FCC PART 27
FCC PART 22H, PART 24E
TEST REPORT

For

Guangdong BYD Energy-saving Technology Co., Ltd.

BYD Industrial Park, Xiangshui River, Daya Bay, Huizhou City, Guangdong Province, China

FCC ID: 2AX63FF-CDP001-P2-1

Report Type:	**Product Type:**
Original Report	Led roof display

Report Number: SH1210819-35399E-00C

Report Date: 2021-10-26

Candy Li

Reviewed By: RF Engineer

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Note: This report may contain data that are not covered by the A2LA accreditation and are marked with an asterisk "★".

Shenzhen Accurate Technology Co., Ltd. is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with an asterisk '*'. Customer model name, addresses, names, trademarks etc. are not considered data.

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Product	Led roof display
Trademark	Led roof display
Tested Model	FF-CDP001-P2
Frequency Range	WCDMA Band 2/LTE Band 2: 1850-1910MHz(TX); 1930-1990MHz(RX) WCDMA Band 4/LTE Band 4: 1710-1755MHz(TX); 2110-2155MHz(RX) WCDMA Band 5/LTE Band 5: 824-849MHz(TX); 869-894MHz(RX) LTE Band 7: 2500-2570MHz(TX); 2620-2690MHz(RX) LTE Band 12: 699-716MHz(TX); 729-746MHz(RX) LTE Band 13: 777-787MHz(TX); 746-756MHz(RX) LTE Band 17: 704-716MHz(TX); 734-746MHz(RX)
Maximum Output Power (Conducted power)	WCDMA Band 4: 23.0dBm, LTE Band 2/4/5/7/12/13/17: 23.0dBm
Modulation Technique	3G: BPSK, QPSK, 16QAM 4G: QPSK, 16QAM
Antenna Specification*	0dBi (provided by the applicant)
Voltage Range	DC 12V
Date of Test	2021-10-26
Sample serial number	SH1210819-35399E-RF-S1 (Assigned by ATC)
Received date	2021-08-09
Sample/EUT Status	Good condition

Objective

This test report is in accordance with Part 2-Subpart J, Part 22-Subpart H, Part 24-Subpart E, and Subpart 27 of the Federal Communication Commission's rules.

The objective is to determine the compliance of the EUT with FCC rules for output power, modulation characteristic, occupied bandwidth, and spurious emission at antenna terminal, spurious radiated emission, frequency stability and band edge.

Test Methodology

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47 Part 2-Subpart J as well as the following parts:

Part 22 Subpart H - Public Mobile Services
Part 24 Subpart E - Personal Communication Services
Part 27 - Miscellaneous Wireless Communications Services

ANSI C63.26-2015: American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services

All emissions measurement was performed at Shenzhen Accurate Technology Co., Ltd. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Measurement Uncertainty

Parameter		Uncertainty
Emissions, Radiated	30MHz - 1GHz	4.28dB
	1GHz - 18GHz	4.98dB
	18GHz - 26.5GHz	5.06dB
Temperature		1℃
Humidity		6%
Supply voltages		0.4%

Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

Test Facility

The Test site used by Shenzhen Accurate Technology Co., Ltd. to collect test data is located on the 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China.

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No.: 708358, the FCC Designation No.: CN1189. Accredited by American Association for Laboratory Accreditation (A2LA) The Certificate Number is 429 7.01.

Listed by Innovation, Science and Economic Development Canada (ISEDC), the Registration Number is 5077A.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The final qualification test was performed with the EUT operating at normal mode.

Equipment Modifications

No modification was made to the EUT.

