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ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT

INTENTIONAL RADIATOR CERTIFICATION TO FCC PART 22 SUBPART H, PART 27 SUBPART B, C & SUBPART L and **PART 90S REQUIREMENT**

OF

Applicant: Huawei Technologies Co., Ltd.

> Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129,

P.R.C

Smart Phone Product Name:

Brand Name: HUAWEI Model No.: BLA-A09

Model Difference: N/A

FCC ID: QISBLA-A09

Report Number: ER/2017/B0215

FCC Rule Part: 2, 22H & 27B, C & L & 90S

Issue Date: Dec. 08, 2017

Date of Test: Nov. 16, 2017~ Dec. 01, 2017

Date of EUT Received: Nov. 16, 2017

We hereby certify that:

The above equipment was tested by SGS Taiwan Ltd. Electronics & Communication Laboratory The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10:2013 and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits.

The test results of this report relate only to the tested sample identified in this report.

Prepared By:

Allen Tsai / Engineer

Approved By:

Jim Chang / Asst. Manager





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Revision History

Report Number	Revision	Description	Issue Date
ER/2017/B0215	Rev.00	Initial creation of document	Dec. 08, 2017

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1. GENERAL PRODUCT INFORMATION

1.1. Product Description

General:

ochcial.			
Product Name:	Smart Phone		
Brand Name:	HUAWEI		
Model No.:	BLA-A09		
Model Difference:	N/A		
Product SW/HW version:	N/A / N/A		
	3.82Vdc from Rechargeable Li-ion polymer Battery or 5Vdc from AC/DC Adapter		
Power Supply:	Battery:	Model No.: HB436486ECW, Supplier: HUAWEI	
	Adapter: Model No.:HW-050450U00, Supplier: HUAWEI		

LTE:

Cellular Phone Standards Frequency Range and Power	Operating Frequency			
	LTE-Band 14 (5MHz)	790.5 MHz – 795.5 MHz		
	LTE-Band 14 (10MHz)	793 MHz		
	LTE-Band 18 (5MHz) (for Part 90S)	817.5 MHz – 821.5 MHz		
	LTE-Band 18 (5MHz)	826.5 MHz – 827.5 MHz		
IMEI:	866730030033604			

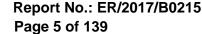
*Note: BLA-A09 is subscriber equipment in the LTE/ WCDMA/GSM system. The LTE frequency band is Band 1, Band 2, Band 3, Band 4, Band 5, Band 7, Band 8, Band 12, Band 14, Band 18, Band 20, Band 28, Band 29, Band 30, Band 66, Band 46, and Band 39. But only LTE Band 14/18 test data in this report.

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Type of Emission & Max ERP/EIRP Power Measurement Result::

LTE Band	BW (MHz)	Modulation	ERP (dBr	n)	(W)	Type of Emission
14	5	QPSK	14.64	ERP	0.029	4M96G7D
14	5	16QAM	13.86	ERP	0.024	4M53D7W
14	5	64QAM	13.83	ERP	0.024	4M54D7W
14	10	QPSK	14.58	ERP	0.029	8M92G7D
14	10	16QAM	13.80	ERP	0.024	8M96D7W
14	10	64QAM	13.96	ERP	0.025	8M96D7W
18 (part22)	5	QPSK	17.79	ERP	0.060	4M55G7D
18 (part22)	5	16QAM	17.39	ERP	0.055	4M53D7W
18 (part22)	5	64QAM	16.10	ERP	0.041	4M52D7W
18 (part90S)	5	QPSK	17.21	ERP	0.053	4M54G7D
18 (part90S)	5	16QAM	17.39	ERP	0.055	4M52D7W
18 (part90S)	5	64QAM	15.84	ERP	0.038	4M53D7W

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1.2. Test Methodology of Applied Standards

CC 47 CFR Part 2, 22, 27, Part 90S.

ANSI C63.26-2015

KDB971168 D01 Power Meas license Digital System

KDB941225 of the Output power Procedure of (SAR Measurement Procedures for 3G Devices, WCDMA / HSPA) was used for EUT and Base station setting.

TS 151 010-1 is used to set, and measure the output power.

Note: All test items have been performed and record as per the above standards.

1.3. Test Facility

SGS Taiwan Ltd. Electronics & Communication Laboratory No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan. (TAF code 0513)

FCC Registration Numbers are: 509634 / TW0001

1.4. Special Accessories

No special accessories were used during testing.

1.5. Equipment Modifications

There were no modifications incorporated into the EUT.

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2. SYSTEM TEST CONFIGURATION

2.1. EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

2.2. EUT Exercise

The EUT (Transmitter) was operated in the continuous transmission mode employed with the simulator of the Base Station that fixates at test default channels to fix the Tx frequency which was for the purpose of the measurements.

2.3. Test Procedure

2.3.1 Conducted Measurement at Antenna Port

According to measurement procured ANSI C63.26-2015, the EUT is placed on a turn table which is 0.8 m above ground plane. A low loss of RF cable was used to connect the antenna port of EUT to measurement equipment.

2.3.2 Radiated Emissions (ERP/EIRP)

According to measurement procured ANSI C63.26-2015, The EUT is a placed on as turn table, for emission measurements below 1 GHz is 0.8 m above ground plane, for emission measurements above 1 GHz, the table height shall be 1.5 m. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both Horizontal and Vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter (EUT) was rotated through three orthogonal axes and measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made "while keeping the antenna in the 'cone of radiation' from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response." is still within the 3dB illumination BW of the measurement antenna according to the requirements in Section 8 and 13.

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2.4. Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuation factor between EUT conducted port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly EUT RF output level.

Note:

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Following shows an offset computation example with cable loss 0.4 dB and 10 dB attenuator and 4 dB for splitter.

Offset = RF cable loss (dB)+ attenuation factor(dB) =0.4+14.0 =14.4(dB)

2.5. Final Amplifier Voltage and Current Information:

Test Mode	DC voltage (V)	DC current (mA)
LTE Band 14_5M QPSK	3.82	0.52
LTE Band 14_5M 16QAM	3.82	0.55
LTE Band 14_5M 64QAM	3.82	0.52
LTE Band 14_10M QPSK	3.82	0.54
LTE Band 14_10M 16QAM	3.82	0.52
LTE Band 14_10M 64QAM	3.82	0.55
LTE Band 18_5M QPSK	3.82	0.5
LTE Band 18_5M 16QAM	3.82	0.49
LTE Band 18_5M 64QAM	3.82	0.48
LTE Band 18_5M QPSK (Part 90S)	3.82	0.49
LTE Band 18_5M 16QAM (Part 90S)	3.82	0.49
LTE Band 18_5M 64QAM (Part 90S)	3.82	0.48

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2.6. Configuration of Tested System

Fig. 2-1 Configuration of Tested System (Fixed Channel-Conducted)

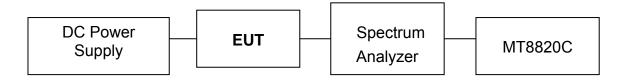


Fig. 2-2 Configuration of Tested System (Fixed Channel-Radiated)

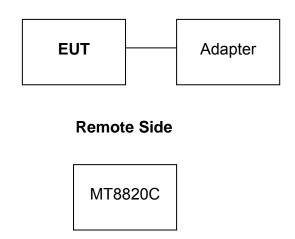


Table 2-1 Equipment Used in

Item	Equipment	Mfr/Brand	Model/ Type No.	Series No.	Data Cable	Power Cord
2.	Universal Radio Communication Tester	Anritsu	MT8820C	6200307563	shielded	Un-shielded

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3. SUMMARY OF TEST RESULTS

FCC Rules	Description Of Test	Result
§2.1046(a)	RF Power Output	Compliant
§2.1046(a) §22.913(a)(5) §27.50(c)(10) §90.635	ERP/ EIRP measure- ment	Compliant
§2.1049(h)	99% & 26dB Oc- cuupied Bandwidth	Compliant
§2.1051 §22.917(a) §27.53(g) §27.50(c)(5) §27.53(h) §90.691	Out of Band Emissions at Antenna Terminals and Band Edge / Emission mask requirements	Compliant
§2.1053 §22.917(a) §27.53(c)(2),(4) §27.50(c)(5) §27.53(f) §27.53(g) §27.53(h) §90.691(a)(1)(2)	Field Strength of Spu- rious Radiation	Compliant
§24.232(d) §27.53(d) (5) §27.50(i) (B)	Peak to Average Ratio	Compliant
§2.1055(a)(1) §22.355 §27.54 §90.213	Frequency Stability	Compliant

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4. DESCRIPTION OF TEST MODES

4.1. The Worst Test Modes and Channel Details

- 1. The EUT has been tested under operating condition.
- 2. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, X(E1)Y(E2)Z(H) axis and antenna ports. The worst case was found as listed below. Following channel(s) was (were) selected for the final test as listed below:

BAND	ERP/EIRP	RADIATED EMISSION and Wireless charging Cover
LTE Band 14	H-plan	H-plan
LTE Band 18	H-plan	H-plan
LTE Band 18 for Part 90S	H-plan	H-plan

LTE Band 14 MODE

LIE Band 14 MODE						
TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE	
ERP	23305 to 23355	23305, 23330, 23355	5MHz	QPSK, 16QAM, 64QAM	1 RB/ 0,24 RB Offest	
LKF	23330	23330	10MHz	QPSK, 16QAM, 64QAM	1 RB/ 0,49 RB Offest	
FREQUENCY STABILITY	23330	23330	10MHz	QPSK,	Full RB	
OCCUPIED	23305 to 23355	23305, 23330, 23355	5MHz	QPSK, 16QAM, 64QAM	Full RB	
BANDWIDTH	23330	23330	10MHz	QPSK, 16QAM, 64QAM	Full RB	
PEAK TO AV-	23305 to 23355	23305, 23330, 23355	5MHz	64QAM	Full RB	
ERAGE RATIO	23330	23330	10MHz	64QAM	Full RB	
BAND EDGE	23305 to 23355	23305, 23330, 23355	5MHz	QPSK,	1 RB/ 0,24 RB Offest Full RB	
BAND EDGE	23330	23330	10MHz	QPSK,	1 RB/ 0,49 RB Offest Full RB	
CONDCUDETED	23305 to 23355	23305, 23330, 23355	5MHz	QPSK,	1 RB, 0 RB Offest	
EMISSION	23330	23330	10MHz	QPSK,	1 RB, 0 RB Offest	
RADIATED EMISSION	23205 to 23255	23205, 23230, 23255	10MHz	QPSK	1 RB/ 0 RB Offest	

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I TF Band 18 MODE

LTE BANG TO MODE							
TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE		
ERP	23965 to 23975	23965, 23970, 23975	5MHz	QPSK, 16QAM, 64QAM	1 RB/ 0,24 RB Offest		
FREQUENCY STABILITY	23965 to 23975	23970	5MHz	QPSK,	Full RB		
OCCUPIED BANDWIDTH	23965 to 23975	23965, 23970, 23975	5MHz	QPSK, 16QAM, 64QAM	Full RB		
PEAK TO AV- ERAGE RATIO	23965 to 23975	23965, 23970, 23975	5MHz	64QAM	Full RB		
BAND EDGE	23965 to 23975	23965, 23975	5MHz	QPSK,	1 RB/ 0,24 RB Offest Full RB		
CONDCUDETED EMISSION	23965 to 23975	23965, 23970, 23975	5MHz	QPSK,	1 RB, 0 RB Offest		
RADIATED EMISSION	23965 to 23975	23965, 23970, 23975	5MHz	QPSK,	1 RB, 0 RB Offest		

