
4.1 VERIFICATION DATA SHEET

Technician: _____ Date: _____
Test Set S/N: _____

STEP	PROCEDURE
------	-----------

4.13.3.B Generator Output Frequency

6. 1 GHz (± 101 Hz) _____

4.13.3.C Generator Output Power

4. +10 dBm	+10 dBm (± 1.0 dB)	_____
0 dBm	0 dBm (± 1.0 dB)	_____
-10 dBm	-10 dBm (± 1.0 dB)	_____
-20 dBm	-20 dBm (± 1.0 dB)	_____
-30 dBm	-30 dBm (± 1.0 dB)	_____
-40 dBm	-40 dBm (± 1.0 dB)	_____
-50 dBm	-50 dBm (± 1.0 dB)	_____
-60 dBm	-60 dBm (± 1.0 dB)	_____

4.13.3.D Generator Level Flatness

3. 50 MHz	0 dBm (± 1 dB)	_____
100 MHz	0 dBm (± 1 dB)	_____
150 MHz	0 dBm (± 1 dB)	_____
200 MHz	0 dBm (± 1 dB)	_____
250 MHz	0 dBm (± 1 dB)	_____
300 MHz	0 dBm (± 1 dB)	_____
350 MHz	0 dBm (± 1 dB)	_____
400 MHz	0 dBm (± 1 dB)	_____
450 MHz	0 dBm (± 1 dB)	_____
500 MHz	0 dBm (± 1 dB)	_____
550 MHz	0 dBm (± 1 dB)	_____
600 MHz	0 dBm (± 1 dB)	_____
650 MHz	0 dBm (± 1 dB)	_____
700 MHz	0 dBm (± 1 dB)	_____
750 MHz	0 dBm (± 1 dB)	_____
800 MHz	0 dBm (± 1 dB)	_____
850 MHz	0 dBm (± 1 dB)	_____
900 MHz	0 dBm (± 1 dB)	_____
950 MHz	0 dBm (± 1 dB)	_____
1000 MHz	0 dBm (± 1 dB)	_____
1050 MHz	0 dBm (± 1 dB)	_____

3901 / 3920 Stop Here

3902 / 3920 /3920B with frequency extension option continue

STEP	PROCEDURE	
------	-----------	--

4.13.3.D Generator Level Flatness (cont)

3.	1100 MHz	0 dBm (± 1 dB)	
	1150 MHz	0 dBm (± 1 dB)	
	1200 MHz	0 dBm (± 1 dB)	
	1250 MHz	0 dBm (± 1 dB)	
	1300 MHz	0 dBm (± 1 dB)	
	1350 MHz	0 dBm (± 1 dB)	
	1400 MHz	0 dBm (± 1 dB)	
	1450 MHz	0 dBm (± 1 dB)	
	1500 MHz	0 dBm (± 1 dB)	
	1550 MHz	0 dBm (± 1 dB)	
	1600 MHz	0 dBm (± 1 dB)	
	1650 MHz	0 dBm (± 1 dB)	
	1700 MHz	0 dBm (± 1 dB)	
	1750 MHz	0 dBm (± 1 dB)	
	1800 MHz	0 dBm (± 1 dB)	
	1850 MHz	0 dBm (± 1 dB)	
	1900 MHz	0 dBm (± 1 dB)	
	1950 MHz	0 dBm (± 1 dB)	
	2000 MHz	0 dBm (± 1 dB)	
	2050 MHz	0 dBm (± 1 dB)	
	2100 MHz	0 dBm (± 1 dB)	
	2150 MHz	0 dBm (± 1 dB)	
	2200 MHz	0 dBm (± 1 dB)	
	2250 MHz	0 dBm (± 1 dB)	
	2300 MHz	0 dBm (± 1 dB)	
	2350 MHz	0 dBm (± 1 dB)	
	2400 MHz	0 dBm (± 1 dB)	
	2450 MHz	0 dBm (± 1 dB)	
	2500 MHz	0 dBm (± 1 dB)	
	2550 MHz	0 dBm (± 1 dB)	
	2600 MHz	0 dBm (± 1 dB)	
	2650 MHz	0 dBm (± 1 dB)	
	2700 MHz	0 dBm (± 1 dB)	

4.13.3.E Generator T/R Power Level Accuracy

4.	-30 dBm	-30 dBm (± 1 dB)	
	-40 dBm	-40 dBm (± 1 dB)	
	-50 dBm	-50 dBm (± 1 dB)	
	-60 dBm	-60 dBm (± 1 dB)	

