
Message bit rate maximum	396.0 TO 404.0	399.5	bps	passed

Intentionally Blank

MAXIMUM TEMPERATURE

First burst delay time: 66.0 sec (maximum)

WSMR ELECTRONIC PROVING GROUND, US ARMY, FORT HUACHUCA, ARIZONA

MANU: MMInc MODEL NO: MBT-40600 SERIAL NO: 097

BEACON CERTIFICATION TEST RESULTS - 406 SIGNAL SPURIOUS EMISSIONS AT MAXIMUM TEMP

MEASUREMENT DATE: 11 Feb 1999 TIME: 15:18:16

TESTED BY:

APPROVED BY:

SPURIOUS EMISSIONS

FREQUENCY (MHz)	RESULTS (dBc)	LIMITS (dBc)
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*** SPURIOUS TEST OK ***

SMR ELECTRONIC PROVING GROUND, US ARMY, FORT HUACHUCA, ARIZONA
MANU: MMinC MODEL NO: MBT-40600 SERIAL NO: 097
BEACON CERTIFICATION TEST RESULTS - 406 SIGNAL SPURIOUS EMISSIONS AT MAXIMUM TEMP
MEASUREMENT DATE: 11 Feb 1999 TIME: 18:09:27
TESTED BY: [Signature] APPROVED BY: [Signature]

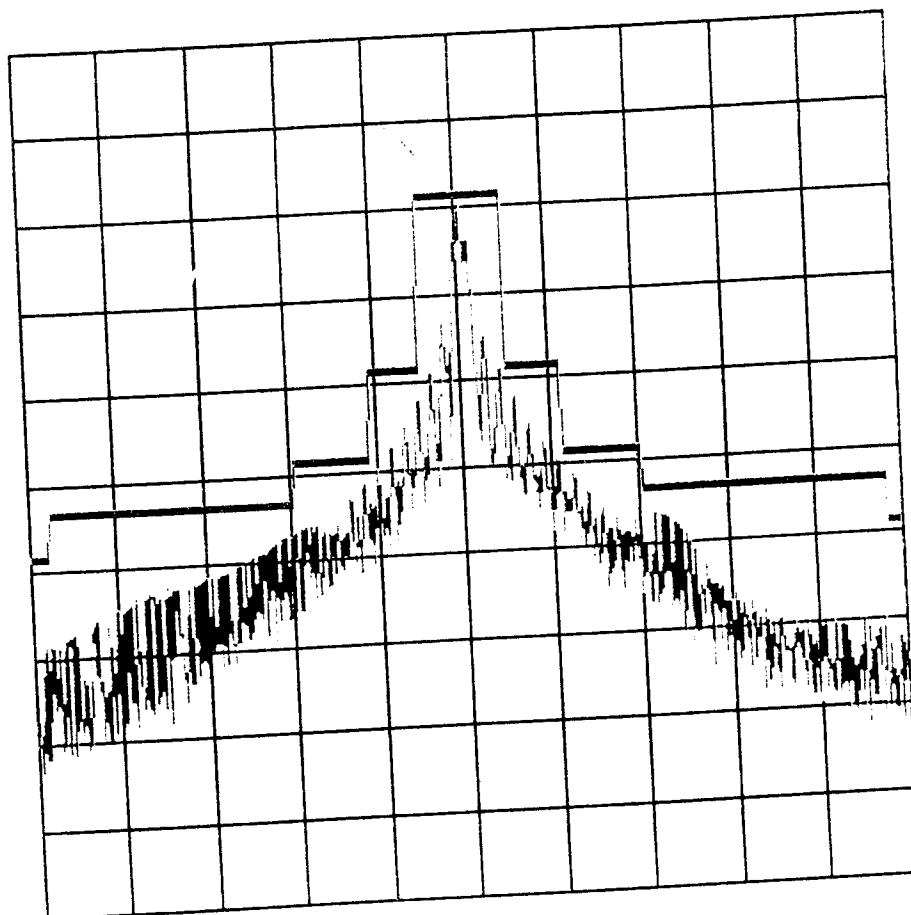
REF 20 dBm

Feb 1999

10 dB/

CENTER: 406.025MHz

BAND: 50KHz



SPURIOUS EMISSIONS SPECTRUM

WSMR ELECTRONIC PROVING GROUND, US ARMY, FORT HUACHUCA, ARIZONA

MANU: MMinC MODEL NO: MBT-40600 SERIAL NO: 097

BEACON CERTIFICATION TEST RESULTS - OPEN / SHORT / 3:1 VSWR PERFORMNACE AT MAXIMUM TEMP

MEASUREMENT DATE: 11 Feb 1999 TIME: 14:24:10

TESTED BY: *[Signature]*

APPROVED BY: *[Signature]*

BEACON DIGITAL MESSAGE VERIFICATION

SYNCHRONIZATION BIT #: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Should be: 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