Support Equipment List and Details

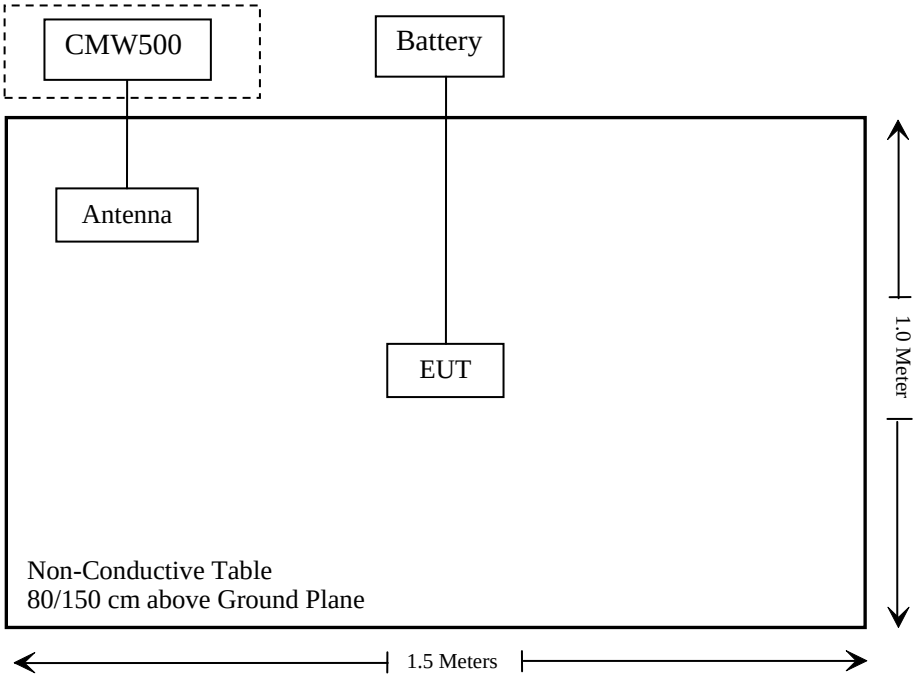
Manufacturer	Description	Model	Serial Number
CHUANXI	MAINTENA NCE-FREE BATTERY	6-QW-60	44H137574
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	154606

Support Cable Description

Cable Description	Length (m)	From / Port	To
Unshielded Detachable DC Cable	1.0	Battery	EUT

Block Diagram of Test Setup

For radiated emission:



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§1.1310 & §2.1091	MAXIMUM PERMISSIBLE EXPOSURE (MPE)	Compliant
§2.1046; § 22.913 (a); § 24.232 (c); §27.50 (a) (b) (c) (d) (h);	RF Output Power	Compliant*
§ 2.1047	Modulation Characteristics	Not Applicable
§ 2.1049; § 22.905; § 22.917; § 24.238; §27.53	Occupied Bandwidth	Compliant*
§ 2.1051; § 22.917 (a); § 24.238 (a); §27.53;	Spurious Emissions at Antenna Terminal	Compliant*
§ 2.1053; § 22.917 (a); § 24.238 (a); §27.53	Field Strength of Spurious Radiation	Compliant
§ 22.917 (a); § 24.238 (a); §27.53 (c) (h) (m)	Band Edge	Compliant*
§ 2.1055; § 22.355; § 24.235; §27.54;	Frequency stability	Compliant*

Compliance*: The current device had been tested and verified the RF parameters consistently with the original device, please refer to the FCC report: RSH201124050-00B (FCC ID: 2AX63FF-CDP001-P2), which was issued by Bay Area Compliance Laboratories Corp. (Shenzhen) on 2021-02-22.

