



Test Report No.: PSU-QSU2206080111RF01



Certificate #6613.01

FCC TEST REPORT

(PART 22)

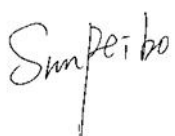
Applicant:	JACS Solutions, Inc.
Address:	809 Pinnacle Drive, Suite R, Linthicum Heights, MD 21090

Manufacturer or Supplier:	JACS Solutions, Inc.
Address:	809 Pinnacle Drive, Suite R, Linthicum Heights, MD 21090
Product:	TD191-B
Brand Name:	JACS
Model Name:	TD191-B
FCC ID:	2AGCDJACSTD191-B
Date of tests:	Jun. 15, 2022 ~ Jul. 15, 2022

The tests have been carried out according to the requirements of the following standard:

- ☒ **FCC PART 22, Subpart H** ☒ **FCC Part 2**
☒ **ANSI/TIA/EIA-603-D** ☒ **ANSI C63.26-2015**
☒ **ANSI/TIA/EIA-603-E**

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Prepared by Chao Wu Engineer / Mobile Department	Approved by Peibo Sun Manager / Mobile Department
 Date: Jul. 15, 2022	 Date: Jul. 15, 2022

This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at <http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/> and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty into account, unless otherwise requested in writing. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.



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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
PSU-QSU2206080111RF01	Original release	Jul. 15, 2022

1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 22 & Part 2			
STANDARD SECTION	TEST TYPE	RESULT	Test lab*
§2.1046	Conducted Output Power	Compliance	A
§22.913 (a)(5)	Effective Radiated Power	Compliance	A
§2.1055 §22.355	Frequency Stability	Compliance	A
§2.1049	Occupied Bandwidth	Compliance	A
§22.913 (d)	Peak to average ratio*	Compliance	A
§22.917(a)	Band Edge Measurements	Compliance	A
§2.1051 §22.917(a)	Conducted Spurious Emissions	Compliance	A
§2.1053 §22.917(a)	Radiated Spurious Emissions	Compliance	A

* Refer to KDB 971168 D01 Power Meas License Digital Systems v03r01.

*Test Lab Information Reference

Lab A:

Huarui 7Layers High Technology (Suzhou) Co., Ltd.

Lab Address:

Tower N, Innovation Center, 88 Zhuyi Road, High-tech District, Suzhou City, Anhui Province

Accredited Test Lab Cert 6613.01

The FCC Site Registration No. is 434559; The Designation No. is CN1325.

1.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	UNCERTAINTY
Maximum Peak Output Power	$\pm 2.06\text{dB}$
Frequency Stability	$\pm 76.97\text{Hz}$
Radiated emissions (30MHz~1GMHz)	$\pm 4.98\text{dB}$
Radiated emissions (1GMHz ~6GMHz)	$\pm 4.70\text{dB}$
Radiated emissions (6GMHz ~18GMHz)	$\pm 4.60\text{dB}$
Radiated emissions (18GMHz ~40GMHz)	$\pm 4.12\text{dB}$
Conducted emissions	$\pm 4.01\text{dB}$
Occupied Channel Bandwidth	$\pm 43.58\text{KHz}$
Band Edge Measurements	$\pm 4.70\text{dB}$
Peak to average ratio	$\pm 0.76\text{dB}$

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

1.2 TEST SITE AND INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Feb. 18,22	Feb. 17,23
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510355	May.15,22	May.14,23
Loop Antenna	Schwarzbeck	FMZB 1519B	00173	Sep.05,21	Sep.04,22
Bilog Antenna	ETS-LINDGRE N	3143B	00161965	Mar. 06,22	Mar. 05,23
Horn Antenna	ETS-LINDGRE N	3117	00168692	Mar. 06,22	Mar. 05,23
Horn Antenna (18GHz-40GHz)	N/A	QWH-SL-18-40-K-SG/QMS-00361	15433	Aug. 25, 21	Aug. 24, 22
Radio Communication Analyzer	ANRITSU	MT8820C	6201465426	Feb. 15,22	Feb. 14,23
Signal Pre-Amplifier	EMSI	EMC 9135	980249	May.12,22	May.11,23
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	May.12,22	May.11,23
Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Feb. 21,22	Feb.20,23
3m Semi-anechoic Chamber	ETS-LINDGRE N	9m*6m*6m	Euroshieldpn-CT0001143-1216	May. 19,20	May. 18,23
Test Software	E3	V 9.160323	N/A	N/A	N/A
Test Software	JS1120	3.1.36	N/A	N/A	N/A
10dB Attenuator	JFW/USA	50HF-010-SMA	1505	May. 07,22	May. 06,23
Power Meter	Anritsu	ML2495A	1506002	Feb. 22,22	Feb. 21,23
Power Sensor	Anritsu	MA2411B	1339352	May. 07,22	May. 06,23
Temperature Chamber	ESPEC	SH-242	93000855	May. 12,22	May. 11,23
MXG Analog Microwave Signal Generator	KEYSIGHT	N5183A	MY50143024	Feb. 18,22	Feb. 17,23
Base station R&S CMW500	Rohde&Schwarz	CMW500	153085	May.12,22	May.11,23
DC Source	Kikusui/JP	PMX18-5A	0000001	Aug. 25,21	Aug. 24,22

- NOTE:**
1. The calibration interval of the above test instruments is 12 months or 36months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
 2. The test was performed in 3m Semi-anechoic Chamber and RF Oven Room.
 3. The horn antenna is used only for the measurement of emission frequency above 1GHz if tested.

2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	TD191-B	
BRAND NAME	JACS	
MODEL NAME	TD191-B	
NOMINAL VOLTAGE	EUT 5Vdc	
MODULATION TYPE	GPRS/EDGE	GMSK,8PSK
	WCDMA	HSUPA, HSDPA, DC-HSDPA
	LTE	QPSK, 16QAM
FREQUENCY RANGE	GPRS/EDGE	824.2MHz ~ 848.8MHz
	WCDMA	826.4MHz ~ 846.6MHz
	LTE Band 5 (Channel Bandwidth: 1.4MHz)	824.7MHz ~ 848.3MHz
	LTE Band 5 (Channel Bandwidth: 3MHz)	825.5MHz ~ 847.5MHz
	LTE Band 5 (Channel Bandwidth: 5MHz)	826.5MHz ~ 846.5MHz
	LTE Band 5 (Channel Bandwidth: 10MHz)	829MHz ~ 844MHz
MAX. ERP POWER	GPRS	1153.45mW
	EDGE	289.73mW
	WCDMA	122.74mW
	LTE Band 5 (Channel Bandwidth: 1.4MHz)	115.35mW
	LTE Band 5 (Channel Bandwidth: 3MHz)	116.14mW
	LTE Band 5 (Channel Bandwidth: 5MHz)	116.14mW
	LTE Band 5 (Channel Bandwidth: 10MHz)	116.68mW
EMISSION DESIGNATORGOGN	GPRS	244KGXW
	EDGE	248KGXW
	WCDMA	4M14F9W
	LTE Band 5 (Channel Bandwidth: 1.4MHz)	QPSK: 1M09G7D 16QAM: 1M09W7D
	LTE Band 5 (Channel Bandwidth: 3MHz)	QPSK: 2M70G7D 16QAM: 2M70W7D
	LTE Band 5 (Channel Bandwidth: 5MHz)	QPSK: 4M50G7D 16QAM: 4M51W7D

	LTE Band 5 (Channel Bandwidth: 10MHz)	QPSK: 8M97G7D 16QAM: 8M96W7D
ANTENNA TYPE	Fixed Internal Antenna with 0.2dBi gain for GSM850/ WCDMA V/ LTE B5	
HW VERSION	TD191-B-1.0.0	
SW VERSION	TD191-B_JACS_V1.0.0	
I/O PORTS	Refer to user's manual	
CABLE SUPPLIED	N/A	
EXTREME TEMPERATURE	-20-65 °C	
EXTREME VOLTAGE	EUT 4.75V - EUT 5.25V	

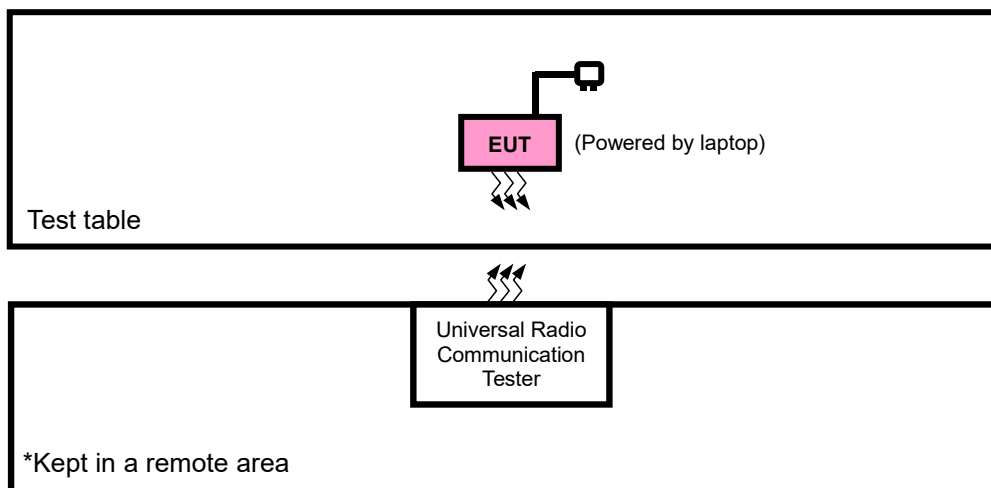
NOTE:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
2. The EUT incorporates a siso function. Physically, the EUT provides one completed transmitter and one receiver.

MODULATION MODE	TX FUNCTION
GPRS/EDGE	1TX/2RX
WCDMA	1TX/2RX
LTE	1TX/2RX

3. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.

2.2 CONFIGURATION OF SYSTEM UNDER TEST FOR RADIATION EMISSION





2.3 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	DC source	Kikusui/JP	PMX18-5A	0000001	N/A
2	Laptop	Lenovo	ThinkPad E14	HRSW00024	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	N/A

2.4 TEST ITEM AND TEST CONFIGURATION

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports. The worst case in ERP and radiated emission was found when positioned on X-plane for GSM /WCDMA/ LTE. Following channel(s) was (were) selected for the final test as listed below:

EUT CONFIGURE MODE	DESCRIPTION
A	EUT + GSM/WCDMA/LTE(powered by Laptop)
B	EUT + DC source with GSM or WCDMA or LTE link



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GSM MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	MODE
A	ERP	128 to 251	128, 190, 251	GPRS
B	FREQUENCY STABILITY	128 to 251	128, 190, 251	GPRS
A	OCCUPIED BANDWIDTH	128 to 251	128, 190, 251	GPRS
A	BAND EDGE	128 to 251	128, 251	GPRS
A	CONDCUDETED EMISSION	128 to 251	128, 190, 251	GPRS
A	RADIATED EMISSION	128 to 251	128, 190, 251	GPRS/EDGE
A	PEAK TO AVERAGE RATIO	128 to 251	128, 190, 251	GPRS

WCDMA MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	MODE
A	ERP	4132 to 4233	4132, 4182, 4233	WCDMA
B	FREQUENCY STABILITY	4132 to 4233	4132, 4182, 4233	WCDMA
A	OCCUPIED BANDWIDTH	4132 to 4233	4132, 4182, 4233	WCDMA
A	BAND EDGE	4132 to 4233	4132, 4233	WCDMA
A	CONDCUDETED EMISSION	4132 to 4233	4132, 4182, 4233	WCDMA
A	RADIATED EMISSION	4132 to 4233	4132, 4182, 4233	WCDMA
A	PEAK TO AVERAGE RATIO	4132 to 4233	4132, 4182, 4233	WCDMA

LTE BAND 5 MODE

EUT CONFIGURE MODE	TEST ITEM	Available Channel	Tested Channel	Channel bandwidth	modulation	mode
A	ERP	20407 to 20643	20407, 20525, 20643	1.4MHz	QPSK,16QAM	1 RB / 0 RB Offset
		20415 to 20635	20415, 20525, 20635	3MHz	QPSK,16QAM	1 RB / 0 RB Offset
		20425 to 20625	20425, 20525, 20625	5MHz	QPSK,16QAM	1 RB / 0 RB Offset
		20450 to 20600	20450, 20525, 20600	10MHz	QPSK,16QAM	1 RB / 0 RB Offset
B	FREQUENCY STABILITY	20407 to 20643	20407, 20525, 20643	1.4MHz	QPSK,16QAM	Full RB / 0 RB Offset
		20415 to 20635	20415, 20525, 20635	3MHz	QPSK,16QAM	Full RB / 0 RB Offset
		20425 to 20625	20425, 20525, 20625	5MHz	QPSK,16QAM	Full RB / 0 RB Offset
		20450 to 20600	20450, 20525, 20600	10MHz	QPSK,16QAM	Full RB / 0 RB Offset
A	OCCUPIED BANDWIDTH	20407 to 20643	20407, 20525, 20643	1.4MHz	QPSK,16QAM	Full RB / 0 RB Offset
		20415 to 20635	20415, 20525, 20635	3MHz	QPSK,16QAM	Full RB / 0 RB Offset
		20425 to 20625	20425, 20525, 20625	5MHz	QPSK,16QAM	Full RB / 0 RB Offset
		20450 to 20600	20450, 20525, 20600	10MHz	QPSK,16QAM	Full RB / 0 RB Offset
A	BAND EDGE	20407 to 20643	20407	1.4 MHz	QPSK,16QAM	1 RB / 0 RB Offset
						Full RB / 0 RB Offset
		20407 to 20643	20643	1.4 MHz	QPSK,16QAM	1 RB / 5 RB Offset
						Full RB / 0 RB Offset
		20415 to 20635	20415	3 MHz	QPSK,16QAM	1 RB / 0 RB Offset
						Full RB / 0 RB Offset
		20415 to 20635	20635	3 MHz	QPSK,16QAM	1 RB / 14 RB Offset
						Full RB / 0 RB Offset
		20425 to 20625	20425	5MHz	QPSK,16QAM	1 RB / 0 RB Offset
						Full RB / 0 RB Offset
		20425 to 20625	20625	5MHz	QPSK,16QAM	1 RB / 24 RB Offset
						Full RB / 0 RB Offset
		20450 to 20600	20450	10MHz	QPSK,16QAM	1 RB / 0 RB Offset
						Full RB / 0 RB Offset
		20450 to 20600	20600	10MHz	QPSK,16QAM	1 RB / 49 RB Offset
						Full RB / 0 RB Offset

A	CONDUCTED EMISSION	20407 to 20643	20407, 20525, 20643	1.4MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		20415 to 20635	20415, 20525, 20635	3MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		20425 to 20625	20425, 20525, 20625	5MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		20450 to 20600	20450, 20525, 20600	10MHz	QPSK, 16QAM	1 RB / 0 RB Offset
A	RADIATED EMISSION	20407 to 20643	20525	1.4MHz	QPSK	1 RB / 0 RB Offset
		20415 to 20635	20525	3MHz	QPSK	1 RB / 0 RB Offset
		20425 to 20625	20425, 20525, 20625	5MHz	QPSK	1 RB / 0 RB Offset
		20450 to 20600	20525	10MHz	QPSK	1 RB / 0 RB Offset
A	PEAK TO AVERAGE RATIO	20407 to 20643	20407, 20525, 20643	1.4MHz	QPSK, 16QAM	1 RB / 0 RB Offset Full RB / 0 RB Offset
		20415 to 20635	20415, 20525, 20635	3MHz	QPSK, 16QAM	1 RB / 0 RB Offset Full RB / 0 RB Offset
		20425 to 20625	20425, 20525, 20625	5MHz	QPSK, 16QAM	1 RB / 0 RB Offset Full RB / 0 RB Offset
		20450 to 20600	20450, 20525, 20600	10MHz	QPSK, 16QAM	1 RB / 0 RB Offset Full RB / 0 RB Offset

Note: This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.



TEST CONDITION:

TEST ITEM	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
ERP	23deg. C, 70%RH	EUT 5.0V	Walker Ye
FREQUENCY STABILITY	23deg. C, 70%RH	EUT 5.0V	Walker Ye
OCCUPIED BANDWIDTH	23deg. C, 70%RH	EUT 5.0V	Walker Ye
BAND EDGE	23deg. C, 70%RH	EUT 5.0V	Walker Ye
CONDCUDED EMISSION	23deg. C, 70%RH	EUT 5.0V	Walker Ye
RADIATED EMISSION	23deg. C, 70%RH	EUT 5.0V	Gavin Guo
PEAK TO AVERAGE RATIO	23deg. C, 70%RH	EUT 5.0V	Walker Ye

2.5 EUT OPERATING CONDITIONS

The EUT makes a call to the communication simulator. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency



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2.6 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC 47 CFR Part 2

FCC 47 CFR Part 22

KDB 971168 D01 Power Meas License Digital Systems v03r01

ANSI/TIA/EIA-603-D

ANSI/TIA/EIA-603-E

ANSI C63.26-2015

NOTE: All test items have been performed and recorded as per the above standards.

3 TEST TYPES AND RESULTS

3.1 OUTPUT POWER MEASUREMENT

3.1.1 LIMITS OF OUTPUT POWER MEASUREMENT

Mobile / Portable station are limited to 7 watts e.r.p.

3.1.2 TEST PROCEDURES

EIRP / ERP MEASUREMENT:

Per KDB 971168 D01 Power Meas License Digital Systems v03r01 or subclause 5.2.5.5 of ANSI C63.26-2015, the relevant equation for determining the ERP or EIRP from the conducted RF output power measured using the guidance provided above is:

$$\text{ERP or EIRP} = P_{\text{Meas}} + G_T - L_C$$

Where:

ERP or EIRP = effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as P_{Meas} , typically dBW or dBm);

P_{Meas} = measured transmitter output power or PSD, in dBm or dBW;

G_T = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

L_C = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

CONDUCTED POWER MEASUREMENT:

The EUT was set up for the maximum power with GSM/WCDMA/LTE link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

3.1.3 TEST SETUP

EIRP / ERP Measurement:

CONDUCTED POWER MEASUREMENT:



3.1.4 TEST RESULTS

CONDUCTED OUTPUT POWER (dBm)

Band	GSM850			Max. Tune-up Power
Channel	128	190	251	
Frequency	824.2	836.6	848.8	
GPRS (GMSK, 1Tx-slot)	32.40	32.56	32.57	33.0
GPRS (GMSK, 2Tx-slot)	29.57	29.51	29.44	30.0
EDGE (8PSK, 1Tx-slot)	26.47	26.41	26.57	27.0
EDGE (8PSK, 2Tx-slot)	25.40	25.22	25.39	26.0
EDGE (8PSK, 3Tx-slot)	23.58	23.60	23.51	24.0
EDGE (8PSK, 4Tx-slot)	21.84	21.95	21.78	22.5

Band	WCDMA V			Max. Tune-up Power
Channel	4132	4182	4233	
Frequency	826.4	836.4	846.6	
RMC 12.2K	22.84	22.76	22.77	23.0
HSDPA Subtest-1	21.84	21.77	21.86	22.0
HSDPA Subtest-2	21.83	21.73	21.93	22.0
HSDPA Subtest-3	21.33	21.33	21.42	21.5
HSDPA Subtest-4	21.38	21.30	21.46	21.5
DC-HSDPA Subtest-1	21.76	21.75	21.85	22.0
DC-HSDPA Subtest-2	21.77	21.73	21.99	22.0
DC-HSDPA Subtest-3	21.28	21.34	21.46	21.5
DC-HSDPA Subtest-4	21.41	21.32	21.39	21.5
HSUPA Subtest-1	21.87	21.84	21.89	22.0
HSUPA Subtest-2	19.75	19.70	19.72	20.0
HSUPA Subtest-3	20.69	20.75	20.66	21.0
HSUPA Subtest-4	19.82	19.86	19.75	20.0
HSUPA Subtest-5	21.76	21.68	21.82	22.0

LTE Band 5

Band/BW	Modulation	RB Size	RB Offset	Low CH 20407	Mid CH 20525	High CH 20643	MPR
				Frequency 824.7 MHz	Frequency 836.5 MHz	Frequency 848.3 MHz	
5/ 1.4	QPSK	1	0	22.41	22.25	22.37	0
		1	2	22.48	22.54	22.57	0
		1	5	22.47	22.37	22.53	0
		3	0	22.18	22.22	22.28	0
		3	1	22.12	22.06	22.15	0
		3	3	22.14	22.30	22.28	0
		6	0	21.35	21.14	21.37	1
	16QAM	1	0	21.26	21.20	21.26	1
		1	2	21.06	21.12	21.12	1
		1	5	21.04	21.03	21.16	1
		3	0	21.33	21.12	21.30	1
		3	1	21.13	21.09	21.25	1
		3	3	21.42	21.49	21.37	1
		6	0	20.28	20.28	20.41	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 20415	Mid CH 20525	High CH 20635	MPR
				Frequency 825.5 MHz	Frequency 836.5 MHz	Frequency 847.5 MHz	
5/ 3	QPSK	1	0	22.36	22.24	22.34	0
		1	7	22.46	22.56	22.60	0
		1	14	22.41	22.43	22.49	0
		8	0	21.15	21.29	21.27	1
		8	3	21.12	21.06	21.12	1
		8	7	21.14	21.30	21.31	1
		15	0	21.34	21.14	21.34	1
	16QAM	1	0	21.30	21.14	21.30	1
		1	7	21.05	21.13	21.09	1
		1	14	21.09	20.99	21.19	1
		8	0	20.33	20.13	20.27	2
		8	3	20.15	20.07	20.31	2
		8	7	20.47	20.49	20.35	2
		15	0	20.28	20.28	20.36	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 20425	Mid CH 20525	High CH 20625	MPR
				Frequency 826.5 MHz	Frequency 836.5 MHz	Frequency 846.5 MHz	
5/ 5	QPSK	1	0	22.38	22.26	22.34	0
		1	12	22.45	22.60	22.57	0
		1	24	22.45	22.40	22.54	0
		12	0	21.17	21.28	21.24	1
		12	6	21.09	21.06	21.18	1
		12	13	21.14	21.29	21.28	1
		25	0	21.37	21.11	21.36	1
	16QAM	1	0	21.24	21.16	21.23	1
		1	12	21.07	21.15	21.08	1
		1	24	21.05	21.00	21.19	1
		12	0	20.29	20.13	20.27	2
		12	6	20.14	20.10	20.31	2
		12	13	20.40	20.49	20.37	2
		25	0	20.25	20.35	20.40	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 20450	Mid CH 20525	High CH 20600	MPR
				Frequency 829 MHz	Frequency 836.5 MHz	Frequency 844 MHz	
5/ 10	QPSK	1	0	22.42	22.31	22.39	0
		1	24	22.53	22.61	22.62	0
		1	49	22.49	22.45	22.55	0
		25	0	21.23	21.30	21.29	1
		25	12	21.16	21.11	21.20	1
		25	25	21.22	21.31	21.33	1
		50	0	21.39	21.19	21.38	1
	16QAM	1	0	21.32	21.22	21.31	1
		1	24	21.13	21.17	21.14	1
		1	49	21.12	21.05	21.21	1
		25	0	20.35	20.20	20.32	2
		25	12	20.21	20.15	20.33	2
		25	25	20.48	20.51	20.43	2
		50	0	20.33	20.36	20.42	2

ERP POWER (dBm)

GSM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	ERP (dBm)	ERP (mW)	Limit (W)
128	824.2	32.4	0.2	30.45	1109.17	7
190	836.6	32.56	0.2	30.61	1150.8	7
251	848.8	32.57	0.2	30.62	1153.45	7

REMARKS: ERP Output Power (dBm) = EIRP (dBm) -2.15(dB).

EDGE

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	ERP (dBm)	ERP (mW)	Limit (W)
128	824.2	26.47	0.2	24.52	283.14	7
190	836.6	26.41	0.2	24.46	279.25	7
251	848.8	26.57	0.2	24.62	289.73	7

REMARKS: ERP Output Power (dBm) = EIRP (dBm) -2.15(dB).

WCDMA

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	ERP (dBm)	ERP (mW)	Limit (W)
4132	826.4	22.84	0.2	20.89	122.74	7
4182	836.4	22.76	0.2	20.81	120.5	7
4233	846.6	22.77	0.2	20.82	120.78	7

REMARKS: ERP Output Power (dBm) = EIRP (dBm) -2.15(dB).

LTE BAND 5

CHANNEL BANDWIDTH: 1.4MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
20407	824.7	22.48	0.2	20.53	112.98	7
20525	836.5	22.54	0.2	20.59	114.55	7
20643	848.3	22.57	0.2	20.62	115.35	7

CHANNEL BANDWIDTH: 1.4MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
20407	824.7	21.42	0.2	19.47	88.51	7
20525	836.5	21.49	0.2	19.54	89.95	7
20643	848.3	21.37	0.2	19.42	87.5	7

CHANNEL BANDWIDTH: 3MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
20415	825.5	22.46	0.2	20.51	112.46	7
20525	836.5	22.56	0.2	20.61	115.08	7
20635	847.5	22.6	0.2	20.65	116.14	7

CHANNEL BANDWIDTH: 3MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
20415	825.5	21.3	0.2	19.35	86.1	7
20525	836.5	21.14	0.2	19.19	82.99	7
20635	847.5	21.3	0.2	19.35	86.1	7

CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
20425	826.5	22.45	0.2	20.5	112.2	7
20525	836.5	22.6	0.2	20.65	116.14	7
20625	846.5	22.57	0.2	20.62	115.35	7

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
20425	826.5	21.24	0.2	19.29	84.92	7
20525	836.5	21.16	0.2	19.21	83.37	7
20625	846.5	21.23	0.2	19.28	84.72	7

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
20450	829.0	22.53	0.2	20.58	114.29	7
20525	836.5	22.61	0.2	20.66	116.41	7
20600	844.0	22.62	0.2	20.67	116.68	7

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
20450	829.0	21.32	0.2	19.37	86.5	7
20525	836.5	21.22	0.2	19.27	84.53	7
20600	844.0	21.31	0.2	19.36	86.3	7

REMARKS: ERP Output Power (dBm) = EIRP (dBm) -2.15(dB).

3.2 FREQUENCY STABILITY MEASUREMENT

3.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

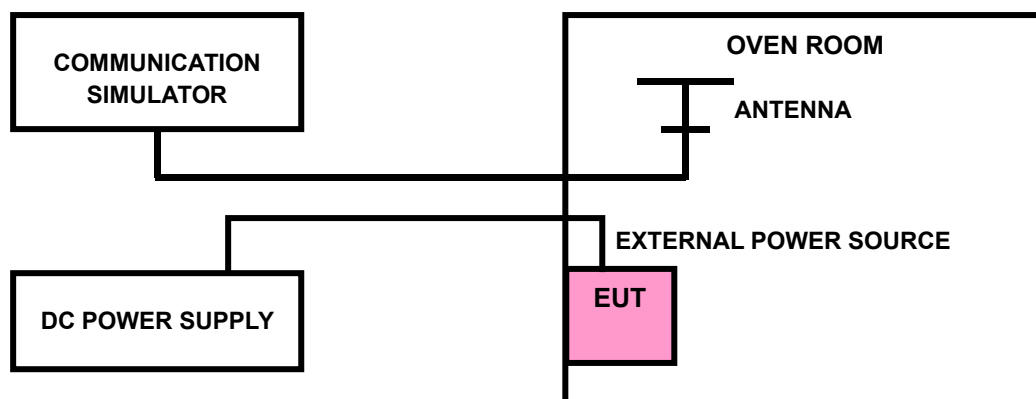
1.5 ppm is for base and fixed station. 2.5 ppm is for mobile station.

3.2.2 TEST PROCEDURE

- Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.
- EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.
- The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the $\pm 0.5^{\circ}\text{C}$ during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

NOTE: The frequency error was recorded frequency error from the communication simulator.

3.2.3 TEST SETUP





Test Report No.: PSU-QSU2206080111RF01

3.2.4 TEST RESULTS

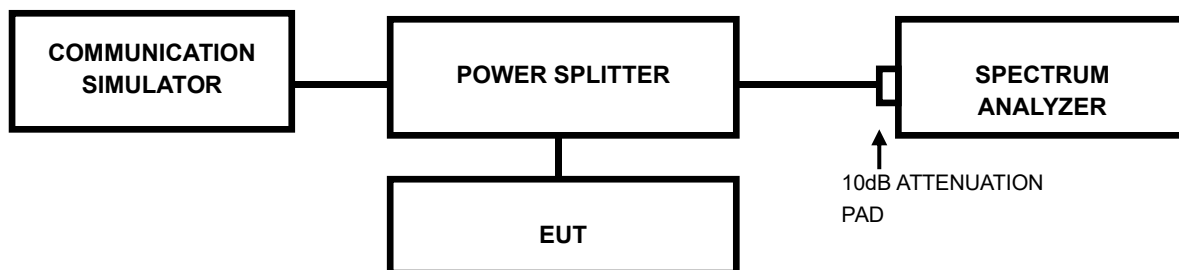
Please Refer to Appendix A Of this test report.

3.3 OCCUPIED BANDWIDTH MEASUREMENT

3.3.1 TEST PROCEDURES

The EUT makes a call to the communication simulator. All measurements were done at low, middle and high operational frequency range. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.

3.3.2 TEST SETUP





Test Report No.: PSU-QSU2206080111RF01

3.3.3 TEST RESULTS

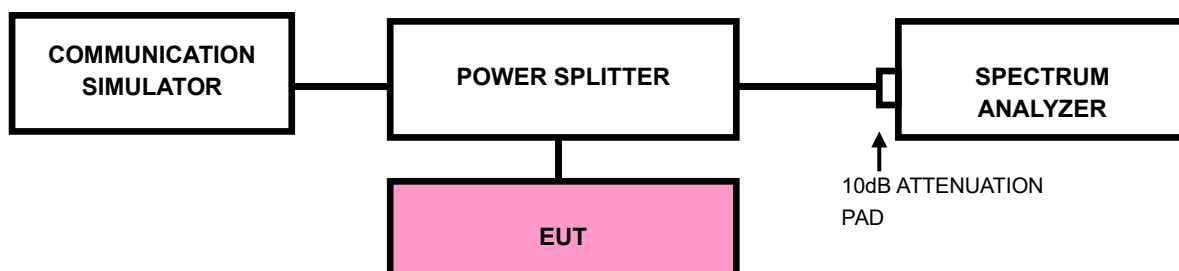
Please Refer to Appendix A Of this test report.

3.4 BAND EDGE MEASUREMENT

3.4.1 LIMITS OF BAND EDGE MEASUREMENT

Power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

3.4.2 TEST SETUP





3.4.3 TEST PROCEDURES

- a. All measurements were done at low and high operational frequency range.
- b. The center frequency of spectrum is the band edge frequency and span is 1~5 MHz.
RBW of the spectrum is 10kHz and VBW of the spectrum is 30kHz (GPRS/ EDGE/LTE bandwidth for (1.4M/3M/5M/10M/15M/20M)1RB/0RB&1RB/MAXRB).
- c. The center frequency of spectrum is the band edge frequency and span is 10MHz.
RBW of the spectrum is 100kHz and VBW of the spectrum is 300kHz (WCDMA).
- d. The center frequency of spectrum is the band edge frequency and span is 1~5 MHz.
RBW of the spectrum is $\geq 1\% \cdot \text{EBW kHz}$ and VBW of the spectrum is $3 \cdot \text{RBW kHz}$. (LTE bandwidth 1.4M/3M/5M/10M/15M/20MHz).
- e. Record the max trace plot into the test report.

3.4.4 TEST RESULTS

Please Refer to Appendix A Of this test report.

3.5 CONDUCTED SPURIOUS EMISSIONS

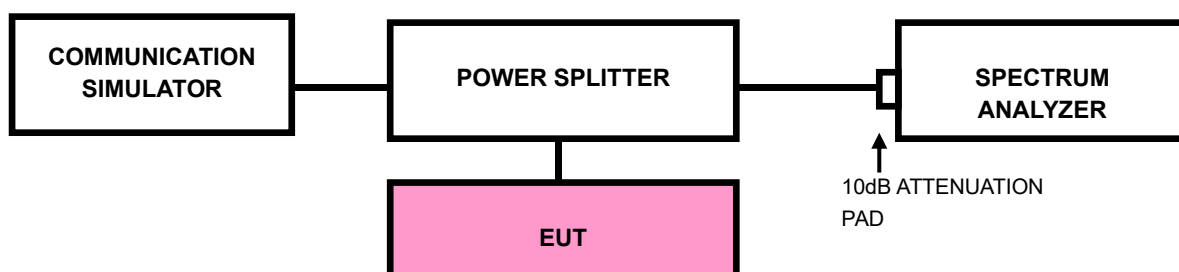
3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. The emission limit equal to -13dBm .

3.5.2 TEST PROCEDURE

- a. The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.
- b. Measuring frequency range is from 9kHz up to a frequency including its 10th harmonic. 10dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz is used for conducted emission measurement.

3.5.1 TEST SETUP



3.5.2 TEST RESULTS

NOTE : The 9K~30MHz amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required in the report.

Please Refer to Appendix A Of this test report.

3.6 RADIATED EMISSION MEASUREMENT

3.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. The emission limit equal to -13dBm .

3.6.2 TEST PROCEDURES

- a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- b. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value" of step a. Record the power level of S.G
- c. $\text{EIRP} = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$.
- d. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole,
 $\text{E.R.P power} = \text{E.I.P.R power} - 2.15\text{dBi}$.

