

***** MLMS Main Test Menu Final Test Data Summary *****

Serial Number: 0026
Model Number: MLMS-0260B
Time: 2:16:38 PM
Date: 11/7/2017
Minimum Frequency: 250.000 MHz
Maximum Frequency: 6000.000 MHz
Frequency Step Size: 0.001 MHz
External 100 MHz PLL Reference Frequency: 10.0 MHz
Maximum RF Level (Min.): 11.0 dBm
Maximum RF Level (Max.): 20.0 dBm
Minimum Operating Temperature: 0 Degrees C.
Maximum Operating Temperature: 60 Degrees C.
MLMS Firmware Version: 2.0 Sep 2 2016
MLWI Sales Order #: 21-0000
MLWI Outline Drawing #: 211-001 A

Final Test Data Check Point Status:

Config data file backup = Pass
Coarse Cal file = Pass
Fine Cal file = Pass
Xtal Oscillator Cal file = Pass
Frequency Lock test file = Pass
RF Max Power test file = Pass
Harmonics test file = Pass
Random Spur test file = Pass
Switching Speed test file = Pass
Phase Noise test file = Pass
NOVO Locked = Pass
Unit Health = Pass
Xtal SN Exists = Pass
Last Self Test = Pass
Full Cal Status = Pass
Coarse Cal = Pass
Fine Cal = Pass
PLL Locked Status = Pass
MLWI Job # = Pass
MLWI Drawing # = Pass
Current Self Test Run = Pass

Pass - Unit is Ready to Ship

Label unit per outline drawing listed above.
Fill out all paperwork and submit to QA for inspection.
Copy all paperwork to include in shipping box.

SHIPPING CHECKLIST:

- 1. Labeled unit with SMA connector protectors installed
2. USB cable (1 per unit)
3. MLMS support CD Rom (1 per lot)
4. J1 mating connector (1 per unit)
5. J1 connector pins (9 per unit)
6. MLMS quick start guide (1 per lot)
7. Copy of completed C of C
8. Copy of test data packet (1 per unit)
9. Copy of outline drawing (1 per unit)
10. Copy of completed Packing list (1 per unit)

Check box

Horizontal lines for check boxes corresponding to the shipping checklist items.

Notes:

Place labeled unit into anti-static pouch.
Place CD and USB cables in a separate large anti-static pouch.
Staple bags with J1 mating items to paperwork.
Box and ship product.

Initials: _____

Date: _____

***** Frequency Lock Test from 250.000 MHz to 6000.000 MHz in 10 MHz Steps *****

Serial Number: 0026
Model Number: MLMS-0260B
Time: 1:53:01 PM
Date: 11/7/2017
Minimum Frequency: 250.000 MHz
Maximum Frequency: 6000.000 MHz
Temperature: +33.5C Deg. C
NOVO State: UnLocked
Power Supply Spec: +5.0 VDC +/- 0.25 V @ < 550 mA
Power Supply Spec: +15.0 VDC +/- 0.50 V @ < 350 mA
Accuracy Tested to: +/-0.002 MHz

Begin Frequency Lock Test from 250.000 MHz to 6000.000 MHz in 10 MHz Steps

Total Frequency Errors: 0

Finish Time: 1:53:31 PM

Begin Random Frequency Lock Test from 250.000 MHz to 6000.000 MHz (1000 Frequencies)

Total Random Frequency Errors: 0

Finish Time: 1:54:40 PM

Internal Power Supply Voltage Readings:

+2.5V = +2.5V Pass
+3.3V = +3.3V Pass
+5.0V = +5.1V Pass
-5.0V = -5.0V Pass
+6.75V = +6.7V Pass
+13.5V = +13.4V Pass
100 MHz PLL V = +1.6V Pass
YIG PLL V = +7.0V Pass

External Power Supply Voltage and Current Readings:

