FCC 47 CFR Part 27

TEST REPORT

For

Corning Optical Communication LLC

840 N McCarthy Blvd Milpitas California United States

FCC ID: OJFE62-N3-7UF

Report Type:	**Product Name:**
Original Report	Remote Unit

Report Number:	RKSA240125001-00B
Report Date:	2024-04-28
Reviewed By:	Bard Liu
Approved By:	Oscar Ye
Prepared By:	Bay Area Compliance Laboratories Corp. (Kunshan) No.248 Chenghu Road, Kunshan, Jiangsu Province, China Tel: +86-512-86175000 Fax: +86-512-88934268 www.baclcorp.com.cn

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REPORT REVISION HISTORY

Number of Revisions	Report No.	Version	Issue Date	Description
0	RKSA240125001-00B	R1V1	2024-04-28	Initial Release

1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

Applicant/Manufacturer:	Corning Optical Communication LLC
Tested Model:	E62-N3
Product Name:	Remote Unit
Power Supply:	DC 48V
Operating Frequency Band:	Downlink: 746-757 MHz(TX) Uplink: 776-787 MHz（RX）
Input Signal:	GSM, WCDMA, LTE, NR
Maximun Channel Bandwidth:	10MHz
MIMO Type:	Support 2*2 MIMO
★Maximum Antenna Gain:	2.43 dBi

Note:
1. The operating frequency range and maximum antenna gain is declared by the manufacturer and BACL (Kunshan) is not responsible for their accuracy.
2. For Uplink, the EUT only receives and then outputs information from the optical fiber.
All measurement and test data in this report was gathered from production sample serial number: RKSA240125001-1 (Assigned by BACL (Kunshan). The EUT supplied by the applicant was received on 2024-01-25).

1.2 Objective

This report is prepared for *Corning Optical Communication LLC* in accordance with in accordance with Part 2 and Part 27 of the Federal Communication Commissions rules.

1.3 Submittal(s)/Grant(s)

No related submittal(s)/grant(s).

1.4 Test Facility

Location of Testing:

The emissions tests described herein were performed at the test facility of Bay Area Compliance Laboratories Corp. (Kunshan) which is located on the No.248 Chenghu Road, Kunshan, Jiangsu Province, China.

Qualification authorization information:

Bay Area Compliance Laboratories Corp. (Kunshan) is accredited in accordance with ISO/IEC 17025:2017 by NVLAP (Lab code: 600338-0), and the lab has been recognized as the FCC accredited lab under the KDB 974614 D01, the FCC Designation No. : CN5055.

1.5 Test Methodology

All tests and measurements indicated in this document were performed in accordance with KDB 935210 D05 Indus Booster Basic Meas v01r04 – Measurement Guidance for Industrial and Non-consumer Signal Booster, Repeater, and Amplifier Devices.

Applicable Standard: ANSI C63.26-2015 – American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services, and KDB 935210 D02 Signal Boosters Certification v04r02 – SIGNAL BOOSTERS BASIC CERTIFICATION REQUIREMENTS.

All emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Kunshan). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

1.6 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the product as specified in CISPR 16-4-2. This uncertainty represents expanded uncertainty expressed at 95.45% confidence level using a coverage factor of k=2.
If U_{lab} is less than or equal to U_{cispr}, then: – compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit.

$$u_c(y) = \sqrt{\sum_i c_i^2 \, u^2(x_i)}$$

Items		Uncertainty (U_{lab})
Radiated Emissions	30MHz~1GHz	4.61dB
	1GHz~6GHz	4.52dB
	6GHz~18GHz	5.39dB
Occupied Channel Bandwidth		±5%
Input/Output Power and amplifier Gain		±1.5dB
Unwanted Emission, Conducted		±1.5dB
Intermodulation		±1.5dB
Temperature		1.0℃
Humidity		5%

2. SYSTEM TEST CONFIGURATION

2.1 Description of Test Configuration

The EUT was configured for testing in an engineering mode which was provided by the manufacturer.

ANSI C63.26, Clause 5.1.2:
Measurements of transmitters shall be performed and, if required, reported for each frequency band in which the EUT can be operated with the device transmitting at the number of frequencies in each band specified in table below.

Frequency range over which EUT operates	Number of frequencies	Location in frequency range of operation
1 MHz or less	1	Middle
1 MHz to 10 MHz	2	1 near top and 1 near bottom
More than 10 MHz	3	1 near top, 1 near middle, and 1 near bottom

Notes: "near" means as close as possible to or at the centre / low end / high end of the frequency range over which the device operates.

2.2 Equipment Software

No software was used to test.

2.3 Special Accessories

No special accessory was used.

2.4 Equipment Modifications

No modifications were made to the EUT.

2.5 Support Equipment List and Details

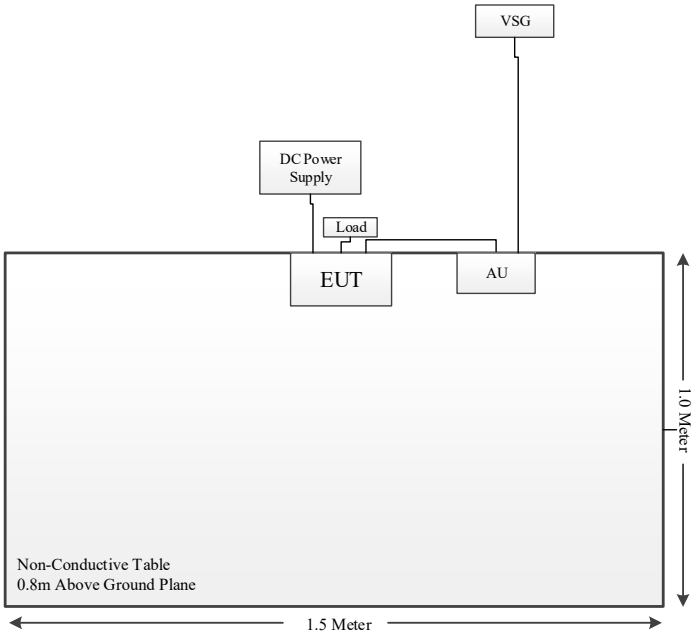
Manufacturer	Description	Model	Serial Number
Corning	Access Unit	E63-A3	KSCR2305000877AT
MAISHENG	DC Power Supply	MP3005D	2020121996
Keysight	Vector Signal Generator	N5182B	MY53051592
LUCAS WEINSCHEL	High Power Load	33-10-33	AW5737

2.6 External I/O Cable

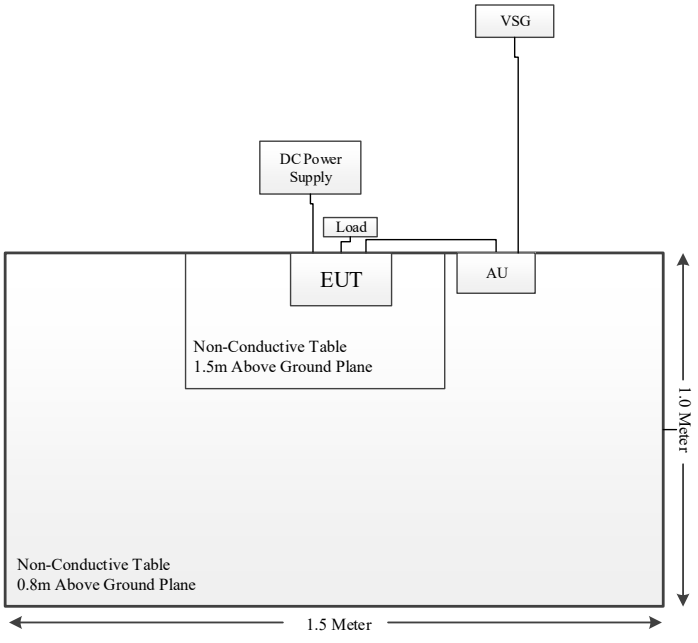
Cable Description	Length (m)	From Port	To Port
Power Cable	2	DC Power Supply	EUT
Optical Cable	3	EUT	AU
Coaxial Cable	5	AU	VSG
Coaxial Cable	0.2	EUT	Load

2.7 Block Diagram of Test Setup

For Radiated Spurious Emissions (Below 1GHz):



For Radiated Spurious Emissions (Above 1GHz):



3. SUMMARY OF TEST RESULTS

Clause	Test description	Results
KDB 935210 D02 Clause II. (p4) KDB 935210 D05 §3.2	AGC threshold level	Compliance
KDB 935210 D02 Clause II. (p2) KDB 935210 D05 §3.3	Out-of-band rejection	Compliance
KDB 935210 D02 Clause II. (p3) KDB 935210 D05 §3.4	Input-versus-output signal comparison (Including occupied bandwidth)	Compliance
FCC 47 CFR Part §27.50(b) KDB 935210 D05 §3.5	Mean output power and amplifier/booster gain	Compliance
FCC 47 CFR Part §27.53(c) KDB 935210 D05 §3.6	Out-of-band/out-of-block (Including intermodulation) emissions	Compliance
FCC 47 CFR Part §27.53(c1,f) KDB 935210 D05 §3.6	Conducted spurious emissions	Compliance
FCC 47 CFR Part §27.54 KDB 935210 D05 §3.7	Frequency stability	N/A (See Note)
FCC 47 CFR Part §27.53(c1,f) KDB 935210 D05 §3.8	Radiated spurious emissions	Compliance

Note: The EUT has no input signal processing capability, so the frequency stability measurement in this section is not required.

4. TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Spurious Emissions Chamber 1# (30 MHz to 1 GHz)					
Keysight	Signal Generator	N5183A	MY47420304	2023-05-23	2024-05-22
Rohde & Schwarz	EMI Test Receiver	ESCI	100195	2023-05-23	2024-05-22
Sunol Sciences	Hybrid Antenna	JB3	A090314-1	2023-11-11	2024-11-10
Sunol Sciences	Hybrid Antenna	JB3	A060217	2023-12-14	2024-12-13
Narda	6dB Attenuator	773-6	10690812-2-1	2023-11-11	2024-11-10
Sonoma Instrument	Amplifier	310N	171205	2023-05-23	2024-05-22
MICRO-COAX	Coaxial Cable	Cable-8	008	2023-05-23	2024-05-22
MICRO-COAX	Coaxial Cable	Cable-9	009	2023-05-23	2024-05-22
MICRO-COAX	Coaxial Cable	Cable-10	010	2023-05-23	2024-05-22
MICRO-COAX	Coaxial Cable	Cable-7	007	2023-05-23	2024-05-22
Rohde & Schwarz	Test Software	EMC32	100361	N/A	N/A
Radiated Spurious Emissions Chamber 2# (Above 1 GHz)					
Keysight	Signal Generator	N5183A	MY47420304	2023-05-23	2024-05-22
Rohde & Schwarz	EMI Test Receiver	ESU40	100207/040	2023-05-19	2024-05-18
Electro-Mechanics	Horn Antenna	3115	9207-3900	2023-06-27	2024-06-26
ETS-LINDGREN	Horn Antenna	3115	9311-4159	2023-12-02	2024-12-01
A.H.Systems,inc	Amplifier	PAM-0118P	512	2023-05-23	2024-05-22
MICRO-COAX	Coaxial Cable	Cable-11	011	2023-05-23	2024-05-22
MICRO-COAX	Coaxial Cable	Cable-12	012	2023-05-23	2024-05-22
MICRO-COAX	Coaxial Cable	Cable-13	013	2023-05-23	2024-05-22
MICRO-COAX	Coaxial Cable	Cable-6	006	2023-05-23	2024-05-22
Rohde & Schwarz	Test Software	EMC32	100361	N/A	N/A
RF Conducted Test					
Keysight	Vector Signal Generator	N5182B	MY53051592	2023-05-23	2024-05-22
Keysight	Signal Generator	N5183A	MY47420304	2023-05-23	2024-05-22
Rohde & Schwarz	Signal Analyzer	FSIQ26	100048	2023-05-23	2024-05-22
Agilent	Power Meter	E4419B	MY41291878	2023-05-23	2024-05-22
Agilent	Power Sensor	MA24418A	12621	2023-09-27	2024-09-26
BACL	Temperature & Humidity Chamber	BTH-150	30023	2023-05-23	2024-05-22
XHFDZ	RG316 Coaxial Cable	SMA-316	XHF-1175	Each time	N/A
XHFDZ	RG178 Coaxial Cable	SMA-178	XHF-1102	Each time	N/A

Statement of Traceability: Bay Area Compliance Laboratories Corp. (Kunshan) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

5. REQUIREMENTS AND TEST PROCEDURES

5.1 AGC threshold level

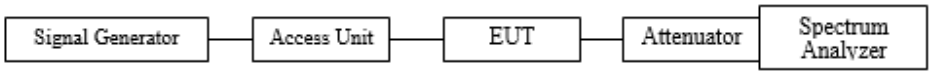
5.1.1 Applicable Standard

KDB 935210 D02 Signal Boosters Certification v04r02 Clause II. (p)(4):
For devices using automatic gain control (AGC) as a means for complying with service rule power limits, provide test results showing maximum output with and without AGC activated.

5.1.2 Test Procedure

KDB 935210 D05 Indus Booster Basic Meas v01r04 Clause 3.2

5.1.3 Test Setup



5.2 Out-of-band rejection

5.2.1 Applicable Standard

KDB 935210 D02 Signal Boosters Certification v04r02 Clause II. (p)(2):
Out-of-band rejection–testing for rejection of out-of-band signals may be appropriate. Alternatively, filter frequency response plots are acceptable.

5.2.2 Test Procedure

KDB 935210 D05 Indus Booster Basic Meas v01r04 Clause 3.3

5.2.3 Test Setup

5.3 Input-versus-output signal comparison

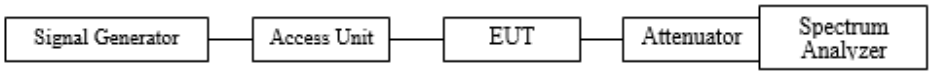
5.3.1 Applicable Standard

KDB 935210 D02 Signal Boosters Certification v04r02 Clause II. (p)(3):
Report worst case results for occupied bandwidth comparison and intermodulation tests done with and without any AGC circuitry activated, for devices so equipped.

5.3.2 Test Procedure

KDB 935210 D05 Indus Booster Basic Meas v01r04 Clause 3.4

5.3.3 Test Setup



5.4 Mean output power and amplifier/booster gain

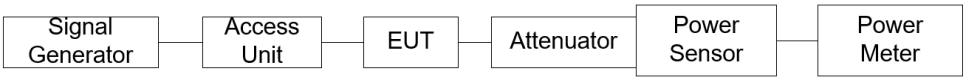
5.4.1 Applicable Standard

FCC 47 CFR Part 27, Subpart C §27.50 (b2):
Fixed and base stations transmitting a signal in the 746–757 MHz and 776–787 MHz bands with an emission bandwidth of 1 MHz or less must not exceed an ERP of 1000 watts and an antenna height of 305 m HAAT, except that antenna heights greater than 305 m HAAT are permitted if power levels are reduced below 1000 watts ERP in accordance with Table 1 of this section.

5.4.2 Test Procedure

KDB 935210 D05 Indus Booster Basic Meas v01r04 Clause 3.5

5.4.3 Test Setup



5.5 Out-of-band/out-of-block emissions

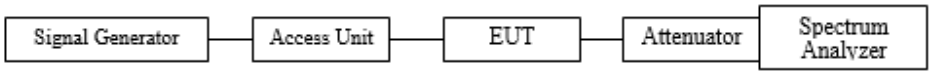
5.5.1 Applicable Standard

FCC 47 CFR Part 27, Subpart C §27.53 (c) (1):
On any frequency outside the 746–758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB.

5.5.2 Test Procedure

KDB 935210 D05 Indus Booster Basic Meas v01r04 Clause 3.6

5.5.3 Test Setup



5.6 Conducted spurious emissions

5.6.1 Applicable Standard

FCC 47 CFR Part 27, Subpart C §27.53 (c1):

On any frequency outside the 746–758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB.

FCC 47 CFR Part 27, Subpart C §27.53 (f):

For operations in the 746–758 MHz, 775–788 MHz, and 805–806 MHz bands, emissions in the band 1559–1610 MHz shall be limited to −70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and −80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

5.6.2 Test Procedure

KDB 935210 D05 Indus Booster Basic Meas v01r04 Clause 3.6

5.6.3 Test Setup

5.7 Radiated spurious emissions

5.7.1 Applicable Standard

FCC 47 CFR Part 27, Subpart C §27.53 (c1):

On any frequency outside the 746–758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB.