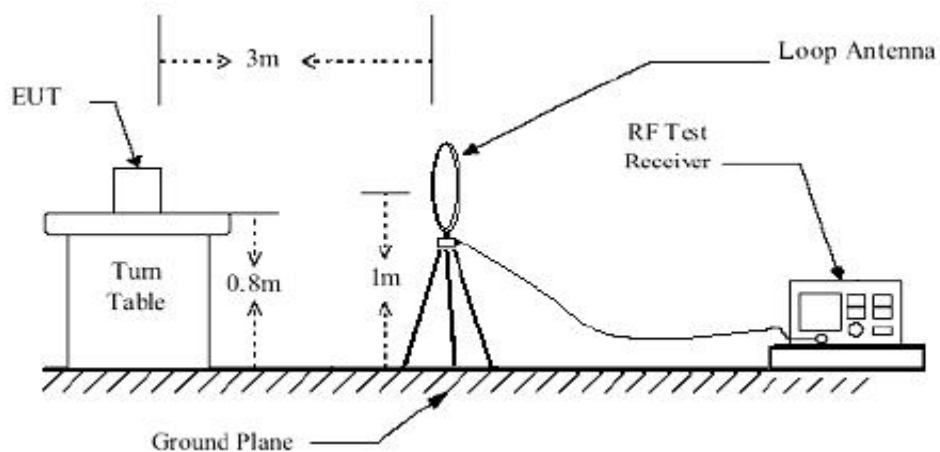
NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

3.6.3 DEVIATION FROM TEST STANDARD

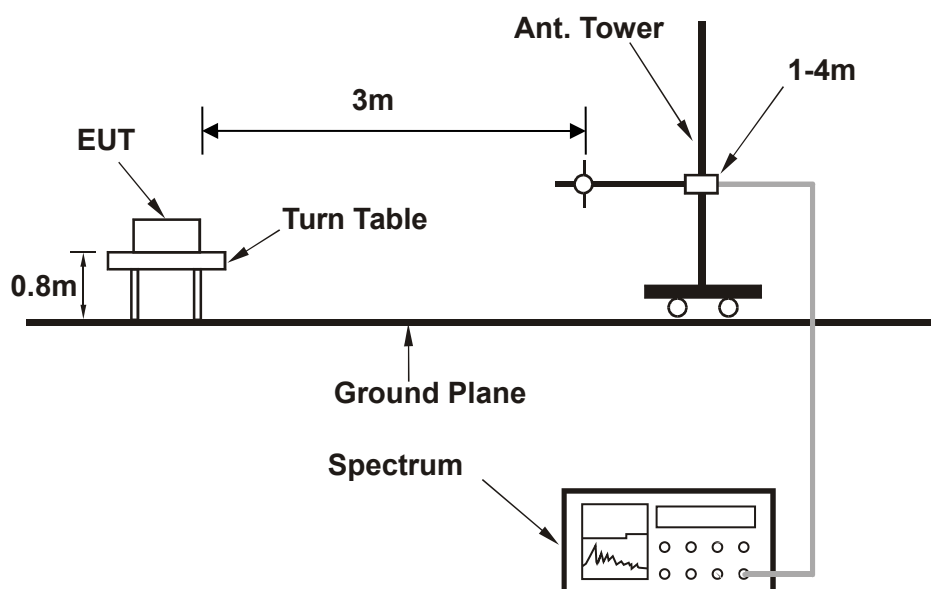
No deviation

3.6.4 TEST SETUP

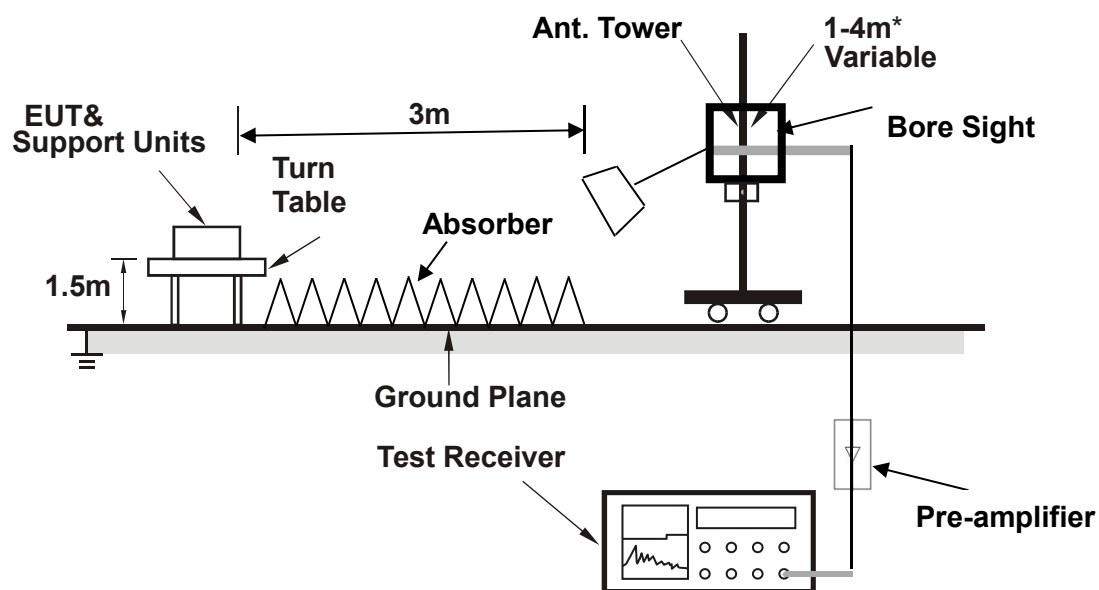
< Frequency Range below 30MHz >



< Frequency Range 30MHz~1GHz >



<Frequency Range above 1GHz>



Note: Above 1G is a directional antenna

Depends on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3.

For the actual test configuration, please refer to the attached file (Test Setup Photo).

3.6.5 TEST RESULTS

NOTE : The 9K~30MHz amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required in the report.

BELOW 1GHz WORST-CASE DATA

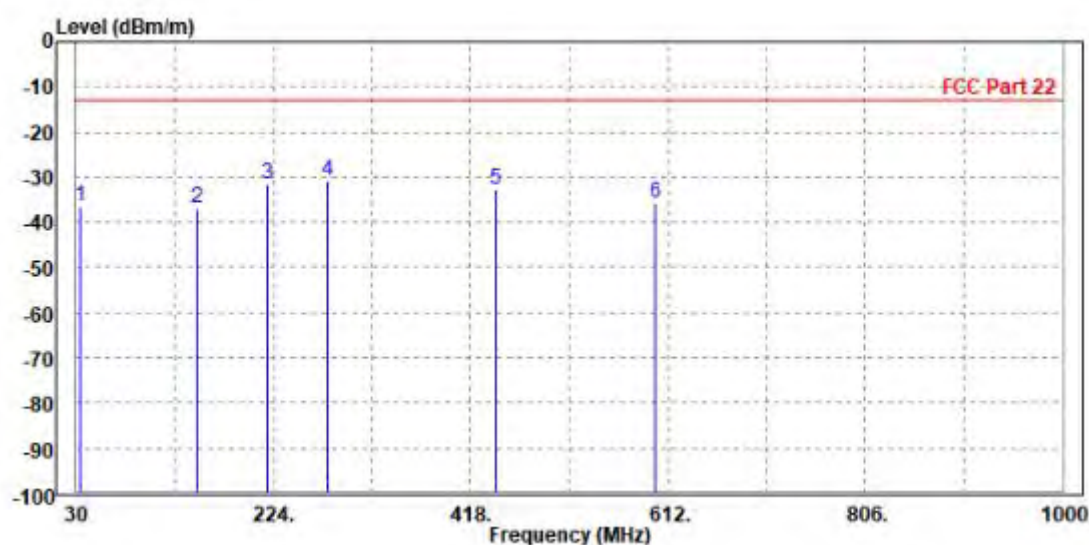
30 MHz – 1GHz data:

GSM 850

CHANNEL BANDWIDTH: 128 ~ 251

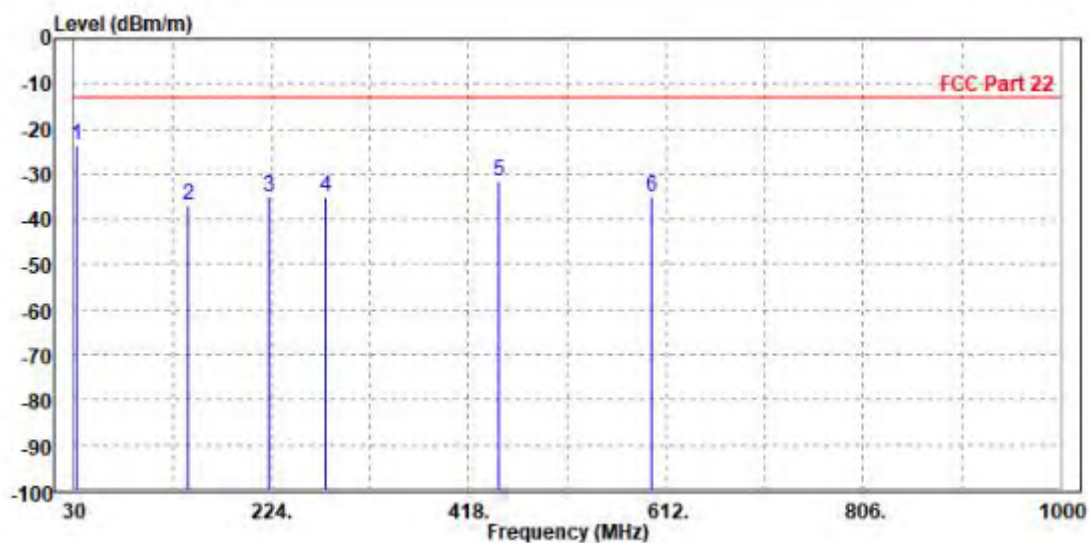
MODE	TX channel 190	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	EUT 5.0V
TESTED BY	Gavin Guo		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	34.850	-36.57	-55.23	-13.00	-23.57	18.66	Peak	Horizontal
2	148.340	-36.89	-46.49	-13.00	-23.89	9.60	Peak	Horizontal
3	218.180	-31.73	-43.83	-13.00	-18.73	12.10	Peak	Horizontal
4 PP	276.380	-30.79	-44.55	-13.00	-17.79	13.76	Peak	Horizontal
5	443.220	-32.78	-49.80	-13.00	-19.78	17.02	Peak	Horizontal
6	599.390	-35.85	-55.54	-13.00	-22.85	19.69	Peak	Horizontal



MODE	TX channel 190	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	EUT 5.0V
TESTED BY	Gavin Guo		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	31.940	-23.74	-43.07	-13.00	-10.74	19.33	Peak	Vertical
2		142.520	-36.91	-46.21	-13.00	-23.91	9.30	Peak	Vertical
3		222.060	-34.86	-46.85	-13.00	-21.86	11.99	Peak	Vertical
4		277.350	-34.99	-48.36	-13.00	-21.99	13.37	Peak	Vertical
5		448.070	-31.65	-48.57	-13.00	-18.65	16.92	Peak	Vertical
6		598.420	-34.84	-54.41	-13.00	-21.84	19.57	Peak	Vertical





Test Report No.: PSU-QSU2206080111RF01

ABOVE 1GHz DATA

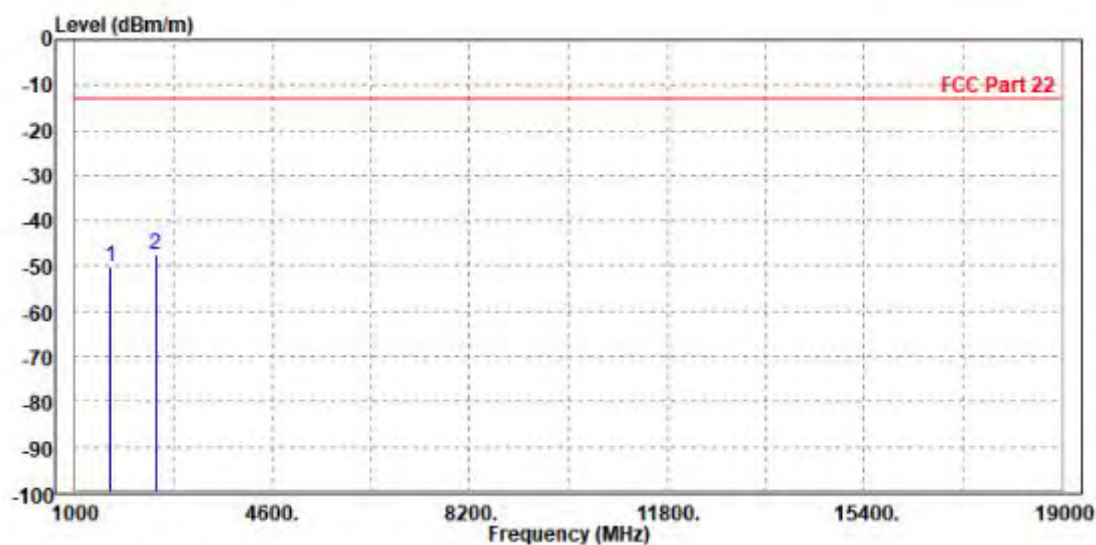
Note: For higher frequency, the emission is too low to be detected.

GSM 850

CH 128:

MODE	TX channel 128	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	EUT 5.0V
TESTED BY	Gavin Guo		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1648.000	-50.07	-53.32	-13.00	-37.07	3.25	Peak	Horizontal
2 PP	2472.600	-47.50	-55.52	-13.00	-34.50	8.02	Peak	Horizontal

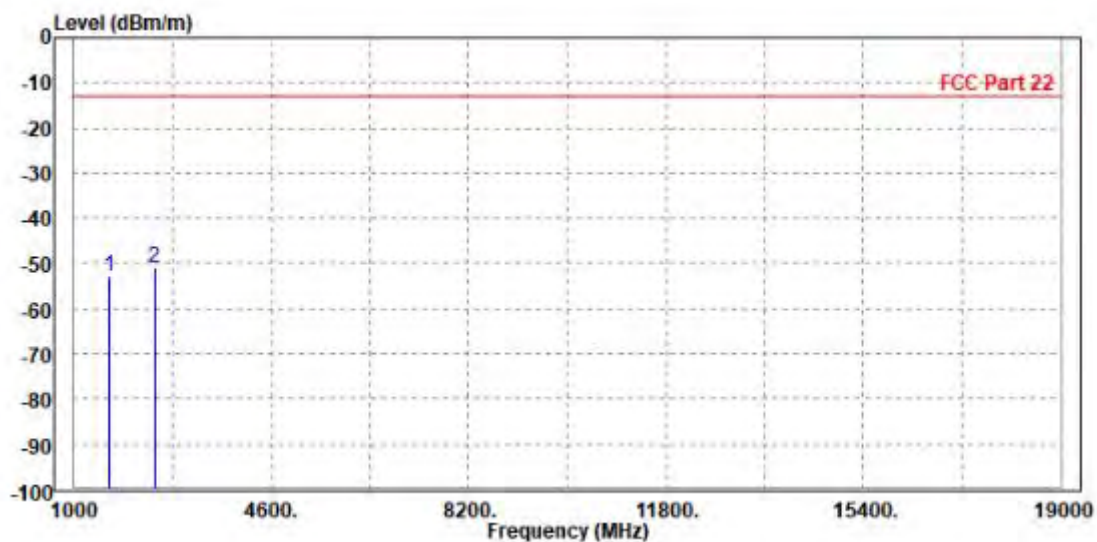




Test Report No.: PSU-QSU2206080111RF01

MODE	TX channel 128	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	EUT 5.0V
TESTED BY	Gavin Guo		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1648.000	-53.02	-56.40	-13.00	-40.02	3.38	Peak	Vertical
2 PP	2472.600	-50.85	-57.89	-13.00	-37.85	7.04	Peak	Vertical



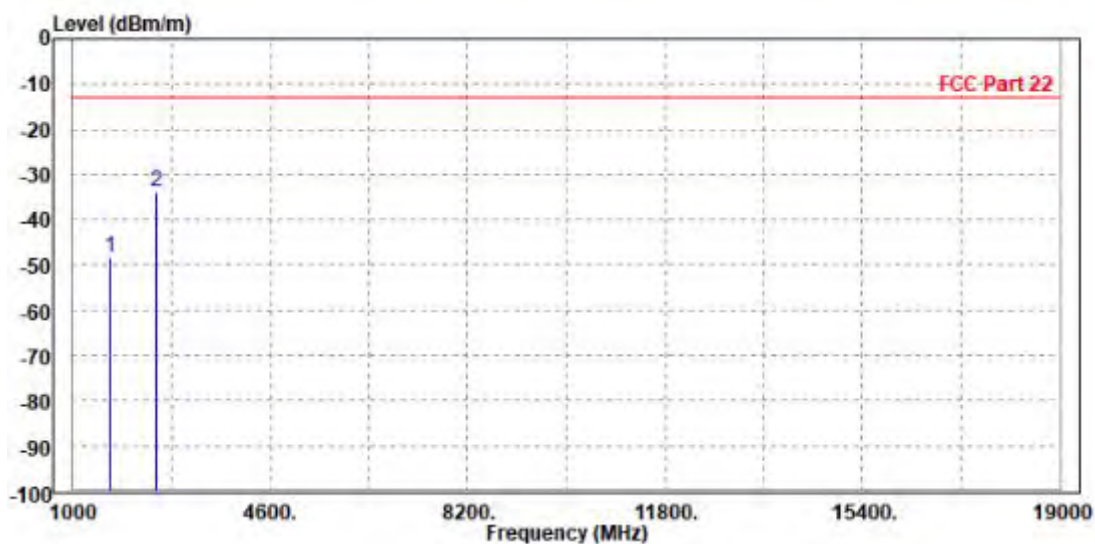


Test Report No.: PSU-QSU2206080111RF01

CH 190:

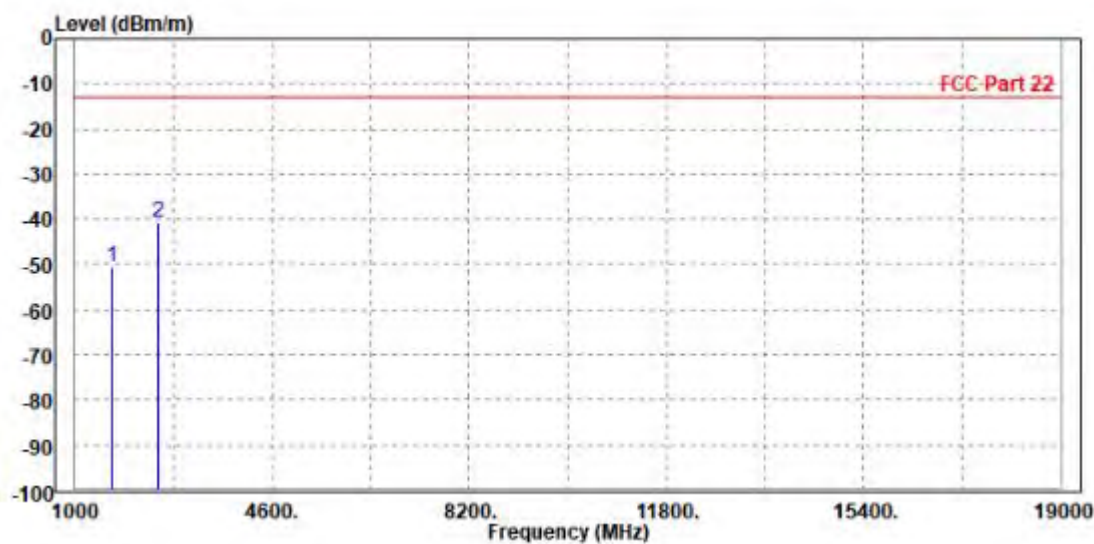
MODE	TX channel 190	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	EUT 5.0V
TESTED BY	Gavin Guo		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1666.000	-48.43	-51.90	-13.00	-35.43	3.47	Peak	Horizontal
2 PP	2509.200	-33.96	-42.02	-13.00	-20.96	8.06	Peak	Horizontal



MODE	TX channel 190	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	EUT 5.0V
TESTED BY	Gavin Guo		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1666.000	-50.69	-54.23	-13.00	-37.69	3.54	Peak	Vertical
2 PP	2509.200	-40.53	-47.63	-13.00	-27.53	7.10	Peak	Vertical



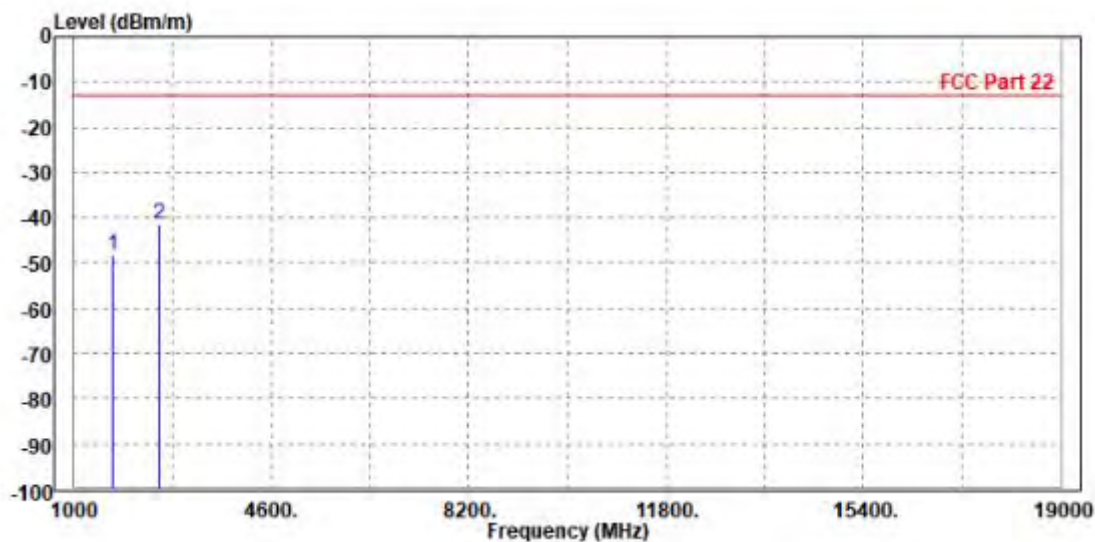


Test Report No.: PSU-QSU2206080111RF01

CH 251:

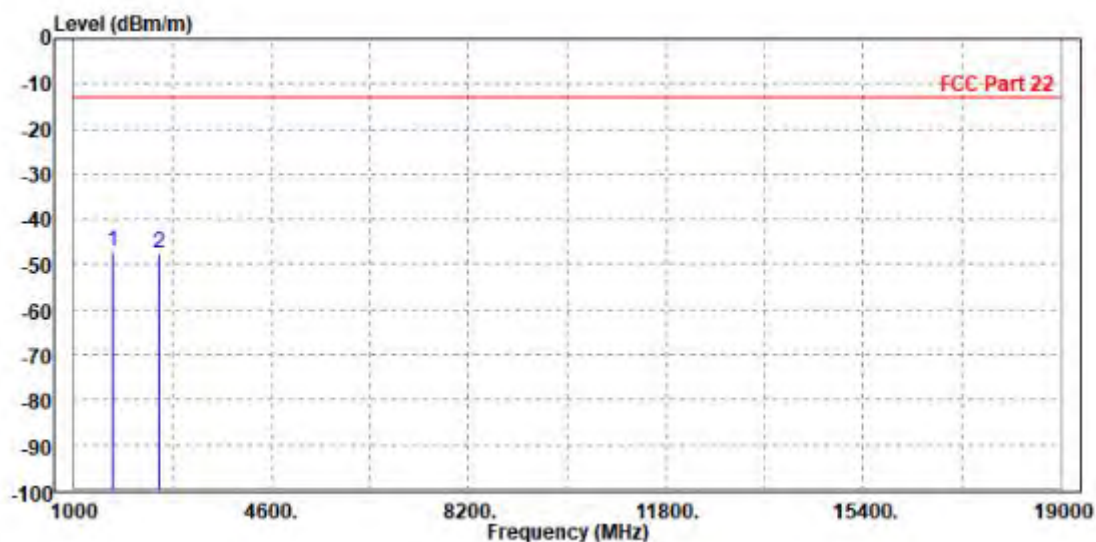
MODE	TX channel 251	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	EUT 5.0V
TESTED BY	Gavin Guo		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1702.000	-48.46	-52.37	-13.00	-35.46	3.91	Peak	Horizontal
2 PP	2546.400	-41.63	-49.74	-13.00	-28.63	8.11	Peak	Horizontal



MODE	TX channel 251	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	EUT 5.0V
TESTED BY	Gavin Guo		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 1702.000	-47.20	-51.07	-13.00	-34.20	3.87	Peak	Vertical
2	2546.400	-47.63	-54.85	-13.00	-34.63	7.22	Peak	Vertical





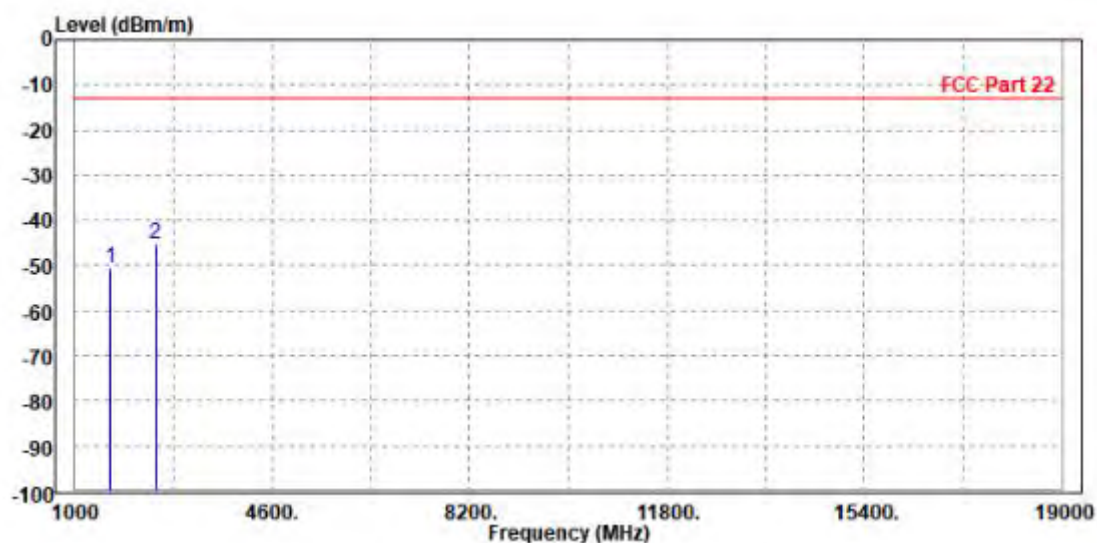
Test Report No.: PSU-QSU2206080111RF01

EDGE 850:

CH 128:

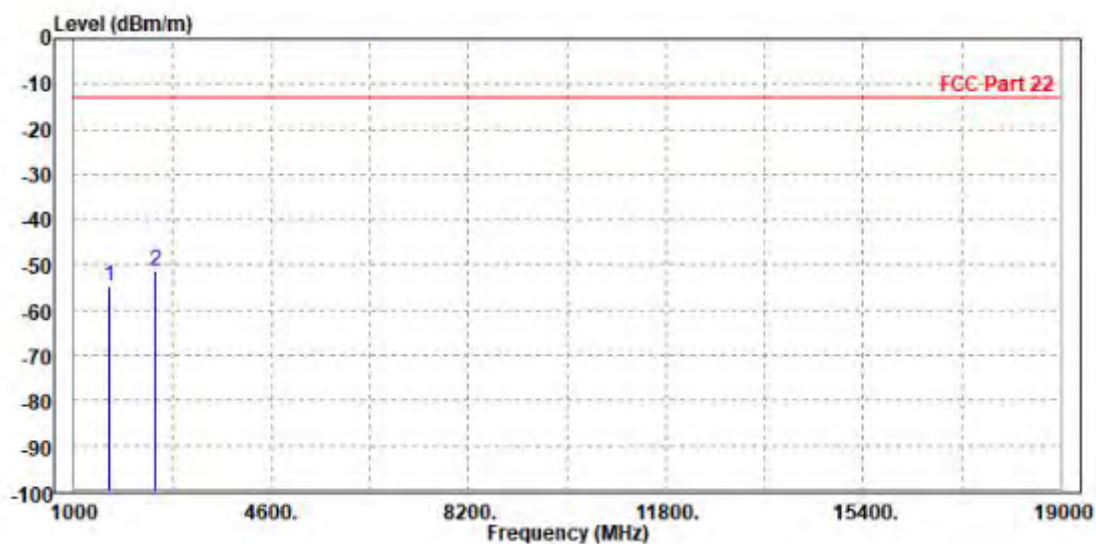
MODE	TX channel 128	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	EUT 5.0V
TESTED BY	Gavin Guo		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1648.000	-50.59	-53.84	-13.00	-37.59	3.25	Peak	Horizontal
2 PP	2472.600	-45.37	-53.39	-13.00	-32.37	8.02	Peak	Horizontal



MODE	TX channel 128	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	EUT 5.0V
TESTED BY	Gavin Guo		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1648.400	-54.75	-58.14	-13.00	-41.75	3.39	Peak	Vertical
2 PP	2476.000	-51.30	-58.34	-13.00	-38.30	7.04	Peak	Vertical



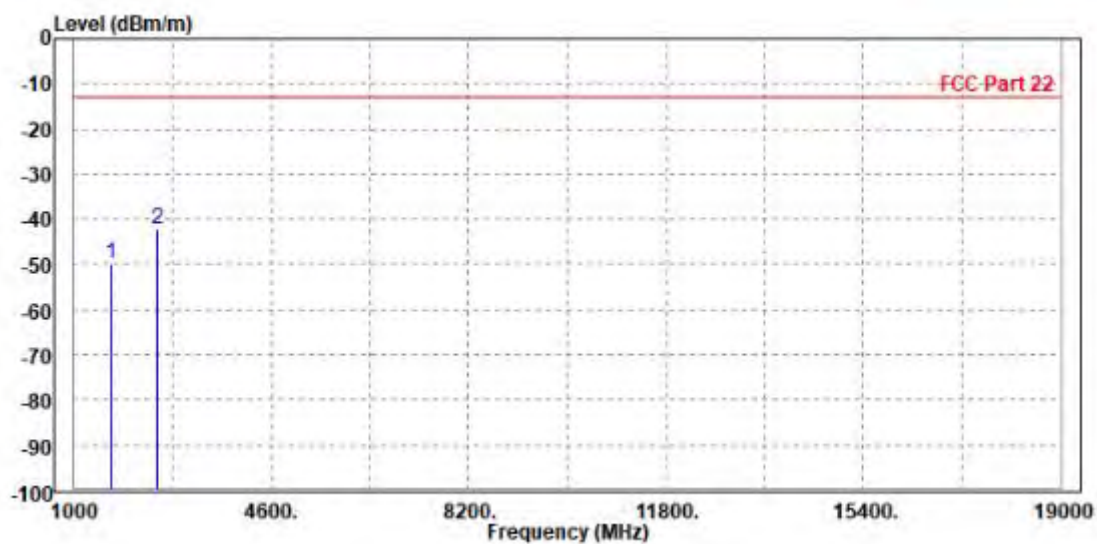


Test Report No.: PSU-QSU2206080111RF01

CH 190:

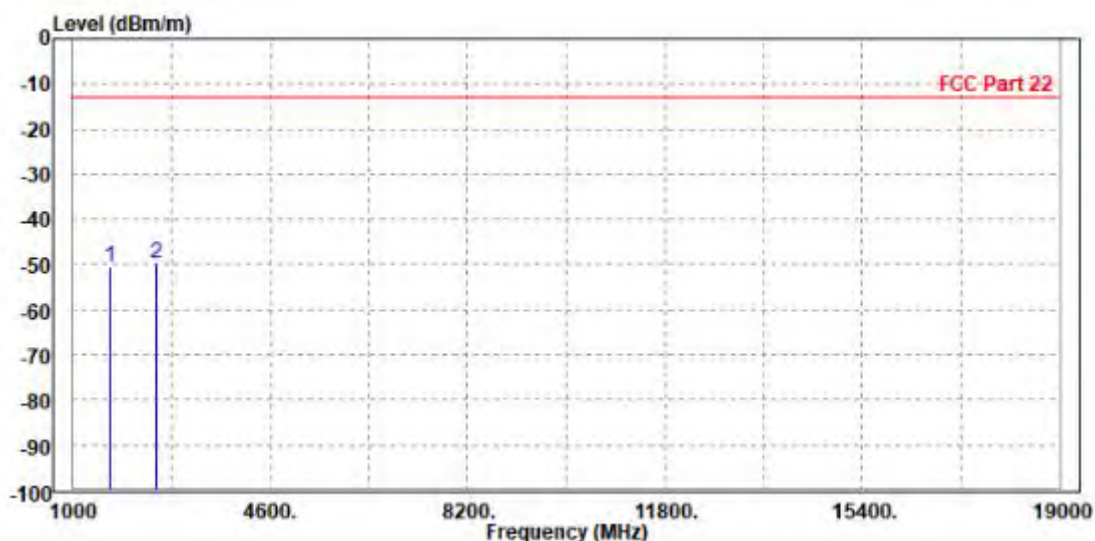
MODE	TX channel 190	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	EUT 5.0V
TESTED BY	Gavin Guo		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1672.800	-49.69	-53.24	-13.00	-36.69	3.55	Peak	Horizontal
2 PP	2512.000	-42.11	-50.17	-13.00	-29.11	8.06	Peak	Horizontal



MODE	TX channel 190	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	EUT 5.0V
TESTED BY	Gavin Guo		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

