

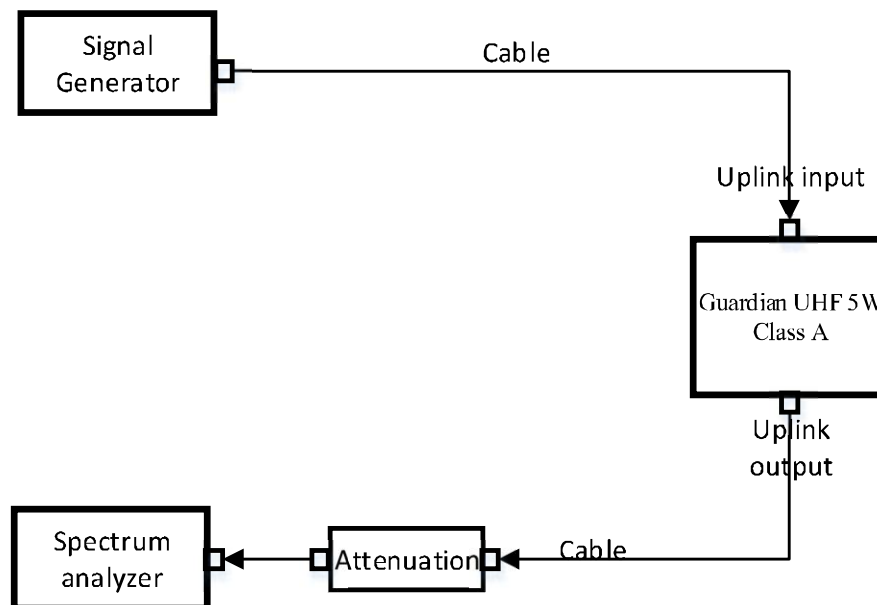


Figure 10.6-2 Uplink connection diagram

10.6.3. Test procedures

- a) Connect a signal generator to the input of the EUT.
- b) Configure to generate the AWGN (broadband) test signal.
- c) The frequency of the signal generator shall be set to the frequency f_0 as determined from 3.3.
- d) Connect a spectrum analyzer or power meter to the output of the EUT using appropriate attenuation as necessary.
- e) Set the signal generator output power to a level that produces an EUT output level that is just below the AGC threshold (see 3.2), but not more than 0.5 dB below.
- f) Measure and record the output power of the EUT; use 3.5.3 or 3.5.4 for power measurement.
- g) Remove the EUT from the measurement setup. Using the same signal generator settings, repeat the power measurement at the signal generator port, which was used as the input signal to the EUT, and record as the input power. EUT gain may be calculated as described in 3.5.5.
- h) Repeat steps f) and g) with input signal amplitude set to 3 dB above the AGC threshold level.
- i) Repeat steps e) to h) with the narrowband test signal.
- j) Repeat steps e) to i) for all frequency bands authorized for use by the EUT.

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10.6.4. Test results

Test Date (yy-mm-dd): 2024-01-24~01-27

Normal condition: Temp: 20.1~21.2°C, Humid:12~32%, Atmospheric Pressure:101kpa

Supply Voltage: DC +24V

10.6.4.1. Mean power and gain

10.6.4.1.1. P25 Phase I(C4FM) mode

Test link	Freq. (MHz)	Sig output power (dBm)	Input Cable Loss (dB)	Peak power (dBm)	Output Atten (dB)	Output Cable Loss (dB)	Output power (dBm)	Output power (W)	Gain (dB)
Down ⁽¹⁾	450.00625	-49.7	0.5	-4.0	40.0	0.1	36.1	4.1	86.3
Down ⁽²⁾	450.00625	-46.7	0.5	-4.0	40.0	0.1	36.1	4.1	83.3
Down ⁽¹⁾	479.0	-52.0	0.5	-3.5	40.0	0.1	36.6	4.6	89.1
Down ⁽²⁾	479.0	-49.0	0.5	-3.5	40.0	0.1	36.6	4.6	86.1
Down ⁽¹⁾	508.99375	-52.2	0.5	-5.0	40.0	0.1	35.1	3.2	87.8
Down ⁽²⁾	508.99375	-49.2	0.5	-5.0	40.0	0.1	35.1	3.2	84.8
Up ⁽¹⁾	455.00625	-62.0	0.5	-13.6	40.0	0.1	26.5	0.4	89.0
Up ⁽²⁾	455.00625	-59.0	0.5	-13.6	40.0	0.1	26.5	0.4	86.0
Up ⁽¹⁾	484.0	-61.9	0.5	-13.2	40.0	0.1	26.9	0.5	89.3
Up ⁽²⁾	484.0	-58.9	0.5	-13.2	40.0	0.1	26.9	0.5	86.3
Up ⁽¹⁾	511.99375	-58.7	0.5	-13.2	40.0	0.1	26.9	0.5	86.1
Up ⁽²⁾	511.99375	-55.7	0.5	-13.2	40.0	0.1	26.9	0.5	83.1

NOTE: ⁽¹⁾ Level is 0.5 dB below AGC threshold; ⁽²⁾ Level is 3dB above AGC threshold.

