

## ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT INTENTIONAL RADIATOR CERTIFICATION TO FCC PART 22 SUBPART H, PART 24 SUBPART E and PART 27 SUBPART B, C & SUBPART L and PART 90S REQUIREMENT

	OF
Applicant:	Harman International Industries Incorporated 636, Ellis St, Mountain View, CA 94043, USA
Product Name:	Sprint Drive
Brand Name:	Sprint Drive
Model No.:	HSA-15US-AA
Model Difference:	N/A
FCC ID:	2AHPN-HSA-15US-AA
Report Number:	E2/2018/70105
FCC Rule Part:	2 , 22H & 24E & 27B, C & L & 90S
Issue Date:	Aug. 31, 2018
Date of Test:	Aug. 10, 2018 ~ Aug. 22, 2018
Date of EUT Received:	Aug. 10, 2018
We hereby certify thet.	

#### 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 C63.26-2015 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.

Tested By:

Approved By:

lito Pei

Vito Pei / Sr. Enigneer

Jim Chang / Manager



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## **Revision History**

Report Number	Revision	Description	Effected Page	Issue Date	Revised By
E2/2018/70105	Rev.00	Initial creation of docu- ment	All	Aug. 31, 2018	Yuri Tsai

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### 1. GENERAL PRODUCT INFORMATION

### **1.1. Product Description**

General:

Product Name:	Sprint Drive
Brand Name:	Sprint Drive
Model No.:	HSA-15US-AA
Model Difference:	N/A
Hardware Version:	VS.0
Software Version:	HSA-15US_81_LA301_R03B
Power Supply:	3.7Vdc from Rechargeable Li-polymer Battery or 12Vdc from vehicle battery
IMEI:	35975009000290

### **Antenna Designation:**

Туре	Antenna Part No.	Modulation	Modulation Frequency (MHz)		Peak Antenna Gain (dBi)	
		LTE Band 2	1850	~	1910	1
		LTE Band 4	1710	~	1755	1
		LTE Band 5	824	~	849	0.5
FPC	N2860-BA	LTE Band 12	699	~	716	0.5
IFC	NZOOO-DA	LTE Band 25	1850	~	1915	1
		LTE Band 26	824	1	849	0.5
	-	LTE Band 26 (Part 90S)	814	~	824	0.5

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### 1.2. LTE: Cellular Phone Standards Frequency Range

LTE Band	BW (MHz)	Operation Frequency (MHz)		LTE Band	BW (MHz)		on Fre	equency )	
	1.4	1850.7	-	1909.3		1.4	1850.7	-	1914.3
	3	1851.5	-	1908.5		3	1851.5	-	1913.5
2	5	1852.5	-	1907.5	25	5	1852.5	-	1912.5
2	10	1855.0	-	1905.0	25	10	1855.0	-	1910.0
	15	1857.5	-	1902.5		15	1857.5	-	1907.5
	20	1860.0	-	1900.0		20	1860.0	-	1905.0
	1.4	1710.7	-	1754.3	26	1.4	824.7	-	848.3
	3	1711.5	-	1753.5		3	825.5	-	847.5
4	5	1712.5	-	1752.5		5	826.5	-	846.5
4	10	1715.0	-	1780.0		10	829.0	-	844.0
	15	1717.5	-	1747.5		15	831.5	-	841.5
	20	1720.0	-	1745.0		1.4	814.7	-	823.3
	1.4	824.7	-	848.3	26 Part90	3	815.5	-	822.5
5	3	825.5	-	847.5	20 Fail90	5	816.5	-	821.5
5	5	826.5	-	846.5		10		819.0	)
	10	829.0	-	844.0					
	1.4	699.7	-	715.3					
12	3	700.5	-	714.5					
12	5	701.5	-	713.5					
	10	704.0	-	711.0					

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

LTE Band	BW (MHz)	Modulation	ERP / EIRP (dBm)		(W)	Type of Emission
	1.4	QPSK	23.71	EIRP	0.235	1M10G7D
	1.4	16QAM	22.98	EIRP	0.199	1M11D7W
	1.4	64QAM	22.93	EIRP	0.196	1M11D7W
	3	QPSK	23.84	EIRP	0.242	2M72G7D
	3	16QAM	23.55	EIRP	0.226	2M72D7W
	3	64QAM	23.52	EIRP	0.225	2M72D7W
	5	QPSK	23.55	EIRP	0.226	4M53G7D
	5	16QAM	23.81	EIRP	0.191	4M52D7W
2	5	64QAM	22.75	EIRP	0.188	4M53D7W
Z	10	QPSK	23.5	EIRP	0.224	9M00G7D
	10	16QAM	23.1	EIRP	0.204	9M01D7W
	10	64QAM	23.03	EIRP	0.202	9M01D7W
	15	QPSK	23.75	EIRP	0.237	13M5G7D
	15	16QAM	23.02	EIRP	0.2	13M5D7W
	15	64QAM	22.99	EIRP	0.199	13M5D7W
	20	QPSK	23.98	EIRP	0.25	18M0G7D
	20	16QAM	22.94	EIRP	0.197	18M0D7W
	20	64QAM	22.92	EIRP	0.196	18M0D7W

LTE Band	BW (MHz)	Modulation		ERP / EIRP (dBm)		Type of Emission
	1.4	QPSK	24.48	EIRP	0.281	1M10G7D
	1.4	16QAM	23.46	EIRP	0.222	1M10D7W
	1.4	64QAM	23.41	EIRP	0.219	1M11D7W
	3	QPSK	24.44	EIRP	0.278	2M73G7D
	3	16QAM	23.49	EIRP	0.223	2M73D7W
	3	64QAM	23.49	EIRP	0.223	2M72D7W
	5	QPSK	24.37	EIRP	0.274	4M53G7D
	5	16QAM	23.50	EIRP	0.224	4M53D7W
4	5	64QAM	23.47	EIRP	0.222	4M54D7W
4	10	QPSK	24.44	EIRP	0.278	9M01G7D
	10	16QAM	23.47	EIRP	0.222	9M00D7W
	10	64QAM	23.46	EIRP	0.222	9M01D7W
	15	QPSK	24.44	EIRP	0.278	13M5G7D
	15	16QAM	23.49	EIRP	0.223	13M5D7W
	15	64QAM	23.45	EIRP	0.221	13M5D7W
	20	QPSK	24.50	EIRP	0.282	18M0G7D
	20	16QAM	23.46	EIRP	0.222	18M0D7W
	20	64QAM	23.47	EIRP	0.222	18M0D7W

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LTE Band	BW (MHz)	Modulation		/ EIRP 3m)	(W)	Type of Emission
	1.4	QPSK	22.87	ERP	0.194	1M10G7D
	1.4	16QAM	22.25	ERP	0.168	1M11D7W
	1.4	64QAM	22.21	ERP	0.166	1M11D7W
	3	QPSK	22.96	ERP	0.198	2M72G7D
	3	16QAM	22.28	ERP	0.169	2M73D7W
5	3	64QAM	22.15	ERP	0.164	2M72D7W
5	5	QPSK	23.01	ERP	0.200	4M54G7D
	5	16QAM	22.58	ERP	0.181	4M53D7W
	5	64QAM	22.52	ERP	0.179	4M53D7W
	10	QPSK	22.88	ERP	0.194	9M01G7D
	10	16QAM	22.32	ERP	0.171	9M00D7W
	10	64QAM	22.28	ERP	0.169	9M00D7W
	1.4	QPSK	23.08	EIRP	0.203	1M10G7D
	1.4	16QAM	22.38	EIRP	0.173	1M11D7W
	1.4	64QAM	22.36	EIRP	0.172	1M11D7W
	3	QPSK	23.25	EIRP	0.211	2M72G7D
	3	16QAM	22.57	EIRP	0.181	2M72D7W
	3	64QAM	22.53	EIRP	0.179	2M72D7W
	5	QPSK	23.25	ERP	0.211	4M53G7D
	5	16QAM	22.87	ERP	0.194	4M53D7W
25	5	64QAM	22.83	ERP	0.192	4M52D7W
20	10	QPSK	23.29	ERP	0.213	9M02G7D
	10	16QAM	22.83	ERP	0.192	9M01D7W
	10	64QAM	22.77	ERP	0.189	9M01D7W
	15	QPSK	23.31	ERP	0.214	13M5G7D
	15	16QAM	23.02	ERP	0.2	13M5D7W
	15	64QAM	22.97	ERP	0.198	13M5D7W
	20	QPSK	23.46	ERP	0.222	18M0G7D
	20	16QAM	22.88	ERP	0.194	18M0D7W
	20	64QAM	22.81	ERP	0.191	18M0D7W

LTE Band	BW (MHz)	Modulation		P / EIRP IBm)	(W)	Type of Emission
	1.4	QPSK	23.16	ERP	0.207	1M11G7D
	1.4	16QAM	22.38	ERP	0.173	1M11D7W
	1.4	64QAM	22.35	ERP	0.172	1M10D7W
	3	QPSK	23.05	ERP	0.202	2M72G7D
	3	16QAM	22.74	ERP	0.188	2M72D7W
12	3	64QAM	22.69	ERP	0.186	2M72D7W
IZ	5	QPSK	23.09	ERP	0.204	4M54G7D
	5	16QAM	22.89	ERP	0.195	4M52D7W
	5	64QAM	22.83	ERP	0.192	4M53D7W
	10	QPSK	23.18	ERP	0.208	9M02G7D
	10	16QAM	22.74	ERP	0.188	9M04D7W
	10	64QAM	22.66	ERP	0.185	9M04D7W
	1.4	QPSK	22.92	ERP	0.196	1M10G7D
	1.4	16QAM	22.26	ERP	0.168	1M10D7W
	1.4	64QAM	22.33	ERP	0.171	1M10D7W
	3	QPSK	23.04	ERP	0.201	2M72G7D
	3	16QAM	22.45	ERP	0.176	2M70D7W
	3	64QAM	22.34	ERP	0.171	2M71D7W
	5	QPSK	23.00	ERP	0.2	4M53G7D
26	5	16QAM	22.52	ERP	0.179	4M52D7W
	5	64QAM	22.45	ERP	0.176	4M51D7W
	10	QPSK	23.05	ERP	0.202	8M99G7D
	10	16QAM	22.43	ERP	0.175	9M02D7W
	10	64QAM	22.38	ERP	0.173	9M01D7W
	15	QPSK	23.06	ERP	0.202	13M5G7D
	15	16QAM	22.43	ERP	0.175	13M5D7W
	15	64QAM	22.37	ERP	0.173	13M5D7W

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LTE Band	BW (MHz)	Modulation	ERP / EIRP (dBm)		(W)	Type of Emission
	1.4	QPSK	22.98	ERP	0.199	1M11G7D
	1.4	16QAM	21.96	ERP	0.157	1M11D7W
	1.4	64QAM	22.11	ERP	0.163	1M11D7W
	3	QPSK	23.11	ERP	0.205	2M72G7D
	3	16QAM	22.14	ERP	0.164	2M73D7W
26	3	64QAM	21.93	ERP	0.156	2M72D7W
Part90	5	QPSK	24.02	ERP	0.252	4M54G7D
	5	16QAM	22.86	ERP	0.193	4M54D7W
	5	64QAM	23.07	ERP	0.203	4M53D7W
	10	QPSK	23.13	ERP	0.206	9M01G7D
	10	16QAM	21.94	ERP	0.156	9M10D7W
	10	64QAM	21.81	ERP	0.152	9M02D7W

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### 1.4. Test Methodology of Applied Standards

CC 47 CFR Part 2, 22, 24, 27, Part 90S.

ANSI C63.26-2015

KDB971168 D01 Power Meas license Digital System v03

KDB941225 D01 SAR test for 3G devices v03r01 (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.

#### 1.5. Test Facility

SGS Taiwan Ltd. Electronics & Communication Laboratory No.2, Keji 1st Rd., Guishan District, Taoyuan City, Taiwan 333 (TAF code 0513)

FCC Registration Numbers are: 735305 / TW0002

#### 1.6. Special Accessories

No special accessories were used during testing.

#### **1.7. 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 in physical test.

	RF cable loss (dB)	Attenuation factor(dB)	offset(dB)
Low Band (Below 1GHz)	3.6	10	13.6
High Band (Above 1 GHz)	4.1	10	14.1

### 2.5. Final Amplifier Voltage and Current Information:

Test Mode	DC voltage (V)	DC current (mA)
LTE Band 2		0.208
LTE Band 4		0.232
LTE Band 5		0.221
LTE Band 12	12V	0.213
LTE Band 25		0.211
LTE Band 26		0.212
LTE Band 26 (Part 90S)		0.207

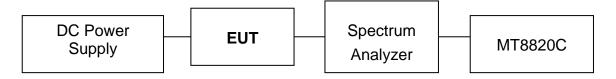
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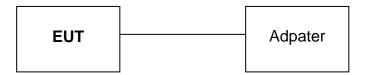


### 2.6. Configuration of Tested System

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



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



### **Remote Side**

MT8820C

#### Table 2-1 Equipment Used in

ltem	Equipment	Mfr/Brand	Model/ Type No.	Series No.	Data Cable	Power Cord
1.	Radio Communication Analyzer	Anritsu	MT8820C	6201107337	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) §24.232(c) §27.50(h)(2) §27.50(c)(10) §27.50(d)(4) §90.635	ERP/ EIRP measurement	Compliant
§2.1049(h)	99% & 26dB Occuupied Bandwidth	Compliant
§2.1051 §22.917(a) §24.238(a) §27.53(g) §27.53(h) §27.53(m)(4)(6) §90.691	Out of Band Emissions at Antenna Ter- minals and Band Edge / Emission mask requirements	Compliant
§2.1053 §22.917(a) §24.238(a) §27.53(f) §27.53(g) §27.53(h) §27.53(m)(4) §90.691(a)(1)(2)	Field Strength of Spurious Radiation	Compliant
§24.232(d) §27.50 (B)	Peak to Average Ratio	Compliant
§2.1055(a)(1) §22.355 §24.235 §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
LTE Band 2	H-plan	H-plan
LTE Band 4	H-plan	H-plan
LTE Band 5	H-plan	H-plan
LTE Band 12	H-plan	H-plan
LTE Band 25	H-plan	H-plan
LTE Band 26	H-plan	H-plan
LTE Band 26 (Part 90S)	H-plan	H-plan

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### LTE Band 2 MODE

TEST ITEM	AVAILABLE	TESTED	CHANNEL	MODULATION	MODE
	CHANNEL	CHANNEL	BANDWIDTH	WODULATION	WODE
	18607 to 19193	18607, 18900, 19193	1.4MHz	QPSK, 16QAM, 64QAM	1 RB/ 0,5 RB Offest
	18615 to 19185	18615, 18900, 19185	3MHz	QPSK, 16QAM, 64QAM	1 RB/ 0,14 RB Offest
EIRP	18625 to 19175	18625, 18900, 19175	5MHz	QPSK, 16QAM, 64QAM	1 RB/ 0,24 RB Offest
LIKF		18650, 18900, 19150	10MHz	QPSK, 16QAM, 64QAM	1 RB/ 0,49 RB Offest
		18675, 18900, 19125	15MHz	QPSK, 16QAM, 64QAM	1 RB/ 0,74 RB Offest
	18700 to 19100	18700, 18900, 19100	20MHz	QPSK, 16QAM, 64QAM	1 RB/ 0,99 RB Offest
FREQUENCY STABILITY	18650 to 19150	18900	10MHz	QPSK	Full RB
	18607 to 19193	18607, 18900, 19193	1.4MHz	QPSK, 16QAM, 64QAM	Full RB
	18615 to 19185	18615, 18900, 19185	3MHz	QPSK, 16QAM, 64QAM	Full RB
OCCUPIED BAND-	18625 to 19175	18625, 18900, 19175	5MHz	QPSK, 16QAM, 64QAM	Full RB
WIDTH	18650 to 19150	18650, 18900, 19150	10MHz	QPSK, 16QAM, 64QAM	Full RB
	18675 to 19125	18675, 18900, 19125	15MHz	QPSK, 16QAM, 64QAM	Full RB
	18700 to 19100	18700, 18900, 19100	20MHz	QPSK, 16QAM, 64QAM	Full RB
	18607 to 19193	18607, 18900, 19193	1.4MHz	16QAM	Full RB
	18615 to 19185	18615, 18900, 19185	3MHz	16QAM	Full RB
	18625 to 19175	18625, 18900, 19175	5MHz	16QAM	Full RB
RATIO		18650, 18900, 19150	10MHz	16QAM	Full RB
		18675, 18900, 19125	15MHz	16QAM	Full RB
	18700 to 19100	18700, 18900, 19100	20MHz	16QAM	Full RB
	18607 to 19193	18607, 19193	1.4MHz	QPSK	1 RB/ 0,5 RB Offes Full RB
	18615 to 19185	18615, 19185	3MHz	QPSK	1 RB/ 0,14 RB Offest Full RB
BAND EDGE	18625 to 19175	18625, 19175	5MHz	QPSK	1 RB/ 0,24 RB Offest Full RB
DANDEDGE	18650 to 19150	18650, 19150	10MHz	QPSK	1 RB/ 0,49 RB Offest Full RB
	18675 to 19125	18675, 19125	15MHz	QPSK	1 RB/ 0,74 RB Offest Full RB
	18700 to 19100	18700, 19100	20MHz	QPSK	1 RB/ 0,99 RB Offest Full RB
		18607, 18900, 19193	1.4MHz	QPSK	1 RB, 0 RB Offest
		18615, 18900, 19185	3MHz	QPSK	1 RB, 0 RB Offest
CONDCUDETED EMISSION		18625, 18900, 19175	5MHz	QPSK	1 RB, 0 RB Offest
		18650, 18900, 19150	10MHz	QPSK	1 RB, 0 RB Offest
		18675, 18900, 19125	15MHz	QPSK	1 RB, 0 RB Offest
	18700 to 19100	18700, 18900, 19100	20MHz	QPSK	1 RB, 0 RB Offest
RADIATED EMISSION	18700 to 19100	18700, 18900, 19100	3MHz	QPSK	1 RB, 0 RB Offest

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#### LTE Band 4 MODE

	AVAILABLE	TESTED	CHANNEL		
TEST ITEM	CHANNEL		BANDWIDTH	MODULATION	MODE
	19957 to 19393	19957, 20175, 19393	1.4MHz	QPSK, 16QAM, 64QAM	1 RB/ 0,5 RB Offest
	19965 to 22385	19965, 20175, 22385	3MHz	QPSK, 16QAM, 64QAM	1 RB/ 0,14 RB Offest
EIRP	19975 to 20375	19975, 20175, 20375	5MHz	QPSK, 16QAM, 64QAM	1 RB/ 0,24 RB Offest
EIRP	20000 to 20350	20000, 20175, 20350	10MHz	QPSK, 16QAM, 64QAM	1 RB/ 0,49 RB Offest
	20025 to 20325	20025, 20175, 20325	15MHz	QPSK, 16QAM, 64QAM	1 RB/ 0,74 RB Offest
	20050 to 20300	20050, 20175, 20300	20MHz	QPSK, 16QAM, 64QAM	1 RB/ 0,99 RB Offest
FREQUENCY STABILITY	20000 to 20350	20175	10MHz	QPSK	Full RB
	19957 to 19393	19957, 20175, 19393	1.4MHz	QPSK, 16QAM, 64QAM	Full RB
	19965 to 22385	19965, 20175, 22385	3MHz	QPSK, 16QAM, 64QAM	Full RB
OCCUPIED BAND-	19975 to 20375	19975, 20175, 20375	5MHz	QPSK, 16QAM, 64QAM	Full RB
WIDTH	20000 to 20350	20000, 20175, 20350	10MHz	QPSK, 16QAM, 64QAM	Full RB
	20025 to 20325	20025, 20175, 20325	15MHz	QPSK, 16QAM, 64QAM	Full RB
	20050 to 20300	20050, 20175, 20300	20MHz	QPSK, 16QAM, 64QAM	Full RB
	19957 to 19393	19957, 20175, 19393	1.4MHz	64QAM	Full RB
	19965 to 22385	19965, 20175, 22385	3MHz	64QAM	Full RB
PEAK TO AVER-	19975 to 20375	19975, 20175, 20375	5MHz	64QAM	Full RB
AGE RATIO	20000 to 20350	20000, 20175, 20350	10MHz	64QAM	Full RB
	20025 to 20325	20025, 20175, 20325	15MHz	64QAM	Full RB
	20050 to 20300	20050, 20175, 20300	20MHz	64QAM	Full RB
	19957 to 19393	19957, 19393	1.4MHz	QPSK	1 RB/ 0,5 RB Offes Full RB
	19965 to 22385	19965, 22385	3MHz	QPSK	1 RB/ 0,14 RB Offest Full RB
BAND EDGE	19975 to 20375	19975, 20375	5MHz	QPSK	1 RB/ 0,24 RB Offest Full RB
DAND EDGE	20000 to 20350	20000, 20350	10MHz	QPSK	1 RB/ 0,49 RB Offest Full RB
	20025 to 20325	20025, 20325	15MHz	QPSK	1 RB/ 0,74 RB Offest Full RB
	20050 to 20300	20050, 20300	20MHz	QPSK	1 RB/ 0,99 RB Offest Full RB
		19957, 20175, 19393	1.4MHz	QPSK	1 RB, 0 RB Offest
		19965, 20175, 22385	3MHz	QPSK	1 RB, 0 RB Offest
CONDCUDETED EMISSION		19975, 20175, 20375	5MHz	QPSK	1 RB, 0 RB Offest
		20000, 20175, 20350	10MHz	QPSK	1 RB, 0 RB Offest
		20025, 20175, 20325	15MHz	QPSK	1 RB, 0 RB Offest
	20050 to 20300	20050, 20175, 20300	20MHz	QPSK	1 RB, 0 RB Offest
RADIATED EMISSION	20000 to 20350	20000, 20175, 20350	10MHz	QPSK	1 RB, 0 RB Offest

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#### LTE Band 5 MODE

TEST ITEM	- AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
	20470 to 20643	20470, 20525, 20643	1.4MHz	QPSK, 16QAM, 64QAM	1 RB/ 0,5 RB Offest
-	20415 to 20635	20415, 20525, 20635	3MHz	QPSK, 16QAM, 64QAM	1 RB/ 0,14 RB Offest
ERP	20425 to 20625	20425, 20525, 20625	5MHz	QPSK, 16QAM, 64QAM	1 RB/ 0,24 RB Offest
	20450 to 20600	20450, 20525, 20600	10MHz	QPSK, 16QAM, 64QAM	1 RB/ 0,49 RB Offest
FREQUENCY STA- BILITY	20450 to 20600	20525	10MHz	QPSK,	Full RB
	20470 to 20643	20470, 20525, 20643	1.4MHz	QPSK, 16QAM, 64QAM	Full RB
OCCUPIED BAND-	20415 to 20635	20415, 20525, 20635	3MHz	QPSK, 16QAM, 64QAM	Full RB
WIDTH	20425 to 20625	20425, 20525, 20625	5MHz	QPSK, 16QAM, 64QAM	Full RB
	20450 to 20600	20450, 20525, 20600	10MHz	QPSK, 16QAM, 64QAM	Full RB
	20470 to 20643	20470, 20525, 20643	1.4MHz	64QAM	Full RB
PEAK TO AVERAGE	20415 to 20635	20415, 20525, 20635	3MHz	64QAM	Full RB
RATIO	20425 to 20625	20425, 20525, 20625	5MHz	64QAM	Full RB
	20450 to 20600	20450, 20525, 20600	10MHz	64QAM	Full RB
	20470 to 20643	20470, 20643	1.4MHz	QPSK,	1 RB/ 0,5 RB Offes Full RB
	20415 to 20635	20415, 20635	3MHz	QPSK,	1 RB/ 0,14 RB Offest Full RB
BAND EDGE	20425 to 20625	20425, 20625	5MHz	QPSK,	1 RB/ 0,24 RB Offest Full RB
	20450 to 20600	20450, 20600	10MHz	QPSK,	1 RB/ 0,49 RB Offest Full RB
	20470 to 20643	20470, 20525, 20643	1.4MHz	QPSK,	1 RB, 0 RB Offest
CONDCUDETED EMISSION	20415 to 20635	20415, 20525, 20635	3MHz	QPSK,	1 RB, 0 RB Offest
	20425 to 20625	20425, 20525, 20625	5MHz	QPSK,	1 RB, 0 RB Offest
	20450 to 20600	20450, 20525, 20600	10MHz	QPSK,	1 RB, 0 RB Offest
RADIATED EMIS- SION	20450 to 20600	20450, 20525, 20600	1.4MHz	16QAM	1 RB, 0 RB Offest

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### LTE Band 12 MODE

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHAN- NEL BAND- WIDTH	MODULATION	MODE
	23017 to 23173	23017, 23095, 23173	1.4MHz	QPSK, 16QAM, 64QAM	1 RB/ 0,5 RB Offest
ERP	23025 to 23165	23025, 23095, 23165	3MHz	QPSK, 16QAM, 64QAM	1 RB/ 0,14 RB Offest
ERF	23035 to 23155	23035, 23095, 23155	5MHz	QPSK, 16QAM, 64QAM	1 RB/ 0,24 RB Offest
	23060 to 23130	23060, 23095, 23130	10MHz	QPSK, 16QAM, 64QAM	1 RB/ 0,49 RB Offest
FREQUENCY STABILITY	23060 to 23130	23095	10MHz	QPSK	Full RB
	23017 to 23173	23017, 23095, 23173	1.4MHz	QPSK, 16QAM, 64QAM	Full RB
OCCUPIED	23025 to 23165	23025, 23095, 23165	3MHz	QPSK, 16QAM, 64QAM	Full RB
BANDWIDTH	23035 to 23155	23035, 23095, 23155	5MHz	QPSK, 16QAM, 64QAM	Full RB
	23060 to 23130	23060, 23095, 23130	10MHz	QPSK, 16QAM, 64QAM	Full RB
	23017 to 23173	23017, 23095, 23173	1.4MHz	64QAM	Full RB
PEAK TO AV-	23025 to 23165	23025, 23095, 23165	3MHz	64QAM	Full RB
ERAGE RATIO	23035 to 23155	23035, 23095, 23155	5MHz	64QAM	Full RB
	23060 to 23130	23060, 23095, 23130	10MHz	64QAM	Full RB
	23017 to 23173	23017, 23095, 23173	1.4MHz	QPSK	1 RB/ 0,5 RB Offes Full RB
	23025 to 23165	23025, 23095, 23165	3MHz	QPSK	1 RB/ 0,14 RB Offest Full RB
BAND EDGE	23035 to 23155	23035, 23095, 23155	5MHz	QPSK	1 RB/ 0,24 RB Offest Full RB
	23060 to 23130	23060, 23095, 23130	10MHz	QPSK	1 RB/ 0,49 RB Offest Full RB
	23017 to 23173	23017, 23095, 23173	1.4MHz	QPSK	1 RB, 0 RB Offest
CONDCU-	23025 to 23165	23025, 23095, 23165	3MHz	QPSK	1 RB, 0 RB Offest
DETED EMIS- SION	23035 to 23155	23035, 23095, 23155	5MHz	QPSK	1 RB, 0 RB Offest
31011	23060 to 23130	23060, 23095, 23130	10MHz	QPSK	1 RB, 0 RB Offest
RADIATED EMISSION	23060 to 23130	23060, 23095, 23130	5MHz	QPSK	1 RB, 49 RB Offest

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#### LTE Band 25 MODE

TEST ITEM	AVAILABLE CHAN- NEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
	27047 to 26683	27047, 26365, 26683	1.4MHz	QPSK, 16QAM, 4QAM	1 RB/ 0,5 RB Offset
	26055 to 26675	26055, 26365, 26675	3MHz	QPSK, 16QAM, 4QAM	1 RB/ 0,14 RB Offset
	26065 to 26665	26065, 26365, 26665	5MHz	QPSK, 16QAM, 4QAM	1 RB/ 0,24 RB Offset
EIRP	26096 to 26640	26096, 26365, 26640	10MHz	QPSK, 16QAM, 4QAM	1 RB/ 0,49 RB Offset
	26115 to 26615	26115, 26365, 26615	15MHz	QPSK, 16QAM, 4QAM	1 RB/ 0,74 RB Offset
	26140 to 26590	26140, 26365, 26590	20MHz	QPSK, 16QAM, 4QAM	1 RB/ 0,99 RB Offset
FREQUENCY STABILITY	26096 to 26640	26365	10MHz	QPSK	Full RB
	27047 to 26683	27047, 26365, 26683	1.4MHz	QPSK, 16QAM, 4QAM	Full RB
	26055 to 26675	26055, 26365, 26675	3MHz	QPSK, 16QAM, 4QAM	Full RB
OCCUPIED BAND-	26065 to 26665	26065, 26365, 26665	5MHz	QPSK, 16QAM, 4QAM	Full RB
WIDTH	26096 to 26640	26096, 26365, 26640	10MHz	QPSK, 16QAM, 4QAM	Full RB
	26115 to 26615	26115, 26365, 26615	15MHz	QPSK, 16QAM, 4QAM	Full RB
	26140 to 26590	26140, 26365, 26590	20MHz	QPSK, 16QAM, 4QAM	Full RB
	27047 to 26683	27047, 26365, 26683	1.4MHz	16QAM	Full RB
	26055 to 26675	26055, 26365, 26675	3MHz	16QAM	Full RB
PEAK TO AVERAGE	26065 to 26665	26065, 26365, 26665	5MHz	16QAM	Full RB
RATIO	26096 to 26640	26096, 26365, 26640	10MHz	16QAM	Full RB
	26115 to 26615	26115, 26365, 26615	15MHz	16QAM	Full RB
	26140 to 26590	26140, 26365, 26590	20MHz	16QAM	Full RB
	27047 to 26683	27047, 26683	1.4MHz	QPSK	1 RB/ 0,5 RB Offset Full RB
	26055 to 26675	26055, 26675	3MHz	QPSK	1 RB/ 0,14 RB Offset Full RB
BAND EDGE	26065 to 26665	26065, 26665	5MHz	QPSK	1 RB/ 0,24 RB Offset Full RB
	26096 to 26640	26096, 26640	10MHz	QPSK	1 RB/ 0,49 RB Offset Full RB
	26115 to 26615	26115, 26615	15MHz	QPSK	1 RB/ 0,74 RB Offset Full RB
	26140 to 26590	26140, 26590	20MHz	QPSK	1 RB/ 0,99 RB Offset Full RB
	27047 to 26683	27047, 26365, 26683	1.4MHz	QPSK	1 RB, 0 RB Offset
	26055 to 26675	26055, 26365, 26675	3MHz	QPSK	1 RB, 0 RB Offset
CONDCUDETED	26065 to 26665	26065, 26365, 26665	5MHz	QPSK	1 RB, 0 RB Offset
EMISSION	26096 to 26640	26096, 26365, 26640	10MHz	QPSK	1 RB, 0 RB Offset
	26115 to 26615	26115, 26365, 26615	15MHz	QPSK	1 RB, 0 RB Offset
	26140 to 26590	26140, 26365, 26590	20MHz	QPSK	1 RB, 0 RB Offset
RADIATED EMISSION	26115 to 26615	26115, 26365, 26615	10MHz	QPSK,	1 RB, 0 RB Offset

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#### LTE Band 26 MODE

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
		26797, 26915, 27033		QPSK, 16QAM, 64QAM, 64QAM	1 RB/ 0,5 RB Offest
	26805 to 27025	26805, 26915, 27025	3MHz	QPSK, 16QAM, 64QAM	1 RB/ 0,14 RB Offest
ERP	26815 to 27015	26815, 26915, 27015	5MHz	QPSK, 16QAM, 64QAM	1 RB/ 0,24 RB Offest
	26840 to 26990	26840, 26915, 26990	10MHz	QPSK, 16QAM, 64QAM	1 RB/ 0,49 RB Offest
	26865 to 26965	26865, 26915, 26965	15MHz	QPSK, 16QAM, 64QAM	1 RB/ 0,74 RB Offest
FREQUENCY STABILITY	26865 to 26965	26915	15MHz	QPSK,	Full RB
	26797 to 27033	26797, 26915, 27033	1.4MHz	QPSK, 16QAM, 64QAM	Full RB
	26805 to 27025	26805, 26915, 27025	3MHz	QPSK, 16QAM, 64QAM	Full RB
OCCUPIED BANDWIDTH	26815 to 27015	26815, 26915, 27015	5MHz	QPSK, 16QAM, 64QAM	Full RB
	26840 to 26990	26840, 26915, 26990	10MHz	QPSK, 16QAM, 64QAM	Full RB
		26865, 26915, 26965		QPSK, 16QAM, 64QAM	Full RB
		26797, 26915, 27033	1.4MHz	16QAM	Full RB
PEAK TO AV-		26805, 26915, 27025		16QAM	Full RB
ERAGE RATIO		26815, 26915, 27015		16QAM	Full RB
		26840, 26915, 26990	10MHz	16QAM	Full RB
	26865 to 26965	26865, 26915, 26965	15MHz	16QAM	Full RB
	26797 to 27033	26797, 26915, 27033	1.4MHz	QPSK,	1 RB/ 0,5 RB Offes Full RB
	26805 to 27025	26805, 26915, 27025	3MHz	QPSK,	1 RB/ 0,14 RB Offest Full RB
BAND EDGE	26815 to 27015	26815, 26915, 27015	5MHz	QPSK,	1 RB/ 0,24 RB Offest Full RB
	26840 to 26990	26840, 26915, 26990	10MHz	QPSK,	1 RB/ 0,49 RB Offest Full RB
	26865 to 26965	26865, 26915, 26965	15MHz	QPSK	1 RB/ 0,74 RB Offest
	26797 to 27033	26797, 26915, 27033	1.4MHz	QPSK,	1 RB, 0 RB Offest
CONDCUDETED EMISSION		26805, 26915, 27025		QPSK,	1 RB, 0 RB Offest
		26815, 26915, 27015		QPSK,	1 RB, 0 RB Offest
		26840, 26915, 26990		QPSK,	1 RB, 0 RB Offest
		26865, 26915, 26965		QPSK	1 RB, 0 RB Offest
RADIATED EMISSION		26805, 26915, 27025		QPSK,	1 RB, 0 RB Offest

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#### LTE Band 26 for 90S MODE

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
	26697 to 26783	26697, 26740, 26783	1.4MHz	QPSK, 16QAM, 64QAM	1 RB/ 0,5 RB Offest
ERP	26705 to 26775	26705, 26740, 26775	3MHz	QPSK, 16QAM, 64QAM	1 RB/ 0,14 RB Offest
LINF	26715 to 26765	26715, 26740, 26765	5MHz	QPSK, 16QAM, 64QAM	1 RB/ 0,24 RB Offest
	26740	26740	10MHz	QPSK, 16QAM, 64QAM	1 RB/ 0,49 RB Offest
FREQUENCY STABILITY	26697 to 26783	26740	1.4MHz	QPSK,	Full RB
	26697 to 26783	26697, 26740, 26783	1.4MHz	QPSK, 16QAM, 64QAM	Full RB
OCCUPIED	26705 to 26775	26705, 26740, 26775	3MHz	QPSK, 16QAM, 64QAM	Full RB
BANDWIDTH	26715 to 26765	26715, 26740, 26765	5MHz	QPSK, 16QAM, 64QAM	Full RB
	26740	26740	10MHz	QPSK, 16QAM, 64QAM	Full RB
		26697, 26740, 26783	1.4MHz	16QAM	Full RB
PEAK TO AV-	26705 to 26775	26705, 26740, 26775	3MHz	16QAM	Full RB
ERAGE RATIO	26715 to 26765	26715, 26740, 26765	5MHz	16QAM	Full RB
	26740	26740	10MHz	16QAM	Full RB
	26697 to 26783	26697, 26740, 26783	1.4MHz	QPSK,	1 RB/ 0,5 RB Offes Full RB
BAND EDGE	26705 to 26775	26705, 26740, 26775	3MHz	QPSK,	1 RB/ 0,14 RB Offest Full RB
DAND EDGE	26715 to 26765	26715, 26740, 26765	5MHz	QPSK,	1 RB/ 0,24 RB Offest Full RB
	26740	26740	10MHz	QPSK,	1 RB/ 0,49 RB Offest Full RB
		26697, 26740, 26783	1.4MHz	QPSK,	1 RB, 0 RB Offest
CONDCUDETED	26705 to 26775	26705, 26740, 26775	3MHz	QPSK,	1 RB, 0 RB Offest
EMISSION		26715, 26740, 26765	5MHz	QPSK,	1 RB, 0 RB Offest
	26740	26740	10MHz	QPSK,	1 RB, 0 RB Offest
RADIATED EMISSION	26740	26740	10MHz	QPSK,	1 RB, 0 RB Offest

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#### **MEASUREMENT UNCERTAINTY** 5.

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
	30MHz - 180MHz: +/- 3.37dB
Measurement uncertainty (Polarization : Vertical)	180MHz -417MHz: +/- 3.19dB
	0.417GHz-1GHz: +/- 3.19dB
	1GHz - 18GHz: +/- 4.04dB
	18GHz - 40GHz: +/- 4.04dB

	9kHz – 30MHz: +/- 2.87 dB
Maggurament ungerteintu	30MHz - 167MHz: +/- 4.22dB
Measurement uncertainty (Polarization : <b>Horizontal</b> )	167MHz -500MHz: +/- 3.44dB
	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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### 6. MAXMUM OUTPUT POWER

### 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.

### **ERP/EIRP LIMIT**

According to FCC §2.1046

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

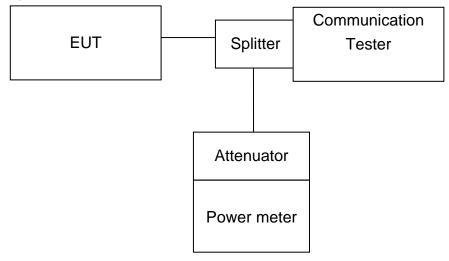
FCC 24.232(c) Mobile and portable stations are limited to 2 W EIRP.

FCC 27.50(a)(3) Mobile and portable stations (hand-held devices) are limited to 250 mW/ 5MHz EIRP.

FCC 27.50(c)(10) Portable stations (hand-held devices) are limited to 3 watts ERP. FCC 27.50(d)(4) Fixed, mobile, and portable (hand-held) stations are limited to 1W EIRP. FCC 27, 50(h)(2) Mobile and other user stations. Mobile stations are limited to 2 W EIRP

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

### 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

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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, (WCDMA/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

All LTE bands conducted average power is obtained from the simulator telecommunication test set.

The following tests were conducted according to the test requirements outlined in section 6.2 of the 3GPP.

### TEST PROCEDURE:

ANSI C63.26:2015 KDB 971168 Section 5.6

ERP/EIRP = PMeas + GT-LC

where: ERP/EIRP = effective or equivalent radiated power, respectively (expressed in the same units as PMeas, typically dBW or dBm);

PMeas = measured transmitter output power or PSD, in dBm or dBW;

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

LC = signal attenuation in the connecting cable between the transmitter and antenna, in dB.2 For devices utilizing multiple antennas, KDB 662911 provides guidance for determining the effective array transmit antenna gain term to be used in the above equation.

6.4. Measurement Equipment Used

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	Agilent	N9010A	MY51440113	2018/06/20	2019/06/19
Radio Communica- tion Analyer	Anritsu	MT8820C	6201107337	2018/06/15	2019/06/14
DC Power Supply	Agilent	E3640A	MY53130054	2017/09/04	2018/09/03
Attenuator	Marvelous	MVE2213-10	RF30	2017/12/26	2018/12/25
Splitter	Woken	DOM35LW1A2	RF36	2017/12/26	2018/12/25

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### 6.5. Measurement Result **RF Conducted Output Power**

Antenna gain (dBi) 1

	gain (ubi)	LTE Band	2_Uplink fre	quenc	y band :	1850 to 1910	) MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	22.55	23.55	33	-9.45
	18607	1850.7	QPSK	1	5	22.55	23.55	33	-9.45
	10007	1030.7	QI SIX	3	2	22.71	23.71	33	-9.29
				6	0	21.79	22.79	33	-10.21
				1	0	22.44	23.44	33	-9.56
	18900	1880	QPSK	1	5	22.34	23.34	33	-9.66
	10700	1000	QI SIX	3	2	22.42	23.42	33	-9.58
				6	0	21.51	22.51	33	-10.49
				1	0	22.49	23.49	33	-9.51
	19193	1909.3	QPSK	1	5	22.41	23.41	33	-9.59
	17175	1707.3	UF SK	3	2	22.52	23.52	33	-9.48
				6	0	21.53	22.53	33	-10.47
				1	0	21.35	22.35	33	-10.65
	10607	1850.7	16QAM	1	5	21.39	22.39	33	-10.61
18607	1630.7		3	2	21.82	22.82	33	-10.18	
				6	0	20.73	21.73	33	-11.27
		1880	16QAM	1	0	21.98	22.98	33	-10.02
1.4	18900			1	5	21.79	22.79	33	-10.21
1.4	10900	1000		3	2	21.45	22.45	33	-10.55
				6	0	20.63	21.63	33	-11.37
				1	0	21.80	22.80	33	-10.2
	19193	1909.3	16QAM	1	5	21.68	22.68	33	-10.32
	17175	1909.3	TOQAIN	3	2	21.67	22.67	33	-10.33
				6	0	20.61	21.61	33	-11.39
				1	0	21.30	22.30	33	-10.7
	18607	1850.7	64QAM	1	5	21.34	22.34	33	-10.66
	10007	1000.7		3	2	21.77	22.77	33	-10.23
				6	0	20.68	21.68	33	-11.32
				1	0	21.93	22.93	33	-10.07
	10000	1000	640044	1	5	21.74	22.74	33	-10.26
	18900	1880	64QAM	3	2	21.40	22.40	33	-10.6
				6	0	20.58	21.58	33	-11.42
				1	0	21.75	22.75	33	-10.25
	10100	1000.0	6400444	1	5	21.63	22.63	33	-10.37
	19193	1909.3	64QAM	3	2	21.62	22.62	33	-10.38
				6	0	20.56	21.56	33	-11.44

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1

LTE Band 2_Uplink frequency band : 1850 to 1910 MHz									
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	22.74	23.74	33	-9.26
	18615	1851.5	QPSK	1	14	22.84	23.84	33	-9.16
	10015	1001.0	QI SK	8	4	21.72	22.72	33	-10.28
				15	0	21.72	22.72	33	-10.28
				1	0	22.68	23.68	33	-9.32
	18900	1880	QPSK	1	14	22.61	23.61	33	-9.39
	10900	1000	QI SK	8	4	21.46	22.46	33	-10.54
				15	0	21.48	22.48	33	-10.52
				1	0	22.73	23.73	33	-9.27
	19185	1908.5	QPSK	1	14	22.39	23.39	33	-9.61
	17100	1900.0	UF 3K	8	4	21.68	22.68	33	-10.32
				15	0	21.56	22.56	33	-10.44
				1	0	22.10	23.10	33	-9.9
	10615	1051 5	16QAM	1	14	22.55	23.55	33	-9.45
	18615 1851.5	TOQAIN	8	4	20.83	21.83	33	-11.17	
				15	0	20.73	21.73	33	-11.27
				1	0	21.90	22.90	33	-10.1
3	18900	1880	16QAM	1	14	21.65	22.65	33	-10.35
3	10900	1000	TOQAIN	8	4	20.56	21.56	33	-11.44
				15	0	20.46	21.46	33	-11.54
				1	0	21.86	22.86	33	-10.14
	19185	1908.5	16QAM	1	14	21.70	22.70	33	-10.3
	19100	1900.0	TOQAIVI	8	4	20.68	21.68	33	-11.32
				15	0	20.61	21.61	33	-11.39
				1	0	22.07	23.07	33	-9.93
	18615	1851.5	64QAM	1	14	22.52	23.52	33	-9.48
	10010	1001.0		8	4	20.80	21.80	33	-11.2
				15	0	20.70	21.70	33	-11.3
				1	0	21.87	22.87	33	-10.13
	10000	1000		1	14	21.62	22.62	33	-10.38
	18900	1880	64QAM	8	4	20.53	21.53	33	-11.47
				15	0	20.43	21.43	33	-11.57
				1	0	21.83	22.83	33	-10.17
	10105	1000 F		1	14	21.67	22.67	33	-10.33
	19185	1908.5	64QAM	8	4	20.65	21.65	33	-11.35
				15	0	20.58	21.58	33	-11.42

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1

LTE Band 2_Uplink frequency band : 1850 to 1910 MHz									
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	22.55	23.55	33	-9.45
	18625	1852.5	QPSK	1	24	22.43	23.43	33	-9.57
	10020	1002.0	UFSK	12	6	21.46	22.46	33	-10.54
				25	0	21.55	22.55	33	-10.45
				1	0	22.27	23.27	33	-9.73
	18900	1880	QPSK	1	24	22.40	23.40	33	-9.6
	10900	1000	UF SK	12	6	21.24	22.24	33	-10.76
				25	0	21.20	22.20	33	-10.8
				1	0	22.24	23.24	33	-9.76
	19175	1907.5	QPSK	1	24	22.46	23.46	33	-9.54
	17175	1907.5	UF SK	12	6	21.30	22.30	33	-10.7
				25	0	21.32	22.32	33	-10.68
				1	0	21.43	22.43	33	-10.57
	19625	1050 S	16QAM	1	24	21.81	22.81	33	-10.19
	18625 1852.5	TOQAIVI	12	6	20.41	21.41	33	-11.59	
				25	0	20.68	21.68	33	-11.32
			16QAM	1	0	21.58	22.58	33	-10.42
5	18900	1880		1	24	21.78	22.78	33	-10.22
5	10900	1000	TOQAIN	12	6	20.28	21.28	33	-11.72
				25	0	20.58	21.58	33	-11.42
				1	0	21.60	22.60	33	-10.4
	19175	1907.5	16QAM	1	24	21.62	22.62	33	-10.38
	19175	1907.3	TOQAIN	12	6	20.23	21.23	33	-11.77
				25	0	20.22	21.22	33	-11.78
				1	0	21.37	22.37	33	-10.63
	18625	1852.5	64QAM	1	24	21.75	22.75	33	-10.25
	10020	1002.0		12	6	20.35	21.35	33	-11.65
				25	0	20.62	21.62	33	-11.38
				1	0	21.52	22.52	33	-10.48
	18900	1000	64000	1	24	21.72	22.72	33	-10.28
	10700	IOŎU	1880 64QAM	12	6	20.22	21.22	33	-11.78
				25	0	20.52	21.52	33	-11.48
				1	0	21.54	22.54	33	-10.46
	10175	1007 5	6400	1	24	21.56	22.56	33	-10.44
	19175	1907.5	64QAM	12	6	20.17	21.17	33	-11.83
				25	0	20.16	21.16	33	-11.84

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Antenna	gain (dBi)	1							
		LTE Band	2_Uplink fre	quenc	y band :	-	_		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	22.50	23.50	33	-9.5
	18650	1855	QPSK	1	24	22.46	23.46	33	-9.54
	10000	1000	QI SIX	12	6	21.39	22.39	33	-10.61
				25	0	21.56	22.56	33	-10.44
				1	0	22.45	23.45	33	-9.55
	18900	1880	QPSK	1	24	22.50	23.50	33	-9.5
	10700	1000		12	6	21.21	22.21	33	-10.79
				25	0	21.35	22.35	33	-10.65
				1	0	22.40	23.40	33	-9.6
	19150	1905	QPSK	1	24	22.36	23.36	33	-9.64
	17130	1705		12	6	21.24	22.24	33	-10.76
				25	0	21.30	22.30	33	-10.7
				1	0	21.32	22.32	33	-10.68
	18650 1855	16QAM	1	24	21.60	22.60	33	-10.4	
	10030	0 1655	TOQAIVI	12	6	20.39	21.39	33	-11.61
				25	0	20.50	21.50	33	-11.5
				1	0	21.57	22.57	33	-10.43
10	18900	1880	16QAM	1	24	22.10	23.10	33	-9.9
10	10900	1000	TOQAM	12	6	20.40	21.40	33	-11.6
				25	0	20.39	21.39	33	-11.61
				1	0	21.56	22.56	33	-10.44
	19150	1905	16QAM	1	24	21.81	22.81	33	-10.19
	17130	1705	TOQAM	12	6	20.46	21.46	33	-11.54
				25	0	20.46	21.46	33	-11.54
				1	0	21.28	22.28	33	-10.72
	18650	1855	64QAM	1	24	21.56	22.56	33	-10.44
	10030	1055		12	6	20.35	21.35	33	-11.65
				25	0	20.46	21.46	33	-11.54
				1	0	21.53	22.53	33	-10.47
	18000	1820	64QAM	1	24	22.06	23.06	33	-9.94
	18900 1880		12	6	20.36	21.36	33	-11.64	
				25	0	20.35	21.35	33	-11.65
				1	0	21.52	22.52	33	-10.48
	19150	1905	64QAM	1	24	21.77	22.77	33	-10.23
	17130	1703		12	6	20.42	21.42	33	-11.58
				25	0	20.42	21.42	33	-11.58