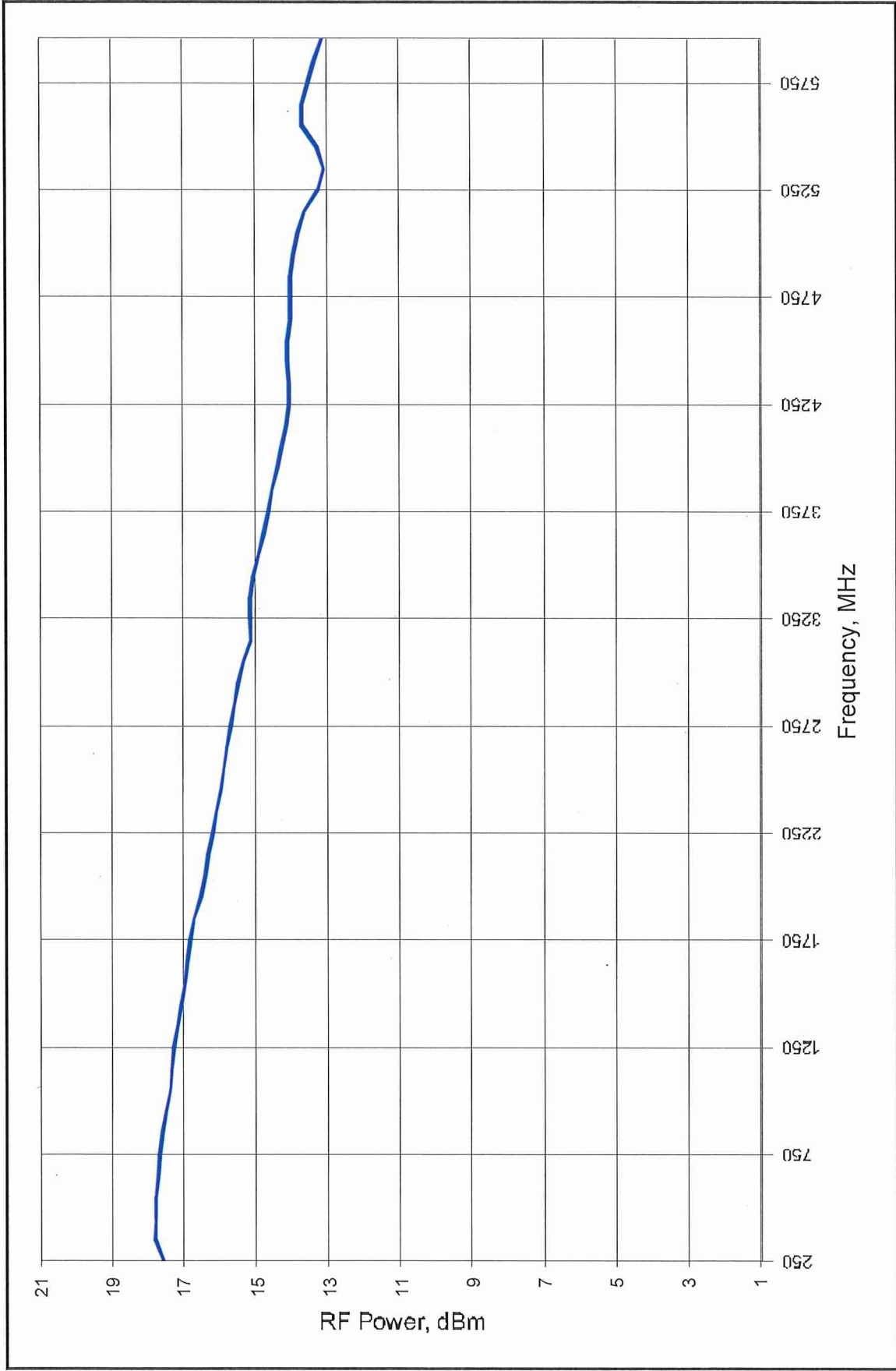
+5.0 VDC Voltage = 5.002V Pass
+5.0 VDC Current = 519mA Pass
+15.0 VDC Voltage = 14.994V Pass
+15.0 VDC Current = 270mA Pass