STEP PROCEDURE

4.13.3.F Generator T/R Power Level Flatness

3.	50 MHz	-30 dBm (± 1 dB)	_____
	100 MHz	-30 dBm (± 1 dB)	_____
	150 MHz	-30 dBm (± 1 dB)	_____
	200 MHz	-30 dBm (± 1 dB)	_____
	250 MHz	-30 dBm (± 1 dB)	_____
	300 MHz	-30 dBm (± 1 dB)	_____
	350 MHz	-30 dBm (± 1 dB)	_____
	400 MHz	-30 dBm (± 1 dB)	_____
	450 MHz	-30 dBm (± 1 dB)	_____
	500 MHz	-30 dBm (± 1 dB)	_____
	550 MHz	-30 dBm (± 1 dB)	_____
	600 MHz	-30 dBm (± 1 dB)	_____
	650 MHz	-30 dBm (± 1 dB)	_____
	700 MHz	-30 dBm (± 1 dB)	_____
	750 MHz	-30 dBm (± 1 dB)	_____
	800 MHz	-30 dBm (± 1 dB)	_____
	850 MHz	-30 dBm (± 1 dB)	_____
	900 MHz	-30 dBm (± 1 dB)	_____
	950 MHz	-30 dBm (± 1 dB)	_____
	1000 MHz	-30 dBm (± 1 dB)	_____
	1050 MHz	-30 dBm (± 1 dB)	_____

3901 / 3920 Stop Here

3902 / 3920 /3920B with frequency extension option continue

STEP	PROCEDURE
------	-----------

4.13.3.F

Generator T/R Power Level Flatness (cont)

3.	1100 MHz	-30 dBm (± 1 dB)	
	1150 MHz	-30 dBm (± 1 dB)	_____
	1200 MHz	-30 dBm (± 1 dB)	_____
	1250 MHz	-30 dBm (± 1 dB)	_____
	1300 MHz	-30 dBm (± 1 dB)	_____
	1350 MHz	-30 dBm (± 1 dB)	_____
	1400 MHz	-30 dBm (± 1 dB)	_____
	1450 MHz	-30 dBm (± 1 dB)	_____
	1500 MHz	-30 dBm (± 1 dB)	_____
	1550 MHz	-30 dBm (± 1 dB)	_____
	1600 MHz	-30 dBm (± 1 dB)	_____
	1650 MHz	-30 dBm (± 1 dB)	_____
	1700 MHz	-30 dBm (± 1 dB)	_____
	1750 MHz	-30 dBm (± 1 dB)	_____
	1800 MHz	-30 dBm (± 1 dB)	_____
	1850 MHz	-30 dBm (± 1 dB)	_____
	1900 MHz	-30 dBm (± 1 dB)	_____
	1950 MHz	-30 dBm (± 1 dB)	_____
	2000 MHz	-30 dBm (± 1 dB)	_____
	2050 MHz	-30 dBm (± 1 dB)	_____
	2100 MHz	-30 dBm (± 1 dB)	_____
	2150 MHz	-30 dBm (± 1 dB)	_____
	2200 MHz	-30 dBm (± 1 dB)	_____
	2250 MHz	-30 dBm (± 1 dB)	_____
	2300 MHz	-30 dBm (± 1 dB)	_____
	2350 MHz	-30 dBm (± 1 dB)	_____
	2400 MHz	-30 dBm (± 1 dB)	_____
	2450 MHz	-30 dBm (± 1 dB)	_____
	2500 MHz	-30 dBm (± 1 dB)	_____
	2550 MHz	-30 dBm (± 1 dB)	_____
	2600 MHz	-30 dBm (± 1 dB)	_____
	2650 MHz	-30 dBm (± 1 dB)	_____
	2700 MHz	-30 dBm (± 1 dB)	_____

4.13.3.G

RF Power Meter Accuracy

6.	10.5 dBm (± 0.4 dB)		

STEP PROCEDURE

4.13.3.H Inband Power Meter Accuracy

3. No User Cal Errors message

RF Generator Level	7. Nominal Value	8. 3900 Inband Power Meter	9. Difference is $\leq \pm 1\text{ dB}$
-60 dBm	_____	_____	_____
-50 dBm	_____	_____	_____
-40 dBm	_____	_____	_____
-30 dBm	_____	_____	_____
-20 dBm	_____	_____	_____

4.13.3.I Analyzer Level Accuracy

	10. Nominal Value	14. Marker 1 Level Reading	15. Difference is $\leq \pm 1\text{ dB}$
10 MHz	_____	_____	_____
50 MHz	_____	_____	_____
100 MHz	_____	_____	_____
150 MHz	_____	_____	_____
200 MHz	_____	_____	_____
250 MHz	_____	_____	_____
300 MHz	_____	_____	_____
350 MHz	_____	_____	_____
400 MHz	_____	_____	_____
450 MHz	_____	_____	_____
500 MHz	_____	_____	_____
550 MHz	_____	_____	_____
600 MHz	_____	_____	_____
650 MHz	_____	_____	_____
700 MHz	_____	_____	_____
750 MHz	_____	_____	_____
800 MHz	_____	_____	_____
850 MHz	_____	_____	_____
900 MHz	_____	_____	_____
950 MHz	_____	_____	_____
1000 MHz	_____	_____	_____
1050 MHz	_____	_____	_____