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Antenna	gain (dBi)	1							
		LTE Band	2_Uplink fre	quenc	y band :				
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	22.68	23.68	33	-9.32
	18675	1857.5	QPSK	1	74	22.52	23.52	33	-9.48
	10075	1007.0		36	19	21.34	22.34	33	-10.66
				75	0	21.54	22.54	33	-10.46
				1	0	22.53	23.53	33	-9.47
	18900	1880	QPSK	1	74	22.35	23.35	33	-9.65
	10700	1000		36	19	21.26	22.26	33	-10.74
				75	0	21.36	22.36	33	-10.64
				1	0	22.53	23.53	33	-9.47
	19125	1902.5	QPSK	1	74	22.75	23.75	33	-9.25
	17125	1702.5		36	19	21.38	22.38	33	-10.62
				75	0	21.34	22.34	33	-10.66
				1	0	21.79	22.79	33	-10.21
	18675 1857.5	16QAM	1	74	21.14	22.14	33	-10.86	
	10075	6075 1657.5	TOQAIN	36	19	20.40	21.40	33	-11.6
				75	0	20.72	21.72	33	-11.28
			0 16QAM	1	0	21.84	22.84	33	-10.16
15	18900	1880		1	74	22.02	23.02	33	-9.98
15	10700	1000	TOQAM	36	19	20.43	21.43	33	-11.57
				75	0	20.18	21.18	33	-11.82
				1	0	21.95	22.95	33	-10.05
	19125	1902.5	16QAM	1	74	21.69	22.69	33	-10.31
	17125	1702.5	TOCINI	36	19	20.43	21.43	33	-11.57
				75	0	20.41	21.41	33	-11.59
				1	0	21.76	22.76	33	-10.24
	18675	1857.5	64QAM	1	74	21.11	22.11	33	-10.89
	10075	1007.0		36	19	20.37	21.37	33	-11.63
				75	0	20.69	21.69	33	-11.31
				1	0	21.81	22.81	33	-10.19
	18900	1880	64QAM	1	74	21.99	22.99	33	-10.01
	18900 1880		36	19	20.40	21.40	33	-11.6	
				75	0	20.15	21.15	33	-11.85
				1	0	21.92	22.92	33	-10.08
	19125	1902.5	64QAM	1	74	21.66	22.66	33	-10.34
	17120	1702.0		36	19	20.40	21.40	33	-11.6
				75	0	20.38	21.38	33	-11.62

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台灣檢驗科技股份有限公司

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1

LTE Band 2_Uplink frequency band : 1850 to 1910 MHz									
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	22.80	23.80	33	-9.2
	18700	1860	QPSK	1	99	22.26	23.26	33	-9.74
	10700	1000	QUOR	50	25	21.05	22.05	33	-10.95
				100	0	21.09	22.09	33	-10.91
				1	0	22.00	23.00	33	-10
	18900	1880	QPSK	1	99	22.14	23.14	33	-9.86
	10700	1000		50	25	21.01	22.01	33	-10.99
				100	0	20.99	21.99	33	-11.01
				1	0	22.98	23.98	33	-9.02
	19100	1900	QPSK	1	99	22.14	23.14	33	-9.86
	17100	1700	QI SIX	50	25	20.92	21.92	33	-11.08
				100	0	20.90	21.90	33	-11.1
				1	0	21.75	22.75	33	-10.25
	18700	1860	16QAM	1	99	21.94	22.94	33	-10.06
	10700	1000	10 21 111	50	25	20.10	21.10	33	-11.9
				100	0	20.17	21.17	33	-11.83
			16QAM	1	0	21.39	22.39	33	-10.61
20	18900	1880		1	99	21.49	22.49	33	-10.51
20	10700	1000	TOCAM	50	25	20.12	21.12	33	-11.88
				100	0	20.05	21.05	33	-11.95
				1	0	20.83	21.83	33	-11.17
	19100	1900	16QAM	1	99	20.72	21.72	33	-11.28
	17100	1700	1002/101	50	25	20.01	21.01	33	-11.99
				100	0	20.05	21.05	33	-11.95
				1	0	21.73	22.73	33	-10.27
	18700	1860	64QAM	1	99	21.92	22.92	33	-10.08
	10700	1000		50	25	20.08	21.08	33	-11.92
				100	0	20.15	21.15	33	-11.85
				1	0	21.37	22.37	33	-10.63
	18000	1820	64QAM	1	99	21.47	22.47	33	-10.53
	18900 1880		50	25	20.10	21.10	33	-11.9	
				100	0	20.03	21.03	33	-11.97
				1	0	20.81	21.81	33	-11.19
	19100	1900	64QAM	1	99	20.71	21.71	33	-11.29
	17100	1700		50	25	19.99	20.99	33	-12.01
				100	0	20.03	21.03	33	-11.97

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	yain (ubi)	LTE Band	4_Uplink fre	quenc	y band :	1710 to 1755	5 MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.12	24.12	30	-5.88
	19957	1710.7	QPSK	1	5	23.03	24.03	30	-5.97
	17757	1710.7	QI SIX	3	2	23.13	24.13	30	-5.87
				6	0	22.27	23.27	30	-6.73
				1	0	23.38	24.38	30	-5.62
	20175	1732.5	QPSK	1	5	23.25	24.25	30	-5.75
	20175	1752.5	QI SIK	3	2	23.48	24.48	30	-5.52
				6	0	22.37	23.37	30	-6.63
				1	0	23.21	24.21	30	-5.79
	20393	1754.3	QPSK	1	5	23.12	24.12	30	-5.88
	20373	1754.5	UI SK	3	2	23.21	24.21	30	-5.79
				6	0	22.30	23.30	30	-6.7
				1	0	22.37	23.37	30	-6.63
	19957	1710.7	16QAM	1	5	22.41	23.41	30	-6.59
	17757	1710.7	TOQAIVI	3	2	22.17	23.17	30	-6.83
				6	0	21.26	22.26	30	-7.74
				1	0	22.46	23.46	30	-6.54
1.4	20175	1732.5	16QAM	1	5	22.13	23.13	30	-6.87
1.4	20175	1752.5	TOQAM	3	2	22.36	23.36	30	-6.64
				6	0	21.11	22.11	30	-7.89
				1	0	22.36	23.36	30	-6.64
	20393	1754.3	16QAM	1	5	21.68	22.68	30	-7.32
	20393	1704.5	TOQAIN	3	2	22.23	23.23	30	-6.77
				6	0	21.26	22.26	30	-7.74
				1	0	22.32	23.32	30	-6.68
	10057	1710 7		1	5	22.36	23.36	30	-6.64
	19957	1710.7	64QAM	3	2	22.12	23.12	30	-6.88
				6	0	21.21	22.21	30	-7.79
				1	0	22.41	23.41	30	-6.59
	20175	1700 F		1	5	22.08	23.08	30	-6.92
	20175	1732.5	64QAM	3	2	22.31	23.31	30	-6.69
				6	0	21.06	22.06	30	-7.94
				1	0	22.31	23.31	30	-6.69
	20202	1754.0		1	5	21.63	22.63	30	-7.37
	20393	1754.3	64QAM	3	2	22.18	23.18	30	-6.82
				6	0	21.21	22.21	30	-7.79

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1

LTE Band 4_Uplink frequency band : 1710 to 1755 MHz										
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)	
				1	0	23.38	24.38	30	-5.62	
	19965	1711.5	QPSK	1	14	23.38	24.38	30	-5.62	
	17705	1711.5		8	4	22.26	23.26	30	-6.74	
				15	0	22.25	23.25	30	-6.75	
				1	0	23.44	24.44	30	-5.56	
	20175	1732.5	QPSK	1	14	23.25	24.25	30	-5.75	
	20175	1752.5		8	4	22.46	23.46	30	-6.54	
				15	0	22.38	23.38	30	-6.62	
				1	0	23.22	24.22	30	-5.78	
	20385	1753.5	QPSK	1	14	23.18	24.18	30	-5.82	
	20303	1755.5	QI SIX	8	4	22.26	23.26	30	-6.74	
				15	0	22.29	23.29	30	-6.71	
				1	0	22.47	23.47	30	-6.53	
	19965	1711.5	16QAM	1	14	22.30	23.30	30	-6.7	
	19965 1711.5	10 02/11/1	8	4	21.27	22.27	30	-7.73		
				15	0	21.06	22.06	30	-7.94	
			16QAM	1	0	22.48	23.48	30	-6.52	
3	20175	1732.5		1	14	22.18	23.18	30	-6.82	
J	20175	1752.5	TOCAM	8	4	21.41	22.41	30	-7.59	
				15	0	21.43	22.43	30	-7.57	
				1	0	22.49	23.49	30	-6.51	
	20385	1753.5	16QAM	1	14	22.41	23.41	30	-6.59	
	20303	1755.5	TOCAM	8	4	21.45	22.45	30	-7.55	
				15	0	21.46	22.46	30	-7.54	
				1	0	22.49	23.49	30	-6.51	
	19965	1711.5	64QAM	1	14	22.22	23.22	30	-6.78	
	17700	1711.0		8	4	21.19	22.19	30	-7.81	
				15	0	20.98	21.98	30	-8.02	
				1	0	22.40	23.40	30	-6.6	
	20175	1732.5	64QAM	1	14	22.10	23.10	30	-6.9	
	20173	1732.3		8	4	21.43	22.43	30	-7.57	
				15	0	21.45	22.45	30	-7.55	
				1	0	22.41	23.41	30	-6.59	
	20385	1753.5	64QAM	1	14	22.43	23.43	30	-6.57	
	20303	1700.0		8	4	21.37	22.37	30	-7.63	
				15	0	21.38	22.38	30	-7.62	

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1

	LTE Band 4_Uplink frequency band : 1710 to 1755 MHz										
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)		
				1	0	23.13	24.13	30	-5.87		
	19975	1712.5	QPSK	1	24	22.91	23.91	30	-6.09		
	17770	1712.0	QI OK	12	6	22.24	23.24	30	-6.76		
				25	0	22.22	23.22	30	-6.78		
				1	0	23.37	24.37	30	-5.63		
	20175	1732.5	QPSK	1	24	23.32	24.32	30	-5.68		
	20175	1752.5	QUOR	12	6	22.32	23.32	30	-6.68		
				25	0	22.30	23.30	30	-6.7		
				1	0	23.15	24.15	30	-5.85		
	20375	1752.5	QPSK	1	24	23.29	24.29	30	-5.71		
	20373	1752.5		12	6	22.27	23.27	30	-6.73		
				25	0	22.09	23.09	30	-6.91		
				1	0	22.48	23.48	30	-6.52		
	19975	1712.5	16QAM	1	24	22.32	23.32	30	-6.68		
	19975 1712.5		12	6	21.17	22.17	30	-7.83			
				25	0	21.18	22.18	30	-7.82		
			16QAM	1	0	22.46	23.46	30	-6.54		
5	20175	1732.5		1	24	22.49	23.49	30	-6.51		
5	20175	1752.5	1002/101	12	6	21.15	22.15	30	-7.85		
				25	0	21.44	22.44	30	-7.56		
				1	0	22.50	23.50	30	-6.5		
	20375	1752.5	16QAM	1	24	22.45	23.45	30	-6.55		
	20373	1752.5	TOCAM	12	6	21.32	22.32	30	-7.68		
				25	0	21.37	22.37	30	-7.63		
				1	0	22.45	23.45	30	-6.55		
	19975	1712.5	64QAM	1	24	22.29	23.29	30	-6.71		
	17775	1712.5		12	6	21.14	22.14	30	-7.86		
				25	0	21.15	22.15	30	-7.85		
				1	0	22.43	23.43	30	-6.57		
	20175	1732.5	64QAM	1	24	22.46	23.46	30	-6.54		
	20175	1752.5		12	6	21.12	22.12	30	-7.88		
				25	0	21.41	22.41	30	-7.59		
				1	0	22.47	23.47	30	-6.53		
	20375	1752.5	64QAM	1	24	22.42	23.42	30	-6.58		
	20373	17 JZ.J		12	6	21.29	22.29	30	-7.71		
				25	0	21.34	22.34	30	-7.66		

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1

LTE Band 4_Uplink freq					quency band : 1710 to 1755 MHz						
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)		
					24.28	30	-5.72				
	20000	1715	QPSK	1	24	23.22	24.22	30	-5.78		
				12	6	22.29	23.29	30	-6.71		
				25	0	22.32	23.32	30	-6.68		
	20175	1732.5		1	0	23.44	24.44	30	-5.56		
			QPSK	1	24	23.32	24.32	30	-5.68		
				12	6	22.44	23.44	30	-6.56		
				25	0	22.35	23.35	30	-6.65		
				1	0	23.19	24.19	30	-5.81		
	20375	1750	QPSK	1	24	23.17	24.17	30	-5.83		
	20375	1750		12	6	22.36	23.36	30	-6.64		
				25	0	22.39	23.39	30	-6.61		
		1715		1	0	22.47	23.47	30	-6.53		
	20000		160AM	1 24 22.26 23.26				30	-6.74		
	20000		16QAM	12	6	21.48	22.48	30	-7.52		
				25	0	21.29	22.29	30	-7.71		
	20175	1732.5		1	0	22.42	23.42	30	-6.58		
10			16QAM	1	24	22.46	23.46	30	-6.54		
10				12	6	21.33	22.33	30	-7.67		
				25	0	21.34	22.34	30	-7.66		
	20375	1750	16QAM	1	0	22.38	23.38	30	-6.62		
				1	24	22.34	23.34	30	-6.66		
				12	6	21.15	22.15	30	-7.85		
				25	0	21.20	22.20	30	-7.8		
	20000	1715		1	0	22.41	23.41	30	-6.59		
			640 A.M	1	24	22.20	23.20	30	-6.8		
			64QAM	12	6	21.42	22.42	30	-7.58		
				25	0	21.23	22.23	30	-7.77		
	20175	1732.5		1	0	22.46	23.46	30	-6.54		
			64QAM	1	24	22.40	23.40	30	-6.6		
				12	6	21.27	22.27	30	-7.73		
				25	0	21.28	22.28	30	-7.72		
	20375	1750		1	0	22.32	23.32	30	-6.68		
			64QAM	1	24	22.28	23.28	30	-6.72		
				12	6	21.09	22.09	30	-7.91		
				25	0	21.14	22.14	30	-7.86		

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1

Antenna gain (dBi) 1 LTE Band 4_Uplink frequency band : 1710 to 1755 MHz									
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
	20025	1717.5		1	0	23.44	24.44	30	-5.56
			QPSK	1	74	23.06	24.06	30	-5.94
				36	19	22.29	23.29	30	-6.71
				75	0	22.37	23.37	30	-6.63
	20175	1732.5		1 0 23.43 24.43	30	-5.57			
			QPSK	1	74	23.36	24.36	30	-5.64
				36	19	22.43	23.43	30	-6.57
				75	0	22.45	23.45	30	-6.55
		1747.5		1 0 23.41 24.4	24.41	30	-5.59		
	20325		QPSK	1	74	23.15	24.15	30	-5.85
	20325			36	19	22.20	23.20	30	-6.8
				75	0	22.34	23.34	30	-6.66
	20025	1717.5		1	0	22.49	23.49	30	-6.51
			16QAM	1	74	22.37	23.37	30	-6.63
			TOQAIN	36	19	21.26	22.26	30	-7.74
				75	0	21.29	22.29	30	-7.71
	20175	1732.5		1	0	22.44	23.44	30	-6.56
15			16QAM	1	74	22.49	23.49	30	-6.51
15				36	19	21.17	22.17	30	-7.83
				75	0	21.40	22.40	30	-7.6
	20325	1747.5	16QAM	1	0	22.45	23.45	30	-6.55
				1	74	22.33	23.33	30	-6.67
				36	19	21.16	22.16	30	-7.84
				75	0	21.24	22.24	30	-7.76
	20025	1717.5		1	0	22.45	23.45	30	-6.55
			64QAM	1	74	22.33	23.33	30	-6.67
			64QAIVI	36	19	21.22	22.22	30	-7.78
				75	0	21.25	22.25	30	-7.75
	20175	1732.5	64QAM	1	0	22.40	23.40	30	-6.6
				1	74	22.45	23.45	30	-6.55
				36	19	21.13	22.13	30	-7.87
				75	0	21.36	22.36	30	-7.64
	20325	1747.5	64QAM	1	0	22.41	23.41	30	-6.59
				1	74	22.29	23.29	30	-6.71
				36	19	21.12	22.12	30	-7.88
				75	0	21.14	22.14	30	-7.86

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1

Antenna gain (dBi) LTE Band 4_Uplink frequency band : 1710 to 1755 MHz									
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.43	24.43	30	-5.57
	20050	1720	QPSK	1	99	23.30	24.30	30	-5.7
				50	25	22.36	23.36	30	-6.64
				100	0	22.35	23.35	30	-6.65
	20175	1732.5		1	0	23.50	24.50	30	-5.5
			QPSK	1	99	23.25	24.25	30	-5.75
				50	25	22.48	23.48	30	-6.52
				100	0	22.43	23.43	30	-6.57
		1745		1	0	23.34	24.34	30	-5.66
	20300		QPSK	1	99	23.06	24.06	30	-5.94
	20300			50	25	22.26	23.26	30	-6.74
				100	0	22.35	23.35	30	-6.65
	20050	1720		1	0	22.45	23.45	23.45 30	-6.55
			140414	1         0         22.45         23.45           1         99         22.23         23.23		30	-6.77		
			16QAM	50	25	21.27	22.27	30	-7.73
				100	0	21.34	22.34	30	-7.66
	20175	1732.5		1	0	22.45	23.45	30	-6.55
20			16QAM	1	99	22.46	23.46	30	-6.54
20				50	25	21.47	22.47	30	-7.53
				100	0	21.47	22.47	30	-7.53
	20300	1745	16QAM	1	0	22.45	23.45	30	-6.55
				1	99	22.17	23.17	30	-6.83
				50	25	21.18	22.18	30	-7.82
				100	0	21.31	22.31	30	-7.69
	20050	1720		1	0	22.47	23.47	30	-6.53
			64QAM	1	99	22.15	23.15	30	-6.85
			64QAM	50	25	21.19	22.19	30	-7.81
				100	0	21.26	22.26	30	-7.74
	20175	1732.5	64QAM	1	0	22.37	23.37	30	-6.63
				1	99	22.38	23.38	30	-6.62
				50	25	21.39	22.39	30	-7.61
				100	0	21.39	22.39	30	-7.61
	20300	1745	64QAM	1	0	22.47	23.47	30	-6.53
				1	99	22.09	23.09	30	-6.91
				50	25	21.10	22.10	30	-7.9
				100	0	21.23	22.23	30	-7.77

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Antenna	Antenna gain (dBi) 0.5									
		LTE Ban	d 5_Uplink fr	equen	cy band					
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)	
				1	0	22.28	22.78	38.45	-15.67	
	20407	824.7	QPSK	1	5	22.21	22.71	38.45	-15.74	
	20407	024.7	UFSK	3	2	22.31	22.81	38.45	-15.64	
				6	0	21.24	21.74	38.45	-16.71	
				1	0	22.37	22.87	38.45	-15.58	
	20525	836.5	QPSK	1	5	22.22	22.72	38.45	-15.73	
	20525	030.5	UF SK	3	2	22.28	22.78	38.45	-15.67	
				6	0	21.34	21.84	38.45	-16.61	
				1	0	22.18	22.68	38.45	-15.77	
	20643	848.3	QPSK	1	5	22.12	22.62	38.45	-15.83	
	20043	040.0	QI SIX	3	2	22.25	22.75	38.45	-15.7	
				6	0	21.27	21.77	38.45	-16.68	
				1	0	21.42	21.92	38.45	-16.53	
	20407	824.7	16QAM	1	5	21.39	21.89	38.45	-16.56	
	20407	024.7		3	2	21.30	21.80	38.45	-16.65	
				6	0	20.08	20.58	38.45	-17.87	
		836.5	16QAM	1	0	21.75	22.25	38.45	-16.2	
1.4	20525			1	5	21.38	21.88	38.45	-16.57	
1.4	20323	030.3		3	2	21.31	21.81	38.45	-16.64	
				6	0	20.39	20.89	38.45	-17.56	
				1	0	21.73	22.23	38.45	-16.22	
	20643	848.3	16QAM	1	5	21.59	22.09	38.45	-16.36	
	20043	040.5	TUQAIN	3	2	21.22	21.72	38.45	-16.73	
				6	0	20.33	20.83	38.45	-17.62	
				1	0	21.38	21.88	38.45	-16.57	
	20407	824.7	64QAM	1	5	21.35	21.85	38.45	-16.6	
	20407	024.7		3	2	21.26	21.76	38.45	-16.69	
				6	0	20.12	20.62	38.45	-17.83	
				1	0	21.71	22.21	38.45	-16.24	
	20525	836.5	64QAM	1	5	21.34	21.84	38.45	-16.61	
	20320	030.0		3	2	21.27	21.77	38.45	-16.68	
				6	0	20.35	20.85	38.45	-17.6	
				1	0	21.69	22.19	38.45	-16.26	
	20643	848.3	64QAM	1	5	21.55	22.05	38.45	-16.4	
	20043	040.3		3	2	21.18	21.68	38.45	-16.77	
				6	0	20.29	20.79	38.45	-17.66	

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Antenna	gain (dBi)	0.5							
		LTE Ban	d 5_Uplink fr	equen	cy band	: 824 to 849	MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	22.42	22.92	38.45	-15.53
	20415	825.5	QPSK	1	14	22.32	22.82	38.45	-15.63
	20413	023.3	QI SK	8	4	21.22	21.72	38.45	-16.73
				15	0	21.16	21.66	38.45	-16.79
				1	0	22.46	22.96	38.45	-15.49
	20525	836.5	QPSK	1	14	22.15	22.65	38.45	-15.8
	20525	030.5		8	4	21.26	21.76	38.45	-16.69
				15	0	21.14	21.64	38.45	-16.81
				1	0	22.33	22.83	38.45	-15.62
	20635	847.5	QPSK	1	14	22.00	22.50	38.45	-15.95
	20000	017.0	QFOR	8	4	21.28	21.78	38.45	-16.67
				15	0	21.10	21.60	38.45	-16.85
				1	0	21.66	22.16	38.45	-16.29
	20415	825.5	16QAM	1	14	21.77	22.27	38.45	-16.18
	20110	020.0		8	4	20.31	20.81	38.45	-17.64
				15	0	20.16	20.66	38.45	-17.79
		836.5	16QAM	1	0	21.78	22.28	38.45	-16.17
3	20525			1	14	21.39	21.89	38.45	-16.56
0	20020	000.0	100/101	8	4	20.04	20.54	38.45	-17.91
				15	0	20.13	20.63	38.45	-17.82
				1	0	21.68	22.18	38.45	-16.27
	20635	847.5	16QAM	1	14	21.37	21.87	38.45	-16.58
	20000	01110		8	4	20.34	20.84	38.45	-17.61
				15	0	20.11	20.61	38.45	-17.84
				1	0	21.53	22.03	38.45	-16.42
	20415	825.5	64QAM	1	14	21.64	22.14	38.45	-16.31
	20110	02010		8	4	20.11	20.61	38.45	-17.84
				15	0	20.03	20.53	38.45	-17.92
				1	0	21.65	22.15	38.45	-16.3
	20525	836.5	64QAM	1	14	21.26	21.76	38.45	-16.69
	20020	300.0		8	4	20.09	20.59	38.45	-17.86
				15	0	20.08	20.58	38.45	-17.87
				1	0	21.55	22.05	38.45	-16.4
	20635	847.5	64QAM	1	14	21.24	21.74	38.45	-16.71
	20000	0.110	0.021	8	4	20.21	20.71	38.45	-17.74
				15	0	20.07	20.57	38.45	-17.88

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Antenna gain (dBi) 0.5									
		LTE Ban	d 5_Uplink fr	equen	cy band				
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	22.51	23.01	38.45	-15.44
	20425	826.5	QPSK	1	24	22.31	22.81	38.45	-15.64
	20425	020.5	UFSK	12	6	21.20	21.70	38.45	-16.75
				25	0	21.19	21.69	38.45	-16.76
				1	0	22.08	22.58	38.45	-15.87
	20525	836.5	QPSK	1	24	22.33	22.83	38.45	-15.62
	20323	030.3	U SK	12	6	21.16	21.66	38.45	-16.79
				25	0	21.17	21.67	38.45	-16.78
				1	0	22.10	22.60	38.45	-15.85
	20625	846.5	QPSK	1	24	22.15	22.65	38.45	-15.8
	20025	040.0	QUSIC	12	6	21.05	21.55	38.45	-16.9
				25	0	21.15	21.65	38.45	-16.8
				1	0	22.08	22.58	38.45	-15.87
	20425	826.5	16QAM	1	24	21.42	21.92	38.45	-16.53
	20423	020.5		12	6	20.11	20.61	38.45	-17.84
				25	0	20.12	20.62	38.45	-17.83
		836.5	16QAM	1	0	21.08	21.58	38.45	-16.87
5	20525			1	24	21.06	21.56	38.45	-16.89
J	20323			12	6	20.09	20.59	38.45	-17.86
				25	0	20.21	20.71	38.45	-17.74
				1	0	21.43	21.93	38.45	-16.52
	20625	846.5	16QAM	1	24	21.50	22.00	38.45	-16.45
	20025	040.0	TUCAIN	12	6	20.06	20.56	38.45	-17.89
				25	0	20.08	20.58	38.45	-17.87
				1	0	22.02	22.52	38.45	-15.93
	20425	826.5	64QAM	1	24	21.36	21.86	38.45	-16.59
	20723	020.0		12	6	20.05	20.55	38.45	-17.9
				25	0	20.06	20.56	38.45	-17.89
				1	0	21.02	21.52	38.45	-16.93
	20525	836.5	64QAM	1	24	21.00	21.50	38.45	-16.95
	20323	030.3		12	6	20.03	20.53	38.45	-17.92
				25	0	20.15	20.65	38.45	-17.8
	20625 8			1	0	21.37	21.87	38.45	-16.58
		846.5	64QAM	1	24	21.44	21.94	38.45	-16.51
		040.3		12	6	20.00	20.50	38.45	-17.95
				25	0	20.02	20.52	38.45	-17.93

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Antenna	gain (dBi)	0.5							
		LTE Ban	d 5_Uplink fr	equen	cy band	: 824 to 849	MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	22.33	22.83	38.45	-15.62
	20450	829	QPSK	1	49	22.32	22.82	38.45	-15.63
	20430	027	QI SK	25	12	21.22	21.72	38.45	-16.73
				50	0	21.30	21.80	38.45	-16.65
				1	0	22.38	22.88	38.45	-15.57
	20525	836.5	QPSK	1	49	22.27	22.77	38.45	-15.68
	20525	030.5		25	12	21.19	21.69	38.45	-16.76
				50	0	21.26	21.76	38.45	-16.69
				1	0	22.34	22.84	38.45	-15.61
	20600	844	QPSK	1	49	22.35	22.85	38.45	-15.6
	20000	770		25	12	21.16	21.66	38.45	-16.79
				50	0	21.28	21.78	38.45	-16.67
				1	0	21.68	22.18	38.45	-16.27
	20450	829	16QAM	1	49	21.13	21.63	38.45	-16.82
	20100	027	1002/101	25	12	20.52	21.02	38.45	-17.43
				50	0	20.32	20.82	38.45	-17.63
		836.5	16QAM	1	0	21.53	22.03	38.45	-16.42
10	20525			1	49	21.14	21.64	38.45	-16.81
10	20020	00010	10 21 111	25	12	20.39	20.89	38.45	-17.56
				50	0	20.32	20.82	38.45	-17.63
				1	0	21.82	22.32	38.45	-16.13
	20600	844	16QAM	1	49	21.26	21.76	38.45	-16.69
				25	12	20.17	20.67	38.45	-17.78
				50	0	20.12	20.62	38.45	-17.83
				1	0	21.64	22.14	38.45	-16.31
	20450	829	64QAM	1	49	21.23	21.73	38.45	-16.72
				25	12	20.48	20.98	38.45	-17.47
				50	0	20.28	20.78	38.45	-17.67
				1	0	21.49	21.99	38.45	-16.46
	20525 836.5	836.5	64QAM	1	49	21.10	21.60	38.45	-16.85
				25	12	20.35	20.85	38.45	-17.6
				50	0	20.28	20.78	38.45	-17.67
				1	0	21.78	22.28	38.45	-16.17
	20600	844	64QAM	1	49	21.22	21.72	38.45	-16.73
				25	12	20.13	20.63	38.45	-17.82
				50	0	20.08	20.58	38.45	-17.87

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Antenna	gain (dBi)	0.5							
		LTE Band	12_Uplink fr	requen	icy band	l : 699 to 716	MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	22.33	22.83	34.77	-11.94
	23017	699.7	QPSK	1	5	22.14	22.64	34.77	-12.13
	20017	077.7	QI SIX	3	2	22.66	23.16	34.77	-11.61
				6	0	21.27	21.77	34.77	-13
				1	0	22.31	22.81	34.77	-11.96
	23095	707.5	QPSK	1	5	22.33	22.83	34.77	-11.94
	23073	101.5	UI JK	3	2	22.31	22.81	34.77	-11.96
				6	0	21.28	21.78	34.77	-12.99
				1	0	22.11	22.61	34.77	-12.16
	23173	715.5	QPSK	1	5	22.08	22.58	34.77	-12.19
	23175	715.5	UF SK	3	2	22.31	22.81	34.77	-11.96
				6	0	21.31	21.81	34.77	-12.96
				1	0	21.62	22.12	34.77	-12.65
	23017	699.7	16QAM	1	5	21.56	22.06	34.77	-12.71
	23017	077.7		3	2	21.23	21.73	34.77	-13.04
				6	0	19.90	20.40	34.77	-14.37
		95 707.5	16QAM	1	0	21.24	21.74	34.77	-13.03
1.4	23095			1	5	21.14	21.64	34.77	-13.13
1.4	23095	707.5	TOQAM	3	2	21.52	22.02	34.77	-12.75
				6	0	20.17	20.67	34.77	-14.1
				1	0	21.88	22.38	34.77	-12.39
	23173	715.5	16QAM	1	5	21.86	22.36	34.77	-12.41
	23173	715.5	TUQAM	3	2	21.10	21.60	34.77	-13.17
				6	0	20.17	20.67	34.77	-14.1
				1	0	21.59	22.09	34.77	-12.68
	23017	699.7	64QAM	1	5	21.53	22.03	34.77	-12.74
	23017	077./		3	2	21.20	21.70	34.77	-13.07
				6	0	19.87	20.37	34.77	-14.4
				1	0	21.21	21.71	34.77	-13.06
	23095	707.5	64QAM	1	5	21.11	21.61	34.77	-13.16
	20090	707.3		3	2	21.49	21.99	34.77	-12.78
				6	0	20.14	20.64	34.77	-14.13
				1	0	21.85	22.35	34.77	-12.42
	23173	715.5	64QAM	1	5	21.83	22.33	34.77	-12.44
	231/3	710.0	04QAIVI	3	2	21.07	21.57	34.77	-13.2
				6	0	20.14	20.64	34.77	-14.13

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Antenna	gain (dBi)	0.5							
		LTE Band	12_Uplink fr	re <b>quer</b>	icy band				
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	22.42	22.92	34.77	-11.85
	23025	700.5	QPSK	1	14	22.44	22.94	34.77	-11.83
	20020	700.0	QIOR	8	4	21.34	21.84	34.77	-12.93
				15	0	21.34	21.84	34.77	-12.93
				1	0	22.32	22.82	34.77	-11.95
	23095	707.5	QPSK	1	14	22.38	22.88	34.77	-11.89
	20070	10110	QI OK	8	4	21.18	21.68	34.77	-13.09
				15	0	21.29	21.79	34.77	-12.98
				1	0	22.42	22.92	34.77	-11.85
	23165	714.5	QPSK	1	14	22.55	23.05	34.77	-11.72
	20.00			8	4	21.24	21.74	34.77	-13.03
				15	0	21.27	21.77	34.77	-13
				1	0	22.24	22.74	34.77	-12.03
	23025	700.5	16QAM	1	14	21.39	21.89	34.77	-12.88
	20020	10010		8	4	20.20	20.70	34.77	-14.07
				15	0	20.34	20.84	34.77	-13.93
		707.5	16QAM	1	0	21.17	21.67	34.77	-13.1
3	23095			1	14	21.51	22.01	34.77	-12.76
Ũ	20070			8	4	20.31	20.81	34.77	-13.96
				15	0	20.27	20.77	34.77	-14
				1	0	21.75	22.25	34.77	-12.52
	23165	714.5	16QAM	1	14	21.73	22.23	34.77	-12.54
				8	4	20.37	20.87	34.77	-13.9
				15	0	20.41	20.91	34.77	-13.86
				1	0	22.19	22.69	34.77	-12.08
	23025	700.5	64QAM	1	14	21.34	21.84	34.77	-12.93
				8	4	20.15	20.65	34.77	-14.12
				15	0	20.29	20.79	34.77	-13.98
				1	0	21.12	21.62	34.77	-13.15
	23095 707.5	64QAM	1	14	21.46	21.96	34.77	-12.81	
				8	4	20.26	20.76	34.77	-14.01
				15	0	20.22	20.72	34.77	-14.05
				1	0	21.70	22.20	34.77	-12.57
	23165 71	714.5	64QAM	1	14	21.68	22.18	34.77	-12.59
				8 15	4	20.32	20.82	34.77	-13.95
				15	0	20.36	20.86	34.77	-13.91

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Antenna	gain (dBi)	0.5							
		LTE Band	12_Uplink fr	requer	icy band				
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	22.44	22.94	34.77	-11.83
	23035	701.5	QPSK	1	24	22.59	23.09	34.77	-11.68
	20000	701.0	QIOR	12	6	21.38	21.88	34.77	-12.89
				25	0	21.41	21.91	34.77	-12.86
				1	0	22.56	23.06	34.77	-11.71
	23095	707.5	QPSK	1	24	22.33	22.83	34.77	-11.94
	20070	707.0	QIOR	12	6	21.22	21.72	34.77	-13.05
				25	0	21.33	21.83	34.77	-12.94
				1	0	22.05	22.55	34.77	-12.22
	23155	713.5	QPSK	1	24	22.40	22.90	34.77	-11.87
	20100	/ 10.0	QIOR	12	6	21.28	21.78	34.77	-12.99
				25	0	21.41	21.91	34.77	-12.86
				1	0	21.92	22.42	34.77	-12.35
	23035	701.5	16QAM	1	24	22.20	22.70	34.77	-12.07
	20000	701.0		12	6	20.35	20.85	34.77	-13.92
				25	0	20.48	20.98	34.77	-13.79
		707.5	16QAM	1	0	22.05	22.55	34.77	-12.22
5	23095			1	24	21.53	22.03	34.77	-12.74
Ũ	20070	707.0	100/101	12	6	20.21	20.71	34.77	-14.06
				25	0	20.40	20.90	34.77	-13.87
				1	0	21.94	22.44	34.77	-12.33
	23155	713.5	16QAM	1	24	22.39	22.89	34.77	-11.88
	20.00			12	6	20.18	20.68	34.77	-14.09
				25	0	20.40	20.90	34.77	-13.87
				1	0	21.86	22.36	34.77	-12.41
	23035	701.5	64QAM	1	24	22.14	22.64	34.77	-12.13
				12	6	20.29	20.79	34.77	-13.98
				25	0	20.42	20.92	34.77	-13.85
				1	0	21.99	22.49	34.77	-12.28
	23095 707.5	707.5	64QAM	1	24	21.47	21.97	34.77	-12.8
				12	6	20.15	20.65	34.77	-14.12
				25	0	20.34	20.84	34.77	-13.93
	23155 7			1	0	21.88	22.38	34.77	-12.39
		713.5	64QAM	1	24	22.33	22.83	34.77	-11.94
				12	6	20.12	20.62	34.77	-14.15
				25	0		0.50	34.77	-34.27

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Antenna	Antenna gain (dBi) 0.5								
		LTE Band	d 12_Uplink fr	requer	icy band		MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	22.42	22.92	34.77	-11.85
	23060	704	QPSK	1	49	22.44	22.94	34.77	-11.83
	23000	704		25	12	21.34	21.84	34.77	-12.93
				50	0	21.34	21.84	34.77	-12.93
				1	0	22.32	22.82	34.77	-11.95
	23095	707.5	QPSK	1	49	22.38	22.88	34.77	-11.89
	20070	101.5	QI SIX	25	12	21.18	21.68	34.77	-13.09
				50	0	21.29	21.79	34.77	-12.98
				1	0	22.42	22.92	34.77	-11.85
	23130	711	QPSK	1	49	22.68	23.18	34.77	-11.59
	20100	,	QI OK	25	12	21.24	21.74	34.77	-13.03
				50	0	21.27	21.77	34.77	-13
				1	0	22.24	22.74	34.77	-12.03
	23060	704	16QAM	1	49	21.39	21.89	34.77	-12.88
	20000	701	10 (2) (1)	25	12	20.20	20.70	34.77	-14.07
				50	0	20.34	20.84	34.77	-13.93
			16QAM	1	0	21.17	21.67	34.77	-13.1
10	23095	707.5		1	49	21.51	22.01	34.77	-12.76
10	20070	10110		25	12	20.31	20.81	34.77	-13.96
				50	0	20.27	20.77	34.77	-14
				1	0	21.75	22.25	34.77	-12.52
	23130	711	16QAM	1	49	21.73	22.23	34.77	-12.54
				25	12	20.37	20.87	34.77	-13.9
				50	0	20.41	20.91	34.77	-13.86
				1	0	22.16	22.66	34.77	-12.11
	23060	704	64QAM	1	49	21.31	21.81	34.77	-12.96
				25	12	20.12	20.62	34.77	-14.15
				50	0	20.26	20.76	34.77	-14.01
				1	0	21.09	21.59	34.77	-13.18
	23095	707.5	64QAM	1	49	21.43	21.93	34.77	-12.84
				25	12	20.23	20.73	34.77	-14.04
				50	0	20.19	20.69	34.77	-14.08
				1	0	21.67	22.17	34.77	-12.6
	23130	711	64QAM	1	49	21.65	22.15	34.77	-12.62
				25	12	20.29	20.79	34.77	-13.98
				50	0	20.33	20.83	34.77	-13.94

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Antenna gain (dBi) LTE Band 25_Uplink frequency band : 1850 to 1915 MHz										
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)	
				1	0	22.03	23.03	33	-9.97	
	0/0/7	1050 7	000	1	5	21.97	22.97	33	-10.03	
	26047	1850.7	QPSK	3	2	22.08	23.08	33	-9.92	
				6	0	21.06	22.06	33	-10.94	
				1	0	21.88	22.88	33	-10.12	
	2/2/5	1000 F	ODCK	1	5	21.79	22.79	33	-10.21	
	26365	1882.5	QPSK	3	2	22.02	23.02	33	-9.98	
				6	0	20.97	21.97	33	-11.03	
				1	0	21.99	22.99	33	-10.01	
	26683	1914.3	QPSK	1	5	21.93	22.93	33	-10.07	
	20003	1914.5	UPSK	3	2	22.08	23.08	33	-9.92	
				6	0	21.01	22.01	33	-10.99	
				1	0	21.05	22.05	33	-10.95	
	26047	1850.7	16QAM	1	5	21.07	22.07	33	-10.93	
	20047	1000.7	TOQAIVI	3	2	21.38	22.38	33	-10.62	
				6	0	19.96	20.96	33	-12.04	
	26365	1882.5	16QAM	1	0	21.14	22.14	33	-10.86	
1.4				1	5	20.69	21.69	33	-11.31	
1.4	20305			3	2	20.97	21.97	33	-11.03	
				6	0	19.84	20.84	33	-12.16	
				1	0	21.14	22.14	33	-10.86	
	26683	1914.3	16QAM	1	5	21.08	22.08	33	-10.92	
	20005	1714.3	TUQAM	3	2	21.03	22.03	33	-10.97	
				6	0	20.03	21.03	33	-11.97	
				1	0	21.03	22.03	33	-10.97	
	26047	1850.7	64QAM	1	5	21.05	22.05	33	-10.95	
	20047	1030.7		3	2	21.36	22.36	33	-10.64	
				6	0	19.94	20.94	33	-12.06	
				1	0	21.12	22.12	33	-10.88	
	26365	1882.5	64QAM	1	5	20.67	21.67	33	-11.33	
	20000	1002.0		3	2	20.95	21.95	33	-11.05	
				6	0	19.82	20.82	33	-12.18	
				1	0	21.12	22.12	33	-10.88	
	26683	1914.3	64QAM	1	5	21.06	22.06	33	-10.94	
	20000	1711.0		3	2	21.01	22.01	33	-10.99	
				6	0	20.01	21.01	33	-11.99	

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	Antenna gain (dBi) T LTE Band 25_Uplink frequency band : 1850 to 1915 MHz										
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)		
				1	0	22.19	23.19	33	-9.81		
	0/055	1051 5	0001/	1	14	22.13	23.13	33	-9.87		
	26055	1851.5	QPSK	8	4	21.04	22.04	33	-10.96		
				15	0	21.03	22.03	33	-10.97		
				1	0	22.25	23.25	33	-9.75		
	2424E	1882.5	QPSK	1	14	22.25	23.25	33	-9.75		
	26365	1002.0	UPSK	8	4	20.95	21.95	33	-11.05		
				15	0	21.07	22.07	33	-10.93		
				1	0	22.18	23.18	33	-9.82		
	26675	1913.5	QPSK	1	14	22.10	23.10	33	-9.9		
	20075	1915.0	UFSK	8	4	21.02	22.02	33	-10.98		
				15	0	21.03	22.03	33	-10.97		
				1	0	21.27	22.27	33	-10.73		
	26055	1851.5	16QAM	1	14	21.18	22.18	33	-10.82		
	20033	1031.3	TUQAM	8	4	20.00	21.00	33	-12		
				15	0	19.89	20.89	33	-12.11		
			16QAM	1	0	21.57	22.57	33	-10.43		
3	26365	1882.5		1	14	21.37	22.37	33	-10.63		
5	20303	1002.5		8	4	20.12	21.12	33	-11.88		
				15	0	20.16	21.16	33	-11.84		
				1	0	21.50	22.50	33	-10.5		
	26675	1913.5	16QAM	1	14	21.44	22.44	33	-10.56		
	20070	1710.0	100/101	8	4	20.19	21.19	33	-11.81		
				15	0	20.07	21.07	33	-11.93		
				1	0	21.23	22.23	33	-10.77		
	26055	1851.5	64QAM	1	14	21.14	22.14	33	-10.86		
	20000	100110		8	4	19.96	20.96	33	-12.04		
				15	0	19.85	20.85	33	-12.15		
				1	0	21.53	22.53	33	-10.47		
	26365	1882.5	64QAM	1	14	21.33	22.33	33	-10.67		
				8	4	20.08	21.08	33	-11.92		
				15	0	20.12	21.12	33	-11.88		
				1	0	21.46	22.46	33	-10.54		
	26675	1913.5	64QAM	1	14	21.40	22.40	33	-10.6		
				8	4	20.15	21.15	33	-11.85		
				15	0	20.03	21.03	33	-11.97		

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Antenna gain (dBi) LTE Band 25_Uplink frequency band : 1850 to 1915 MHz										
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)	
				1	0	22.13	23.13	33	-9.87	
	26065	1852.5	QPSK	1	24	22.03	23.03	33	-9.97	
	20000	1002.0	UPSK	12	6	20.98	21.98	33	-11.02	
				25	0	21.13	22.13	33	-10.87	
				1	0	22.03	23.03	33	-9.97	
	26365	1882.5	QPSK	1	24	22.13	23.13	33	-9.87	
	20300	1002.0	UPSK	12	6	20.97	21.97	33	-11.03	
				25	0	21.07	22.07	33	-10.93	
				1	0	22.25	23.25	33	-9.75	
	26665	1912.5	QPSK	1	24	22.08	23.08	33	-9.92	
	20000	1912.0	UPSK	12	6	20.92	21.92	33	-11.08	
				25	0	20.97	21.97	33	-11.03	
				1	0	21.37	22.37	33	-10.63	
	26065	1852.5	16QAM	1	24	21.66	22.66	33	-10.34	
	20000	1002.0	TOQAIN	12	6	19.99	20.99	33	-12.01	
				25	0	20.26	21.26	33	-11.74	
		1882.5	16QAM	1	0	21.22	22.22	33	-10.78	
5	26365			1	24	21.59	22.59	33	-10.41	
5	20300	1002.0		12	6	19.99	20.99	33	-12.01	
				25	0	20.19	21.19	33	-11.81	
				1	0	21.68	22.68	33	-10.32	
	26665	1912.5	16QAM	1	24	21.87	22.87	33	-10.13	
	20000	1912.0	TOQAIN	12	6	19.83	20.83	33	-12.17	
				25	0	20.05	21.05	33	-11.95	
				1	0	21.33	22.33	33	-10.67	
	24045	1852.5	64QAM	1	24	21.62	22.62	33	-10.38	
	26065	1602.0		12	6	19.95	20.95	33	-12.05	
				25	0	20.22	21.22	33	-11.78	
				1	0	21.18	22.18	33	-10.82	
	2624E	1882.5	64000	1	24	21.55	22.55	33	-10.45	
	26365	1002.0	64QAM	12	6	19.95	20.95	33	-12.05	
				25	0	20.15	21.15	33	-11.85	
				1	0	21.64	22.64	33	-10.36	
	26445	1912.5	64QAM	1	24	21.83	22.83	33	-10.17	
	26665	1712.3	04QAW	12	6	19.79	20.79	33	-12.21	
				25	0	20.01	21.01	33	-11.99	

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Antenna	LTE Band 25_Uplink frequency band : 1850 to 1915 MHz										
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)		
				1	0	22.04	23.04	33	-9.96		
	26090	1855	QPSK	1	49	22.08	23.08	33	-9.92		
	20090	1000	UFSK	25	12	21.06	22.06	33	-10.94		
				50	0	21.08	22.08	33	-10.92		
				1	0	22.00	23.00	33	-10		
	26365	1882.5	QPSK	1	49	22.10	23.10	33	-9.9		
	20305	1002.5	UF SK	25	12	21.01	22.01	33	-10.99		
				50	0	21.06	22.06	33	-10.94		
				1	0	22.29	23.29	33	-9.71		
	26640	1910	QPSK	1	49	22.16	23.16	33	-9.84		
	20040	1710	UF SK	25	12	21.02	22.02	33	-10.98		
				50	0	21.09	22.09	33	-10.91		
				1	0	21.33	22.33	33	-10.67		
	26090 1	1855	16QAM	1	49	21.18	22.18	33	-10.82		
	20070	1033		25	12	20.07	21.07	33	-11.93		
				50	0	20.08	21.08	33	-11.92		
	26365	5 1882.5	16QAM	1	0	20.99	21.99	33	-11.01		
10				1	49	21.83	22.83	33	-10.17		
10	20303			25	12	19.96	20.96	33	-12.04		
				50	0	20.02	21.02	33	-11.98		
				1	0	21.26	22.26	33	-10.74		
	26640	1910	16QAM	1	49	21.47	22.47	33	-10.53		
	20040	1710	TUQAIN	25	12	19.76	20.76	33	-12.24		
				50	0	19.97	20.97	33	-12.03		
				1	0	21.27	22.27	33	-10.73		
	26090	1855	64QAM	1	49	21.12	22.12	33	-10.88		
	20090	1000		25	12	20.01	21.01	33	-11.99		
				50	0	20.02	21.02	33	-11.98		
				1	0	20.93	21.93	33	-11.07		
	26365	1882.5	64QAM	1	49	21.77	22.77	33	-10.23		
	20300	1002.0		25	12	19.90	20.90	33	-12.1		
				50	0	19.96	20.96	33	-12.04		
				1	0	21.20	22.20	33	-10.8		
	26640	1910	64QAM	1	49	21.41	22.41	33	-10.59		
	20040	1710		25	12	19.70	20.70	33	-12.3		
				50	0	19.91	20.91	33	-12.09		

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	yain (ubi)	LTE Band	25_Uplink fre	quenc	ency band : 1850 to 1915 MHz					
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)	
				1	0	22.19	23.19	33	-9.81	
	26115	1857.5	QPSK	1	74	22.25	23.25	33	-9.75	
	20110	100710	QI OK	36	19	21.11	22.11	33	-10.89	
				75	0	21.10	22.10	33	-10.9	
				1	0	22.21	23.21	33	-9.79	
	26365	1882.5	QPSK	1	74	22.08	23.08	33	-9.92	
	20000	1002.0	QIOR	36	19	20.99	21.99	33	-11.01	
				75	0	21.09	22.09	33	-10.91	
				1	0	22.31	23.31	33	-9.69	
	26615	1907.5	QPSK	1	74	22.15	23.15	33	-9.85	
	20013	1707.5		36	19	20.95	21.95	33	-11.05	
				75	0	21.11	22.11	33	-10.89	
				1	0	21.63	22.63	33	-10.37	
	26115	1857.5	16QAM	1	74	22.02	23.02	33	-9.98	
	20110 1857.5	TUCAM	36	19	20.03	21.03	33	-11.97		
				75	0	20.13	21.13	33	-11.87	
			1	0	21.35	22.35	33	-10.65		
15	26365	1882.5	16QAM	1	74	21.37	22.37	33	-10.63	
15	20303	1002.5	TUCAM	36	19	20.03	21.03	33	-11.97	
				75	0	20.05	21.05	33	-11.95	
				1	0	21.32	22.32	33	-10.68	
	26615	1907.5	16QAM	1	74	21.73	22.73	33	-10.27	
	20015	1707.5	TUCAM	36	19	19.97	20.97	33	-12.03	
				75	0	20.17	21.17	33	-11.83	
				1	0	21.58	22.58	33	-10.42	
	26115	1857.5	64QAM	1	74	21.97	22.97	33	-10.03	
	20115	1007.0		36	19	19.98	20.98	33	-12.02	
				75	0	20.08	21.08	33	-11.92	
				1	0	21.30	22.30	33	-10.7	
	<u></u> 2424⊑	1000 ⊑	64QAM	1	74	21.32	22.32	33	-10.68	
	26365	1882.5		36	19	19.98	20.98	33	-12.02	
				75	0	20.00	21.00	33	-12	
				1	0	21.27	22.27	33	-10.73	
	) <b>∠∠1</b> ⊑	1907.5	64QAM	1	74	21.68	22.68	33	-10.32	
	26615	C.1041		36	19	19.92	20.92	33	-12.08	
				75	0	20.12	21.12	33	-11.88	

