



INDUSTRIES

EMISSION COMPLIANCE TESTING
ON
ASHDOWN GUITAR AMPLIFIERS
FOR
ELECTRIC FACTORY PTY. LTD.

R.F.I. INDUSTRIES TEST REPORT TL3492
August, 2001.

EMI/EMC LABORATORIES

**EMISSION COMPLIANCE TESTING
FOR
ELECTRIC FACTORY PTY. LTD.**

Administrative Data


Test Specification: AS/NZS 1053: 1999
Limits and methods of measurement of radio disturbance characteristics of sound and television broadcast receiver and associated equipment.


Test Samples: Ashdown Guitar Amplifiers
Models: 22/AAR-1V, 22/AAR02V, 22/ABM 300, 22/ABM 500, 22/MAG 200H and 22/EBC-12

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Test Dates: 13th and 14th August, 2001.

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Approved by: 
Malcolm Mulcare
Senior Engineer

Report Issued: **31** August, 2001.

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R.F.I. Industries Copy 3

EMISSION COMPLIANCE TESTING FOR ELECTRIC FACTORY PTY. LTD.

1. INTRODUCTION

Disturbance voltage injected into the mains as well as disturbance power measurements on both the mains and various input and output signal ports, were performed on each EUT (described in section 2) in order to determine compliance with the requirements of AS/NZS 1053: 1999.

2. PRODUCT SAMPLE, TEST EQUIPMENT AND FACILITY

2.1 Product Samples

The product samples, as supplied by the client, were identified as follows:

EUT 1:	Ashdown Guitar Amplifier Model No: 22/AAR-1V Ser. No: 0926 05 01
EUT 2:	Ashdown Guitar Amplifier Model No: 22/AAR02V Ser. No: 0954 05 01
EUT 3:	Ashdown Guitar Amplifier Model No: 22/ABM 300 Ser. No: 1651 05 01
EUT 4:	Ashdown Guitar Amplifier Model No: 22/ABM 500 Ser. No: 2025 05 01
EUT 5:	Ashdown Guitar Amplifier Model No: 22/MAG 200H Ser. No: 2553 05 01
EUT 6:	Ashdown Guitar Amplifier Model No: 22/EBC-12 Ser. No: 1506 05 01

Product samples that did not have a built-in speaker were connected to a 4 Ω external speaker. Each product sample was tested with its output level set to 1/8 maximum and driven by a prerecorded 1kHz tone from an audio cassette tape. EUT 5 and EUT 6 had this signal fed into the "Instrument Input High" port.

2.2 Test Equipment

Refer to Appendix A for a list of the measurement instrumentation used.

2.3 Test Facility

The tests were performed in the facilities of R.F.I. Industries EMI/EMC Laboratories located at Unit 6, 381 Bayswater Road, Bayswater, Victoria. The facilities include an RF absorber/anechoic lined enclosure measuring 10.8m x 7.9m x 4.2m high.

3. TEST METHODOLOGY

The conformance test methods applied were adapted from procedures of the applicable referenced standard.

3.1 Conducted Emissions : Disturbance Voltage (Injected Into the Mains) Measurement

The equipment under test shall meet the limits of terminal disturbance voltage in the frequency range of 150KHz to 30MHz, using a measuring receiver and LISN as specified in the referenced standard.

3.2 Radiated Emissions : Disturbance Power Measurements

The equipment under test shall meet the limits of disturbance power in the frequency range of 30MHz to 300MHz, using a measuring receiver and absorber clamp as specified in the referenced standard.

4. TEST PROCEDURE

4.1 Conducted Emissions (Mains terminal disturbance voltage)

The EUT was positioned on a non-conductive table 0.4m above the ground plane. Power was provided to the EUT by an artificial mains network, (LISN) which itself is connected via shielded coaxial cable to the measuring receiver. An IEC type mains supply lead, 0.8m in length, was used to connect the output of the LISN to the EUT.

Measurements were performed in turn on the active and neutral lines of the EUT supply.

Refer to photographs in Appendix B for the typical test configuration.

4.2 Radiated Emissions (Disturbance power)

The EUT was positioned on a non-conductive table 0.8m above the ground plane. Using a measuring receiver and absorbing clamp as specified in the referenced standard, measurements were performed along the 6m extended power cable, in order to capture the worst case emissions. Disturbance power measurements were also performed on various input and output signal ports.

Refer to photographs in Appendix B for views of the test configurations.