LTE Band 18 for 90S MODE

	ETE Balla 10 101 300 MODE						
TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE		
ERP	23875 to 23915	23875, 23895, 23915	5MHz	QPSK, 16QAM, 64QAM	1 RB/ 0,24 RB Offest		
FREQUENCY STABILITY	23875 to 23915	23895	5MHz	QPSK,	Full RB		
OCCUPIED BANDWIDTH	23875 to 23915	23875, 23895, 23915	5MHz	QPSK, 16QAM, 64QAM	Full RB		
PEAK TO AV- ERAGE RATIO	23875 to 23915	23875, 23895, 23915	5MHz	64QAM	Full RB		
BAND EDGE	23875 to 23915	23875, 23915	5MHz	QPSK,	1 RB/ 0,24 RB Offest Full RB		
CONDCUDETED EMISSION	23875 to 23915	23875, 23895, 23915	5MHz	QPSK,	1 RB, 0 RB Offest		
RADIATED EMISSION	23875 to 23915	23875, 23895, 23915	5MHz	16QAM,	1 RB, 0.24 RB Offest		

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5. MEASUREMENT UNCERTAINTY

Test Items	Uncertainty				
RF Power Output	+/- 1.10 dB				
ERP/ EIRP measurement	Vertical Polarization = +/- 4.74dB Horizontal Polarization =+/- 4.62dB				
99% Occupied Bandwidth	+/- 5.19 Hz				
Out of Band Emissions at Antenna Terminals and Band Edge	+/- 0.70 dB				
Peak to Average Ratio	+/- 0.70 dB				
Frequency Stability vs. Temperature	+/- 5.19 Hz				
Frequency Stability vs. Voltage	+/- 5.19 Hz				
Temperature	+/- 0.65 °C				
Humidity	+/- 4.6 %				
DC / AC Power Source	DC= +/- 0.13%, AC=+/- 0.2%				

Radiated Spurious Emission:

	9kHz – 30MHz: +/- 2.87 dB					
NA	30MHz - 180MHz: +/- 3.37dB					
Measurement uncertainty (Polarization : Vertical)	180MHz -417MHz: +/- 3.19dB					
(1 Glarization : Vertical)	0.417GHz-1GHz: +/- 3.19dB					
	1GHz - 18GHz: +/- 4.04dB					
	18GHz - 40GHz: +/- 4.04dB					

	9kHz – 30MHz: +/- 2.87 dB
Magaziramantungartaintu	30MHz - 167MHz: +/- 4.22dB
Measurement uncertainty (Polarization : Horizontal)	167MHz -500MHz: +/- 3.44dB
(Foldrization : Horizontal)	0.5GHz-1GHz: +/- 3.39dB
	1GHz - 18GHz: +/- 4.08dB
	18GHz - 40GHz: +/- 4.08dB

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

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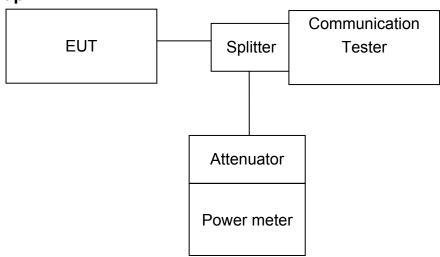
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6. RF CONDUCTED OUTPUT POWER MEASUREMENT

6.1. Standard Applicable

A base station simulator was used to establish communication with the EUT. Its parameters were set to transmit the maximum power on the EUT. The measured power in the radio frequency on the transmitter output terminals.

6.2. Test Set-up



Note: Measurement setup for testing on Antenna connector

6.3. Measurement Procedure

The transmitter output was connected to a calibrated attenuator, the other end of which was connected to a power meter. Transmitter output was read off the power meter in dBm. The power output at the transmitter antenna port was determined by adding the value of the attenuator to the power meter reading. TS 151 010-1 is reference to conduct the test measurement of output power.

The Procedure of KDB941225 (SAR Measurement Procedures for 3G devices, (WCD-MA/HSPA) was used for EUT and Base station setting. RMC 12.2kps is used for this testing. and KDB 971168 D01 Power Meas License Digital System as the supplemental test methodology to adjust the proper setting obtaining the measurement results

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6.4. Measurement Equipment Used

Conduc	ted Emission (m	neasured at a	antenna port)	Test Site	
EQUIPMENT	MFR	MODEL	SERIAL	LAST	CAL DUE.
TYPE		NUMBER	NUMBER	CAL.	
Power Meter	Anritsu	ML2495A	1005007	12/15/2016	12/14/2017
Power Sensor	Anritsu	MA2411B	917032	12/15/2016	12/14/2017
EXA Spectrum Ana- lyzer	Agilent	N9030A	MY53120760	03/21/2017	03/20/2018
DC Block	Mini-Circuits	BLK-18-S+	1	01/05/2017	01/04/2018
Coaxial Cable	HU- BER+SUHNER	SUCOFLEX 102	23670/2	01/05/2017	01/04/2018
Attenuator	Mini-Circuit	BW-S10W2+	2	01/05/2017	01/04/2018
Splitter	Agilent	11636B	N/A	01/05/2017	01/04/2018
DC Power Supply	Agilent	E3640A	MY52410006	02/26/2017	02/25/2018
Temperature Chamber	TERCHY	MHG-120LF	911009	05/19/2017	05/18/2018
Radio Communication Analyzer	R&S	CMU200	102189	02/10/2017	02/09/2018
Radio Communication Analyer	Anritsu	MT8820C	6201465317	01/03/2017	01/02/2018

6.5. Measurement Result

RF Conducted Output Power

WCDMA MODE:

The following tests were completed according to the test requirements outlined in section 5.2 of the 3GPP TS34.121-1 V8.4.0 specification. The EUT supports power Class 3, which has a nominal maximum output power of 24 dBm (+1.7/-3.7). RMC 12.2kps is used for this testing.

Results:

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LTE Result:

LTE Band 14

	LTE Band 14_Uplink frequency band : 788 to 798 MHz													
				Conducted power (dBm)										
DVA		DD		QPSK			16QAM			64QAM				
BW (MHz)	RB Size	RB Offset	CH	CH	CH	CH	CH	CH	CH	CH	СН			
(1711 12)	Oizc	20 011301	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)			
			23305	23330	23355	23305	23330	23355	23305	23330	23355			
	1	0	23.3	23.35	22.83	21.97	21.21	21.44	21.74	21.35	21.91			
_	1	24	23.34	23.66	22.46	21.47	21.74	21.55	21.61	21.39	20.98			
5	12	6	21.64	21.58	21.6	21.39	21.12	21.26	21.29	21.14	21.55			
	25	0	21.6	21.63	21.59	21.19	21.42	21.13	21.58	21.41	21.57			

	LTE Band 2_Uplink frequency band : 793 MHz													
				Conducted power (dBm)										
	DD		QPSK			16QAM			64QAM					
BW (MHz)	RB Size	RB Offset	CH	СН	CH	CH	CH	CH	CH	CH	CH			
(1011 12) 3126	Onset	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)				
				23330			23330			23330				
	1	0		22.31			22.05			21.78				
10	1	49		22.42			22.01			21.65				
10	25	12		21.67			21.25			21.63				
	50	0		21.65			21.41			20.6				

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LTE Band 18

	LTE Band 18_Uplink frequency band : 815 to 830 MHz													
				Conducted power (dBm)										
BW	RB	RB		QPSK			16QAM			64QAM				
(MHz)	Size	Offset	СН	СН	СН	CH	СН	СН	СН	СН	СН			
(12)	0.20	20 011000	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)			
			23965	23970	23975	23965	23970	23975	23965	23970	23975			
	1	0	21.88	22.27	21.76	21.91	21.81	21.91	21.66	21.42	21.66			
5	1	24	21.95	21.87	21.75	21.74	21.98	21.74	21.83	21.58	21.83			
5	12	6	21.67	21.72	21.67	21.3	21.41	21.3	21.34	21.02	21.34			
	25	0	21.72	22.09	21.72	21.39	21.32	21.39	21.16	21.29	21.16			

LTE Band 18 (Part 90S)

	` '													
	LTE Band 18_Uplink frequency band : 815 to 830 MHz													
				Conducted power (dBm)										
DVA		DD		QPSK			16QAM			64QAM				
BW (MHz)	RB Size	RB Offset	CH	СН	CH	CH	CH	CH	CH	CH	CH			
	Oliset	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)				
			23875	23895	23915	23875	23895	23915	23875	23895	23915			
	1	0	21.85	21.73	21.76	22	21.83	21.71	21.57	21.91	21.03			
5	1	24	21.96	21.97	21.75	21.98	21.74	21.53	21.54	21.18	21.08			
] 3	12	6	21.68	21.64	21.65	21.39	21.31	21.05	21.07	21.08	20.83			
	25	0	21.76	21.59	21.68	21.34	21.19	21.01	21.02	21.24	21.17			

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7. EFFECTIVE RADIATED POWER AND EQUIVALENT ISOTROPIC RADIATED **POWER MEASUREMENT**

7.1. Standard Applicable

According to FCC §2.1046

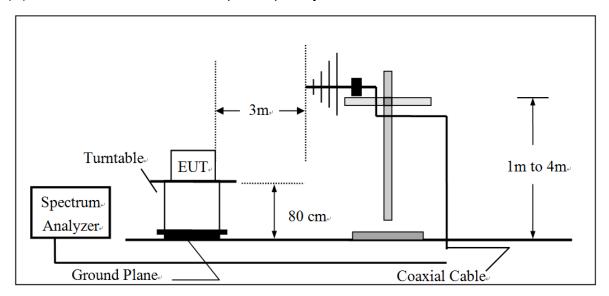
FCC 22.913(a) Mobile station is limited to 7W ERP.

FCC 27.50(c)(10) Portable stations (hand-held devices) are limited to 3 watts ERP.

FCC 90.635(b) Mobile station is limited to 100W ERP

7.2. Test SET-UP

(A) Radiated Power Test Set-Up, Frequency Below1000MHz



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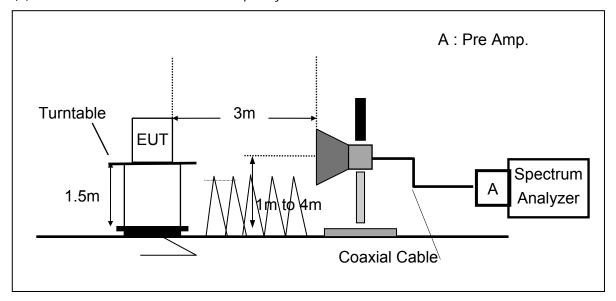
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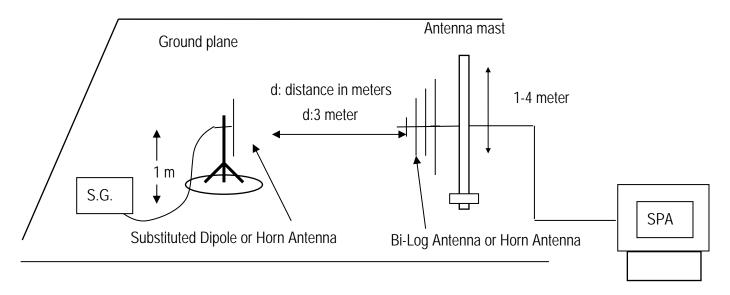


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Radiated Power Test Set-UP Frequency Over 1 GHz



(C) Substituted Method Test Set-UP



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7.3. Measurement Procedure

- The testing follows the Measurement Procedure of FCC KDB 971168 D01
- 2. The EUT was placed on a non-conductive turntable using a non-conductive support. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer.
- 3. During the measurement, the EUT was communication with the station. The highest emission was recorded with the rotation of the turntable and the lowering of the test antenna from 4m to 1m. The reading was recorded and the field strength (E in dBuV/m) was calculated
- 4. The testing follows the Measurement Procedure of FCC KDB 971168 D01
- 5. 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 b. Record the power level of S.G.
- 6. ERP = S.G. output (dBm) + Antenna Gain (dBd) Cable Loss (dB)
- 7. ERP = S.G. output (dBm) + Antenna Gain (dBd) Cable Loss (dB)
- 8. Spectrum setting:
 - (1) Detector = Peak, marker the highest value of the detector by maximum hold, set RBW wide enough to capture the entire signal of emission, and VBW > 3xRBW.
 - (2) KDB 971168 D01 is adopted, and the procedure as lists under item 4, Measurement of the Average Power over the Fundamental Signal Bandwidth, is followed to set correspondingly for the acquisition of proper measurement data.