Finish Time: 1:54:41 PM

Total Errors: 0

Pass

Maximum RF Output Power vs. Frequency



Max Leveled Pwr: Yes dBm Min Leveled Pwr: N/A dBm Leveled Pwr Set: Max dBm Level Flatness Spec: +/-2.0 dB

Print

***** Harmonic Test from 250.000000 MHz to 6000.000000 MHz in 100 MHz Steps *****

Model Number: MLMS-0260B

Serial Number: 0026

Time: 4:26:19 PM

Date: 11/6/2017

Minimum Frequency: 250.000000 MHz

Maximum Frequency: 6000.000000 MHz

Current Unit Temperature: +37.0C Deg. C

Harmonic Spec Level (In Band): -8.0 dBc

Frequency	Level	Harm #	Status
250 MHz	-10 dBc	3	PASS
350 MHz	-10 dBc	3	PASS
450 MHz	-11 dBc	3	PASS
550 MHz	-11 dBc	3	PASS
650 MHz	-11 dBc	3	PASS
750 MHz	-11 dBc	3	PASS
850 MHz	-12 dBc	3	PASS
950 MHz	-12 dBc	3	PASS
1050 MHz	-12 dBc	3	PASS
1150 MHz	-12 dBc	3	PASS
1250 MHz	-12 dBc	3	PASS
1350 MHz	-12 dBc	3	PASS
1450 MHz	-13 dBc	3	PASS
1550 MHz	-13 dBc	3	PASS
1650 MHz	-14 dBc	3	PASS
1750 MHz	-14 dBc	3	PASS
1850 MHz	-14 dBc	3	PASS
1950 MHz	-16 dBc	3	PASS
2050 MHz	-17 dBc	2	PASS
2150 MHz	-16 dBc	2	PASS
2250 MHz	-15 dBc	2	PASS
2350 MHz	-15 dBc	2	PASS
2450 MHz	-16 dBc	2	PASS
2550 MHz	-17 dBc	2	PASS
2650 MHz	-18 dBc	2	PASS
2750 MHz	-16 dBc	2	PASS
2850 MHz	-16 dBc	2	PASS
2950 MHz	-16 dBc	2	PASS
3050 MHz	-16 dBc	2	PASS
3150 MHz	-15 dBc	2	PASS
3250 MHz	-16 dBc	2	PASS
3350 MHz	-16 dBc	2	PASS
3450 MHz	-17 dBc	2	PASS
3550 MHz	-16 dBc	2	PASS
3650 MHz	-16 dBc	2	PASS
3750 MHz	-16 dBc	2	PASS
3850 MHz	-15 dBc	2	PASS
3950 MHz	-15 dBc	2	PASS
4050 MHz	-16 dBc	2	PASS
4150 MHz	-19 dBc	2	PASS
4250 MHz	-21 dBc	2	PASS
4350 MHz	-23 dBc	3	PASS
4450 MHz	-24 dBc	3	PASS
4550 MHz	-24 dBc	3	PASS
4650 MHz	-25 dBc	3	PASS
4750 MHz	-26 dBc	3	PASS
4850 MHz	-26 dBc	2	PASS
4950 MHz	-24 dBc	2	PASS
5050 MHz	-23 dBc	2	PASS
5150 MHz	-22 dBc	2	PASS
5250 MHz	-23 dBc	2	PASS
5350 MHz	-24 dBc	2	PASS
5450 MHz	-24 dBc	2	PASS
5550 MHz	-25 dBc	2	PASS
5650 MHz	-26 dBc	2	PASS
5750 MHz	-29 dBc	3	PASS
5850 MHz	-28 dBc	3	PASS
5950 MHz	-27 dBc	3	PASS