Decoded: 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

*** BIT SYNCHRONIZATION OK ***

FRAME SYNCHRONIZATION BIT #: 16 17 18 19 20 21 22 23 24

Should be: 0 0 0 1 0 1 1 1 1

Decoded: 0 0 0 1 0 1 1 1 1

*** FRAME SYNCHONIZATION OK ***

MESSAGE TYPE: LONG MESSAGE (bit 25 = 1)

15 Hex Beacon ID (bits 26-85): 2DD60030BF81FE0

30 Hex Message (bits 25-144): 96EB00185FC0FF0057E8B59F3C0CD4

BCH CODE BIT #: 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01 02 03 04 05 06

Should be: 0 0 0 0 1 0 1 0 1 1 1 1 1 1 0 1 0 0 0 1 0

Decoded: 0 0 0 0 1 0 1 0 1 1 1 1 1 1 0 1 0 0 0 1 0

*** BCH CODE OK ***

1 1 1 1 1 1 1 1 1 1 1 1

BCH CODE BIT #: 33 34 35 36 37 38 39 40 41 42 43 44

Should be: 1 1 0 0 1 1 0 1 0 1 0 0

Decoded: 1 1 0 0 1 1 0 1 0 1 0 0

*** BCH CODE OK ***

WSMR ELECTRONIC PROVING GROUND, US ARMY, FORT HUACHUCA, ARIZONA
MANU: MMInc MODEL NO: MBT-40600 SERIAL NO: 097
BEACON CERTIFICATION TEST RESULTS - OPEN / SHORT / 3:1 VSWR PERFORMNACE AT MAXIMUM TEMP
MEASUREMENT DATE: 11 Feb 1999 TIME: 14:58:35

TESTED BY: *[Signature]*

APPROVED BY: *[Signature]*

MESSAGE DATA:

Message Format: 1
Protocol Flag: 0
Country Code: 0101101110
Protocol Code: 1011
Serial Number: 000000000001100001
Reported Latitude: N127 0
Reported Longitude: E255 0
Position Data Source Flag: 1
Spare (108): 1
Homing Device Flag: 0
Additional Data Flag: 1
Spare (111,112):
01
Delta Latitude (min): 0
Delta Latitude (sec): 60
Delta Longitude (min): 0
Delta Longitude (sec): 60
Spare (127-132): 000000