Set frequency = nominal signal center frequency;

Set span = 2 X occupied BW;

Set RBW ≈ 1~5% of the span, not to exceed 1 MHz

Set $VBW = 3 \times RBW$;

Select average power (RMS) detector

Set sweep time and number of measurement points to achieve a minimum of 1 millisecond/pt integration time (ex. Point = 601points, then sweet time = $601*10^{-3}$ = 6s.

Activate trace averaging routine over a minimum of 10 sweeps;

Activate marker/span pair and set span = signal or channel bandwidth;

Activate the band/interval power marker function;

Record the band power level:

Record adjusted value as the average signal power level. Then activate the occupied bandwidth measurement function.

The proper adjustment due to limitation of spectrum capability is given compensated to spectrum with conversion factor of 10*log (TBW/RBW), where TBW is the transmission of UE exceeding the maximum BW UE can extends, and RBW is the resolution BW in UE.

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7.4. Measurement Equipment Used

ERP,	EIRP MEASUREM	IENT EQUIPME	NT List 966 Cl	namber	
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
EMI Test Receiver	R&S	ESCI7	100760	05/11/2017	05/10/2018
Spectrum Analyzer	Agilent	E4446A	MY51100003	04/25/2017	04/24/2018
Loop Antenna	ETS-Lindgren	6502	148045	09/20/2017	09/19/2018
Bilog Antenna	SCHWAZBECK	VULB9168	378	12/19/2016	12/18/2017
Horn Antenna	Schwarzbeck	BBHA9120D	1441	08/04/2017	08/03/2018
Pre-Amplifier	Agilent	8447D	2944A07676	01/05/2017	01/04/2018
Pre-Amplifier	EMC Instruments Corp.	EMC0126530	980038	01/05/2017	01/04/2018
Turn Table	HD	DT420	N/A	N.C.R	N.C.R
Antenna Tower	ChamPro	AM-BS-4500-B	060776-ABS	N.C.R	N.C.R
Controller	ChamPro	EM1000	60776	N.C.R	N.C.R
Low Loss Cable	Huber Suhner	966_RX	9	01/05/2017	01/04/2018
3m Site NSA	SGS	966 chamber	N/A	07/01/2017	06/30/2018
Low Loss Cable	Huber Suhner	966 TX	1	01/05/2017	01/04/2018
Horn Antenna	Schwarzbeck	BBHA9170	184	12/12/2016	12/11/2017
Pre-Amplifier	EMC Instruments Corp.	EMC184045	980135	01/05/2017	01/04/2018
Radio Communication Analyer	Anritsu	MT8820C	6201465317	01/03/2017	01/02/2018

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7.5. Measurement Result: (Peak) –using option of peak measurement

	EUT		J		_	ırement		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	ERP	Limit
	MHz		V/H	dBm	dBd	dB	dBm	dBm
	700 5	22205	V	11.67	3.31	-2.90	12.08	34.77
LTE	790.5	23305	Н	7.77	3.31	-2.90	8.18	34.77
BAND 14	702.0	2222	V	11.61	3.32	-2.90	12.04	34.77
BW: 5M	793.0	23330	Н	7.48	3.32	-2.90	7.90	34.77
QPSK RB: 1,0	705.5	22255	V	12.49	3.33	-2.90	12.92	34.77
KD. 1,0	795.5	23355	Н	8.47	3.33	-2.90	8.90	34.77
	700 F	22205	V	11.75	3.31	-2.90	12.17	34.77
LTE BAND 14	790.5	23305	Н	7.46	3.31	-2.90	7.87	34.77
	702.0	2222	V	13.49	3.33	-2.90	13.92	34.77
BW: 5M QPSK RB: 1,24	793.0	23330	Н	9.02	3.32	-2.90	9.44	34.77
	70F F	00055	V	14.21	3.33	-2.90	14.64	34.77
ND. 1,24	795.5	23355	Н	9.69	3.33	-2.90	10.12	34.77
	700 F	22205	V	11.05	3.31	-2.90	11.46	34.77
LTE	790.5	23305	Н	7.47	3.31	-2.90	7.87	34.77
BAND 14 BW: 5M	793.0	23330	V	11.13	3.32	-2.90	11.55	34.77
16QAM			Н	6.85	3.31	-2.90	7.25	34.77
RB: 1,0	795.5	23355	V	12.02	3.33	-2.90	12.45	34.77
110. 1,0			Н	7.72	3.32	-2.90	8.14	34.77
- - -	790.5	22205	V	11.51	3.31	-2.90	11.93	34.77
LTE	790.5	23305	Н	7.52	3.31	-2.90	7.93	34.77
BAND 14 BW: 5M	793.0	23330	V	12.99	3.33	-2.90	13.42	34.77
16QAM	193.0	23330	Н	8.65	3.32	-2.90	9.07	34.77
RB: 1,24	795.5	23355	V	13.43	3.33	-2.90	13.86	34.77
ND. 1,24	795.5	23333	Н	9.01	3.33	-2.90	9.43	34.77
	790.5	23305	V	11.71	3.31	-2.90	12.11	34.77
LTE BAND 14	790.5	23303	Н	5.47	3.31	-2.90	5.88	34.77
BW: 5M	793.0	23330	V	11.31	3.32	-2.90	11.73	34.77
64QAM	193.0	23330	Н	5.12	3.32	-2.90	5.54	34.77
RB: 1,0	795.5	23355	V	12.10	3.32	-2.90	12.52	34.77
110. 1,0	180.0	23355	Н	5.93	3.32	-2.90	6.35	34.77
	790.5	23305	V	12.05	3.31	-2.90	12.47	34.77
LTE BAND 14 BW: 5M	1 30.0	20000	Н	5.63	3.32	-2.90	6.04	34.77
	793.0	23330	V	13.16	3.32	-2.90	13.58	34.77
64QAM	1 33.0	20000	Н	6.61	3.32	-2.90	7.03	34.77
RB: 1,24	795.5	23355	V	13.39	3.34	-2.90	13.83	34.77
110. 1,27	1 80.0	23333	Н	7.02	3.33	-2.90	7.45	34.77

Remark:

(1) The RBW, VBW of SPA for frequency RBW= 8MHz, VBW= 8MHz

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	EUT				Measure	ement		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	ERP	Limit
	MHz		V/H	dBm	dBd	dB	dBm	dBm
LTE BAND 14 BW: 10M	793.0	23330	V	11.18	3.31	-2.90	11.59	34.77
QPSK RB: 1,0	793.0	23330	Н	7.36	3.31	-2.90	7.77	34.77
LTE BAND 14 BW: 10M	793.0	23330	V	14.15	3.33	-2.90	14.58	34.77
QPSK RB: 1,49	790.0	23330	Н	9.59	3.33	-2.90	10.02	34.77
LTE BAND 14 BW: 10M	793.0	23330	V	11.12	3.31	-2.90	11.53	34.77
16QAM RB: 1,0	793.0	23330	Н	7.30	3.31	-2.90	7.71	34.77
LTE BAND 14 BW: 10M	793.0	23330	V	13.37	3.33	-2.90	13.80	34.77
16QAM RB: 1,49	793.0	23330	Н	9.03	3.33	-2.90	9.46	34.77
LTE BAND 14 BW: 10M	793.0	23330	V	12.02	3.31	-2.90	12.43	34.77
64QAM RB: 1,0	793.0	23330	Н	4.66	3.32	-2.90	5.07	34.77
LTE BAND 14 BW: 10M	793.0	23330	V	13.53	3.33	-2.90	13.96	34.77
64QAM RB: 1,49	793.0	23330	Н	6.33	3.33	-2.90	6.76	34.77

Remark: (1) The RBW, VBW of SPA for frequency RBW=8MHz, VBW=8MHz

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	EUT				Measure	ement		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	ERP	Limit
	MHz		V/H	dBm	dBd	dB	dBm	dBm
	826.5	22065	V	17.42	3.3	-2.93	17.79	38.45
LTE	020.3	23965	Н	12.39	3.31	-2.92	12.78	38.45
BAND 18 BW: 5M	827.0	23970	V	16.68	3.3	-2.93	17.05	38.45
QPSK	027.0	23970	Н	12.39	3.3	-2.93	12.76	38.45
RB: 1,0	827.5	23975	V	16.53	3.3	-2.93	16.9	38.45
	021.5	23913	Н	12.27	3.3	-2.93	12.64	38.45
	826.5	23965	V	16.63	3.31	-2.92	17.01	38.45
LTE	020.3	23903	Н	12.3	3.31	-2.92	12.68	38.45
BAND 18 BW: 5M	827.0	23970	V	16.45	3.31	-2.92	16.83	38.45
QPSK	827.0	20070	Н	12.34	3.3	-2.93	12.71	38.45
RB: 1,5	827.5	23975	V	16.44	3.3	-2.93	16.82	38.45
	027.5	20010	Н	12.07	3.3	-2.93	12.44	38.45
	826.5	23965	V	16.76	3.31	-2.92	17.15	38.45
LTE	020.5	23903	Н	12.75	3.31	-2.92	13.15	38.45
BAND 18 BW: 5M	827.0	23970	V	17.17	3.31	-2.92	17.55	38.45
16QAM			Н	12.62	3.31	-2.92	13.01	38.45
RB: 1,0	827.5	23975	V	16.81	3.31	-2.92	17.19	38.45
			Н	12.57	3.31	-2.92	12.96	38.45
	826.5	23965	V	17.01	3.31	-2.92	17.39	38.45
LTE	020.5		Н	12.69	3.31	-2.92	13.08	38.45
BAND 18 BW: 5M	827.0	23970	V	16.93	3.31	-2.92	17.31	38.45
16QAM	027.0	20070	Н	12.6	3.31	-2.92	12.98	38.45
RB: 1,5	827.5	23975	V	16.84	3.31	-2.93	17.22	38.45
	027.0	20070	Н	12.46	3.31	-2.93	12.84	38.45
	826.5	23965	V	15.73	3.31	-2.92	16.12	38.45
LTE BAND 18	020.0	20000	Н	8.43	3.31	-2.92	8.83	38.45
BW: 5M	827.0	23970	V	15.71	3.31	-2.92	16.1	38.45
64QAM			Н	8.31	3.31	-2.92	8.7	38.45
RB: 1,0	827.5	23975	V	15.66	3.31	-2.92	16.04	38.45
	50		Н	8.18	3.31	-2.92	8.57	38.45
1.75	826.5	23965	V	15.57	3.31	-2.92	15.95	38.45
LTE BAND 18 BW: 5M			Н	8.08	3.31	-2.92	8.46	38.45
	827.0	23970	V	15.54	3.31	-2.92	15.93	38.45
64QAM			Н	8.16	3.31	-2.92	8.54	38.45
RB: 1,5	827.5	23975	V	15.54	3.31	-2.92	15.92	38.45
			Н	8.08	3.31	-2.92	8.46	38.45