FCC 47 CFR Part 27, Subpart C §27.53 (f):

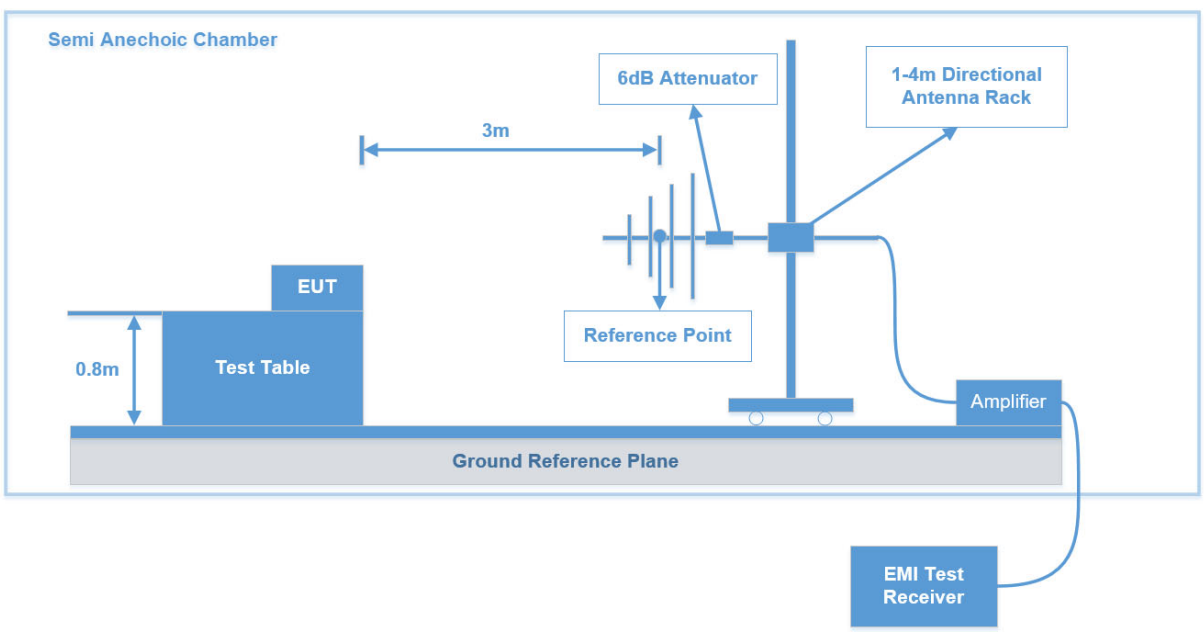
For operations in the 746–758 MHz, 775–788 MHz, and 805–806 MHz bands, emissions in the band 1559–1610 MHz shall be limited to −70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and −80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

5.7.2 Test Procedure

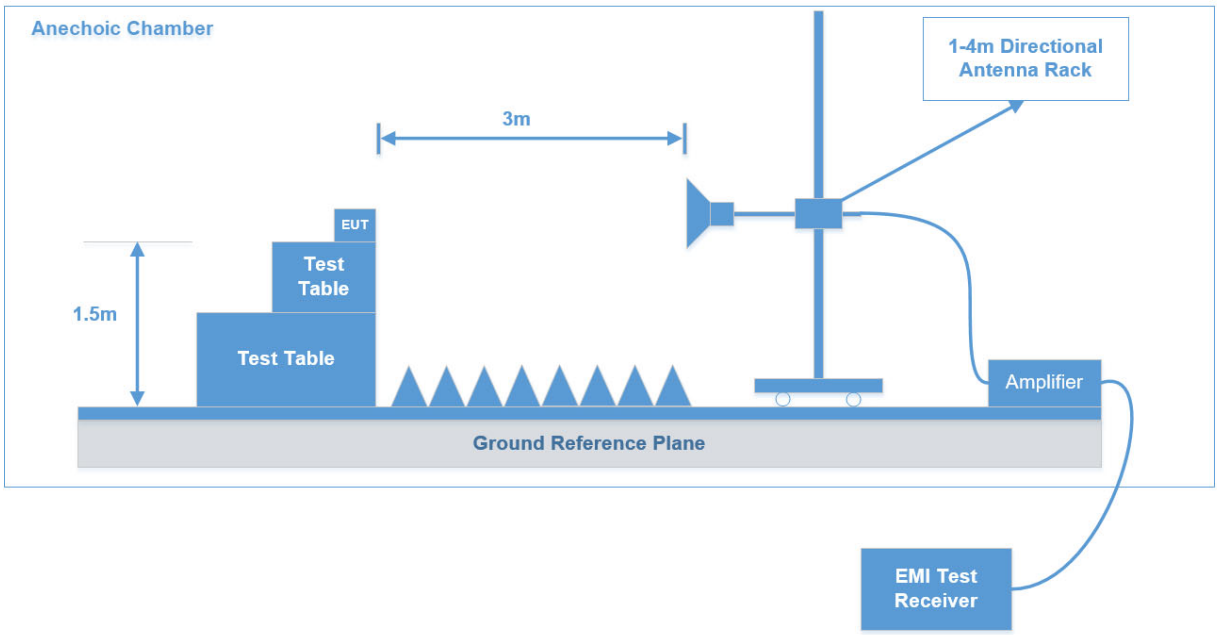
KDB 935210 D05 Indus Booster Basic Meas v01r04 Clause 3.8

5.7.3 Test Setup

Radiated testing block diagram (below 1 GHz):



Radiated testing block diagram (above 1 GHz):



6. TEST CONDITIONS

6.1 Environmental Conditions & Test Information

Test Item:	AGC THRESHOLD LEVEL	OUT-OF-BAND REJECTION	INPUT-VERSUS-OUTPUT SIGNAL COMPARISON	MEAN OUTPUT POWER AND AMPLIFIER/BOOSTER GAIN
Test Date:	2024-04-16	2024-04-28	2024-02-20	2024-04-16
Temperature:	20.5 ℃	22.8 ℃	19.2 ℃	20.5 ℃
Relative Humidity:	45 %	55 %	52 %	45 %
ATM Pressure:	102.5kPa	102.8kPa	102.6kPa	102.5kPa
Test Result:	Pass	Pass	Pass	Pass
Test Engineer:	Jenny Yang	Jenny Yang	Chris Wang	Jenny Yang

Test Item:	OUT-OF-BAND/OUT-OF-BLOCK EMISSIONS	CONDUCTED SPURIOUS EMISSIONS	RADIATED SPURIOUS EMISSIONS	
Test Date:	2024-02-21	2024-02-21	2024-02-23	
Temperature:	20.5 ℃	20.5 ℃	21.2 ℃	
Relative Humidity:	36%	36%	41%	
ATM Pressure:	101.5kPa	101.5kPa	103.2kPa	
Test Result:	Pass	Pass	Pass	
Test Engineer:	Chris Wang	Chris Wang	Chris Wang	

6.2 Power Supply Range

The normal test voltage for equipment to be connected to the mains shall be the nominal mains voltage. For the purpose of the present document, the nominal voltage shall be the declared voltage, or any of the declared voltages ±5 %, for which the equipment was designed.

6.3 MIMO Test instruction

The worst case (RF port1) data in the report except for power test.

6.4 Test Channel instruction

Frequency Band (MHz)	Signal Type	channel	Frequency (MHz)
746-757	GSM	Low	746.2
		Middle	751.4
		High	756.8
	AWGN	Low	748.5
		Middle	751.5
		High	754.5

7. TEST DATA

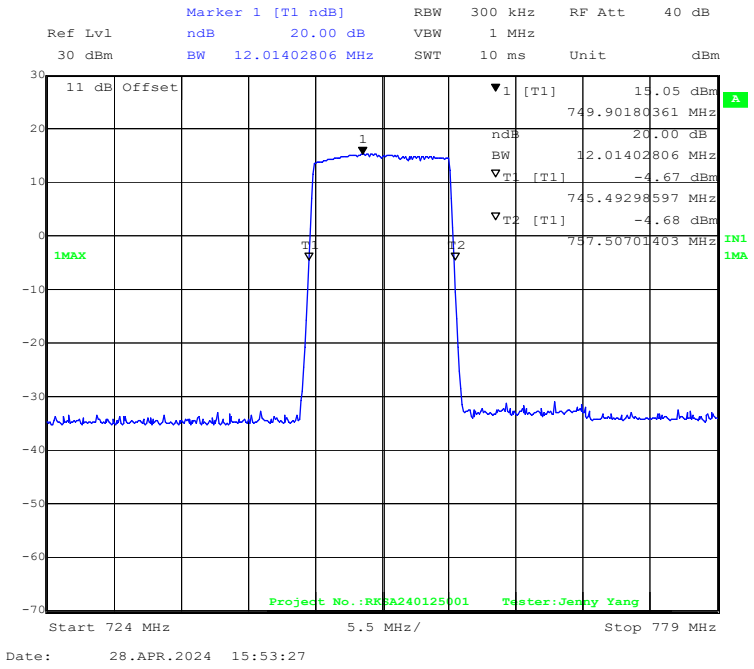
7.1 AGC threshold level

Frequency Band (MHz)	Signal Type	AGC Input Level (dBm)
746-757	AWGN	0
	GSM	0

7.2 Out-of-band rejection

Frequency Band (MHz)	Lower Frequency f_1 (MHz)	Upper Frequency f_2 (MHz)	Peak Amplitude Frequency f_0 (MHz)
746-757	745.493	757.507	749.90

Note:
f1 is the lower edge of the 20dBc center frequency
f2 is the upper edge of the 20dBc center frequency

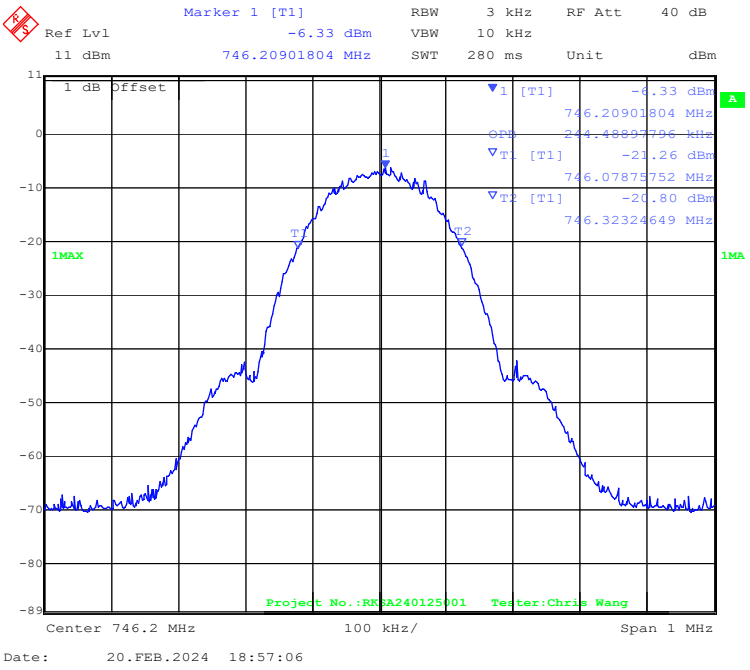


7.3 Input-versus-output signal comparison

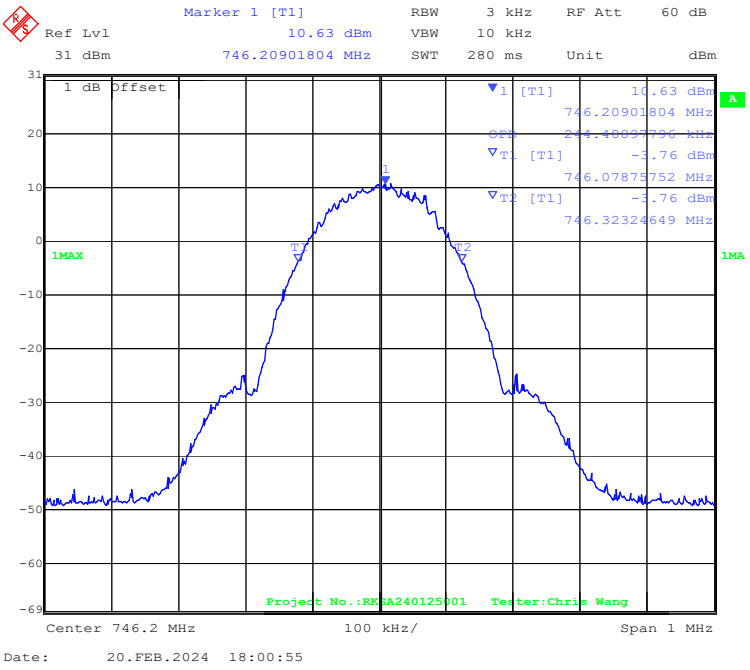
Frequency Band (MHz)	Signal Type	Channel	Signal Level	Input	Output	Spectral growth of the 99% OBW (%)
				99% OBW (MHz)	99% OBW (MHz)	
746-757	GSM	Low	AGC	0.244	0.244	0
			AGC + 3dB	0.244	0.244	0
		Middle	AGC	0.244	0.244	0
			AGC + 3dB	0.244	0.244	0
		High	AGC	0.244	0.244	0
			AGC + 3dB	0.244	0.244	0
	AWGN	Low	AGC	4.128	4.148	0.48
			AGC + 3dB	4.108	4.108	0
		Middle	AGC	4.108	4.148	0.97
			AGC + 3dB	4.108	4.108	0
		High	AGC	4.108	4.108	0
			AGC + 3dB	4.108	4.128	0.49

Signal Type: GSM

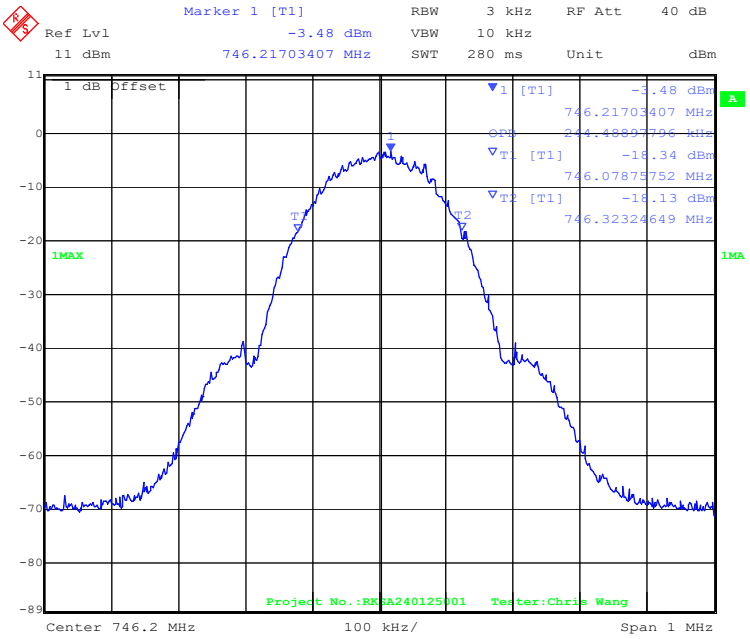
Low Channel: 746.2 MHz, 99% Occupied Bandwidth AGC Input



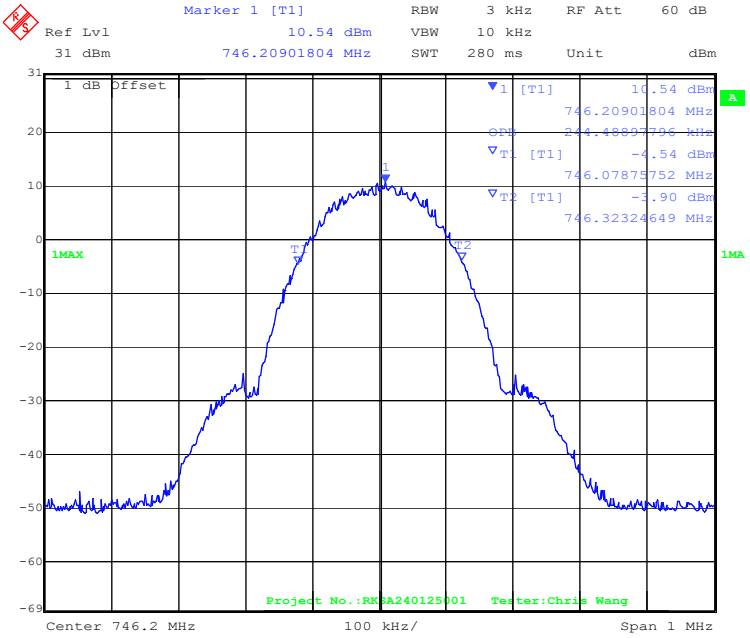
Low Channel: 746.2 MHz, 99% Occupied Bandwidth AGC Output



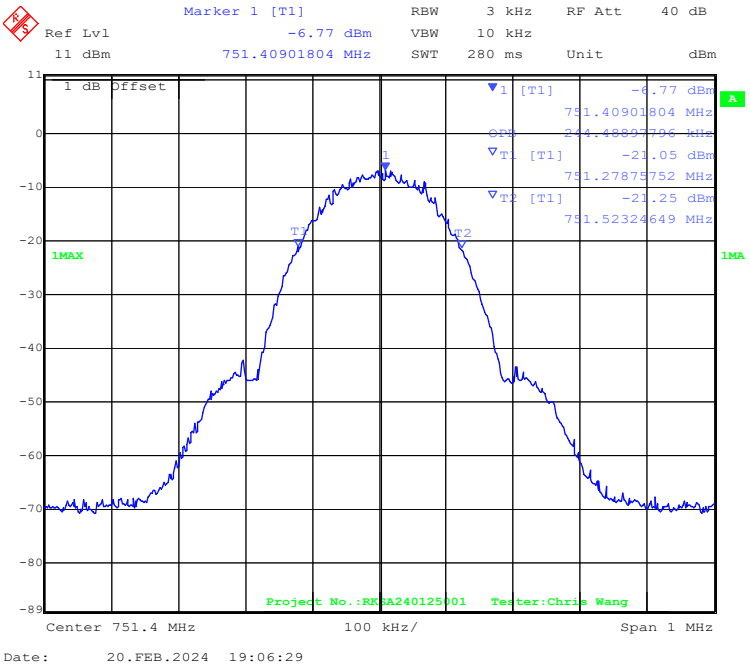
Low Channel: 746.2 MHz, 99% Occupied Bandwidth AGC + 3dB Input



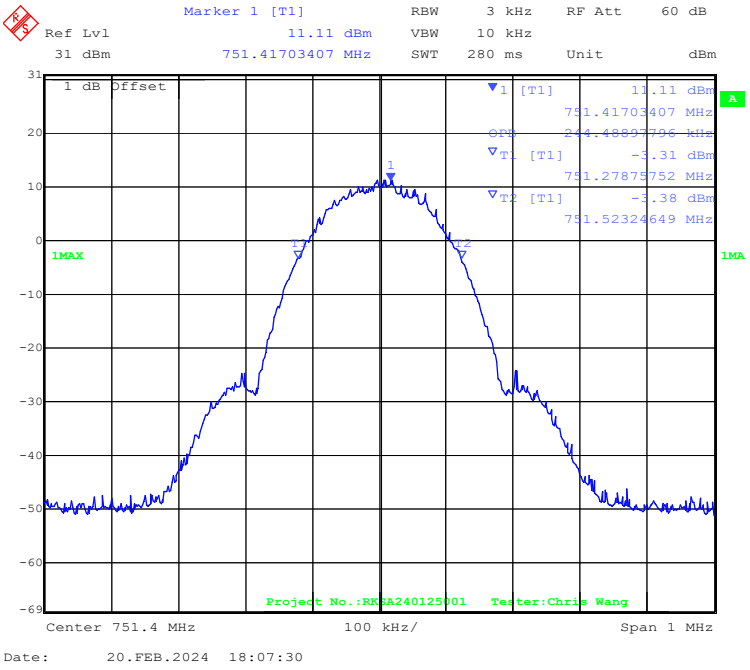
Low Channel: 746.2 MHz, 99% Occupied Bandwidth AGC + 3dB Output



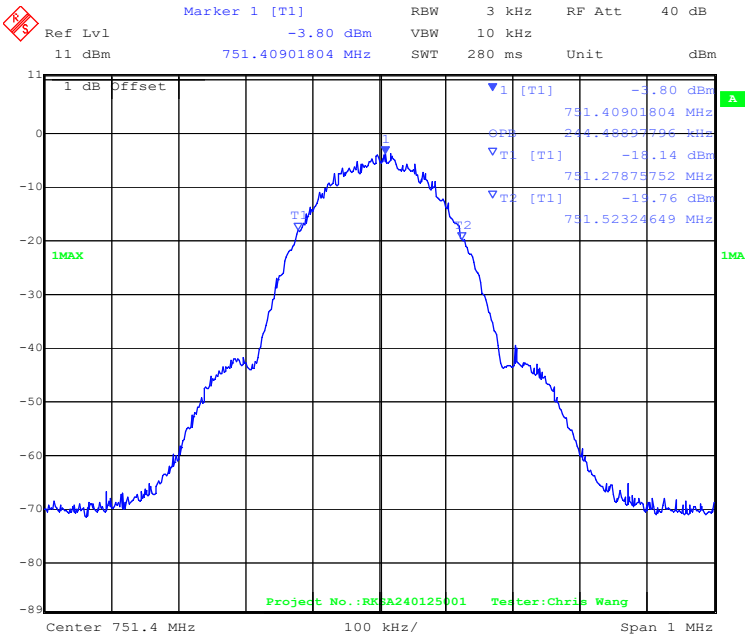
Middle Channel: 751.4 MHz, 99% Occupied Bandwidth AGC Input



