

GETROM Home Appliance Co., Ltd.

TEST REPORT

SCOPE OF WORK

EMC TESTING– See Page 2

REPORT NUMBER

200103058GZU-001

ISSUE DATE

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[REVISED DATE]

[-----]

PAGES

65

DOCUMENT CONTROL NUMBER

FCC Part 15:2019-e

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TEST REPORT

Applicant Name & : GETROM Home Appliance Co., Ltd.
Address : Dongfubei Road 74#, Nantou Town, ZHONGSHAN Guangdong
528427, China
Manufacturing Site : Same as Applicant
Intertek Report No: 200103058GZU-001

Test standards

CFR 47, FCC Part 15, Subpart B:2019

Sample Description

Product : Built-In Electric Cooktop
Model No. : GK-CD122402, GK-CD122405, GK-CD123002, GK-CD123005, GK-CF246004,
GK-CF246005, GK-CF246404, GK-CF246405, GK-CF306704, GK-CF306705,
GK-CV307205, GK-CV307209, GK-CV367705, GK-CV367709.
Electrical Rating : See page 5(Model Similarity for detail)
Serial No. : Not Labeled
Date Received : 03 January 2020
Date Test : 21 January 2020-22 January 2020
Conducted

Prepared and Checked By



Doctang Tang
Engineer

Approved By:



Sky Zhu
Team Leader

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Intertek Testing Services Shenzhen Ltd. Guangzhou Branch
Room 02, & 101/E201/E301/E401/E501/E601/E701/E801 of Room 01 1-8/F., No. 7-2. Caipin Road, Science City, GETDD,
Guangzhou, Guangdong, China

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1. TEST RESULTS SUMMARY

Classification of EUT: Class B

Test Item	Standard	Result
Conducted disturbance voltage at mains ports	CFR 47, FCC Part 15, Subpart B	Pass
Radiated emission (30 MHz–1 GHz)	CFR 47, FCC Part 15, Subpart B	Pass
Radiated emission (Above 1 GHz)	CFR 47, FCC Part 15, Subpart B	N/A
Remark: Reference publication is used for methods of measurement: ANSI C63.4:2014		

Remark:

1. The symbol "N/A" in above table means Not Applicable.
2. When determining the test results, measurement uncertainty of tests has been considered.

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2. EMC RESULTS CONCLUSION

RE: EMC Testing Pursuant to FCC part 15 performed on the Built-In Electric Cooktop, Models: GK-CD122402, GK-CD122405, GK-CD123002, GK-CD123005, GK-CF246004, GK-CF246005, GK-CF246404, GK-CF246405, GK-CF306704, GK-CF306705, GK-CV307205, GK-CV307209, GK-CV367705, GK-CV367709.

Model Similarity

Model Similarity	Model	Size (mm)	Rating Combination (W)	Ratings (W)	Control type
	GK-CD122402	288*520	1200+1200	120V, 60Hz, 2400W 220-240V, 60Hz, 2400W	Electronic
	GK-CD122405				Mechanical
	GK-CD123002		1800+1200	220-240V, 60Hz, 3000W	Electronic
	GK-CD123005				Mechanical
	GK-CF246004	590*520	1200X2+1800X2	220-240V, 60Hz, 6000W	Electronic
	GK-CF246005				Mechanical
	GK-CF246404		1200X2+2200+1800	220-240V, 60Hz, 6400W	Electronic
	GK-CF246405				Mechanical
	GK-CF306704	770*520	1200X2+2500+1800	220-240V, 60Hz, 6700W	Electronic
	GK-CF306705				Mechanical
	GK-CV307205		1200X2+2500+2200+100	220-240V, 60Hz,7200W	Mechanical
	GK-CV307209				Electronic
	GK-CV367705	900*520	1200X2+3000+2200+100	220-240V, 60Hz,7700W	Mechanical
	GK-CV367709				Electronic

Model GK-CD123002(including main PCB, control PCB) is same as GK-CD122402 except for the power

Model GK-CF246004, GK-CF306704 (including main PCB, control PCB) are same as GK-CF246404 except for the power

Model GK-CV307209(including main PCB, control PCB) is same as GK-CV367709 except for the power

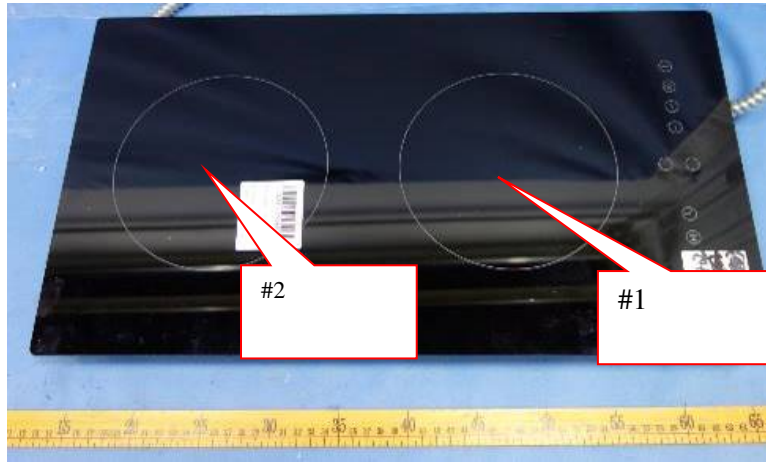
Based on up difference models GK-CD122402, GK-CV367709, GK-CF246404 had been performed full test.

We tested the Built-In Electric Cooktop, Models: GK-CD122402, GK-CV367709, GK-CF246404, to determine if they were in compliance with the relevant standards as marked on the Test Results Summary. We found that the units met the requirement of FCC part 15 standard when tested as received. The worst case’s test data was presented in this test report.

The production units are required to conform to the initial sample as received when the units are placed on the market.

TEST REPORT

Heating zone(#1,#2,#3,#4,#5) defined only used for test
Model GK-CD122402



Model GK-CV367709



Model GK-CF246404



TEST REPORT

3. LABORATORY MEASUREMENTS

Configuration Information

Support Equipment: N/A

Rated Voltage and frequency under test: 240 V~; 60 Hz
 Condition of Environment: Temperature: 22~28°C
 Relative Humidity:35~60%
 Atmosphere Pressure:86~106kPa

Notes:

1. The EMI measurements had been made in the operating mode produced the largest emission in the frequency band being investigated consistent with normal applications. An attempt had been made to maximize the emission by varying the configuration of the EUT.

2. Test Facility accreditation:
 A2LA Certificate Number 0078.10
 Intertek Testing Services Shenzhen Ltd. Guangzhou Branch is accredited by A2LA and Listed in FCC website. FCC accredited test labs may perform both Certification testing under Parts 15 and 18 and Declaration of Conformity testing.

3. Test Location:
 Intertek Testing Services Shenzhen Ltd. Guangzhou Branch
 All tests were performed at:
 Room 02, & 101/E201/E301/E401/E501/E601/E701/E801 of Room 01 1-8/F., No. 7-2. Caipin Road, Science City, GETDD, Guangzhou, Guangdong, China
 Except Radiated Emissions was performed at:
 Room 102/104, No 203, KeZhu Road, Science City, GETDD Guangzhou, China

4. Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Conducted Emission (9 kHz-150 kHz)	2.79 dB
2	Conducted Emission (150 kHz-30 MHz)	2.55 dB
3	Disturbance Power (30 MHz-300 MHz)	3.04 dB
4	Radiated Emission (30 MHz-1 GHz)	4.80 dB
5	Radiated Emission (1 GHz-6 GHz)	4.97 dB
6	Radiated Emission (6 GHz-18 GHz)	4.89 dB

The measurement uncertainty describes the overall uncertainty of the given measured value during the operation of the EUT.

Measurement uncertainty is calculated in accordance with CISPR16-4-2:2011+A1:2014 +A2:2018.

The measurement uncertainty is given with a confidence of 95%, k=2.

Determination of the test conclusion is based on IEC Guide 115 in consideration of measurement uncertainty.

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4. EQUIPMENT USED DURING TEST

Conducted Disturbance-Mains Terminal (1)

Equipment No.	Equipment	Model	Manufacturer	Calibration Interval
EM080-05	EMI receiver	ESCI	R&S	1Y
EM006-05	LISN	ENV216	R&S	1Y
SA047-112	Digital Temperature-Humidity Recorder	RS210	YIJIE	1Y
EM004-04	EMC shield Room	8m×3m×3m	Zhongyu	1Y

Radiated Disturbance (30 MHz-1 GHz)

Equipment No.	Equipment	Model	Manufacturer	Calibration Interval
EM030-04	3m Semi-Anechoic Chamber	9×6×6 m3	ETS-LINDGREN	1Y
EM031-02	EMI Test Receiver (9 kHz~7 GHz)	R&S ESR7	R&S	1Y
EM033-01	TRILOG Super Broadband test Antenna(30 MHz-3 GHz)	VULB 9163	SCHWARZBECK	1Y
EM031-02-01	Coaxial cable	/	R&S	1Y
EM036-01	Common-mode absorbing clamp	CMAD 20B	TESEQ	1Y
SA047-118	Digital Temperature-Humidity Recorder	RS210	YIJIE	1Y
EM045-01-01	EMC32 software (RE/RS)	V10.01.00	R&S	N/A

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Detail of the equipment calibration due date:

Equipment No.	Cal. Due date (DD-MM-YYYY)
Conducted Disturbance-Mains Terminal (1)	
EM080-05	19/07/2021
EM006-05	07/06/2021
SA047-112	16/11/2021
EM004-04	21/01/2022
Conducted Disturbance-Mains Terminal (2)	
EM031-04	07/01/2022
EM006-06	06/09/2021
SA047-111	16/11/2021
EM004-03	21/01/2022
EM031-04-01	N/A
Conducted Disturbance-Load and Control Terminal (1)	
EM080-05	19/07/2021
EM080-05-01	06/09/2021
SA047-112	16/11/2021
EM004-04	21/01/2022
Conducted Disturbance-Load and Control Terminal (2)	
EM080-05	19/07/2021
EM005-06-01	06/09/2021
SA047-112	16/11/2021
EM004-04	21/01/2022
Conducted Disturbance-Telecom Terminal	
EM080-05	19/07/2021
EM011-05	12/04/2021
EM011-06	12/04/2021
EM006-06	06/09/2021
SA047-112	16/11/2021
EM004-04	21/01/2022
Conducted Disturbance-Antenna Terminal	
EM031-04	07/01/2022
EM084-02	21/07/2021
EM041-01	05/01/2022
EM041-02	05/01/2022
SA047-111	16/11/2021
EM004-03	21/01/2022
Click (1)	

Equipment No.	Cal. Due date (DD-MM-YYYY)
Radiated Disturbance (CDN Method)	
EM080-05	19/07/2021
EM003-02	15/11/2021
EM003-03	15/11/2021
EM003-01-05	06/09/2021
EM032-02-01	20/07/2021
EM032-02-02	20/07/2021
SA047-112	16/11/2021
EM004-04	21/01/2022
Radiated electromagnetic disturbances (9 kHz-30 MHz)	
EM031-04	07/01/2022
EM061-04	7/03/2022
SA047-111	16/11/2021
EM004-03	21/01/2022
Radiated Disturbance (9 kHz-30 MHz)	
EM030-04	10/04/2021
EM031-02	16/10/2021
EM011-04	18/06/2021
EM031-02-01	12/04/2021
SA047-118	21/07/2021
EM045-01-01	N/A
Radiated Disturbance (30 MHz-1 GHz)	
EM030-04	10/04/2021
EM031-02	16/10/2021
EM033-01	18/09/2021
EM031-02-01	12/04/2021
EM036-01	21/07/2021
SA047-118	21/07/2021
EM045-01-01	N/A
Radiated Disturbance (1-18 GHz)	
EM030-04	10/04/2021
EM031-02	16/10/2021
EM031-03	06/09/2021
EM033-02	18/06/2021
EM033-02-02	12/04/2021
EM022-03	10/05/2021
SA047-118	21/07/2021
EM045-01-01	N/A

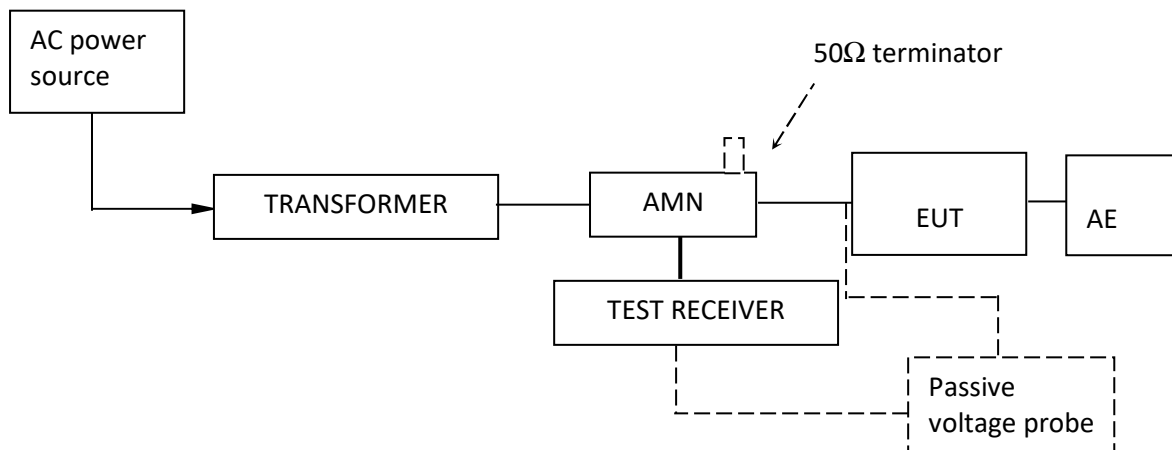
TEST REPORT

5. EMI TEST

5.1 Conducted Disturbance Voltage at mains ports

Test Result: Pass

5.1.1 Block Diagram of Test Setup



5.1.2 Test Setup and Procedure

The EUT was set to achieve the maximum emission level. The mains terminal disturbance voltage was measured with the EUT in a shielded room. The EUT was connected to AC power source through an Artificial Mains Network which provides a 50Ω linear impedance. Artificial hand is used if appropriate (for handheld apparatus). The load/control terminal disturbance voltage was measured with passive voltage probe if appropriate.

The table-top EUT was placed on a 0.8m high non-metallic table above earthed ground plane (Ground Reference Plane). And for floor standing EUT, was placed on a 0.1m high non-metallic supported on GRP. The EUT keeps a distance of at least 0.8m from any other of the metallic surface. The Artificial Mains Network is situated at a distance of 0.8m from the EUT. During the test, mains lead of EUT excess 0.8m was folded back and forth parallel to the lead so as to form a horizontal bundle with a length between 0.3m and 0.4m.

The bandwidth of test receiver was set at 9 kHz. The frequency range from 150 kHz to 30MHz was checked.

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5.1.3 Limit

Frequency range MHz	AC mains terminals dB (uV)	
	Quasi-peak	Average
0.15 to 0.5	66 to 56*	56 to 46*
0.5 to 5	56	46
5 to 30	60	50

Note 1: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.
Note 2: The lower limit is applicable at the transition frequency.

TEST REPORT

5.1.4 Test Data and curve

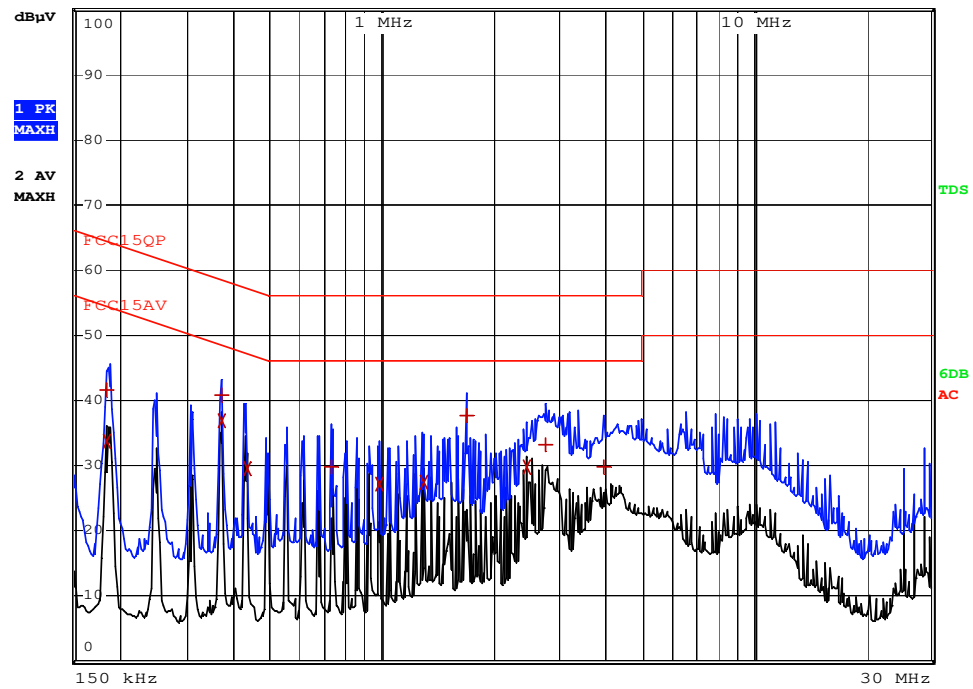
At mains terminal:

Model: GK-CD122402

#1 heating zone

Tested Wire: Live

Operation Mode: heating



EDIT PEAK LIST (Final Measurement Results)				
TRACE	FREQUENCY	LEVEL dBµV	DELTA	LIMIT dB
Trace1:	FCC15QP			
Trace2:	FCC15AV			
Trace3:	---			
1 Quasi Peak	186 kHz	41.52 L1	-22.69	
2 Average	186 kHz	33.81 L1	-20.40	
1 Quasi Peak	370 kHz	40.79 L1	-17.70	
2 Average	370 kHz	36.80 L1	-11.69	
2 Average	434 kHz	29.52 L1	-17.64	
1 Quasi Peak	734 kHz	29.88 L1	-26.11	
2 Average	986 kHz	27.05 L1	-18.94	
2 Average	1.294 MHz	27.30 L1	-18.69	
1 Quasi Peak	1.694 MHz	37.64 L1	-18.35	
2 Average	2.462 MHz	29.92 L1	-16.08	
1 Quasi Peak	2.754 MHz	33.28 L1	-22.71	
1 Quasi Peak	3.95 MHz	29.86 L1	-26.13	

