

Commercial In Confidence

TEST REPORT No: P4187/2/SF

Customer/Applicant: Merrychef Limited

Address: Station Road West
Ash Vale
Aldershot
Hampshire
GU12 5XA

Subject: **ELECTROMAGNETIC COMPATIBILITY**

Customer Ref: 25528

Manufacturer: Merrychef Limited

Product: Micro Combination Oven - FCC ID : PCVCTM3246015A
Micro Combination Oven - FCC ID : PCVCTM3206015A

Model/Trade Name: Mealstream 501

Model No/Type: CTM3246015A (240V 60Hz System)
CTM3206015A (208V 60Hz System)

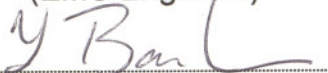
Serial No/Lot No: 143630305 (240 V) 143640305 (208 V)

Tests Carried Out: FCC rules CFR 47 Part 18 Sections 18.307

This Report applies only to the above referenced EQUIPMENT and details the tests applied using test equipment calibrated to traceable National Standards and is not indicative of the qualities of identical or similar products

Report Author: F Barkas
Title: (EMC Engineer)

Signature



Checked By: O.W. Cockram
Title: (General Manager)

Signature



Issue Date: 9 May 2005

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Commercial In Confidence
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Page 1 of 8



1 INTRODUCTION

This report details the results of the Electromagnetic Compatibility (EMC) tests carried out on a Microwave Combination Oven with a rated power output of 1.425kW. The Mealstream 501 is a Microwave Combination Oven, (EUT) manufactured by Merrychef Limited. The manufacturer had previously shown full compliance to the regulations current at that time, requiring conducted emissions testing 450 kHz – 30 MHz. The testing covered by this report was to show compliance over the previously untested frequency band 150 kHz – 450 kHz and continued compliance over the frequencies 450 kHz – 30 MHz. Testing was carried out to the requirements of CFR 47 Part 18, subpart C, Section 18.307 Conducted Emissions in accordance with the requirements of FCC/OST MP-5 (1986) and ANSI 63.4 (2003).

EMC Projects Ltd. is an UKAS accredited EMC Test House; a CAB recognised by the EU-US MRA Joint Committee and is registered with the FCC, registration No 90573.

Power Supply:	240V ac 60Hz 1ph 208V ac 60Hz 1ph	Mode/s of Operation:	Microwave cycle
Software Version :	1.0		
Deviations From Standard:	No deviations from the applied standards were applied		
Test Engineer:	Mr Frank Barkas		
In Attendance:	Mr Paul Harrison		
Comments	-		

Testing was carried in accordance with ANSI C63.4 special reference is made to sub paragraph 5.2.2 in that no Vertical Coupling plane was located 40cm to the rear of the EUT. All testing was carried out using calibrated test equipment traceable to national standards, to accredited in-house test procedures. Full details and results are contained within the Project File.