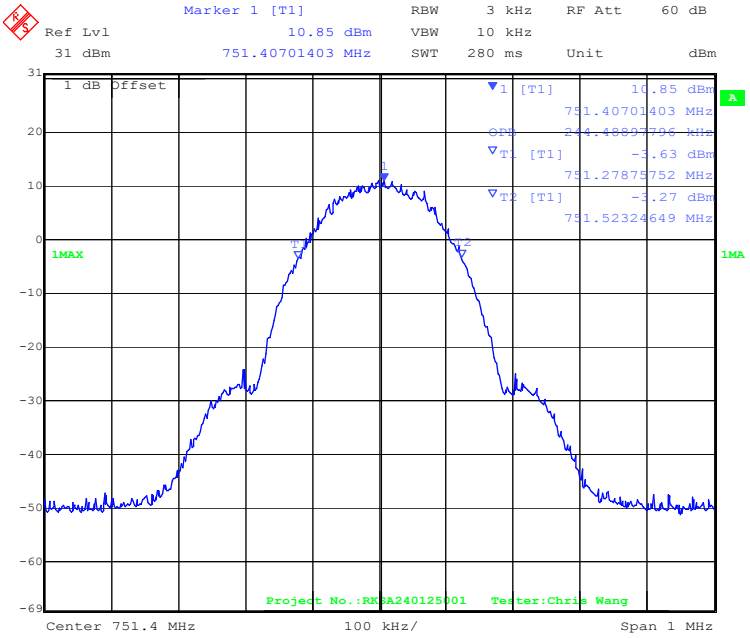
Middle Channel: 751.4 MHz, 99% Occupied Bandwidth AGC Output



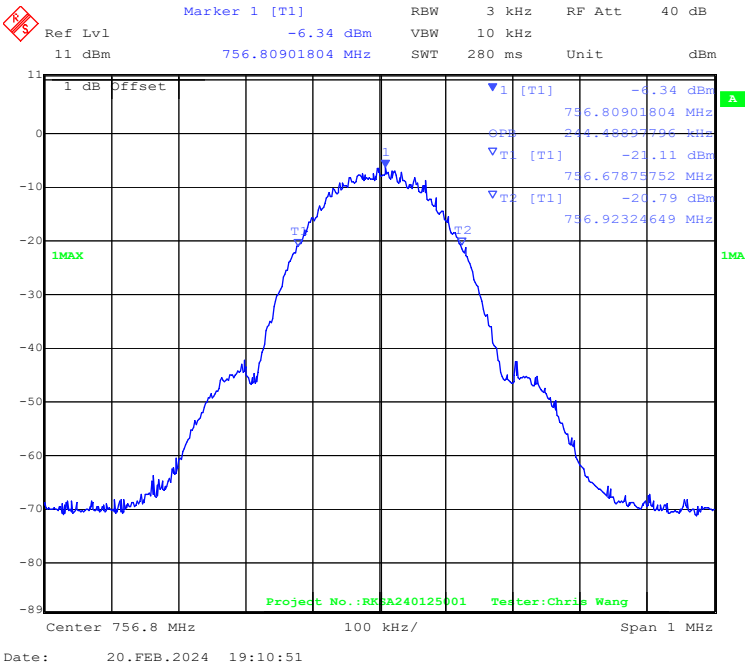
Middle Channel: 751.4 MHz, 99% Occupied Bandwidth AGC + 3dB Input



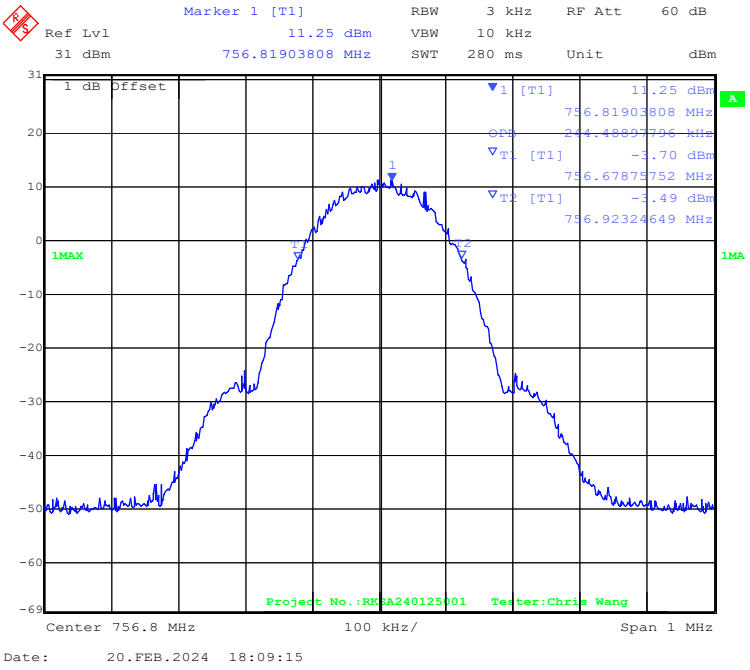
Middle Channel: 751.4 MHz, 99% Occupied Bandwidth AGC + 3dB Output



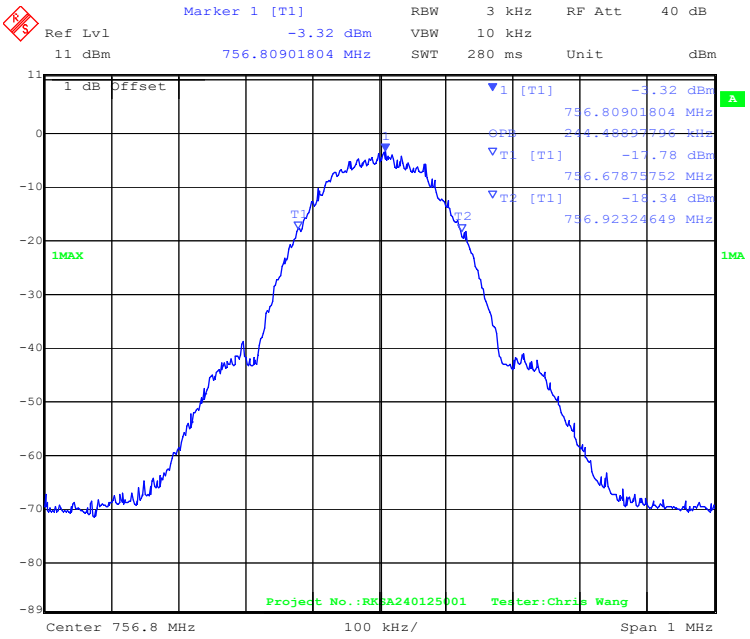
High Channel: 756.8 MHz, 99% Occupied Bandwidth AGC Input



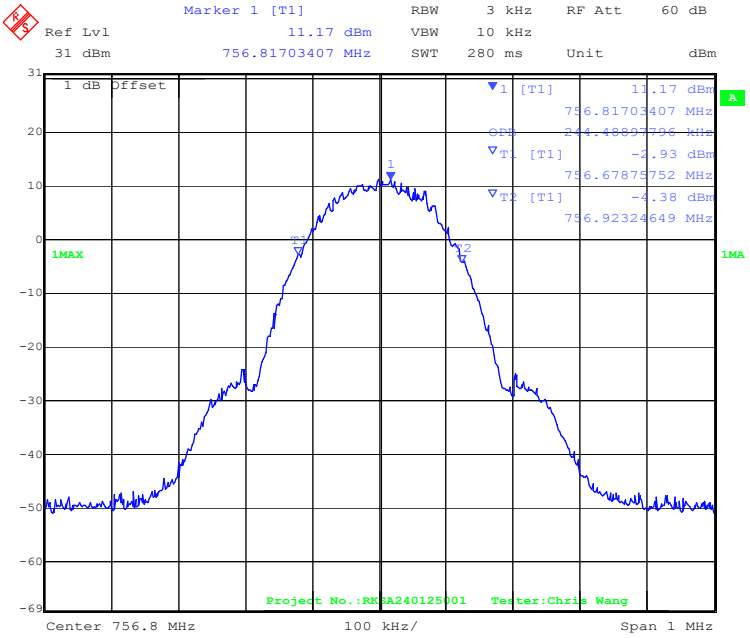
High Channel: 756.8 MHz, 99% Occupied Bandwidth AGC Output



High Channel: 756.8 MHz, 99% Occupied Bandwidth AGC + 3dB Input

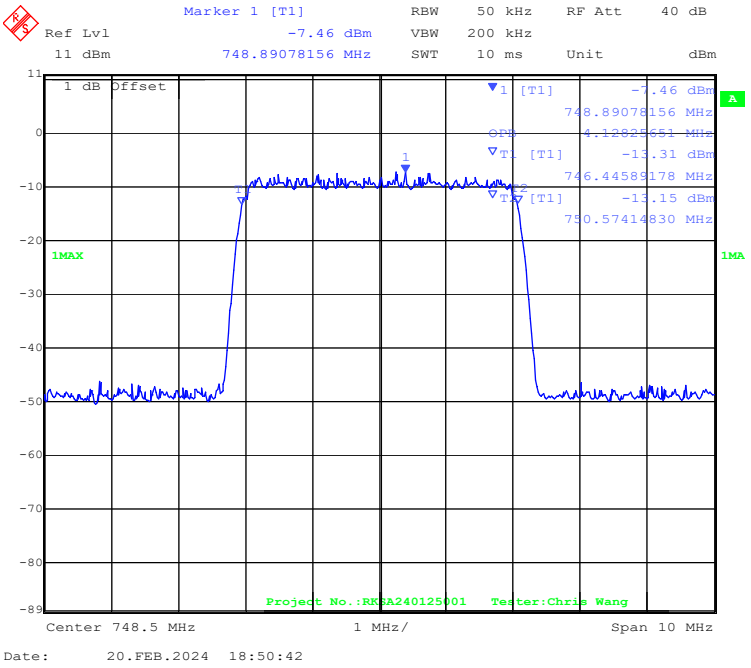


High Channel: 756.8 MHz, 99% Occupied Bandwidth AGC + 3dB Output

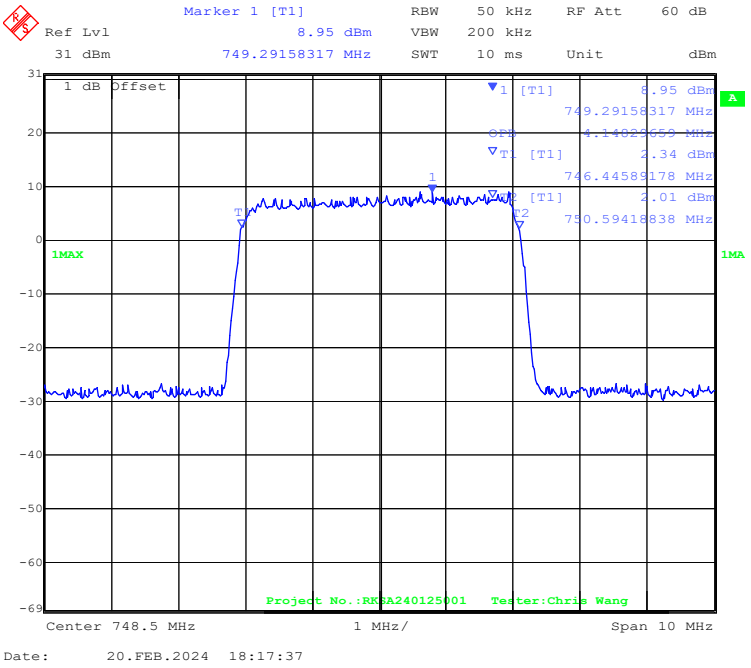


Signal Type: AWGN

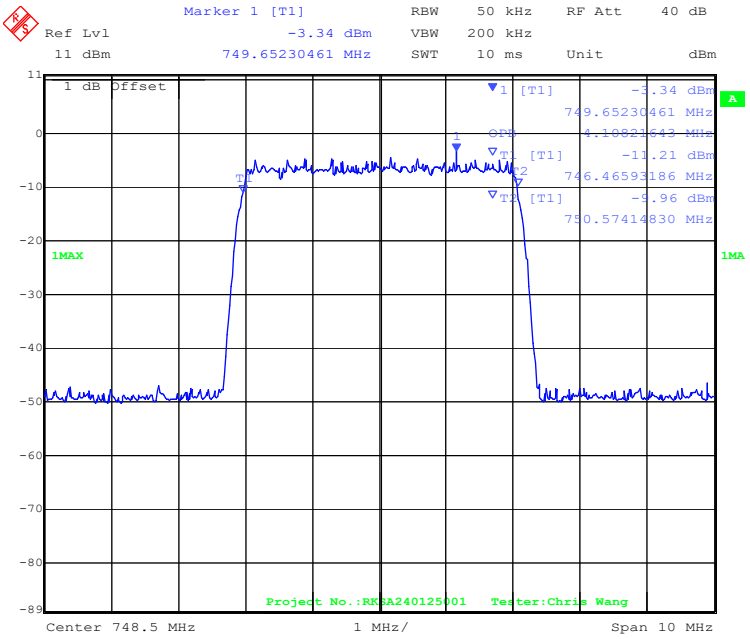
Low Channel: 748.5 MHz, 99% Occupied Bandwidth AGC Input



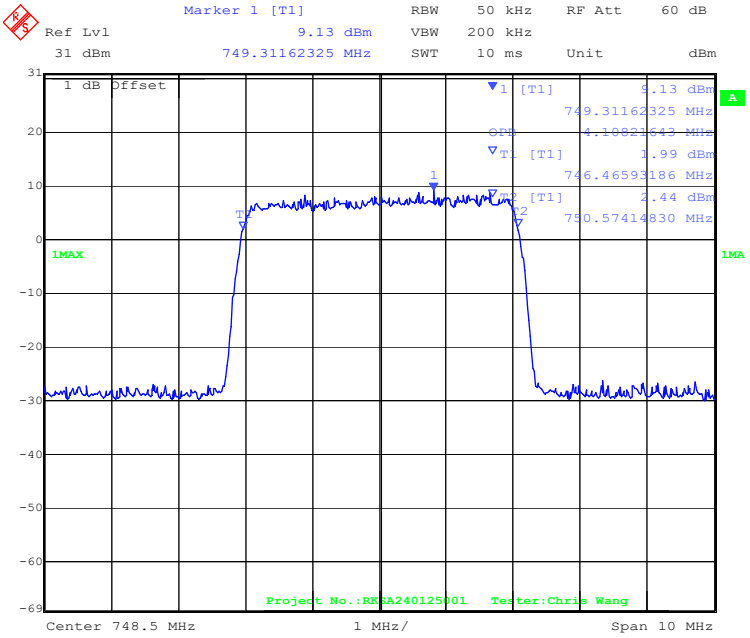
Low Channel: 748.5 MHz, 99% Occupied Bandwidth AGC Output



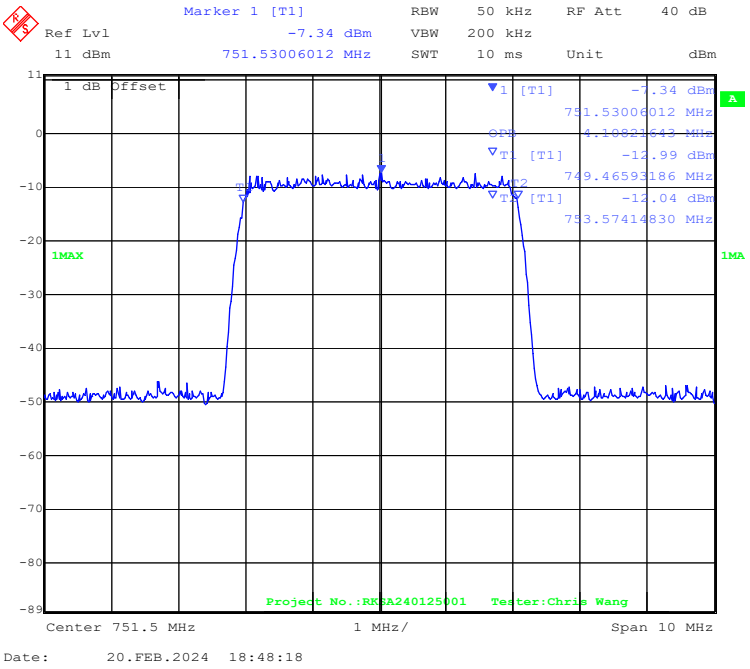
Low Channel: 748.5 MHz, 99% Occupied Bandwidth AGC + 3dB Input



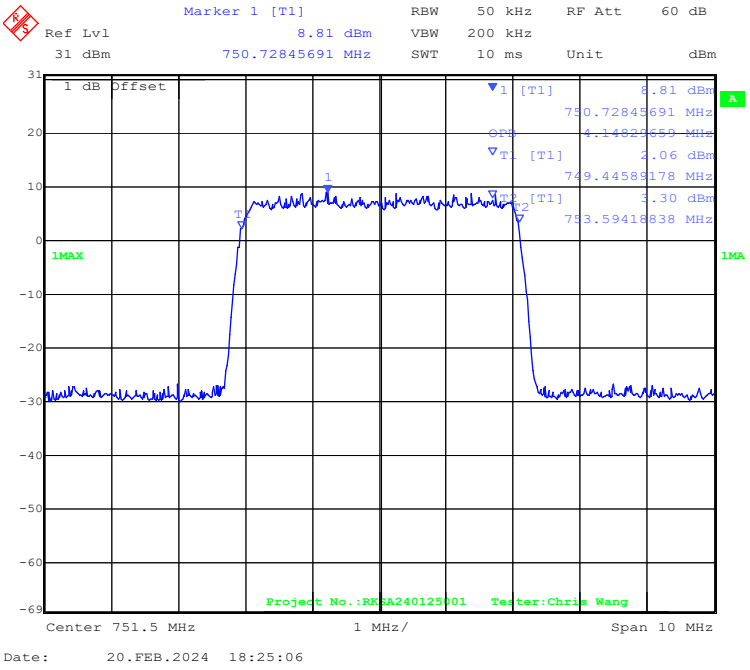
Low Channel: 748.5 MHz, 99% Occupied Bandwidth AGC + 3dB Output



