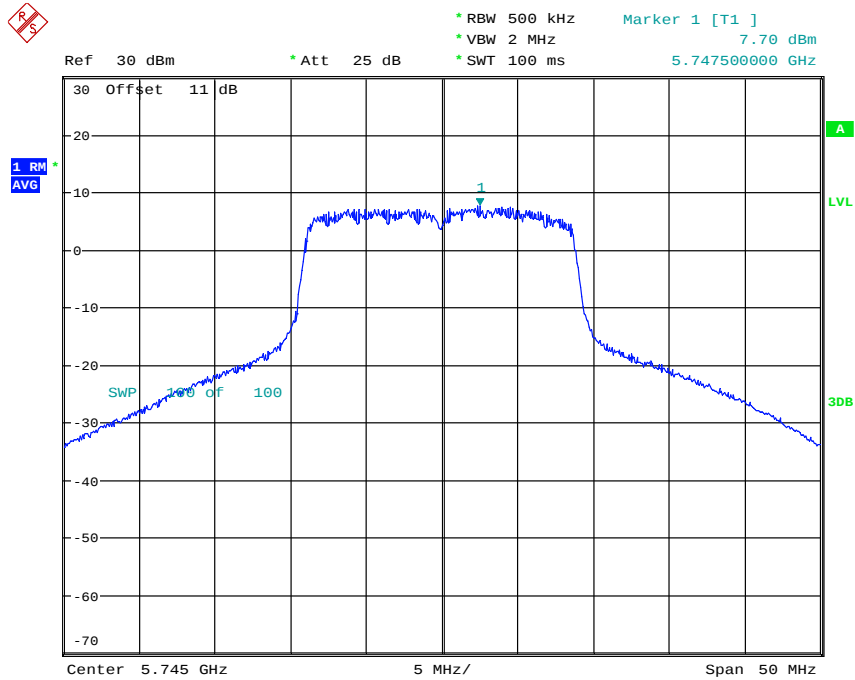


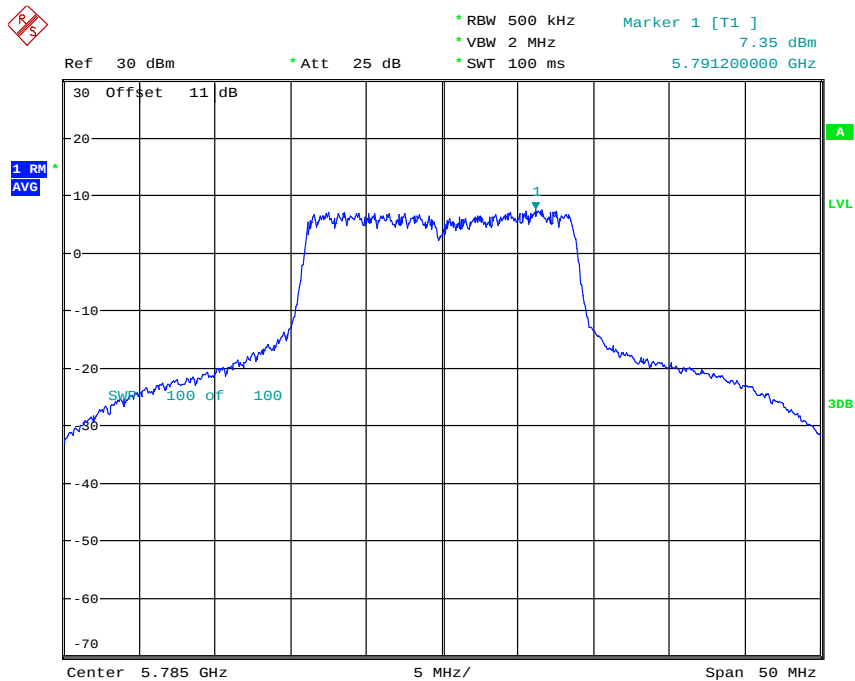


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21504-14946-C-54
FCC ID: ZTT-RE1750A



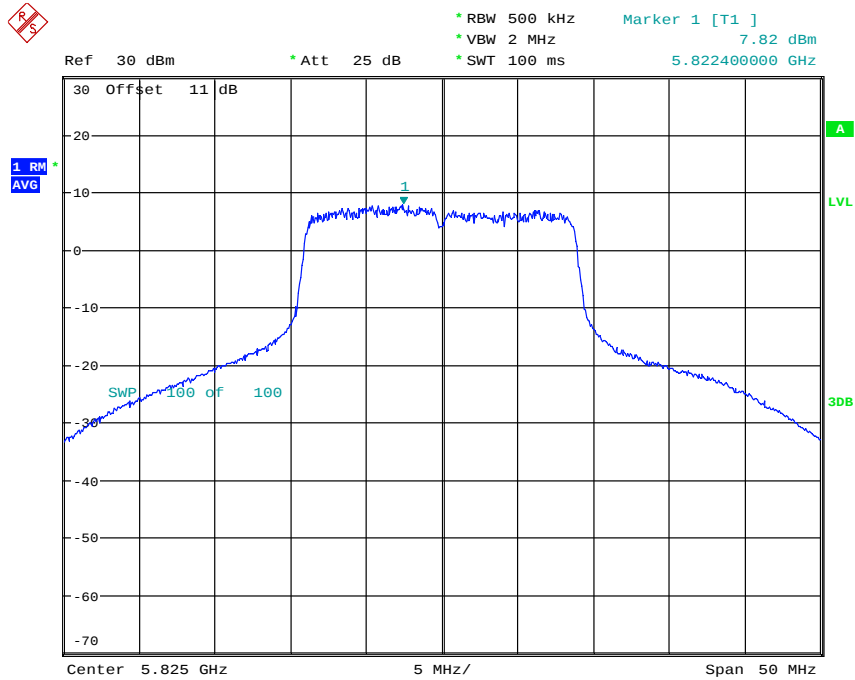
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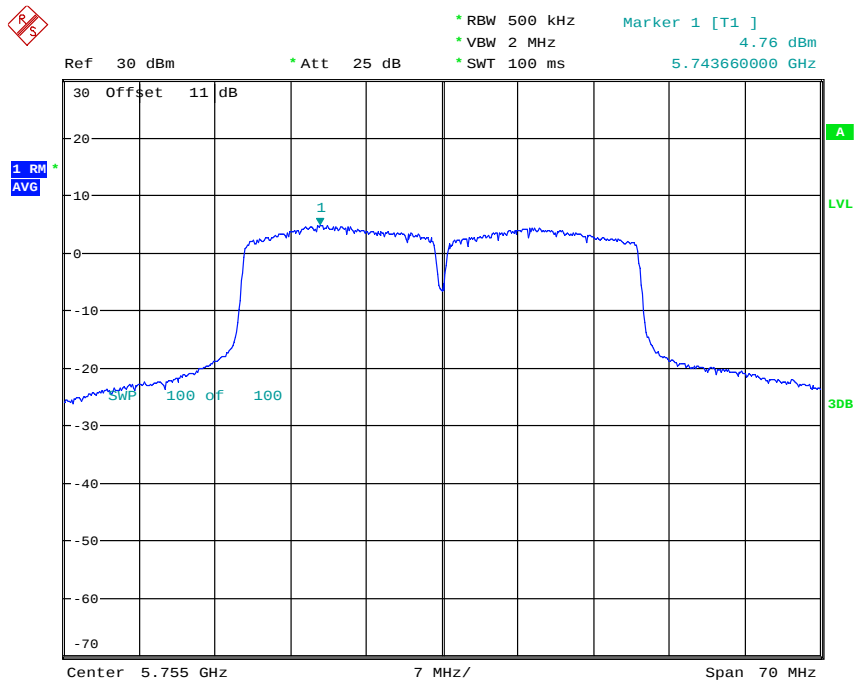
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Registration number: W6D21504-14946-C-54
FCC ID: ZTT-RE1750A