10.6.4.1.2. P25 Phase II(H-DQPSK) mode

Test link	Freq. (MHz)	Sig output power (dBm)	Input Cable Loss (dB)	Peak power (dBm)	Output Atten (dB)	Output Cable Loss (dB)	Output power (dBm)	Output power (W)	Gain (dB)
Down ⁽¹⁾	450.00625	-49.9	0.5	-4.6	40.0	0.1	35.5	3.5	85.9
Down ⁽²⁾	450.00625	-46.9	0.5	-4.6	40.0	0.1	35.5	3.5	82.9
Down ⁽¹⁾	479.0	-52.3	0.5	-4.1	40.0	0.1	36.0	4.0	88.8
Down ⁽²⁾	479.0	-49.3	0.5	-4.1	40.0	0.1	36.0	4.0	85.8
Down ⁽¹⁾	508.99375	-51.7	0.5	-4.9	40.0	0.1	35.2	3.3	87.4
Down ⁽²⁾	508.99375	-48.7	0.5	-4.9	40.0	0.1	35.2	3.3	84.4
Up ⁽¹⁾	455.00625	-61.9	0.5	-13.6	40.0	0.1	26.5	0.4	88.9

Up ⁽²⁾	455.00625	-58.9	0.5	-13.6	40.0	0.1	26.5	0.4	85.9
Up ⁽¹⁾	484.0	-62.4	0.5	-13.8	40.0	0.1	26.3	0.4	89.2
Up ⁽²⁾	484.0	-59.4	0.5	-13.8	40.0	0.1	26.3	0.4	86.2
Up ⁽¹⁾	511.99375	-58.8	0.5	-13.4	40.0	0.1	26.7	0.5	86.0
Up ⁽²⁾	511.99375	-55.8	0.5	-13.4	40.0	0.1	26.7	0.5	83.0

NOTE: ⁽¹⁾ Level is 0.5 dB below AGC threshold; ⁽²⁾ Level is 3dB above AGC threshold.

10.6.4.1.3. 6.25kHz Analog FM mode

Test link	Freq. (MHz)	Sig output power (dBm)	Input Cable Loss (dB)	Peak power (dBm)	Output Atten (dB)	Output Cable Loss (dB)	Output power (dBm)	Output power (W)	Gain (dB)
Down ⁽¹⁾	450.00313	-50.0	0.5	-3.9	40.0	0.1	36.2	4.2	86.7
Down ⁽²⁾	450.00313	-47.0	0.5	-3.9	40.0	0.1	36.2	4.2	83.7
Down ⁽¹⁾	479.0	-52.6	0.5	-3.5	40.0	0.1	36.6	4.6	89.7
Down ⁽²⁾	479.0	-49.6	0.5	-3.5	40.0	0.1	36.6	4.6	86.7
Down ⁽¹⁾	508.99688	-50.6	0.5	-4.1	40.0	0.1	36.0	4.0	87.1
Down ⁽²⁾	508.99688	-47.6	0.5	-4.1	40.0	0.1	36.0	4.0	84.1
Up ⁽¹⁾	455.00313	-62.0	0.5	-12.9	40.0	0.1	27.2	0.5	89.7
Up ⁽²⁾	455.00313	-59.0	0.5	-12.9	40.0	0.1	27.2	0.5	86.7
Up ⁽¹⁾	484.0	-62.6	0.5	-13.0	40.0	0.1	27.1	0.5	90.2
Up ⁽²⁾	484.0	-59.6	0.5	-13.0	40.0	0.1	27.1	0.5	87.2
Up ⁽¹⁾	511.99688	-59.5	0.5	-13.3	40.0	0.1	26.8	0.5	86.8
Up ⁽²⁾	511.99688	-56.5	0.5	-13.3	40.0	0.1	26.8	0.5	83.8

NOTE: ⁽¹⁾ Level is 0.5 dB below AGC threshold; ⁽²⁾ Level is 3dB above AGC threshold.

10.6.4.1.4. 12.5kHz Analog FM mode

Test link	Freq. (MHz)	Sig output power (dBm)	Input Cable Loss (dB)	Peak power (dBm)	Output Atten (dB)	Output Cable Loss (dB)	Output power (dBm)	Output power (W)	Gain (dB)
Down ⁽¹⁾	450.00625	-49.9	0.5	-3.9	40.0	0.1	36.2	4.2	86.6
Down ⁽²⁾	450.00625	-46.9	0.5	-3.9	40.0	0.1	36.2	4.2	83.6
Down ⁽¹⁾	479.0	-52.4	0.5	-3.5	40.0	0.1	36.6	4.6	89.5
Down ⁽²⁾	479.0	-49.4	0.5	-3.5	40.0	0.1	36.6	4.6	86.5
Down ⁽¹⁾	508.99375	-52.4	0.5	-5.0	40.0	0.1	35.1	3.2	88.0
Down ⁽²⁾	508.99375	-49.4	0.5	-5.0	40.0	0.1	35.1	3.2	85.0

Up ⁽¹⁾	455.00625	-64.0	0.5	-12.8	40.0	0.1	27.3	0.5	91.8
Up ⁽²⁾	455.00625	-61.0	0.5	-12.8	40.0	0.1	27.3	0.5	88.8
Up ⁽¹⁾	484.0	-62.5	0.5	-13.1	40.0	0.1	27.0	0.5	90.0
Up ⁽²⁾	484.0	-59.5	0.5	-13.1	40.0	0.1	27.0	0.5	87.0
Up ⁽¹⁾	511.99375	-59.4	0.5	-13.2	40.0	0.1	26.9	0.5	86.8
Up ⁽²⁾	511.99375	-56.4	0.5	-13.2	40.0	0.1	26.9	0.5	83.8

NOTE: ⁽¹⁾ Level is 0.5 dB below AGC threshold; ⁽²⁾ Level is 3dB above AGC threshold.

