

FCC PART 96.47 CBSD-EUD TEST REPORT

OF

Applicant: Askey Computer Corporation
10F, No 119, JianKang Rd., Zhonghe Dist., New Taipei
City, Taiwan 23585

Product Name: Cat 12 Indoor CPE

Brand Name: Verizon

Model No.: ASK-RTL108

Model Difference: N/A

Report Number: E2/2020/10032

FCC ID: H8N-ASK-RTL108

FCC Rule Part: Part 96.47

Issue Date: Mar. 19, 2020

Date of Test: Nov. 26, 2019 ~ Jan. 22, 2020

Date of EUT Received: Nov. 26, 2019

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 and has been in compliance with the applicable technical standards. The test results of this report relate only to the tested sample identified in this report.

Approved By:

CHUN-CHIEH, CHEN
Chun Chieh Chen / Supervisor



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Revision History

Report Number	Revision	Description	Issue Date	Remark
E2/2020/10032	Rev.00	Original.	Mar. 19, 2020	Revised By: Yuri Tsai

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1. GENERAL PRODUCT INFORMATION

1.1. Product Description

General:

Product Name:	Cat 12 Indoor CPE	
Brand Name:	Verizon	
Model No.:	ASK-RTL108	
Model Difference:	N/A	
Hardware Version:	REV 3.0	
Software Version:	N/A	
Power Supply:	12V from AC/DC Adapter	
	Adapter:	1. Model No.: PS24L120K2000UD, Supplier: FLYPOWER 2. Model No.: WB-24J12FU, Supplier: Asian Power Devices Inc.
IMEI:	359403109903190	

1.2. LTE: Cellular Phone Standards Frequency Range 3500~3700Mhz

LTE Band	BW (MHz)	Operation Frequency (MHz)	
48	5	3552.5	3697.5
	10	3555.0	3695.0
	15	3557.5	3692.5
	20	3560.0	3690.0

1.3. Antenna Designation

Internal

Vendor	Type	Model Name	Modulation	Frequency (MHz)			Peak Antenna Gain (dBi)
N/A	PIFA	Main	LTE Band 48	3550	~	3700	3.59

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

LTE Band	BW	Modulation	EIRP (dBm/10MHz)		(W)	Type of Emission
48	5	QPSK	22.94	EIRP	0.197	4M51G7D
		16QAM	22.56	EIRP	0.180	4M51D7W
		64QAM	22.42	EIRP	0.175	4M49D7W
48	10	QPSK	22.92	EIRP	0.196	8M99G7D
		16QAM	22.65	EIRP	0.184	9M01D7W
		64QAM	22.47	EIRP	0.177	9M00D7W
48	15	QPSK	22.88	EIRP	0.194	13M4G7D
		16QAM	22.78	EIRP	0.190	13M5D7W
		64QAM	22.60	EIRP	0.182	13M5D7W
48	20	QPSK	22.95	EIRP	0.197	18M0G7D
		16QAM	22.85	EIRP	0.193	17M9D7W
		64QAM	22.71	EIRP	0.187	17M9D7W

1.5. Test Methodology of Applied Standards

FCC Part 96.47

FCC KDB 940660 D01 Part 96 CBRS Eqpt V02

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

1.6. Test Facility

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

FCC Registration Numbers are: TW0002

1.7. Special Accessories

No special accessories were used during testing.

1.8. Equipment Modifications

There were no modifications incorporated into the EUT.

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2. SUMMARY OF TEST RESULTS

2.1. Summary of test results

FCC Rules	Description Of Test	Result
§96.47(a) (1)	End User Device additional requirements	Compliant

Note

Determining compliance base on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.2. Reporting statements of conformity

The conformity statement in this report is based solely on the test results, measurement uncertainty is excluded.

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3. MEASUREMENT

3.1. End User Device additional requirements

FCC Part 96.47

(a) End User Devices may operate only if they can positively receive and decode an authorization signal transmitted by a CBSD, including the frequencies and power limits for their operation.

(1) An End User Device must discontinue operations, change frequencies, or change its operational power level within 10 seconds of receiving instructions from its associated CBSD.

3.2. Test Procedure

The EUT was connected to a certified Gentek CBSD (FCC ID: MXF-WLTGFC105 and qualified by WInnForum) as the companion device to show compliance with Part 96.47 requirement.

Note: EUT = End User Device (EUD)

3.3. 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.