Remark: (1) The RBW, VBW of SPA for frequency RBW= 8MHz, VBW= 8MHz

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	Measurement							
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	ERP	Limit
	MHz		V/H	dBm	dBd	dB	dBm	dBm
LTE	047.5	23875	V	15.42	3.32	-2.89	15.85	50.00
	817.5		Н	11.91	3.32	-2.89	12.34	50.00
BAND 18 BW: 5M	819.5	23895	V	16.14	3.32	-2.9	16.56	50.00
QPSK	019.5	23093	Н	12.6	3.32	-2.9	13.02	50.00
RB: 1,0	821.5	23915	V	16.79	3.32	-2.9	17.21	50.00
,	021.5	23913	Н	12.74	3.32	-2.9	13.15	50.00
	817.5	23875	V	15.84	3.32	-2.89	16.26	50.00
LTE	017.5	23073	Н	12.39	3.32	-2.89	12.82	50.00
BAND 18 BW: 5M	819.5	23895	V	16.58	3.32	-2.9	17	50.00
QPSK	019.5	23093	Н	12.69	3.32	-2.9	13.11	50.00
RB: 1,5	024 5	22015	V	16.59	3.31	-2.9	17	50.00
. (2,0	821.5	23915	Н	12.77	3.31	-2.9	13.18	50.00
	017.5	00075	V	15.57	3.32	-2.89	16	50.00
LTE	817.5	23875	Н	12.12	3.32	-2.89	12.55	50.00
BAND 18	819.5	23895	V	16.21	3.32	-2.9	16.63	50.00
BW: 5M 16QAM			Н	12.72	3.32	-2.89	13.14	50.00
RB: 1,0	004 5	22015	V	16.68	3.32	-2.9	17.09	50.00
,	821.5	23915	Н	13.12	3.32	-2.9	13.11 17 13.18 9 16 9 12.55 16.63 9 13.14 0 17.09 0 13.53 9 16.31 0 13.48 0 16.98 0 13.39 1 17.39 0 13.53 9 14.98	50.00
	817.5	00075	V	15.88	3.32	-2.89	16.31	50.00
LTE	017.5	23875	Н	13.07	3.32	-2.9	13.48	50.00
BAND 18 BW: 5M	910.5	22905	V	16.57	3.32	-2.9	16.98	50.00
16QAM	819.5	23895	Н	12.97	3.32	-2.9	13.39	50.00
RB: 1,5	821.5	23915	V	16.98	3.31	-2.91	17.39	50.00
		23913	Н	13.12	3.31	-2.9	13.53	50.00
	817.5	23875	V	14.55	3.32	-2.89	14.98	50.00
LTE	017.5	23073	Н	8.87	3.32	-2.89	9.3	50.00
BAND 18 BW: 5M	910 5	00005	V	15.37	3.32	-2.9	15.79	50.00
64QAM	819.5	23895	Н	9.73	3.32	-2.9	10.15	50.00
RB: 1,0	024 5	22015	V	15.21	3.32	-2.9	15.63	50.00
,-	821.5	23915	Н	9.89	3.32	-2.9	10.3	50.00
	017 5	22075	V	15.17	3.32	-2.89	15.6	50.00
LTE	817.5	23875	Н	9.4	3.32	-2.89	9.83	50.00
BAND 18	910 F	22005	V	15.42	3.32	-2.9	15.84	50.00
BW: 5M 64QAM	819.5	23895	Н	9.76	3.32	-2.9	10.18	50.00
RB: 1,5	004.5	23915	V	15.24	3.31	-2.91	15.64	50.00
, -	821.5		Н	10.03	3.31	-2.91	10.44	50.00

Remark: (1) The RBW, VBW of SPA for frequency RBW=8MHz, VBW=8MHz

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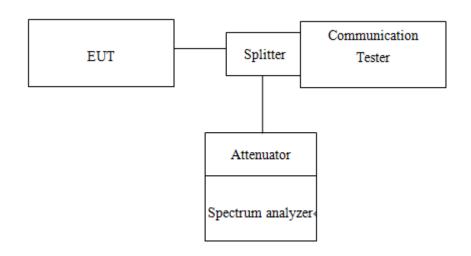
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8. OCCUPIED BANDWIDTH MEASUREMENT

8.1. Standard Applicable

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power.

8.2. Test Set-up



8.3. Measurement Procedure

99% &26dB Bandwidth with detector peak

The EUT's output RF connector was connected with a short cable to the spectrum analyzer, RBW was set to about 1% of emission BW, VBW= 3 times RBW, -26dBc display line was placed on the screen (or 26dB bandwidth), the occupied bandwidth is the delta frequency between the two points where the display line intersects the signal trace. Then set RBW to 99% bandwidth, RBW= 1%, VBW= 3 RBW, with span > 2 * Signal BW, set % Power = 99%.

99% Bandwidth with detector sample

The EUT's output RF connector was connected with a short cable to the spectrum analyzer, RBW was set to about 1% ~ 5% of emission BW, VBW= 3 times RBW, -20dBc display line was placed on the screen (or 20dB bandwidth). Set RBW to 99% bandwidth, RBW= 1% ~ 5%, VBW= 3 RBW, with span > 2 * Signal BW, set % Power = 99%.

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8.4. Measurement Equipment Used

modean official Equipment Cook											
Conduc	Conducted Emission (measured at antenna port) Test Site										
EQUIPMENT	MFR	MODEL	SERIAL	LAST	CAL DUE.						
TYPE		NUMBER	NUMBER	CAL.							
Power Meter	Anritsu	ML2495A	1005007	12/15/2016	12/14/2017						
Power Sensor	Anritsu	MA2411B	917032	12/15/2016	12/14/2017						
EXA Spectrum Ana- lyzer	Agilent	N9030A	MY53120760	03/21/2017	03/20/2018						
DC Block	Mini-Circuits	BLK-18-S+	1	01/05/2017	01/04/2018						
Coaxial Cable	HU- BER+SUHNER	SUCOFLEX 102	23670/2	01/05/2017	01/04/2018						
Attenuator	Mini-Circuit	BW-S10W2+	2	01/05/2017	01/04/2018						
Splitter	Agilent	11636B	N/A	01/05/2017	01/04/2018						
DC Power Supply	Agilent	E3640A	MY52410006	11/21/2016	11/20/2017						
Temperature Chamber	TERCHY	MHG-120LF	911009	05/19/2017	05/18/2018						
Radio Communication Analyer	Anritsu	MT8820C	6201465317	01/03/2017	01/02/2018						

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8.5. Measurement Result

LTE BAND 14 Channel bandwidth: 5MHz								
Freq. (MHz)	СН	99%BW (MHz)	99%BW (MHz)	99%BW (MHz)	26 dB BW(MHz)	26 dB BW(MHz)	26 dB BW(MHz)	
		QPSK	16QAM	64QAM	QPSK	16QAM	64QAM	
790.5	23305	4.9580	4.5257	4.5360	4.5202	6.8070	6.0830	
793.0	23330	4.5153	4.5104	4.5373	5.0110	5.5440	6.2380	
795.5	23355	4.5161	4.5224	4.5169	4.9720	5.3290	4.9740	

LTE BAND 14 Channel bandwidth: 10MHz								
Freq. (MHz)	СН	99%BW (MHz)	99%BW (MHz)	99%BW (MHz)	26 dB BW(MHz)	26 dB BW(MHz)	26 dB BW(MHz)	
		QPSK	16QAM	64QAM	QPSK	16QAM	64QAM	
793.0	23330	8.9153	8.9587	8.9636	9.7800	9.7440	9.7890	

LTE BAND 18 (Part 22) Channel bandwidth: 5MHz									
Freq. (MHz)	СН	99%BW (MHz)	99%BW (MHz)	99%BW (MHz)	26 dB BW(MHz)	26 dB BW(MHz)	26 dB BW(MHz)		
		QPSK	16QAM	64QAM	QPSK	16QAM	64QAM		
824.7	26797	4.5303	4.5258	4.5168	4.9880	4.9190	4.9900		
836.5	26915	4.5223	4.5149	4.5212	4.9820	4.9720	4.9850		
848.3	27033	4.5487	4.5195	4.5222	4.9980	4.9910	4.9470		

LTE BAND 18 (Part 90S) Channel bandwidth: 5MHz								
Freq. (MHz)	СН	99%BW (MHz)	99%BW (MHz)	99%BW (MHz)	26 dB BW(MHz)	26 dB BW(MHz)	26 dB BW(MHz)	
		QPSK	16QAM	64QAM	QPSK	16QAM	64QAM	
2572.5	37775	4.5199	4.5197	4.4972	4.9420	4.9540	4.9670	
2595.0	38000	4.5378	4.4976	4.5141	4.9580	4.9380	4.9090	
2617.5	38225	4.5270	4.5199	4.5316	4.9730	4.9680	4.9570	

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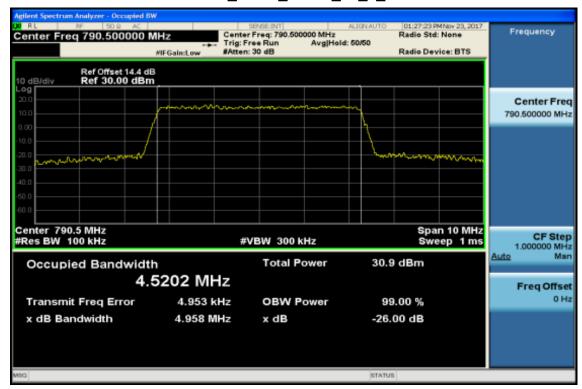
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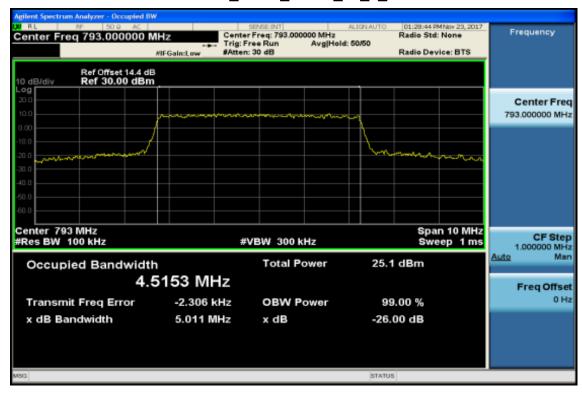


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Band14 5MHz QPSK 25 0 Low



Band14 5MHz QPSK 25 0 Mid



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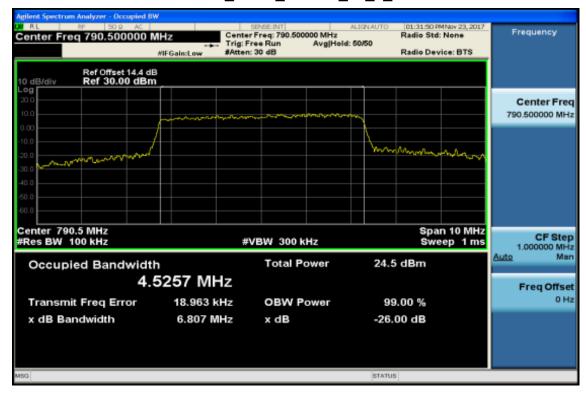