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test					
Rohde & Schwarz	Spectrum Analyzer	FSV-40	101495	2020/12/24	2021/12/23
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	154606	2020/12/25	2021/12/24
Vector Signal Generator	AGILENT	N5182A	MY50143401	2020/12/25	2021/12/24
V.R. of Signal Generators	Anritsu	68369B	004114	2021/07/31	2022/07/30
Schwarzbeck	Horn Antenna	BBHA9120D	9120D-1067	2020/01/05	2023/01/04
SCHWARZBECK	HORN ANTENNA	BBHA9120D	9120D-655	2020/01/05	2023/01/04
Schwarzbeck	HORN ANTENNA	BBHA9170	9170-359	2020/01/05	2023/01/04
Ducommun Technolagies	Horn antenna	ARH-4223-02	1007726-01 1304	2020/12/06	2023/12/05
A.H. Systems, inc.	Preamplifier	PAM-0118P	531	2021/07/08	2022/07/07
Quinstar	Amplifier	QLW-184055 36-J0	15964001002	2020/11/28	2021/11/27
Rohde& Schwarz	Test Receiver	ESR	101817	2020/12/24	2021/12/23
SONOMA INSTRUMENT	Amplifier	310 N	186131	2020/12/25	2021/12/24
Anritsu Corp	50 Coaxial Switch	MP59B	6100237248	2020/12/25	2021/12/24
Schwarzbeck	Bilog Antenna	VULB9163	9163-323	2020/01/05	2023/01/04
Schwarzbeck	Bilog Antenna	VULB9163	9163-194	2020/01/05	2023/01/04
RF Coaxial Cable	Unknown	N-5m	No.1	2020/12/25	2021/12/24
RF Coaxial Cable	Unknown	N-1m	No.6	2020/12/25	2021/12/24
RF Coaxial Cable	Unknown	N-6m	No.10	2020/12/25	2021/12/24
RF Coaxial Cable	Unknown	N-2m	No.11	2020/12/25	2021/12/24
RF Coaxial Cable	Unknown	N-8m	No.15	2020/12/25	2021/12/24

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test					
Unknown	Band Reject Filter	MSF1850-1910MS-1148	201706003	2020/12/25	2021/12/24
Unknown	Band Reject Filter	MSF1710-1785MS-1150	201706003	2020/12/25	2021/12/24
Unknown	Band Reject Filter	MSF824-862 MS-1147	201706003	2020/12/25	2021/12/24
Unknown	Band Reject Filter	MSF700-800 MS-1153	201706003	2020/12/25	2021/12/24
Unknown	High Pass Filter	HPM-1.2/18G-60	110	2020/12/25	2021/12/24

* Statement of Traceability: Shenzhen Accurate Technology Co., Ltd. attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

FCC § 1.1310 & §2.1091- MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Applicable Standard

According to subpart 1.1310 and subpart 2.1091 systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to RF energy level in excess of the communication guidelines.

Limits for General Population/Uncontrolled Exposure

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	**Electric Field Strength (V/m)**	**Magnetic Field Strength (A/m)**	**Power Density (mW/cm^2)**	**Averaging Time (Minutes)**
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*($180/f^2$)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

f = frequency in MHz
* = Plane-wave equivalent power density

Result

Calculated Formulary:

Predication of MPE limit at a given distance

$$S = \frac{PG}{4\pi R^2}$$

S = power density (in appropriate units, e.g. mW/cm^2)
P = power input to the antenna (in appropriate units, e.g., mW).
G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain.
R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

For simultaneously transmit system, the calculated power density should comply with:

$$\sum_i \frac{S_i}{S_{Limit,i}} \le 1$$

Mode	Frequency	Antenna Gain		Tune up conducted power		Evaluation Distance (cm)	Power Density (mW/cm^2)	MPE Limit (mW/cm^2)
		(dBi)	(numeric)	(dBm)	(mW)			
BDR/EDR	2402-2480	5.0	3.16	7.0	5.01	20	0.003	1
BLE	2402-2480	5.0	3.16	1.5	1.41	20	0.001	1
Wi-Fi	2412-2462	5.0	3.16	16.5	44.67	20	0.028	1
WCDMA Band 2	1850-1910	0	1.0	23.0	200	20	0.040	1
WCDMA Band 4	1710-1755	0	1.0	23.0	200	20	0.040	1
WCDMA Band 5	824-849	0	1.0	23.0	200	20	0.040	0.549
LTE Band 2	1850-1910	0	1.0	23.0	200	20	0.040	1
LTE Band 4	1710-1755	0	1.0	23.0	200	20	0.040	1
LTE Band 5	824-849	0	1.0	23.0	200	20	0.040	0.549
LTE Band 7	2500-2570	0	1.0	23.0	200	20	0.040	1
LTE Band 12	699-716	0	1.0	23.0	200	20	0.040	0.466
LTE Band 13	777-787	0	1.0	23.0	200	20	0.040	0.518
LTE Band 17	704-716	0	1.0	23.0	200	20	0.040	0.469

Note: 1. the tune up conducted power was declared by the applicant
2. the Wi-Fi, WCDMA/LTE can transmit at the same time.