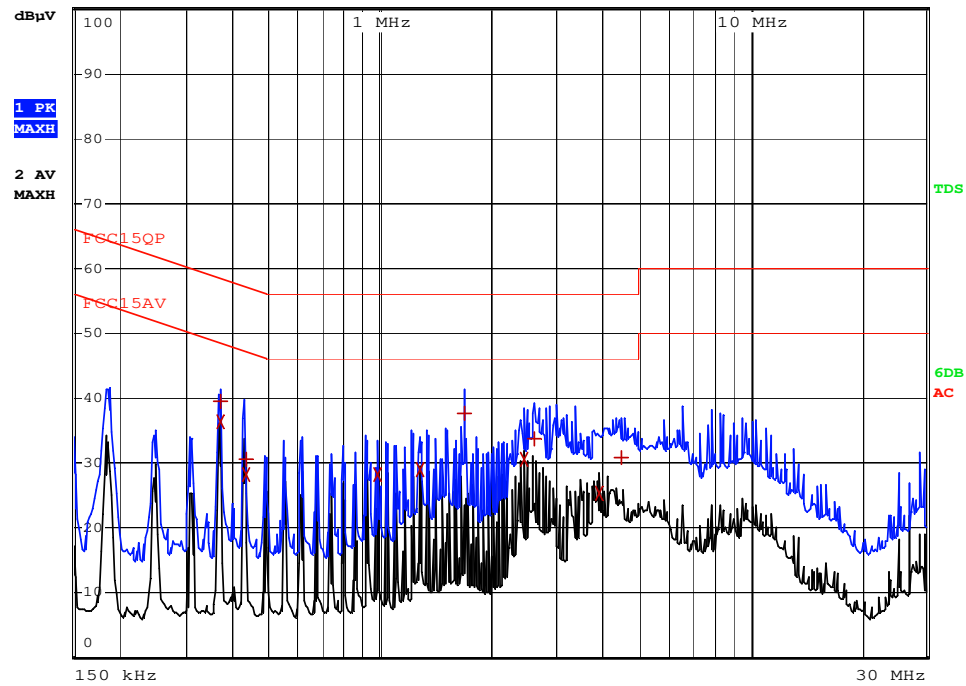
Remark:

1. Corr. (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Level (dBµV) = Corr. (dB) + Read Level (dBµV)
3. Delta Limit (dB) = Level (dBµV)-Limit (dBµV)

TEST REPORT

Tested Wire: Neutral

Operation Mode: heating



EDIT PEAK LIST (Final Measurement Results)				
TRACE	FREQUENCY	LEVEL dBµV	DELTA	LIMIT dB
Trace1:	FCC15QP			
Trace2:	FCC15AV			
Trace3:	---			
1	Quasi Peak 370 kHz	39.56 L1	-18.94	
2	Average 370 kHz	36.31 L1	-12.18	
1	Quasi Peak 434 kHz	30.58 L1	-26.58	
2	Average 434 kHz	28.11 L1	-19.06	
2	Average 982 kHz	28.17 L1	-17.82	
2	Average 1.29 MHz	29.05 L1	-16.94	
1	Quasi Peak 1.694 MHz	37.72 L1	-18.27	
2	Average 2.458 MHz	30.59 L1	-15.41	
1	Quasi Peak 2.626 MHz	33.62 L1	-22.37	
2	Average 3.934 MHz	25.29 L1	-20.70	
1	Quasi Peak 4.514 MHz	30.89 L1	-25.10	

Remark:

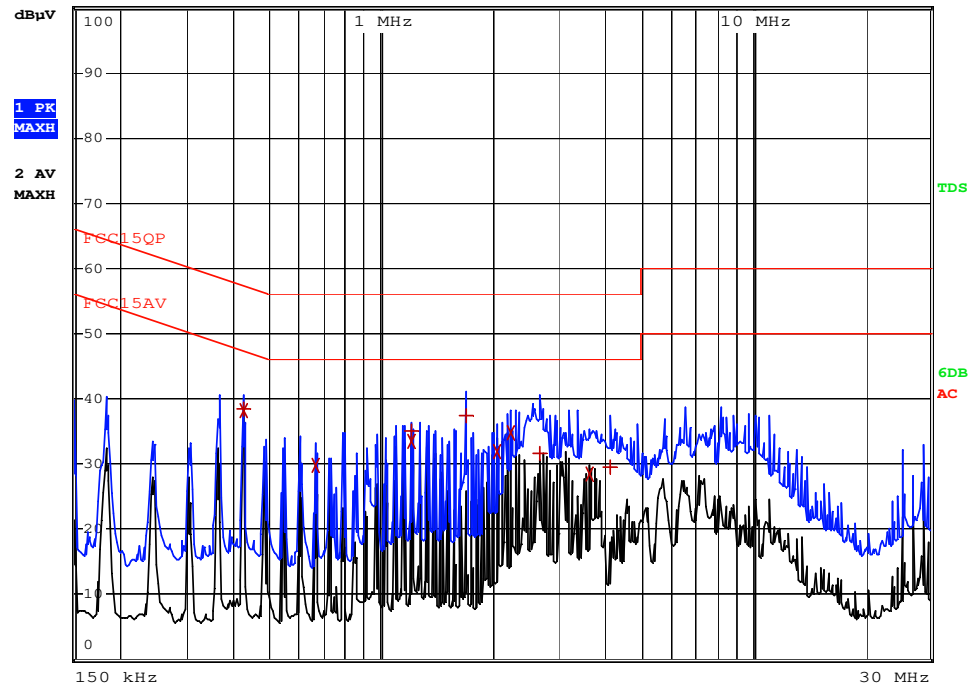
1. Corr. (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Level (dBµV) = Corr. (dB) + Read Level (dBµV)
3. Delta Limit (dB) = Level (dBµV)-Limit (dBµV)

TEST REPORT

#2 heating zone

Tested Wire: Live

Operation Mode: heating



EDIT PEAK LIST (Final Measurement Results)				
TRACE		FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
Trace1:	FCC15QP			
Trace2:	FCC15AV			
Trace3:	---			
2	Average	422 kHz	38.06 L1	-9.34
1	Quasi Peak	426 kHz	38.32 L1	-19.00
2	Average	666 kHz	29.66 L1	-16.33
1	Quasi Peak	1.21 MHz	35.09 L1	-20.90
2	Average	1.21 MHz	33.38 L1	-12.61
1	Quasi Peak	1.694 MHz	37.28 L1	-18.71
2	Average	2.058 MHz	31.97 L1	-14.02
2	Average	2.238 MHz	34.74 L1	-11.25
1	Quasi Peak	2.686 MHz	31.62 L1	-24.37
2	Average	3.63 MHz	28.42 L1	-17.57
1	Quasi Peak	4.142 MHz	29.60 L1	-26.39

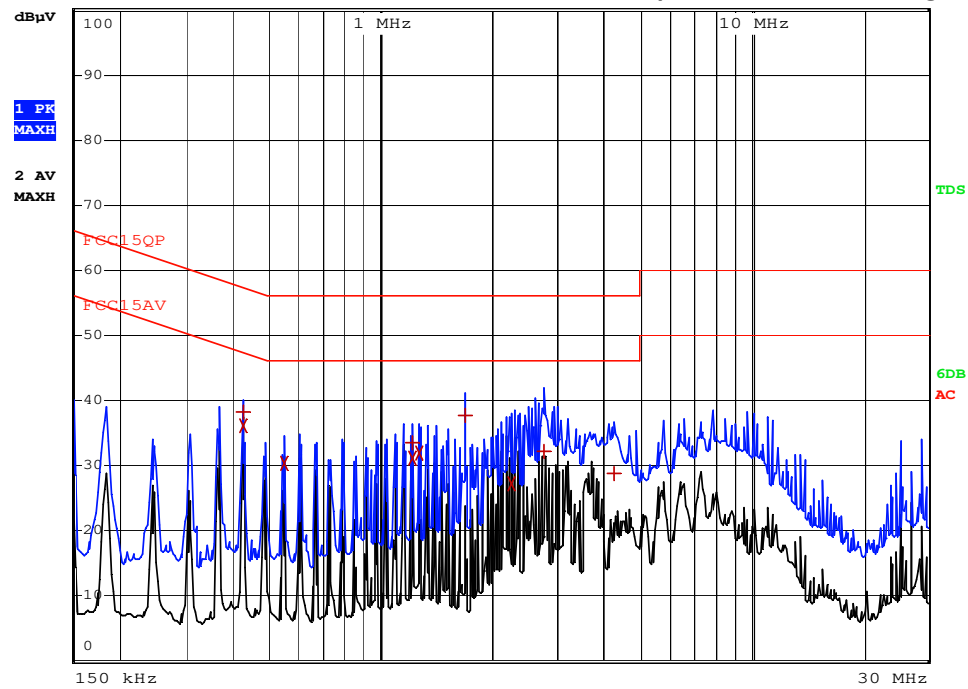
Remark:

1. Corr. (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Level (dBµV) = Corr. (dB) + Read Level (dBµV)
3. Delta Limit (dB) = Level (dBµV)-Limit (dBµV)

TEST REPORT

Tested Wire: Neutral

Operation Mode: heating



EDIT PEAK LIST (Final Measurement Results)				
Trace1:		FCC15QP		
Trace2:		FCC15AV		
Trace3:		---		
TRACE	FREQUENCY	LEVEL dBµV		DELTA LIMIT dB
1 Quasi Peak	426 kHz	38.12	L1	-19.20
2 Average	426 kHz	35.97	L1	-11.35
2 Average	546 kHz	30.29	L1	-15.71
1 Quasi Peak	1.214 MHz	33.52	L1	-22.47
2 Average	1.214 MHz	31.12	L1	-14.88
2 Average	1.274 MHz	31.85	L1	-14.15
1 Quasi Peak	1.694 MHz	37.69	L1	-18.30
2 Average	2.246 MHz	27.21	L1	-18.78
1 Quasi Peak	2.75 MHz	32.02	L1	-23.97
1 Quasi Peak	4.274 MHz	28.82	L1	-27.17

Remark:

1. Corr. (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Level (dBµV) = Corr. (dB) + Read Level (dBµV)
3. Delta Limit (dB) = Level (dBµV)-Limit (dBµV)

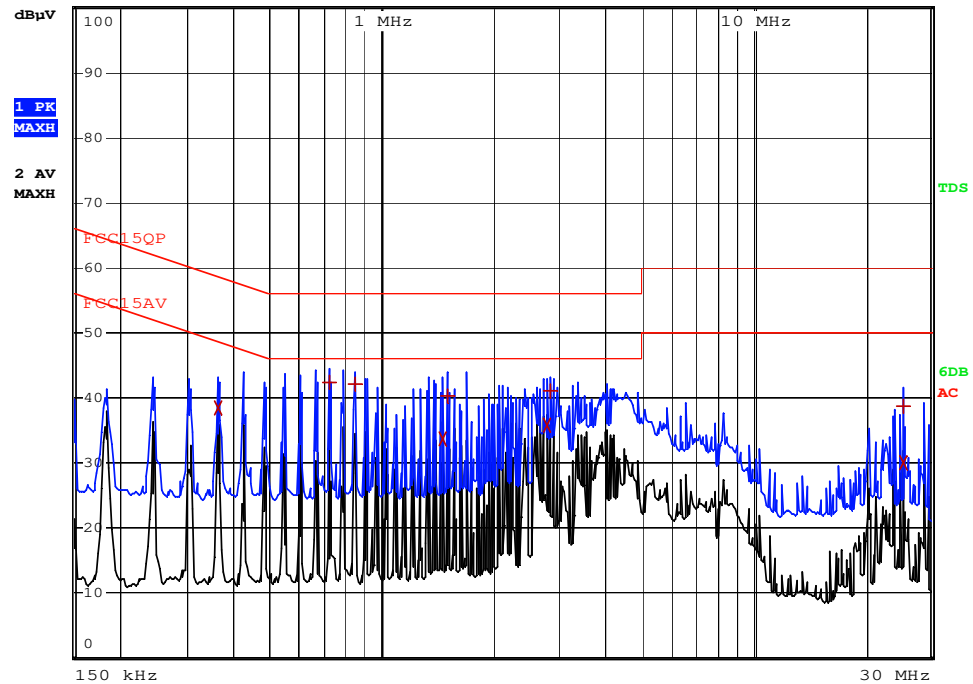
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Model: GK-CV367709

#1 heating zone

Tested Wire: Live

Operation Mode: heating



EDIT PEAK LIST (Final Measurement Results)				
TRACE	FREQUENCY	LEVEL dBµV		DELTA LIMIT dB
Trace1:	FCC15QP			
Trace2:	FCC15AV			
Trace3:	---			
2 Average	362 kHz	38.41 L1		-10.26
1 Quasi Peak	726 kHz	42.38 L1		-13.62
1 Quasi Peak	846 kHz	42.16 L1		-13.83
2 Average	1.454 MHz	33.82 L1		-12.17
1 Quasi Peak	1.51 MHz	40.17 L1		-15.82
2 Average	2.786 MHz	35.86 L1		-10.13
1 Quasi Peak	2.842 MHz	41.13 L1		-14.86
1 Quasi Peak	25.434 MHz	38.65 L1		-21.34
2 Average	25.434 MHz	29.99 L1		-20.00

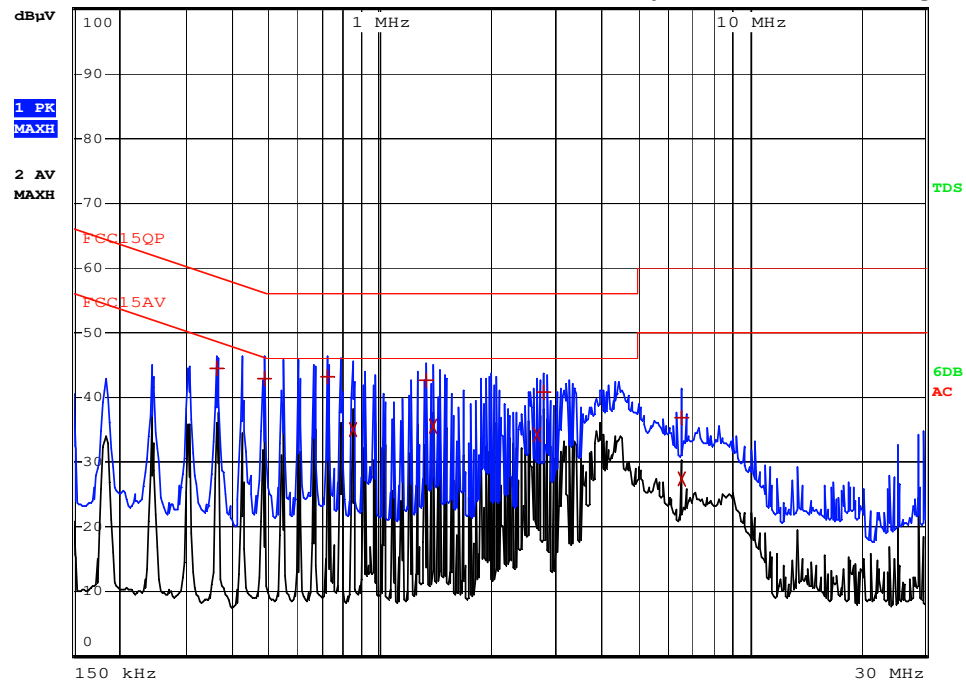
Remark:

1. Corr. (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Level (dBµV) = Corr. (dB) + Read Level (dBµV)
3. Delta Limit (dB) = Level (dBµV)-Limit (dBµV)

TEST REPORT

Tested Wire: Neutral

Operation Mode: heating



EDIT PEAK LIST (Final Measurement Results)				
TRACE	FREQUENCY	LEVEL dBµV	DELTA	LIMIT dB
Trace1: FCC15QP				
Trace2: FCC15AV				
Trace3: ---				
1 Quasi Peak	362 kHz	44.47 L1	-14.20	
1 Quasi Peak	486 kHz	42.85 L1	-13.37	
1 Quasi Peak	726 kHz	43.12 L1	-12.87	
2 Average	850 kHz	34.92 L1	-11.07	
1 Quasi Peak	1.334 MHz	42.52 L1	-13.48	
2 Average	1.394 MHz	35.60 L1	-10.39	
2 Average	2.67 MHz	34.21 L1	-11.79	
1 Quasi Peak	2.79 MHz	40.89 L1	-15.10	
1 Quasi Peak	6.594 MHz	36.87 L1	-23.12	
2 Average	6.594 MHz	27.55 L1	-22.44	

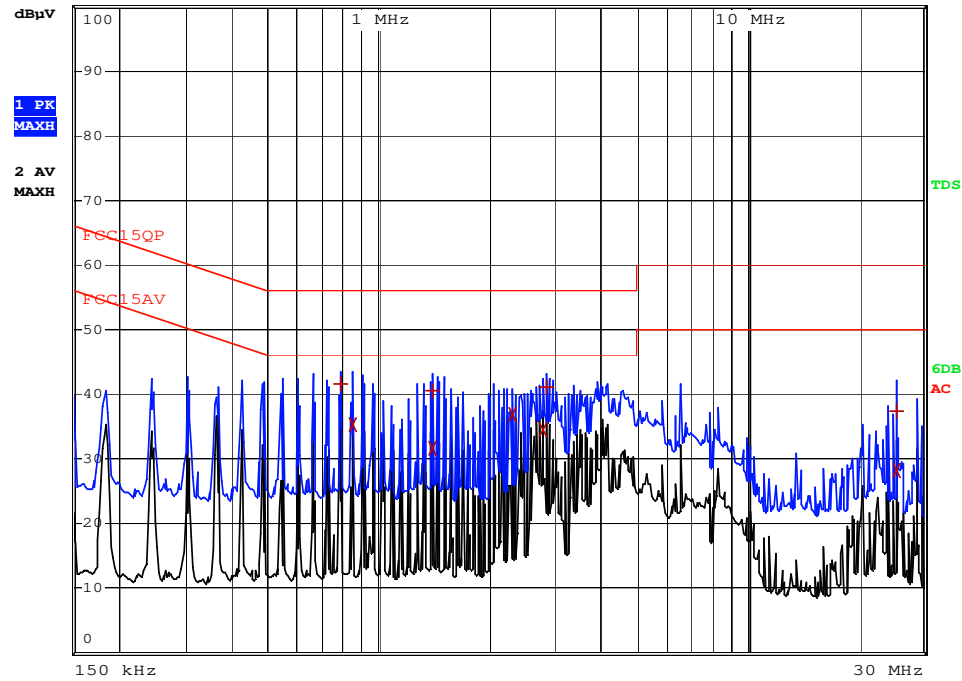
Remark:

1. Corr. (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Level (dBµV) = Corr. (dB) + Read Level (dBµV)
3. Delta Limit (dB) = Level (dBµV)-Limit (dBµV)