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Band14 5MHz QPSK 25 0 High



Band14 5MHz 16QAM 25 0 Low



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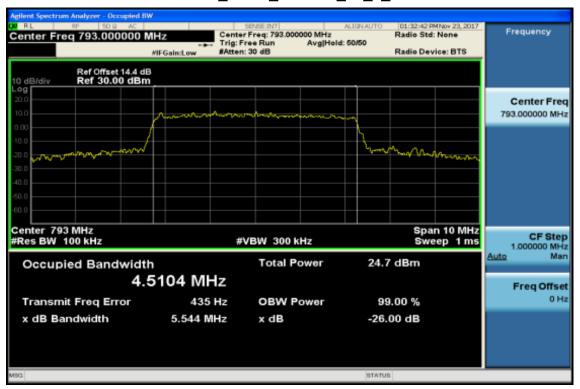
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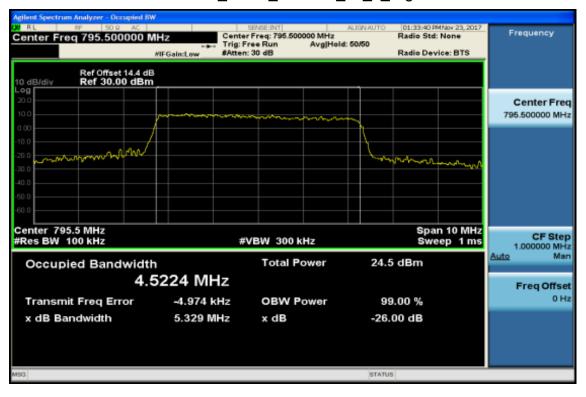
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Band14 5MHz 16QAM 25 0 Mid



Band14_5MHz_16QAM _25_0_High



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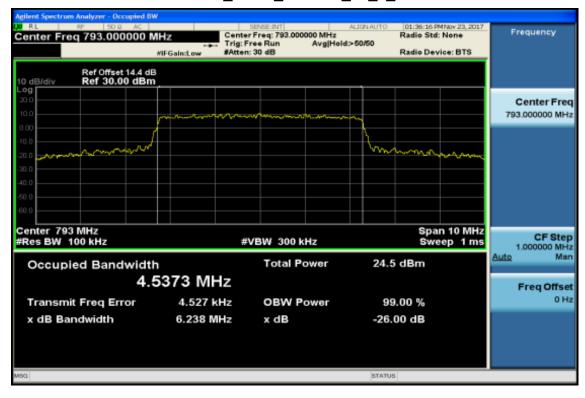
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Band14 5MHz 64QAM 25 0 Low



Band14_5MHz_64QAM 25 0 Mid



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Band14_5MHz_64QAM _25_0_High



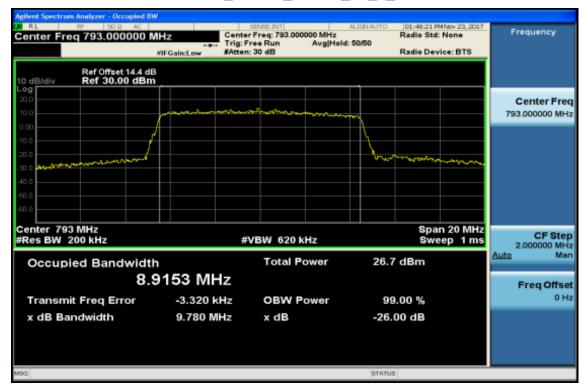
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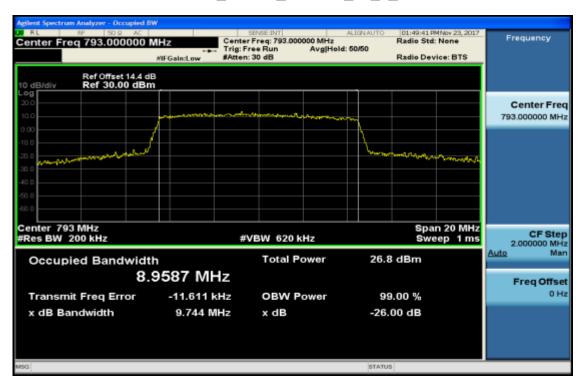
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Band14 10MHz QPSK 50 0 Mid



Band14 10MHz 16QAM 50 0 Mid



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Band14 10MHz 64QAM 50 0 Mid



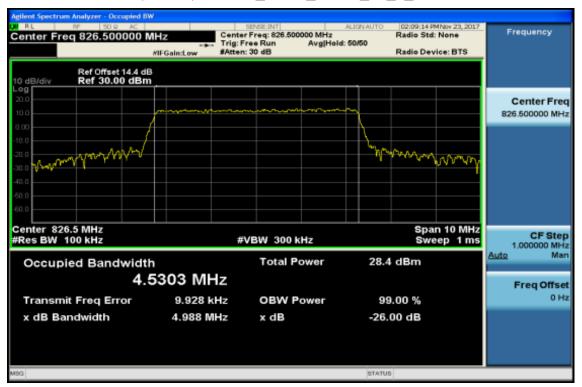
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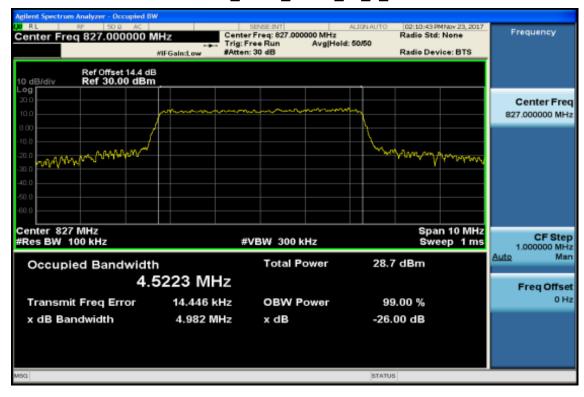


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(Part22) Band18 5MHz QPSK 25 0 Low



Band18 5MHz QPSK 25 0 Mid



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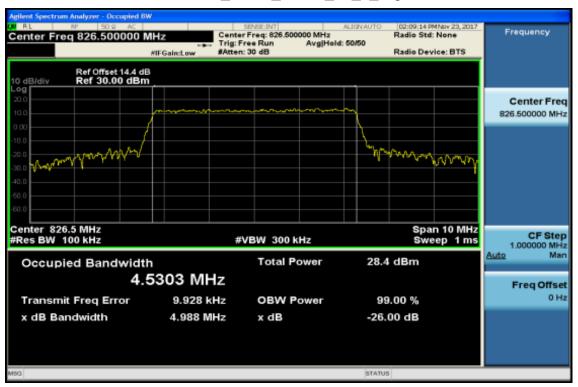
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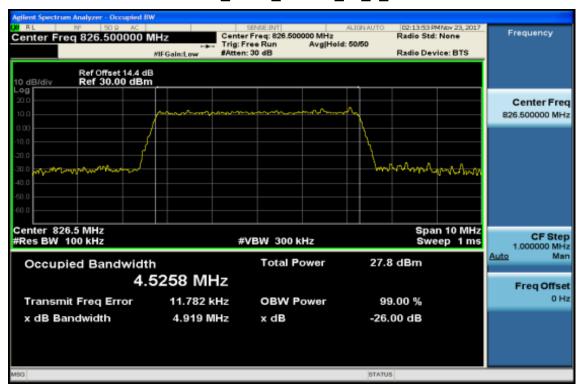
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Band18 5MHz QPSK 25 0 High



Band18 5MHz 16QAM 25 0 Low



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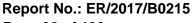
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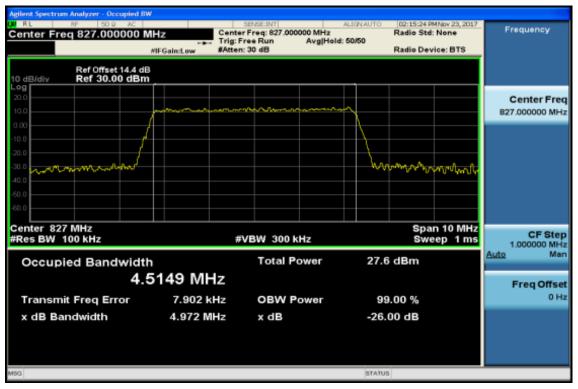
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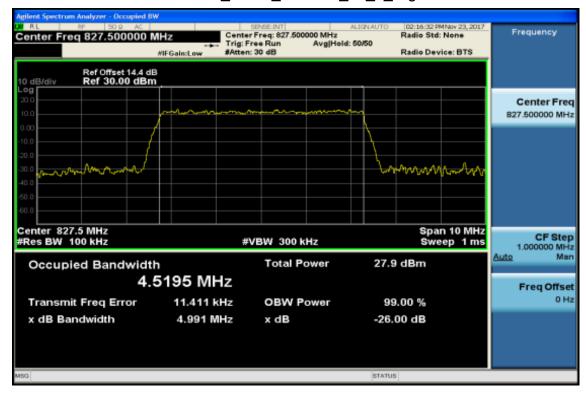


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Band18 5MHz 16QAM 25 0 Mid



Band18 5MHz 16QAM 25 0 High



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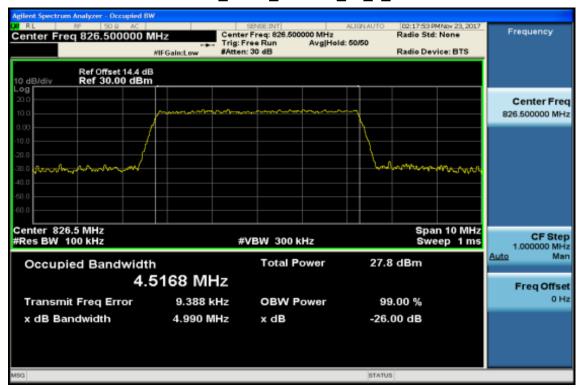
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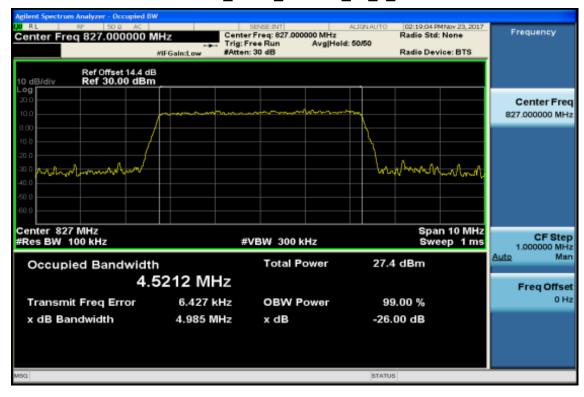
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Band18 5MHz 64QAM 25 0 Low