So the worst simultaneous transmitting consideration:
The ratio=$MPE_{Wi\text{-}Fi}$/limit + MPE_{LTE} /limit =0.028/1.0+0.040/0.466=0.114＜1.0

To maintain compliance with the FCC's RF exposure guidelines, place the equipment at least 20cm from nearby persons.

Result: Compliant

FCC §2.1047 - MODULATION CHARACTERISTIC

According to FCC § 2.1047(d), Part 22H & 24E & 27 there is no specific requirement for digital modulation, therefore modulation characteristic is not presented.

FCC § 2.1053; § 22.917 (a);§ 24.238 (a); §27.53 - SPURIOUS RADIATED EMISSIONS

Applicable Standard

FCC § 2.1053, §22.917(a) & § 24.238(a) & § 27.53.

Test Procedure

The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load which was also placed on the turntable.

The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the receiving antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.

The frequency range up to tenth harmonic of the fundamental frequency was investigated.

Test Data

Environmental Conditions

Temperature:	28 ℃
Relative Humidity:	50 %
ATM Pressure:	101.0 kPa

The testing was performed by Ting Lü on 2021-10-26

EUT operation mode: Transmitting (Worst case record in the reports)

The worst case is as below:

Cellular Band (Part 22H)

30MHz – 10GHz:

Frequency (MHz)	Receiver		Turntable Angle Degree	Rx Antenna		Substituted Factor (dB/m)	Absolute Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
	Reading (dBuV)	PK/Ave		Height (m)	Polar (H/V)				
WCDMA Mode, Low channel									
175.03	-39.57	PK	40	1.9	H	-6.05	-45.62	-13	32.62
176.88	-49.27	PK	234	1.6	V	-2.64	-51.91	-13	38.91
1652.8	-50.88	PK	211	1.4	H	-2.32	-53.20	-13	40.20
1652.8	-52.67	PK	332	1.9	V	-2.29	-54.96	-13	41.96
2479.2	-54.51	PK	143	2.0	H	1.21	-53.30	-13	40.30
2479.2	-53.98	PK	47	1.1	V	1.24	-52.74	-13	39.74
3305.6	-51.51	PK	63	1.7	H	3.25	-48.26	-13	35.26
3305.6	-52.41	PK	53	1.3	V	3.26	-49.15	-13	36.15
WCDMA Mode, Middle Channel									
175.03	-39.92	PK	247	1.0	H	-6.05	-45.97	-13	32.97
176.88	-48.81	PK	304	2.0	V	-2.64	-51.45	-13	38.45
1673.2	-51.28	PK	53	1.3	H	-2.34	-53.62	-13	40.62
1673.2	-52.19	PK	313	1.2	V	-2.31	-54.50	-13	41.50
2509.8	-54.67	PK	26	1.7	H	1.35	-53.32	-13	40.32
2509.8	-55.08	PK	269	2.2	V	1.39	-53.69	-13	40.69
3346.4	-51.05	PK	47	1.3	H	3.31	-47.74	-13	34.74
3346.4	-52.27	PK	47	1.8	V	3.3	-48.97	-13	35.97
WCDMA Mode, High Channel									
175.03	-38.20	PK	9	1.4	H	-6.05	-44.25	-13	31.25
176.88	-48.16	PK	275	1.1	V	-2.64	-50.80	-13	37.80
1693.2	-52.25	PK	47	1.8	H	-2.38	-54.63	-13	41.63
1693.2	-53.50	PK	17	1.5	V	-2.34	-55.84	-13	42.84
2539.8	-54.69	PK	191	2.2	H	1.43	-53.26	-13	40.26
2539.8	-56.00	PK	326	1.8	V	1.48	-54.52	-13	41.52
3386.4	-51.94	PK	46	1.8	H	3.37	-48.57	-13	35.57
3386.4	-52.66	PK	187	2.1	V	3.35	-49.31	-13	36.31

PCS Band (Part 24E)

30MHz – 20GHz:

