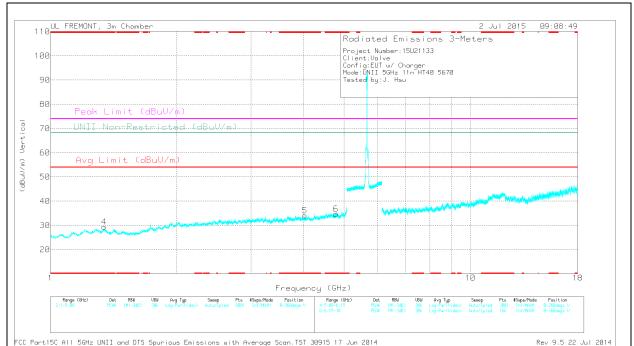
DATE: AUG 18, 2015 IC ID: 20207-1003

# HIGH CHANNEL VERTICAL



# **HIGH CHANNEL DATA**

# **Trace Markers**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non- Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.279	32.67	PK	29.7	-33	0	29.37	-	-	74	-44.63	-	-	0-360	100	H
2	* 3.78	34.7	PK	33.1	-30.9	0	36.9	-	-	74	-37.1	-	-	0-360	100	Н
4	* 1.341	32.82	PK	29.4	-32.8	0	29.42	-	-	74	-44.58	-	-	0-360	100	V
5	* 4.029	31.6	PK	33.2	-30.7	0	34.1	-	-	74	-39.9	-	-	0-360	200	V
6	* 4.777	30.44	PK	34	-29.7	0	34.74	-	-	74	-39.26	-	-	0-360	200	V
3	* 11.929	28.38	PK	39.1	-23.6	0	43.88	-	-	74	-30.12	-	-	0-360	200	Н

<sup>\* -</sup> indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

# Radiated Emissions

Frequency (GHz)	Meter Reading	Det	AF T119 (dB/m)	Amp/Cbl/Fl tr/Pad (dB)	DC Corr (dB)	Corrected Reading	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non- Restricted	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
(0)	(dBuV)		(==,,	.,,		(dBuV/m)	(===1,,	(/	(===1,,	(==)	(dBuV/m)	(==)	(8-)	()	
* 1.281	42	PK1	29.7	-33.1	0	38.6	-	-	74	-35.4	-	-	360	100	Н
* 1.28	30.01	AD1	29.7	-33	.8	27.51	54	-26.49	-	-	-	-	360	100	Н
* 3.78	42.59	PK1	33.1	-30.9	0	44.79	-	-	74	-29.21	-	-	302	165	Н
* 3.78	33.73	AD1	33.1	-30.9	.8	36.73	54	-17.27	-	-	-	-	302	165	Н
* 1.342	41.98	PK1	29.4	-32.8	0	38.58	-	-	74	-35.42	-	-	302	165	V
* 1.342	30.14	AD1	29.4	-32.8	.8	27.54	54	-26.46	-	-	-	-	302	165	V
* 4.028	40.4	PK1	33.2	-30.7	0	42.9	-	-	74	-31.1	-	-	302	165	V
* 4.029	28.89	AD1	33.2	-30.7	.8	32.19	54	-21.81	-	-	-	-	302	165	V
* 4.776	39.87	PK1	34	-29.7	0	44.17	-	-	74	-29.83	-	-	302	165	V
* 4.776	28.5	AD1	34	-29.7	.8	33.6	54	-20.4	-	-	-	-	302	165	V
* 11.93	37.69	PK1	39.1	-23.6	0	53.19	-	-	74	-20.81	-	-	302	165	Н
* 11.928	25.92	AD1	39.1	-23.6	.8	42.22	54	-11.78	-	-	-	-	302	165	Н

<sup>\* -</sup> indicates frequency in CFR15.205/IC7.2.2 Restricted Band

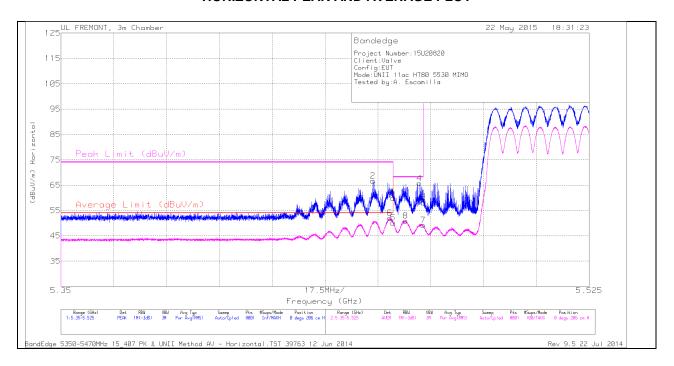
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

FCC Part15C All 5GHz UNII and DTS Spurious Emissions with Average Scan.TST 30915 17 Jun 2014

# 13.2.3. TX ABOVE 1 GHz 802.11ac HT80 MODE IN THE 5.5 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

#### HORIZONTAL PEAK AND AVERAGE PLOT



#### **HORIZONTAL DATA**

#### Trace Markers

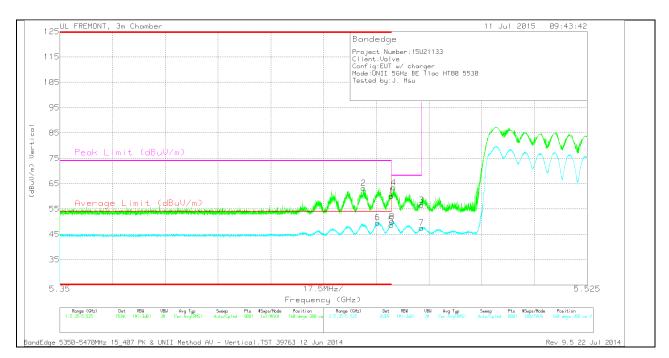
Marker	Frequency	Meter	Det	AF T119	Amp/Cbl/Flt	DC Corr (dB)	Corrected	Average	Margin	Peak Limit	PK Margin	Azimuth	Height	Polarity
	(GHz)	Reading		(dB/m)	r/Pad (dB)		Reading	Limit	(dB)	(dBuV/m)	(dB)	(Degs)	(cm)	
		(dBuV)					(dBuV/m)	(dBuV/m)						
2	5.453	53.51	PK	34.6	-21.4	0	66.71	i	-	74	-7.29	0	206	Н
6	5.459	38.14	RMS	34.6	-21.4	.66	52	54	-2	-	-	0	206	Н
1	5.46	46.61	PK	34.6	-21.4	0	59.81	-	-	74	-14.19	0	206	Н
5	5.46	36.25	RMS	34.6	-21.4	.66	50.11	54	-3.89	-	•	0	206	Н
8	5.464	37	RMS	34.6	-21.4	.66	50.86	ı	-	-	·	0	206	Н
4	5.469	52.42	PK	34.6	-21.3	0	65.72	-	-	68.2	-2.48	0	206	Н
3	5.47	44.88	PK	34.6	-21.3	0	58.18	-	-	68.2	-10.02	0	206	Н
7	5.47	35.25	RMS	34.6	-21.3	.66	49.21	-	-	-	-	0	206	Н

PK - Peak detector

RMS - RMS detection

BandEdge 5350-5470MHz 15\_407 PK & UNII Method AV - Horizontal.TST 39763 12 Jun 2014

# VERTICAL PEAK AND AVERAGE PLOT



# **VERTICAL DATA**

#### **Trace Markers**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.46	46.15	PK	34.6	-20.7	0	60.05	-	-	74	-13.95	160	388	V
2	* 5.451	49.15	PK	34.6	-20.6	0	63.15	-	-	74	-10.85	160	388	V
5	* 5.46	33.74	RMS	34.6	-20.7	1.02	48.66	54	-5.34	-	-	160	388	V
6	* 5.455	34.59	RMS	34.6	-20.6	1.02	49.61	54	-4.39	-	-	160	388	V
8	5.46	35.14	RMS	34.6	-20.7	1.02	50.06		-	-	-	160	388	V
4	5.461	49.59	PK	34.6	-20.7	0	63.49	-	-	68.2	-4.71	160	388	V
3	5.47	42.45	PK	34.6	-20.6	0	56.45	-	-	68.2	-11.75	160	388	V
7	5.47	32.51	RMS	34.6	-20.6	1.02	47.53	-	-	-	-	160	388	V

<sup>\* -</sup> indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection

BandEdge 5350-5470MHz 15\_407 PK & UNII Method AV - Vertical.TST 39763 12 Jun 2014