Band18_5MHz_64QAM 25 0 Mid



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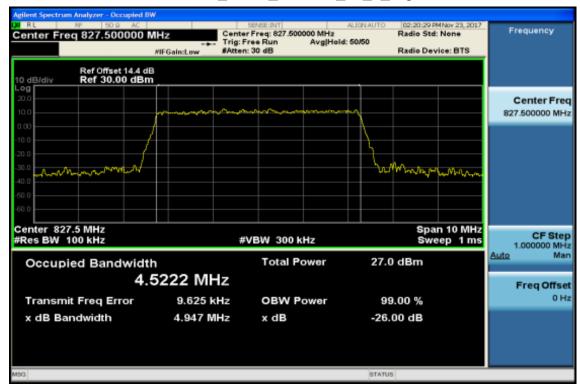
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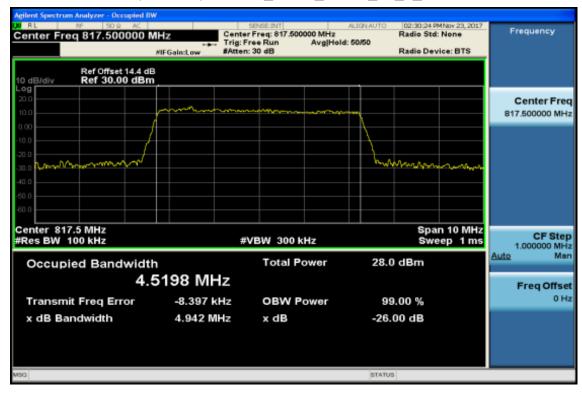
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Band18_5MHz_64QAM _25_0_High



(Part90S) Band18 5MHz QPSK 25 0 Low

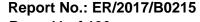


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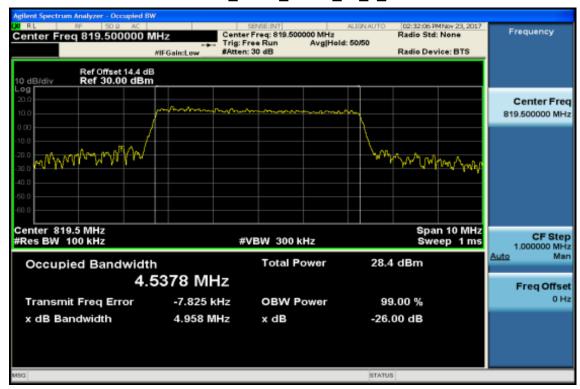
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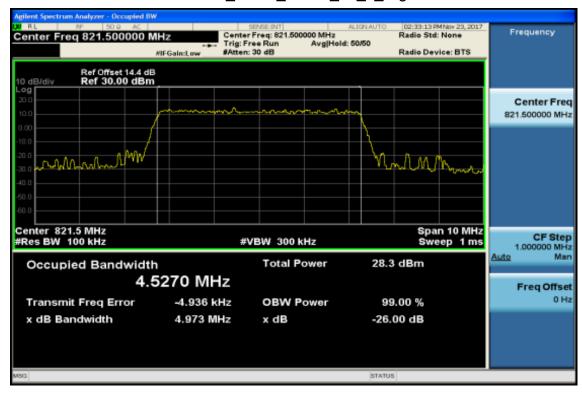


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Band18 5MHz QPSK 25 0 Mid



Band18 5MHz QPSK 25 0 High



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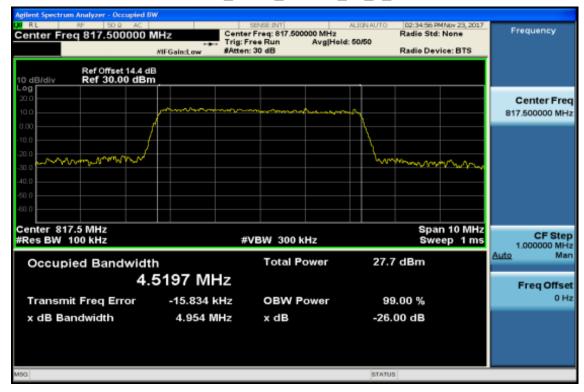
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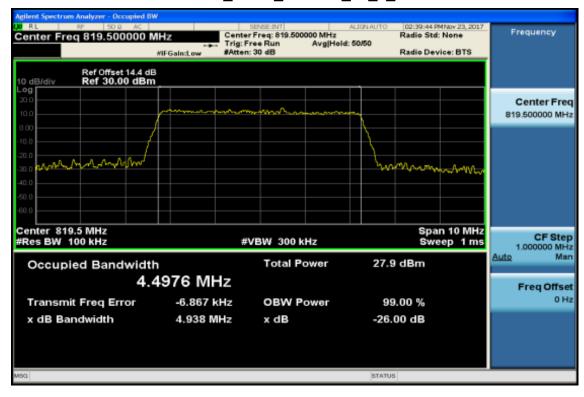


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Band18 5MHz 16QAM 25 0 Low



Band18 5MHz 16QAM 25 0 Mid



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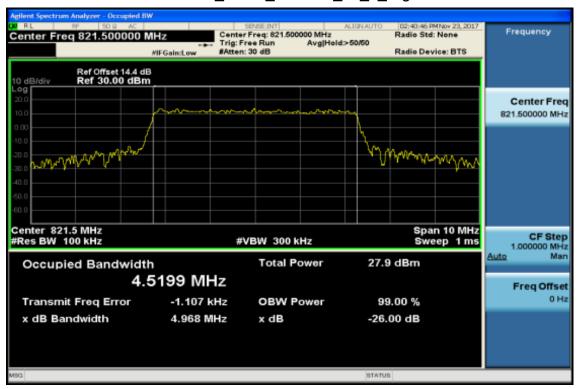
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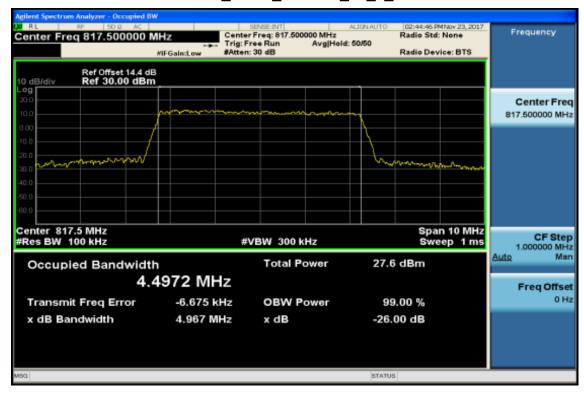


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Band18_5MHz_16QAM _25_0_High



Band18 5MHz 64QAM 25 0 Low



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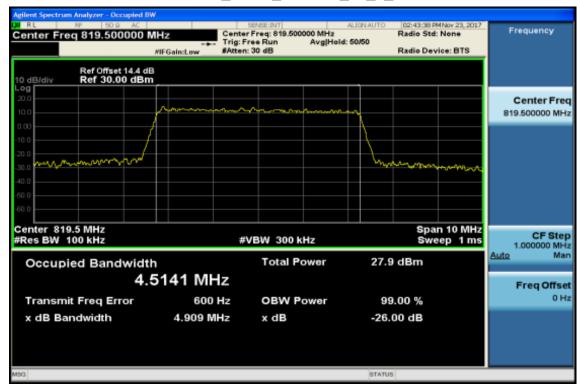
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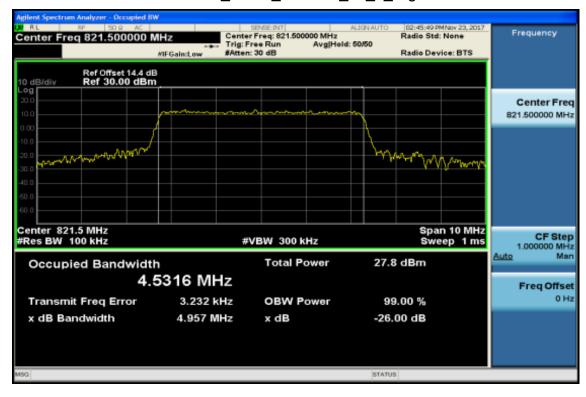


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Band18 5MHz 64QAM 25 0 Mid



Band18 5MHz 64QAM 25 0 High



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9. OUT OF BAND EMISSION AT ANTENNA TERMINALS

9.1. Standard Applicable

FCC §22.917(a),§27.53(h),Out of band emissions. 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.

FCC §27.53(c)

- (c) For operations in the 746–758 MHz band and the 776–788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:
- (2) On any frequency outside the 776–788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB (-13dBm)
- (4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than 65 + 10 log (P) dB in a 6.25 kHz band segment, for mobile and portable stations;

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

FCC §27.53(c) (5) & FCC §27.53(g)

Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

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FCC §27.53(h) (3)

Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

§90.691 Emission mask requirements for EA-based systems.

- (a) Out-of-band emission requirement shall apply only to the "outer" channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:
- (1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116 Log10(f/6.1) decibels or 50 + 10 Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.
- (2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

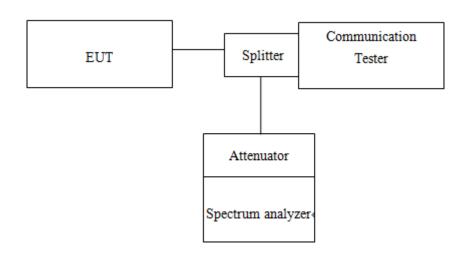
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9.2. Test SET-UP



9.3. Measurement Procedure

Conducted Emission

The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation The resolution bandwidth of the spectrum analyzer was set at 1MHz, sufficient scans were taken to show the out of band Emissions if any up to 10th harmonic.

- 1. To connect Antenna Port of EUT to Spectrum.
- 2. Set RBW = 1MHz & VBW = 1MHz on Spectrum.
- 3. Allow trace to fully stabilize
- 4. Repeat above procedures until all default test channel measured were complete.

Band Edge

- 1. To connect Antenna Port of EUT to Spectrum.
- The band edge of low and high channels for the highest RF powers was measured. Setting RBW ≥ 1% EBW.
- 3. Allow trace to fully stabilize
- 4. Repeat above procedures until all default test channel measured were complete.

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9.4. Measurement Equipment Used

Conducted Emission (measured at antenna port) Test Site					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Power Meter	Anritsu	ML2495A	1005007	12/15/2016	12/14/2017
Power Sensor	Anritsu	MA2411B	917032	12/15/2016	12/14/2017
EXA Spectrum Ana- lyzer	Agilent	N9030A	MY53120760	03/21/2017	03/20/2018
DC Block	Mini-Circuits	BLK-18-S+	1	01/05/2017	01/04/2018
Coaxial Cable	HU- BER+SUHNER	SUCOFLEX 102	23670/2	01/05/2017	01/04/2018
Attenuator	Mini-Circuit	BW-S10W2+	2	01/05/2017	01/04/2018
Splitter	Agilent	11636B	N/A	01/05/2017	01/04/2018
DC Power Supply	Agilent	E3640A	MY52410006	11/21/2016	11/20/2017
Temperature Chamber	TERCHY	MHG-120LF	911009	05/19/2017	05/18/2018
Radio Communication Analyer	Anritsu	MT8820C	6201465317	01/03/2017	01/02/2018

9.5. Measurement Result:

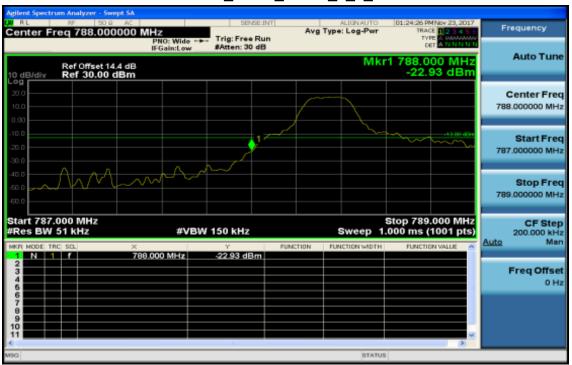
Refer to next pages.

NOTE: The occurrence of the spike on the conducted emission is the signal of the fundamental emission.