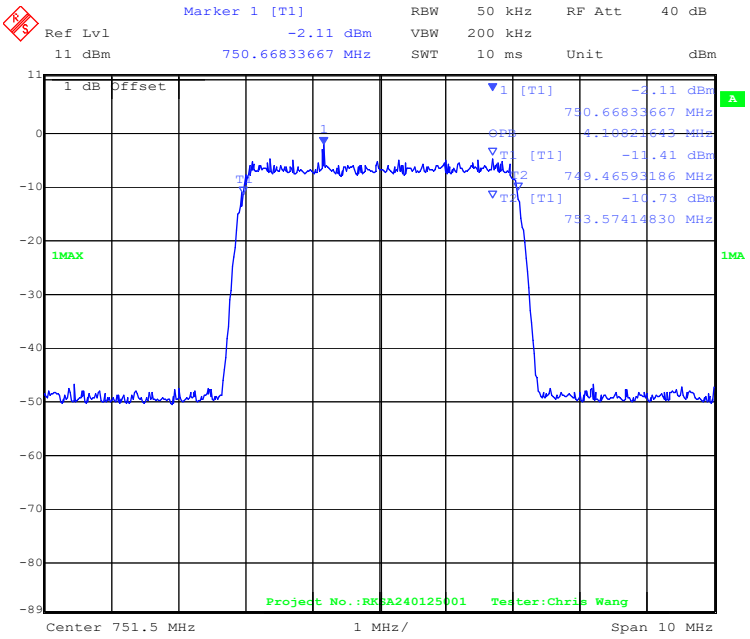
Middle Channel: 751.5 MHz, 99% Occupied Bandwidth AGC Input



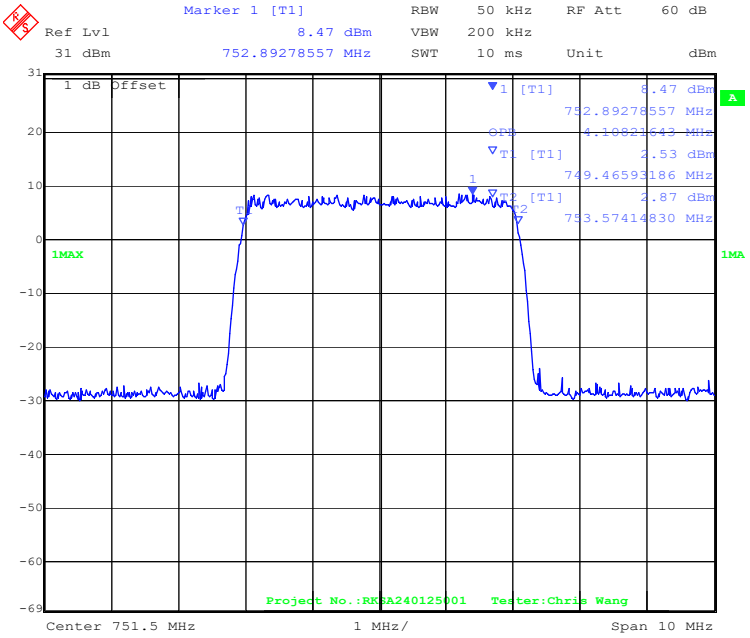
Middle Channel: 751.5 MHz, 99% Occupied Bandwidth AGC Output



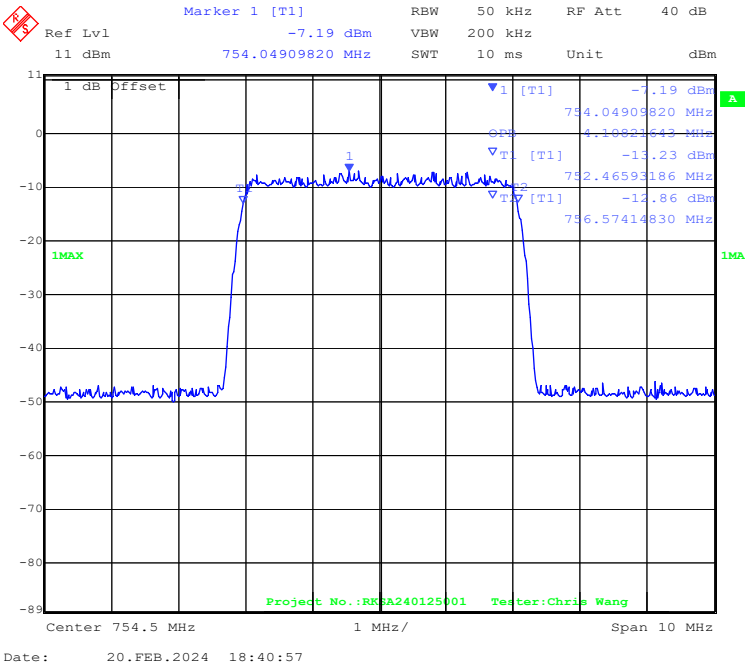
Middle Channel: 751.5 MHz, 99% Occupied Bandwidth AGC + 3dB Input



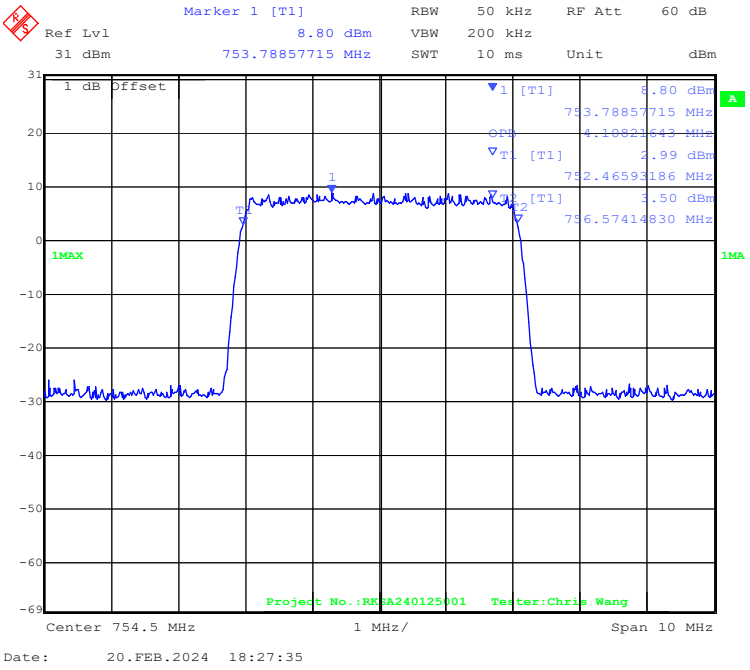
Middle Channel: 751.5 MHz, 99% Occupied Bandwidth AGC + 3dB Output



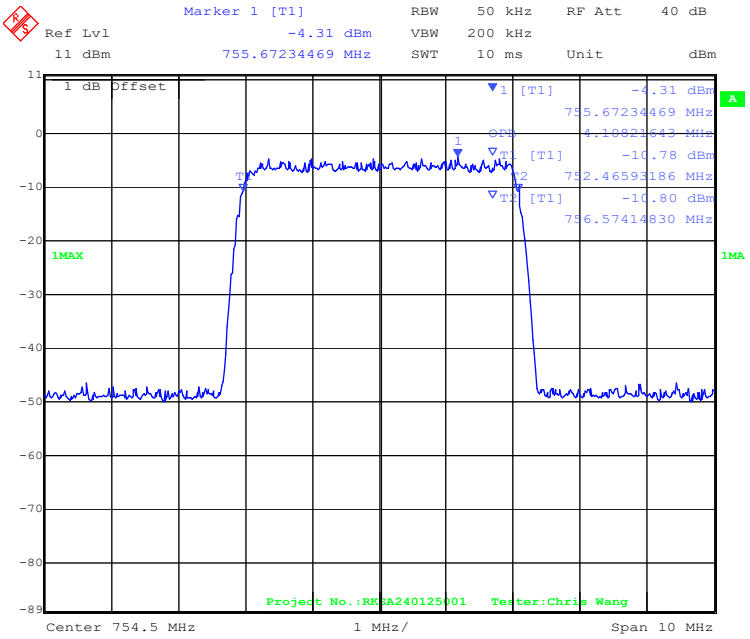
High Channel: 754.5 MHz, 99% Occupied Bandwidth AGC Input



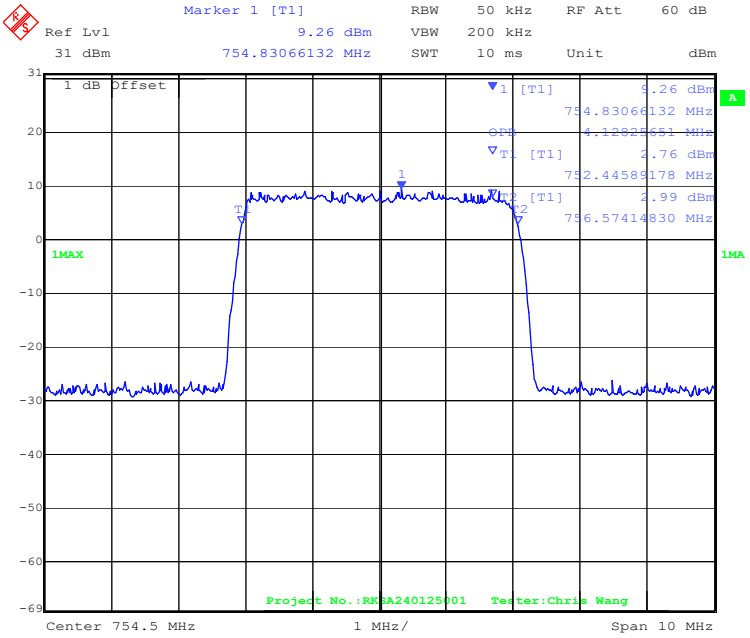
High Channel: 754.5 MHz, 99% Occupied Bandwidth AGC Output



High Channel: 754.5 MHz, 99% Occupied Bandwidth AGC + 3dB Input



High Channel: 754.5 MHz, 99% Occupied Bandwidth AGC + 3dB Output



7.4 Mean output power and amplifier/booster gain

Operational Frequencies (MHz)	Signal Type	Frequency f_0 (MHz)	Signal Level	Input Power (dBm)	Output Power (dBm)		Gain (dB)		MIMO Output Power (dBm)	Total ERP (dBm)	ERP Limit (dBm)
					RF Port 1	RF Port 2	RF Port 1	RF Port 2			
746-757	AWGN	749.90	AGC	0.0	16.64	16.56	16.64	16.56	19.61	19.89	60
			AGC + 3dB	3.0	16.47	16.44	/	/	19.47	19.75	60
	GSM		AGC	0.0	16.89	16.83	16.89	16.83	19.87	20.15	60
			AGC + 3dB	3.0	16.77	16.72	/	/	19.76	20.04	60

Note:
The maximum antenna gain is 2.43dBi, 2.43dBi=0.28dBd.
Total ERP = MIMO Output Power + antenna gain (dBd).

7.5 Out-of-band/out-of-block emissions

Frequency Band: 746-757MHz

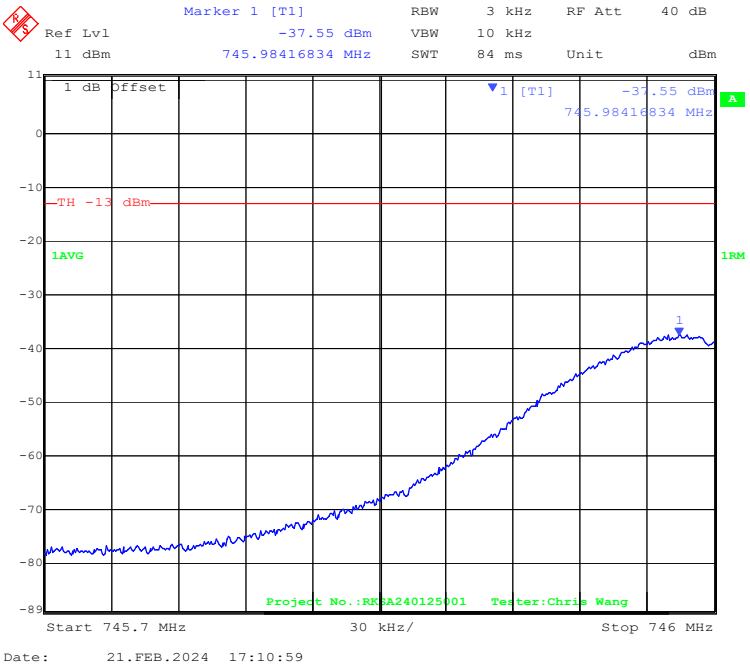
Signal Input	Channel	Input Signal Level	Test Frequency Range	Test Signal Level (dBm)		Limit (dBm)	Result
				GSM	AWGN		
One	Low	AGC	Lower	-37.55	-53.39	-16.01	PASS
		AGC + 3dB		-37.32	-53.10		
		AGC	Upper	-80.59	-59.11		
		AGC + 3dB		-80.66	-58.68		
	High	AGC	Lower	-81.66	-59.52		
		AGC + 3dB		-81.57	-58.87		
		AGC	Upper	-36.31	-51.04		
		AGC + 3dB		-36.75	-50.83		
Two	Low	AGC	Lower	-35.45	-44.26		
		AGC + 3dB		-35.47	-44.34		
		AGC	Upper	-80.59	-58.26		
		AGC + 3dB		-80.36	-58.38		
	High	AGC	Lower	-81.46	-59.11		
		AGC + 3dB		-81.21	-58.90		
		AGC	Upper	-34.42	-41.94		
		AGC + 3dB		-34.43	-42.75		

Note: The EUT supports 2*2 MIMO, since we only exhibited the results of ant 1 port which has the worse case power, so we subtract 10*log (2)=3dB from -13dBm.

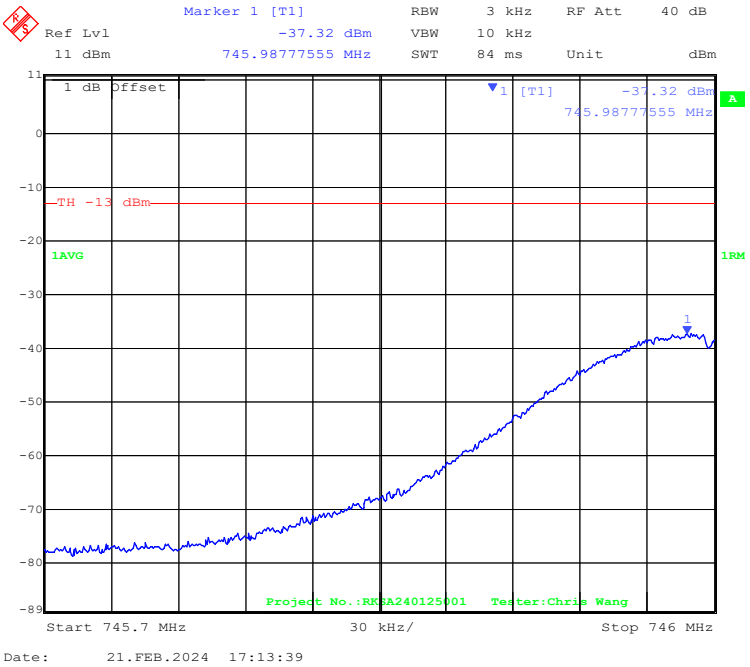
One Signal:

Signal Type: GSM

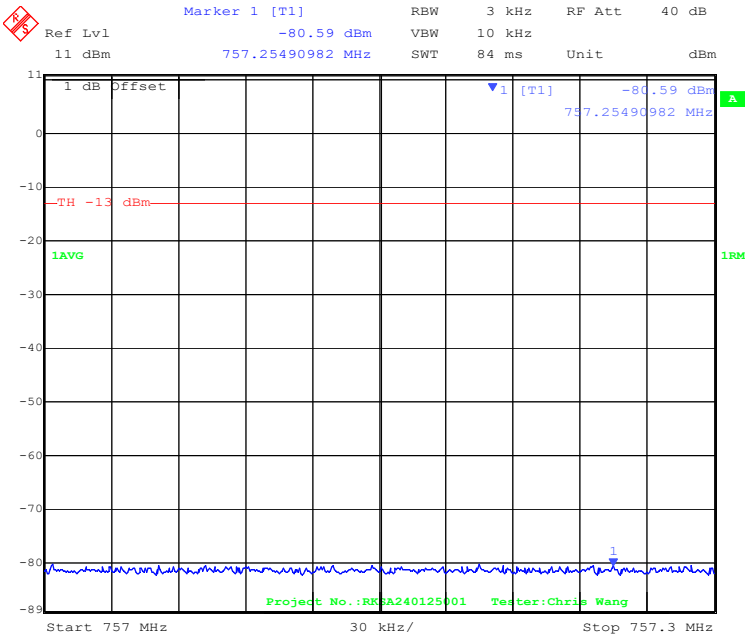
Frequency: 746.2 MHz, Left, AGC output



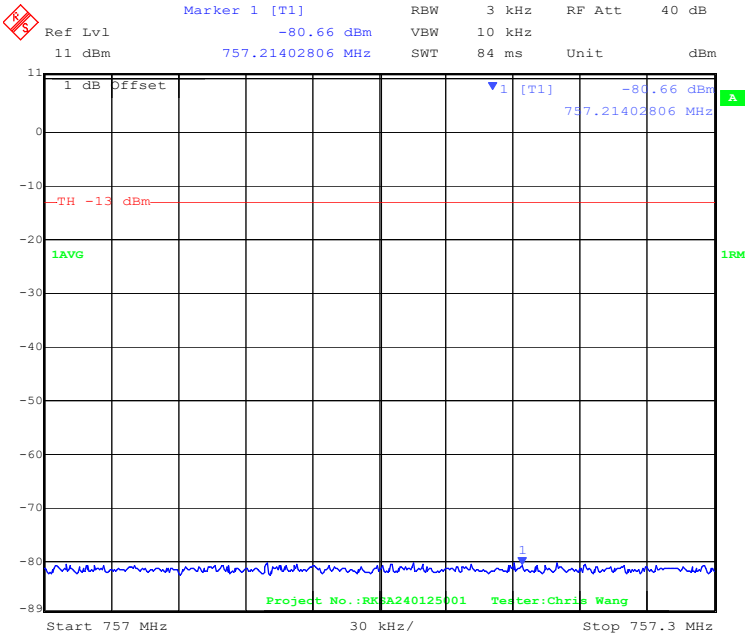
Frequency: 746.2 MHz, Left, AGC + 3dB output



