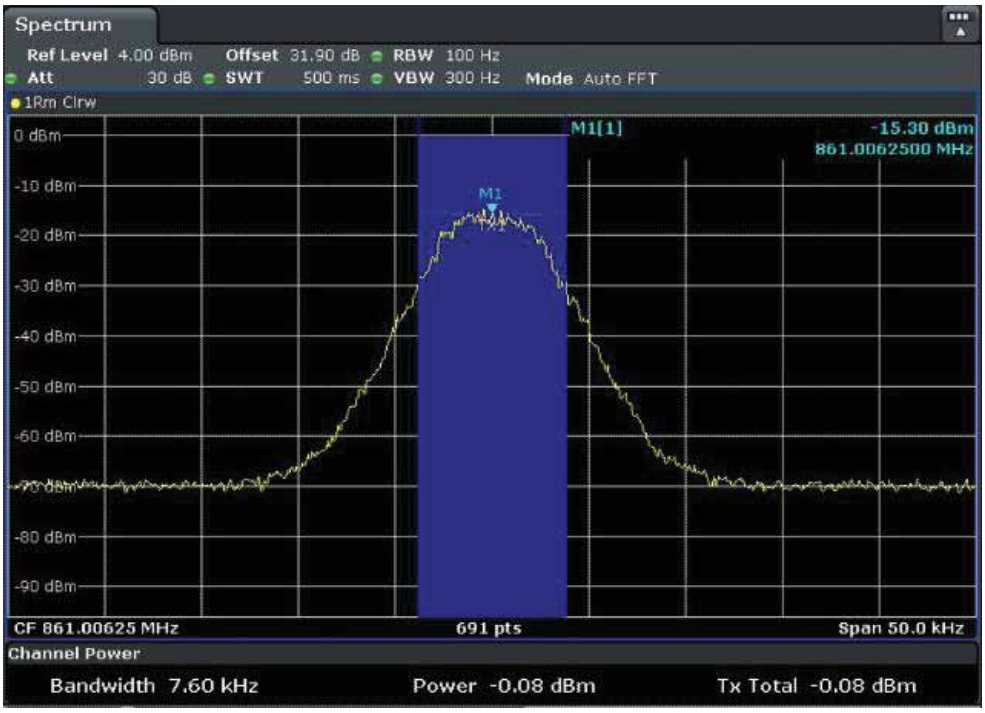
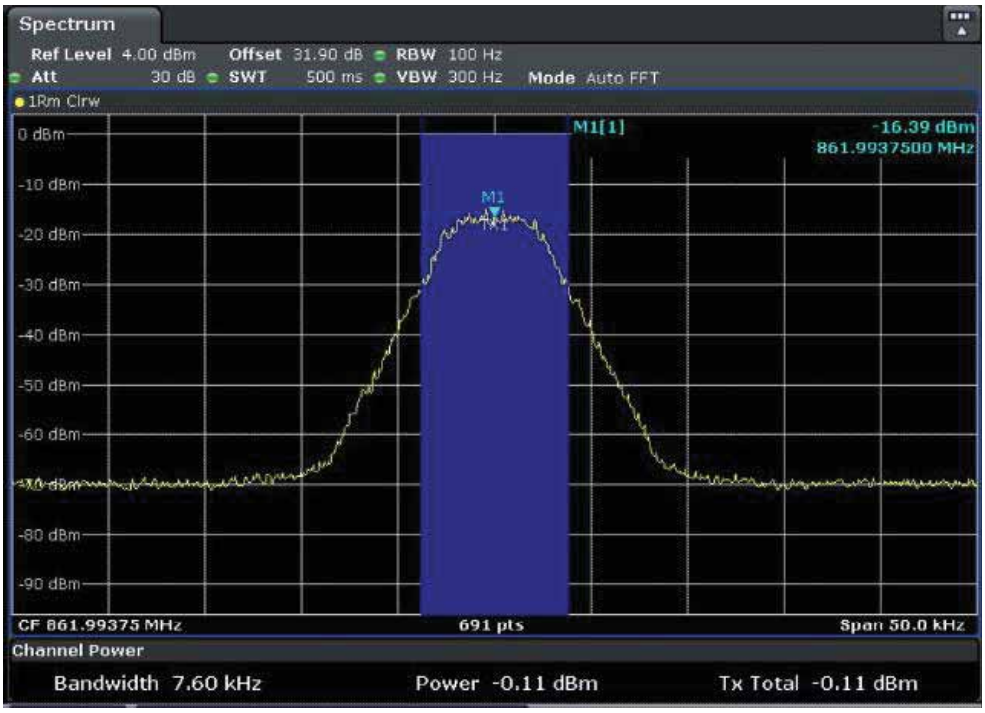
11.2.3.1.3. DMR

11.2.3.1.3.1. Downlink



Low Frequency: 861.00625MHz



High Frequency: 861.99375MHz

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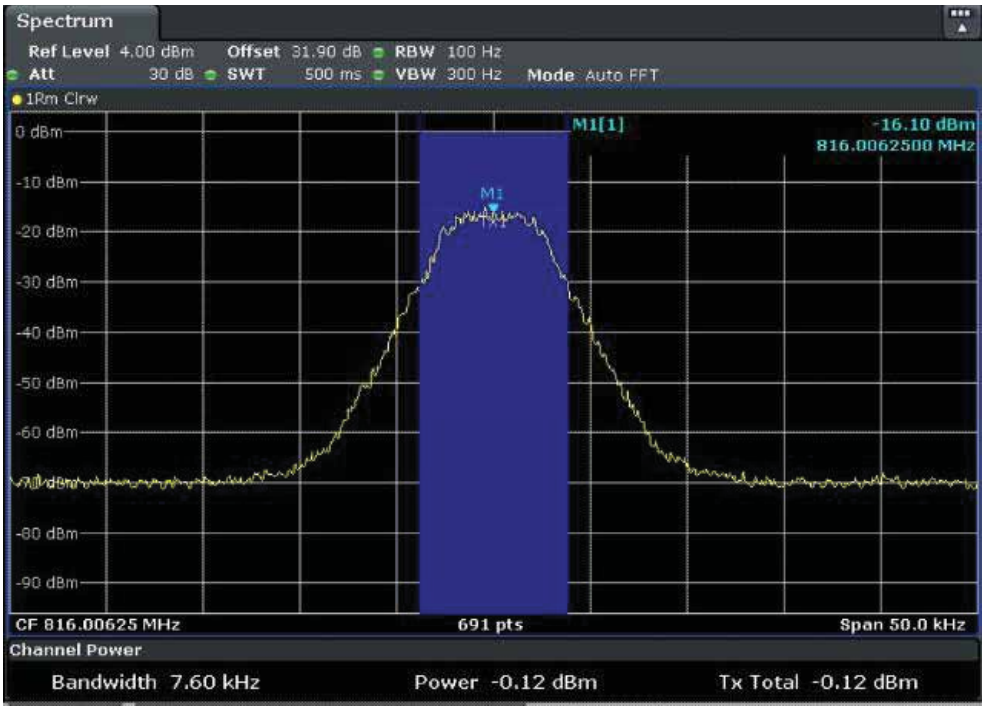
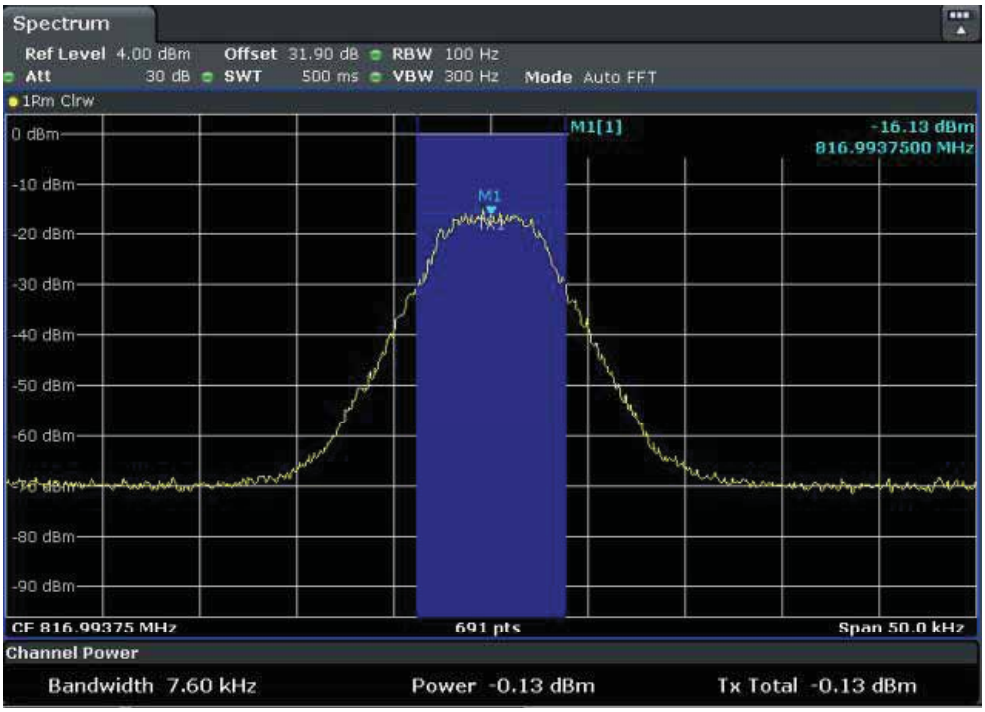
11.2.3.1.3.2. Uplink



Low Frequency: 816.00625MHz



High Frequency: 816.99375MHz

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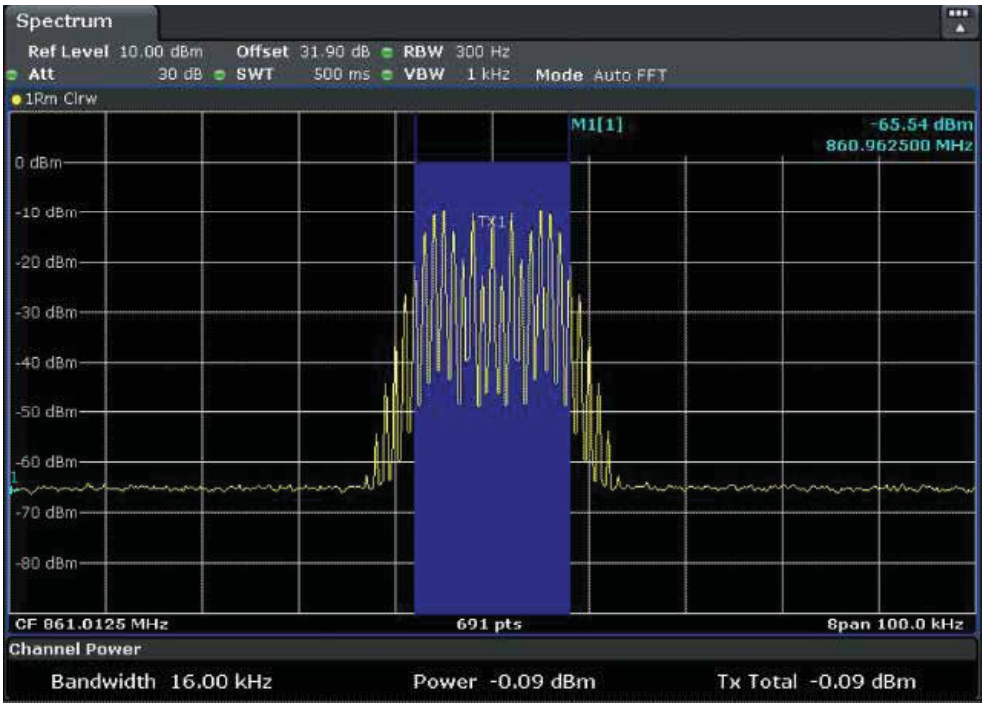
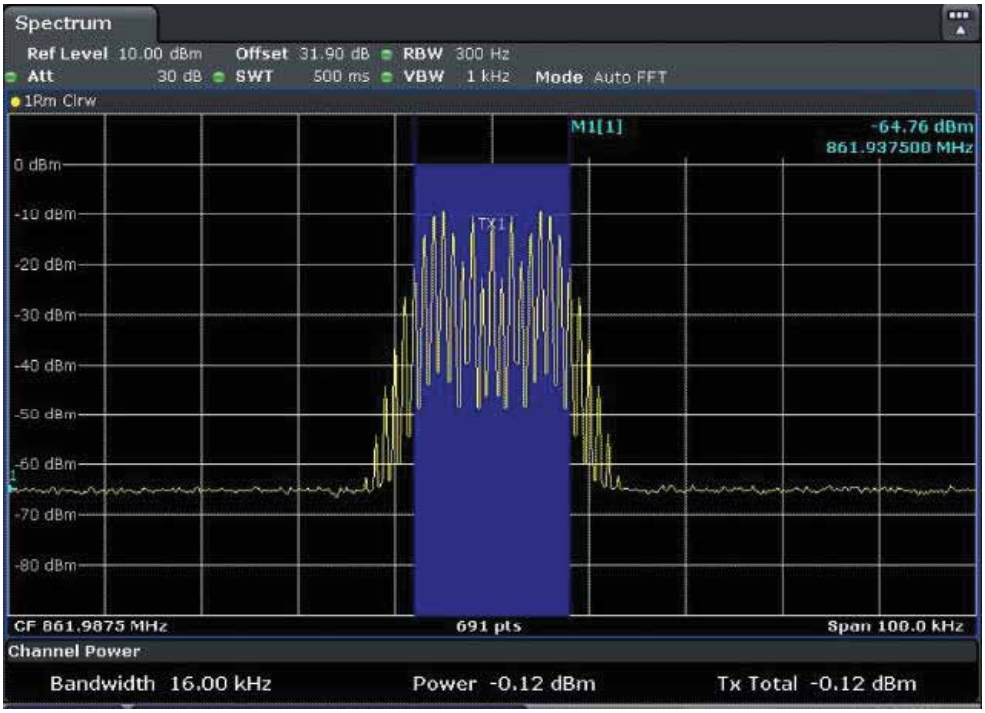
11.2.3.1.4. Analog FM