Number of Failures: 0

Finish Time: 4:35:47 PM

Harmonic Readings complete

Pass

***** Random Spur Test from 250.000 MHz to 6000.000 MHz *****

Serial Number: 0026
Model Number: MLMS-0260B
Time: 11:30:18 AM
Date: 11/7/2017
Minimum Frequency: 250.000 MHz
Maximum Frequency: 6000.000 MHz
Analyzer Frequency Span Tested: 2 kHz to 2000 MHz - or Max span = 1.9 * CF if <=1000 MHz
Spur Level Spec <=: -60.0 dBc
Number of Frequencies Tested: 25
Temperature: +34.6C Deg. C
NOVO State: UnLocked

Random Frequency	Status
Frequency Tested = 1770.480 MHz	Pass
Frequency Tested = 4875.869 MHz	Pass
Frequency Tested = 3834.926 MHz	Pass
Frequency Tested = 3654.105 MHz	Pass
Frequency Tested = 656.777 MHz	Pass
Frequency Tested = 2675.796 MHz	Pass
Frequency Tested = 665.833 MHz	Pass
Frequency Tested = 1603.312 MHz	Pass
Frequency Tested = 2755.919 MHz	Pass
Frequency Tested = 5256.194 MHz	Pass
Frequency Tested = 1657.408 MHz	Pass
Frequency Tested = 3654.042 MHz	Pass
Frequency Tested = 4628.856 MHz	Pass
Frequency Tested = 3012.377 MHz	Pass
Frequency Tested = 3789.622 MHz	Pass
Frequency Tested = 5597.647 MHz	Pass
Frequency Tested = 2948.771 MHz	Pass
Frequency Tested = 5970.509 MHz	Pass
Frequency Tested = 3289.172 MHz	Pass
Frequency Tested = 4671.303 MHz	Pass
Frequency Tested = 2144.749 MHz	Pass
Frequency Tested = 1790.897 MHz	Pass
Frequency Tested = 4884.468 MHz	Pass
Frequency Tested = 4996.254 MHz	Pass
Frequency Tested = 3929.910 MHz	Pass

Total Spur Errors: 0

Finish Time: 12:02:40 PM
Test Completed
Pass

***** Switching Speed Test from 250.0 to 6000.0 MHz in 100 1000 MHz & Full Band Steps *****

Model Number: MLMS-0260B

Serial Number: 0026

Time: 11:19:54 AM

Date: 11/7/2017

Minimum Frequency: 250.000 MHz

Maximum Frequency: 6000.000 MHz

Current Unit Temperature: +33.4C Deg. C

Switching Speed Spec:

For a 100 MHz Step: 1.0 mS (Frequencies <500 MHz = 2.0 mS)

For a 1000 MHz Step: 2.0 mS

For a Full Band Step: 3.0 mS

For 25 Random Jumps - Max Time Range: 1.0 to 3.0 mS

Frequency Step	Meas. Speed	Status
100 MHz Step Up =	0.7 mS	Pass
100 MHz Step Down =	0.7 mS	Pass
1000 MHz Step Up =	0.7 mS	Pass
1000 MHz Step Down =	0.7 mS	Pass
Full band Step Up =	1.7 mS	Pass
Full band Step Down =	0.8 mS	Pass