10.6.4.1.5. 25kHz Analog FM mode

Test link	Freq. (MHz)	Sig output power (dBm)	Input Cable Loss (dB)	Peak power (dBm)	Output Atten (dB)	Output Cable Loss (dB)	Output power (dBm)	Output power (W)	Gain (dB)
Down ⁽¹⁾	450.0125	-49.8	0.5	-3.9	40.0	0.1	36.2	4.2	86.5
Down ⁽²⁾	450.0125	-46.8	0.5	-3.9	40.0	0.1	36.2	4.2	83.5
Down ⁽¹⁾	479.0	-52.2	0.5	-3.5	40.0	0.1	36.6	4.6	89.3
Down ⁽²⁾	479.0	-49.2	0.5	-3.5	40.0	0.1	36.6	4.6	86.3
Down ⁽¹⁾	508.9875	-52.1	0.5	-4.2	40.0	0.1	35.9	3.9	88.5
Down ⁽²⁾	508.9875	-49.1	0.5	-4.3	40.0	0.1	35.8	3.8	85.4
Up ⁽¹⁾	455.0125	-61.8	0.5	-12.8	40.0	0.1	27.3	0.5	89.6
Up ⁽²⁾	455.0125	-58.8	0.5	-12.8	40.0	0.1	27.3	0.5	86.6
Up ⁽¹⁾	484.0	-62.4	0.5	-13.1	40.0	0.1	27.0	0.5	89.9
Up ⁽²⁾	484.0	-59.4	0.5	-13.1	40.0	0.1	27.0	0.5	86.9
Up ⁽¹⁾	511.9875	-59.3	0.5	-13.2	40.0	0.1	26.9	0.5	86.7
Up ⁽²⁾	511.9875	-56.3	0.5	-13.2	40.0	0.1	26.9	0.5	83.7

NOTE: ⁽¹⁾ Level is 0.5 dB below AGC threshold; ⁽²⁾ Level is 3dB above AGC threshold.

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10.6.4.2. ERP Calculations

10.6.4.2.1. P25 Phase I(C4FM) mode

Test link	Freq. (MHz)	EUT Max. output power (dBm)	Max. Ant Gain(dBi)	Duty Cycle (%)	ERP (W)	ERP Limit (W)	AGC Mode
Down	450.00625	36.1	0	100	4.1	5.0	-0.5dB Below
	450.00625	36.1	0	100	4.1	5.0	+3.0dB above
	479.0	36.6	0	100	4.6	5.0	-0.5dB Below
	479.0	36.6	0	100	4.6	5.0	+3.0dB above
	508.99375	35.1	0	100	3.2	5.0	-0.5dB Below
	508.99375	35.1	0	100	3.2	5.0	+3.0dB above
Up	455.00625	26.5	9.0	100	3.5	5.0	-0.5dB Below
	455.00625	26.5	9.0	100	3.5	5.0	+3.0dB above
	484.0	26.9	9.0	100	3.9	5.0	-0.5dB Below
	484.0	26.9	9.0	100	3.9	5.0	+3.0dB above
	511.99375	26.9	9.0	100	3.9	5.0	-0.5dB Below
	511.99375	26.9	9.0	100	3.9	5.0	+3.0dB above

NOTE: The maximum external antenna gain is 0dbi by manufacturer declares.

10.6.4.2.2. P25 Phase II(H-DQPSK) mode

Test link	Freq. (MHz)	EUT Max. output power (dBm)	Max. Ant Gain(dBi)	Duty Cycle (%)	ERP (W)	ERP Limit (W)	AGC Mode
Down	450.00625	35.5	0	100	3.5	5.0	-0.5dB Below
	450.00625	35.5	0	100	4.0	5.0	+3.0dB above
	479.0	36.0	0	100	4.0	5.0	-0.5dB Below
	479.0	36.0	0	100	3.3	5.0	+3.0dB above
	508.99375	35.2	0	100	3.3	5.0	-0.5dB Below
	508.99375	35.2	0	100	3.3	5.0	+3.0dB above
Up	455.00625	26.5	9.0	100	3.5	5.0	-0.5dB Below
	455.00625	26.5	9.0	100	3.5	5.0	+3.0dB above
	484.0	26.3	9.0	100	3.4	5.0	-0.5dB Below
	484.0	26.3	9.0	100	3.4	5.0	+3.0dB above
	511.99375	26.7	9.0	100	3.7	5.0	-0.5dB Below
	511.99375	26.7	9.0	100	3.7	5.0	+3.0dB above

10.6.4.2.3. 6.25kHz Analog FM mode

Test link	Freq. (MHz)	EUT Max. output power (dBm)	Max. Ant Gain(dBi)	Duty Cycle (%)	ERP (W)	ERP Limit (W)	AGC Mode
Down	450.00313	36.2	0	100	4.2	5	-0.5dB Below
	450.00313	36.2	0	100	4.2	5	+3.0dB above
	479.0	36.6	0	100	4.6	5	-0.5dB Below
	479.0	36.6	0	100	4.6	5	+3.0dB above
	508.99688	36.0	0	100	4.0	5	-0.5dB Below
	508.99688	36.0	0	100	4.0	5	+3.0dB above
Up	455.00313	27.2	9.0	100	4.2	5	-0.5dB Below
	455.00313	27.2	9.0	100	4.2	5	+3.0dB above
	484.0	27.1	9.0	100	4.1	5	-0.5dB Below
	484.0	27.1	9.0	100	4.1	5	+3.0dB above
	511.99688	26.8	9.0	100	3.8	5	-0.5dB Below
	511.99688	26.8	9.0	100	3.8	5	+3.0dB above