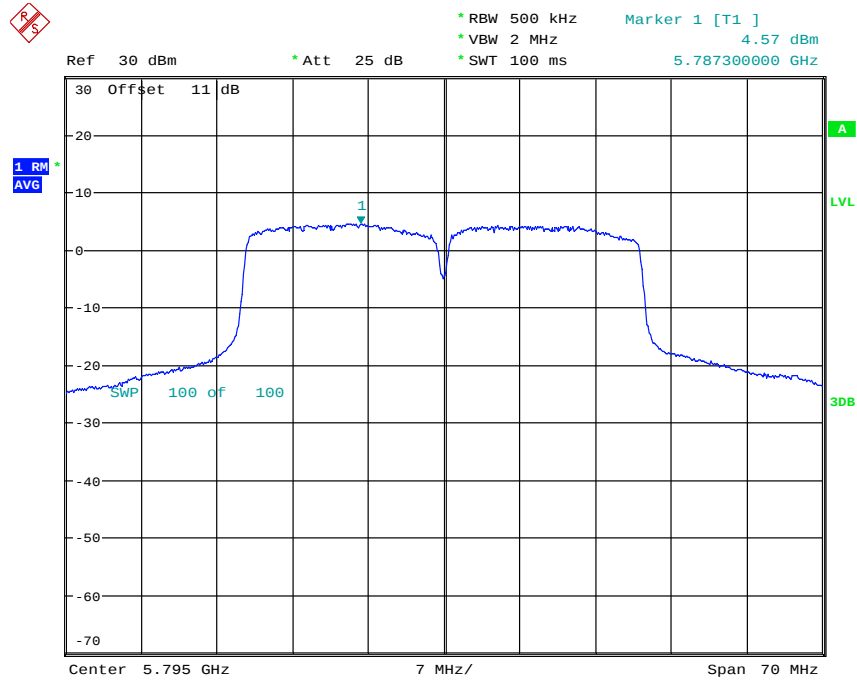
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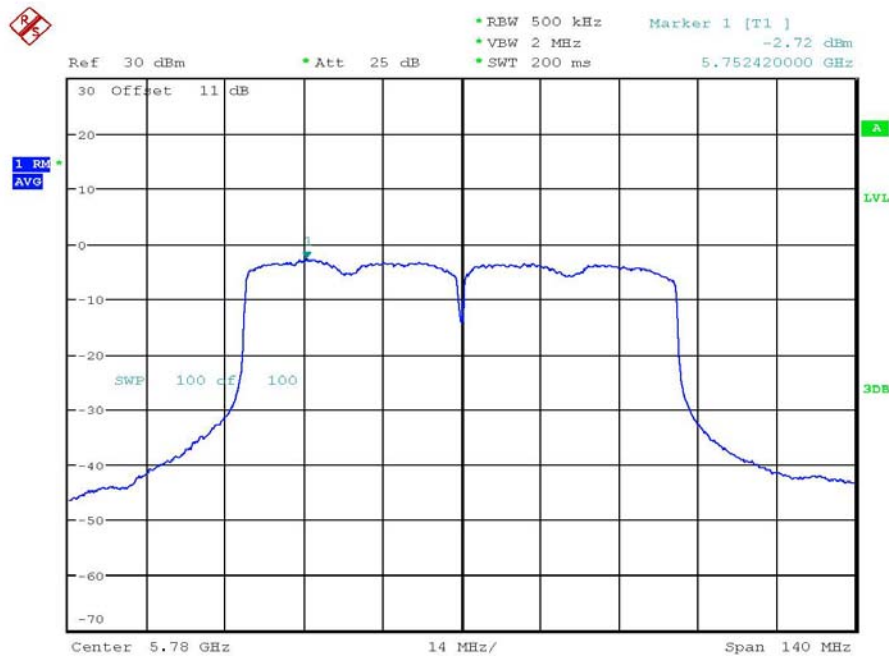
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Date: 25.NOV.2014 23:26:03



Registration number: W6D21504-14946-C-54
FCC ID: ZTT-RE1750A



POWER DENSITY CDD ANT0_VHT40CH159
Date: 25.NOV.2014 23:30:43



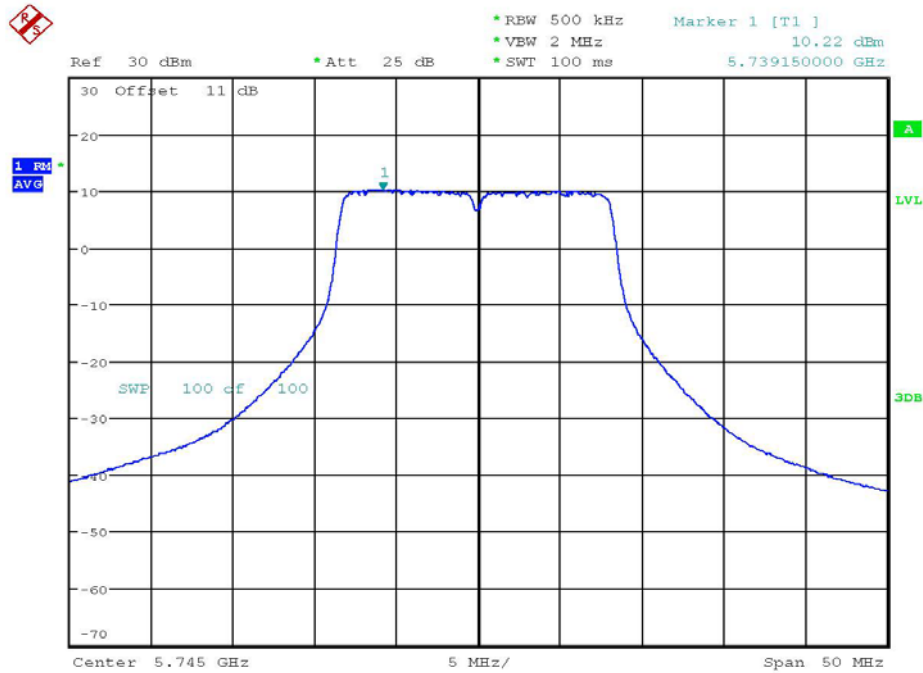
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Date: 25.NOV.2014 23:43:43