General View of Product Tested



2 TESTS and RESULTS

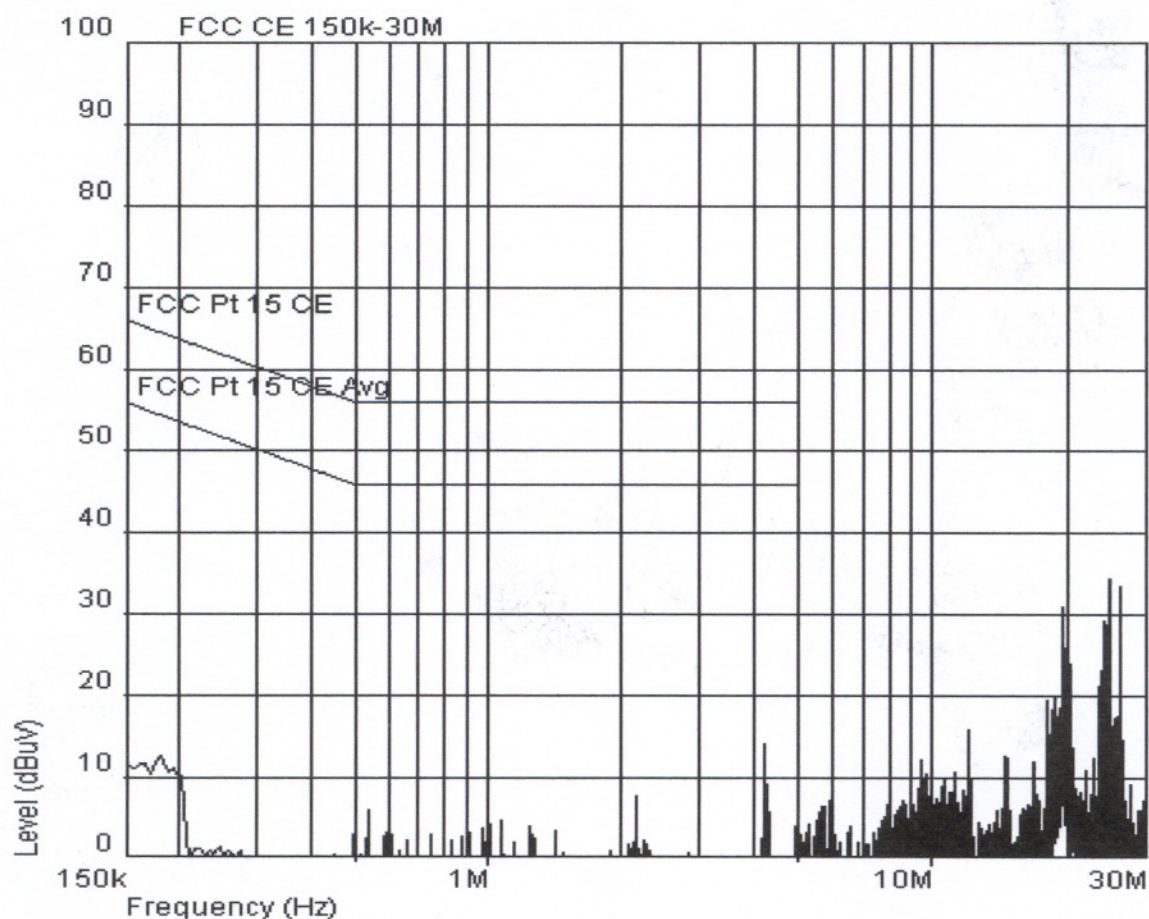
2.1 Emissions

Test	Test Type	Specification & Issue	Result	Levels/Comments
1	Conducted Emissions 240 V-60 Hz	CFR 47 Part 18 Section 18.307 Non Consumer Equipment Limits	Pass	(0.15 – 30) MHz Quasi-Peak, and Average detector function
2	Conducted Emissions 208 V-60 Hz	CFR 47 Part 18 Section 18.307 Non Consumer Equipment Limits	Pass	(0.15 – 30) MHz Quasi-Peak, and Average detector function

2.2 Table of Recorded Conducted emissions for 240V 60Hz Unit Line 1

Freq MHz	Recorded Level (dB μ V)	Detector	Average Limit (dB μ V)	Average Delta (dB)	Quasi Peak Limit (dB μ V)	Quasi Peak Limit (dB μ V)
19.7	30.9	Q.Peak	50	-19.1	60	-29.1
20.3	24	Q.Peak	50	-26	60	-36.0
24.5	29.3	Q.Peak	50	-20.7	60	-30.7
24.7	28.7	Q.Peak	50	-21.3	60	-31.3
25.0	34.5	Q.Peak	50	-15.5	60	-25.5
26.4	33.5	Q.Peak	50	-16.5	60	-26.5

