Prüfbericht-Nr.: *Test report no.:*	**CN21M8L6 001**	**Auftrags-Nr.:** *Order no.:*	168311796	Seite 1 von 38 *Page 1 of 38*
Kunden-Referenz-Nr.: *Client reference no.:*	**N/A**	**Auftragsdatum:** *Order date:*	2021-03-23	

Auftraggeber: *Client:*	**Shenzhen RAKwireless Technology Co.,Ltd.** Room 506, Bldg B, New Compark, Pingshan First Road, Taoyuan Street, XiLi town Nanshan District, Shenzhen, Guangdong, P.R. China
Prüfgegenstand: *Test item:*	WisGate
Bezeichnung / Typ-Nr.: *Identification / Type no.:*	RAK7248 (Trademark: RAK)
Auftrags-Inhalt: *Order content*:	Type Test
Prüfgrundlage: *Test specification:*	CFR47 FCC Part 15: Subpart B Section 15.107 CFR47 FCC Part 15: Subpart B Section 15.109 ICES-003 Issue 7 October 2020

Wareneingangsdatum: *Date of sample receipt:*	2021-03-29
Prüfmuster-Nr.: *Test sample no:*	A003006173-001, 002
Prüfzeitraum: *Testing period:*	2021-03-31 – 2021-04-02
Ort der Prüfung: *Place of testing:*	TÜV Rheinland (Shenzhen) Co., Ltd.
Prüflaboratorium: *Testing laboratory:*	TÜV Rheinland (Shenzhen) Co., Ltd.
Prüfergebnis*: *Test result*:*	Pass

Please refer to photo documents

geprüft von: *tested by:*	X Alex Lan Signed by: Alex Lan	**genehmigt von:** *authorized by:*	X Winnie Hou Signed by: Winnie Hou
Datum: *Date:* 2021-04-14		**Ausstellungsdatum:** *Issue date:* 2021-04-14	
Stellung / Position	Senior Project Engineer	**Stellung** / Position	Department Manager

Sonstiges / *Other:* FCC ID: 2AF6B-RAK7248

Zustand des Prüfgegenstandes bei Anlieferung: Prüfmuster vollständig und unbeschädigt
Condition of the test item at delivery: *Test item complete and undamaged*

* Legende:	1 = sehr gut	2 = gut	3 = befriedigend	4 = ausreichend	5 = mangelhaft
	P(ass) = entspricht o.g. Prüfgrundlage(n)		F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
** Legend:*	*1 = very good*	*2 = good*	*3 = satisfactory*	*4 = sufficient*	*5 = poor*
	P(ass) = passed a.m. test specification(s)		*F(ail) = failed a.m. test specification(s)*	*N/A = not applicable*	*N/T = not tested*

Test Summary

5.1 Conducted emissions
RESULT: Pass

5.2 Radiated emissions
RESULT: Pass

Contents

1 General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

None.

2 Test Sites

2.1 Test Facilities

TÜV Rheinland (Shenzhen) Co., Ltd.

No. 362 Huanguan Road Middle, Longhua District, Shenzhen 518110, People's Republic of China

FCC Registration No.: 694916

IC Registration No.: 25069

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Radiated Emission Testing				
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Until**
3m SAC	ETS	SAC3	CT001632-Q1362	23.08.2021
EMI Test Receiver	R&S	ESR7	102111	23.01.2022
Horn Antenna	R&S	HF907	102706	01.09.2021
Preamplifier	FIT	SCU-18F	180077	19.08.2021
Active magnetic loop antenna	SCHWARZBECK	FMZB1519B	00080	19.08.2021
Trilog-Broadband antenna	SCHWARZBECK	VULB9168	0945	12.09.2021
Switching Controller Interface	R&S	OSP 120	102039	N/A
EMC32 test software	R&S	EMC32(Ver.10.50.01)	N/A	N/A
Conducted Emissions testing				
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Until**
EMI Test Receiver	R&S	ESR3	102428	16.08.2021
Artificial Mains Network	R&S	ENV216	102333	16.08.2021
EMC32 test software	R&S	EMC32(Ver.10.50.01)	N/A	N/A

2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basics using in house standards or comparisons.

2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements as below table

Test	**Parameters**	**uncertainty**
Conducted Emission	Conducted emission 150kHz-30MHz (AMN)	± 3.70 dB ± 3.30 dB
Radiated Emission (3m SAC)	Radiated emission 30MHz-1GHz	± 4.52 dB
	Radiated emission 1GHz-18GHz	± 4.37 dB

2.6 Location of Original Data

The original copies of all test data taken during actual testing were at this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) file for certification follow-up purposes.

2.7 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. Test facility located at No. 362 Huanguan Road Middle, Longhua District, Shenzhen 518110, People's Republic of China. is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3 General Product Information

3.1 Product Function and Intended Use

The EUT is gateway and it supports Lora, Wi-Fi and Bluetooth Low Energy wireless technologies.

For details refer to the User Manual, Technical Description and Circuit Diagram.

3.2 Ratings and System Details

Table 2: Technical Specification of EUT

General Information of EUT	Value
Kind of Equipment	WisGate
Type Designation	RAK7248
Trade Mark	RAK
FCC ID:	2AF6B-RAK7248
Input Voltage	DC 5V via AC/DC Adapter
Testing Voltage	AC 120V, 60Hz
Adapter information	Model:RAK040-0500300US Input: AC 100-240V, 50/60Hz, 0.6A Max Output: DC 5.0V, 3.0A 15.0W

3.3 Independent Operation Modes

The basic operation modes are:

A, On, operating

1. operating with Lora
2. operating with Bluetooth
3. operating with Wi-Fi
4. operating with Lora + Bluetooth + Wi-Fi

A. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.5 Submitted Documents

- Block Diagram
- Schematics
- Photo Document
- User Manual

4 Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All testing were performed according to the procedures in ANSI C63.4: 2014.

4.3 Special Accessories and Auxiliary Equipment

Table 3: List of Accessories and Auxiliary Equipment

Description	Manufacturer	Model No.	Serial Number
Notebook	Lenovo	ThinkPad E15	PF-26277L 20/04
Notebook	SAMSUNG	500R5H	0PUA91KJ200771X
Router	TP-LINK	TL-WVR300	119C155000444

4.4 Countermeasures to Achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Technical Construction File (TCF).

No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

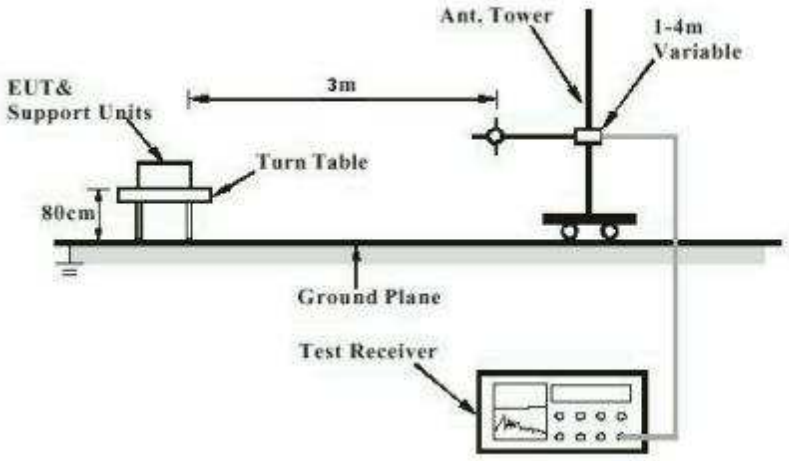


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

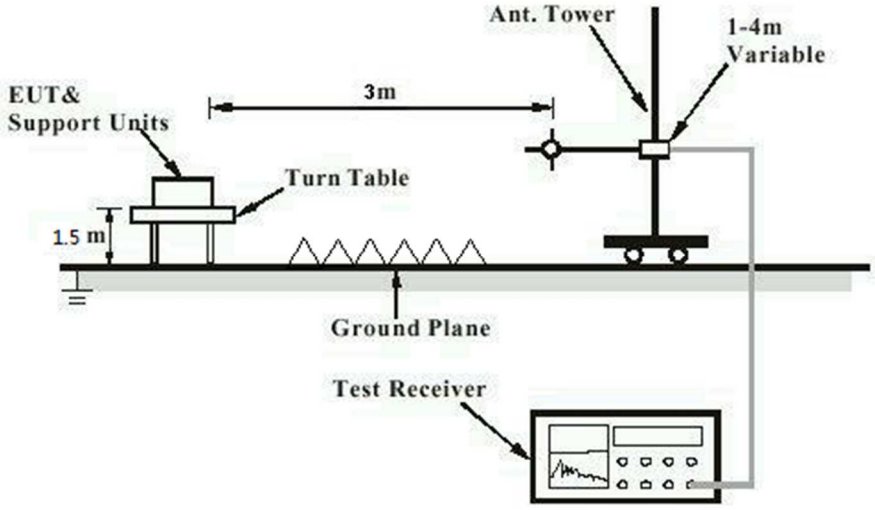
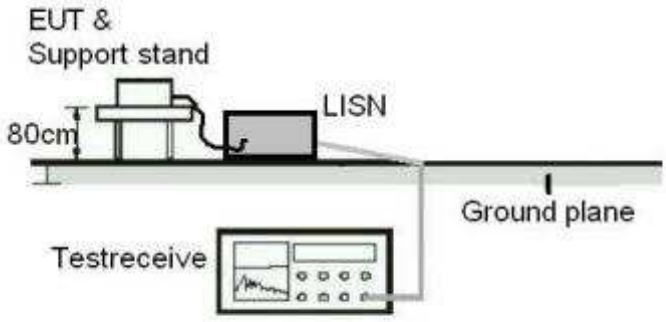