1. Setup with frequency 3615-3635MHz and power level 20dBm/MHz
2. Enable AP service from EPC management
3. Check EUT Tx Frequency and power
4. Disable AP service from EPC management
 - a. Check EUT stops transmission within 10seconds.
5. Setup with 3660-3680MHz and power level 13dBm/MHz
6. Enable AP service from EPC management
7. Check EUT Tx Frequency and power
8. Disable AP service from EPC management
 - a. Check EUT stops transmission within 10seconds.

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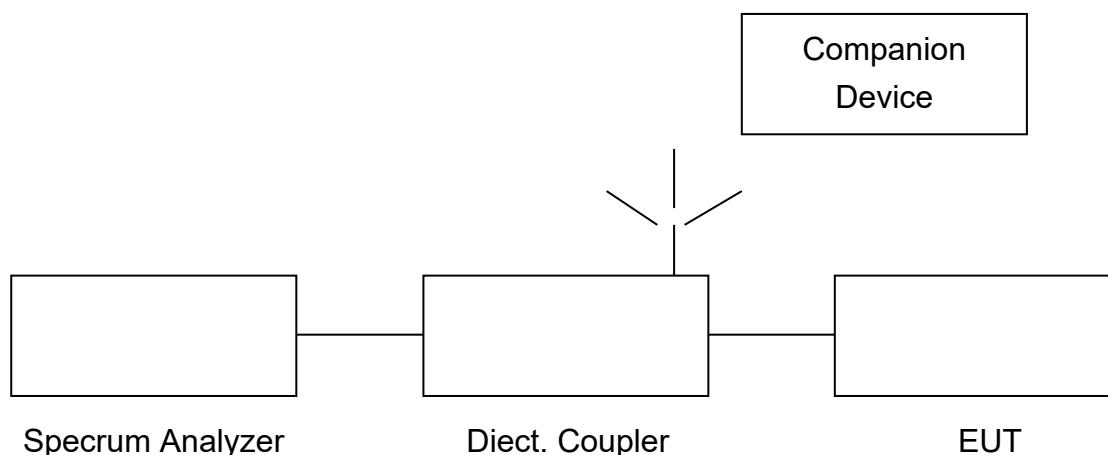
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3.4. Test Configuration of Equipment Under Test:

Connection Diagram of Test System



The companion device is certified CBRS (FCC ID: MXF-WLTGFC105)

3.5. Measurement Equipment Used

EQUIPMENT TYPE	MFR	MODEL NUM-BER	SERIAL NUMBER	LAST CAL.	CAL DUE.
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY54200716	10/18/2019	10/17/2020
Attenuator	Agilent	8495B	3308A22470	01/02/2020	01/01/2021
Attenuator	HP	8494B	2812A170605	01/02/2020	01/01/2021
2WayDivider	Woken	DSU7AMK1A1	N/A	01/02/2020	01/01/2021
Coaxial Cable	Woken	18GHz Stainless 30cm	S02-181017-211	01/02/2020	01/01/2021
Coaxial Cable	Woken	18GHz Stainless 80cm	S02-181017-211	01/02/2020	01/01/2021
Notebook	Lenovo	L430	PK-126TN	N/A	N/A
AP	PC i-	FXG-05TX	N/A	N/A	N/A
CBSD	Gentek	WLTGFC-105	SN: N/A FCC ID: MXF-WLTGFC105	N/A	N/A
EPC	Gentek	CSB-3230A-GT1	1412902099	N/A	N/A

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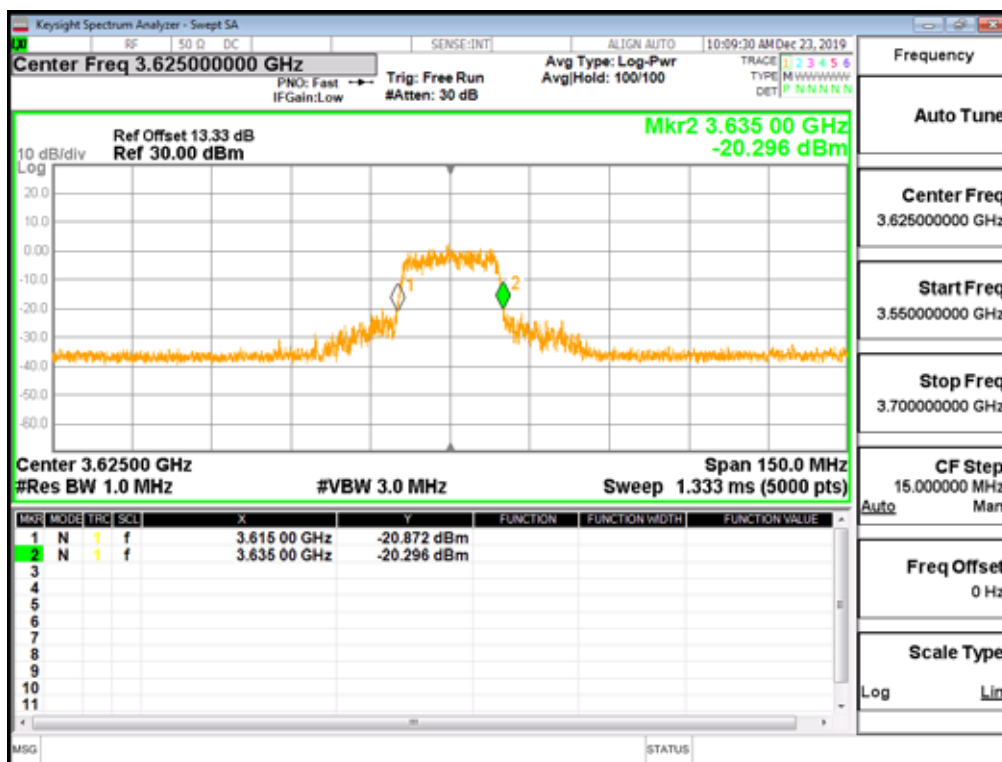
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3.6. Measurement Result