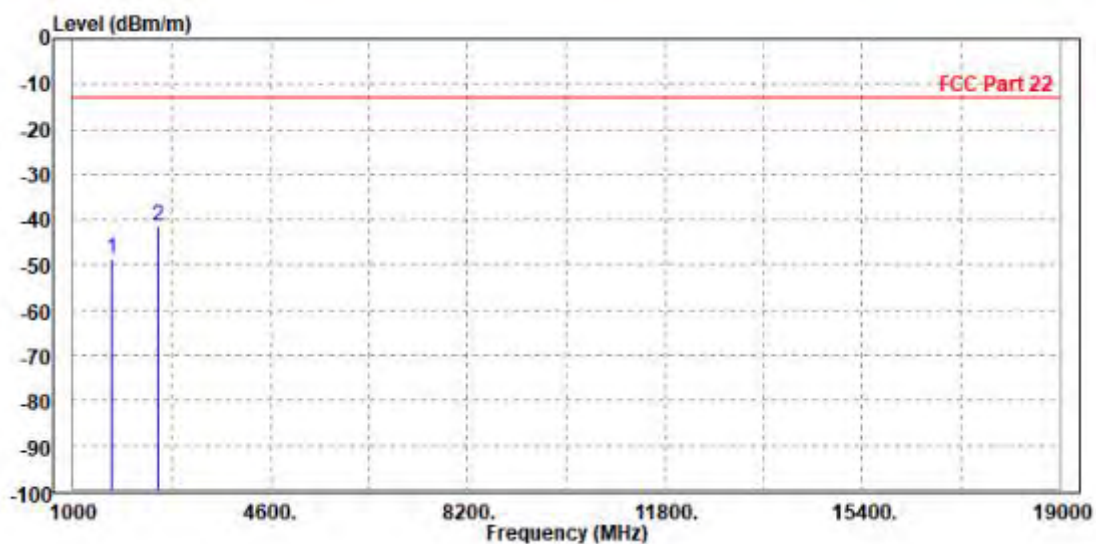
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1666.000	-50.69	-54.23	-13.00	-37.69	3.54	Peak	Vertical
2 PP	2509.200	-49.88	-56.98	-13.00	-36.88	7.10	Peak	Vertical



CH 251:

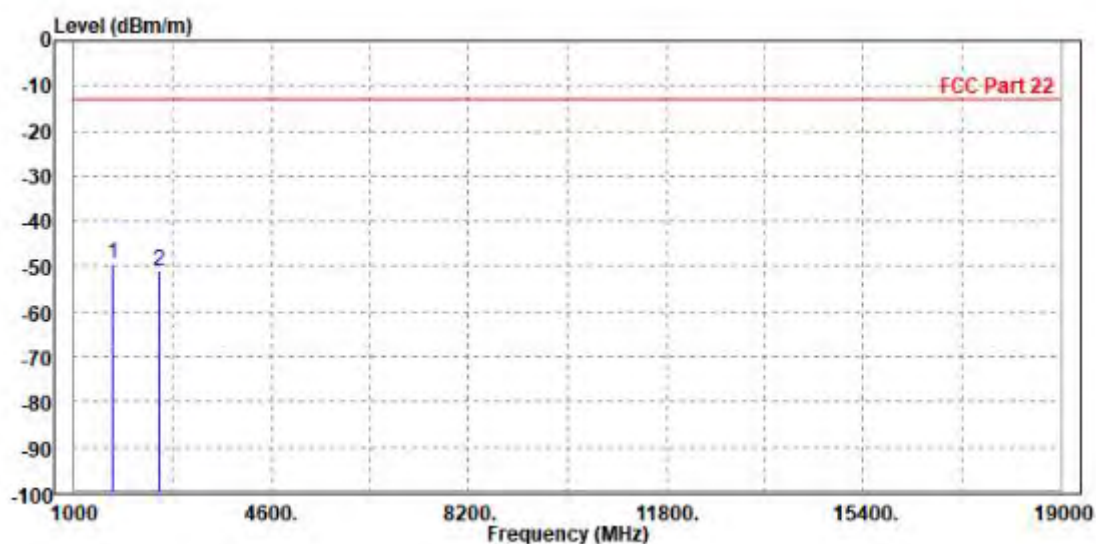
MODE	TX channel 251	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	EUT 5.0V
TESTED BY	Gavin Guo		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1697.600	-48.68	-52.54	-13.00	-35.68	3.86	Peak	Horizontal
2 PP	2548.000	-41.36	-49.47	-13.00	-28.36	8.11	Peak	Horizontal



MODE	TX channel 251	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	EUT 5.0V
TESTED BY	Gavin Guo		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	1702.000	-49.61	-53.48	-13.00	-36.61	3.87	Peak	Vertical
2		2546.400	-51.10	-58.32	-13.00	-38.10	7.22	Peak	Vertical





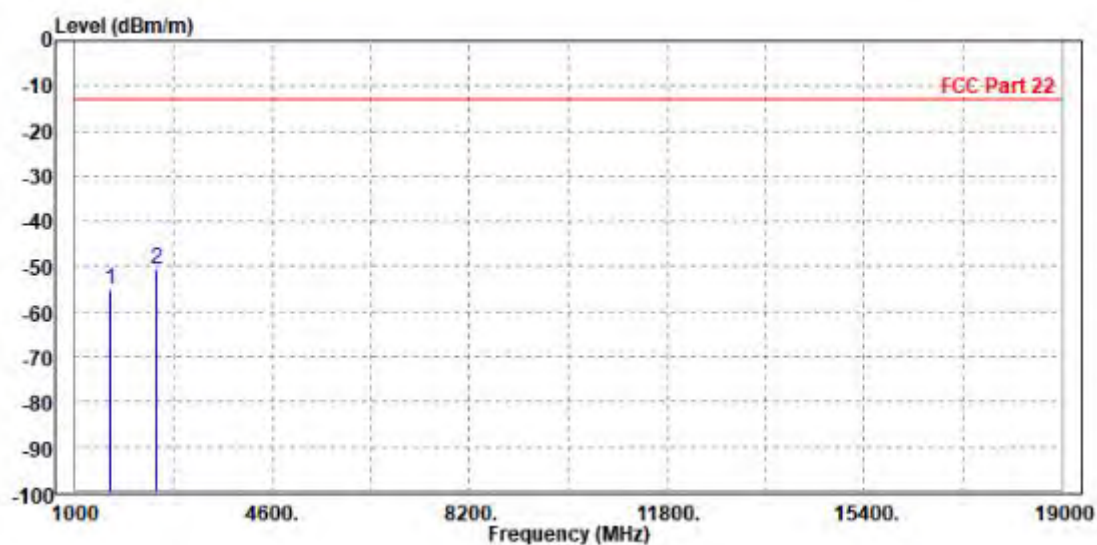
Test Report No.: PSU-QSU2206080111RF01

WCDMA Band V:

CH 4132:

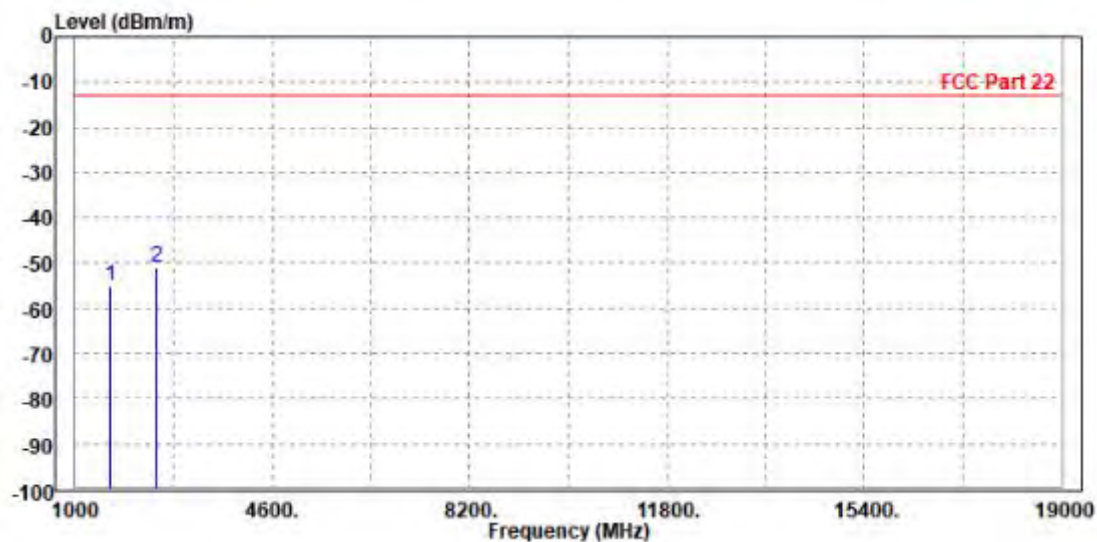
MODE	TX channel 4132	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	EUT 5.0V
TESTED BY	Gavin Guo		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1648.000	-54.96	-58.21	-13.00	-41.96	3.25	Peak	Horizontal
2 PP	2479.200	-50.70	-58.73	-13.00	-37.70	8.03	Peak	Horizontal



MODE	TX channel 4132	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	EUT 5.0V
TESTED BY	Gavin Guo		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1648.000	-55.27	-58.65	-13.00	-42.27	3.38	Peak	Vertical
2 PP	2479.200	-50.98	-58.03	-13.00	-37.98	7.05	Peak	Vertical



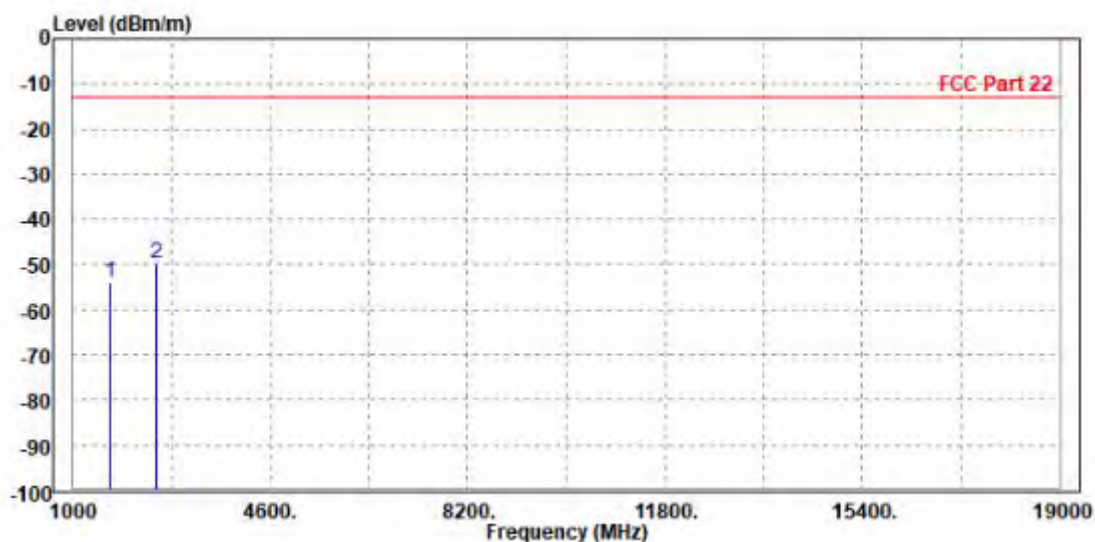


Test Report No.: PSU-QSU2206080111RF01

CH 4182:

MODE	TX channel 4182	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	EUT 5.0V
TESTED BY	Gavin Guo		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1666.000	-54.11	-57.58	-13.00	-41.11	3.47	Peak	Horizontal
2	PP 2509.200	-49.84	-57.90	-13.00	-36.84	8.06	Peak	Horizontal

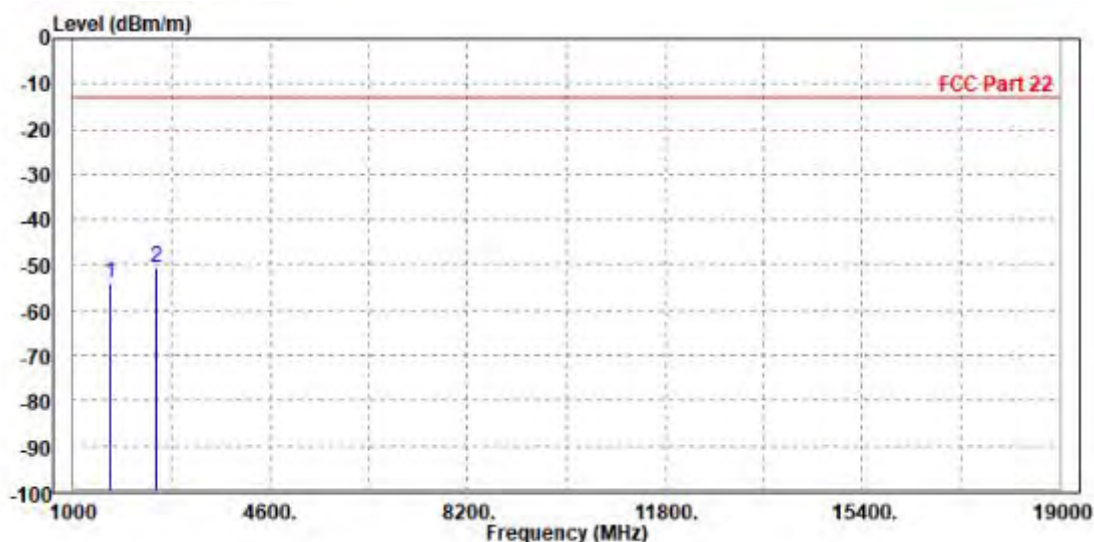




Test Report No.: PSU-QSU2206080111RF01

MODE	TX channel 4182	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	EUT 5.0V
TESTED BY	Gavin Guo		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1666.000	-53.92	-57.46	-13.00	-40.92	3.54	Peak	Vertical
2 PP	2509.200	-50.53	-57.63	-13.00	-37.53	7.10	Peak	Vertical



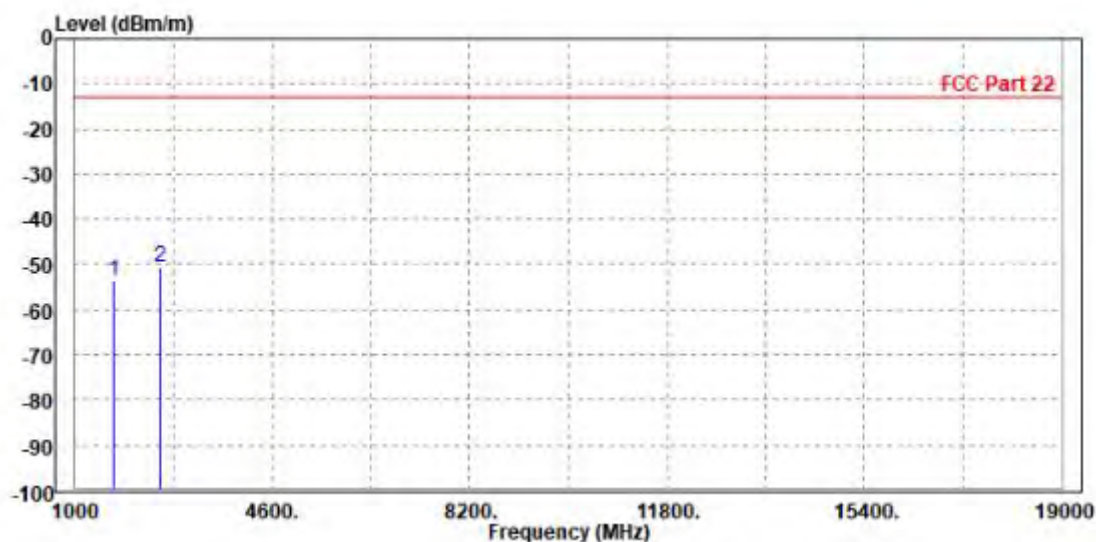


Test Report No.: PSU-QSU2206080111RF01

CH 4233:

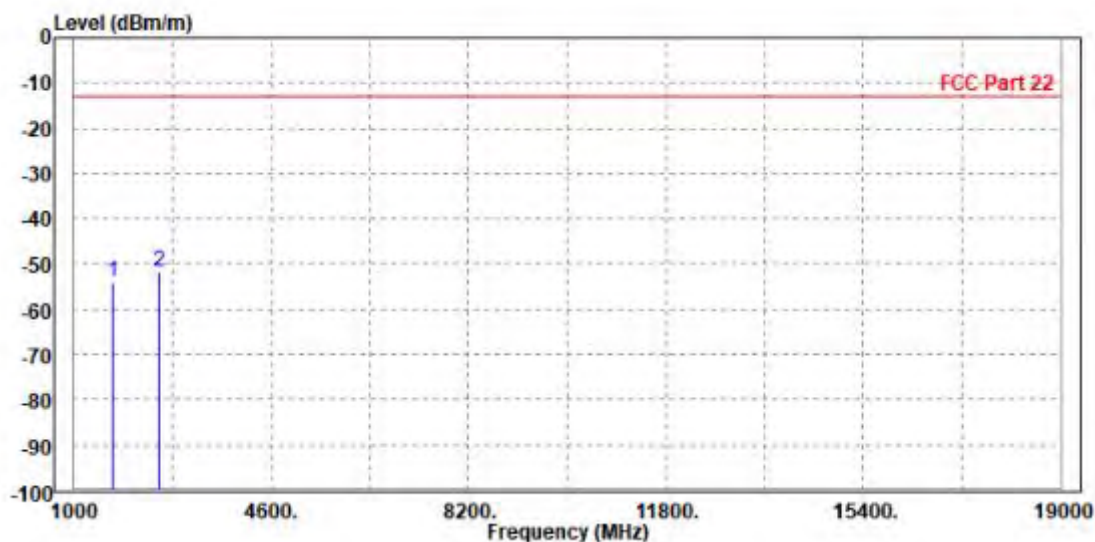
MODE	TX channel 4233	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	EUT 5.0V
TESTED BY	Gavin Guo		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1702.000	-53.62	-57.53	-13.00	-40.62	3.91	Peak	Horizontal
2 PP	2539.800	-50.58	-58.68	-13.00	-37.58	8.10	Peak	Horizontal



MODE	TX channel 4233	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	EUT 5.0V
TESTED BY	Gavin Guo		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1693.200	-54.12	-57.91	-13.00	-41.12	3.79	Peak	Vertical
2 PP	2539.800	-51.60	-58.80	-13.00	-38.60	7.20	Peak	Vertical





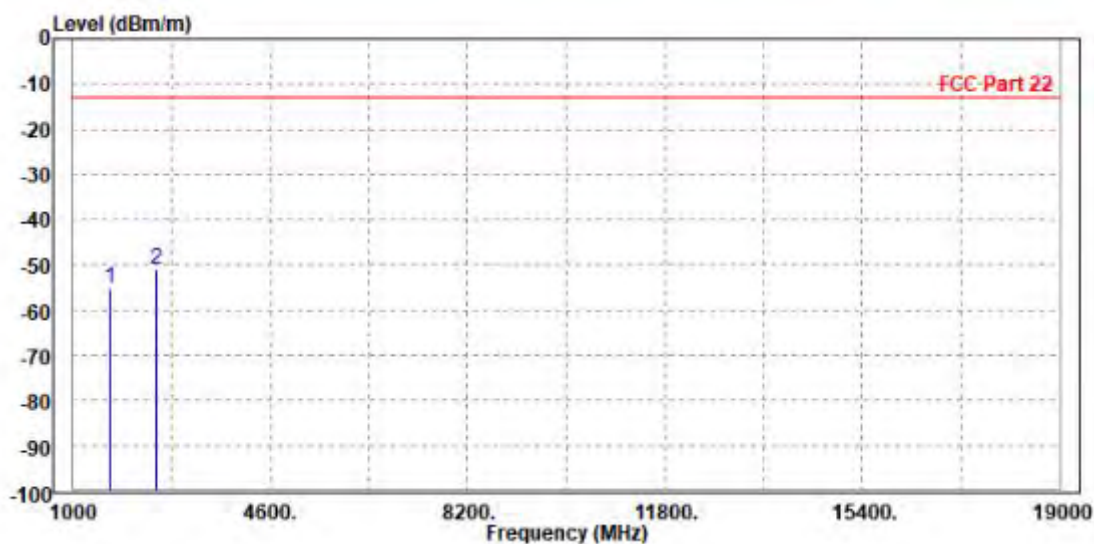
Test Report No.: PSU-QSU2206080111RF01

LTE Band 5

CHANNEL BANDWIDTH: 1.4MHz / QPSK

MODE	TX channel 20525	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	EUT 5.0V
TESTED BY	Gavin Guo		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1666.000	-54.99	-58.46	-13.00	-41.99	3.47	Peak	Horizontal
2 PP	2509.500	-50.92	-58.98	-13.00	-37.92	8.06	Peak	Horizontal

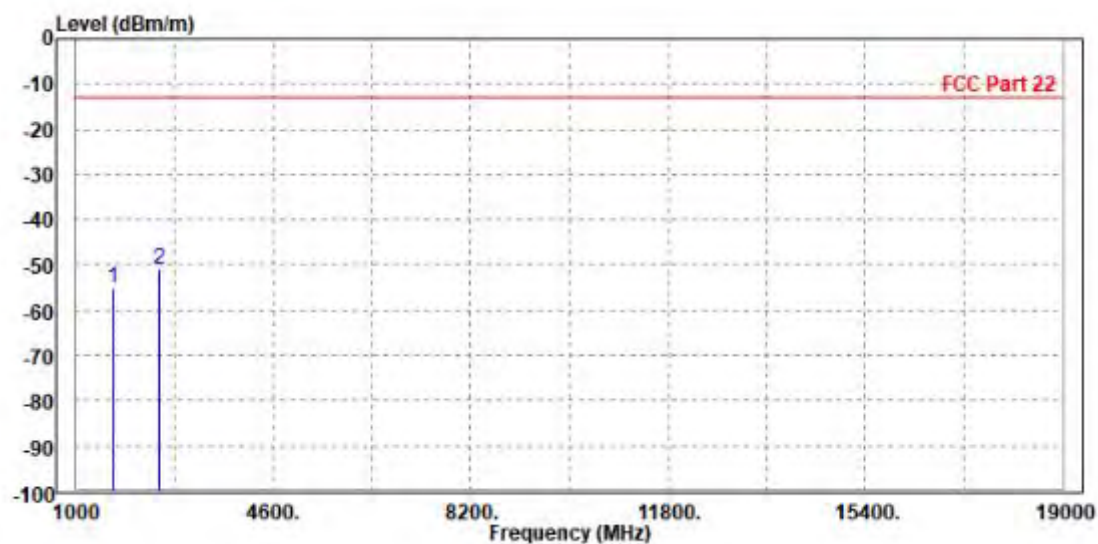




Test Report No.: PSU-QSU2206080111RF01

MODE	TX channel 20525	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	EUT 5.0V
TESTED BY	Gavin Guo		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

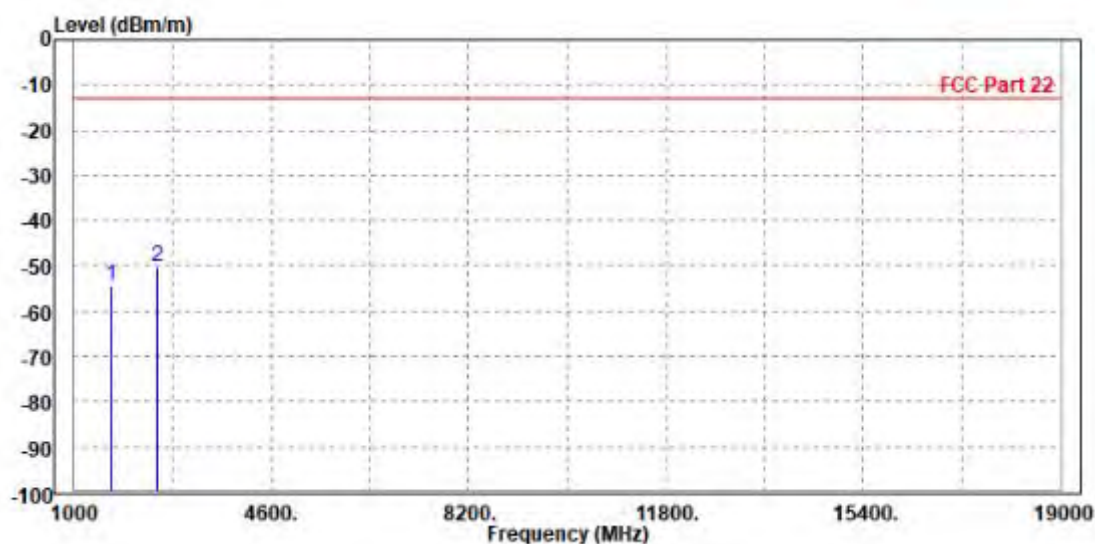
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1666.000	-55.02	-58.56	-13.00	-42.02	3.54	Peak	Vertical
2 PP	2509.500	-51.03	-58.13	-13.00	-38.03	7.10	Peak	Vertical



CHANNEL BANDWIDTH: 3MHz / QPSK

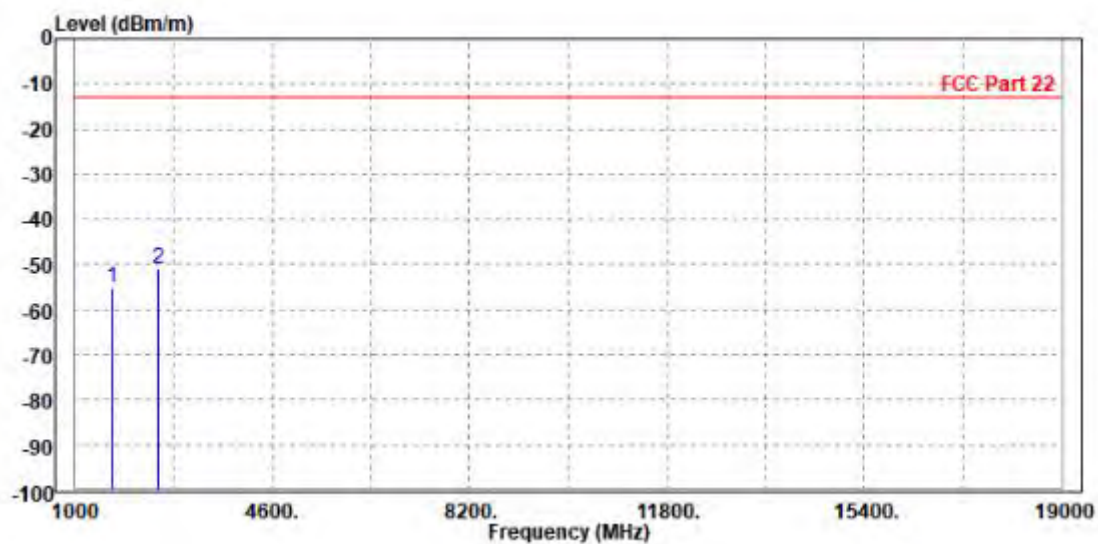
MODE	TX channel 20525	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	EUT 5.0V
TESTED BY	Gavin Guo		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1666.000	-54.20	-57.67	-13.00	-41.20	3.47	Peak	Horizontal
2	PP 2509.500	-50.09	-58.15	-13.00	-37.09	8.06	Peak	Horizontal



MODE	TX channel 20525	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	EUT 5.0V
TESTED BY	Gavin Guo		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1666.000	-55.11	-58.65	-13.00	-42.11	3.54	Peak	Vertical
2 PP	2509.500	-51.04	-58.14	-13.00	-38.04	7.10	Peak	Vertical

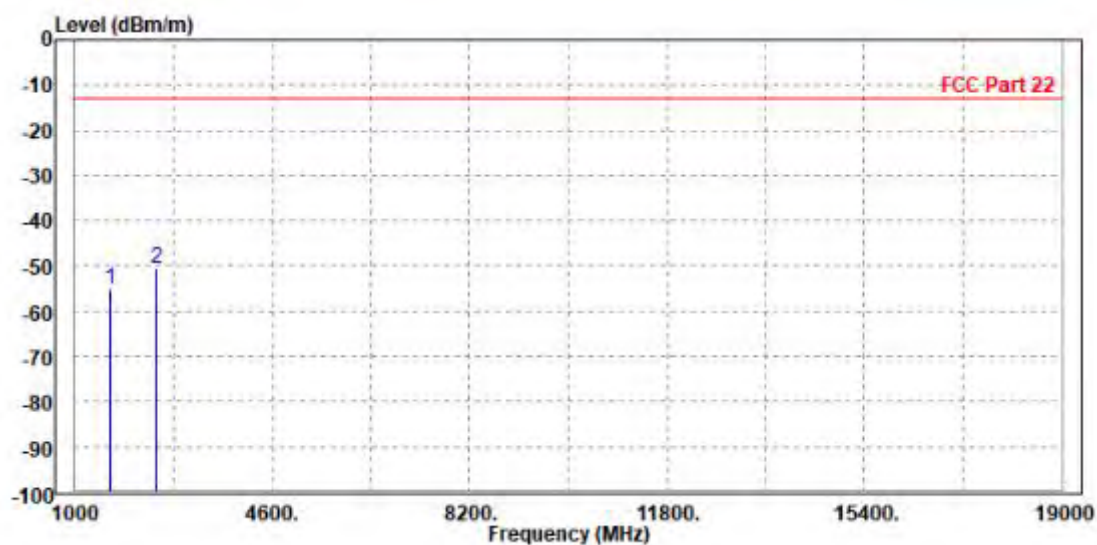


CHANNEL BANDWIDTH: 5MHz / QPSK

CH 20425

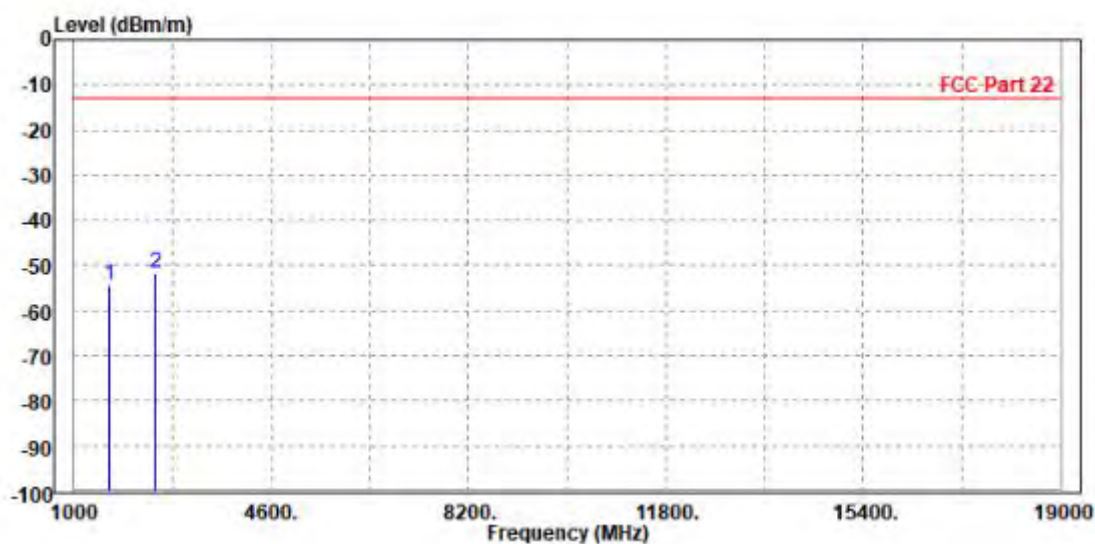
MODE	TX channel 20425	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	EUT 5.0V
TESTED BY	Gavin Guo		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1648.000	-55.15	-58.40	-13.00	-42.15	3.25	Peak	Horizontal
2 PP	2479.500	-50.71	-58.74	-13.00	-37.71	8.03	Peak	Horizontal



MODE	TX channel 20425	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	EUT 5.0V
TESTED BY	Gavin Guo		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1648.000	-54.36	-57.74	-13.00	-41.36	3.38	Peak	Vertical
2 PP	2479.500	-51.85	-58.90	-13.00	-38.85	7.05	Peak	Vertical



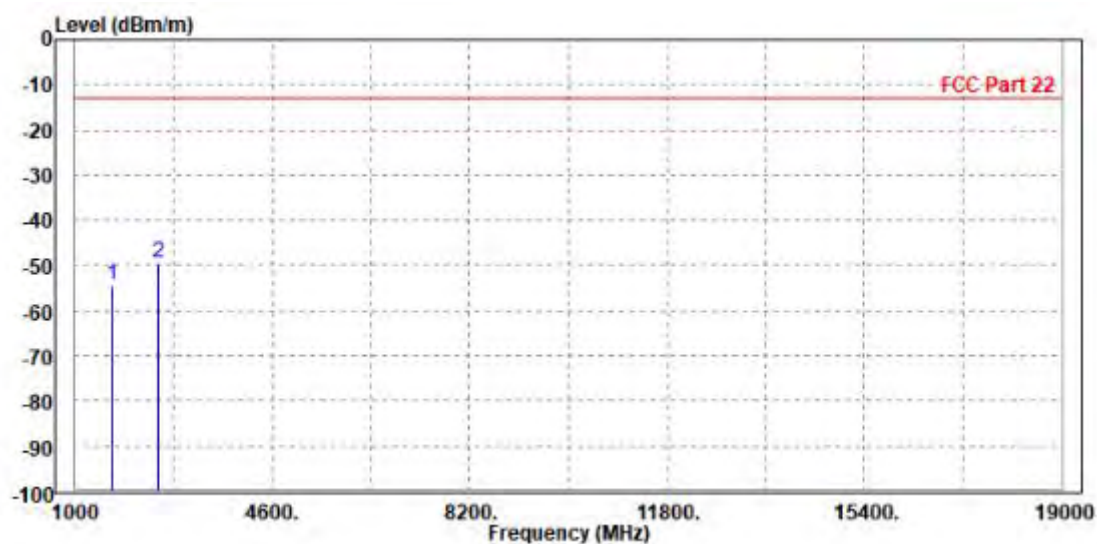


Test Report No.: PSU-QSU2206080111RF01

CH 20525

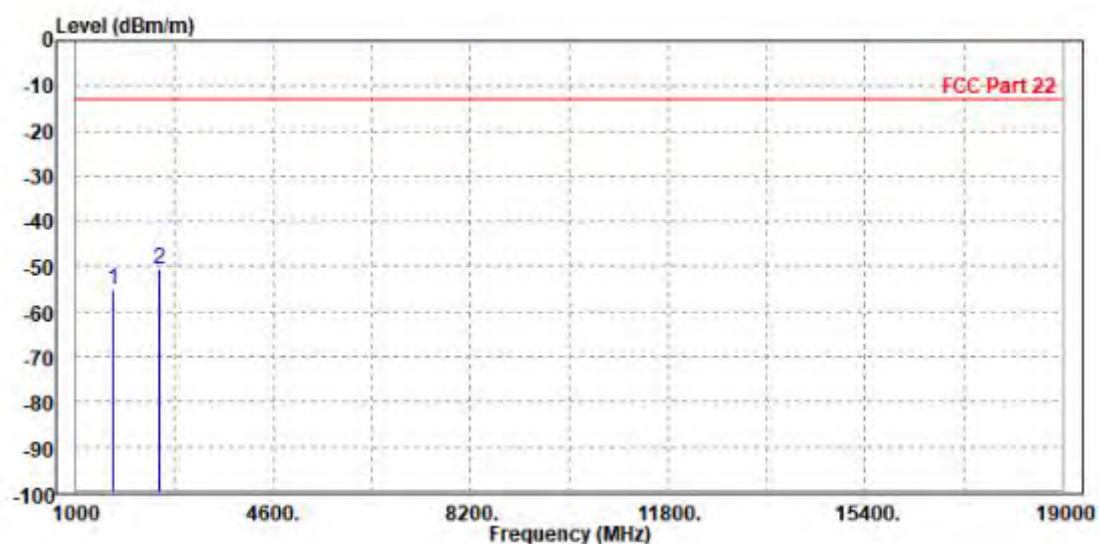
MODE	TX channel 20525	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	EUT 5.0V
TESTED BY	Gavin Guo		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1666.000	-54.31	-57.78	-13.00	-41.31	3.47	Peak	Horizontal
2 PP	2509.500	-49.60	-57.66	-13.00	-36.60	8.06	Peak	Horizontal