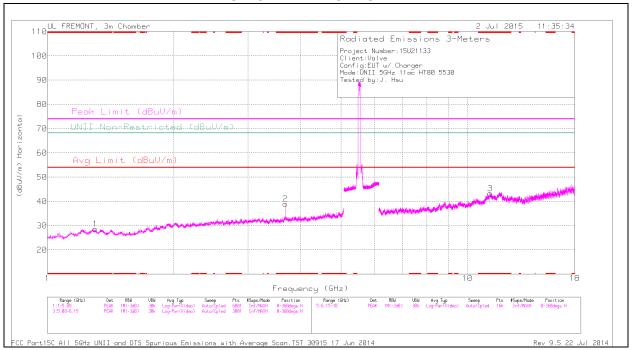
Rev 9.5 22 Jul 2014

DATE: AUG 18, 2015

IC ID: 20207-1003

# HARMONICS AND SPURIOUS EMISSIONS

# **LOW CHANNEL HORIZONTAL**



# **LOW CHANNEL VERTICAL** 110 UL FREMONT, 3m Chamber 2 Jul 2015 11:35:34 Radiated Emissions 3-Meters Project Number: 15U21133 Client: Ualve Config:EUT w/ Charger Mode: UNII 56Hz 11ac HT80 5530 Tested by: J. Hsu 100 90 80 Peak Limit (dBuV/ :dBuV/m) Vertical UNII Non-Restricted (dBuV/m) 70 60 Avg Limit (dBuV/m 50 Det RBW PEAK 1M(-348) UBW Avg Tup Sumep Pts #Swps/Mode Position 38k Log-Pwr(Uideo) Auto/Cpied 6081 Inf/MAXH 8-368deqs U Range (GHz) Pts #Swps/Mode Sxeep PartISC All 5GHz UNII and DTS Spurious Emissions with Average Scan.TST 30915 17 Jun 2014

# **LOW CHANNEL DATA**

# **Trace Markers**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non- Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.3	31.7	PK	29.9	-33	0	28.6	-	-	74	-45.4	-	-	0-360	200	Н
2	* 3.687	35.87	PK	33	-29.9	0	38.97	-	-	74	-35.03	-	-	0-360	100	Н
4	* 1.413	31.8	PK	28.5	-32.1	0	28.2	-	-	74	-45.8	-	-	0-360	100	V
5	* 2.231	32.41	PK	31.5	-31.7	0	32.21	-	-	74	-41.79	-	-	0-360	100	V
6	* 4.796	30.34	PK	34	-29.4	0	34.94	-	-	74	-39.06	-	-	0-360	100	V
3	* 11.324	28.18	PK	38.1	-23	0	43.28	-	-	74	-30.72	-	-	0-360	100	Н

<sup>\* -</sup> indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

# Radiated Emissions

Frequency (GHz)	Meter Reading	Det	AF T119 (dB/m)	Amp/CbI/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non- Restricted	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
	(dBuV)					(dBuV/m)					(dBuV/m)				
* 1.299	41.3	PK1	29.9	-33	0	38.2	-	-	74	-35.8	-	-	360	100	Н
* 1.298	29.58	AD1	29.9	-33	1.02	27.5	54	-26.5	-	-	-	-	360	100	Н
* 3.687	42.93	PK1	33	-29.9	0	46.03	-	-	74	-27.97	-	-	296	101	Н
* 3.687	35.5	AD1	33	-29.9	1.02	39.62	54	-14.38	-	-	-	-	296	101	Н
* 1.412	42.04	PK1	28.6	-32.1	0	38.54	-	-	74	-35.46	-	-	360	100	V
* 1.414	29.85	AD1	28.5	-32.1	1.02	27.27	54	-26.73	-	-	-	-	360	100	V
* 2.231	41.42	PK1	31.5	-31.7	0	41.22	-	-	74	-32.78	-	-	360	100	V
* 2.232	29.42	AD1	31.5	-31.7	1.02	30.24	54	-23.76	-	-	-	-	360	100	V
* 4.795	40.31	PK1	34	-29.5	0	44.81	-	-	74	-29.19	-	-	360	100	V
* 4.794	28.45	AD1	34	-29.5	1.02	33.97	54	-20.03	-	-	-	-	360	100	V
* 11.326	37.39	PK1	38.1	-23	0	52.49	-	-	74	-21.51	-	-	360	100	Н
* 11.326	25.35	AD1	38.1	-23	1.02	41.47	54	-12.53	-	-	-	-	360	100	Н

<sup>\* -</sup> indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

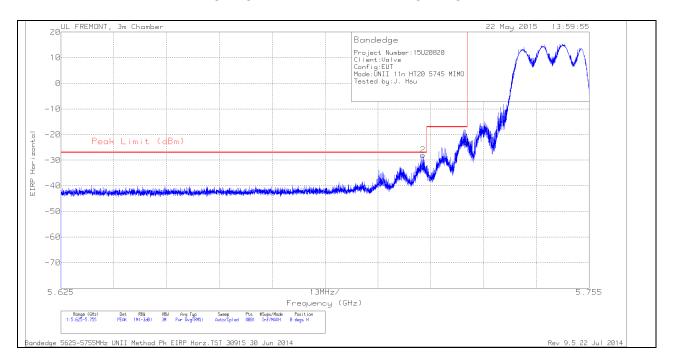
AD1 - KDB789033 Method: AD Primary Power Average

FCC Part15C All 5GHz UNII and DTS Spurious Emissions with Average Scan.TST 30915 17 Jun 2014

# 13.3. 5.8 GHz

# 13.3.1. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.8 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

#### HORIZONTAL PEAK AND AVERAGE PLOT



# **HORIZONTAL DATA**

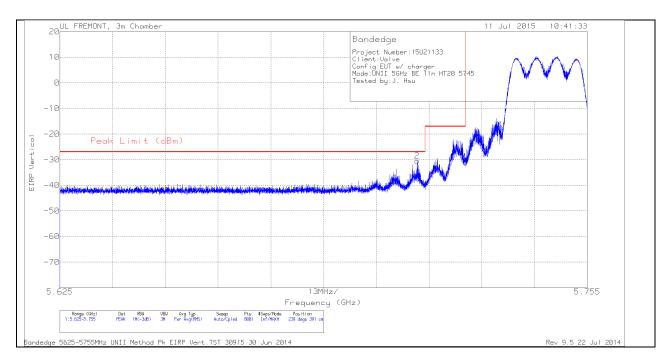
# **Trace Markers**

М	arker	Frequency (GHz)	Meter Reading	Det	AF T119 (dB/m)	Amp/Cbl/F ltr/Pad	Conversion Factor (dB)	Corrected Reading	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
			(dBm)			(dB)		EIRP					
	2	5.714	-53.58	PK	34.8	-21	11.8	-27.98	-27	98	0	231	Н
	1	5.725	-48.46	PK	34.8	-21.1	11.8	-22.96	-17	-5.96	0	231	Н

PK - Peak detector

Bandedge 5625-5755MHz UNII Method Pk EIRP Horz.TST 30915 30 Jun 2014

# **VERTICAL PEAK AND AVERAGE PLOT**



# **VERTICAL DATA**

# **Trace Markers**

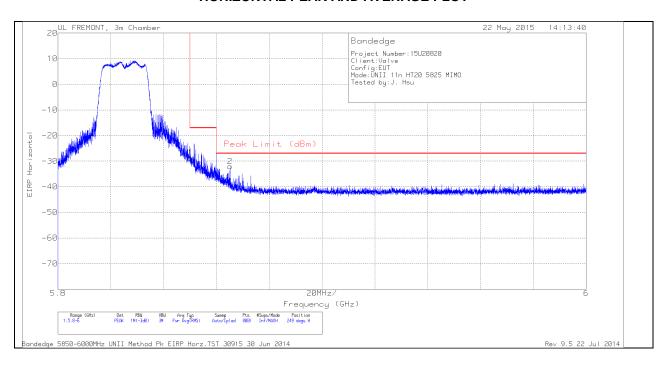
Ī	Marker	Frequency	Meter	Det	AF T119	Amp/Cbl/F	Conversion	Corrected	Peak Limit	PK Margin	Azimuth	Height	Polarity
		(GHz)	Reading		(dB/m)	ltr/Pad	Factor (dB)	Reading	(dBm)	(dB)	(Degs)	(cm)	
			(dBm)			(dB)		EIRP					
Ī	2	5.713	-56.63	PK	34.8	-20.4	11.8	-30.43	-27	-3.43	239	391	V
Ī	1	5.725	-57.06	PK	34.8	-20.3	11.8	-30.76	-17	-13.76	239	391	V

PK - Peak detector

Bandedge 5625-5755MHz UNII Method Pk EIRP Vert.TST 30915 30 Jun 2014

# **AUTHORIZED BANDEDGE (HIGH CHANNEL)**

# HORIZONTAL PEAK AND AVERAGE PLOT



# **HORIZONTAL DATA**

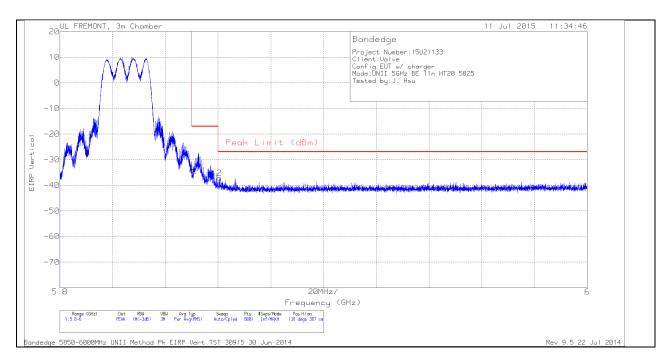
# Trace Markers

	Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
ſ	1	5.85	-54.06	PK	34.9	-21.3	11.8	-28.66	-17	-11.66	249	284	Н
	2	5.865	-57.42	PK	34.9	-21.3	11.8	-32.02	-27	-5.02	249	284	Н