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Band14 5MHz QPSK 1 0 Low



Band14_5MHz_QPSK_1_24_High



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Band14 5MHz QPSK 25 0 Low



Band14_5MHz_QPSK_25_0_High



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Band14 10MHz QPSK 1 0 Low



Band14_10MHz_QPSK_1_49_ High



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Band14 10MHz QPSK 50 0 Low



Band14_10MHz_QPSK_50_0_ High



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Band18 5MHz QPSK 1 0 Low



Band18_5MHz_QPSK_1_24_High



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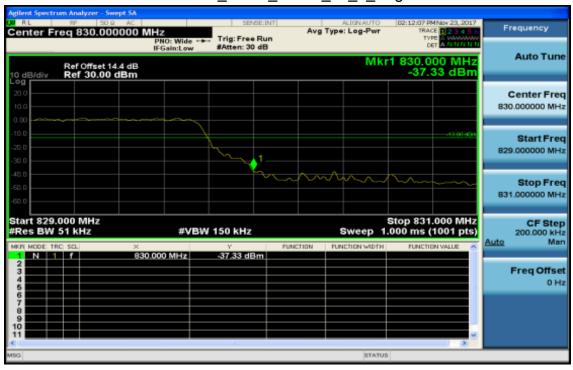
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Band18 5MHz QPSK 25 0 Low



Band18_5MHz_QPSK_25_0_ High



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For Part 90S Band18 5MHz QPSK 1 0 Low



For Part 90S Band18_5MHz_QPSK_1_24_High



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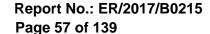


For Part 90S Band18_5MHz_QPSK_25_0_High



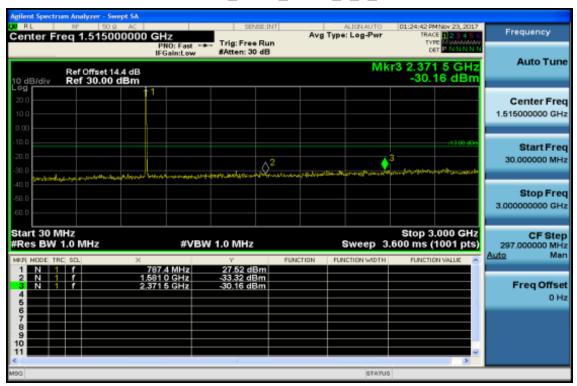
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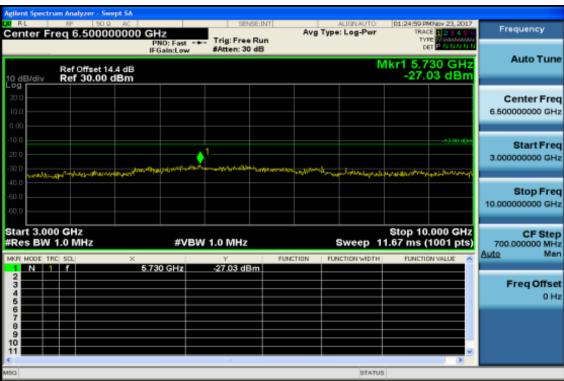
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Band14 5MHz QPSK 1 0 Low



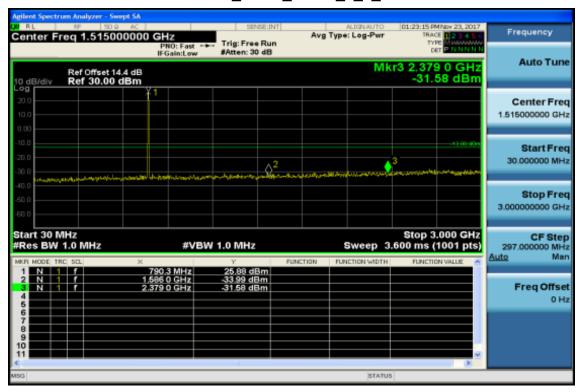


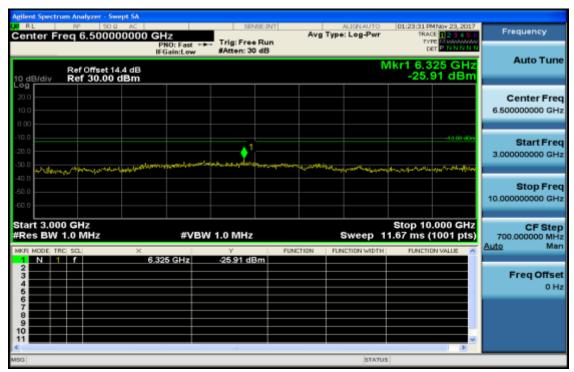
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Band14 5MHz QPSK 1 0 Mid





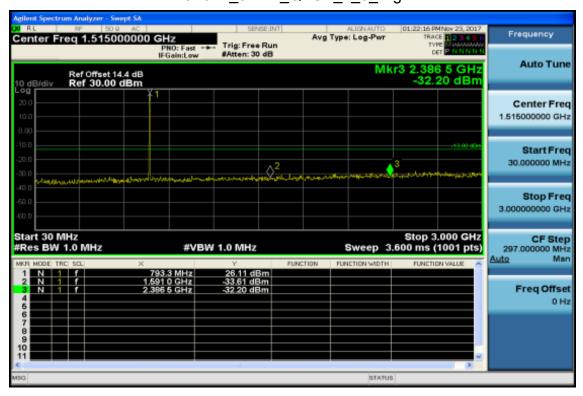
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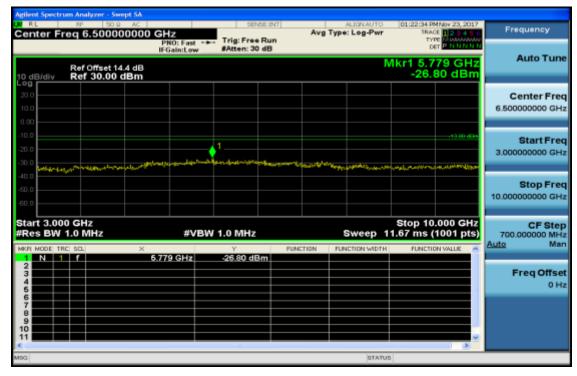
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Band14 5MHz QPSK 1 0 High





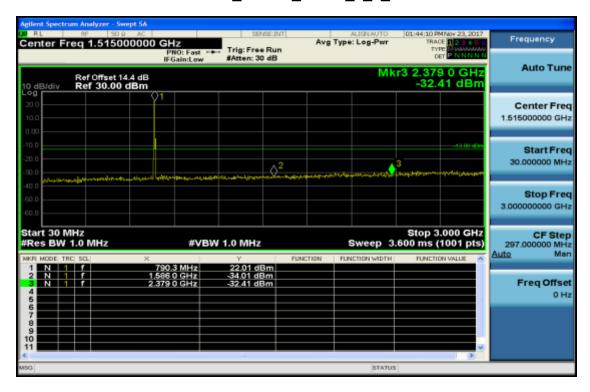
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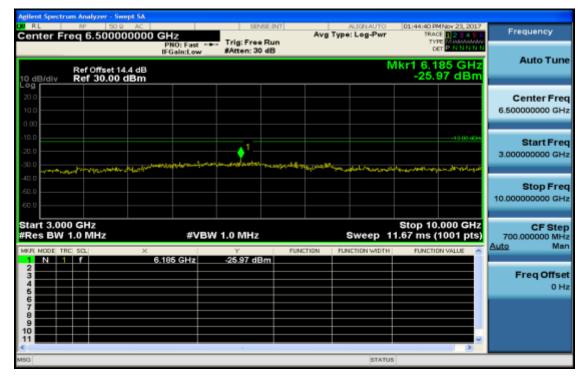
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Band14 10MHz QPSK 1 0 Mid



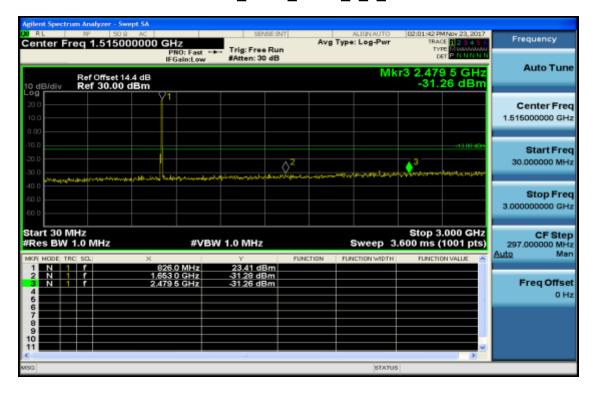


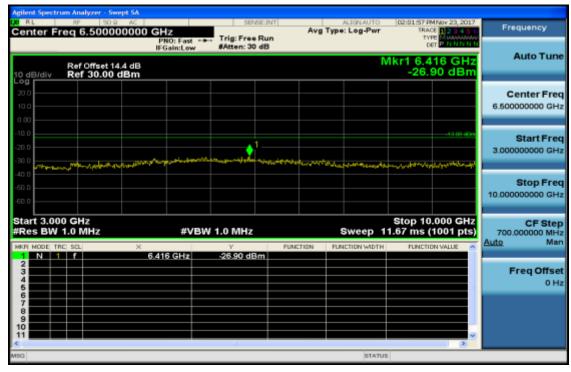
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Band18 5MHz QPSK 1 0 Low





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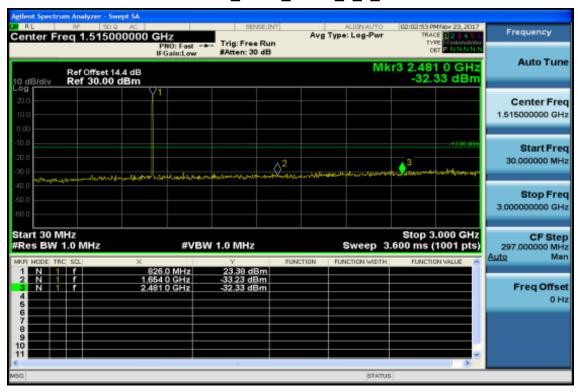
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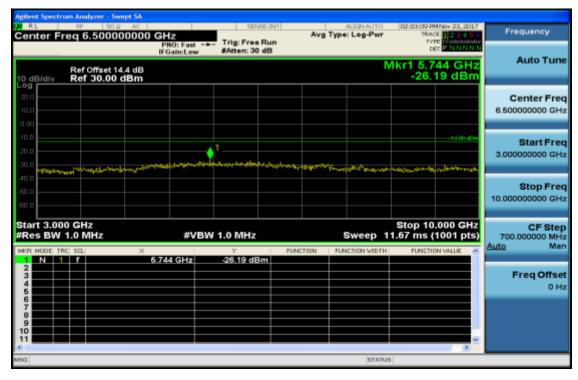
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Band18 5MHz QPSK 1 0 Mid