5. TEST RESULTS

5.1 Ashdown Guitar Amplifier, Model: 22/AAR-1V, Ser. No.: 0926 05 01

For the disturbance voltage (injected into the mains) measurement, peak emissions were above the limit between 150KHz and 700KHz, for both the Active and Neutral lines. Quasi-Peak measurements were made at spot frequencies, as detailed in Tables 1A and 1B below, and these are all below the limit. These measurements show that the EUT meets the requirements of AS/NZS1053: 1999 for mains terminal disturbance voltage measurements.

Frequency	Quasi-Peak Limit (dB μ V)	Quasi-Peak Measurement (dB μ V)	Difference
150KHz	65.92	61.71	4.21dB below limit
216KHz	62.88	58.45	4.43dB below limit
512KHz	56.00	50.14	5.86dB below limit

Table 1A. Quasi-Peak values for EUT 1, Active line

Frequency	Quasi-Peak Limit (dB μ V)	Quasi-Peak Measurement (dB μ V)	Difference
153KHz	65.76	60.52	5.24dB below limit
240KHz	63.04	56.65	6.39dB below limit
714KHz	56.00	47.47	8.53dB below limit

Table 1B. Quasi-Peak values for EUT 1, Neutral line

Disturbance power measurements were performed for various signal and supply lines. Where the Peak emissions exceeded the Average limit line, an Average measurement was performed. These measurements indicate that EUT 1 meets the requirements of AS/NZS1053: 1999 for disturbance power measurements. Table 2 below lists all of the input and output lines measured, and the number of the corresponding graph in Appendix C.

LINE	GRAPH No
Mains	34
Return	35
Send	36
Link/Line out	37
Line Input	38

Table 2. EUT 1 Disturbance Power Measurement Summary

5.2 Ashdown Guitar Amplifier, Model: 22/AAR02V, Ser. No.: 0954 05 01

For the disturbance voltage measurements, Peak emissions were above the limit between 150KHz and 400KHz, for both the Active and Neutral lines. Quasi-Peak measurements were made at spot frequencies, as detailed in Tables 3A and 3B below, and these are all below the limit. These measurements show that EUT 2 meets the requirements of AS/NZS1053: 1999 for mains terminal disturbance voltage measurements.

Frequency	Quasi-Peak Limit (dB μ V)	Quasi-Peak Measurement (dB μ V)	Difference
152KHz	65.84	60.77	5.07dB below limit
249KHz	61.76	55.98	5.78dB below limit
359KHz	58.68	49.73	8.95dB below limit

Table 3A. Quasi-Peak values for EUT 2, Active line

Frequency	Quasi-Peak Limit (dB μ V)	Quasi-Peak Measurement (dB μ V)	Difference
152KHz	66.84	60.77	6.07dB below limit
240KHz	62.04	56.55	5.49dB below limit
372KHz	58.40	52.07	6.33dB below limit

Table 3B. Quasi-Peak values for EUT 2, Neutral line

All disturbance power emissions were below the Peak and Average limit lines. These measurements indicate that EUT 2 meets the requirements of AS/NZS1053: 1999 for disturbance power measurements. Table 4 below lists all of the input and output lines measured.

LINE	GRAPH No
Mains	43
Mute F/S Tuner F/S	44
Return Effects	45
Link/Line Output	46
Line Input	47

Table 4. EUT 2 Disturbance Power Measurement Summary

5.3 Ashdown Guitar Amplifier, Model: 22/ABM 300, Ser. No.: 1651 05 01

Peak emissions for the disturbance voltage measurements were below the Average limit line over the frequency band of interest, for both the Active and Neutral lines. These measurements show that EUT 3 meets the requirements of AS/NZS1053: 1999 for mains terminal disturbance voltage measurements.

Peak emissions for the disturbance power measurements were also below the Peak and Average limit lines. These measurements indicate that EUT 3 meets the requirements of AS/NZS1053: 1999 for disturbance power measurements. Table 5 below lists all of the input and output lines measured.

LINE	GRAPH No
Mains	13
Speaker Output	14
Effects Send	15
Footswitch EQ/Shape	16
Mute F/S Sub	17
Line Input	18
Instrument Input High	19
Sub Output	20

Table 5. EUT 3 Disturbance Power Measurement Summary

5.4 Ashdown Guitar Amplifier, Model: 22/ABM 500, Ser. No.: 2025 05 01

Peak emissions for the disturbance voltage measurements were below the Average limit line over the frequency band of interest, for both the Active and Neutral lines. These measurements show that EUT 4 meets the requirements of AS/NZS1053: 1999 for mains terminal disturbance voltage measurements.

Peak emissions for the disturbance power measurements were also below the Peak and Average limit lines. These measurements indicate that EUT 4 meets the requirements of AS/NZS1053: 1999 for disturbance power measurements. Table 6 below lists all of the input and output lines measured.