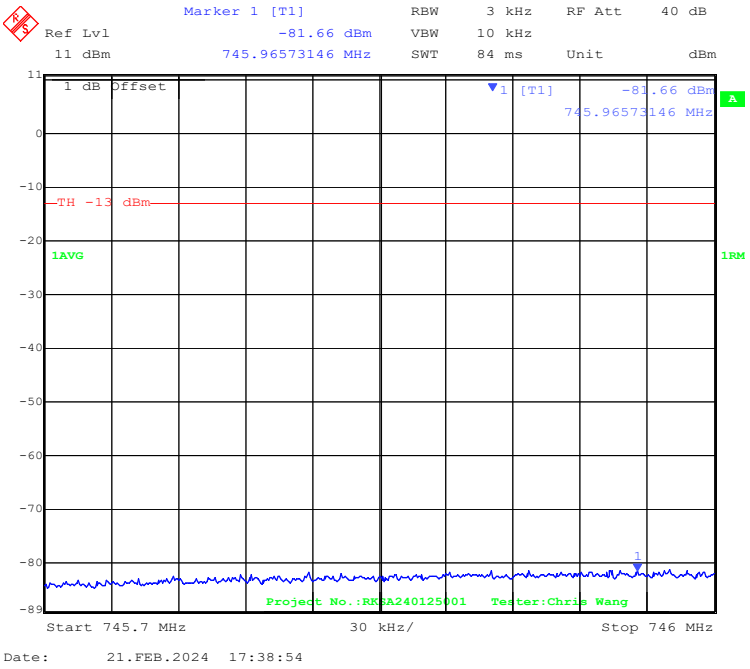
Frequency: 746.2 MHz, Right, AGC output



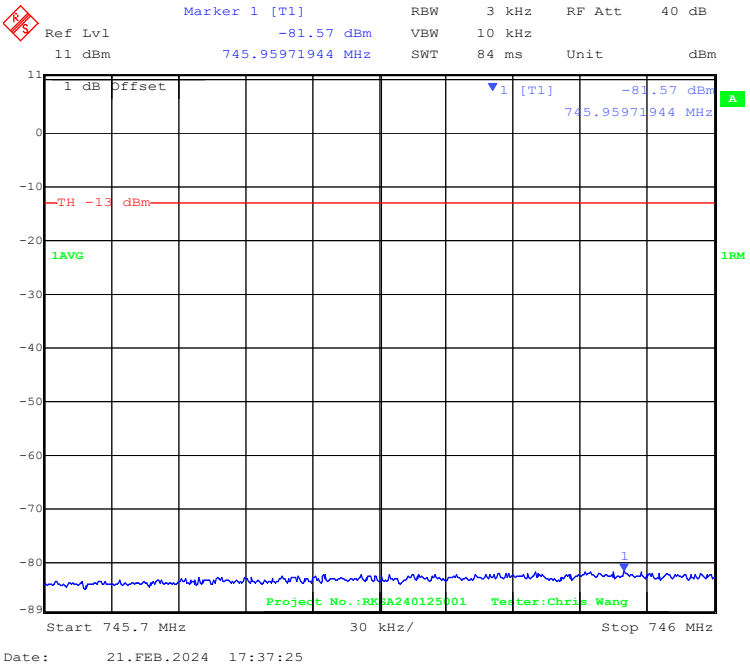
Frequency: 746.2 MHz, Right, AGC + 3dB output



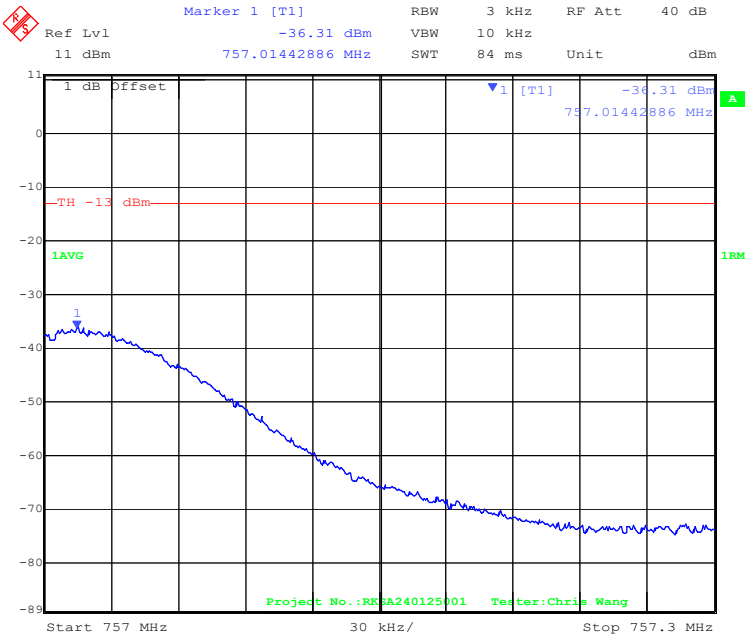
Frequency: 756.8 MHz, Left, AGC output



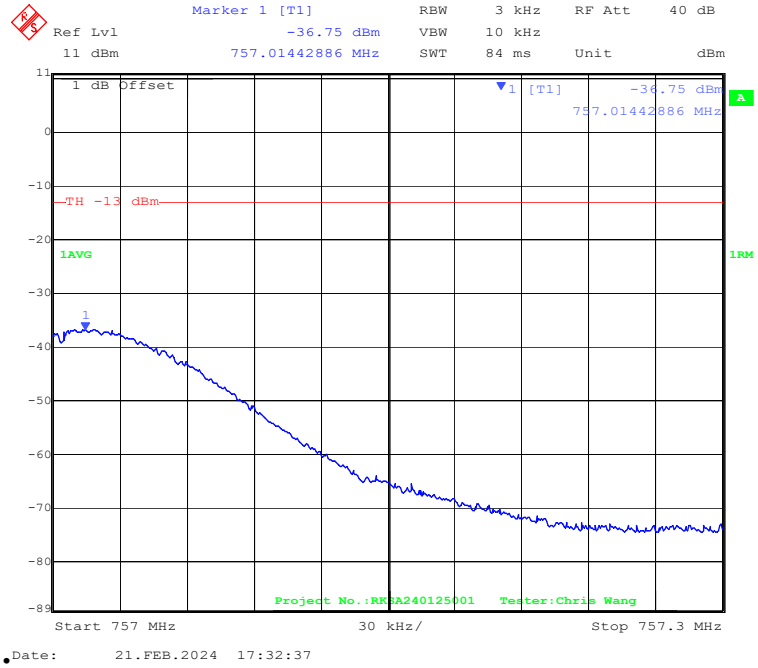
Frequency: 756.8 MHz, Left, AGC + 3dB output



Frequency: 756.8 MHz, Right, AGC output

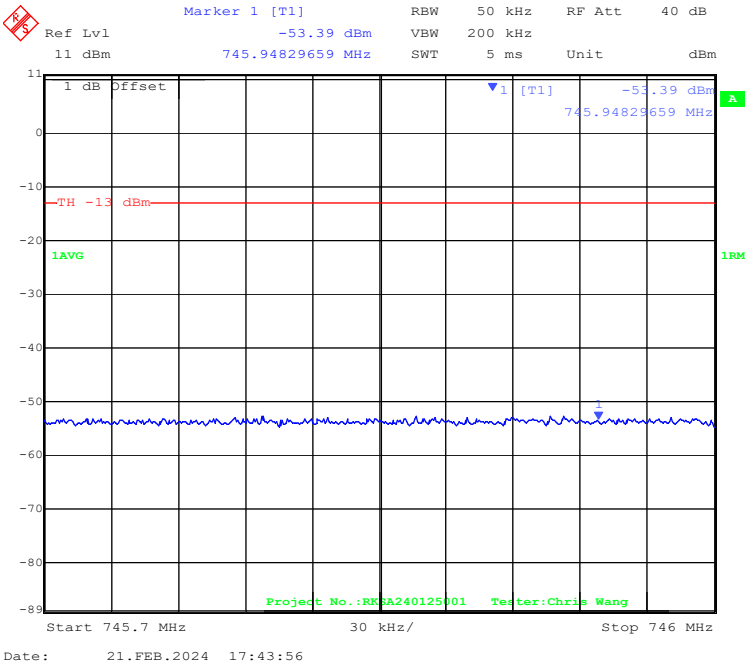


Frequency: 756.8 MHz, Right, AGC + 3dB output

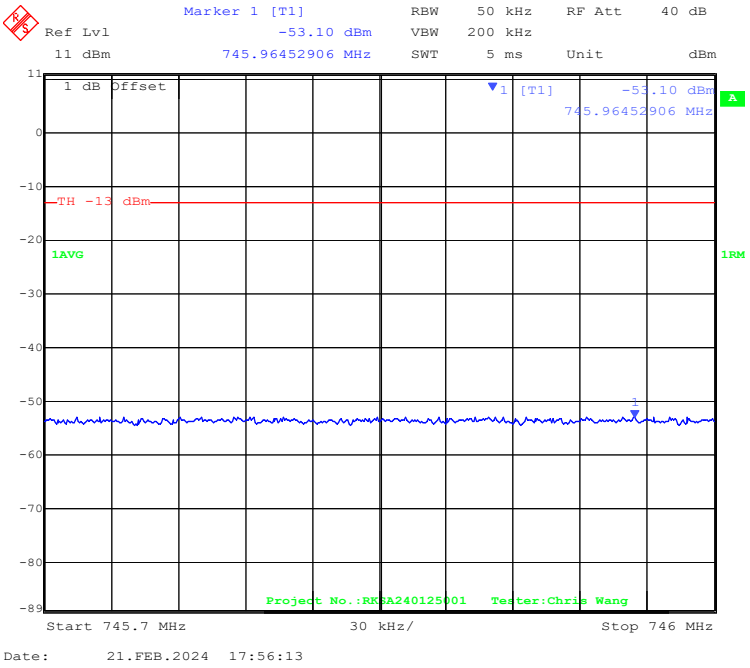


Signal Type: AWGN

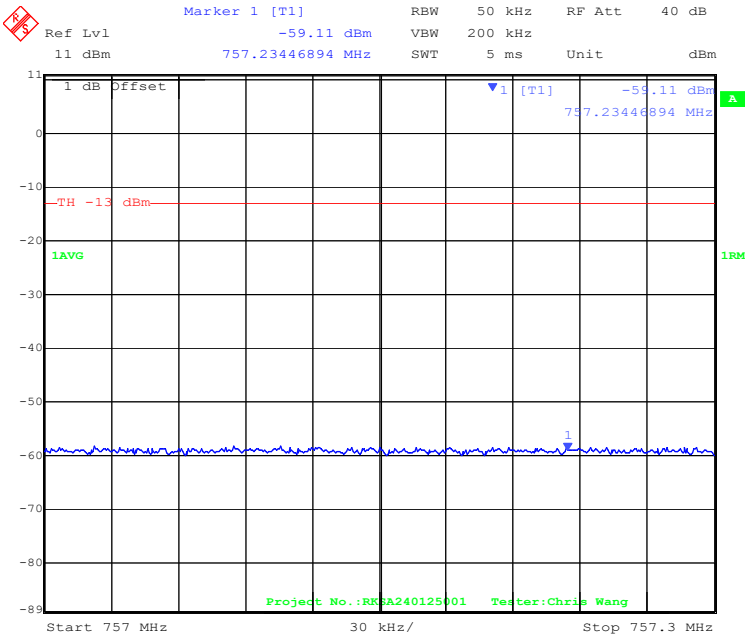
Frequency: 748.5 MHz, Left, AGC output



Frequency: 748.5 MHz, Left, AGC + 3dB output

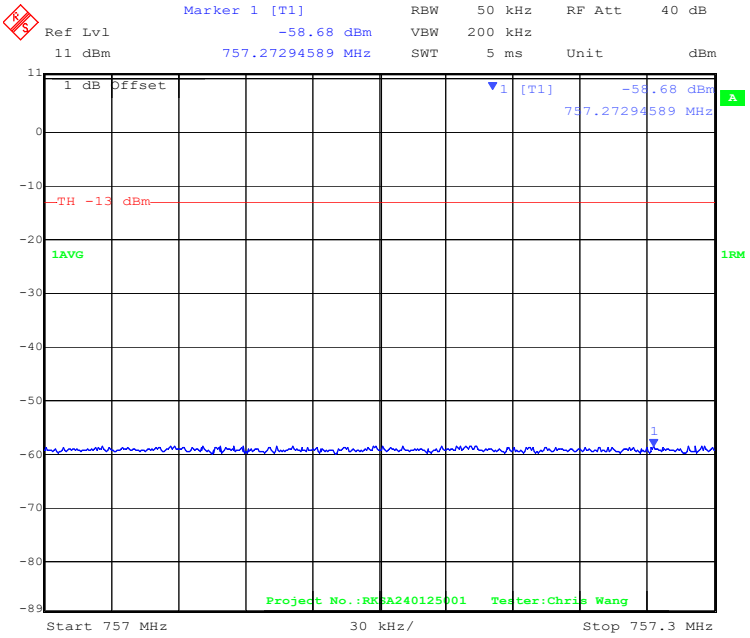


Frequency: 748.5 MHz, Right, AGC output



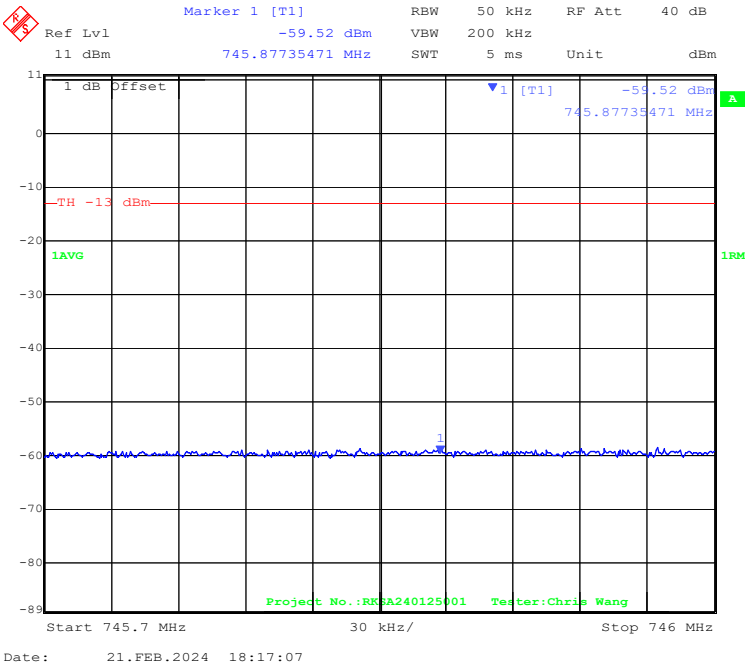
Date: 21.FEB.2024 18:01:23

Frequency: 748.5 MHz, Right, AGC + 3dB output

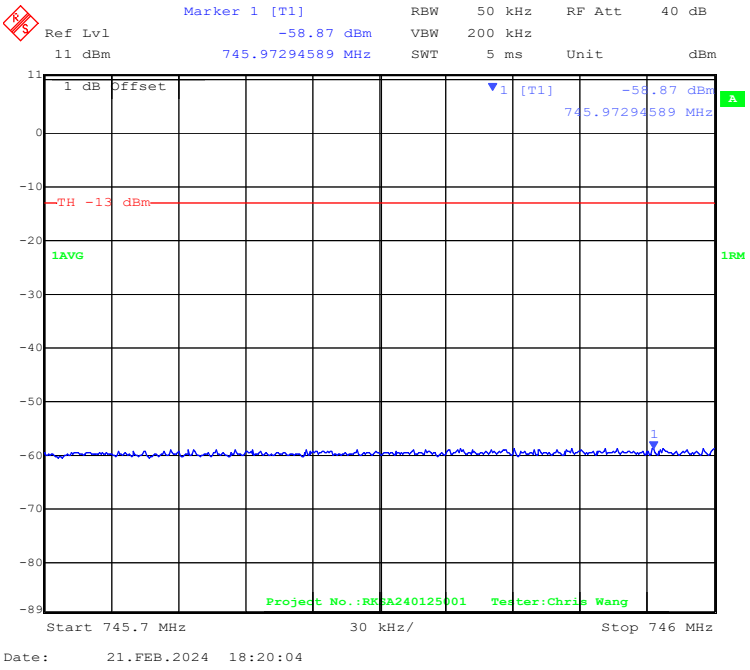


Date: 21.FEB.2024 18:00:07

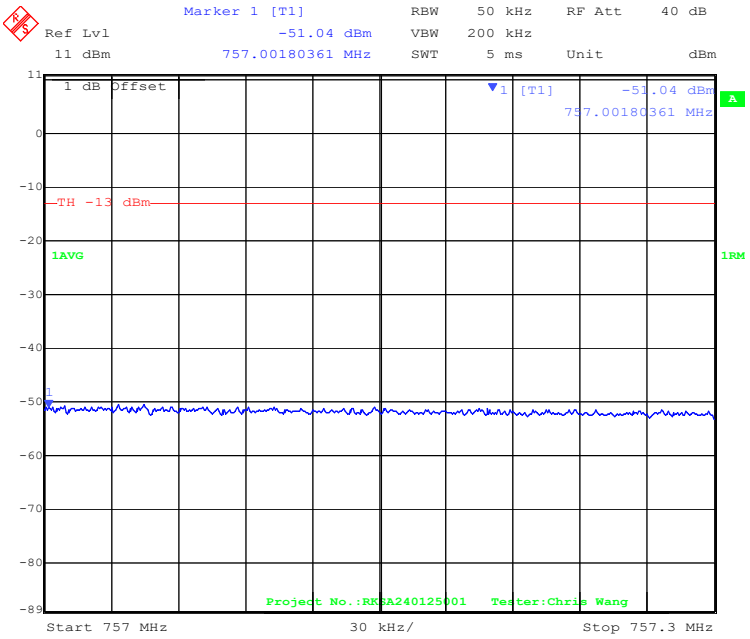
Frequency: 754.5 MHz, Left, AGC output



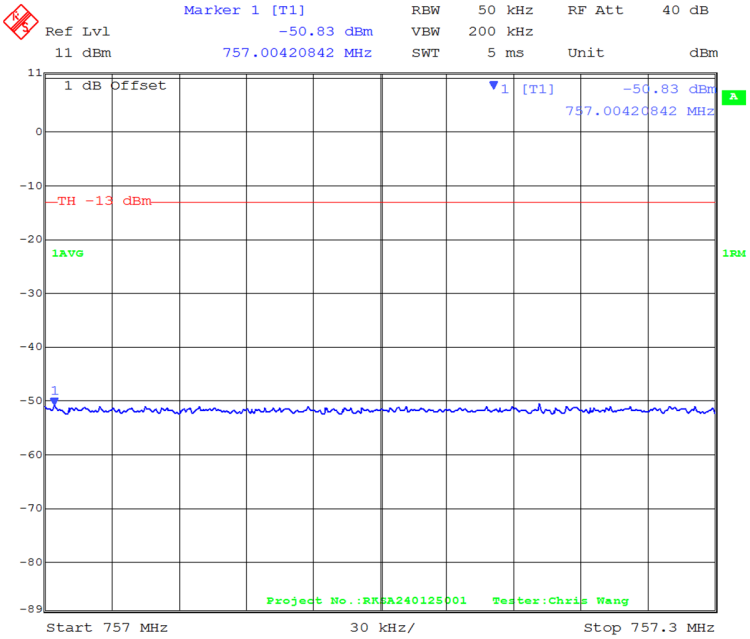
Frequency: 754.5 MHz, Left, AGC + 3dB output