3901 / 3920 Stop Here

3902 / 3920 /3920B with frequency extension option continue

STEP

PROCEDURE

4.13.3.I

Analyzer Level Accuracy (cont)

	10. Nominal Value	14. Marker 1 Level Reading	15. Difference is $\leq \pm 1\text{ dB}$
1100 MHz	_____	_____	_____
1150 MHz	_____	_____	_____
1200 MHz	_____	_____	_____
1250 MHz	_____	_____	_____
1300 MHz	_____	_____	_____
1350 MHz	_____	_____	_____
1400 MHz	_____	_____	_____
1450 MHz	_____	_____	_____
1500 MHz	_____	_____	_____
1550 MHz	_____	_____	_____
1600 MHz	_____	_____	_____
1650 MHz	_____	_____	_____
1700 MHz	_____	_____	_____
1750 MHz	_____	_____	_____
1800 MHz	_____	_____	_____
1850 MHz	_____	_____	_____
1900 MHz	_____	_____	_____
1950 MHz	_____	_____	_____
2000 MHz	_____	_____	_____
2050 MHz	_____	_____	_____
2100 MHz	_____	_____	_____
2150 MHz	_____	_____	_____
2200 MHz	_____	_____	_____
2250 MHz	_____	_____	_____
2300 MHz	_____	_____	_____
2350 MHz	_____	_____	_____
2400 MHz	_____	_____	_____
2450 MHz	_____	_____	_____
2500 MHz	_____	_____	_____
2550 MHz	_____	_____	_____
2600 MHz	_____	_____	_____
2650 MHz	_____	_____	_____
2700 MHz	_____	_____	_____

STEP	PROCEDURE
4.13.3.J	Generator FM Residual <hr/> <p>4. Record Generator FM Level reading Modulation Analyzer FM Level <15 Hz rms</p>
4.13.3.K	Generator AM Residual <hr/> <p>4. Record Residual AM Level reading Modulation Analyzer AM Level <0.1%</p>
4.13.3.L	Generator FM Deviation Accuracy <hr/> <p>4. Record FM Deviation reading FM Residual reading from Step 4 of the Generator FM Residual Verification Procedure</p> <p>5. Subtract FM Residual reading from FM Deviation reading FM deviation is 10 kHz (± 0.30 kHz)</p>
4.13.3.M	Generator FM Modulation Rate <hr/> <p>4. Record FM Deviation readings 50.0 Hz 300.0 Hz 10000.0 Hz FM Residual reading from Step 4 of the Generator FM Residual Verification Procedure</p> <p>5. Subtract FM Residual reading from each Modulation Analyzer FM reading 50.0 Hz (6 kHz (± 0.18 kHz)) 300.0 Hz (6 kHz (± 0.18 kHz)) 10000.0 Hz (6 kHz (± 0.18 kHz))</p>
4.13.3.N	Generator FM Modulation Distortion <hr/> <p>6. Modulation Distortion is <1%</p>
4.13.3.O	Generator AM Modulation Accuracy <hr/> <p>4. Record AM Modulation reading Residual AM Level reading Step 4 of the Generator AM Residual Verification Procedure</p> <p>5. Subtract AM Level reading from AM Modulation reading AM Modulation is 30% ($\pm 1\%$)</p>
4.13.3.P	RF Offset Meter Accuracy <hr/> <p>3. RF Offset Meter +10000 Hz (± 1 Hz)</p> <p>5. RF Offset Meter -10000 Hz (± 1 Hz)</p>
4.13.3.Q	Demod Frequency Meter Accuracy <hr/> <p>5. Demod Frequency 1000 Hz (± 0.4 Hz)</p>

STEP	PROCEDURE
------	-----------

4.13.3.R FM Deviation Meter Accuracy

- | | | | |
|-----|---------------|-------|-----|
| 4. | 8901 Residual | _____ | kHz |
| 5. | 3900 Residual | _____ | kHz |
| 7. | 8901 FM | _____ | kHz |
| 8. | 3900 FM | _____ | kHz |
| 9. | 8901 Nominal | _____ | kHz |
| 10. | 3900 Measured | _____ | kHz |

4.13.3.S AM Modulation Meter Accuracy

- | | | | |
|-----|---------------|-------|---|
| 4. | 8901 Residual | _____ | % |
| 5. | 3900 Residual | _____ | % |
| 7. | 8901 FM | _____ | % |
| 8. | 3900 FM | _____ | % |
| 9. | 8901 Nominal | _____ | % |
| 10. | 3900 Measured | _____ | % |