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	Antenna gain (dBi) T LTE Band 25_Uplink frequency band : 1850 to 1915 MHz											
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)			
				1	0	22.26	23.26	33	-9.74			
	26140	1860	QPSK	1	99	22.46	23.46	33	-9.54			
	20140	1000	UFSK	50	25	21.08	22.08	33	-10.92			
				100	0	21.11	22.11	33	-10.89			
				1	0	22.02	23.02	33	-9.98			
	26365	1882.5	QPSK	1	99	22.17	23.17	33	-9.83			
	20305	1002.5	UF SK	50	25	21.08	22.08	33	-10.92			
				100	0	21.11	22.11	33	-10.89			
				1	0	22.21	23.21	33	-9.79			
	26590	1905	QPSK	1	99	22.23	23.23	33	-9.77			
	20390	1905	UF SK	50	25	21.17	22.17	33	-10.83			
				100	0	21.12	22.12	33	-10.88			
				1	0	21.29	22.29	33	-10.71			
	26140	1860	16QAM	1	99	21.88	22.88	33	-10.12			
	20140 1800	1000	TOQAM	50	25	20.04	21.04	33	-11.96			
				100	0	20.15	21.15	33	-11.85			
			16QAM	1	0	21.40	22.40	33	-10.6			
20	26365	1882.5		1	99	21.62	22.62	33	-10.38			
20	20305	1002.0	TOQAM	50	25	20.09	21.09	33	-11.91			
				100	0	20.07	21.07	33	-11.93			
				1	0	21.31	22.31	33	-10.69			
	26590	1905	16QAM	1	99	21.20	22.20	33	-10.8			
	20390	1905	TOQAM	50	25	20.16	21.16	33	-11.84			
				100	0	20.11	21.11	33	-11.89			
				1	0	21.22	22.22	33	-10.78			
	26140	1860	64QAM	1	99	21.81	22.81	33	-10.19			
	20140	1000		50	25	19.97	20.97	33	-12.03			
				100	0	20.08	21.08	33	-11.92			
				1	0	21.33	22.33	33	-10.67			
	26365	1882.5	64QAM	1	99	21.55	22.55	33	-10.45			
	20300	1002.3		50	25	20.02	21.02	33	-11.98			
				100	0	20.00	21.00	33	-12			
				1	0	21.24	22.24	33	-10.76			
	26590	1905	64QAM	1	99	21.13	22.13	33	-10.87			
	20090	1700	04QAIVI	50	25	20.09	21.09	33	-11.91			
				100	0	20.04	21.04	33	-11.96			

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Antenna gain (dBi) 0.5											
		LTE Band	l 26_Uplink fi	requer	icy band		MHz				
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)		
				1	0	22.31	22.81	38.45	-15.64		
	26797	824.7	QPSK	1	5	22.15	22.65	38.45	-15.8		
	20171	021.7	QI SIX	3	2	22.42	22.92	38.45	-15.53		
				6	0	21.44	21.94	38.45	-16.51		
				1	0	22.17	22.67	38.45	-15.78		
	26915	836.5	QPSK	1	5	22.16	22.66	38.45	-15.79		
	20710	000.0	QFOR	3	2	22.32	22.82	38.45	-15.63		
				6	0	21.37	21.87	38.45	-16.58		
				1	0	22.17	22.67	38.45	-15.78		
	27033	848.3	QPSK	1	5	21.93	22.43	38.45	-16.02		
	27000	010.0	QI SIX	3	2	22.11	22.61	38.45	-15.84		
				6	0	21.15	21.65	38.45	-16.8		
				1	0	21.76	22.26	38.45	-16.19		
	26797	824 7	16QAM	1	5	21.66	22.16	38.45	-16.29		
	20171	797 824.7		3	2	21.58	22.08	38.45	-16.37		
				6	0	20.37	20.87	38.45	-17.58		
				1	0	21.16	21.66	38.45	-16.79		
1.4	26915	836.5	16QAM	1	5	21.66	22.16	38.45	-16.29		
1.7	20713	030.5	1002/101	3	2	21.37	21.87	38.45	-16.58		
				6	0	20.40	20.90	38.45	-17.55		
				1	0	21.10	21.60	38.45	-16.85		
	27033	848.3	16QAM	1	5	20.82	21.32	38.45	-17.13		
	27000	010.0	1002/101	3	2	21.20	21.70	38.45	-16.75		
				6	0	20.15	20.65	38.45	-17.8		
				1	0	21.73	22.23	38.45	-16.22		
	26797	824.7	64QAM	1	5	21.63	22.13	38.45	-16.32		
	20171	021.7		3	2	21.55	22.05	38.45	-16.4		
				6	0	20.34	20.84	38.45	-17.61		
				1	0	21.13	21.63	38.45	-16.82		
	26915	836.5	64QAM	1	5	21.63	22.13	38.45	-16.32		
	20/10	000.0		3	2	21.34	21.84	38.45	-16.61		
				6	0	20.37	20.87	38.45	-17.58		
				1	0	21.07	21.57	38.45	-16.88		
	27033	848.3	64QAM	1	5	21.83	22.33	38.45	-16.12		
	21000	010.0		3	2	21.17	21.67	38.45	-16.78		
				6	0	20.12	20.62	38.45	-17.83		

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Antenna gain (dBi) 0.5 LTE Band 26_Uplink frequency band : 824 to 849 MHz											
		LTE Band	l 26_Uplink fi	requer	ncy band	d : 824 to 849	MHz				
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)		
				1	0	22.54	23.04	38.45	-15.41		
	26455	825.5	QPSK	1	14	22.47	22.97	38.45	-15.48		
	20433	023.5	QI SIX	8	4	21.36	21.86	38.45	-16.59		
				15	0	21.47	21.97	38.45	-16.48		
				1	0	22.31	22.81	38.45	-15.64		
	26915	836.5	QPSK	1	14	22.50	23.00	38.45	-15.45		
	20713	000.0	QUOR	8	4	21.43	21.93	38.45	-16.52		
				15	0	21.34	21.84	38.45	-16.61		
				1	0	22.28	22.78	38.45	-15.67		
	27025	847.5	QPSK	1	14	22.10	22.60	38.45	-15.85		
	27020	017.0	QUOR	8	4	21.16	21.66	38.45	-16.79		
				15	0	21.21	21.71	38.45	-16.74		
				1	0	21.95	22.45	38.45	-16		
	26455	825.5	16QAM	1	14	21.43	21.93	38.45	-16.52		
	26455 825.5		8	4	20.26	20.76	38.45	-17.69			
			15	0	20.60	21.10	38.45	-17.35			
				1	0	21.78	22.28	38.45	-16.17		
3	26915	836.5	16QAM	1	14	21.91	22.41	38.45	-16.04		
0	20710	00010	10 27 111	8	4	20.54	21.04	38.45	-17.41		
				15	0	20.58	21.08	38.45	-17.37		
				1	0	21.69	22.19	38.45	-16.26		
	27025	847.5	16QAM	1	14	21.27	21.77	38.45	-16.68		
				8	4	20.11	20.61	38.45	-17.84		
				15	0	20.11	20.61	38.45	-17.84		
				1	0	21.84	22.34	38.45	-16.11		
	26455	825.5	64QAM	1	14	21.32	21.82	38.45	-16.63		
				8	4	20.15	20.65	38.45	-17.8		
				15	0	20.49	20.99	38.45	-17.46		
				1	0	21.67	22.17	38.45	-16.28		
	26915	836.5	64QAM	1	14	21.80	22.30	38.45	-16.15		
				8	4	20.43	20.93	38.45	-17.52		
				15	0	20.47	20.97	38.45	-17.48		
				1	0	21.58	22.08	38.45	-16.37		
	27025	847.5	64QAM	1	14	21.16	21.66	38.45	-16.79		
				8	4	20.00	20.50	38.45	-17.95		
				15	0	20.00	20.50	38.45	-17.95		

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Antenna g	Antenna gain (dBi) 0.5											
		LTE Band	l 26_Uplink fr	requer	icy band	l : 824 to 849						
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)			
				1	0	22.35	22.85	38.45	-15.6			
	26815	826.5	OPSK	1	24	22.20	22.70	38.45	-15.75			
	20015	020.0		12	6	21.32	21.82	38.45	-16.63			
			Modulation         RB Size         RB Offset         Average (dBm)         Average (dBm)         Average (dBm)         Lin (dBm)           0         22.35         22.85         38.           1         24         22.20         22.70         38.           12         6         21.32         21.82         38.           12         6         21.32         21.82         38.           25         0         21.33         21.83         38.           11         24         22.15         22.65         38.           12         6         21.36         21.80         38.           12         6         21.36         21.86         38.           12         6         21.36         21.86         38.           12         6         21.32         21.86         38.           12         6         21.32         21.86         38.           13         24         22.12         22.62         38.           12         6         21.22         21.72         38.           12         6         20.37         20.87         38.           16QAM         1         24         21.42	38.45	-16.62							
				1	0	22.50	23.00	38.45	-15.45			
	26915	836.5	OPSK	1	24	22.15	22.65	38.45	-15.8			
	20713	000.0		12	6	21.36	21.86	38.45	-16.59			
				25	0	21.44	21.94	38.45	-16.51			
				1	0	22.38	22.88	38.45	-15.57			
	27015	846.5	OPSK	1	24	22.12	22.62	38.45	-15.83			
	27015	040.0		12	6	21.22	21.72	38.45	-16.73			
				25	0	21.24	21.74	38.45	-16.71			
				1	0	21.89	22.39	38.45	-16.06			
	26815	826 5	160AM	1	24	21.42	21.92	38.45	-16.53			
	26815 826.5	TOQAM	12	6	20.37	20.87	38.45	-17.58				
				25	0	20.39	20.89	38.45	-17.56			
				1	0	21.22	21.72	38.45	-16.73			
5	26915	836.5	16ΟΔΜ	1	24	21.60	22.10	38.45	-16.35			
5	20710	000.0	100/101	12	6	20.31	20.81	38.45	-17.64			
				25	0	20.57	21.07	38.45	-17.38			
				1	0	22.02	22.52	38.45	-15.93			
	27015	846.5	160AM	1	24	21.17	21.67	38.45	-16.78			
	27010	010.0	100/101		6	20.20	20.70	38.45	-17.75			
				25	0	20.28	20.78	38.45	-17.67			
				1	0	21.82	22.32	38.45	-16.13			
	26815	826.5	640AM	1	24	21.35	21.85	38.45	-16.6			
	20010	020.0	0102/111	12	6	20.30	20.80	38.45	-17.65			
				25	0	20.32	20.82	38.45	-17.63			
				1	0	21.15	21.65	38.45	-16.8			
	26915	836.5	64001	1	24	21.53	22.03	38.45	-16.42			
	20/10	000.0		12	6	20.24	20.74	38.45	-17.71			
				25	0	20.50	21.00	38.45	-17.45			
				1	0	21.95	22.45	38.45	-16			
	27015	846.5	64QAM	1	24	21.10	21.60	38.45	-16.85			
	27013	010.0		12	6	20.13	20.63	38.45	-17.82			
				25	0	20.21	20.71	38.45	-17.74			

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Antenna	Antenna gain (dBi) 0.5 LTE Band 26_Uplink frequency band : 824 to 849 MHz										
		LTE Band	l 26_Uplink fi	requer	icy band	1 : 824 to 849	MHz				
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)		
				1	0	22.55	23.05	38.45	-15.4		
	26840	829	QPSK	1	49	22.30	22.80	38.45	-15.65		
	20040	027	QI SIX	25	12	21.25	21.75	38.45	-16.7		
				50	0	21.42	21.92	38.45	-16.53		
				1	0	22.40	22.90	38.45	-15.55		
	26915	836.5	QPSK	1	49	22.12	22.62	38.45	-15.83		
	20710	000.0	QI OK	25	12	21.37	21.87	38.45	-16.58		
				50	0	21.47	21.97	38.45	-16.48		
				1	0	22.40	22.90	38.45	-15.55		
	26990	844	QPSK	1	49	22.17	22.67	38.45	-15.78		
	20770	0	2. 0.1	25	12	21.35	21.85	38.45	-16.6		
				50	0	21.33	21.83	38.45	-16.62		
			16QAM	1	0	21.46	21.96	38.45	-16.49		
	26840	829		1	49	21.90	22.40	38.45	-16.05		
	20040 029			25	12	20.42	20.92	38.45	-17.53		
				50	0	20.45	20.95	38.45	-17.5		
				1	0	21.78	22.28	38.45	-16.17		
10	26915	836.5	16QAM	1	49	21.30	21.80	38.45	-16.65		
				25	12	20.42	20.92	38.45	-17.53		
				50	0	20.44	20.94	38.45	-17.51		
				1	0	21.93	22.43	38.45	-16.02		
	26990	844	16QAM	1	49	20.88	21.38	38.45	-17.07		
				25	12	20.46	20.96	38.45	-17.49		
				50	0	20.33	20.83	38.45	-17.62		
				1	0	21.41	21.91	38.45	-16.54		
	26840	829	64QAM	1	49	21.85	22.35	38.45	-16.1		
				25	12	20.37	20.87	38.45	-17.58		
				50	0	20.40	20.90	38.45	-17.55		
				1	0	21.73	22.23	38.45	-16.22		
	26915	836.5	64QAM	1 25	49	21.25	21.75	38.45	-16.7		
				25	12	20.37	20.87	38.45	-17.58		
				50	0	20.39	20.89	38.45	-17.56		
				1	0	21.88	22.38	38.45	-16.07		
	26990	844	64QAM	1 25	49 12	20.83	21.33	38.45	-17.12		
				25 50	12	20.41	20.91	38.45	-17.54		
				50	0	20.28	20.78	38.45	-17.67		

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Antenna	Antenna gain (dBi) 0.5										
		LTE Band	l 26_Uplink fi	requer	ncy band	d : 824 to 849	MHz				
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)		
				1	0	22.56	23.06	38.45	-15.39		
	26865	831.5	QPSK	1	74	22.34	22.84	38.45	-15.61		
	20003	001.0	QUSIC	36	19	21.29	21.79	38.45	-16.66		
				75	0	21.37	21.87	38.45	-16.58		
				1	0	22.44	22.94	38.45	-15.51		
	26915	836.5	QPSK	1	74	22.30	22.80	38.45	-15.65		
	20713	030.5	QUSIC	36	19	21.33	21.83	38.45	-16.62		
				75	0	21.49	21.99	38.45	-16.46		
				1	0	22.27	22.77	38.45	-15.68		
	26965	841.5	QPSK	1	74	22.16	22.66	38.45	-15.79		
	20703	041.5	QI SIX	36	19	21.31	21.81	38.45	-16.64		
				75	0	21.39	21.89	38.45	-16.56		
				1	0	21.63	22.13	38.45	-16.32		
	26865	831 5	16QAM	1	74	21.39	21.89	38.45	-16.56		
	26865 831.5	1002/101	36	19	20.25	20.75	38.45	-17.7			
				75	0	20.47	20.97	38.45	-17.48		
			1	0	21.71	22.21	38.45	-16.24			
15	26915	836.5	16QAM	1	74	21.93	22.43	38.45	-16.02		
15	20713	030.5	TOCINI	36	19	20.34	20.84	38.45	-17.61		
				75	0	20.41	20.91	38.45	-17.54		
				1	0	21.41	21.91	38.45	-16.54		
	26965	841.5	16QAM	1	74	21.12	21.62	38.45	-16.83		
	20703	041.5	TOCINI	36	19	20.41	20.91	38.45	-17.54		
				75	0	20.40	20.90	38.45	-17.55		
				1	0	21.57	22.07	38.45	-16.38		
	26865	831.5	64QAM	1	74	21.33	21.83	38.45	-16.62		
	20000	001.0	010/101	36	19	20.19	20.69	38.45	-17.76		
				75	0	20.41	20.91	38.45	-17.54		
				1	0	21.65	22.15	38.45	-16.3		
	26915	836.5	64QAM	1	74	21.87	22.37	38.45	-16.08		
	20713	000.0		36	19	20.28	20.78	38.45	-17.67		
				75	0	20.35	20.85	38.45	-17.6		
				1	0	21.35	21.85	38.45	-16.6		
	26965	841.5	64QAM	1	74	21.06	21.56	38.45	-16.89		
	20703	011.0		36	19	20.35	20.85	38.45	-17.6		
				75	0	20.34	20.84	38.45	-17.61		

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Antenna	Antenna gain (dBi) 0.5 Part 90S_LTE Band 26_Uplink frequency band : 814 to 824 MHz											
	P	art 90S_LTE	Band 26_Upl	ink fre	quency	band : 814 to	o 824 MHz					
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)			
				1	0	22.29	22.79	50	-27.21			
	26697	814.7	QPSK	1	5	22.32	22.82	50	-27.18			
	20077	014.7	QI SK	3	2	22.28	22.78	50	-27.22			
				6	0	21.42	21.92	50	-28.08			
				1	0	22.48	22.98	50	-27.02			
	26740	819	ODSK	1	5	22.36	22.86	50	-27.14			
	20740	017	QI SK	3	2	22.48	22.98	50	-27.02			
				6	0	21.28	21.78	50	-28.22			
				1	0	22.31	22.81	50	-27.19			
	26783	823.3	ODSK	1	5	22.24	22.74	50	-27.26			
	20703	023.3	QI SK	3	2	22.20	22.70	50	-27.3			
				6	0	21.00	21.50	50	-28.5			
				1	0	21.19	21.69	50	-28.31			
	26607	81/17	16QAM	1	5	21.12	21.62	50	-28.38			
	26697 814.7	TUQAIN	3	2	21.30	21.80	50	-28.2				
				6	0	20.22	20.72	50	-29.28			
			1	0	21.46	21.96	50	-28.04				
1.4	26740	819	16ΟΔΜ	1	5	21.29	21.79	50	-28.21			
1.1	20710	017	100/101	3	2	21.32	21.82	50	-28.18			
				6	0	20.22	20.72	50	-29.28			
				1	0	21.24	21.74	50	-28.26			
	26783	823.3	160AM	1	5	21.34	21.84	50	-28.16			
	20700	020.0	100/101	3	2	21.18	21.68	50	-28.32			
				6	0	20.15	20.65	50	-29.35			
				1	0	20.86	21.36	50	-28.64			
	26697	814.7	640AM	1	5	21.53	22.03	50	-27.97			
	20077	011.7	010/101	3	2	21.33	21.83	50	-28.17			
				6	0	20.50	21.00	50	-29			
				1	0	21.32	21.82	50	-28.18			
	26740	819	640AM	1	5	21.15	21.65	50	-28.35			
	20170	017		3	2	21.61	22.11	50	-27.89			
				6	0	20.45	20.95	50	-29.05			
				1	0	21.02	21.52	50	-28.48			
	26783	823.3	640AM	1	5	21.22	21.72	50	-28.28			
	20703	020.0	QPSK QPSK 16QAM 16QAM 64QAM 64QAM	3	2	21.42	21.92	50	-28.08			
				6	0	20.51	21.01	50	-28.99			

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Antenna gain (dBi) 0.5 Part 90S_LTE Band 26_Uplink frequency band : 814 to 824 MHz											
	P	art 90S_LTE	Band 26_Upl	ink fre	quency	band : 814 to					
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)		
				1	0	22.61	23.11	50	-26.89		
	26705	815.5	QPSK	1	14	22.54	23.04	50	-26.96		
	20703	013.3	QI JK	8	4	21.41	21.91	50	-28.09		
				15	0	21.37	21.87	50	-28.13		
				1	0	22.60	23.10	50	-26.9		
	26740	819	QPSK	1	14	22.32	22.82	50	-27.18		
	20740	017	QI JK	8	4	21.47	21.97	50	-28.03		
				15	0	21.42	21.92	50	-28.08		
				1	0	22.11	22.61	50	-27.39		
	26775	822.5	QPSK	1	14	22.56	23.06	50	-26.94		
	20115	022.0		8	4	21.36	21.86	50	-28.14		
				15	0	21.33	21.83	50	-28.17		
				1	0	21.60	22.10	50	-27.9		
	26705	815 5	16QAM	1	14	20.87	21.37	50	-28.63		
	26705 815.5	1002/11/1	8	4	20.54	21.04	50	-28.96			
				15	0	20.25	20.75	50	-29.25		
				1	0	21.48	21.98	50	-28.02		
3	26740	819	16QAM	1	14	21.16	21.66	50	-28.34		
5	20740	017	100/101	8	4	20.48	20.98	50	-29.02		
				15	0	20.38	20.88	50	-29.12		
				1	0	21.64	22.14	50	-27.86		
	26775	822.5	16QAM	1	14	21.60	22.10	50	-27.9		
	20110	022.0	100/101	8	4	20.17	20.67	50	-29.33		
				15	0	20.17	20.67	50	-29.33		
				1	0	20.86	21.36	50	-28.64		
	26705	815.5	64QAM	1	14	21.14	21.64	50	-28.36		
	20,00	010.0		8	4	20.18	20.68	50	-29.32		
				15	0	20.26	20.76	50	-29.24		
				1	0	21.29	21.79	50	-28.21		
	26740	819	64QAM	1	14	21.11	21.61	50	-28.39		
	_0,10	0.7		8	4	20.29	20.79	50	-29.21		
				15	0	20.26	20.76	50	-29.24		
				1	0	21.43	21.93	50	-28.07		
	26775	822.5	64QAM	1	14	21.20	21.70	50	-28.3		
		022.0		8	4	20.29	20.79	50	-29.21		
				15	0	20.31	20.81	50	-29.19		

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Antenna gain (dBi) 0.5 Part 90S_LTE Band 26_Uplink frequency band : 814 to 824 MHz											
	P	art 90S_LTE	Band 26_Upl	ink fre	quency	band : 814 to	o 824 MHz				
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)		
				1	0	23.52	24.02	50	-25.98		
	26715	816.5	QPSK	1	24	23.38	23.88	50	-26.12		
	20715	010.5	UF SK	12	6	22.25	22.75	50	-27.25		
				25	0	22.22	22.72	50	-27.28		
				1	0	23.46	23.96	50	-26.04		
	26740	819	QPSK	1	24	23.28	23.78	50	-26.22		
	20740	017	UF SK	12	6	22.28	22.78	50	-27.22		
				25	0	22.33	22.83	50	-27.17		
				1	0	23.41	23.91	50	-26.09		
	26765	821.5	QPSK	1	24	23.35	23.85	50	-26.15		
	20705	021.0	UF SK	12	6	22.19	22.69	50	-27.31		
				25	0	22.21	22.71	50	-27.29		
				1	0	22.08	22.58	50	-27.42		
	26715	816.5	16QAM	1	24	22.01	22.51	50	-27.49		
	26715 816.5	010.5	TUQAIN	12	6	21.20	21.70	50	-28.3		
				25	0	21.26	21.76	50	-28.24		
			1	0	22.36	22.86	50	-27.14			
5	26740	819	16QAM 16QAM	1	24	22.06	22.56	50	-27.44		
5	20740	017	TOCAM	12	6	21.16	21.66	50	-28.34		
				25	0	21.44	21.94	50	-28.06		
				1	0	21.99	22.49	50	-27.51		
	26765	821.5	16QAM	1	24	22.09	22.59	50	-27.41		
	20703	021.0	TOCAM	12	6	21.11	21.61	50	-28.39		
				25	0	21.22	21.72	50	-28.28		
				1	0	22.52	23.02	50	-26.98		
	26715	816.5	64QAM	1	24	21.54	22.04	50	-27.96		
	20713	010.0		12	6	21.10	21.60	50	-28.4		
				25	0	21.23	21.73	50	-28.27		
				1	0	22.57	23.07	50	-26.93		
	26740	819	64QAM	1	24	21.79	22.29	50	-27.71		
	20740	017		12	6	21.11	21.61	50	-28.39		
				25	0	21.19	21.69	50	-28.31		
				1	0	21.98	22.48	50	-27.52		
	26765	821.5	64QAM	1	24	21.81	22.31	50	-27.69		
	20703	021.3		12	6	21.17	21.67	50	-28.33		
				25	0	21.17	21.67	50	-28.33		

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Antenna	Antenna gain (dBi) 0.5											
	P	art 90S_LTE	Band 26_Upl	ink fre	quency	band : 814 to	o 824 MHz					
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)			
				1	0	22.62	23.12	50	-26.88			
	26740	819	QPSK	1	49	22.63	23.13	50	-26.87			
	20740	017		25	12	21.33	21.83	50	-28.17			
				50	0	21.30	21.80	50	-28.2			
				1	0	21.44	21.94	50	-28.06			
10	26740	819	16QAM	1	49	21.36	21.86	50	-28.14			
10	20740	017		25	12	20.36	20.86	50	-29.14			
				50	0	20.49	20.99	50	-29.01			
			1	0	21.31	21.81	50	-28.19				
	26740	819	64QAM	1	49	20.99	21.49	50	-28.51			
	20740	017		25	12	20.50	21.00	50	-29			
				50	0	20.36	20.86	50	-29.14			

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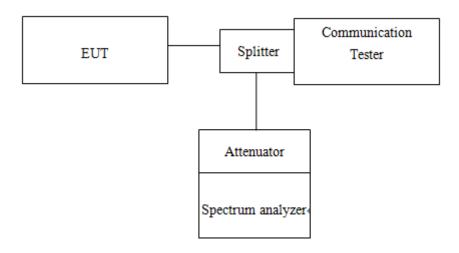


# 7. OCCUPIED BANDWIDTH MEASUREMENT

# 7.1. 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.

# 7.2. Test Set-up



# 7.3. 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  $1\% \sim 5\%$  of emission BW, VBW= 3 times RBW, -20dBc display line was placed on the screen (or 20dB bandwidth). Set RBW to 99% bandwidth, RBW=  $1\% \sim 5\%$ , VBW= 3 RBW, with span > 2 \* Signal BW, set % Power = 99%.

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# 7.4. Measurement Equipment Used

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	Agilent	N9010A	MY51440113	2018/06/20	2019/06/19
Radio Communica- tion Analyzer	Anritsu	MT8820C	6201107337	2018/06/15	2019/06/14
Attenuator	Marvelous	MVE2213-10	RF30	2017/12/26	2018/12/25
Splitter	Woken	DOM35LW1A2	RF36	2017/12/26	2018/12/25
DC Block	PASTERNACK	PE8210	RF29	2017/12/26	2018/12/25
Coaxial Cables	Woken	00100A1F1A185C	RF229	2017/12/26	2018/12/25
Coaxial Cables	Woken	00100A1F1A185C	RF230	2017/12/26	2018/12/25
Coaxial Cables	Woken	00100A1F1A185C	RF231	2017/12/26	2018/12/25
Temperature Chamber	TERCHY	MHK-120LK	1020582	2018/01/13	2019/01/02

# 7.5. Measurement Result

	LTE BAND 2 Channel bandwidth: 1.4MHz											
Freq.	СН	99% BW (MHz)			26 dB BW (MHz)							
(MHz)	(MHz) CH		16QAM	64QAM	QPSK	16QAM	64QAM					
1850.7	18607	1.1012	1.1066	1.1017	1.3163	1.3380	1.3257					
1880.0	18900	1.0985	1.1028	1.1104	1.3099	1.3454	1.3416					
1909.3	19193	1.1025	1.1031	1.1096	1.2991	1.3226	1.3096					

	LTE BAND 2 Channel bandwidth: 5MHz											
Freq.		99	99% BW (MHz) 26 dB BW (MHz)									
(MHz)	CIT	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM					
1852.5	18625	4.5316	4.5248	4.5251	5.0270	5.0016	5.0797					
1880.0	18900	4.5175	4.5126	4.5269	5.0322	5.0294	5.0354					
1907.5	19175	4.5258	4.5156	4.5160	5.0646	5.0406	5.0079					

	LTE BAND 2 Channel bandwidth: 3MHz										
Freq. CH	99	99% BW (MHz) 26 dB BW (MHz)									
(MHz)	CIT	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM				
1851.5	18615	2.7173	2.7123	2.7192	3.0162	3.0111	2.9961				
1880.0	18900	2.7161	2.7225	2.7197	3.0522	3.0142	2.9984				
1908.5	19185	2.7069	2.7153	2.7144	3.0077	3.0056	3.0131				

LTE BAND 2 Channel bandwidth: 10MHz										
Freq.	CH 99% BW (MHz) 26 dB BW (MH					Hz)				
(MHz)	CIT	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM			
1855.0	18650	8.9899	9.0131	9.0106	9.959	9.974	9.948			
1880.0	18900	8.9990	9.0060	8.9943	9.987	9.997	9.966			
1905.0	19150	8.9836	8.9812	8.9721	9.978	9.794	9.775			

1QAM .643

		LTE BAN	VD 2 Chan	nel bandwi	dth: 15MF	łz				LTE BAN	ID 2 Chanr	nel bandwic	dth: 20MH	Z	
Freq.	99% BW (MHz)		26	dB BW (M	Hz)	Freq.	Freq. 99% BW (MHz) 26			26 dB BW (MHz)					
(MHz)	Сп	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM	(MHz)	СН	QPSK	16QAM	64QAM	QPSK	16QAM	640
1857.5	18675	13.508	13.497	13.489	14.796	14.843	14.715	1860.0	18700	18.011	17.953	17.984	19.457	19.459	19.
1880.0	18900	13.522	13.471	13.487	14.779	14.605	14.734	1880.0	18900	17.961	17.952	17.970	19.616	19.495	19.
1902.5	19125	13.494	13.455	13.468	14.717	14.782	14.656	1900.0	19100	17.920	17.974	17.925	19.611	19.476	19.

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ſ	LTE BAND 4 Channel bandwidth: 1.4MHz										
	Freq.	СН	99	9% BW (MI	V (MHz) 26 dB BW (MHz)						
	(MHz)	CIT	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM			
	1710.7	19957	1.0962	1.1038	1.1047	1.3202	1.3253	1.3463			
	1732.5	20175	1.0995	1.1021	1.1023	1.3141	1.3556	1.3165			
	1754.3	20393	1.1012	1.1037	1.1063	1.3288	1.3302	1.3242			

LTE BAND 4 Channel bandwidth: 5MHz										
Freq.	CH 99% BW (MHz) 26 dB BW (MHz)					Hz)				
(MHz)	СП	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM			
1712.5	19957	4.5275	4.5294	4.5392	5.0580	5.0452	5.0580			
1732.5	20175	4.5190	4.5117	4.5241	5.0570	4.9770	5.0608			
1752.5	20375	4.5212	4.5226	4.5250	5.0207	5.0654	5.0431			

	LTE BAND 4 Channel bandwidth: 15MHz										
Freq.	011	99	9% BW (MI	Hz)	26	dB BW (M	Hz)				
(MHz)	СН	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM				
1717.5	20025	13.508	13.511	13.525	14.969	14.765	14.803				
1732.5	20175	13.534	13.496	13.500	14.806	14.698	14.724				
1747.5	20325	13.519	13.474	13.501	14.868	14.835	14.745				

	LTE BAND 5 Channel bandwidth: 1.4MHz										
Freq.	СН	99	99% BW (MHz) 26 dB BW (MHz)								
(MHz)	СП	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM				
824.7	20407	1.1001	1.1033	1.0990	1.2995	1.3033	1.2960				
836.5	20525	1.0977	1.1056	1.1063	1.3047	1.3114	1.3156				
848.3	20643	1.1039	1.1041	1.1054	1.3199	1.3208	1.3125				

	LTE BAND 5 Channel bandwidth: 5MHz										
Freq.	СН	99	99% BW (MHz) 26 dB BW (MHz)								
(MHz)	СП	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM				
826.5	20425	4.5177	4.5252	4.5175	5.0526	4.9938	5.0497				
836.5	20525	4.5368	4.5190	4.5265	5.0357	5.0187	5.0284				
846.5	20625	4.5208	4.5141	4.5196	5.0421	5.0701	5.0291				

	LTE BAND 12 Channel bandwidth: 1.4MHz										
Freq.	I. Z) CH	99	99% BW (MHz) 26 dB BW (MH								
(MHz)		QPSK	16QAM	64QAM	QPSK	16QAM	64QAM				
699.7	23017	1.1053	1.1058	1.1038	1.2964	1.3060	1.3173				
707.5	23095	1.0998	1.0979	1.0990	1.2980	1.3095	1.3125				
715.3	23173	1.0992	1.0999	1.1023	1.2843	1.3046	1.3130				

	LTE BAND 12 Channel bandwidth: 5MHz										
Freq.		99	99% BW (MHz) 26 dB BW (MHz)								
(MHz)	CIT	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM				
701.5	23035	4.5429	4.5215	4.5313	5.0238	5.0392	4.9865				
707.5	23095	4.5291	4.5176	4.5219	5.0088	5.0128	4.9918				
713.5	23155	4.5332	4.5185	4.5132	5.0409	5.0170	5.0577				

	LTE BAND 4 Channel bandwidth: 3MHz											
Freq. (MHz)	СН	99% BW (MHz)			26 dB BW (MHz)							
(MHz)	CIT	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM					
1711.5	19965	2.7112	2.7127	2.7151	3.0342	3.0093	3.0162					
1732.5	20175	2.7097	2.7138	2.7060	3.0234	2.9767	2.9965					
1753.5	20385	2.7151	2.7266	2.7197	3.0281	3.0329	3.0244					

LTE BAND 4 Channel bandwidth: 10MHz										
Freq.	СН	99	9% BW (MI	Hz)	26 dB BW (MHz)					
(MHz)	Сп	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM			
1715.0	20000	8.9976	8.9930	9.0075	9.963	9.920	9.923			
1732.5	20175	9.0143	8.9949	8.9971	9.942	9.963	9.914			
1750.0	20350	8.9911	8.9998	9.0048	10.057	9.904	9.960			

LTE BAND 4 Channel bandwidth: 20MHz										
Freq.	СН	99	9% BW (MI	Hz)	26 dB BW (MHz)					
(MHz)	Сп	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM			
1720.0	20050	17.971	17.946	17.948	19.586	19.534	19.483			
1732.5	20175	17.981	17.971	17.963	19.546	19.468	19.529			
1745.0	20300	17.959	17.951	17.951	19.619	19.615	19.367			

	LTE BAND 5 Channel bandwidth: 3MHz										
Freq.	СН	99	99% BW (MHz)			26 dB BW (MHz)					
(MHz)	CIT	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM				
825.5	20415	2.7194	2.7178	2.7098	3.0052	2.9991	3.0023				
836.5	20525	2.7161	2.7046	2.7249	3.0015	3.0049	3.0158				
847.5	20635	2.7122	2.7314	2.7219	3.0308	3.0037	3.0156				

	LTE BAND 5 Channel bandwidth: 10MHz										
Freq.	СН	99	9% BW (MH	% BW (MHz)		26 dB BW (MHz)					
(MHz)	СП	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM				
829.0	20450	8.9848	8.9887	8.9736	9.956	9.944	9.977				
836.5	20525	9.0144	9.0008	8.9978	9.997	9.952	9.906				
844.0	20600	8.9819	8.9800	8.9745	9.881	9.861	9.902				

	LTE BAND 12 Channel bandwidth: 3MHz											
Freq.	СН	99	9% BW (MHz)		26 dB BW (MHz)							
(MHz)	CIT	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM					
700.5	23025	2.7160	2.7174	2.7126	3.0172	2.9938	2.9794					
707.5	23095	2.7158	2.7093	2.7151	3.0013	3.0143	2.9917					
714.5	23165	2.7063	2.7089	2.7179	2.9917	3.0092	3.0067					

		LTE BAN	D 12 Chan	nel bandwi	dth: 10MF	łz	
Freq.	СН	99% BW (MHz)			26 dB BW (MHz)		
(MHz)	CIT	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
704.0	23060	8.9649	8.9585	8.9481	9.820	9.813	9.816
707.5	23095	8.9706	8.9636	8.9587	9.860	9.801	9.746
711.0	23130	9.0187	9.0352	9.0386	9.937	9.958	9.992

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26 dB BW (MHz)

16QAM

9.875

9.889

9.948

64QAM

9.853

9.909

9.952

QPSK

9.962

9.972

9.955

ĺ	LTE BAND 25 Channel bandwidth: 1.4MHz										
	Freq.	СН	99% BW (MHz)			26 dB BW (MHz)					
	(MHz)	СП	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM			
	1850.7	26047	1.1017	1.1029	1.1053	1.341	1.345	1.305			
	1882.5	26365	1.0987	1.1060	1.1049	1.326	1.332	1.299			
	1914.3	26683	1.0995	1.1057	1.1076	1.308	1.320	1.320			

		LTE BAN	ID 25 Char	nnel bandw	idth: 3MH	Z	
Freq.	СН	99% BW (MHz)			26 dB BW (MHz)		
(MHz)	СП	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1851.5	26055	2.7141	2.7127	2.7200	3.028	3.030	2.999
1882.5	26365	2.7163	2.7150	2.7117	3.050	3.005	3.027
1913.5	26675	2.7041	2.7138	2.7172	3.030	3.025	2.990

LTE BAND 25 Channel bandwidth: 10MHz

64QAM

9.0144

8.9855

9.0099

99% BW (MHz)

16QAM

9.0004

8.9895

9.0124

Freq.

(MHz)

1855.0

1882.5

1910.0

CH

26090

26365

26640

QPSK

9.0100

8.9863

9.0237

	LTE BAND 25 Channel bandwidth: 5MHz											
Freq. CH		99% BW (MHz)			26 dB BW (MHz)							
(MHz)	СП	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM					
1852.5	26065	4.5333	4.5258	4.5248	5.087	5.073	5.029					
1882.5	26365	4.5340	4.5276	4.5241	5.094	5.110	5.038					
1912.5	26665	4.5282	4.5238	4.5241	5.048	4.989	5.024					

	LTE BAND 25 Channel bandwidth: 15MHz											
Freq.	СН	99% BW (MHz)			26 dB BW (MHz)							
(MHz)	СП	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM					
1857.5	26115	13.503	13.538	13.502	14.75	14.88	14.87					
1882.5	26365	13.501	13.496	13.516	14.84	14.82	14.66					
1907.5	26615	13.510	13.526	13.519	14.73	14.72	14.93					

	LTE BAND 26 Channel bandwidth: 1.4MHz											
Freq.	СН	99% BW (MHz)			26 dB BW (MHz)							
(MHz)	СП	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM					
824.7	26797	1.1035	1.0994	1.0973	1.3020	1.2980	1.3100					
836.5	26915	1.1005	1.0959	1.0966	1.2860	1.3040	1.2920					
848.3	27033	1.1032	1.0986	1.0984	1.3090	1.3130	1.3160					

		LTE BAI	ND 26 Cha	nnel bandv	vidth: 5MF	lz	
Freq.	СН	99	9% BW (Mł	Hz)	26	dB BW (M	Hz)
(MHz)	СП	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
826.5	26815	4.5205	4.5063	4.5019	4.9660	4.9800	4.9940
836.5	26915	4.5222	4.5155	4.4967	5.0250	4.9340	4.9740
846.5	27015	4.5279	4.5106	4.5120	5.0000	5.0130	5.0250

	LTE BAND 26 Channel bandwidth: 15MHz									
Freq.	СН	99	99% BW (MHz) 26 dB BW (MH							
(MHz)	СП	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM			
831.5	26865	13.512	13.504	13.513	14.780	14.890	14.790			
836.5	26915	13.462	13.464	13.473	14.750	14.760	14.640			
841.5	26965	13.450	13.437	13.435	14.710	14.830	14.750			

	LTE BAND 25 Channel bandwidth: 20MHz									
Freq		99	9% BW (M⊦	lz)	26	dB BW (M	Hz)			
(MHz	)	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM			
1860.0	26140	17.9520	17.9670	17.9730	19.547	19.459	19.624			
1882.	5 26365	17.9210	17.9340	17.9340	19.460	19.391	19.423			
1905.0	26590	17.9150	17.9250	17.9250	19.514	19.349	19.418			

	LTE BAND 26 Channel bandwidth: 3MHz									
Freq.	СН	99	99% BW (MHz) 26 dB BW (							
(MHz)	СП	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM			
825.5	26455	2.7133	2.7040	2.7061	3.0200	2.9890	2.9830			
836.5	26915	2.7128	2.7021	2.7026	3.0350	2.9820	2.9810			
847.5	27025	2.7173	2.7044	2.7085	3.0550	3.0200	3.0190			

LTE BAND 26 Channel bandwidth: 10MHz									
Freq.	СН	99	99% BW (MHz) 26 dB BW (MHz)						
(MHz)	СП	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM		
829.0	26840	8.9862	9.0172	9.0115	9.966	9.974	9.977		
836.5	26915	8.9588	8.9797	8.9877	9.896	9.837	9.900		
844.0	26990	8.9609	8.9656	8.9553	9.938	9.872	9.923		

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	LTE BAND 26 for part 90S Channel bandwidth: 1.4MHz									
Freq.	СН	99	99% BW (MHz) 26 dB BW (MHz)							
(MHz)	CII	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM			
814.7	26697	1.1006	1.1016	1.1026	1.3170	1.3370	1.3250			
819.0	26740	1.1057	1.1077	1.1070	1.3100	1.3140	1.3220			
823.3	26783	1.1016	1.0992	1.0997	1.3060	1.2770	1.2950			

	LTE BAND 26 for part 90S Channel bandwidth: 3MHz									
Freq. (MHz)	СН	99	9% BW (MI	Hz)	26 dB BW (MHz)					
(MHz)	CIT	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM			
815.5	26705	2.7198	2.7146	2.7161	3.0370	3.0170	3.0290			
819.0	26740	2.7142	2.7231	2.7215	3.0450	3.0230	3.0280			
822.5	26775	2.7113	2.7250	2.7139	3.0090	2.9970	2.9820			

ľ	LTE BAND 26 for part 90S Channel bandwidth: 5MHz									
ſ	Freq.	СН	99	9% BW (Mł	BW (MHz) 26 dB BW (MHz)					
	(MHz)	CIT	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM		
I	816.5	26715	4.5412	4.5224	4.5348	5.0370	5.0450	5.0510		
ſ	819.0	26740	4.5377	4.5385	4.5264	5.0140	5.0230	5.0500		
I	821.5	26765	4.5310	4.5301	4.5171	5.0200	5.0200	5.0380		

LTE BAND 26 for part 90S Channel bandwidth: 10MHz									
Freq.	СН	99	9% BW (Mł	Hz)	26	dB BW (M	Hz)		
(MHz)	Сп	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM		
819.0	26740	9.0135	9.1022	9.0249	9.956	9.970	9.962		

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# Band2\_1\_4MHz\_QPSK\_6\_0\_LowCH18607-1850.7

Avenuet Seat	HIT DOLLARS	r		inter store		ALION MUTCH	Lord an all	PH App 15, 2010	022
	ng 1.850700000	GHz MEGain:Low	Center	Freq: 1,85070	AvgiHal		Radio Str		Frequency
10 dB/div	Ref Offset 13.9 dl Ref 30.00 dBn							-1	
200		juna	~~~~	······	-				Center Free 1 850700000 GH
10.00	manin	1				James -	m		
-30,0									
-60.0						_			
Center 1.8 #Res BW			#V	BW 91 kH	łz			oan 3 MHz ep 3.2 ms	CF Step 300.000 kH
Occup	led Bandwidt	h		Total P	ower	30,	2 dBm		Auto Mar
	1.	1012 MH	IZ						Freq Offse
		-342 1.316 M				99.00 %. 6.00 dB		OH	
60						#7870	е		

#### Band2\_1\_4MHz\_QPSK\_6\_0\_MidCH18900-1880

PL:	NT 20.0, DC			ar 307		ALIGS BUILD		PM Aug 15, 2010	Frequency
Center Fre	eq 1.880000000	MFGain:Low			AvgiHold	60/60	Radio St Radio De	t: None vice: BTS	requency
10 dB/div	Ref Offset 13.9 dB Ref 30.00 dBm							-1	
200		Jonn	- Namer	an salanan					Center Fred 1 88000000 GHa
0.00 -10.0 20.0	amongani	4				1 mars	m.		
48.0								Lu	
60.0									
Center 1.8 #Res BW			#VB	W 91 KH	z			pan 3 MHz ap 3.2 ms	CF Step 300.000 kH
Occup	led Bandwidt	985 MH	1-	Total P	ower	30	.0 dBm		Auto Mar
	it Freq Error Indwidth	-602 1.310 M	Hz	OBW P	ower		9.00 % 5.00 dB		Freq Offset 0 H:
80							05		

#### Band2\_1\_4MHz\_QPSK\_6\_0\_HighCH19193-1909.3

A Supermitisest	telent Analyzer - Occupied BW									24
	eq 1.909300000	GHz MFGain:Low	Center F		AvgiHold	60/60	Radio St	MAng 15, 2018 d: None wice: BTS	Frequency	
10 dB/div	Ref Offset 13.9 dB Ref 30.00 dBm							0		
200		man	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~						Center # 1.909300000	
-10.0	manne	JA .				him	- marine	man		
-30,0 -48,0 -90,0										
Center 1.9			#VI	BW 91 kH	2			pan 3 MHz ep 3.2 ms	CF 1 300.000	step
Occup	led Bandwidt			Total Pa		30.	1 dBm			Mar
	1, lit Freq Error andwidth	987 1.299 M	Hz	OBW Po x dB	ower		9.00 % 5.00 dB		FreqO	7set 0 Hz
Caller						=7×1	e.	-		_

#### Band2\_1\_4MHz\_16QAM\_6\_0\_LowCH18607-1850.7

Asymptotic Space	Ar Sec. Document	BW/		312 111		ALION HUTCH	01140-01	PH App 15, 2010	028
Center Fre	Frequency								
10 dB/div									
200				~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	m				Center Fre 1.850700000 GH
-10.0	man	-				m	manner		
-40 0				-				~ 201	
-60.0 -60.0									
Center 1.8 #Res BW			#	VBW 91 k	łz			pan 3 MHz ep 3.2 ms	CF Ste 300.000 kH
Occup	led Bandwid	ith		Total P	ower	29,2	dBm		Auto Ma
	1	.1066 N	Hz						Freq Offse
Transm	it Freq Error	2.172	kHz	OBW Power		99.00 %			OH
x dB Ba	indwidth	1.338	MHz	x dB		-26.	00 dB		1
wiico i							6		

## Band2\_1\_4MHz\_16QAM\_6\_0\_MidCH18900-1880

Average Cont	tearn Ananyan - Occupied By	N						0.2.00					
	BL BE CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL 2021 Enter Freq 1.880000000 GHZ Bit Control Co												
10 dB/div	Ref Offset 13.9 di Ref 30.00 dBn						- 0						
200 100		Jum	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			-		Center Fred 1.880000000 GH					
-10.0 -20.0	manne	1			Nan								
-46 ú -80 0													
Center 1.8 #Res BW			#VBW 911	(Hz			an 3 MHz p 3.2 ms	CF Step 300.000 kHz					
Occup	ied Bandwidt 1.	h 1028 MH		Power	29,	1 dBm		Auto Mar Freq Offse					
	lit Freq Error Indwidth	-771   1.345 Mi		Power		9.00 % .00 dB		08					
ceite					-7.436	15		-					

#### Band2\_1\_4MHz\_16QAM\_6\_0\_HighCH19193-1909.3

Property and	nert Analyzer - Occupied BW						222
	g 1.909300000	G112	Center Freq: 1,9093000 rig: Free Run Atten: 30 dB	00 GHz AvgiHold >50/50	Radio Std		Frequency
10 dB/div	Ref Offset 13.9 dB Ref 30.00 dBm			201-		- 0	
200		jona	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	m			Center Freq 1 909300000 GHz
10 0 20 0 30 0 0		1		Jos Marco	mm	mm	-
46.0 90.0							1100
Center 1.9 Res BW 3			#VBW 91 kHz			an 3 MHz p 3.2 ms	CF Step 300.000 kHz
Occupi	ed Bandwidt		Total Po	wer 29	.4 dBm		Auto Man
Transm	1, It Freg Error	-1.481 kH		war	99.00 %		Freq Offset
	ndwidth	1.323 MH			5.00 dB		

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### Band2\_1\_4MHz\_64QAM\_6\_0\_LowCH18607-1850.7