PK - Peak detector

Bandedge 5850-6000MHz UNII Method Pk EIRP Horz.TST 30915 30 Jun 2014

# **VERTICAL PEAK AND AVERAGE PLOT**



# **VERTICAL DATA**

# **Trace Markers**

	Marker	Frequency	Meter	Det	AF T119	Amp/Cbl/F	Conversion	Corrected	Peak Limit	PK Margin	Azimuth	Height	Polarity
		(GHz)	Reading		(dB/m)	ltr/Pad	Factor (dB)	Reading	(dBm)	(dB)	(Degs)	(cm)	
			(dBm)			(dB)		EIRP					
Ī	1	5.85	-60.16	PK	34.9	-20.6	11.8	-34.06	-17	-17.06	138	387	V
Ī	2	5.861	-63.37	PK	34.9	-20.5	11.8	-37.17	-27	-10.17	138	387	V

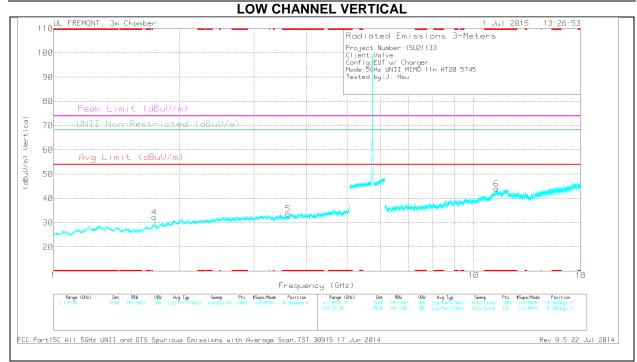
PK - Peak detector

Bandedge 5850-6000MHz UNII Method Pk EIRP Vert.TST 30915 30 Jun 2014

# HARMONICS AND SPURIOUS EMISSIONS

# LOW CHANNEL HORIZONTAL





# **LOW CHANNEL DATA**

#### **Trace Markers**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fitr /Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non- Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.293	31.72	PK	29.8	-33	28.52	-	-	74	-45.48	-	-	0-360	100	Н
2	* 3.83	34.32	PK	33.1	-30.3	37.12	-	-	74	-36.88	-	-	0-360	100	Н
5	* 3.615	31.37	PK	32.8	-30.5	33.67	-	-	74	-40.33	-	-	0-360	100	V
6	* 11.337	28.5	PK	38.1	-22.7	43.9	-	-	74	-30.1	-	-	0-360	100	V
4	1.737	34.32	PK	29.4	-31.5	32.22	-	-	-	-	68.2	-35.98	0-360	100	V
3	8.548	29.24	PK	35.8	-25	40.04	-	-	-	-	68.2	-28.16	0-360	200	Н

<sup>\* -</sup> indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

#### Radiated Emissions

Frequency (GHz)	Meter Reading	Det	AF T119 (dB/m)	Amp/Cbl/Fl tr/Pad (dB)	Corrected Reading	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non- Restricted	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
(61.2)	(dBuV)		(45),	u, i uu (ub)	(dBuV/m)	(4541))	(45)	(45417)	(45)	(dBuV/m)	(45)	(505)	(6)	
* 1.291	41.55	PK1	29.8	-33	38.35	-	-	74	-35.65	-	-	360	100	Н
* 1.291	29.78	AD1	29.8	-33	26.58	54	-27.42	-	-	-	-	360	100	Н
* 3.83	41.92	PK1	33.1	-30.3	44.72	-	-	74	-29.28	-	-	301	142	Н
* 3.83	32.86	AD1	33.1	-30.3	35.66	54	-18.34	-	-	-	-	301	142	Н
* 3.616	40.18	PK1	32.8	-30.5	42.48	-	-	74	-31.52	-	-	277	100	V
* 3.615	28.42	AD1	32.8	-30.5	30.72	54	-23.28	-	-	-	-	277	100	V
* 11.336	37.07	PK1	38.1	-22.7	52.47	-	-	74	-21.53	-	-	277	100	V
* 11.339	25.45	AD1	38.1	-22.7	40.85	54	-13.15	-	-	-	-	277	100	V
1.737	41.31	PK1	29.4	-31.5	39.21	-	-	-	-	68.2	-28.99	277	100	V
1.738	29.05	AD1	29.5	-31.5	27.05	-	-	-	-	-	-	277	100	V
8.547	26.06	AD1	35.8	-25.1	36.76	-	-	-	-	-	-	277	100	Н
8.548	37.55	PK1	35.8	-25	48.35	-	-	-	-	68.2	-19.85	277	100	Н

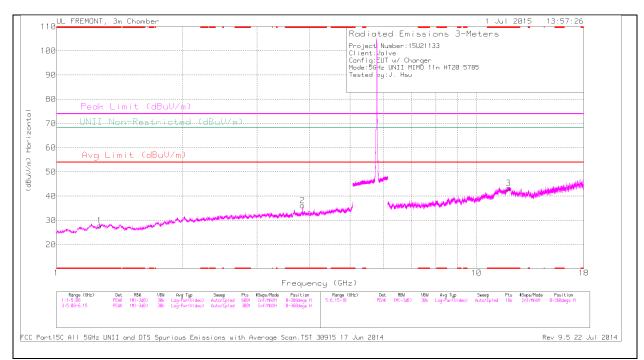
<sup>\* -</sup> indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

FCC Part15C All 5GHz UNII and DTS Spurious Emissions with Average Scan.TST 30915 17 Jun 2014

# MID CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

DATE: AUG 18, 2015

IC ID: 20207-1003

# MID CHANNEL VERTICAL 110 UL FREMONT, 3m Chamber 1 Jul 2015 13:57:26 Radiated Emissions 3-Meters Project Number: 15U21133 Client: Valve Config:EUT w/ Charger Mode: 5612 UNII MIMD 11n HT20 5785 Tested by: J. Hsu 100 90 80 Peak Limit (dBuV/ :dBuV/m) Vertical UNII Non-Restricted (dBuV/m) 70 60 Avg Limit (dBuV/m 50 Det RBW PEAK 1M(-348) UBW Avg Tup Sweep Pts #Swps/Made Pasition 38k Log-Pwr(Uideo) Auto/Cpled 6881 Enf/MAXH 8-368deqs U Range (GHz) Pts #Swps/Mode Sxeep PartISC All 5GHz UNII and DTS Spurious Emissions with Average Scan.TST 30915 17 Jun 2014

# **MID CHANNEL DATA**

#### **Trace Markers**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fitr /Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non- Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.267	31.29	PK	29.6	-33	27.89	-	-	74	-46.11	-	-	0-360	100	Н
2	* 3.857	33.22	PK	33.1	-30.2	36.12	-	-	74	-37.88	-	-	0-360	100	Н
4	* 1.484	32.3	PK	28.2	-32.3	28.2	-	-	74	-45.8	-	-	0-360	200	V
5	* 3.687	30.81	PK	33	-29.9	33.91	-	-	74	-40.09	-	-	0-360	200	V
3	* 11.922	27.84	PK	39.1	-23.6	43.34	-	-	74	-30.66	-	-	0-360	100	Н
6	* 11.308	27.87	PK	38.1	-23	42.97	-	-	74	-31.03	-	-	0-360	100	V

<sup>\* -</sup> indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

# Radiated Emissions

Frequency	Meter	Det	AF T119	Amp/Cbl/Fl	Corrected	Avg Limit	Margin	Peak Limit	PK Margin	UNII Non-	PK Margin	Azimuth	Height	Polarity
(GHz)	Reading		(dB/m)	tr/Pad (dB)	Reading	(dBuV/m)	(dB)	(dBuV/m)	(dB)	Restricted	(dB)	(Degs)	(cm)	i l
	(dBuV)				(dBuV/m)					(dBuV/m)				
* 1.265	40.82	PK1	29.6	-33	37.42	-	-	74	-36.58	-	-	360	100	Н
* 1.267	29.52	AD1	29.6	-33	26.12	54	-27.88	-	-	-	-	360	100	Н
* 3.856	41.11	PK1	33.1	-30.1	44.11	-	-	74	-29.89	-	-	313	165	Н
* 3.857	30.97	AD1	33.1	-30.2	33.87	54	-20.13	-	-	-	-	313	165	Н
* 1.484	41.05	PK1	28.2	-32.3	36.95	-	-	74	-37.05	-	-	313	165	V
* 1.486	29.76	AD1	28.2	-32.3	25.66	54	-28.34	-	-	-	-	313	165	V
* 3.688	40.63	PK1	33	-29.9	43.73	-	-	74	-30.27	-	-	313	165	V
* 3.686	28.59	AD1	33	-29.9	31.69	54	-22.31	-	-	-	-	313	165	V
* 11.92	37.36	PK1	39.1	-23.6	52.86	-	-	74	-21.14	-	-	313	165	Н
* 11.92	25.93	AD1	39.1	-23.6	41.43	54	-12.57	-	-	-	-	313	165	Н
* 11.307	36.53	PK1	38.1	-22.9	51.73	-	-	74	-22.27	-	-	313	165	V
* 11.31	25.19	AD1	38.1	-23	40.29	54	-13.71	-	-	-	-	313	165	V

