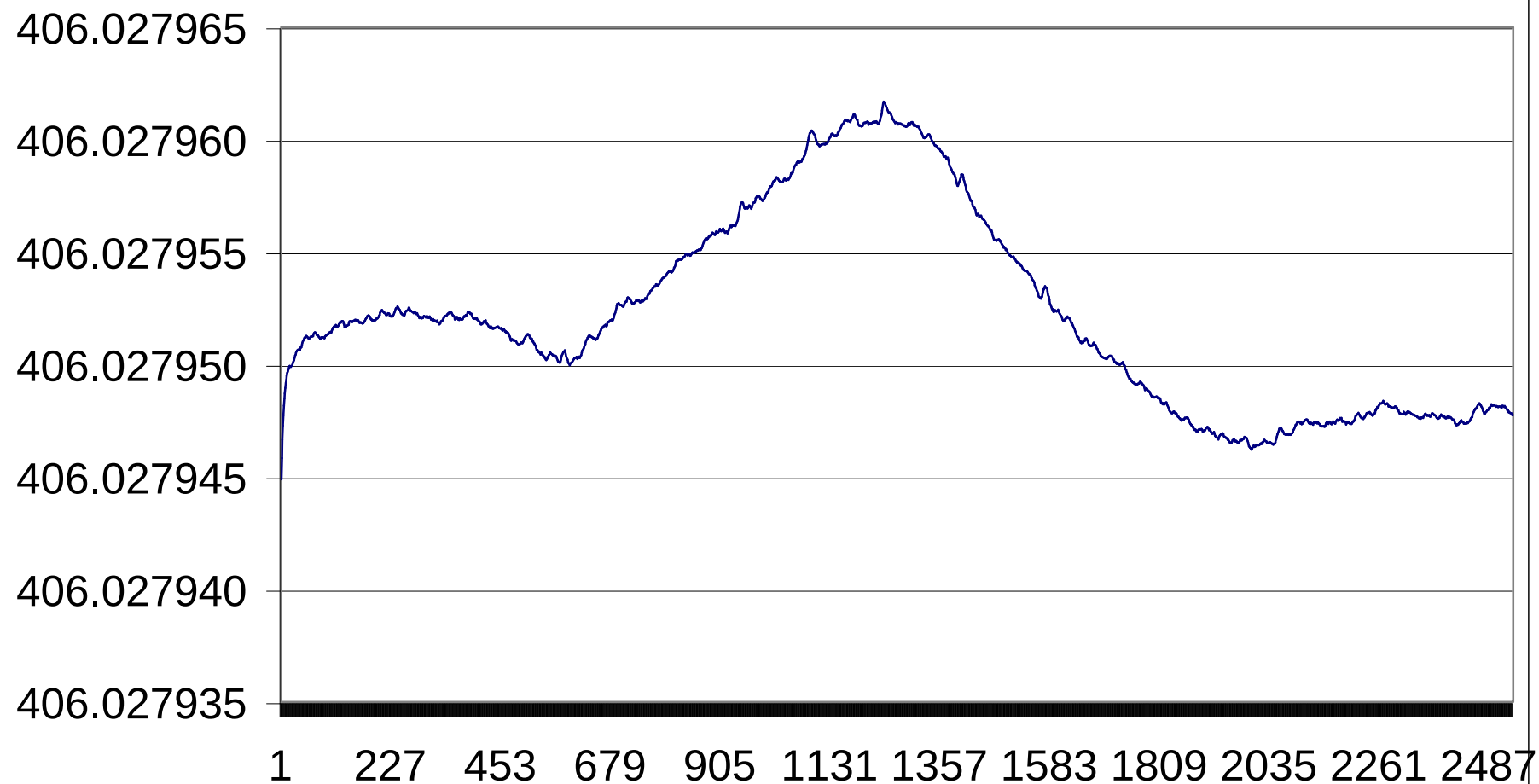


PLB-200 S/N 7 Gradient Test 4/26/04
Freq Spec: ± 1 KHz max



ETSI DRY HEAT TEST -55°C

TURNED ON 08:30 AM

DATE: 05-19-2004 TIME: 10:59:09 AM FINISHED RLB303C Ver.7.7 9/2/1999

2DDC64800EFFBFF

>>Engineering Report<<

PASSED

C/S-201-USA-7

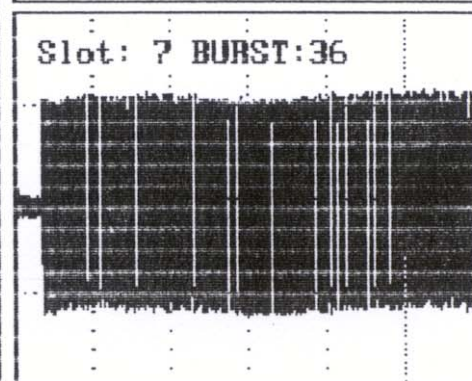
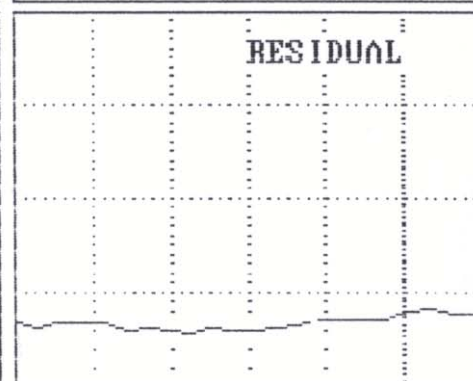
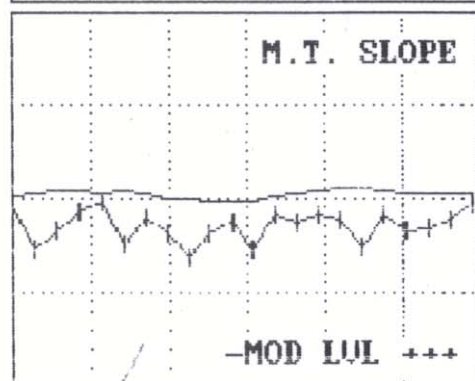
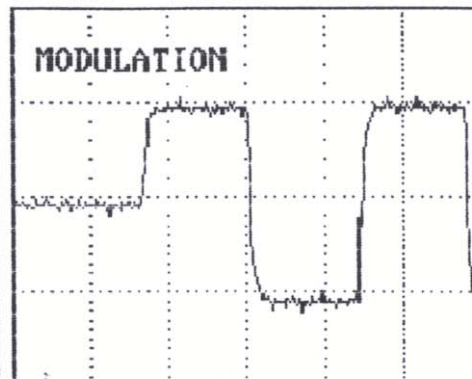
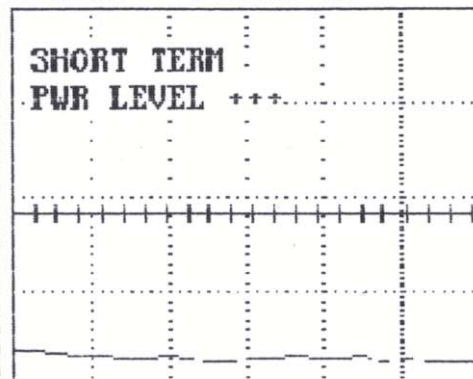
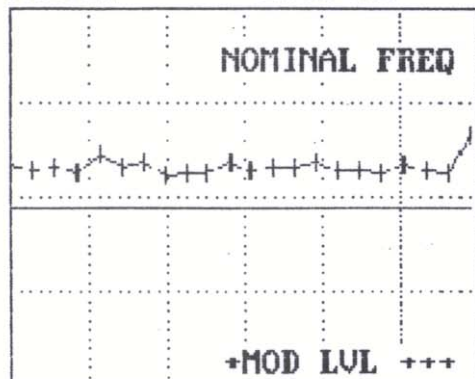
PASSED

-58.9 Hz

PASSED

1.409E-10

PEAKS: +1.165 -1.337 rad



PASSED

3.446E-11

PASSED

6.163E-10

PEAKS: +1.289 -1.389 rad

NOMINAL FREQUENCY: 406.02494 MHz
POWER OUTPUT: 4.524 Watts
(11.700 dB) +36.55 dBm
POWER STABILITY: 10.65 %
POWER RISE TIME: 1030 µsec
PEAK VOLTAGE: +2.244 Volts
DRIFT SLOPES: 1) -2.80E-01 rad/sec
2) -2.80E-01 rad/sec
3) -2.80E-01 rad/sec
MODULATION LEVELS: +1.127 radians
+1.130 -1.120 -1.123 radians
+0.005 OFFSET +0.002 radians
MODULATION TIMES: RISE 133 µsec
FALL 130 µsec
SYMMETRY 0.70 %
MODULATION BIT RATE: 398.49 Hz
BURST TIMES: AVG PERIOD 50.6 sec
CARRIER DURATION 159.7 msec
MESSAGE DURATION 361.7 msec
TOTAL DURATION 521.4 msec
PREAMBLE LEAKAGE LEVEL 35.0 dBc
LEAKAGE LENGTH 0.3 msec