MODE	TX channel 20525	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	EUT 5.0V
TESTED BY	Gavin Guo		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

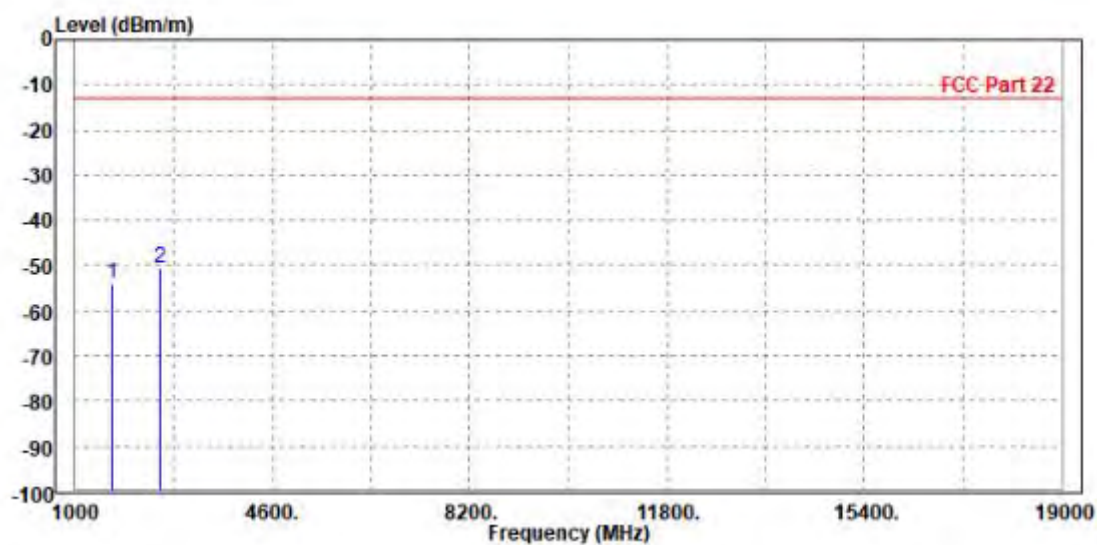
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1666.000	-55.25	-58.79	-13.00	-42.25	3.54	Peak	Vertical
2 PP	2509.500	-50.71	-57.81	-13.00	-37.71	7.10	Peak	Vertical



CH 20625

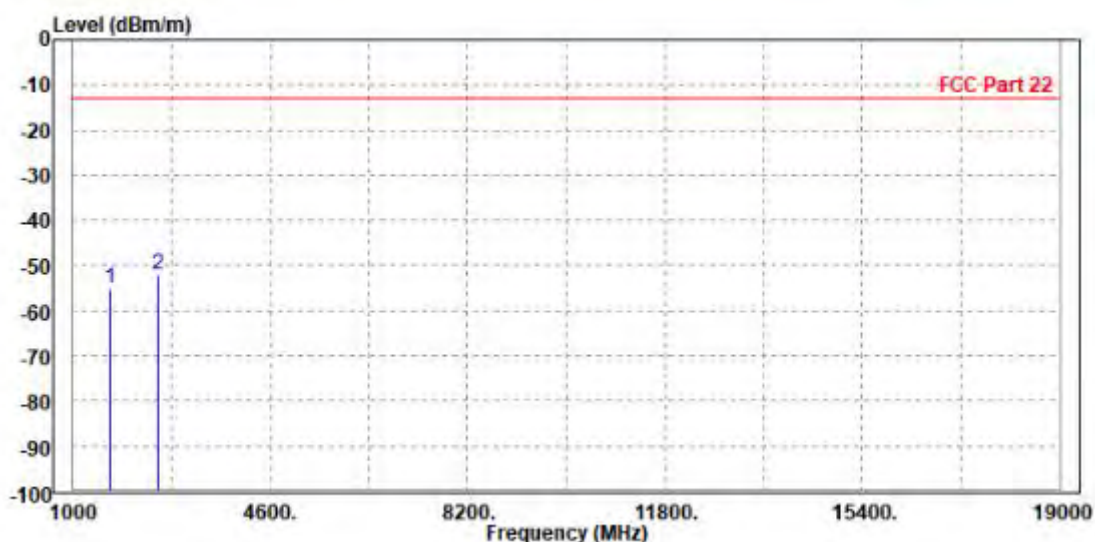
MODE	TX channel 20625	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	EUT 5.0V
TESTED BY	Gavin Guo		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1684.000	-54.13	-57.82	-13.00	-41.13	3.69	Peak	Horizontal
2 PP	2539.500	-50.62	-58.72	-13.00	-37.62	8.10	Peak	Horizontal



MODE	TX channel 20625	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	EUT 5.0V
TESTED BY	Gavin Guo		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1684.000	-54.99	-58.70	-13.00	-41.99	3.71	Peak	Vertical
2 PP	2539.500	-51.98	-59.18	-13.00	-38.98	7.20	Peak	Vertical





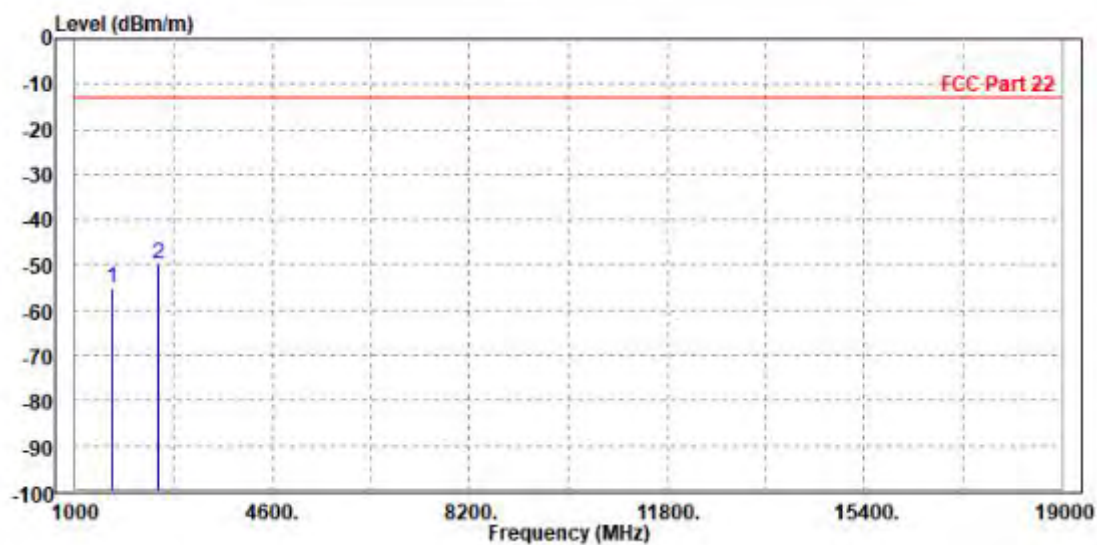
Test Report No.: PSU-QSU2206080111RF01

CHANNEL BANDWIDTH: 10MHz / QPSK

CH 20525

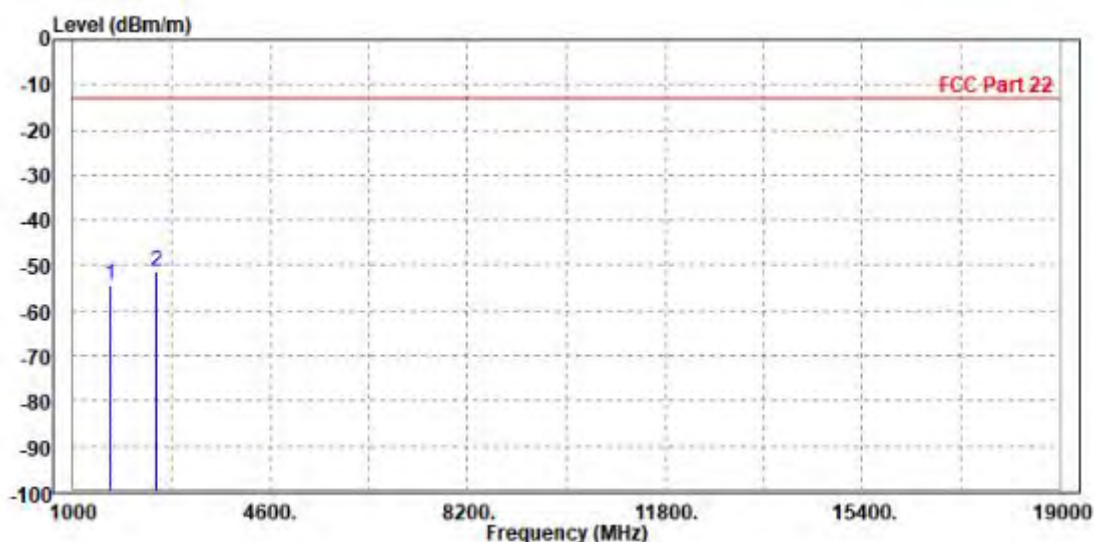
MODE	TX channel 20525	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	EUT 5.0V
TESTED BY	Gavin Guo		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1666.000	-55.11	-58.58	-13.00	-42.11	3.47	Peak	Horizontal
2 PP	2509.500	-49.64	-57.70	-13.00	-36.64	8.06	Peak	Horizontal



MODE	TX channel 20525	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	EUT 5.0V
TESTED BY	Gavin Guo		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1666.000	-54.47	-58.01	-13.00	-41.47	3.54	Peak	Vertical
2 PP	2509.500	-51.48	-58.58	-13.00	-38.48	7.10	Peak	Vertical

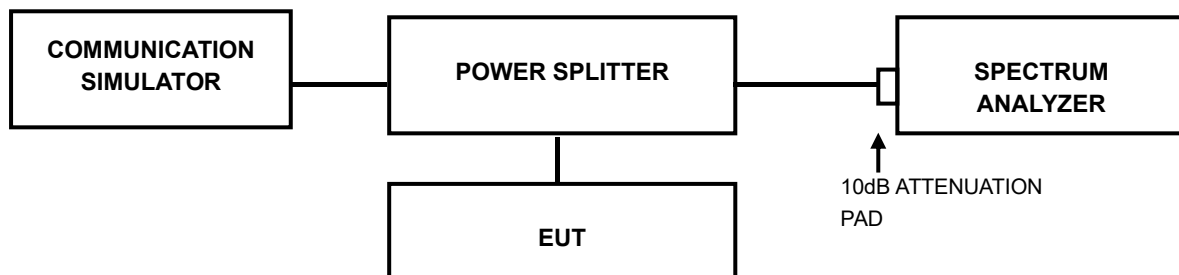


3.7 PEAK TO AVERAGE RATIO

3.7.1 LIMITS OF PEAK TO AVERAGE RATIO MEASUREMENT

In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13 dB

3.7.2 TEST SETUP



3.7.3 TEST PROCEDURES

1. Set resolution/measurement bandwidth $\geq$ signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Record the maximum PAPR level associated with a probability of 0.1%.

3.7.4 TEST RESULTS

Please Refer to Appendix A Of this test report.



Test Report No.: PSU-QSU2206080111RF01

4 PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).



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5 INFORMATION ON THE TESTING LABORATORIES

We, Huarui 7layers High Technology (Suzhou) Co., Ltd. ,were founded in 2020 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

Suzhou EMC/RF Lab:

Tel: +86 (0557) 368 1008



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6 MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.



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7 APPENDIX A:

GSM850

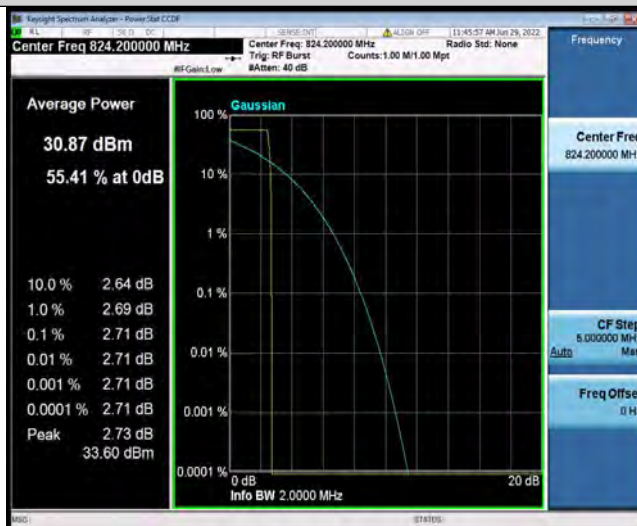
PEAK-TO-AVERAGE RATIO(CCDF)

Test Result

Band	Channel	Result(dB)	Limit(dB)	Verdict
GPRS850	128	2.71	13	PASS
GPRS850	190	2.73	13	PASS
GPRS850	251	2.71	13	PASS
EGPRS850	128	5.74	13	PASS
EGPRS850	190	5.73	13	PASS
EGPRS850	251	5.74	13	PASS

Test Graphs

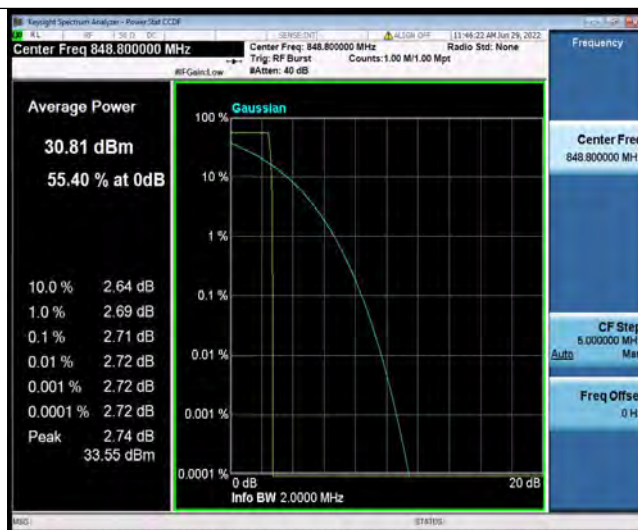
GPRS850-128



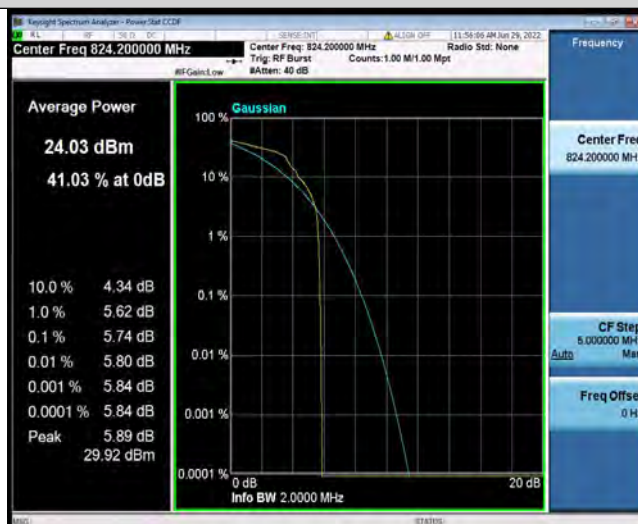
GPRS850-190



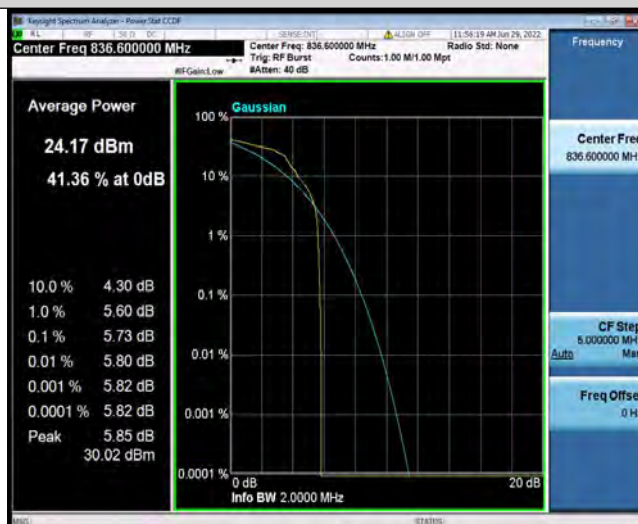
GPRS850-251



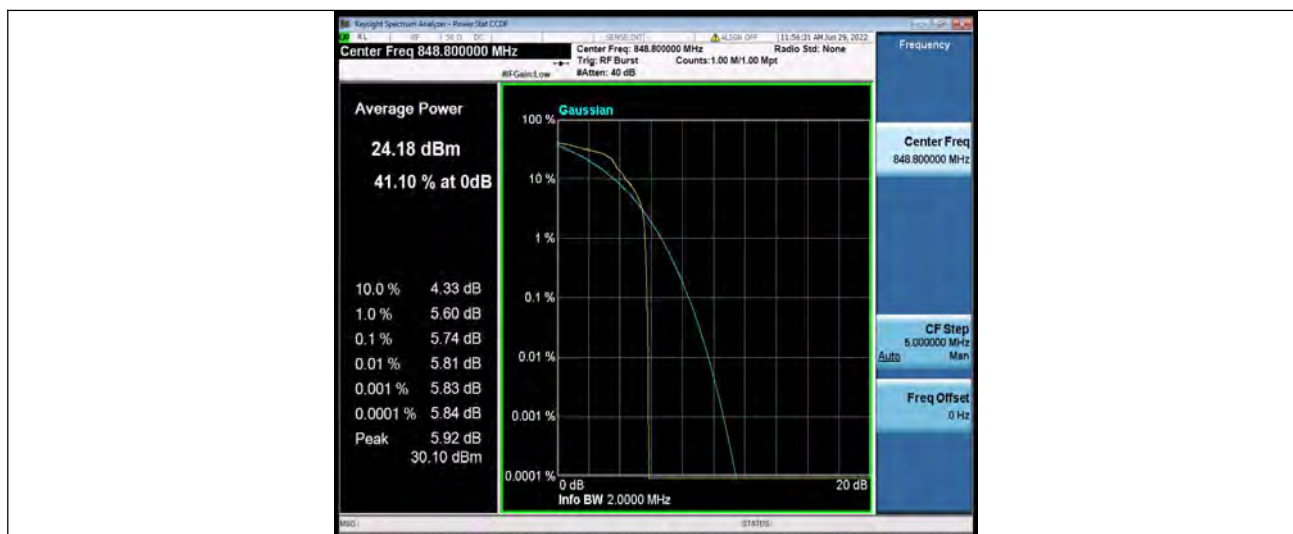
EGPRS850-128



EGPRS850-190



EGPRS850-251





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26DB BANDWIDTH AND OCCUPIED BANDWIDTH

Test Result

Band	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GPRS850	128	0.24309	0.3073	---	PASS
GPRS850	190	0.24438	0.3126	---	PASS
GPRS850	251	0.24379	0.3092	---	PASS
EGPRS850	128	0.24170	0.3039	---	PASS
EGPRS850	190	0.24296	0.2932	---	PASS
EGPRS850	251	0.24762	0.3029	---	PASS

Test Graphs

GPRS850-128



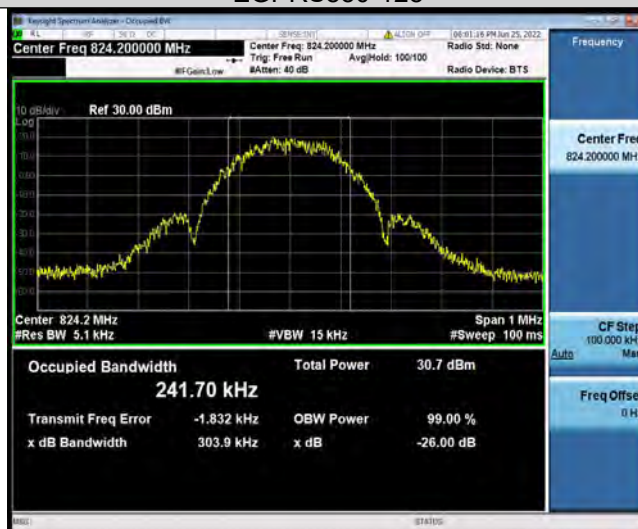
GPRS850-190



GPRS850-251



EGPRS850-128



EGPRS850-190



EGPRS850-251





Test Report No.: PSU-QSU2206080111RF01

BAND EDGE

Test Result

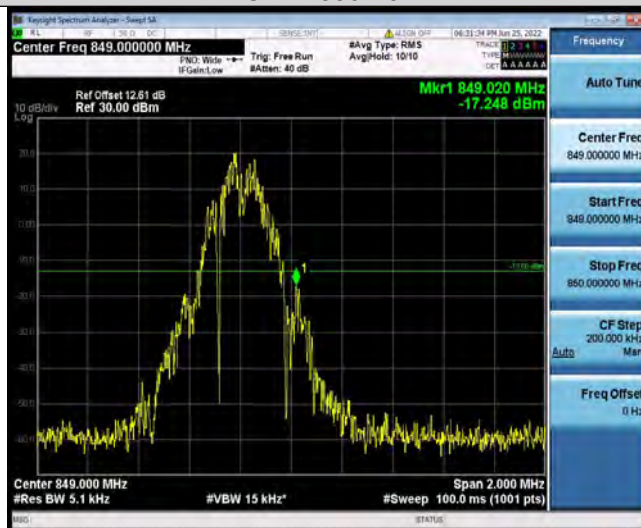
Band	Channel	Freq (MHz)	Result (dBm)	Limit(dBm)	Verdict
GPRS850	128	824.00	-17.84	-13	PASS
GPRS850	251	849.02	-17.25	-13	PASS
EGPRS850	128	823.98	-19.40	-13	PASS
EGPRS850	251	849.02	-21.37	-13	PASS

Test Graphs

GPRS850-128



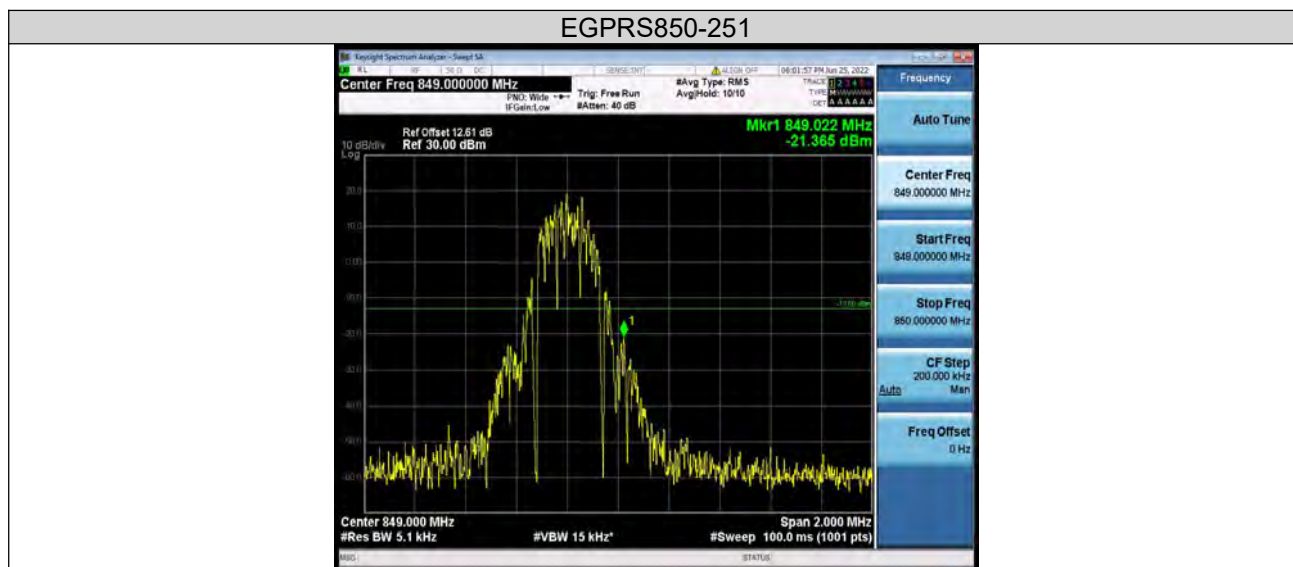
GPRS850-251



EGPRS850-128



EGPRS850-251

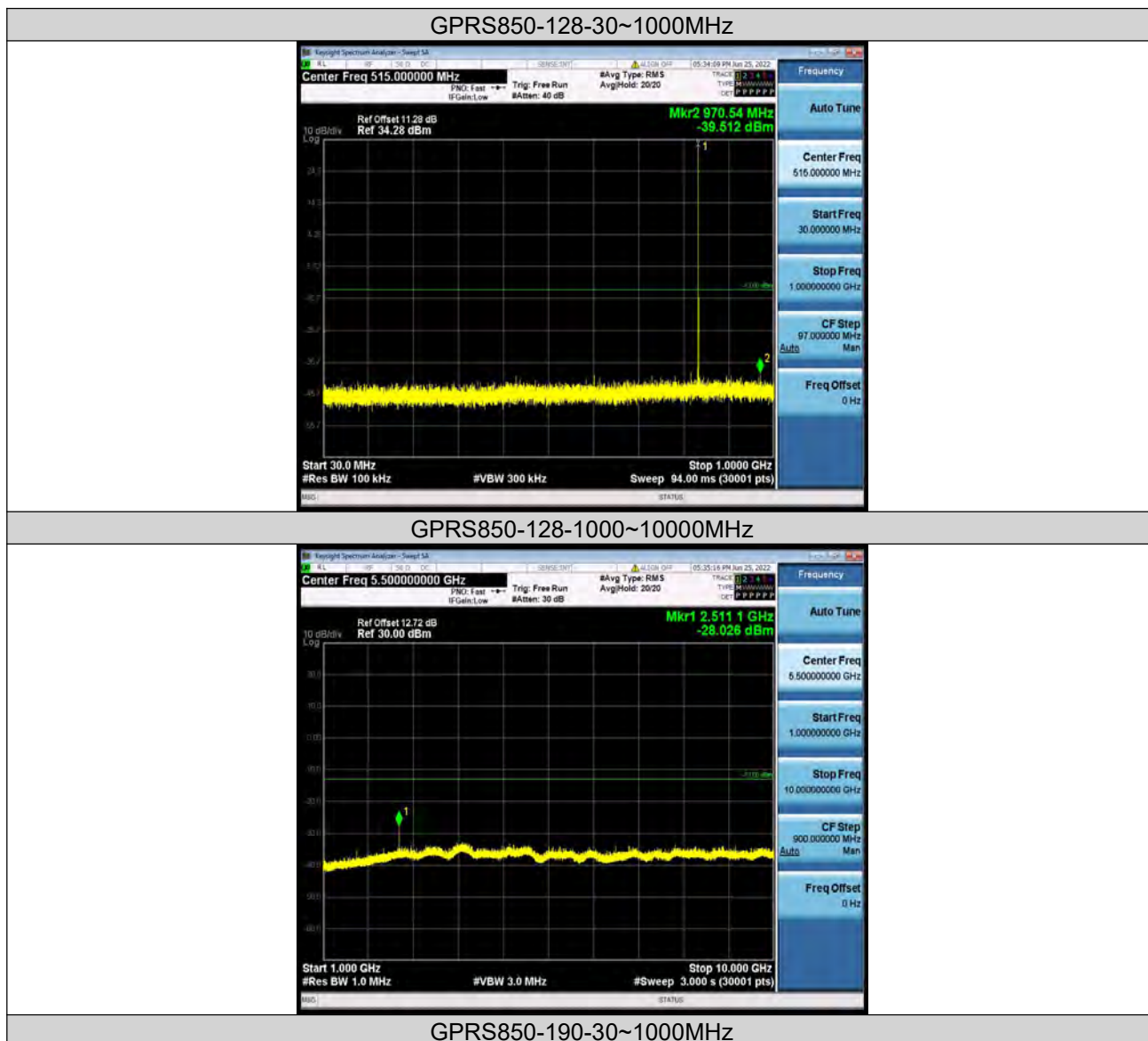


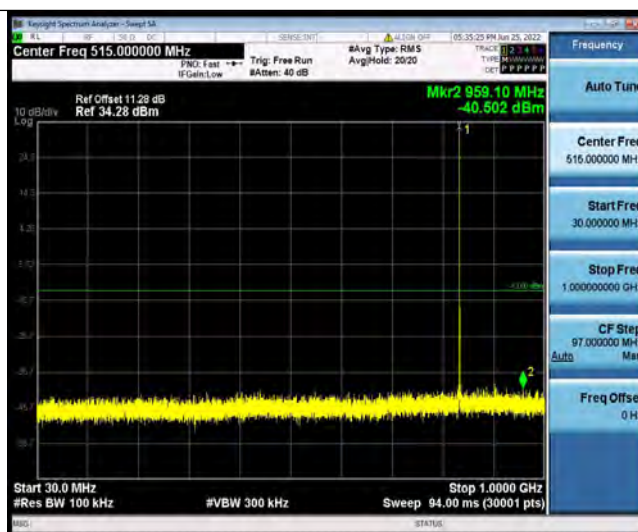
CONDUCTED SPURIOUS EMISSION

Test Result

Band	Channel	Frequency Range(MHz)	Max.Freq. (MHz)	Result (dBm)	Limit (dBm)	Verdict
GPRS850	128	30~1000MHz	970.54	-39.51	-13	PASS
GPRS850	128	1000~10000MHz	2511.1	-28.03	-13	PASS
GPRS850	190	30~1000MHz	959.1	-40.5	-13	PASS
GPRS850	190	1000~10000MHz	2511.1	-28.68	-13	PASS
GPRS850	251	30~1000MHz	714.66	-40.15	-13	PASS
GPRS850	251	1000~10000MHz	2510.8	-28.01	-13	PASS
EGPRS850	128	30~1000MHz	948.91	-39.01	-13	PASS
EGPRS850	128	1000~10000MHz	3779.8	-32.3	-13	PASS
EGPRS850	190	30~1000MHz	944.06	-38.84	-13	PASS
EGPRS850	190	1000~10000MHz	3717.4	-32.3	-13	PASS
EGPRS850	251	30~1000MHz	513.97	-40.37	-13	PASS
EGPRS850	251	1000~10000MHz	3818.2	-32.75	-13	PASS