Frequency: 754.5 MHz, Right, AGC output



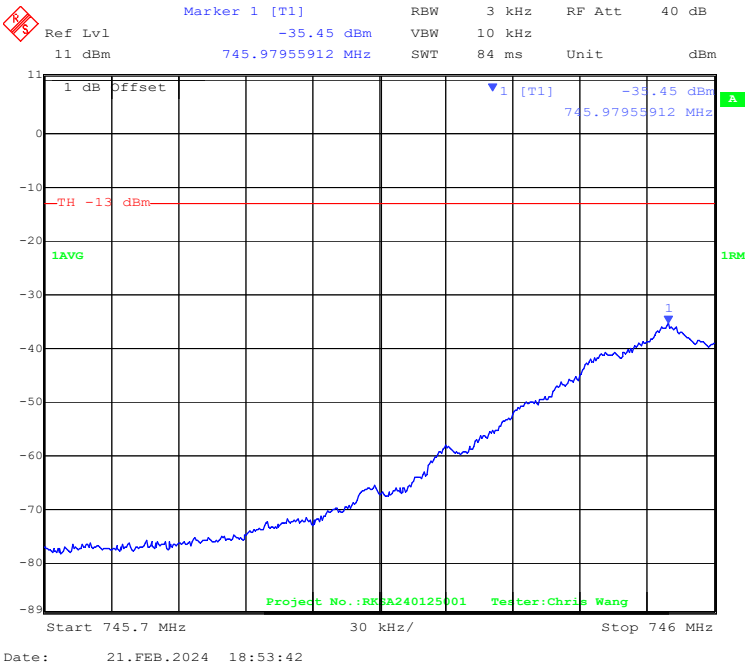
Frequency: 754.5 MHz, Right, AGC + 3dB output



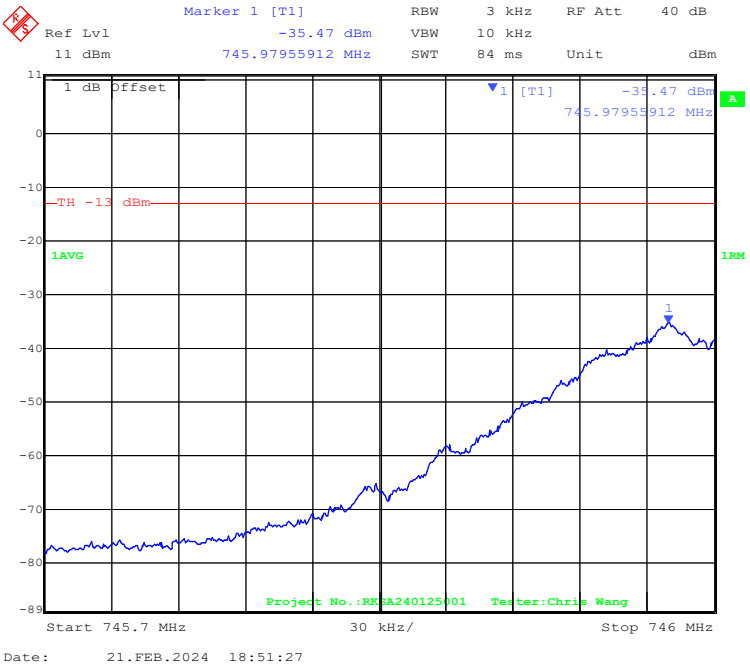
Two Signal:

Signal Type: GSM

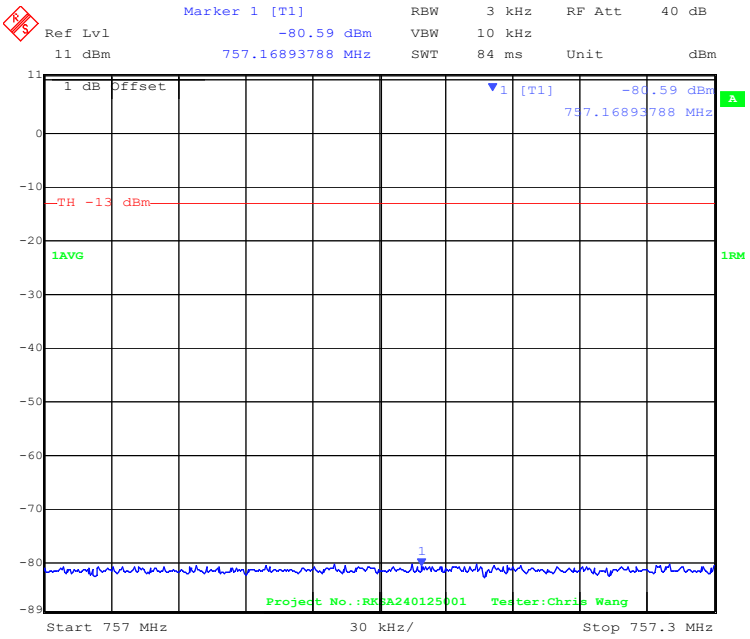
Frequency: 746.2 MHz, Left, AGC output



Frequency: 746.2 MHz, Left, AGC + 3dB output

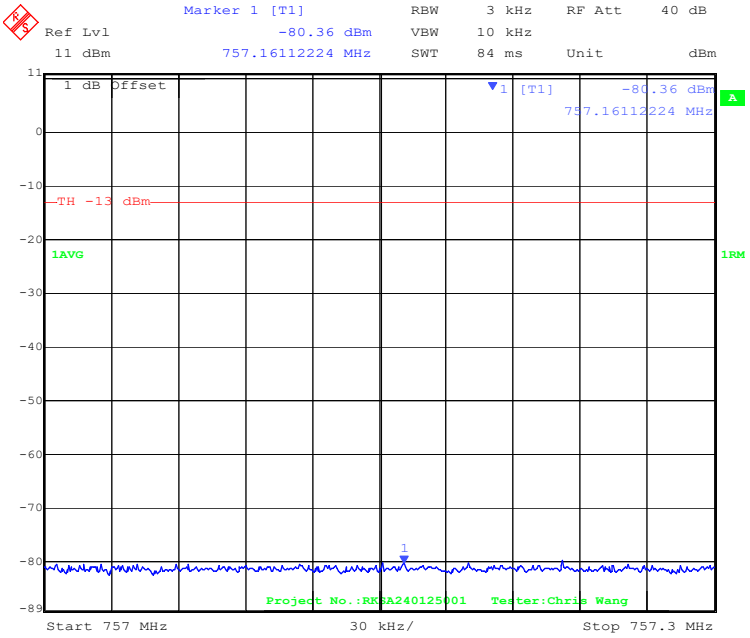


Frequency: 746.2 MHz, Right, AGC output



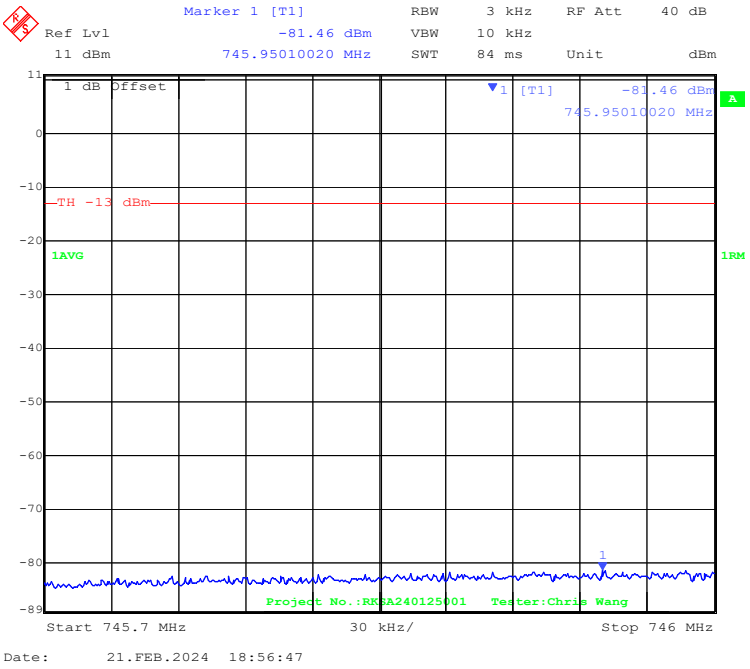
Date: 21.FEB.2024 19:04:51

Frequency: 746.2 MHz, Right, AGC + 3dB output

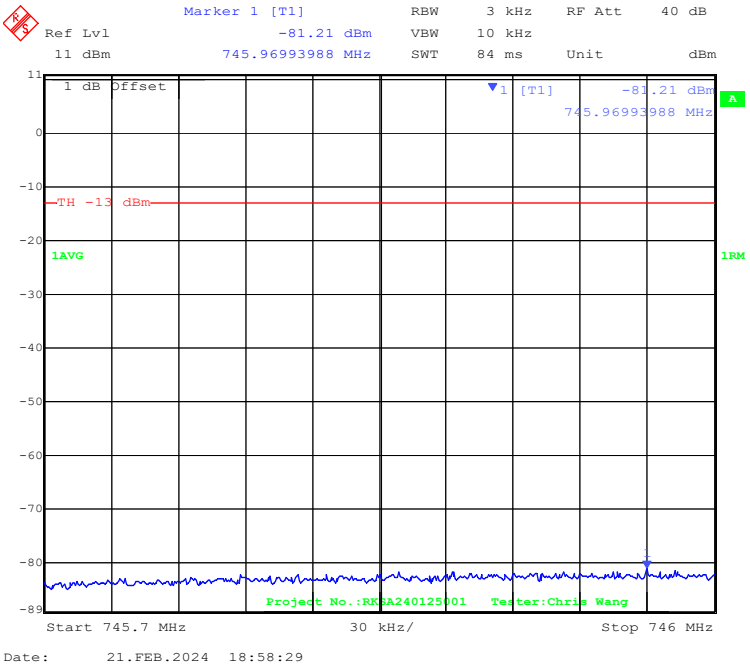


Date: 21.FEB.2024 19:06:59

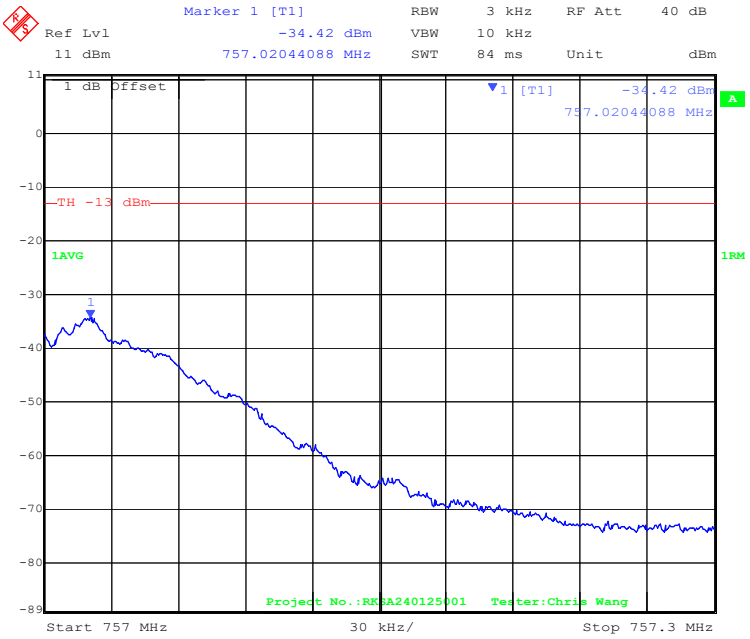
Frequency: 756.8 MHz, Left, AGC output



Frequency: 756.8 MHz, Left, AGC + 3dB output



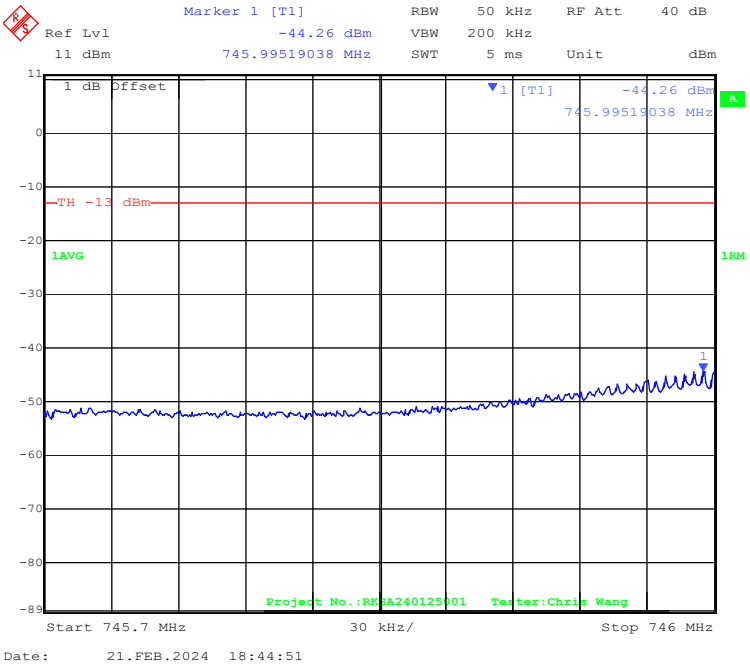
Frequency: 756.8 MHz, Right, AGC output



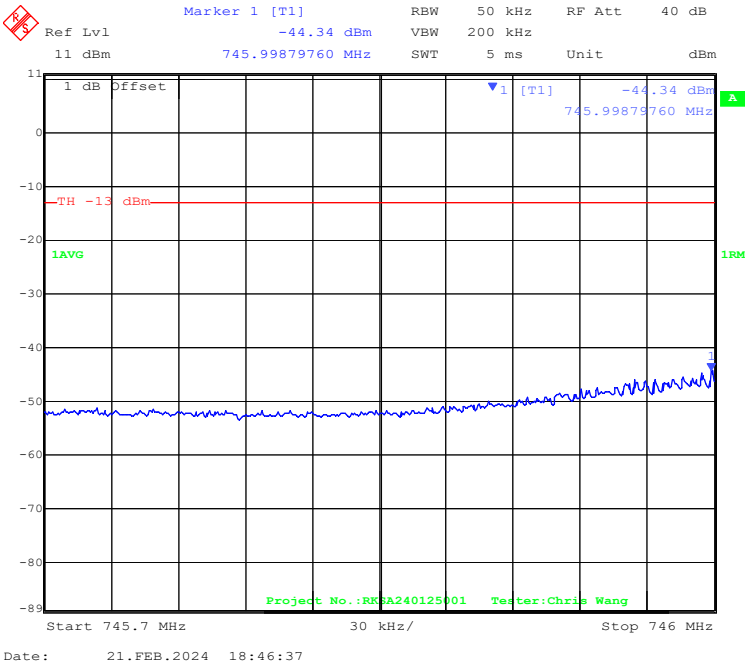
Frequency: 756.8 MHz, Right, AGC + 3dB output

Signal Type: AWGN

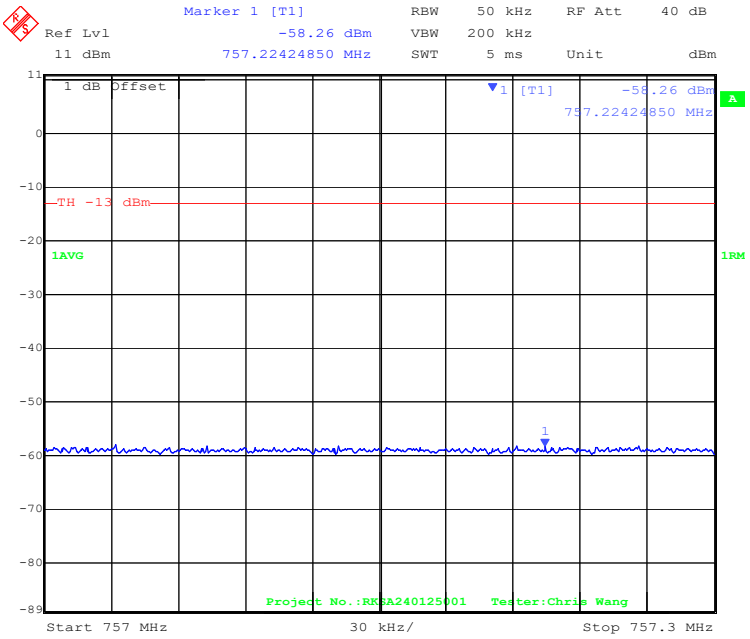
Frequency: 748.5 MHz, Left, AGC output



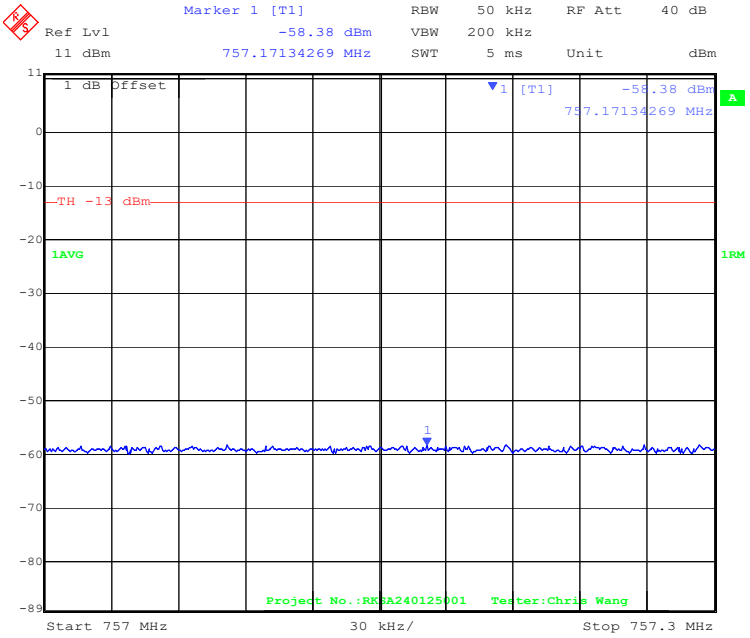
Frequency: 748.5 MHz, Left, AGC + 3dB output