<sup>\* -</sup> indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

FCC Part15C All 5GHz UNII and DTS Spurious Emissions with Average Scan.TST 30915 17 Jun 2014

# HIGH CHANNEL HORIZONTAL 110 UL FREMONT, 3m Chamber 1 Jul 2015 14:23:24 Radiated Emissions 3-Meters Project Number: 15U21133 Client: Valve Config:EUT w/ Charger Mode: 56Hz UNII MIMO 11n HT20 5825 Tested by: J. Hau 100 80 Peak Limit (dBuV/ Horizontal UNII Non-Restricted (dBuV/m) 60 Avg Limit (dBuV/m (dBuU/m) 50 Range (6Hz) 5:6.15-18 Det RBW UBW Avg Tup Sweep Pts #Swps/Mode Position PEAK IMC-3dB) 38k Log-Pun(Video) Auto/Coled 16k Inf/MAXH 8-368deos P PartISC All 5GHz UNII and DTS Spurious Emissions with Average Scan.TST 30915 17 Jun 2014

DATE: AUG 18, 2015 IC ID: 20207-1003

# HIGH CHANNEL VERTICAL



# **HIGH CHANNEL DATA**

#### **Trace Markers**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fitr /Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non- Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.418	32.42	PK	28.5	-32.1	28.82	-	-	74	-45.18	-	-	0-360	200	Н
2	* 3.883	32.58	PK	33.2	-29.9	35.88	-	-	74	-38.12	-	-	0-360	200	Н
4	* 1.294	31.93	PK	29.8	-33	28.73	-	-	74	-45.27	-	-	0-360	200	V
6	* 4.685	30.44	PK	34	-29.8	34.64	-	-	74	-39.36	-	-	0-360	200	V
3	* 11.944	28.32	PK	39.1	-23.7	43.72	-	-	74	-30.28	-	-	0-360	100	Н
5	1.921	33.82	PK	31.2	-32	33.02	-	-	-	-	68.2	-35.18	0-360	100	V

<sup>\* -</sup> indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

#### Radiated Emissions

Frequency (GHz)	Meter Reading	Det	AF T119 (dB/m)	Amp/Cbl/Fl tr/Pad (dB)	Corrected Reading	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non- Restricted	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
	(dBuV)				(dBuV/m)					(dBuV/m)				
* 1.419	41.17	PK1	28.5	-32.1	37.57	-	-	74	-36.43	-	-	360	100	Н
* 1.416	30.01	AD1	28.5	-32.1	26.41	54	-27.59	-	-	-	-	360	100	Н
* 3.883	40.19	PK1	33.2	-29.9	43.49	-	-	74	-30.51	-	-	360	100	Н
* 3.883	29.93	AD1	33.2	-29.9	33.23	54	-20.77	-	-	-	-	360	100	Н
* 1.293	41.04	PK1	29.8	-33	37.84	-	-	74	-36.16	-	-	360	100	V
* 1.292	29.74	AD1	29.8	-33	26.54	54	-27.46	-	-	-	-	360	100	V
* 4.684	40.06	PK1	34	-29.8	44.26	-	-	74	-29.74	-	-	360	100	V
* 4.683	28.38	AD1	34	-29.8	32.58	54	-21.42	-	-	-	-	360	100	V
* 11.945	37.38	PK1	39.1	-23.7	52.78	-	-	74	-21.22	-	-	360	100	Н
* 11.942	25.93	AD1	39.1	-23.6	41.43	54	-12.57	-	-	-	-	360	100	Н
1.922	40.8	PK1	31.2	-32	40	-	-	-	-	68.2	-28.2	360	100	V
1.923	29.22	AD1	31.2	-31.9	28.52	-	-	-	-	-	-	360	100	V

<sup>\* -</sup> indicates frequency in CFR15.205/IC7.2.2 Restricted Band

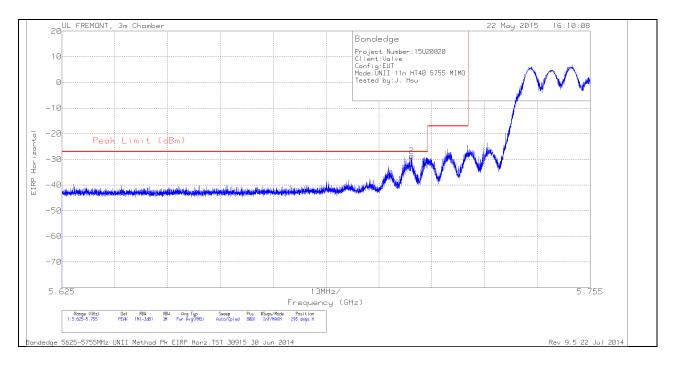
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

FCC Part15C All 5GHz UNII and DTS Spurious Emissions with Average Scan.TST 30915 17 Jun 2014

# 13.3.2. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.8 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

#### HORIZONTAL PEAK AND AVERAGE PLOT



# **HORIZONTAL DATA**

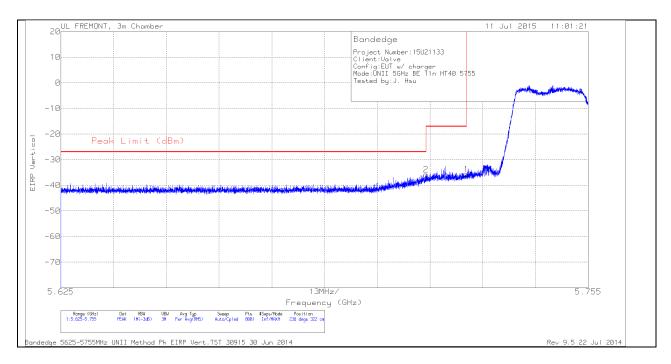
#### Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.711	-54.18	PK	34.8	-21	11.8	-28.58	-27	-1.58	295	206	Н
1	5.725	-53.41	PK	34.8	-21.1	11.8	-27.91	-17	-10.91	295	206	Н

PK - Peak detector

Bandedge 5625-5755MHz UNII Method Pk EIRP Horz.TST 30915 30 Jun 2014

# VERTICAL PEAK AND AVERAGE PLOT



# **VERTICAL DATA**

# **Trace Markers**

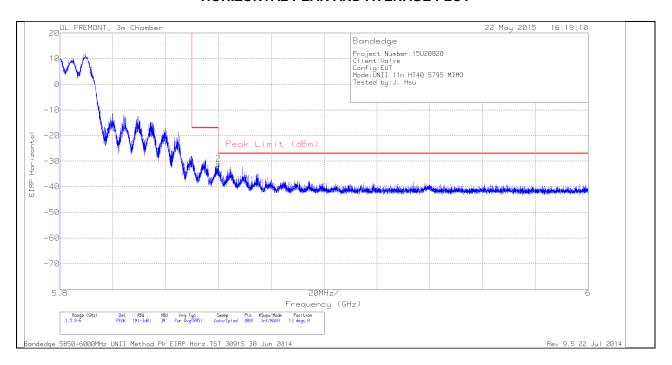
Marker	Frequency	Meter	Det	AF T119	Amp/Cbl/F	Conversion	Corrected	Peak Limit	PK Margin	Azimuth	Height	Polarity
	(GHz)	Reading		(dB/m)	ltr/Pad	Factor (dB)	Reading	(dBm)	(dB)	(Degs)	(cm)	
		(dBm)			(dB)		EIRP					
2	5.715	-62.1	PK	34.8	-20.3	11.8	-35.8	-27	-8.8	236	322	V
1	5.725	-62.07	PK	34.8	-20.3	11.8	-35.77	-17	-18.77	236	322	V