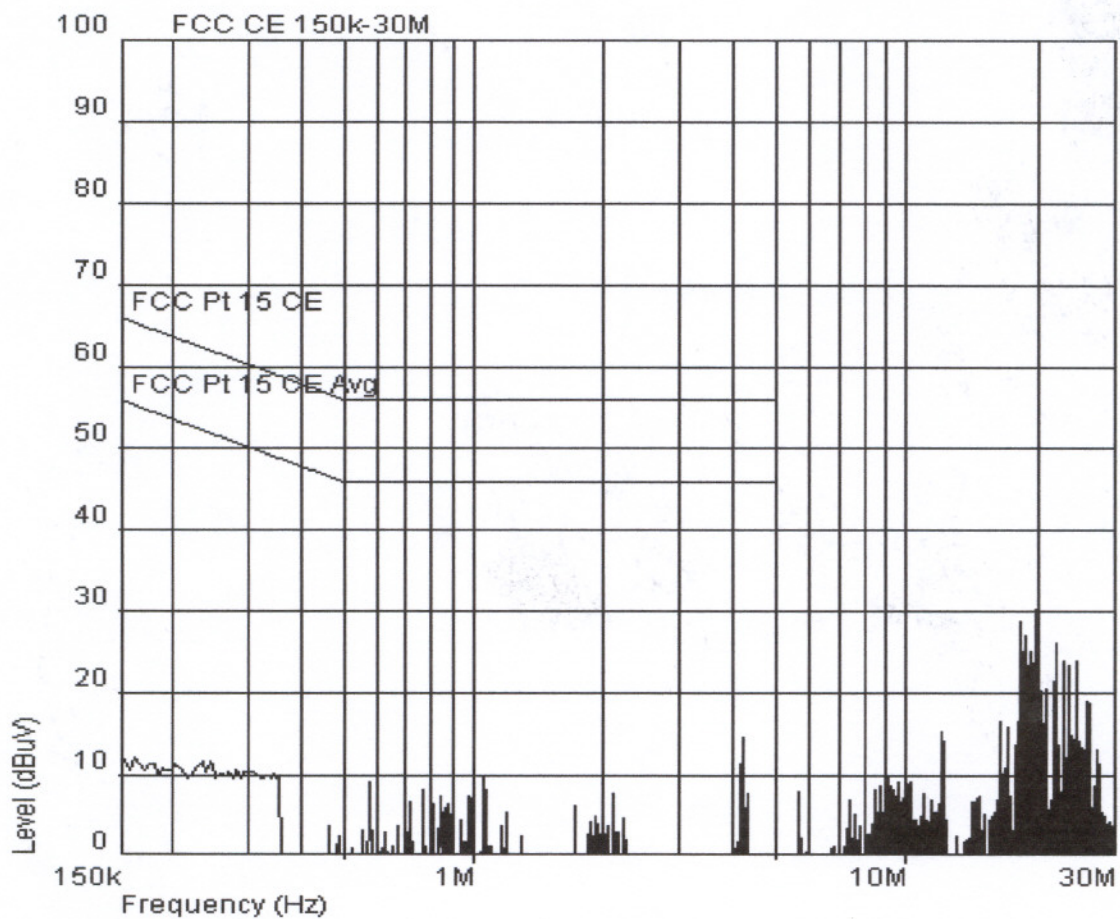
2.2.1 Representative Graph of 240V 60Hz Unit using Quasi Peak Detector Line 1



2.3 Table of Recorded Conducted emissions for 240V 60Hz Unit Line 2

Freq MHz	Recorded Level (dB μ V)	Detector	Average Limit (dB μ V)	Average Delta (dB)	Quasi Peak Limit (dB μ V)	Quasi Peak Limit (dB μ V)
18.3	28.7	Q.Peak	50	-21.3	60	-31.3
18.6	25.2	Q.Peak	50	-24.8	60	-34.8
18.8	27.1	Q.Peak	50	-22.9	60	-32.9
19.3	25.2	Q.Peak	50	-24.8	60	-34.8
19.8	30.2	Q.Peak	50	-19.8	60	-39.8
22.1	26.0	Q.Peak	50	-24.0	60	-34.0