TEST REPORT

#2 heating zone
Tested Wire: Live

Operation Mode: heating



EDIT PEAK LIST (Final Measurement Results)				
TRACE		FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
Trace1:	FCC15QP			
Trace2:	FCC15AV			
Trace3:	---			
1	Quasi Peak	786 kHz	41.60 L1	-14.40
2	Average	846 kHz	35.21 L1	-10.78
1	Quasi Peak	1.394 MHz	40.49 L1	-15.50
2	Average	1.394 MHz	31.65 L1	-14.35
2	Average	2.298 MHz	36.74 L1	-9.25
2	Average	2.786 MHz	34.50 L1	-11.50
1	Quasi Peak	2.842 MHz	41.14 L1	-14.85
1	Quasi Peak	25.43 MHz	37.49 L1	-22.51
2	Average	25.43 MHz	28.27 L1	-21.72

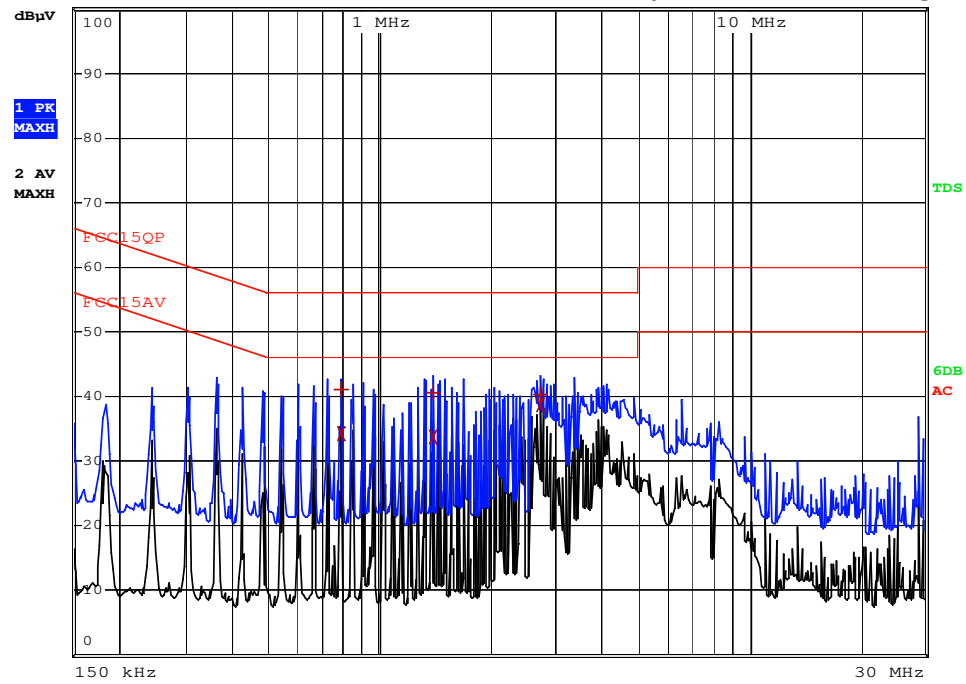
Remark:

1. Corr. (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Level (dBµV) = Corr. (dB) + Read Level (dBµV)
3. Delta Limit (dB) = Level (dBµV)-Limit (dBµV)

TEST REPORT

Tested Wire: Neutral

Operation Mode: heating



EDIT PEAK LIST (Final Measurement Results)				
Trace1:	FCC15QP			
Trace2:	FCC15AV			
Trace3:	---			
TRACE	FREQUENCY	LEVEL dBµV		DELTA LIMIT dB
1 Quasi Peak	786 kHz	41.01	L1	-14.98
2 Average	786 kHz	34.22	L1	-11.77
2 Average	1.394 MHz	33.68	L1	-12.31
1 Quasi Peak	1.394 MHz	40.67	L1	-15.32
2 Average	2.722 MHz	38.70	L1	-7.29
1 Quasi Peak	2.726 MHz	40.36	L1	-15.64

Remark:

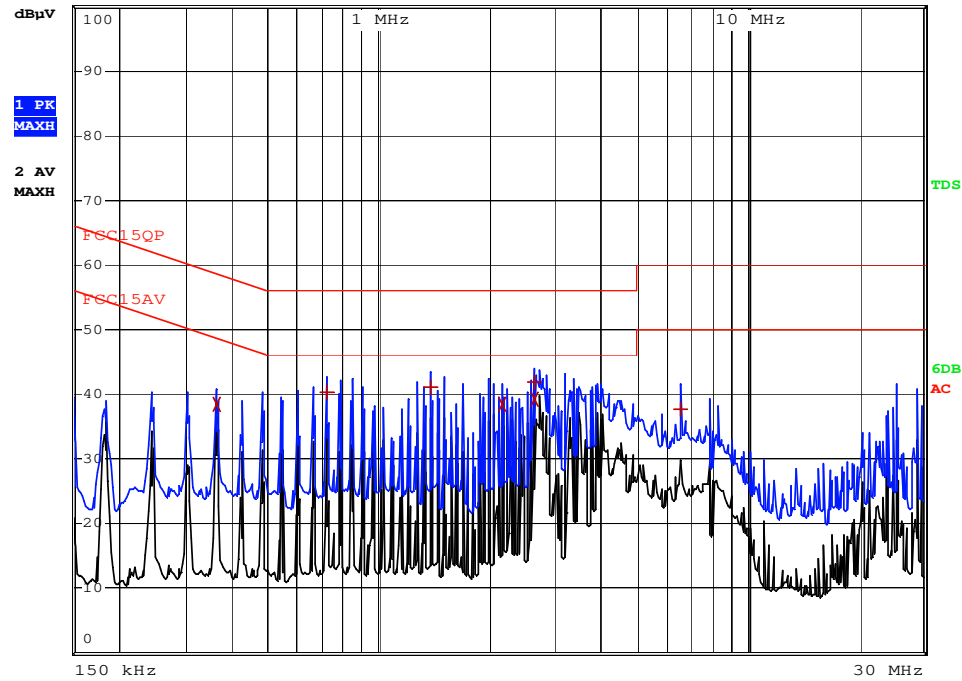
1. Corr. (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Level (dBµV) = Corr. (dB) + Read Level (dBµV)
3. Delta Limit (dB) = Level (dBµV)-Limit (dBµV)

TEST REPORT

#3 heating zone

Tested Wire: Live

Operation Mode: heating



EDIT PEAK LIST (Final Measurement Results)				
TRACE	FREQUENCY	LEVEL dBµV	DELTA	LIMIT dB
Trace1:	FCC15QP			
Trace2:	FCC15AV			
Trace3:	---			
2 Average	362 kHz	38.44 L1	-10.23	
1 Quasi Peak	726 kHz	40.39 L1	-15.60	
1 Quasi Peak	1.39 MHz	40.96 L1	-15.03	
2 Average	2.174 MHz	38.35 L1	-7.64	
1 Quasi Peak	2.658 MHz	41.97 L1	-14.02	
2 Average	2.658 MHz	39.11 L1	-6.88	
1 Quasi Peak	6.59 MHz	37.62 L1	-22.37	

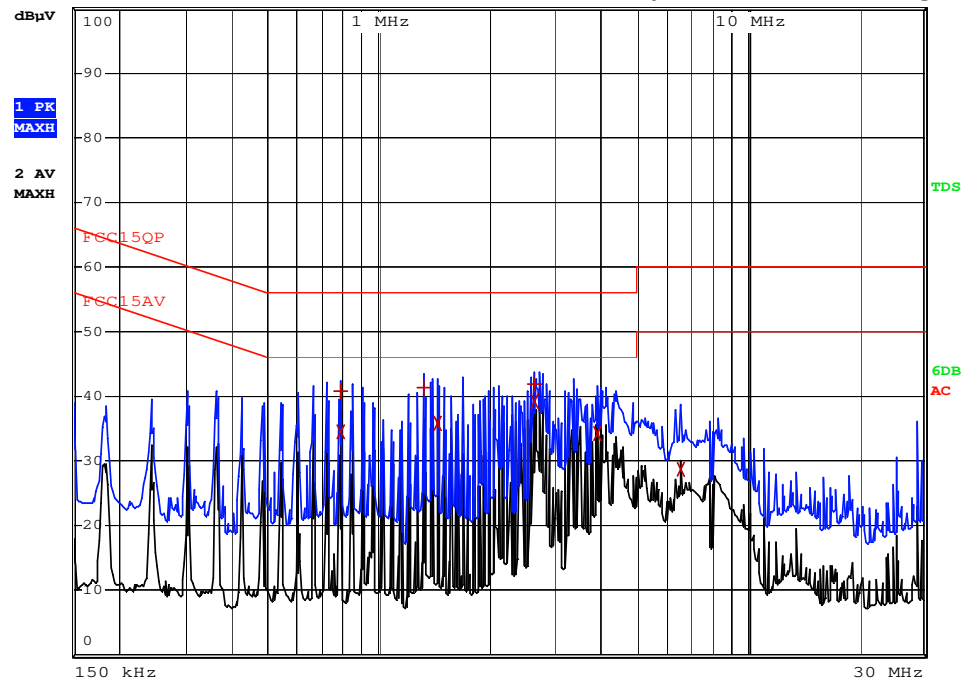
Remark:

1. Corr. (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Level (dBµV) = Corr. (dB) + Read Level (dBµV)
3. Delta Limit (dB) = Level (dBµV)-Limit (dBµV)

TEST REPORT

Tested Wire: Neutral

Operation Mode: heating



EDIT PEAK LIST (Final Measurement Results)				
TRACE	FREQUENCY	LEVEL dBµV	DELTA	LIMIT dB
Trace1:	FCC15QP			
Trace2:	FCC15AV			
Trace3:	---			
1 Quasi Peak	786 kHz	40.75 L1	-15.24	
2 Average	786 kHz	34.39 L1	-11.60	
1 Quasi Peak	1.33 MHz	41.34 L1	-14.65	
2 Average	1.45 MHz	35.78 L1	-10.21	
1 Quasi Peak	2.658 MHz	41.79 L1	-14.20	
2 Average	2.658 MHz	39.35 L1	-6.64	
2 Average	3.93 MHz	34.28 L1	-11.71	
2 Average	6.59 MHz	28.81 L1	-21.18	

Remark:

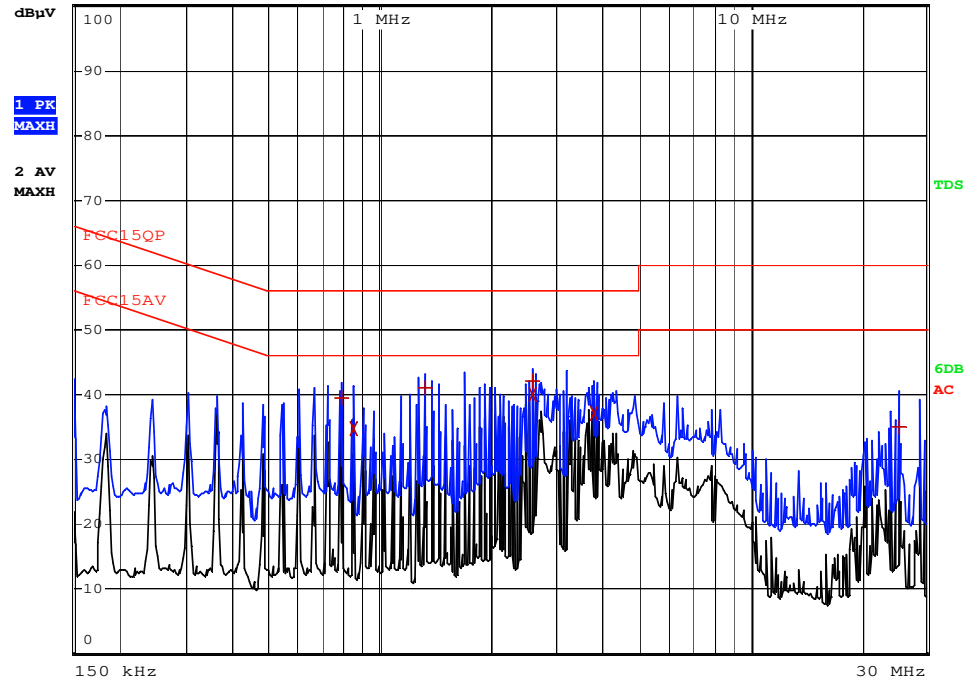
1. Corr. (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Level (dBµV) = Corr. (dB) + Read Level (dBµV)
3. Delta Limit (dB) = Level (dBµV)-Limit (dBµV)

TEST REPORT

#4 heating zone

Tested Wire: Live

Operation Mode: heating



EDIT PEAK LIST (Final Measurement Results)				
Trace1:		FCC15QP		
Trace2:		FCC15AV		
Trace3:		---		
TRACE		FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1	Quasi Peak	786 kHz	39.45 L1	-16.54
2	Average	846 kHz	34.74 L1	-11.25
1	Quasi Peak	1.326 MHz	41.13 L1	-14.86
1	Quasi Peak	2.594 MHz	42.06 L1	-13.93
2	Average	2.594 MHz	40.10 L1	-5.89
2	Average	3.802 MHz	37.12 L1	-8.87
1	Quasi Peak	25.422 MHz	35.13 L1	-24.86

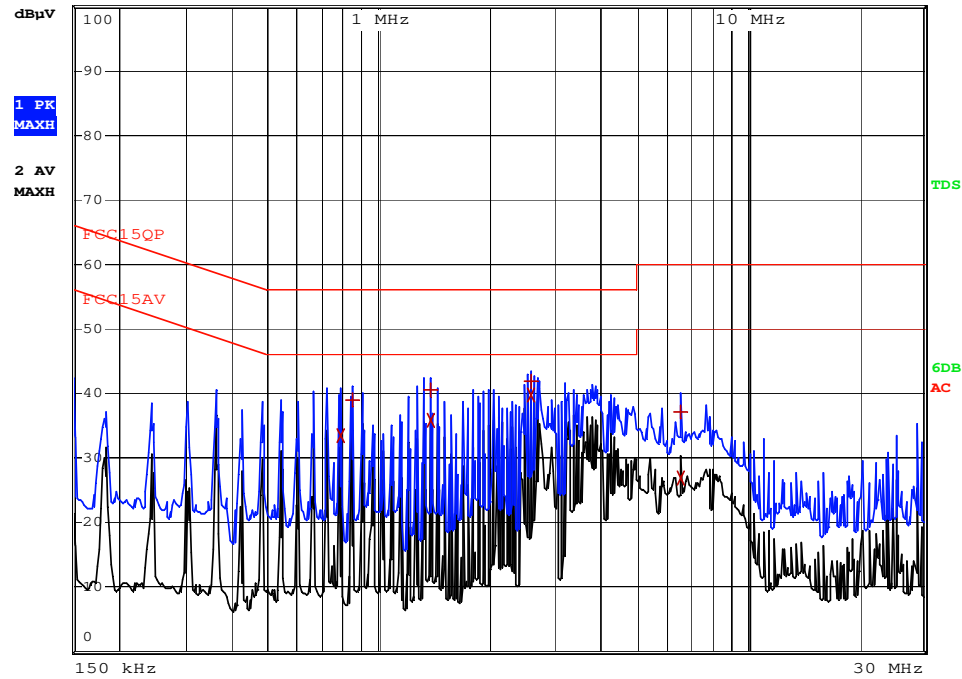
Remark:

1. Corr. (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Level (dBµV) = Corr. (dB) + Read Level (dBµV)
3. Delta Limit (dB) = Level (dBµV)-Limit (dBµV)

TEST REPORT

Tested Wire: Neutral

Operation Mode: heating



EDIT PEAK LIST (Final Measurement Results)				
Trace1:	FCC15QP			
Trace2:	FCC15AV			
Trace3:	---			
TRACE	FREQUENCY	LEVEL dBµV		DELTA LIMIT dB
2 Average	786 kHz	33.41	L1	-12.58
1 Quasi Peak	846 kHz	38.95	L1	-17.04
1 Quasi Peak	1.386 MHz	40.68	L1	-15.31
2 Average	1.386 MHz	35.74	L1	-10.25
1 Quasi Peak	2.594 MHz	41.82	L1	-14.18
2 Average	2.594 MHz	39.65	L1	-6.34
1 Quasi Peak	6.59 MHz	37.06	L1	-22.93
2 Average	6.59 MHz	26.98	L1	-23.01

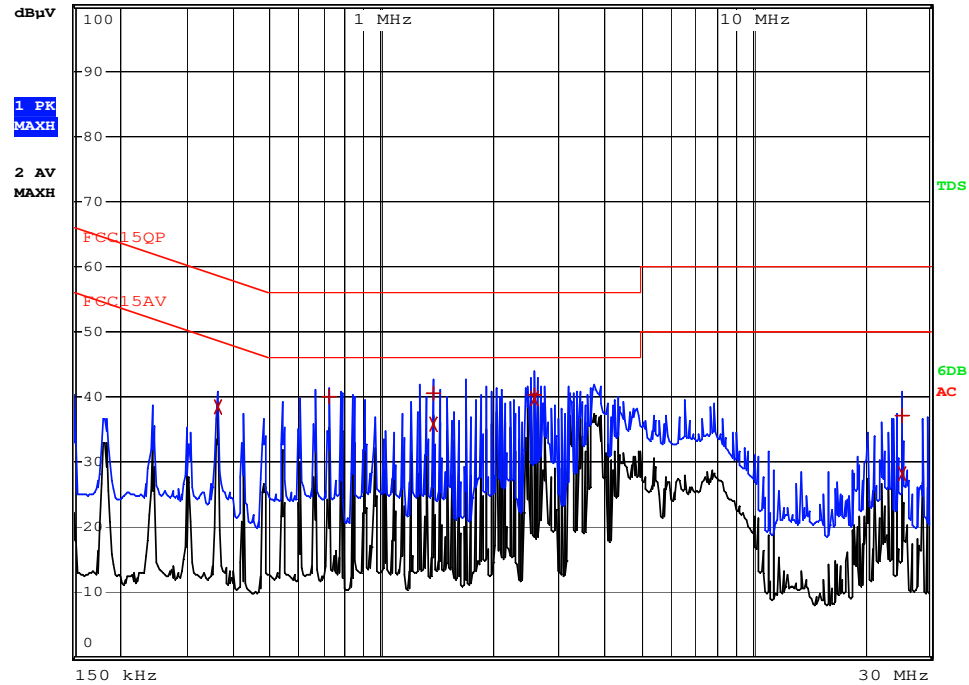
Remark:

1. Corr. (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Level (dBµV) = Corr. (dB) + Read Level (dBµV)
3. Delta Limit (dB) = Level (dBµV)-Limit (dBµV)