Diagram of Measurement Configuration for Mains Conduction Measurement



5 Test Results

5.1 Conducted emissions

RESULT: **Pass**

Test Specification

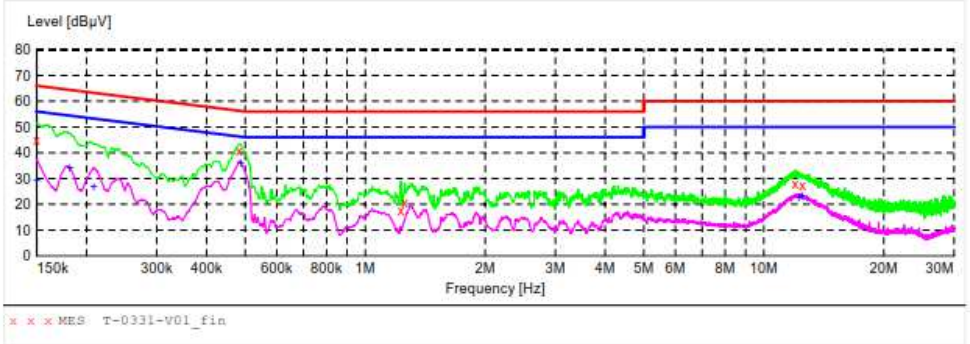
Test standard	:	FCC Part 15.107(a) & ICES-003
Basic standard	:	ANSI C63.4: 2014
Frequency range	:	150KHz - 30MHz
Classification	:	Class B
Limit		FCC Part 15.107(a) & ICES-003 Table 1
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2021-03-21 to 2021.04.01
Input voltage	:	AC 120V, 60Hz
Operation mode	:	A
Earthing	:	Not connected
Ambient temperature	:	24.5 ℃
Relative humidity	:	57 %
Atmospheric pressure	:	101 kPa

```
EUT:                WisGate M/N:RAK7248
Manufacturer:       Shenzhen RAKwireless Technology Co.,Ltd.
Operating Condition: A.2
Test Site:          Shieldiing Room
Operator:           PEI
Test Specification: L 120V/60Hz
Comment:            Mains port
Start of Test:      2021-3-31 /
```

SCAN TABLE: "Voltage (9K-30M)FIN"
Short Description: 150K-30M Voltage



2021-3-31

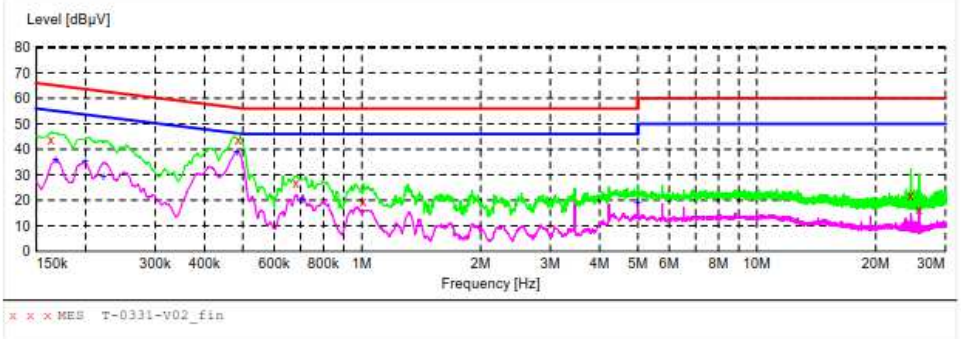
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000	45.20	8.1	66	20.8	QP	L1	GND
0.483000	40.80	8.6	56	15.5	QP	L1	GND
1.230000	17.90	8.8	56	38.1	QP	L1	GND
1.257000	20.70	8.8	56	35.3	QP	L1	GND
11.980000	28.10	9.8	60	31.9	QP	L1	GND
12.500000	27.70	9.8	60	32.3	QP	L1	GND

2021-3-31

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000	29.20	8.1	56	26.8	AV	L1	GND
0.181500	34.30	8.1	54	20.1	AV	L1	GND
0.208500	26.90	8.2	53	26.4	AV	L1	GND
0.487500	35.70	8.6	46	10.5	AV	L1	GND
12.240000	22.70	9.8	50	27.3	AV	L1	GND
12.440000	23.20	9.8	50	26.8	AV	L1	GND

EUT: WisGate M/N:RAK7248
Manufacturer: Shenzhen RAKwireless Technology Co.,Ltd.
Operating Condition: A.2
Test Site: Shieldiing Room
Operator: PEI
Test Specification: N 120V/60Hz
Comment: Mains port
Start of Test: 2021-3-31 /

SCAN TABLE: "Voltage (9K-30M)FIN"
Short Description: 150K-30M Voltage



2021-3-31

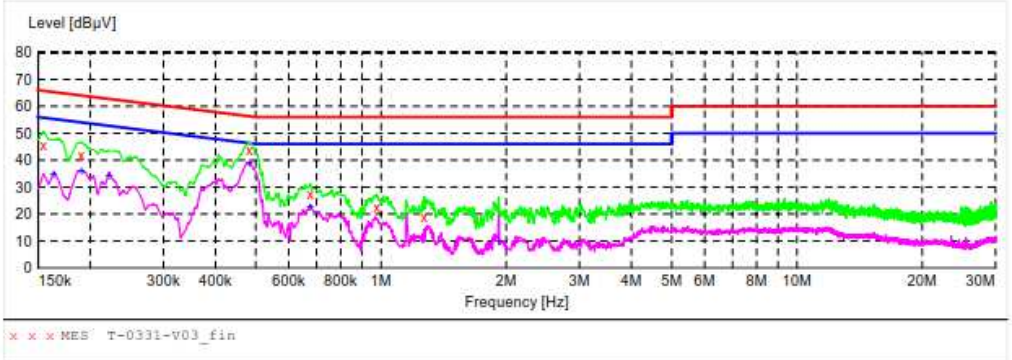
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.163500	43.60	8.1	65	21.7	QP	N	GND
0.487500	43.70	8.6	56	12.5	QP	N	GND
0.681000	26.60	8.6	56	29.4	QP	N	GND
1.009500	19.60	8.8	56	36.4	QP	N	GND
24.540000	21.70	10.7	60	38.3	QP	N	GND
25.740000	16.50	10.8	60	43.5	QP	N	GND

2021-3-31

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.168000	35.70	8.1	55	19.4	AV	N	GND
0.199500	35.00	8.1	54	18.6	AV	N	GND
0.222000	29.40	8.2	53	23.3	AV	N	GND
0.483000	39.20	8.6	46	7.1	AV	N	GND
0.708000	20.40	8.6	46	25.6	AV	N	GND
4.990000	19.00	9.2	46	27.0	AV	N	GND

```
EUT:                  WisGate M/N:RAK7248
Manufacturer:         Shenzhen RAKwireless Technology Co.,Ltd.
Operating Condition:  A.1
Test Site:            Shieldiing Room
Operator:             PEI
Test Specification:   N 120V/60Hz
Comment:              Mains port
Start of Test:        2021-3-31 /
```

SCAN TABLE: "Voltage (9K-30M) FIN"
Short Description: 150K-30M Voltage



2021-3-31

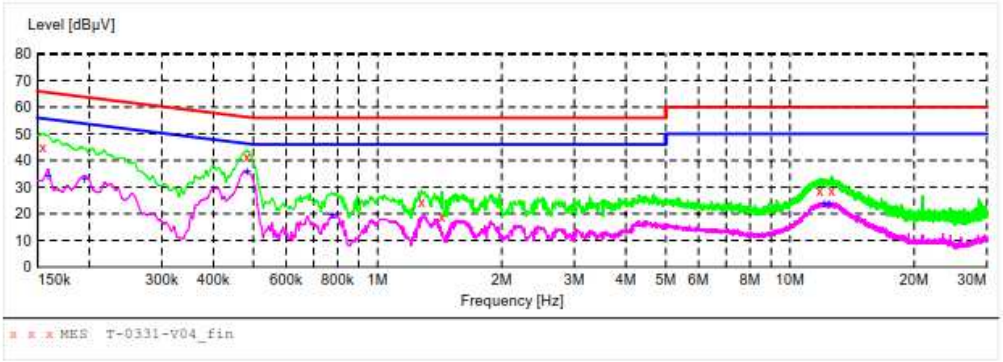
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.154500	45.40	8.1	66	20.4	QP	N	GND
0.190500	42.20	8.1	64	21.8	QP	N	GND
0.483000	43.70	8.6	56	12.6	QP	N	GND
0.676500	27.30	8.6	56	28.7	QP	N	GND
0.978000	22.50	8.8	56	33.5	QP	N	GND
1.270500	19.20	8.8	56	36.8	QP	N	GND

2021-3-31

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.163500	34.40	8.1	55	20.9	AV	N	GND
0.190500	35.60	8.1	54	18.4	AV	N	GND
0.222000	34.20	8.2	53	18.5	AV	N	GND
0.483000	38.70	8.6	46	7.6	AV	N	GND
0.676500	22.40	8.6	46	23.6	AV	N	GND
1.918500	9.60	8.8	46	36.4	AV	N	GND

```
EUT:                  WisGate M/N:RAK7248
Manufacturer:         Shenzhen RAKwireless Technology Co.,Ltd.
Operating Condition:  A.1
Test Site:            Shieldiing Room
Operator:             PEI
Test Specification:   L 120V/60Hz
Comment:              Mains port
Start of Test:        2021-3-31 /
```

SCAN TABLE: "Voltage (9K-30M) FIN"
Short Description: 150K-30M Voltage



2021-3-31

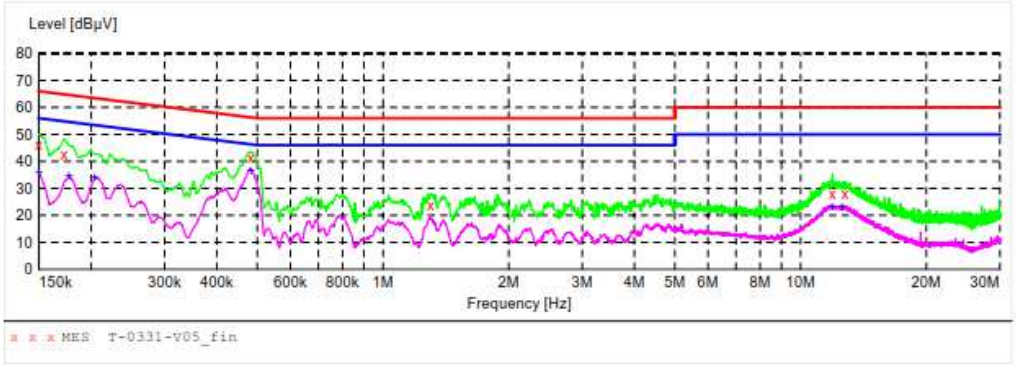
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.154500	45.10	8.1	66	20.7	QP	L1	GND
0.483000	41.30	8.6	56	15.0	QP	L1	GND
1.279500	24.20	8.8	56	31.8	QP	L1	GND
1.432500	19.10	8.8	56	36.9	QP	L1	GND
11.830000	28.50	9.7	60	31.5	QP	L1	GND
12.620000	28.50	9.8	60	31.5	QP	L1	GND