Slot No: 7
HEXADECIMAL MESSAGE
2DDC64800EFFBFF
FFFE2F96EE3240077FDFFB74ED3783E0F66C
BIT SYNCHRONIZATION..... OK
FRAME SYNCHRONIZATION... OK
MESSAGE FORMAT..... LONG
PROTOCOL FLAG..... STANDARD
COUNTRY..... USA
PROTOCOL CODE..... TEST MODE
C/S CERTIFICATE No..... 201
SERIAL NUMBER..... 7
LATITUDE.....Default (127.75)
LONGITUDE.....Default (255.75)
ERROR CORRECTION CODE 1. OK
ENCODED DATA SOURCE..... Internal
121.5 MHz HOMING..... Yes
FIXED Bits..... OK
LATITUDE OFFSET.....Def.(+ 0' 60'')
LONGITUDE OFFSET.....Def.(+ 0' 60'')
ERROR CORRECTION CODE 2. OK

ETSI COLD TEMPERATURE TEST - 20°C

DATE: 05-20-2004 TIME: 09:17:10

RLB303C Ver.7.7 9/2/1999

2DDC64800EFFFBF

>>Engineering Report<<

PASSED

C/S-201-USA-7

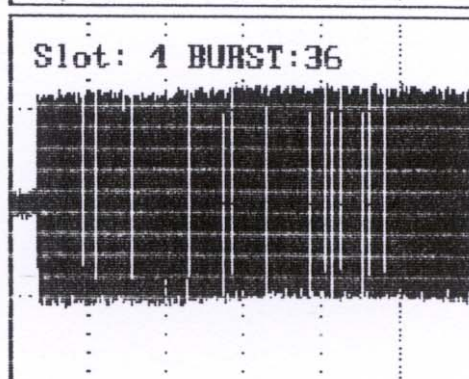
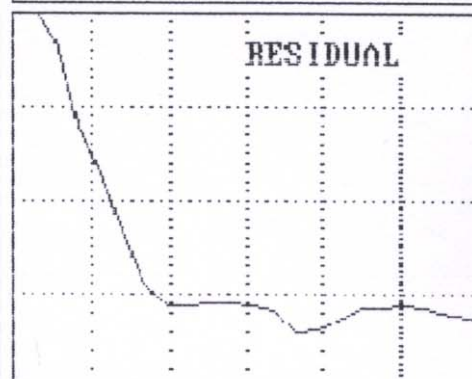
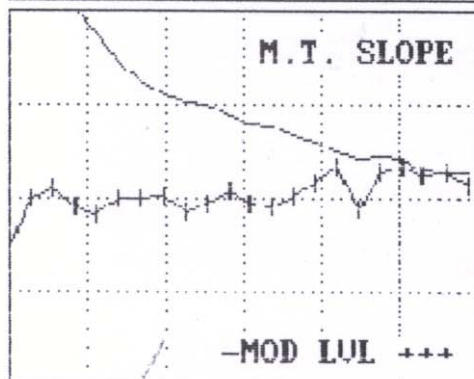
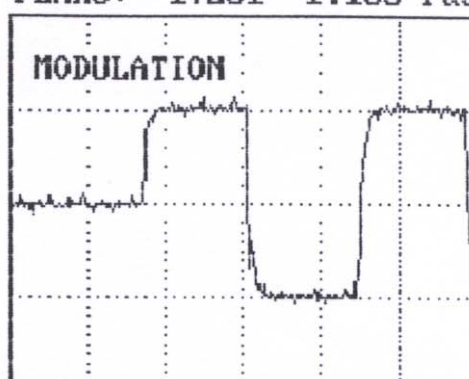
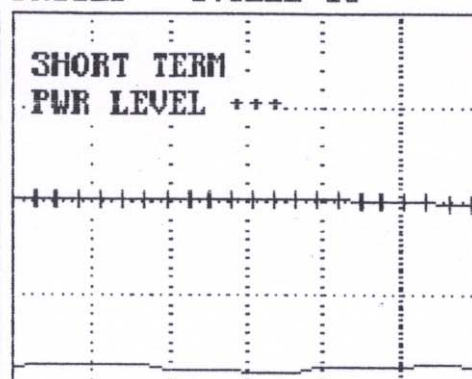
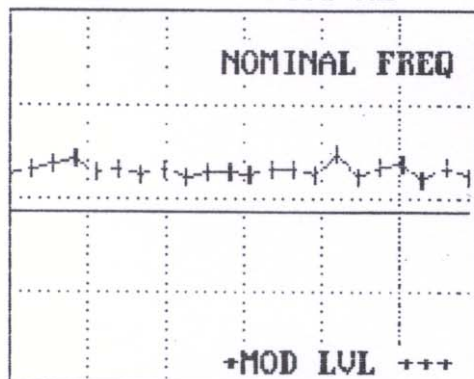
PASSED