TEST REPORT

#5 heating zone
Tested Wire: Live

Operation Mode: heating



EDIT PEAK LIST (Final Measurement Results)				
TRACE	FREQUENCY	LEVEL dBµV		DELTA LIMIT dB
Trace1:	FCC15QP			
Trace2:	FCC15AV			
Trace3:	---			
2 Average	362 kHz	38.53	L1	-10.15
1 Quasi Peak	722 kHz	39.94	L1	-16.06
1 Quasi Peak	1.386 MHz	40.61	L1	-15.38
2 Average	1.386 MHz	35.93	L1	-10.06
2 Average	2.59 MHz	39.68	L1	-6.31
1 Quasi Peak	2.594 MHz	40.32	L1	-15.67
1 Quasi Peak	25.41 MHz	37.26	L1	-22.74
2 Average	25.41 MHz	28.13	L1	-21.86

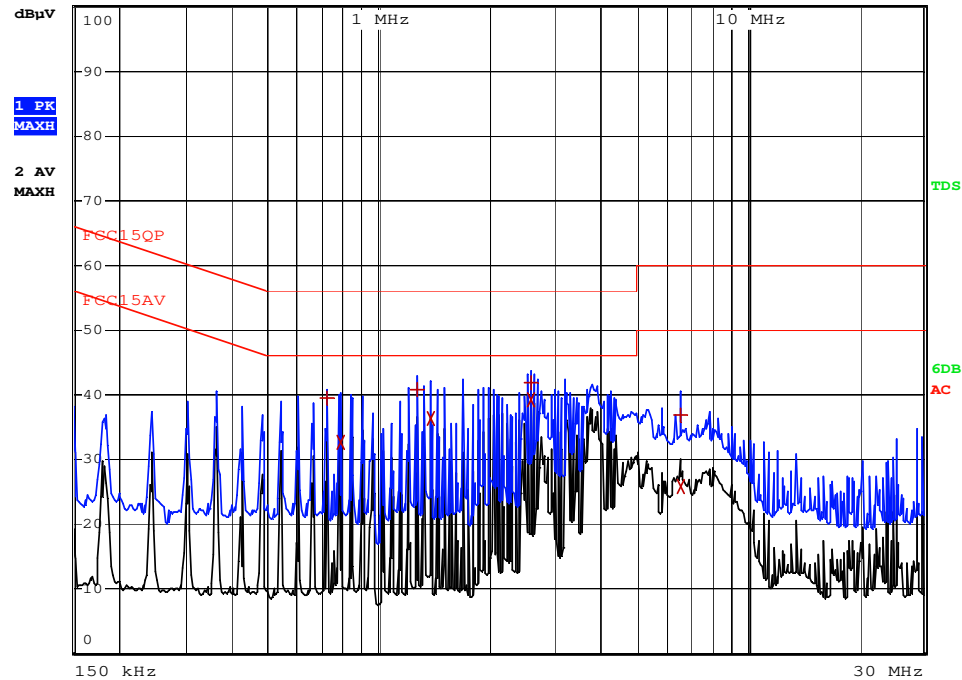
Remark:

1. Corr. (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Level (dBµV) = Corr. (dB) + Read Level (dBµV)
3. Delta Limit (dB) = Level (dBµV)-Limit (dBµV)

TEST REPORT

Tested Wire: Neutral

Operation Mode: heating



EDIT PEAK LIST (Final Measurement Results)				
TRACE		FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
Trace1:	FCC15QP			
Trace2:	FCC15AV			
Trace3:	---			
1	Quasi Peak	722 kHz	39.62 L1	-16.37
2	Average	786 kHz	32.80 L1	-13.19
1	Quasi Peak	1.266 MHz	40.72 L1	-15.27
2	Average	1.386 MHz	36.22 L1	-9.77
1	Quasi Peak	2.59 MHz	41.85 L1	-14.14
2	Average	2.59 MHz	39.27 L1	-6.72
1	Quasi Peak	6.59 MHz	36.81 L1	-23.18
2	Average	6.59 MHz	25.79 L1	-24.20

Remark:

1. Corr. (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Level (dBµV) = Corr. (dB) + Read Level (dBµV)
3. Delta Limit (dB) = Level (dBµV)-Limit (dBµV)

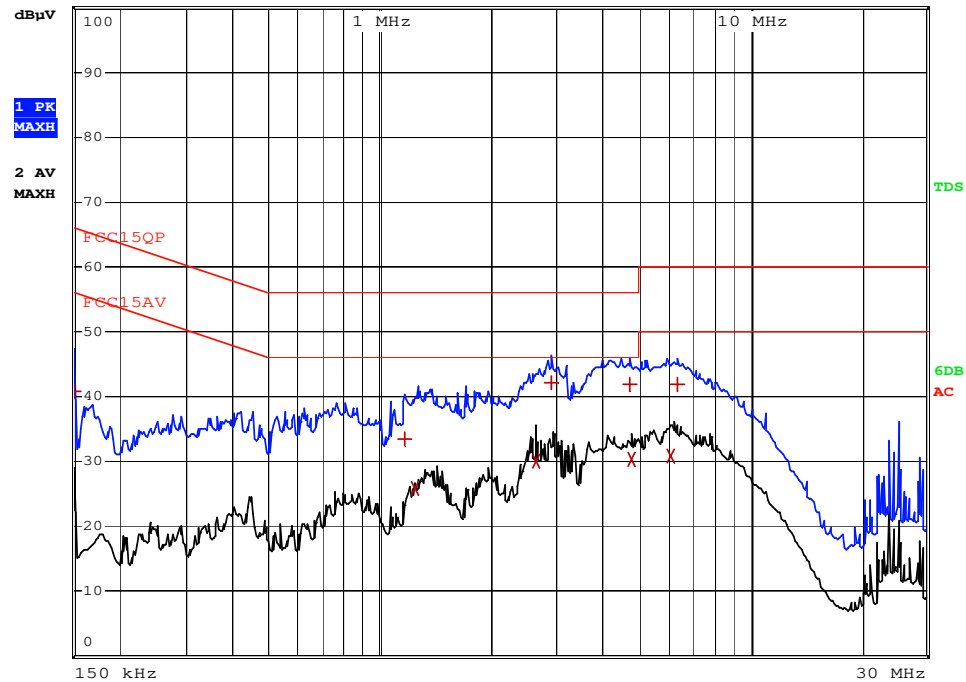
TEST REPORT

Model: GK-CF246404

#1 heating zone

Tested Wire: Live

Operation Mode: heating



EDIT PEAK LIST (Final Measurement Results)				
TRACE		FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
Trace1:	FCC15QP			
Trace2:	FCC15AV			
Trace3:	---			
1	Quasi Peak	150 kHz	40.69 L1	-25.30
1	Quasi Peak	1.166 MHz	33.43 L1	-22.56
2	Average	1.242 MHz	25.78 L1	-20.21
2	Average	2.638 MHz	30.03 L1	-15.96
1	Quasi Peak	2.902 MHz	42.03 L1	-13.96
1	Quasi Peak	4.73 MHz	41.78 L1	-14.21
2	Average	4.802 MHz	30.24 L1	-15.75
2	Average	6.142 MHz	30.91 L1	-19.08
1	Quasi Peak	6.378 MHz	41.86 L1	-18.13

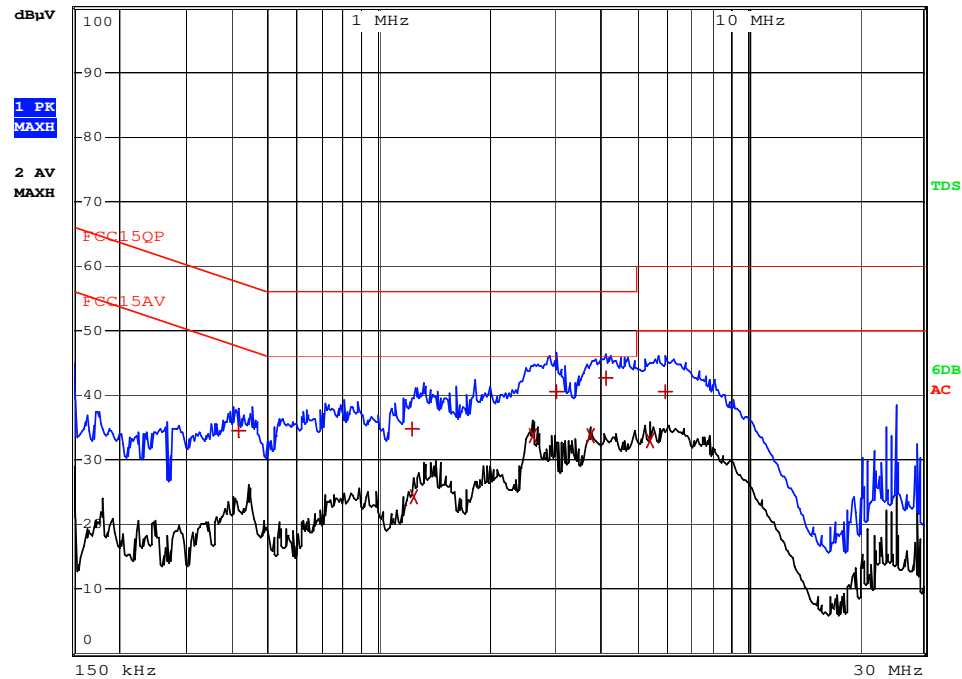
Remark:

1. Corr. (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Level (dBµV) = Corr. (dB) + Read Level (dBµV)
3. Delta Limit (dB) = Level (dBµV)-Limit (dBµV)

TEST REPORT

Tested Wire: Neutral

Operation Mode: heating



EDIT PEAK LIST (Final Measurement Results)				
TRACE	FREQUENCY	LEVEL dBµV	DELTA	LIMIT dB
Trace1:	FCC15QP			
Trace2:	FCC15AV			
Trace3:	---			
1	Quasi Peak	414 kHz	34.64	L1
1	Quasi Peak	1.234 MHz	34.86	L1
2	Average	1.246 MHz	24.22	L1
2	Average	2.606 MHz	33.82	L1
1	Quasi Peak	3.05 MHz	40.42	L1
2	Average	3.738 MHz	33.84	L1
1	Quasi Peak	4.134 MHz	42.74	L1
2	Average	5.462 MHz	33.01	L1
1	Quasi Peak	6.014 MHz	40.60	L1

Remark:

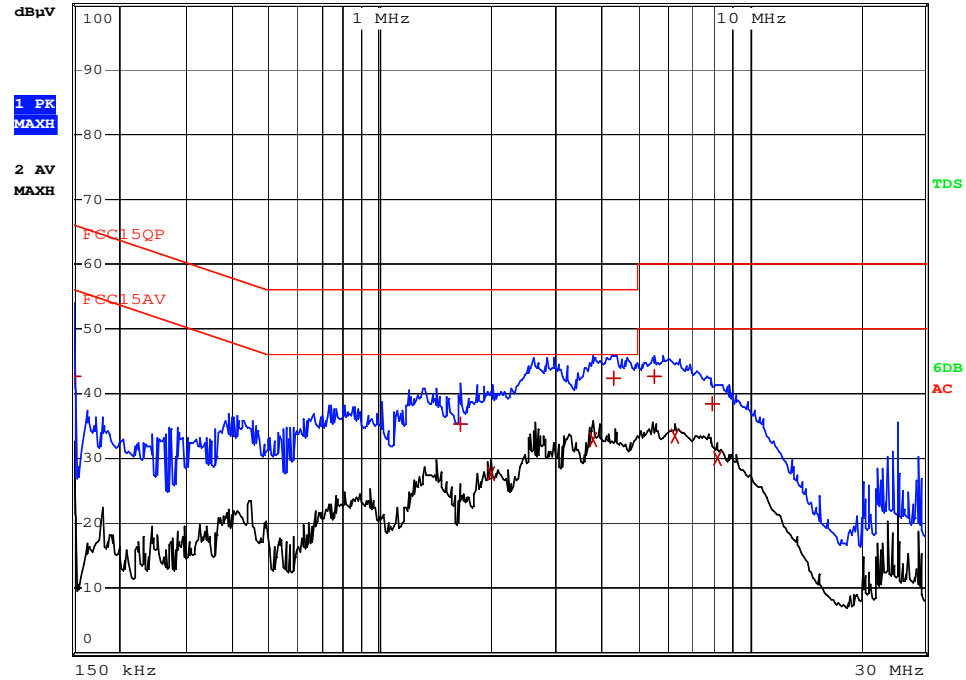
1. Corr. (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Level (dBµV) = Corr. (dB) + Read Level (dBµV)
3. Delta Limit (dB) = Level (dBµV)-Limit (dBµV)

TEST REPORT

#2 heating zone

Tested Wire: Live

Operation Mode: heating



EDIT PEAK LIST (Final Measurement Results)					
TRACE		FREQUENCY	LEVEL dBµV		DELTA LIMIT dB
Trace1:	FCC15QP				
Trace2:	FCC15AV				
Trace3:	---				
1	Quasi Peak	150 kHz	42.73	L1	-23.26
1	Quasi Peak	1.658 MHz	35.27	L1	-20.72
2	Average	2.014 MHz	27.65	L1	-18.34
2	Average	3.794 MHz	33.02	L1	-12.97
1	Quasi Peak	4.29 MHz	42.40	L1	-13.59
1	Quasi Peak	5.574 MHz	42.70	L1	-17.29
2	Average	6.31 MHz	33.51	L1	-16.48
1	Quasi Peak	7.982 MHz	38.47	L1	-21.52
2	Average	8.254 MHz	30.18	L1	-19.81

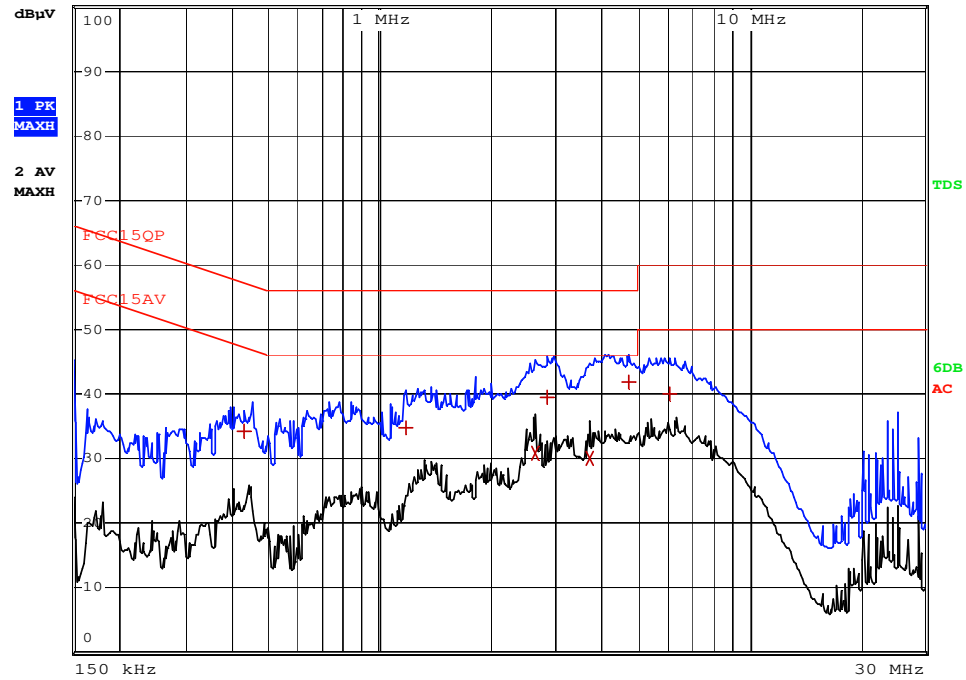
Remark:

1. Corr. (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Level (dBµV) = Corr. (dB) + Read Level (dBµV)
3. Delta Limit (dB) = Level (dBµV)-Limit (dBµV)

TEST REPORT

Tested Wire: Neutral

Operation Mode: heating



EDIT PEAK LIST (Final Measurement Results)					
Trace1:		FCC15QP			
Trace2:		FCC15AV			
Trace3:		---			
TRACE	FREQUENCY	LEVEL dBµV			DELTA LIMIT dB
1 Quasi Peak	430 kHz	34.38	L1		-22.87
1 Quasi Peak	1.182 MHz	34.72	L1		-21.27
2 Average	2.646 MHz	30.92	L1		-15.07
1 Quasi Peak	2.838 MHz	39.45	L1		-16.54
2 Average	3.734 MHz	29.97	L1		-16.02
1 Quasi Peak	4.718 MHz	41.94	L1		-14.05
1 Quasi Peak	6.118 MHz	39.95	L1		-20.04

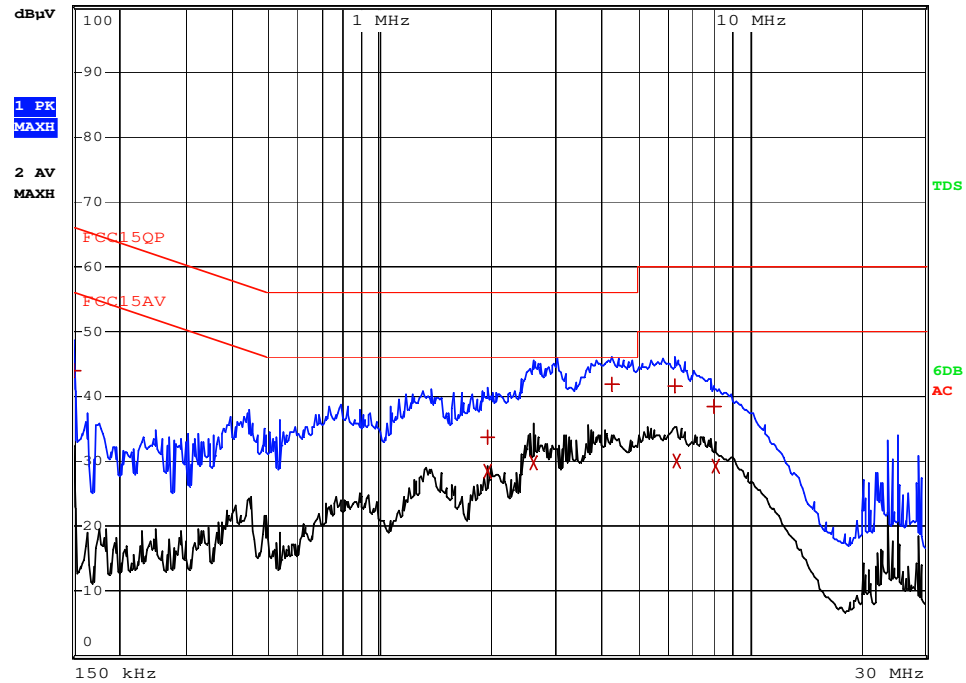
Remark:

1. Corr. (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Level (dBµV) = Corr. (dB) + Read Level (dBµV)
3. Delta Limit (dB) = Level (dBµV)-Limit (dBµV)