10.6.4.2.4. 12.5kHz Analog FM mode

Test link	Freq. (MHz)	EUT Max. output power (dBm)	Max. Ant Gain(dBi)	Duty Cycle (%)	ERP (W)	ERP Limit (W)	AGC Mode
Down	450.00625	36.2	0	100	4.2	5.0	-0.5dB Below
	450.00625	36.2	0	100	4.2	5.0	+3.0dB above
	479.0	36.6	0	100	4.6	5.0	-0.5dB Below
	479.0	36.6	0	100	4.6	5.0	+3.0dB above
	508.99375	35.1	0	100	3.2	5.0	-0.5dB Below
	508.99375	35.1	0	100	3.2	5.0	+3.0dB above
Up	455.00625	27.3	9.0	100	4.3	5.0	-0.5dB Below
	455.00625	27.3	9.0	100	4.3	5.0	+3.0dB above
	484.0	27.0	9.0	100	4.0	5.0	-0.5dB Below
	484.0	27.0	9.0	100	4.0	5.0	+3.0dB above
	511.99375	26.9	9.0	100	3.9	5.0	-0.5dB Below
	511.99375	26.9	9.0	100	3.9	5.0	+3.0dB above

10.6.4.2.5. 25kHz Analog FM mode

Test link	Freq. (MHz)	EUT Max. output power (dBm)	Max. Ant Gain(dBi)	Duty Cycle (%)	ERP (W)	ERP Limit (W)	AGC Mode
Down	450.0125	36.2	0	100	4.2	5.0	-0.5dB Below
	450.0125	36.2	0	100	4.2	5.0	+3.0dB above
	479.0	36.6	0	100	4.6	5.0	-0.5dB Below
	479.0	36.6	0	100	4.6	5.0	+3.0dB above
	508.9875	35.9	0	100	3.9	5.0	-0.5dB Below
	508.9875	35.8	0	100	3.8	5.0	+3.0dB above
Up	455.0125	27.3	9.0	100	4.3	5.0	-0.5dB Below
	455.0125	27.3	9.0	100	4.3	5.0	+3.0dB above
	484.0	27.0	9.0	100	4.0	5.0	-0.5dB Below
	484.0	27.0	9.0	100	4.0	5.0	+3.0dB above
	511.9875	26.9	9.0	100	3.9	5.0	-0.5dB Below
	511.9875	26.9	9.0	100	3.9	5.0	+3.0dB above

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10.7. Noise figure

Test requirement: KDB 935210 D05 clause 4.6
FCC PART 90.219 (e)(2)

Test Method: KDB 935210 D05/4.6

10.7.1. Requirements

According to FCC PART 90§90.219 (e) (2) requirement, the noise figure limit of a signal booster must is given in table 10.7-1.

Table 10.7-1 Noise figure limits

frequency range(MHz)	Max. Noise figure limit(dB)
450~512	9

10.7.2. Test configuration

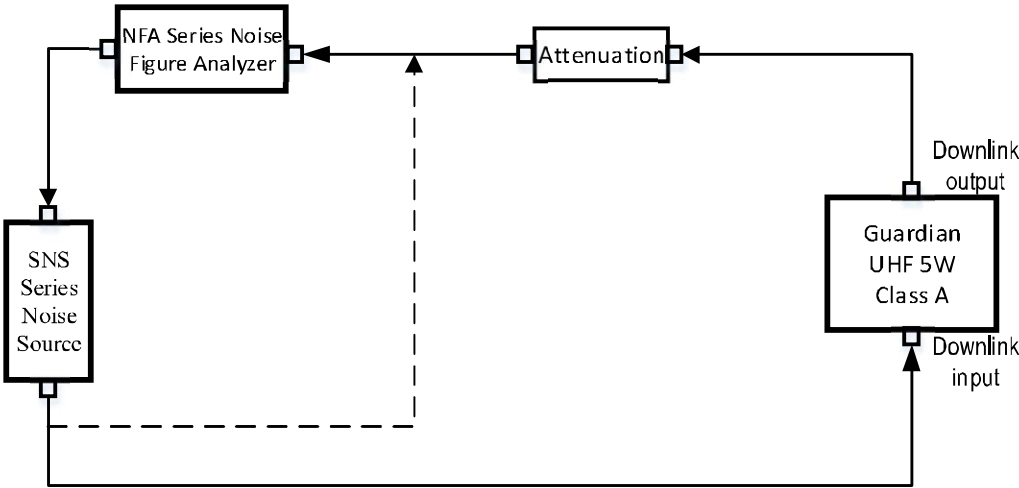


Figure 10.7-1 Downlink test connection diagram

NOTE: The green dotted line is the instrument calibration path.