2021-3-31

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.159000	34.30	8.1	56	21.2	AV	L1	GND
0.195000	32.90	8.1	54	20.9	AV	L1	GND
0.483000	35.90	8.6	46	10.4	AV	L1	GND
0.775500	19.40	8.6	46	26.6	AV	L1	GND
12.110000	23.70	9.8	50	26.3	AV	L1	GND
12.420000	23.30	9.8	50	26.7	AV	L1	GND

```
EUT:                  WisGate M/N:RAK7248
Manufacturer:         Shenzhen RAKwireless Technology Co.,Ltd.
Operating Condition:  A.3
Test Site:            Shieldiing Room
Operator:             PEI
Test Specification:   L 120V/60Hz
Comment:              Mains port
Start of Test:        2021-3-31 /
```

SCAN TABLE: "Voltage (9K-30M)FIN"
Short Description: 150K-30M Voltage



2021-3-31

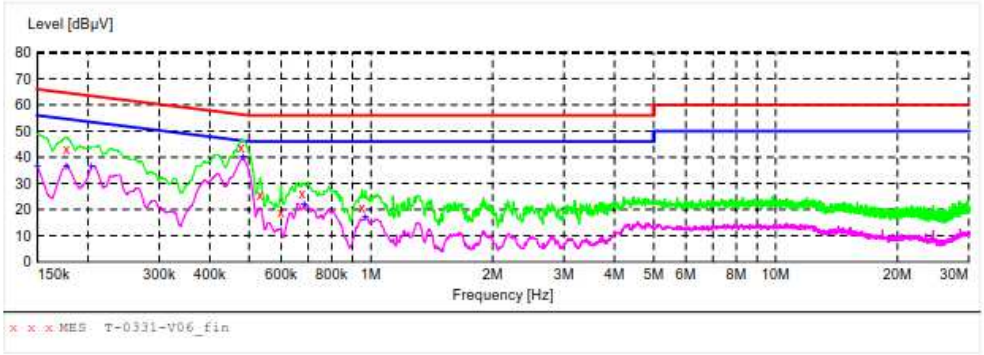
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000	46.20	8.1	66	19.8	QP	L1	GND
0.172500	42.80	8.1	65	22.0	QP	L1	GND
0.483000	41.50	8.6	56	14.8	QP	L1	GND
1.302000	23.80	8.8	56	32.2	QP	L1	GND
11.920000	28.20	9.7	60	31.8	QP	L1	GND
12.770000	27.80	9.8	60	32.2	QP	L1	GND

2021-3-31

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000	35.80	8.1	56	20.2	AV	L1	GND
0.177000	34.70	8.1	55	19.9	AV	L1	GND
0.204000	33.80	8.1	53	19.6	AV	L1	GND
0.483000	36.80	8.6	46	9.5	AV	L1	GND
11.900000	22.90	9.7	50	27.1	AV	L1	GND
12.550000	23.00	9.8	50	27.0	AV	L1	GND

```
EUT:                WisGate M/N:RAK7248
Manufacturer:       Shenzhen RAKwireless Technology Co.,Ltd.
Operating Condition: A.3
Test Site:          Shieldiing Room
Operator:           PEI
Test Specification: N 120V/60Hz
Comment:            Mains port
Start of Test:      2021-3-31 /
```

SCAN TABLE: "Voltage (9K-30M)FIN"
Short Description: 150K-30M Voltage



2021-3-31

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.177000	42.90	8.1	65	21.7	QP	N	GND
0.478500	43.70	8.6	56	12.7	QP	N	GND
0.532500	25.60	8.6	56	30.4	QP	N	GND
0.600000	19.10	8.6	56	36.9	QP	N	GND
0.676500	26.00	8.6	56	30.0	QP	N	GND
0.951000	20.90	8.7	56	35.1	QP	N	GND