TEST REPORT

#3 heating zone
Tested Wire: Live

Operation Mode: heating



EDIT PEAK LIST (Final Measurement Results)				
TRACE	FREQUENCY	LEVEL dBµV		DELTA LIMIT dB
Trace1:	FCC15QP			
Trace2:	FCC15AV			
Trace3:	---			
1 Quasi Peak	150 kHz	44.01	L1	-21.98
1 Quasi Peak	1.966 MHz	33.62	L1	-22.37
2 Average	1.97 MHz	28.39	L1	-17.60
2 Average	2.606 MHz	29.76	L1	-16.23
1 Quasi Peak	4.278 MHz	41.87	L1	-14.13
1 Quasi Peak	6.31 MHz	41.50	L1	-18.49
2 Average	6.39 MHz	30.05	L1	-19.94
1 Quasi Peak	8.038 MHz	38.35	L1	-21.64
2 Average	8.158 MHz	29.39	L1	-20.60

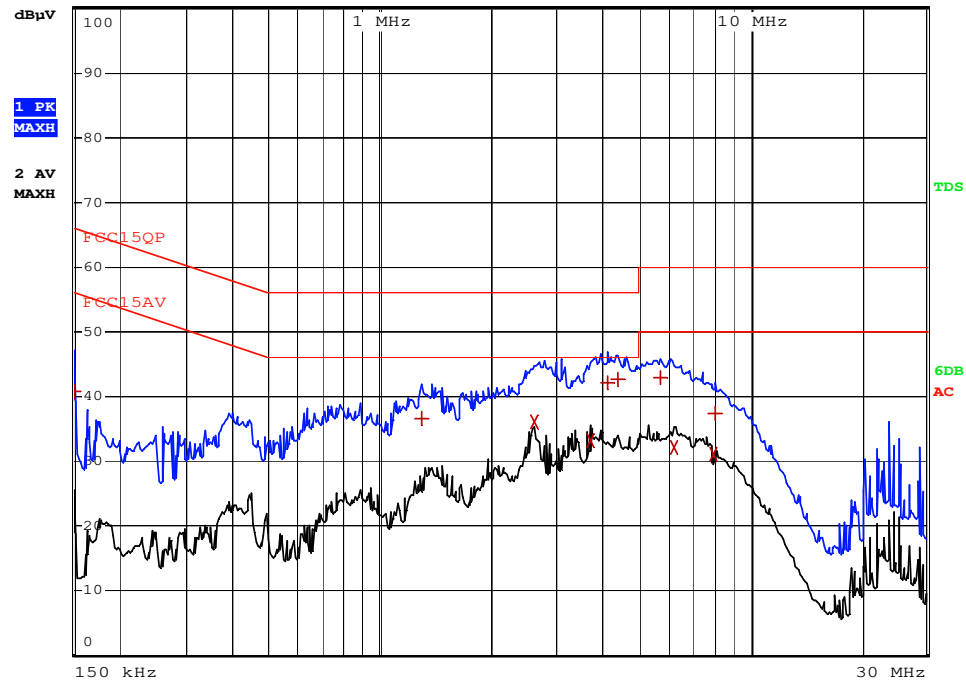
Remark:

1. Corr. (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Level (dBµV) = Corr. (dB) + Read Level (dBµV)
3. Delta Limit (dB) = Level (dBµV)-Limit (dBµV)

TEST REPORT

Tested Wire: Neutral

Operation Mode: heating



EDIT PEAK LIST (Final Measurement Results)					
Trace1:		FCC15QP			
Trace2:		FCC15AV			
Trace3:		---			
TRACE		FREQUENCY	LEVEL	dBµV	DELTA LIMIT
1	Quasi Peak	150 kHz	40.76	L1	-25.23
1	Quasi Peak	1.302 MHz	36.56	L1	-19.43
2	Average	2.618 MHz	36.06	L1	-9.93
2	Average	3.702 MHz	33.26	L1	-12.73
1	Quasi Peak	4.146 MHz	42.17	L1	-13.82
1	Quasi Peak	4.394 MHz	42.63	L1	-13.37
1	Quasi Peak	5.73 MHz	42.81	L1	-17.18
2	Average	6.27 MHz	32.03	L1	-17.97
2	Average	7.978 MHz	31.08	L1	-18.91
1	Quasi Peak	8.09 MHz	37.43	L1	-22.56

Remark:

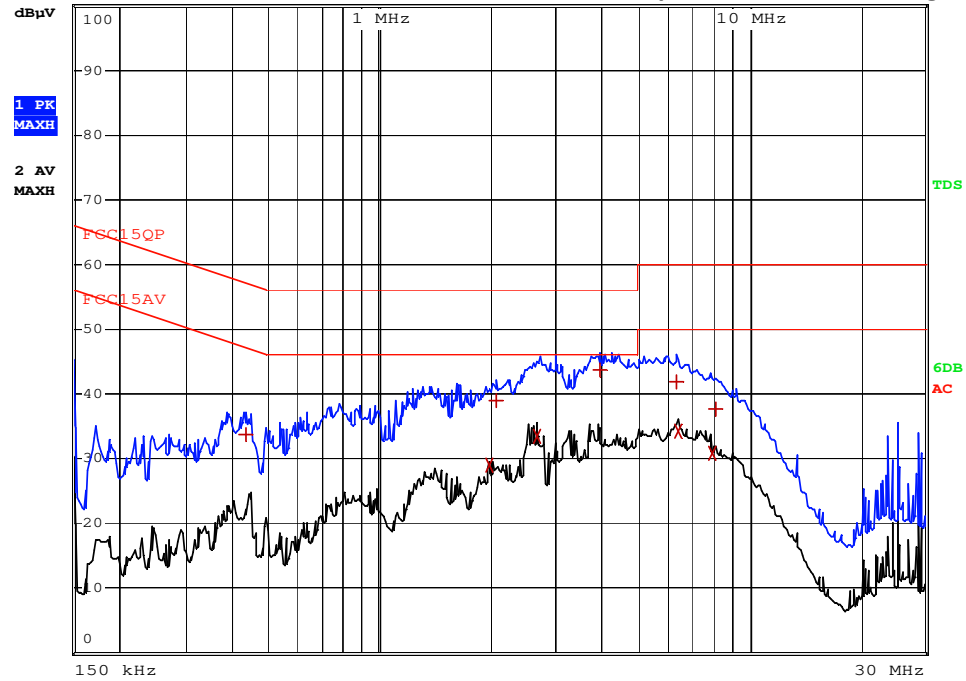
1. Corr. (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Level (dBµV) = Corr. (dB) + Read Level (dBµV)
3. Delta Limit (dB) = Level (dBµV)-Limit (dBµV)

TEST REPORT

#4 heating zone

Tested Wire: Live

Operation Mode: heating



EDIT PEAK LIST (Final Measurement Results)					
TRACE		FREQUENCY	LEVEL	dBµV	DELTA LIMIT
Trace1:	FCC15QP				
Trace2:	FCC15AV				
Trace3:	---				
TRACE	FREQUENCY	LEVEL	dBµV	DELTA	LIMIT
1 Quasi Peak	434 kHz	33.62	L1	-23.55	
2 Average	1.978 MHz	28.88	L1	-17.11	
1 Quasi Peak	2.078 MHz	39.09	L1	-16.90	
2 Average	2.662 MHz	33.38	L1	-12.61	
1 Quasi Peak	3.958 MHz	43.77	L1	-12.22	
1 Quasi Peak	6.378 MHz	41.78	L1	-18.21	
2 Average	6.418 MHz	34.36	L1	-15.63	
2 Average	7.99 MHz	30.73	L1	-19.27	
1 Quasi Peak	8.186 MHz	37.62	L1	-22.37	

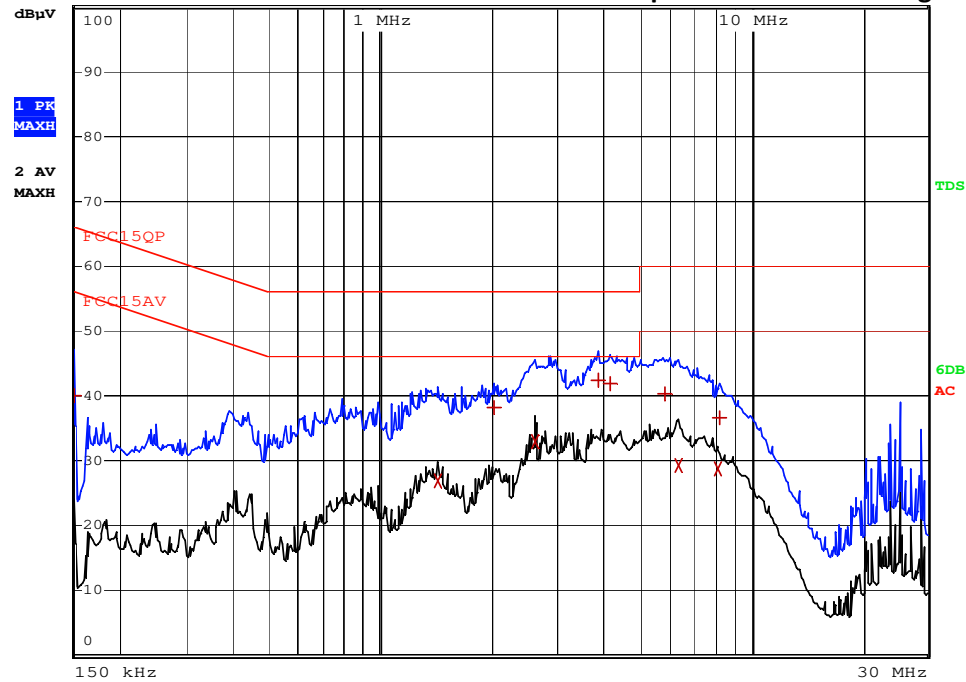
Remark:

1. Corr. (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Level (dBµV) = Corr. (dB) + Read Level (dBµV)
3. Delta Limit (dB) = Level (dBµV)-Limit (dBµV)

TEST REPORT

Tested Wire: Neutral

Operation Mode: heating



EDIT PEAK LIST (Final Measurement Results)				
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB	
Trace1:	FCC15QP			
Trace2:	FCC15AV			
Trace3:	---			
1	Quasi Peak	150 kHz	39.94 L1	-26.06
2	Average	1.43 MHz	26.91 L1	-19.09
1	Quasi Peak	2.022 MHz	38.13 L1	-17.86
2	Average	2.614 MHz	32.96 L1	-13.03
1	Quasi Peak	3.894 MHz	42.43 L1	-13.56
1	Quasi Peak	4.182 MHz	41.97 L1	-14.02
1	Quasi Peak	5.862 MHz	40.35 L1	-19.64
2	Average	6.354 MHz	29.26 L1	-20.73
2	Average	8.134 MHz	28.65 L1	-21.34
1	Quasi Peak	8.262 MHz	36.68 L1	-23.31

Remark:

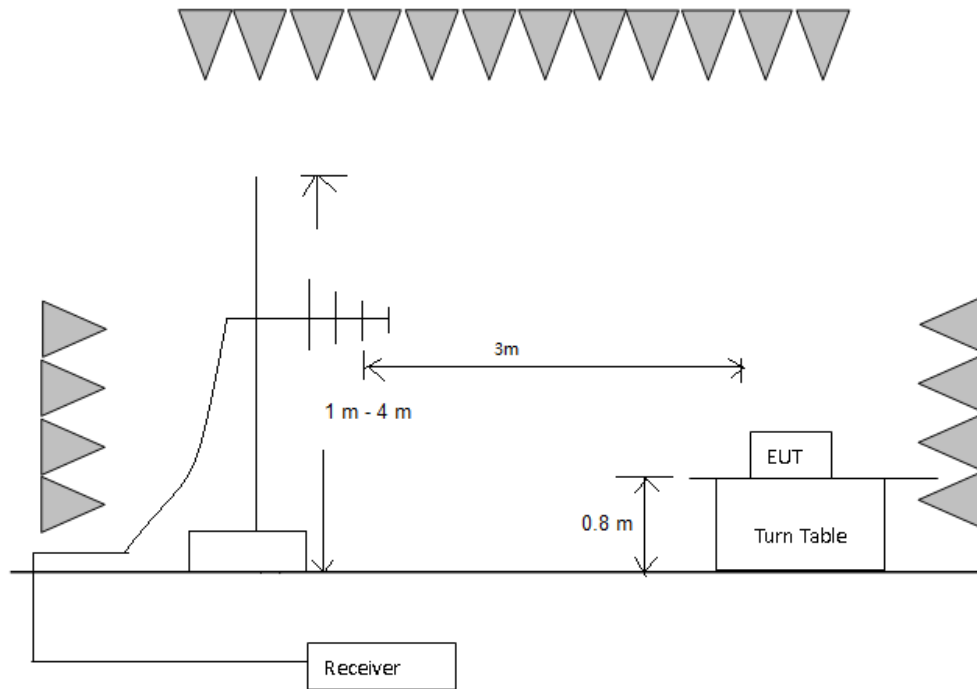
1. Corr. (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Level (dBµV) = Corr. (dB) + Read Level (dBµV)
3. Delta Limit (dB) = Level (dBµV)-Limit (dBµV)

TEST REPORT

5.2 Radiated Emission 30 MHz -1000 MHz

Test Result: Pass

5.2.1 Block Diagram of Test Setup



5.2.2 Test Setup and Procedure

The measurement was applied in a semi-anechoic chamber. The EUT and simulators were placed on a 0.8 m high foamed table above the horizontal metal ground plane. The turn table rotated 360 degrees to determine the position of the maximum emission level. The EUT was set 3 meters away from the receiving antenna which was mounted on an antenna mask. The antenna moved up and down between from 1 meter to 4 meters to find out the maximum emission level.

Broadband antenna was used as receiving antenna. Both horizontal and vertical polarization of the antenna was set on measurement. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4 requirement during radiated test. The bandwidth setting on R&S Test Receiver was 120 kHz.

For an unintentional radiator, including a digital device, the spectrum shall be investigated from the lowest radio frequency signal generated or used in the device, without going below the lowest frequency for which a radiated emission limit is specified, up to the frequency shown in the following table:

Highest frequency generated or used in the device or on which the device operates or	Upper Frequency of Radiated Measurement
--	---

TEST REPORT

tunes (MHz)	
Below 1.705 MHz	30MHz
1.705 MHz – 108 MHz	1 GHz
108 MHz – 500 MHz	2 GHz
500 MHz – 1 GHz	5 GHz
Above 1 GHz	5th harmonic of the highest frequency or 40 GHz, whichever is lower.
At transitional frequencies the lower limit applies.	

Remark: Radiated Emission was performed from 30 MHz to 1 GHz.

5.2.3 Limit

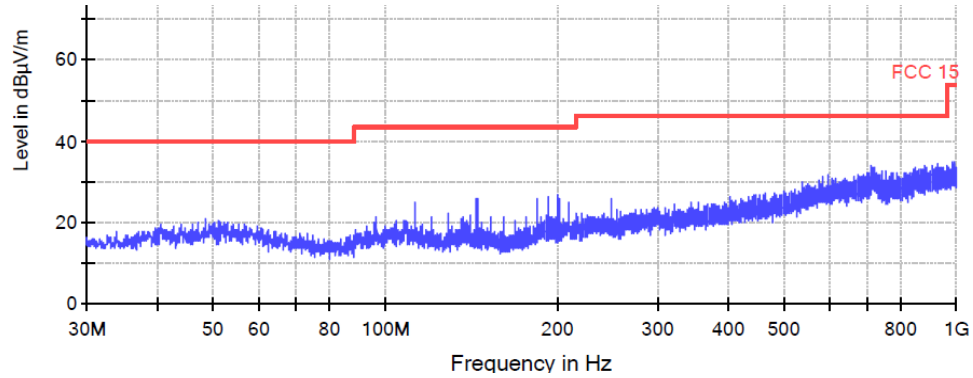
Class B limit at 3m test distance:

Frequency range MHz	Quasi-peak limits dB (μ V/m)
30 to 88	40
88 to 216	43.5
216 to 960	46
960 to 1000	54
At transitional frequencies the lower limit applies.	

TEST REPORT

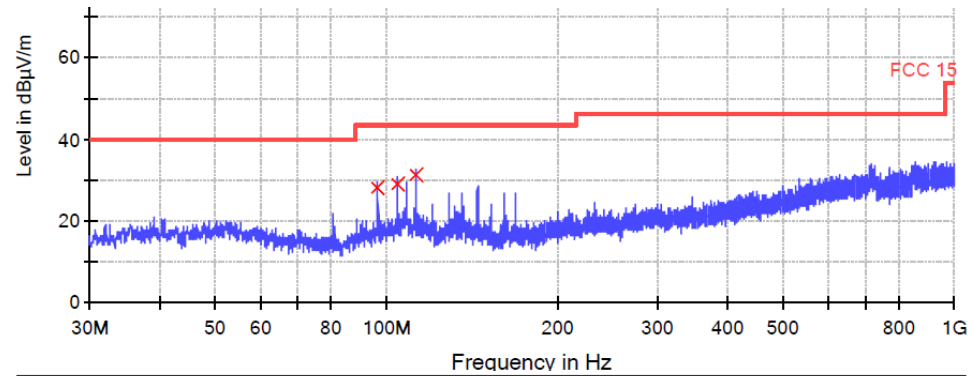
5.2.4 Test Data and Curve

Operation Mode: heating
Model: GK-CD122402
#1 heating zone
Horizontal



All emission levels are more than 6 dB below the limit.