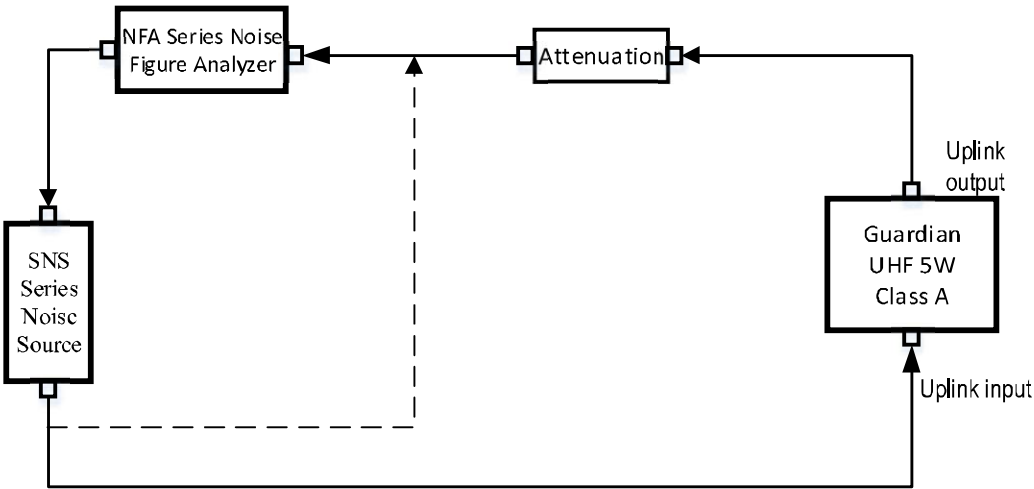


Figure 10.7-2 Uplink test diagram

NOTE: The green dotted line is the instrument calibration path.

10.7.3. Test procedures

- (1) Connect the device as illustrated Figure, when the output power is over the maximum value of the Noise meter, add the attenuator to avoid destroying;
- (2) Set the EUT operating band and maximum gain;
- (3) Set the relevant parameters for 400MHz of device and connect the dotted line to calibrate;
- (4) After calibrating, according to the solid line connecting and testing Noise figure and record data;
- (5) Repeat RF Low, middle and high frequency to be tested and Repeat steps (2) to (4);

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10.7.4. Test results

Test Date (yy-mm-dd): 2024-02-22

Normal condition: Temp: 24.4°C, Humid: 42%, Atmospheric Pressure:101kpa

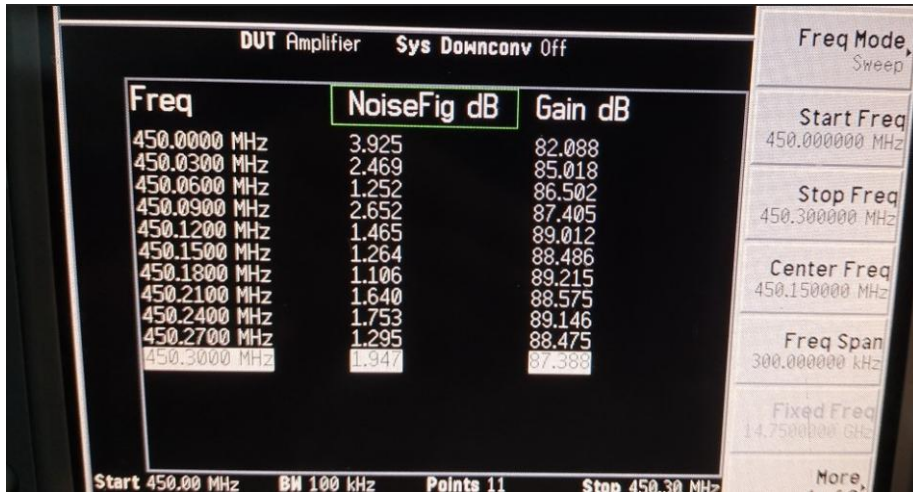
Supply Voltage: DC +24V

Test link	Test frequency (MHz)	Max. Limit (dB)	Noise figure data(dB)	Margin (dB)	Result
Downlink	Low frequency: 450.0125 MHz	9.0	1.46	7.54	PASS
	Middle frequency: 479.0MHz		1.93	7.07	PASS
	High frequency: 508.9875MHz		2.36	6.64	PASS
Uplink	Low frequency: 455.0125 MHz	9.0	2.65	6.35	PASS
	Middle frequency: 484.0MHz		2.29	6.71	PASS
	High frequency: 511.9875MHz		2.32	6.68	PASS
NOTE: Margin= specification limit - Noise figure data.					

———— The following blanks ————

10.7.5. Test screenshot

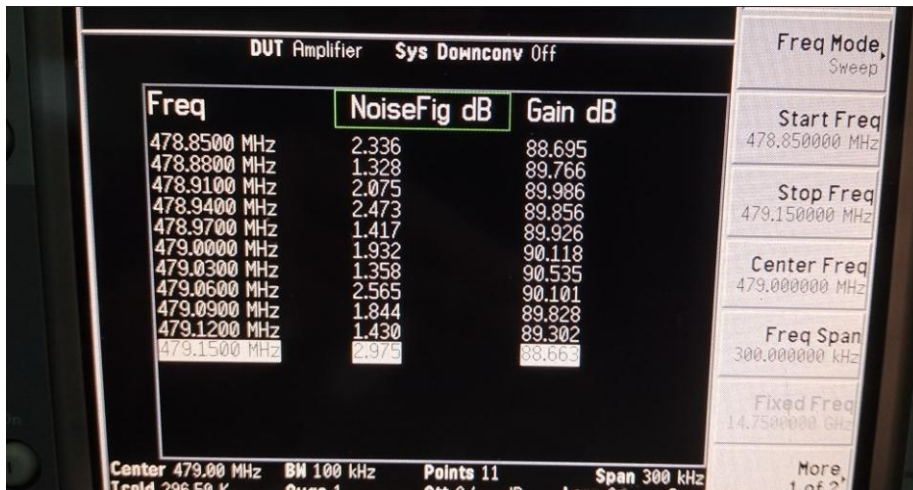
10.7.5.1. Downlink



Freq	NoiseFig dB	Gain dB
450.0000 MHz	3.925	82.088
450.0300 MHz	2.469	85.018
450.0600 MHz	1.252	86.502
450.0900 MHz	2.652	87.405
450.1200 MHz	1.465	89.012
450.1500 MHz	1.264	88.486
450.1800 MHz	1.106	89.215
450.2100 MHz	1.640	88.575
450.2400 MHz	1.753	89.146
450.2700 MHz	1.295	88.475
450.3000 MHz	1.947	87.388