4.13.3.T Analyzer Frequency and Span Accuracy

- | | | | |
|-----|--|-------|--|
| 6. | Marker Frequency (400.000000 MHz \pm 0.003500 MHz) | _____ | |
| 10. | 200 MHz Marker Frequency | _____ | |
| 13. | 600 MHz Marker Frequency | _____ | |
| 14. | Difference (400.000000 MHz \pm 5.000000 MHz) | _____ | |

4.13.3.U Analyzer Bandwidth Switching Error

- | | | | |
|-----|--|-------|--|
| 9. | 300 Hz RBW Filter Marker Level reading | _____ | |
| 12. | 3 kHz RBW Filter Marker Level reading | _____ | |
| 16. | 30 kHz RBW Filter Marker Level reading | _____ | |
| 19. | 60 kHz RBW Filter Marker Level reading | _____ | |
| 22. | 300 kHz RBW Filter Marker Level reading | _____ | |
| 25. | 6 MHz RBW Filter Marker Level reading | _____ | |
| 26. | Difference between highest and lowest Marker Level readings
<1 dB | _____ | |

STEP PROCEDURE

4.13.3.V Oscilloscope Amplitude Accuracy

8 - 10. Channel 1 Input Connector

3900 AF Generator Level	8. DMM Reading	9. Nominal Value	10. Marker Delta Level	Tolerance (Nominal ±)	Within Limits
42.4 mVrms (120.0 mVp-p)	_____	_____	_____	(±8 mV)	_____
106.1 mVrms (300.0 mVp-p)	_____	_____	_____	(±20 mV)	_____
212.1 mVrms (600 mVp-p)	_____	_____	_____	(±40 mV)	_____
424.2 mVrms (1200 mVp-p)	_____	_____	_____	(±80 mV)	_____
1.061 Vrms (3.000 Vp-p)	_____	_____	_____	(±200 mV)	_____
2.121 Vrms (6.000 Vp-p)	_____	_____	_____	(±400 mV)	_____
4.242 Vrms (12.000 Vp-p)	_____	_____	_____	(±800 mV)	_____

16 - 18. Channel 2 Input Connector

3900 AF Generator Level	16. DMM Reading	17. Nominal Value	18. Marker Delta Level	Tolerance (Nominal ±)	Within Limits
42.4 mVrms (120.0 mVp-p)	_____	_____	_____	(±8 mV)	_____
106.1 mVrms (300.0 mVp-p)	_____	_____	_____	(±20 mV)	_____
212.1 mVrms (600 mVp-p)	_____	_____	_____	(±40 mV)	_____
424.2 mVrms (1200 mVp-p)	_____	_____	_____	(±80 mV)	_____
1.061 Vrms (3.000 Vp-p)	_____	_____	_____	(±200 mV)	_____
2.121 Vrms (6.000 Vp-p)	_____	_____	_____	(±400 mV)	_____
4.242 Vrms (12.000 Vp-p)	_____	_____	_____	(±800 mV)	_____

4.13.3.W Audio Level Meter Accuracy

- 6. AF Level Meter ±10% of Digital Multimeter reading _____
- 8. AF Level Meter ±10% of Digital Multimeter reading _____
- 12. AF Level Meter ±10% of Digital Multimeter reading _____
- 14. AF Level Meter ±10% of Digital Multimeter reading _____

4.13.3.X Function Generator Level Accuracy

- 4. 5.000 Vrms (±50 mVrms) _____

4.13.3.Y Function Generator Frequency Accuracy

- 3. 5000 Hz (±0.25 Hz) _____

STEP	PROCEDURE
4.13.3.Z	Function Generator Total Harmonic Distortion
	3. Total harmonic output is <0.5%
4.13.3.AA	Audio Frequency Meter Accuracy
	5. Nominal ± 0.4 Hz (5000.0 Hz)
4.13.3.AB	Sinad/Distortion Meter Accuracy
	5. Test Set Sinad Meter reading
	6. Audio Analyzer Sinad reading
	7. Sinad Meter Reading Nominal ± 1.01 dB (20.0 dB)
	11. Distortion Meter Reading Nominal $\pm 0.5\%$ (20%)
4.13.3.AC	DMM Functionality/Accuracy
	5. Record DMM reading (Zero volts ± 10 mV)
	8. Record DMM reading (10 DC volts $\pm .2$ V)
	11. Record DMM reading (10 AC volts ± 1 V)
	14. Record DMM reading (2Kohms +++)
	16. Record DMM reading (Zero Ohms ± 1 ohms)
	18. Record DMM reading (1,000 Ohms ± 50 ohms)
	22. Record DMM reading (1 DC AMP $\pm .05$ AMP)
	25. Record DMM reading (1 AC AMP $\pm .05$ AMP)