Registration number: W6D21504-14946-C-54

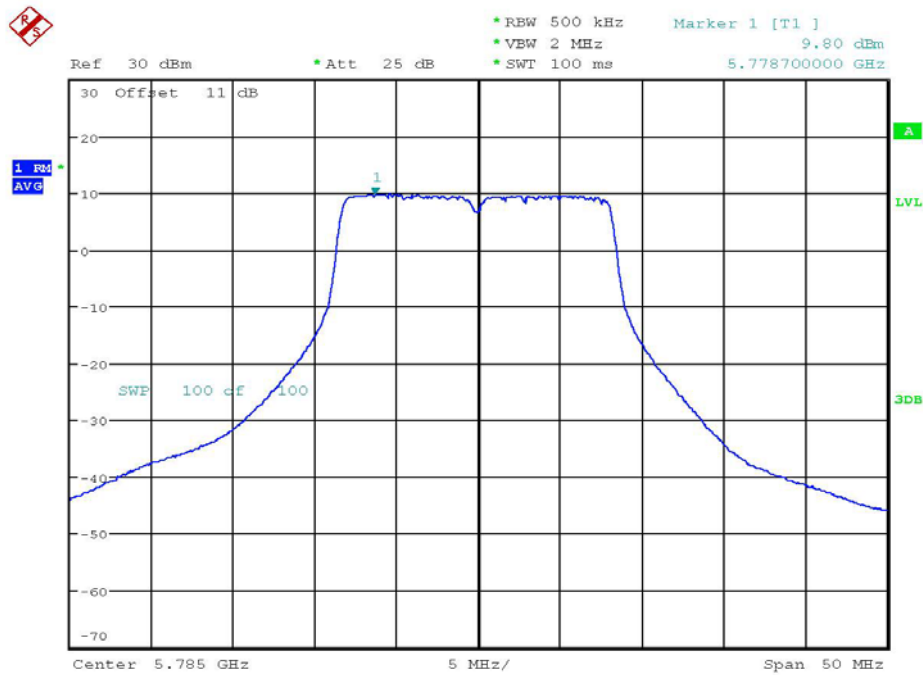
FCC ID: ZTT-RE1750A

ANT1



POWER DENSITY CDD ANT1_aCH149

Date: 25.NOV.2014 17:27:01

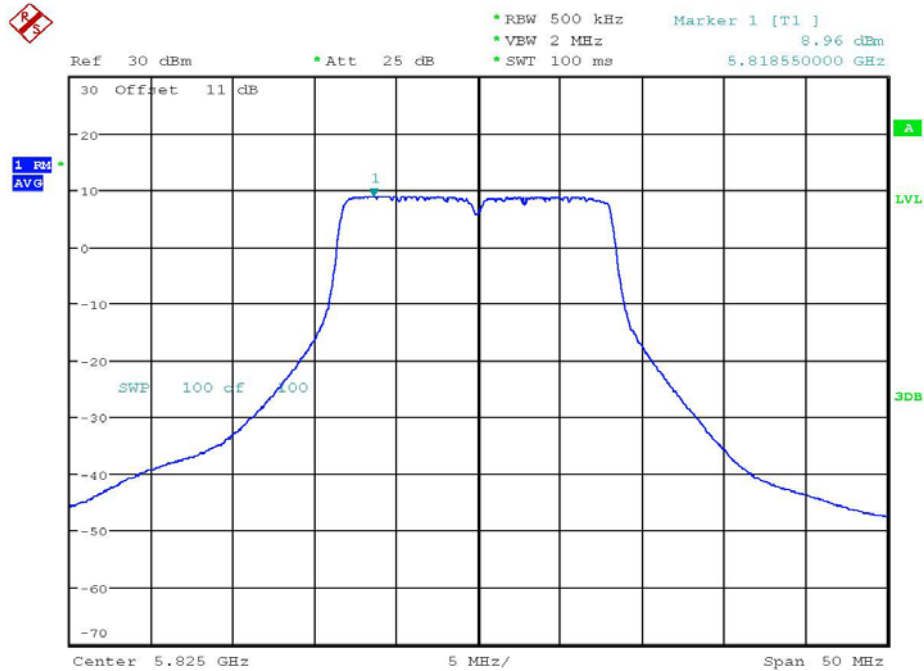


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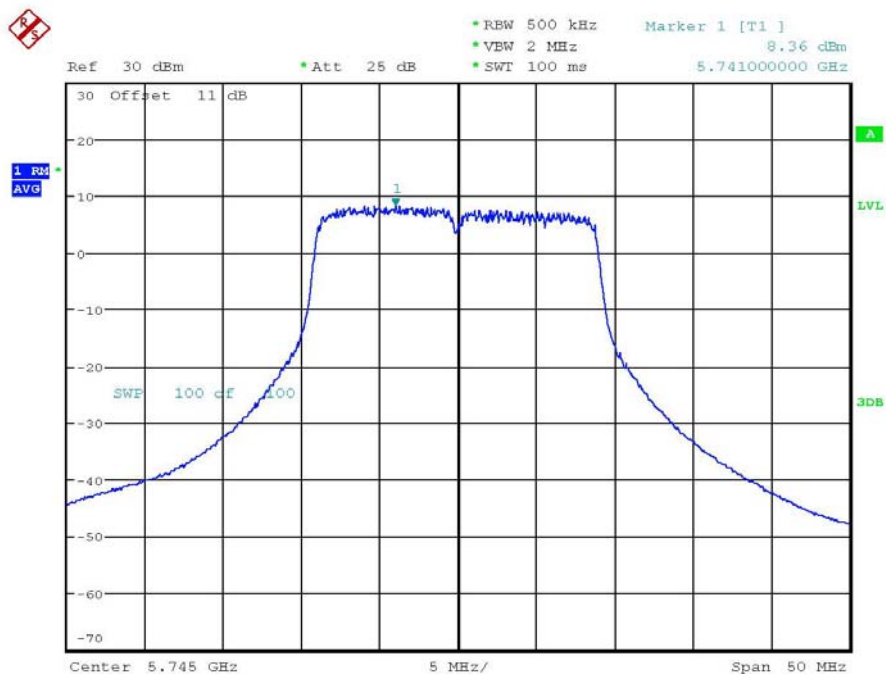
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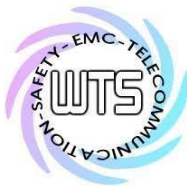
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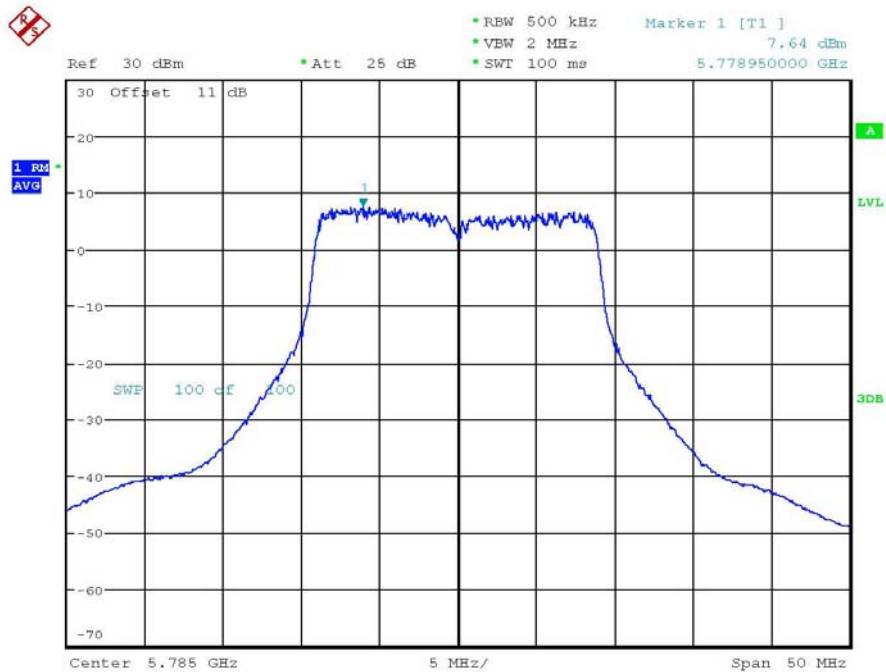
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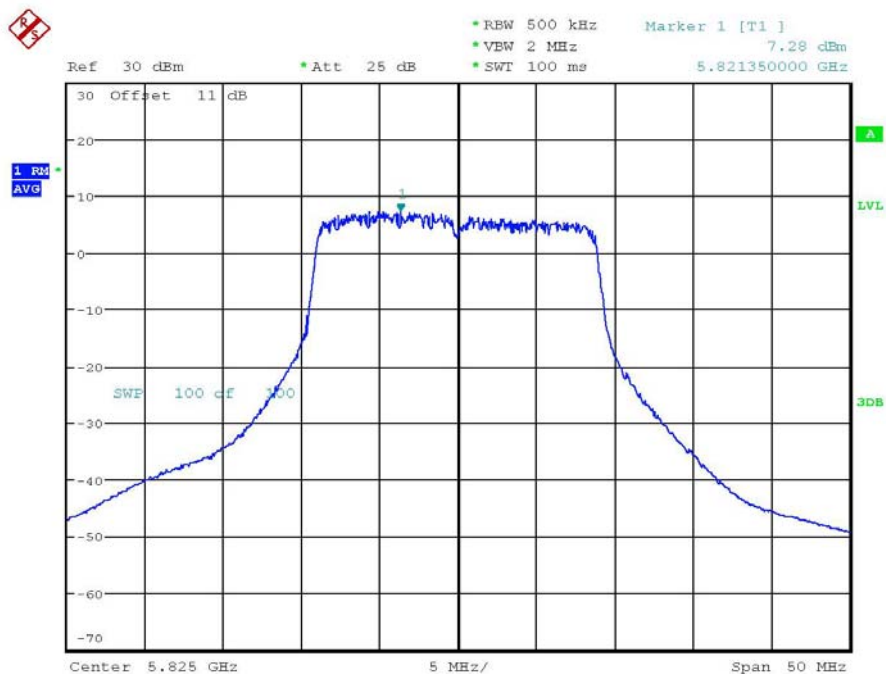
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Registration number: W6D21504-14946-C-54
FCC ID: ZTT-RE1750A