Start 450.00 MHz BW 100 kHz Points 11 Stop 450.30 MHz

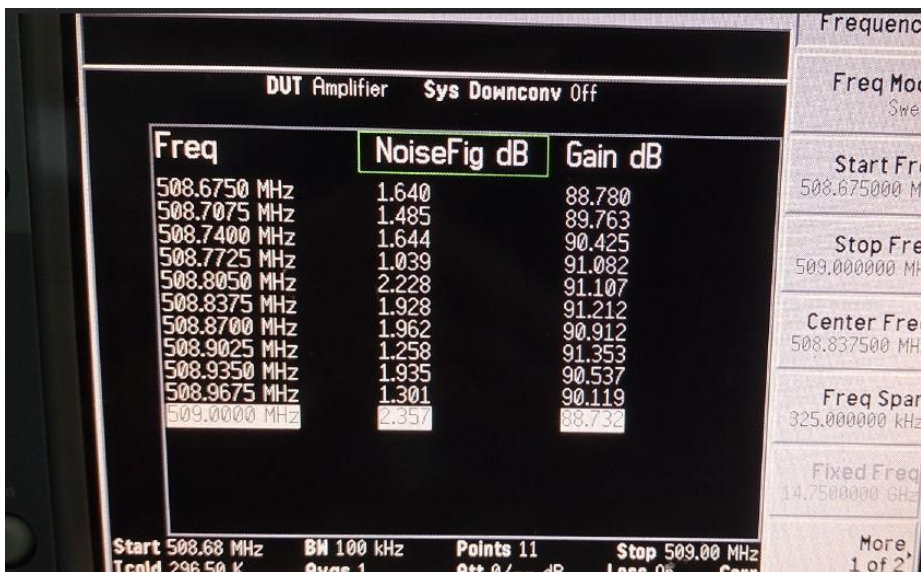
Low frequency: 450.0125MHz



Freq	NoiseFig dB	Gain dB
478.8500 MHz	2.336	88.695
478.8800 MHz	1.328	89.766
478.9100 MHz	2.075	89.986
478.9400 MHz	2.473	89.856
478.9700 MHz	1.417	89.926
479.0000 MHz	1.932	90.118
479.0300 MHz	1.358	90.535
479.0600 MHz	2.565	90.101
479.0900 MHz	1.844	89.828
479.1200 MHz	1.430	89.302
479.1500 MHz	2.979	88.663

Center 479.00 MHz BW 100 kHz Points 11 Span 300 kHz

Middle frequency: 479.0MHz

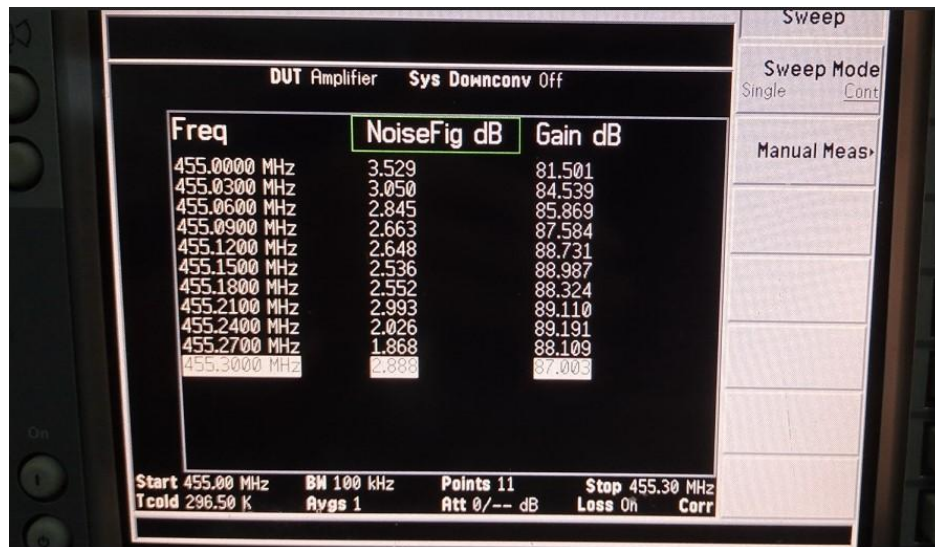


Freq	NoiseFig dB	Gain dB
508.6750 MHz	1.640	88.780
508.7075 MHz	1.485	89.763
508.7400 MHz	1.644	90.425
508.7725 MHz	1.039	91.082
508.8050 MHz	2.228	91.107
508.8375 MHz	1.928	91.212
508.8700 MHz	1.962	90.912
508.9025 MHz	1.258	91.353
508.9350 MHz	1.935	90.537
508.9675 MHz	1.301	90.119
509.0000 MHz	2.357	88.732

Start 508.68 MHz BW 100 kHz Points 11 Stop 509.00 MHz

High frequency: 508.9875MHz

10.7.5.2. Uplink



DUT Amplifier Sys Downconv Off

Freq	NoiseFig dB	Gain dB
455.0000 MHz	3.529	81.501
455.0300 MHz	3.050	84.539
455.0600 MHz	2.845	85.869
455.0900 MHz	2.663	87.584
455.1200 MHz	2.648	88.731
455.1500 MHz	2.536	88.987
455.1800 MHz	2.552	88.324
455.2100 MHz	2.993	89.110
455.2400 MHz	2.026	89.191
455.2700 MHz	1.868	88.109
455.3000 MHz	2.888	87.003