11.2.3.1.4.1. Downlink



Low Frequency: 861.0125MHz



High Frequency: 861.9875MHz

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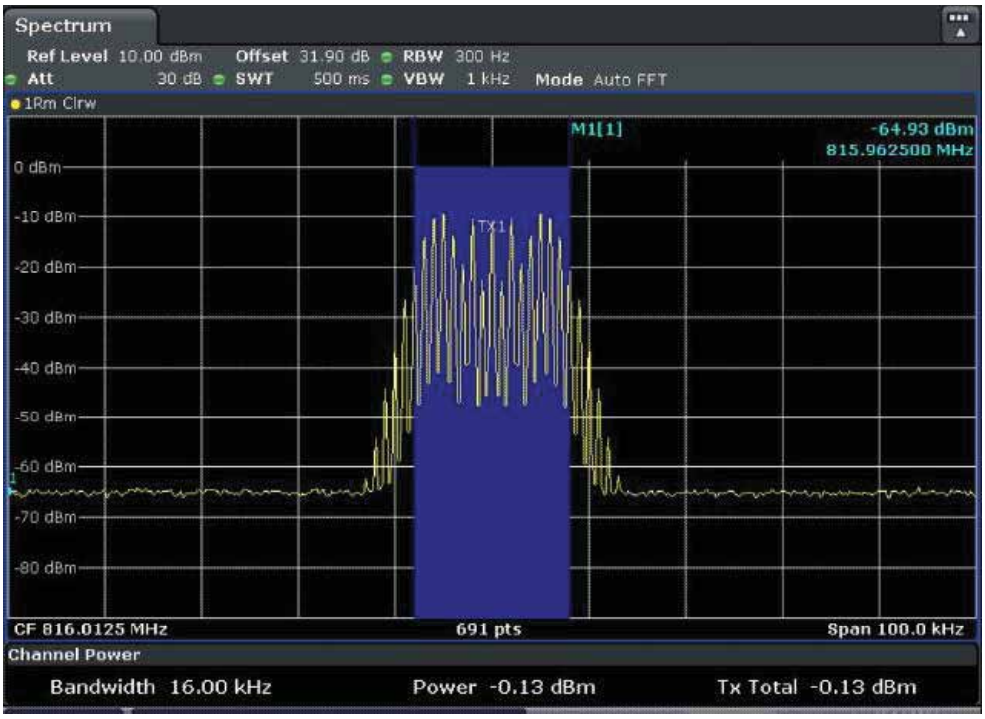
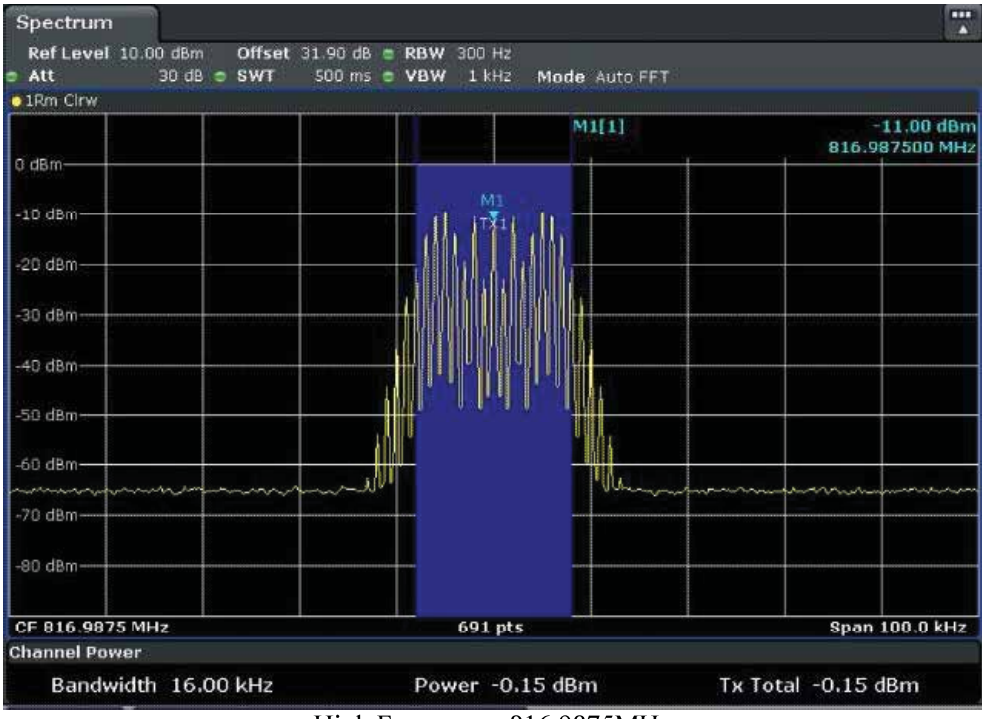
11.2.3.1.4.2. Uplink



Low Frequency: 816.0125MHz



High Frequency: 816.9875MHz

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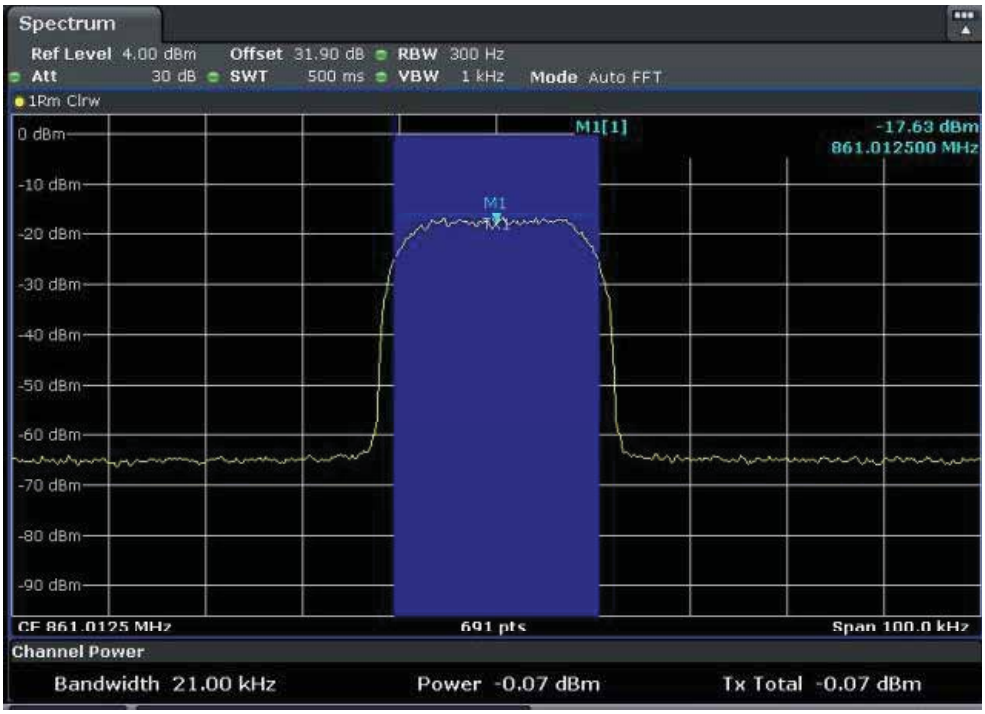
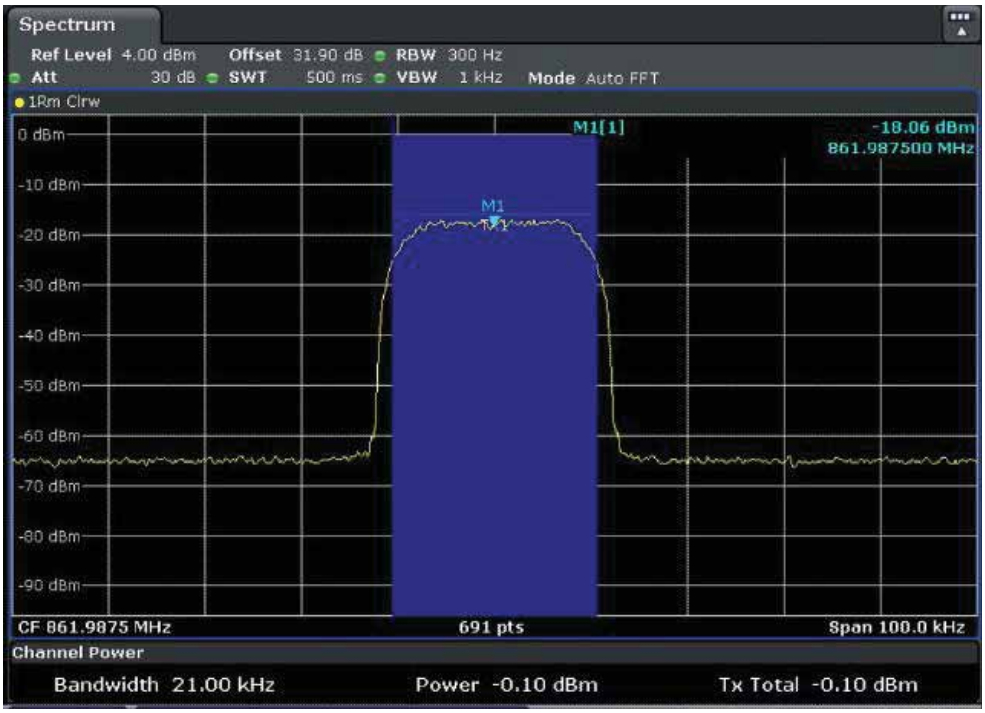
11.2.3.1.5. Tetra