Corrected latitude: N127 1 0
Corrected longitude: E255 1 0

WSMR ELECTRONIC PROVING GROUND, US ARMY, FORT HUACHUCA, ARIZONA

MANU: MMinc MODEL NO: MBT-40600 SERIAL NO: 097

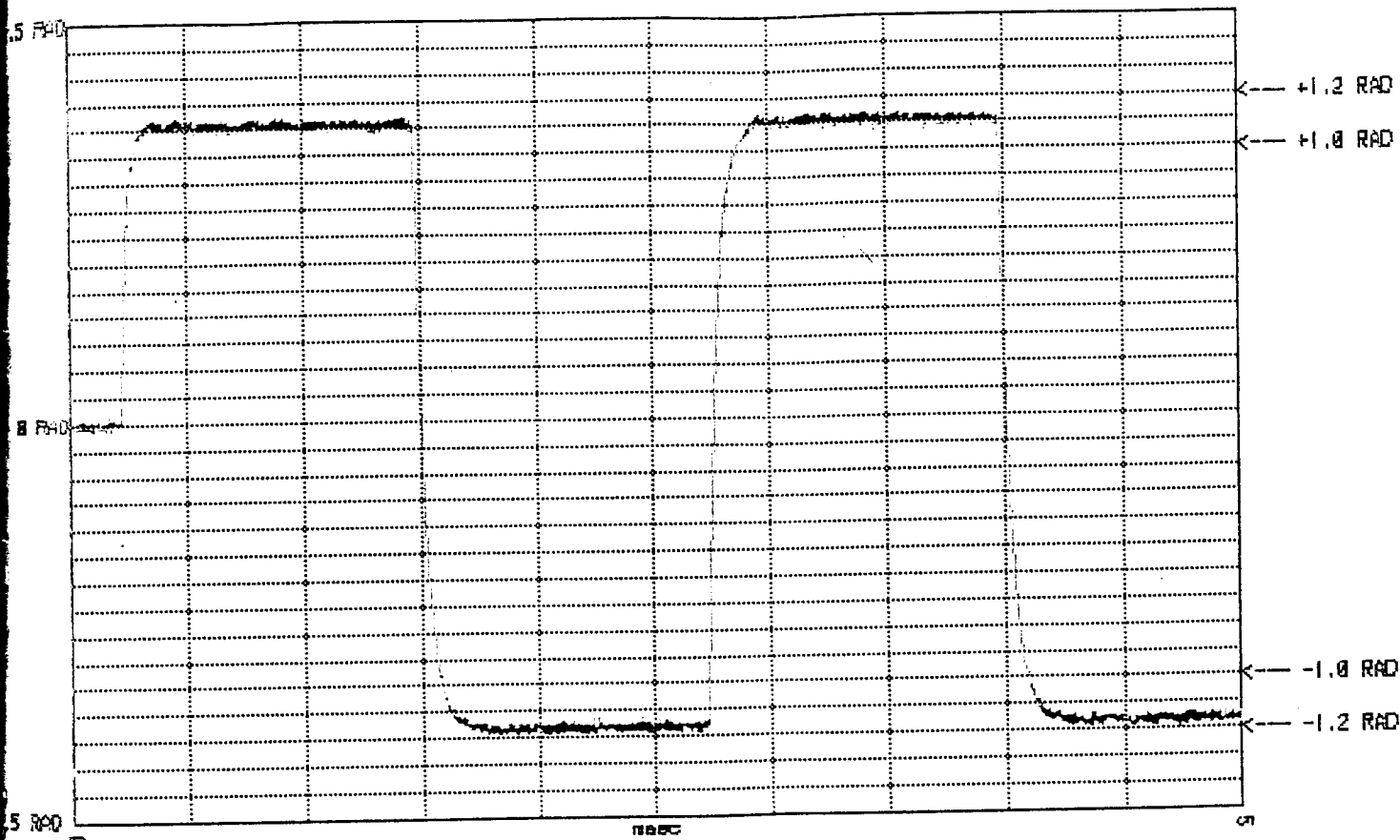
BEACON CERTIFICATION TEST RESULTS - OPEN / SHORT / 3:1 VSWR PERFORMANCE AT MAXIMUM TEMP

MEASUREMENT DATE: 11 Feb 1999 TIME: 14:58:36

TESTED BY: [Signature]

APPROVED BY: [Signature]

PHASE MODULATION vs TIME



SPECIFICATIONS TESTED	LIMITS	RESULTS	UNITS	COMMENTS
Modulation: symmetry	< 0.05	.0005		passed
Modulation: rise time	150 $\pm$ 100	136.3	us	passed
fall time	150 $\pm$ 100	124.5	us	passed