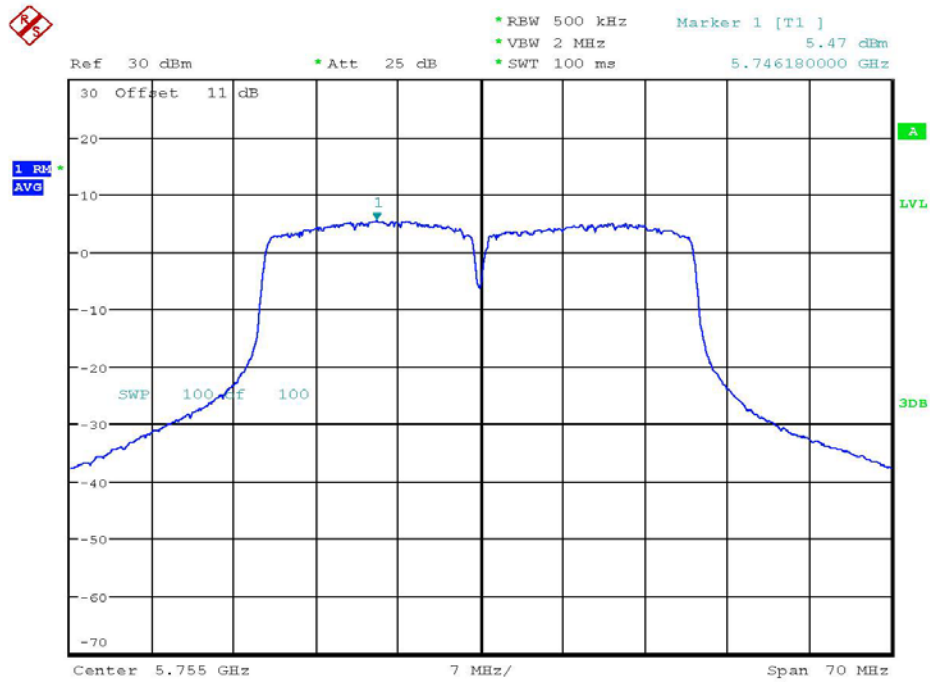
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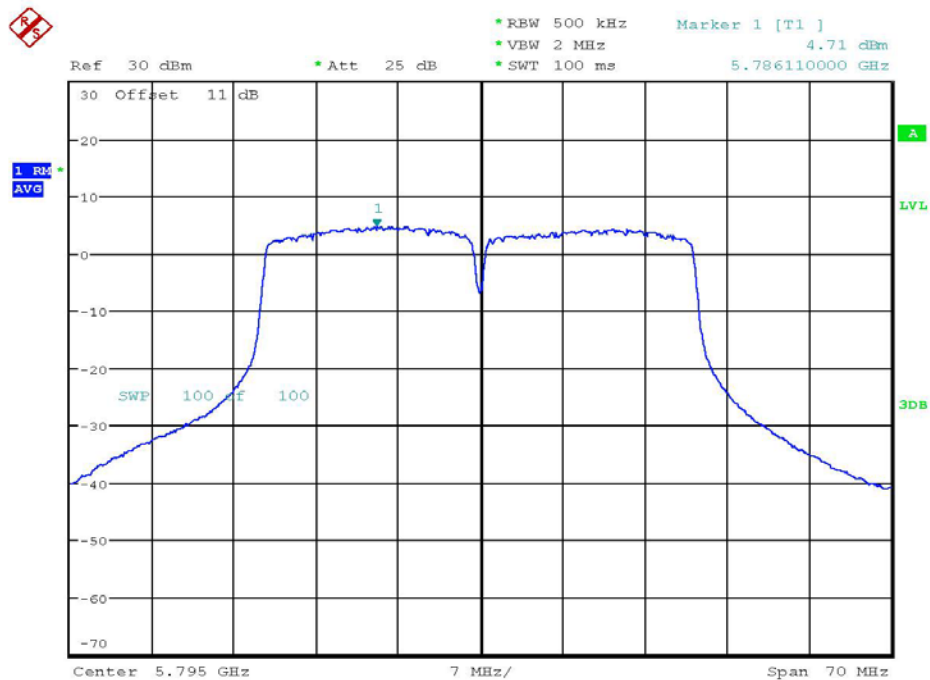
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Date: 25.NOV.2014 22:37:49



Registration number: W6D21504-14946-C-54
FCC ID: ZTT-RE1750A



POWER DENSITY CDD ANT1_VHT40CH151
Date: 25.NOV.2014 23:08:19



POWER DENSITY CDD ANT1_VHT40CH159
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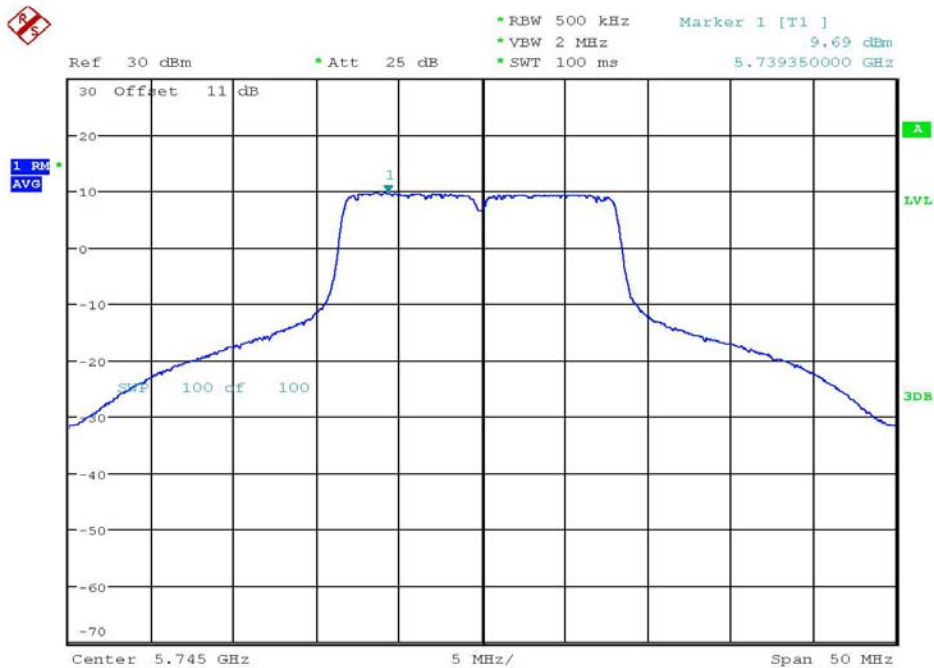


Registration number: W6D21504-14946-C-54
FCC ID: ZTT-RE1750A

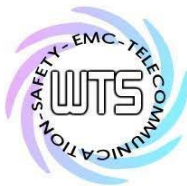


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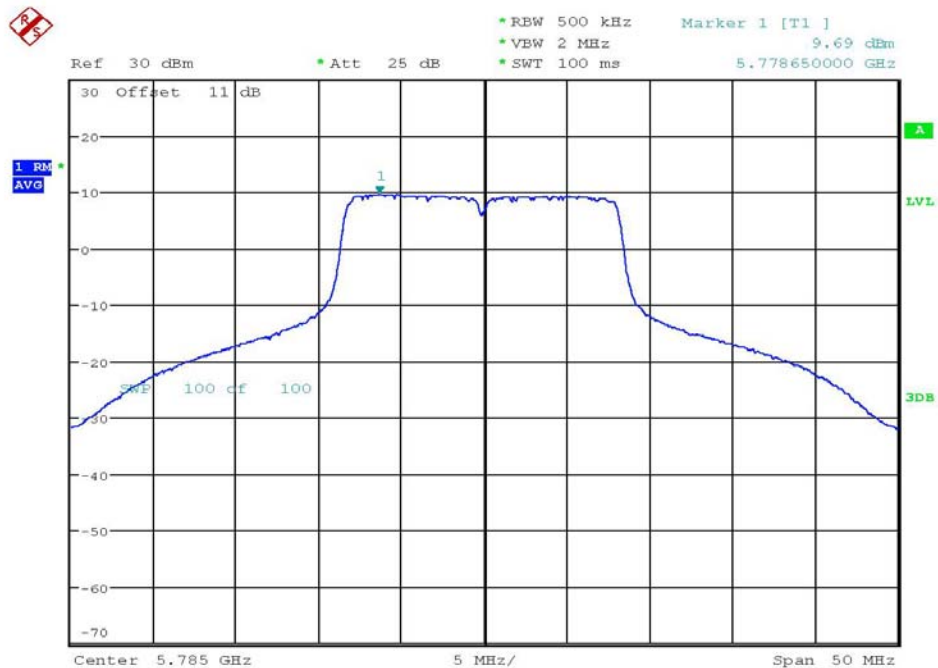
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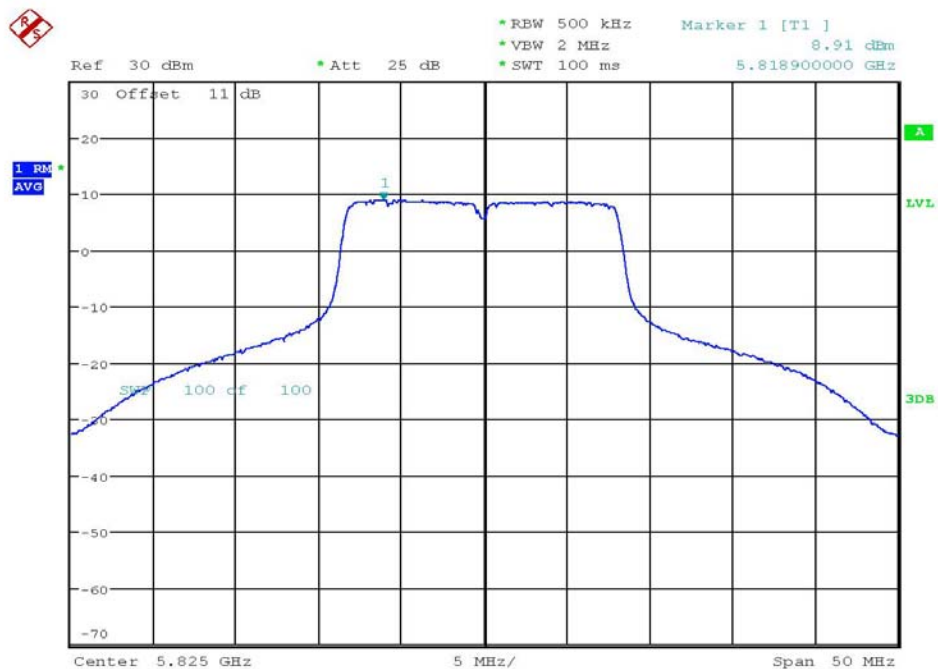
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Registration number: W6D21504-14946-C-54
FCC ID: ZTT-RE1750A