11.2.3.1.5.1. Downlink



Low Frequency: 861.0125MHz



High Frequency: 861.9875MHz

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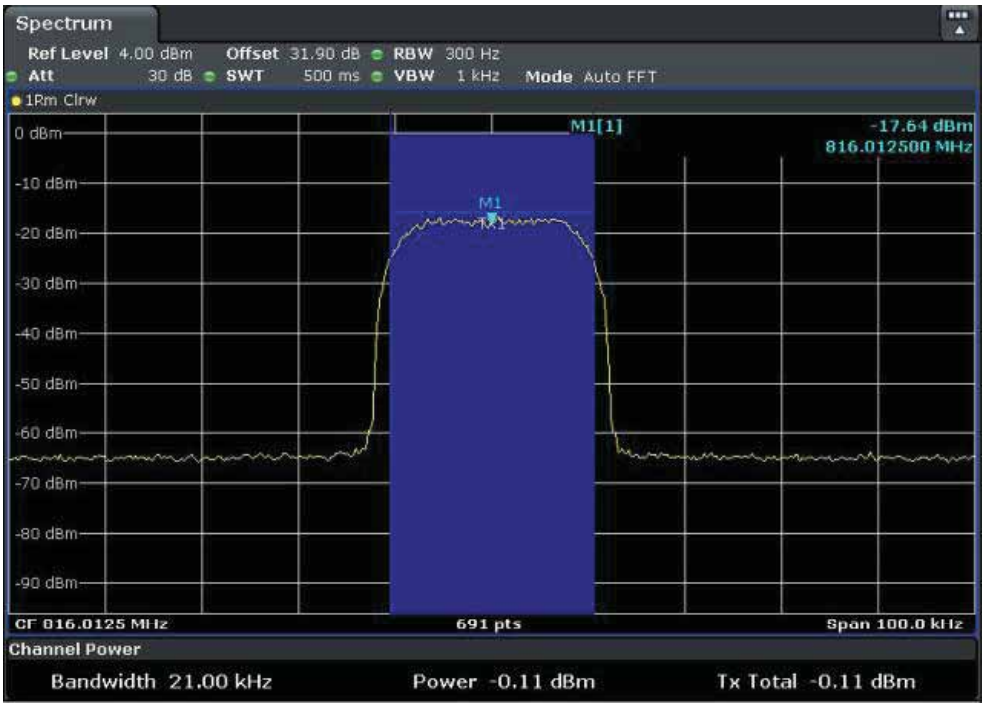
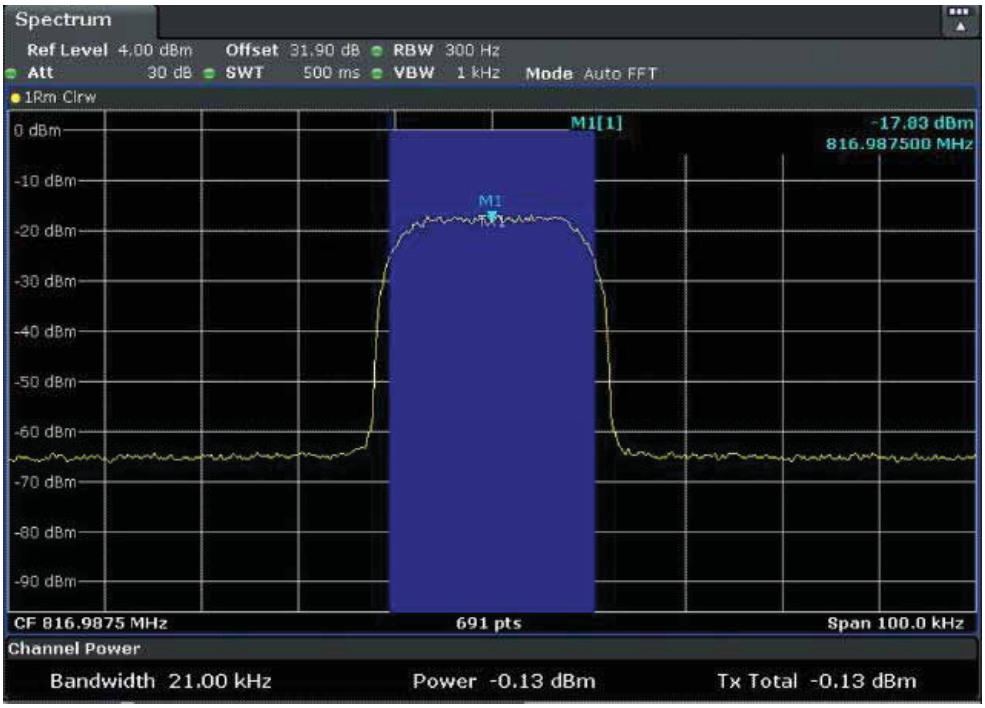
11.2.3.1.5.2. Uplink



Low Frequency: 816.0125MHz



High Frequency: 816.9875MHz

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11.3. AGC Threshold

Requirements: KDB 935210 D05 clause 4.2

Test Method: KDB 935210 D05 clause 3.2

11.3.1. Requirements

Testing at and above the AGC threshold will be required.[6] The AGC threshold shall be determined by applying the procedure of 3.2, but with the signal generator configured to produce a test signal defined in Table 1, a CW input signal, or a digitally modulated signal, consistent with the discussion about signal types in 4.1.

11.3.2. Test configuration

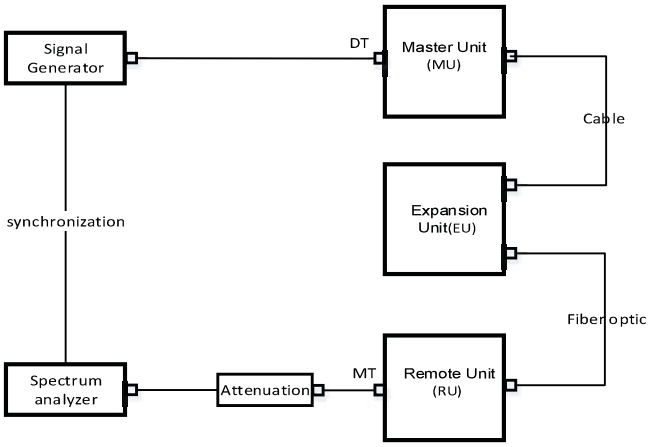

Figure 11.3-1 Downlink connection diagram

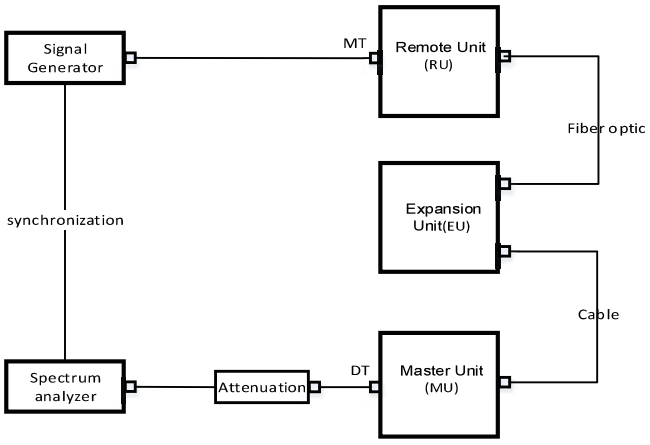

Figure 11.3-2 Uplink connection diagram

11.3.3. Test procedures

The AGC threshold is to be determined as follows.[3]

In the case of fiber-optic distribution systems, the RF input port of the equipment under test (EUT) refers to the RF input of the supporting equipment RF to optical convertor; see also descriptions and diagrams for typical DAS booster systems in KDB Publication 935210 D02 [R7].

Devices intended to be directly connected to an RF source (donor port) only need to be evaluated for any over-the-air transmit paths.

a) Connect a signal generator to the input of the EUT.
b) Connect a spectrum analyzer or power meter to the output of the EUT using appropriate attenuation as necessary.
c) The signal generator should initially be configured to produce either of the required test signals (i.e., broadband or narrowband).
d) Set the signal generator frequency to the center frequency of the EUT operating band.
e) While monitoring the output power of the EUT, measured using the methods of 3.5.3 or 3.5.4, increase the input level until a 1 dB increase in the input signal power no longer causes a 1 dB increase in the output signal power.
f) Record this level as the AGC threshold level.
g) Repeat the procedure with the remaining test signal.

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11.3.4. Test results

Test Date (yy-mm-dd): 2024-05-17

Normal condition: Temp:26.4℃, Humid: 44%, Atmospheric Pressure:101kpa

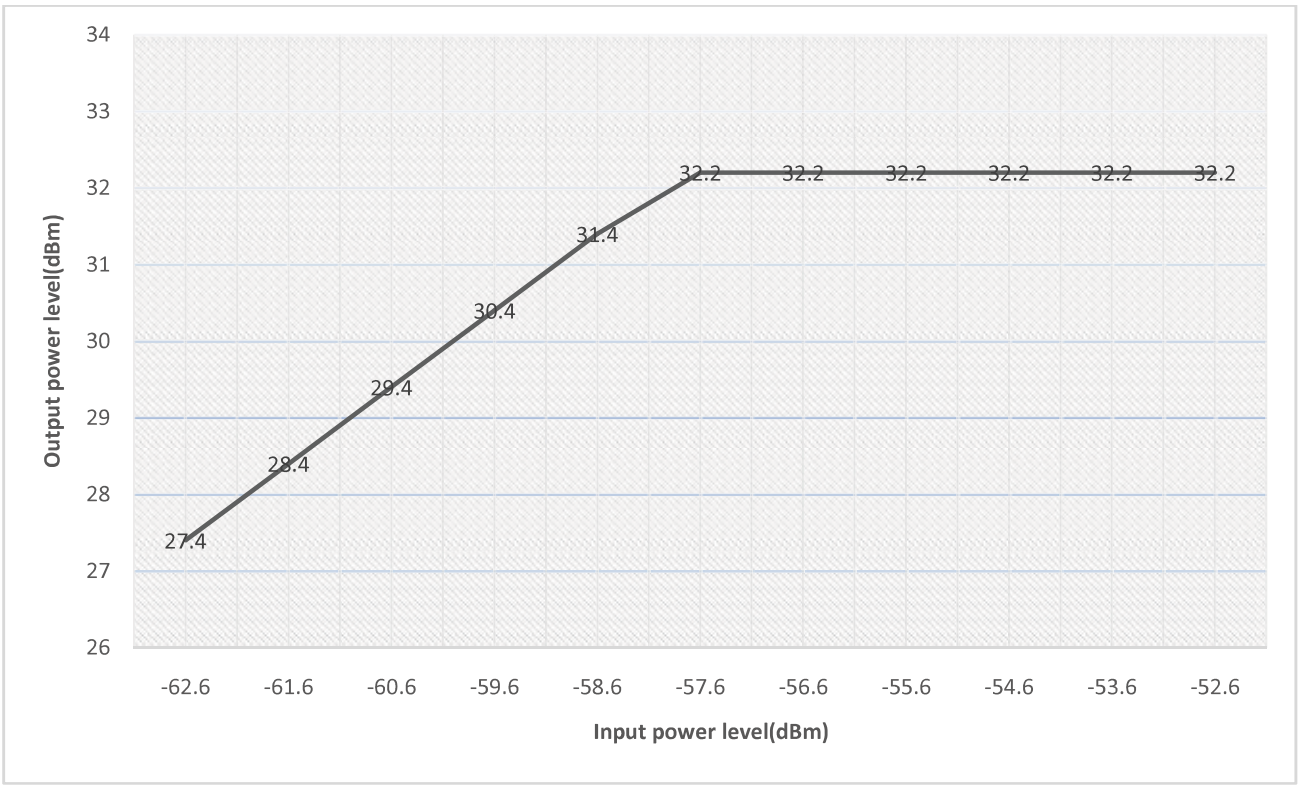
Supply Voltage: AC 110V, 50Hz

11.3.4.1. 800MHz Band (Downlink: 861MHz ~862MHz, Uplink: 816MHz ~ 817MHz)

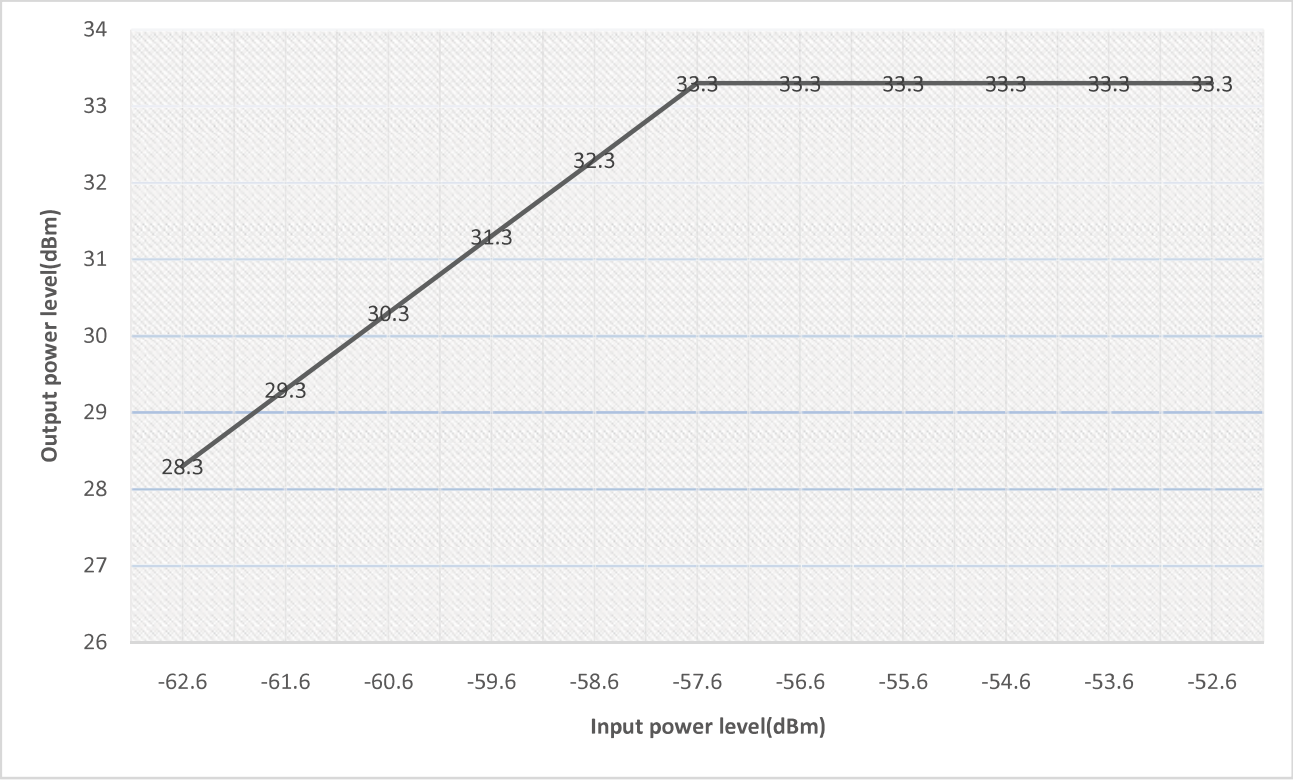
11.3.4.1.1. Downlink

11.3.4.1.1.1. P25 Phase I(C4FM)

Test frequency	Signal output power (dBm)	EUT Input cable loss (dB)	EUT Corrected Input power (dBm)	EUT Corrected Output power (dBm)
861.00625MHz	-60.8	1.8	-62.6	27.4
	-59.8	1.8	-61.6	28.4
	-58.8	1.8	-60.6	29.4
	-57.8	1.8	-59.6	30.4
	-56.8	1.8	-58.6	31.4
	-55.8	1.8	-57.6	32.2
	-54.8	1.8	-56.6	32.2
	-53.8	1.8	-55.6	32.2
	-52.8	1.8	-54.6	32.2
	-51.8	1.8	-53.6	32.2
	-50.8	1.8	-52.6	32.2