Frequency Step (MHz)	Step Size (MHz)	Meas. Speed	Status
Random Jump From 250.0 To 1568.0	1318.0	0.8 mS	Pass
Random Jump From 1568.0 To 3435.0	1867.0	0.8 mS	Pass
Random Jump From 3435.0 To 2547.0	-888.0	0.8 mS	Pass
Random Jump From 2547.0 To 5815.0	3268.0	2.0 mS	Pass
Random Jump From 5815.0 To 3866.0	-1949.0	1.1 mS	Pass
Random Jump From 3866.0 To 2827.0	-1039.0	0.8 mS	Pass
Random Jump From 2827.0 To 1329.0	-1498.0	0.8 mS	Pass
Random Jump From 1329.0 To 5447.0	4118.0	1.6 mS	Pass
Random Jump From 5447.0 To 2645.0	-2802.0	0.9 mS	Pass
Random Jump From 2645.0 To 3576.0	931.0	0.9 mS	Pass
Random Jump From 3576.0 To 4498.0	922.0	1.3 mS	Pass
Random Jump From 4498.0 To 5994.0	1496.0	1.1 mS	Pass
Random Jump From 5994.0 To 1963.0	-4031.0	0.9 mS	Pass
Random Jump From 1963.0 To 2367.0	404.0	0.7 mS	Pass
Random Jump From 2367.0 To 3248.0	881.0	0.9 mS	Pass
Random Jump From 3248.0 To 4469.0	1221.0	1.3 mS	Pass
Random Jump From 4469.0 To 1035.0	-3434.0	0.8 mS	Pass
Random Jump From 1035.0 To 3872.0	2837.0	0.9 mS	Pass
Random Jump From 3872.0 To 3931.0	59.0	0.8 mS	Pass
Random Jump From 3931.0 To 5697.0	1766.0	1.9 mS	Pass
Random Jump From 5697.0 To 5435.0	-262.0	1.6 mS	Pass
Random Jump From 5435.0 To 4140.0	-1295.0	1.1 mS	Pass
Random Jump From 4140.0 To 5039.0	899.0	1.1 mS	Pass
Random Jump From 5039.0 To 4735.0	-304.0	1.0 mS	Pass
Random Jump From 4735.0 To 837.0	-3898.0	0.9 mS	Pass

Number of Failures: 0

Finish Time: 11:28:07 AM

Switching Speed Readings complete

Pass

***** Phase Noise Test from 250.000 MHz to 6000.000 MHz in 575 MHz Steps *****

Model Number: MLMS-0260B
Serial Number: 0026
Time: 10:35:38 AM
Date: 11/7/2017
Minimum Frequency: 250.000 MHz
Maximum Frequency: 6000.000 MHz
Number of Frequencies Tested: 11
Current Unit Temperature: +31.6C Deg. C

Phase Noise Spec @ Offset:

@ 100 Hz = -74.0 dBc/Hz
@ 1.0 kHz = -94.0 dBc/Hz
@ 10.0 kHz = -96.0 dBc/Hz
@ 100 kHz = -119.0 dBc/Hz
@ 1.0 MHz = -144.0 dBc/Hz
@ 10.0 MHz = -150 dBc/Hz

Correlation = 1

Measured: Frequency	100 Hz	1 kHz	10 kHz	100 kHz	1 MHz	10 MHz	Status	RF Power
250.000	-105.3	-123.1	-123.6	-137.1	-157.6	-159.4	Pass	13.79 dBm
825.000	-97.5	-113.6	-115.6	-135.5	-155.3	-157.4	Pass	13.43 dBm
1400.000	-92.3	-108.4	-109.4	-126.5	-150.1	-156.5	Pass	11.12 dBm
1975.001	-89.5	-106.4	-109.0	-131.0	-152.4	-155.0	Pass	11.24 dBm
2550.001	-88.2	-103.1	-104.5	-121.5	-145.5	-154.0	Pass	10.14 dBm
3125.002	-85.9	-101.8	-104.1	-122.6	-146.4	-153.9	Pass	9.83 dBm
3700.002	-83.5	-101.3	-103.3	-124.7	-147.9	-153.4	Pass	9.45 dBm
4275.002	-83.6	-99.4	-101.9	-124.8	-148.2	-153.3	Pass	8.41 dBm
4850.003	-80.5	-98.9	-100.4	-124.4	-148.2	-153.5	Pass	8.27 dBm
5425.003	-78.6	-97.8	-98.9	-124.1	-147.8	-153.1	Pass	7.48 dBm
6000.003	-78.1	-97.2	-98.3	-124.5	-147.3	-151.9	Pass	7.03 dBm

Number of Failures: 0

Finish Time: 10:40:15 AM

Phase Noise Readings Complete

Pass