-74.3 Hz

PASSED

1.322E-10

PEAKS: +1.251 -1.165 rad



PASSED

2.102E-10

PASSED

6.627E-10

PEAKS: +1.428 -1.224 rad

NOMINAL FREQUENCY: 406.02492 MHz
 POWER OUTPUT: 4.933 Watts
 (11.700 dB) +36.93 dBm
 POWER STABILITY: 10.47 %
 POWER RISE TIME: 1060 µsec
 PEAK VOLTAGE: +2.339 Volts
 DRIFT SLOPES: 1) +4.34E-01 rad/sec
 2) +4.34E-01 rad/sec
 3) +4.34E-01 rad/sec
 MODULATION LEVELS: +1.107 radians
 +1.129 -1.100 -1.103 radians
 +0.014 OFFSET +0.002 radians
 MODULATION TIMES: RISE 139 µsec
 FALL 140 µsec
 SYMMETRY 0.59 %
 MODULATION BIT RATE: 398.35 Hz
 BURST TIMES: AVG PERIOD 50.4 sec
 CARRIER DURATION 159.6 msec
 MESSAGE DURATION 361.7 msec
 TOTAL DURATION 521.3 msec
 PREAMBLE LEAKAGE LEVEL 35.0 dBc
 LEAKAGE LENGTH 0.2 msec

Slot No: 4
 HEXADECIMAL MESSAGE
 2DDC64800EFFFBF
 FFFE2F96EE3240077FDFFB74ED3783E0F66C
 BIT SYNCHRONIZATION.... OK
 FRAME SYNCHRONIZATION... OK
 MESSAGE FORMAT..... LONG
 PROTOCOL FLAG..... STANDARD
 COUNTRY..... USA
 PROTOCOL CODE..... TEST MODE
 C/S CERTIFICATE No..... 201
 SERIAL NUMBER..... 7
 LATITUDE.....Default (127.75)
 LONGITUDE.....Default (255.75)
 ERROR CORRECTION CODE 1. OK
 ENCODED DATA SOURCE..... Internal
 121.5 MHz HOMING..... Yes
 FIXED Bits..... OK
 LATITUDE OFFSET.....Def.(+ 0' 60'')
 LONGITUDE OFFSET.....Def.(+ 0' 60'')
 ERROR CORRECTION CODE 2. OK