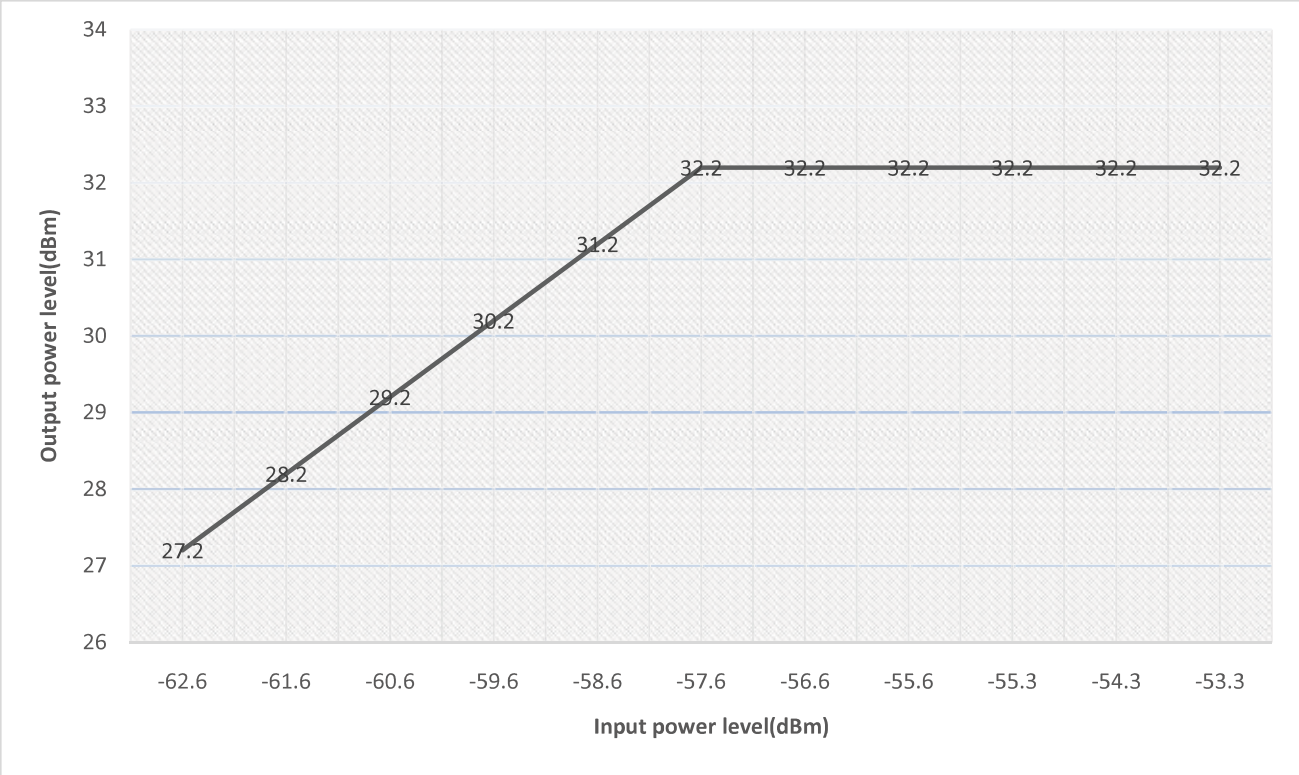
Test frequency	Signal output power (dBm)	EUT Input cable loss (dB)	EUT Corrected Input power (dBm)	EUT Corrected Output power (dBm)
861.99375MHz	-60.8	1.8	-62.6	28.3
	-59.8	1.8	-61.6	29.3
	-58.8	1.8	-60.6	30.3
	-57.8	1.8	-59.6	31.3
	-56.8	1.8	-58.6	32.3
	-55.8	1.8	-57.6	33.3
	-54.8	1.8	-56.6	33.3
	-53.8	1.8	-55.6	33.3
	-52.8	1.8	-54.6	33.3
	-51.8	1.8	-53.6	33.3
	-50.8	1.8	-52.6	33.3



———— The following blanks ————

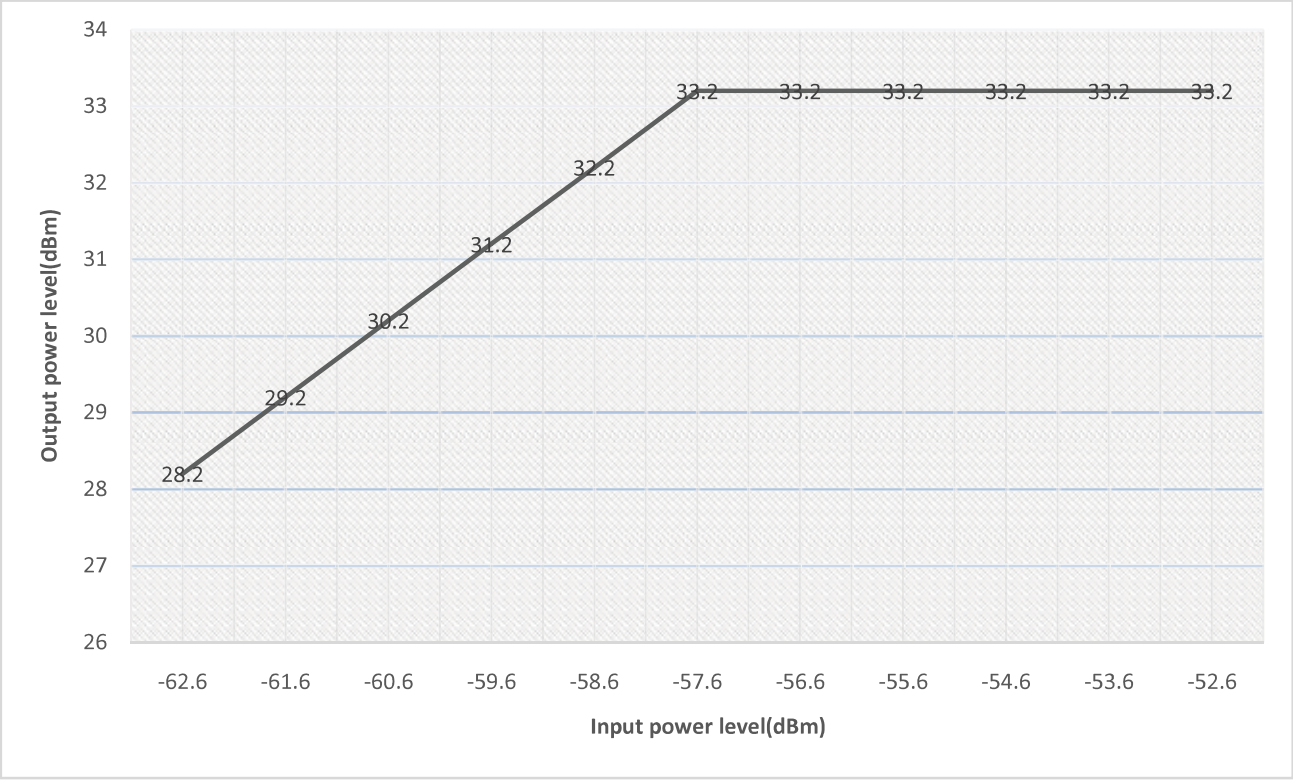
11.3.4.1.1.2. P25 Phase II(H-DQPSK)

861.00625MHz	-60.8	1.8	-62.6	27.2
	-59.8	1.8	-61.6	28.2
	-58.8	1.8	-60.6	29.2
	-57.8	1.8	-59.6	30.2
	-56.8	1.8	-58.6	31.2
	-55.8	1.8	-57.6	32.2
	-54.8	1.8	-56.6	32.2
	-53.8	1.8	-55.6	32.2
	-53.5	1.8	-55.3	32.2
	-52.5	1.8	-54.3	32.2
	-51.5	1.8	-53.3	32.2



———— The following blanks ————

Test frequency	Signal output power (dBm)	EUT Input cable loss (dB)	EUT Corrected Input power (dBm)	EUT Corrected Output power (dBm)
861.99375MHz	-60.8	1.8	-62.6	28.2
	-59.8	1.8	-61.6	29.2
	-58.8	1.8	-60.6	30.2
	-57.8	1.8	-59.6	31.2
	-56.8	1.8	-58.6	32.2
	-55.8	1.8	-57.6	33.2
	-54.8	1.8	-56.6	33.2
	-53.8	1.8	-55.6	33.2
	-52.8	1.8	-54.6	33.2
	-51.8	1.8	-53.6	33.2
	-50.8	1.8	-52.6	33.2



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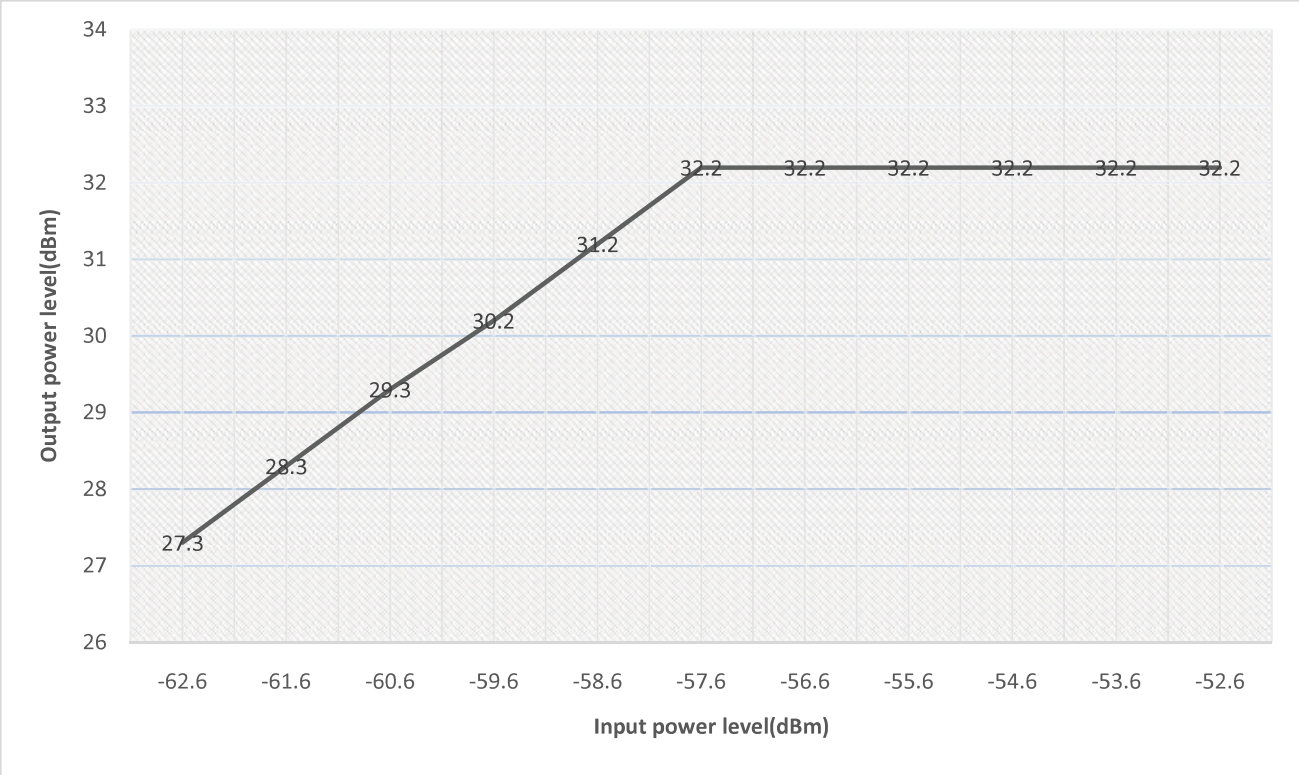
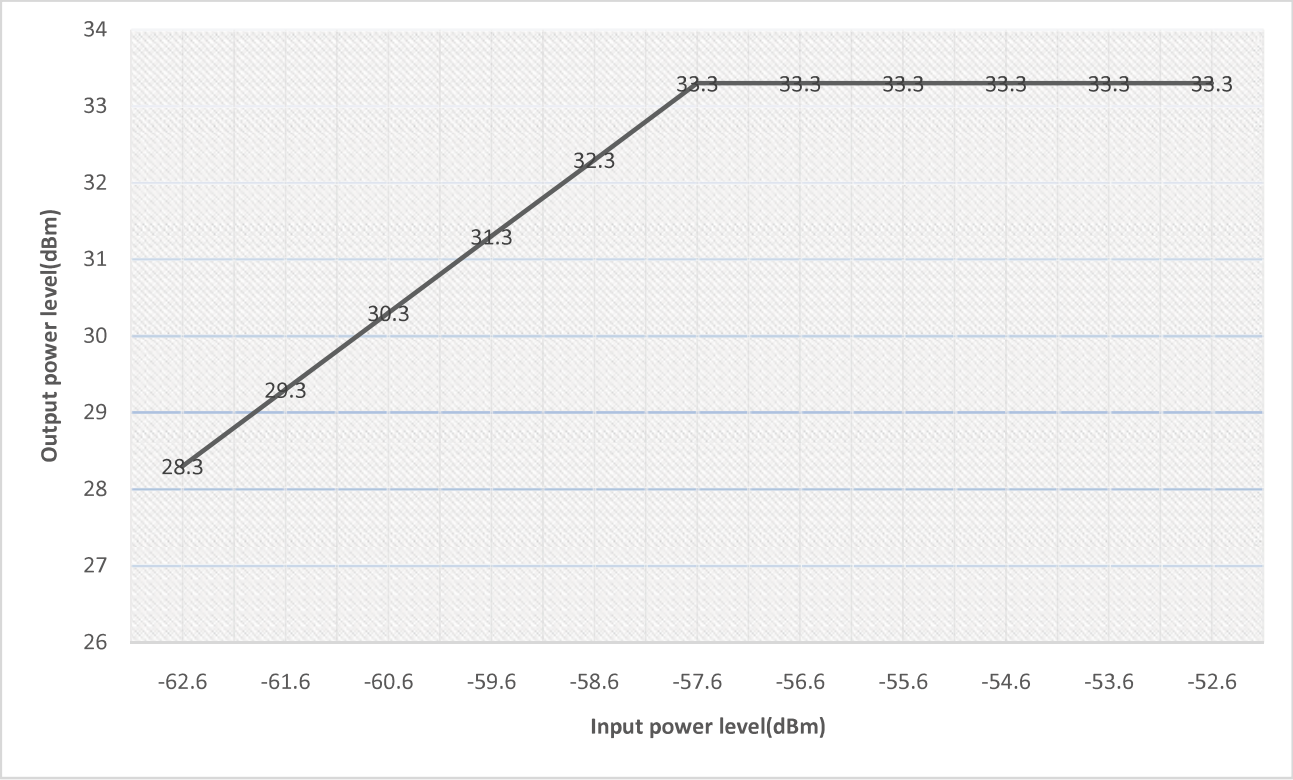
11.3.4.1.1.3. DMR