3625_20M_EIRP 20dBm



3625_20M_EIRP 20dBm_10s



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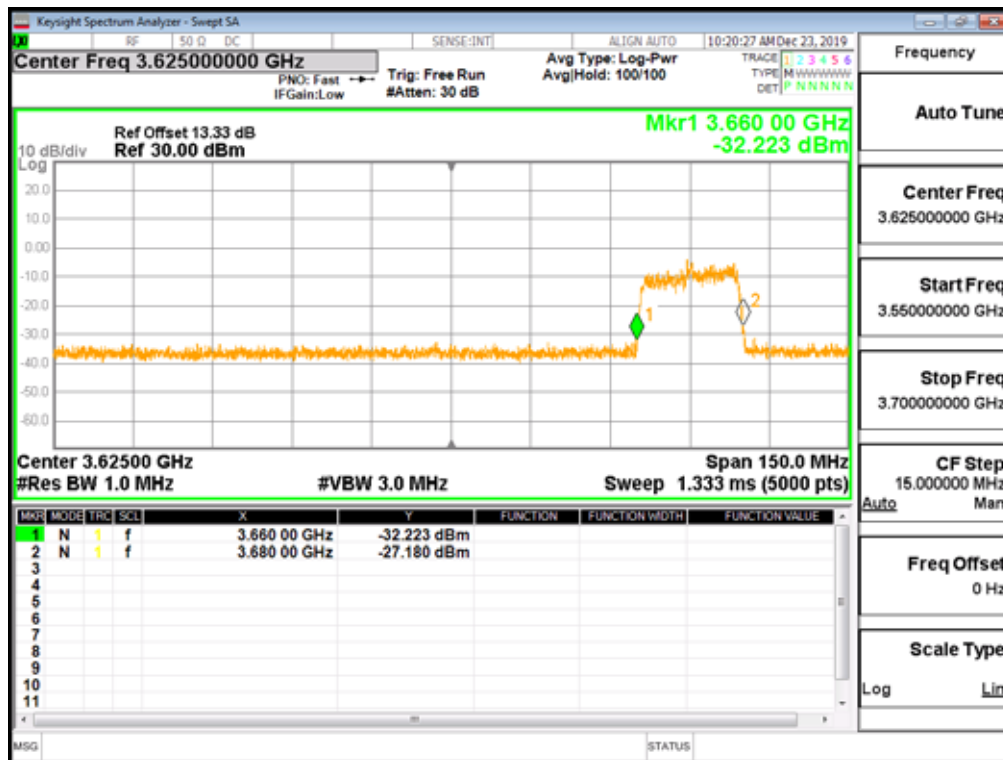
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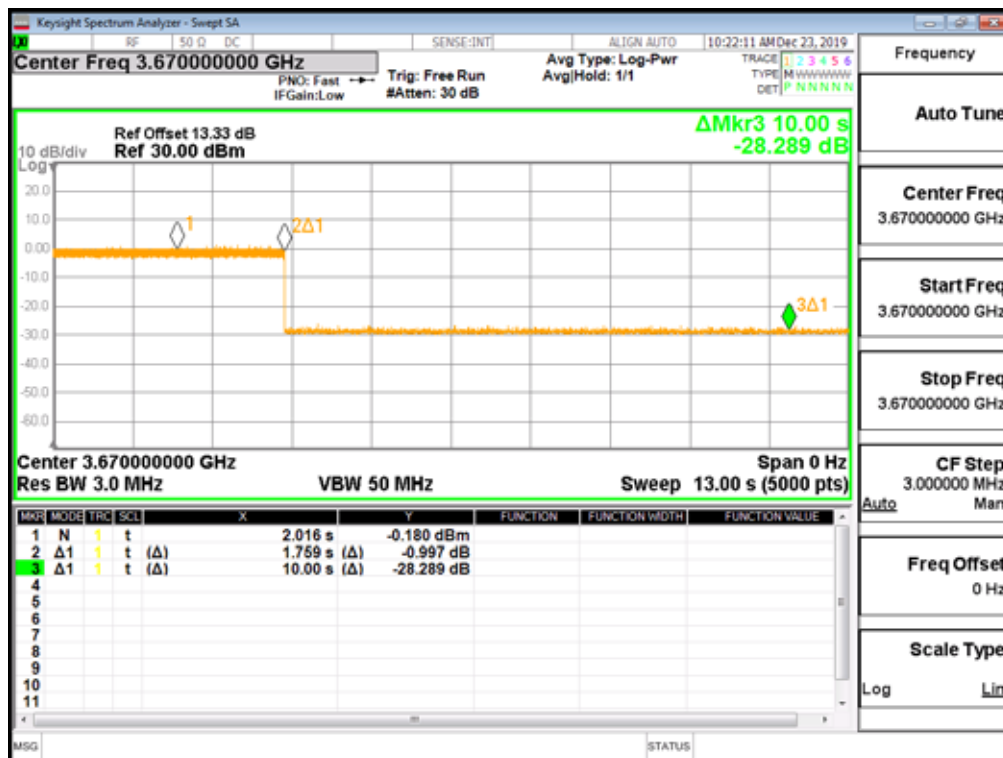
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3670_20M_EIRP 13dBm