Average Spect	Mr Occupied BW			ana an		MIGh MUTCH		PH App 15, 2010		1		
	enter Freg 1.850700000 GHz trig: Fresh X850700000 GHz MFGelin Low #Atten: 30 dB AugiHold >50(50 Radio Device: BTS											
10 dB/div	Ref Offset 13.9 dB Ref 30.00 dBm											
20.0		rummu	- popular		my				Center 1 1 850700000			
0.00 -10.0 -20.0	- man	4				home	-	mann				
-30,0.				-				Contraction of the second s				
-60.0		-		-			-		_			
Center 1.8 #Res BW			#	VBW 91 kH	łz			pan 3 MHz ep 3.2 ms	300	F Step		
Occup	led Bandwidt	h		Total P	ower	29.	1 dBm		Auto	Mar		
	1.1	1017 MI	Ηz						FreqOffse	Offset		
	lit Freq Error Indwidth	1.465 I 1.326 M					99.00 % -26.00 dB			0 Hz		
(celler						=7×10	5			_		

#### Band2\_1\_4MHz\_64QAM\_6\_0\_MidCH18900-1880

Avenue for	there was a constant of the co	W).		anautri	_	ALIG5 aling	Instattante	PH App 15, 2018	
	eq 1.88000000	MFGalmLnw	Center Trig: F	Freq: 1.88000 ree Run : 30 dB	AvgiHal		Radio Sto Radio De	t: None	Frequency
10 dB/div	Ref Offset 13.9 c Ref 30.00 dB							0	
200 100 0.00			Acres	v					Center Fred 1 88000000 GH;
-10.0	-	1				from	munn		
48 0 80 0 60 0									
Center 1.8 #Res BW			#	VBW 91 kH	łz			oan 3 MHz ep 3.2 ms	CF Step 300.000 kH
Occup	led Bandwid	<sup>th</sup> 1104 M	Hz	Total P	ower	29.	0 dBm		Auto Mar Freq Offse
	hit Freq Error andwidth		6 Hz	OBW P x dB	ower		9.00 % .00 dB		OH
CHIN						=7×11	e		

### Band2\_1\_4MHz\_64QAM\_6\_0\_HighCH19193-1909.3

Averaget Space	An Occupied BW	· · ·				ALION-AUTO							
	BL Error Freg 1.909300000 GHz BritishLaw Attach 2001 Center Freg 1.909300000 GHz BritishLaw Attach 2001 Attach 2001 Center Freg 1.90930000 GHz BritishLaw Attach 2001 Attach 2001 Center Freg 1.90930000 GHz BritishLaw Attach 2001 Center Freg 1.90000 GHz BritishLaw Attach 2001 Center Freg 1.900000 GHz BritishLaw Attach 2001 Center Freg 1.9000												
10 dB/div	Ref Offset 13.9 dB dB/div Ref 30.00 dBm												
10.0			han	havin man	my		-		Center Freq 1 909300000 GHz				
0.00 -10.0 20.0	man	1				mar							
30.0 ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	- during the			-				min					
sh () 60.0													
enter 1.9 Res BW			#1	VBW 91 kH	z			pan 3 MHz ep 3.2 ms	CF Step 300.000 kH				
Occup	led Bandwidth	096 M	Hz	Total P	ower	29.	4 dBm		Auto Mar				
	it Freq Error Indwidth	-898 1.310 I	Hz OBW Power				9.00 % .00 dB		Freq Offset 0 Hz				
10						#FR10	5						

#### Band2\_3MHz\_QPSK\_15\_0\_LowCH18615-1851.5

Center Fre	Frequency											
10 dB/div	Ref Offset 13.9 dB 0 dB/div Ref 30.00 dBm 											
20.0 10.0		mon	marchan		~		Center Free 1.851500000 GH					
9.00 -10.0	mond			1	-	-						
-20.0												
-80.0												
Center 1.8 #Res BW			VBW 180 kHz			an 6 MHz 1.533 ms	CF Step					
Occup	led Bandwidt		Total Power	30.	3 dBm		Auto Mar					
		7173 MHz		1.0	1.5		Freq Offset					
	lit Freq Error Indwidth	2.187 kHz 3.016 MHz	OBW Power x dB		9.00 % .00 dB							
eiro i					15	-						

## Band2\_3MHz\_QPSK\_15\_0\_MidCH18900-1880

A Supermitting	HI SO G DC	1.				abarra bata	a last shirts a	MAGE 18 TOUR	02.00			
	PLC arr to compare the second of the second											
10 dB/div	Ref Offset 13.9 di Ref 30.00 dBm											
200		man				7			Center Freq 1 880000000 GHz			
-10.0	amount		-			1	man					
-30,0 -48.0 -80.0												
-60.0 Center 1.8								an 6 MHz	CF Step			
#Res BW	62 kHz		#VI	BW 180 k	Hz		Sweep	1.533 ms	600.000 kHz			
Occup	led Bandwidt 2.	h 7161 MH	łz	Total P	ower	30	0.3 dBm		Freq Offset			
	it Freq Error Indwidth	274 3.052 M				99.00 % 6.00 dB		0 Hz				
ANNO						100	105					

#### Band2\_3MHz\_QPSK\_15\_0\_HighCH19185-1908.5

Center Fre	iq 1.908500		Hz FGelmLow	Center	Freq: 1,908500 see Run 30 dB		50/50	Radio Sto		Frequency	
10 dB/div	Ref Offset 13 Ref 30.00										
200 100		1	man	norio		manna	2			Center Fred 1 908500000 GH	
10.0		1				-	h				
30,0. 48.0 90.0											
co.g	09 GHz					_		St	an 6 MHz		
Res BW				#1	BW 180 k	Hz			1.533 ms	000.000 Krs	
Occup	led Bandw	ldth			Total Power			6 dBm		Auto Mar	
		2.70	069 MH	lz						Freq Offse	
	it Freq Erro ndwidth	r	3.177 k 3.008 M		OBW Pe	ower		9.00 % .00 dB		0 8	
								_			

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## Band2\_3MHz\_16QAM\_15\_0\_LowCH18615-1851.5

	HANNYAR - Occupied BY	Υ							
	1.851500000	MEGalniLow	Trig: I	Freq: 1.8515 Free Run :: 30 dB	AvgiHold	1: 60/60	Radio Str	vice: BTS	Frequency
10 dB/div	Ref Offset 13.9 d Ref 30.00 dBn								
200		mon		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	main	~		1	Center Fro
9.00		4				A			1001000000
200 00000000	manual		-			1		Anna	
-30,0.									
-60.0									
Center 1.852 #Res BW 62		1.1	#	VBW 1801	KHZ			oan 6 MHz 1.533 ms	CF Ste 600.000 kl
Occupie	d Bandwidt	h		Total P	ower	29	9.4 dBm		Auto M
	2.	7123 M	Hz						Freq Offs
Transmit	Freq Error	2.102	kHz	OBW P	ower	1.11	99.00 %		01
x dB Band	dwidth	3.011	MHz	x dB		-2	6.00 dB		
NERO						100	que		

#### Band2\_3MHz\_16QAM\_15\_0\_MidCH18900-1880

A Supermit Space	Ar Dep C	Name BW	-				ALISSAUT						
	BL Br (2000 COC GHZ) Brt Grint Freq 1,8800 COC GHZ Brt Grint Law Brt Grint Law												
10 dB/div	Ref Offset 13.9 dB 0 dB/div Ref 30.00 dBm												
20.0		/	man	potrone.	minin	minimi	-			Center Freq 1.88000000 GHz			
-10.0	-	1					6	man	an work				
-30.0 -46.0 -80.0													
-60.0 Center 1.8									an 6 MHz	CF Step			
#Res BW	62 kHz led Band	width		#	VBW 180 Fotal P		29	Sweep	1.533 ms	600.000 kHz Auto Mar			
occup	led balle		225 M	Hz						Freq Offse			
	Transmit Freq Error 2.751 x dB Bandwidth 3.014							99.00 % 5.00 dB		0 Hz			
MIRO								02					

### Band2\_3MHz\_16QAM\_15\_0\_HighCH19185-1908.5

PL I		DC 1	. T	1 2192-201		ALLON BUT		HAng 15, 2018	Frequency			
Center Fre	enter Freq 1.908500000 GHz Center Freq 1.90850000 GHz Radio Std: None affGainLow AvgHridd: 50/50 Radio Device: BTS Atten: 30 dB Atten: 30 dB Atten											
10 dB/div												
20.0		7	m	wanna	min	-	-		Center Fred 1 908500000 GHz			
0.00 10.0		1		-								
30.0 40.0		~					-	no-were				
90 0		_		_			-					
enter 1.9 Res BW				#VBW 1	80 kHz			an 6 MHz 1.533 ms	CF Step			
Occup	led Bandw		153 MHz		al Power	29	.5 dBm		Auto Mar			
	it Freq Erro Indwidth		6.117 kH 3.006 MH	KHZ OBW Power			99.00 % 6.00 dB		Freq Offse 0 H			
						-						

#### Band2\_3MHz\_64QAM\_15\_0\_LowCH18615-1851.5

PL         PL<												equency
10 dB/div												
20.0			1	unin		m	monto	1				Center Fred 1500000 GH
0.00 -10.0 -20.0		nt						1	mma	We chourse		
-30.0. -46 D -46 D								-	-			
-60.0												
Center 1.852 #Res BW 62		-			#VE	SW 180 H	Hz			an 6 MHz 1.533 ms		CF Step 600.000 kHz
Occupie	d Band	width	1			Total P	ower	25	.4 dBm		Auto	Man
	2.7192 MHz											Freq Offset
Transmit		or		2.903 k	Hz	OBW Power		99.00 %				0 Hz
x dB Ban	dwidth			2.996 M	IHz	x dB		-2	6.00 dB		1	
								-				

#### Band2\_3MHz\_64QAM\_15\_0\_MidCH18900-1880

	Tageget sectore reason - Occased BW PL en [seignor: 1] - Sectore III - Automatical - Automatical (2015)18 PH Aug 15, 2018										
	Inter Freq 1.880000000 GHz         Center Freq 1.88000000 GHz         Radio Std: None           Trig Freq 1.88000000 GHz         Radio Std: None           Mation: 30 dB         Radio Device: BTS           Ref Offset 13.9 dB         Ref 0.00 dBm										
10 dB/div											
200		min	i-inin	man	mm	1			Center Freq 1.88000000 GHz		
0.00 -10.0 -20.0 من 20.0	man					100		veronen			
-30.0. -48.0 -80.0											
Center 1.8	8 GHz			BW 180 P				an 6 MHz 1.533 ms	CF Step		
	led Bandwidt			Total P		29	4 dBm	1.000 ms	600.000 kHz Auto Mar		
	2.1 It Freq Error ndwidth	2.811 k 2.998 M	Hz	OBW P x dB	ower		9.00 % 5.00 dB		Freq Offset 0 Hz		
ceix						1001	05				

#### Band2\_3MHz\_64QAM\_15\_0\_HighCH19185-1908.5

	sent Analyzer - Occupied 874	10					
Center Free	g 1.908500000	Siriz Trig	ter Freq 1,908500000 GHI Free Run AvgHo en: 30 dB	ald: 60/60	Radio Sto		Frequency
10 dB/div	Ref Offset 13.9 dl Ref 30.00 dBm					0	
20.0		pour	manning	-			Center Free 1.908500000 GH
9.00 10.0 20.0	mont	1		1		min	
30,0 40 D						and he was	
60.0 							
Center 1.90 Res BW 6			#VBW 180 kHz			an 6 MHz 1.533 ms	000.000 Krs
Occupi	ed Bandwidt		Total Power	29.	6 dBm		Auto Mar
	2.	7144 MHz					Freq Offset
	t Freq Error	-281 Hz	OBW Power		9.00 %		0 H
x dB Bar	ndwidth	3.013 MHz	x dB	-26	.00 dB		1

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### Band2\_5MHz\_QPSK\_25\_0\_LowCH18625-1852.5

Avenuet Seat	AT 20-0 D			202 101	ALTON- 80	Internet	MARS 15, 2010	Frequency				
	enter Freg 1.852500000 GHz Trig: Free Na AvgiHold: 60/80 #FGalind.rw Atten: 30 dB Radio 2v/ce BTS											
10 dB/div												
20.0 10.0	0											
-10.0	minum	A			1	moni						
-30.0			-									
-60 0			-			-						
Center 1.8 #Res BW				VBW 300 kH			n 10 MHz eep 1 ms	CF Ste 1.000000 MH				
Occup	led Bandwi	dth 4.5316	MHz	Total Pov	ver 3	0.4 dBm		Auto Ma				
	it Freq Error Indwidth	5.58	87 kHz 7 MHz	z OBW Power 9				OH				
60						#105						

#### Band2\_5MHz\_QPSK\_25\_0\_MidCH18900-1880

	Nyvegnt Spectreen weeyze - Occupied BW PL Rr Str. G. CC - Stream Million - All Children - All Ch										
	enter Freg 1.880000000 GHz Center Freg 1.880000000 UHt Radio Stel: None mFGelnLmw SAtten: 30 dB AvgiHelc>80/50 Radio Device: BTS										
10 dB/div	Ref Offset 13.9 c Ref 30.00 dBi						_	()			
200 100		man	13m	warning	m	X			Center Fred 1 880000000 GH;		
-10.0		P <sup>*</sup>				1			-		
-30.0. -46.0 -50.0			-								
Genter 1.8	28 GH2						Sna	n 10 MHz			
#Res BW			#VBV	/ 300 kH	z			ep 1 ms	CF Step 1.000000 MH		
Occup	ied Bandwid 4	th 5175 MH		otal Po	wer	30.	5 dBm		Auto Man Freq Offset		
	hit Freq Error andwidth	5.043 k 5.032 M		dB Pov	wer		9.00 % .00 dB		OH		
WIRD						=7810					

### Band2\_5MHz\_QPSK\_25\_0\_HighCH19175-1907.5

RL I	PL #r 380.00 Std: 2002011 #2016-0010 (21-06-50 PH Aug 15, 2016 enter Freq 1.907500000 GHz Radio Std: None											
Center Fre	ng 1.90750000	MFGalmLov	Trig I					t: None vice: BTS	Frequency			
10 dB/div												
20.0		m		mon		2		-	Center Freq 1 907500000 GHz			
0.00 10.0 20.0		4	-		-	X						
30.0.												
80.0			-				-		_			
Center 1.9 Res BW			#	VBW 300 kH	łz			eep 1 ms	CF Step			
Occup	ied Bandwid	dth 1.5258	MHz	Total Po	wer	30.	8 dBm		Auto Man Freq Offset			
	it Freq Error Indwidth	05 kHz 5 MHz	Hz OBW Power			9.00 % 5.00 dB		0 Hz				
000						= 7 8 7	14					

#### Band2\_5MHz\_16QAM\_25\_0\_LowCH18625-1852.5

Kayagett Spectropy Aug	022								
Center Freq 1.8	Frequency								
10 dB/div Ref									
200 100		,	- Mayor Mayor Mayor Mayor Mayor Mayor Mayor Mayor Mayor Mayor Mayor Mayor Mayor Mayor Mayor Mayor Mayor Magain Mag			~			Center Fred 1.852500000 GH
10.0 21.0	m					Z			
30.0 40 D 80 D									
-60.0 Center 1.853 GH								an 10 MHz	CF Step
#Res BW 100 kH	IZ		#VE	SW 3001	Hz		SW	eep 1 ms	1.000000 MH
Occupied B	andwidth			Total P	ower	29	.6 dBm		Auto Man
	Freq Offset								
Transmit Free	q Error	-540	Hz OBW Power			99.00 %			0 Ha
x dB Bandwid	dth	5.002 M	Hz	x dB		-20	5.00 dB		
NRC 1							10.0%		

## Band2\_5MHz\_16QAM\_25\_0\_MidCH18900-1880

	Any-get System Awayae - Occupied BW     PL AT 29 G DC									
	enter Freg 1.880000000 GHz Center Freg 1.88000000 GHz Radio Std: None Trig: Freg 1.00 dB August 1.00 Radio Solito Radio Device: BTS									
10 dB/div	Ref Offset 13.9 Ref 30.00 di		0							
200 100 0.00		James -		monton	-	1			Center Freq 1.880000000 GHz	
-30,0E-	and the second			-				manimu		
-40 0 -50 0 -60 0										
Center 1.8 #Res BW		-		VBW 300	kHz			eep 1 ms	CF Step	
Occup	led Bandwi	dth 4.5126 M	1Hz	Total P	ower	29	.6 dBm		Auto Mar	
	lit Freq Error Indwidth		7 kHz	OBW P x dB	ower		99.00 % 6.00 dB		0 Hz	
CHIN				-		100	105		-	

### Band2\_5MHz\_16QAM\_25\_0\_HighCH19175-1907.5

	mi-Hawayaw - Occupied 5%					
	1.907500000	Striz Trig	er Freq: 1,907500000 GHz Free Run AvgiHali m: 30 dB	d>50/50	Radio Std: None Radio Device: BTS	Frequency.
10 dB/div	Ref Offset 13.9 dl Ref 30.00 dBm			2.		
.og 20.0 10.0		Jour marine		ming		Center Free 1 907500000 GH
0.00 10.0 20.0	mont			1		-
30.0. 48 D						
sn n 60.0						
Center 1.90 #Res BW 10			#VBW 300 kHz		Span 10 Mi Sweep 1 n	1.000000 MHz
Occupie	d Bandwidt		Total Power	29.	9 dBm	Auto Man
		5156 MHz				Freq Offset
Transmit x dB Ban	Freq Error dwidth	3.067 kHz 5.041 MHz	OBW Power x dB		9.00 % .00 dB	0.62
				-		

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#### Band2\_5MHz\_64QAM\_25\_0\_LowCH18625-1852.5

Kyneget Spectreen Analyzer - Occupied BW     PL er [seign_cht] eLigh-eLing [c2:do:+1.PH Aug 15, 2016										Frequency
Center Fre	enter Freg 1.852500000 GHz Center Freg 1.85250000 GHz Radio Stot: None BitGaint_two BAtten: 30 ofB Radio Device: DTS Ref Offset 13.9 dB Ref 3.0.00 dBm									
10 dB/div										
2000 10.0 0.00 -10.0 -20.0 -20.0 -20.0 -40.0 -40.0	www.and									Center Freq 1 852500000 GHz
-60.0 Center 1.8 #Res BW				#V	BW 300 H	Hz			an 10 MHz eep 1 ms	CF Step 1.000000 MHz
Occupied Bandwidth 4.5251 M				z	Total Power		29	.6 dBm		Auto Man Freq Offset
	Transmit Freq Error 1.452 k x dB Bandwidth 5.080 M							99.00 % 6.00 dB		0 Hz
CHINA					-	_	in	105		

#### Band2\_5MHz\_64QAM\_25\_0\_MidCH18900-1880

	Nyvogni Spistover Analyze - Occusion BW/         Spistover Analyze - Occusion BW/           PL         AT         SD G. DC         Spistover Analyze - Occusion BW/										
	enter Freq 1.880000000 GHz Center Freq 1.880000000 GHz Radio Ster. None mFGalet.nw Staten: 30 dB Radio Device: BTS										
10 dB/div											
200 100 0.00		/	man	nime		2			Center Fred 1 88000000 GH		
-10.0 -20.0 -30.0	www.auro					1	mont	many			
40 D -90 Q											
Center 1.8 #Res BW			#	VBW 3001	KHZ			an 10 MHz eep 1 ms	CF Step 1.000000 MH		
Occup	led Bandwi	dth 1.5269	MHz	Total P	ower	29.	5 dBm		Auto Mar		
	hit Freq Error andwidth	5 MHz	Hz OBW Power 9			9.00 % 5.00 dB		0 Ha			
(celle							05				

### Band2\_5MHz\_64QAM\_25\_0\_HighCH19175-1907.5

Center Fre	1.9075000		łz	Center	Freq: 1,90750		ALTON BUTC	Radio St	td: None	Frequency
			Gaintinw	Trig: Fr #Atten:		AvgiHold	60/60	Radio D	evice: BTS	
10 dB/div	Ref Offset 13 Ref 30.00 c		_						- 0	
20.0		~	man	Anna	norman	minin	~			Center Freq
0.00		A								
10	min	al l		_	-		1	mon	min	
a n	-	-			-					
so.a		-								_
enter 1.9 Res BW				#V	BW 300 k	Hz			an 10 MHz veep 1 ms	CF Step
Occup	led Bandw	idth			Total P	ower	29	.8 dBm		Auto Mar
		4.51	60 MH	z						Freq Offset
	it Freq Error	-2.625 k	kHz OBW Power			99.00 %		0 Ha		
x dB Ba	indwidth		5.008 M	Hz	x dB		-26	5.00 dB		
00							1000	105		

## Band2\_10MHz\_QPSK\_50\_0\_LowCH18650-1855

Averaget Space	Ar Sec. Document	ØV/	ana wi		10% AUTO		MAag 15, 2018	020
Center Fre	Frequency							
10 dB/div	0							
200 100		minimum	~~~~	manufa				Center Free 1 855000000 GH
-10.0	-	A	_		1			
30.0			_			Then		1.1
-40 0 -90 0						-		
Center 1.8 #Res BW 2			#VBW 620	kHz	1		n 20 MHz eep 1 ms	CF Step
Occupi	led Bandwid	ith	Total I	Total Power 3				Auto Mar
	8	.9899 MH	z					Freq Offse
Transmit Freq Error 8.00		8.007 kH	kHz OBW Power			.00 %		OH
x dB Ba	ndwidth	9.959 MH	z x dB		-26.	00 dB		
wiic)					= FRIDE	_	-	

#### Band2\_10MHz\_QPSK\_50\_0\_MidCH18900-1880

Supermitique	Ar Sector Decision		3192.00	_	A104-4010		HAan 15, 2010	
Center Fre	Frequency							
10 dB/div								
200 100		Jannamon		handressare	m			Center Freq 1.88000000 GHz
-10 D	www.				K	more		
-30.0 -46.0 -90.0								
-60.0 Center 1,8	R GHZ		_			Sna	n 20 MHz	
#Res BW			#VBW 620	) kHz			eep 1 ms	CF Step 2.000000 MHz
Occup	led Bandwidth			Power	30	3 dBm		Auto Man
Transmit Freq Error 7.461		9990 MH: 7.461 kH 9.987 MH	Hz OBW Power		99.00 % -26.00 dB			Freq Offset 0 Hz
(cite)						112		

#### Band2\_10MHz\_QPSK\_50\_0\_HighCH19150-1905

	niert-Aner/aer - Occilated	stw.						
Center Fre	ig 1.90500000	MFGalmLn	Trig:	Free Run n: 30 dB	00 GHz AvgiHold: 50/50	Radio Std	C CETTE	Frequency
10 dB/div								
200		mone	and a strategies	1	manan	-		Center Fred 1 905000000 GHz
0.00		A	-		1	-		
	mana	1			<u> </u>		money	
-50.0			-			-		
Center 1.9 #Res BW 2		_		VBW 620 KH	z		n 20 MHz eep 1 ms	CF Step 2.000000 MHz
Occup	ied Bandwid	ith		Total Po	wer 23	.7 dBm		Auto Man
	8	.9836	MHz					Freq Offset
Transm	it Freq Error	3.1	38 kHz	OBW Po	wer 1	99.00 %		0 Hz
x dB Ba	ndwidth	9.97	8 MHz	x dB	-2	6.00 dB		1
URINO 1						105	-	

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## Band2\_10MHz\_16QAM\_50\_0\_LowCH18650-1855

Avguight Spant	Ar 20 G 00	n	2122.201	ALIGN AUTO	02 50 22 PH Aug 15 7	
	eq 1.855000000	Trip	ter Freq: 1.855000000 GHz Free Run AvgiHol en: 30 dB	d: 50/50	Radio Std: None Radio Device: BTS	Frequency
10 dB/div						
200 100		Jummerur		~		Center Free 1 855000000 GH
0.00 -10.0		1				-
20.0 -30.0	when a warment				- durch marcon	P16
80 0 60 0						-
Center 1.8 #Res BW			#VBW 620 kHz		Span 20 Mi Sweep 1 n	
Occup	led Bandwidt	h	Total Power	30.0	dBm	Auto Mar
	9.	0131 MHz				Freq Offse
		15.937 kHz 9.974 MHz	OBW Power x dB	99. -26.0	00% 0dB	0 8
eic)				=F#102		

#### Band2\_10MHz\_16QAM\_50\_0\_MidCH18900-1880

A Supermitting	Herri Haunyam - Occulption	e ØW		1000		una auno		PH Ang 15, 2010	028
Center Fre	Frequency								
Ref Offset 13.9 dB 10 dB/div Ref 30.00 dBm									
20.0 10.0		framer		service	umhearta aite	7			Center Fred 1 88000000 GH
-10.0						X	Minner		
-30.0. -46.0 -50.0									
-60.0 Center 1.8	8 GHz						Spi	an 20 MHz	
#Res BW		_	#V	BW 620 P	KHZ			eep 1 ms	CF Step 2.000000 MH
Occup	led Bandwi	dth 9.0060	MHz	Total P	ower	29	.4 dBm		Auto Man Freq Offset
	Transmit Freq Error 11.46 x dB Bandwidth 9.997		i6 kHz 7 MHz			99.00 % -26.00 dB			0 Hz
(initial initial initi							05		

### Band2\_10MHz\_16QAM\_50\_0\_HighCH19150-1905

RL	10 , 100 10	in I will	anaratir	ALLON BUILD		PH Aug 15, 2018	Frequency
Center Fre	rq 1.905000000	Trig	er Freq: 1.905000000 GHz Free Run AvgiHol m: 30 dB	ld: 50/50	Radio Std: None Radio Device: BTS		riequency
10 dB/div							
20.0		a charter Blackerstown	and an an an and a state of the		-		Center Freq 1 90500000 GHz
-10.0	1			1			
20.0	1			1			
40.0	- And and a state of the state					marris	
-60.0					-	-	
Center 1.9 #Res BW			VBW 620 kHz			eep 1 ms	CF Step
Occup	led Bandwidth	ř.	Total Power	22.	8 dBm	-	Auto Man
	8.9	812 MHz					Freq Offset
	it Freq Error	-2.658 kHz	OBW Power		9.00 %		0 Hz
x dB Ba	ndwidth	9.794 MHz	x dB	-26	.00 dB		1
NIK3					e		

### Band2\_10MHz\_64QAM\_50\_0\_LowCH18650-1855

PL I	a et 19	DC 1			2010/2011/07	in the second	ALCS ALTO		PM Aug 15, 2018	Frequency
Center Freq 1.855000000 GHz Center Freq 1.85500000 GHz Radio Std: None Trig: Free Run AvgiHold: 50/60 Radio Device: BTS									Frequency	
Ref Offset 13.9 dB 10 dB/div Ref 30.00 dBm									0	
20.0	00			-			-	-		Center Free 1.855000000 GH
9.00 -10.0 -20.0		1	-		-	-	1	-		
30.0	- Andrewski - A Andrewski - Andrewski - Andr							idhense in pu	- marine	
-60.0		_	-	-	-			-	-	
Center 1.8 #Res BW 2				#	VBW 6201	kHz		Sp Sv	an 20 MHz Jeep 1 ms	CF Step 2.000000 MH
Occupi	ed Bandy	vidth	0.5		Total P	ower	29	.4 dBm		Auto Mar
		9.0	106 N	IHz						Freq Offse
Transmit Freq Error 5.198		kHz	Hz OBW Power		1	99.00 %		OH		
x dB Ba	ndwidth		9.948	MHz	x dB		-2	6.00 dB		
enc)							-	10.00		

## Band2\_10MHz\_64QAM\_50\_0\_MidCH18900-1880

Averaget. Space	AT 20 G DC		1 212 111	_	una vou	Incl. B.B. 413 B	M Aug 15, 2018	222
Center Fre	Frequency							
10 dB/div	= 0							
20.0			~~~~		-	-		Center Fred 1 88000000 GH
0.00 -10.0	1				1			
-20 0 -30 0 -40 0	monort				free	mount	man	
-80 0								
Center 1.8 #Res BW			#VBW 620	kHz			n 20 MHz ep 1 ms	CF Step 2.000000 MH
Occup	led Bandwidth	943 MH	Total I	Power	21.0	5 dBm		Auto Mar
	it Freq Error	89 H	z OBW	Power		9.00 %		Freq Offsel 0 Hz
x dB Ba	ndwidth	9.966 MH	łz x dB		-26.	00 dB		1
NERO I					=1810		-	

### Band2\_10MHz\_64QAM\_50\_0\_HighCH19150-1905

	ent Aner/an - Occased 8W						
Center Free	g 1.905000000	Griz.	nter Freq. 1,905000000 d g: Free Run Avg tten: 30 dB	Radio Std		Frequency	
10 dB/div	Ref Offset 13.9 dB Ref 30.00 dBm			2.45		-1	
20.0 10.0		minnorm	manna				Center Fred 1 905000000 GH;
0.00 -10.0 20.0	a province of			1		man	
30.0. 40.0 80.0							
-60.0 Center 1.90					Pna	n 20 MHz	1
#Res BW 2			#VBW 620 kHz		SW	eep 1 ms	2.000000 mm
Occupi	ed Bandwidt		Total Power	29.	6 dBm		Auto Man
	8.9	9721 MHz					Freq Offset
Transmi	t Freq Error	1.677 kHz	OBW Power	9	9.00 %		0 Hz
x dB Bar	ndwidth	9.775 MHz	x dB	-26	6.00 dB		1
1							

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# Band2\_15MHz\_QPSK\_75\_0\_LowCH18675-1857.5

Avenuet Seat	Hr Decker				- a mar . 101		4105 auro	1075-41111	PM App 15, 2010	
Center Freq 1,857500000 GHz Center Freq 187500000 GHE Radio Std: None MFCalmLow RAtian: 30 dB Radio Device: BTS 10 dB/div Ref 30.00 dBm Loal									Frequency	
20.0	0.0				an and	an means	-			Center Fred 1 857500000 GHz
0.00 -10.0	-	1			-		1	-		
-30,0	and the second second second	-		-			~			100
-40 D	-	-	-		-			-		
Genter 1.8									an 30 MHz	CF Step
#Res BW	led Bandw	idth	_	#VBW 910 kHz Total Power			30	2 dBm	eep 1 ms	3.000000 MHz Auto Man
6.00		13.5	08 MI	Ηz						Freq Offset
		-955 14.80 N			99.00 % -26.00 dB			0 Hz		
cain							1003	05		

#### Band2\_15MHz\_QPSK\_75\_0\_MidCH18900-1880

Averagent Spect	Ar Story Cocupaed By	W)							328
Center Freq 1,880000000 GHz Center Freq 1,80000000 GHz Radio Softon Cortemportant 17, Trig Free Run AvgiHold 50/80 Radio Softon Rome								None	Frequency
10 dB/div	Ref Offiset 13.9 dB 10 dB/div Ref 30.00 dBm								
20.0		hanne	بأرافية جودتت		nture		-		Center Freq 1 88000000 GHz
-10 0		/				1	man		
-30.0. -40.0 -80.0							-		
-60.0 Center 1.8	8 GH2		-				Sna	n 30 MHz	-
#Res BW			#V	BW 9101	Hz			eep 1 ms	CF Step 3.000000 MHz Auto Man
Occup	led Bandwidt	th 3.522 MH	17	Total P	ower	30	0.3 dBm		
	Transmit Freq Error 24.865 x dB Bandwidth 14.78		KHz OBW Power		99.00 % -26.00 dB			Freq Offset 0 Hz	
wite						100	que:	-	

#### Band2\_15MHz\_QPSK\_75\_0\_HighCH19125-1902.5

Average Space	HIT STORE DC	W).	anautri		ALIGN BURG		PH App 15, 2010	32.00
Center Fre	Frequency							
10 dB/div								
200		paramenter		man	-			Center Fred 1 902500000 GH
-10 0	manna		_	_	1	-	and any ing	
46.0				_				
Center 1.9 #Res BW			#VBW 91	) kHz			an 30 MHz /eep 1 ms	CF Step 3.000000 MH
Occup	led Bandwidt	th 3.494 MH		Power	28.	8 dBm		Auto Mar Freq Offse
Transmit Freq Error -2.16 x dB Bandwidth 14.72			kHz OBW Power		99.00 %. -26.00 dB			0 Hi
eo)						e	-	

#### Band2\_15MHz\_16QAM\_75\_0\_LowCH18675-1857.5

Augustit Space	Herri-Analyzan - Occala			1.2	197-197		A104 aUM	02-44-58	PH App 15, 2010	
Center Fre	g 1.857500	000 GH	iz Galistaw	Center F	eq: 1.85750			Radio St		Frequency
10 dB/div	Ref Offset 13 Ref 30.00									
200		r	يند در معرب م	urmationsh			-			Center Freq 1.857500000 GHz
10.0	and an and a second						6	man	- marine	
30.0 40.0		-		-				-		
-60.0										
Center 1.8 #Res BW 3		-		#VE	SW 910 P	Hz	-		an 30 MHz Jeep 1 ms	CF Step 3.000000 MH
Occupi	led Bandw				Total P	ower	29	.6 dBm		Auto Mar
		13.4	97 M	Hz						Freq Offse
	it Freq Erro	r -	18.320	kHz	OBW P	ower	5	99.00 %		0 Hz
x dB Ba	ndwidth		14.84 M	MHz	x dB		-20	5.00 dB		
680							100	105		

## Band2\_15MHz\_16QAM\_75\_0\_MidCH18900-1880

Avenue for	HI SHOT P	11		3193.311		#105-MUTO	Local address of the	PH Ang 15, 2010	02.0
	eq 1.88000000	MFGainLow	Center Trig: F	Freq 1,88000 ree Run : 30 dB	0000 GHz AvgiHold		Radio St		Frequency
10 dB/div	Ref Offset 13.9 d Ref 30.00 dBr					2		0	CF Step 3.0000000 MH
200		-	-	welly som	-				
0.00 -10.0 -20.0		A 📃		-		1		1	
-30.0	- Alder Stronger and						and hore gar	minun	
-80.0			-	-			-	-	
Center 1.8 #Res BW			#	VBW 910 H	Hz			an 30 MHz leep 1 ms	S 3.000000 Mi Auto Ma
Occup	led Bandwidt	th 3.471 Mi	4.7	Total P	ower	29.	0 dBm		
	hit Freq Error	15.305 14.60 M	kHz	OBW P	ower		9.00 %		Center Free 188000000 GH 188000000 GH CF Ster Max Freq Offse
CHER							15.		

#### Band2\_15MHz\_16QAM\_75\_0\_HighCH19125-1902.5

	runyan - Occupied BW						
Center Freq 1	.902500000 0	-	Senter Freq: 1,9025 Frig: Free Run Atten: 30 dB		/50 Radio	Std: None Device: BTS	Frequency
10 dB/div R	tef Offset 13.9 dB tef 30.00 dBm			20			Center Frequency
20.0		and the second second		-	1		
0.00 10.0 20.0 70,0 70,0	innered				Incom	man	
30.0 46.0							
60.0 Center 1,903 (	0.112					Span 30 MHz	
Res BW 300			#VBW 910	kHz		Sweep 1 ms	3.000000 MHz
Occupied	Bandwidth		Total I	Power	29.5 dBn	1	Auto Man
		455 MH	2				
Transmit F		6.822 kH		Power	99.00 %		0 Hz
x dB Bandy	width	14.78 MH	z xdB		-26.00 dE	3	
00					a Datus		

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### Band2\_15MHz\_64QAM\_75\_0\_LowCH18675-1857.5

W).	comerce alter	diami- alizes	Instateuties	HAR IN THE	
Trig	Free Run AvgiHale		Radio Std	None	Center Free 1.85750000 GH
mundishdamm		ony			
A		A			
		Marth.	Mitor sugar	meren	100
					Center Fre 1 857500000 GH 3.000000 MH Auto Ma Freq Offse
			Spa	n 30 MHz	07.04
1	VBW 910 kHz				Center Fre 1 857500000 GH 3.000000 MH Auto Ma Freq Offse
	Total Power	29.4 dBm			Auto Man
	A state and a	6.02	1.5		Center Fre 185/50000 0H 185/50000 0H CP Ste Auto Preq Offse Preq Offse
9.064 kHz 14.71 MHz	OBW Power x dB		99.00 % -26.00 dB		CF Sto 3.00000 MH <u>Auto</u> Ma Freq Offse
			_		
	DGHZ Centre REGainstow B DGHZ Centre PART P	O GHZ     O	Center Freq 1350000 OH2 HEGAINSW H	0 GHZ         Center Freq 13550000 0100         Reado 56           0 GHZ         Center Freq 13550000 0100         Reado 56           0 GHZ         Trip Free Run         Avgittale 5660         Radio 50           0 GHZ         Trip Free Run         Avgittale 5660         Radio 50           0 GHZ         Trip Free Run         Avgittale 5660         Radio 50           0 GHZ         Trip Free Run         Avgittale 5660         Radio 50           0 GHZ         Trip Free Run         Avgittale 5660         Radio 50           0 GHZ         Trip Free Run         Avgittale 5660         Radio 50           0 GHZ         Trip Free Run         Avgittale 5660         Radio 50           0 GHZ         Trip Free Run         Avgittale 5660         Radio 50           0 GHZ         Trip Free Run         Avgittale 5660         Radio 50           0 GHZ         Trip Free Run         Avgittale 5660         Radio 50           0 GHZ         Trip Free Run         Trip Free Run         Spectra           0 GHZ         Spectra         Spectra         Spectra           0 GHZ         Trip Free Run         Trip Free Run         Spectra           0 GHZ         Trip Free Run         Spectra         Spectra	DHZ Center Freq 12800000 GHz Radio Serie Kone Radio Davise BTS Robert Market Serie Kone Radio Davise BTS Radio Ra

#### Band2\_15MHz\_64QAM\_75\_0\_MidCH18900-1880

Averaget Space	Ar Stor Dock							PH Ang 15, 2010	020
	ng 1.8800000	00 GHz	Center Trig F	Freq. 1.88000 ree Run : 30 dB	AvgiHald	60/60	Radio St		Frequency
10 dB/div	Ref Offset 13.5 Ref 30.00 di							0	Center Free 1 80000000 CH 3 0000000 CH 3 00000 MH Mar Free Offse
20.0 10.0		pressional		www.www	-	~			
0.00 -10.0 -20.0	-					hun	minum	mulanter	
-30,0 -48,0 -50,0				-			-		
-60.0 Center 1.8	29 CH2						Pn	an 30 MHz	
#Res BW			#	VBW 910 H	Hz			eep 1 ms	3.000000 MH
Occup	led Bandwi	dth 13.487 M	Hz	Total P	ower	29.	4 dBm		
	lit Freq Error Indwidth		kHz	OBW P x dB	ower		9.00 % 6.00 dB		0 Hz
wino)						=7×1	ue.		

### Band2\_15MHz\_64QAM\_75\_0\_HighCH19125-1902.5

	niert-Aner/an - Occlapie	c 67V/						
Center Fre	iq 1.9025000	00 GHz MFGaind	Trig 1	r Freq: 1,90250000 Free Run h: 30 dB	AvgiHold >50/50	Radio St	d: None evice: BTS	Frequency
10 dB/div	Ref Offset 13.9 Ref 30.00 di				2.00		0	Center Free 1.802500000 CH 3.000000 MH Auto Mar Free Offse
200			fala Pangaran Sandaran	-	immen			
0.00		1						
20.0 -30.0	when more interested					Anter and a state	wanter	
40.0 60.0								
Center 1.9 Res BW			#	VBW 910 kH	,		an 30 MHz /eep 1 ms	CF Step
Occup	led Bandwi	dth 13.468	MUz	Total Pov	ver 2	29.6 dBm	Auto M	
	it Freq Error	8.	298 kHz	OBW Pov		99.00 %		Freq Offset 0 Hz
x dB Ba	ndwidth	14	.66 MHz	x dB		26.00 dB		
80						F#1625	-	

#### Band2\_20MHz\_QPSK\_100\_0\_LowCH18700-1860

Kayagett Spectromy-Approx	Coldena (IV)			313.311		4/10% aU	an Indedatasi	PH App 15, 2018	328
Center Freq 1.8600		GHz MFGalmLow	Trig F	Freq 1,8800 Free Run : 30 dB	AvgiHold		Radio St		Frequency
10 dB/div Ref Offse									
200		manion		171		-			Center Freq 1.860000000 GHz
-10 D -20 0	and					1	-		
46.0				-				man	
-60.0									
Center 1.86 GHz #Res BW 390 kHz	-	_	#	VBW 1.2	MHz	_		an 40 MHz /eep 1 ms	CF Step 4.000000 MHz
Occupied Band				Total I	Power	2	8.9 dBm		Auto Man
	18	.011 N	IHz						Freq Offset
Transmit Freq Er	ror	18.25	7 kHz	OBW F	Power		99.00 %		0 Hz
x dB Bandwidth		19.46	MHz	x dB		-2	6.00 dB		
wino)						-	105		

## Band2\_20MHz\_QPSK\_100\_0\_MidCH18900-1880

Averaget. Space	HIT SIG DC	N	1 2122-011		#194 #UTG	Induction	PH Ang 15 2010	328
	ng 1.880000000	MF/Salm1.nw	Center Freq: 1.88	AvgiHalo		Radio St		Frequency
10 dB/div	Ref Offset 13.9 d Ref 30.00 dBr				2.00		1	Center Free 1.880000000 GH 1.800000 GH CF Step 4.00000 MH Mat
200 100		mouranon	and a second second second	toole and the second	un			
0.00 -10.0		4		1	1	1.20		
-30.0	and the second desides			-		Sendor Sampling	Marian	
-80.0			-					
Center 1.8 #Res BW			#VBW 1.2	MHz			an 40 MHz leep 1 ms	
Occup	led Bandwidt	h 7.961 MH		Power	30	.4 dBm		Auto Mar
	it Freq Error	25.679 k	Hz OBW	Power		99.00 %		Freq Offset 0 Hz
x dB Ba	indwidth	19.62 M	Hz x dB		-26	5.00 dB		
MIRO						05	-	

#### Band2\_20MHz\_QPSK\_100\_0\_HighCH19100-1900

			Kaywettt: Spatterer Houryzer - Occupied BW
Action Altres (22:22:31 PM Aug 15, 2018) Hz Radio Std: None Frequency Hald: 50/50 Radio Device: BTS	q: 1,900000000 GHz Run AvgiHold: 50/50		Center Freq 1.900000000
			10 dB/div Ref 30.00 dBm
Center Free 1 90000000 GHz	mannan	nd not approved and most	200
monstellandening			0.00 -10.0 -20.0
			30.0 40.0
			-50.0
Span 40 MHz CF Ster Sweep 1 ms 4.000000 MH	W 1.2 MHz	#1	Center 1.9 GHz #Res BW 390 kHz
the second second second second	Total Power 30	920 MHz	Occupied Bandwidth
99.00 %. Freq Offsel	OBW Power	-2.054 kHz	Transmit Freq Error
-26.00 dB	x dB -2	19.61 MHz	x dB Bandwidth
10105			MIRO

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# Band2\_20MHz\_16QAM\_100\_0\_LowCH18700-1860

Avenuent Space	Nr Docup			ana mi	ALIGN-BURG		PH App 15, 2010	322	
	Center Freq 1.86000000 GHz Center Freq 1.88000000 GHz Radio Std: None BFGeint_tow #Atten: 30 dB Radio 250,50 Radio Device: BTS								
10 dB/div	Ref Offset 13 Ref 30.00 c		_		2.4		()		
20.0		~		mandant . American	-	-		Center Free 1 86000000 GH	
-10.0		1			1	-			
-30,0 0,00000	moreculors	art			here		inspranaut		
-40.0	-	-					-		
Center 1.8	6 CH2					En	an 40 MHz		
#Res BW				VBW 1.2 MHz			eep 1 ms	4.000000 MHz Auto Man	
Occup	led Bandw			Total Power	29.	5 dBm		Lamon .	
	it Freq Error		53 MHz 7.362 kHz	OBW Power				Freq Offset	
		19.46 MHz			99.00 % -26.00 dB				
wiici i					=7#10	5			

#### Band2\_20MHz\_16QAM\_100\_0\_MidCH18900-1880

Averanties	Brief Analyzer - Occupe	et ØW		ana ani		ALTON-MUTCH		PH Aug 15, 2018	0.2.00
	enter Freg 1.880000000 GHz Center Freg 1.88000000 GHz Radio Std: None Trig: Free Run Avgihold: 50/50 Radio Device: BTS								
10 dB/div	Ref Offset 13. Ref 30.00 d					2.45		0	
200 100				-	-			Center Freq 1 88000000 GHz	
-10.0	makandersee	al l				1		and	
-30,0 -46 0 -46 0				-					
Center 1.8				VBW 1.2 M	IHZ			an 40 MHz eep 1 ms	CF Step
Occupied Bandwidth 17.952 MH				Total F	ower	29.			Auto Mar
	Transmit Freq Error 26.992		t Freq Error 26.992 kHz OBV				9.00 % 5.00 dB		Freq Offset 0 Hz
MIK						=7×3	e.	-	

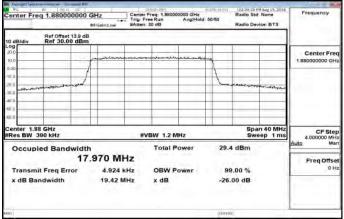
### Band2\_20MHz\_16QAM\_100\_0\_HighCH19100-1900

Center Fre	rq 1.900000000	GHz		Freq: 1,9000000		0%=#Ung	Radio St	d: None	Frequency
		MEGainLow	#Atter	1: 30 dB	10.000000000000000000000000000000000000	_	Radio De	evice: BTS	
10 dB/div	Ref Offset 13.9 d Ref 30.00 dBr					-		- 0	
200			aviea	-	mandarpan		-		Center Freq
0.00		1				1			
00.11	monent					here	Low March	whitemare	
40.0									
-60.0							-	-	
Center 1.9 #Res BW			#	VBW 1.2 MH	z	-		an 40 MHz /eep 1 ms	CF Step
Occup	led Bandwid	th		Total Pov	wer	29.	4 dBm		Auto Man
	17	7.974 M	Hz						Freq Offset
Transmit Freq Error 13.510 kH		kHz	OBW Pov	ver	9	9.00 %		0 Hz	
x dB Ba	indwidth	19.48 1	MHz	x dB		-26	8b 00.		
NDC .						-			

#### Band2\_20MHz\_64QAM\_100\_0\_LowCH18700-1860

		DC 1			10:521-11(7		ATOM NULL		PM Aug 15, 2018	Frequency
Conter Freq 1.86000000 GHz Center Freq 1.86000000 GHz Radio Std: None Trig Free Run AvgiHold: 50/50 #FGeint_ow #Atten: 30 dB Radio Device: BTS										
10 dB/div	Ref Offset 1 Ref 30.00		_							
200 100 020				marnin			2	-		Center Free 1.860000000 GH
-10.0	-	1					1	monum		
-46 0				-					- and - and - and -	
-60.0				-			-			
Center 1.86 #Res BW 39		-		#V	BW 1.2 M	IHz			an 40 MHz eep 1 ms	CF Step 4.000000 MHz
Occupie	d Bandy				Total P	ower	29	.3 dBm		Auto Mar
17.984 MHz										Freq Offset
Transmit	Freq Erro	or	2.58	8 kHz	OBW P	ower	5	9.00 %		0 H
x dB Ban	dwidth		19.64	MHz	x dB		-20	5.00 dB		
control (control										

## Band2\_20MHz\_64QAM\_100\_0\_MidCH18900-1880



### Band2\_20MHz\_64QAM\_100\_0\_HighCH19100-1900

	ent-Analyzer - Occupied 67	W .					
	1.90000000	Tri	ter Freq: 1,900000000 GHz g: FreeRun AvgiHo ten: 30 dB	ld>50/50	Radio St	d: None evice: BTS	Frequency
10 dB/div	Ref Offset 13.9 d Ref 30.00 dBr			2.46			
.og 20.0 10.0			and the second second second	-			Center Free 1 90000000 GH
0.00 10.0 20.0		1					
10 0	and an Marcall				norseler	and and the second second	1.1
ep.g. eu.ü.			_		-	-	
enter 1.9 C Res BW 39			#VBW 1.2 MHz			an 40 MHz Veep 1 ms	CF Ste 4.000000 MH
Occupie	ed Bandwid	th	Total Power	29.	5 dBm		Auto Ma
	1	7.925 MHz					Freq Offse
Transmit Freq Error		18.663 kHz	OBW Power	9	9.00 %		OH
x dB Ban	dwidth	19.48 MHz	x dB	-26	.00 dB		
80					14.	-	

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## Band4\_1\_4MHz\_QPSK\_6\_0\_LowCH19957-1710.7

A Average System Annual - Occupied B	WI.					
Center Freq 1.710700000	Trig	er Freq. 1,710700000 GHz Free Run AvgiHol en: 30 dB	d: 60/60	Radio Std: Radio Devi	(serve	Frequency
10 dB/div Ref 30.00 dB					= -0	
100	Jumman					Center Free 1.710700000 GH
-10.0 20.0 -00.0	N		1 ma	maria	Arran was	
-30 0. -40 0 -60 0						
Center 1.711 GHz					n 3 MHz	CF Ster
#Res BW 30 kHz Occupied Bandwid		#VBW 91 kHz Total Power	20.5	dBm	3.2 ms	300.000 kH Auto Mar
a subscript of an an and a subscript of	0962 MHz	Total Power	30.5	UBIN	191	Freq Offse
Transmit Freq Error x dB Bandwidth	130 Hz 1.320 MHz	OBW Power x dB		00 % 10 dB		0 H
CRIM			= YATUS			-

### Band4\_1\_4MHz\_QPSK\_6\_0\_MidCH20175-1732.5

PL	NI 20-G DC			1.111		41105 aLIT		PM Aug 15, 2018	Frequency
Center Fre	Center Freg 1.732500000 GHz Center Freg 1.732500000 GHz Radio Std: None Trig: Free Run AvgiHold: 50/80 Radio Device: BTS								
10 dB/div	Ref Offset 13.9 dE Ref 30.00 dBm							0	
20.0				m	-	-		Center Fred 1.732500000 GH;	
0.00 -10.0 -20.0	-					m	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	m	
30.0 40.0			_				-		
Center 1.7	733 GH2						Si	oan 3 MHz	
Res BW			#VBI	V 91 KH	z		Swee	ep 3.2 ms	CF Step 300.000 kH
Occup	led Bandwidti 1.(	h 0995 Mł		Total P	ower	30	0.2 dBm		Freq Offset
	hit Freq Error andwidth	-1.134 H 1.314 M		OBW Pe	ower		99.00 % 6.00 dB		OH
640						100	cice.		