PK - Peak detector

Bandedge 5625-5755MHz UNII Method Pk EIRP Vert.TST 30915 30 Jun 2014

# **AUTHORIZED BANDEDGE (HIGH CHANNEL)**

# HORIZONTAL PEAK AND AVERAGE PLOT



# **HORIZONTAL DATA**

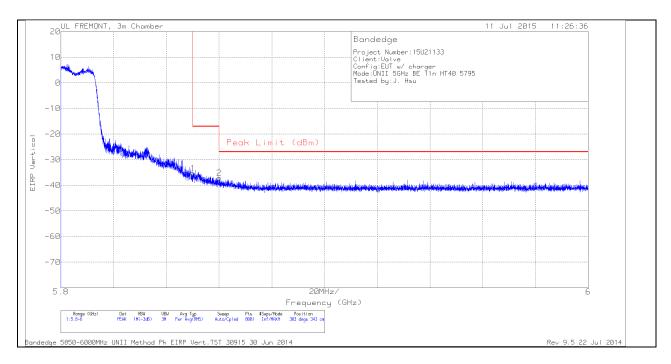
# Trace Markers

	Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
ſ	1	5.85	-56.55	PK	34.9	-21.3	11.8	-31.15	-17	-14.15	13	246	Н
	2	5.86	-56.52	PK	34.9	-21.3	11.8	-31.12	-27	-4.12	13	246	Н

PK - Peak detector

Bandedge 5850-6000MHz UNII Method Pk EIRP Horz.TST 30915 30 Jun 2014

# VERTICAL PEAK AND AVERAGE PLOT



# **VERTICAL DATA**

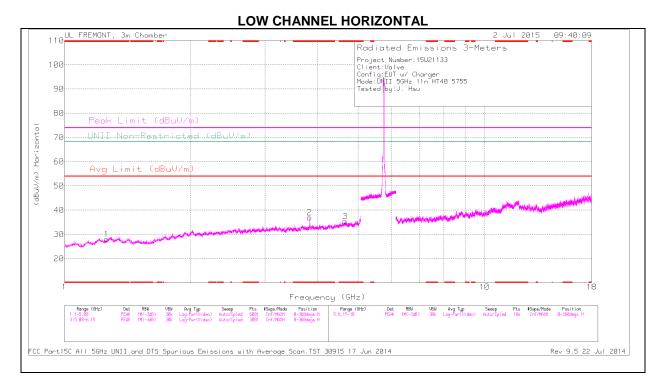
# **Trace Markers**

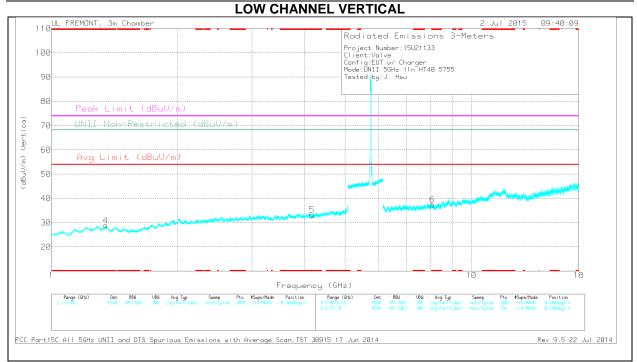
Marker	Frequency	Meter	Det	AF T119	Amp/Cbl/F	Conversion	Corrected	Peak Limit	PK Margin	Azimuth	Height	Polarity
	(GHz)	Reading		(dB/m)	ltr/Pad	Factor (dB)	Reading	(dBm)	(dB)	(Degs)	(cm)	
		(dBm)			(dB)		EIRP					
1	5.85	-61.43	PK	34.9	-20.6	11.8	-35.33	-17	-18.33	303	343	V
2	5.86	-63.37	PK	34.9	-20.5	11.8	-37.17	-27	-10.17	303	343	V

PK - Peak detector

Bandedge 5850-6000MHz UNII Method Pk EIRP Vert.TST 30915 30 Jun 2014

# HARMONICS AND SPURIOUS EMISSIONS





# **LOW CHANNEL DATA**

#### **Trace Markers**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non- Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.26	31.37	PK	29.5	-32.9	0	27.97	-	-	74	-46.03	-		0-360	200	Н
2	* 3.836	33.9	PK	33.1	-30.1	0	36.9	-	-	74	-37.1	-	-	0-360	100	Н
3	* 4.655	30.87	PK	34	-29.5	0	35.37	-	-	74	-38.63	-	-	0-360	200	Н
4	* 1.345	32.37	PK	29.3	-32.8	0	28.87	-	-	74	-45.13	-	-	0-360	200	V
5	* 4.174	30.44	PK	33.3	-30.6	0	33.14	-	-	74	-40.86	-	-	0-360	200	V
6	* 8.073	28.23	PK	35.7	-26.5	0	37.43	-	-	74	-36.57	-	-	0-360	100	V

<sup>\* -</sup> indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

#### Radiated Emissions

Frequency (GHz)	Meter Reading	Det	AF T119 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non- Restricted	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
	(dBuV)					(dBuV/m)					(dBuV/m)				
* 1.262	40.83	PK1	29.5	-32.9	0	37.43	-	-	74	-36.57	-	-	360	100	Н
* 1.262	29.16	AD1	29.5	-32.9	.8	26.56	54	-27.44	-	-	-	-	360	100	Н
* 3.836	42.56	PK1	33.1	-30.1	0	45.56	-	-	74	-28.44	-	-	305	176	Н
* 3.837	33.04	AD1	33.1	-30.1	.8	36.84	54	-17.16	-	-	-	-	305	176	Н
* 4.654	40.55	PK1	34	-29.5	0	45.05	-	-	74	-28.95	-	-	305	176	Н
* 4.654	28.52	AD1	34	-29.5	.8	33.82	54	-20.18	-	-	-	-	305	176	Н
* 1.347	42.1	PK1	29.3	-32.8	0	38.6	-	-	74	-35.4	-	-	305	176	V
* 1.345	30.15	AD1	29.3	-32.8	.8	27.45	54	-26.55	-	-	-	-	305	176	V
* 4.174	40.7	PK1	33.3	-30.5	0	43.5	-	-	74	-30.5	-	-	305	176	V
* 4.174	28.44	AD1	33.3	-30.6	.8	31.94	54	-22.06	-	-	-	-	305	176	V
* 8.075	37.88	PK1	35.7	-26.4	0	47.18	-	-	74	-26.82	-	-	305	176	V
* 8.075	26.54	AD1	35.7	-26.4	.8	36.64	54	-17.36	-	-	-	-	305	176	V

<sup>\* -</sup> indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

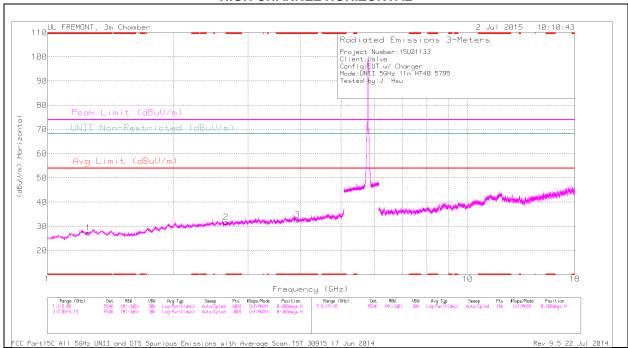
AD1 - KDB789033 Method: AD Primary Power Average

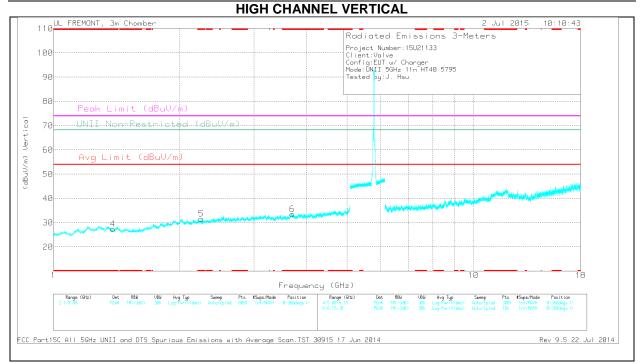
FCC Part15C All 5GHz UNII and DTS Spurious Emissions with Average Scan.TST 30915 17 Jun 2014

Rev 9.5 22 Jul 2014

FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

# HIGH CHANNEL HORIZONTAL





# **HIGH CHANNEL DATA**

# **Trace Markers**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non- Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
												(ubuv/m)				
1	* 1.252	30.73	PK	29.4	-32.8	0	27.33	-	-	74	-46.67	-	-	0-360	200	H
2	* 2.659	31.09	PK	32.3	-31.7	0	31.69	-	-	74	-42.31	-	-	0-360	100	Н
3	* 3.931	30.19	PK	33.2	-30.6	0	32.79	-	-	74	-41.21	-	-	0-360	100	Н
4	* 1.386	31.06	PK	28.8	-32.4	0	27.46	-	-	74	-46.54	-	-	0-360	200	V
5	* 2.249	31.76	PK	31.5	-31.7	0	31.56	-	-	74	-42.44	-	-	0-360	100	V
6	* 3.706	30.89	PK	33	-30.3	0	33.59	-	-	74	-40.41	-	-	0-360	100	V