Vertical



Frequency (MHz)	Quasi Peak (dBµV/m)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
96.560000	28.1	120.000	V	11.9	15.4	43.5
104.560000	29.1	120.000	V	12.2	14.4	43.5
112.640000	31.2	120.000	V	11.9	12.3	43.5

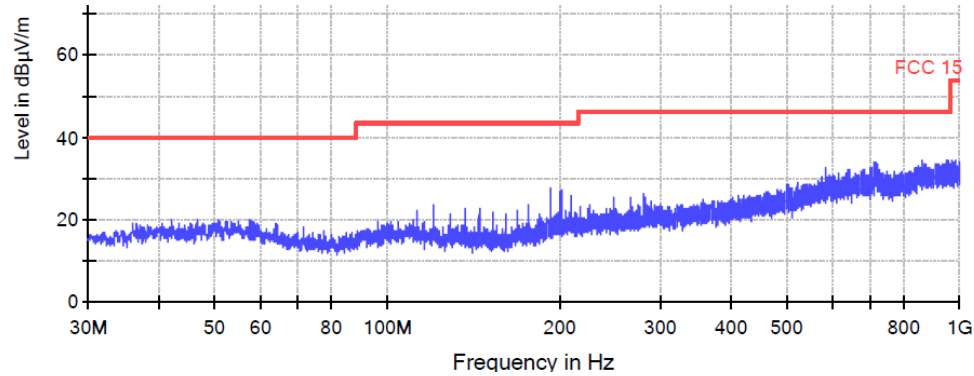
Remark:

1. Corr. (dB) = Antenna Factor (dB) + Cable Loss (dB)
2. Quasi Peak (dBµV/m) = Corr. (dB) + Read Level (dBµV)
3. Margin (dB) = Limit QPK (dBµV/m) – Quasi Peak (dBµV/m)

TEST REPORT

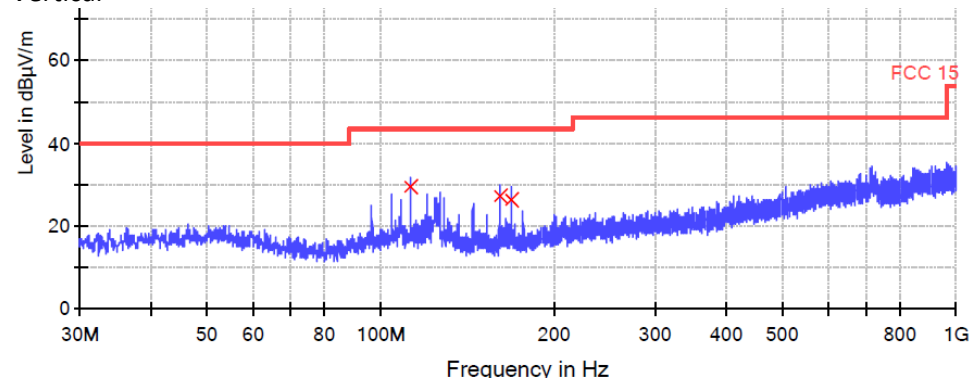
#2 heating zone

Horizontal



All emission levels are more than 6 dB below the limit.

Vertical



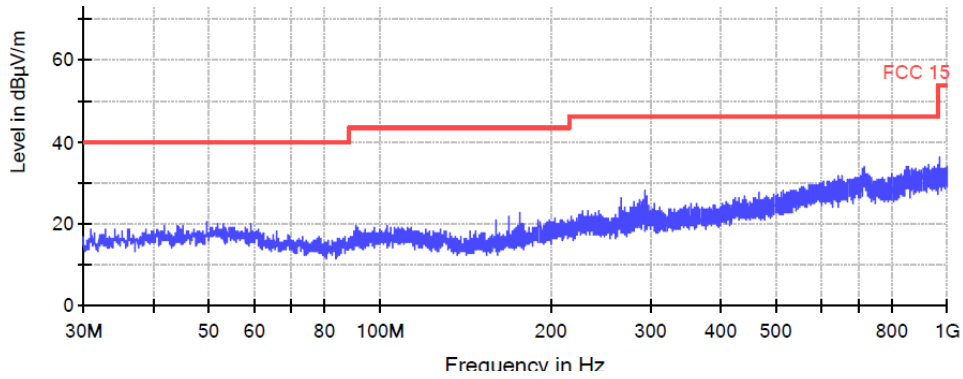
Frequency (MHz)	Quasi Peak (dBµV/m)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
112.560000	29.3	120.000	V	11.9	14.2	43.5
161.000000	27.0	120.000	V	10.3	16.5	43.5
168.960000	26.3	120.000	V	10.7	17.2	43.5

Remark:

1. Corr. (dB) = Antenna Factor (dB) + Cable Loss (dB)
2. Quasi Peak (dBµV/m) = Corr. (dB) + Read Level (dBµV)
3. Margin (dB) = Limit QPK (dBµV/m) - Quasi Peak (dBµV/m)

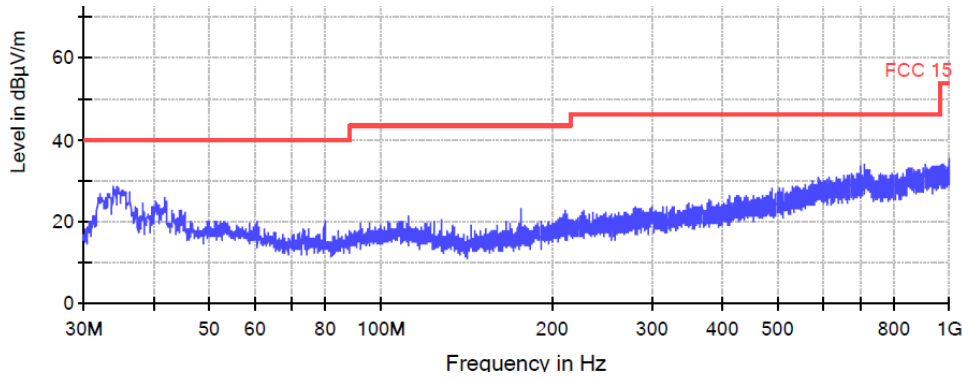
TEST REPORT

Model: GK-CV367709
#1 heating zone
Horizontal



All emission levels are more than 6 dB below the limit.

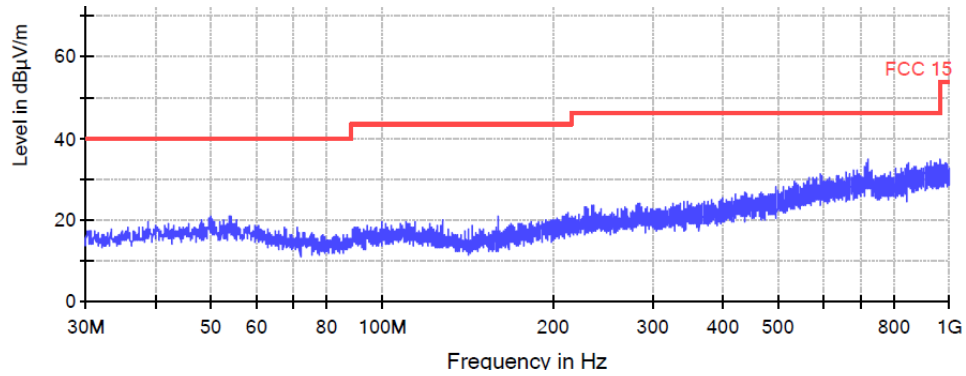
Vertical



All emission levels are more than 6 dB below the limit.

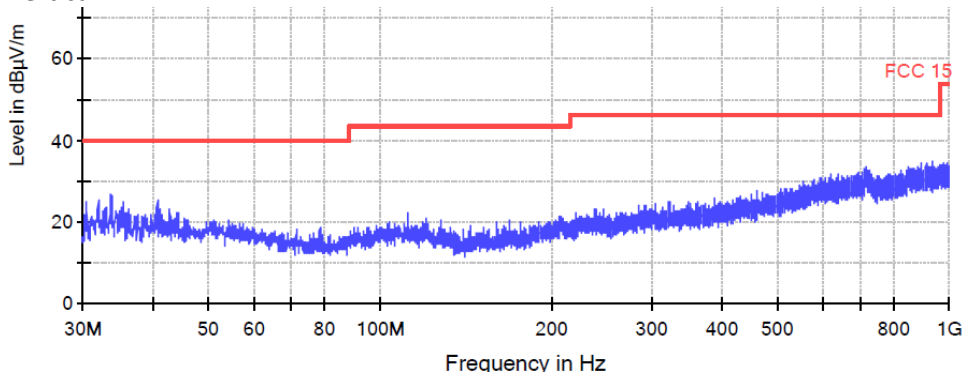
TEST REPORT

#2 heating zone
Horizontal



All emission levels are more than 6 dB below the limit.

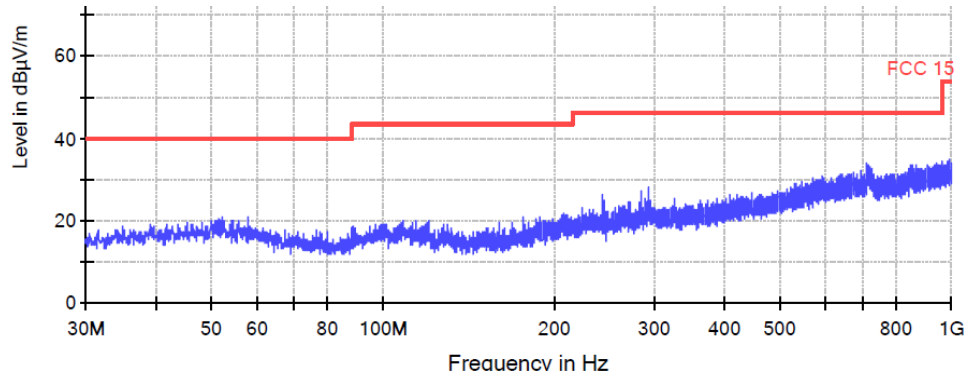
Vertical



All emission levels are more than 6 dB below the limit.

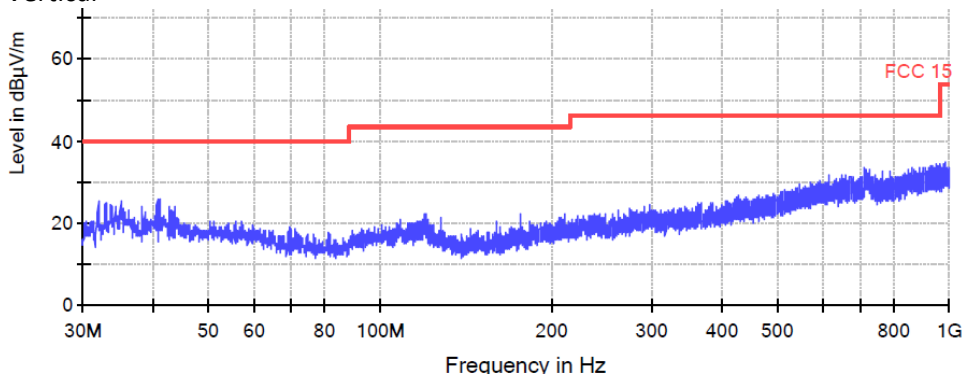
TEST REPORT

#3 heating zone
Horizontal



All emission levels are more than 6 dB below the limit.

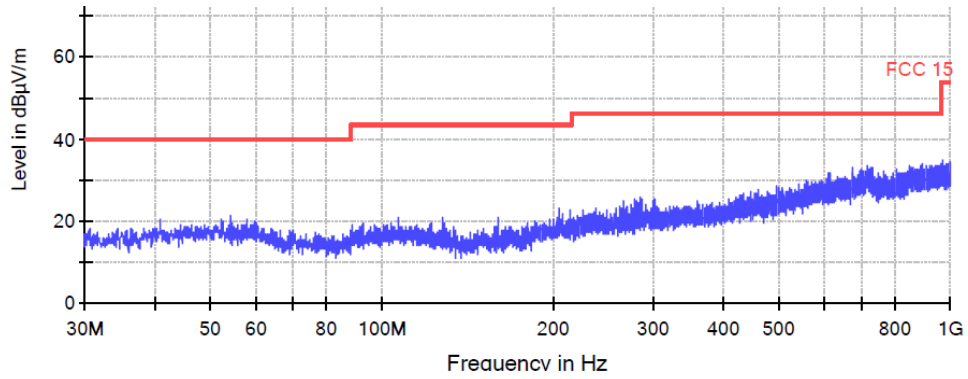
Vertical



All emission levels are more than 6 dB below the limit.

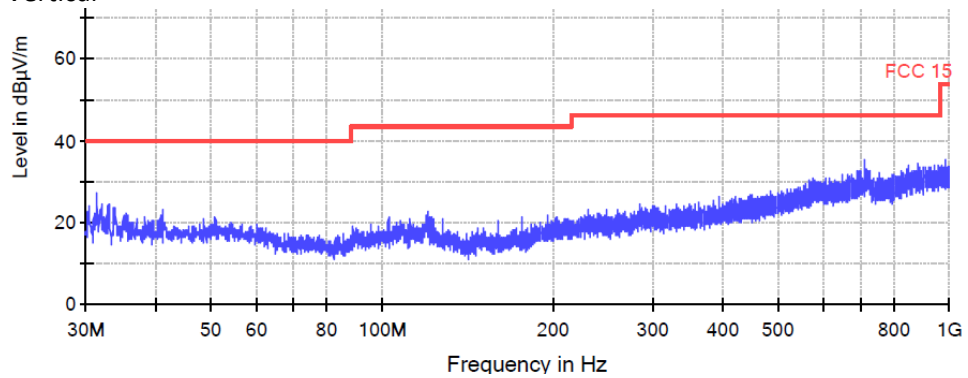
TEST REPORT

#4 heating zone
Horizontal



All emission levels are more than 6 dB below the limit.

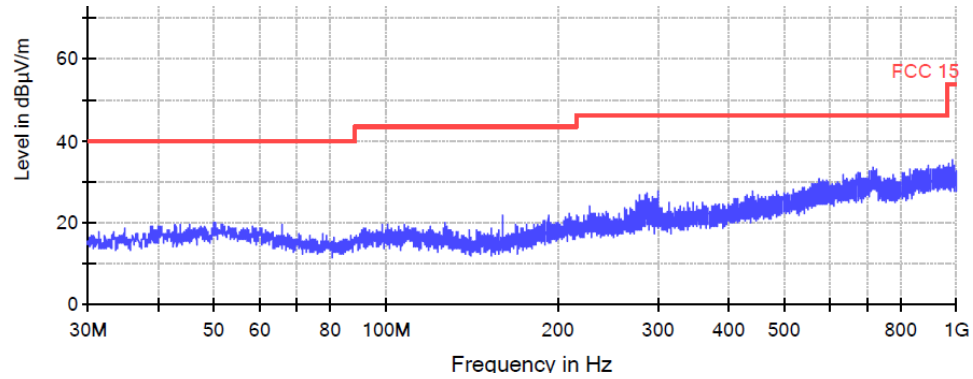
Vertical



All emission levels are more than 6 dB below the limit.

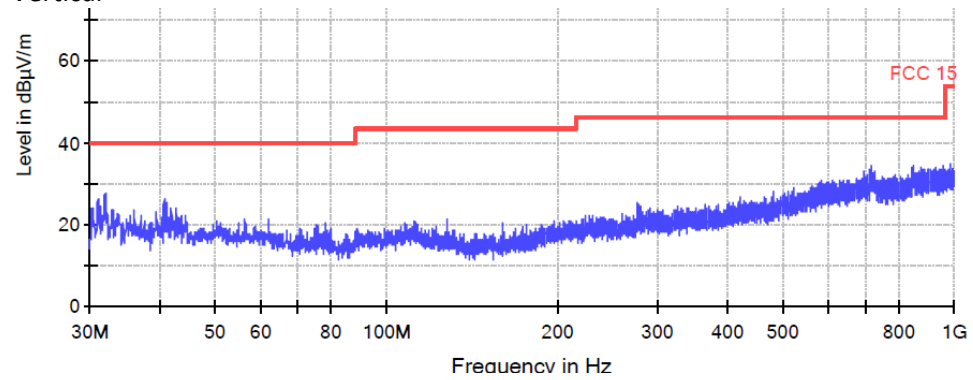
TEST REPORT

#5 heating zone
Horizontal



All emission levels are more than 6 dB below the limit.

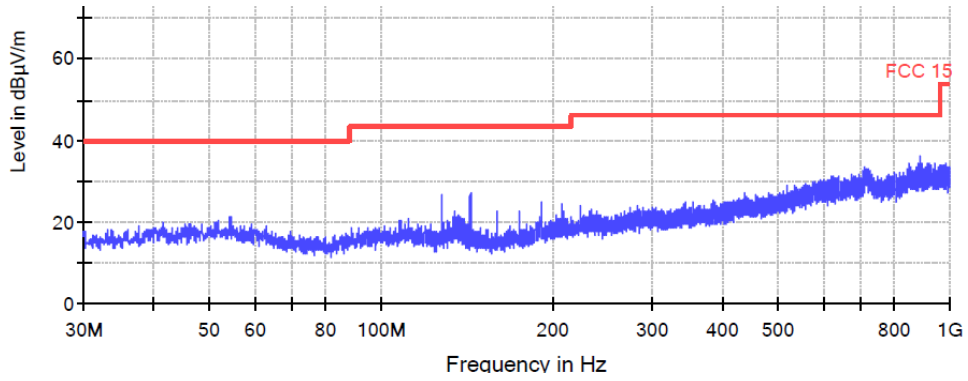
Vertical



All emission levels are more than 6 dB below the limit.

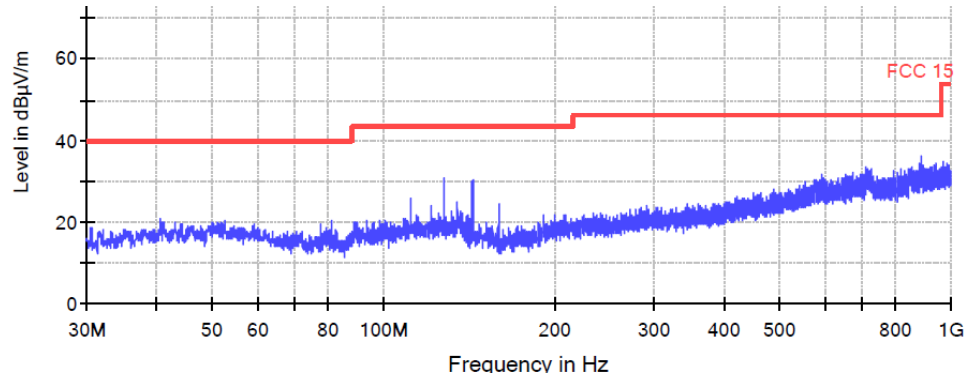
TEST REPORT

Model: GK-CF246404
#1 heating zone
Horizontal



All emission levels are more than 6 dB below the limit.

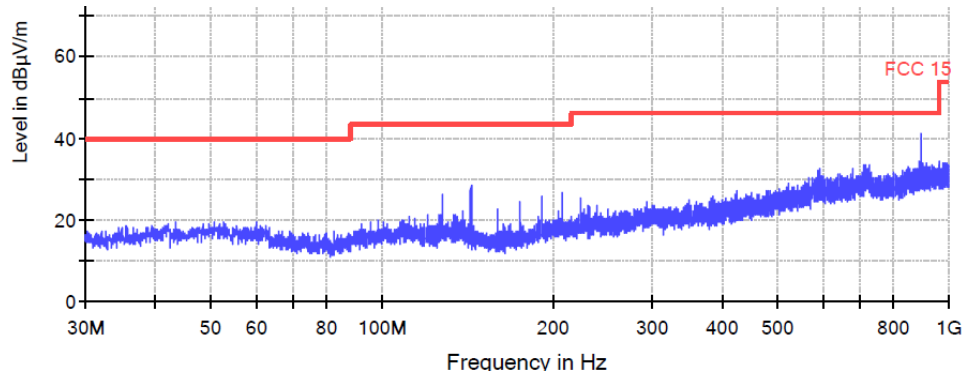
Vertical



All emission levels are more than 6 dB below the limit.