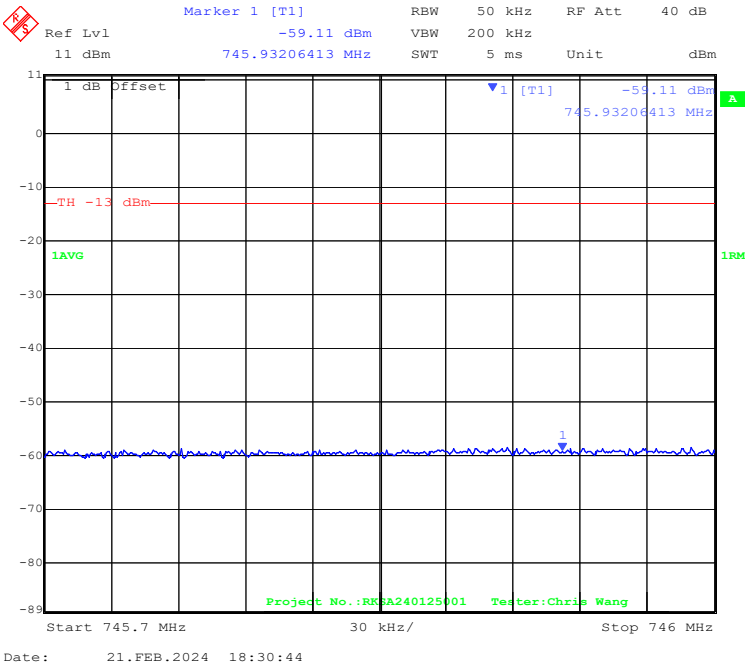
Frequency: 748.5 MHz, Right, AGC output



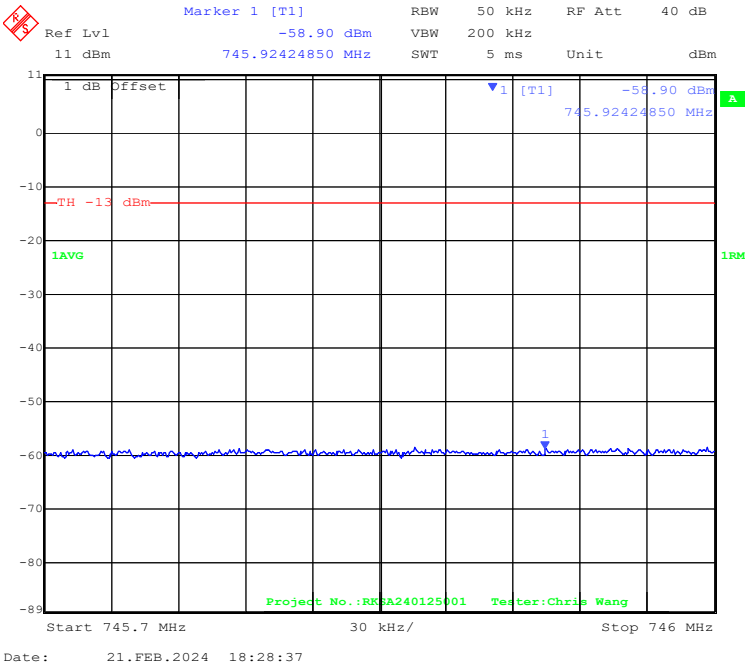
Frequency: 748.5 MHz, Right, AGC + 3dB output



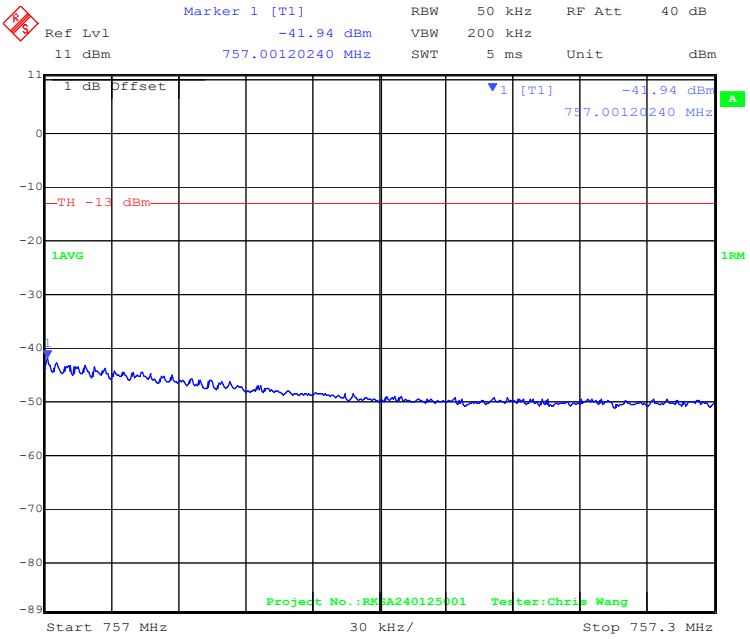
Frequency: 754.5 MHz, Left, AGC output



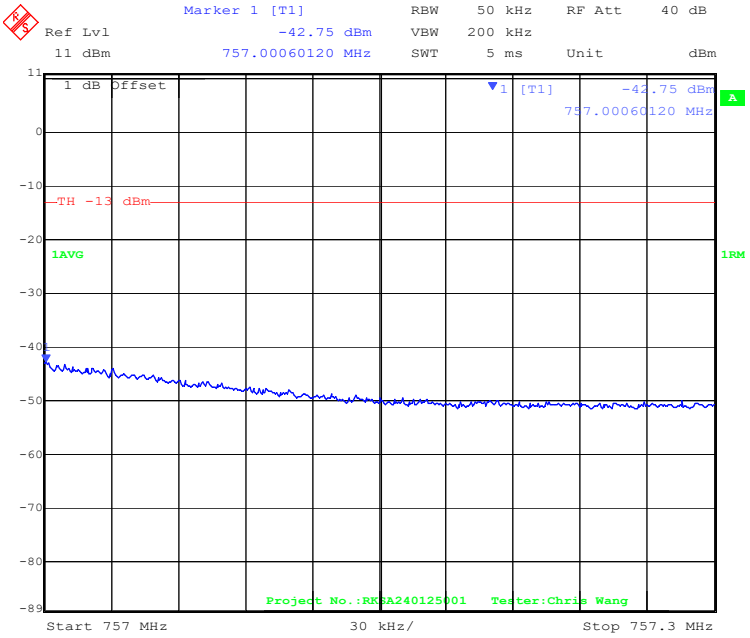
Frequency: 754.5 MHz, Left, AGC + 3dB output



Frequency: 754.5 MHz, Right, AGC output



Frequency: 754.5 MHz, Right, AGC + 3dB output



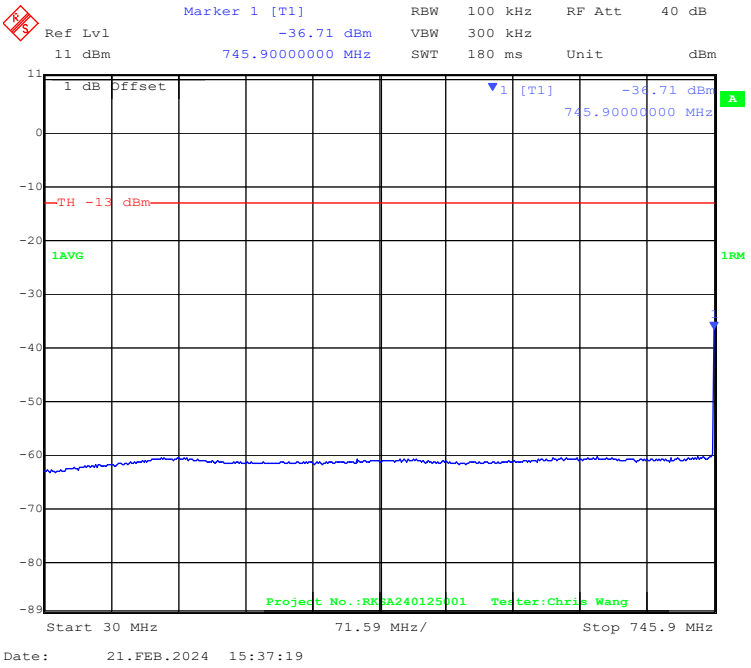
7.6 Conducted spurious emissions

Frequency Band MHz	Channel	Test Frequency Range (MHz)	Test Signal Level (MHz)		Limit (dBm)	Result
			GSM	AWGN		
746-757	Low	30-745.9	-36.71	-49.90	-16.01	PASS
		757.1-1000	-58.26	-57.57		
		1000-8000	-43.61	-43.77		
	Middle	30-745.9	-59.69	-59.02		
		757.1-1000	-57.50	-57.16		
		1000-8000	-43.84	-43.84		
	High	30-745.9	-59.64	-59.74		
		757.1-1000	-24.54	-48.53		
		1000-8000	-43.71	-43.90		

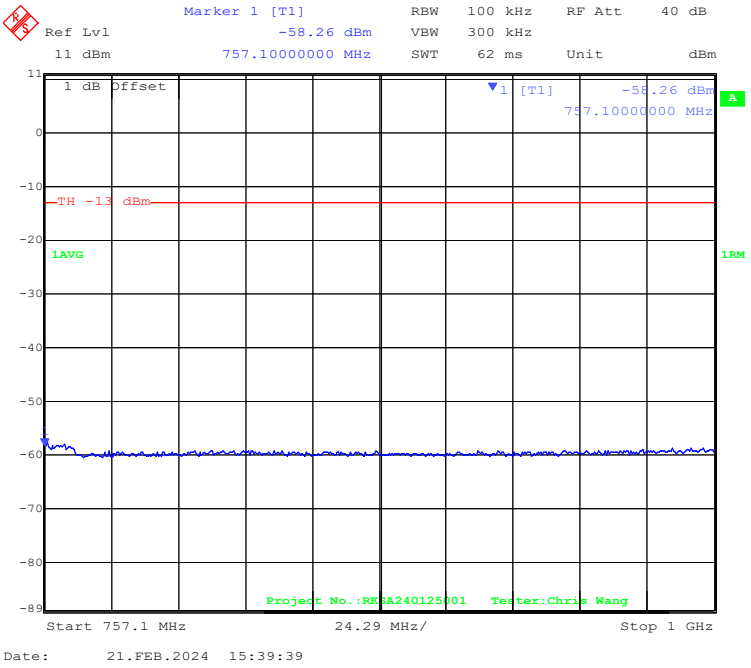
Note: The EUT supports 2*2 MIMO, since we only exhibited the results of ant 1 port which has the worse case power, so we subtract 10*log (2) = 3.01dB from -13dBm.

Signal Type: GSM

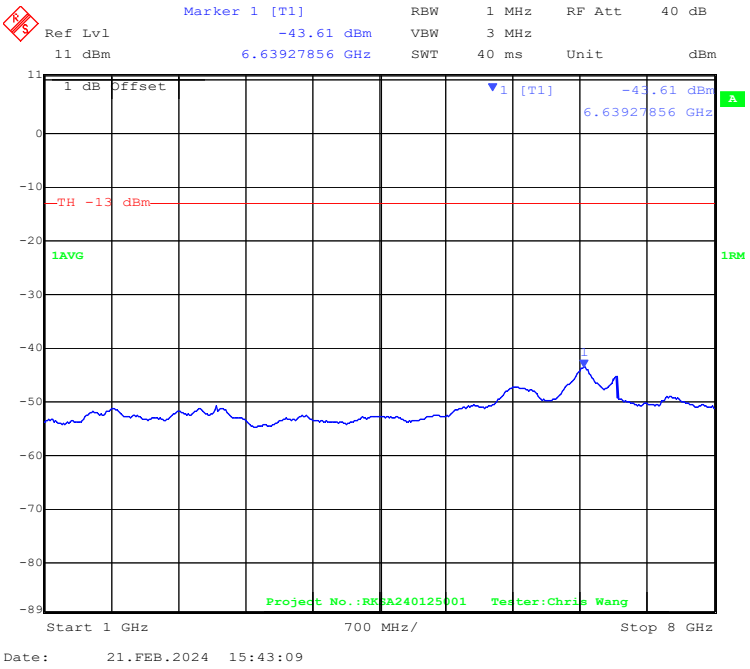
Low Channel, Frequency Range: 30-745.9MHz



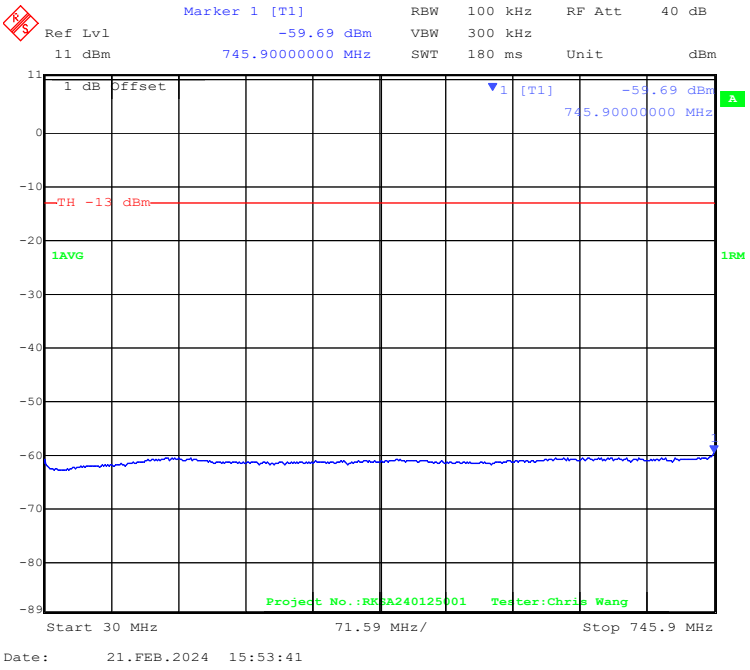
Low Channel, Frequency Range: 757.1-1000MHz



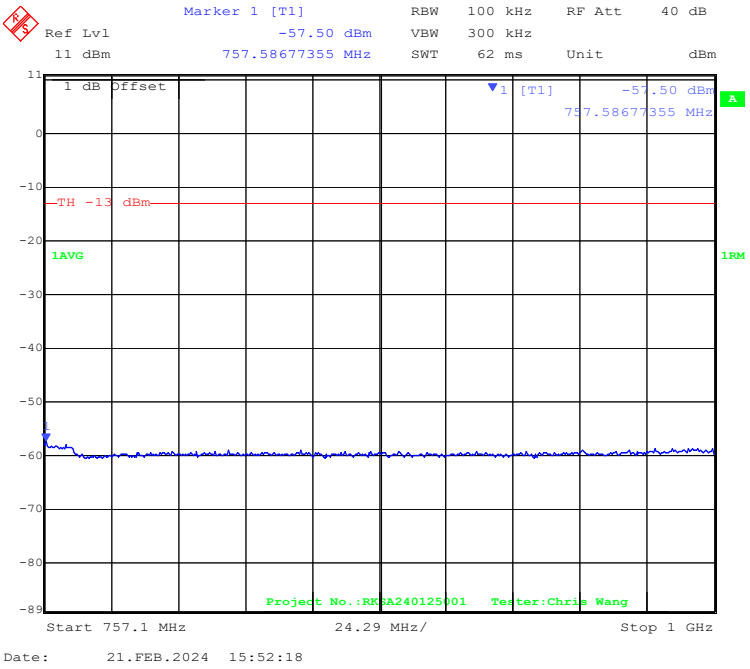
Low Channel, Frequency Range: 1000-8000MHz



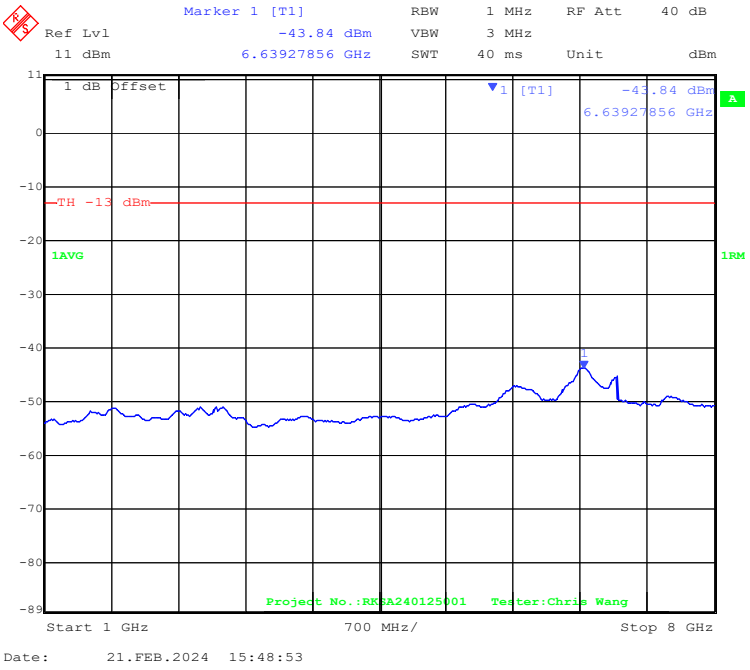
Middle Channel, Frequency Range: 30-745.9MHz



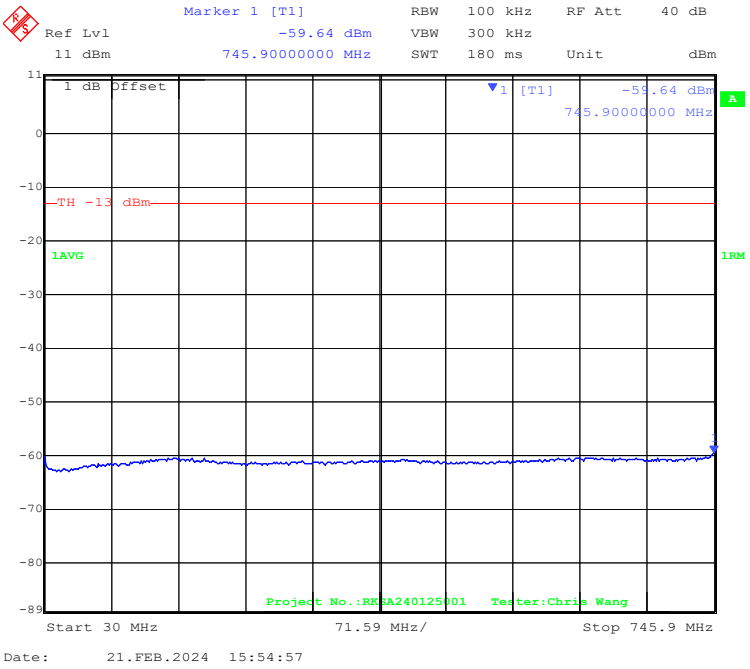
Middle Channel, Frequency Range: 757.1-1000MHz



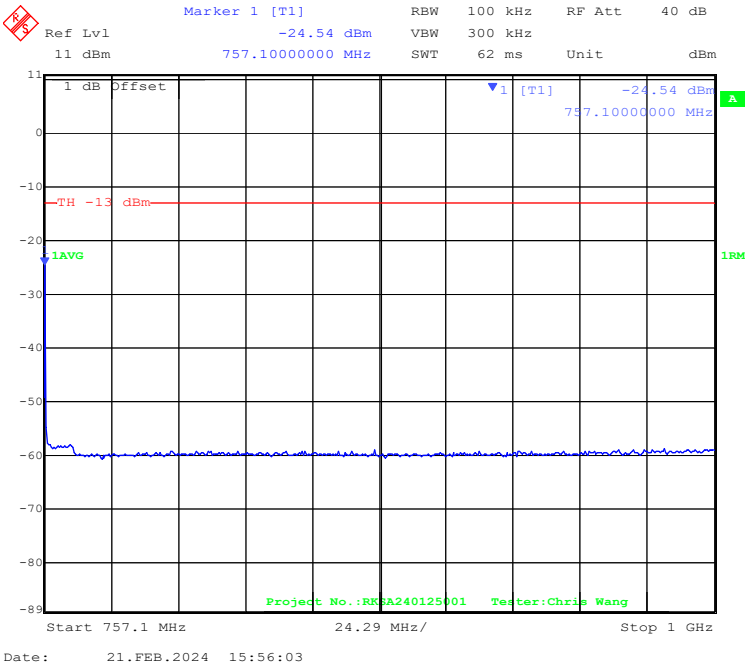
Middle Channel, Frequency Range: 1000-8000MHz