2021-3-31

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000	36.40	8.1	56	19.6	AV	N	GND
0.177000	36.30	8.1	55	18.3	AV	N	GND
0.204000	36.20	8.1	53	17.2	AV	N	GND
0.483000	39.90	8.6	46	6.4	AV	N	GND
0.685500	22.10	8.6	46	23.9	AV	N	GND
0.969000	17.40	8.7	46	28.6	AV	N	GND

```
EUT:                  WisGate M/N:RAK7248
Manufacturer:         Shenzhen RAKwireless Technology Co.,Ltd.
Operating Condition:  A.4
Test Site:            Shieldiing Room
Operator:             PEI
Test Specification:   N 120V/60Hz
Comment:              Mains port
Start of Test:        2021-4-1 /
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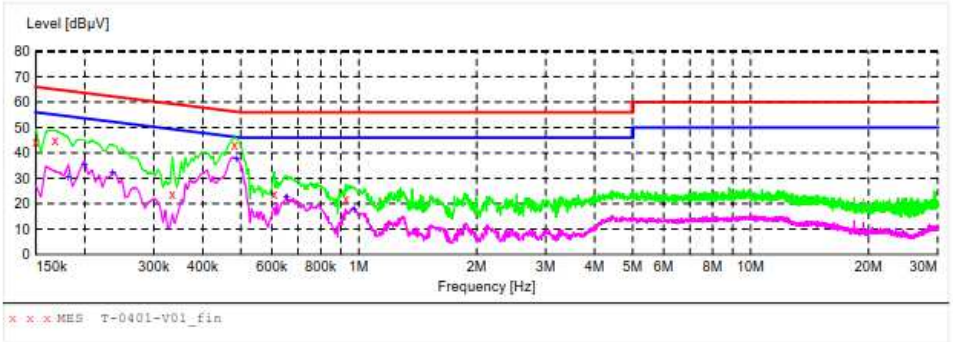
SCAN TABLE: "Voltage (9K-30M)FIN"
Short Description: 150K-30M Voltage



2021-4-1

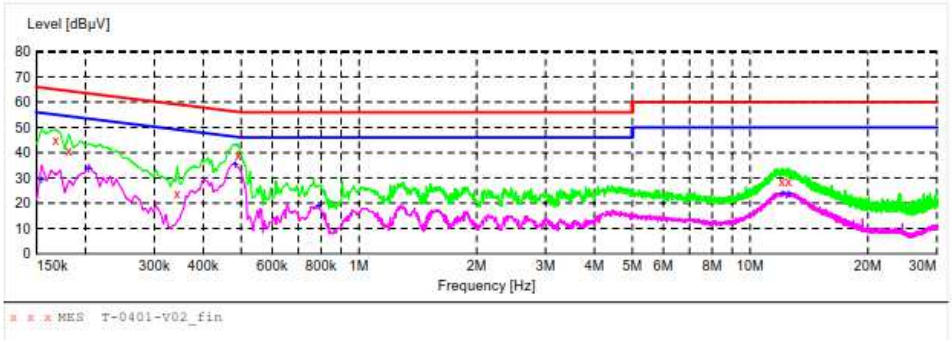
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000	44.30	8.1	66	21.7	QP	N	GND
0.168000	44.90	8.1	65	20.2	QP	N	GND
0.334500	24.00	8.4	59	35.3	QP	N	GND
0.483000	43.40	8.6	56	12.9	QP	N	GND
0.609000	24.00	8.6	56	32.0	QP	N	GND
0.928500	22.20	8.7	56	33.8	QP	N	GND

2021-4-1

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.181500	30.60	8.1	54	23.8	AV	N	GND
0.199500	35.00	8.1	54	18.6	AV	N	GND
0.235500	32.40	8.2	52	19.9	AV	N	GND
0.487500	37.70	8.6	46	8.5	AV	N	GND
0.654000	22.40	8.6	46	23.6	AV	N	GND
0.973500	17.70	8.7	46	28.3	AV	N	GND

EUT: WisGate M/N:RAK7248
Manufacturer: Shenzhen RAKwireless Technology Co.,Ltd.
Operating Condition: A.4
Test Site: Shieldiing Room
Operator: PEI
Test Specification: L 120V/60Hz
Comment: Mains port
Start of Test: 2021-4-1 /

SCAN TABLE: "Voltage (9K-30M)FIN"
Short Description: 150K-30M Voltage



2021-4-1

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.168000	44.90	8.1	65	20.2	QP	L1	GND
0.181500	41.00	8.1	64	23.4	QP	L1	GND
0.343500	23.90	8.4	59	35.2	QP	L1	GND
0.492000	39.10	8.6	56	17.0	QP	L1	GND