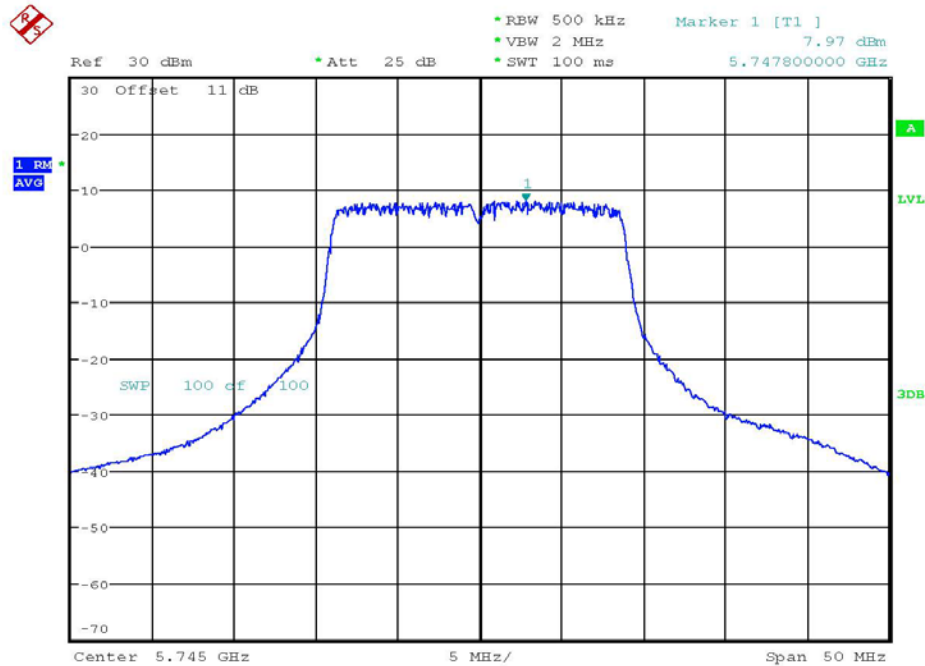
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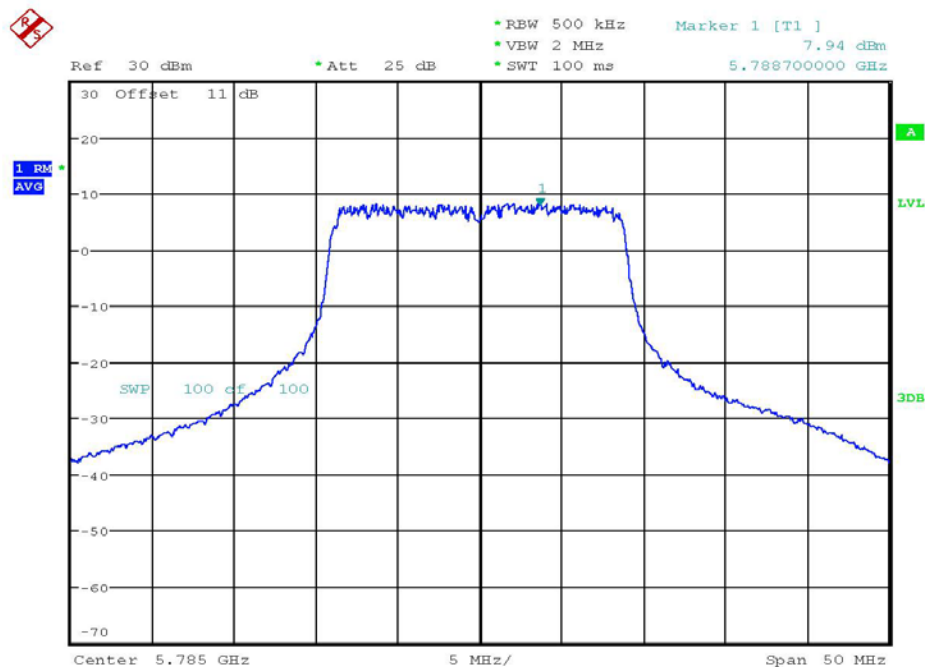
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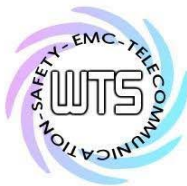
Registration number: W6D21504-14946-C-54
FCC ID: ZTT-RE1750A



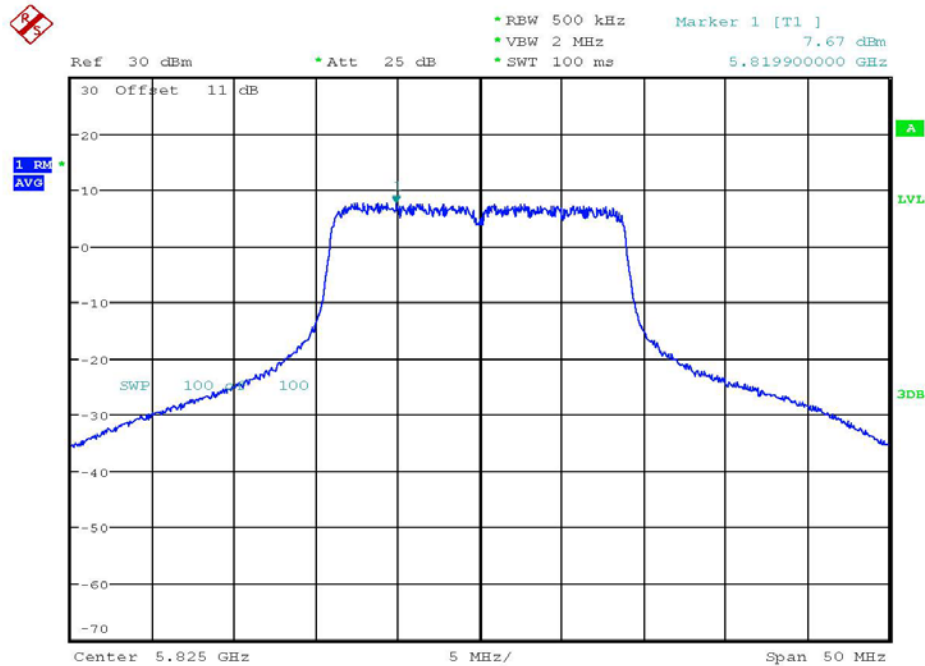
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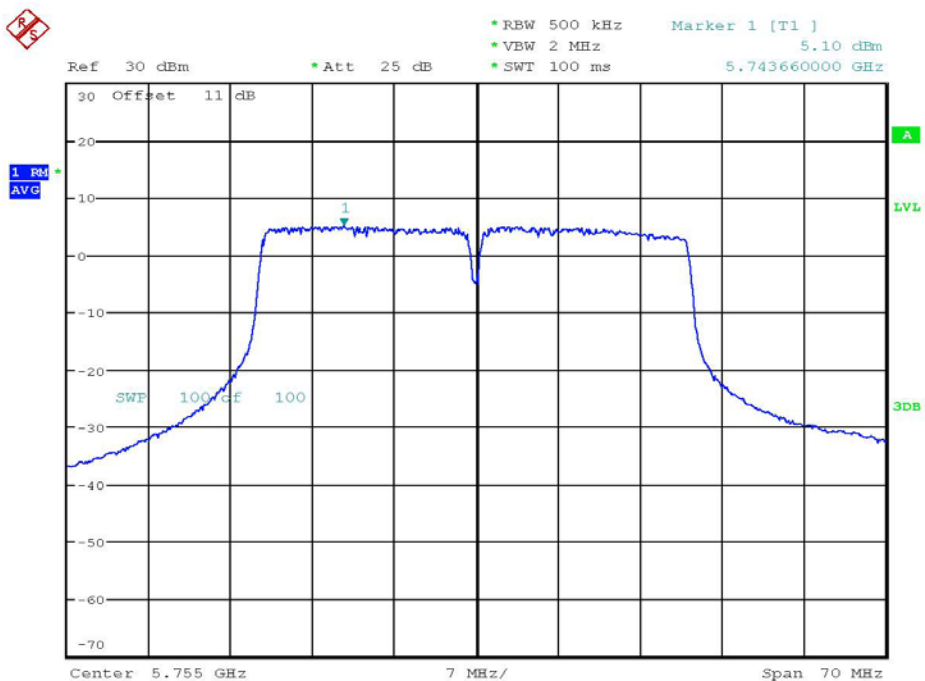
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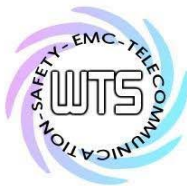
Registration number: W6D21504-14946-C-54
FCC ID: ZTT-RE1750A