Frequency (MHz)	Receiver		Turntable Angle Degree	Rx Antenna		Substituted Factor (dB/m)	Absolute Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
	Reading (dBuV)	PK/Ave		Height (m)	Polar (H/V)				
WCDMA Mode, Low Channel									
175.03	-37.59	PK	295	1.8	H	-6.05	-43.64	-13	30.64
176.88	-47.06	PK	197	1.4	V	-2.64	-49.70	-13	36.70
3704.8	-49.53	PK	31	2.1	H	4.75	-44.78	-13	31.78
3704.8	-53.49	PK	79	1.4	V	4.62	-48.87	-13	35.87
WCDMA Mode, Middle Channel									
175.03	-38.20	PK	149	2.1	H	-6.05	-44.25	-13	31.25
176.88	-48.18	PK	21	1.9	V	-2.64	-50.82	-13	37.82
3760	-49.90	PK	317	2.1	H	4.94	-44.96	-13	31.96
3760	-53.10	PK	16	1.0	V	4.85	-48.25	-13	35.25
WCDMA Mode, High Channel									
175.03	-39.15	PK	155	1.4	H	-6.05	-45.20	-13	32.20
176.88	-48.88	PK	25	2.0	V	-2.64	-51.52	-13	38.52
3815.2	-49.70	PK	303	2.2	H	5.22	-44.48	-13	31.48
3815.2	-52.49	PK	238	1.2	V	5.05	-47.44	-13	34.44

AWS Band

30MHz – 20GHz:

Frequency (MHz)	Receiver		Turntable Angle Degree	Rx Antenna		Substituted Factor (dB/m)	Absolute Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
	Reading (dBuV)	PK/Ave		Height (m)	Polar (H/V)				
WCDMA Mode, Low Channel									
175.03	-40.01	PK	129	1.8	H	-6.05	-46.06	-13	33.06
176.88	-49.87	PK	96	1.3	V	-2.64	-52.51	-13	39.51
3424.8	-50.06	PK	350	1.3	H	3.43	-46.63	-13	33.63
3424.8	-52.23	PK	77	1.8	V	3.39	-48.84	-13	35.84
WCDMA Mode, Middle Channel									
175.03	-39.54	PK	92	1.9	H	-6.05	-45.59	-13	32.59
176.88	-49.10	PK	49	1.3	V	-2.64	-51.74	-13	38.74
3456.2	-45.18	PK	202	1.8	H	-2.34	-47.52	-13	34.52
3456.2	-47.18	PK	89	1.8	V	-2.31	-49.49	-13	36.49
WCDMA Mode, High Channel									
175.03	-40.05	PK	41	2.1	H	-6.05	-46.10	-13	33.10
176.88	-49.86	PK	6	2.0	V	-2.64	-52.50	-13	39.50
3505.2	-46.58	PK	48	1.7	H	-2.38	-48.96	-13	35.96
3505.2	-48.46	PK	69	1.3	V	-2.34	-50.80	-13	37.80