Start 455.00 MHz BW 100 kHz Points 11 Stop 455.30 MHz
Tcold 296.50 K Aves 1 Att 0/-- dB Loss On Corr

Sweep
Sweep Mode
Single Cont
Manual Meas

Low frequency: 455.0125MHz



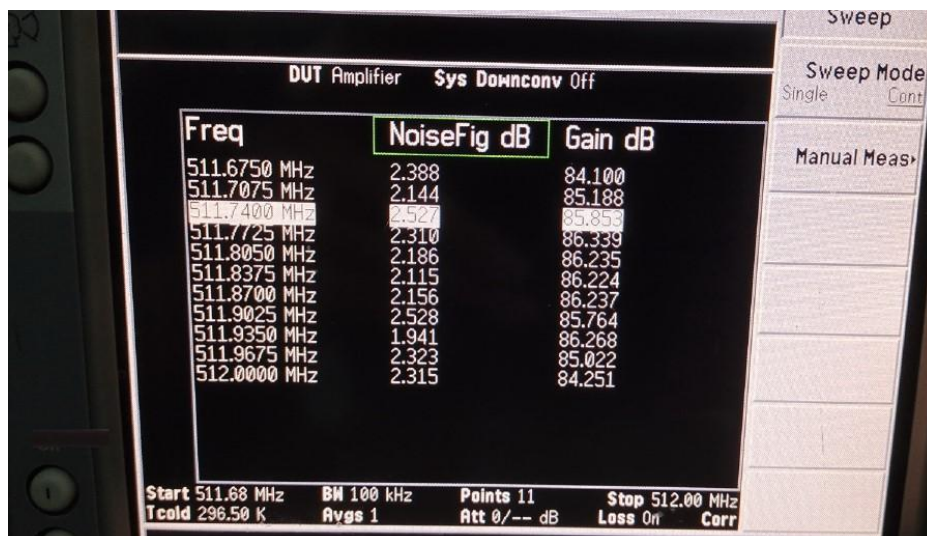
DUT Amplifier Sys Downconv Off

Freq	NoiseFig dB	Gain dB
483.8500 MHz	2.431	88.083
483.8800 MHz	2.339	88.488
483.9100 MHz	1.967	89.233
483.9400 MHz	2.152	89.707
483.9700 MHz	1.867	89.525
484.0000 MHz	2.291	89.011
484.0300 MHz	1.923	89.783
484.0600 MHz	1.764	89.434
484.0900 MHz	2.914	88.923
484.1200 MHz	2.210	88.315
484.1500 MHz	2.056	87.906

Center 484.00 MHz BW 100 kHz Points 11 Span 300 kHz
Tcold 296.50 K Aves 1 Att 0/-- dB Loss On Corr

Sweep
Sweep Mode
Single Cont
Manual Meas

Middle frequency: 484.0MHz



DUT Amplifier Sys Downconv Off

Freq	NoiseFig dB	Gain dB
511.6750 MHz	2.388	84.100
511.7075 MHz	2.144	85.188
511.7400 MHz	2.527	85.858
511.7725 MHz	2.310	86.339
511.8050 MHz	2.186	86.235
511.8375 MHz	2.115	86.224
511.8700 MHz	2.156	86.237
511.9025 MHz	2.528	85.764
511.9350 MHz	1.941	86.268
511.9675 MHz	2.323	85.022
512.0000 MHz	2.315	84.251

Start 511.68 MHz BW 100 kHz Points 11 Stop 512.00 MHz
Tcold 296.50 K Aves 1 Att 0/-- dB Loss On Corr

Sweep
Sweep Mode
Single Cont
Manual Meas

High frequency: 511.9875MHz

10.8. Out-of-band/out-of-block emissions

Test requirement: KDB 935210 D05 clause 4.7.2
FCC PART 2.1051
FCC PART 90.219 (d)(6)(i)
FCC PART 90.219 (e)(3)

Test Method: KDB 935210 D05/4.7.1 and 4.7.2

10.8.1. Requirements

The EUT shall comply with sections 4.7.2 of KDB 935210 D05.

Refer to the applicable rule part(s) for specified limits on unwanted (out-of-band/out-of-block and spurious) emissions (e.g., Section 90.210).

Spurious emissions shall be measured using a single test signal sequentially tuned to the low, middle, and high channels or frequencies within each authorized frequency band of operation.

Intermodulation products shall be measured using two CW signals with all available channel spacings (e.g., 12.5 kHz and 6.25 kHz) with the center between these channels being equal to the center frequency f_0 as determined from 4.3.

NOTE—Intermodulation-product spurious emission measurements are not required for single-channel boosters that cannot accommodate two simultaneous signals within the passband.

For a multi-channel enhancer, any intermodulation product level must be attenuated, relative to P, by at least: $43 + 10 \cdot \log_{10} P$ is less stringent than 70dB, that limit was used.

Spurious emissions shall be measured using a single test signal sequentially tuned to the low, middle, and high channels or frequencies within each authorized frequency band of operation.

Out-of-band/out-of-block emissions (including intermodulation products) shall be measured under each of the following two stimulus conditions:

- a) two adjacent test signals sequentially tuned to the lower and upper frequency band/block edges;
- b) a single test signal, sequentially tuned to the lowest and highest frequencies or channels within the frequency band/block under examination.