Test Graphs

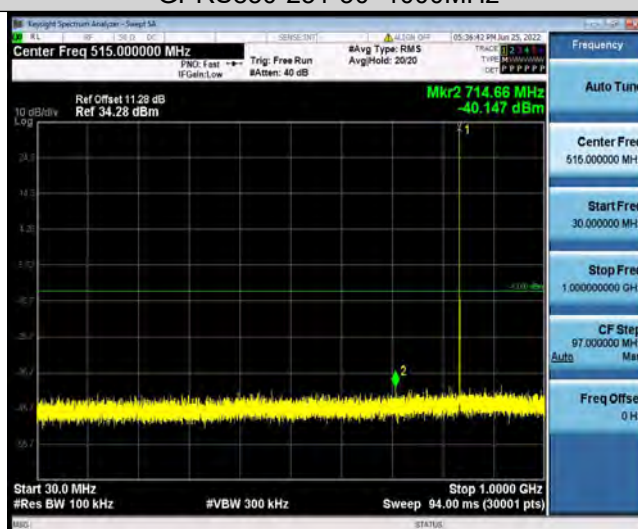




GPRS850-190-1000~10000MHz



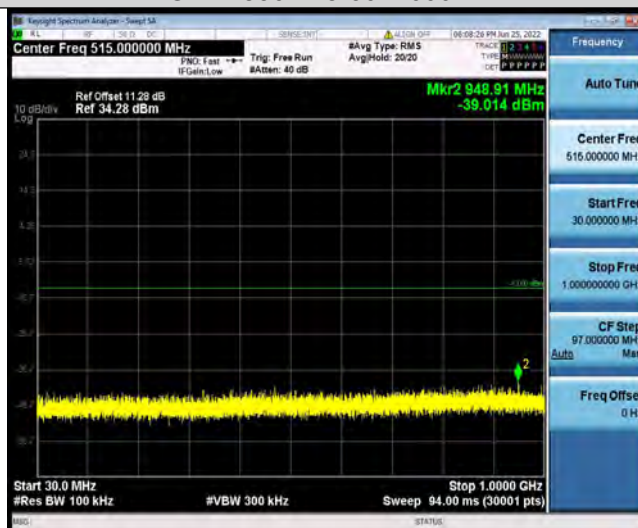
GPRS850-251-30~1000MHz



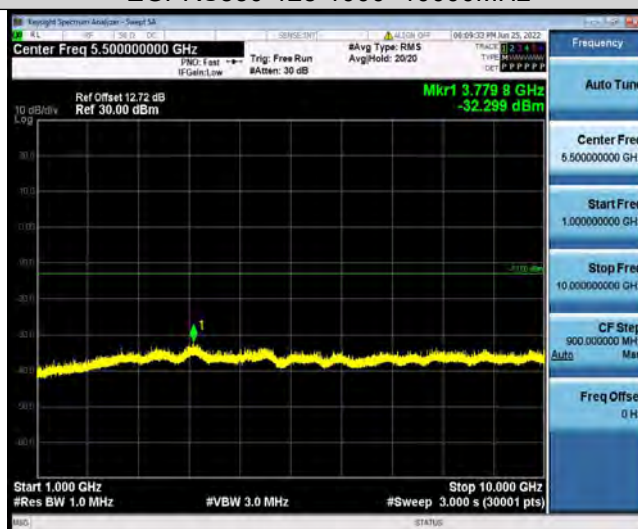
GPRS850-251-1000~10000MHz



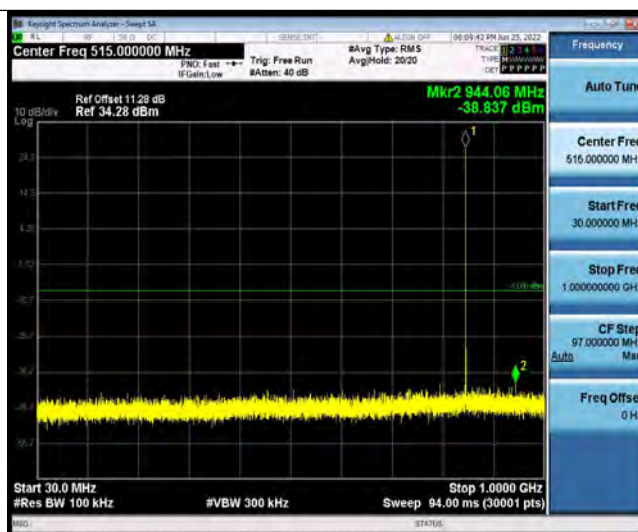
EGPRS850-128-30~1000MHz



EGPRS850-128-1000~10000MHz



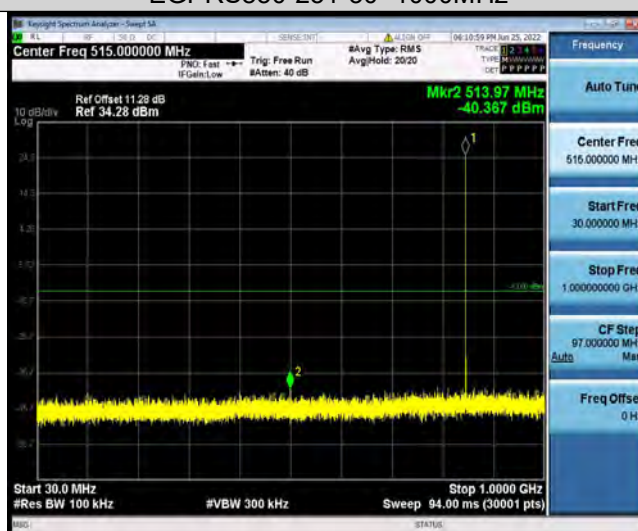
EGPRS850-190-30~1000MHz



EGPRS850-190-1000~10000MHz



EGPRS850-251-30~1000MHz



EGPRS850-251-1000~10000MHz



FREQUENCY STABILITY

Test Result

Voltage							
Band	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GPRS850	128	VL	NT	22.15	0.026875	±2.5	PASS
GPRS850	128	VN	NT	20.53	0.024909	±2.5	PASS
GPRS850	128	VH	NT	19.79	0.024011	±2.5	PASS
GPRS850	190	VL	NT	23.02	0.027516	±2.5	PASS
GPRS850	190	VN	NT	20.57	0.024588	±2.5	PASS
GPRS850	190	VH	NT	19.24	0.022998	±2.5	PASS
GPRS850	251	VL	NT	20.15	0.023739	±2.5	PASS
GPRS850	251	VN	NT	20.47	0.024116	±2.5	PASS
GPRS850	251	VH	NT	18.79	0.022137	±2.5	PASS
EGPRS850	128	VL	NT	18.69	0.022677	±2.5	PASS
EGPRS850	128	VN	NT	19.31	0.023429	±2.5	PASS
EGPRS850	128	VH	NT	19.37	0.023502	±2.5	PASS
EGPRS850	190	VL	NT	21.99	0.026285	±2.5	PASS
EGPRS850	190	VN	NT	20.18	0.024121	±2.5	PASS
EGPRS850	190	VH	NT	23.86	0.028520	±2.5	PASS
EGPRS850	251	VL	NT	21.50	0.025330	±2.5	PASS
EGPRS850	251	VN	NT	23.86	0.028110	±2.5	PASS
EGPRS850	251	VH	NT	24.28	0.028605	±2.5	PASS

Temperature							
Band	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GPRS850	128	NV	-30	20.24	0.024557	±2.5	PASS
GPRS850	128	NV	-20	20.60	0.024994	±2.5	PASS
GPRS850	128	NV	-10	19.86	0.024096	±2.5	PASS
GPRS850	128	NV	0	21.57	0.026171	±2.5	PASS
GPRS850	128	NV	10	18.11	0.021973	±2.5	PASS
GPRS850	128	NV	20	19.92	0.024169	±2.5	PASS
GPRS850	128	NV	30	19.60	0.023781	±2.5	PASS
GPRS850	128	NV	40	19.95	0.024205	±2.5	PASS
GPRS850	128	NV	50	19.27	0.023380	±2.5	PASS
GPRS850	190	NV	-30	20.37	0.024349	±2.5	PASS
GPRS850	190	NV	-20	20.40	0.024384	±2.5	PASS
GPRS850	190	NV	-10	20.24	0.024193	±2.5	PASS
GPRS850	190	NV	0	19.95	0.023847	±2.5	PASS
GPRS850	190	NV	10	19.50	0.023309	±2.5	PASS
GPRS850	190	NV	20	20.53	0.024540	±2.5	PASS
GPRS850	190	NV	30	20.02	0.023930	±2.5	PASS
GPRS850	190	NV	40	22.60	0.027014	±2.5	PASS
GPRS850	190	NV	50	23.99	0.028676	±2.5	PASS
GPRS850	251	NV	-30	20.40	0.024034	±2.5	PASS
GPRS850	251	NV	-20	18.14	0.021371	±2.5	PASS
GPRS850	251	NV	-10	18.18	0.021418	±2.5	PASS
GPRS850	251	NV	0	19.95	0.023504	±2.5	PASS
GPRS850	251	NV	10	17.76	0.020924	±2.5	PASS
GPRS850	251	NV	20	20.44	0.024081	±2.5	PASS
GPRS850	251	NV	30	20.21	0.023810	±2.5	PASS
GPRS850	251	NV	40	20.53	0.024187	±2.5	PASS
GPRS850	251	NV	50	19.53	0.023009	±2.5	PASS
EGPRS850	128	NV	-30	19.21	0.023307	±2.5	PASS
EGPRS850	128	NV	-20	19.47	0.023623	±2.5	PASS
EGPRS850	128	NV	-10	18.05	0.021900	±2.5	PASS
EGPRS850	128	NV	0	20.76	0.025188	±2.5	PASS
EGPRS850	128	NV	10	20.18	0.024484	±2.5	PASS
EGPRS850	128	NV	20	19.60	0.023781	±2.5	PASS
EGPRS850	128	NV	30	20.44	0.024800	±2.5	PASS
EGPRS850	128	NV	40	21.05	0.025540	±2.5	PASS
EGPRS850	128	NV	50	19.37	0.023502	±2.5	PASS
EGPRS850	190	NV	-30	21.41	0.025592	±2.5	PASS

EGPRS85 0	190	NV	-20	23.25	0.027791	±2.5	PASS
EGPRS85 0	190	NV	-10	19.89	0.023775	±2.5	PASS
EGPRS85 0	190	NV	0	23.02	0.027516	±2.5	PASS
EGPRS85 0	190	NV	10	19.95	0.023847	±2.5	PASS
EGPRS85 0	190	NV	20	21.34	0.025508	±2.5	PASS
EGPRS85 0	190	NV	30	20.47	0.024468	±2.5	PASS
EGPRS85 0	190	NV	40	20.66	0.024695	±2.5	PASS
EGPRS85 0	190	NV	50	21.11	0.025233	±2.5	PASS
EGPRS85 0	251	NV	-30	22.44	0.026437	±2.5	PASS
EGPRS85 0	251	NV	-20	20.73	0.024423	±2.5	PASS
EGPRS85 0	251	NV	-10	23.34	0.027498	±2.5	PASS
EGPRS85 0	251	NV	0	23.21	0.027344	±2.5	PASS
EGPRS85 0	251	NV	10	22.24	0.026202	±2.5	PASS
EGPRS85 0	251	NV	20	21.28	0.025071	±2.5	PASS
EGPRS85 0	251	NV	30	18.92	0.022290	±2.5	PASS
EGPRS85 0	251	NV	40	19.02	0.022408	±2.5	PASS
EGPRS85 0	251	NV	50	19.82	0.023351	±2.5	PASS



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WCDMA V

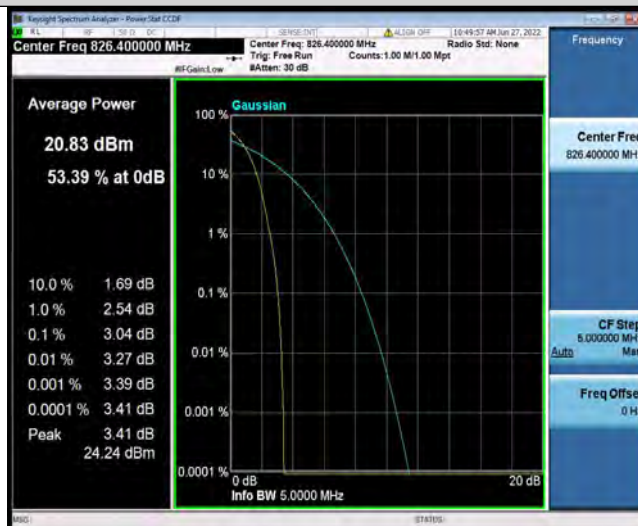
PEAK-TO-AVERAGE RATIO

Test Result

Band	Channel	Peak-to-Average Ratio(dB)	Limit(dBm)	Verdict
Band5	4132	3.04	13	PASS
Band5	4182	3.07	13	PASS
Band5	4233	3.10	13	PASS

Test Graphs

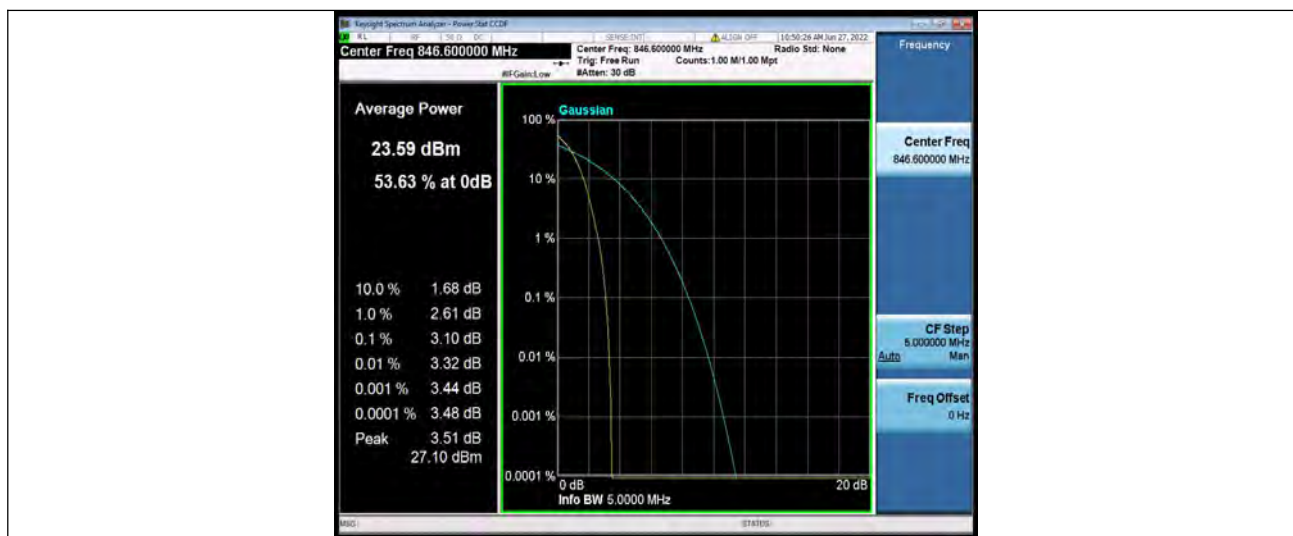
Band5-4132



Band5-4182



Band5-4233





Test Report No.: PSU-QSU2206080111RF01

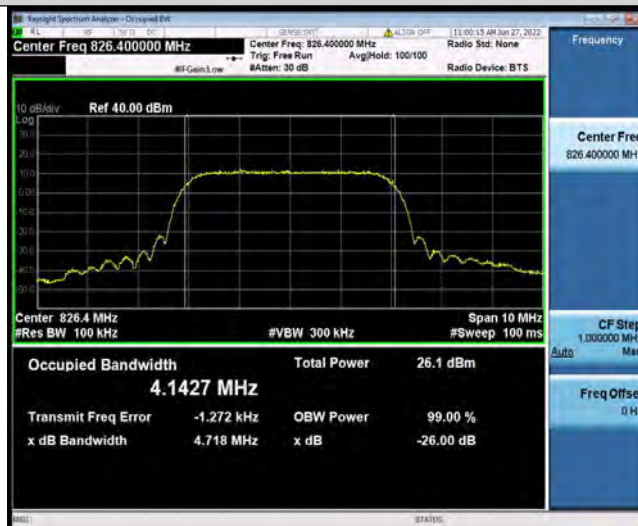
26DB BANDWIDTH AND OCCUPIED BANDWIDTH

Test Result

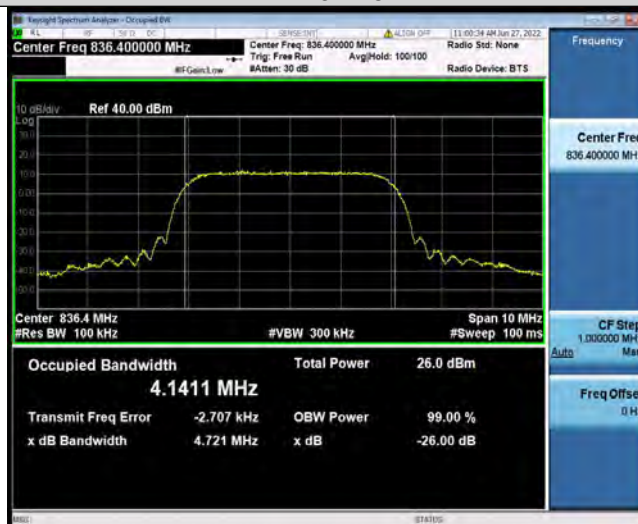
Band	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit(MHz)	Verdict
Band5	4132	4.1427	4.718	---	PASS
Band5	4182	4.1411	4.721	---	PASS
Band5	4233	4.1399	4.725	---	PASS

Test Graphs

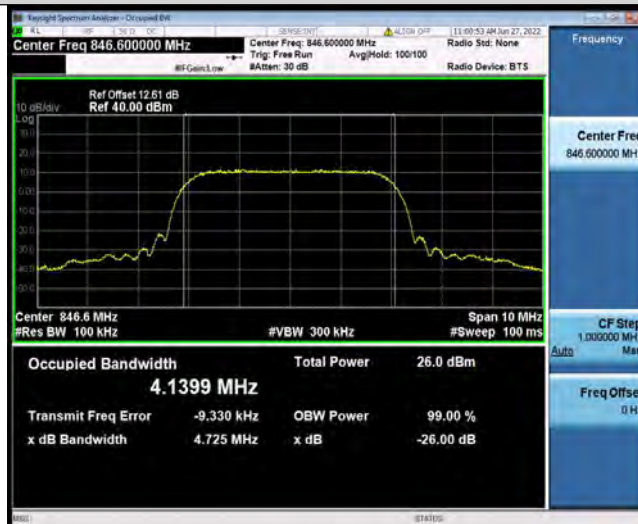
Band5-4132



Band5-4182



Band5-4233





Test Report No.: PSU-QSU2206080111RF01

BAND EDGE

Test Result

Band	Channel	Frequency (MHz)	Result (dBm)	Limit(dBm)	Verdict
Band5	4132	823.85	-24.85	-13	PASS
Band5	4233	849.00	-24.95	-13	PASS



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Test Graphs

Band5-4132



Band5-4233





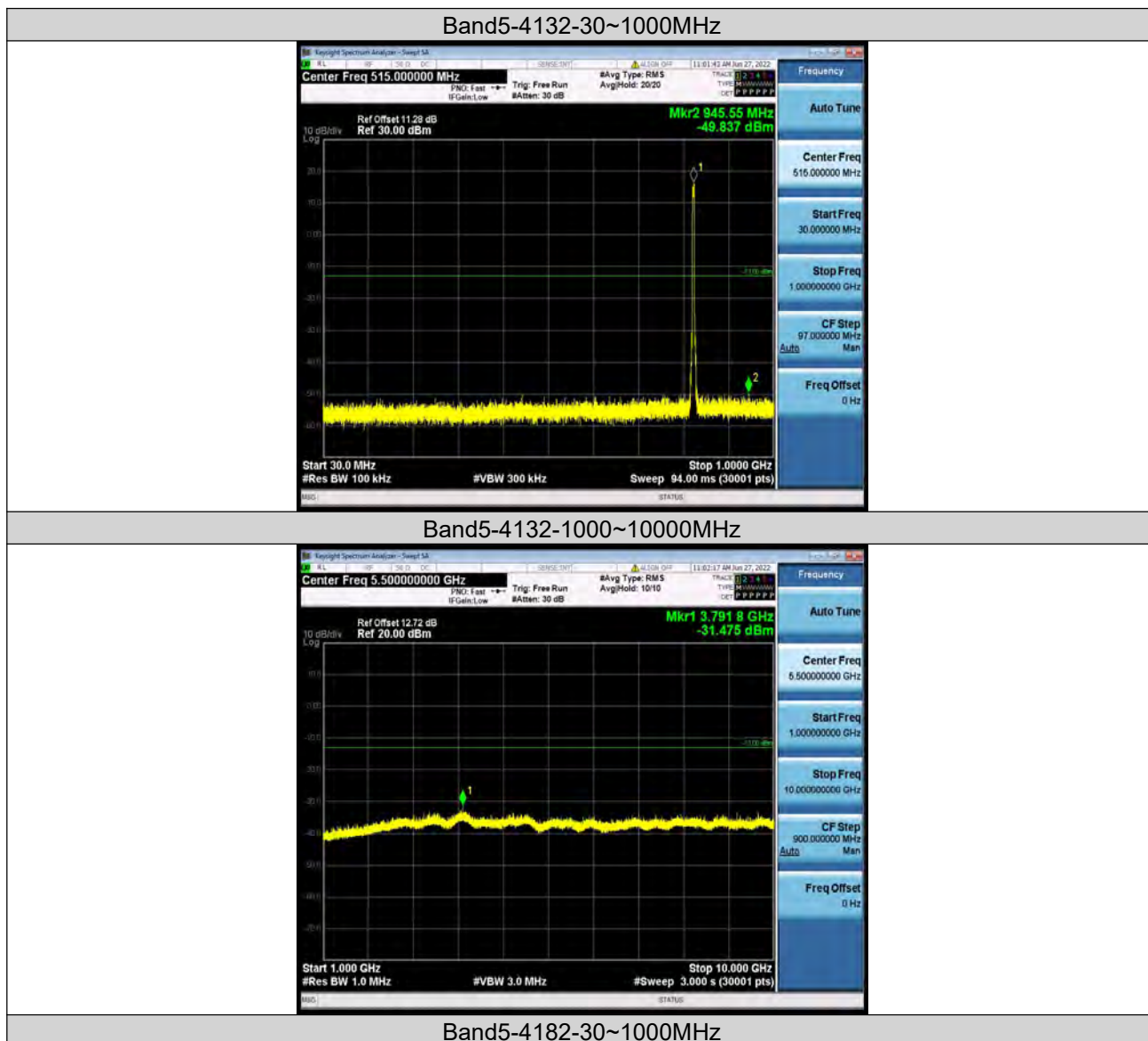
Test Report No.: PSU-QSU2206080111RF01

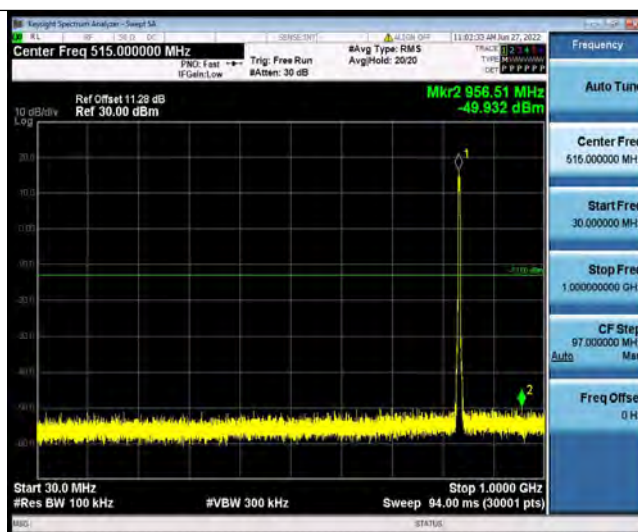
CONDUCTED SPURIOUS EMISSION

Test Result

Band	Channel	Frequency Range (Mhz)	Frequency (dBm)	Result (dBm)	Limit (dBm)	Verdict
Band5	4132	30~1000MHz	945.55	-49.84	-13	PASS
Band5	4132	1000~10000MHz	3791.8	-31.48	-13	PASS
Band5	4182	30~1000MHz	956.51	-49.93	-13	PASS
Band5	4182	1000~10000MHz	3740.2	-32.07	-13	PASS
Band5	4233	30~1000MHz	995.18	-50.35	-13	PASS
Band5	4233	1000~10000MHz	3764.2	-32.61	-13	PASS

Test Graphs

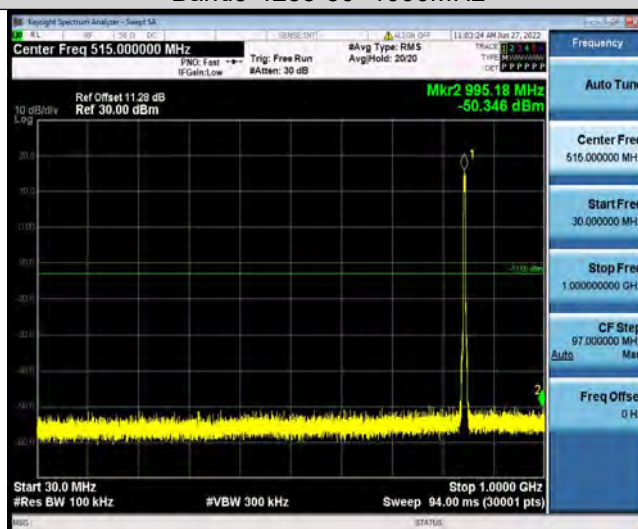




Band5-4182-1000~10000MHz



Band5-4233-30~1000MHz



Band5-4233-1000~10000MHz



FREQUENCY STABILITY

Test Result

Voltage							
Band	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band5	4132	VL	NT	0.59	0.000714	±2.5	PASS
Band5	4132	VN	NT	0.14	0.000169	±2.5	PASS
Band5	4132	VH	NT	0.78	0.000944	±2.5	PASS
Band5	4182	VL	NT	-0.21	-0.000251	±2.5	PASS
Band5	4182	VN	NT	-0.35	-0.000418	±2.5	PASS
Band5	4182	VH	NT	-0.26	-0.000311	±2.5	PASS
Band5	4233	VL	NT	-3.53	-0.004170	±2.5	PASS
Band5	4233	VN	NT	-3.25	-0.003839	±2.5	PASS
Band5	4233	VH	NT	-3.60	-0.004252	±2.5	PASS

Temperature							
Band	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band5	4132	NV	-30	1.47	0.001779	±2.5	PASS
Band5	4132	NV	-20	1.56	0.001888	±2.5	PASS
Band5	4132	NV	0	1.63	0.001972	±2.5	PASS
Band5	4132	NV	10	2.15	0.002602	±2.5	PASS
Band5	4132	NV	20	2.25	0.002723	±2.5	PASS
Band5	4132	NV	30	2.73	0.003303	±2.5	PASS
Band5	4132	NV	40	2.56	0.003098	±2.5	PASS
Band5	4132	NV	50	2.73	0.003303	±2.5	PASS
Band5	4182	NV	-30	-0.16	-0.000191	±2.5	PASS
Band5	4182	NV	-20	-0.20	-0.000239	±2.5	PASS
Band5	4182	NV	0	-0.01	-0.000012	±2.5	PASS
Band5	4182	NV	10	-0.04	-0.000048	±2.5	PASS
Band5	4182	NV	20	-0.27	-0.000323	±2.5	PASS
Band5	4182	NV	30	-0.21	-0.000251	±2.5	PASS
Band5	4182	NV	40	-0.10	-0.000120	±2.5	PASS
Band5	4182	NV	50	-0.22	-0.000263	±2.5	PASS
Band5	4233	NV	-30	-3.42	-0.004040	±2.5	PASS
Band5	4233	NV	-20	-3.48	-0.004111	±2.5	PASS
Band5	4233	NV	0	-3.57	-0.004217	±2.5	PASS
Band5	4233	NV	10	-3.48	-0.004111	±2.5	PASS
Band5	4233	NV	20	-3.67	-0.004335	±2.5	PASS
Band5	4233	NV	30	-3.55	-0.004193	±2.5	PASS
Band5	4233	NV	40	-3.40	-0.004016	±2.5	PASS
Band5	4233	NV	50	-3.55	-0.004193	±2.5	PASS



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LTE BAND5

PEAK-TO-AVERAGE RATIO(CCDF)

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band5	1.4MHz	QPSK	20407	1RB#0	4.52	13	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	5.19	13	PASS
Band5	1.4MHz	QPSK	20525	1RB#0	4.53	13	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	5.16	13	PASS
Band5	1.4MHz	QPSK	20643	1RB#0	4.36	13	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	5.05	13	PASS
Band5	1.4MHz	16QAM	20407	1RB#0	5.38	13	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	6.04	13	PASS
Band5	1.4MHz	16QAM	20525	1RB#0	5.31	13	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	6.03	13	PASS
Band5	1.4MHz	16QAM	20643	1RB#0	5.23	13	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	5.96	13	PASS
Band5	3MHz	QPSK	20415	1RB#0	4.54	13	PASS
Band5	3MHz	QPSK	20415	15RB#0	5.23	13	PASS
Band5	3MHz	QPSK	20525	1RB#0	4.55	13	PASS
Band5	3MHz	QPSK	20525	15RB#0	5.17	13	PASS
Band5	3MHz	QPSK	20635	1RB#0	4.61	13	PASS
Band5	3MHz	QPSK	20635	15RB#0	5.09	13	PASS
Band5	3MHz	16QAM	20415	1RB#0	5.40	13	PASS
Band5	3MHz	16QAM	20415	15RB#0	6.11	13	PASS
Band5	3MHz	16QAM	20525	1RB#0	5.47	13	PASS
Band5	3MHz	16QAM	20525	15RB#0	6.06	13	PASS
Band5	3MHz	16QAM	20635	1RB#0	5.51	13	PASS
Band5	3MHz	16QAM	20635	15RB#0	6.03	13	PASS
Band5	5MHz	QPSK	20425	1RB#0	4.54	13	PASS
Band5	5MHz	QPSK	20425	25RB#0	5.26	13	PASS
Band5	5MHz	QPSK	20525	1RB#0	4.49	13	PASS
Band5	5MHz	QPSK	20525	25RB#0	5.18	13	PASS
Band5	5MHz	QPSK	20625	1RB#0	4.64	13	PASS
Band5	5MHz	QPSK	20625	25RB#0	5.19	13	PASS
Band5	5MHz	16QAM	20425	1RB#0	5.49	13	PASS
Band5	5MHz	16QAM	20425	25RB#0	6.06	13	PASS
Band5	5MHz	16QAM	20525	1RB#0	5.19	13	PASS
Band5	5MHz	16QAM	20525	25RB#0	5.98	13	PASS
Band5	5MHz	16QAM	20625	1RB#0	5.40	13	PASS
Band5	5MHz	16QAM	20625	25RB#0	6.00	13	PASS
Band5	10MHz	QPSK	20450	1RB#0	4.48	13	PASS
Band5	10MHz	QPSK	20450	50RB#0	5.28	13	PASS
Band5	10MHz	QPSK	20525	1RB#0	4.50	13	PASS
Band5	10MHz	QPSK	20525	50RB#0	5.20	13	PASS
Band5	10MHz	QPSK	20600	1RB#0	4.52	13	PASS
Band5	10MHz	QPSK	20600	50RB#0	5.23	13	PASS

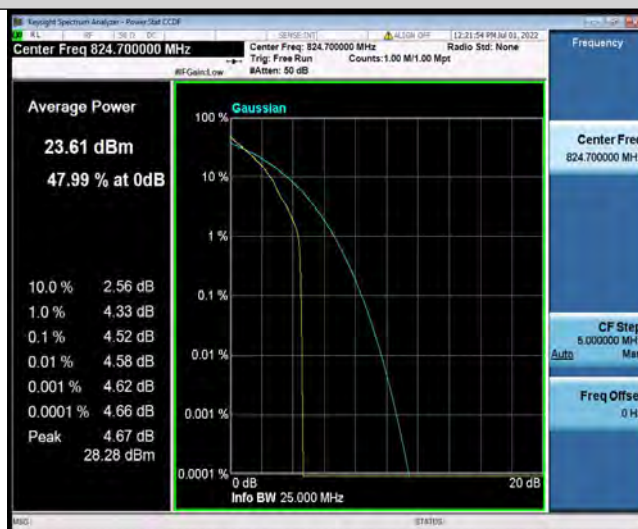


Test Report No.: PSU-QSU2206080111RF01

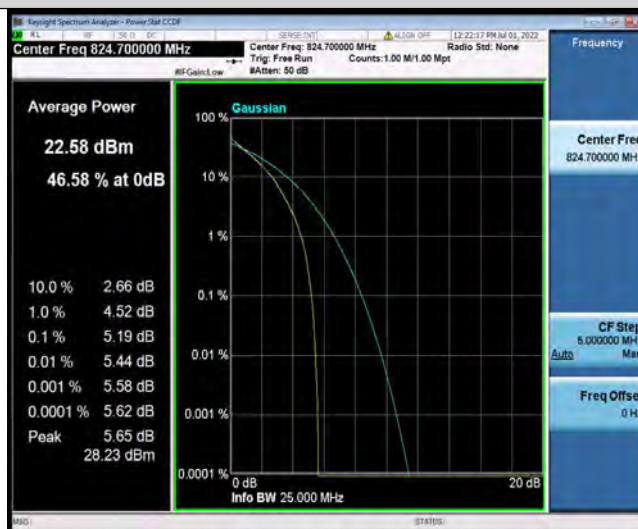
Band5	10MHz	16QAM	20450	1RB#0	5.28	13	PASS
Band5	10MHz	16QAM	20450	50RB#0	6.10	13	PASS
Band5	10MHz	16QAM	20525	1RB#0	5.43	13	PASS
Band5	10MHz	16QAM	20525	50RB#0	6.04	13	PASS
Band5	10MHz	16QAM	20600	1RB#0	5.35	13	PASS
Band5	10MHz	16QAM	20600	50RB#0	6.06	13	PASS