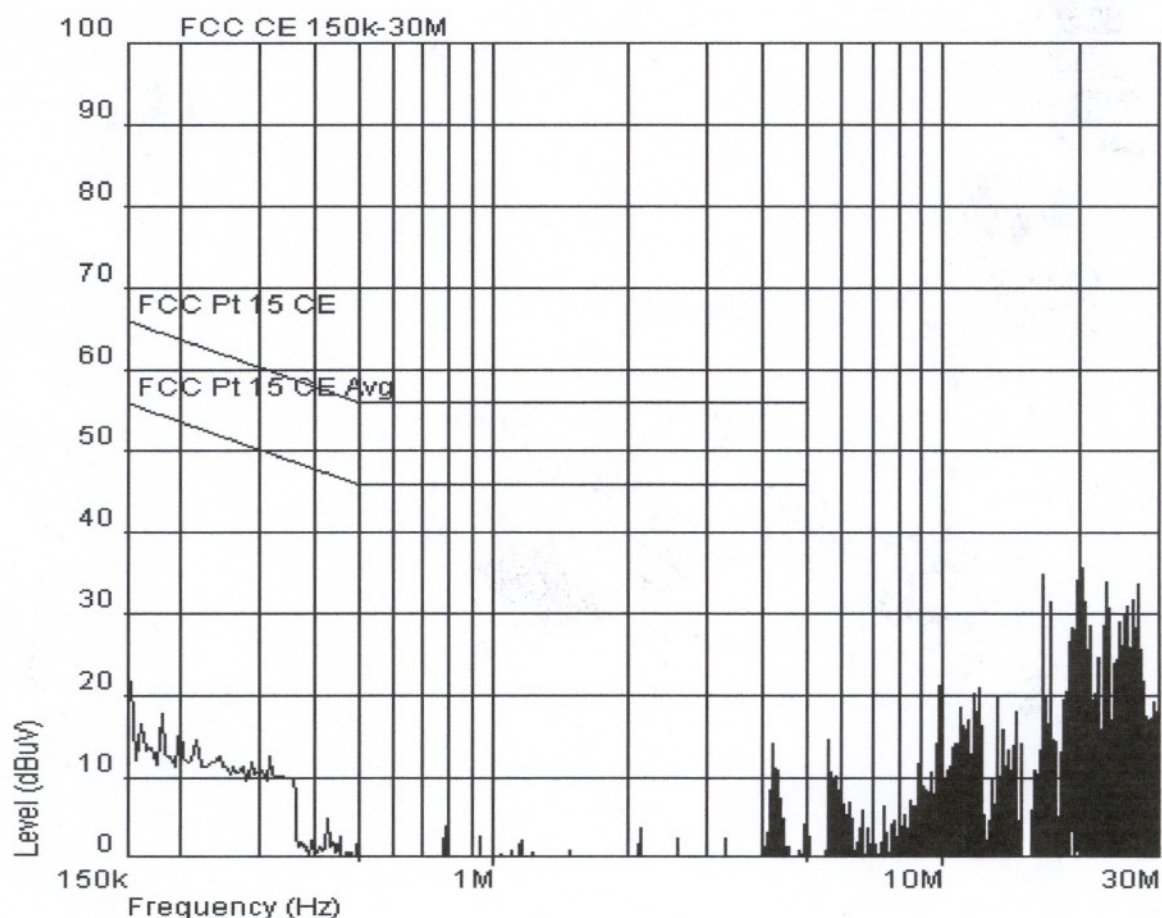
2.3.1 Representative Graph of 240V 60Hz Unit using Quasi Peak Detector Line 2



2.4 Table of Recorded Conducted emissions for 208V 60Hz Unit Line 1

Freq MHz	Recorded Level (dB μ V)	Detector	Average Limit (dB μ V)	Average Delta (dB)	Quasi Peak Limit (dB μ V)	Quasi Peak Limit (dB μ V)
16.7	34.9	Q.Peak	50	-15.1	60	-25.1
20.3	35.7	Q.Peak	50	-14.3	60	-24.3
20.0	34.3	Q.Peak	50	-15.7	60	-25.7
20.3	35.7	Q.Peak	50	-14.3	60	-24.3
23.2	33.9	Q.Peak	50	-16.1	60	-26.1
27.2	33.7	Q.Peak	50	-16.3	60	-26.3