<sup>\* -</sup> indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

# Radiated Emissions

Frequency (GHz)	Meter Reading	Det	AF T119 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non- Restricted	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
(GHZ)	(dBuV)		(05/111)	1/140 (05)		(dBuV/m)	(ubuv/iii)	(ub)	(ubuv/iii)	(ub)	(dBuV/m)	(ub)	(Degs)	(CIII)	
* 1.25	40.22	PK1	29.4	-32.8	0	36.82	-	-	74	-37.18	-	-	360	100	Н
* 1.25	28.83	AD1	29.4	-32.8	.8	26.23	54	-27.77	-	-	-	-	360	100	Н
* 2.66	41.27	PK1	32.3	-31.7	0	41.87	-	-	74	-32.13	-	-	360	100	Н
* 2.661	29.1	AD1	32.3	-31.7	.8	30.5	54	-23.5	-	-	-	-	360	100	Н
* 3.933	39.78	PK1	33.2	-30.6	0	42.38	-	-	74	-31.62	-	-	360	100	Н
* 3.93	28.55	AD1	33.2	-30.5	.8	32.05	54	-21.95	-	-	-	-	360	100	Н
* 1.384	40.13	PK1	28.8	-32.4	0	36.53	-	-	74	-37.47	-	-	360	100	V
* 1.387	28.91	AD1	28.8	-32.4	.8	26.11	54	-27.89	-	-	-	-	360	100	V
* 2.249	41.13	PK1	31.5	-31.7	0	40.93	-	-	74	-33.07	-	-	360	100	V
* 2.25	29.01	AD1	31.5	-31.7	.8	29.61	54	-24.39	-	-	-	-	360	100	V
* 3.705	39.76	PK1	33	-30.3	0	42.46	-	-	74	-31.54	-	-	360	100	V
* 3.704	28.29	AD1	33	-30.3	.8	31.79	54	-22.21	-	-	-	-	360	100	V

<sup>\* -</sup> indicates frequency in CFR15.205/IC7.2.2 Restricted Band

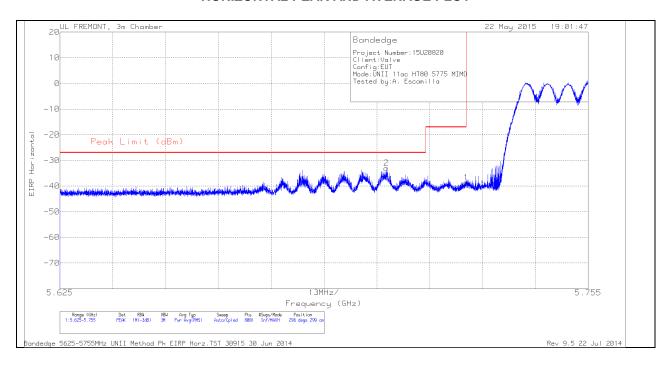
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

FCC Part15C All 5GHz UNII and DTS Spurious Emissions with Average Scan.TST 30915 17 Jun 2014

# 13.3.3. TX ABOVE 1 GHz 802.11ac HT80 MODE IN THE 5.8 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

#### HORIZONTAL PEAK AND AVERAGE PLOT



# **HORIZONTAL DATA**

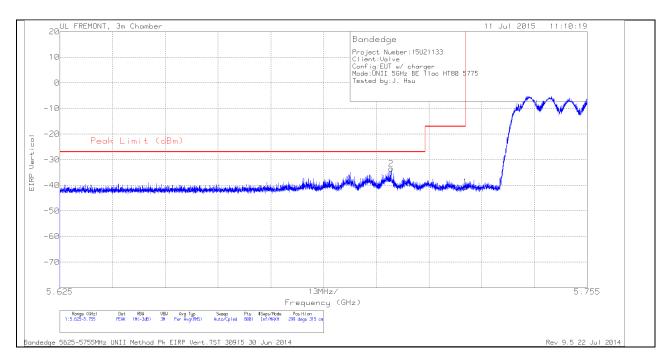
# **Trace Markers**

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversio n Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.705	-58.58	PK	34.7	-21	11.8	0	-33.08	-27	-6.08	296	299	Н
1	5.725	-64.16	PK	34.8	-21.1	11.8	0	-38.66	-17	-21.66	296	299	Н

PK - Peak detector

Bandedge 5625-5755MHz UNII Method Pk EIRP Horz.TST 30915 30 Jun 2014

# **VERTICAL PEAK AND AVERAGE PLOT**



# **VERTICAL DATA**

# **Trace Markers**

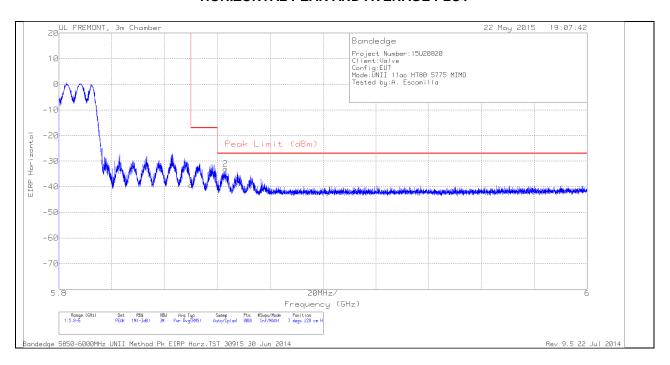
	Marker	Frequency	Meter	Det	AF T119	Amp/Cbl/F	Conversion	Corrected	Peak Limit	PK Margin	Azimuth	Height	Polarity
		(GHz)	Reading (dBm)		(dB/m)	ltr/Pad (dB)	Factor (dB)	Reading EIRP	(dBm)	(dB)	(Degs)	(cm)	
L			· ,			, ,		Liiti					
	2	5.707	-59.76	PK	34.7	-20.3	11.8	-33.56	-27	-6.56	299	315	V
Ī	1	5.725	-66.97	PK	34.8	-20.3	11.8	-40.67	-17	-23.67	299	315	V

PK - Peak detector

Bandedge 5625-5755MHz UNII Method Pk EIRP Vert.TST 30915 30 Jun 2014

# **AUTHORIZED BANDEDGE (HIGH CHANNEL)**

# HORIZONTAL PEAK AND AVERAGE PLOT



# **HORIZONTAL DATA**

# Trace Markers

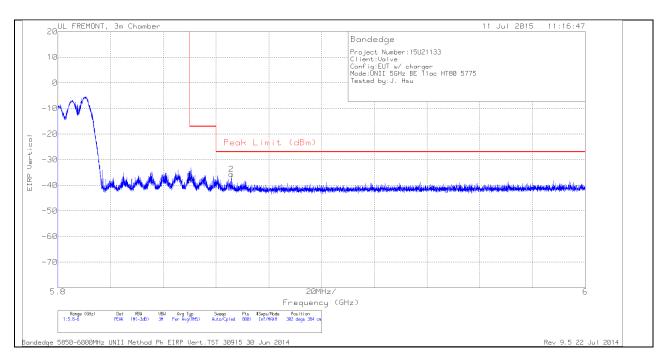
Marker	Frequency	Meter	Det	AF T119	Amp/Cbl/	Conversio	DC Corr	Corrected	Peak Limit	PK Margin	Azimuth	Height	Polarity
	(GHz)	Reading		(dB/m)	Fltr/Pad	n Factor	(dB)	Reading	(dBm)	(dB)	(Degs)	(cm)	
		(dBm)			(dB)	(dB)		EIRP					
1	5.85	-64.8	PK	34.9	-21.3	11.8	0	-39.4	-17	-22.4	7	228	Н
2	5.863	-58.41	PK	34.9	-21.3	11.8	0	-33.01	-27	-6.01	7	228	Н

PK - Peak detector

Bandedge 5850-6000MHz UNII Method Pk EIRP Horz.TST 30915 30 Jun 2014

REPORT NO: 15U21133-E4A FCC ID: 2AES41003

# VERTICAL PEAK AND AVERAGE PLOT



# **VERTICAL DATA**

# **Trace Markers**

Ī	Marker	Frequency	Meter	Det	AF T119	Amp/Cbl/F	Conversion	Corrected	Peak Limit	PK Margin	Azimuth	Height	Polarity
		(GHz)	Reading		(dB/m)	ltr/Pad	Factor (dB)	Reading	(dBm)	(dB)	(Degs)	(cm)	
			(dBm)			(dB)		EIRP					
Ī	1	5.85	-63.85	PK	34.9	-20.6	11.8	-37.75	-17	-20.75	302	384	V
Ī	2	5.866	-61.97	PK	34.9	-20.5	11.8	-35.77	-27	-8.77	302	384	V