Test Graphs

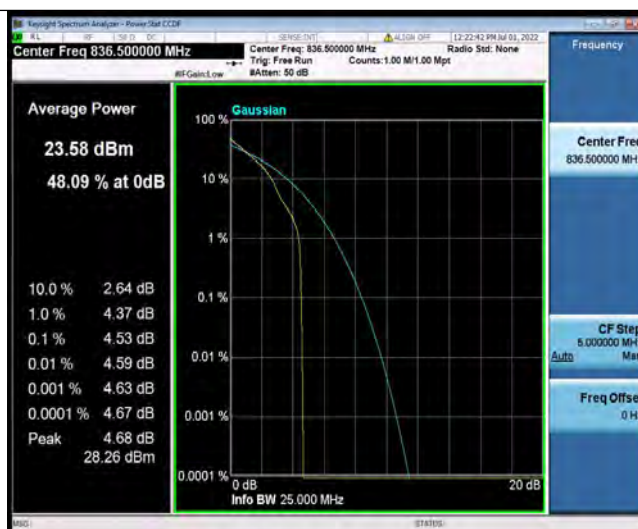
Band5-1.4MHz-QPSK-20407-1RB#0



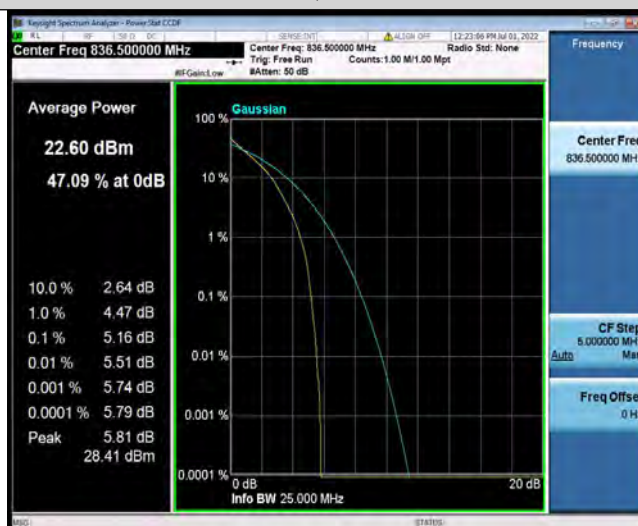
Band5-1.4MHz-QPSK-20407-6RB#0



Band5-1.4MHz-QPSK-20525-1RB#0



Band5-1.4MHz-QPSK-20525-6RB#0



Band5-1.4MHz-QPSK-20643-1RB#0



Band5-1.4MHz-QPSK-20643-6RB#0



Band5-1.4MHz-16QAM-20407-1RB#0



Band5-1.4MHz-16QAM-20407-6RB#0



Band5-1.4MHz-16QAM-20525-1RB#0



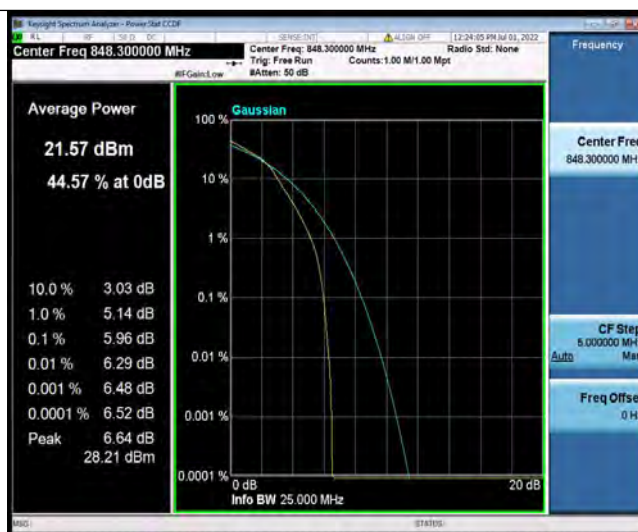
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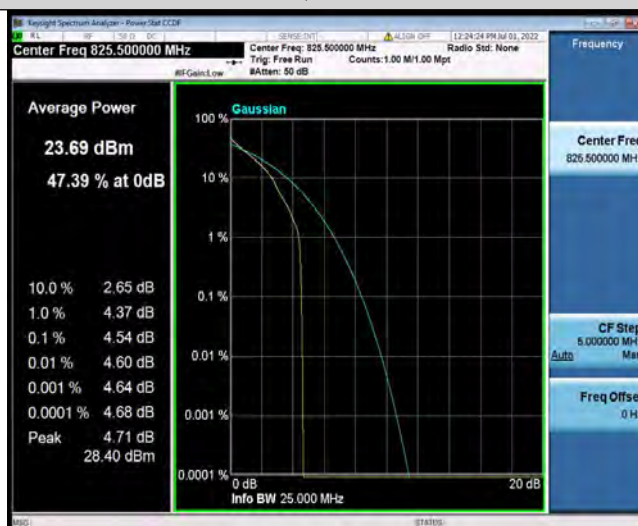
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Band5-1.4MHz-16QAM-20643-6RB#0



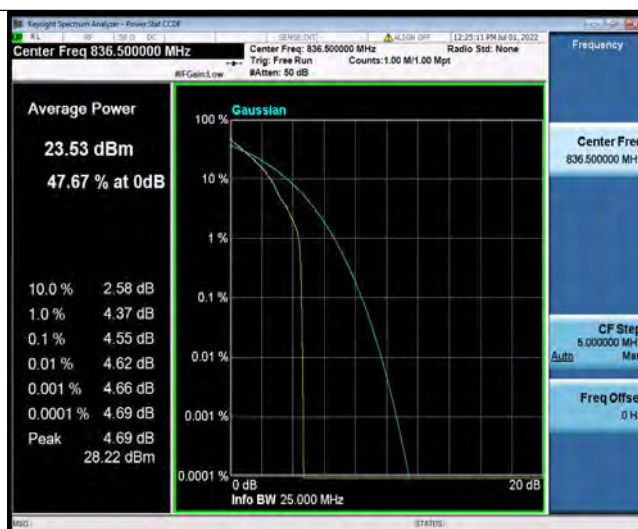
Band5-3MHz-QPSK-20415-1RB#0



Band5-3MHz-QPSK-20415-15RB#0



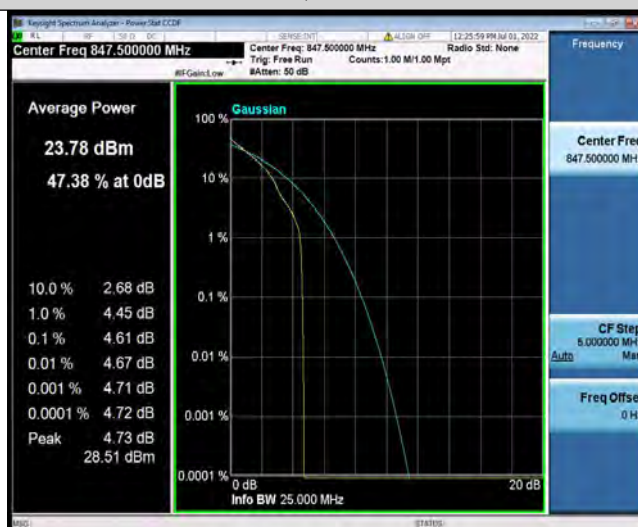
Band5-3MHz-QPSK-20525-1RB#0



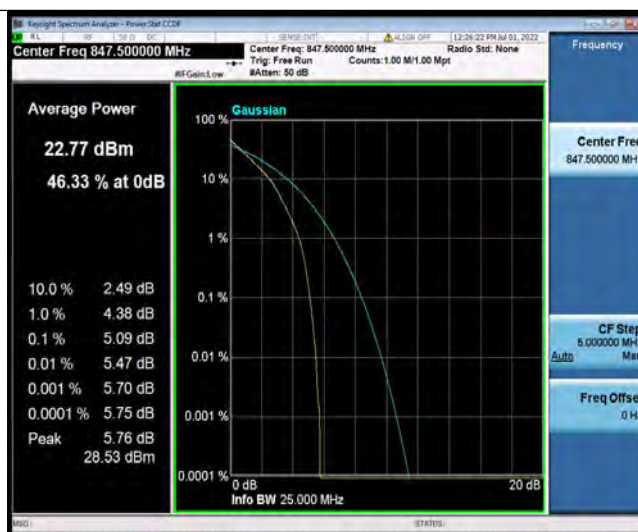
Band5-3MHz-QPSK-20525-15RB#0



Band5-3MHz-QPSK-20635-1RB#0



Band5-3MHz-QPSK-20635-15RB#0



Band5-3MHz-16QAM-20415-1RB#0



Band5-3MHz-16QAM-20415-15RB#0



Band5-3MHz-16QAM-20525-1RB#0



Band5-3MHz-16QAM-20525-15RB#0



Band5-3MHz-16QAM-20635-1RB#0



Band5-3MHz-16QAM-20635-15RB#0



Band5-5MHz-QPSK-20425-1RB#0



Band5-5MHz-QPSK-20425-25RB#0



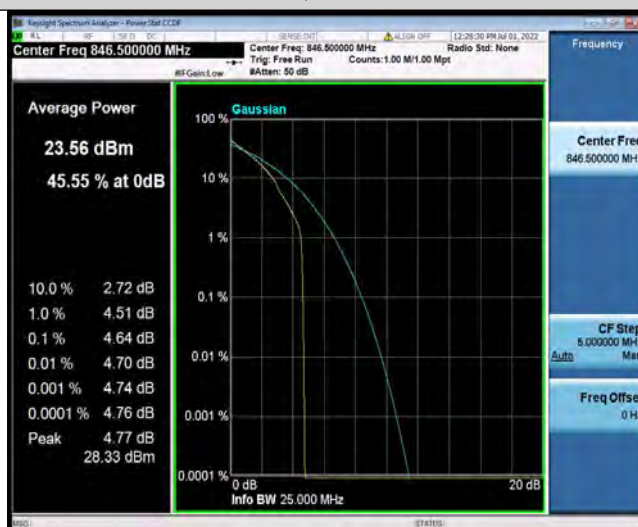
Band5-5MHz-QPSK-20525-1RB#0



Band5-5MHz-QPSK-20525-25RB#0



Band5-5MHz-QPSK-20625-1RB#0



Band5-5MHz-QPSK-20625-25RB#0



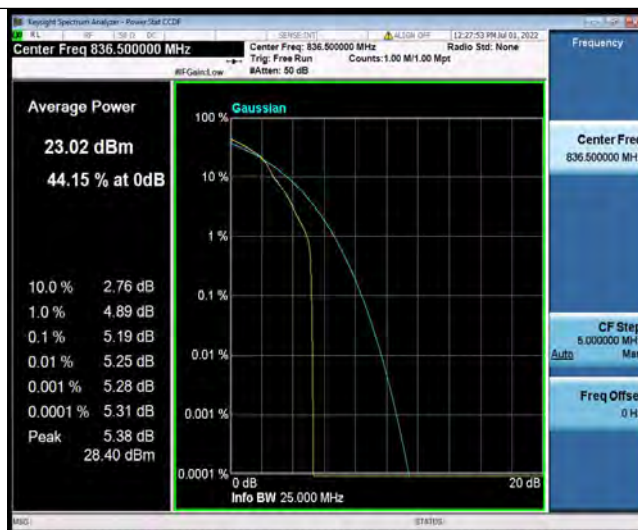
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Band5-5MHz-16QAM-20425-25RB#0



Band5-5MHz-16QAM-20525-1RB#0



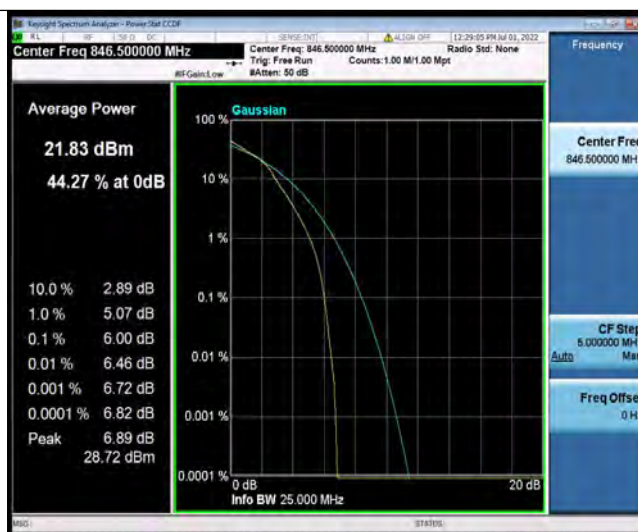
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Band5-5MHz-16QAM-20625-1RB#0



Band5-5MHz-16QAM-20625-25RB#0



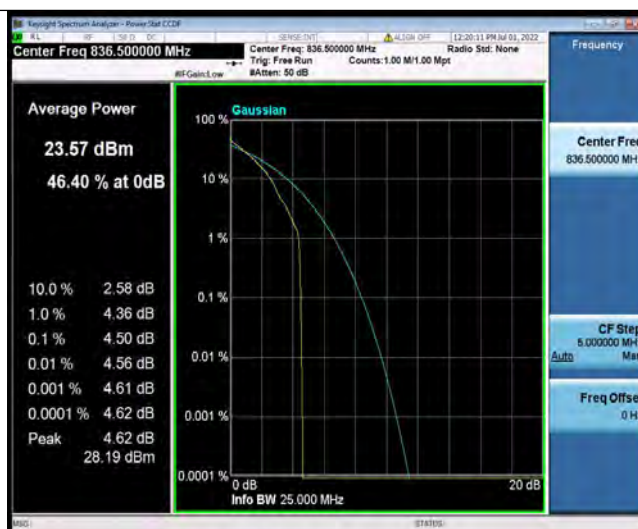
Band5-10MHz-QPSK-20450-1RB#0



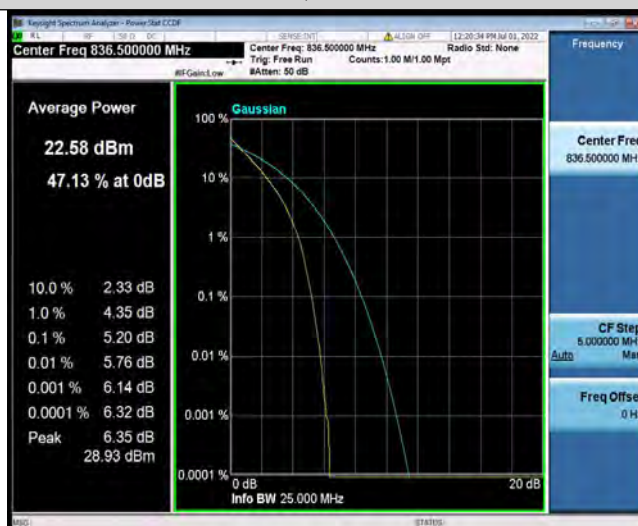
Band5-10MHz-QPSK-20450-50RB#0



Band5-10MHz-QPSK-20525-1RB#0



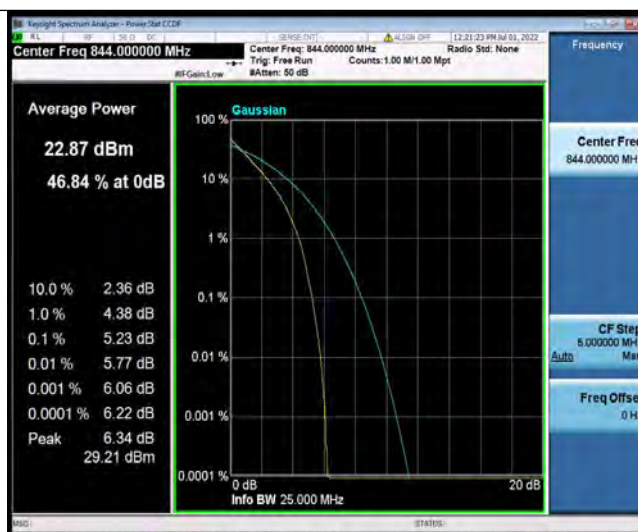
Band5-10MHz-QPSK-20525-50RB#0



Band5-10MHz-QPSK-20600-1RB#0



Band5-10MHz-QPSK-20600-50RB#0



Band5-10MHz-16QAM-20450-1RB#0



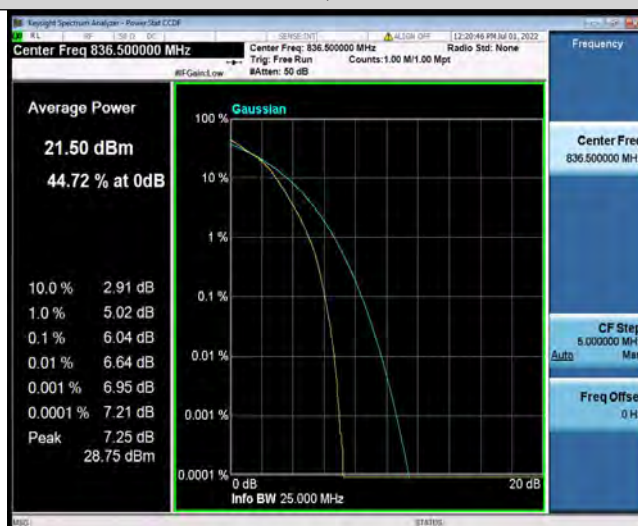
Band5-10MHz-16QAM-20450-50RB#0



Band5-10MHz-16QAM-20525-1RB#0



Band5-10MHz-16QAM-20525-50RB#0



Band5-10MHz-16QAM-20600-1RB#0



Band5-10MHz-16QAM-20600-50RB#0





Test Report No.: PSU-QSU2206080111RF01

26DB BANDWIDTH AND OCCUPIED BANDWIDTH

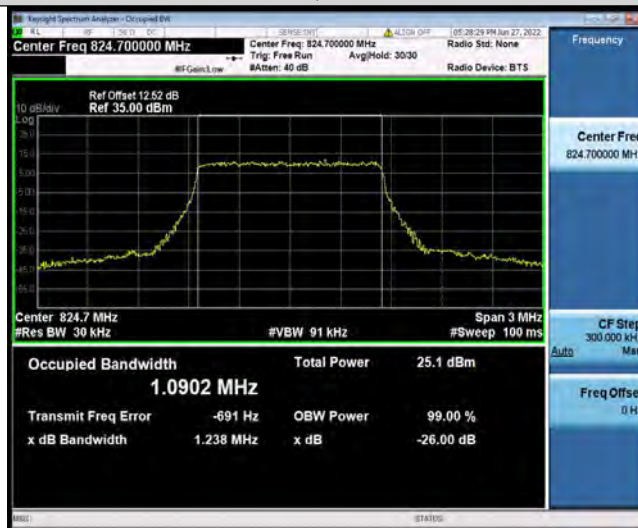
Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band5	1.4MHz	QPSK	20407	6RB#0	1.0902	1.238	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	1.0936	1.248	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	1.0882	1.278	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	1.0910	1.263	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	1.0907	1.266	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	1.0896	1.234	PASS
Band5	3MHz	QPSK	20415	15RB#0	2.6875	2.885	PASS
Band5	3MHz	QPSK	20525	15RB#0	2.7002	2.925	PASS
Band5	3MHz	QPSK	20635	15RB#0	2.7001	2.914	PASS
Band5	3MHz	16QAM	20415	15RB#0	2.6921	2.905	PASS
Band5	3MHz	16QAM	20525	15RB#0	2.6935	2.906	PASS
Band5	3MHz	16QAM	20635	15RB#0	2.6965	2.919	PASS
Band5	5MHz	QPSK	20425	25RB#0	4.5023	4.900	PASS
Band5	5MHz	QPSK	20525	25RB#0	4.4958	4.887	PASS
Band5	5MHz	QPSK	20625	25RB#0	4.5023	4.820	PASS
Band5	5MHz	16QAM	20425	25RB#0	4.5009	4.857	PASS
Band5	5MHz	16QAM	20525	25RB#0	4.4984	4.887	PASS
Band5	5MHz	16QAM	20625	25RB#0	4.5097	4.862	PASS
Band5	10MHz	QPSK	20450	50RB#0	8.9744	9.558	PASS
Band5	10MHz	QPSK	20525	50RB#0	8.9580	9.524	PASS
Band5	10MHz	QPSK	20600	50RB#0	8.9524	9.529	PASS
Band5	10MHz	16QAM	20450	50RB#0	8.9620	9.526	PASS
Band5	10MHz	16QAM	20525	50RB#0	8.9545	9.537	PASS
Band5	10MHz	16QAM	20600	50RB#0	8.9491	9.530	PASS



Test Graphs

Band5-1.4MHz-QPSK-20407-6RB#0



Band5-1.4MHz-QPSK-20525-6RB#0



Band5-1.4MHz-QPSK-20643-6RB#0



Band5-1.4MHz-16QAM-20407-6RB#0



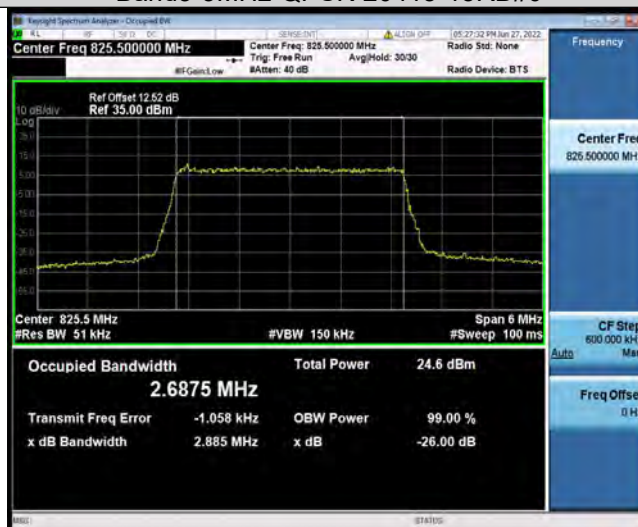
Band5-1.4MHz-16QAM-20525-6RB#0



Band5-1.4MHz-16QAM-20643-6RB#0



Band5-3MHz-QPSK-20415-15RB#0



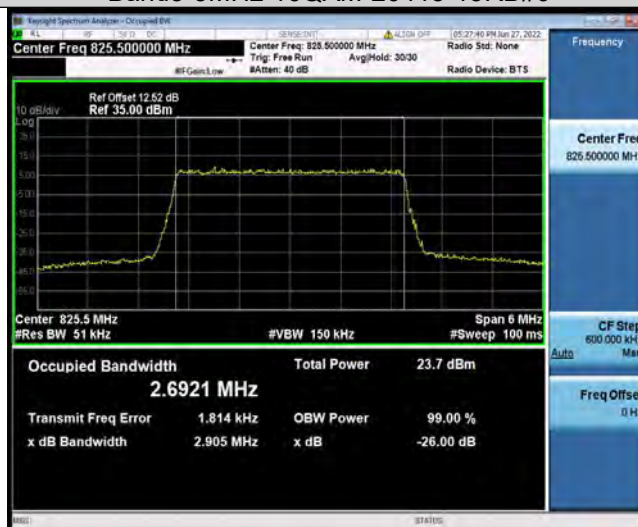
Band5-3MHz-QPSK-20525-15RB#0



Band5-3MHz-QPSK-20635-15RB#0



Band5-3MHz-16QAM-20415-15RB#0



Band5-3MHz-16QAM-20525-15RB#0



Band5-3MHz-16QAM-20635-15RB#0



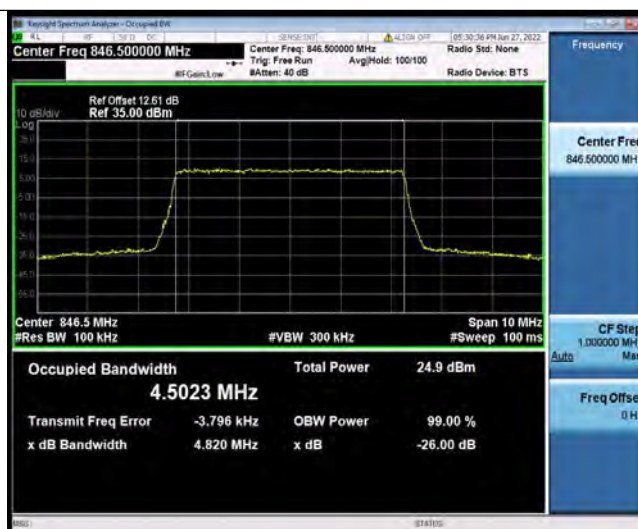
Band5-5MHz-QPSK-20425-25RB#0



Band5-5MHz-QPSK-20525-25RB#0



Band5-5MHz-QPSK-20625-25RB#0



Band5-5MHz-16QAM-20425-25RB#0



Band5-5MHz-16QAM-20525-25RB#0



Band5-5MHz-16QAM-20625-25RB#0



Band5-10MHz-QPSK-20450-50RB#0



Band5-10MHz-QPSK-20525-50RB#0



Band5-10MHz-QPSK-20600-50RB#0



Band5-10MHz-16QAM-20450-50RB#0



Band5-10MHz-16QAM-20525-50RB#0



Band5-10MHz-16QAM-20600-50RB#0



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BAND EDGE

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band5	1.4MHz	QPSK	20407	1RB#0	-27.38	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	-29.44	PASS
Band5	1.4MHz	QPSK	20643	1RB#5	-25.81	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	-26.81	PASS
Band5	1.4MHz	16QAM	20407	1RB#0	-28.89	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	-30.26	PASS
Band5	1.4MHz	16QAM	20643	1RB#5	-28.77	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	-28.01	PASS
Band5	3MHz	QPSK	20415	1RB#0	-26.77	PASS
Band5	3MHz	QPSK	20415	15RB#0	-25.20	PASS
Band5	3MHz	QPSK	20635	1RB#14	-26.21	PASS
Band5	3MHz	QPSK	20635	15RB#0	-26.11	PASS
Band5	3MHz	16QAM	20415	1RB#0	-28.24	PASS
Band5	3MHz	16QAM	20415	15RB#0	-26.52	PASS
Band5	3MHz	16QAM	20635	1RB#14	-27.37	PASS
Band5	3MHz	16QAM	20635	15RB#0	-26.98	PASS
Band5	5MHz	QPSK	20425	1RB#0	-29.99	PASS
Band5	5MHz	QPSK	20425	25RB#0	-26.15	PASS
Band5	5MHz	QPSK	20625	1RB#24	-28.24	PASS
Band5	5MHz	QPSK	20625	25RB#0	-25.88	PASS
Band5	5MHz	16QAM	20425	1RB#0	-30.91	PASS
Band5	5MHz	16QAM	20425	25RB#0	-26.51	PASS
Band5	5MHz	16QAM	20625	1RB#24	-30.87	PASS
Band5	5MHz	16QAM	20625	25RB#0	-25.97	PASS
Band5	10MHz	QPSK	20450	1RB#0	-45.20	PASS
Band5	10MHz	QPSK	20450	50RB#0	-29.01	PASS
Band5	10MHz	QPSK	20600	1RB#49	-44.56	PASS
Band5	10MHz	QPSK	20600	50RB#0	-28.90	PASS
Band5	10MHz	16QAM	20450	1RB#0	-44.84	PASS
Band5	10MHz	16QAM	20450	50RB#0	-31.03	PASS
Band5	10MHz	16QAM	20600	1RB#49	-42.91	PASS
Band5	10MHz	16QAM	20600	50RB#0	-30.61	PASS