861.00625MHz	-60.8	1.8	-62.6	27.3
	-59.8	1.8	-61.6	28.3
	-58.8	1.8	-60.6	29.3
	-57.8	1.8	-59.6	30.2
	-56.8	1.8	-58.6	31.2
	-55.8	1.8	-57.6	32.2
	-54.8	1.8	-56.6	32.2
	-53.8	1.8	-55.6	32.2
	-52.8	1.8	-54.6	32.2
	-51.8	1.8	-53.6	32.2
	-50.8	1.8	-52.6	32.2



———— The following blanks ————

Test frequency	Signal output power (dBm)	EUT Input cable loss (dB)	EUT Corrected Input power (dBm)	EUT Corrected Output power (dBm)
861.99375MHz	-60.8	1.8	-62.6	28.3
	-59.8	1.8	-61.6	29.3
	-58.8	1.8	-60.6	30.3
	-57.8	1.8	-59.6	31.3
	-56.8	1.8	-58.6	32.3
	-55.8	1.8	-57.6	33.3
	-54.8	1.8	-56.6	33.3
	-53.8	1.8	-55.6	33.3
	-52.8	1.8	-54.6	33.3
	-51.8	1.8	-53.6	33.3
	-50.8	1.8	-52.6	33.3



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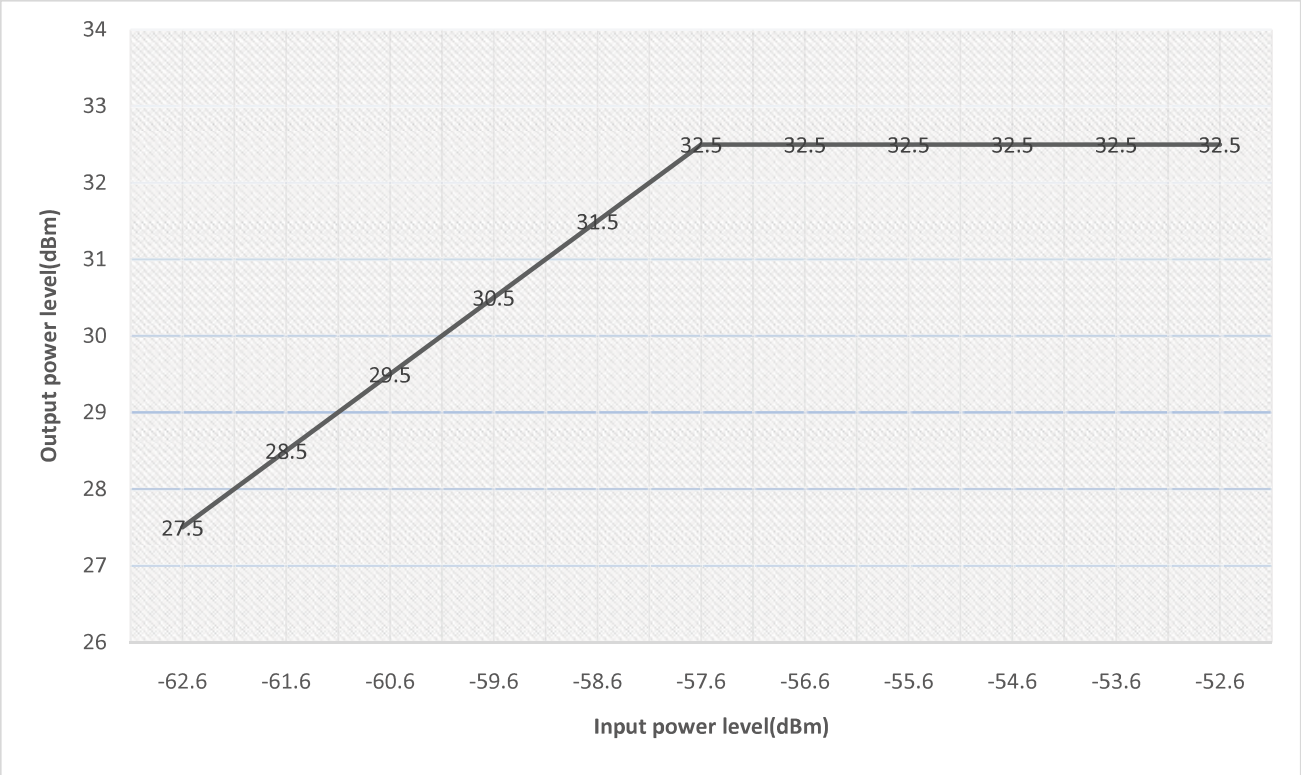
11.3.4.1.1.4. Analog FM

861.0125MHz	-60.8	1.8	-62.6	27.5
	-59.8	1.8	-61.6	28.5
	-58.8	1.8	-60.6	29.5
	-57.8	1.8	-59.6	30.5
	-56.8	1.8	-58.6	31.5
	-55.8	1.8	-57.6	32.5
	-54.8	1.8	-56.6	32.5
	-53.8	1.8	-55.6	32.5
	-52.8	1.8	-54.6	32.5
	-51.8	1.8	-53.6	32.5
	-50.8	1.8	-52.6	32.5



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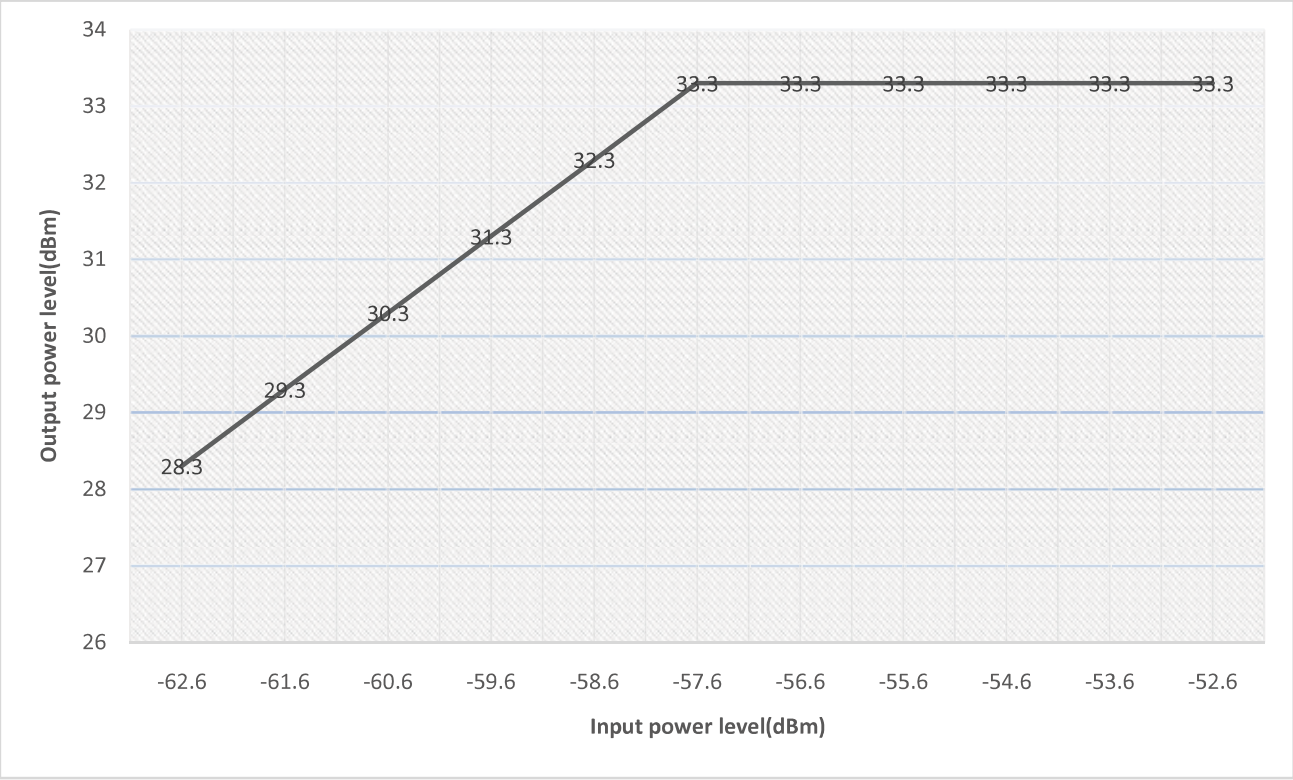
Test frequency	Signal output power (dBm)	EUT Input cable loss (dB)	EUT Corrected Input power (dBm)	EUT Corrected Output power (dBm)
861.9875MHz	-60.8	1.8	-62.6	28.3
	-59.8	1.8	-61.6	29.3
	-58.8	1.8	-60.6	30.3
	-57.8	1.8	-59.6	31.3
	-56.8	1.8	-58.6	32.3
	-55.8	1.8	-57.6	33.3
	-54.8	1.8	-56.6	33.3
	-53.8	1.8	-55.6	33.3
	-52.8	1.8	-54.6	33.3
	-51.8	1.8	-53.6	33.3
	-50.8	1.8	-52.6	33.3