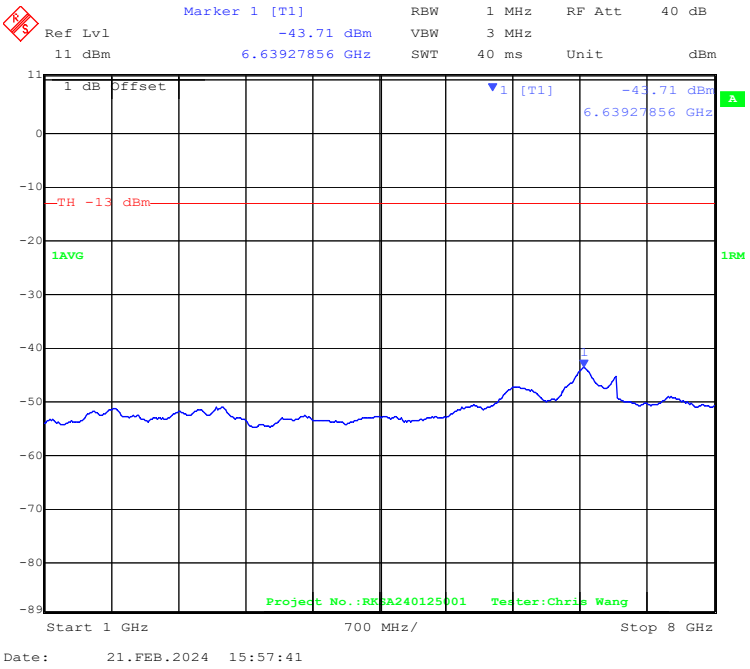
High Channel, Frequency Range: 30-745.9MHz



High Channel, Frequency Range: 757.1-1000MHz

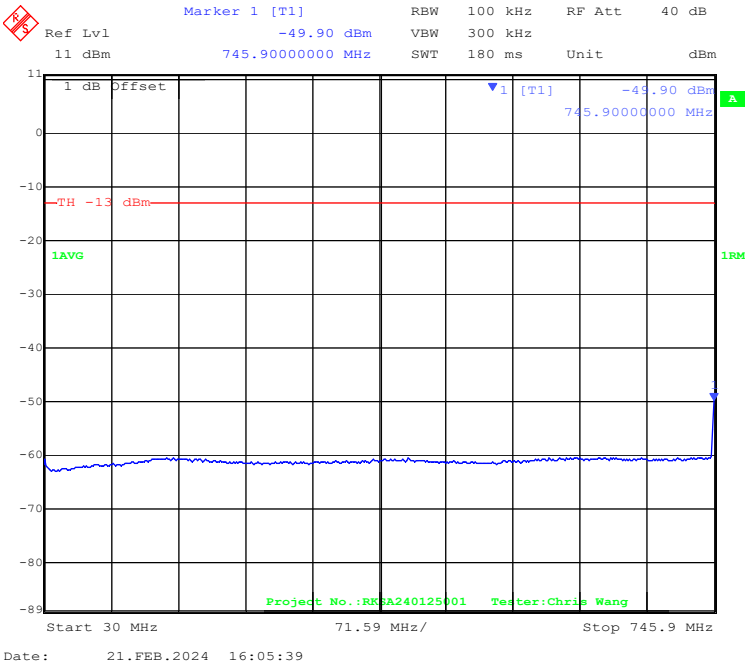


High Channel, Frequency Range: 1000-8000MHz

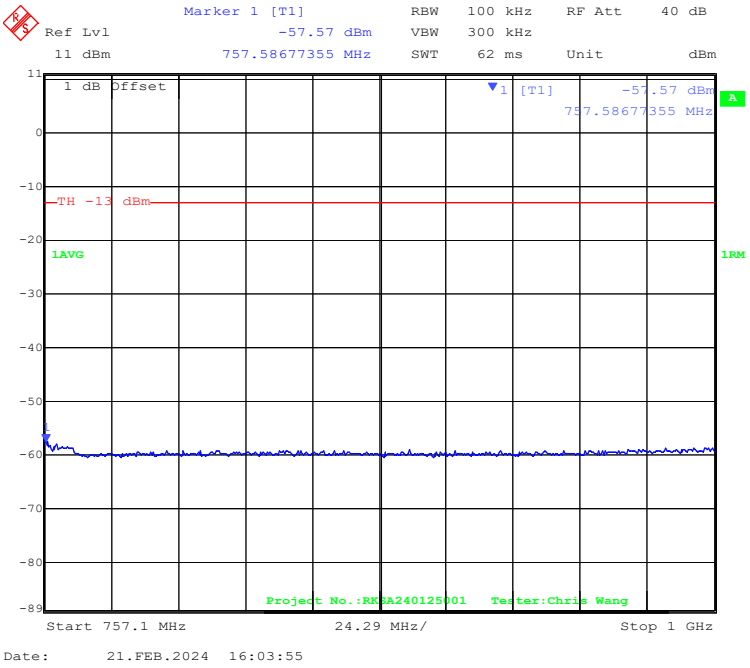


Signal Type: AWGN

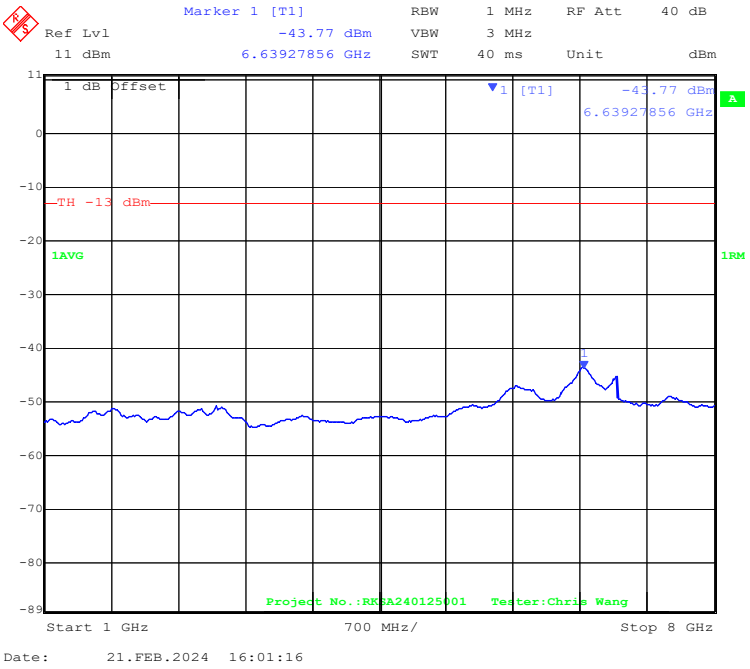
Low Channel, Frequency Range: 30-745.9MHz



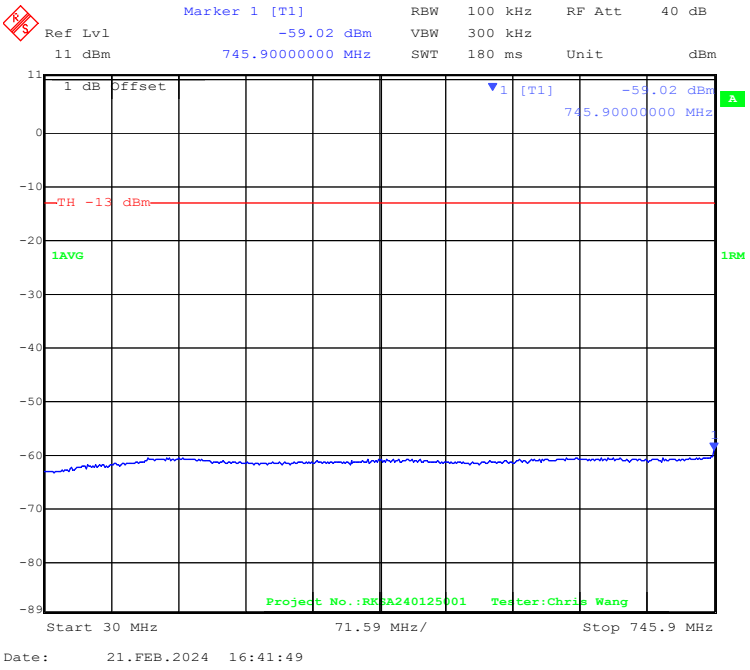
Low Channel, Frequency Range: 757.1-1000MHz



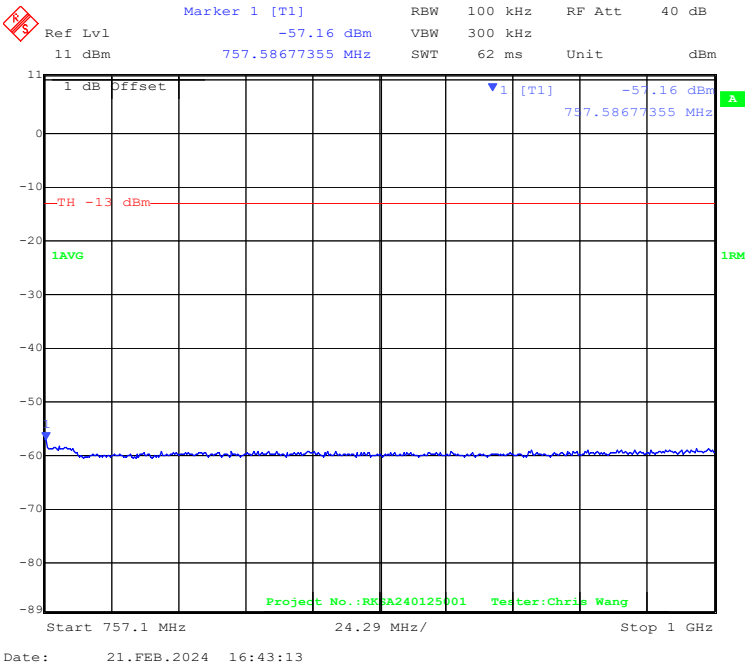
Low Channel, Frequency Range: 1000-8000MHz



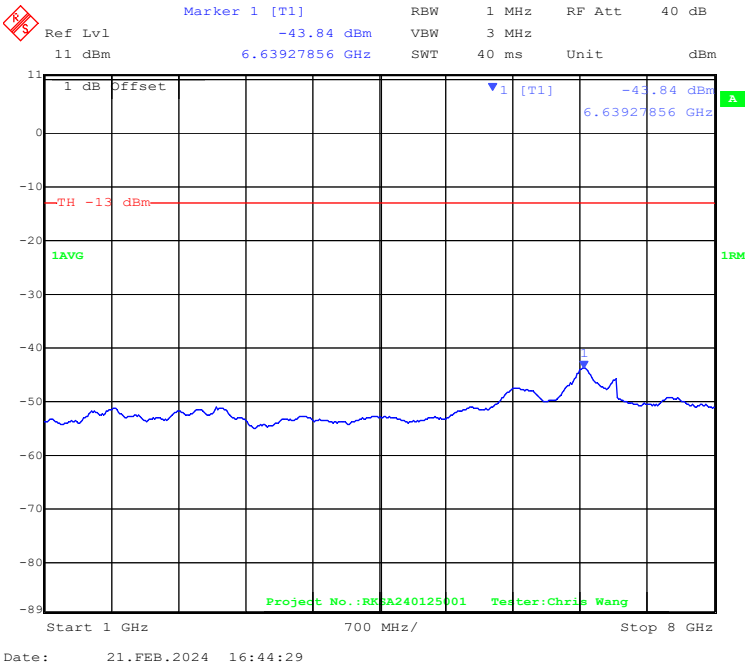
Middle Channel, Frequency Range: 30-745.9MHz



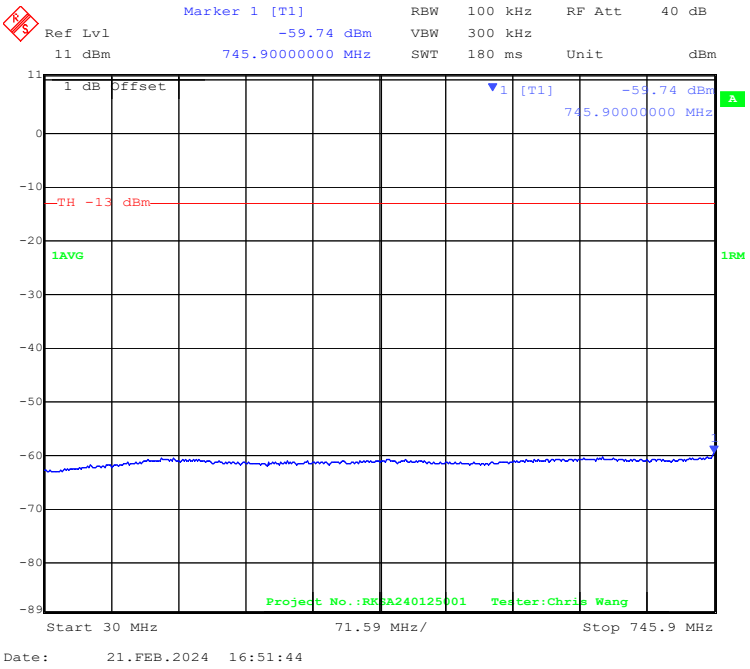
Middle Channel, Frequency Range: 757.1-1000MHz



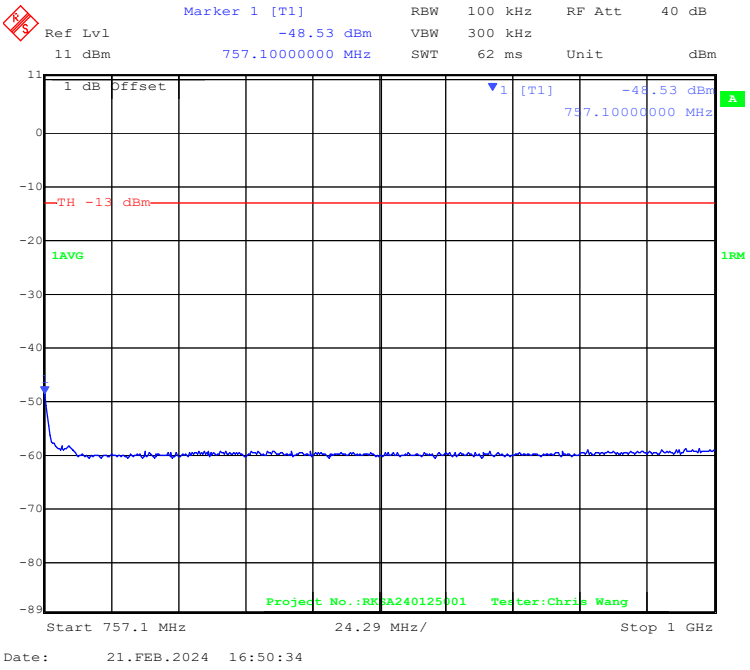
Middle Channel, Frequency Range: 1000-8000MHz



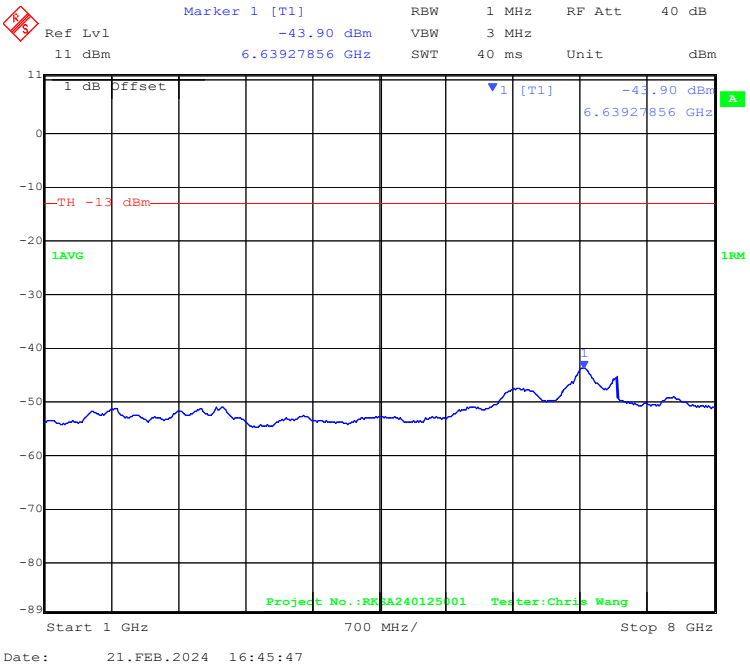
High Channel, Frequency Range: 30-745.9MHz



High Channel, Frequency Range: 757.1-1000MHz



High Channel, Frequency Range: 1000-8000MHz



7.7 Radiated spurious emissions

Input Signal Type: GSM (worst case)

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	SG Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
Low Channel										
124.94	44.46	185	142	H	-55.71	0.35	-6.10	-62.16	-13	49.16
124.94	43.88	255	146	V	-55.63	0.35	-6.10	-62.08	-13	49.08
7864.90	58.10	222	239	H	-41.29	1.83	10.03	-33.09	-13	20.09
7864.90	58.59	103	220	V	-40.80	1.83	10.03	-32.60	-13	19.60
Middle Channel										
124.94	45.36	78	243	H	-54.81	0.35	-6.10	-61.26	-13	48.26
124.94	44.90	211	200	V	-54.61	0.35	-6.10	-61.06	-13	48.06
7864.90	57.67	288	159	H	-41.72	1.83	10.03	-33.52	-13	20.52
7864.90	58.15	41	151	V	-41.24	1.83	10.03	-33.04	-13	20.04
High Channel										
124.94	46.38	85	113	H	-53.79	0.35	-6.10	-60.24	-13	47.24
124.94	45.77	226	161	V	-53.74	0.35	-6.10	-60.19	-13	47.19
7864.90	57.00	266	247	H	-42.39	1.83	10.03	-34.19	-13	21.19
7864.90	57.53	326	247	V	-41.86	1.83	10.03	-33.66	-13	20.66

Note:
1) Antenna gain is dBd for frequency below 1GHz and is dBi for frequency above 1GHz.
2) Absolute Level = SG Level - Cable loss + Antenna Gain
3) Margin = Limit- Absolute Level

8. PHOTOS

8.1 Photos of the test set-up

Please refer to the document “EXHIBIT C_TEST SETUP PHOTOGRAPHS”.

8.2 Photos of the EUT

Please refer to the document “EXHIBIT A_EUT EXTERNAL PHOTOGRAPHS” and “EXHIBIT B_EUT INTERNAL PHOTOGRAPHS”.

Declarations

1. Bay Area Compliance Laboratories Corp. (Kunshan) is not responsible for authenticity of any test data provided by the applicant. Test data from the applicant that may affect test results are marked with an asterisk "★". The model number, product name, address, trademark, etc. from the applicant are not considered as test data.

2. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested.

3. Unless required by the rule provided by the applicant or product regulations, then decision rule in this report did not consider the uncertainty.

4. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor k=2 with the 95.45% confidence interval.

5. This report cannot be reproduced except in full, without prior written approval of Bay Area Compliance Laboratories Corp. (Kunshan).

6. This report is valid only with a valid digital signature. The digital signature may be available only under the adobe software above version 7.0.

******* END OF REPORT*******