Test Graphs

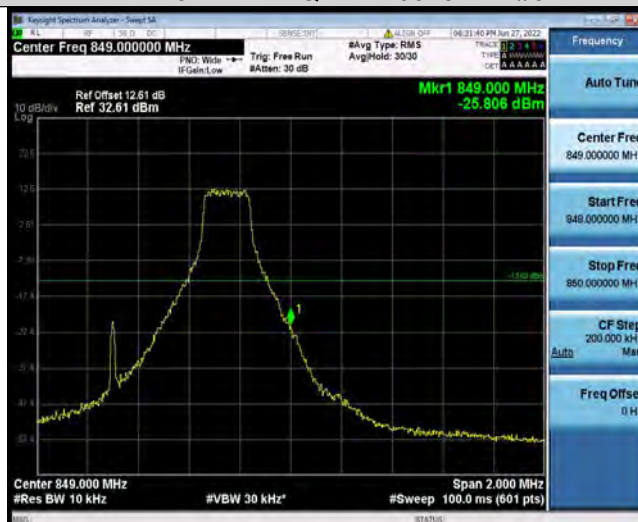
Band5-1.4MHz-QPSK-20407-1RB#0



Band5-1.4MHz-QPSK-20407-6RB#0



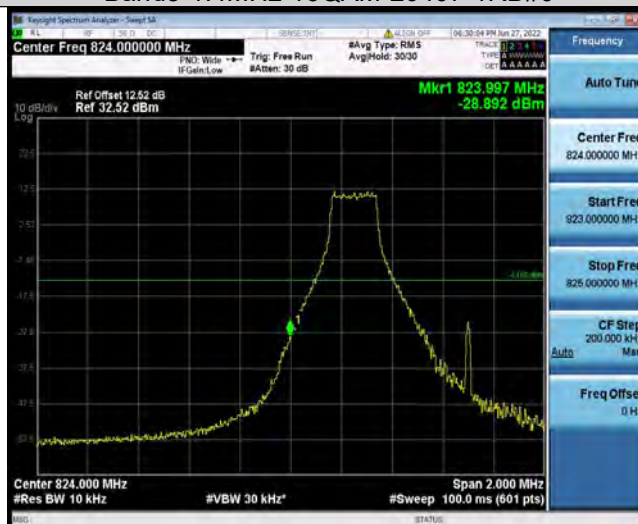
Band5-1.4MHz-QPSK-20643-1RB#5



Band5-1.4MHz-QPSK-20643-6RB#0



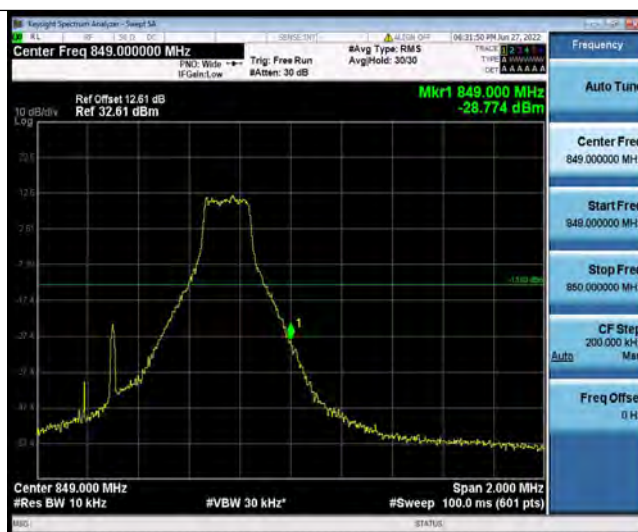
Band5-1.4MHz-16QAM-20407-1RB#0



Band5-1.4MHz-16QAM-20407-6RB#0



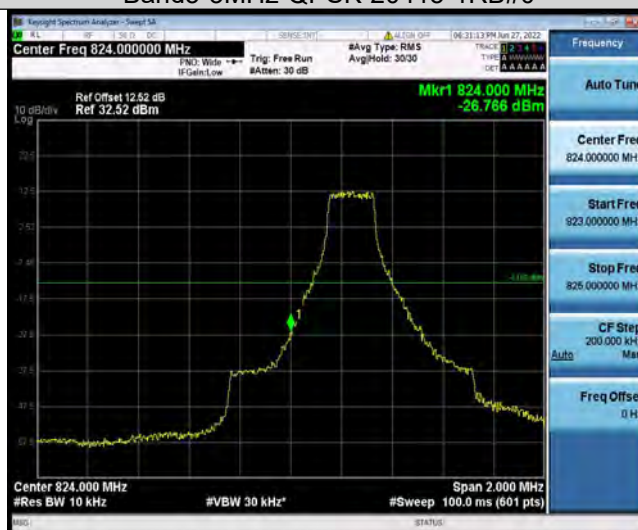
Band5-1.4MHz-16QAM-20643-1RB#5



Band5-1.4MHz-16QAM-20643-6RB#0



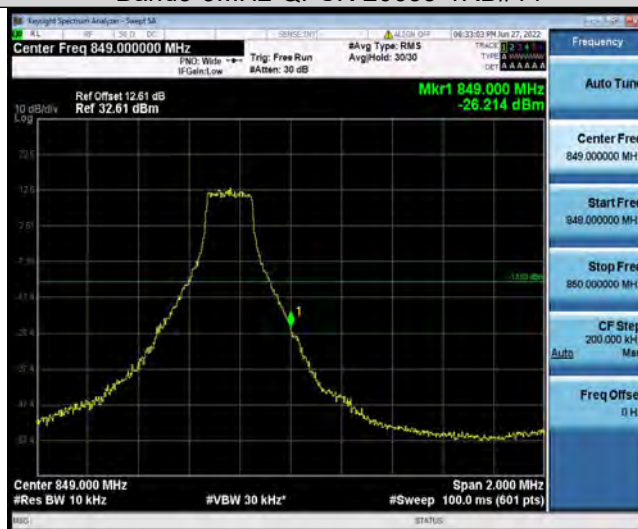
Band5-3MHz-QPSK-20415-1RB#0



Band5-3MHz-QPSK-20415-15RB#0



Band5-3MHz-QPSK-20635-1RB#14



Band5-3MHz-QPSK-20635-15RB#0



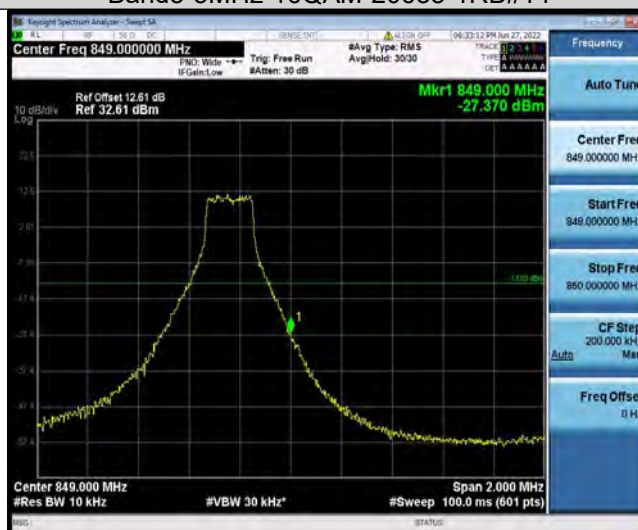
Band5-3MHz-16QAM-20415-1RB#0



Band5-3MHz-16QAM-20415-15RB#0



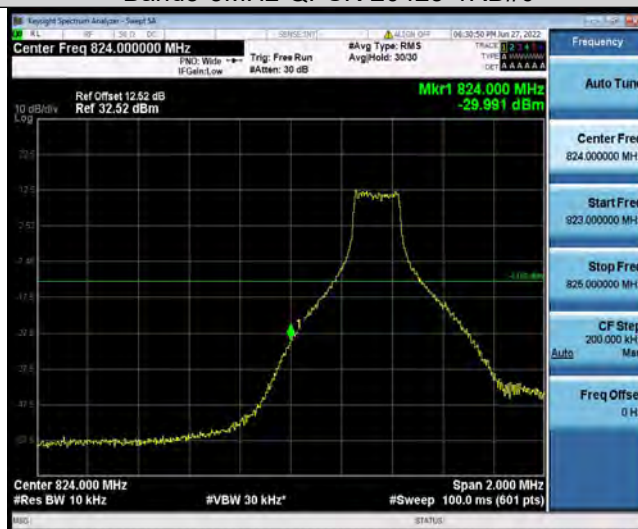
Band5-3MHz-16QAM-20635-1RB#14



Band5-3MHz-16QAM-20635-15RB#0



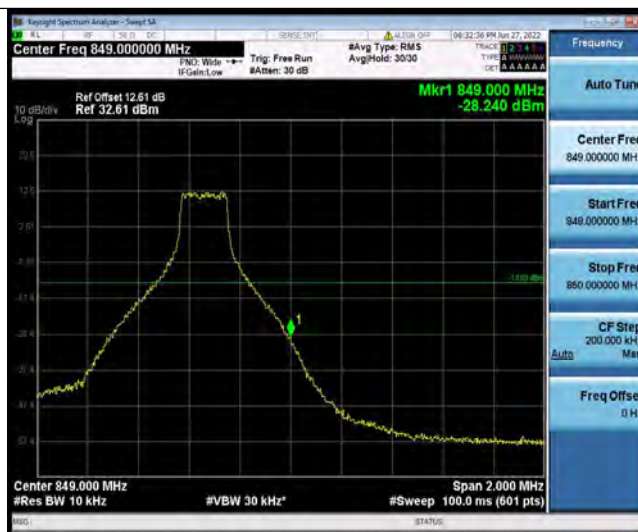
Band5-5MHz-QPSK-20425-1RB#0



Band5-5MHz-QPSK-20425-25RB#0



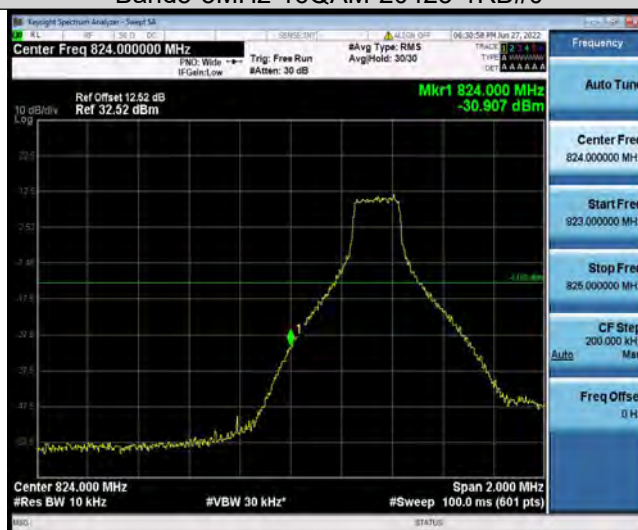
Band5-5MHz-QPSK-20625-1RB#24



Band5-5MHz-QPSK-20625-25RB#0



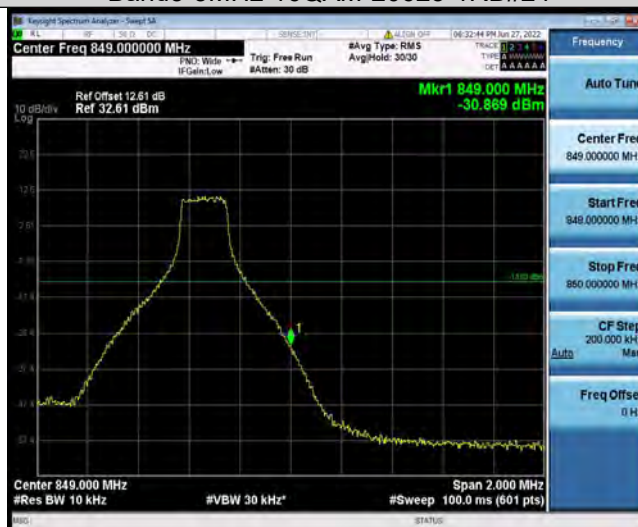
Band5-5MHz-16QAM-20425-1RB#0



Band5-5MHz-16QAM-20425-25RB#0



Band5-5MHz-16QAM-20625-1RB#24



Band5-5MHz-16QAM-20625-25RB#0



Band5-10MHz-QPSK-20450-1RB#0



Band5-10MHz-QPSK-20450-50RB#0



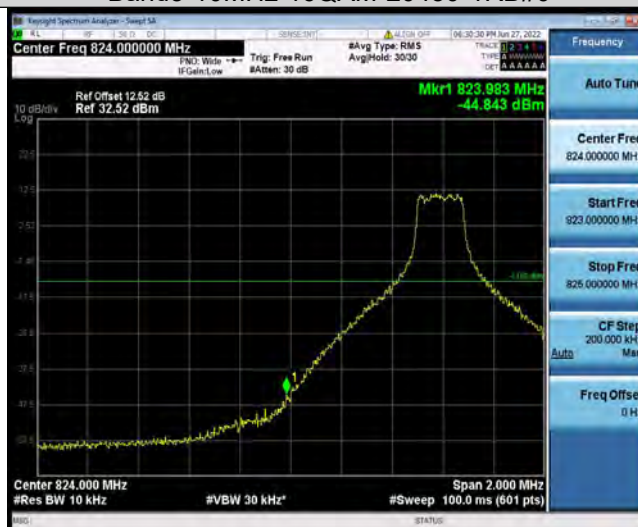
Band5-10MHz-QPSK-20600-1RB#49



Band5-10MHz-QPSK-20600-50RB#0



Band5-10MHz-16QAM-20450-1RB#0



Band5-10MHz-16QAM-20450-50RB#0



Band5-10MHz-16QAM-20600-1RB#49



Band5-10MHz-16QAM-20600-50RB#0





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Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Frequency Range	Result (dBm)	Verdict
Band5	1.4MHz	QPSK	20407	1RB#0	Range1:30~1000MHz	-40.42	PASS
Band5	1.4MHz	QPSK	20407	1RB#0	Range2:1000~10000MHz	-33.63	PASS
Band5	1.4MHz	QPSK	20525	1RB#0	Range1:30~1000MHz	-39.7	PASS
Band5	1.4MHz	QPSK	20525	1RB#0	Range2:1000~10000MHz	-33.49	PASS
Band5	1.4MHz	QPSK	20643	1RB#0	Range1:30~1000MHz	-40.14	PASS
Band5	1.4MHz	QPSK	20643	1RB#0	Range2:1000~10000MHz	-33.91	PASS
Band5	1.4MHz	16QAM	20407	1RB#0	Range1:30~1000MHz	-39.17	PASS
Band5	1.4MHz	16QAM	20407	1RB#0	Range2:1000~10000MHz	-34.01	PASS
Band5	1.4MHz	16QAM	20525	1RB#0	Range1:30~1000MHz	-40.07	PASS
Band5	1.4MHz	16QAM	20525	1RB#0	Range2:1000~10000MHz	-34.3	PASS
Band5	1.4MHz	16QAM	20643	1RB#0	Range1:30~1000MHz	-39.17	PASS
Band5	1.4MHz	16QAM	20643	1RB#0	Range2:1000~10000MHz	-32.75	PASS
Band5	3MHz	QPSK	20415	1RB#0	Range1:30~1000MHz	-40.11	PASS
Band5	3MHz	QPSK	20415	1RB#0	Range2:1000~10000MHz	-34.1	PASS
Band5	3MHz	QPSK	20525	1RB#0	Range1:30~1000MHz	-39.72	PASS
Band5	3MHz	QPSK	20525	1RB#0	Range2:1000~10000MHz	-34.44	PASS
Band5	3MHz	QPSK	20635	1RB#0	Range1:30~1000MHz	-39.44	PASS
Band5	3MHz	QPSK	20635	1RB#0	Range2:1000~10000MHz	-34.39	PASS
Band5	3MHz	16QAM	20415	1RB#0	Range1:30~1000MHz	-39.85	PASS
Band5	3MHz	16QAM	20415	1RB#0	Range2:1000~10000MHz	-33.71	PASS
Band5	3MHz	16QAM	20525	1RB#0	Range1:30~1000MHz	-40.23	PASS
Band5	3MHz	16QAM	20525	1RB#0	Range2:1000~10000MHz	-33.62	PASS
Band5	3MHz	16QAM	20635	1RB#0	Range1:30~1000MHz	-40.65	PASS
Band5	3MHz	16QAM	20635	1RB#0	Range2:1000~10000MHz	-33.36	PASS
Band5	5MHz	QPSK	20425	1RB#0	Range1:30~1000MHz	-39.64	PASS
Band5	5MHz	QPSK	20425	1RB#0	Range2:1000~10000MHz	-34.04	PASS
Band5	5MHz	QPSK	20525	1RB#0	Range1:30~1000MHz	-39.18	PASS
Band5	5MHz	QPSK	20525	1RB#0	Range2:1000~10000MHz	-34.67	PASS
Band5	5MHz	QPSK	20625	1RB#0	Range1:30~1000MHz	-39.82	PASS
Band5	5MHz	QPSK	20625	1RB#0	Range2:1000~10000MHz	-34.15	PASS
Band5	5MHz	16QAM	20425	1RB#0	Range1:30~1000MHz	-40.05	PASS
Band5	5MHz	16QAM	20425	1RB#0	Range2:1000~10000MHz	-34.6	PASS
Band5	5MHz	16QAM	20525	1RB#0	Range1:30~1000MHz	-39.56	PASS
Band5	5MHz	16QAM	20525	1RB#0	Range2:1000~10000MHz	-33.9	PASS
Band5	5MHz	16QAM	20625	1RB#0	Range1:30~1000MHz	-39.87	PASS
Band5	5MHz	16QAM	20625	1RB#0	Range2:1000~10000MHz	-34.85	PASS
Band5	10MHz	QPSK	20450	1RB#0	Range1:30~1000MHz	-39.35	PASS
Band5	10MHz	QPSK	20450	1RB#0	Range2:1000~10000MHz	-34.2	PASS
Band5	10MHz	QPSK	20525	1RB#0	Range1:30~1000MHz	-40.31	PASS
Band5	10MHz	QPSK	20525	1RB#0	Range2:1000~10000MHz	-34.3	PASS
Band5	10MHz	QPSK	20600	1RB#0	Range1:30~1000MHz	-40.33	PASS
Band5	10MHz	QPSK	20600	1RB#0	Range2:1000~10000MHz	-34.04	PASS
Band5	10MHz	16QAM	20450	1RB#0	Range1:30~1000MHz	-39.85	PASS
Band5	10MHz	16QAM	20450	1RB#0	Range2:1000~10000MHz	-34.45	PASS



Test Report No.: PSU-QSU2206080111RF01

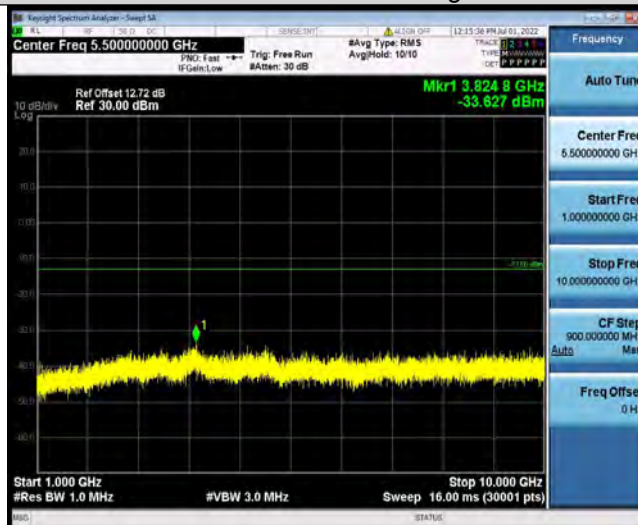
Band5	10MHz	16QAM	20525	1RB#0	Range1:30~1000MHz	-39.49	PASS
Band5	10MHz	16QAM	20525	1RB#0	Range2:1000~10000MHz	-33.64	PASS
Band5	10MHz	16QAM	20600	1RB#0	Range1:30~1000MHz	-40.14	PASS
Band5	10MHz	16QAM	20600	1RB#0	Range2:1000~10000MHz	-34.09	PASS

Test Graphs

Band5-1.4MHz-QPSK-20407-1RB#0-Range1:30~1000MHz



Band5-1.4MHz-QPSK-20407-1RB#0-Range2:1000~10000MHz



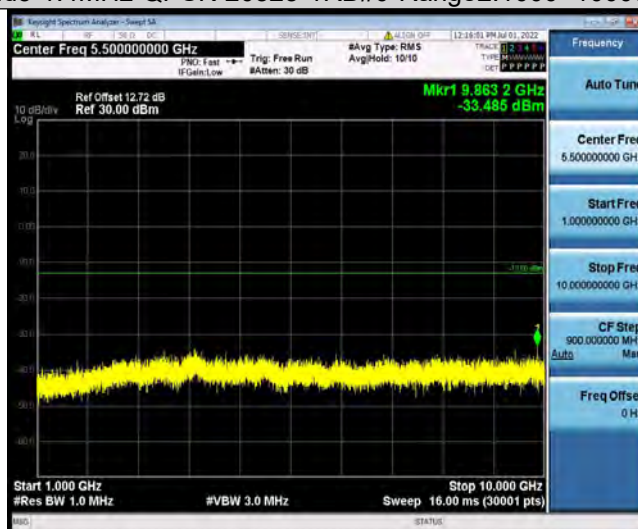
Band5-1.4MHz-QPSK-20525-1RB#0-Range1:30~1000MHz



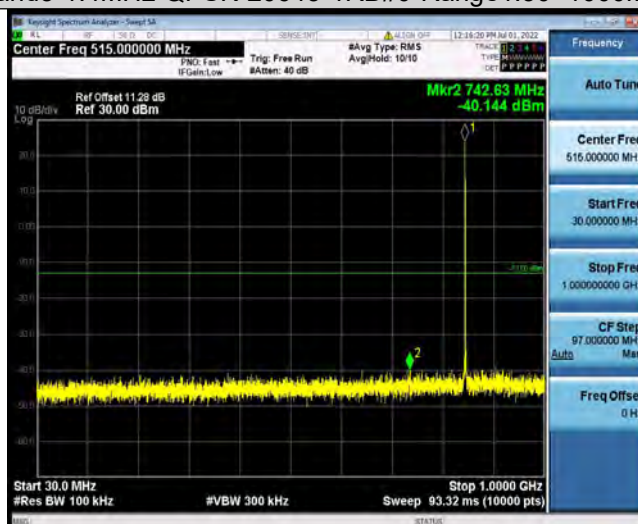


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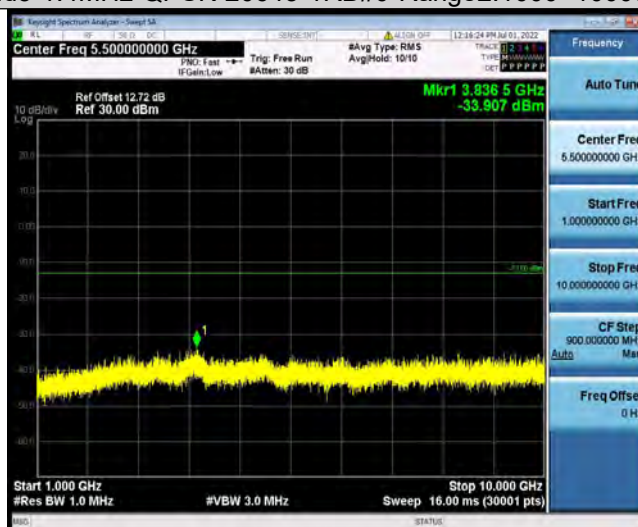
Band5-1.4MHz-QPSK-20525-1RB#0-Range2:1000~10000MHz



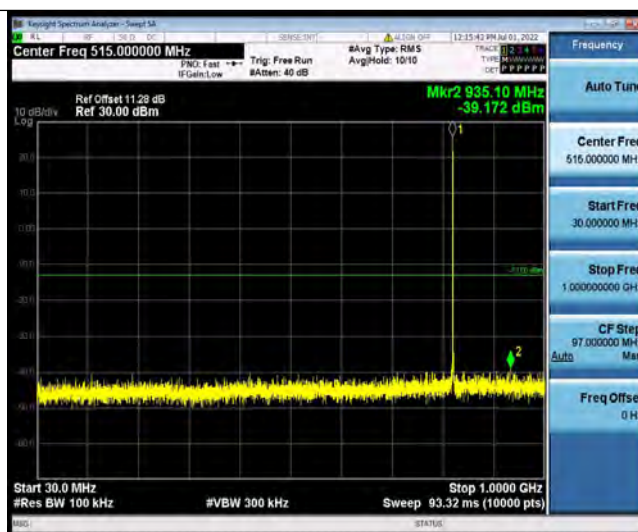
Band5-1.4MHz-QPSK-20643-1RB#0-Range1:30~1000MHz



Band5-1.4MHz-QPSK-20643-1RB#0-Range2:1000~10000MHz



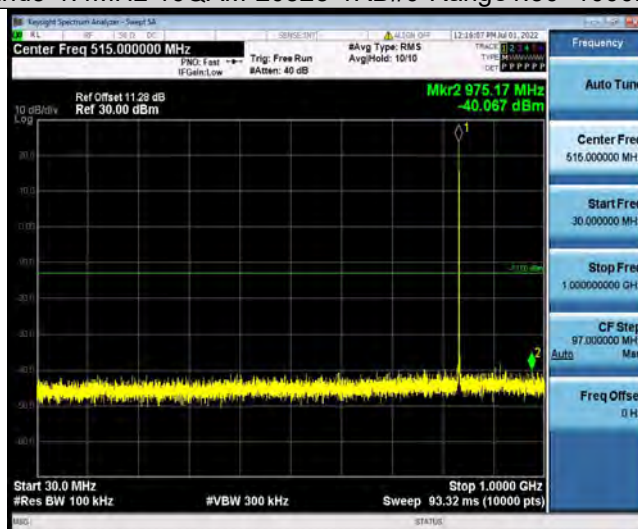
Band5-1.4MHz-16QAM-20407-1RB#0-Range1:30~1000MHz



Band5-1.4MHz-16QAM-20407-1RB#0-Range2:1000~10000MHz



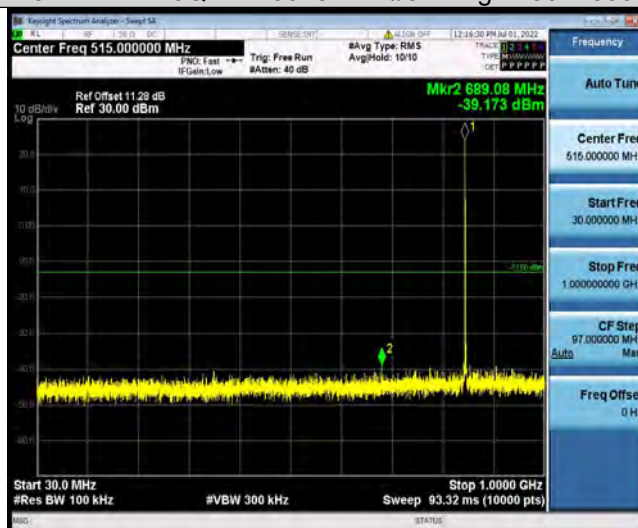
Band5-1.4MHz-16QAM-20525-1RB#0-Range1:30~1000MHz



Band5-1.4MHz-16QAM-20525-1RB#0-Range2:1000~10000MHz



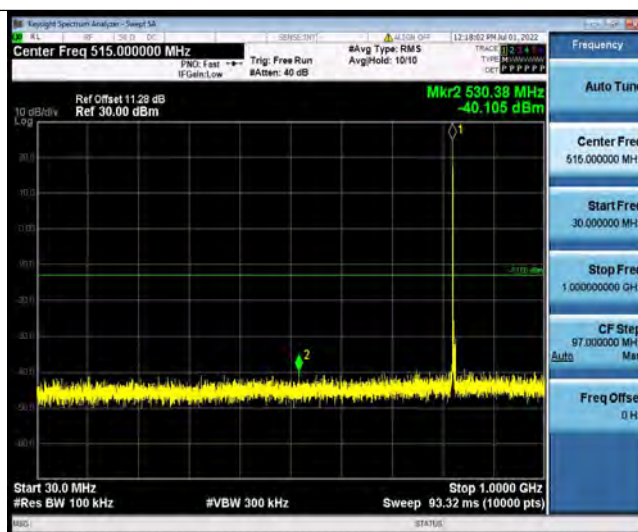
Band5-1.4MHz-16QAM-20643-1RB#0-Range1:30~1000MHz



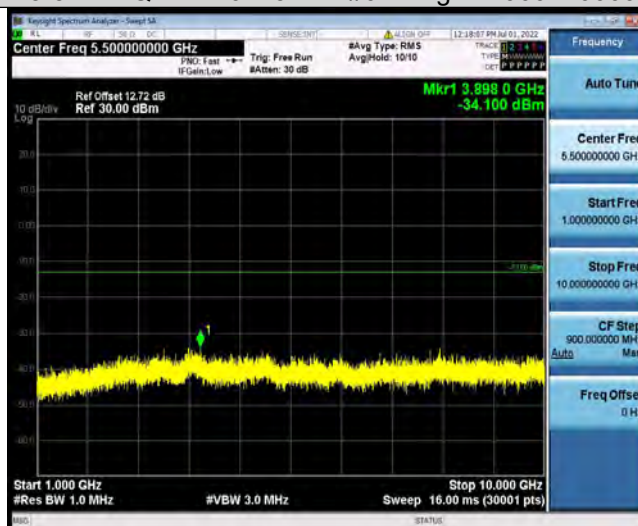
Band5-1.4MHz-16QAM-20643-1RB#0-Range2:1000~1000MHz



Band5-3MHz-QPSK-20415-1RB#0-Range1:30~1000MHz



Band5-3MHz-QPSK-20415-1RB#0-Range2:1000~10000MHz



Band5-3MHz-QPSK-20525-1RB#0-Range1:30~1000MHz



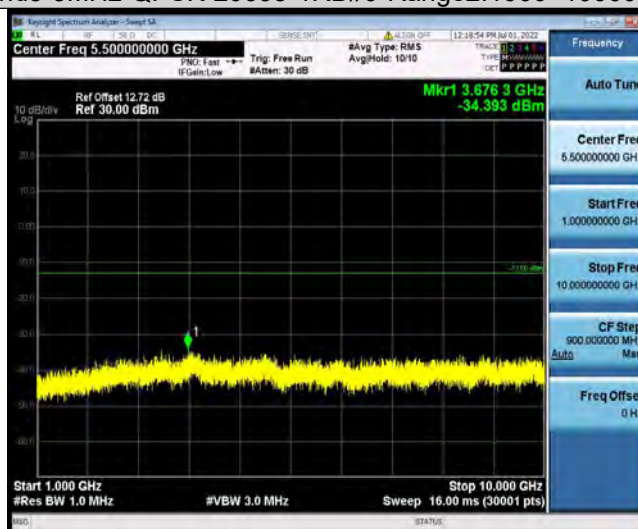
Band5-3MHz-QPSK-20525-1RB#0-Range2:1000~10000MHz



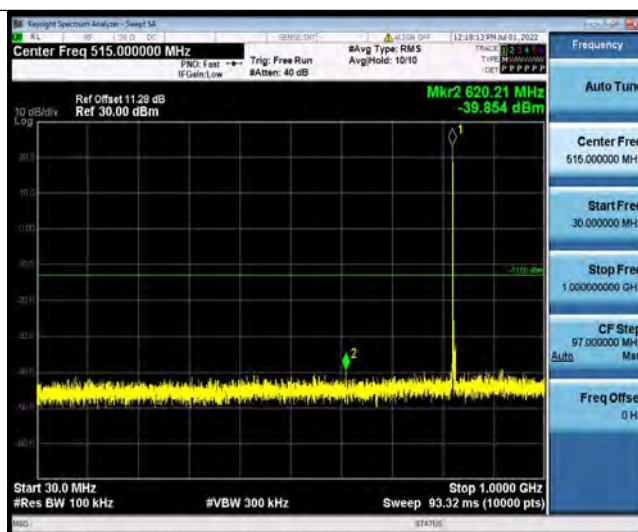
Band5-3MHz-QPSK-20635-1RB#0-Range1:30~1000MHz



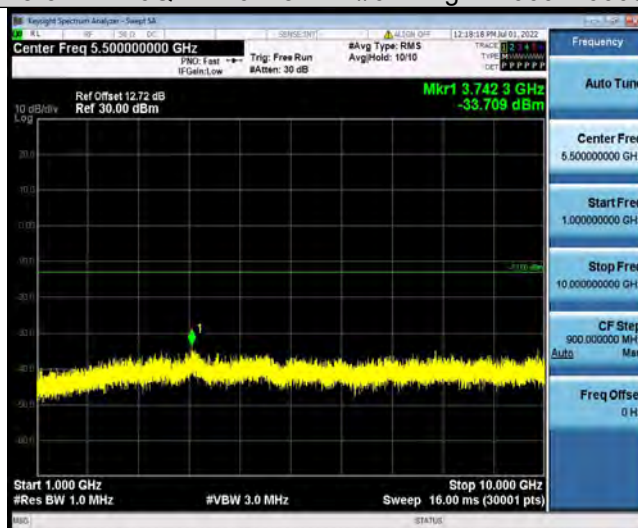
Band5-3MHz-QPSK-20635-1RB#0-Range2:1000~10000MHz



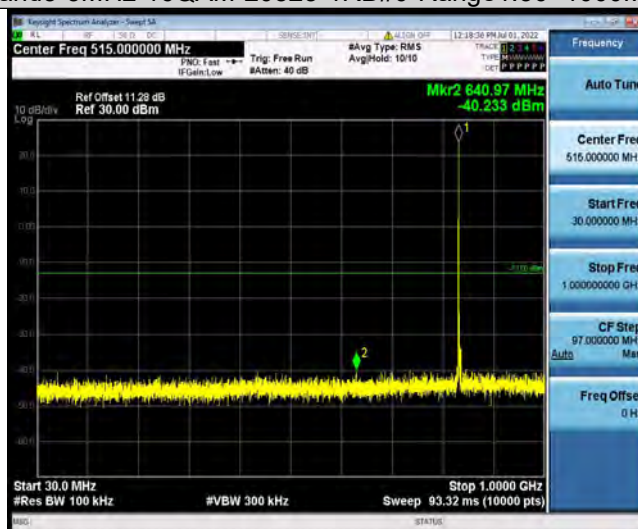
Band5-3MHz-16QAM-20415-1RB#0-Range1:30~1000MHz



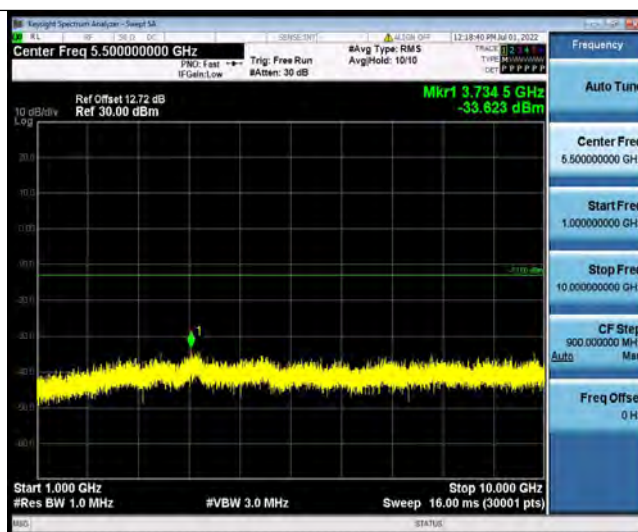
Band5-3MHz-16QAM-20415-1RB#0-Range2:1000~10000MHz



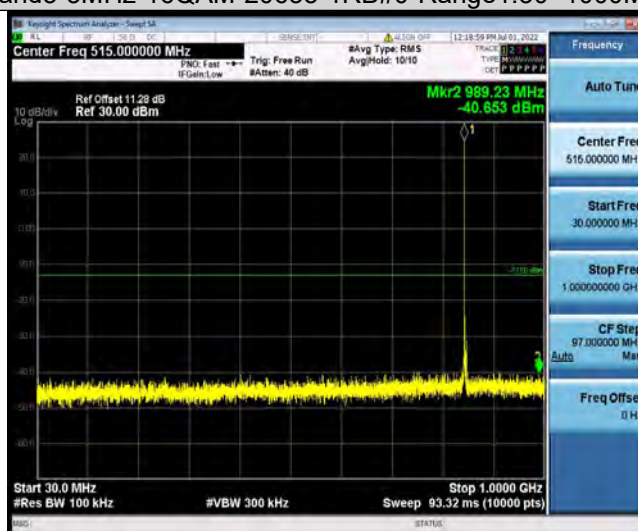
Band5-3MHz-16QAM-20525-1RB#0-Range1:30~1000MHz



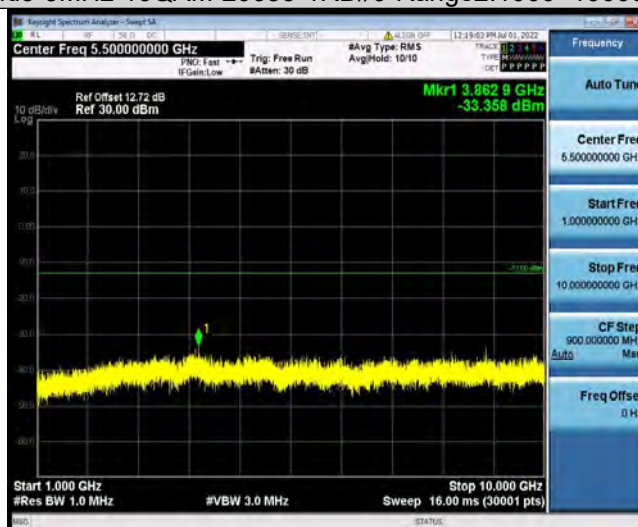
Band5-3MHz-16QAM-20525-1RB#0-Range2:1000~10000MHz



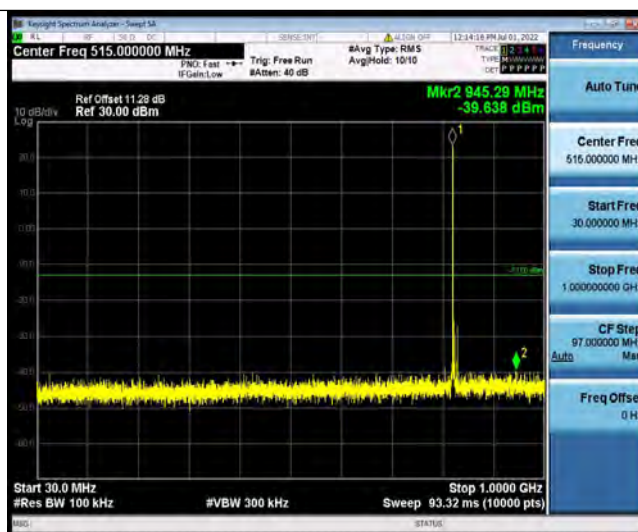
Band5-3MHz-16QAM-20635-1RB#0-Range1:30~1000MHz



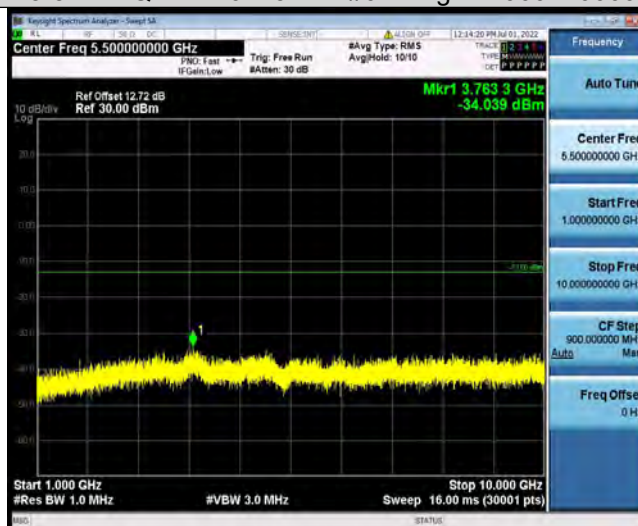
Band5-3MHz-16QAM-20635-1RB#0-Range2:1000~10000MHz



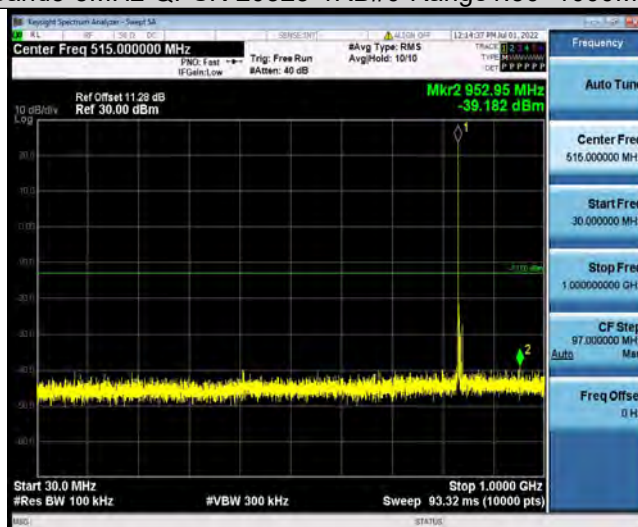
Band5-5MHz-QPSK-20425-1RB#0-Range1:30~1000MHz



Band5-5MHz-QPSK-20425-1RB#0-Range2:1000~10000MHz



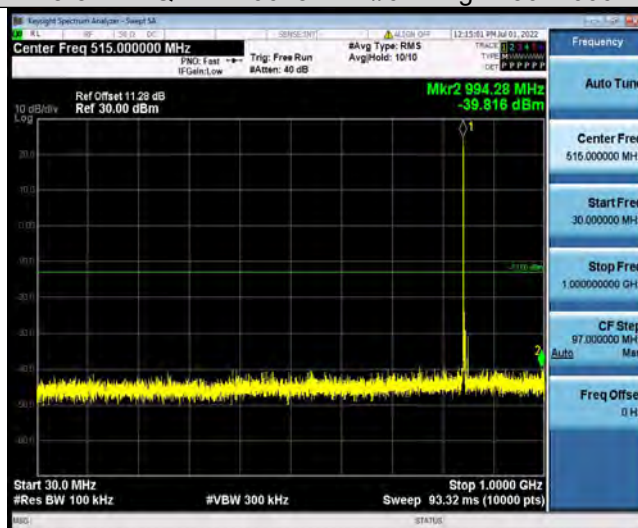
Band5-5MHz-QPSK-20525-1RB#0-Range1:30~1000MHz