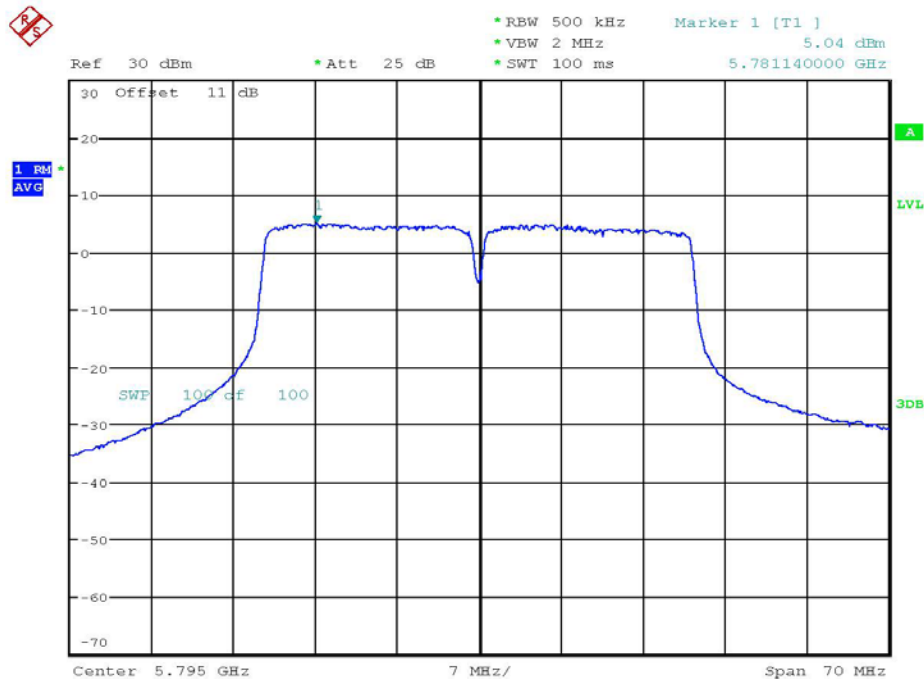
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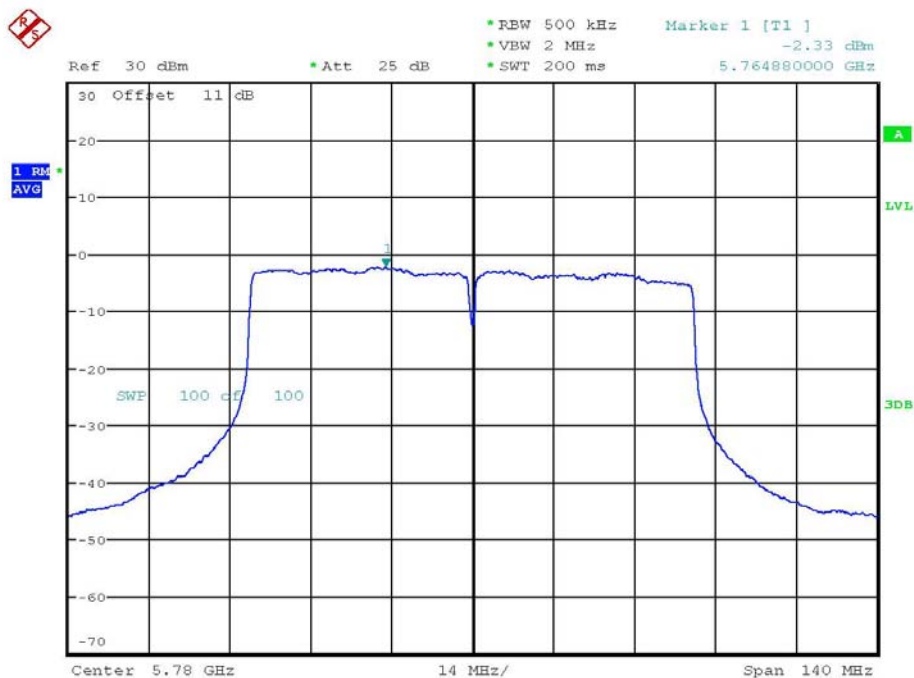
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Date: 25.NOV.2014 22:55:31



Registration number: W6D21504-14946-C-54
FCC ID: ZTT-RE1750A



POWER DENSITY CDD ANTO_VHT40CH159
Date: 25.NOV.2014 23:00:43



POWER DENSITY CDD ANT2_VHT80CH156
Date: 26.NOV.2014 00:00:45



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21504-14946-C-54

FCC ID: ZTT-RE1750A

Band 1

ANT0	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	6.577	5.715	6.026	8.18	7.57	7.80
802.11n 40MHz	3.357	--	3.266	5.26	--	5.14
802.11ac	0.662	--	--	-1.79	--	--
ANT1	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	5.821	5.957	7.079	7.65	7.75	8.50
802.11n 40MHz	2.972	--	3.388	4.73	--	5.3
802.11ac	0.685	--	--	-1.64	--	--
ANT2	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	6.486	7.096	7.379	8.12	8.51	8.68
802.11n 40MHz	3.214	--	3.681	5.07	--	5.66
802.11ac	0.628	--	--	-2.02	--	--
Combine	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	18.884	18.768	20.484	12.76	12.73	13.11
802.11n 40MHz	9.543	--	10.335	9.80	--	10.14
802.11ac	1.975	--	--	2.96	--	--



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21504-14946-C-54

FCC ID: ZTT-RE1750A

Band 4

ANT0	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	5.888	5.433	6.053	7.70	7.35	7.82
802.11n 40MHz	2.992	--	2.864	4.76	--	4.57
802.11ac	0.535	--	--	-2.72	--	--
ANT1	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	6.855	5.808	5.346	8.36	7.64	7.28
802.11n 40MHz	3.524	--	2.958	5.47	--	4.71
802.11ac	0.589	--	--	-2.30	--	--
ANT2	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	6.266	6.223	5.848	7.97	7.94	7.67
802.11n 40MHz	3.236	--	3.192	5.10	--	5.04
802.11ac	0.585	--	--	-2.33	--	--
Combine	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	19.009	17.464	17.247	12.79	12.42	12.37
802.11n 40MHz	9.752	--	9.014	9.89	--	9.55
802.11ac	1.709	--	--	2.33	--	--