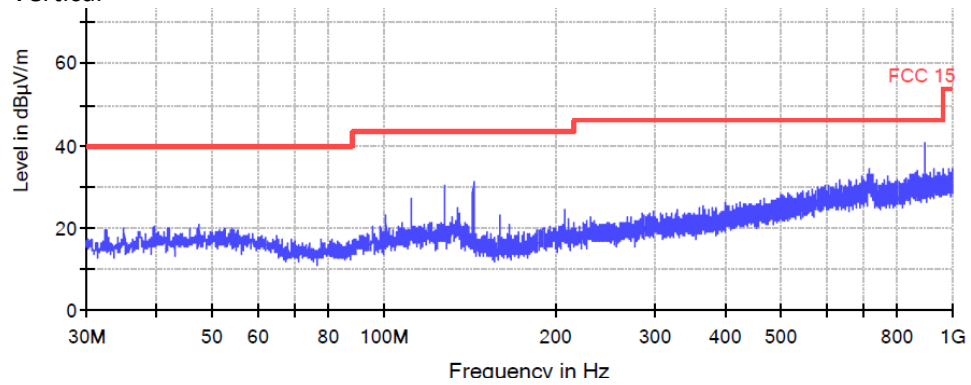
TEST REPORT

#2 heating zone
Horizontal



All emission levels are more than 6 dB below the limit.

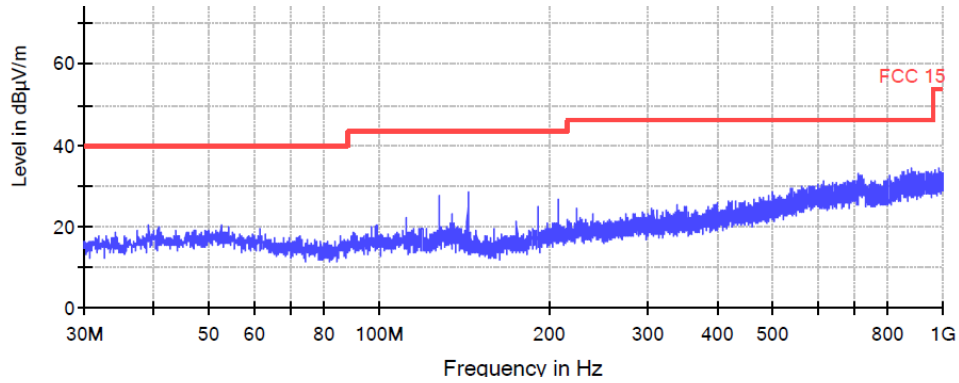
Vertical



All emission levels are more than 6 dB below the limit.

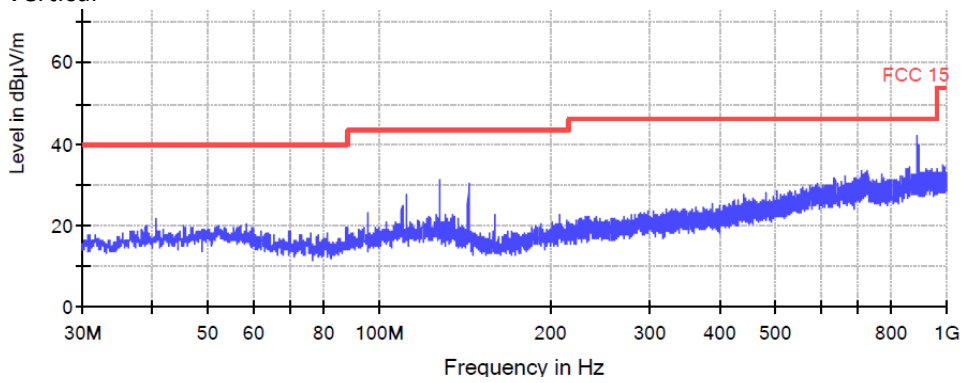
TEST REPORT

#3 heating zone
Horizontal



All emission levels are more than 6 dB below the limit.

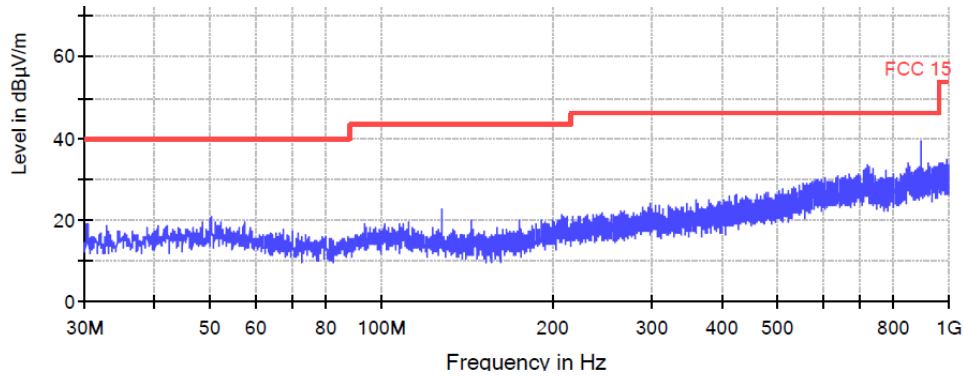
Vertical



All emission levels are more than 6 dB below the limit.

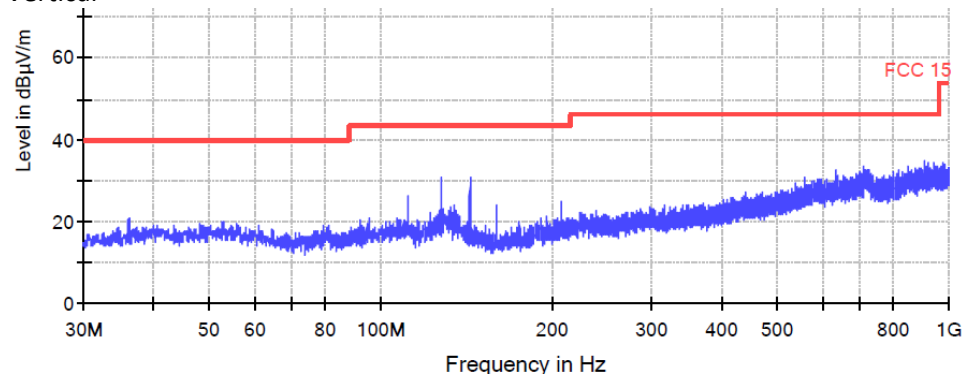
TEST REPORT

#4 heating zone
Horizontal



All emission levels are more than 6 dB below the limit.

Vertical



All emission levels are more than 6 dB below the limit.

5.3 Radiated Emission above 1 GHz

Test Result: Not Applicable

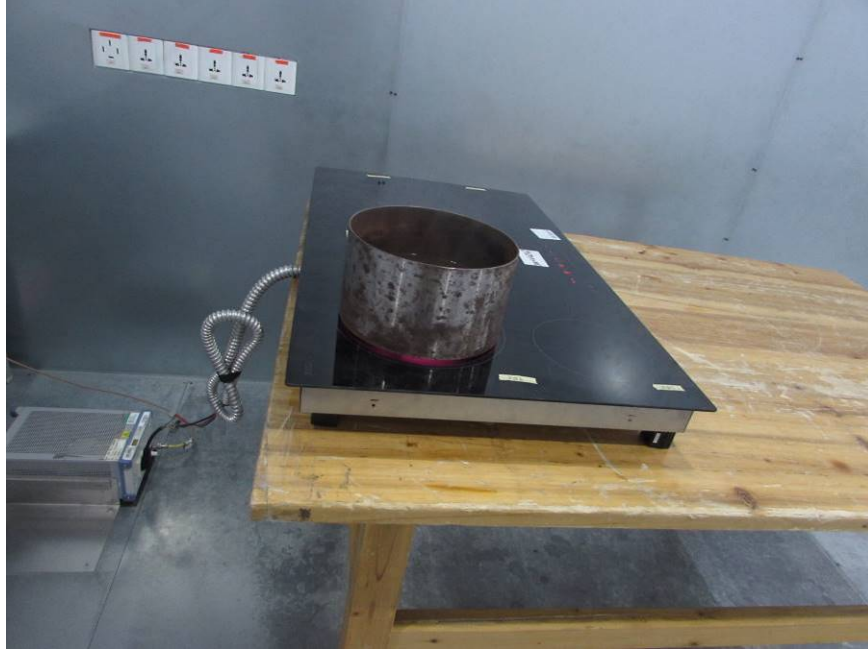
Remark:

The highest internal source of the EUT is not more than 108 MHz, so the measurement above 1000 MHz is not applicable.

TEST REPORT

6. APPENDIX I - PHOTOS OF TEST SETUP

Conducted Emission



Radiated Emission (30 MHz–1000 MHz)



TEST REPORT

7. APPENDIX II – PHOTOS OF EUT

Overall view of model GK-CD122402



Overall view of model GK-CD122405

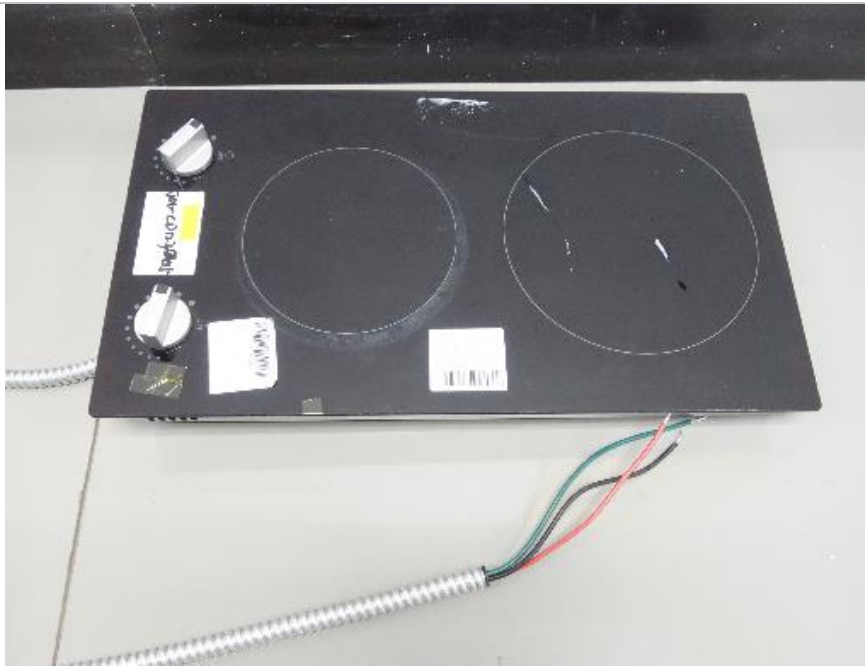


TEST REPORT

Overall view of model GK-CD123002



Overall view of model GK-CD123005



TEST REPORT

Overall view of model GK-CF246004

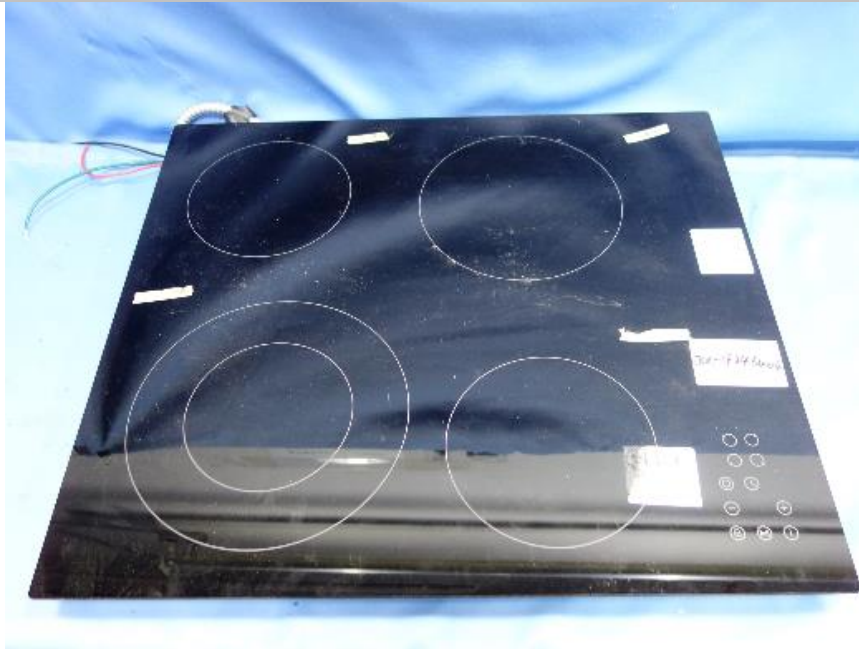


Overall view of model GK-CF246005



TEST REPORT

Overall view of model GK-CF246404



Overall view of model GK-CF246405



TEST REPORT

Overall view of model GK-CF306704



Overall view of model GK-CF306705



TEST REPORT

Overall view of model GK-CV307205



Overall view of model GK-CV307209



TEST REPORT

Overall view of model GK-CV367705

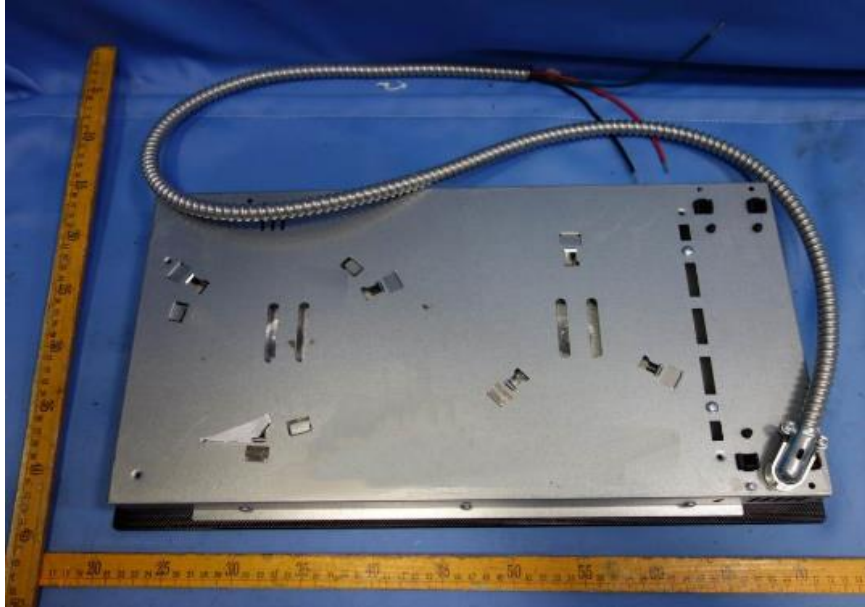


Overall view of model GK-CV367709

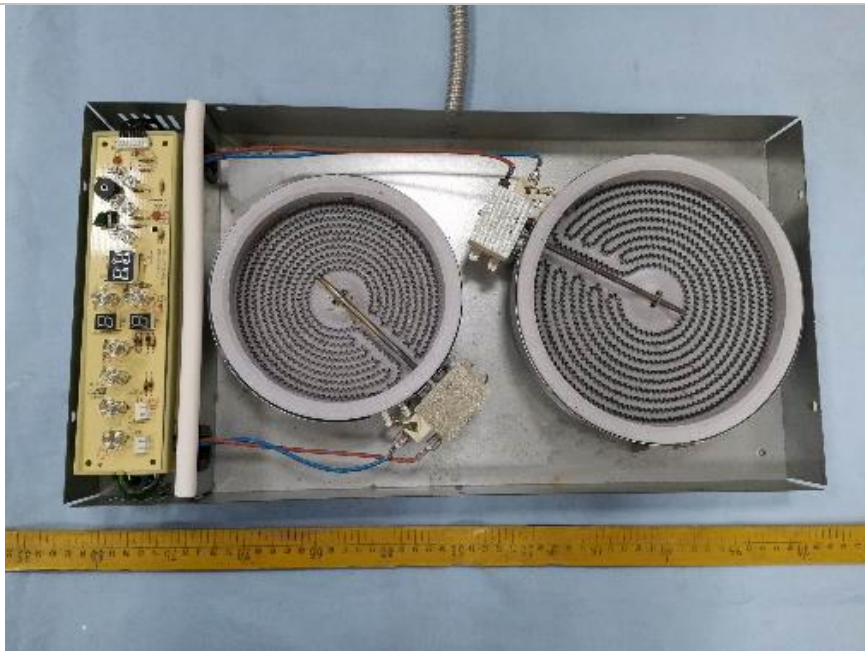


TEST REPORT

Bottom view of model GK-CD123002 (similar to model GK-CD122402)

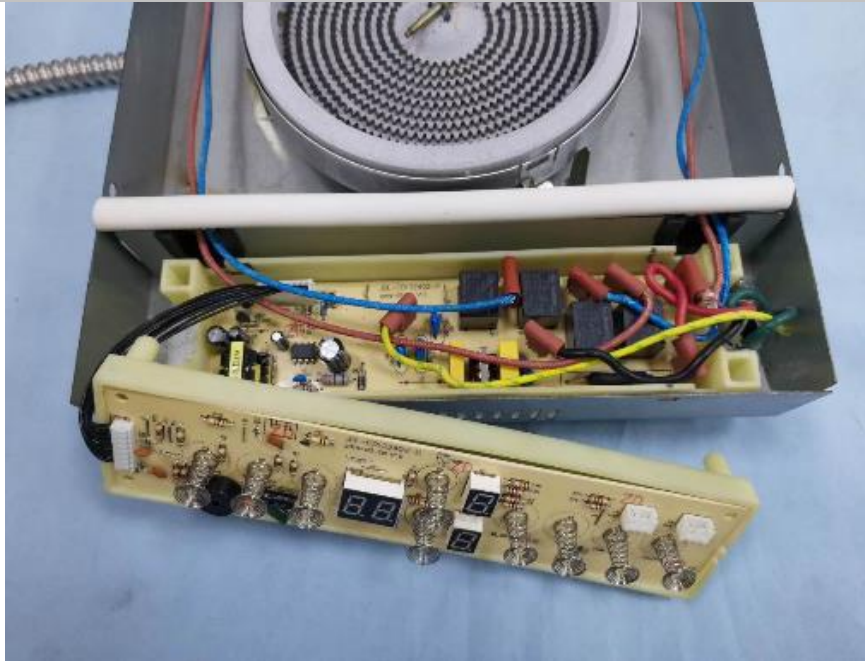


Internal view of model GK-CD123002 (similar to model GK-CD122402)