LTE Band

Frequency (MHz)	Receiver		Turntable Angle Degree	Rx Antenna		Substituted Factor (dB/m)	Absolute Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
	Reading (dBuV)	PK/Ave		Height (m)	Polar (H/V)				
4G BAND2									
1.4MHz, Low Channel									
175.03	-38.21	PK	348	1.8	H	-6.05	-44.26	-13	31.26
176.88	-47.31	PK	84	1.7	V	-2.64	-49.95	-13	36.95
3701.4	-49.82	PK	325	1.1	H	4.72	-45.10	-13	32.10
3701.4	-49.46	PK	1	1.8	V	4.61	-44.85	-13	31.85
4G BAND2									
1.4MHz, Middle Channel									
175.03	-39.00	PK	212	1.1	H	-6.05	-45.05	-13	32.05
176.88	-48.20	PK	23	1.9	V	-2.64	-50.84	-13	37.84
3760	-51.14	PK	320	1.1	H	4.94	-46.20	-13	33.20
3760	-51.56	PK	354	2.1	V	4.85	-46.71	-13	33.71
4G BAND2									
1.4MHz, High Channel									
175.03	-38.79	PK	91	1.9	H	-6.05	-44.84	-13	31.84
176.88	-47.76	PK	8	1.7	V	-2.64	-50.40	-13	37.40
3800	-52.10	PK	307	1.2	H	5.25	-46.85	-13	33.85
3800	-52.65	PK	136	2.1	V	5.16	-47.49	-13	34.49
4G BAND4									
1.4MHz, Low Channel									
175.03	-39.00	PK	121	2.1	H	-6.05	-45.05	-13	32.05
176.88	-48.55	PK	56	1.5	V	-2.64	-51.19	-13	38.19
3421.4	-48.47	PK	29	1.1	H	2.72	-45.75	-13	32.75
3421.4	-47.02	PK	296	2.0	V	2.59	-44.43	-13	31.43
4G BAND4									
1.4MHz, Middle Channel									
175.03	-39.04	PK	278	1.1	H	-6.05	-45.09	-13	32.09
176.88	-49.30	PK	126	1.9	V	-2.64	-51.94	-13	38.94
3465	-47.71	PK	321	2.0	H	3.09	-44.62	-13	31.62
3465	-48.16	PK	275	1.7	V	2.97	-45.19	-13	32.19
4G BAND4									
1.4MHz, High Channel									
175.03	-40.23	PK	80	1.9	H	-6.05	-46.28	-13	33.28
176.88	-50.06	PK	23	1.7	V	-2.64	-52.70	-13	39.70
3508.6	-48.62	PK	178	1.5	H	3.44	-45.18	-13	32.18
3508.6	-50.05	PK	108	1.9	V	3.31	-46.74	-13	33.74
4G BAND5									
1.4MHz, Low Channel									
175.03	-39.58	PK	8	1.2	H	-6.05	-45.63	-13	32.63
176.88	-49.27	PK	55	1.4	V	-2.64	-51.91	-13	38.91

1649.4	-51.83	PK	304	1.5	H	-2.79	-54.62	-13	41.62
1649.4	-52.57	PK	11	1.0	V	-2.73	-55.30	-13	42.30
2474.1	-50.54	PK	37	1.7	H	1.19	-49.35	-13	36.35
2474.1	-51.15	PK	198	2.0	V	1.21	-49.94	-13	36.94
3298.8	-51.44	PK	165	2.2	H	3.24	-48.20	-13	35.20
3298.8	-51.67	PK	65	1.6	V	3.25	-48.42	-13	35.42
4G BAND5									
1.4MHz, Middle Channel									
175.03	-40.01	PK	191	1.7	H	-6.05	-46.06	-13	33.06
176.88	-48.90	PK	305	1.1	V	-2.64	-51.54	-13	38.54
1673	-52.79	PK	65	1.3	H	-2.74	-55.53	-13	42.53
1673	-51.51	PK	24	1.6	V	-2.69	-54.20	-13	41.20
2509.5	-49.95	PK	12	2.1	H	1.35	-48.60	-13	35.60
2509.5	-50.37	PK	27	2.2	V	1.39	-48.98	-13	35.98
3346	-52.72	PK	165	1.8	H	3.31	-49.41	-13	36.41
3346	-53.05	PK	44	1.7	V	3.3	-49.75	-13	36.75
4G BAND5									
1.4MHz, High Channel									
175.03	-39.51	PK	162	1.3	H	-6.05	-45.56	-13	32.56
176.88	-47.85	PK	268	1.9	V	-2.64	-50.49	-13	37.49
1696.6	-54.65	PK	44	1.7	H	-2.7	-57.35	-13	44.35
1696.6	-54.06	PK	133	1.9	V	-2.65	-56.71	-13	43.71
2544.9	-49.68	PK	216	1.5	H	1.45	-48.23	-13	35.23
2544.9	-50.52	PK	25	1.4	V	1.5	-49.02	-13	36.02
3393.2	-52.68	PK	54	1.9	H	3.38	-49.30	-13	36.30
3393.2	-53.08	PK	6	1.6	V	3.35	-49.73	-13	36.73
4G BAND7									
5MHz, Low Channel									
175.03	-40.01	PK	196	1.1	H	-6.05	-46.06	-25	21.06
176.88	-48.59	PK	146	1.9	V	-2.64	-51.23	-25	26.23
5005	-57.44	PK	145	1.8	H	8.82	-48.62	-25	23.62
5005	-55.12	PK	203	1.7	V	8.53	-46.59	-25	21.59
4G BAND7									
5MHz, Middle Channel									
175.03	-39.86	PK	127	1.7	H	-6.05	-45.91	-25	20.91
176.88	-48.23	PK	276	1.7	V	-2.64	-50.87	-25	25.87
5070	-56.78	PK	85	1.2	H	9.18	-47.60	-25	22.6
5070	-54.90	PK	126	2.0	V	8.56	-46.34	-25	21.34
4G BAND7									
5MHz, High Channel									
175.03	-40.03	PK	310	1.9	H	-6.05	-46.08	-25	21.08
176.88	-49.27	PK	73	2.1	V	-2.64	-51.91	-25	26.91
5135	-57.10	PK	220	1.0	H	9.47	-47.63	-25	22.63
5135	-55.14	PK	298	1.3	V	8.65	-46.49	-25	21.49
4G BAND12									
1.4MHz, Low Channel									
175.03	-40.14	PK	175	1.2	H	-6.05	-46.19	-13	33.19