## Band4\_1\_4MHz\_QPSK\_6\_0\_HighCH20393-1754.3

Average Seats	Nerr Analyzer - Occupied BW	· · ·	1 2122		40104		HA0g 15 2010			
	enter Freg 1.754300000 GHz Trig: Free Run AvgiHold: 50/50 #FGeint.nw #Atten: 30 dB Radio Device: BTS									
10 dB/div	Ref Offset 13.9 dE Ref 30.00 dBm	1								
200		Jum		-	~			Center Freq 1.754300000 GHz		
-10.0	mann	1			1 a	instrum	monther			
-30.0 -46.0 -80.0										
-60.0 Center 1.7	54 GH2						an 3 MHz			
#Res BW			#VBW	91 kHz			p 3.2 ms	CF Step 300.000 kHz Auto Man		
Occup	led Bandwidti 1.*	1012 MH		otal Powe	·	30.0 dBm		Freq Offset		
						99.00 %. -26.00 dB		0 Hz		
60						11102				

### Band4\_1\_4MHz\_16QAM\_6\_0\_LowCH19957-1710.7

Center Fre	Center Freq 1,710700000 GHz Center Freq 1,710700000 GHz Restor Trig Free Run Avgilidid: 56% Restor Trig Free Run Avgilidid: 56% Radio Device: BTS								
10 dB/div	Ref Offset 13.9 dB Ref 30.00 dBm					. 0	Center Freq 1.71070000 GHz		
200-00-000		june	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~						
10.0	mananin	w.r.		m	montena	mm			
-46 0 -90 0									
Center 1.7 #Res BW 3			#VBW 91 kHz		Swe	pan 3 MHz ep 3.2 ms	CF Step 300.000 kH		
Occupi	led Bandwidt	h 1038 MHz	Total Power	29.	5 dBm		Auto Mar		
	Fransmit Freq Error - 392 Hz OBW Power c dB Bandwidth 1.325 MHz x dB		99.00 %. -26.00 dB			Freq Offsel 0 Hz			
eine)					14				

# Band4\_1\_4MHz\_16QAM\_6\_0\_MidCH20175-1732.5

Average Contract	Nert Hawyon - Occupied Bi	4				ALION HUTCH			18 F 🖬
	iq 1.732500000	MFGalmLnw	Trig: F	Freq 1,732500 Free Run 1: 30 dB	AvgiHold	Radio Std: None			Frequency
10 dB/div	Ref Offset 13.9 dB 10 dB/div Ref 30.00 dBm								
20.0		form	mm	in minument	ming				Center Fred 1.732500000 GHz
0.00 -10.0 -20.0	- warman w	NA	-			ma		man.	
30.0 000000								~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
center 1.7	22.042							oan 3 MHz	
Res BW			#	VBW 91 kH	z			ep 3.2 ms	CF Step 300.000 kH
Occup	led Bandwidt 1.	h 1021 M	Hz	Total Po	ower	29.4	dBm	1.1	Freq Offset
		-1.096 1.356	kHz	OBW Power 99.00 %. x dB -26.00 dB			0 Hz		
80						=78102	-		

## Band4\_1\_4MHz\_16QAM\_6\_0\_HighCH20393-1754.3

PL:	ert Analyzer - Occupied BW						2 2 M
	q 1.754300000	GILL Tr	nter Freq: 1,754300000 GHz g: Free Run AvgiHo tten: 30 dB	t ald:>50/50	Radio Sto	vice: BTS	Frequency
10 dB/div	Ref Offset 13.9 dB Ref 30.00 dBm					0	
.0g 200 100 9.00		minun	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	X	-		Center Fred 1.754300000 GH
	- inerent	/		m	n-n-	amining	
48 0 90 0							
Center 1.75 Res BW 3			#VBW 91 kHz			oan 3 MHz ep 3.2 ms	CF Step 300.000 kHz
Occupie	ed Bandwidt		Total Power	29.	1 dBm		Auto Man
Transmil x dB Bar	Freq Error	1037 MHz -1.232 kHz 1.330 MHz	OBW Power x dB		9.00 % .00 dB		Freq Offset 0 Hz

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### Band4\_1\_4MHz\_64QAM\_6\_0\_LowCH19957-1710.7

S. Symphic System revenue - Occapied	DW/					100 X 20
Center Freg 1.71070000	0.0112	Center Freq: 1,7107000 Trig: Free Run #Atten: 30 dB	AvgiHold: 50/50	Radio Std: Radio Devi	(serve	Frequency
10 dB/div Ref 30.00 dB	dB m				= -0	
200	min		num			Center Freq 1.710700000 GHz
0.00 -10.0 -10.0	w		heres	masan	we tool	
-30.0						
-60.0 Center 1.711 GHz				Sna	n 3 MHz	1.2.2.
#Res BW 30 kHz		#VBW 91 kHz			3.2 ms	CF Step 300.000 kHz Auto Man
Occupied Bandwid	.1047 MH	Total Po	wer 29	.3 dBm	1.11	
Transmit Freq Error -2.26 x dB Bandwidth 1.346		Z OBW Por		99.00 % -26.00 dB		Freq Offset 0 Hz
NIKO			1000	05		

### Band4\_1\_4MHz\_64QAM\_6\_0\_MidCH20175-1732.5

Center Fr	eq 1.732500000	GHz	Center Fr		0000 GHz AvgiHol	d: 50/50	Radio Ste	PHAng 15, 2018 d: None vice: BTS	Frequency
10 dB/div	Ref Offset 13.9 di Ref 30.00 dBm								
•90 200 100 900		forma	on the state of the	Residence					Center Free 1.732500000 GH
10.0 20.0	manner	1				m	-	man	
40.0 90.0									
Center 1.7 #Res BW			#VE	SW 91 KH	IZ		Sil	oan 3 MHz ep 3.2 ms	CF Step 300.000 kH
Occup	Occupied Bandwidth 1.1023 MH			Total P	ower	29	4 dBm		Auto Mar
	Transmit Freq Error 76 x dB Bandwidth 1.317		Hz OBW Power Hz x dB			99.00 % -26.00 dB			он
80						100	05		

## Band4\_1\_4MHz\_64QAM\_6\_0\_HighCH20393-1754.3

	mithamyzer - Occupied BV	1.				ALTON BUTCH			
	1.754300000	GHz MEGain:Low	Center 1 Trig: Fr	Center Freq: 1,754300000 GHz				t: None vice: BTS	Frequency
10 dB/div	Ref Offset 13.9 dl Ref 30.00 dBm							-1	
200		Jun	winnin		marry				Center Freq 1.754300000 GHz
-10.0 -20.0 million	mon	1				how	minin	ann	
-30 0 4 -46 6 -50 0									
60.0 Center 1.754 #Res BW 30			#V	'BW 91 kH	łz			oan 3 MHz ep 3.2 ms	CF Step 300.000 kHz
Occupied Bandwidth 1,1063 Mł					29,	2 dBm		Auto Man	
Transmit Freq Error -42		-423 1.324 M	Hz OBW Power			99.00 % -26.00 dB			Freq Offset 0 Hz
60						= Y # 34	ue.	-	

### Band4\_3MHz\_QPSK\_15\_0\_LowCH19965-1711.5

Center Fre	g 1.7115000		Trig: I	Freq: 1,71150	AvgiHold	60/50	Radio Std		Frequency	
		MEGainLin	w #Atter	n: 30 dB		-	Radio Dev	vice: BTS		
10 dB/div	Ref Offset 13. Ref 30.00 d							- 0		
20.0							-	1	Center Fr	rec
10.0		- Junerale		and the second second	with	1		-	1,711500000 G	
0.00		1	-	-		X	-			
-10.0	1 mmm	1				17	mmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmm	A		
30.0	1				_					
40.0			_	-	-					
en o		_	-	-	-		-			
-60.0			-	-	-		-			
	Center 1.712 GHz Span 6 MHz #Res BW 62 kHz #VBW 180 kHz Sweep 1.533 ms									CF Step 600.000 kHz
Occup	led Bandwi	dth		Total P	ower	30.6 dBm			Auto	Man
2.7112 MHz										teat
Transm	Transmit Freg Error 2.910 kHz		10 kHz	OBW P	ower		99.00 %		Freq Of	0 Hz
		4 MHz	x dB			5.00 dB			-	
P									1	
enc)						100				_

## Band4\_3MHz\_QPSK\_15\_0\_MidCH20175-1732.5

And Anti-Anti-Anti-Anti-Anti-Anti-Anti-Anti-	there analyze - Occupied	BW/		anaum		ALION AUTO		MAge 15, 2018	22.0
	eq 1.73250000	MEGaintLow	Trig: I	Center Freq: 1,732500000 GHz Trig: Free Run AvgiHold: 50/50 #Atten: 30 dB				I: None vice: BTS	Frequency
10 dB/div	Ref Offset 13.9 Ref 30.00 dB		_					- 0	
20.0			- promo		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				Center Freq 1,732500000 GHz
-10.0	monormant	/				1		,	
-46 0 -80 0				-					
Center 1.1 #Res BW			1	VBW 180 P	KHZ			an 6 MHz 1.533 ms	CF Step 600.000 kH
Occup	Occupied Bandwidth 2.7097 MH			Total Power			.5 dBm		Auto Ma
	Transmit Freq Error 3.124 x dB Bandwidth 3.023 l					99.00 % -26.00 dB			OH
eliec)						100	105	-	

### Band4\_3MHz\_QPSK\_15\_0\_HighCH20385-1753.5

Kaynegett.Speathearrises							
Center Freq 1.		Trip	ter Freq. 1,753500000 GHz Free Run AvgiHol en: 30 dB	d: 50/50	Radio De		Frequency
	f Offset 13.9 dB			a		- 0	
00		mornin		m			Center Fred 1.753500000 GH
10.00				hu	m	a manage	
-30,0. 40.0							
60.0			_				
Center 1.754 G #Res BW 62 kH			#VBW 180 kHz		Sp Sweep	an 6 MHz 1.533 ms	CF Step 600.000 kHz
Occupied	Occupied Bandwidth		Total Power	30.3	2 dBm		Auto Man
	2.7	151 MHz					Freq Offset
Transmit Freq Error		748 Hz	OBW Power	91	9.00 %		0 Hz
x dB Bandw	idth	3.028 MHz	x dB	-26	.00 dB		1
-							

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## Band4\_3MHz\_16QAM\_15\_0\_LowCH19965-1711.5

Center Fre	ng 1.71150000	0 GHz	Center	Freq: 1,71150	00000 GHz	ALLON HUND	Radio Std	MAg 15, 2018	Frequency
ound in	ig in thoose	MEGainLow	#Atten:		AvgiHold	1: 60/60	Radio Dev	ice: BTS	
10 dB/div	Ref Offset 13.9 Ref 30.00 dB							()	
200		Jamon				2	~		Center Free 1.711500000 GH
-10.0		Д		-		1	-		
-30,0	norman marine		-	-		- ~ ~		-works	
40 D -80 D			-	-			-		
Genter 1.7	12 GHz						Sp	an 6 MHz	CFSter
#Res BW	62 kHz		#V	BW 180 H	Hz		Sweep	1.533 ms	600.000 kHz
Occup	led Bandwid	Hz	Total Power			8 dBm			
Transm	kHz	Hz OBW Power			9.00 %		Freq Offse		
x dB Ba	indwidth	3.009 1	MHZ	x dB		-26	5.00 dB		1
(IN)							ue:		

# Band4\_3MHz\_16QAM\_15\_0\_MidCH20175-1732.5

Avenue for	Ar Star Cockard By		anautri		A105-1010		MAge 15, 7010	
	enter Freg 1.732500000 GHz Center Freg 1.732500000 GHz Radio Std: None #FGelinLinw #Atten: 30 dB Radio Std: Radio Device: BTS							
10 dB/div	Ref Offset 13.9 dE Ref 30.00 dBm						- 0	
200 100		manna				7		Center Fred 1.732500000 GH
-10.0	mont				1	mi		
30.0 46.0 46.0								
Center 1.7			#VBW 180	kHz			an 6 MHz 1.533 ms	CF Step
Occup	led Bandwidt	Total	29.7 dBm 99.00 % -26.00 dB			Auto Ma		
	Transmit Freq Error 2.929 x dB Bandwidth 2.977 M					Hz OBW Power		0H
663					-783	ues.		-

## Band4\_3MHz\_16QAM\_15\_0\_HighCH20385-1753.5

PL:	the second se	I see a second	3183 3NT	WTO/F MILLIO		HAug 15, 2018	Frequency
Center Fr	eq 1.75350000	Trig	ter Freq: 1,753500000 GHz Free Run AvgiHol en: 30 dB	d >50/50	Radio Std		Frequency
10 dB/div	Ref Offset 13.9 Ref 30.00 dB						
200		Journa		-	-		Center Freq 1,753500000 GHz
10.0				1 h			
30.0. 46.0 90.0							
Center 1.1 Res BW			#VBW 180 kHz			an 6 MHz 1.533 ms	CF Step 600.000 kHz Auto Man Freq Offset
Occup	led Bandwid	.7266 MHz	Total Power	29.6	6 dBm		
	Transmit Freq Error 3.880 ) x dB Bandwidth 3.033 N		OBW Power x dB	99.00 % -26.00 dB			0 Hz
00				=7830			

#### Band4\_3MHz\_64QAM\_15\_0\_LowCH19965-1711.5

		1.17.11	A Conservation Con									quency
20.0												
0.00		parminum							enter Fred 500000 GH			
10.0 20.0 Martino	man	1						fra	mon	m		
-30,0. 40 D 80 D				-								
60.0 Center 1.712 #Res BW 62				_	#VB	W 180 k	Hz			an 6 MHz 1.533 ms		CF Step
Occupie		vidth	in						29.8 dBm			Mar Mar
		2.7	151	MH	Iz						F	req Offset
Transmit Freq Error -720 x dB Bandwidth 3.016 M		-720 16 M				99.00 % -26.00 dB			-	0 Hz		
												_

#### Band4\_3MHz\_64QAM\_15\_0\_MidCH20175-1732.5

A Superget Space	treat Analyze - Occupied BW				LION AUTO			
	ng 1.732500000	Tri	Center Freq: 1,732500000 GHz				vice: BTS	Frequency
10 dB/div	Ref Offset 13.9 dB Ref 30.00 dBm						0	
200 100			n ann an thurs		1			Center Freq 1,732500000 GHz
-10.0	mont				100	Manner	monumen	
-30.0 -48.0 -80.0					-			
Center 1.7			#VBW 1801				an 6 MHz 1.533 ms	CF Step
	led Bandwidth	i .				8 dBm	1.000 ms	600.000 kHz Auto Man
	2.7060 M Transmit Freq Error 2.753 x dB Bandwidth 2.997 M		kHz OBW Power		99.00 % -26.00 dB			Freq Offset 0 Hz
New J					- 7×17	e		

### Band4\_3MHz\_64QAM\_15\_0\_HighCH20385-1753.5

P P	erri-Ananyan - Occupied i	747				HAag 15, 2018	222
	q 1.75350000	Tri	nter Freq 1,75350000 g: Free Run A tten: 30 dB	vgiHold >50/50	Radio Sto	I: None	Frequency
10 dB/div	Ref Offset 13.9 Ref 30.00 dB			2		()	
200 100 020				Center Fred 1.753500000 GH			
10.0	man m			K	man	man	
30,0. 48,0 90,0							
60.0 Center 1.7						an 6 MHz	CF Step
	Res BW 62 kHz Occupied Bandwidth		#VBW 180 kHz Total Pow		Sweep 1.5 29.2 dBm		600.000 kHz Auto Mar
	2	.7197 MHz				Freq Offset	
	Transmit Freq Error 3 x dB Bandwidth 3.024		OBW Pow x dB		99.00 % -26.00 dB		0 H2
				- 191	114		

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## Band4\_5MHz\_QPSK\_25\_0\_LowCH19975-1712.5

Avenuest Seats	Herri Analyzer - Occilipi			anautri	ALION-BUT	a logisticati	PH App 15, 2010	028
	g 1.7125000	000 GHz	Trig I	r Freg: 1,712500000 0		Radio Sto		Frequency
10 dB/div	Ref Offset 13 Ref 30.00 d							
200		-		man		2		Center Fre
0.00 10.0		1			1	-		
30.0		e					multi	
40 D 80 D							-	
-60.0 Center 1.7	13 647					En	n 10 MHz	
#Res BW			#	VBW 300 kHz			eep 1 ms	CF Ster 1.000000 MH
Occup	led Bandw		5 MHz	Total Powe	30	.7 dBm		Auto Ma
	it Freq Error	r	3.639 kHz	OBW Powe		99.00 %		Freq Offse
x dB Ba	ndwidth		5.058 MHz	x dB	-2	6.00 dB		1
60					1000	105		

### Band4\_5MHz\_QPSK\_25\_0\_MidCH20175-1732.5

Avenuent Speet	Herri Analyzer - Occupied BW	1.	ana		ALIGN-MUTCH	Logic delucion de	MAag 15, 2010	222
Center Fre	ng 1.732500000	GHz MFGalm±nw	Center Freq: 1/732500000 GHz			Radio Std: None Radio Device: BTS		Frequency
10 dB/div	Ref Offset 13.9 dE Ref 30.00 dBm							
20.0 10.0		man	a		2			Center Fre 1.732500000 GH
-10.0					1	mayers		
-30.0								
-60.0 Center 1.7	33 GHz					Spa	n 10 MHz	CF Step
#Res BW	100 kHz		#VBW 300	kHz			ep 1 ms	1.000000 MH
Occup	ied Bandwidt 4.	h 5190 MH		Power	30.	6 dBm		Auto Man Freq Offset
	it Freq Error Indwidth	-1.695 kl 5.057 Mi		Power		9.00 % .00 dB		0 H
CRIM						15		

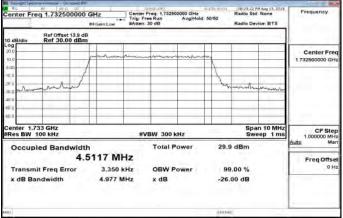
## Band4\_5MHz\_QPSK\_25\_0\_HighCH20375-1752.5

Center Fr	eq 1.752500000		enter Freq: 1,752 rig: Free Run		ALTON BUTT	Radio Std:	None None	Frequency
			Atten: 30 dB	>90/50	Radio Devi	ice: BTS		
10 dB/div	Ref Offset 13.9 dl Ref 30.00 dBm							
200		mon	-un-in-		~			Center Freq
0.00	1				X			
30.0					~	n		
48.0			_					
60.0								
Center 1.7 #Res BW			#VBW 300	kHz			ep 1 ms	CF Step 1.000000 MHz
Occup	led Bandwidt	h	Total	Power	30.	4 dBm		Auto Man
	4.	5212 MHz						Freq Offset
Transm	nit Freq Error	5.283 kHz	OBW	Power	9	9.00 %		0 Hz
x dB Ba	andwidth	5.021 MHz	x dB		-26	5.00 dB		
eino i						18		

### Band4\_5MHz\_16QAM\_25\_0\_LowCH19975-1712.5

Center Freg 1.712500000 GHz Center Fred 1.712500000 cm Center Fred 1.7125000000 cm Center Fred 1.712500000 cm Center Fred 1.7125000000 cm Center Fred 1.712500000 cm Center Fred 1.712500000 cm Center Fred 1.712500000 cm Center Fred 1.7125000000 cm Center Fred 1.7125000000 cm Center Fred 1.71									Frequency	
									-1	
100							X			Center Fred 1.712500000 GH
-10 0	whoman	w					L	annan,	man	
-405 D -405 D -405 D										
Center 1.71 #Res BW 1				#V	BW 300 k	Hz	-		n 10 MHz ep 1 ms	CF Step 1.000000 MH
Occupi	ed Band	width	Sec. 10.		Total P	ower	29.	7 dBm		Auto Man
		4.5	294 MI	Ηz						Freq Offset
Transmit	Freq En	ror	935	Hz	OBW P	ower	9	9.00 %		0 Hz
x dB Bar	dwidth		5.045 N	IHz	x dB		-26	.00 dB		1
(IN)										

## Band4\_5MHz\_16QAM\_25\_0\_MidCH20175-1732.5



### Band4\_5MHz\_16QAM\_25\_0\_HighCH20375-1752.5

Center Freq	1.7525000		Trig F	Center Freq: 1,752500000 GHz Trig: Free Run AvgiHold: 50/50 #Atten: 30 dB			Radio St	PH Aug 15, 2018 d: None svice: BTS	Frequency
10 dB/div	Ref Offset 13 Ref 30.00 c							0	
-og 200		pan	nim	minum					Center Freq 1.752500000 GHz
00 <b>1</b>		1				5	man	man	
0.0. d 0 d 0									
enter 1.753 Res BW 10			#	VBW 300 k	Hz			an 10 MHz leep 1 ms	CF Step 1.000000 MH
Occupie	d Bandw			Total P	ower	29.	5 dBm		Auto Man
Transmit x dB Band	Freq Error		MHZ 50 kHz 55 MHz	OBW Pe x dB	wer		9.00 % .00 dB		Freq Offset 0 Hz

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### Band4\_5MHz\_64QAM\_25\_0\_LowCH19975-1712.5

Averant Seater	ert Analyze - Occupied I	W/		avault		ALIG5-401		PH Ang 15, 2010	Frequency
Center Free	enter Freg 1.712500000 GHz Center Freg 1.712500000 GHt Radio Std: None Trig: Freg 1.712500000 GHz Radio Std: None Radio Std: None Radio Std: None Radio Std: None Radio Std: Std: Std: Std: Std: Std: Std: Std:								
10 dB/div	Ref Offset 13.9 Ref 30.00 dB							. 0	
200 100		Jum		www.	min	-			Center Free 1.712500000 GH
	Annam					- N	M Mann	manax	
-40 D -60 Q									
Center 1.71 #Res BW 10			#	VBW 300 1	KHZ	11		an 10 MHz eep 1 ms	CF Step
Occupie	ed Bandwid 4	th .5392 M	ЛНz	Total P	ower	2	9.8 dBm		Auto Ma
Transmit x dB Bar	t Freq Error	5.23	7 kHz 8 MHz	OBW P x dB	ower		99.00 % 26.00 dB		0H
Wilk)						100	105		

# Band4\_5MHz\_64QAM\_25\_0\_MidCH20175-1732.5

Avenue for	there was a constant of the co			ear ann		ALIGN BUTT	Instantia to b	HAag 15, 2010	328
	eq 1.732500000	GHz MEGalmEnw	Center Fr Trig: Fre	enter Freq: 1,732500000 GHz rig: Free Run AvgiHold: 50/50 Atten: 30 dB			Radio Std: None Radio Device: BTS		Frequency
10 dB/div	Ref Offset 13.9 dE Ref 30.00 dBm							0	
200 100 0.00					-			Center Fre 1,732500000 GH	
-10.0 20.0	month					1	Amm	مر المراجع	
48 0 80 0 60 0									
Center 1.7 Res BW			#VE	BW 3001	KHZ			n 10 MHz eep 1 ms	CF Step
Occup	led Bandwidt	h 5241 MH	17	Total P	ower	29	.8 dBm		Auto Mar
	Transmit Freq Error -4.102 x dB Bandwidth 5.061		Hz OBW Power		99.00 % -26.00 dB			Freq Offse 0 H	
60							02		-

### Band4\_5MHz\_64QAM\_25\_0\_HighCH20375-1752.5

Center Fre	ng 1.75250000	MEGalinLow	Trig I	Center Freq: 1,752500000 GHz Trig: Free Run AvgiHold: 50/50 #Atten: 30 dB			Radio Std: None Radio Device: BTS		Frequency.
10 dB/div	Ref Offset 13.9 Ref 30.00 dE							()	
200		James	in	mana	mont				Center Fred 1.752500000 GHz
0.00 -10.0 -20.0	man amore	A	-			2	_		
-30.0	5 M								
-50.0			-				_		
Center 1.7 #Res BW	53 GHz 100 kHz		#	VBW 300 kHz				n 10 MHz ep 1 ms	CF Step
Occup	ied Bandwid	ith .5250	MHz	Total Pow	ver	29.7	dBm		Auto Mar
	it Freq Error Indwidth	6.08	36 kHz 3 MHz	OBW Pow x dB		99.0 -26.0	00 % 0 dB		0 Hi
80						FRIDE.		_	

### Band4\_10MHz\_QPSK\_50\_0\_LowCH20000-1715

RE I	M 20 0 00	China Canta	Freg 1,715000000 GHz	WTO/F MILLO	Radio Std: None	Frequency
Center Fre	eq 1.715000000	Trig I	Free Run AvgiHala	1 60/60	Radio Device: BTS	
10 dB/div	Ref Offset 13.9 di Ref 30.00 dBn					
200		-	malammana	2		Center Free
0.00				A		
20.0	more in a second			1	man man man	
-30,0						
-80.0						
Center 1.7 #Res BW		#	VBW 620 kHz		Span 20 MHz Sweep 1 ms	CF Ste 2.000000 MH
Occup	led Bandwidt	h	Total Power	30.	5 dBm	Auto Mar
	Freq Offse					
Transm	it Freq Error	12.909 kHz	OBW Power	9	9.00 %	0 H
x dB Ba	Indwidth	9.963 MHz	x dB	-26	.00 dB	1
(celler						

## Band4\_10MHz\_QPSK\_50\_0\_MidCH20175-1732.5

Angeographic Space	Herri - Analyzer - Occupen	HIC BTVV		313.01		ALIGN-4010		PH App 15, 2010	028
	enter Freg 1.732500000 GHz BrGain±.nw Argin 1.732500000 GHz Artis: 10 db Radio Solido Radio Device: BTS								Frequency
10 dB/div	Ref Offset 13.9 dB 10 dB/div Ref 30.00 dBm Log								
20.0			and the second second second					Center Freq 1,732500000 GHz	
-10 D				-		Z			-
-48.0	mal months						- Londone	amun-m	
Center 1.7 #Res BW				#VBW 620	kHz			an 20 MHz eep 1 ms	CF Step 2.000000 MHz
Occup	led Bandwi		3 MHz	Total F	ower	24	2 dBm		Auto Man
	it Freq Error Indwidth		-152 Hz 9.942 MHz	OBW F x dB	ower		9.00 % 5.00 dB		0 Hz
ANING							05		

### Band4\_10MHz\_QPSK\_50\_0\_HighCH20350-1750

PL D	and the contract of the contra		3193.311	#210% #UTG	DEDTILEPH App 1	
Center Freq 1.	750000000 0	Trig	Free Run AvgiHal n: 30 dB		Radio Std: None Radio Device: B	Frequency
10 dB/div Re	f Offset 13.9 dB			2.45		-0.
00 200 100			Arrendo Terretoria	nen -		Center Fred 1.750000000 GH
0.00	1			X		
80.0 10.0				20	dame - a com	~~~~
90 0 50 0						
enter 1.75 GH Res BW 200 k			VBW 620 kHz		Span 20 Sweep	
Occupied I		2	Total Power	30.	2 dBm	Auto Mar
Transmit Fre		3.049 kHz	OBW Power	9	9.00 %	Freq Offset 0 Hi
x dB Bandw		10.06 MHz	x dB		.00 dB	
100				10.010	10.	

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### Band4\_10MHz\_16QAM\_50\_0\_LowCH20000-1715

A Superstant Spatterer Analyzer - Occas	post BW		avaratit		ALION AUTO			020
Center Freq 1.715000	MAng 15, 2018 I: None vice: BTS	Frequency						
10 dB/div Ref 30.00				_			(	
20.0 10.0	mon	anor contract and and a second second			~			Center Freq
0.00 -10.0	1				X			
200	~		-		~	monteres	honer	1.1
40.0 50.0			-					
Center 1.715 GHz		1				Sna	n 20 MHz	
#Res BW 200 kHz		#	VBW 620 k	Hz	_		eep 1 ms	2.000000 MH
Occupied Bandy	vidth 8.9930 1	MH <sub>7</sub>	Total P	ower	29	.7 dBm		Auto Mar
Transmit Freq Erro x dB Bandwidth	r 17.30		OBW P	ower		99.00 % 5.00 dB		Freq Offse 0H
CRIM					1013	08		

## Band4\_10MHz\_16QAM\_50\_0\_MidCH20175-1732.5

Angeogen Space	trient-Analyzer - Occupied B	W).		1100 200		#105-4Um	a longin na i	PH App 15, 2018	022		
Center Fre	eq 1.73250000	MEGaliniLow	Center F	Freq: 1,73250	AvgiHale		Radio Sto Radio De	1: None	Frequency		
10 dB/div	Ref Officet 13.9 dB 0 dB/div Ref 30.00 dBm 90										
20.0		James	ميمنيهم	and the second		m			Center Freq 1,732500000 GHz		
-10.0	mannad	4		-		1	hammen				
-40.0 -40.0 -40.0											
Center 1.7 #Res BW			#V	BW 6201	(Hz			an 20 MHz eep 1 ms	CF Step		
	led Bandwid			Total P	ower	29	.6 dBm		Auto Man		
	8.9949 M Transmit Freq Error 12.864 x dB Bandwidth 9.963 M		4 kHz OBW Pow				99.00 %. -26.00 dB		Freq Offset 0 Hz		
Avino						in the	105	-			

## Band4\_10MHz\_16QAM\_50\_0\_HighCH20350-1750

	HANNING - Occupied BW						24					
	1.750000000	Trig	er Freq: 1,750000000 GHz Free Run AvgiHal en: 30 dB	d: 50/50	Radio Std: Nor Radio Device:	ne Frequency	1					
10 dB/div	Ref Officet 13.9 dB 0 dB/div Ref 30.00 dBm											
20.0		monterenter	www.when.			Center F 1.750000000						
-10.0				A		_						
	minand			Las	and an all and an and an	100 may						
50.0			_									
Center 1.75 Res BW 20		)	#VBW 620 kHz		Span 2 Sweep	1 ms 2.000000 f	MH					
Occupie	d Bandwidth 8.9	998 MHz	Total Power	23.4	dBm	FreqOff	Man					
	Transmit Freq Error 1.524 x dB Bandwidth 9.904 M		OBW Power x dB		.00 %. 00 dB		0 Hz					
60				TATAS			_					

### Band4\_10MHz\_64QAM\_50\_0\_LowCH20000-1715

Pic         arr         page det         Carter Freq 1.715000000 GHz         Carter Freq 1.71500000 GHz         Carter Freq 1.71500000 GHz         Radio Set None           Center Freq 1.71500000 GHz         Freq 1.71500000 GHz         Carter Freq 1.71500000 GHz         Radio Device BTS           AttGaint_Low         AttGraint_Low         Setter: 3 of the Setter         Radio Device BTS										Frequency		
10 dB/div		Ref 30.00 dBm										
200		_			-	minin	my	-		Center Freq 1.715000000 GHz		
-10.00 -20.0		1						www.willian				
30.0	emperium				-				manholisse			
-8ñ i)				-		-		-	-			
Center 1.71	5 GHz				_			Sp	an 20 MHz	CF Step		
#Res BW 20	00 kHz			#\	BW 6201	kHz		Sv	veep 1 ms	2.000000 MHz		
Occupie	d Bandw				Total F	ower	2	9.7 dBm		Auto Man		
		9.0	075	MHz						Freq Offset		
Transmit	Freq Erro	r	11.4	50 kHz	OBW P	ower		99.00 %		0 Hz		
x dB Ban	dwidth		9.92	3 MHz	x dB		-	26.00 dB				
(CIN)							_	11115				

## Band4\_10MHz\_64QAM\_50\_0\_MidCH20175-1732.5

A Coperations	there + + + + + + + + + + + + + + + + + +	-	1.0	ese attri		ALISN-NUTS	000-05-43-05	MAas 15, 2010	32.00		
Center Fr	eq 1.732500000	GHz MFGain:Lnw	Center F	req: 1,73250 e Run	AvgiHold		Radio Std	None	Frequency		
10 dB/div	Ref Offset 13.9 dB 0 dB/div Ref 30.00 dBm og										
200 100		mundand	and the second			~			Center Freq 1.732500000 GHz		
-10 D	1					1			-		
-30.0								magnetur			
Center 1.3			#VI	BW 6201	Hz	11		n 20 MHz ep 1 ms	CF Step 2.000000 MHz		
Occup	led Bandwidt	971 MH	17	Total P	ower	24.	3 dBm		Auto Mar		
	Transmit Freq Error 5.126 x dB Bandwidth 9.914 M		Hz OBW Power			99.00 % -26.00 dB			Freq Offset 0 Hz		
ANING (						=1×1	05				

## Band4\_10MHz\_64QAM\_50\_0\_HighCH20350-1750

	cent Analyzer - Occupied 87W										
Center Fre	g 1.750000000	Trip	ter Freq: 1,750000000 Free Run Avi ten: 30 dB	3Hz gHald: 60/60	Radio Std: None Radio Device: BT	Frequency					
10 dB/div											
200 100 0.00		-		mannar		Center Fred 1,750000000 GHt					
10 D	manne			1	-						
30.0 48.0											
60.0 Center 1.75					Span 20 P						
Res BW 2		_	#VBW 620 kHz		Sweep 1	ms 2.000000 MH					
Occupi	ed Bandwidt	h 0048 MHz	Total Powe	r 29.	4 dBm	Freq Offset					
	Transmit Freq Error -2.382 x dB Bandwidth 9.960		OBW Powe		9.00 %	OH					
x dB Bar	ndwidth	9.960 MHz	x dB	-26	5.00 dB	1					
and a						1					

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## Band4\_15MHz\_QPSK\_75\_0\_LowCH20025-1717.5

Avenuent Speet	NIET ANNUAR - Occup	est DW		anautri		ALIGN-MUND		PH Aug 15, 2010	0.2.00
Center Fre	Frequency								
10 dB/div	0								
200		r	unperingent and	managar	i	-			Center Free 1.717500000 GH
0.00 -10.0		1				A		-	
30.0	-	ant.		-				Auguntano	
40 D 80 D		-		_					
-60.0 Center 1.7	18 GHz						Spi	an 30 MHz	
#Res BW				#VBW 910	kHz			eep 1 ms	CF Step 3.000000 MH
Occupied Bandwidth				Total	ower	31.	2 dBm		Auto Ma
				ower		9.00 % .00 dB		Freq Offse 0 H	
80							8		

### Band4\_15MHz\_QPSK\_75\_0\_MidCH20175-1732.5

Avenue for	treet Analyzer - Occupied B	W)							02.00	
	Pit at 1250 C 2010 C 20									
10 dB/div										
200 100		presentation	man and an and a second				-		Center Free 1.732500000 GH	
0.00 -10.0						1				
200	in never t		-			1	whether	mmm	1.0.00	
-40.0			-		-	-		-		
-60.0 Center 1.7	222 CH2			_			Pn	an 30 MHz	-	
#Res BW			#VB	N 910 k	Hz	_		eep 1 ms	CF Step 3.000000 MH	
Occup	led Bandwid		Total P	ower	31	.2 dBm		Auto Mar		
Transm	1: hit Freg Error	Hz I	OBW P	ower		99.00 %		Freq Offset 0 Hi		
	x dB Bandwidth 14.81 M						5.00 dB			
(celle							ue.			

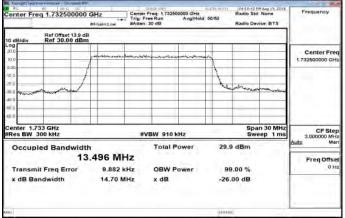
## Band4\_15MHz\_QPSK\_75\_0\_HighCH20325-1747.5

PL	No. D GC 14	5 1	T	3153.210		4210% aUTO		PH Aug 15, 2010				
Center Fre	iq 1.7475000		Trig	er Freq: 1,74750 Free Run n: 30 dB	0000 GHz AvgiHold	50/50	Radio St Radio De	d: None rvice: BTS	Frequency			
10 dB/div	Ref Offset 13.9 dB 0 dB/div Ref 30.00 dBm 90											
20.0 10.0		r	-	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		-			Center Free 1,747500000 GH			
9.00 10.0 20.0		J		-		to		5.291				
30.0	article a for							and the second sec				
sñ () 60.0												
enter 1.7 Res BW 3				VBW 910 k	Hz			an 30 MHz /eep 1 ms	CF Step 3.000000 MH			
Occupied Bandwidth 13,519 MHz				Total P	ower	31	.2 dBm		Auto Mar			
							99.00 % 5.00 dB		OH			
0						100	08					

#### Band4\_15MHz\_16QAM\_75\_0\_LowCH20025-1717.5

Average Space	HIT 200 0			1.0	ingraturi		AL05-1	100	a-10-20 PT	Aag 15, 2010	32.00
Center Fre	q 1.717500	000 G	Hz FGalmLow	Center 1 Trig: Fr	Center Freq: 1,717500000 GHz F Trig: Free Run AvgiHold >50/50					None Ice: BTS	Frequency
10 dB/div	Ref Offset 13.9 dB 10 dB/div Ref 30.00 dBm .eq										
20.0							pin		_		Center Free 1.717500000 GH
0.00 -10.0 -20.0		1	-	-	-						
30.0 Later mar	wanter		-		-			- news	ha tha first	wounder	
-40 0 -60 0		-							_		
Center 1.7 #Res BW 3				#V	BW 9101	Hz				n 30 MHz ep 1 ms	CF Step
Occupi	ed Bandw	ldth			Total Power				Bm		Auto Man
		Ηz							Freq Offse		
Transmit Freq Error 23.933 ki x dB Bandwidth 14.76 Mi						99.00			OH		
x dB Ba	ndwidth		14.76 N	Hz	x dB			-26.00	dB		
(R)								18105			-

## Band4\_15MHz\_16QAM\_75\_0\_MidCH20175-1732.5



## Band4\_15MHz\_16QAM\_75\_0\_HighCH20325-1747.5

	HANNING - OCCU										
Center Freq	1.747500	000 G	Hz FGalmitow	Center F			60/60	Radio S	td: None evice: BTS	Frequency	
10 dB/div	Ref Offset 13.9 dB dB/div Ref 30.00 dBm										
20.0	- arpenie and	manen			-		_	Center Fred 1,747500000 GH			
0.00 10.0 20.0		A					1				
48.0	den anna	1			-		1	-	water		
80.0 60.0								1			
Center 1.74 Res BW 30				#V	BW 9101	Hz			an 30 MHz veep 1 ms	CF Step 3.000000 MH	
Occupie	d Bandy				Total P	ower	2	2.1 dBm		Auto Mar	
13.474 Mi									Freq Offset		
	Freq Erro	or	9.878		OBW P	ower		99.00 %		0 H2	
x dB Ban	dwidth		14.84 N	Hz	x dB		.7	26.00 dB		1	
								1110			

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### Band4\_15MHz\_64QAM\_75\_0\_LowCH20025-1717.5

Avenue Seat	HT Story DC	W)	anautri	AU05-8070 124-11/287	HAag 15, 2010	028					
Center Fre	Frequency										
10 dB/div	Ref Officet 13.9 dB 0 dB/div Ref 30.00 dBm 										
200 100		for an and the second second		-		Center Fred 1.717500000 GH					
- 10 D	mentioned	/		handere	and the second						
40 D -80 D											
Center 1.7 #Res BW			#VBW 910 kHz		n 30 MHz eep 1 ms	CF Step 3.000000 MH					
Occup	led Bandwidt	th 3.525 MHz	Total Power	27.1 dBm		Auto Mar					
	Transmit Freq Error 6.232 x dB Bandwidth 14.80		OBW Power x dB	99.00 % -26.00 dB		OH					
Milici)				= FRIDE.							

### Band4\_15MHz\_64QAM\_75\_0\_MidCH20175-1732.5

A Construction of the local division of the	err Analyze - Occupied I	W/		avautt		urote etimo		PH Aug 15, 2010				
Center Fre	Frequency											
10 dB/div	Ref Officet 13.9 dB o dB/div Ref 30.00 dBm oor											
20.0 10.0		procession	man		- ann shirten	-			Center Freq 1.732500000 GHz			
-10 0 -20 0		/			_	1		4.1				
-40.0	manthant		-				- Comeran	manne				
-80 0 -60 0						1						
Center 1.73 #Res BW 3			#	VBW 910 ki	Hz			an 30 MHz eep 1 ms	CF Step 3.000000 MHz			
Occupi	ed Bandwid			Total Po	wer	30	.3 dBm		Auto Man			
	13.500 M       Transmit Freq Error     5.663       x dB Bandwidth     14.72			kHz OBW Power			9.00 % 5.00 dB		Freq Offset 0 Hz			
MIN						10.03	05					

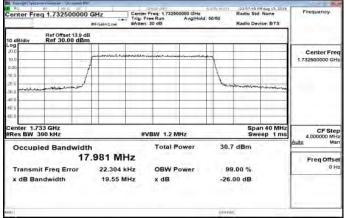
## Band4\_15MHz\_64QAM\_75\_0\_HighCH20325-1747.5

Representation	Nerri Analyzer - Occupied BV	2	313.11	ALIG5-8010	04:12:22 PH App 15:201	
Center Fre	Frequency					
10 dB/div						
.og 200		parameter	manunmana	any		Center Fred 1,747500000 GH;
0.00 10.0 20.0	1			1	genter and a genter a	
ui ú	and and some stand					<u>*</u>
sñ () s0.0						
enter 1.7 Res BW			#VBW 910 kHz		Span 30 MH Sweep 1 m	S 3.000000 MH
Occup	ied Bandwidt 13	h 8.501 MHz	Total Power	29.5	5 dBm	Freq Offset
	it Freq Error Indwidth	12.254 kHz 14.74 MHz	OBW Power x dB		9.00 %. 00 dB	011
0				=7×10		

### Band4\_20MHz\_QPSK\_100\_0\_LowCH20050-1720

RL I	q 1.720000		Hz	Center F	req 1,7200	00000 GHz AvgiHold		e euro	Radio St	PH Aug 15, 2018 d: None	Frequency
			TFGain:Low	#Atten: 3		CARLING.			Radio De	vice: BTS	
Ref Offset 13.9 dB 10 dB/div Ref 30.00 dBm Log											
200			minun	alpintrumbru			-	1			Center Free
0.00		-1	-	_	-	-	-	1	_	-	1,72000000 013
-10 D		1	-		-	-	++	1	-		_
20 0		~						here	- should	www.	
40.0		-				-					
sn n		-	-		-		++	-		-	
-60.0									-		
Center 1.72 #Res BW 3				#VE	3W 1.2 N	1Hz				an 40 MHz /eep 1 ms	CF Step 4.000000 MH
Occupi	ed Bandw	idth	C		Total P	ower		30.7	dBm		Auto Mar
		17.	971 MI	Hz							Freq Offset
Transmi	t Freq Error	1	26.089	Hz	OBW P	ower		99	.00 %		0 H
x dB Bar	ndwidth		19.59 N	IHz	x dB			-26.	00 dB		
600								=04102			

## Band4\_20MHz\_QPSK\_100\_0\_MidCH20175-1732.5



### Band4\_20MHz\_QPSK\_100\_0\_HighCH20300-1745

	rent Analyzer - Occupied BW/						
Center Fre	g 1.745000000	Trip	ter Freq: 1,745000000 GHz Free Run AvgiHol en: 30 dB	id: 50/50	Radio Std: Radio Devi		Frequency
10 dB/div	Ref Offset 13.9 dB Ref 30.00 dBm			2.00		= 0	
20.0		mannon	and all amore in the last of the and	in			Center Freq 1.745000000 GHz
-10 B				L		-	
- 30,0. -48 B						and the second	
-80.0	-		-				
Center 1.74 #Res BW 3			#VBW 1.2 MHz			ep 1 ms	CF Step 4.000000 MHz
Occupi	ed Bandwidt		Total Power	29	9 dBm		Auto Man
12.00		.959 MHz	-				Freq Offset
x dB Bar	t Freq Error ndwidth	5.012 kHz 19.62 MHz	OBW Power x dB		9.00 % 5.00 dB		

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## Band4\_20MHz\_16QAM\_100\_0\_LowCH20050-1720

Anterest Speet	Ar Deckport BV	1.					0.2.00
	ng 1.720000000	Trig	Freq: 1,720000000 GHz Free Run AvgiHol n: 30 dB	d: 50/60	Radio Sto		Frequency
10 dB/div	Ref Offset 13.9 dl Ref 30.00 dBm					()	
200 100		-			-		Center Freq 1,720000000 GHz
0.00 -10.0 -20.0	mound			1		Milmour	
-30.0							
-60.0 Center 1.7	2 GHz				Spa	in 40 MHz	
#Res BW	390 kHz	*	VBW 1.2 MHz			eep 1 ms	4.000000 MHz Auto Man
Occup	led Bandwidt 17	h .946 MHz	Total Power	29,	9 dBm		Freq Offset
	it Freq Error Indwidth	-4.733 kHz 19.53 MHz	OBW Power x dB		9.00 % .00 dB		0 Hz
Milo			_			_	

### Band4\_20MHz\_16QAM\_100\_0\_MidCH20175-1732.5

Anterest Space	there was a constant				ana utri		ALION 8010	015855	PH Ang 15, 2010	Frequency	
Center Fr	Center Freg 1.732500000 GHz Center Freg 1.73280000 GHz Radio Stor. None Baticalization Trig Pres Run AvgiHeld 5000 Radio Device BTS Ref Offset 1.9 4 BB										
10 dB/div											
200 100 0.00		T					2	-		Center Freq 1,732500000 GHz	
-10.0	and a second second second	1					tu	anderson	minu		
-40 D -50 D					-						
Genter 1.7 #Res BW				#1	/BW 1.2 M	ЛНZ			an 40 MHz eep 1 ms	CF Step 4.000000 MH3	
Occup	led Bandwi		971 MI	łz	Total F	ower	26	.9 dBm		Auto Mar Freq Offset	
1	Transmit Freq Error 1.09 x dB Bandwidth 19.47				kHz OBW Power			9.00 % 5.00 dB		0 Hz	
ANINO					-		1000	05	-		

## Band4\_20MHz\_16QAM\_100\_0\_HighCH20300-1745

Average Space	ALC: 100 - CO				3192.201		ALION MUTCH		PH Ang 15, 2010			
Center Fre	Frequency											
10 dB/div												
200 100	-	-	annum			minum				Center Freq 1.74500000 GHz		
0.00 -10.0					-							
-30,0	- marine	and a start	-	-	-	-	7454	harrison	sen ser strangen at	100		
-40 D -80 Q	-		-		-			-				
-60.0 Center 1.7		-							an 40 MHz	CF Step		
WRes BW	led Band	width		#	VBW 1.2 N Total P		29.	4 dBm	eep 1 ms	4.000000 MHz Auto Man		
			951 MI	100						Freq Offset		
	it Freq En Indwidth	or	-3.226 I 19.62 N		OBW P x dB	ower		9.00 % .00 dB		0 Hz		
Calify							=7.838	e	-			

#### Band4\_20MHz\_64QAM\_100\_0\_LowCH20050-1720

Averaget Sparte	Ar Seg D			1.00	ear ann		uros aun	a latestati	MAas 15 2010	322		
Center Fre	Frequency											
10 dB/div	og											
20.0		7	er			in the second	~	-		Center Free 1.720000000 GH		
9.00 -10.0 -20.0		1					1	under march the states				
-30.0 <b>-30.0</b> -40.0	a second and the seco								and the second			
-60.0		-										
Center 1.72 #Res BW 3				#VE	SW 1.2 M	Hz			eep 1 ms	CF Step 4.000000 MH		
Occupi	ed Bandwi	idth			Total P	ower	29	.8 dBm		Auto Mar		
		17.9	48 MH	Ηz						Freq Offse		
Transmi	t Freq Error		4.557 k	Hz	OBW P	ower	1	99.00 %		0 H		
x dB Bar	ndwidth		19.48 M	Hz	x dB		-2	6.00 dB		1		
WIRC							100	105				

## Band4\_20MHz\_64QAM\_100\_0\_MidCH20175-1732.5

Angeographic Space	Ar Story Cocupied By	W		11:22 - 11/1		A105 AUTO	last and the	PH App 15, 7010	0.2 8
Center Fre	Frequency								
10 dB/div									
200			animi onda		angel man	-			Center Freq 1.732500000 GHz
0.00 -10.0 -20.0		1				1			
-30.0 me. 1944	a garage and a start of the		-				- and a state of the	and the state of the state	
-60.0				-			-	-	
Center 1.7 #Res BW			#V	BW 1.2 N	IHz			an 40 MHz /eep 1 ms	CF Step 4.000000 MHz
Occup	led Bandwidt	th 7.963 MH	47	Total P	ower	29.	1 dBm		Auto Man
	it Freq Error Indwidth	-381 19.53 M	Hz OBW Power			99.00 % -26.00 dB			Freq Offset 0 Hz
wino							05		

## Band4\_20MHz\_64QAM\_100\_0\_HighCH20300-1745

	round Administration of Conditioned I	DAM.							
Center Fre	ig 1.74500000	0 GHz MFGaint.nw	Trig: 1	r Freq: 1,74500 Free Run n: 30 dB	AvgiHab	a >50/50	Radio De		Frequency
10 dB/div	Ref Offset 13.9 Ref 30.00 dB				2	2		-1	
200				the first and a second second					Center Fred 1.74500000 GHz
-10.0		1				T)			
-20 0		1				1			
-46.0	happenperent and the set			-		-		Mensulation	
-60.0									1
Center 1.7 #Res BW 3		_	10	VBW 1.2 M	IHz			eep 1 ms	CF Step 4.000000 MH
Occup	led Bandwid			Total P	ower	23	.3 dBm		Auto Man
	and the second se	7.951 N	VIHz						Freq Offse
	it Freq Error	3.298		OBW P	ower		99.00 %		0 Hz
x dB Ba	ndwidth	19.37	MHZ	x dB		-20	5.00 dB		1000
NUC .							105		

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# Band5\_1\_4MHz\_QPSK\_6\_0\_LowCH20407-824.7

PL PL	AT 25 G DC	arw.		Fred: 824,700		LIGS AUTO	09-43:02 P	MAag 15, 2010		
Center Fre	None tce: BTS	Frequency								
10 dB/div	Ref Offset 13.6 Ref 30.00 df		_					()		
200 100		m		~~~~	mmy				Center 824.70000	
-10 0 -20 0		1		-		M	nun .	Antin		
-40.0									11.	
Center 824 #Res BW 3			#	VBW 91 kH	Iz			an 3 MHz p 3.2 ms	CF 300.00	Step
Occupi	ed Bandwid	dth	MHz	Total P	ower	29,6	i dBm	101	Auto	Ma
Transmi x dB Ba	t Freq Error	-1.3	42 kHz 99 MHz	OBW P	ower		0.00 % 00 dB		FreqC	0 H
eino)						#7810	_	-		_

### Band5\_1\_4MHz\_QPSK\_6\_0\_MidCH20525-836.5

Septembine	All Star Cocused By	·		war attri		ALIGN AUTO		PH Ang 15, 2010	22.00
	eq 836.500000 N	MHZ MEGain:Low	Center F	req: 836,500	AvgiHole		Radio Sto Radio De	t: None	Frequency
10 dB/div	Ref Offset 13.6 dB Ref 30.00 dBm							-1	
200 100		Jam	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		m				Center Freq 836.500000 MHz
-10.0	- work	4	-			12m	m		
40 D -80 D									1
-60.0 Center 83 #Res BW			#V	BW 91 kH	1z	-		oan 3 MHz ep 3.2 ms	CF Step 300.000 kHz
Occup	led Bandwidt	- 0977 Mł	łz	Total P	ower	29.	7 dBm		Auto Man Freq Offset
	hit Freq Error andwidth	-1.439 k 1.305 M	Hz	OBW P x dB	ower		9.00 % .00 dB		OH
ANING							ues.		