PK - Peak detector

Bandedge 5850-6000MHz UNII Method Pk EIRP Vert.TST 30915 30 Jun 2014

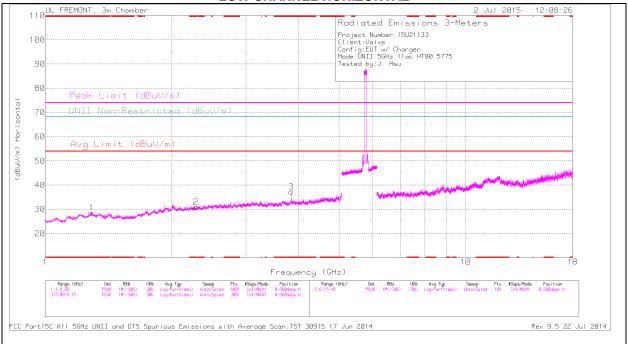
Rev 9.5 22 Jul 2014

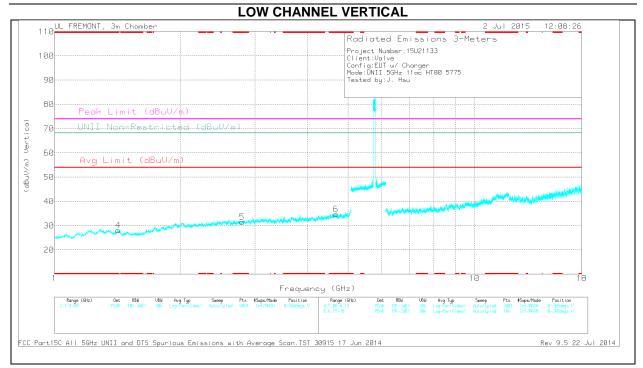
DATE: AUG 18, 2015

IC ID: 20207-1003

# HARMONICS AND SPURIOUS EMISSIONS

#### LOW CHANNEL HORIZONTAL





# **LOW CHANNEL DATA**

#### **Trace Markers**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non- Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.287	31.79	PK	29.8	-33	0	28.59	-	-	74	-45.41	-	-	0-360	200	Н
2	* 2.28	30.99	PK	31.6	-31.6	0	30.99	-	-	74	-43.01	-	-	0-360	200	Н
3	* 3.85	34.37	PK	33.1	-30.1	0	37.37	-	-	74	-36.63	-	-	0-360	100	Н
4	* 1.42	31.76	PK	28.5	-32.1	0	28.16	-	-	74	-45.84	-	-	0-360	100	V
5	* 2.797	30.46	PK	32.6	-31.6	0	31.46	-	-	74	-42.54	-	-	0-360	100	V
6	* 4.674	30.47	PK	34	-29.8	0	34.67	-	-	74	-39.33	-	-	0-360	100	V

<sup>\* -</sup> indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

# Radiated Emissions

Frequency (GHz)	Meter Reading	Det	AF T119 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non- Restricted	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
(0.12)	(dBuV)		(45))	171 00 (05)		(dBuV/m)	(454 17.117	(45)	(4547))	(45)	(dBuV/m)	(45)	(50,63)	(ciii)	
* 1.287	41.8	PK1	29.8	-33	0	38.6	-	-	74	-35.4	-	-	360	100	Н
* 1.288	29.88	AD1	29.8	-33	1.02	27.7	54	-26.3	-	-	-	-	360	100	Н
* 2.28	40.64	PK1	31.6	-31.6	0	40.64	-	-	74	-33.36	-	-	360	100	Н
* 2.279	29	AD1	31.6	-31.6	1.02	30.02	54	-23.98	-	-	-	-	360	100	Н
* 3.85	42.32	PK1	33.1	-30.1	0	45.32	-	-	74	-28.68	-	-	310	191	Н
* 3.85	32.92	AD1	33.1	-30.1	1.02	36.94	54	-17.06	-	-	-	-	310	191	Н
* 1.421	41.02	PK1	28.5	-32.1	0	37.42	-	-	74	-36.58	-	-	310	191	V
* 1.419	29.94	AD1	28.5	-32.1	1.02	27.36	54	-26.64	-	-	-	-	310	191	V
* 2.796	40.51	PK1	32.6	-31.7	0	41.41	-	-	74	-32.59	-	-	310	191	V
* 2.798	29.02	AD1	32.6	-31.6	1.02	31.04	54	-22.96	-	-	-	-	310	191	V
* 4.672	40.19	PK1	34	-29.7	0	44.49	-	-	74	-29.51	-	-	310	191	V
* 4.675	28.34	AD1	34	-29.8	1.02	33.56	54	-20.44	-	-	-	-	310	191	V

<sup>\* -</sup> indicates frequency in CFR15.205/IC7.2.2 Restricted Band

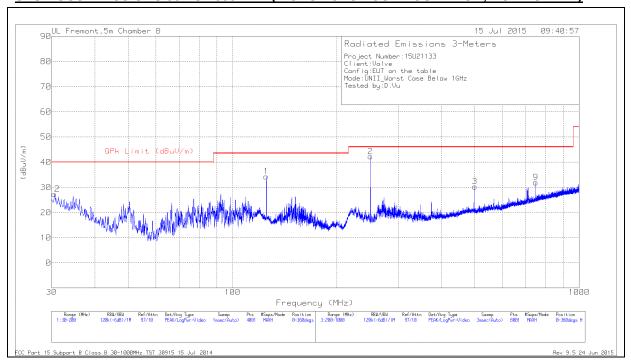
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

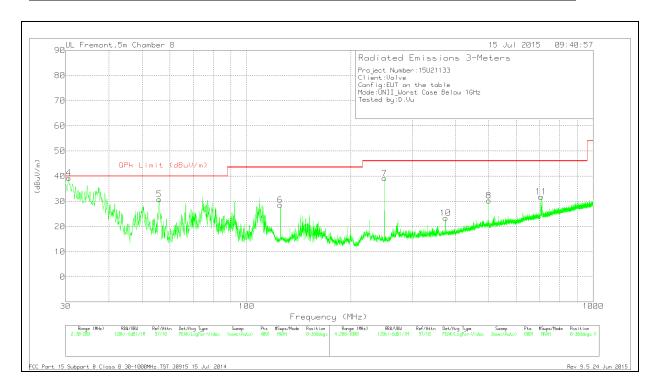
FCC Part15C All 5GHz UNII and DTS Spurious Emissions with Average Scan.TST 30915 17 Jun 2014

# 14. WORST-CASE BELOW 1 GHz (in the 5.3 GHz Band)

# SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)



# SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, VERTICAL)



# **Below 1G Data**

# **Trace Markers**

Marker	Frequency	Meter	Det	AF T243	Amp/Cbl (dB)	Corrected	Class B QPk	Margin	Azimuth	Height	Polarity
	(MHz)	Reading		(dB/m)		Reading	Limit	(dB)	(Degs)	(cm)	
		(dBuV)				(dBuV/m)	(dBuV/m)				
12	30.595	35.79	Pk	20.3	-28.8	27.29	40	-12.71	0-360	199	Н
4	30.6375	47.8	Pk	20.3	-28.8	39.3	40	7	0-360	101	V
5	55.8825	52.01	Pk	7.3	-28.5	30.81	40	-9.19	0-360	101	V
1	124.9875	47.83	Pk	14.2	-27.7	34.33	43.52	-9.19	0-360	199	Н
6	124.9875	42.1	Pk	14.2	-27.7	28.6	43.52	-14.92	0-360	101	V
2	250	56.95	Pk	11.6	-26.3	42.25	46.02	-3.77	0-360	101	Н
7	250	53.85	Pk	11.6	-26.3	39.15	46.02	-6.87	0-360	101	V
10	375	33.98	Pk	15.2	-25.8	23.38	46.02	-22.64	0-360	101	V
3	500	38.23	Pk	17.8	-25.7	30.33	46.02	-15.69	0-360	199	Н
8	500	38.21	Pk	17.8	-25.7	30.31	46.02	-15.71	0-360	199	V
11	707.8	35.8	Pk	20.3	-24.3	31.8	46.02	-14.22	0-360	101	V
9	750	34.96	Pk	21	-24	31.96	46.02	-14.06	0-360	101	Н

# Pk - Peak detector

# Radiated Emissions

Frequency	Meter	Det	AF T243	Amp/Cbl	Corrected	Class B	Margin	Azimuth	Height	Polarity
(MHz)	Reading		(dB/m)	(dB)	Reading	QPk Limit	(dB)	(Degs)	(cm)	
	(dBuV)				(dBuV/m)	(dBuV/m)				
30.6119	44.34	Qp	20.3	-28.8	35.84	40	-4.16	177	101	V
250.0077	56.6	Qp	11.6	-26.3	41.9	46.02	-4.12	62	101	Н

# Qp - Quasi-Peak detector

FCC Part 15 Subpart B Class B 30-1000MHz.TST 30915 15 Jul 2014

Rev 9.5 24 Jun 2015

# 15. AC POWER LINE CONDUCTED EMISSIONS

# **LIMITS**

FCC §15.207 (a)

RSS-Gen 8.8

Frequency of Emission (MHz)	Conducted I	.imit (dBuV)
	Quasi-peak	Average
0.15-0.5	66 to 56 *	56 to 46 *
0.5-5	56	46
5-30	60	50

Decreases with the logarithm of the frequency.