12.060000	28.70	9.8	60	31.3	QP	L1	GND
12.540000	28.90	9.8	60	31.1	QP	L1	GND

2021-4-1

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.154500	29.40	8.1	56	26.4	AV	L1	GND
0.204000	33.40	8.1	53	20.0	AV	L1	GND
0.483000	35.40	8.6	46	10.9	AV	L1	GND
0.789000	19.10	8.6	46	26.9	AV	L1	GND
12.090000	23.50	9.8	50	26.5	AV	L1	GND
12.530000	23.70	9.8	50	26.3	AV	L1	GND

5.2 Radiated Emission

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.109(a) & ICES-003
Basic standard	:	ANSI C63.4: 2014
Frequency range	:	30 - 6000MHz
Classification	:	Class B
Limit		FCC Part 15.109(a)
		ICES-003 Table 2 & Table 4
Kind of test site	:	3m Semi-anechoic Chamber

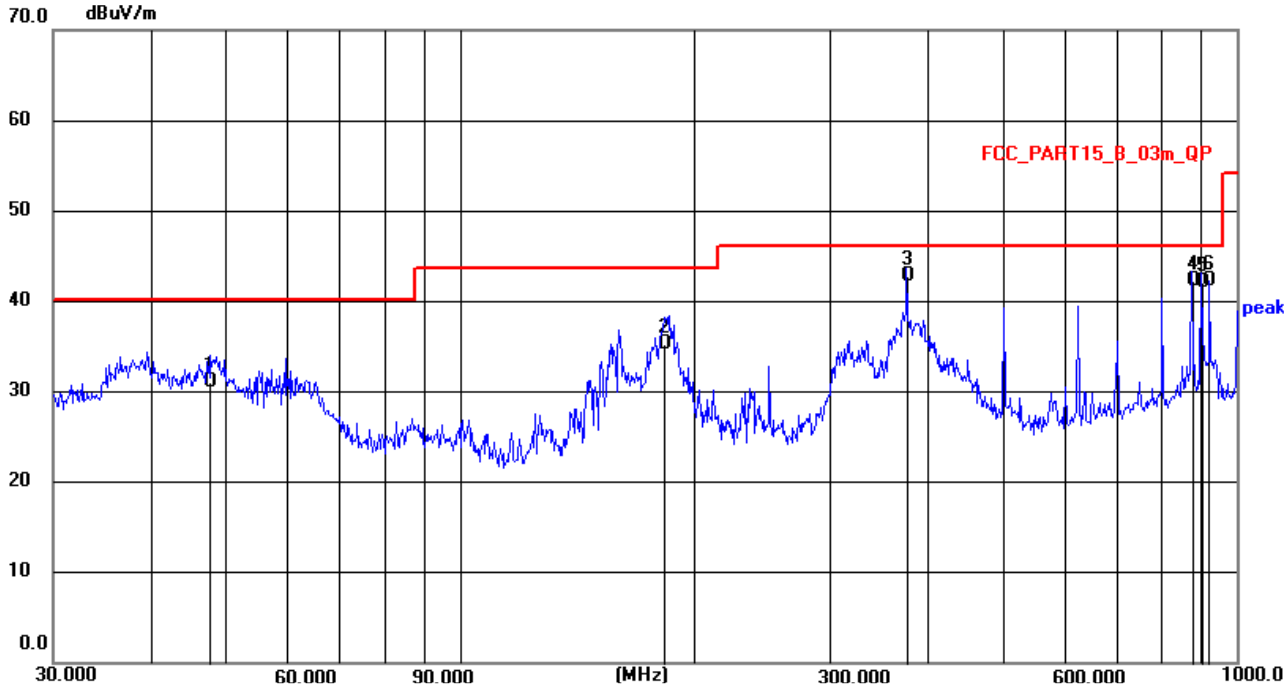
Test Setup

Date of testing	:	2021-04-02
Input voltage	:	AC 120V, 60Hz
Operation mode	:	A
Earthing	:	Not connected
Ambient temperature	:	26 ℃
Relative humidity	:	54 %
Atmospheric pressure	:	101 kPa

Remark: The limit of below radiated emission test data is from FCC part 15.109, it also meet the limit of ICES-003 issue 7.

EUT Information

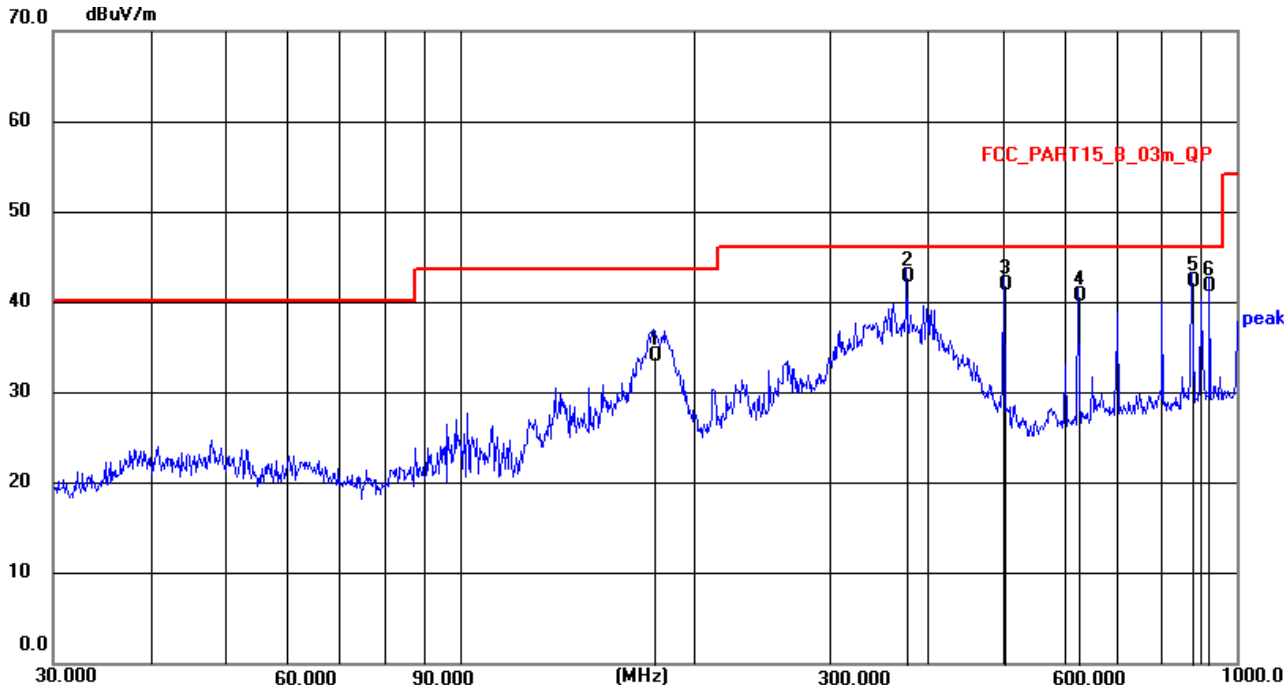
EUT Name:	WisGate
Model	RAK7248
Test Mode:	A.1
Test Voltage:	AC 120V, 60Hz
Remark:	3m Chamber
Polarization	***Vertical***



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	47.8260	16.19	14.93	31.12	40.00	8.88	QP
2	183.2005	22.15	13.15	35.30	43.50	8.20	QP
3 *	375.9385	26.38	16.35	42.73	46.00	3.27	QP
4	875.2469	18.52	23.74	42.26	46.00	3.74	QP
5	900.1474	18.10	24.06	42.16	46.00	3.84	QP
6	922.5157	17.94	24.31	42.25	46.00	3.75	QP

EUT Information

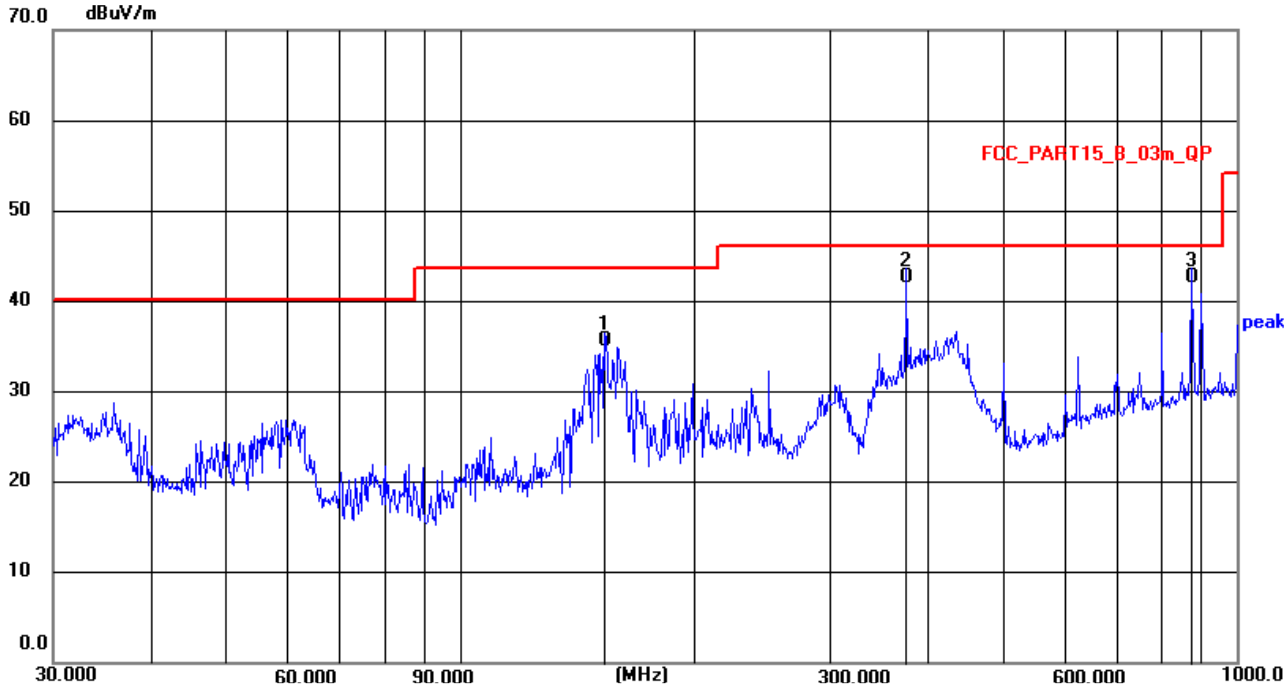
EUT Name:	WisGate
Model	RAK7248
Test Mode:	A.1
Test Voltage:	AC 120V, 60Hz
Remark:	3m Chamber
Polarization	***Horizontal***



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	177.5091	20.14	13.91	34.05	43.50	9.45	QP
2 *	375.9385	26.44	16.35	42.79	46.00	3.21	QP
3	501.1790	23.19	18.64	41.83	46.00	4.17	QP