176.88	-48.88	PK	178	1.4	V	-2.64	-51.52	-13	38.52
1399.4	-59.59	PK	32	1.8	H	-0.53	-60.12	-13	47.12
1399.4	-59.90	PK	19	1.9	V	-0.74	-60.64	-13	47.64
2099.1	-41.39	PK	214	1.6	H	-0.74	-42.13	-13	29.13
2099.1	-39.92	PK	12	1.1	V	-0.98	-40.90	-13	27.90
2798.8	-56.70	PK	106	2.2	H	2.2	-54.50	-13	41.50
2798.8	-55.17	PK	132	1.6	V	2.3	-52.87	-13	39.87
4G BAND12									
1.4MHz, Middle Channel									
175.03	-40.85	PK	218	1.7	H	-6.05	-46.90	-13	33.90
176.88	-50.00	PK	248	1.4	V	-2.64	-52.64	-13	39.64
1415	-54.94	PK	132	1.6	H	-0.7	-55.64	-13	42.64
1415	-55.19	PK	247	1.2	V	-0.9	-56.09	-13	43.09
2122.5	-41.41	PK	172	1.7	H	-0.62	-42.03	-13	29.03
2122.5	-39.69	PK	82	2.1	V	-0.85	-40.54	-13	27.54
2830	-54.37	PK	127	1.1	H	2.29	-52.08	-13	39.08
2830	-52.77	PK	216	2.0	V	2.4	-50.37	-13	37.37
4G BAND12									
1.4MHz, High Channel									
175.03	-40.36	PK	75	1.2	H	-6.05	-46.41	-13	33.41
176.88	-48.55	PK	272	1.1	V	-2.64	-51.19	-13	38.19
1430.6	-57.34	PK	216	2.0	H	-0.85	-58.19	-13	45.19
1430.6	-57.56	PK	15	1.2	V	-1.07	-58.63	-13	45.63
2145.9	-41.70	PK	166	1.0	H	-0.5	-42.20	-13	29.20
2145.9	-41.00	PK	336	1.3	V	-0.71	-41.71	-13	28.71
2861.2	-54.43	PK	59	2.1	H	2.38	-52.05	-13	39.05
2861.2	-55.76	PK	145	1.8	V	2.49	-53.27	-13	40.27
4G BAND13									
5MHz, Low Channel									
175.03	-39.12	PK	104	2.1	H	-6.05	-45.17	-13	32.17
176.88	-47.76	PK	171	1.8	V	-2.64	-50.40	-13	37.40
1559	-55.89	PK	244	1.4	H	-2.34	-58.23	-40	18.23
1559	-54.07	PK	123	1.6	V	-2.45	-56.52	-40	16.52
2338.5	-46.61	PK	286	1.1	H	0.49	-46.12	-13	33.12
2338.5	-44.87	PK	61	1.5	V	0.41	-44.46	-13	31.46
3118	-52.27	PK	172	1.2	H	2.97	-49.30	-13	36.30
3118	-52.98	PK	203	1.7	V	3.06	-49.92	-13	36.92
4G BAND13									
5MHz, Middle Channel									
175.03	-40.04	PK	321	2.1	H	-6.05	-46.09	-13	33.09
176.88	-48.53	PK	323	2.1	V	-2.64	-51.17	-13	38.17
1564	-56.57	PK	296	1.8	H	-2.4	-58.97	-40	18.97
1564	-53.60	PK	189	1.2	V	-2.5	-56.10	-40	16.10
2346	-47.37	PK	146	1.3	H	0.53	-46.84	-13	33.84
2346	-43.59	PK	137	1.9	V	0.46	-43.13	-13	30.13
3128	-52.23	PK	166	1.2	H	2.98	-49.25	-13	36.25
3128	-52.87	PK	126	1.2	V	3.07	-49.80	-13	36.80