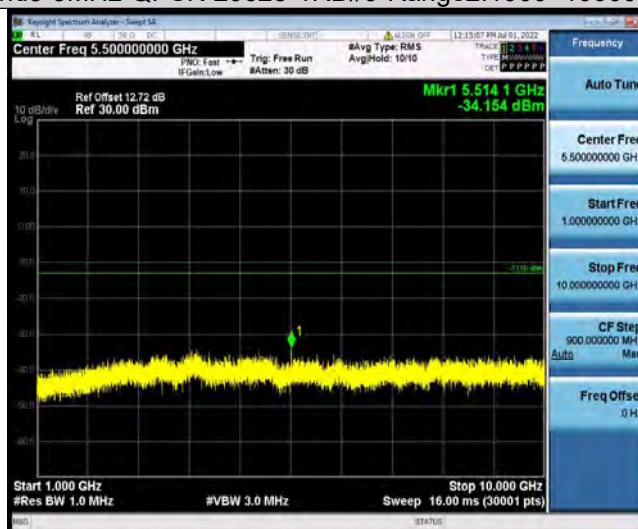
Band5-5MHz-QPSK-20525-1RB#0-Range2:1000~10000MHz



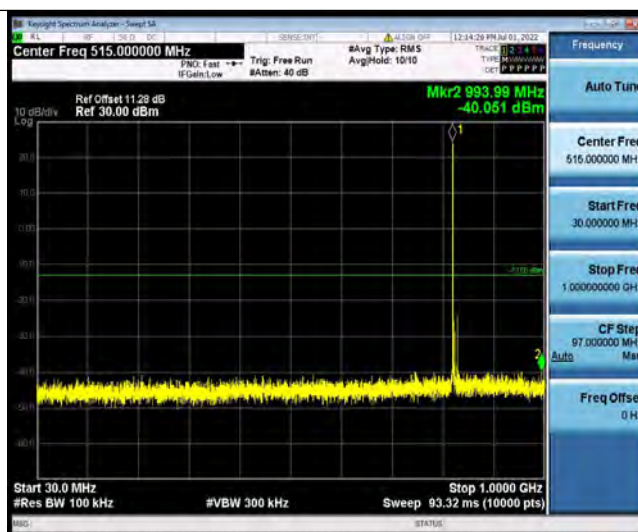
Band5-5MHz-QPSK-20625-1RB#0-Range1:30~1000MHz



Band5-5MHz-QPSK-20625-1RB#0-Range2:1000~10000MHz



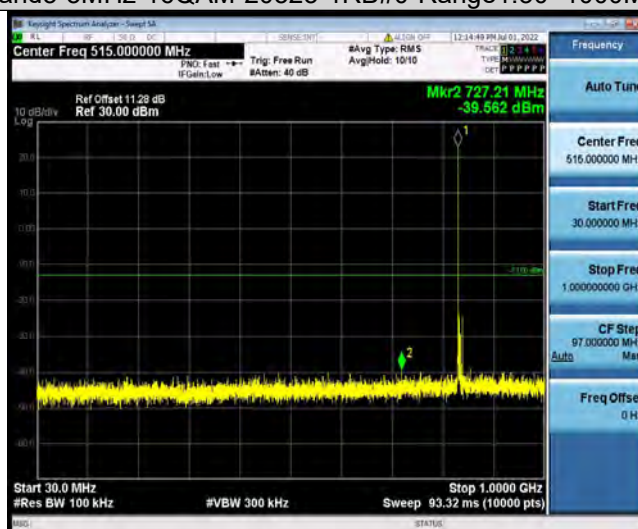
Band5-5MHz-16QAM-20425-1RB#0-Range1:30~1000MHz



Band5-5MHz-16QAM-20425-1RB#0-Range2:1000~10000MHz



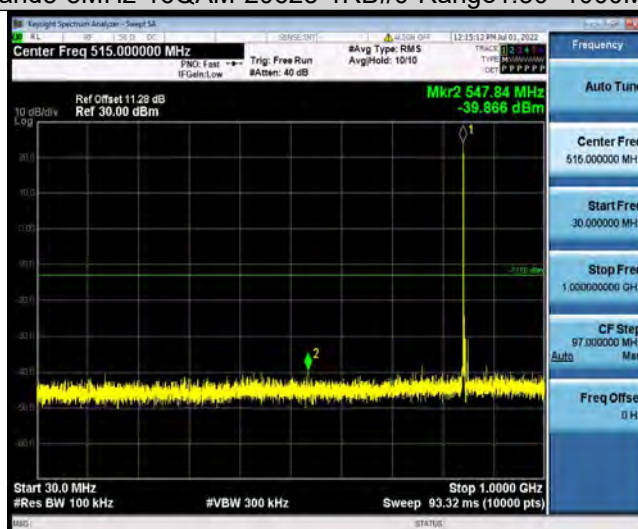
Band5-5MHz-16QAM-20525-1RB#0-Range1:30~1000MHz



Band5-5MHz-16QAM-20525-1RB#0-Range2:1000~10000MHz



Band5-5MHz-16QAM-20625-1RB#0-Range1:30~1000MHz



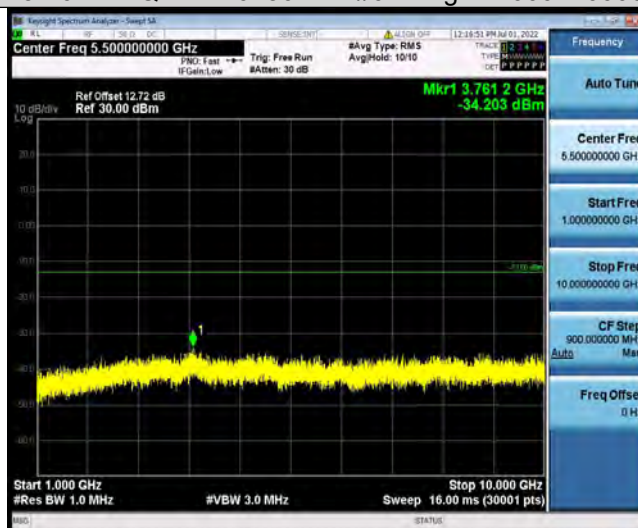
Band5-5MHz-16QAM-20625-1RB#0-Range2:1000~10000MHz



Band5-10MHz-QPSK-20450-1RB#0-Range1:30~1000MHz



Band5-10MHz-QPSK-20450-1RB#0-Range2:1000~10000MHz



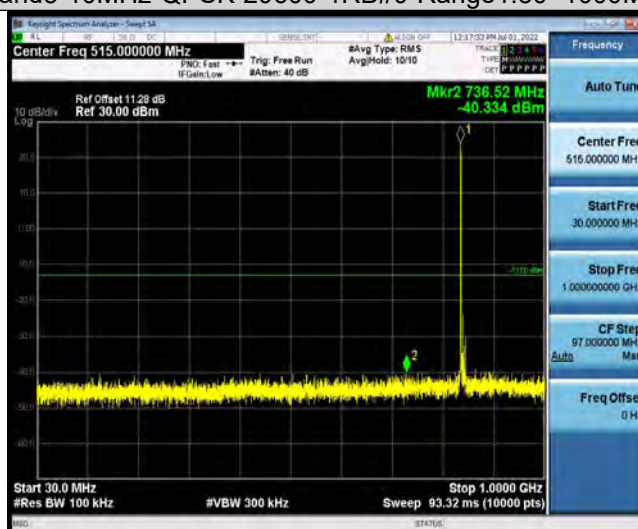
Band5-10MHz-QPSK-20525-1RB#0-Range1:30~1000MHz



Band5-10MHz-QPSK-20525-1RB#0-Range2:1000~10000MHz



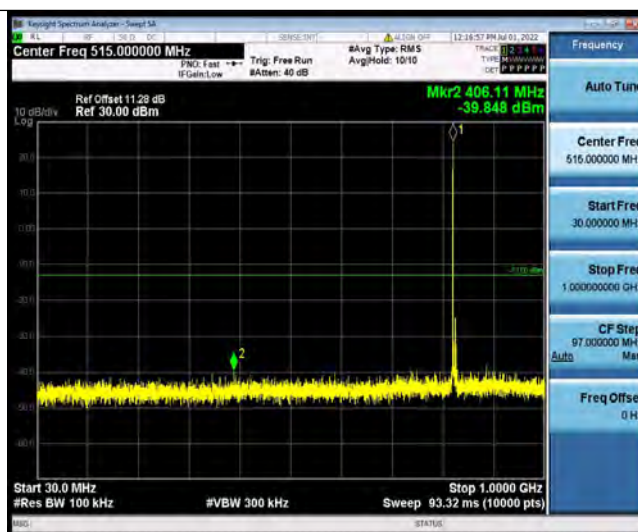
Band5-10MHz-QPSK-20600-1RB#0-Range1:30~1000MHz



Band5-10MHz-QPSK-20600-1RB#0-Range2:1000~10000MHz



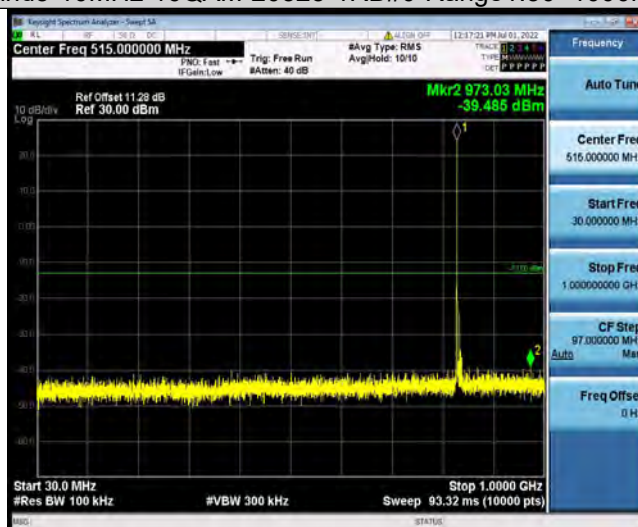
Band5-10MHz-16QAM-20450-1RB#0-Range1:30~1000MHz



Band5-10MHz-16QAM-20450-1RB#0-Range2:1000~10000MHz



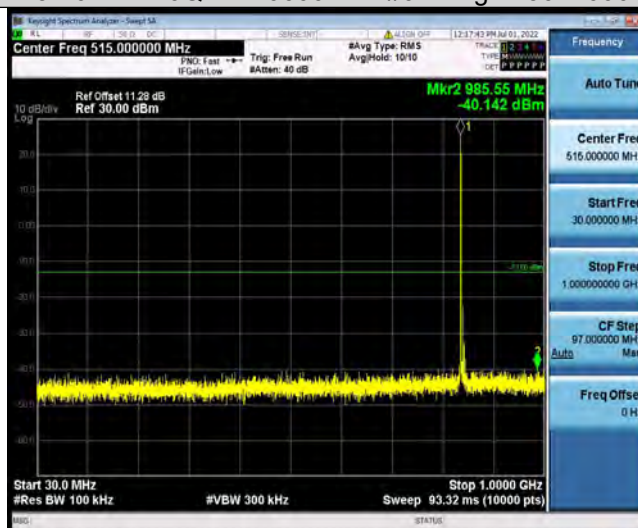
Band5-10MHz-16QAM-20525-1RB#0-Range1:30~1000MHz



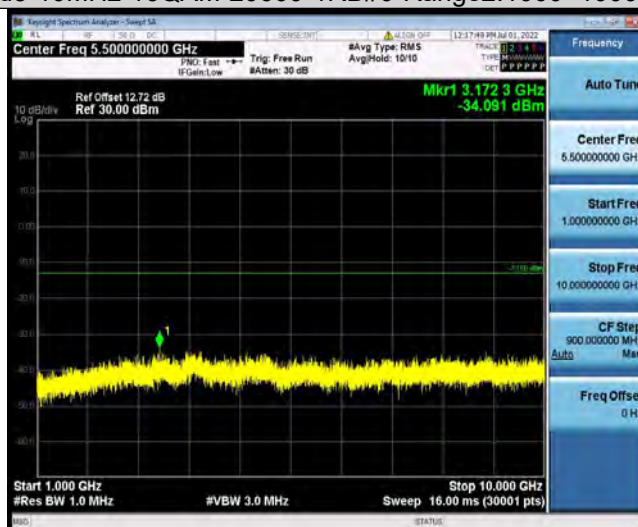
Band5-10MHz-16QAM-20525-1RB#0-Range2:1000~10000MHz



Band5-10MHz-16QAM-20600-1RB#0-Range1:30~1000MHz



Band5-10MHz-16QAM-20600-1RB#0-Range2:1000~10000MHz





FREQUENCY STABILITY

Test Result

Voltage										
Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band5	1.4MHz	QPSK	20407	6RB#0	VL	NT	-3.08	-0.003735	±2.5	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	VN	NT	-3.42	-0.004147	±2.5	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	VH	NT	-4.12	-0.004996	±2.5	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	VL	NT	-2.12	-0.002534	±2.5	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	VN	NT	-2.16	-0.002582	±2.5	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	VH	NT	-3.20	-0.003825	±2.5	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	VL	NT	2.73	0.003218	±2.5	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	VN	NT	-1.46	-0.001721	±2.5	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	VH	NT	2.45	0.002888	±2.5	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	VL	NT	-3.65	-0.004426	±2.5	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	VN	NT	-3.38	-0.004098	±2.5	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	VH	NT	-2.76	-0.003347	±2.5	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	VL	NT	-2.23	-0.002666	±2.5	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	VN	NT	-2.55	-0.003048	±2.5	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	VH	NT	-2.62	-0.003132	±2.5	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	VL	NT	1.73	0.002039	±2.5	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	VN	NT	-1.76	-0.002075	±2.5	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	VH	NT	-1.67	-0.001969	±2.5	PASS
Band5	3MHz	QPSK	20415	15RB#0	VL	NT	1.29	0.001563	±2.5	PASS
Band5	3MHz	QPSK	20415	15RB#0	VN	NT	-2.20	-0.002665	±2.5	PASS
Band5	3MHz	QPSK	20415	15RB#0	VH	NT	-1.50	-0.001817	±2.5	PASS
Band5	3MHz	QPSK	20525	15RB#0	VL	NT	-2.90	-0.003467	±2.5	PASS
Band5	3MHz	QPSK	20525	15RB#0	VN	NT	-3.71	-0.004435	±2.5	PASS
Band5	3MHz	QPSK	20525	15RB#0	VH	NT	-1.70	-0.002032	±2.5	PASS
Band5	3MHz	QPSK	20635	15RB#0	VL	NT	-1.14	-0.001345	±2.5	PASS
Band5	3MHz	QPSK	20635	15RB#0	VN	NT	-3.49	-0.004118	±2.5	PASS
Band5	3MHz	QPSK	20635	15RB#0	VH	NT	-2.05	-0.002419	±2.5	PASS
Band5	3MHz	16QAM	20415	15RB#0	VL	NT	-2.07	-0.002508	±2.5	PASS
Band5	3MHz	16QAM	20415	15RB#0	VN	NT	1.20	0.001454	±2.5	PASS
Band5	3MHz	16QAM	20415	15RB#0	VH	NT	-2.19	-0.002653	±2.5	PASS
Band5	3MHz	16QAM	20525	15RB#0	VL	NT	1.69	0.002020	±2.5	PASS
Band5	3MHz	16QAM	20525	15RB#0	VN	NT	-2.95	-0.003527	±2.5	PASS
Band5	3MHz	16QAM	20525	15RB#0	VH	NT	-2.37	-0.002833	±2.5	PASS
Band5	3MHz	16QAM	20635	15RB#0	VL	NT	-2.89	-0.003410	±2.5	PASS
Band5	3MHz	16QAM	20635	15RB#0	VN	NT	-3.53	-0.004165	±2.5	PASS
Band5	3MHz	16QAM	20635	15RB#0	VH	NT	-2.56	-0.003021	±2.5	PASS
Band5	5MHz	QPSK	20425	25RB#0	VL	NT	-1.90	-0.002299	±2.5	PASS
Band5	5MHz	QPSK	20425	25RB#0	VN	NT	-2.62	-0.003170	±2.5	PASS
Band5	5MHz	QPSK	20425	25RB#0	VH	NT	-3.65	-0.004416	±2.5	PASS
Band5	5MHz	QPSK	20525	25RB#0	VL	NT	-2.10	-0.002510	±2.5	PASS



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Band5	5MHz	QPSK	20525	25RB#0	VN	NT	-2.06	-0.002463	±2.5	PASS
Band5	5MHz	QPSK	20525	25RB#0	VH	NT	-1.54	-0.001841	±2.5	PASS
Band5	5MHz	QPSK	20625	25RB#0	VL	NT	-1.53	-0.001807	±2.5	PASS
Band5	5MHz	QPSK	20625	25RB#0	VN	NT	1.83	0.002162	±2.5	PASS
Band5	5MHz	QPSK	20625	25RB#0	VH	NT	-2.66	-0.003142	±2.5	PASS
Band5	5MHz	16QAM	20425	25RB#0	VL	NT	-3.39	-0.004102	±2.5	PASS
Band5	5MHz	16QAM	20425	25RB#0	VN	NT	-5.68	-0.006872	±2.5	PASS
Band5	5MHz	16QAM	20425	25RB#0	VH	NT	-2.65	-0.003206	±2.5	PASS
Band5	5MHz	16QAM	20525	25RB#0	VL	NT	3.38	0.004041	±2.5	PASS
Band5	5MHz	16QAM	20525	25RB#0	VN	NT	-1.86	-0.002224	±2.5	PASS
Band5	5MHz	16QAM	20525	25RB#0	VH	NT	-3.10	-0.003706	±2.5	PASS
Band5	5MHz	16QAM	20625	25RB#0	VL	NT	-2.52	-0.002977	±2.5	PASS
Band5	5MHz	16QAM	20625	25RB#0	VN	NT	-3.09	-0.003650	±2.5	PASS
Band5	5MHz	16QAM	20625	25RB#0	VH	NT	-1.77	-0.002091	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	VL	NT	-2.10	-0.002533	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	VN	NT	-3.72	-0.004487	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	VH	NT	-2.69	-0.003245	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	VL	NT	-2.42	-0.002893	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	VN	NT	-1.96	-0.002343	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	VH	NT	-1.96	-0.002343	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	VL	NT	-2.46	-0.002915	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	VN	NT	-2.16	-0.002559	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	VH	NT	-2.43	-0.002879	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	VL	NT	-2.33	-0.002811	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	VN	NT	-3.49	-0.004210	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	VH	NT	-2.79	-0.003366	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	VL	NT	-2.52	-0.003013	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	VN	NT	-2.96	-0.003539	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	VH	NT	-1.22	-0.001458	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	VL	NT	-2.47	-0.002927	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	VN	NT	-0.82	-0.000972	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	VH	NT	-1.52	-0.001801	±2.5	PASS

Temperature										
Band	Bandwidth	Modulation	Channel	RB Configuration	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band5	1.4MHz	QPSK	20407	6RB#0	NV	-30	-4.21	-0.005105	±2.5	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	NV	-20	-3.48	-0.004220	±2.5	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	NV	0	-4.88	-0.005917	±2.5	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	NV	10	-2.16	-0.002619	±2.5	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	NV	20	-2.59	-0.003141	±2.5	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	NV	30	-3.88	-0.004705	±2.5	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	NV	40	-4.09	-0.004959	±2.5	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	NV	50	-3.92	-0.004753	±2.5	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	NV	-30	-2.17	-0.002594	±2.5	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	NV	-20	-3.55	-0.004244	±2.5	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	NV	0	-2.83	-0.003383	±2.5	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	NV	10	-2.13	-0.002546	±2.5	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	NV	20	-4.42	-0.005284	±2.5	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	NV	30	2.22	0.002654	±2.5	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	NV	40	-3.08	-0.003682	±2.5	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	NV	50	1.77	0.002116	±2.5	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	NV	-30	2.62	0.003089	±2.5	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	NV	-20	-2.39	-0.002817	±2.5	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	NV	0	-1.73	-0.002039	±2.5	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	NV	10	-1.77	-0.002087	±2.5	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	NV	20	-1.24	-0.001462	±2.5	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	NV	30	2.57	0.003030	±2.5	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	NV	40	-1.87	-0.002204	±2.5	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	NV	50	-2.09	-0.002464	±2.5	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	NV	-30	-2.45	-0.002971	±2.5	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	NV	-20	-3.10	-0.003759	±2.5	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	NV	0	-2.23	-0.002704	±2.5	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	NV	10	-2.98	-0.003613	±2.5	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	NV	20	-3.19	-0.003868	±2.5	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	NV	30	-3.38	-0.004098	±2.5	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	NV	40	-3.63	-0.004402	±2.5	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	NV	50	-3.78	-0.004583	±2.5	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	NV	-30	-2.46	-0.002941	±2.5	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	NV	-20	-3.65	-0.004363	±2.5	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	NV	0	-2.82	-0.003371	±2.5	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	NV	10	1.95	0.002331	±2.5	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	NV	20	-2.49	-0.002977	±2.5	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	NV	30	-4.65	-0.005559	±2.5	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	NV	40	-4.66	-0.005571	±2.5	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	NV	50	-4.23	-0.005057	±2.5	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	NV	-30	-1.97	-0.002322	±2.5	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	NV	-20	-1.82	-0.002145	±2.5	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	NV	0	2.86	0.003371	±2.5	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	NV	10	-2.62	-0.003089	±2.5	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	NV	20	2.26	0.002664	±2.5	PASS



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Band5	1.4MHz	16QAM	20643	6RB#0	NV	30	1.60	0.001886	±2.5	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	NV	40	-1.43	-0.001686	±2.5	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	NV	50	-2.27	-0.002676	±2.5	PASS
Band5	3MHz	QPSK	20415	15RB#0	NV	-30	-2.95	-0.003574	±2.5	PASS
Band5	3MHz	QPSK	20415	15RB#0	NV	-20	1.89	0.002290	±2.5	PASS
Band5	3MHz	QPSK	20415	15RB#0	NV	0	-1.82	-0.002205	±2.5	PASS
Band5	3MHz	QPSK	20415	15RB#0	NV	10	2.03	0.002459	±2.5	PASS
Band5	3MHz	QPSK	20415	15RB#0	NV	20	-2.70	-0.003271	±2.5	PASS
Band5	3MHz	QPSK	20415	15RB#0	NV	30	1.85	0.002241	±2.5	PASS
Band5	3MHz	QPSK	20415	15RB#0	NV	40	-1.33	-0.001611	±2.5	PASS
Band5	3MHz	QPSK	20415	15RB#0	NV	50	-3.08	-0.003731	±2.5	PASS
Band5	3MHz	QPSK	20525	15RB#0	NV	-30	-2.33	-0.002785	±2.5	PASS
Band5	3MHz	QPSK	20525	15RB#0	NV	-20	-2.60	-0.003108	±2.5	PASS
Band5	3MHz	QPSK	20525	15RB#0	NV	0	-3.68	-0.004399	±2.5	PASS
Band5	3MHz	QPSK	20525	15RB#0	NV	10	-2.57	-0.003072	±2.5	PASS
Band5	3MHz	QPSK	20525	15RB#0	NV	20	-2.19	-0.002618	±2.5	PASS
Band5	3MHz	QPSK	20525	15RB#0	NV	30	-2.59	-0.003096	±2.5	PASS
Band5	3MHz	QPSK	20525	15RB#0	NV	40	-3.62	-0.004328	±2.5	PASS
Band5	3MHz	QPSK	20525	15RB#0	NV	50	-2.13	-0.002546	±2.5	PASS
Band5	3MHz	QPSK	20635	15RB#0	NV	-30	-3.65	-0.004307	±2.5	PASS
Band5	3MHz	QPSK	20635	15RB#0	NV	-20	-3.03	-0.003575	±2.5	PASS
Band5	3MHz	QPSK	20635	15RB#0	NV	0	-3.08	-0.003634	±2.5	PASS
Band5	3MHz	QPSK	20635	15RB#0	NV	10	-4.28	-0.005050	±2.5	PASS
Band5	3MHz	QPSK	20635	15RB#0	NV	20	-1.57	-0.001853	±2.5	PASS
Band5	3MHz	QPSK	20635	15RB#0	NV	30	-4.21	-0.004968	±2.5	PASS
Band5	3MHz	QPSK	20635	15RB#0	NV	40	-4.42	-0.005215	±2.5	PASS
Band5	3MHz	QPSK	20635	15RB#0	NV	50	-2.98	-0.003516	±2.5	PASS
Band5	3MHz	16QAM	20415	15RB#0	NV	-30	-2.09	-0.002532	±2.5	PASS
Band5	3MHz	16QAM	20415	15RB#0	NV	-20	1.59	0.001926	±2.5	PASS
Band5	3MHz	16QAM	20415	15RB#0	NV	0	2.43	0.002944	±2.5	PASS
Band5	3MHz	16QAM	20415	15RB#0	NV	10	-1.72	-0.002084	±2.5	PASS
Band5	3MHz	16QAM	20415	15RB#0	NV	20	1.73	0.002096	±2.5	PASS
Band5	3MHz	16QAM	20415	15RB#0	NV	30	-3.38	-0.004094	±2.5	PASS
Band5	3MHz	16QAM	20415	15RB#0	NV	40	-1.27	-0.001538	±2.5	PASS
Band5	3MHz	16QAM	20415	15RB#0	NV	50	-2.36	-0.002859	±2.5	PASS
Band5	3MHz	16QAM	20525	15RB#0	NV	-30	-1.66	-0.001984	±2.5	PASS
Band5	3MHz	16QAM	20525	15RB#0	NV	-20	-2.20	-0.002630	±2.5	PASS
Band5	3MHz	16QAM	20525	15RB#0	NV	0	-2.25	-0.002690	±2.5	PASS
Band5	3MHz	16QAM	20525	15RB#0	NV	10	-2.62	-0.003132	±2.5	PASS
Band5	3MHz	16QAM	20525	15RB#0	NV	20	-2.55	-0.003048	±2.5	PASS
Band5	3MHz	16QAM	20525	15RB#0	NV	30	-2.22	-0.002654	±2.5	PASS
Band5	3MHz	16QAM	20525	15RB#0	NV	40	-2.70	-0.003228	±2.5	PASS
Band5	3MHz	16QAM	20525	15RB#0	NV	50	-2.26	-0.002702	±2.5	PASS
Band5	3MHz	16QAM	20635	15RB#0	NV	-30	-1.96	-0.002313	±2.5	PASS
Band5	3MHz	16QAM	20635	15RB#0	NV	-20	-2.32	-0.002737	±2.5	PASS
Band5	3MHz	16QAM	20635	15RB#0	NV	0	-3.81	-0.004496	±2.5	PASS
Band5	3MHz	16QAM	20635	15RB#0	NV	10	-3.95	-0.004661	±2.5	PASS
Band5	3MHz	16QAM	20635	15RB#0	NV	20	-3.91	-0.004614	±2.5	PASS
Band5	3MHz	16QAM	20635	15RB#0	NV	30	-3.75	-0.004425	±2.5	PASS
Band5	3MHz	16QAM	20635	15RB#0	NV	40	-4.22	-0.004979	±2.5	PASS



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Band5	3MHz	16QAM	20635	15RB#0	NV	50	-1.69	-0.001994	±2.5	PASS
Band5	5MHz	QPSK	20425	25RB#0	NV	-30	-2.68	-0.003243	±2.5	PASS
Band5	5MHz	QPSK	20425	25RB#0	NV	-20	-2.27	-0.002747	±2.5	PASS
Band5	5MHz	QPSK	20425	25RB#0	NV	0	-1.13	-0.001367	±2.5	PASS
Band5	5MHz	QPSK	20425	25RB#0	NV	10	-3.78	-0.004574	±2.5	PASS
Band5	5MHz	QPSK	20425	25RB#0	NV	20	1.50	0.001815	±2.5	PASS
Band5	5MHz	QPSK	20425	25RB#0	NV	30	-2.79	-0.003376	±2.5	PASS
Band5	5MHz	QPSK	20425	25RB#0	NV	40	-3.10	-0.003751	±2.5	PASS
Band5	5MHz	QPSK	20425	25RB#0	NV	50	-3.83	-0.004634	±2.5	PASS
Band5	5MHz	QPSK	20525	25RB#0	NV	-30	-1.90	-0.002271	±2.5	PASS
Band5	5MHz	QPSK	20525	25RB#0	NV	-20	-2.82	-0.003371	±2.5	PASS
Band5	5MHz	QPSK	20525	25RB#0	NV	0	-1.00	-0.001195	±2.5	PASS
Band5	5MHz	QPSK	20525	25RB#0	NV	10	-2.76	-0.003299	±2.5	PASS
Band5	5MHz	QPSK	20525	25RB#0	NV	20	-3.16	-0.003778	±2.5	PASS
Band5	5MHz	QPSK	20525	25RB#0	NV	30	2.63	0.003144	±2.5	PASS
Band5	5MHz	QPSK	20525	25RB#0	NV	40	1.14	0.001363	±2.5	PASS
Band5	5MHz	QPSK	20525	25RB#0	NV	50	-2.40	-0.002869	±2.5	PASS
Band5	5MHz	QPSK	20625	25RB#0	NV	-30	1.93	0.002280	±2.5	PASS
Band5	5MHz	QPSK	20625	25RB#0	NV	-20	-2.86	-0.003379	±2.5	PASS
Band5	5MHz	QPSK	20625	25RB#0	NV	0	1.23	0.001453	±2.5	PASS
Band5	5MHz	QPSK	20625	25RB#0	NV	10	-3.35	-0.003957	±2.5	PASS
Band5	5MHz	QPSK	20625	25RB#0	NV	20	-2.13	-0.002516	±2.5	PASS
Band5	5MHz	QPSK	20625	25RB#0	NV	30	-2.52	-0.002977	±2.5	PASS
Band5	5MHz	QPSK	20625	25RB#0	NV	40	-1.95	-0.002304	±2.5	PASS
Band5	5MHz	QPSK	20625	25RB#0	NV	50	-3.42	-0.004040	±2.5	PASS
Band5	5MHz	16QAM	20425	25RB#0	NV	-30	-3.99	-0.004828	±2.5	PASS
Band5	5MHz	16QAM	20425	25RB#0	NV	-20	-4.12	-0.004985	±2.5	PASS
Band5	5MHz	16QAM	20425	25RB#0	NV	0	-3.83	-0.004634	±2.5	PASS
Band5	5MHz	16QAM	20425	25RB#0	NV	10	-2.25	-0.002722	±2.5	PASS
Band5	5MHz	16QAM	20425	25RB#0	NV	20	-3.78	-0.004574	±2.5	PASS
Band5	5MHz	16QAM	20425	25RB#0	NV	30	1.57	0.001900	±2.5	PASS
Band5	5MHz	16QAM	20425	25RB#0	NV	40	-3.55	-0.004295	±2.5	PASS
Band5	5MHz	16QAM	20425	25RB#0	NV	50	-2.65	-0.003206	±2.5	PASS
Band5	5MHz	16QAM	20525	25RB#0	NV	-30	1.90	0.002271	±2.5	PASS
Band5	5MHz	16QAM	20525	25RB#0	NV	-20	-1.20	-0.001435	±2.5	PASS
Band5	5MHz	16QAM	20525	25RB#0	NV	0	-1.63	-0.001949	±2.5	PASS
Band5	5MHz	16QAM	20525	25RB#0	NV	10	-4.26	-0.005093	±2.5	PASS
Band5	5MHz	16QAM	20525	25RB#0	NV	20	-3.62	-0.004328	±2.5	PASS
Band5	5MHz	16QAM	20525	25RB#0	NV	30	-1.87	-0.002236	±2.5	PASS
Band5	5MHz	16QAM	20525	25RB#0	NV	40	-3.73	-0.004459	±2.5	PASS
Band5	5MHz	16QAM	20525	25RB#0	NV	50	-3.03	-0.003622	±2.5	PASS
Band5	5MHz	16QAM	20625	25RB#0	NV	-30	-3.30	-0.003898	±2.5	PASS
Band5	5MHz	16QAM	20625	25RB#0	NV	-20	-2.03	-0.002398	±2.5	PASS
Band5	5MHz	16QAM	20625	25RB#0	NV	0	-1.47	-0.001737	±2.5	PASS
Band5	5MHz	16QAM	20625	25RB#0	NV	10	-2.78	-0.003284	±2.5	PASS
Band5	5MHz	16QAM	20625	25RB#0	NV	20	2.76	0.003260	±2.5	PASS
Band5	5MHz	16QAM	20625	25RB#0	NV	30	-1.34	-0.001583	±2.5	PASS
Band5	5MHz	16QAM	20625	25RB#0	NV	40	-2.56	-0.003024	±2.5	PASS
Band5	5MHz	16QAM	20625	25RB#0	NV	50	-3.26	-0.003851	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	-30	-3.71	-0.004475	±2.5	PASS

Band5	10MHz	QPSK	20450	50RB#0	NV	-20	-2.40	-0.002895	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	0	1.65	0.001990	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	10	-2.26	-0.002726	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	20	-2.90	-0.003498	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	30	-3.23	-0.003896	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	40	-2.27	-0.002738	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	50	-3.06	-0.003691	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	-30	-2.56	-0.003060	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	-20	2.00	0.002391	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	0	-2.53	-0.003025	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	10	-2.88	-0.003443	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	20	-1.46	-0.001745	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	30	-2.76	-0.003299	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	40	-2.49	-0.002977	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	50	-3.33	-0.003981	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	-30	-1.90	-0.002251	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	-20	-4.15	-0.004917	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	0	1.22	0.001445	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	10	-3.71	-0.004396	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	20	1.63	0.001931	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	30	-2.80	-0.003318	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	40	-2.37	-0.002808	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	50	1.46	0.001730	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	-30	-3.46	-0.004174	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	-20	-1.22	-0.001472	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	0	-3.06	-0.003691	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	10	-3.16	-0.003812	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	20	-2.93	-0.003534	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	30	-2.93	-0.003534	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	40	-2.45	-0.002955	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	50	-3.63	-0.004379	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	-30	-2.09	-0.002499	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	-20	-3.30	-0.003945	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	0	1.69	0.002020	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	10	-2.52	-0.003013	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	20	-2.56	-0.003060	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	30	-2.16	-0.002582	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	40	-2.75	-0.003288	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	50	1.67	0.001996	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	-30	-2.26	-0.002678	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	-20	-1.03	-0.001220	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	0	1.49	0.001765	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	10	-2.40	-0.002844	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	20	-2.00	-0.002370	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	30	-1.59	-0.001884	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	40	-2.36	-0.002796	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	50	-3.03	-0.003590	±2.5	PASS