4	625.0780	19.70	21.07	40.77	46.00	5.23	QP
5	875.2469	18.51	23.74	42.25	46.00	3.75	QP
6	922.5157	17.48	24.31	41.79	46.00	4.21	QP

EUT Information

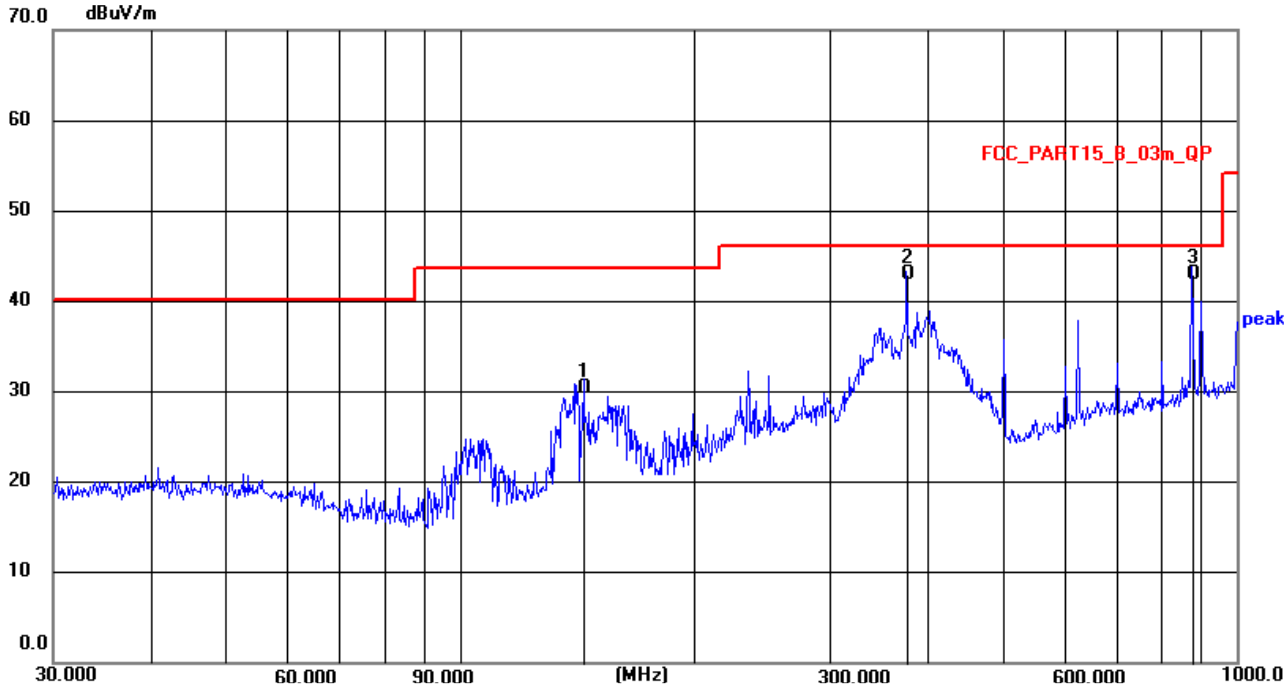
EUT Name:	WisGate
Model	RAK7248
Test Mode:	A.2
Test Voltage:	AC 120V, 60Hz
Remark:	3m Chamber
Polarization	***Vertical***



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	153.7384	19.56	15.99	35.55	43.50	7.95	QP
2	375.9384	26.26	16.35	42.61	46.00	3.39	QP
3 *	875.2468	18.93	23.74	42.67	46.00	3.33	QP

EUT Information

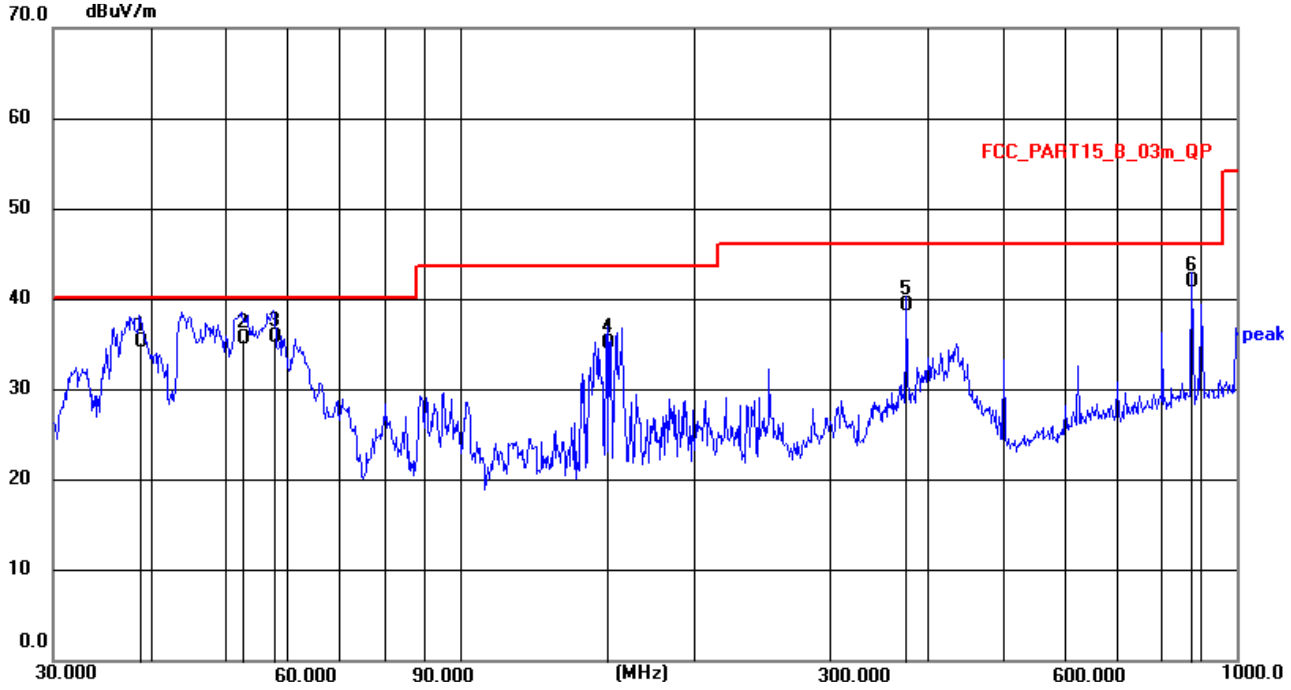
EUT Name:	WisGate
Model	RAK7248
Test Mode:	A.2
Test Voltage:	AC 120V, 60Hz
Remark:	3m Chamber
Polarization	***Horizontal***



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	144.3347	15.58	14.77	30.35	43.50	13.15	QP
2 *	375.9385	26.59	16.35	42.94	46.00	3.06	QP
3	875.2469	19.17	23.74	42.91	46.00	3.09	QP

EUT Information

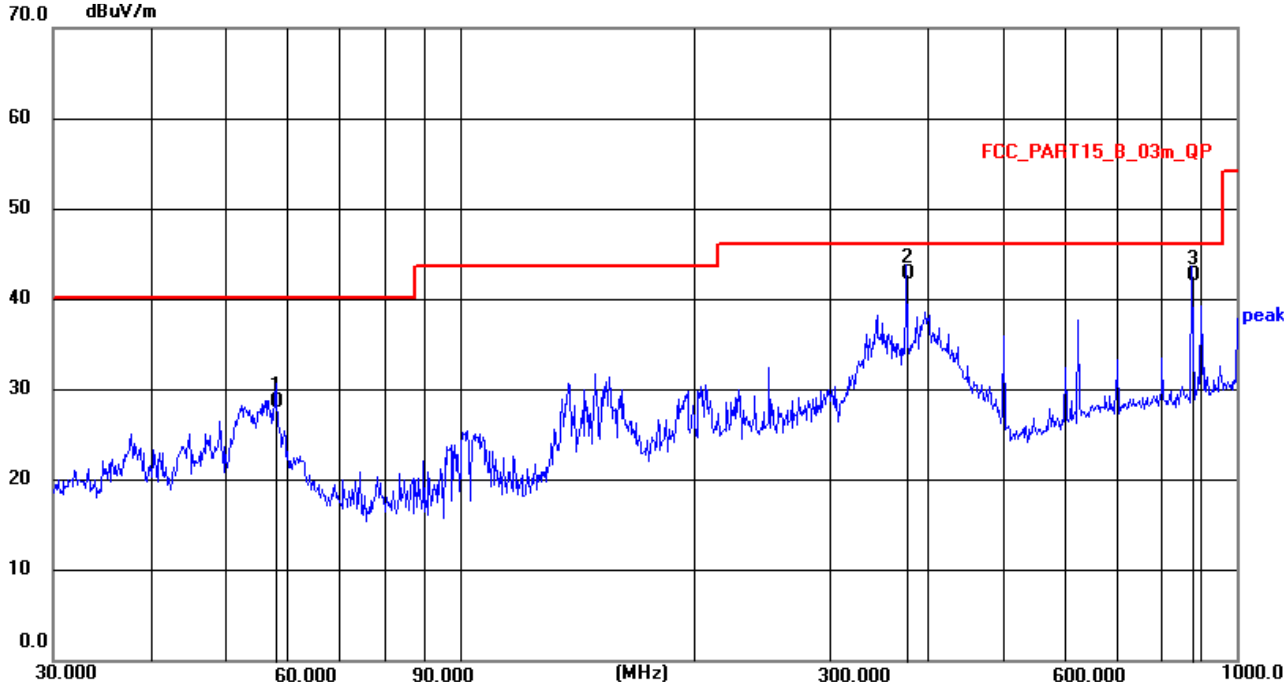
EUT Name:	WisGate
Model	RAK7248
Test Mode:	A.3
Test Voltage:	AC 120V, 60Hz
Remark:	3m Chamber
Polarization	***Vertical***



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	38.7517	20.11	15.16	35.27	40.00	4.73	QP
2	52.3912	20.93	14.73	35.66	40.00	4.34	QP
3	57.5939	21.47	14.36	35.83	40.00	4.17	QP
4	154.8204	19.03	15.99	35.02	43.50	8.48	QP
5	375.9384	22.95	16.35	39.30	46.00	6.70	QP
6 *	875.2468	18.25	23.74	41.99	46.00	4.01	QP

EUT Information

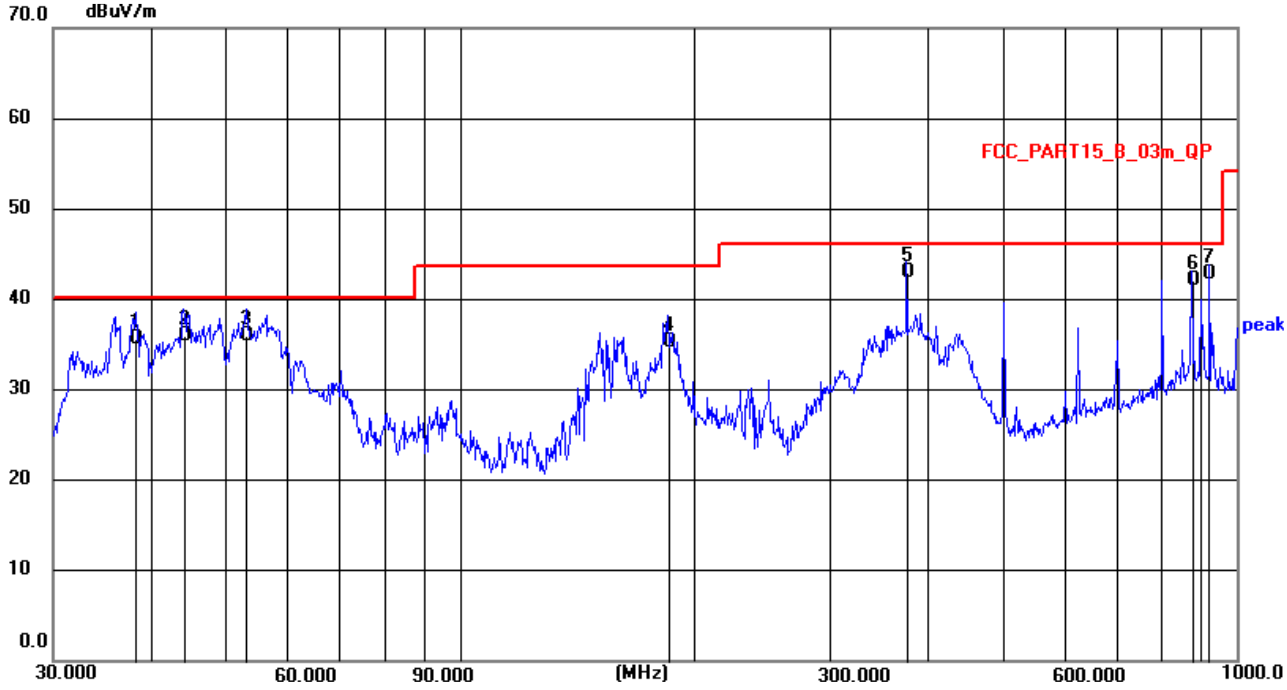
EUT Name:	WisGate
Model	RAK7248
Test Mode:	A.3
Test Voltage:	AC 120V, 60Hz
Remark:	3m Chamber
Polarization	***Horizontal***



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	57.9992	14.36	14.34	28.70	40.00	11.30	QP
2 *	375.9385	26.51	16.35	42.86	46.00	3.14	QP
3	875.2469	18.93	23.74	42.67	46.00	3.33	QP

EUT Information

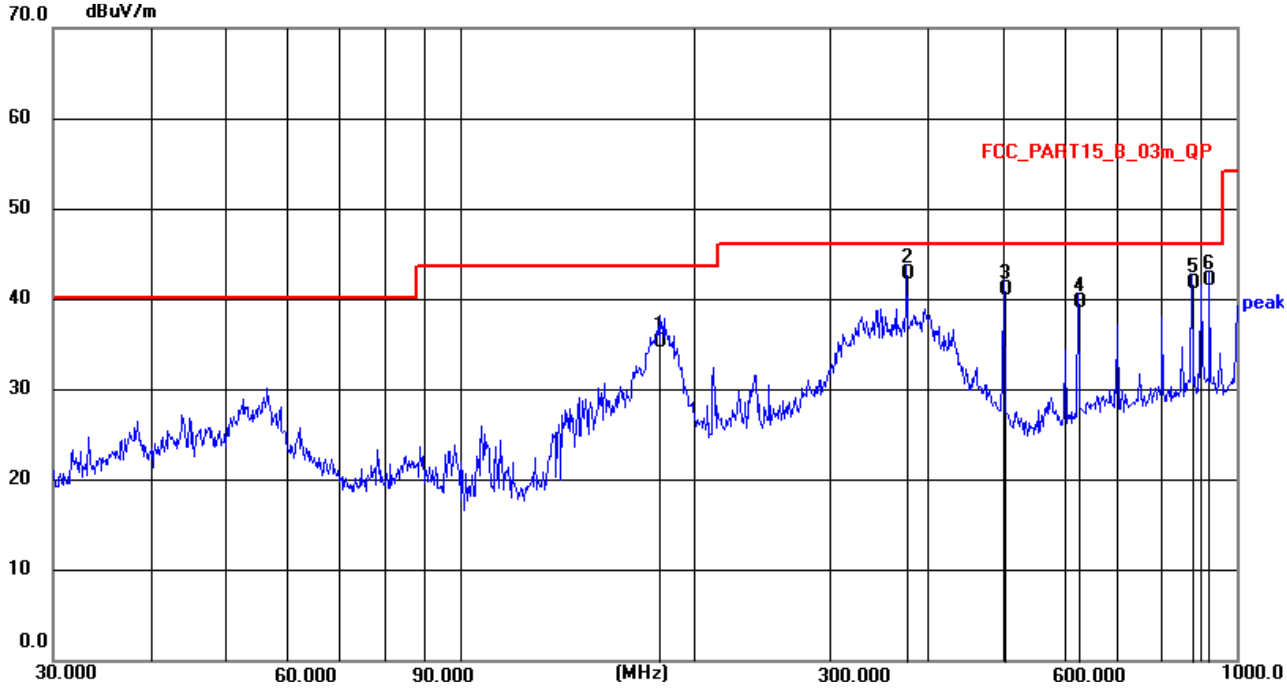
EUT Name:	WisGate
Model	RAK7248
Test Mode:	A.4
Test Voltage:	AC 120V, 60Hz