S/N 12

25°C

after assembly

DATE: 05-17-2004

TIME: 16:46:08

RLB303D Ver.8.2 3/24/2004

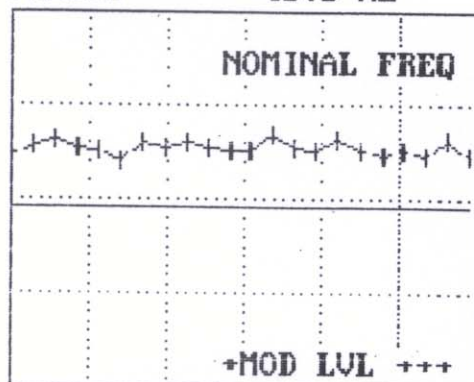
2DDE00063F81FE0

>>Engineering Report<<

PASSED

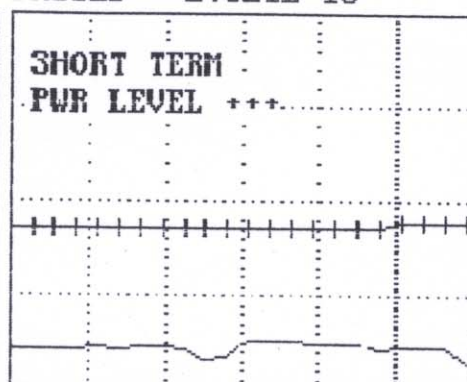
PASSED

-40.6 Hz

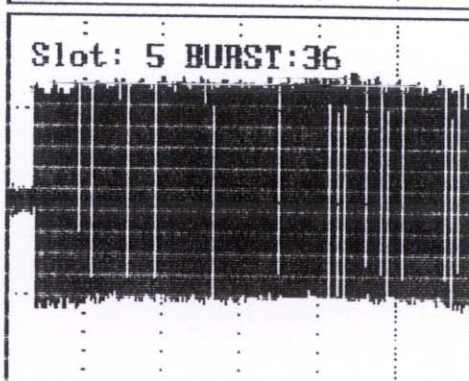
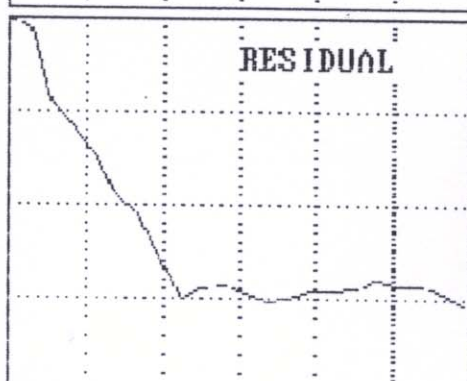
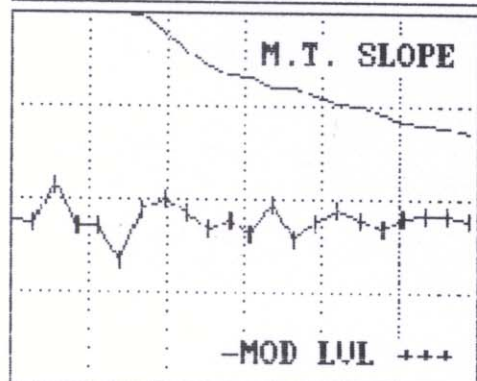
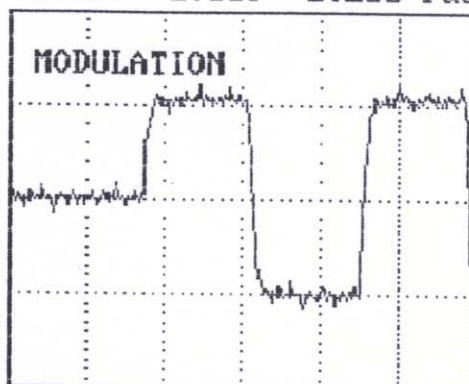


PASSED

2.321E-10



PEAKS: +1.389 -1.266 rad



PASSED

4.172E-10

PASSED

8.524E-10

PEAKS: +1.573 -1.266 rad

FREQUENCY OFFSET: -40.6 Hz
 POWER OUTPUT: 4.390 Watts
 (11.700 dB) +36.42 dBm
 POWER STABILITY: 9.57 %
 POWER RISE TIME: 940 µsec
 PEAK VOLTAGE: +2.216 Volts
 DRIFT SLOPES: 1) +5.55E-01 rad/sec
 2) +5.55E-01 rad/sec
 3) +5.55E-01 rad/sec
 MODULATION LEVELS: +1.138 radians
 +1.152 -1.123 -1.135 radians
 +0.014 OFFSET +0.002 radians
 MODULATION TIMES: RISE 141 µsec
 FALL 147 µsec
 SYMMETRY 0.66 %
 MODULATION BIT RATE: 398.62 Hz
 BURST TIMES: AVG PERIOD 50.5 sec
 CARRIER DURATION 159.8 msec
 MESSAGE DURATION 361.7 msec
 TOTAL DURATION 521.5 msec
 PREAMBLE LEAKAGE LEVEL 35.0 dBc
 LEAKAGE LENGTH 0.2 msec

Slot No: 5

HEXADECIMAL MESSAGE

2DDE00063F81FE0

FFFE2F96EF00031FCOFF001895F59F3C0CD4

Bit Synchronization.....OK

Frame Synchronization...OK

Format Flag.....LONG

Protocol Flag.....LOCATION

Country.....USA (366)