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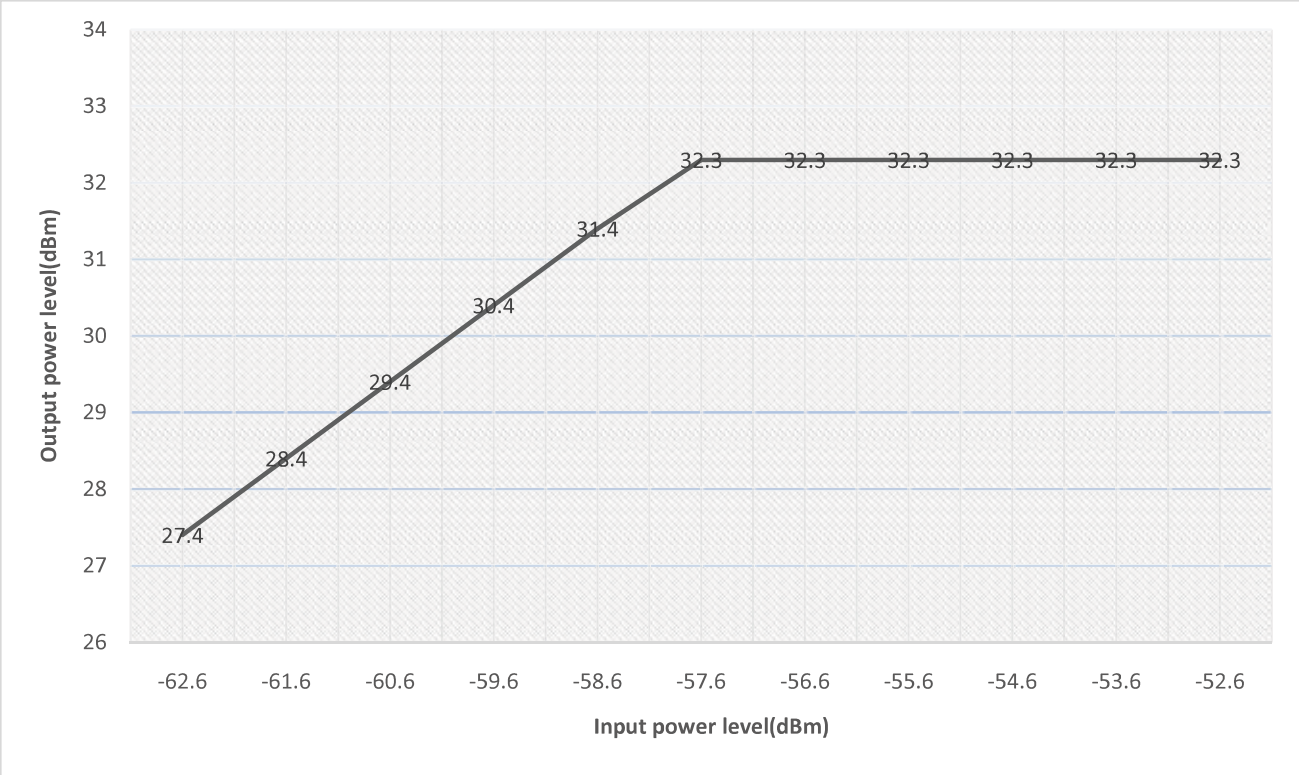
11.3.4.1.1.5. Tetra

861.0125MHz	-60.8	1.8	-62.6	27.4
	-59.8	1.8	-61.6	28.4
	-58.8	1.8	-60.6	29.4
	-57.8	1.8	-59.6	30.4
	-56.8	1.8	-58.6	31.4
	-55.8	1.8	-57.6	32.3
	-54.8	1.8	-56.6	32.3
	-53.8	1.8	-55.6	32.3
	-52.8	1.8	-54.6	32.3
	-51.8	1.8	-53.6	32.3
	-50.8	1.8	-52.6	32.3



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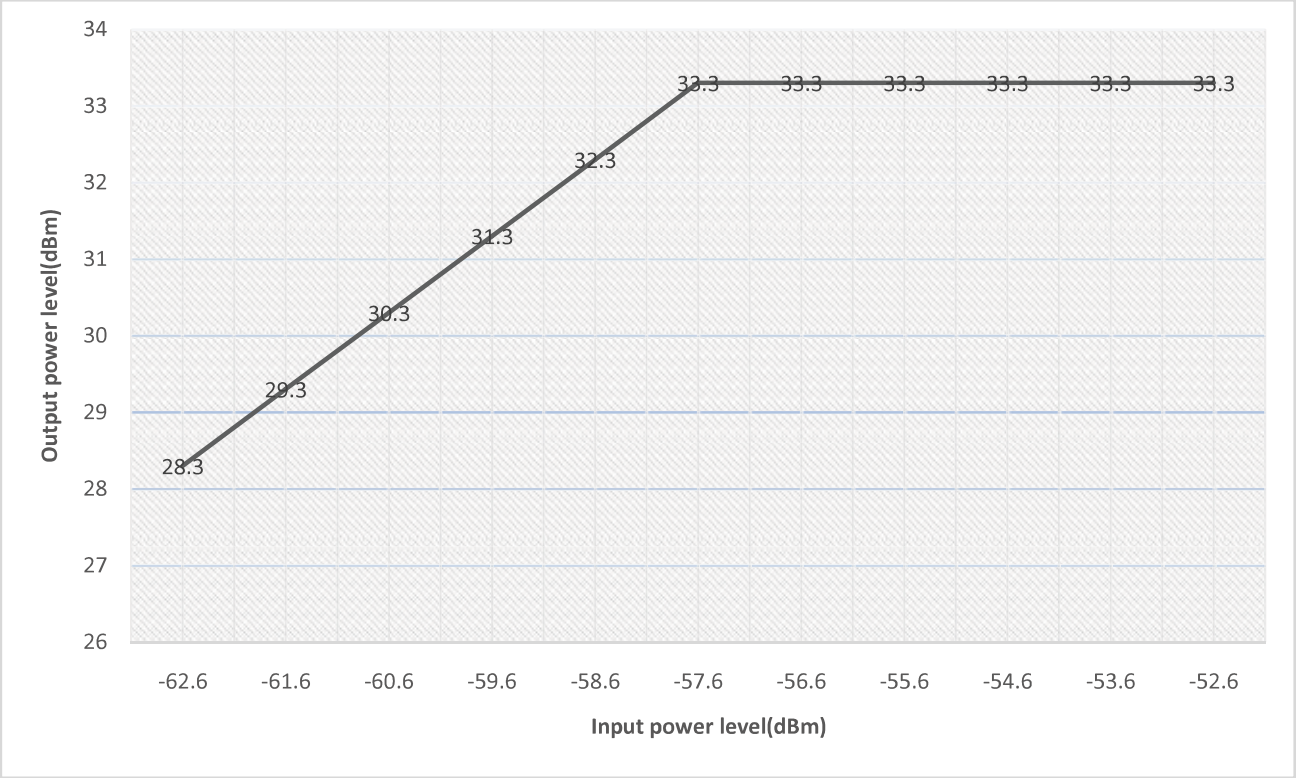
Test frequency	Signal output power (dBm)	EUT Input cable loss (dB)	EUT Corrected Input power (dBm)	EUT Corrected Output power (dBm)
861.9875MHz	-60.8	1.8	-62.6	28.3
	-59.8	1.8	-61.6	29.3
	-58.8	1.8	-60.6	30.3
	-57.8	1.8	-59.6	31.3
	-56.8	1.8	-58.6	32.3
	-55.8	1.8	-57.6	33.3
	-54.8	1.8	-56.6	33.3
	-53.8	1.8	-55.6	33.3
	-52.8	1.8	-54.6	33.3
	-51.8	1.8	-53.6	33.3
	-50.8	1.8	-52.6	33.3



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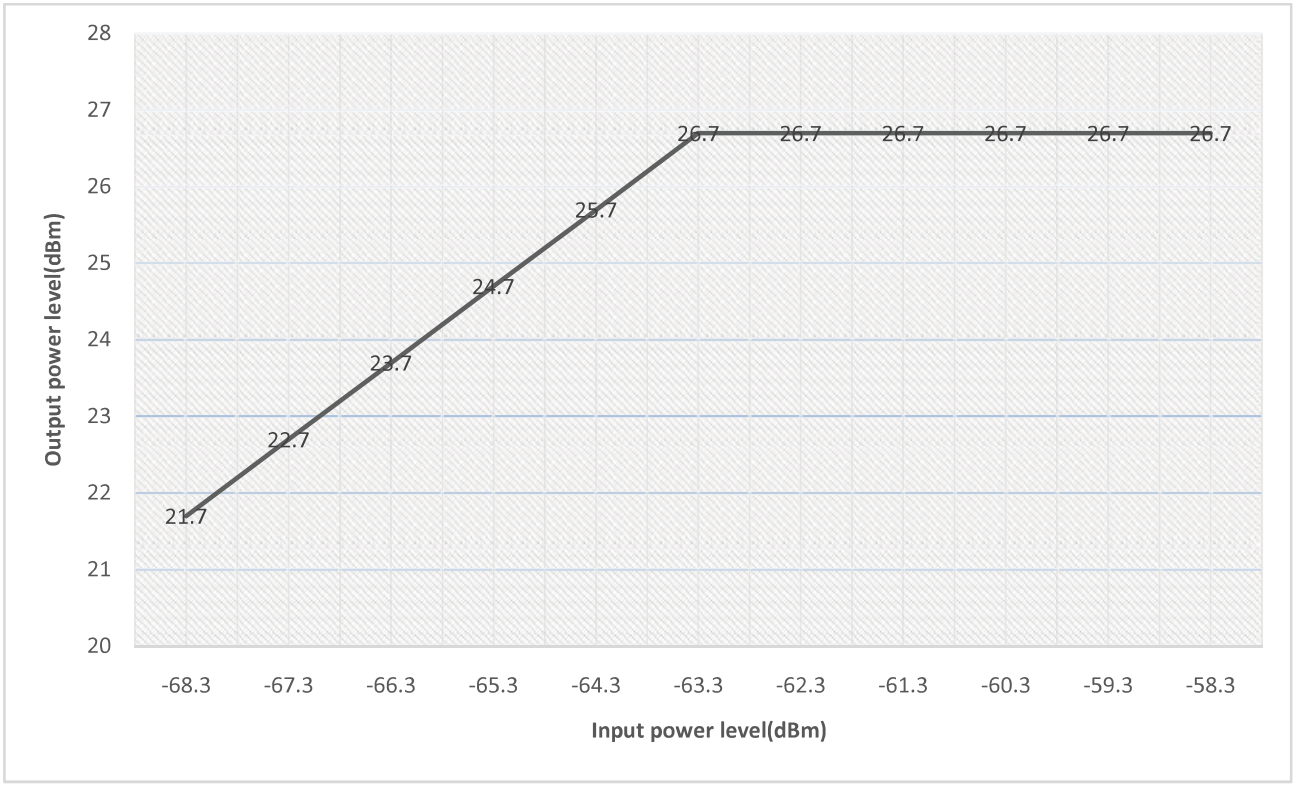
11.3.4.1.2. Uplink

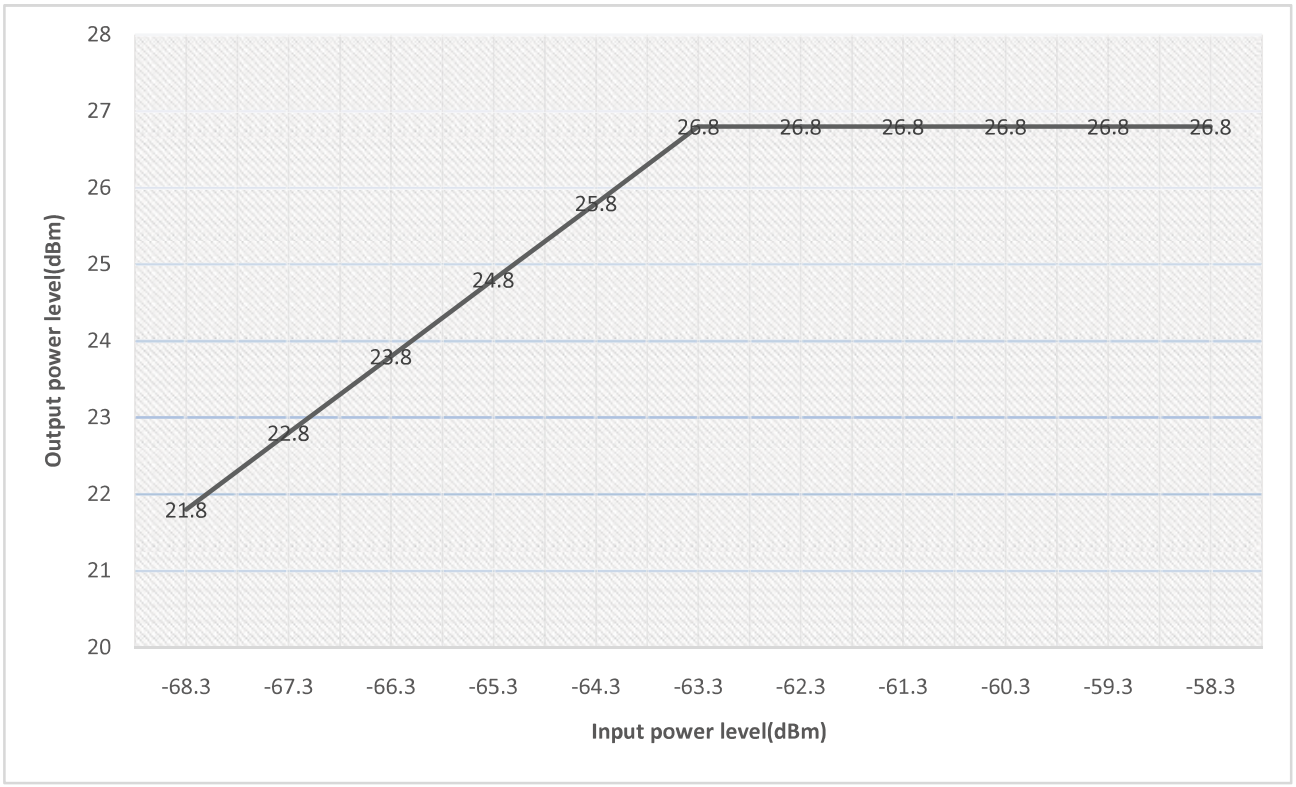
11.3.4.1.2.1. P25 Phase I(C4FM)