Remark:	3m Chamber
Polarization	***Vertical***



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	38.3462	20.57	15.10	35.67	40.00	4.33	QP
2	44.1202	20.89	15.02	35.91	40.00	4.09	QP
3	53.1313	21.35	14.67	36.02	40.00	3.98	QP
4	185.1378	22.30	12.93	35.23	43.50	8.27	QP
5 *	375.9385	26.61	16.35	42.96	46.00	3.04	QP
6	875.2469	18.33	23.74	42.07	46.00	3.93	QP
7	922.5157	18.46	24.31	42.77	46.00	3.23	QP

EUT Information

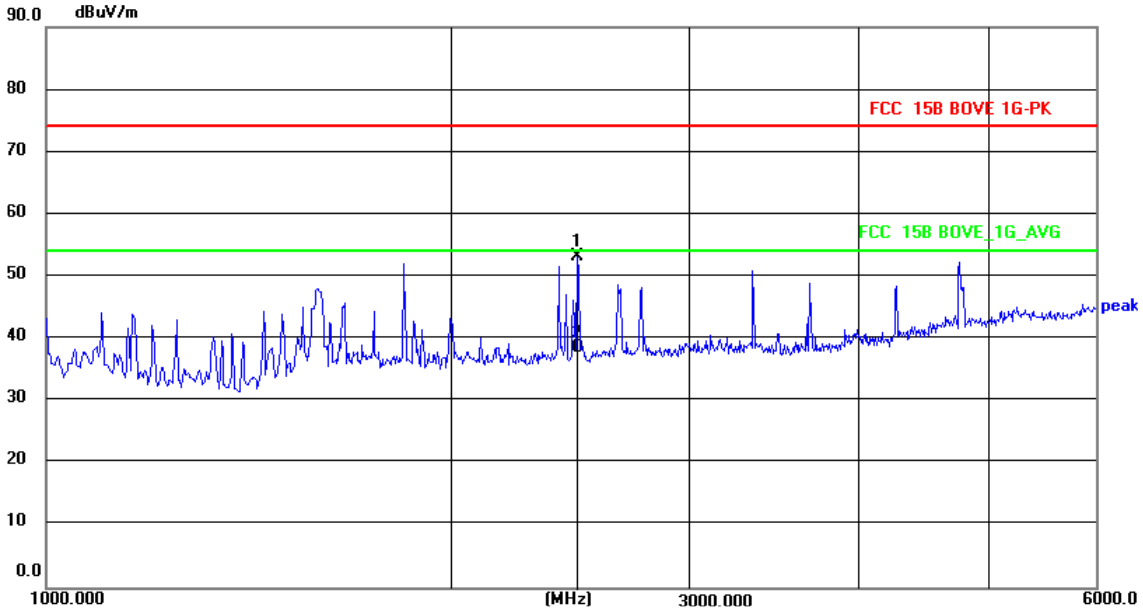
EUT Name:	WisGate
Model	RAK7248
Test Mode:	A.4
Test Voltage:	AC 120V, 60Hz
Remark:	3m Chamber
Polarization	***Horizontal***



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	181.2834	21.85	13.38	35.23	43.50	8.27	QP
2 *	375.9385	26.41	16.35	42.76	46.00	3.24	QP
3	501.1790	22.45	18.64	41.09	46.00	4.91	QP
4	625.0780	18.54	21.07	39.61	46.00	6.39	QP
5	875.2469	18.06	23.74	41.80	46.00	4.20	QP
6	922.5157	17.81	24.31	42.12	46.00	3.88	QP

EUT Information

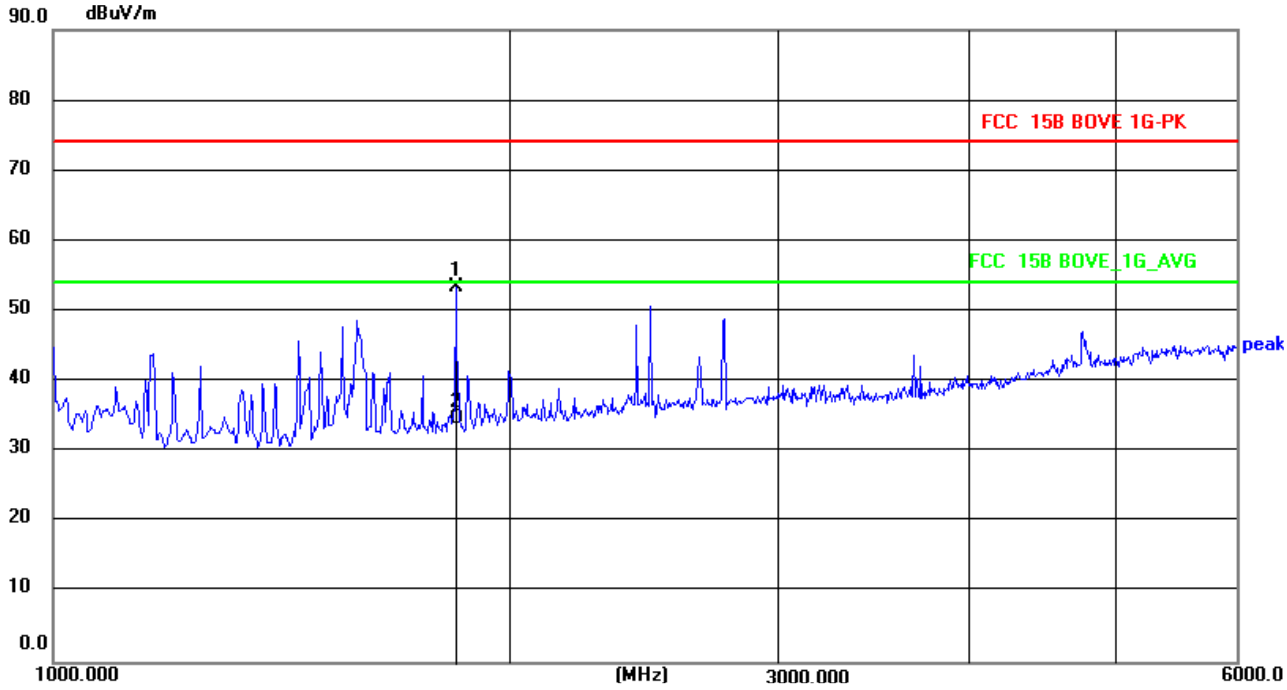
EUT Name:	WisGate
Model	RAK7248
Test Mode:	A.1
Test Voltage:	AC 120V, 60Hz
Remark:	3m Chamber
Polarization	***Vertical***



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2480.000	48.96	4.27	53.23	74.00	20.77	peak
2 *	2480.000	34.38	4.27	38.65	54.00	15.35	AVG

EUT Information

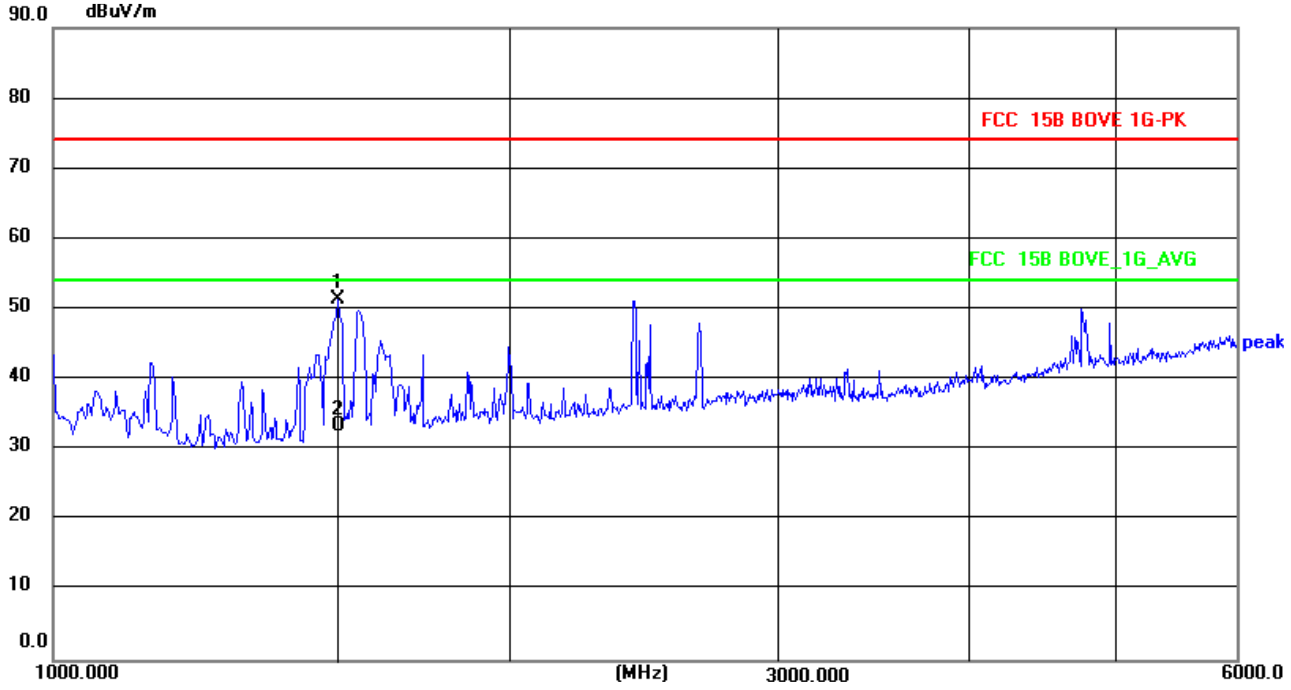
EUT Name:	WisGate
Model	RAK7248
Test Mode:	A.1
Test Voltage:	AC 120V, 60Hz
Remark:	3m Chamber
Polarization	***Horizontal***



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	1840.000	52.84	0.67	53.51	74.00	20.49	peak
2 *	1840.000	34.05	0.67	34.72	54.00	19.28	AVG

EUT Information

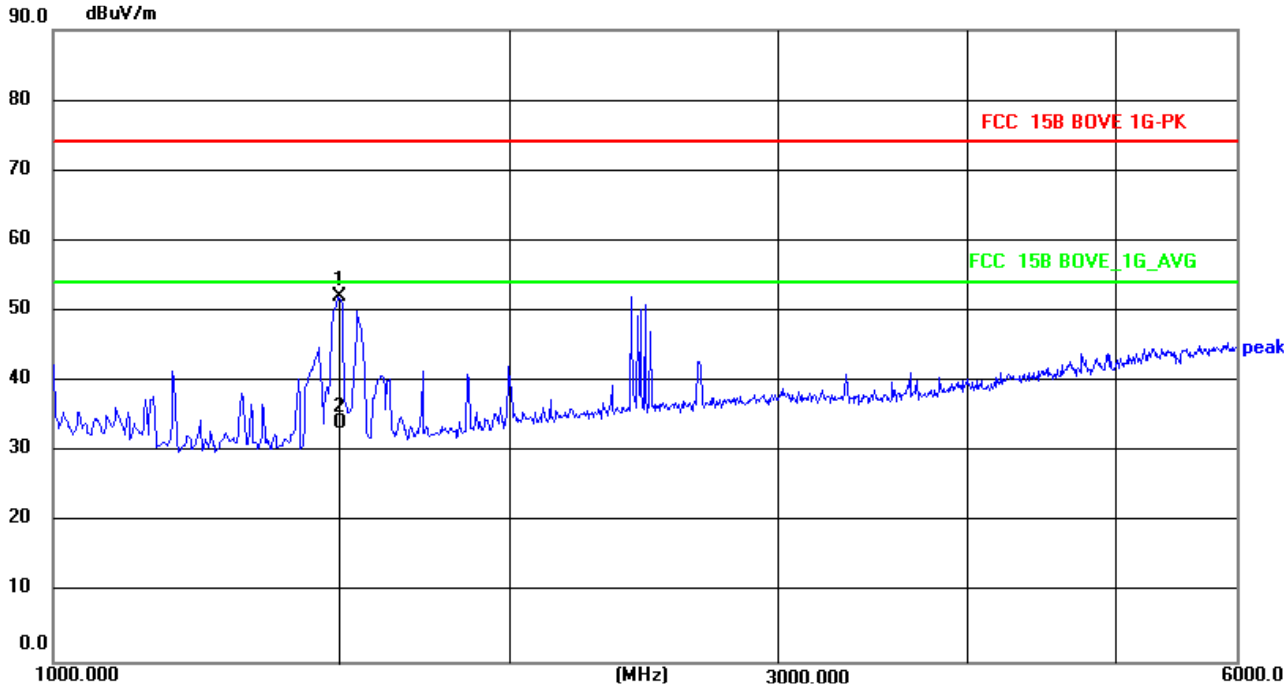
EUT Name:	WisGate
Model	RAK7248
Test Mode:	A.2
Test Voltage:	AC 120V, 60Hz
Remark:	3m Chamber
Polarization	***Vertical***



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	1540.000	52.07	-0.73	51.34	74.00	22.66	peak