Test equipment used: ETSTW-RE 055, ETSTW-RE 050



Registration number: W6D21504-14946-C-54
FCC ID: ZTT-RE1750A

3.4 Undesirable emission limits, FCC 15.407 (b)

1. For transmitters operating in the 5.15–5.25 GHz band: all emissions out-side of the 5.15–5.35 GHz band shall not exceed an EIRP of –27 dBm/MHz.
2. For transmitters operating in the 5.25–5.35 GHz band: all emissions out-side of the 5.15–5.35 GHz band shall not exceed an EIRP of –27 dBm/MHz. De-vices operating in the 5.25–5.35 GHz band that generate emissions in the 5.15–5.25 GHz band must meet all appli-cable technical requirements for operation in the 5.15–5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5.15–5.25 GHz band.
3. For transmitters operating in the 5.47–5.725 GHz band: all emissions out-side of the 5.47–5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz.
4. For transmitters operating in the 5.725–5.825 GHz band: all emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an EIRP of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an EIRP of -27 dBm/MHz.
5. The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.
6. Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209.
7. According to According to KDB 789033 D02 General UNII Test Procedures v01, as specified in 15.407(b), emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of -27 dBm/MHz (or -17 dBm/MHz as specified in 15.407(b)(4)). However, an out of-band emission that complies with both the average and peak limits of 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz peak emission limit.
8. If radiated measurements are performed, field strength is then converted to EIRP as follows:
 - (i) $EIRP = ((E \cdot d)^2) / 30$, where: E is the field strength in V/m; d is the measurement distance in meters. EIRP is the equivalent isotropically radiated power in watts.
 - (ii) Working in dB units, the above equation is equivalent to: $EIRP[dBm] = E[dB\mu V/m] + 20 \log(d[meters]) - 104.77$.
 - (iii) Or, if d is 3 meters: $EIRP[dBm] = E[dB\mu V/m] - 95.2$.

Applicable to	Limit	
☒	FIELD STRENGTH at 3m (dBμV/m)	
	PK	AV
	74	54
☐	EIRP LIMIT (dBm)	EQUIVALENT FIELD STRENGTH at 3m (dBμV/m)
	PK	PK
	-27	68.3



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21504-14946-C-54

FCC ID: ZTT-RE1750A

Model: RE1750A

Date: --

Mode:

Temperature: -- °C

Engineer: --

Polarization: Horizontal

Humidity: -- %

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--

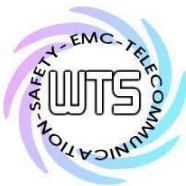
Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--

Test equipment used: ETSTW-RE 004, ETSTW-RE 030, ETSTW-RE 111,
ETSTW-RE 088, ETSTW-RE 018

Explanation: See attached diagrams in appendix.



Registration number: W6D21504-14946-C-54

FCC ID: ZTT-RE1750A

3.5 Automatic Discontinuation of transmission, FCC 15.407 (c)

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure.

This function will be declared by manufacturer.

3.6 Reserved, FCC 15.407 (d)

3.7 Indoor Operation Restriction, FCC 15.407 (e)

Within the 5.15–5.25 GHz band, U- NII devices will be restricted to indoor operations to reduce any potential for harmful interference to co-channel MSS operations. This equipment has to be declared by manufacturer of the final product as content of the user manual.



Registration number: W6D21504-14946-C-54

FCC ID: ZTT-RE1750A

3.8 Equivalent isotropic radiated power, FCC 15.407 (f)

FCC Rule: 15.407(b)(3)

For systems using digital modulation in the 5.725 GHz-5.850 GHz bands: 1 Watt.

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Test equipment used: ETSTW-RE 055

3.9 RF Exposure Compliance Requirements

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.25 m normally can be maintained between the user and the device.

FCC OET Bulletin 65 Edition 97.01 determines the equations for predicting RF fields and applicable limits.

The prediction for power density in the far-field but will over-predict power density in the near field, where it could be used for walking a “worst case” or conservative prediction.

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

S – Power Density

P – Output power ERP

R – Distance

D – Cable Loss

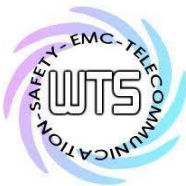
AG – Antenna Gain

Band 1

Item	Unit	Value	Remarks
P	mW	281.8383	Peak value
D	dB		
AG	dBi	9.77	
G		9.4842	Calculated Value
R	cm	20	Assumed value
S	mW/cm2	0.5318	Calculated value

Band 4

Item	Unit	Value	Remarks
P	mW	100	Peak value
D	dB		
AG	dBi	9.77	
G		9.4842	Calculated Value
R	cm	20	Assumed value
S	mW/cm2	0.1887	Calculated value



Registration number: W6D21504-14946-C-54

FCC ID: ZTT-RE1750A

3.10 Transmit Power Control (TPC)

Transmit power control (TPC). U-NII devices operating in the 5.25-5.35 GHz band and the 5.47-5.725 GHz band shall employ a TPC mechanism. The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30 dBm. A TPC mechanism is not required for systems with an e.i.r.p. of less than 500 mW.

Explanation: The EUT operates 5150 MHz – 5250 MHz and 5725 MHz – 5850 MHz, so this test item is not required..



Registration number: W6D21504-14946-C-54

FCC ID: ZTT-RE1750A

3.11 Radiated Emissions from Receiver Part

FCC Rule: 15.109

Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency of Emission (MHz)	Field Strength (microvolts/meter)	Field Strength (dBmicrovolts/meter)
30 – 88	100	40.0
88 – 216	150	43.5
216 – 960	200	46.0
Above 960	500	54.0

Test equipment used: ETSTW-RE 004, ETSTW-RE 030, ETSTW-RE 111, ETSTW-RE 088, ETSTW-RE 018

Explanation: The test results are listed in the separated test report no.: W6M21410-14564-P-15B-R1.

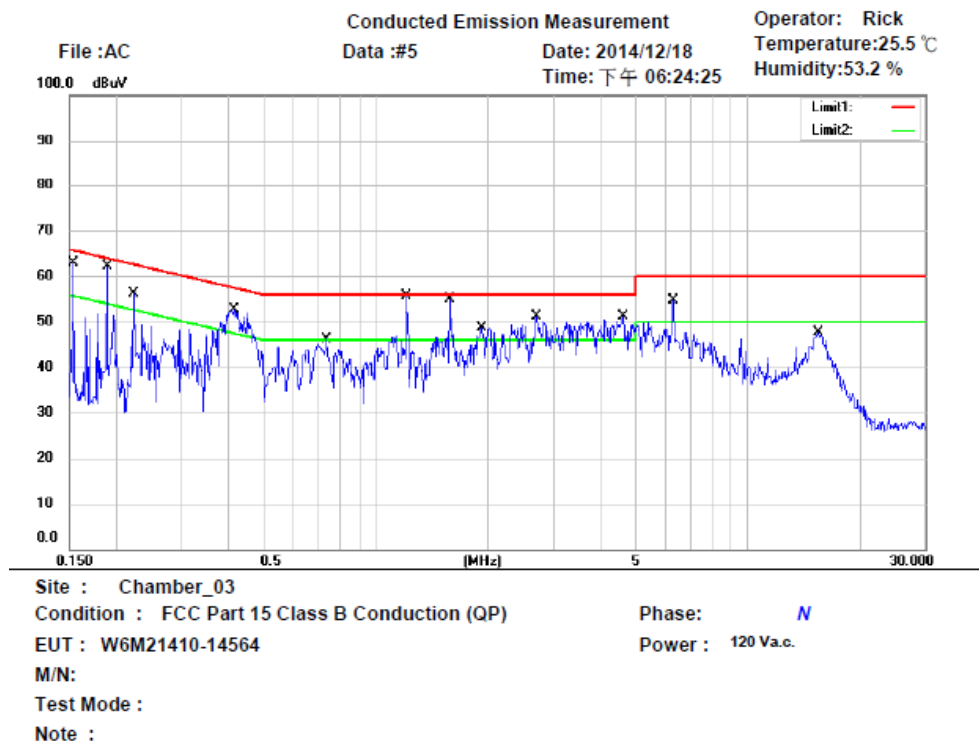


Registration number: W6D21504-14946-C-54
FCC ID: ZTT-RE1750A

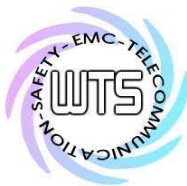
3.12 Power Line Conducted Emission

For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the table bellows with this provision shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminals.