Protocol Code:(1111)....NAT LOC TEST

National ID.....12

Data Source.....External

Latitude.....Default

Longitude.....Default

Homing.....121.5 MHz

Fixed.....110 OK

Delta Lat.....Default

Delta Lon.....Default

BCH-1.....OK

BCH-2.....OK

+25°C 50Ω

DATE: 04-16-2004 TIME: 10:36:52

RLB303C Ver.7.7 9/2/1999

2DDC648016FFBFF

>>Engineering Report<<

PASSED

C/S-201-USA-11

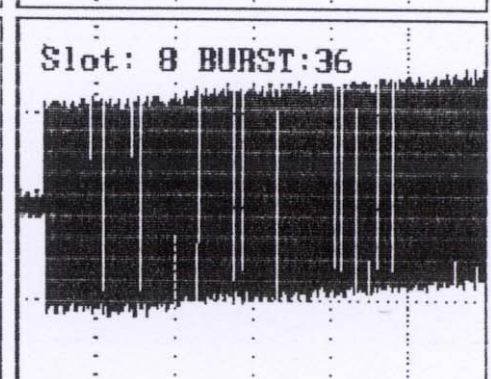
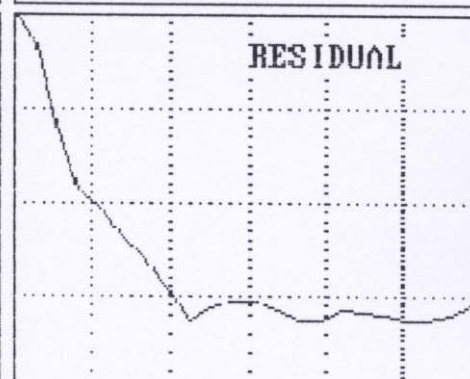
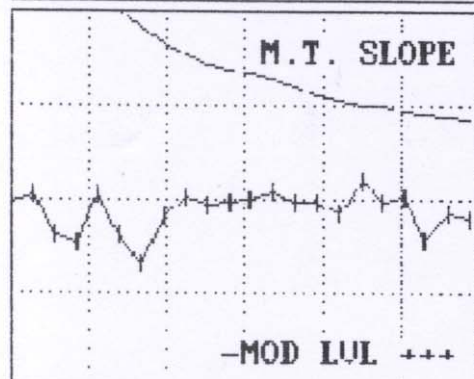
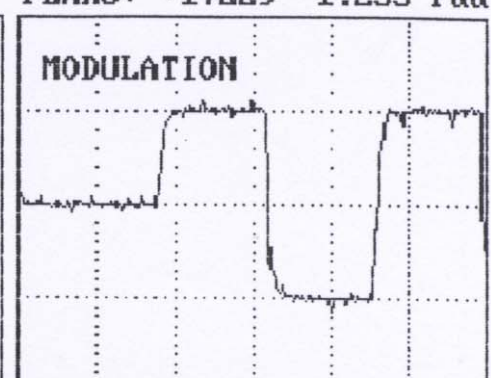
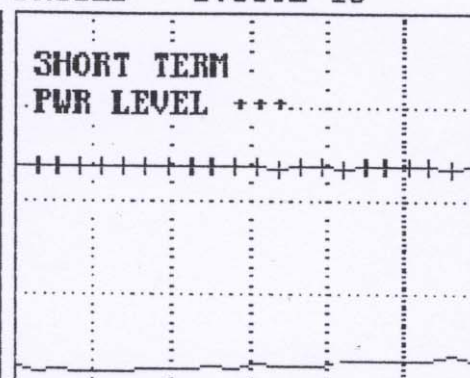
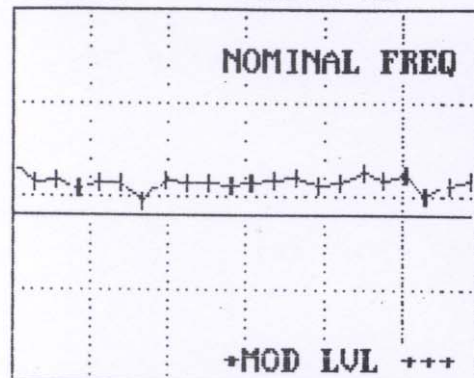
PASSED

-106.4 Hz

PASSED

1.669E-10

PEAKS: +1.229 -1.255 rad



PASSED

4.750E-10

PASSED

6.826E-10

PEAKS: +1.644 -1.284 rad

NOMINAL FREQUENCY: 406.02489 MHz
POWER OUTPUT: 5.847 Watts
(11.700 dB) +37.67 dBm
POWER STABILITY: 9.74 %
POWER RISE TIME: 940 µsec
PEAK VOLTAGE: +2.542 Volts
DRIFT SLOPES: 1) +7.01E-01 rad/sec
2) +7.01E-01 rad/sec
3) +7.01E-01 rad/sec
MODULATION LEVELS: +1.109 radians
+1.113 -1.110 -1.105 radians
+0.002 OFFSET +0.002 radians
MODULATION TIMES: RISE 148 µsec
FALL 156 µsec
SYMMETRY 0.73 %
MODULATION BIT RATE: 398.78 Hz
BURST TIMES: AVG PERIOD 50.4 sec
CARRIER DURATION 159.9 msec
MESSAGE DURATION 361.7 msec
TOTAL DURATION 521.6 msec
PREAMBLE LEAKAGE LEVEL 35.0 dBc
LEAKAGE LENGTH 0.2 msec