2 *	1540.000	34.09	-0.73	33.36	54.00	20.64	AVG

EUT Information

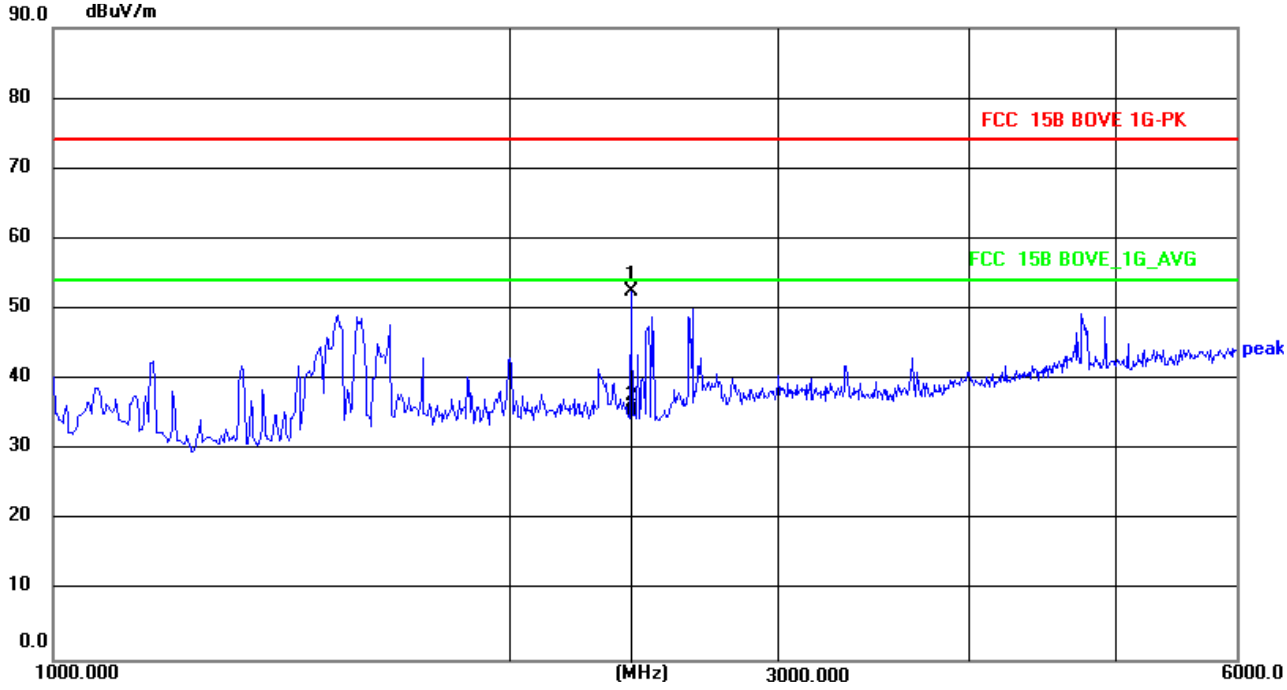
EUT Name:	WisGate
Model	RAK7248
Test Mode:	A.2
Test Voltage:	AC 120V, 60Hz
Remark:	3m Chamber
Polarization	***Horizontal***



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	1540.049	52.85	-0.73	52.12	74.00	21.88	peak
2 *	1540.049	34.73	-0.73	34.00	54.00	20.00	AVG

EUT Information

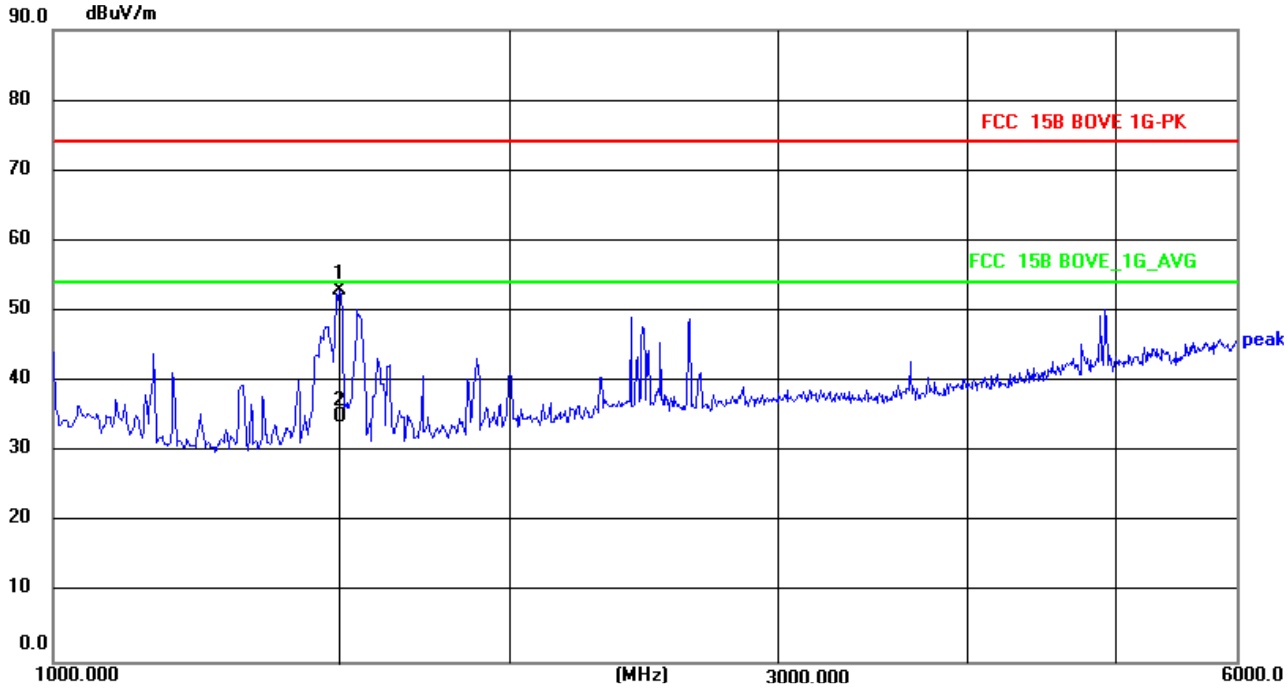
EUT Name:	WisGate
Model	RAK7248
Test Mode:	A.3
Test Voltage:	AC 120V, 60Hz
Remark:	3m Chamber
Polarization	***Vertical***



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2400.000	48.65	3.94	52.59	74.00	21.41	peak
2 *	2400.000	31.47	3.94	35.41	54.00	18.59	AVG

EUT Information

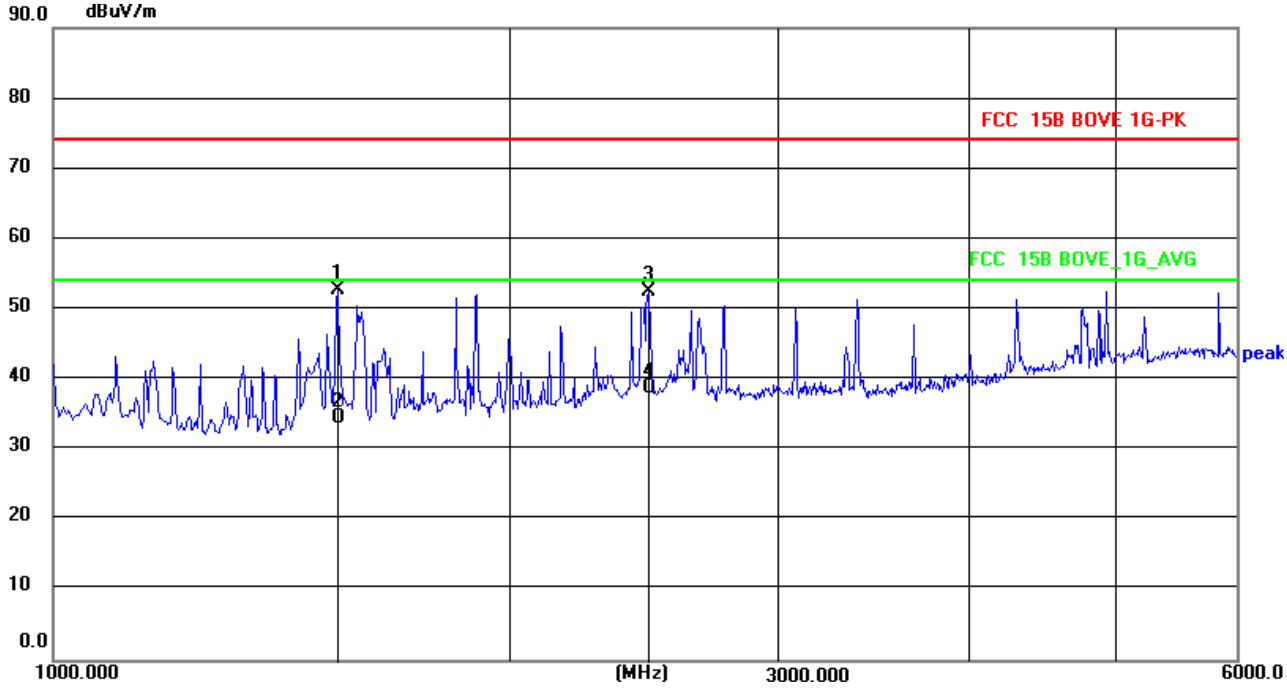
EUT Name:	WisGate
Model	RAK7248
Test Mode:	A.3
Test Voltage:	AC 120V, 60Hz
Remark:	3m Chamber
Polarization	***Horizontal***



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	1545.000	53.69	-0.72	52.97	74.00	21.03	peak
2 *	1545.000	35.68	-0.72	34.96	54.00	19.04	AVG

EUT Information

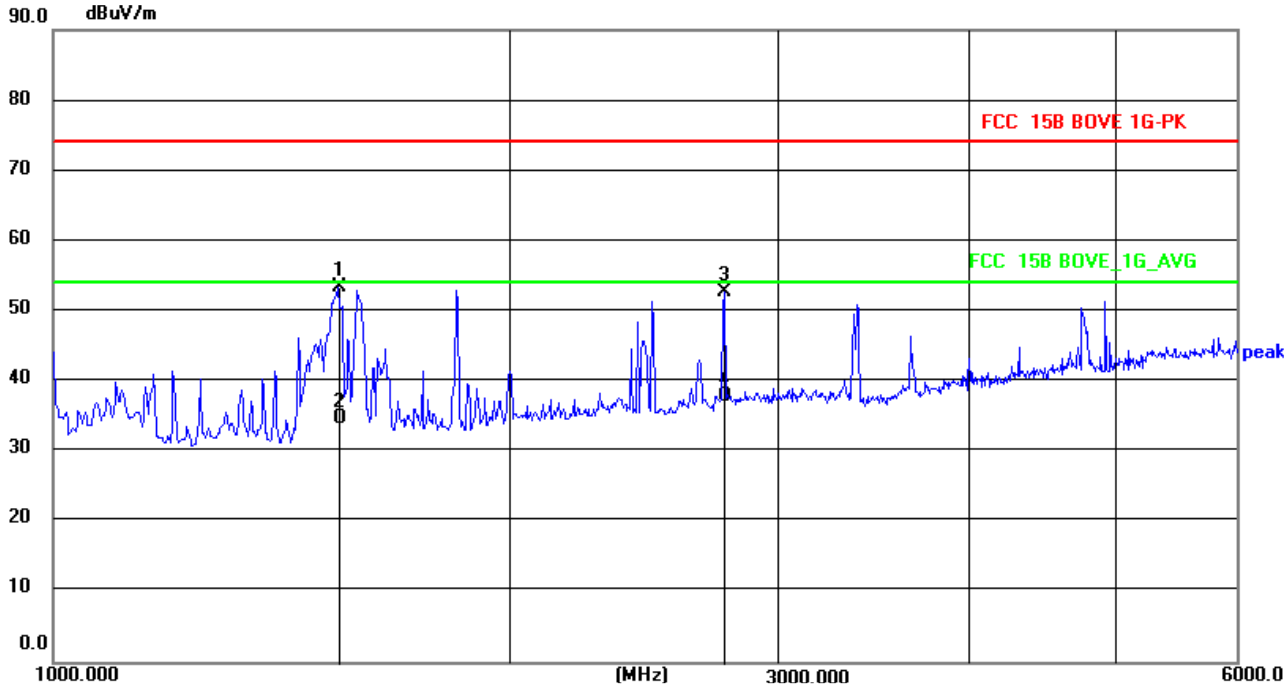
EUT Name:	WisGate
Model	RAK7248
Test Mode:	A.4
Test Voltage:	AC 120V, 60Hz
Remark:	3m Chamber
Polarization	***Vertical***



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	1540.000	53.48	-0.73	52.75	74.00	21.25	peak
2	1540.000	35.28	-0.73	34.55	54.00	19.45	AVG
3	2465.000	48.40	4.20	52.60	74.00	21.40	peak
4 *	2465.000	34.52	4.20	38.72	54.00	15.28	AVG

EUT Information

EUT Name:	WisGate
Model	RAK7248
Test Mode:	A.4
Test Voltage:	AC 120V, 60Hz
Remark:	3m Chamber
Polarization	***Horizontal***



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	1540.049	54.18	-0.73	53.45	74.00	20.55	peak
2	1540.049	35.58	-0.73	34.85	54.00	19.15	AVG
3	2765.000	47.31	5.43	52.74	74.00	21.26	peak
4 *	2765.000	32.52	5.43	37.95	54.00	16.05	AVG

7 List of Tables

8 List of Photographs