4G BAND13									
5MHz, High Channel									
175.03	-41.05	PK	29	2.0	H	-6.05	-47.10	-13	34.10
176.88	-49.97	PK	51	2.1	V	-2.64	-52.61	-13	39.61
1569	-54.77	PK	83	1.5	H	-2.46	-57.23	-40	17.23
1569	-54.35	PK	254	1.1	V	-2.56	-56.91	-40	16.91
2353.5	-45.96	PK	267	1.2	H	0.56	-45.40	-13	32.40
2353.5	-43.65	PK	282	2.1	V	0.5	-43.15	-13	30.15
3138	-52.59	PK	353	1.9	H	3	-49.59	-13	36.59
3138	-53.07	PK	145	1.2	V	3.08	-49.99	-13	36.99
4G BAND17, Low Channel									
5MHz, Low Channel									
175.03	-41.26	PK	154	1.8	H	-6.05	-47.31	-13	34.31
176.88	-50.19	PK	128	1.5	V	-2.64	-52.83	-13	39.83
1413	-58.70	PK	145	1.8	H	-0.65	-59.35	-13	46.35
1413	-57.85	PK	255	1.2	V	-0.87	-58.72	-13	45.72
2119.5	-47.53	PK	281	2.1	H	-0.67	-48.20	-13	35.20
2119.5	-46.29	PK	127	1.9	V	-0.87	-47.16	-13	34.16
2826	-54.19	PK	37	1.4	H	2.28	-51.91	-13	38.91
2826	-52.97	PK	59	2.1	V	2.38	-50.59	-13	37.59
4G BAND17									
5MHz, Middle Channel									
175.03	-40.73	PK	58	2.2	H	-6.05	-46.78	-13	33.78
176.88	-48.82	PK	169	2.0	V	-2.64	-51.46	-13	38.46
1420	-55.95	PK	59	2.1	H	-0.67	-56.62	-13	43.62
1420	-54.45	PK	233	1.8	V	-0.91	-55.36	-13	42.36
2130	-47.43	PK	189	2.1	H	-0.58	-48.01	-13	35.01
2130	-45.38	PK	185	1.4	V	-0.8	-46.18	-13	33.18
2840	-53.95	PK	59	1.0	H	2.32	-51.63	-13	38.63
2840	-52.63	PK	233	1.8	V	2.43	-50.20	-13	37.20
4G BAND17, High Channel									
5MHz, High Channel									
175.03	-39.63	PK	109	1.8	H	-6.05	-45.68	-13	32.68
176.88	-47.87	PK	19	1.2	V	-2.64	-50.51	-13	37.51
1427	-60.00	PK	119	1.9	H	-0.71	-60.71	-13	47.71
1427	-58.45	PK	21	1.1	V	-0.94	-59.39	-13	46.39
2140.5	-45.73	PK	271	1.8	H	-0.53	-46.26	-13	33.26
2140.5	-45.93	PK	105	1.9	V	-0.74	-46.67	-13	33.67
2854	-53.49	PK	256	1.3	H	2.36	-51.13	-13	38.13
2854	-53.27	PK	127	1.1	V	2.47	-50.80	-13	37.80

Note:
Absolute Level = Reading Level + Substituted Factor
Factor contains: SG Level - Cable loss+ Antenna Gain
Margin = Limit - Absolute Level

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