## Band5\_1\_4MHz\_QPSK\_6\_0\_HighCH20643-848.3

Center Fre	PH Aug 15, 2018 d: None tvice: BTS	Frequency							
10 dB/div	Ref Offset 13.6 d Ref 30.00 dBn								
200		1 min	-	marine	m				Center Freq 848.300000 MHz
0.00 10.0 21.0	m	A				home	how	mornin.	
30,0 48.0 90.0								~~~	
60.0 Center 841	8.3 MHz						S	pan 3 MHz	CF Step
Res BW	30 kHz led Bandwidt	h	#VI	Total P	-	29	Swe 9 dBm	ep 3.2 ms	300.000 kHz Auto Man
Occup		1039 M	Hz			20.0 0511			Freq Offset
	it Freq Error Indwidth	312 1.320 M	Hz MHz	OBW P	ower		9.00 %. .00 dB		0 Hz
80						=7×10	5	-	

#### Band5\_1\_4MHz\_16QAM\_6\_0\_LowCH20407-824.7

Center Fre	Frequency						
10 dB/div							
200 100 0.00		June	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~			Center Free 824.700000 MH
-18 B	10	4	_	h			
-30,0	- a man						-
-60.0 Center 824					Spi	an 3 MHz	CF Step
#Res BW 3	10 kHz		#VBW 91 k	Hz	Swee	p 3.2 ms	300.000 kH
Occupi	ed Bandwidt	h	Total F	ower	28.6 dBm		Auto wan
	1.	1033 MHz	z				Freq Offset
Transmi	t Freq Error	1.725 kH	Z OBW F	ower	99.00 %		0 Hz
x dB Ba	ndwidth	1.303 MH	z xdB		-26.00 dB		-
				_	18105		

## Band5\_1\_4MHz\_16QAM\_6\_0\_MidCH20525-836.5

A Supermit Space	Ar Story Cockbeel By		anauni			PH App 15, 2018					
	enter Freq 836.500000 MHz enter Freq 836.500000 MHz fig Freq Ran AvgHold 5040 afGeinLow Addition 2000 MHz Radio Device: BTS Radio Device: BTS										
10 dB/div											
200 100		-	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	m			Center Freq 836.500000 MHz				
-10 0 -20 0	mannen	A		m	menne	- manual	-				
-48 D -50 D						A. Succession	14.4				
Center 83 #Res BW			#VBW 91 ki	Hz		oan 3 MHz ep 3.2 ms	CF Step 300.000 kHz				
Occup	ied Bandwidt 1.	h 1056 MHz	Total F	ower 28	3.8 dBm		Auto Man Freg Offset				
	it Freq Error indwidth	-1.618 kH 1.311 MH	OBW F		99.00 %. 6.00 dB		0 Hz				
WIRO				-	que		-				

### Band5\_1\_4MHz\_16QAM\_6\_0\_HighCH20643-848.3

	An Occupied By	Ν.	ana wi	A105 H				2 24		
Center Fre	BL ar 100 00 MHz pritor Freg 848.300000 MHz strGeinLaw Argina Carter Streg 848.300000 MHz strGeinLaw Argina Carter Streg 848.30000 MHz Radio Device BTS									
10 dB/div	Ref Offset 13.6 d Ref 30.00 dBn					-1				
200		man	w	runny			Cente 848.3000	er Freq od MHz		
0.00 -10.0 -20.0	- man on	4		X	- verselwand	A.A. 11				
-30.0 -40.0 -50.0						1. 200				
Center 848	3 MH2					an 3 MHz				
#Res BW 3			#VBW 91 ki	Hz		p 3.2 ms	300.0	F Step		
Occupi	ed Bandwidt		Total F	ower 2	28.9 dBm		Auto	Man		
	1.	1041 MH	z				Freq	Offset		
Transmi	t Freq Error	557 H	Z OBW P	ower	99.00 %		1	0 Hz		
x dB Bar	adwidth	1.321 MH	iz x dB		26.00 dB					
							-	_		

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### Band5\_1\_4MHz\_64QAM\_6\_0\_LowCH20407-824.7

Averagent Speet	HIT 200 DC	S	anastri	ALTON-BUT	1 09-45134 PM Au	32	2
Center Fre	BTS						
10 dB/div	-0						
200-000-000		1 mm		non		Center F 824.700000	
-10.0	1			1 mg			
-30.0	-von-mont				man	ange after	
Genter 824							
#Res BW			#VBW 91 kH	z	Sweep	300.000	<b>kH</b>
Occup	led Bandwidt		Total P	ower 29	.1 dBm	Auto	Mar
		0990 MH2				Freq Off	
	it Freq Error Indwidth	1.566 kH 1.296 MH			99.00 % 6.00 dB		0.11
Celler				ine	iues		_

#### Band5\_1\_4MHz\_64QAM\_6\_0\_MidCH20525-836.5

Anterest Space	Hr Decupied	DW/		avaut		ALTON AUTO	00-40 20 8	HAas 15, 2018	Frequency		
	enter Freg 836.500000 MHz Center Freg 836.500000 MHz Radio Std: None Trig Freg Radio Augustald: 50:50 Radio Device: BTS										
10 dB/div	Ref Offset 13.6 Ref 30.00 dB		_					-1			
200 100 020				m-m-m	m				Center Freq 836.500000 MHz		
-10.0	mon	~				1 m	m	waamay ha	-		
-46 D -80 D									1.		
Center 83 #Res BW				VBW 91 kH	łz			an 3 MHz p 3.2 ms	CF Step 300.000 kHz		
Occup	led Bandwid	.1063 N	Hz	Total P	ower	28.	8 dBm	1.1	Auto Man Freg Offset		
	it Freq Error Indwidth	1.078 1.316	kHz	OBW P x dB	ower		9.00 % .00 dB		0 Hz		
ANIRO.				-		=7×34	e	-	-		

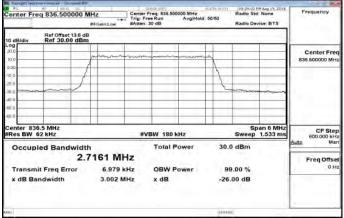
#### Band5\_1\_4MHz\_64QAM\_6\_0\_HighCH20643-848.3

PL:	their Analyse Occupe	× 1	10.00		a near stir		ALLOS ALLTO		MAng 15, 2018	F
Center Freq 848,300000 MHz Center Freq 848,300000 MHz Radio Std: None Trig: Free Run AvgiHold: 50/50 Radio Device: BTS Redin_triw #Atten: 30 dB Radio Device: BTS										Frequency
10 dB/div										
20.0 10.0		-	part	m		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				Center Freq 848.300000 MHz
0.00 10.0 20.0		www				-	m			
30.0							~	toman	-n-n	
60.0		_		-				-	-	
enter 84 Res BW				#1	BW 91 kH	Iz			an 3 MHz p 3.2 ms	CF Step 300.000 kHz
Occup	led Bandw				Total P	ower	28.	9 dBm		Auto Man
		1.10	54 Mł	łz						Freq Offset
	nit Freq Error andwidth		-2.492   1.312 N		OBW P	ower		9.00 % .00 dB		0 Hz
iko)							#F#10	е	-	

#### Band5\_3MHz\_QPSK\_15\_0\_LowCH20415-825.5

PL 400 LOD 400 000 MHz Center Freq 825.50000 MHz 400 LOD 400 Red 534 Rome Center Freq 825.500000 MHz 535 0000 MHz 805 00000 MHZ 805 0000 MHZ 805 00000 MHZ 805 0000 MHZ 805 00000 MHZ 805 0											Frequency	
200 200 0.00		r				-m-m	7					enter Freq 500000 MHz
		/						F	- Good and and	Stra Martin		
-40 0 -60 0		_										
Center 825 #Res BW 6		_		#VB	W 180 P	Hz		-0		an 6 MHz 1.533 ms		CF Step
Occupi	ed Bandw		94 MHz		Total P	ower	3	29.8	dBm		Auto	Man Treg Offset
Transmi x dB Bar	t Freq Error ndwidth		4.319 kH 3.005 MH		OBW P x dB	ower			.00 %. 00 dB		1	0 Hz
unc.								Dates.		-		

## Band5\_3MHz\_QPSK\_15\_0\_MidCH20525-836.5



### Band5\_3MHz\_QPSK\_15\_0\_HighCH20635-847.5

	sent Analyzer - Occupied 574					PH App 15, 2018	
Center Fre	q 847.500000 M	Trig	er Freq: 847.500000 MHz Free Run AvgiHal m: 30 dB	q: 847.500000 MHz Run Avg Hold: 50/50			Frequency
10 dB/div	Ref Offset 13.6 dl Ref 30.00 dBm					0	
-og 200		mmmmm	mannin	-			Center Free 847.500000 MH
0.00 10.00 20.00	mound			1			
30.0.							
eo.o.							
Center 847 Res BW 6			VBW 180 kHz		Sweep	an 6 MHz 1.533 ms	000.000 Krs
Occupi	ed Bandwidt		Total Power	30.	2 dBm		Auto Mar
	2.	7122 MHz					Freq Offset
	t Freq Error	-1.303 kHz	OBW Power		9.00 %		0 Ha
x dB Bar	ndwidth	3.031 MHz	x dB	-26	.00 dB		1
21							

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### Band5\_3MHz\_16QAM\_15\_0\_LowCH20415-825.5

A Coperations	Mr Occupied By	N.	313.00	ALION-AUTO		MAag 15, 2018	0.2.00
Center Fr	None vice: BTS	Frequency					
10 dB/div							
20.0 10.0 0.00 -10.0	, ,		manne m	~			Center Fre 825 500000 MH
20 0 -30,0 -40 0 -80 0				1	مغربه والمعالم		1
-60.0 Center 82 #Res BW		<u>    </u> ,	VBW 180 kHz			an 6 MHz 1.533 ms	CF Step 600.000 kH
Occup	led Bandwidt 2.	h 7178 MHz	Total Power	28.9	dBm		Auto Ma Freq Offse
	hit Freq Error andwidth	5.573 kHz 2.999 MHz	OBW Power x dB		.00 % 00 dB		0H
Wilko				=78105	0		-

# Band5\_3MHz\_16QAM\_15\_0\_MidCH20525-836.5

Center Fre	Frequency								
10 dB/div	Ref Offset 13.6 dl Ref 30.00 dBn							- 0	
200 100 0.00 -10.0 -20.0	]	mm		a		7			Center Free 836.500000 MH
30 0 Articleum 40 0 60 0							abra		
Center 83 #Res BW			#VI	BW 180 k	Hz			an 6 MHz 1.533 ms	CF Step 600.000 kH
Occup	ied Bandwidt 2.	h 7046 MH	Iz	Total P	ower	28	8.9 dBm		Auto Mar
	it Freq Error Indwidth	2.171 ki 3.005 M		OBW P x dB	ower		99.00 % 6.00 dB		0 H
eika)						100	105		-

## Band5\_3MHz\_16QAM\_15\_0\_HighCH20635-847.5

Center Fre	q 847.50000	0 MHz	Trig: I	Freq: 847.500	AvgiHald	110% NUTO	Radio Str		Frequency		
		#FGainLow	#Atter	: 30 dB	1.0		Radio De	vice: BTS	_		
10 dB/div		Ref Offset 13.6 dB Ref 30.00 dBm									
.og 20.0			~~~~~		-			-	Center Fred		
10.0		1	-			1			847.500000 MH		
10.0		4		-	_	1					
0.0	mound			-		Two	-	unna			
0.0							1				
si o'											
60.0	-	-	-	-			-				
enter 84				VBW 180 k				an 6 MHz 1.533 ms	CF Step		
			*					1.533 ms	600.000 kHz		
Occup	led Bandwi			Total P	ower	29	2 dBm				
		2.7314 N	IHZ						Freq Offset		
Transm	it Freq Error	-4.18	9 kHz	OBW P	ower	9	9.00 %		0 Ha		
x dB Ba	indwidth	3.004	MHz	x dB		-26	5.00 dB				
						1000	_				

#### Band5\_3MHz\_64QAM\_15\_0\_LowCH20415-825.5

Center Fre	Frequency									
10 dB/div										
200 100 020 -18 B -21 B		1	~~~~~	ning minum Wi	****	ni Annin	~			Center Fre 825 500000 MH
-30.0 -40.0 -80.0 Center 825		-1							an 6 MHz	
#Res BW 6				1	VBW 180	kHz			1.533 ms	
Occupi	led Bandv		098 1	MHz	Total	Power	2	8.9 dBm		Auto Ma
Transmi x dB Ba	it Freq Erro ndwidth	or		9 kHz 2 MHz	OBW I	Power		99.00 %. 26.00 dB		0H
uiio)							-	#105		

# Band5\_3MHz\_64QAM\_15\_0\_MidCH20525-836.5

0.2.2	HAas 15 2010		#194 MITC		a n.a			CALIBRING BYVY	Alt I se o	Averaget Speet			
Frequency	None	Radio Std	Center Freq: 838,500000 MHz			Center Trig: F	enter Freq 836,500000 MHz mFGalmit.ow						
		_							Ref Offset Ref 30.0	10 dB/div			
Center Freq 836.500000 MHz						minin	1		20.0 10.0 0.00 -10.0				
	man	18-0-0	7							-200 -300			
CF Step 600.000 kHz	an 6 MHz 1.533 ms			kHz	/BW 180	#				Center 83 #Res BW			
Freq Offset	29.0 dBm						pled Bandwidth 2.7249						
0 Hz		99.00 % -26.00 dB		Power	OBW F		1.368 I 3.016 M	or	it Freq Err ndwidth				
-	-	15								CHINA			

### Band5\_3MHz\_64QAM\_15\_0\_HighCH20635-847.5

RE	PL         IF         Sign Cc         Sign Cc<											ency			
Center Fre	q 847.5000		Z FGalistaw						Radio Std		. code				
10 dB/div	Ref Offset 13 Ref 30.00		_							-1	1				
.0g 200 100		-	- when in		maini	main	2					ter Free			
0.00 10.0 20.0	minunger	1		-	-			In	winner	- Marina					
30.0. 48.0 90.0					-			-							
center 847	5 MHz								- Cri	an 6 MHz					
Res BW		-		#V	BW 180	kHz				1.533 ms	600	CF Step			
Occupi	ed Bandw	idth			Total F	ower		29.1 dBm		Auto	Mat				
		2.7219 MHz				ЛНz		9 MHz							q Offse
	Transmit Freq Error					99.00 %					0 H				
x dB Ba	ndwidth		3.016 M	Hz	x dB			-26.0	00 dB		1				

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# Band5\_5MHz\_QPSK\_25\_0\_LowCH20425-826.5

Avenue Seat	HIT 200 DC	N/	anastri	ALION-MUTCH	09:16:03 PH Aug 1					
	Center Freg 825.500000 MHz Trig: Free 825.500000 MHz After: 30 dB Radio Std: None Radio Std: None Radio Std: None Radio Std: None Radio Std: None Radio Std: None									
10 dB/div	Ref Offset 13.6 d Ref 30.00 dBr					-0				
200 100		Jana Maria	and the second s							
-10.0	1	2		1						
30.0 40.0 80.0	manna					- market				
Center 820					Span 10					
Res BW	led Bandwidt		#VBW 300 kHz Total Power 29.9		Sweep	1 ms Auto Ma				
occup		5177 MHz				Freq Offse				
			234 Hz OBW Power 5.053 MHz x dB			0 H				
60				#F#102		_				

#### Band5\_5MHz\_QPSK\_25\_0\_MidCH20525-836.5

Supermiting	Ar Story Cocupied By					4104 AUT		PH Aug 15, 2010	0.2.00		
	aq 836,500000 M	MHZ MEGalmLow	Center Fr Trig: Free	Senter Freq: 836.500000 MHz rig: Free Run AvgiHold: 50/50 Atten: 30 dB			Radio Str	t: None vice: BTS	Frequency		
10 dB/div	Ref Offset 13.6 dB Ref 30.00 dBm							0			
200								Center Free 836.500000 MH			
0.00 -10.0 -20.0	1					1					
30 0 30 0 40 0				-			-				
60.0									1		
Center 83 #Res BW		-	#VE	SW 300 K	Hz			an 10 MHz eep 1 ms	CF Step 1.000000 MH		
Occup	ied Bandwidt 4.1	d Bandwidth Total Power 30.0 dB 4.5368 MHz							.0 dBm		Auto Mar
			and the second			OBW P x dB	DBW Power 9 dB -26				OH
80						-	105		-		

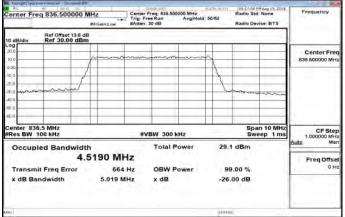
### Band5\_5MHz\_QPSK\_25\_0\_HighCH20625-846.5

	846.500000 M	MHz	Center Freq: 846,5		WTOP STUD	Radio Std	None	Frequency	
	1010.000000	#FGainLow	Trig: Free Run AvgiHold: 50/50 #Atten: 30 dB			Radio Device: BTS			
10 dB/div	()								
.0g 20.0 10.0		mon			2			Center Freq 846,500000 MHz	
00	1	1							
00					-	to the second		100.000	
10 10		1							
0.0			-						
	enter 846.5 MHz Span 10 MHz Res BW 100 kHz #VBW 300 kHz Sweep 1 ms							CF Step 1.000000 MHz	
Occupie	ed Bandwidt		Total Power 30.0 dBm 3 MHz		30.0 dBm		Auto Mar		
		5208 MH							
Transmit x dB Ban	Freq Error	-6.911 ki 5.042 Mi		Power		99.00 % -26.00 dB		0 H	
								-	
10					100.00	e	-	-	

#### Band5\_5MHz\_16QAM\_25\_0\_LowCH20425-826.5

Center Fred			Hz #Galmitow	Center F	Center Freq: 828.500000 MHz Trig: Freq: 828.500000 MHz Trig: Free Run AvgiHold: 50/50 #Atten: 30 dB			Radio Std: None Radio Device: BTS		Frequency											
10 dB/div	Ref Offset 1: Ref 30.00									0											
200 100		-			mahren		~				Center Freq 826 500000 MHz										
-\0.0		1						1													
-30.0		1						~	montenter	mon											
-60.0										1.1.1.1											
Center 826. #Res BW 10		-		#V	BW 300 P	Hz				eep 1 ms	CF Step 1.000000 MHz										
Occupie	d Bandw	d Bandwidth Total Power 29.2 dBm					Auto Man														
	4.5252 MHz		4.5		252 MHz		MHz						52 MHz				52 MHz		52 MHz		Freq Offset
Transmit	Freq Erro	r	1.045	kHz	OBW P	ower		99	.00 %		0 Hz										
x dB Ban	dwidth		4.994 1	WHz	x dB			-26.	00 dB												
NIC .																					

## Band5\_5MHz\_16QAM\_25\_0\_MidCH20525-836.5



### Band5\_5MHz\_16QAM\_25\_0\_HighCH20625-846.5

Center Fre	q 846.500000	MH2 MEGalmLow	Center Freq. 846.5 Trig: Free Run #Atten: 30 dB	ig: Free Run AvgiHold: 50/50			MAag 15, 2018 1: None vice: BTS	Frequency	
10 dB/div	Ref Offset 13.6 Ref 30.00 dE						-0		
200			Maharana ang sang sang sang sang sang sang sa		m			Center Fred 846.500000 MH	
10.0 20.0 pagenting	-	1			1		nom		
30,0, 48 D 90 D			_	-					
center 84	5 MH2					Sna	n 10 MHz		
Res BW			#VBW 300	kHz		Sw	eep 1 ms		
Occup	ed Bandwid	ith	Total	Power	29.3 dBm		Auto Mar		
	4	.5141 MH	z				Freq Offset		
Transm	it Freq Error	Freq Error -2.944 kH		KHz OBW Power 9		99.00 %		0 Ha	
x dB Ba	ndwidth	5.070 MH	tz x dB		-26	6.00 dB			
						_			

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### Band5\_5MHz\_64QAM\_25\_0\_LowCH20425-826.5

Averaget Space	AP 20 G DC		anadmi	ALIG5 aUTG		Apg 15, 2010	10 2 M
	rq 826.500000 N	Trig	r Freq. 826.500000 MHz Free Run AvgiHolo n: 30 dB	Radio Std: None Radio Device: BTS		Frequency	
10 dB/div	Ref Offset 13.6 dB Ref 30.00 dBm					= -0	
200							
-10 D -20 D	- /			1			
-30.0 -40.0 -40.0					- marine	~~~~	
Center 820 #Res BW			VBW 300 kHz			10 MHz ep 1 ms	CF Ste
Occup	led Bandwidth 4.5	5175 MHz	Total Power	29.0 dBm			Auto Ma
	it Freq Error ndwidth					OH	
eiro)				1783	ue.		

### Band5\_5MHz\_64QAM\_25\_0\_MidCH20525-836.5

Averaget Space	Hr Decapied BW			sa stri		ALION AUTO			02.00			
	eq 836.500000 M	MEGain:Low	Center Fr Trig: Fre	Center Freq: 836,500000 MHz Trig: Free Run Avg Hold: 50/50 #Atten: 30 dB			Radio Device: BTS		Frequency			
10 dB/div	Ref Offset 13.6 dB Ref 30.00 dBm					2		-1				
200			and a contraction	warnen		-			Center Free 836 500000 MHz			
0.00 -10.0 -20.0	1					X			-			
-30.0	an annument			-				and the other				
-60.0 Center 83	6 6 MH2						Pag	n 10 MHz				
#Res BW			#VE	SW 300 I	KHZ			eep 1 ms	CF Step 1.000000 MH			
Occup	Occupied Bandwidth 4.5265 Mi			Total Powe				ower	29.	2 dBm		Auto Man Freq Offset
	Transmit Freq Error 3.22 x dB Bandwidth 5.028		kHz OBW Powe		ower	99.00 % -26.00 dB			OH			
Milco				-	_	= Y # 3	ues.	-				

## Band5\_5MHz\_64QAM\_25\_0\_HighCH20625-846.5

Center Fre	aq 846,500000 I	Triber Tri	Center Freq: 846.500000 MHz Trig: Free Run AvgiHold: 50/50 #Atten: 30 dB				MANG 15, 2018 d: None wice: BTS	Frequency
10 dB/div	Ref Offset 13.6 dl Ref 30.00 dBn				2		()	
200			manna		-			Center Freq 846.500000 MHz
0.00 -10.0 -20.0	-				1	m		
30.0. 40.0			-	-				
-sn n -60.0								
Center 840 #Res BW		-	#VBW 300	kHz			an 10 MHz eep 1 ms	CF Step 1.000000 MHz
Occup	led Bandwidt	h 5196 MHz	Total F	ower	29.0 dBm			Auto Man
	ansmit Freq Error -4.		118 kHz OBW Power 99.00 % 29 MHz x dB -26.00 dB					Freq Offset 0 Hz
80						14		

#### Band5\_10MHz\_QPSK\_50\_0\_LowCH20450-829

Keywpitt Speatners Analyzer - Occupe	028				
Center Freq 829.00000	Radio Device: BTS	Frequency			
10 dB/div Ref 30.00 c			8. m <sup>2</sup>		
200 100 0.00	James		-	Center Free 829.000000 MH	
-10 0 -20 0 -30 0					
-60.0					
Center 829 MHz #Res BW 200 kHz		#VBW 620 kHz		Span 20 MHz Sweep 1 ms	CF Ste 2.000000 MH
Occupied Bandw					
Transmit Freq Error x dB Bandwidth	12.312 kH 9.956 MH		99.0 -26.0	00 %. 0 dB	Freq Offse 0H
(ORI)			=7#105		

## Band5\_10MHz\_QPSK\_50\_0\_MidCH20525-836.5



### Band5\_10MHz\_QPSK\_50\_0\_HighCH20600-844

Expeditions	HIRT ANNUAL OCCUPIED	07W/						
	aq 844.000000	MHz		er Freq: 844.000000 MHz Free Run Avg/Hold: 50/50			MAag 15, 2018 f: None vice: BTS	Frequency
10 dB/div	Ref Offset 13.6 Ref 30.00 dB						-0	
200		James	umininan					Center Free 844.000000 MH
9.20 10.0 20.0		/			1			
30.0 <b></b> 48.0	anentering	_				annen (	man	
80.0								
Center 844 Res BW			#VBW 63	20 kHz			eep 1 ms	CF Step 2.000000 MH
Occup	led Bandwid	ith	Tota	I Power	29	7 dBm		Auto Mar
	8	.9819 MH	9 MHz			Freq Offse		
Transm	it Freq Error	-7.694 k	Hz OBV	Power	9	9.00 %		OH
x dB Ba	indwidth	9.881 M	Hz x dE		-26	6.00 dB		
80						U.S.		

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## Band5\_10MHz\_16QAM\_50\_0\_LowCH20450-829

Section 21	Nert Analyze - Oct									
Center Fre	ng 829,000	0000 MH	tz FGalmLnw	Trig: 1	Freq: 829.000 Free Run :: 30 dB	AvgiHald	1>50/50	Radio Std		Frequency
10 dB/div	Ref Offset Ref 30.0						2.00		-0	
20.0	o manimum				-	main	-			Center Freq 829.000000 MHz
-10.0		1								
	mann	sel .					~		man	
-80 0			-	-				-		
Center 82 #Res BW				#	VBW 6201	KHZ			n 20 MHz eep 1 ms	CF Step 2.000000 MHz
Occup	led Band		887 M	Hz	Total F	ower	28	.8 dBm		Auto Man Freg Offset
Transmit Freq Error 4.169 kHz x dB Bandwidth 9.944 MHz		kHz			9.00 %. 5.00 dB		0 Hz			
ANIRO .							100	08		

### Band5\_10MHz\_16QAM\_50\_0\_MidCH20525-836.5

Averaget Space	err - Analyzer - Occupied BV			_				
	q 836,500000 I		Center Freq: 836.50 Trig: Free Run #Atten: 30 dB		>50/50	Radio Std: None Frequence Radio Device: BTS		
10 dB/div	Ref Offset 13.6 dl Ref 30.00 dBn						()	
20.0		Jennimumin	minimi	m	1			Center Freq 836.500000 MHz
-10 0 -20 0	an en andres				Z			
-30 0 2000000000000000000000000000000000							terp-untui	1
Center 836 #Res BW 2			#VBW 620	kHz			n 20 MHz eep 1 ms	CF Step 2.000000 MHz
Occupi	ed Bandwidt 9	h 0008 MH:		Power	29.0	dBm		Auto Man
and the second sec	Transmit Freq Error 7.972 x dB Bandwidth 9.952		z OBW	OBW Power				Freq Offset 0 Hz
ARIC	_				-7810	-		-

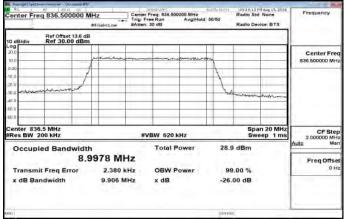
## Band5\_10MHz\_16QAM\_50\_0\_HighCH20600-844

A Average Space	Ar Occupied By	N.	ana 201	ALIGNAUNG	09-09-26 PH Aug 15, 201	
Center Fre	g 844.000000	Trig	ter Freq: 844.000000 MHz	d>50/50	Radio Std: None Radio Device: BTS	Frequency
10 dB/div	Ref Offset 13.6 d Ref 30.00 dBn			2.45		
200		mennih	and the second second second	-		Center Freq 844,000000 MHz
0.00 -10.0	/	1				
200 300	mand		_	1	and marked and and and and and and and and and an	
50.0						
Center 844			#VBW 620 kHz		Span 20 MH Sweep 1 m	
Occup	led Bandwidt		Total Power	28.9	dBm	Auto Mar
	8.	9800 MHz				Freq Offset
	Transmit Freq Error -7.401 kH k dB Bandwidth 9.861 MH		OBW Power			0 H
x 00 0a	illiuwioth	3.001 MHZ	XUB	-20.	oo ub	1
(cal)				=7×10	-	

#### Band5\_10MHz\_64QAM\_50\_0\_LowCH20450-829

P. Avgeogett.Spanter	AP 20 G DC	/	anaun	#104-HUTO	09:09:47 PH Aug	15 2018 E	
Center Fre	TS	Frequency					
10 dB/div	Ref Offset 13.6 dl Ref 30.00 dBn			2.00		-0	
200			Anna and				Center Fre 829.00000 MH
0.00		A		T.			
20 0 -30 0	mandread			1			
-80.0	Concession and the		_				
-60.0 Center 829	MHz				Span 20	MHz	CF Ster
#Res BW 2	00 kHz	1	VBW 620 kHz		Sweep	1 ms	2.000000 MH
Occupi	ed Bandwidt	h	Total Power	20.	9 dBm	e	Auto Ma
	8.	9736 MHz				- 1	Freq Offse
Transmit Freq Error 10.628 kHz		10.628 kHz	OBW Power	91	9.00 %		OH
x dB Bar	ndwidth	9.977 MHz	x dB	-26	00 dB		
eine)				= 1810			

## Band5\_10MHz\_64QAM\_50\_0\_MidCH20525-836.5



### Band5\_10MHz\_64QAM\_50\_0\_HighCH20600-844

	rei-Analyzer - Occupied B	W/								
	844.000000	1411 12.	Senter Freq: 844.00 Frig: Free Run Atten: 30 dB		50/50	Radio Std: None Frequency Radio Device: BTS				
10 dB/div										
.0g 20.0 10.0			n				-	Center Free 844.000000 MH		
9.00 10.0 20.0		A				-	-			
30.0 40.0	munant				1		anon-ma			
60.0 Center 844   #Res BW 20			#VBW 620	kHz			n 20 MHz eep 1 ms	CF Step		
	d Bandwid	th	Total		20.	6 dBm		2.000000 MH Auto Mar		
8.9745 MHz Transmit Freg Error -22.085 kHz		2	ower	99.00 %		Freq Offset				
x dB Ban		9.902 MH				.00 dB				
						_				

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## Band12\_1\_4MHz\_QPSK\_6\_0\_LowCH23017-699.7

Keyngett Spectromy Analyzer - On			2122 211	ALION AUTO		M Aug 16, 2018	
Center Freq 699,70	Frequency						
10 dB/div Ref Offse				10		()	
20.0				~~~			Center Free 699.700000 MH
20.0				The	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Andrea	
-30.0 4010							
60.0							
Center 699.7 MHz #Res BW 30 kHz			VBW 91 kHz			an 3 MHz p 3.2 ms	CF Step 300.000 kH
Occupied Band			Total Pow	er 29	.1 dBm		Auto Mar
	1,1053	MHz					Freq Offsel
Transmit Freq Error 971 x dB Bandwidth 1.296 N		971 Hz 96 MHz	OBW Power x dB		99.00 %. -26.00 dB		0 H
All College					05	_	

### Band12\_1\_4MHz\_QPSK\_6\_0\_MidCH23095-707.5

Averagett.Space	trient Analyzer - Occupied BW		i anautri	N1061		M Aug 10, 2018			
	enter Freg 707,500000 MHz Center Freg 707,50000 MHz Radio Stor. None #FGalns.Low #Atten: 30 dB Radio Device: BTS								
10 dB/div	Ref Offset 13.6 dB Ref 30.00 dBm					]			
200 100 0.00		Juman	~~~~~~	$ \rightarrow $			Center Freq 707.500000 MHz		
-10.0 -20.0 -30.0	and the second second			1	man	~~~~~			
-46.0 -50.0						_			
Center 70 #Res BW			#VBW 91 kt	łz		an 3 MHz p 3.2 ms	CF Step 300.000 kHz		
Occup	led Bandwidt	h 0998 MHz	Total P	ower	29.7 dBm	1.11	Auto Mar Freq Offset		
Transmit Freq Error -640		-640 Hz 1.298 MHz	OBW Power 99.00 %				0 Hz		
Niko					Pane.		-		

## Band12\_1\_4MHz\_QPSK\_6\_0\_HighCH23173-715.3

Asymptotic Spanter	err Analyzer - Occupied BW			ansastri				Aug 16, 2018	
	enter Freq 715.300000 MHz MF(SalinLow				AvgiHald	1: 50/50	Radio Sto	None	Frequency
10 dB/div	Ref Offset 13.6 dB Ref 30.00 dBm							]	
200				wyma	m				Center Fred 715.300000 MHz
9.00 10.0 20.0		A				In	minter	Lun J	
30.0 20000000000000000000000000000000000	mandsontation							Contraction and the	
60.0 Center 715.	3 MHz						Se	an 3 MHz	
Res BW 3	0 kHz		#V	/BW 91 kH			Swee	p 3.2 ms	CF Step 300.000 kH
Occupie	ed Bandwidti 1.(	0992 MI	Ηz	Total P	ower	29,	6 dBm		Freq Offset
		1.638 1.284 M		OBW P x dB	DBW Power 99.00 %. ( dB -26.00 dB			0 Hz	
80				-	_		e		

#### Band12\_1\_4MHz\_16QAM\_6\_0\_LowCH23017-699.7

RE INF	20 G DC			1012 -11/1		ALIGN BUTCH		AM Aug 16, 2018	Free	uency
Center Freq 699,700000 MHz Center Freq 699,700000 MHz Radio Std: None Trig: Free Run AvgiHold: 50/50 Radio Device: BTS										during
10 dB/div Re	of Offset 13.6 dB							-1		
200 200		June	inin m		many					enter Fred 00000 MH;
-10.0 20.0	martine	4				Jam	-m-m	man	-	
-40 0 -90 0										
-60 0 Center 699.7 M #Res BW 30 kH		1	#V	BW 91 kH	iz		Swe	oan 3 MHz ep 3.2 ms		CF Step
Occupied				Total P	ower	28.	6 dBm		Auto	Man
1.1058 MHz									FI	eq Offset
Transmit Freq Error -1.692 ki x dB Bandwidth 1.306 MH						9.00 % .00 dB		-	0 Hz	
600						10.010	0.95			

## Band12\_1\_4MHz\_16QAM\_6\_0\_MidCH23095-707.5

Averaget Spatter	err Analyzer - Occupied BW		319.31		#104 #UTG			22.00
Center Freq 707.500000 MHz     Center Freq 707.50000 MHz     Center Freq 707.50000 MHz     Center Freq 707.50000 MHz     Center Freq 707.50000 MHz     Redio Set None     Redio Device DTS								Frequency
10 dB/div	Ref Offset 13.6 dB Ref 30.00 dBm							
200 200 100 0.00		www.www.	mining			Center Freq 707.500000 MHz		
					J. Marriela			
-46.9 -60.0								
Center 707 #Res BW 3			#VBW 91	kHz		Sp Swee	an 3 MHz p 3.2 ms	CF Step 300.000 kHz
Occupi	ed Bandwidti 1.(	0979 MH		Power	28.	8 dBm		Auto Mar Freq Offset
		-752 1.310 M						0 Hz
MIRO					- 1930	15		-

### Band12\_1\_4MHz\_16QAM\_6\_0\_HighCH23173-715.3

	entitives/aer - Occupied 8	TW/					
Center Free	q 715.300000	The Tr	enter Freq: 715.30000 ig: Free Run Atten: 30 dB	0 MHz AvgiHold: 50/50	Radio Std: None Frequence Radio Device: BTS		
10 dB/div							
200 100		minim	man province and a	m			Center Fred 715.300000 MHz
vn n 20 0		N		No.			-
30.0 48.0 80.0	Concentration of the				ntrancia	ann	
60.0 Center 715	3 MHz				Snan	3 MHz	
#Res BW 3			#VBW 91 kHz		Sweep 3	3.2 ms	CF Step 300.000 kHz
Occupi	ed Bandwid	th	Total Pov	wer 28.	7 dBm	Au	ito Man
	1	.0999 MHz				- Г	Freq Offset
Transmit Freq Error 2.299 kHz		OBW Pov	DBW Power 99.00 %			0 Hz	
x dB Bar	ndwidth	1.305 MHz	x dB	-26	5.00 dB		
680					05	1	

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## Band12\_1\_4MHz\_64QAM\_6\_0\_LowCH23017-699.7

Avenue Space	enert Analyzer - Occupied BV			avarant		ALTON-AUTO		M Aug 16, 2018	221	2
Center Freg 699.700000 MHz Center Freg 699.700000 MHr Radio Std: None Trig: Free Run AvgiHold: 50/50 Radio Device: BTS Ref. 30 dB Radio Device: BTS								None	Frequency	
10 dB/div	Ref Offset 13.6 dl Ref 30.00 dBn							-1		
20.0 10.0		minim	rininin		min		-		Center Fr 699.700000 M	
0.00 -10.0 -20.0						1 mars	min			
-30.0	~							acres was		
-60.0				-						
Center 69 #Res BW			#\	VBW 91 kH	łz			an 3 MHz p 3.2 ms	CF St 300.000 k	tH
Occup	led Bandwidt			Total P	ower	28.	4 dBm		Auto N	Aar
	1.	1038 MI	Ηz						Freq Off	
Transmit Freq Error 345 x dB Bandwidth 1.317 f		Hz Hz	OBW Power x dB			99.00 % -26.00 dB		0	H	
WIRC						#F#10		_		

### Band12\_1\_4MHz\_64QAM\_6\_0\_MidCH23095-707.5

RE	NE 26.0, DC		areauti	ALLON-AUTO		M Aug 10, 2018	Frequency			
Center Fre	enter Freg 707,500000 MHz Trig: Free Run 500000 MHz Trig: Free Run 500000 MHz Radio Std: None Radio Std: None Radio Std: None Radio Device: BTS									
10 dB/div										
20.0		Iman	-una-montenecies	1	-	-	Center Free 707.500000 MH			
0.00 -10.0 -20.0	1	A		m	-					
40.0	manner					man				
50.0 60.0										
Center 70 #Res BW			#VBW 91 kHz			an 3 MHz p 3.2 ms	CF Step 300.000 kH			
Occup	ied Bandwidt	990 MHz	Total Power	28.	8 dBm	101	Auto Mar			
	Transmit Freq Error 4 x dB Bandwidth 1.313		Hz OBW Power		9.00 % .00 dB		Freq Offse 0 H			
00					e	_				

## Band12\_1\_4MHz\_64QAM\_6\_0\_HighCH23173-715.3

Avenuent Speet	HIT STORE DC	W)	2 ana ani	ALIGN-AUTO	09-25-56 AM Aug 1						
	enter Freq 715.300000 MHz Trig: Freq 715.300000 MHz #FGalin1.nw #Atten: 20 dB Radio 24/2 Radio 24										
10 dB/div											
200-00-000		June				Center Freq 715.300000 MHz					
-10 D	a mineral			12	2	_					
-30,0						~~~					
Center 71: #Res BW			#VBW 91 kHz		Span 3 Sweep 3.3						
Occup	led Bandwid	th 1023 MHz	Total Pov	wer 28.	7 dBm	Auto Man Freg Offset					
		-1.629 kHz 1.313 MHz	OBW Pov		9.00 % .00 dB	Freq Onset 0 Hz					
(inc)				- 78.76	8						

#### Band12\_3MHz\_QPSK\_15\_0\_LowCH23025-700.5

Averaget Speet	NI 20 G D			313.31		104 4010		M Aug 16, 2018	
Center Fre	Frequency								
Ref Offset 13.6 dB 10 dB/div Ref 30.00 dBm Log F									
200 200 100 0.00						1			Center Free 700.500000 MH
-10 0 -20 0 -30 0			_			1		~~~~~	
40 0 40 0 60 0			-	-		-			
Center 70				VBW 180 k	Hz	_		an 6 MHz 1.533 ms	CF Ste
Occup	led Bandwi	dth 2.7160	MHz	Total P	ower	29.	4 dBm	- 51	Auto Mar
Transmit Freq Error 4.939 x dB Bandwidth 3.017		9 kHz	OBW Pe x dB	OBW Power x dB		99.00 % 6.00 dB		Freq Offse 0H	
eiro i							05		

## Band12\_3MHz\_QPSK\_15\_0\_MidCH23095-707.5

Antipage Contraction	trient-Analyzer - Occupied BW	S		ar attri		#104 AUTO		AM Aug 10, 2018	32.0
	eq 707.500000 M	MHZ MFGaint.nw	Center Freq. 707.500000 MHz			Radio Sto		Frequency	
10 dB/div	Ref Officet 13.6 dB Ref 30.00 dBm								
-10.0 -10.0 -10.0 -20.0 -30.0 -40.0		Junio	يمين مر			Z			Center Freq 707.500000 MHz
-60.0 Center 70 #Res BW	62 kHz		#VB	W 180 k		30		oan 6 MHz 1.533 ms	CF Step 600.000 kHz Auto Man
Transm	Occupied Bandwidth 2.7158 Mi Transmit Freq Error x dB Bandwidth 3.001 M		kHz OBW Power			9	9.00 % 6.00 dB		Freq Offset 0 Hz
WilkO.				-	_		05		-

### Band12\_3MHz\_QPSK\_15\_0\_HighCH23165-714.5

PL:	eq 714.500000 M		ter Freq: 714.500000 MHz	ALLON AUTO	Radio Std	H Aug 16, 2018	Frequency	
conterrit	eq / 14.500000 /	Trig	Trig: Free Run Avg Hold: 50/50 #Atten: 30 dB			vice: BTS		
10 dB/div	Ref Offset 13.6 dB Ref 30.00 dBm					- 0		
200			mon	and the			Center Freq 714.500000 MHz	
9.00 -10.0 -20.0	1							
-30.0	man				min	man	1.00	
-80 0 -60.0			_					
Center 71 #Res BW			#VBW 180 kHz			an 6 MHz 1.533 ms		
Occup	ied Bandwidt	h	Total Power	29.	9 dBm		Auto Man	
	2.	7063 MHz					Freq Offset	
	hit Freq Error	6.635 kHz	OBW Power		9.00 %		0 Hz	
x dB Ba	andwidth	2.992 MHz	x dB	-26	.00 dB		1	
ulino i					14			

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### Band12\_3MHz\_16QAM\_15\_0\_LowCH23025-700.5

	ment Analyzer - Occupied B	W.				-	-				
Center Fre	Enter Freq 700.500000 MHz Center Freq 700.50000 MHz Freq 700.5000 MHZ Freq 700.50000 MHZ Freq 700.50000 MHZ										
10 dB/div	0										
20.0 10.0 0.00		/				2			Center Free 700.500000 MH		
10 0 20 0 30 0	mound					Ľ,		mour			
48 0 80 0 60 0				-			_				
Center 70				VBW 1801	kHz			oan 6 MHz 1.533 ms	CF Step 600.000 kH		
Occup	led Bandwid 2.	th 7174 N	IHz	Total F	ower	28	.6 dBm		Auto Mar		
Transmit Freq Error 7.353 x dB Bandwidth 2.994					99.00 % -26.00 dB			08			
eino i						1000	05	-			

#### Band12\_3MHz\_16QAM\_15\_0\_MidCH23095-707.5

Anterest Space	HI SHO DO	n		ing still		A104-4010	Inc. 17.15	M Aug 16, 2018	
	Center Freq. 707.500000 MHz Center Freq. 707.500000 MHz Radio Std: None Trig: Free Run AvgHeld: 50/50 Radio Device: BTS								Frequency
10 dB/div	Ref Offiset 13.6 dB 10 dB/div Ref 30.00 dBm Log								
20.0 10.0 0.00 -10.0	mm		-unununtur	m	~~~^	1		m	Center Freq 707.500000 MHz
48.8 -50.0 Center 70	7.5 MHz		111	BW 1801				an 6 MHz 1.533 ms	CF Step
	Res BW 62 kHz Occupied Bandwidth			Total Power			.8 dBm	1.000 1118	600.000 kHz Auto Man
	2.7093 N Transmit Freq Error -1.862 x dB Bandwidth 3.014		kHz OBW Power		99.00 %. -26.00 dB			Freq Offset 0 Hz	
CRIM						100	05		-

## Band12\_3MHz\_16QAM\_15\_0\_HighCH23165-714.5

Center Fre	eq 714.500000		enter Freq: 714.50	0000 MHz	ALTON AUTO	Radio Std	MAug10, 2018 None	Frequency	
			Trig: Free Run Avg Hold: 50/50 #Atten: 30 dB			Radio De	vice: BTS		
10 dB/div	Ref Offset 13.6 d Ref 30.00 dBr						0		
20.0		man	man		~			Center Freq 714,500000 MHz	
0.00		A			1				
20 0	mand				1	mon	man		
48.0			-	-		-		·	
60.0						-			
Res BW			#VBW 180	kHz			an 6 MHz 1.533 ms	CF Step 600.000 kHz	
Occup	ied Bandwidt		Total F	ower	29	.0 dBm		Auto Mar	
	2.	7089 MHz						Freq Offset	
	hit Freq Error	4.254 kHz 3.009 MHz		ower		99.00 % 6.00 dB		0 H1	
80					100	105		-	

### Band12\_3MHz\_64QAM\_15\_0\_LowCH23025-700.5

RE	0.05				reg: 700 500		CTOP STUD	Radio Sto	M Aug 10, 2018	Fr	equency
Center Fre	Center Freq. 700.500000 MHz Trijs Free Run AvgiHald 50/60 #FGalmiLnw #Atten: 30 dB Radio Device: BTS										
Ref Offset 13.6 dB 10 dB/div Ref 30.00 dBm											
200		1		and the			1				Center Fred
-30,0	www.	1		_			1	man	and the second sec		
-40 0 -80 0 -60 0				_							
Center 700 #Res BW 6		-		#VE	3W 180 H	Hz	_		an 6 MHz 1.533 ms		CF Step 600.000 kH
Occupi	ed Bandw				Total P	ower	28	.6 dBm		Auto	Mar
		- T - T - T	126 MH	1.1	-		1.5			1.0	Freq Offse
x dB Ba	it Freq Errol ndwidth	r	5.227 k 2.979 M		OBW P x dB	ower		99.00 % 6.00 dB			
uter l								10.00			

## Band12\_3MHz\_64QAM\_15\_0\_MidCH23095-707.5

Averagent Speet	Martin - Occupied BV	0	- 28-2-11/1		#105-HUTG		AM Aug 10, 2018	
Center Fre	Frequency							
10 dB/div	()							
20.0 10.0 0.00		mannaman	milininer		7			Center Freq 707.500000 MHz
-10 0 -20 0 -30 0	monand				1	mann	min	
-46.9	_		_					
Center 70 #Res BW			#VBW 180	kHz			oan 6 MHz 1.533 ms	CF Step 600.000 kH
Occup	led Bandwidt 2.	h 7151 MHz		Power	28.	8 dBm		Auto Mar Freq Offset
		2.850 kHz 2.992 MHz			99.00 % -26.00 dB			0 Hz
wino					-1836	15		-

### Band12\_3MHz\_64QAM\_15\_0\_HighCH23165-714.5

P. Sayaget Spanter	ert Analyzer - Occupied By	/							-		
	Enter Freq 714.5000000 MHz Center Freq 714.50000 MHz Relation 2010 File Relation Freq 714.50000 MHz Relation 2010 File Relation Freq Freq 714.5000 MHz Relation 2010 File Relation Freq Freq Freq Freq Freq Freq Freq File Relation Fre										
Ref Offset 13.6 dB 0 dB/div Ref 30.00 dBm 											
200 100 0.00		Jumm				1				enter Freq 500000 MHz	
10 0 20 0 30 0	mont		-	_		1	mana	-			
48 0 -80 0 -60 0			-				-				
Center 714. #Res BW 6			#VBW	/ 180 k	Hz	_	Sweep	an 6 MHz 1.533 ms		CF Step	
Occupie	ed Bandwidt			otal P	ower	28.	9 dBm		Auto	Man	
Transmit x dB Bar	Freq Error	7179 MH -1.326 kl 3.007 Mi	Hz C	dB	ower		9.00 % .00 dB			req Offset 0 Hz	
i.i.											