This measurement was transact first with instrumentation using an average and peak detector and a 10 kHz bandwidth. If the peak detector achieves a calculated level, the measurement is repeated by an instrumentation using a quasi-peak detector.



Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
	0.1526	30.45	QP	9.76	40.21	65.86	-25.65	
	0.1526	2.46	AVG	9.76	12.22	55.86	-43.64	
	0.1890	29.83	QP	9.76	39.59	64.08	-24.49	
	0.1890	16.10	AVG	9.76	25.86	54.08	-28.22	
	0.2226	28.66	QP	9.76	38.42	62.72	-24.30	
	0.2226	13.65	AVG	9.76	23.41	52.72	-29.31	
	0.4167	39.62	QP	9.77	49.39	57.51	-8.12	
	0.4167	26.14	AVG	9.77	35.91	47.51	-11.60	
	0.7384	31.52	QP	9.78	41.30	56.00	-14.70	
	0.7384	18.87	AVG	9.78	28.65	46.00	-17.35	
*	1.2065	39.67	QP	9.80	49.47	56.00	-6.53	
	1.2065	26.93	AVG	9.80	36.73	46.00	-9.27	
	1.5777	34.12	QP	9.81	43.93	56.00	-12.07	
	1.5777	19.99	AVG	9.81	29.80	46.00	-16.20	
	1.9197	33.37	QP	9.82	43.19	56.00	-12.81	
	1.9197	20.63	AVG	9.82	30.45	46.00	-15.55	



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21504-14946-C-54

FCC ID: ZTT-RE1750A

Site : Chamber_03

Condition : FCC Part 15 Class B Conduction (QP)

Phase: **N**

EUT : W6M21410-14564

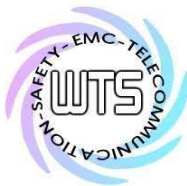
Power : 120 Va.c.

M/N:

Test Mode :

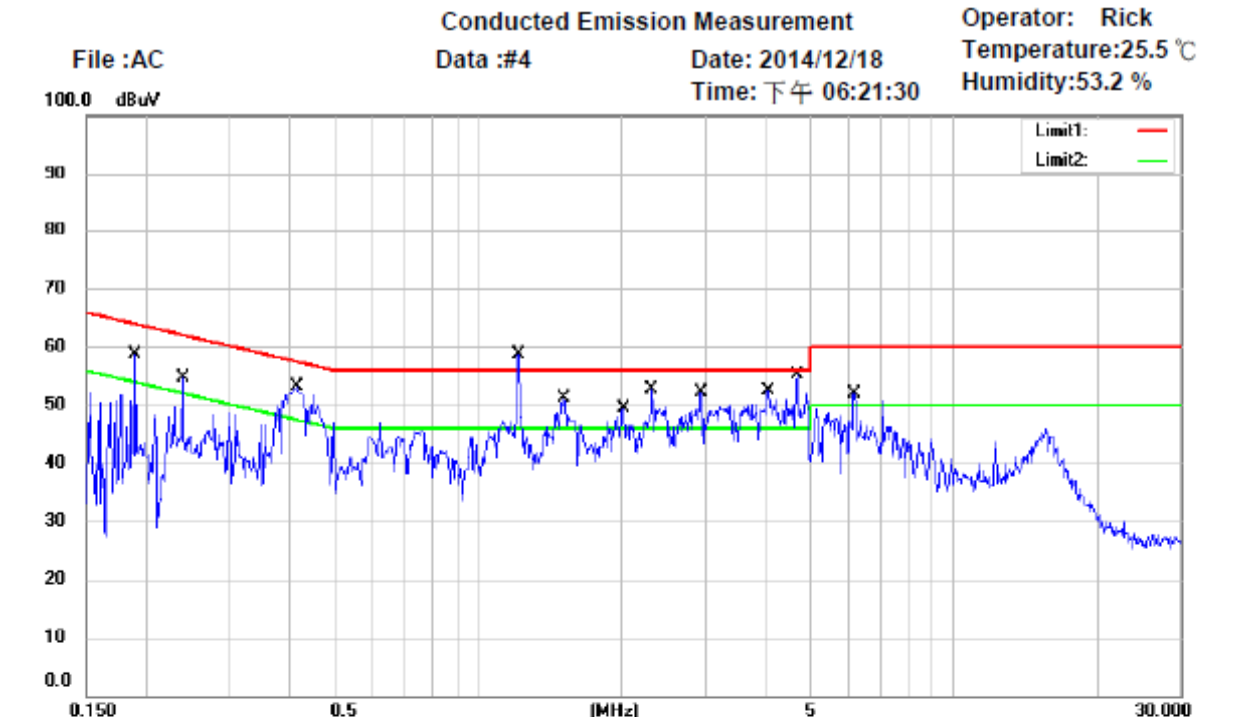
Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
	2.6938	32.92	QP	9.85	42.77	56.00	-13.23	
	2.6938	20.43	AVG	9.85	30.28	46.00	-15.72	
	4.6085	33.87	QP	9.95	43.82	56.00	-12.18	
	4.6085	22.44	AVG	9.95	32.39	46.00	-13.61	
	6.2875	32.88	QP	10.03	42.91	60.00	-17.09	
	6.2875	22.20	AVG	10.03	32.23	50.00	-17.77	
	15.4125	31.56	QP	10.17	41.73	60.00	-18.27	
	15.4125	24.71	AVG	10.17	34.88	50.00	-15.12	



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21504-14946-C-54
FCC ID: ZTT-RE1750A



Site : Chamber_03

Condition : FCC Part 15 Class B Conduction (QP)

Phase: L1

EUT : W6M21410-14564

Power : 120 V.a.c.

M/N:

Test Mode :

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
	0.1900	-2.91	QP	9.70	6.79	64.04	-57.25	
	0.1900	14.61	AVG	9.70	24.31	54.04	-29.73	
	0.2380	31.54	QP	9.70	41.24	62.17	-20.93	
	0.2380	16.04	AVG	9.70	25.74	52.17	-26.43	
	0.4141	40.16	QP	9.70	49.86	57.57	-7.71	
	0.4141	28.12	AVG	9.70	37.82	47.57	-9.75	
*	1.2110	40.63	QP	9.73	50.36	56.00	-5.64	
	1.2110	26.38	AVG	9.73	36.11	46.00	-9.89	
	1.5192	32.00	QP	9.74	41.74	56.00	-14.26	
	1.5192	19.37	AVG	9.74	29.11	46.00	-16.89	
	2.0120	32.28	QP	9.75	42.03	56.00	-13.97	
	2.0120	18.92	AVG	9.75	28.67	46.00	-17.33	
	2.3158	32.94	QP	9.76	42.70	56.00	-13.30	
	2.3158	19.96	AVG	9.76	29.72	46.00	-16.28	
	2.9323	32.92	QP	9.79	42.71	56.00	-13.29	
	2.9323	18.36	AVG	9.79	28.15	46.00	-17.85	



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21504-14946-C-54
FCC ID: ZTT-RE1750A

Site : Chamber_03

Condition : FCC Part 15 Class B Conduction (QP)

Phase: L1

EUT : W6M21410-14564

Power : 120 V.a.c.

M/N:

Test Mode :

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
	4.0505	33.53	QP	9.84	43.37	56.00	-12.63	
	4.0505	21.69	AVG	9.84	31.53	46.00	-14.47	
	4.6963	32.57	QP	9.87	42.44	56.00	-13.56	
	4.6963	19.16	AVG	9.87	29.03	46.00	-16.97	
	6.1750	31.89	QP	9.94	41.83	60.00	-18.17	
	6.1750	21.54	AVG	9.94	31.48	50.00	-18.52	

- Note:** 1. The formula of measured value as: Test Result = Reading + Correction Factor
2. The Correction Factor = Cable Loss + LISN Insertion Loss + Pulse Limit Loss
3. Detector function in the form : PK = Peak, QP = Quasi Peak, AV = Average
4. All not in the table noted test results are more than 20 dB below the relevant limits.
5. Measurement uncertainty = ± 1.41 dB; Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.
6. Up Line: QP Limit Line, Down Line: Ave Limit Line.

Limits:

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi Peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

Test equipment used: ETSTW-CE 001, ETSTW-CE 016, ETSTW-RE 045