Slot No: 8

HEXADECIMAL MESSAGE

2DDC648016FFBFF

FFFE2F96EE32400B7FDFF805047783E0F66C

BIT SYNCHRONIZATION..... OK

FRAME SYNCHRONIZATION... OK

MESSAGE FORMAT..... LONG

PROTOCOL FLAG..... STANDARD

COUNTRY..... USA

PROTOCOL CODE..... TEST MODE

C/S CERTIFICATE No..... 201

SERIAL NUMBER..... 11

LATITUDE.....Default (127.75)

LONGITUDE.....Default (255.75)

ERROR CORRECTION CODE 1. OK

ENCODED DATA SOURCE..... Internal

121.5 MHz HOMING..... Yes

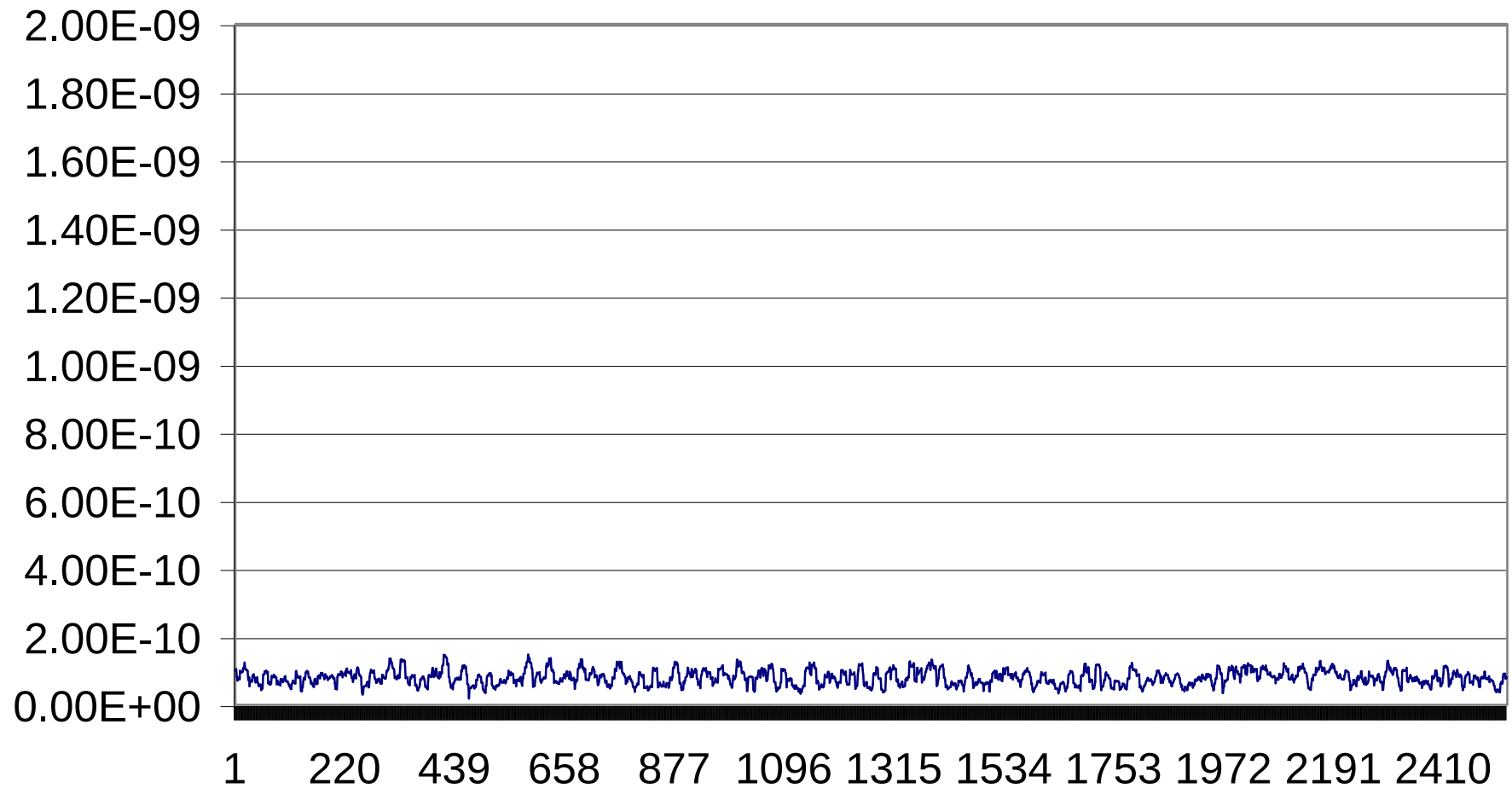
FIXED Bits..... OK

LATITUDE OFFSET.....Def.(+ 0' 60'')