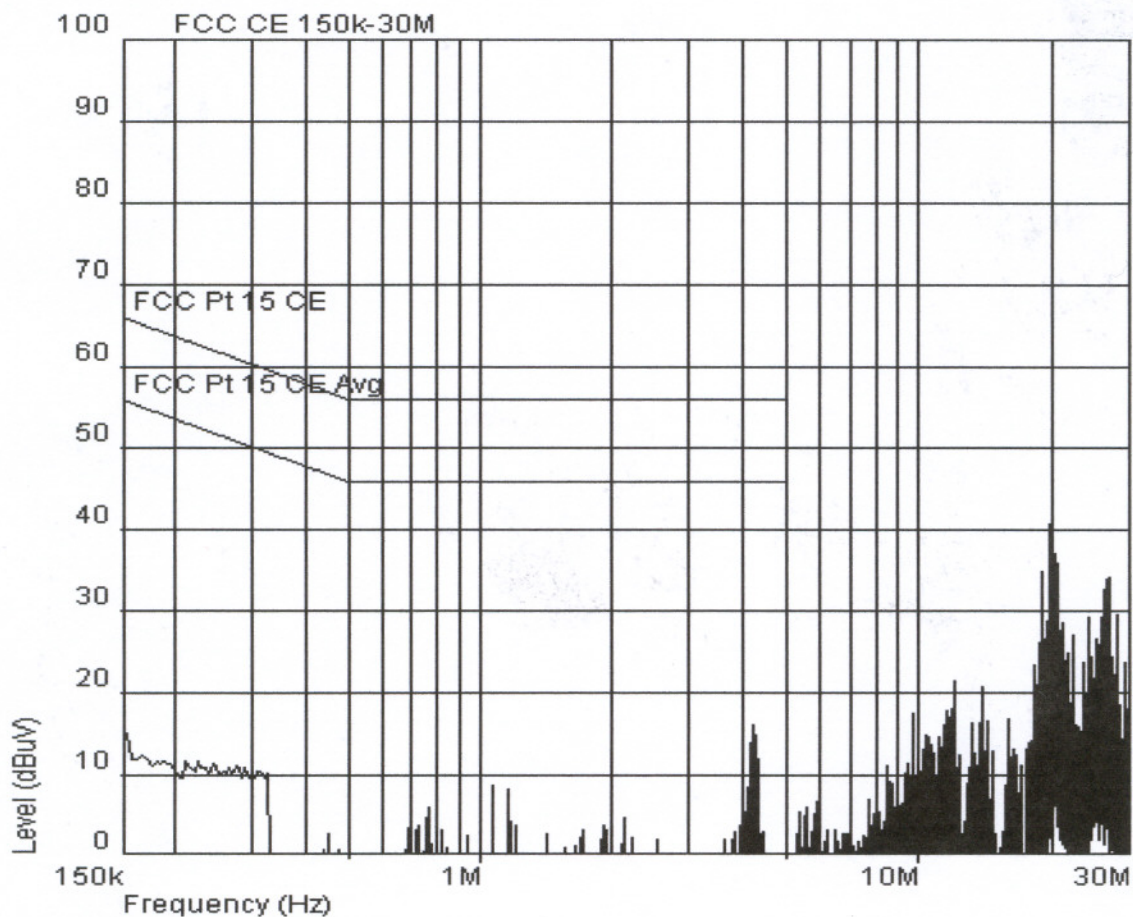
2.4.1 Representative Graph of 208V 60Hz Unit using Quasi Peak Detector Line 1



2.5 Table of Recorded Conducted emissions for 208V 60Hz Unit Line 2

Freq MHz	Recorded Level (dB μ V)	Detector	Average Limit (dB μ V)	Average Delta (dB)	Quasi Peak Limit (dB μ V)	Quasi Peak Limit (dB μ V)
19.9	40.8	Q.Peak	50	-9.2	60	-19.2
20.4	37.1	Q.Peak	50	-12.9	60	-22.9
20.7	35.8	Q.Peak	50	-14.2	60	-24.2
26.4	32.6	Q.Peak	50	-17.4	60	-27.4
26.8	34.0	Q.Peak	50	-16	60	-26
27.0	31.2	Q.Peak	50	-18.8	60	-28.8

2.5.1 Representative Graph of 208V 60Hz Unit using Quasi Peak Detector Line 2



3 TEST EQUIPMENT

Plant No	Manufacturer	Description	Serial No	Cal Period	Cal Due
L1/1	EMC Projects Ltd.	CISPR16 9kHz-30MHz (30A,50 /50µH),		12 Months	11 Nov 05
L1/2	EMC Projects Ltd.	CISPR16 9kHz-30MHz (30A,50 /50µH),		12 Months	11 Nov 05
L1/3	EMC Projects Ltd.	CISPR16 9kHz-30MHz (30A,50 /50µH),		12 Months	11 Nov 05
LHR 1	Chase	Receiver LHR 7000	1028	12 Months	15 Mar 06

4 CONCLUSIONS

The EUT was found to meet the requirements of the above specifications when operated in its normal mode of operation.