3670_20M_EIRP 13dBm_10s



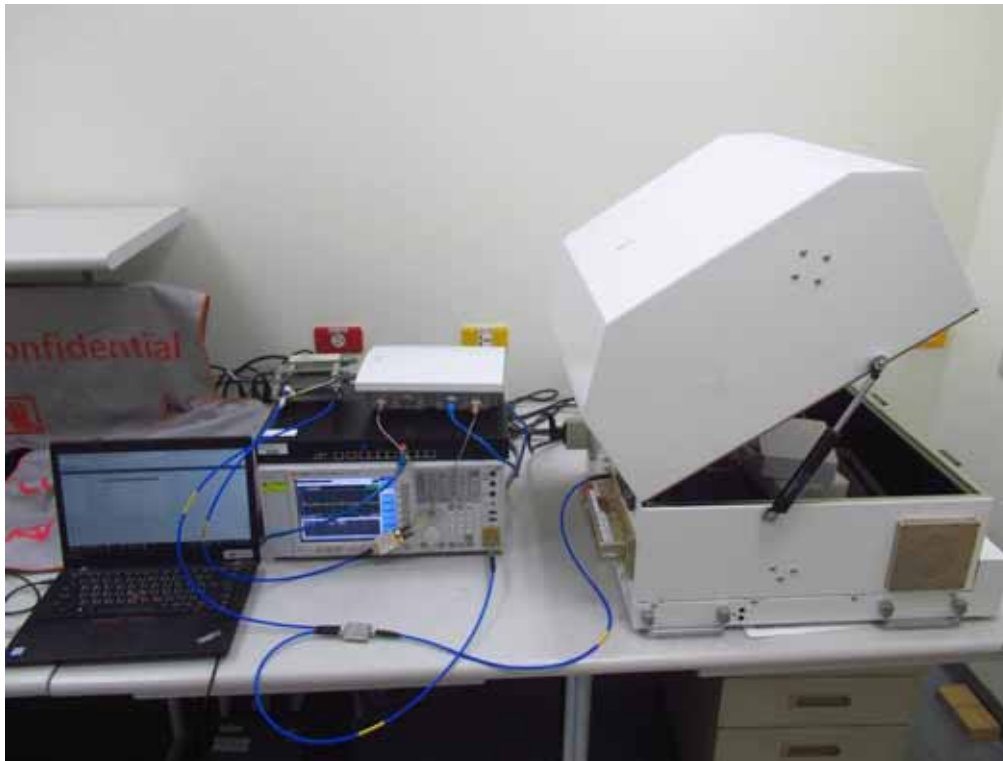
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PHOTOGRAPHS OF SET UP

Conducted Set up Photos



PHOTOGRAPHS OF EUT

Please refer to the attached file(EUT Photo)

~ End of Report ~

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