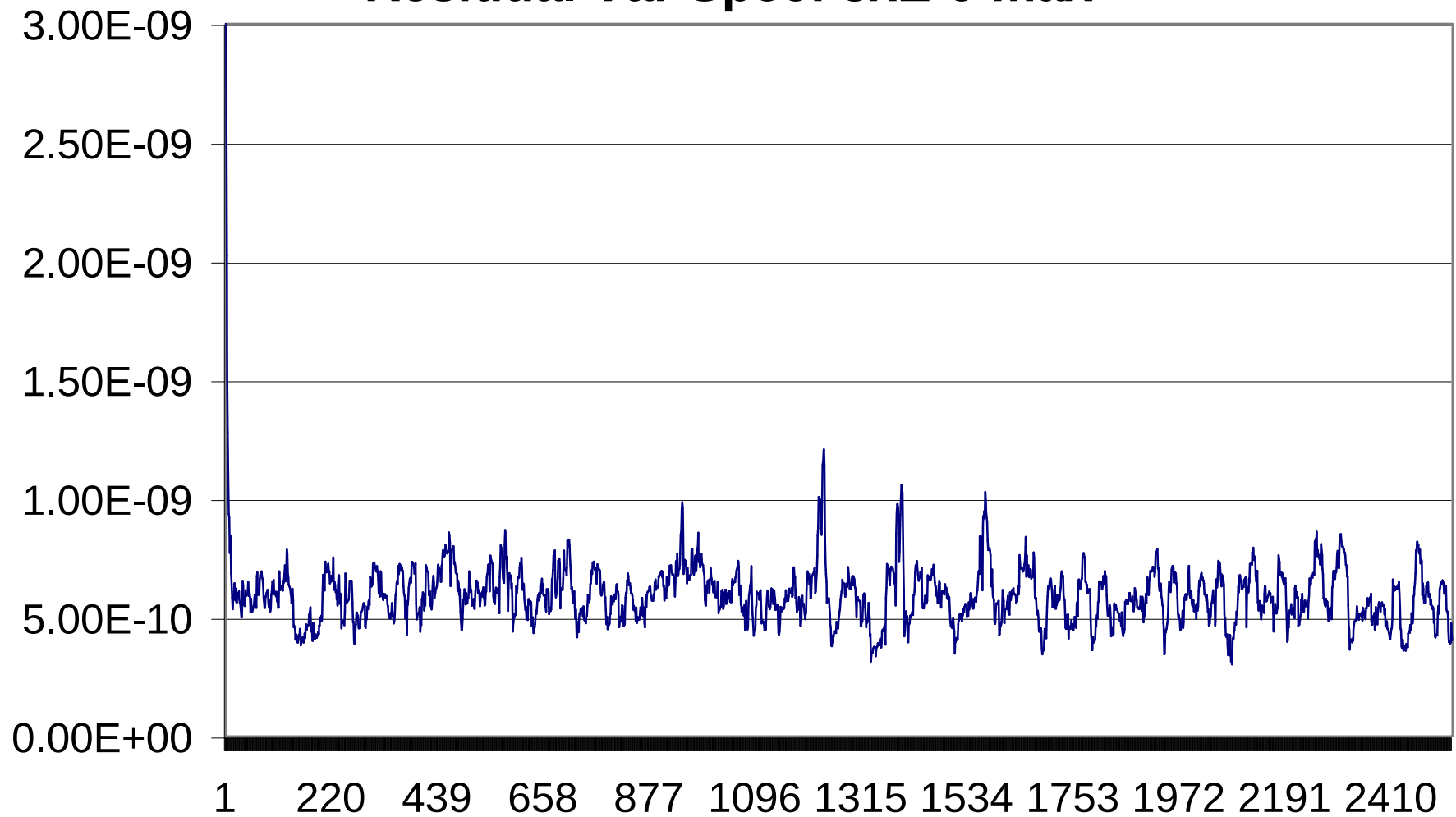
LONGITUDE OFFSET.....Def.(+ 0' 60'')

ERROR CORRECTION CODE 2. OK

PLB-200 S/N 7 Gradient Test 4/26/04
Short Term Stab Spec: 2xE-9max.



PLB-200 S/N 7 Gradient Test 4/26/04
Residual Var Spec: 3xE-9 max



PLB-200 S/N 7 Gradient Test 4/26/04
Medium Term Slope Spec: $\pm 1\text{E-}9$