NSMR ELECTRONIC PROVING GROUND, US ARMY, FORT HUACHUCA, ARIZONA

MANU: MMinc MODEL NO: MBT-40600 SERIAL NO: 097

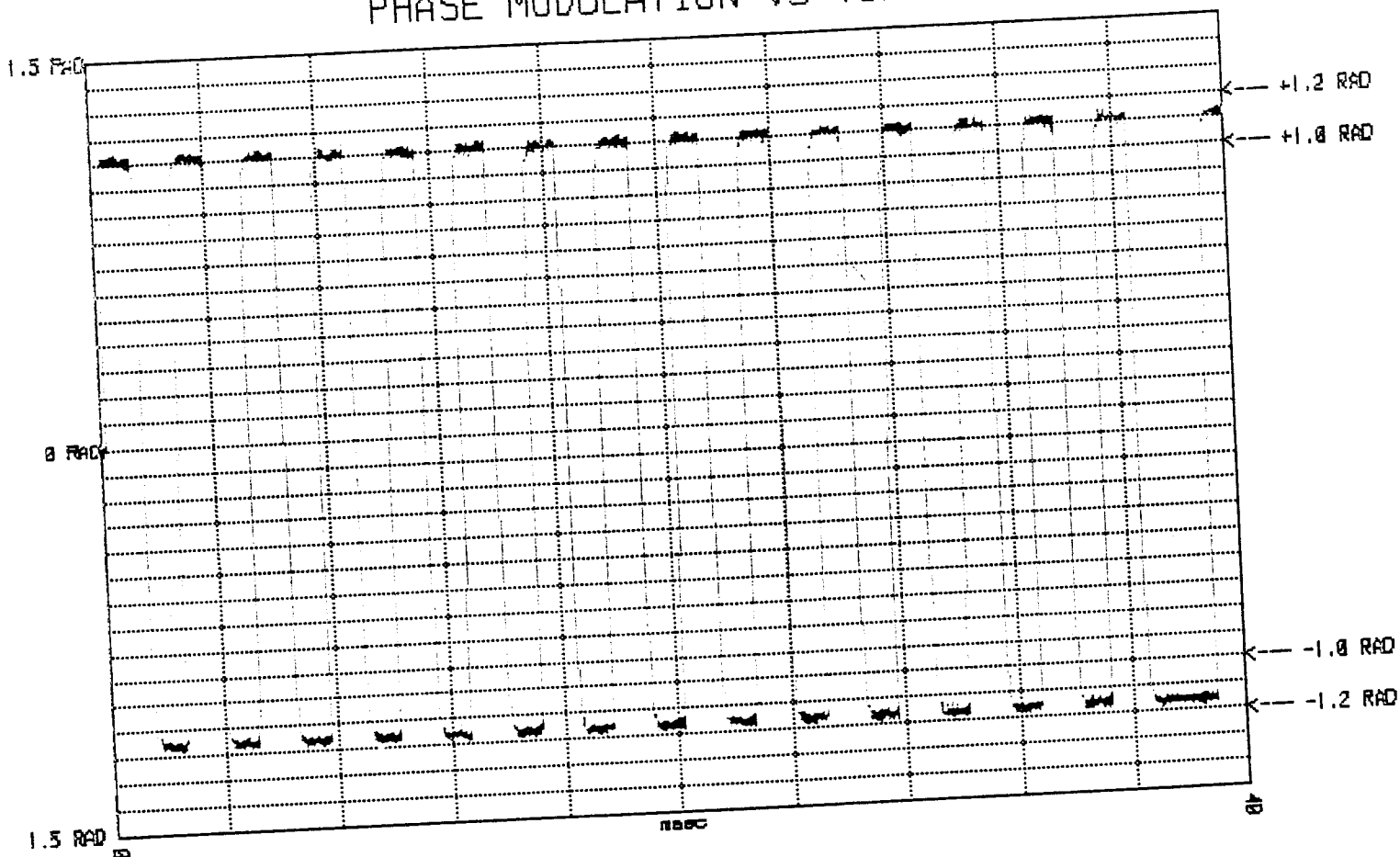
BEACON CERTIFICATION TEST RESULTS - OPEN / SHORT / 3:1 VSWR PERFORMANCE AT MAXIMUM TEMP

MEASUREMENT DATE: 11 Feb 1999 TIME: 15:00:17

TESTED BY: [Signature]

APPROVED BY: [Signature]

PHASE MODULATION vs TIME



SPECIFICATIONS TESTED	LIMITS	RESULTS	UNITS	COMMENTS
Phase modulation: + AVG	+1.1 ±0.1	1.12	rad	passed
- AVG	-1.1 ±0.1	-1.16	rad	passed

Peak positive phase modulation: 1.17 rad
Peak negative phase modulation: -1.20 rad

WSMR ELECTRONIC PROVING GROUND, US ARMY, FORT HUACHUCA, ARIZONA

MANU: MMInc MODEL NO: MBT-40600 SERIAL NO: 097

BEACON CERTIFICATION TEST RESULTS - OPEN / SHORT / 3:1 VSWR PERFORMNACE AT MAXIMUM TEMP

MEASUREMENT DATE: 11 Feb 1999 TIME: 15:02:00

TESTED BY: *[Signature]*

APPROVED BY: *[Signature]*

SPECIFICATIONS TESTED	LIMITS	RESULTS	UNITS	COMMENTS
Nominal transmitted frequency	406.025 ±.002	406.025295	MHz	passed
Short term frequency stability	< 2.0E-9	1.35E-10		passed
Medium term: mean slope	< 1.0E-9	-1.81E-10	/min	passed
residual deviation	< 3.0E-9	2.53E-10		passed
Tx ouput power level	3.15 TO 7.93	4.17	W	passed
Burst envelope: rise time	< 5	.15	ms	passed
fall time	< 5	.06	ms	passed
Phase modulation: + AVG	+1.1 ±0.1	1.12	rad	passed
- AVG	-1.1 ±0.1	-1.16	rad	passed
Modulation: symmetry	< 0.05	.0005		passed
Modulation: rise time	150 ±100	136.3	us	passed
fall time	150 ±100	124.5	us	passed
Repetition period minimum	47.5 TO 52.5	48.3	s	passed
Repetition period maximum	47.5 TO 52.5	51.8	s	passed
Repetition period (max - min)	>1	3.5	s	passed
Total transmission time minimum	514.8 TO 525.2	521.2	ms	passed
Total transmission time maximum	514.8 TO 525.2	521.2	ms	passed
Cw preamble minimum	158.4 TO 161.6	159.3	ms	passed
Cw preamble maximum	158.4 TO 161.6	159.3	ms	passed
Message bit rate minimum	396.0 TO 404.0	399.4	bps	passed
Message bit rate maximum	396.0 TO 404.0	399.5	bps	passed