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## Band12\_5MHz\_QPSK\_25\_0\_LowCH23035-701.5

RE	NU 20 G DC		anaun	ALLON-ALLING		Aug 16, 2018	Frequency	
Center Fre	aq 701.500000 M	Trig	ter Freq: 701.500000 MHz Free Run AvgiHol en: 30 dB	d >50/50	Radio Std: I		risquency	
10 dB/div	Ref Offset 13.6 dB Ref 30.00 dBm	= -0						
200 100		m-vinnen	and the second second	2		_	Center Fre 701.500000 MH	
-10.0 20.0 000000								
-30.0. -40.0 -80.0			_		- marine	Service West	1.1	
60.0 Center 70							1	
#Res BW			#VBW 300 kHz	_		10 MHz p 1 ms	CF Ste 1.000000 MH	
Occup	led Bandwidt	h 5429 MHz	Total Power	29.	7 dBm		Auto Ma	
Transmit Freq Error 26.180		26.180 kHz 5.024 MHz	Hz OBW Power		9.00 % .00 dB		0 H	
80					e	_		

#### Band12\_5MHz\_QPSK\_25\_0\_MidCH23095-707.5

Average Contra	HI SHO DC	1.	ana diri	_	ALIGN AUTO	International Action	M Aug 16, 2018	
	eq 707.500000 I	MHz MFGainLow	Center Freq: 707.500000 MHz			Radio Std Radio Dev	None	Frequency
10 dB/div	Ref Offset 13.6 dB 10 dB/div Ref 30.00 dBm							
200 100 0.00 -10.0 -200			<b>~~</b> ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		Z	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	mun	Center Free 707 500000 MH
40 0 40 0 40 0 60 0								
Center 70 #Res BW			#VBW 30	0 kHz			eep 1 ms	CF Step 1.000000 MH
Occup	led Bandwidt 4.	Total Z	29.8 dBm 99.00 % -26.00 dB			Auto Ma		
	Transmit Freq Error -118 x dB Bandwidth 5.009 M					Hz OBW Power		OH
600					1003	05		

## Band12\_5MHz\_QPSK\_25\_0\_HighCH23155-713.5

Center Fre	ng 713.500000 l	MHz	Center Freq: 713.500000 MHz Trig: Free Run AvgiHold: 50/50 #Atten: 30 dB				Radio St	AM Aug 10, 2018 d: None svice: BTS	Frequency
10 dB/div	Ref Offset 13.6 d Ref 30.00 dBn					2.31		0	
200-00-000			ura majodiana	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		1			Center Freq 713.500000 MHz
-10.0	1 month	/	-			1			
-30.0						1	MAR	hope	1
-80 0									
Center 71			#V	BW 300 k	Hz			an 10 MHz /eep 1 ms	CF Step
Occup	led Bandwidt			Total P	ower	29	9.8 dBm		Auto Man
Transmit Freq Error 10.05			0.055 kHz OB		OBW Power x dB		99.00 % 6.00 dB		Freq Offset 0 Hz
citico						-	102		

#### Band12\_5MHz\_16QAM\_25\_0\_LowCH23035-701.5

Kayagitt Spathorn Analyzer - Occas	pred BW/	and the	A104-4010	09:57:45 AM Aug 10, 20	
Center Freq 701.5000	Frequency				
10 dB/div Ref 30.00					
200			~		Center Free 701.500000 MH
20.0	1		1	mmm	-
30.0. 48 D. 80 D.					~
Center 701.5 MHz		#VBW 300 kHz		Span 10 MH Sweep 1 m	
Occupied Bandy	vidth	Total Power	29.	1 dBm	Auto Ma
	FreqOffse				
Transmit Freq Error 22.122 k x dB Bandwidth 5.039 M				9.00 % .00 dB	OH
A OB Ballowidth	3.038 MP		-20		
(0)			=7410		1

# Band12\_5MHz\_16QAM\_25\_0\_MidCH23095-707.5

A Superstations	treat Analyzer - Occupied BW								
	eq 707.500000 N	Tr.	enter Freq: 707.500000 MHz (g: Free Run AvgiHold: 50/50 Atten: 30 dB			Radio Std: None Radio Device: BTS		Frequency	
10 dB/div	Ref Offset 13.6 dB 10 dB/diy Ref 30.00 dBm								
200 100 920 -10.0 -20.0			and a second					Center Freq 707.500000 MHz	
-48.0 -90.0									
Center 70 #Res BW			#VBW 300	kHz			eep 1 ms	CF Step 1.000000 MHz Auto Man	
	ied Bandwidt 4.	h 5176 MHz 2.140 kHz				0 dBm		Freq Offset	
		5.013 MHz			99.00 % -26.00 dB				
NERG				_	- 1810	e		-	

### Band12\_5MHz\_16QAM\_25\_0\_HighCH23155-713.5

	nerri-Aneryan - Occula								
Center Fre	q 713.5000		16.	enter Freq: 713.500000 MHz rig: Free Run AvgiHold: 50/50 Atten: 30 dB			Radio Std: Radio Devi		Frequency
Ref Offset 13.6 dB 0 dB/div Ref 30.00 dBm									
-og 20.0 10.0 9.00				and the second	m	-			Center Freq 713.500000 MHz
10 0 20 0		1				/	maland		-
40 0 90 0 60 0		_							
Center 713 Res BW				#VBW 300	) kHz			n 10 MHz ep 1 ms	CF Step 1.000000 MH
Occup	led Bandw		harren	4, 10,000	Power	29	.0 dBm		Auto Man
	4.5185 MH Transmit Freq Error 14.497 M x dB Bandwidth 5.017 M			OBW	Power	99.00 % -26.00 dB			Freq Offset 0 Hz

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### Band12\_5MHz\_64QAM\_25\_0\_LowCH23035-701.5

	niert-Analyzer - Occupied								0.2.00
Pic         arr         page         constraint         states and         states and <th< th=""><th>Frequency</th></th<>								Frequency	
10 dB/div	Ref Offset 13.6 Ref 30.00 di								
200		Janas		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	inarconten	1			Center Free 701.500000 MH
9.00 -10.0 -20.0		/				1			
-30,0. -46.0			-	-	_		-	mann	
-60.0					-	-	-		
Center 70 #Res BW				VBW 300 k	Hz			n 10 MHz ep 1 ms	CF Step 1.000000 MH
Occupied Bandwidth 4.5313 MH				Total Powe			9 dBm		Auto Ma
Transmit Freq Error 16.338 k x dB Bandwidth 4.986 M		38 kHz			99.00 % -26.00 dB			OH	
Wilko							05		

#### Band12\_5MHz\_64QAM\_25\_0\_MidCH23095-707.5

Avenuencies	there was a constant of the co	V		eg atri		A105 AUT		M Aug 16, 2018	0.2 2
Center Freq 707.500000 MHz Trig: Freq Run AvgiHold: 50/50 #ffGain_t.nw BAtter: 30 dB Radio De							None	Frequency	
10 dB/div	Ref Offset 13.6 dl Ref 30.00 dBn							= -0	
20.0 10.0 0.00	Johnm		mant		Ason A			Center Fred 707.500000 MHz	
-10 0 -20 0	mont					1	the construction	m.	
46.6 50.0				-	_				
Center 70 Res BW			#VE	BW 300 H	Hz			n 10 MHz eep 1 ms	CF Ster
Occup	led Bandwidt 4.	Total Power			28.8 dBm 99.00 % -26.00 dB			Auto Ma	
		-2.323 k 4.992 M						OH	
eina)						and the second s	105		

## Band12\_5MHz\_64QAM\_25\_0\_HighCH23155-713.5

PL Symphesister	telent Analyzer - Occupied	ØV/							
	eq 713.500000	MHz	Trig: I	Center Freq: 713.500000 MHz Trig: Freq: 713.500000 MHz Trig: Free Run AvgiHold: 50/50 #Atten: 30 dB			Radio Std		Frequency
10 dB/div	Ref Offset 13.6 Ref 30.00 dB							- 0	
200		James		mm		2			Center Freq 713.500000 MHz
9.00 -10.0 -20.0		1				1	-		-
-30,0			-				mann	monthe	
-80.0				-			-		
Center 71 #Res BW				VBW 300 k	Hz			n 10 MHz eep 1 ms	CF Step 1.000000 MHz Auto Man
Occup	led Bandwid	.5132	MHz	Total P	ower	29	.1 dBm		Auto Man Freq Offset
Transmit Freq Error 19.443 x dB Bandwidth 5.058			Hz OBW Power		99.00 % -26.00 dB			0 Hz	
(cally							102		

### Band12\_10MHz\_QPSK\_50\_0\_LowCH23060-704

Represent Spectromy Analyze - C						ALION AUT			020
EL         err         topo de topo de topode de topo de topode de topo de to									Frequency
Ref Offset 13.6 dB 10 dB/div Ref 30.00 dBm Log									
20.0						~			Center Free 704.000000 MH
-10.00 -10.00 -20.00						1	manun		
-30.0						-	- Maturian	- mainten	
-60.0									
Center 704 MHz #Res BW 200 kHz			#VBV	V 620 k	Hz			n 20 MHz ep 1 ms	CF Ste 2.000000 MH
Occupied Bandwidth Total Power 29.4 dBm 8.9649 MHz								Auto Ma	
Transmit Freq Error 35.813 kH x dB Bandwidth 9.820 MH				99.00 %			0 H		
610						100	105		

## Band12\_10MHz\_QPSK\_50\_0\_MidCH23095-707.5

Averagent Spect	Nerr Analyzer - Occupied B	1/							- 10 2 <b>2</b>
Center Freq 707.500000 MHz Center Freq 707.50000 MHz Center Freq 707.50000 MHz Radio Device: B15 Radio									Frequency
10 dB/div	Ref Offset 13.6 dB 10 dB/diy Ref 30.00 dBm								
20.0		/			havenor			Center Freq 707.500000 MHz	
#Res BW	Res BW 200 kHz Sveep 1								CF Step 2.000000 MHz Auto Man
Occupied Bandwidth 8.9706 M Transmit Freq Error 14.009 x dB Bandwidth 9.860 M		kHz	Hz OBW Power		24.3 dBm 99.00 % -26.00 dB			Freq Offse 0 Hi	
(CRIM				-	_	= ¥ = 3	05		-

### Band12\_10MHz\_QPSK\_50\_0\_HighCH23130-711

Keywatt Spectroent Analyze - Occupied By	V ·		ALION-4010			
Center Freq 711.000000 I	Trig	Freq: 711.000000 MHz Free Run AvgiHold n: 30 dB	Radio Std Radio Dev		Frequency	
Ref Offset 13.6 d IO dB/div Ref 30.00 dBn						
00 20.0 10.0 9.00	provention		-			Center Fred 711.000000 MHz
10.0 20.0				-		
80 0 10 0 10 0					- mark	
Center 711 MHz Res BW 200 kHz	11 1	VBW 620 kHz			n 20 MHz ep 1 ms	CF Step
Occupied Bandwidt		Total Power	29.	2 dBm	op i ma	2.000000 MHz Auto Man
9.	0187 MHz					Freq Offset
Transmit Freq Error x dB Bandwidth	2.372 kHz 9.937 MHz	OBW Power x dB		9.00 % .00 dB		0 Hz

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### Band12\_10MHz\_16QAM\_50\_0\_LowCH23060-704

Augustitutes	NT Store Document BY	N.	and the	witch sum			0.2.2
Center Fre	M Aug 16, 2018 None toe: BTS	Frequency					
10 dB/div	()						
200							Center Free 704.000000 MH
0.00 -\0.0 -20.0	munant			L	Antophication		
-30,0 -40					and the second	- notices	
-60.0			_				
Center 70 #Res BW			#VBW 620 kH	z		n 20 MHz ep 1 ms	CF Step 2.000000 MHz
Occup	led Bandwidt 8	h 9585 MHz	Total Po	wer 28	.2 dBm		Auto Mar
		33.340 kHz 9.813 MHz	OBW Por x dB		99.00 % 6.00 dB		Freq Offset 0 Hz
wiici					105		

#### Band12\_10MHz\_16QAM\_50\_0\_MidCH23095-707.5

Center Fre	Frequency							
10 dB/div	Ref Offset 13.6 dB Ref 30.00 dBm				2.00		1	
20.0 10.0		-	manakara	we what a new				Center Freq 707 500000 MHz
-10.00 -10.0 -20.0 -30.0	-				X		ann ann a	
-80.0 -60.0 Center 707							- 20 Mile	
#Res BW 2			#VBW 620	kHz			eep 1 ms	CF Step 2.000000 MH
Occupi	ed Bandwidth 8.9	636 MH		Power	21	.3 dBm		Auto Man Freq Offset
	it Freq Error ndwidth	7.359 kH 9.801 MH		Power		9.00 % 5.00 dB		0 Hz
NING					1003	05	-	-

## Band12\_10MHz\_16QAM\_50\_0\_HighCH23130-711

September 1	ment Analyzer - Occupied BY	N.						
Center Fre	eq 711.000000		Center Freq: 711.000000 MHz Frig: Free Run AvgiHold: 50/60 #Atten: 30 dB			Radio Device: BTS		Frequency
10 dB/div	Ref Offset 13.6 d Ref 30.00 dBr							
200 100		minine		anina	~			Center Freq 711.000000 MHz
-10.0	mannen				L	amarian		-
46 0 							- Marchand	
Center 71			#VBW 620	kHz			n 20 MHz ep 1 ms	CF Step
Occup	led Bandwidt 9	h 0352 MH		ower	28.	5 dBm		Auto Man
	dit Freq Error Indwidth	-3.679 kH 9.958 MH	Z OBW	ower		9.00 %. 5.00 dB		Freq Offset 0 Hz
(celle						085		

#### Band12\_10MHz\_64QAM\_50\_0\_LowCH23060-704

Center Freg 704,000000 MHz Center Galaxies and Center Freg 704,000000 MHz Center Galaxies and Center Freg 704,000000 MHz Center Galaxies and Cente									Frequency
-10.0	- normalit	4		_	_	1	an a		_
-30.0							- Northie		
-60.0 Center 704				_				n 20 MHz	CFStep
#Res BW 2	200 kHz			620 k				ep 1 ms	2.000000 MHz Auto Man
Occupi	ed Bandwid			otal Po	ower	28.3	dBm		
		.9481 MH	51						Freq Offset
x dB Ba	it Freq Error ndwidth	39.066 kH 9.816 MH		dB dB	ower		00 dB		
						- 18162			

## Band12\_10MHz\_64QAM\_50\_0\_MidCH23095-707.5

A Supermitting	trient-Analyzer - Occupied B	W		100 100		#104 AUTO	(central)	AM Aug 10, 2018	328
	eq 707.500000	MHZ	Center F	Center Freq: 707.500000 MHz			Radio Sto Radio De	1: None	Frequency
10 dB/div	Ref Offset 13.6 c Ref 30.00 dB				0				
200 100									Center Fred 707.500000 MHz
- 10 D	1	4				X		Winymann	
-48 D -80 D	white we wanted								
Center 70		11	#VI	BW 620 k	Hz	11		an 20 MHz eep 1 ms	CF Step 2.000000 MH
Occup	ied Bandwid 8	th 9587 MI	Hz	Total P	ower	28	5 dBm		Auto Mar
			kHz OBW Power		99.00 % -26.00 dB			Freq Offsel	
Milo						10.01	05		

## Band12\_10MHz\_64QAM\_50\_0\_HighCH23130-711

	entriknen/ser - Occubend 874	Υ					100 A 100		
	PL         MIC Dec (M)         Center Freq. 711.000000 MHz         Center Freq. 711.000000 MHz         Radio Scit.sone           Inform Freq. 711.000000 MHz         Freq. 711.00000 MHz         Center Freq. 711.00000 MHz         Radio Device: B15								
10 dB/div									
200		for the second days	-	-			Center Fred 711.000000 MH;		
-10 0 -20 0	and	1		L	manan				
30.0. 48.0 80.0									
-60.0 Center 711	MH7				Span 2	0 MHz			
#Res BW 20			#VBW 620 kHz		Sweep	1 ms	CF Step 2.000000 MHz		
Occupie	ed Bandwidt	h	Total Power	28.	1 dBm		Auto Man		
	9.	0386 MHz					Freq Offset		
Transmit	Freq Error	1.319 kHz	OBW Power	9	9.00 %		0 Hz		
x dB Ban	dwidth	9.991 MHz	x dB	-26	.00 dB				
					-		-		

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# Band25\_1\_4MHz\_QPSK\_6\_0\_LowCH26047-1850.7

Avenues Seats	Nert Analyze - Occupied BW		312.00	Auge auro	1 45 25 PH Aug 16, 2018	020
Center Fre	Frequency					
10 dB/div						
200		monterior	emananany			Center Fre 1.850700000 GH
10.00 20.0 30.0		4		mo	n-sun un	
40 0 80 0						
Center 1.8 #Res BW			#VBW 91 kHz		Span 3 MHz Sweep 3.2 ms	CF Step 300.000 kH
Occup	led Bandwidth	017 MHz	Total Power	29.8 d	Bm	Auto Ma
	it Freq Error ndwidth	-212 Hz 1.341 MHz	OBW Power x dB	99.0 -26.00		Freq Offse 0 H
(calk				#7#108		

# Band25\_1\_4MHz\_QPSK\_6\_0\_MidCH26365-1882.5

RL I	NT DECLEMENT		Center Fred: 1.882		NUCE BUTCH		MAAg 16, 2018	Frequency	
Center Fr	eq 1.882500000	MFGainLow	AvgiHold				requercy		
10 dB/div	Ref Offset 13.9 dB 0 dB/div Ref 30.00 dBm 0 g								
20.0 10.0		provenen	-man	man				Center Fred 1 882500000 GH:	
20.0	man	1			for	Lan	man		
30.0 46.0 46.0									
Center 1.8			#VBW 91 k	Hz	-		an 3 MHz p 3.2 ms	CF Step 300.000 kHz	
Occup	led Bandwidth			Power	29.7	dBm		Auto Mar	
	1.0987 M       Transmit Freq Error     6       x dB Bandwidth     1.326		tz OBW	Power		99.00 %. 5.00 dB		Freq Offsel 0 Hz	
eino)					STATUS.		-		

## Band25\_1\_4MHz\_QPSK\_6\_0\_HighCH26683-1914.3

PL	NI SEA DC			near attri				PH Aug 16, 2010	Frequency
Center Fre	enter Freg 1.914300000 GHz Center Freg 1.914300000 GHz Radio Std: None Trig Free Run AvgiHold: 50/80 Radio Device: BTS								
10 dB/div									
20.0 10.0		min	human.	m	min		-		Center Fred 1.914300000 GHz
0.00 10.0 20.0		N	-			have	Mini	-	
48.0									
50.0									
enter 1.9 Res BW			#V	BW 91 kH	z			pan 3 MHz ep 3.2 ms	CF Step 300.000 kH
Occup	ied Bandwidti 1 (	h 0995 MH	17	Total P	ower	29,	9 dBm		Auto Mar
	it Freq Error ndwidth	-259 1.308 M	Hz	OBW P	ower		9.00 % .00 dB		Freq Offsel 0 H
0							15	_	

#### Band25\_1\_4MHz\_16QAM\_6\_0\_LowCH26047-1850.7

328	01:40:35 PH Aug 10, 2018	ALTON AUTO		1-31-31/r			Analyzer - Occupied BW	Augustit Spant		
Frequency	Radio Std: None Radio Device: BTS	Center Freg 1,850700000 GHz Center Freg: 1,850700000 GHz Radio Std: None								
Center Fre 1 850700000 GH		1	mont	-		m	09 no 00			
	-amonto man	J. S. Consult				1	winner	-10.0		
-	~							-30.0 ¥		
IZ CF Ste	Span 3 MHz	-			-		GHz	Genter 1.8		
300.000 kH	Sweep 3.2 ms	_	łz	BW 91 kH	#V		kHz	#Res BW		
Auto Ma	dBm	29.0	ower	Total P			Bandwidth	Occup		
Freq Offse					Hz	029 M	1.1			
0 H	9.00 %	99	ower	OBW P	kHz	1.828	Freq Error	Transm		
1	00 dB	-26.		x dB	MHz	1.345 M	width	x dB Ba		
-								Wilco i		

#### Band25\_1\_4MHz\_16QAM\_6\_0\_MidCH26365-1882.5

PL I	HI DOLD DC			21122.397		4105 AUTO		PM Aug 16, 2018	
Center Fre	eq 1.88250000	MFGalinLow	Trig: F	Center Freq: 1.882500000 GHz Trig: Free Run AvgiHold: 50/50 #Atten: 30 dB			Radio Std: None Radio Device: BTS		Frequency
10 dB/div	Ref Offset 13.9 c Ref 30.00 dB							0	
200		mm	unn	man	many				Center Freq 1.882500000 GHz
0.00 -10.0 -20.0		M	-	-		the		-	
30.0	manhanmante			-	-			man	
-50.0			-				-		
Center 1.8 #Res BW		11.		VBW 91 kH	łz			pan 3 MHz ep 3.2 ms	CF Step 300.000 kHz
Occup	led Bandwid			Total P	ower	28.	8 dBm		Auto Man
		1060 N							Freq Offset
	nit Freq Error Indwidth	1.332	1 Hz MHz	OBW P x dB	ower		9.00 % .00 dB		
MIC							15	-	

## Band25\_1\_4MHz\_16QAM\_6\_0\_HighCH26683-1914.3

Averaget Space	HIT OCCUPIED BY		anauvil			PH Aug 16, 2018	× × ×		
	enter Freg 1.914300000 GHz Center Freg 1.914300000 GHz Radio Std: None HFGaint.tw #Atten: 30 dB Radio Sofo Radio Device: BTS								
10 dB/div	Ref Offset 13.9 dB Ref 30.00 dBm			35		-1			
200 100 0.00		from	manin		-		Center Fred 1.914300000 GH:		
10 0 20 0 30 0	manne	<i>x</i> <sup>4</sup>		N.m.	-	An			
50.0 Center 1.9					Sį	oan 3 MHz	CF Step		
Res BW	30 kHz led Bandwidth	1	#VBW 91 kHz Total Pow	er 29	Swee	ep 3.2 ms	300.000 kHz Auto Mar		
	1.1 it Freq Error ndwidth	1057 MHz 995 Hz 1.320 MHz	OBW Pow x dB		99.00 %. 5.00 dB		Freq Offse 0 H		

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### Band25\_1\_4MHz\_64QAM\_6\_0\_LowCH26047-1850.7

Average Constant	Ar Sec. Docupied	DW/		anautri		ALIGN HUTCH	101.01.01	PH Apg 16, 2010	
Center Fre	Frequency.								
Ref Officet 13.9 dB 10 dB/div Ref 30.00 dBm									
200 100 0.00		F	monorman						Center Fre 1 850700000 GH
200 200	m	m				him	and a strength of the strength	man man	
-40 0 -50 0			-	-				_	
Center 1.8 #Res BW		11		VBW 91 kH	z			oan 3 MHz ep 3.2 ms	CF Step 300.000 kH
Occup	ied Bandwic 1	th .1053	MHz	Total P	ower	29.4	l dBm		Auto Ma Freq Offse
	it Freq Error Indwidth	1.3	79 Hz 05 MHz	OBW P x dB	ower		9.00 % 00 dB		0H
wiici						#7830	-		-

### Band25\_1\_4MHz\_64QAM\_6\_0\_MidCH26365-1882.5

PL:	aq 1.882500000	and the second s	Center Fr		AvgiHol	4105 eUra d: 50/50	Radio St	PHAg 16, 2018 d: None evice: BTS	Frequency
10 dB/div	Ref Offset 13.9 dB							0	
200		m							Center Freq 1 882500000 GHz
-10 0 -20 0 -30 0	hand	1				ma		-	
48.8					-		-		
Center 1.8 #Res BW			#VE	SW 91 KH	łz			pan 3 MHz ep 3.2 ms	CF Step 300.000 kHz
Occup	ied Bandwidt 1.	h 1049 MH	Iz	Total P	ower	29,	1 dBm		Auto Man Freq Offset
	it Freq Error Indwidth	-2.068 k 1.299 M		OBW P x dB	ower		9.00 % .00 dB		OH
60						#7×10	e	-	

## Band25\_1\_4MHz\_64QAM\_6\_0\_HighCH26683-1914.3

Representation	International Contract By			ana shri		ALTON ALTON		MAag 16, 2010	0.2 24
	eq 1.914300000	GHz mFGainLow	Center Trig P	Center Freq: 1.914300000 GHz Trig: Free Run Avg/Hold: 50/50 #Atten: 30 dB			Radio Std: None Radio Device: BTS		Frequency
10 dB/div	Ref Offset 13.9 de Ref 30.00 dBm							0	
200		100	amin	www.min.co					Center Freq 1.914300000 GHz
0.00 -10.0 20.0	manyman	1				Luno		man	
30.0 46.0 46.0 46.0			_						
Center 1.9			#	VBW 91 kH	1z			an 3 MHz p 3.2 ms	CF Step 300.000 kHz
Occup	led Bandwidt	h 1076 M	1117	Total P	ower	29.1	dBm		Auto Man
Transmit Freq Error -1.3		-1.32	5 kHz MHz	kHz OBW Power		99.00 %. -26.00 dB			Freq Offset 0 Hz
eo)							-	-	

#### Band25\_3MHz\_QPSK\_15\_0\_LowCH26055-1851.5

PL	30 A 65 10	and the second s	er Freg. 1.851500000 GHz	ALTON AUTO	Radio Std	MAag 16, 2018	Frequency		
Center Fre	requency								
10 dB/div									
20.0		mon	minimum	-			Center Free 1.851500000 GH		
-10.0	1					-			
-30,0					~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	and many many	1.0		
-46 D -80 D									
Center 1.8	52 CH2				- Cn	an 6 MHz			
#Res BW			#VBW 180 kHz			1.533 ms	600.000 KH		
Occup	led Bandwid		Total Power	30.5	dBm		Auto Man		
	2.7141 MHz								
Transm	it Freq Error	798 Hz	OBW Power	99.0	00 %		0 H		
x dB Ba	indwidth	3.028 MHz	x dB	-26.00	0 dB				
NHIC)				=7#105					

### Band25\_3MHz\_QPSK\_15\_0\_MidCH26365-1882.5

PL FIL	Hr Deckand	BWY .		2122-210		4105-4010	01:17:02	PH App 16, 2018	328
Center Fr	eq 1.88250000	MFGain:Low	Trig: F	Center Freq: 1.882500000 GHz Trig: Free Run AvgiHold: 50/50 #Atten: 30 dB			Radio St	t: None vice: BTS	Frequency
Ref Offset 13.9 dB 10 dB/div Ref 30.00 dBm									
20.0		m	in-nin-	viewen	m	my			Center Freq 1 882500000 GHz
0.00 -10.0		A		-		1			
-30.0	oppersonante!"		-	-			-		
-40 D -80 D			-	-			-		
Center 1.1	883 GHz		1		L		SI	oan 6 MHz	CF Step
#Res BW	62 kHz		#	VBW 180 k	Hz			1.533 ms	600.000 kHz Auto Man
Occup	led Bandwid	ith .7163 M	Hz	Total P	ower	30	5 dBm		Freq Offset
	hit Freq Error andwidth	6.165 3.050 I		OBW P	ower		9.00 %		0 Hz
NERO DE CREM							ue:		-

### Band25\_3MHz\_QPSK\_15\_0\_HighCH26675-1913.5

Pic Supergett. Space	ment-Analyzer - Occupied	BW .								<b></b>
	ng 1.9135000	MEGainsLow	Trig: I	Center Freq: 1.913500000 GHz Trig: Freq: 1.913500000 GHz Trig: Freq: Run Avg Hold: 50/50 #Atten: 30 dB			Radio Std: None Radio Device: BTS		Frequency.	
10 dB/div	Ref Offset 13.9 Ref 30.00 di					2		. 0		
200		mon		min	nmn	-				enter Freq 500000 GHz
0.00 -10.0 -20.0		£						hanne.		
-30.0	mmmm		-							
-60.0			-						_	
Center 1.9 #Res BW		-		VBW 180	kHz		Sp Sweep	an 6 MHz 1.533 ms		CF Step
Occup	led Bandwi			Total I	ower	30	.7 dBm		Auto	Man
Transm	it Freg Error	2.7041 M 2.692		OBW	autor.		9.00 %		F	req Offset
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	indwidth	3.030		x dB	ower		5.00 dB			

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### Band25\_3MHz\_16QAM\_15\_0\_LowCH26055-1851.5

PL Separate Space	Herri Anunyan - Occila									0.2.2
Conter Freq 1.851500000 GHz Center Freq 1.851500000 CHt Adio Stati Rone Radio Stati Rone Radio Device: BTS Radio Device: BTS										Frequency
10 dB/div	Ref Offset 12 Ref 30.00						2 M		0	
20.0 10.0		-	man	mun		minun	-			Center Fre 1 851500000 GH
0.00 -10.0		1					1		-	
30.0			-	-	-	-	20	mann	And and	1.1
40 0 80 0		_	-	-	-	-		-	-	
Center 1.8				1	VBW 1801	dis			oan 6 MHz 1.533 ms	CF Ste
	led Bandw	vidth		*	Total P		29	.9 dBm	1.000 ms	600.000 kH Auto Ma
		2.7	127 M	Hz						Freq Offse
Transmit Freq Error 4.822 x dB Bandwidth 3.030 l						9.00 % 5.00 dB		0H		
wino i								05		

# Band25\_3MHz\_16QAM\_15\_0\_MidCH26365-1882.5

RE	ng 1.8825000	Andrew I.	Center F		AvgiHald	60/60	Radio De		Frequency
Ref Offset 13.9 dB 10 dB/div Ref 30.00 dBm									
200 100 0.00		para	vinsennelles			-			Center Freq 1 882500000 GHz
10 0 20 0 30 0	man					10		-mann	
48 D 90 Q 60 Q									
Center 1.8 Res BW (			#V	BW 180 k	Hz			an 6 MHz 1.533 ms	CF Step 600.000 kH
Occupi	led Bandwi	dth 2.7150 MH	Ηz	Total P	ower	29	.7 dBm		Auto Man Freq Offset
	it Freq Error ndwidth	386 3.005 M		OBW P	ower		9.00 % 3.00 dB		OH
80)						11743	05	-	

## Band25\_3MHz\_16QAM\_15\_0\_HighCH26675-1913.5

Avenue Seat	Mr Occupied BW	1.	ana am	ALIG5-3070	1211-28-48 B	MAng 16, 2010	020
Center Fre	Frequency						
10 dB/div	Ref Offset 13.9 dE Ref 30.00 dBm				()		
20.0 10.0 0.00		m		-			Center Freq 1.913500000 GHz
-10 0 -20 0 -30 0	manna			1			
46.0 -90.0							
Center 1.9 #Res BW		11	#VBW 180 kHz			an 6 MHz 1.533 ms	CF Step 600.000 kHz
Occup	led Bandwidt 2.	h 7138 MHz	Total Power	29,1	9 dBm		Auto Man
		5.564 kHz 3.025 MHz			99.00 % -26.00 dB		0 Hz
CHIN				=7×10	5	-	

### Band25\_3MHz\_64QAM\_15\_0\_LowCH26055-1851.5

PL I	HE DOLLAR D	< i		r Freq: 1.8515		41101e #UTG	Radio Std	MAug 16, 2018	
Center Fre	Frequency								
Ref Offset 13.9 dB 10 dB/div Ref 30.00 dBm									
200			noninim	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		-			Center Fred 1.851500000 GH
-10.0	minimum	1				h	m nania		
-30.0. -40.0 -80.0				-					
GO Center 1.8	52 CH2							an 6 MHz	
#Res BW		-		VBW 180	kHz			1.533 ms	CF Step 600.000 kH
Occup	led Bandwi			Total F	ower	29.	6 dBm		Auto Mar
1.00		2.7200		-	-	1.0			Freq Offset
	it Freq Error ndwidth		9 MHz	X dB	ower		9.00 % 5.00 dB		
(IN)							110		

## Band25\_3MHz\_64QAM\_15\_0\_MidCH26365-1882.5

Center Fre	Pice Provide State									
10 dB/div	Ref 30.00 dBm	· · · · · ·					-	-		
20.0		farmen				-			Center Freq 1 882500000 GHz	
0.00 -10.0	1	A								
-20.0	monorman					~		- www.		
48.0										
-60.0	1								=	
Center 1.8 #Res BW			#VE	3W 180 H	Hz			an 6 MHz 1.533 ms	CF Step 600.000 kHz	
Occup	led Bandwidt			Total P	ower	29,	7 dBm		Auto Man	
	2.1	7117 MH	z						Freq Offset	
Transm	it Freq Error	4.568 kH	łz	OBW P	ower	9	9.00 %		0 Hz	
x dB Ba	indwidth	3.027 MH	łz	x dB		-26	.00 dB			
uno i							14			

## Band25\_3MHz\_64QAM\_15\_0\_HighCH26675-1913.5

	Rent Hassiver - Occubered 87	W .		ALION-AUTO			
Center Fre	q 1.913500000	Trip	ter Freq: 1,913500000 GH Free Run Avgitten: 30 dB	Radio Std: None Radio Device: BTS		Frequency	
10 dB/div	- 0						
200		man	v	my			Center Free 1.913500000 GH
0.00 10.0 20.0		1		1		www	
30.0	name					annamin	
80.0							
Center 1.91 #Res BW 6			#VBW 180 kHz		Sweep	an 6 MHz 1.533 ms	
Occupi	ed Bandwidt		Total Power	29.	8 dBm		Auto Mar
	2.	7172 MHz					Freq Offset
	t Freq Error	4.260 kHz	OBW Power		9.00 %		0 Hz
x dB Bar	ndwidth	2.990 MHz	x dB	-26	.00 dB		1

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# Band25\_5MHz\_QPSK\_25\_0\_LowCH26065-1852.5

Averagent Speet	ar Decupied B	WV .	2102.201	N104 a	UTCI 01 20:46 PM Au	32.0
Center Fre	BTS					
10 dB/div						
200 200 0.00		/	<sup>199</sup> لىمەرىمەر مەرەپىرىمەر يەرەپىرىمەر يەرەپىرى			Center Free 1 852500000 GH
-10.0 -20.0 -30.0	man				hannon	~~~~
40 0 80 0 60 0						-
Center 1.8 #Res BW			#VBW 300	kHz	Span 1 Sweep	
Occup	led Bandwid 4	th .5333 MH	Total Z	Power	31.0 dBm	Auto Ma
		6.754 kH 5.087 MH			99.00 % -26.00 dB	ÓН
600					VATUR	

# Band25\_5MHz\_QPSK\_25\_0\_MidCH26365-1882.5

Augustit.Space	et Couped B	W.	2192.30	ALIGN-AUTO	01:27:16 PM Au		022	
	enter Freg 1.882500000 GHz Trig Freg 1.882500000 GHz Trig Freg 1.882500000 GHz Augusta Augusta Augustald >50/50 Radio Device: BTS							
10 dB/div	Ref Offset 13.9 c Ref 30.00 dB			9. A-				
200 200 100 0.00		from the second	arton a marine a marine a	~			Center Freq 1 882500000 GHz	
-10.0 -20.0				×		-		
-48 0 -90 0 -60 0						-		
Center 1.8 #Res BW			#VBW 300 kHz			0 MHz 1 ms	CF Step	
Occup	led Bandwid 4	th 5340 MHz	Total Pov	ver 30	.6 dBm	Auto Ma		
	it Freq Error indwidth	4.611 kHz 5.094 MHz	OBW Pov		99.00 % -26.00 dB			
(crite)					05	-		

## Band25\_5MHz\_QPSK\_25\_0\_HighCH26665-1912.5

Avenuent Spect	HIT STORE DO	S	2102.211	ALIGN-BURG		MAag 16, 2010		
	enter Freg 1.912500000 GHz Center Freg 1.912500000 GHz Radio Std: None Trig: Freg. 1.912500000 GHz Radio Std: None Trig: Freg. 1.912500000 GHz Radio Device: BTS							
10 dB/div	Ref Offset 13.9 dE Ref 30.00 dBm			2.5				
200		/		-			Center Freq 1.912500000 GHz	
-10.00				1	m			
-30.0 -46.0 -90.0								
-60.0 Center 1.9 #Res BW			#VBW 300 kHz			n 10 MHz ep 1 ms	CF Step	
	led Bandwidt		Total Power	30.9	dBm	rep This	1.000000 MHz Auto Man	
Transmit Freq Error 8.403		5282 MHz 8.403 kHz 5.048 MHz	OBW Power x dB					
cain					-			

#### Band25\_5MHz\_16QAM\_25\_0\_LowCH26065-1852.5

Averagent Speate	Ren Analyze - Occupied BW	1.	ana mi	#104 #UTG	01:28:35 PM App 16.2	
Center Fre	Frequency					
10 dB/div	Ref Offset 13.9 dB Ref 30.00 dBm					
200			annal anna anna anna anna anna anna ann	m		Center Free 1.852500000 GH
-10.00	amount		K	man	an	
-30,0.						
-ep.0						
Center 1.8 #Res BW 1	Hz CF Step 1.000000 MH					
Occupi	ed Bandwidt	h	Total Power	30.	9 dBm	Auto Mar
	Freq Offse					
Transmit Freq Error		-953 Hz	OBW Power	9	9.00 %	OH
x dB Bar	ndwidth	5.073 MHz	x dB	-26	.00 dB	1
eine i						-

## Band25\_5MHz\_16QAM\_25\_0\_MidCH26365-1882.5

A Superstrates	HI SEC 20	· · · · · ·	1 313 311		10%-AUro	Loss of the last state	Aug 16, 2018	32.00	
	Center Freq 1.882500000 GHz Center Freq 1.882500000 GHz Radio Std: None Trig: Freat Mathematical Std: None Trig: Freat Mathematical Std: None #Atten: 30 dB Radio Device: BTS								
10 dB/div	Ref Offset 13.9 dB Ref 30.00 dBm						- 0		
200 100 0.00			~~~~~	- marine	1			Center Freq 1.882500000 GHz	
-30.0. -46.0 -80.0	and the second							- 1	
-60.0 Center 1.8 #Res BW			#VBW 300	kHz			10 MHz p 1 ms	CF Step	
Occup	Occupied Bandwidth Total Power 30.5 dBm 4.5276 MHz								
		-598 Hz 5.110 MHz		Power	ver 99.00 % -26.00 dB			Freq Offset 0 Hz	
CRIM					=7×108	-		-	

#### Band25\_5MHz\_16QAM\_25\_0\_HighCH26665-1912.5

Representation	ment Analyzer - Occupied BV	N.					222
	ng 1.912500000	Trig	er Freq. 1.912500000 GHz Free Run AvgiHol en: 30 dB	d: 50/50 Radio Device: BTS			Frequency
10 dB/div	Ref Offset 13.9 d Ref 30.00 dBn			3 M		. 0	
20.0		portuna		~			Center Free 1.912500000 GH
0.00 10.0 20.0	1			1	anna.	- month	-
30.0	manner						
80.0 60.0							
Center 1.9 Res BW			#VBW 300 kHz			eep 1 ms	CF Step 1.000000 MHz
Occup	led Bandwidt		Total Power	30.7 dBm			Auto Mar
Tranem	4. It Freg Error	5238 MHz 13.225 kHz	OBW Power	99.00 %			Freq Offse
	indwidth	4.989 MHz	x dB		9.00 %		

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### Band25\_5MHz\_64QAM\_25\_0\_LowCH26065-1852.5

PL Avenuett Speak	HIT STORE DO		2122.011	ALION MUTCH	01:29:51 PM Aug 16, 2010	0.2.2			
	enter Freg 1.852500000 GHz Center Freg 1.852500000 GHz Radio Std: None atricialmit.rw #Atten: 30 dB AvgiHeld:>55/50 Radio Device: BTS								
10 dB/div	Ref Offset 13.9 dB Ref 30.00 dBm								
200- 100-		minan	Animanna A	-		Center Free 1 852500000 GH			
10.0				town	min				
-30.0. -40.0									
60.0					_				
Center 1.8 #Res BW			VBW 300 kHz		Span 10 MHz Sweep 1 ms	CF Step 1.000000 MHI Auto Mar			
Occup	led Bandwidt	5248 MHz	Total Power	29,9 0	1Bm				
		6.819 kHz 5.029 MHz	OBW Power x dB						
60				=7#105					

### Band25\_5MHz\_64QAM\_25\_0\_MidCH26365-1882.5

Avenuencies	there wanted an Occupied BV	n		ear stirl	_	41404	AUTO		MAge 16, 2018	02.0
	enter Freg 1.882500000 GHz Center Freg 1.882500000 GHz Radio Std: None Trig: Freg 1.82500000 GHz AvgiHald: 50/80 Radio Device: BTS								Frequency	
10 dB/div	Ref Offset 13.9 dl Ref 30.00 dBm								()	
20.0		pann	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		-					Center Fred 1.882500000 GHz
-10.0	mont					1	L	n mar	man	_
-30,0					-	Ħ	_			
-60.0										
Center 1.1 #Res BW			#VI	SW 300 P	Hz				n 10 MHz ep 1 ms	CF Step 1.000000 MH
Occupied Bandwidth Tota 4.5241 MHz					ower		29.7	dBm		Auto Man
	Transmit Freq Error 2.549 x dB Bandwidth 5.038 f		Hz	OBW P x dB	W Power 99.00 % B -26.00 dB				Freq Offset 0 Hz	
wiro)							=7×102	-		

## Band25\_5MHz\_64QAM\_25\_0\_HighCH26665-1912.5

Averant Seat	HIT STORE DC	W)	anaun	ALIGNAUTO	Ide conversion	MAng 16, 2010			
	enter Freg 1.912500000 GHz Center Freg 1.912500000 GHz Radio Std: None Trig: Freg. 1.912500000 GHz Radio Std: None Trig: Freg. 1.912500000 GHz Radio Device: BTS								
10 dB/div	Ref Offset 13.9 d Ref 30.00 dBr	B n		2.5		()			
200 100		promo	and the second				Center Freq 1.912500000 GHz		
0.00 -10.0 -20.0	1			1	يىلىراس		-		
30.0 48.0	hand the manufacture								
50.0							_		
Center 1.9 Res BW			#VBW 300 kHz			n 10 MHz ep 1 ms	CF Step 1.000000 MHz		
Occup	led Bandwidt 4.	5241 MHz	Total Power	29,1	9 dBm		Auto Man Freg Offset		
	it Freq Error indwidth	6.346 kHz 5.024 MHz	OBW Power x dB	r 99.00 % -26.00 dB			0 Hz		
80				=7×10		-			

#### Band25\_10MHz\_QPSK\_50\_0\_LowCH26090-1855

Any apprention of	All 20 G		-	1.00	ear attri		ALION AUTO	Incash da	AM Aug 16, 2018	022
Center Freg 1.855000000 GHz Center Freg 1.85500000 GHz Radio Std: None Trig: Free Ruin AvgiHold: 50:50 Radio Device: BTS									Frequency	
10 dB/div	Ref Offset 12 Ref 30.00			_			2		. 0	
200		r			mm	-	2			Center Free 1.855000000 GH
0.00 10.0 20.0		N					1		· · · · · · · · · · · · · · · · · · ·	
30 0. 40 0 80 0										
-60.0										-
Center 1.8 #Res BW 2				#VE	BW 620 P	Hz			an 20 MHz /eep 1 ms	CF Step 2.000000 MHz
Occupi	led Bandw				Total P	ower	28	6 dBm		Auto Mar
9.0100 MHz									Freq Offse	
			16.224	KHZ	OBW P	ower	9	9.00 %		014
x dB Ba	ndwidth		9.962 N	IHz	x dB		-26	5.00 dB		1
wiic)								05		

## Band25\_10MHz\_QPSK\_50\_0\_MidCH26365-1882.5

	AT Start of the	747							
Center Fre	Enter Freq 1.88250000 GHz Enter Freq 1.88250000 GHz Referenzuer Ref								
10 dB/div	Ref Offset 13.9 Ref 30.00 dB		_					-1	
200 100 0.00		forman	alaan waxay	*******	-	m			Center Freq 1.882500000 GHz
-10.0	man and	1		-		1			
-48 0 -80 0 -60.0			-	-					
Center 1.8 #Res BW			#	VBW 620 k	Hz			eep 1 ms	CF Step 2.000000 MHz
Occup	Occupied Bandwidth Total Power 28.7 dBm 8.9863 MHz							Freq Offsel	
		3.387 9.972						0 Hz	
Milo						- 1×1	05		

## Band25\_10MHz\_QPSK\_50\_0\_HighCH26640-1910

PL BT PL BT	/					
Center Freq 1.91000000	Siriz Trig	Free Run AvgiHal n: 30 dB	d: 60/60	Radio Std		Frequency
10 dB/div Ref 30.00 dBn					- 0	
200		1179 when a harring of the land	an			Center Free 1.91000000 GH
900 100 210			1			
30.0			1	man	man	
-50.0						
Center 1.91 GHz #Res BW 200 kHz		VBW 620 kHz			n 20 MHz ep 1 ms	CF Step 2.000000 MHz
Occupied Bandwidt		Total Power	21.9 dBm			Auto Man
Transmit Freq Error	0237 MHz 3.383 kHz	OBW Power	9.00 %	Freq Offsel 0 Hz		
x dB Bandwidth	9.955 MHz	x dB	-26	.00 dB		
				14		

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### Band25\_10MHz\_16QAM\_50\_0\_LowCH26090-1855

Avenuent Speet	Alt 20 G	pose BW/			ana mi		ALIGN-AUTO	Lunde 11	AM Aug 10, 2018	
	enter Freg 1.855000000 GHz Center Freg 1.85500000 GHE Radio Std: None # Trig Free Run AvgiHold:>8050 #FGeint_rw #Atten: 30 dB Radio Device: BTS									Frequency
10 dB/div	Ref Offset 1 Ref 30.00					0	2.00		0	
200-000-000		1	Autoria Travestara			horman	m			Center Free 1 855000000 GH
-vn n	Marthan	1					1 ha	-	aboption and	
-30.0 -40.0 -80.0										
Genter 1.8	55 CH2				-			En	an 20 MHz	1
#Res BW				#	VBW 620 1	Hz	_		eep 1 ms	2.000000 MHz
Occup	led Bandw		004 MI	-	Total P	ower	29	2 dBm		Auto Mar
Transmit Freq Error 80		803 9.875 N	Hz	OBW Power 99.00 %. x dB -26.00 dB					Freq Offse 0 H	
(CRIN							1000	05		

## Band25\_10MHz\_16QAM\_50\_0\_MidCH26365-1882.5

Avenuett Space	At 20.0	eed BW/			12 - 197		ALION AUTO		M Aug 16, 2018		
	enter Freq 1.882500000 GHz Trig: Free Nn AvgiHold: 50/50 AFGaind.nw Affen: 30 dB Affen: 30 dB A										
10 dB/div	Ref Offset 13.9 dB o dB/div Ref 30.00 dBm o g										
20.0		-	-	mohan office	an in	ante alester	2			Center Freq 1.882500000 GHz	
-10 D		1					1				
40.0 -50.0	- Annone and a second							hand the standard s	and the second se	1	
Center 1.8 #Res BW				#VI	BW 620 H	Hz			n 20 MHz eep 1 ms	CF Step 2.000000 MHz	
Occup	led Bandw		395 MI	17	Total P	ower	21	.8 dBm		Auto Man	
	it Freq Erro Indwidth		8.434 H 9.889 N	Hz	OBW P x dB	ower		9.00 % 5.00 dB		Freq Offset 0 Hz	
ARICO					-			05	-		