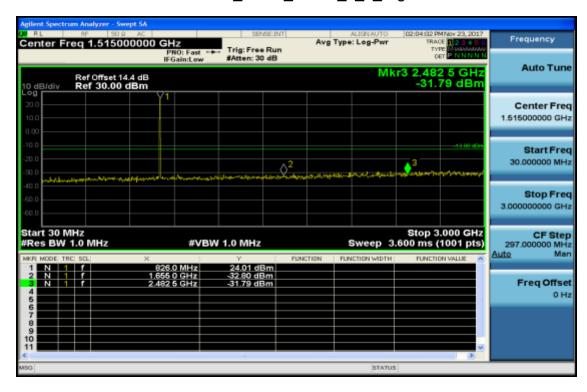
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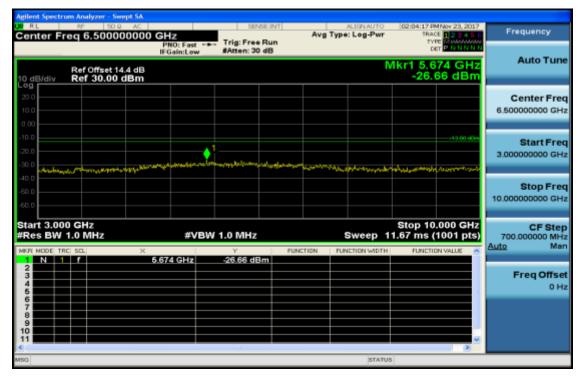
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Band18 5MHz QPSK 1 0 High





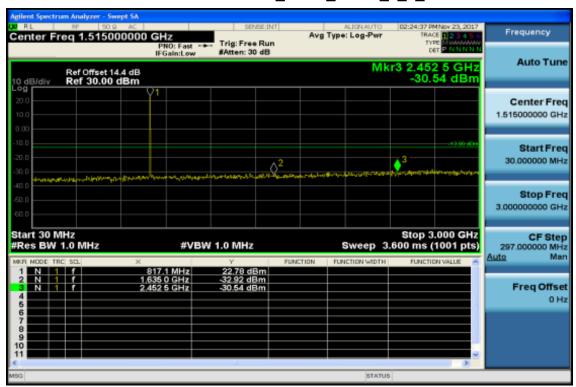
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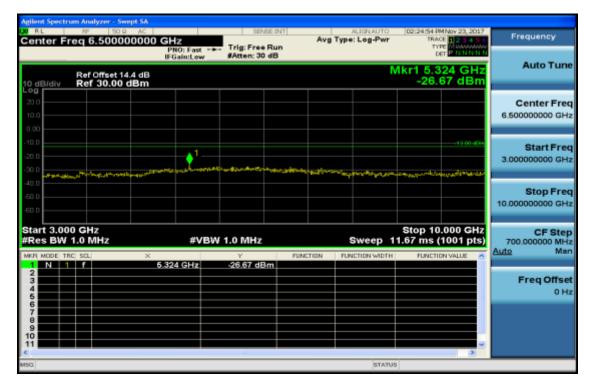
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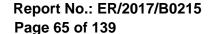
For Part 90S Band18 5MHz QPSK 1 0 Low





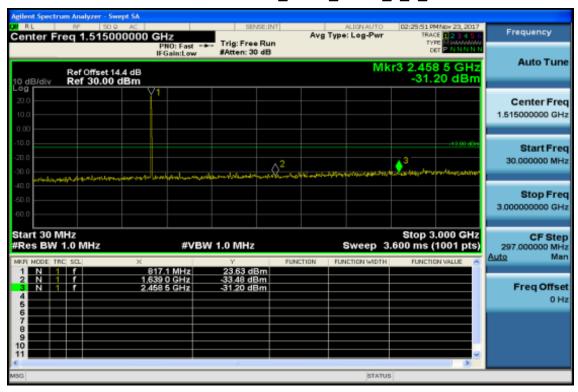
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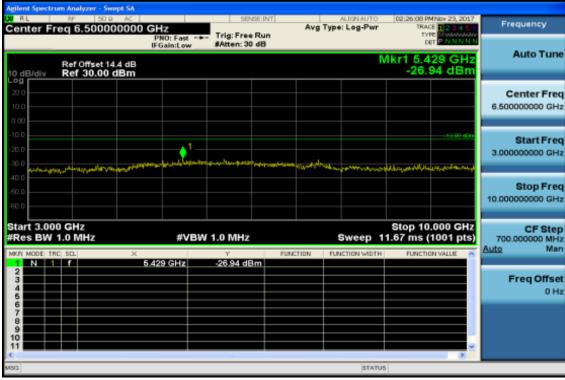
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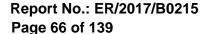
For Part 90S Band18 5MHz QPSK 1 0 Mid





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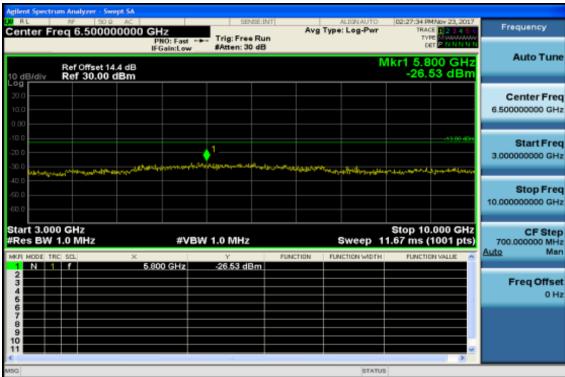
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For Part 90S Band18 5MHz QPSK 1 0 High



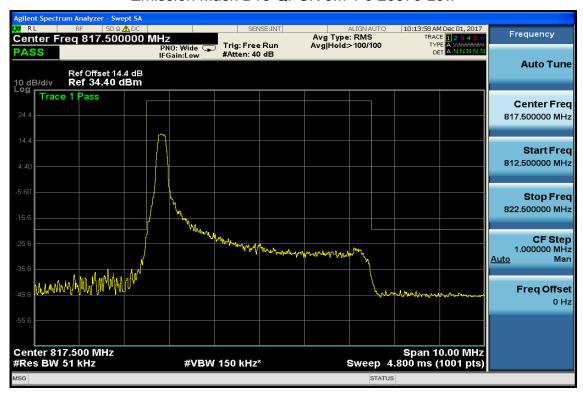


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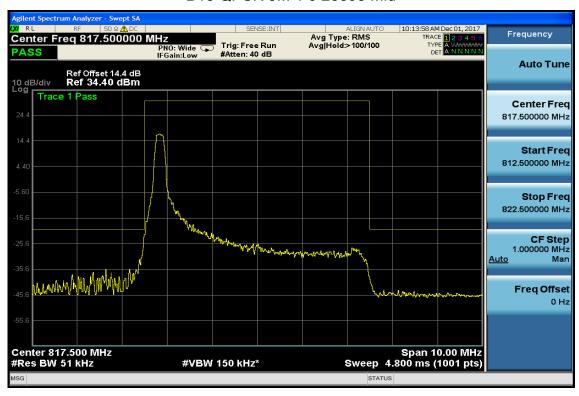
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Emission Mask B18 QPSK 5M 1 0 23875 Low



B18 QPSK 5M 1 0 23895 Mid



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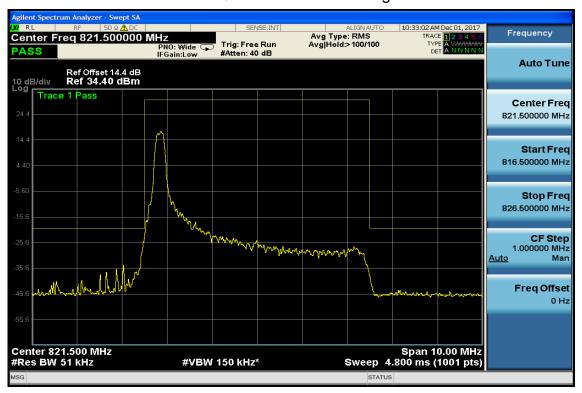
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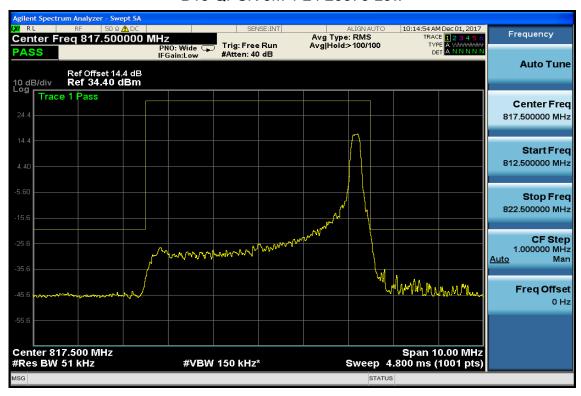
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B18 QPSK 5M 1 0 23915 High



B18 QPSK 5M 1 24 23875 Low



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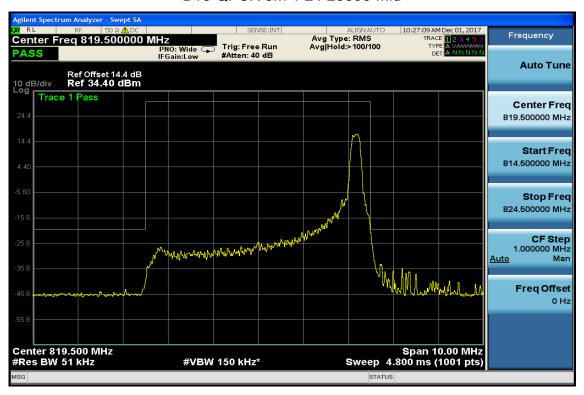
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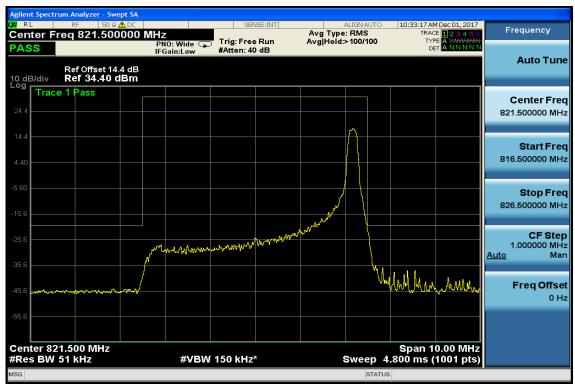
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B18 QPSK 5M 1 24 23895 Mid



B18 QPSK 5M 1 24 23915 High



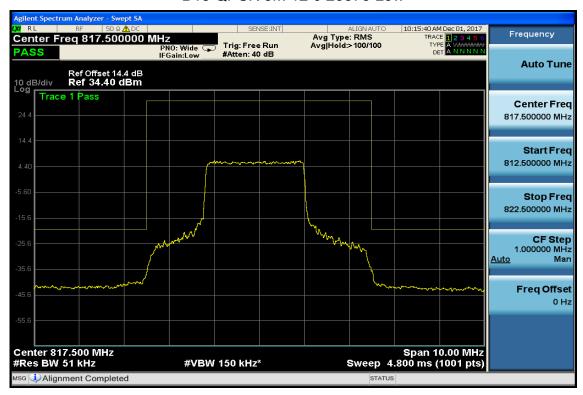
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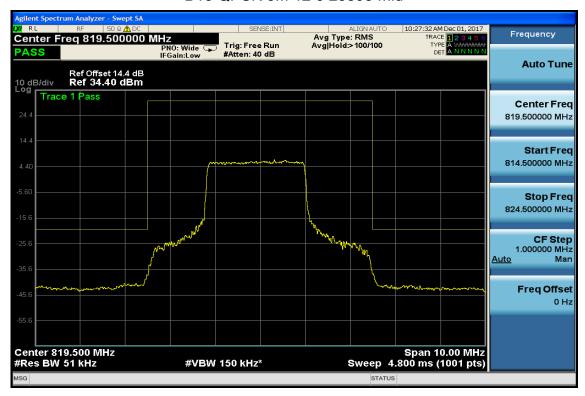
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B18 QPSK 5M 12 6 23875 Low



B18 QPSK 5M 12 6 23895 Mid



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