816.00625MHz	-67.3	1.0	-68.3	21.7
	-66.3	1.0	-67.3	22.7
	-65.3	1.0	-66.3	23.7
	-64.3	1.0	-65.3	24.7
	-63.3	1.0	-64.3	25.7
	-62.3	1.0	-63.3	26.7
	-61.3	1.0	-62.3	26.7
	-60.3	1.0	-61.3	26.7
	-59.3	1.0	-60.3	26.7
	-58.3	1.0	-59.3	26.7
	-57.3	1.0	-58.3	26.7



———— The following blanks ————

Test frequency	Signal output power (dBm)	EUT Input cable loss (dB)	EUT Corrected Input power (dBm)	EUT Corrected Output power (dBm)
816.99375MHz	-67.3	1.0	-68.3	21.8
	-66.3	1.0	-67.3	22.8
	-65.3	1.0	-66.3	23.8
	-64.3	1.0	-65.3	24.8
	-63.3	1.0	-64.3	25.8
	-62.3	1.0	-63.3	26.8
	-61.3	1.0	-62.3	26.8
	-60.3	1.0	-61.3	26.8
	-59.3	1.0	-60.3	26.8
	-58.3	1.0	-59.3	26.8
	-57.3	1.0	-58.3	26.8



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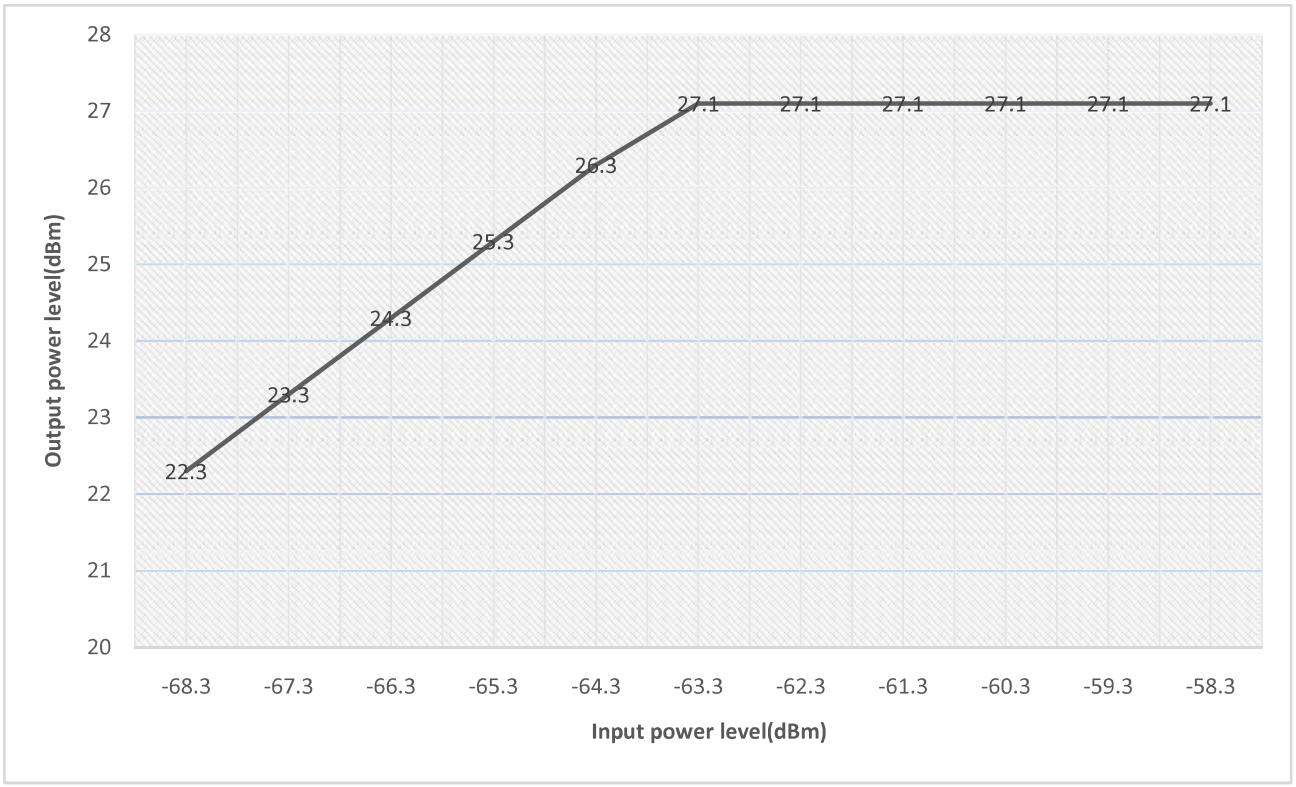
11.3.4.1.2.2. P25 Phase II(H-DQPSK)

816.00625MHz	-67.3	1.0	-68.3	22.3
	-66.3	1.0	-67.3	23.3
	-65.3	1.0	-66.3	24.3
	-64.3	1.0	-65.3	25.3
	-63.3	1.0	-64.3	26.3
	-62.3	1.0	-63.3	27.1
	-61.3	1.0	-62.3	27.1
	-60.3	1.0	-61.3	27.1
	-59.3	1.0	-60.3	27.1
	-58.3	1.0	-59.3	27.1
	-57.3	1.0	-58.3	27.1



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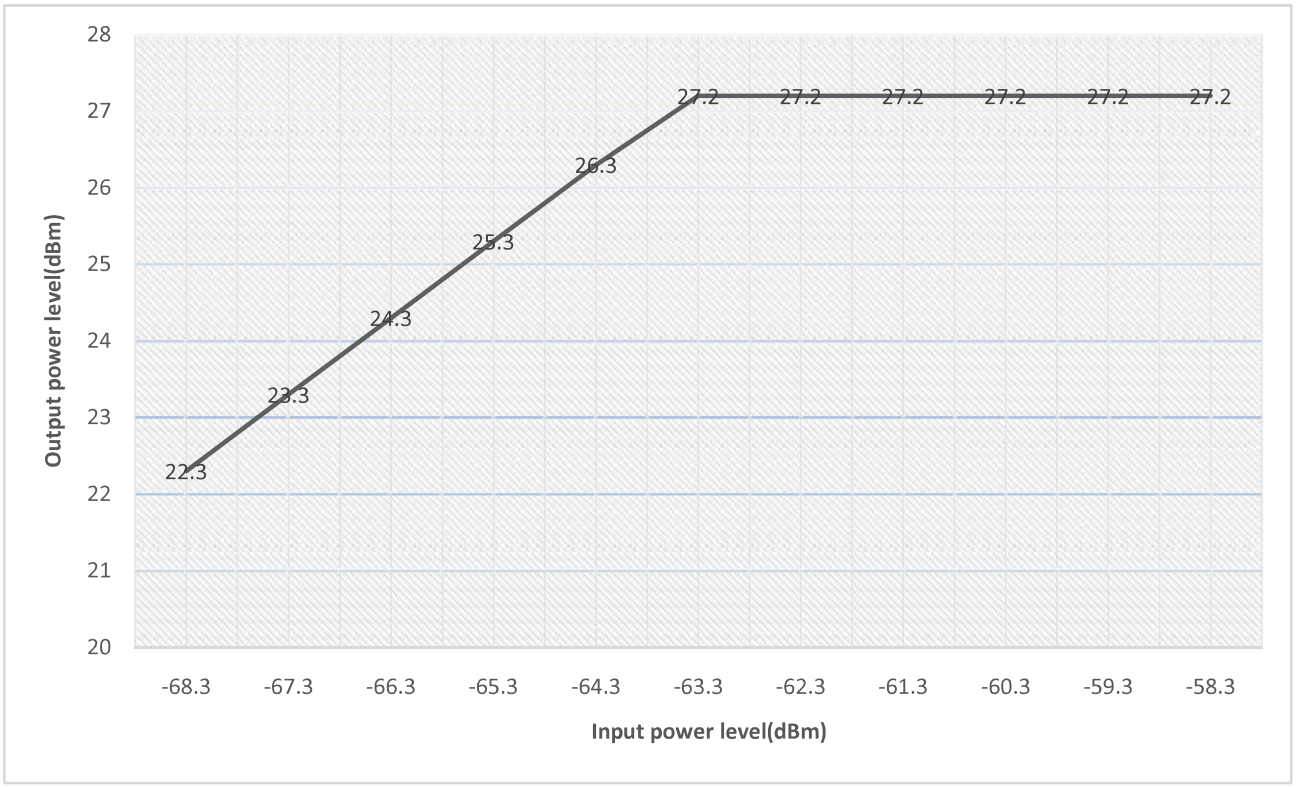
Test frequency	Signal output power (dBm)	EUT Input cable loss (dB)	EUT Corrected Input power (dBm)	EUT Corrected Output power (dBm)
816.99375MHz	-67.3	1.0	-68.3	22.3
	-66.3	1.0	-67.3	23.3
	-65.3	1.0	-66.3	24.3
	-64.3	1.0	-65.3	25.3
	-63.3	1.0	-64.3	26.3
	-62.3	1.0	-63.3	27.2
	-61.3	1.0	-62.3	27.2
	-60.3	1.0	-61.3	27.2
	-59.3	1.0	-60.3	27.2
	-58.3	1.0	-59.3	27.2
	-57.3	1.0	-58.3	27.2



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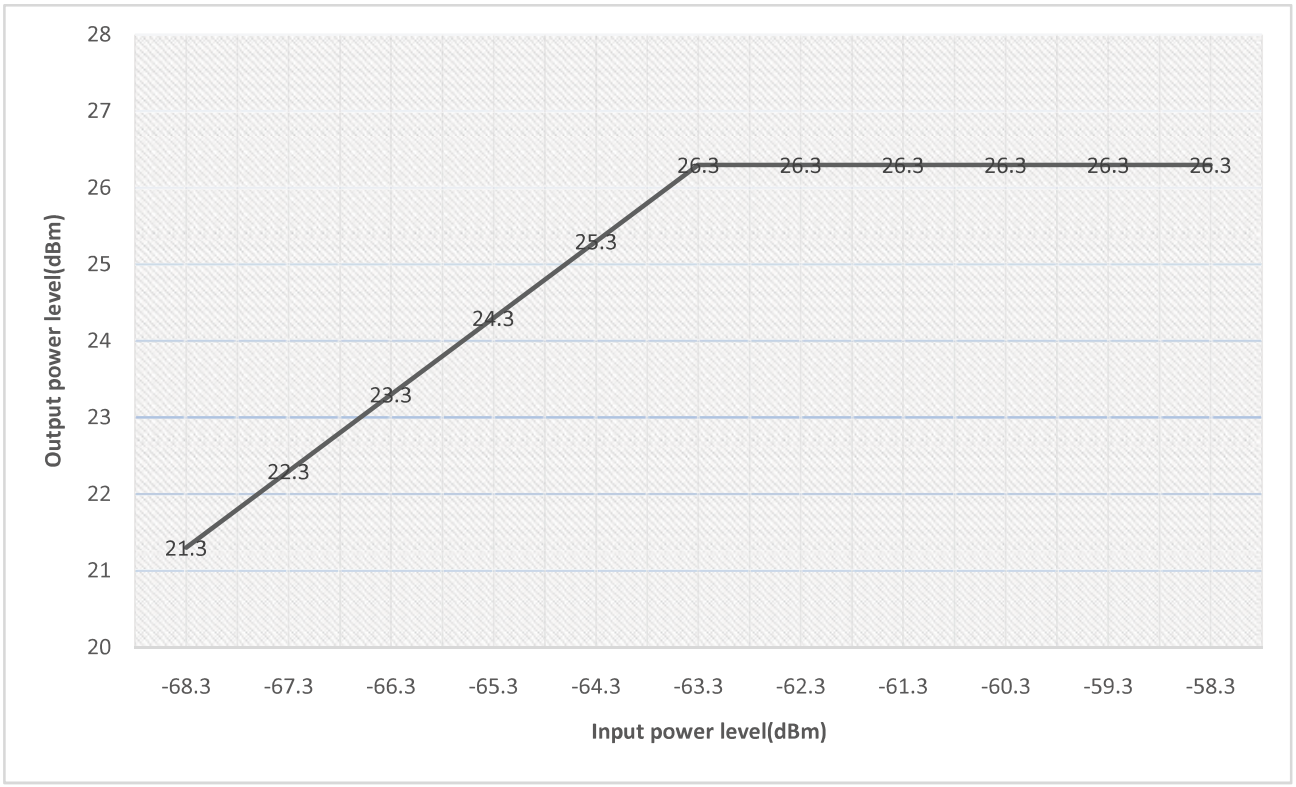
11.3.4.1.2.3. DMR