LINE	GRAPH No
Mains	21
Speaker Output	22
Effects Send	23
Footswitch EQ/Shape	24
Mute F/S Sub	25
Line Input	26
Instrument Input High	27
Sub Output	28

Table 6. EUT 4 Disturbance Power Measurement Summary

5.5 Ashdown Guitar Amplifier, Model: 22/MAG 200H, Ser. No.: 2553 05 01

Peak emissions for the disturbance voltage measurements were below the Peak limit line over the frequency band of interest, for both the Active and Neutral lines. Average measurements were performed on both lines and it was found that whilst Peak emissions exceeded the Average limit, the Average emissions were well below the Average limit. These measurements indicate that EUT 5 meets the requirements of AS/NZS1053: 1999 for mains terminal disturbance voltage measurements.

Peak emissions for the disturbance power measurements were below both the Peak and Average limit lines. These measurements indicate that EUT 5 meets the requirements of AS/NZS1053: 1999 for disturbance power measurements. Table 7 below lists all of the input and output lines measured.

LINE	GRAPH No
Mains	29
Speaker Output	30
Instrument Input High	31
Effects Return	32
Tuner/Line Output	33

Table 7. EUT 5 Disturbance Power Measurement Summary

5.6 Ashdown Guitar Amplifier, Model: 22/EBC-12, Ser. No.: 1506 05 01

Peak emissions for the disturbance voltage measurements were below the Peak and Average limit lines over the frequency band of interest, for both the Active and Neutral lines. These measurements indicate that EUT 6 meets the requirements of AS/NZS1053: 1999 for mains terminal disturbance voltage measurements.

Peak emissions for the disturbance power measurements were also below the Peak and Average limit lines. These measurements indicate that EUT 6 meets the requirements of AS/NZS1053: 1999 for disturbance power measurements. Table 8 below lists all of the input and output lines measured.

LINE	GRAPH No
Mains	39
Instrument Input Low	40
Effects Send	41
Tuner/Line Output	42

Table 8. EUT 6 Disturbance Power Measurement Summary

6. RESULTS INTERPRETATION

- 6.1 The graphs in Appendix C show a combination of Ambient, Peak, Quasi-Peak and Average measurements.
- 6.2 Ambient measurements (the green traces) are a recording of all noise present in the test facility and test equipment.
- 6.3 Peak measurements (the red traces for active and common mode, and the blue traces for neutral) are necessary as a survey of the entire frequency range. These do not have to meet any limits.
- 6.4 The spot frequencies marked as quasi-peak must not exceed the higher of the two limits.
- 6.5 If either the peak or quasi-peak measurements exceed the lower limit line, then an Average measurement is to be taken.
- 6.6 Average traces are purple and labelled as 'emissions'. These must not exceed the lower limit line.
- 6.7 The specifications of clauses 6.4 and 6.6 must be achieved for each product to be compliant.

APPENDIX A
Test Equipment

Equipment	Manufacturer	Model	Serial No.	Cal. Due Date
EMI Receiver	Hewlett Packard	HP8574A	2974A01009	Jul. 02
Spectrum Analyser	Hewlett Packard	HP8568B	3001A04923	Jul. 02
Quasi-Peak Adaptor	Hewlett Packard	HP85650A	2521A010005	Jul. 02
RF Pre selector	Hewlett Packard	HP85685A	2974A01009	Jul. 02
LISN	EMCO	3850/2	1006	Mar. 02
Transient Limiter	Hewlett Packard	11947A	2820A00132	Oct. 01
Absorber Clamp	Fischer	F-201	120	Jun. 02

APPENDIX B

Photographs of Test Setups

Photograph 1.	EUT 1 – Front View
Photograph 2.	EUT 1 – Rear View
Photograph 3.	EUT 3 – Front View
Photograph 4.	EUT 2 – Rear View
Photograph 5.	EUT 3 – Front View
Photograph 6.	EUT 3 – Rear View
Photograph 7.	EUT 4 – Front View
Photograph 8.	EUT 4 – Rear View
Photograph 9.	EUT 5 – Front View
Photograph 10.	EUT 5 – Rear View
Photograph 11.	EUT 6 – Front View
Photograph 12.	EUT 6 – Rear View
Photograph 13.	Conducted Emmissions: Disturbance voltages Typical Test Setup
Photograph 14.	Radiated Emissions: Disturbance power measurements – Typical Test Setup