## Band25\_10MHz\_16QAM\_50\_0\_HighCH26640-1910

	HIRTHMAN - Occa	Apriled BTV/								
Center Fre	eq 1.910000		Hz F5alm1.ow	Trig: 1	Freq: 1,910000 Free Run 1: 30 dB	AvgiHold	>50/50	Radio St	AH Aug 16, 2018 d: None svice: BTS	Frequency
10 dB/div	Ref Offset 1 Ref 30.00									
200		- /			-		2			Center Fred 1.91000000 GH
9.00 -10.0 -20.0		- Aner					1	hanna - a		
-30.0 -40.0	Stand Sector		-	-		_			minne	
-60.0								-		
Center 1.9 #Res BW					VBW 620 ki	łz			an 20 MHz /eep 1 ms	CF Step 2.000000 MH
Occup	led Bandy		124 M	Hz	Total Po	ower	29	.8 dBm		Auto Mar Freq Offset
	it Freq Erro	or	-1.919 9.948		OBW Po x dB	wer		9.00 % 5.00 dB		OH
ceix							1000	05	-	

#### Band25\_10MHz\_64QAM\_50\_0\_LowCH26090-1855

Averaget Spatter	Ht 20.0	ec (IV)			ear ann		uros auro	LID-17-AT	AM Aug 16, 2018	
Center Fre	d: None evice: BTS	Frequency								
10 dB/div	Ref Offset 13 Ref 30.00 c									
200 100		r	manin	-	himan	annin	1			Center Free 1 85500000 GH
-10 0 -20 0	pyper-man	1					tes	miner	Marghan Serve	
-30.0		-	-				-			
-60.0										
Center 1.85 #Res BW 2		-		#VE	SW 620 H	Hz			an 20 MHz /eep 1 ms	CF Step 2.000000 MH
Occupi	ed Bandw	idth	0		Total P	ower	29	4 dBm		Auto Mar
		9.01	144 MH	Ηz						Freq Offset
Transmi	t Freq Error	ŕ.	4.420 1	Hz	Iz OBW Power			9.00 %	0 Ha	
x dB Bar	ndwidth		9.853 M	Hz	x dB		-26	5.00 dB		1
(CON)							1001	05		

## Band25\_10MHz\_64QAM\_50\_0\_MidCH26365-1882.5

Averagent Speet	ment Analyzer - Occupied B	W.							022		
	ng 1.882500000	MFGalintanw	Center		AvgiHald	1: 50/50	Radio Sto	MA Aug 10, 2018 d: None vice: BTS	Frequency		
10 dB/div	Ref Officet 13.9 dB 0 dB/div Ref 30.00 dBm 										
200 100 0.00 -10.0		/	********	and the management of the		1			Center Freq 1.882500000 GHz		
-200 -300 -460 -600	and a second second							And a second second			
Center 1.8 #Res BW			#\	/BW 620 1	(Hz			an 20 MHz eep 1 ms	CF Step 2.000000 MH2 Auto Mar		
Transm	led Bandwid 8. It Freq Error	th 9855 MH -2.992 k 9.909 M	kHz OBW Power			9	8 dBm 9.00 %		Freq Offse		
MIC N											

### Band25\_10MHz\_64QAM\_50\_0\_HighCH26640-1910

Representation	event Analyzer - Occupied BY	N				M Aug 10, 2018					
	q 1.91000000	Sinz Trip	er Freq: 1,910000000 GHz Free Run AvgiHal m: 30 dB	d: 60/60	Radio Std Radio Dev	None	Frequency				
10 dB/div											
200		ununmon	manmanaharan				Center Free 1.91000000 GH				
0.00 -10.0 -20.0	man man man				womente	1.000					
30,0 48.0	NA-STORE & S.					man					
50.0											
Res BW			#VBW 620 kHz			n 20 MHz ep 1 ms	CF Step 2.000000 MH				
Occup	led Bandwidt		Total Power	29.	4 dBm		Auto Man				
12		0099 MHz		1.0			Freq Offset				
	it Freq Error indwidth	-7.307 kHz 9.952 MHz	OBW Power x dB		9.00 % 5.00 dB						

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## Band25\_15MHz\_QPSK\_75\_0\_LowCH26115-1857.5

Avenuent Speak	Hr Dock		-		anastri		ALTON-AUTO		AM Aug 10, 2018	020	
	Center Freq 1.857500000 GHz Center Freq 1.85750000 GHz Radio Std: None Trig: Frea Run AvgiHold>50/50 BFGein£.nw Adsen: 30 dB Radio Device: BTS										
10 dB/div	Ref Offset 1 Ref 30.00						2		0		
20.0 10.0			maning	and a second and a second s						Center Free 1.857500000 GH	
0.00 -10.0 -20.0	manan	w			-		K	and and an			
-30.0 -40.0	a contraction of the second			-					and and		
-60.0		_		-	-			-			
Center 1.8 #Res BW 3					VBW 9101	KHZ			an 30 MHz eep 1 ms	CF Step 3.000000 MH	
Occupi	ed Bandy		503 1	ЛНг	Total F	ower	30	.1 dBm		Auto Ma	
Transmi x dB Ba	it Freq Erro ndwidth	1.5	16.21		kHz OBW Power			99.00 % 5.00 dB		0 H	
00								02	_		

### Band25\_15MHz\_QPSK\_75\_0\_MidCH26365-1882.5

PL	there are on the second By	<i>p</i>	212 M	ALION BUTG 109.54	23 AM Aug 10, 2018						
	enter Freg 1.882500000 GHz Center Freg 1.88250000 2Hz Cate Freg 1.88250000 CHz Trig Free 1.88250000 CHz Rome States 30 dB AvgiHeld 50:50 Radio Ster. Kone Radio Device: BTS										
10 dB/div											
20.0 10.0		juncommencia	internal managements	-	Center Freq 1 882500000 GHz						
0.00 -10.0 -20.0	-			hourse							
-30.0. -48.0											
-60.0						1					
Center 1.1 #Res BW		_	#VBW 910 kHz		Span 30 MHz Sweep 1 ms	CF Step 3.000000 MHz					
Occup	led Bandwidt		Total Power	30.2 dBn	1	Auto Man					
		3.501 MHz				Freq Offset					
	hit Freq Error andwidth	-5.332 kHz 14.84 MHz	OBW Power x dB	99.00 % -26.00 dE		0 Hz					
wiik)			-	-78102							

## Band25\_15MHz\_QPSK\_75\_0\_HighCH26615-1907.5

PL F	enter Freq 1 907500000 GHz Center Freq 1,907500000 GHz Radio Std: None										
conterin	eq 1.307300000	MEGainLow	Trig: Free #Atten: 30		AvgiHold	50/50	Radio De	vice: BTS			
10 dB/div											
.og 20.0 10.0		moutine	ورورد	the way	musiculum	~			Center Freq 1.907500000 GHz		
9.00 10.0 20.0						N					
0.0	-					-		man	1.0		
50.0				_							
enter 1.9 Res BW			#VB	W 910 H	Hz			an 30 MHz leep 1 ms	CF Step 3.000000 MHz		
Occup	led Bandwidt			Total P	ower	24.	1 dBm		Auto Man		
Transm	13.510 MHz Transmit Freg Error 6.342 kHz OBW Power 99.00 %										
	andwidth	14.73 M		x dB	ower		.00 dB				
10						17810		_			

#### Band25\_15MHz\_16QAM\_75\_0\_LowCH26115-1857.5

A Participationer inveger:         - Constraint Fire         - Straint Fire											Frequency
10 dB/div	Ref Offset		1							0	
20.0 10.0			m	******	-		- man wanter	-			Center Fred 1.857500000 GH
-10 0 -20 0	معتصفين والم	1						1	the the the two provides the two provide	a to the second	
30.0. 40 D								-			
60.0											
#Res BW 30		-			#VE	3W 910 P	Hz			an 30 MHz /eep 1 ms	CF Step 3.000000 MHz
Occupie	d Band	width	1			Total P	ower	29	.2 dBm		Auto Man
		13	.53	8 MI	Hz						Freq Offset
Transmit	Freq Err	or	-1	.603	kHz	OBW P	ower	1	99.00 %		0 Hz
x dB Ban	dwidth		1.	4.88 N	IHz	x dB		-2	6.00 dB		1
Califo								-	1425		

### Band25\_15MHz\_16QAM\_75\_0\_MidCH26365-1882.5

PL PL	At 1 20 G	CHIDING BY		1.2			10% eUra	09:55:40	AM Aug 16, 2018	328
Center Fre	ng 1.88250		SHz NFGaintow		eq 1,88250 eRun 0 dB	AvgiHoldo	-50/50	Radio St Radio De	d: None wice: BTS	Frequency
10 dB/div	Ref Offset Ref 30.0						~		1	
20.0			-	te management		-	-	-		Center Fred 1.882500000 GHz
0.00		1					1		-	
30.0	monor	store .	-	_			~~	S. M. Halmander	- Marmonopole	
40 D 80 Q		_	-				-	-	-	
Center 1.8	83 GHz				-			Sp	an 30 MHz	CF Step
Res BW	300 kHz	_		#VE	SW 910	Hz			eep 1 ms	3.000000 MH
Occup	led Band		496 MI	łz	Total P	ower	29.	1 dBm		Auto Man Freq Offset
	it Freq Err		12.072	Hz	Hz OBW Power			9.00 %		OH
x dB Ba	indwidth		14.82 N	Hz	x dB		-26	.00 dB		1
eiro i								05		

## Band25\_15MHz\_16QAM\_75\_0\_HighCH26615-1907.5

P. SynghtSpath	nert Analyzer - Occupied BY	W).						<b></b>
	ig 1.907500000		enter Freq: 1,9075 rig: Free Run Atten: 30 dB		6/50 Rat	dio Std: Nor dio Device:	ne	Frequency.
10 dB/div	Ref Offset 13.9 d Ref 30.00 dBr						=0	
200 100		junanononion	**********		X			Center Freq 1 907500000 GHz
-10.0	-	/			Lun	man	_	
-30,0. -40 D			-				-an	
-50.0								
Center 1.9 #Res BW 3		h-	#VBW 910	kHz		Span 3 Sweep		CF Step 3.000000 MHz
Occupi	ed Bandwidt		Total I	ower	29.4 dE	Im		Auto Man
Les and		3.526 MHz	the state of the					Freq Offset
Transm x dB Ba	it Freq Error ndwidth	-18.406 kH 14.72 MH		ower	99.00 -26.00			UHZ

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## Band25\_15MHz\_64QAM\_75\_0\_LowCH26115-1857.5

Averaget Space	NIT 200 C			1. 00	in the		ALTON AUTO	log be te	AM Aug 10, 2018	Frequency	
	Center Freq 1.857500000 GHz Trig Freq 1.857500000 GHz Radio Std: None Radio Std: None Radio Device: BTS Radio Device: BTS										
10 dB/div	Ref Offset 13. Ref 30.00 d								0		
200		ju	unitarian	sterentrone			~			Center Free 1 857500000 GH	
0.00 -\0.0 -200	and man have a special	1					1		-		
-30.0											
-60.0											
Center 1.8 #Res BW		-		#VE	SW 910 H	Hz	-		an 30 MHz eep 1 ms	CF Step 3.000000 MH	
Occup	led Bandwi		02 M	47	Total P	ower	27	.9 dBm		Auto Mar	
	it Freq Error Indwidth		-2.724 1 14.87 M	kHz	OBW Power			9.00 % 5.00 dB		Freq Offse 0 H	
(CRIN)							1000	05	_		

#### Band25\_15MHz\_64QAM\_75\_0\_MidCH26365-1882.5

PL PL	there wanted an occupied BV	P			The set of the set						
	PL at a concentration of the c										
10 dB/div	Ref Offset 13.9 di Ref 30.00 dBn				2		0				
200	10 minute market market the second se										
0.00 -10.0 -20.0	manulan news	1			La	man	- marker comment	-			
-30.0. -48.0											
Center 1.3	892 CH2					Pna	n 30 MHz				
#Res BW			#VBW 91	0 kHz	_		ep 1 ms	CF Step 3.000000 MHz Auto Man			
Occup	led Bandwidt	h 8.516 MH		Power	29.	5 dBm		Freq Offset			
	nit Freq Error andwidth	11.465 kl 14.66 Mi		99.00 %. -26.00 dB			0 Hz				
wiika					-7.434	08	-				

## Band25\_15MHz\_64QAM\_75\_0\_HighCH26615-1907.5

	mentioner/an - Occapied 8	TW/						<b></b>			
Center Fre	DL         organization         Constraint of the state         Constraint of the state <thconsta< th=""></thconsta<>										
10 dB/div	Ref Offset 13.9 Ref 30.00 dB										
200		providential	montana	-				Center Freq 1 907500000 GHz			
-10.0		1	_		X						
-30.0 -40.0	and the second s					And a street	an sterner				
-80.0						-					
Center 1.9 #Res BW			#VBW 9	IO KHZ			an 30 MHz Jeep 1 ms	CF Step 3.000000 MHz			
Occup	led Bandwid			I Power	29.	4 dBm		Auto Man			
	1	3.519 MH	z					Freq Offset			
Transm	it Freq Error	13.475 ki	Hz OBV	V Power	9	9.00 %		0 Hz			
x dB Ba	indwidth	14.93 MI	Hz x dE		-26	.00 dB					
Millo						ues.	-				

## Band25\_20MHz\_QPSK\_100\_0\_LowCH26140-1860

Averaget Space	HIT STORE DC	W .	212 111	- 4210% #UTG	09-44120 AM Aug 10, 21	
Center Fre	Frequency					
10 dB/div						
200			unitari sussesti curre	-		Center Free 1 86000000 GH
9.00 -10.0 -20.0	mentioned			1		
-30,0						~
-ep 0 -en 0						
Center 1.8 #Res BW			VBW 1.2 MHz	_	Span 40 Mi Sweep 1 n	4.000000 MH
Occup	led Bandwid	th	Total Power	30	6 dBm	Auto Mar
	1	7.952 MHz				Freq Offse
Transm	it Freq Error	16.843 kHz	OBW Power	9	9.00 %	0 H
x dB Ba	ndwidth	19.55 MHz	x dB	-26	.00 dB	1
NIKO				= 1 = 1	15	

### Band25\_20MHz\_QPSK\_100\_0\_MidCH26365-1882.5

Angeographic Speech	telen Analyzer - Occupied BW			inter sea				AM Aug 10, 2018			
	Center Freg 1.882500000 GHz Center Freg 1.882500000 GHz Trig Free Run AvgiHed: 5050 Articlin1.nw Arten: 30 db Radio Stri None Radio Stri None Radio Stri None Radio Stri None Radio Stri None										
10 dB/div											
200 100				********		-			Center Freq 1.882500000 GHz		
-10.0						1	entrumore	man	_		
-30.0 -46.0 -46.0 -40.0											
Center 1.8			#VI	BW 1.2 N	1Hz			an 40 MHz eep 1 ms	CF Step		
Occup	led Bandwidt 17	.921 MH	łz	Total P	ower	25	.6 dBm		Auto Man		
	hit Freq Error andwidth	8.913 k 19.46 M		OBW P x dB	ower		99.00 %. 5.00 dB		0 Hz		
Milo				-	_	- 191	05	-			

## Band25\_20MHz\_QPSK\_100\_0\_HighCH26590-1905

	ertyAppen/am - OCCMDERCE	WY .						
	1.90500000		Center Freq 1,905 Trig: Free Run #Atten: 30 dB		0/50	Radio Std		Frequency.
10 dB/div	Ref Offset 13.9 d Ref 30.00 dB						0	
200 100		Jacomenta	*****					Center Fred 1 905000000 GH
0.00 •0.0 20.0		A			1			-
-30.0 -40.0 -50.0					- ma	almonth.	100	-
-60.0								
Center 1.90 #Res BW 39		-	#VBW 1.2	MHz	-		n 40 MHz eep 1 ms	CF Step 4.000000 MH
Occupie	ed Bandwid	th	Total	Power	24.8	dBm		Auto Mar
	1	7.915 MH	z					Freq Offsel
Transmit	Freq Error	19.900 kH	z OBW	Power	99	.00 %		0 H
x dB Ban	dwidth	19.51 MH	z xdB		-26.0	00 dB		
							_	

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### Band25\_20MHz\_16QAM\_100\_0\_LowCH26140-1860

Averagent Speet	Ar Story DC	Υ	1.0	na an		ALTON- 8UT	a log-shibs	AM Aug 10, 2018	Frequency			
Center Fre	enter Freg 1.86000000 GHz Center Freg 1.86000000 GHz Radio Std: None Trig: Free Association AvgiHold: 50:50 Radio Device: BTS											
10 dB/div												
20.0		paromerstale	whisis		anini tak	-			Center Freq 1 86000000 GHz			
-10.00 -20.0						1	mathingain	nomenous				
-30.0 -40.0								- Marine				
60.0			_									
Center 1.8 #Res BW			#V	BW 1.2 N	IHz	_		an 40 MHz /eep 1 ms	CF Step 4.000000 MHz			
Occup	led Bandwidt			Total P	ower	29	.4 dBm		Auto Man			
		.967 MH		OBW P		. 1.5	99.00 %		Freq Offset 0 Hz			
and the second second	lit Freq Error Indwidth	17.718 k 19.46 M		x dB	ower		6.00 dB					
NIIO						100	102					

#### Band25\_20MHz\_16QAM\_100\_0\_MidCH26365-1882.5

A Coperations	trient-Analyzer - Occupied B	W		and the		ALION AUTO	109-40-11	M Aug 16, 2018	Frequency		
Center Fr	Center Freg 1.882500000 GHz Center Freg 1.882500000 GHz Radio Std: None Trig: Freg TASS AND AVgHold >50/50 Radio Device: BTS										
10 dB/div											
200 100		purimentargenter	chinan	man		-			Center Freq 1.882500000 GHz		
0.00 -10.0 -20.0	manner	/		-		1					
-30.0 -46.0											
-60.0 Center 1.8	383 GHz						Spa	an 40 MHz			
#Res BW			#V	BW 1.2 N			SW	eep 1 ms	CF Step 4.000000 MHz Auto Man		
Occup	ied Bandwid	7.934 MI	Ηz	Total P	ower	29	.3 dBm		FreqOffset		
	nit Freq Error andwidth	-9.361   19.39 N		OBW P x dB	ower		9.00 % 5.00 dB		0 Hz		
Mino				-		1000	08				

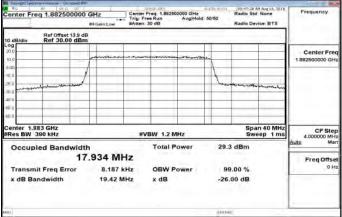
## Band25\_20MHz\_16QAM\_100\_0\_HighCH26590-1905

Avenue Seato	Nerr Analyzer - Occupied BV	P)		ear atri		ALION AUTO		Aug 16, 2018	
Center Fre	Frequency								
10 dB/div									
20.0		mono	Andreania	-		-			Center Fred 1 905000000 GH;
0.00 -10.0 -20.0						L	man .		
30.0 maanaanka 46.6 90.0	how we have the second			-		-	montani		
60.0									1
Center 1.9 Res BW			#VE	SW 1.2 M	IHz			ep 1 ms	CF Step 4.000000 MH
Occupi	led Bandwidt 17	h .925 MH	z	Total P	ower	29.	5 dBm		Auto Mar Freq Offse
	it Freq Error ndwidth	17.787 ki 19.35 Mi			ower	99.00 %. -26.00 dB			0 Hi
ic)						-1787P	125	_	

# Band25\_20MHz\_64QAM\_100\_0\_LowCH26140-1860

Center Fred	Frequency									
10 dB/div	()									
20.0 10.0		-	- and an Constants	-0410-2		si Dada Jakadar				Center Fred 1.860000000 GH
0.00 -10.0 -20.0		1					1			
30.0	antra and	ware.	-	-	-	-	- mole	with mandat	malpule	1.0
en p		_	-	-	-			-	-	
60.0 Center 1.86	GH7							Sn	an 40 MHz	
#Res BW 3		_		#	/BW 1.2 M	IHZ			eep 1 ms	CF Step 4.000000 MH
Occupie	ed Bandw	ldth	S		Total F	ower	28.	0 dBm		Auto Mar
		17.9	973 MI	Ηz						Freq Offse
Transmit	Freq Erro	r	18.571	Hz	OBW P	ower	91	9.00 %		0 H
x dB Ban	dwidth		19.62 M	IHz	x dB		-26	8b 00.		
(in)							=7*10			

## Band25\_20MHz\_64QAM\_100\_0\_MidCH26365-1882.5



## Band25\_20MHz\_64QAM\_100\_0\_HighCH26590-1905

Center Fre	enter Freg 1.90500000 GHz atFGaint.nw Freg 1.00500000 GHz Trig: Freg Nam AvgiHeid: 50/50 Radio Std: None Radio Std: None Radio Std: None Radio Device: BTS										
Ref Offset 13.9 dB 0 dB/div Ref 30.00 dBm											
200				and the second second		-	-				Center Fred 1 905000000 GHz
0.00 -10.0 -20.0	-	A		_				1			
the second second	-	how		_				Ju-	maninin		
50.0											
Center 1.9 Res BW 3			·	#V	BW 1.2 M	Hz				ep 1 ms	CF Step 4.000000 MH
Occupi	ed Band	width	Sec.		Total Po	ower		22.	9 dBm		Auto Mar
		17.	925 MH	z							Freq Offsel
	it Freq Err	or	4.461 k		OBW Po	wer			9.00 %		0 Hz
x dB Ba	ndwidth		19.42 M	Hz	x dB			-26	.00 dB		1.1.1
									-		

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### Band26\_1\_4MHz\_QPSK\_6\_0\_LowCH26697

Center Fre	Frequency								
10 dB/div									
200-000-000		Jun		ware ware	m				Center Freq 814.700000 MHz
-100	and the second	1				hum	·		
40 0 80 0									
Center 814 #Res BW			#V	/BW 91 kH	Iz			pan 3 MHz ep 3.2 ms	CF Step 300.000 kHz
Occup	ied Bandwidti 1.1	035 MI	Hz	Total P	ower	29.8	3 dBm		Auto Mar
	it Freq Error ndwidth	1.957   1.302 M	Hz	OBW P x dB	ower		9.00 % 00 dB		0 Hz
airc						-7830	-		

### Band26\_1\_4MHz\_QPSK\_6\_0\_MidCH26865

Average Lines	there was a constant of the co	-		112 211		ALTON AUTO	101-09-27	PM Aug 17, 2010	Frequency		
Center Fr	enter Freg 831.500000 MHz Center Freg 831.600000 MHz Radio Std: None Trig: Free Run Avg Hold: 50/50 Radio Device: BTS										
10 dB/div											
200		for		mann		1	_		Center Free 831,500000 MH		
0.00 -10.0 -20.0		4				1	mon				
30.0 48.0 80.0											
Center 83	1.5 MH2							pan 3 MHz			
Res BW		_	#V	BW 91 kH	z			ep 3.2 ms	CF Step 300.000 kH Auto Mar		
Occup	led Bandwidti 1.	h 1005 MH	łz	Total P	ower	30.	1 dBm		Freq Offse		
	hit Freq Error andwidth	1.497 k 1.286 M		OBW P x dB	ower		9.00 % 6.00 dB		0 Hi		
80							ue.	-			

## Band26\_1\_4MHz\_QPSK\_6\_0\_HighCH27033

P P	Mr. Occupied BW		1.9	ing and		ALION AUTO	01-13-32 PM	Aur 17, 2018	
Center Fre	eq 848,300000 N	MEGain:Low		req: 848.300	AvgiHold		Radio Std: I Radio Devic	None	Frequency
10 dB/div	Ref Offset 13.6 dB Ref 30.00 dBm							= -0	
.og 200		man		~~~	m				Center Freq 848.300000 MHz
		4				Im			
а а а а									
sñ (j) 50.0			_					-	
enter 84 Res BW			#VE	3W 91 kH	z			n 3 MHz 3.2 ms	CF Step 300.000 kH
Occup	led Bandwidt	1032 MH	7	Total P	ower	30.	1 dBm		Auto Mar
Transmit Freq Error		878   1.309 Mi	Hz	OBW Power 99.00 % x dB -26.00 dB			Freq Offsel 0 Hz		
ic)						1000	e		

## Band26\_1\_4MHz\_16QAM\_6\_0\_LowCH26697

Augustit Spath	HT STORES	· · · · · · · · · · · · · · · · · · ·	3103.007	ALTON- AUTO			022	
	entor Frog B14,700000 MHz Center Freg B14,700000 MHz Tig Free Run ArgiHol 66/0 Reference Refer R							
10 dB/div	Ref Offset 13.6 dB Ref 30.00 dBm					= -0		
200 100	Jerrow and						Center Free 814.700000 MH	
-10 0 20 0 -30 0	man	4		100		m		
48 0 80 0								
Center 814.7 MHz Span 3 MHz Rres BW 30 kHz \$VBW 91 kHz Sweep 3.2 ms							CF Step 300.000 kH Auto Mar	
Occup	led Bandwidt		Total Power 28.7 dBm				Auto Mar	
	it Freq Error Indwidth				Freq Offse 0 H			
					05	-		

### Band26\_1\_4MHz\_16QAM\_6\_0\_MidCH26865

PL Average Space	AT Store Declared BW		2 212 211				PH Ang 17, 2010	
	q 831.500000 N		enter Freq: 831.56 rig: Free Run Atten: 30 dB	AvgiHal	d: 60/60	Radio St		Frequency
10 dB/div	Ref Offset 13.6 dB Ref 30.00 dBm						0	
20.0 10.0 0.00	10			m				Center Freq 831,500000 MHz
-10.0	man	1			m		and the second	
48.9 -90.0						-		
Center 83 #Res BW			#VBW 91 k	Hz			pan 3 MHz ep 3.2 ms	CF Step 300.000 kHz
Occup	led Bandwidth 1.0		Power	28	.8 dBm		Auto Man Freg Offset	
	Transmit Freq Error 4 x dB Bandwidth 1.30							0 Hz
Milo					11 P 11	05		-

### Band26\_1\_4MHz\_16QAM\_6\_0\_HighCH27033

	H-Heating and - Occubered BW/							
	848.300000 N	1112	Center Freq: 848.30 Trig: Free Run #Atten: 30 dB		Radio Std		Frequency	
10 dB/div	Ref Offset 13.6 dB Ref 30.00 dBm					= -0		
200 100		June		m			Center Fred 848.300000 MH;	
20.0	man	4			man more	man		
30.0 40.0 80.0							1.1	
-60.0 Center 848.3 #Res BW 30			#VBW 91 k	Hz	Sp	an 3 MHz p 3.2 ms	CF Step 300.000 kHz	
Occupie	d Bandwidth		Total I	Power	28.8 dBm		Auto Mar	
		986 MH					Freq Offset	
Transmit x dB Band	Freq Error dwidth	-1.431 kH 1.313 MH		ower	99.00 % -26.00 dB		0 Hz	
					-			

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### Band26\_1\_4MHz\_64QAM\_6\_0\_LowCH26697

Avenue Space	Ar Story Cocupied BW		anadri		August auror		PH App 17, 2010	32.00
	enter Freq B14,700000 MHz Conter Freq B14,700000							
10 dB/div	Ref Offset 13.6 dB Ref 30.00 dBm						0	
200		June		m				Center Fred 814.700000 MHz
-10.0 20.0		4			hurson			
40 Ú 80 Q								
Center 81		11 1	#VBW 91 k	Hz			pan 3 MHz ep 3.2 ms	CF Step 300.000 kH
			Total F	ower	28.7	dBm		Auto Mar
		-1.181 kHz 1.310 MHz	OBWF	OBW Power 99.00 % x dB -26.00 dB			0H	
(CHIN)				_	=7#102	-	-	

## Band26\_1\_4MHz\_64QAM\_6\_0\_MidCH26865

Averant Seat	treet Analyzer - Occupied BW		1.989-00		ALIGN-AUTO	01-10-14	MAag 17, 2018	2 2 M
Center Fre	enter Freg 831,500000 MHz Center Freg 831,500000 MHz Radio Std: None Trig: Free Run Avg Hold: 50/50 Radio Device: BTS #H5ain:10 dB Radio Device: BTS							Frequency
10 dB/div	Ref Offset 13.6 dB Ref 30.00 dBm						= -1	
200 100		from	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	m				Center Freq 831.500000 MHz
-10 0 -21 0 -30 0	man	4	_		han	· · · · · · · · · · · · · · · · · · ·	m	
40.0 -90.0						-		
Center 83 #Res BW			#VBW 91 k	Hz			oan 3 MHz ep 3.2 ms	CF Step 300.000 kHz
Occup	led Bandwidt	h 0966 MH:	Total I	Power	28.	9 dBm	1.1	Auto Mar Freq Offset
	Transmit Freq Error -282 x dB Bandwidth 1.292 M		Z OBW F	DBW Power 99.00 % dB -26.00 dB			0 Hz	
60					-1010			

## Band26\_1\_4MHz\_64QAM\_6\_0\_HighCH27033

PL:	10 D DE 10	1		Freq: 848.300		ALLON- MUTU	Radio Std:	Aug 17, 2018	Frequency
Center Fr	eq 848,300000 N	MFGainLow	Trig: F	Free Run 1: 30 dB		ld: 50/50	Radio Std: Radio Devi		requirey
10 dB/div	Ref Offset 13.6 dB Ref 30.00 dBm							= 0	
200		m			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				Center Freq 848 300000 MHz
-10.0	man	1		_		Jum		~~	
-30,0 -46,0 -90,0			-	-				~	
60.0			-						
Center 84 #Res BW		_	#	VBW 91 kH	Iz			n 3 MHz 3.2 ms	CF Step 300.000 kHz
Occup	led Bandwidth	h		Total P	ower	28.9	dBm		Auto Man
	1.0	0984 M	Hz						Freq Offset
		-1.121						0 Hz	
x dB Ba	andwidth	1.316	MHz	x dB		-26.	00 dB		1
eino)						=78102	-		-

### Band26\_3MHz\_QPSK\_15\_0\_LowCH26705

Augustit Sparts	At Story of Story								24
	PL at 200 to 11420 at Aug 12 2012 enter Freq 815.550000 MHz Trig: Freq Rato Avg/Hold: 69/50 Aff.GimLaw Attain: 20 0 At Aug 2012								
10 dB/div	Ref Offset 13 Ref 30.00 c				2.5		0		
200-000-000	no				m			Center F 815 500000	
-10.0					1	-			
-30.0.						-			
-60.0									
Center 815 #Res BW 6				VBW 180 kH	z		an 6 MHz 1.533 ms	CF Step 600.000 kH	<b>kH</b>
Occupied Bandwidth				Total Po	wer 3	30.3 dBm		Auto	Man
1.0		2.7133		Calanta -		0.0.5		Freq Of	tset 0 Hz
Transmit Freq Error x dB Bandwidth 3			465 Hz 20 MHz	OBW Power 99.00 % x dB -26.00 dB			2 612		
wiica i						#1425			_

### Band26\_3MHz\_QPSK\_15\_0\_MidCH26865

			ALISN-AUTO					AT DEC	Superstrates		
Frequency	d: None	Radio Std: None Radio Device: BTS		500000 MHz AvgiHol	Center Freq: Trig: Free Ru #Atten: 30 dE		Center Freq 831,500000 MHz				
	0							Ref Offsel Ref 30.0	10 dB/div		
Center Fri 831.500000 Mi		<b>\</b>							- 10 0 - 10 0		
CF Ste 600.000 ki Auto M	oan 6 MHz 1.533 ms	Sweep			#VBW			52 kHz	Center 83 #Res BW		
Freq Offs	1 - 1	3 dBm	30.3	Power		128 MH		led Band	Occup		
01	er 99.00 % -26.00 dB			Power		83 I 3.035 Mi					
<u> </u>		e	=7810						wiio.		

## Band26\_3MHz\_QPSK\_15\_0\_HighCH27025

Kvprofit.Spathsteri-Analyzer - Occupied 5	747						
Center Freq 847,500000	Trip	ter Freq: 847.500000 MHz ; Free Run AvgiHol ten: 30 dB	d: 60/60	Radio Std		Frequency	
10 dB/div Ref 30.00 dB	dB m		2.		0		
200	Jamman		1			Center Freq 847.500000 MHz	
-10.0			1		Same		
-30.0. -48.0 							
-60 0 Center 847.5 MHz #Res BW 62 kHz		#VBW 180 kHz			an 6 MHz 1.533 ms	CF Step	
Occupied Bandwid	th	Total Power	30.	3 dBm	1.000 113	600.000 kHz Auto Man	
	.7173 MHz					Freq Offset	
Transmit Freq Error x dB Bandwidth	-2.108 kHz 3.055 MHz	OBW Power 99.00 % x dB -26.00 dB				0 Hz	
				pe.			

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### Band26\_3MHz\_16QAM\_15\_0\_LowCH26705

PL PL	trear Analyzer - Occupied BW		1 31	ar ann		ALIGN-AUTO	121-42:49.4	M Aug 17, 2018	
Center Fre	eq 815,500000 N	MEGainLow	Center Fre Trig: Free #Atten: 30		AvgiHold	>50/50	Radio Std: None Frequency Radio Device: BTS		
10 dB/div	Ref Offset 13.6 dB Ref 30.00 dBm					2		(	
200-00-000			hange berna		m	m			Center Fred 815 500000 MH
-10.0	man		_	_	-		·····		
-40 0 -80 0				-					
Center 81 #Res BW			#VB	W 180 k	Hz			an 6 MHz 1.533 ms	CF Step
				Total P	ower	29.	7 dBm		Auto Mar Freq Offse
		-17 F 2.989 MF		OBW Power 99.00 % x dB -26.00 dB				08	
(initial)						=7810	5		-

### Band26\_3MHz\_16QAM\_15\_0\_MidCH26865

Anterest Contemport	trainer Analyzer - Occupied B	W)					
Center Freg B31.500000 MHz BifGainLow Attent 30 0B Attent 30 Attent 30 Attend 30 Attent 30 Attent 30 Attent 30 Attend 30 Atte							Frequency
10 dB/div	Ref Offset 13.6 c Ref 30.00 dBi			2.00			
200-000-000		para		ring			Center Free 831.500000 MH
-10.0	married a	/		1		And and a second	
-30.0 -40.0 -90.0							
Center 83	1.5 MHz				Spa	n 6 MHz	
#Res BW			#VBW 180 kHz		Sweep 1		CF Step 600.000 kHz Auto Mar
Occup	led Bandwid 2.	n 7021 MHz	Total Power	29.	7 dBm		Freq Offset
	hit Freq Error andwidth	1.041 kHz 2.982 MHz	OBW Power x dB		9.00 % .00 dB		0 8
682				-7470			

## Band26\_3MHz\_16QAM\_15\_0\_HighCH27025

Represent Speatners - Speatners - S			1952 - 197	ALIO5-4010	Ter Laboration	M Aug 17, 2018	
Center Freq 847.50	0000 MHz	Center I Trig Fr	Center Freq: 847.500000 MHz Trig: Free Run AvgiHold: 50/50 #Atten: 30 dB			None	Frequency
10 dB/div Ref 30.	et 13.6 dB 00 dBm			2.45			
200	jaman			~			Center Freq 847.500000 MHz
0.00 10.0 20.0	~			1	man		
0.0. 0.0					-		
50 0.							
enter 847.5 MHz Res BW 62 kHz		#V	BW 180 kHz			an 6 MHz 1.533 ms	CF Step 600.000 kHz
Occupied Ban			Total Power	29.	8 dBm		Auto Mar
Transmit Freq E x dB Bandwidth	2.7044 N mor -1.71 3.020	kHz	OBW Power x dB		9.00 % 5.00 dB		Freq Offset 0 Hz
io)					08		

#### Band26\_3MHz\_64QAM\_15\_0\_LowCH26705

Averaget Spect	AT 20 G D		ana 11/1	Auge-store in	1-41-15 A	M Aug 17, 2018	0.2 8
Center Fre	Frequency						
10 dB/div	Ref Offset 13.6 Ref 30.00 di					= 0	Center Freq 815 500000 MHz
200		para an	ana	-			
-10.0	mann			1 mm	-		
30.0. 40.0 80.0							
Center 81					C.n.	an 6 MHz	
Res BW			#VBW 180 kHz	S	weep	1.533 ms	CF Ste 600.000 kH
Occup	led Bandwi		Total Power	29.8 d	Bm		Auto Mar
Trancon		2.7061 MHz	OBW Power	99.00	0.0/		Freq Offse
	it Freq Error Indwidth	-478 Hz 2.983 MHz	x dB	-26.00			
00				-14105			

# Band26\_3MHz\_64QAM\_15\_0\_MidCH26865

Antipage Contraction	All Start Document			avaun		A104 aUm	Terration	H Aug 17, 2018	0.2 8	
	Center Freg 831.500000 MHz Center Freg 831.500000 MHz Radio Std: None Trig: Freg 831.500000 MHz Argi Pres 80.500000 MHz Radio Solis Center Freg 831.500000 MHz Radio Device: BTS									
10 dB/div	Ref Offset 13.6 Ref 30.00 di					2.00		0		
20.0		/	````		nnn				Center Freq 831.500000 MHz	
-60.0 Center 83 #Res BW		dth	#	VBW 180 P		29		an 6 MHz 1.533 ms	CF Step 600.000 kHz Auto Mar	
Transm		2.7026 MI	kHz	OBW P x dB		5	99.00 % 5.00 dB		Freq Offset 0 Hz	
wiik)					-	1000	05	-		

### Band26\_3MHz\_64QAM\_15\_0\_HighCH27025

Kaywegitt. Spectrolery (Arony) 20	er - OccMpred BW/						
Center Freq 847.		in Tr	ig: Free Run tten: 30 dB	Radio De		Frequency	
10 dB/div Ref :	ffset 13.6 dB 30.00 dBm			8 - 8 m			
200 200 100		man		m			Center Free 847,500000 MH
10.0	mint				~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		
30.0 48.0 40.0					-		
Center 847.5 MHz						an 6 MHz	
#Res BW 62 kHz	-		#VBW 180 H	Hz	Sweep	1.533 ms	CF Ster 600.000 kH
Occupied Ba			Total P	ower 2	9.9 dBm		Auto Ma
	2.7	085 MHz					Freq Offse
Transmit Freq	Error	-3.060 kHz	OBW P	ower	99.00 %		OH
x dB Bandwid	th	3.019 MHz	x dB		26.00 dB		
-					8710		

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## Band26\_5MHz\_QPSK\_25\_0\_LowCH26715

Averaget Space	HP 294 G DC	W	2 282 281		ALISS-MUTCH		M Aug 17, 2018	020
Center Fre	Frequency							
10 dB/div	Ref Offset 13.6 c Ref 30.00 dB						- 0	
200		perman				-		Center Free 816.500000 MH
0.00 -10.0 21.0	hand				X	min		
-30.0. -40.0 -60.0								
Genter 816	a balla							
Res BW			#VBW 300	kHz			n 10 MHz ep 1 ms	CF Step 1.000000 MH
Occup	led Bandwid 4	th 5205 MHz	Total	Power	30.	6 dBm		Auto Mar Freq Offse
	it Freq Error ndwidth	3.076 kH 4.966 MH		Power		9.00 % .00 dB		0 H
eiro)						6		

## Band26\_5MHz\_QPSK\_25\_0\_MidCH26865

P PL	Aleri Analyzer - Occilipi			ana			111-20-15	MAug 17, 2018	
Center Fre	Frequency								
10 dB/div	Ref Offset 13 Ref 30.00 c							()	
200 100		por	~~~~~~	n	-		-		Center Free 831.500000 MH
-10.0						1		mina	
30,0. 40 D									
center 83	1.5 MHz					_	Sna	an 10 MHz	
Res BW			#	VBW 300 ki	łz			eep 1 ms	CF Step 1.000000 MH
Occup	led Bandw	idth 4.5222	2 MHz	Total Po	ower	30.6	dBm		Auto Mar Freq Offset
	it Freq Errol ndwidth		.848 kHz 025 MHz	OBW Po x dB	wer		9.00 % 00 dB		0 H
80									

## Band26\_5MHz\_QPSK\_25\_0\_HighCH27015

PL Frenter Fre	q 846.50000		12		reg: 846.500	000 MHz	WTOP STUD	Radio St	AM Aug 17, 2018	Frequency
Senter Th	FQ 040.50000		Fisain Low	Trig: Free Run AvgiHold: 50/50 #Atten: 30 dB				Radio De	vice: BTS	
10 dB/div	Ref Offset 13 Ref 30.00 c	.6 dB							0	
.0g 200 100		1	monuna	un hanna - un han - man -		-			Center Freq 846.500000 MHz	
0.00 10.0 20.0	mm	1								
30,0. 40 D										
sñ () 60.0			-							
Center 84				#V	BW 300 k	Hz			an 10 MHz eep 1 ms	CF Step
Occup	led Bandw		279 Mł	1-	Total P	ower	30	.4 dBm		Auto Man
	it Freq Error Indwidth		-786 5.000 N	Hz	OBW P x dB	ower		99.00 % 6.00 dB		Freq Offset 0 Hz
10							-	14.14		

#### Band26\_5MHz\_16QAM\_25\_0\_LowCH26715

Average Constant	HP DOCUMENT	W.	ana wil	#105-#UTG	111:24:07 AM Aug 17: 20	
Center Fre	Frequency					
10 dB/div	Ref Offset 13.6 d Ref 30.00 dBr			2.4		
200						
-10.0	-			La		
-30,0. -40 D						-
-60.0						
Center 810 #Res BW			#VBW 300 kHz		Span 10 MH Sweep 1 m	S 1.000000 MH
Occup	led Bandwidt	th	Total Power	29.0	5 dBm	Auto Mar
	4.	5063 MHz				Freq Offse
Transm	it Freq Error	-921 Hz	OBW Power	91	9.00 %	0 8
x dB Ba	ndwidth	4.980 MHz	x dB	-26.	00 dB	1
viio				=1=10		

## Band26\_5MHz\_16QAM\_25\_0\_MidCH26865

Average Spect	enerri Analyzer - Occupied By	W.	3193.00		#195-MUTO		AM Aug 17, 2018	22.00
Center Fre	d: None zvice: BTS	Frequency						
10 dB/div	Ref Offset 13.6 d Ref 30.00 dBn						(	
200		mon	hannan			-		Center Freq 831.500000 MHz
9.00 -10.0 -20.0	1				X		1.5.4	
-30.0 -40.0					~~~~	- man	marina	
-80 0 -60 0			_					
Center 83 #Res BW			#VBW 300	kHz			an 10 MHz /eep 1 ms	CF Step 1.000000 MH
Occup	led Bandwidt 4.	<sup>th</sup> 5155 MH		Power	30.	2 dBm		Auto Mar
	lit Freq Error Indwidth	2.800 kH 4.934 MH	z OBW	Power		9.00 % .00 dB		0 Hz
00					=7*10		_	

## Band26\_5MHz\_16QAM\_25\_0\_HighCH27015

<ul> <li>Superprising and the second sec</li></ul>	Noted BW/				
Center Freq 846.500		Center Freq: 846,500 Trig: Free Run #Atten: 30 dB	AvgiHold: 50/50	Radio Std: None Radio Device: BTS	Frequency
10 dB/div Ref 30.00					
200 100	juna				Center Free 846.500000 MH
0.00 10.0 20.0	1		h		
30,0,					
e0.0					_
Center 846.5 MHz #Res BW 100 kHz		#VBW 300 k	Hz	Span 10 MH Sweep 1 n	1.000000 MH
Occupied Band	width	Total P	ower 29.	6 dBm	Auto Mar
	4.5106 M	Hz			Freq Offset
Transmit Freq Erro	or -8.850	KHZ OBW P	ower 9	9.00 %	0 Ha
x dB Bandwidth	5.013 M	IHz x dB	-26	.00 dB	1
				æ	-

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### Band26\_5MHz\_64QAM\_25\_0\_LowCH26715

Avenue for	HE 20 G D		_	anautri		104 aung	THE MACTER	H Aug 17, 2018	022
Center Freg 816.500000 MHz Center Freg 816.50000 MHz Radio Std: None Trig: Free Run AvgiHold: 50:50 Radio Device: BTS								None	Frequency
10 dB/div	Ref Offset 13. Ref 30.00 d					~		(	
200 100		formen		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		5			Center Fred 816.500000 MH
-10 0 -20 0						fre			
40 D 40 D 40 D		_							
Center 81 #Res BW			#	VBW 300 ki	łz			n 10 MHz eep 1 ms	CF Ste 1.000000 MH
Occup	led Bandwi	dth 4.5019	MHz	Total Po	wer	29.7	dBm		Auto Ma
	hit Freq Error andwidth		94 MHz	OBW Pa x dB	wer		9.00 % 00 dB		он
(init)						#7830	-		-

# Band26\_5MHz\_64QAM\_25\_0\_MidCH26865

Avgeographic Spec	the of the other other other other other other	1	ana ani	ALTON-MUTCH	111:20:50 AM Aug 17, 2018	0.2.00
Center Fr	Frequency					
10 dB/div	Ref Offset 13.6 di Ref 30.00 dBm				1	
200 100 0.00				-		Center Free 831.500000 MHz
200	manned			1		
48 0 90 0 60 0						
Center 83 #Res BW			VBW 300 kHz		Span 10 MHz Sweep 1 ms	1.000000 MH
Occup	led Bandwidt	h 4967 MHz	Total Power	29.7	dBm	Freg Offse
	hit Freq Error andwidth	2.488 kHz 4.974 MHz	OBW Power x dB		9.00 % 00 dB	OH
80					-	

## Band26\_5MHz\_64QAM\_25\_0\_HighCH27015

Center Fre	eq 846.500000	Center Freq: 848,500000 MHz Trig: Free Run Avg/Hold: 50/50				Radio St	AM Aug 17, 2018 d: None	Frequency	
		#FGain:Lnw		tten: 30 dB			Radio De	vice: BTS	
10 dB/div	Ref Offset 13.6 d Ref 30.00 dBr							0	
200		m	~~~	mm		~			Center Freq 846,500000 MHz
0.00		1	-			A		-	
20.0	anima			-		1		min	
40.0				-					
60.0				-		11			
Center 846.5 MHz Span 10 MHz Res BW 100 kHz #VBW 300 kHz Sweep 1 ms									CF Step
Occupied Bandwidth			Total Power 29.			4 dBm	-	Auto Man	
	4.	5120 MH	z						Freq Offset
Transmit Freq Error -8.215 F x dB Bandwidth 5.025 M				9	99.00 %		0 Ha		
		5.025 M	1Hz x dB		-26	-26.00 dB			
00							1.04	_	

#### Band26\_10MHz\_QPSK\_50\_0\_LowCH26750

Averant Seat	Ar Seg Do	BW/		anautit	W104-80			
Center Fre	M Aug 17, 2018 1: None vice: BTS	Frequency						
10 dB/div	Ref Offset 13.6 dB /div Ref 30.00 dBm							
200		man	mani	have made	mm	-		Center Free 820.000000 MH
0.00		/						
30.0			-			man and and and and and and and and and a	un and a second	
-60.0						-		
Center 820 MHz Span 20 MHz #Res BW 200 kHz Sweep 1 ms								CF Ste 2.000000 MH
Occupied Bandwidth				1,0,000 0,000 0,000 0,000		30.4 dBm		Auto Mar
	8	.9862 N	/Hz					Freq Offse
Transmit Freq Error 3.127 x dB Bandwidth 9.966 M		7 kHz			99.00 % -26.00 dB		0 H	
		MHz						
eiro i						where	-	

## Band26\_10MHz\_QPSK\_50\_0\_MidCH26865

A Supermitives	Annual	· · · ·		ana m		#154 aUng	Interaction	AM 4	
Center Fre	Center Freq. 831.500000 MHz Trig: Free Run AvgiHold: 50/50 #Atten: 30 dB			Radio Std: None Radio Device: BTS		Frequency			
10 dB/div									
200 10.0	m				-	-		Center Freq 831.500000 MHz	
9.00 -10.0 -20.0	1	4	_	-	-	1		1	
30.0	and and a start of the start of		-				-Marina		
-80 () -60.0			-	-			-		
	enter 831.5 MHz Span 20 MHz Span 20 MHz Sweep 1 ms								CF Step 2.000000 MHz
Occupied Bandwidth 8.9588 MHz				Total Power 30.		0.5 dBm		Auto Man Freq Offset	
Transmit Freq Error 1.776 i x dB Bandwidth 9.896 M		Hz	OBW Power		99.00 % -26.00 dB			0 Hz	
Culture (							08		

### Band26\_10MHz\_QPSK\_50\_0\_HighCH26990

Asymptotic Span	throny Analyzer - Occupied 8	747		#104 HUT				
	eq 844.000000	Ten 12.	ig: Free Run tten: 30 dB	Radio Device: BTS		Frequency		
10 dB/div								
200						Center Freq 844,000000 MHz		
9.00. 10.0		1	-					
30.0	and all and an and and				-	m		
40 D 90 Q 60 Q								
Center 84 Res BW			#VBW 620 kH	2	Span Swee	20 MHz p 1 ms	CF Step 2.000000 MH	
Occup	led Bandwid	th	Total Power		30.5 dBm		Auto Man	
	8	.9609 MHz					Freq Offset	
		-20.169 kHz 9.938 MHz			99.00 % 5.00 dB		0 Hz	
							-	
(IK)					1.24			

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