# **TEST PROCEDURE**

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.10.

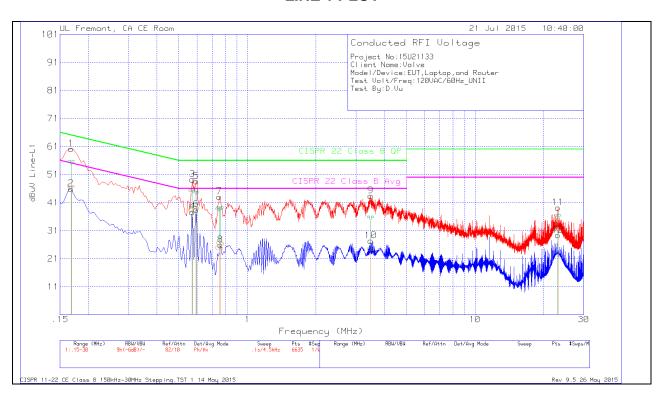
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

# **RESULTS**

# **6 WORST EMISSIONS**

# **LINE 1 PLOT**



# **LINE 1 RESULTS**

# Trace Markers

Range 1: Line-L1 .15 - 30MHz

_										
Marker	Frequency	Meter	Det	T24 IL L1	LC Cables	Corrected	CISPR 22	Margin	CISPR 22	Margin
	(MHz)	Reading			1&3	Reading	Class B QP	(dB)	Class B	(dB)
		(dBuV)				dBuV			Avg	
1	.168	58.92	Pk	1.2	0	60.12	65.06	-4.94	-	-
2	.168	44.68	Av	1.2	0	45.88	-	-	55.06	-9.18
3	.573	48.99	Pk	.3	0	49.29	56	-6.71	-	-
4	.573	37.36	Av	.3	0	37.66	-	-	46	-8.34
5	.5955	48.31	Pk	.3	0	48.61	56	-7.39	-	-
6	.5955	38.27	Av	.3	0	38.57	-	-	46	-7.43
7	.753	42.77	Pk	.3	0	43.07	56	-12.93	-	-
8	.762	25.6	Av	.3	0	25.9	-	-	46	-20.1
9	3.4845	43.11	Pk	.2	.1	43.41	56	-12.59	-	-
10	3.4845	27.1	Av	.2	.1	27.4	-	-	46	-18.6
11	23.1315	38.65	Pk	.3	.2	39.15	60	-20.85	-	-
12	23.1315	28.9	Av	.3	.2	29.4	-	-	50	-20.6

Pk - Peak detector

Av - Average detection

DATE: AUG 18, 2015 IC ID: 20207-1003

# Peak/Average/RMS Emissions

Range 1: Line-L1 .15 - 30MHz

Frequency	Meter	Det	T24 IL L1	LC Cables	Corrected	CISPR 22	Margin	CISPR 22	Margin
(MHz)	Reading			1&3	Reading	Class B QP	(dB)	Class B Avg	(dB)
	(dBuV)				dBuV				
.16868	44.6	Ca	1.2	0	45.8	-	-	55.03	-9.23
.57188	36.78	Ca	.3	0	37.08	-	-	46	-8.92
.59528	37.68	Ca	.3	0	37.98	-	-	46	-8.02
.75278	23.38	Ca	.3	0	23.68	-	-	46	-22.32
.76088	25.08	Ca	.3	0	25.38	-	-	46	-20.62
3.48518	22.9	Ca	.2	.1	23.2	-	-	46	-22.8
23.1304	29.7	Ca	.3	.2	30.2	-	-	50	-19.8

Ca - CISPR average detection

# **Quasi-Peak Emissions**

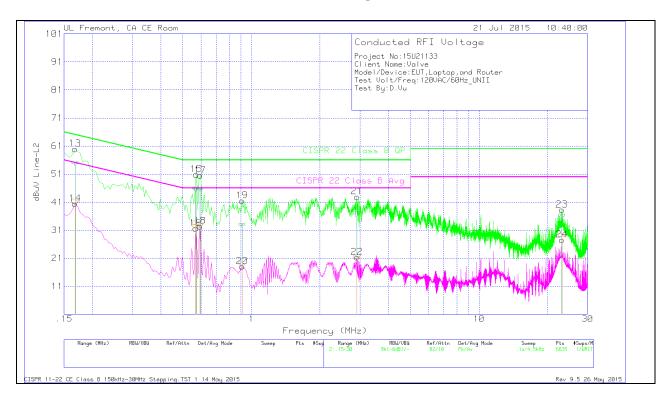
Range 1: Line-L1 .15 - 30MHz

Frequency	Meter	Det	T24 IL L1	LC Cables	Corrected	CISPR 22	Margin	CISPR 22	Margin
(MHz)	Reading			1&3	Reading	Class B QP	(dB)	Class B Avg	(dB)
	(dBuV)				dBuV				
.16868	53.47	Qp	1.2	0	54.67	65.03	-10.36	-	-
.57188	44.08	Qp	.3	0	44.38	56	-11.62	-	-
.59528	43.51	Qp	.3	0	43.81	56	-12.19	-	-
.75278	37.52	Qp	.3	0	37.82	56	-18.18	-	-
.76088	38.01	Qp	.3	0	38.31	56	-17.69	-	-
3.48518	34.63	Qp	.2	.1	34.93	56	-21.07	-	-
23.1304	34.99	Qp	.3	.2	35.49	60	-24.51	-	-

CISPR 11-22 CE Class B 150kHz-30MHz Stepping.TST 1 14 May 2015

Rev 9.5 26 May 2015

# **LINE 2 PLOT**



# **LINE 2 RESULTS**

# **Trace Markers**

Range 2: Line-L2 .15 - 30MHz

Marker	Frequency	Meter	Det	T24 IL L2	LC Cables	Corrected	CISPR 22	Margin	CISPR 22	Margin
	(MHz)	Reading			2&3	Reading	Class B QP	(dB)	Class B	(dB)
		(dBuV)				dBuV			Avg	
13	.168	58.66	Pk	1.3	0	59.96	65.06	-5.1	55.06	4.9
14	.168	39.1	Av	1.3	0	40.4	-	-	55.06	-14.66
15	.573	50.53	Pk	.3	0	50.83	56	-5.17	46	4.83
16	.5685	31.29	Av	.3	0	31.59	-	-	46	-14.41
17	.5955	50.1	Pk	.3	0	50.4	56	-5.6	46	4.4
18	.5955	32.11	Av	.3	0	32.41	-	-	46	-13.59
19	.9105	41.18	Pk	.3	0	41.48	56	-14.52	46	-4.52
20	.9105	17.72	Av	.3	0	18.02	-	-	46	-27.98
21	2.9085	42.61	Pk	.2	.1	42.91	56	-13.09	46	-3.09
22	2.9085	21.04	Av	.2	.1	21.34	-	-	46	-24.66
23	23.1315	37.73	Pk	.3	.2	38.23	60	-21.77	50	-11.77
24	23.1315	27.04	Av	.3	.2	27.54	_	-	50	-22.46

Page 376 of 382

Av - Average detection

# Peak/Average/RMS Emissions

Range 2: Line-L2 .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
.16868	38.83	Ca	1.3	0	40.13	-	-	55.03	-14.9
.57188	30.8	Ca	.3	0	31.1	-	-	46	-14.9
.56963	32.03	Ca	.3	0	32.33	-	-	46	-13.67
.59528	31.91	Ca	.3	0	32.21	-	-	46	-13.79
.91163	17.61	Ca	.3	0	17.91	-	-	46	-28.09
2.90738	19.92	Ca	.2	.1	20.22	-	-	46	-25.78
23.1304	27.54	Ca	.3	.2	28.04	-	-	50	-21.96

Ca - CISPR average detection

#### **Quasi-Peak Emissions**

Range 2: Line-L2 .15 - 30MHz

		Det	T24 IL L2	LC Cables	Corrected	CISPR 22	Margin	CISPR 22	Margin
(MHz)	Reading			2&3	Reading	Class B QP	(dB)	Class B Avg	(dB)
	(dBuV)				dBuV				
.16868	52.78	Qр	1.3	0	54.08	65.03	-10.95	-	-
.57188	44.57	Qр	.3	0	44.87	56	-11.13	-	-
.56963	44.88	Qр	.3	0	45.18	56	-10.82	-	-
.59528	44.58	Qp	.3	0	44.88	56	-11.12	-	-
.91163	31.82	Qр	.3	0	32.12	56	-23.88	-	-
2.90738	35.83	Qр	.2	.1	36.13	56	-19.87	-	-
23.1304	34.86	Qp	.3	.2	35.36	60	-24.64	-	-

# Qp - Quasi-Peak detector

CISPR 11-22 CE Class B 150kHz-30MHz Stepping.TST 1 14 May 2015

Rev 9.5 26 May 2015

DATE: AUG 18, 2015

IC ID: 20207-1003