816.00625MHz	-67.3	1.0	-68.3	21.3
	-66.3	1.0	-67.3	22.3
	-65.3	1.0	-66.3	23.3
	-64.3	1.0	-65.3	24.3
	-63.3	1.0	-64.3	25.3
	-62.3	1.0	-63.3	26.3
	-61.3	1.0	-62.3	26.3
	-60.3	1.0	-61.3	26.3
	-59.3	1.0	-60.3	26.3
	-58.3	1.0	-59.3	26.3
	-57.3	1.0	-58.3	26.3



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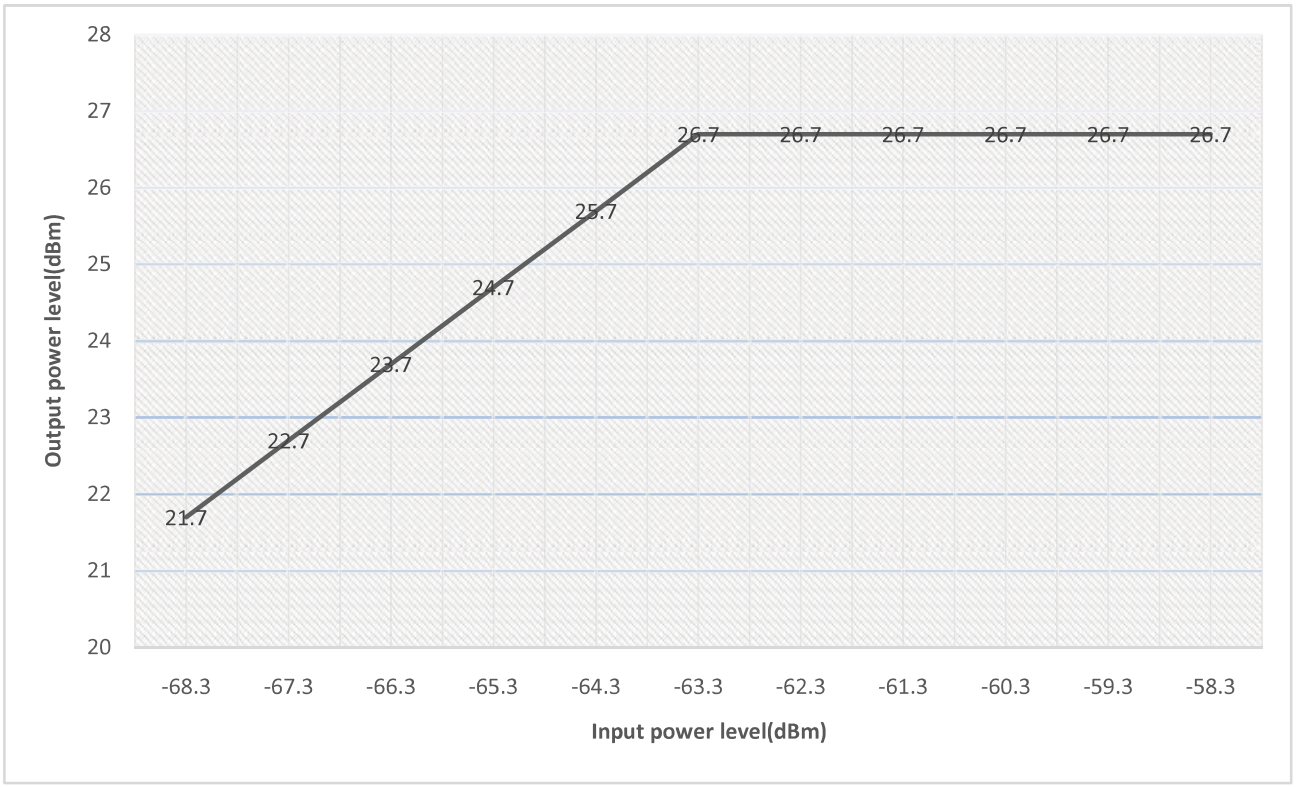
Test frequency	Signal output power (dBm)	EUT Input cable loss (dB)	EUT Corrected Input power (dBm)	EUT Corrected Output power (dBm)
816.99375MHz	-67.3	1.0	-68.3	21.7
	-66.3	1.0	-67.3	22.7
	-65.3	1.0	-66.3	23.7
	-64.3	1.0	-65.3	24.7
	-63.3	1.0	-64.3	25.7
	-62.3	1.0	-63.3	26.7
	-61.3	1.0	-62.3	26.7
	-60.3	1.0	-61.3	26.7
	-59.3	1.0	-60.3	26.7
	-58.3	1.0	-59.3	26.7
	-57.3	1.0	-58.3	26.7



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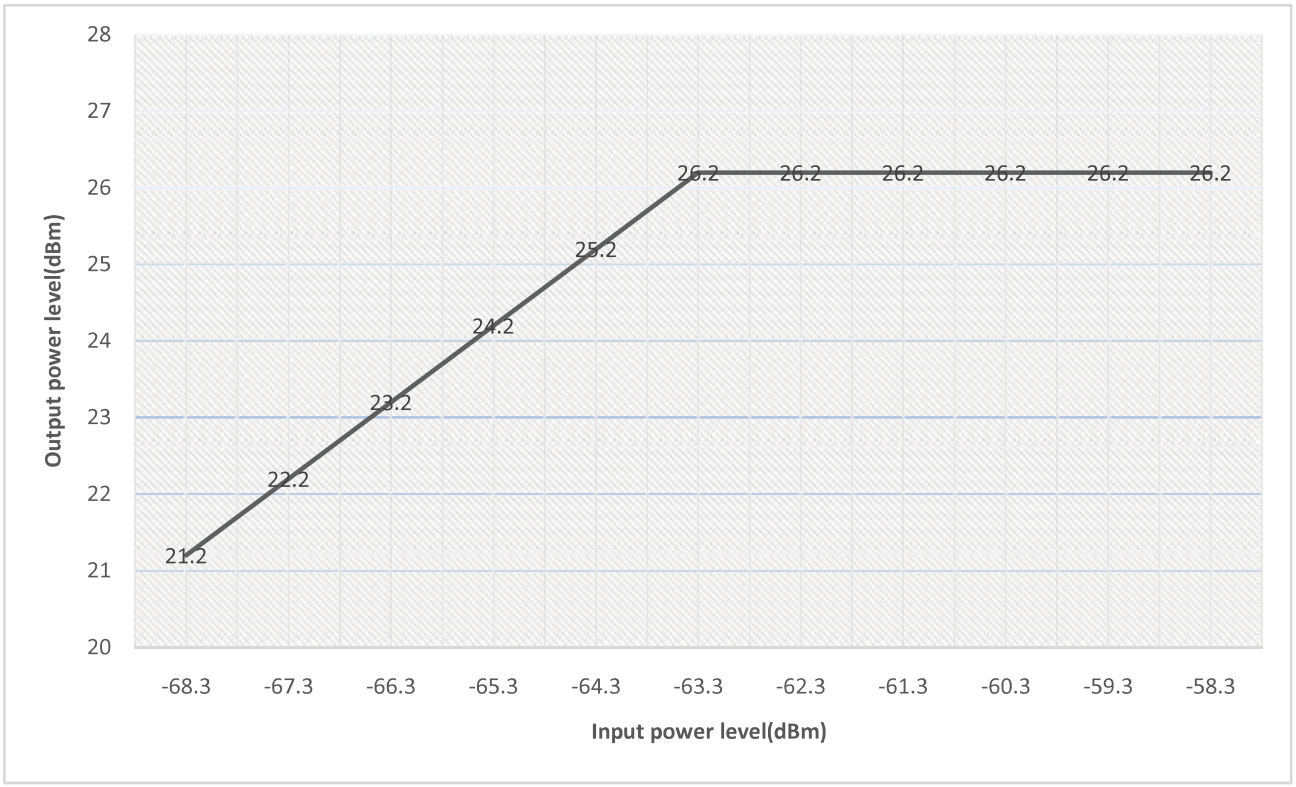
11.3.4.1.2.4. Analog FM

816.0125MHz	-67.3	1.0	-68.3	21.2
	-66.3	1.0	-67.3	22.2
	-65.3	1.0	-66.3	23.2
	-64.3	1.0	-65.3	24.2
	-63.3	1.0	-64.3	25.2
	-62.3	1.0	-63.3	26.2
	-61.3	1.0	-62.3	26.2
	-60.3	1.0	-61.3	26.2
	-59.3	1.0	-60.3	26.2
	-58.3	1.0	-59.3	26.2
	-57.3	1.0	-58.3	26.2



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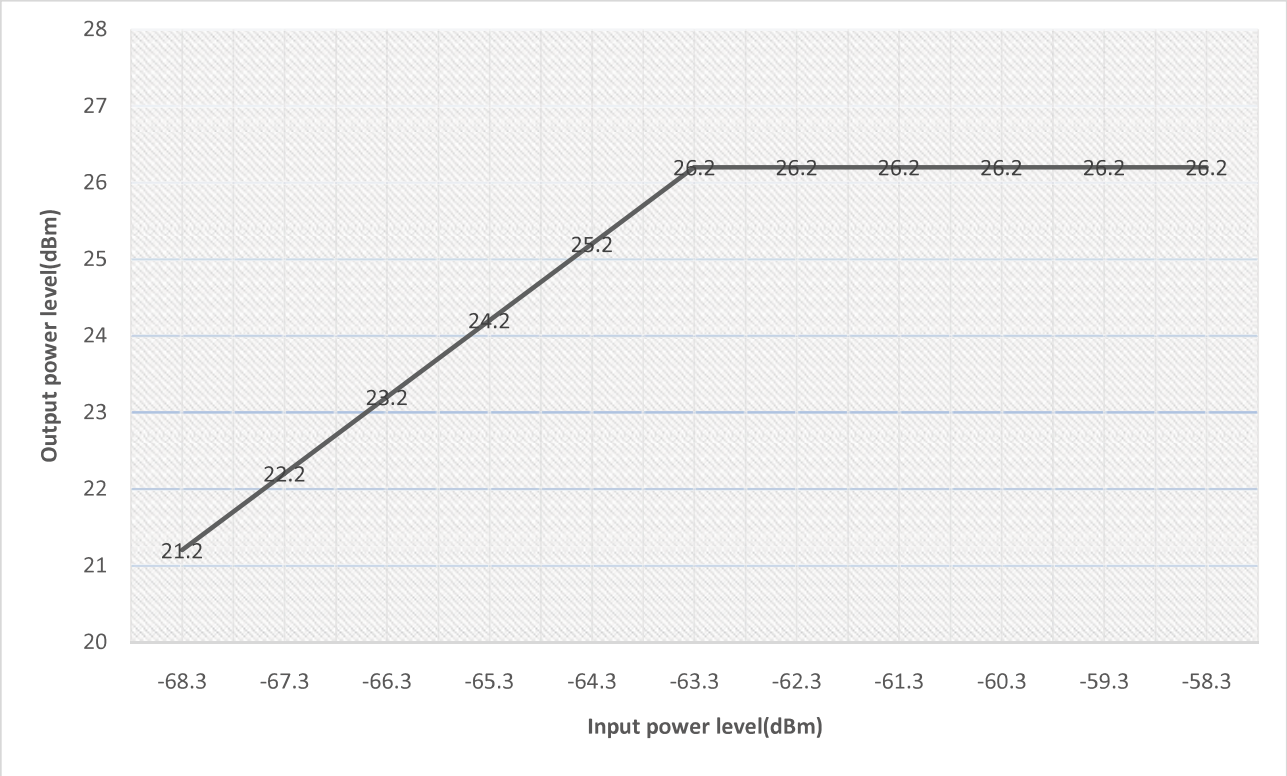
Test frequency	Signal output power (dBm)	EUT Input cable loss (dB)	EUT Corrected Input power (dBm)	EUT Corrected Output power (dBm)
816.9875MHz	-67.3	1.0	-68.3	21.2
	-66.3	1.0	-67.3	22.2
	-65.3	1.0	-66.3	23.2
	-64.3	1.0	-65.3	24.2
	-63.3	1.0	-64.3	25.2
	-62.3	1.0	-63.3	26.2
	-61.3	1.0	-62.3	26.2
	-60.3	1.0	-61.3	26.2
	-59.3	1.0	-60.3	26.2
	-58.3	1.0	-59.3	26.2
	-57.3	1.0	-58.3	26.2



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