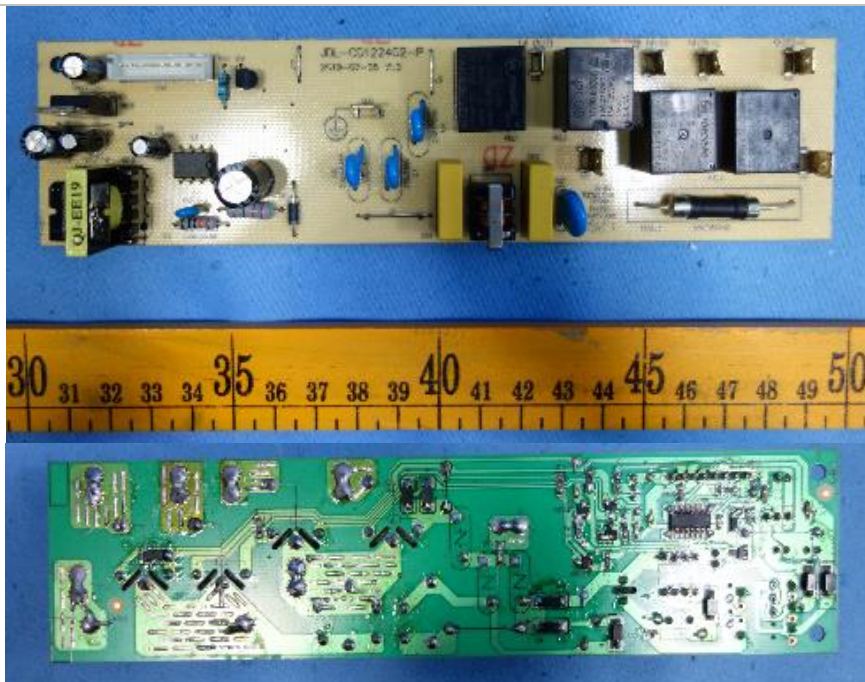


TEST REPORT

Internal view of model GK-CD123002 (similar to model GK-CD122402)

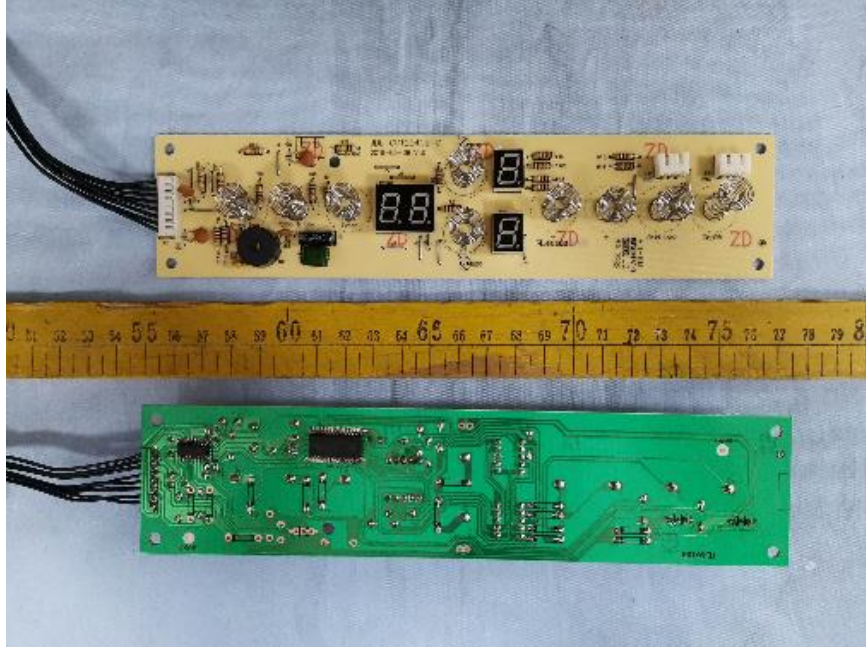


Main PCB view of model GK-CD123002 (similar to model GK-CD122402)

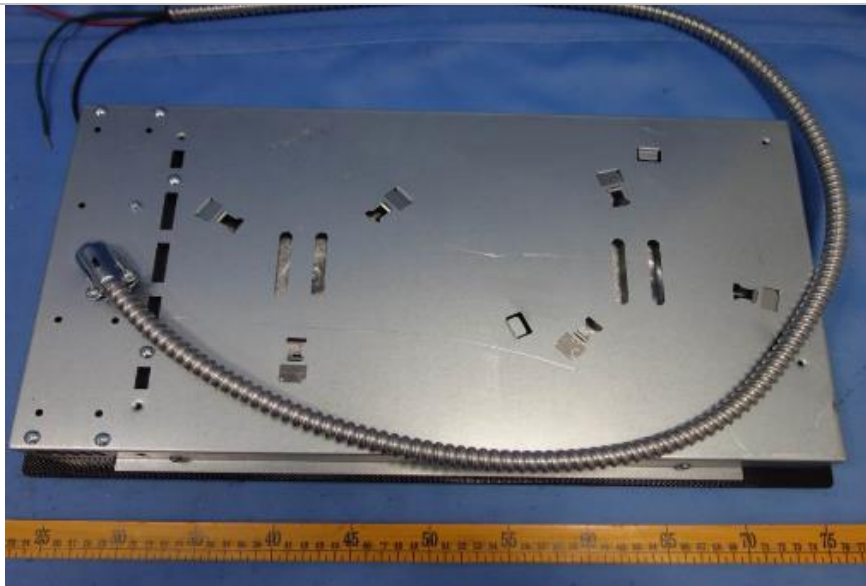


TEST REPORT

Control PCB view of model GK-CD123002 (similar to model GK-CD122402)



Bottom view of model GK-CD122405 (similar to model GK-CD123005)

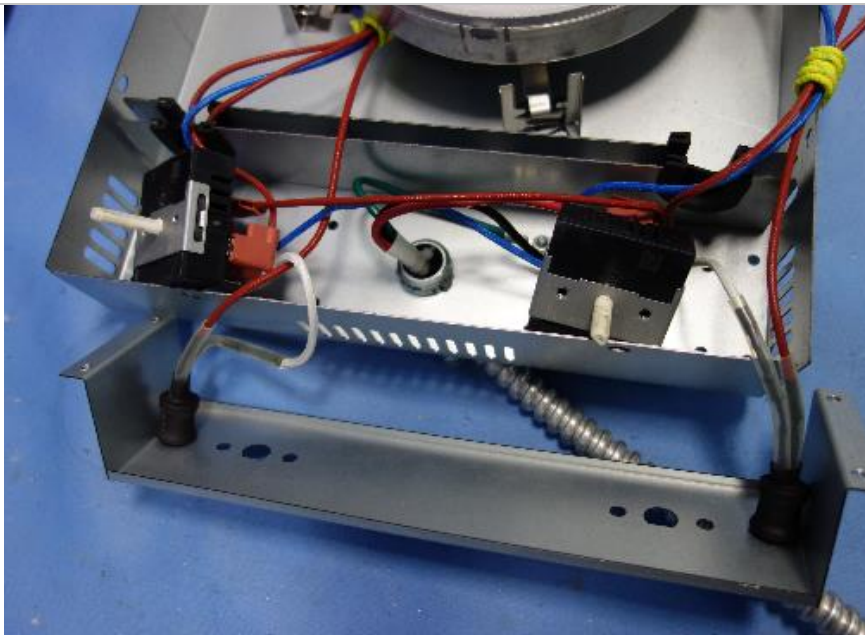


TEST REPORT

Internal view of model GK-CD122405 (similar to model GK-CD123005)



Internal view of model GK-CD122405 (similar to model GK-CD123005)

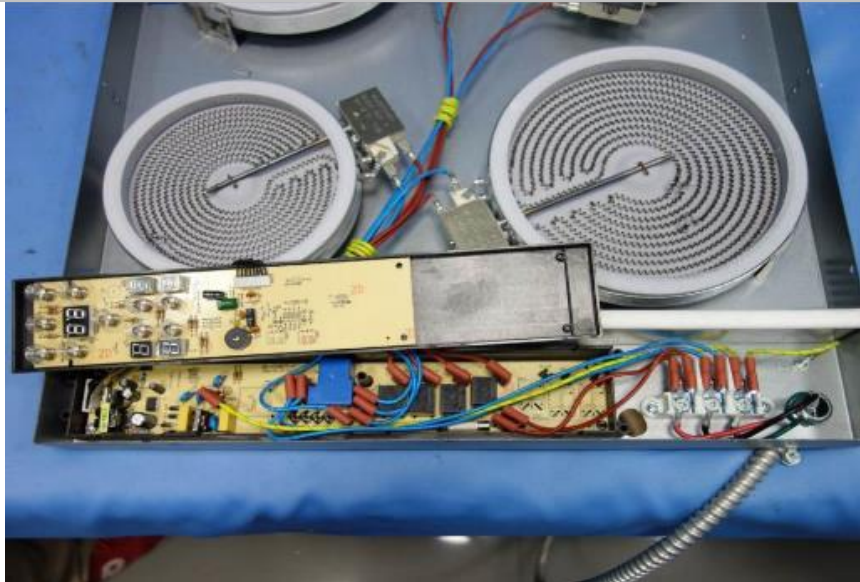


TEST REPORT

Internal view of model GK-CF246004 (similar to model GK-CF246404,GK-CF306704)

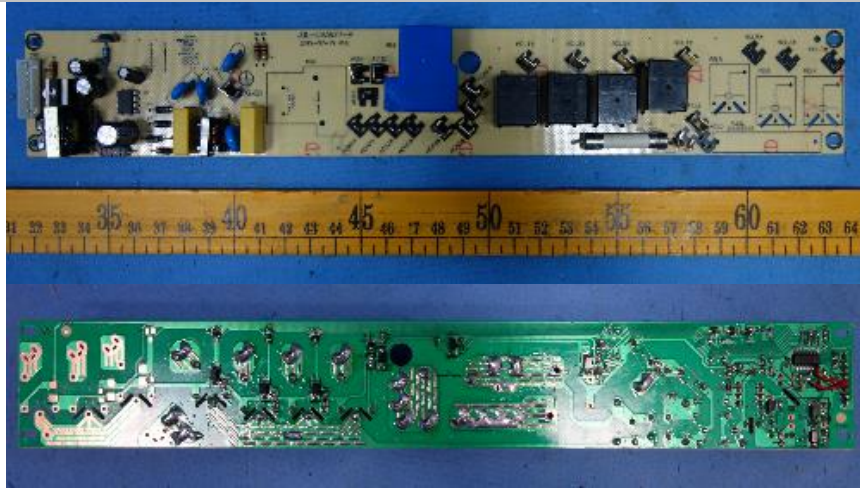


Internal view of model GK-CF246004 (similar to model GK-CF246404,GK-CF306704)

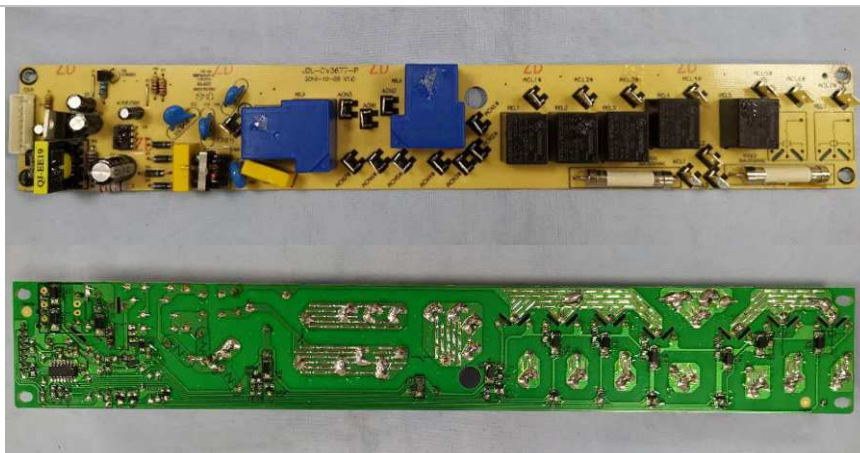


TEST REPORT

Main PCB view of model GK-CF246004



Main PCB view of models GK-CF246404, GK-CF306704

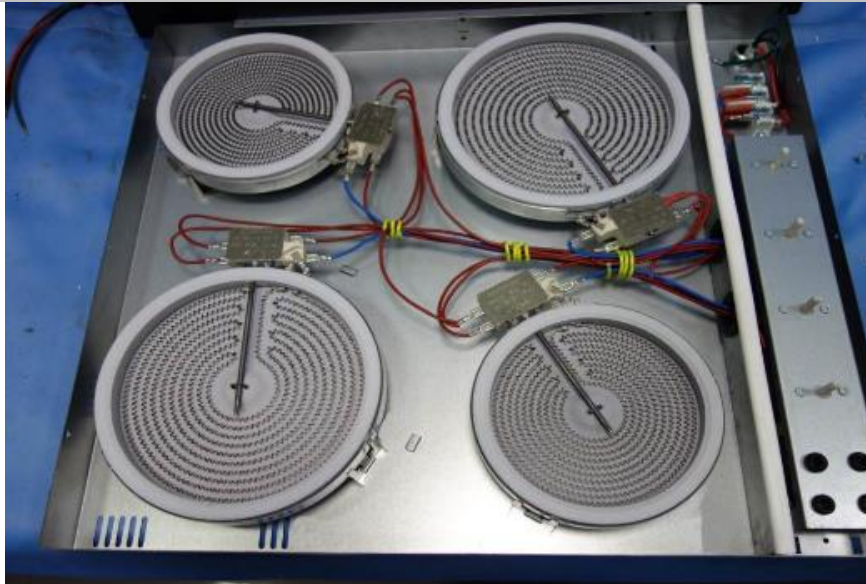


TEST REPORT

Control PCB view of model GK-CF246004(similar to models GK-CF246404,GK-CF306704)



Internal view of model GK-CF246005(similar to models GK-CF246405,GK-CF306705)



TEST REPORT

Internal view of model GK-CV307209(similar to model GK-CV367709)

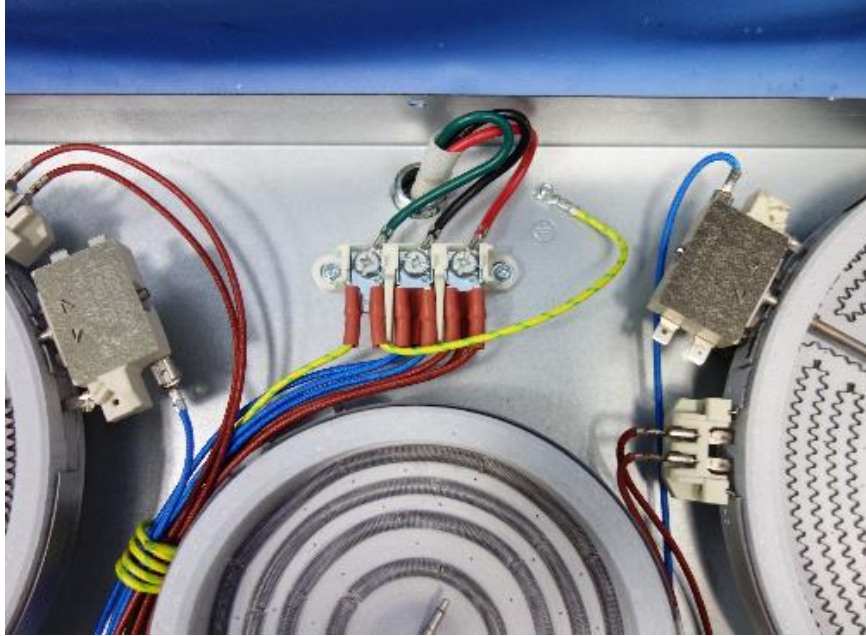


Internal view of model GK-CV307209 (similar to model GK-CV367709)

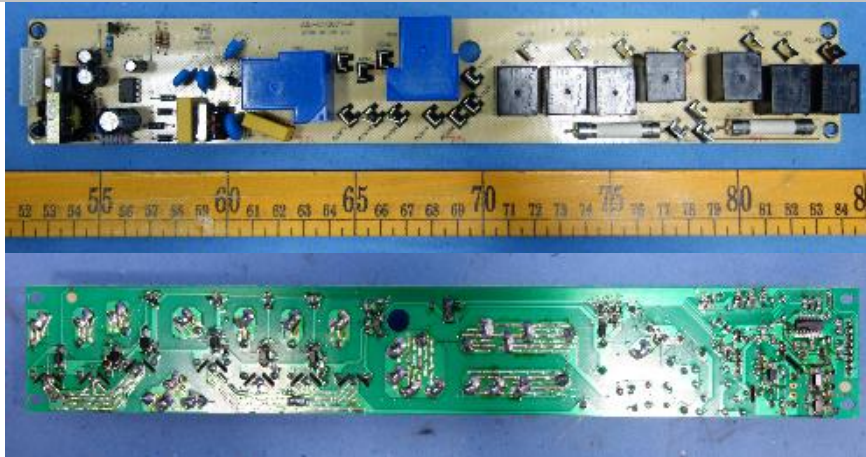


TEST REPORT

Internal view of model GK-CV307209 (similar to model GK-CV367709)

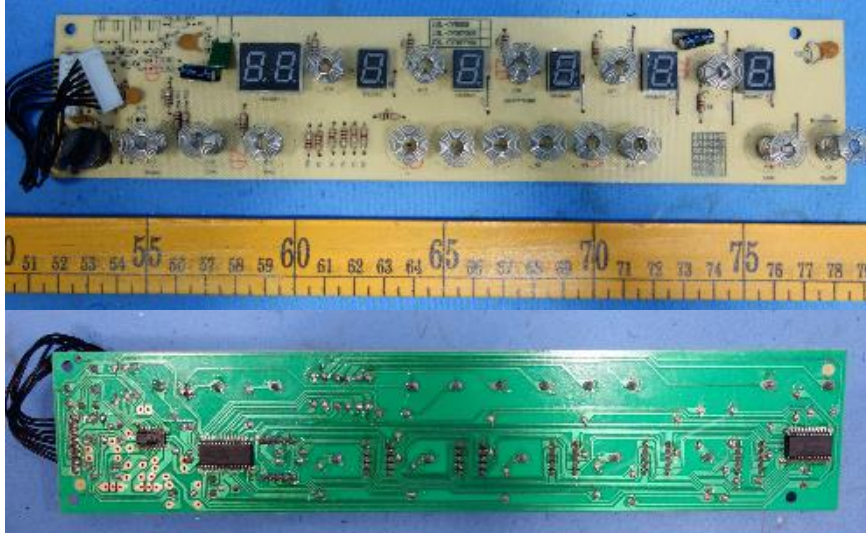


Main PCB view of model GK-CV307209(similar to model GK-CV367709)



TEST REPORT

Control PCB view of model GK-CV307209(similar to model GK-CV367709)



Internal view of model GK-CV307205(similar to model GK-CV367705)



TEST REPORT

View of Heater Element



*****End of Report*****