NOTE—Single-channel boosters that cannot accommodate two simultaneous signals within the passband may be excluded from the test stipulated in step a).

———— The following blanks ————

10.8.2. Test configuration

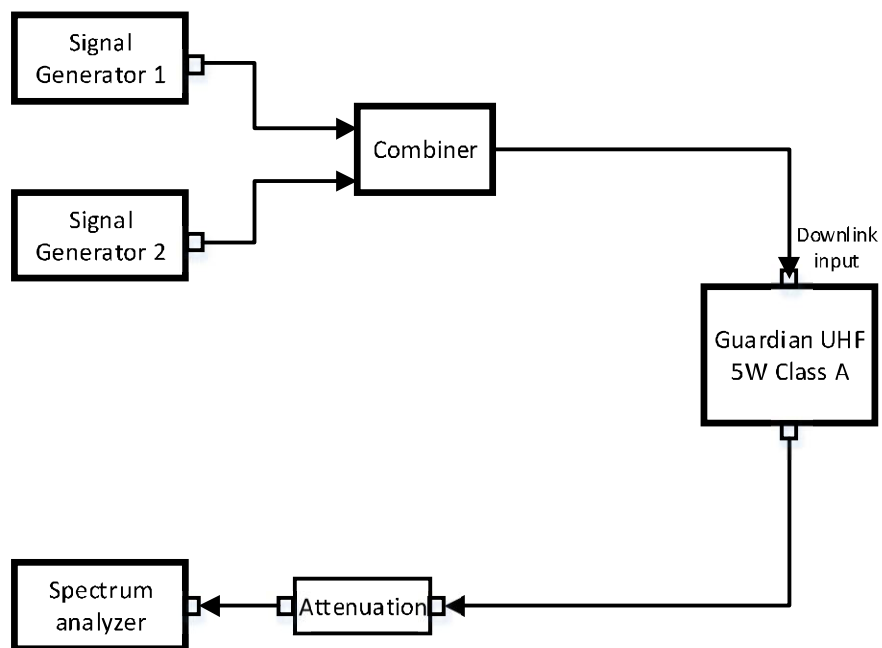


Figure 10.8-1 Downlink test connection diagram

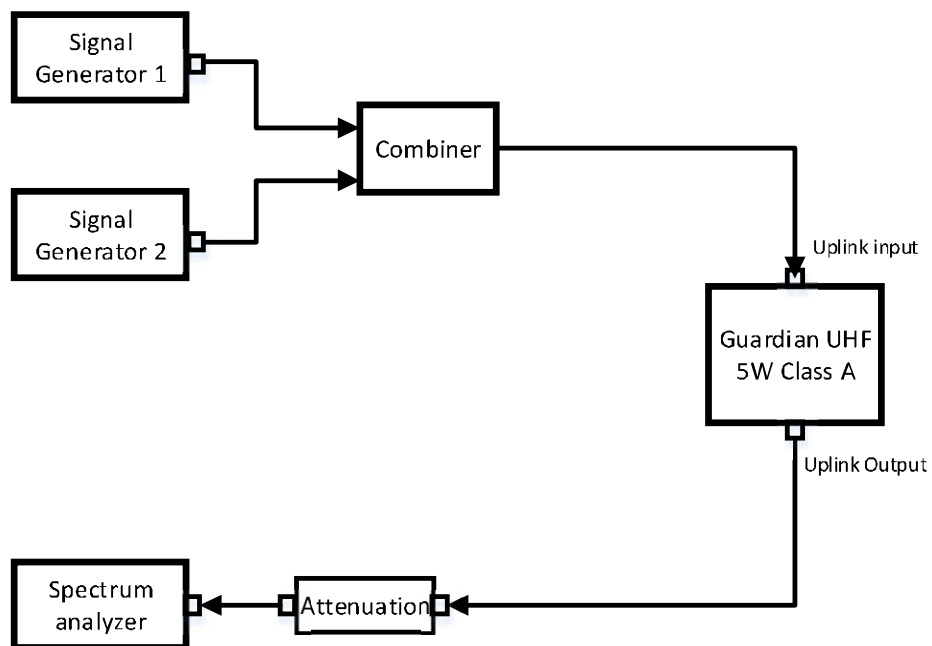


Figure 10.8-2 Uplink test connection diagram

———— The following blanks ————

10.8.3. Test procedures

- a) Connect a signal generator to the input of the EUT.
If the signal generator is not capable of producing two independent modulated carriers simultaneously, then two discrete signal generators can be connected, with an appropriate combining network to support the two-signal test.
- b) Configure the two signal generators to produce CW on frequencies spaced consistent with 4.7.1, with amplitude levels set to just below the AGC threshold (see 4.2). Set the signal generator amplitudes so that the power from each into the EUT is equivalent.
- c) Connect a spectrum analyzer to the EUT output.
- d) Set the span to 100 kHz.
- e) Set RBW = 300 Hz with VBW $\geq 3 \times$ RBW.
- f) Set the detector to power averaging (rms).
- g) Place a marker on highest intermodulation product amplitude.
- h) Capture the plot for inclusion in the test report.
- i) Repeat steps c) to h) with the composite input power level set to 3 dB above the AGC threshold.
- j) Repeat steps b) to i) for all operational bands.

Any frequency outside the authorized bandwidth was attenuated by at least $43 + 10 \cdot \log(P)$ dB. This corresponds to an absolute level of -13 dBm ($P_{\text{dBm}} = -(43 + 10 \cdot \log(P_{\text{W}}))$).

———— The following blanks ————