Photograph 1. Ashdown Model: 22/AAR-1V Amplifier – front view



Photograph 2. Ashdown Model: 22/AAR-1V Amplifier – rear view



Photograph 3. Ashdown Model: 22/AAR02V Amplifier – front view



Photograph 4. Ashdown Model: 22/AAR02V Amplifier – rear view



Photograph 5. Ashdown Model: 22/ABM 300 Amplifier – front view



Photograph 6. Ashdown Model: 22/ABM 300 Amplifier – rear view



Photograph 7. Ashdown Model: 22/ABM 500 Amplifier – front view



Photograph 8. Ashdown Model: 22/ABM500 Amplifier – rear view



Photograph 9. Ashdown Model: 22/MAG 200H Amplifier – front view



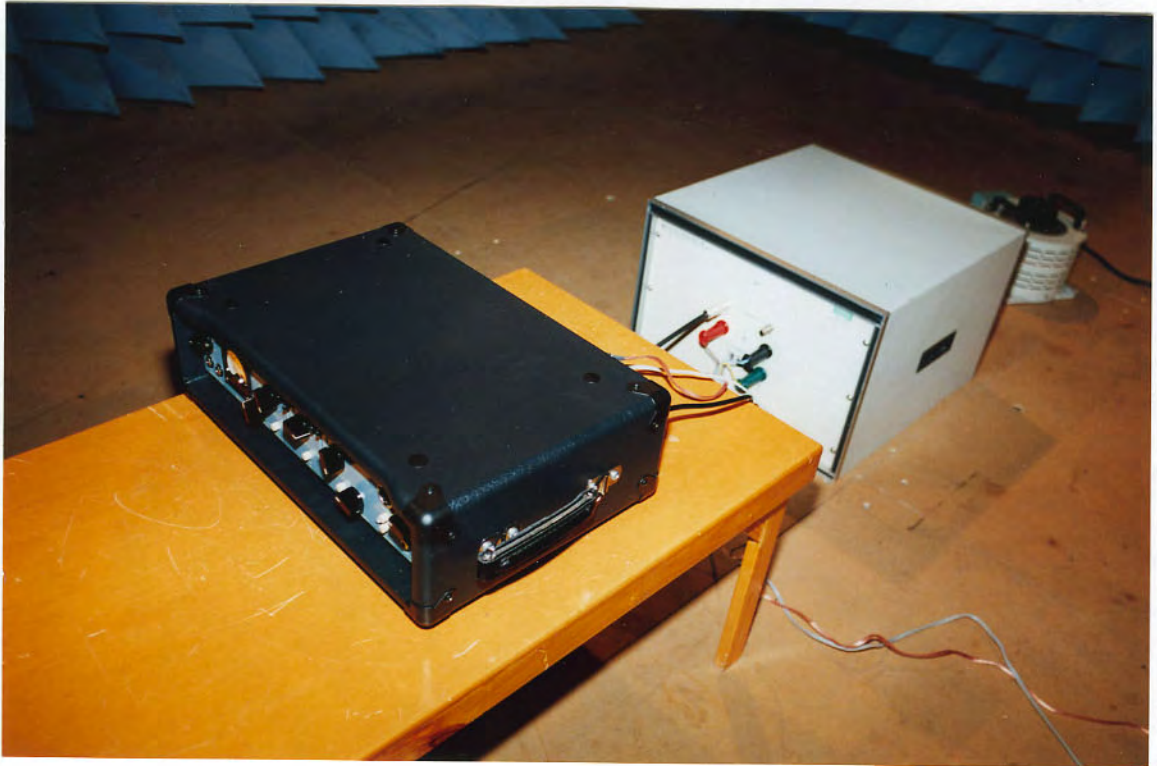
Photograph 10. Ashdown Model: 22/MAG 200H Amplifier – rear view



Photograph 11. Ashdown Model: 22/EBC-12 Amplifier – front view



Photograph 12. Ashdown Model: 22/EBC-12 Amplifier – rear view



Photograph 13. Conducted Emissions : Disturbance voltage injected into mains – Typical setup



Photograph 14. Radiated Emissions: Disturbance power measurements – Typical Test Setup

APPENDIX C

Graphs

DISTURBANCE VOLTAGE MEASUREMENT GRAPHS

Graph 1.	EUT 3 – Active Line	Graph 7.	EUT 1 – Active Line
Graph 2.	EUT 3 – Neutral Line	Graph 8.	EUT 1 – Neutral Line
Graph 3.	EUT 4 – Active Line	Graph 9.	EUT 6 – Active Line
Graph 4.	EUT 4 – Neutral Line	Graph 10.	EUT 6 – Neutral Line
Graph 5.	EUT 5 – Active Line	Graph 11.	EUT 2 – Active Line
Graph 6.	EUT 5 – Neutral Line	Graph 12.	EUT 2 – Neutral Line

DISTURBANCE POWER MEASUREMENT GRAPHS

Graph 13.	EUT 3 – Mains	Graph 34.	EUT 1 – Mains
Graph 14.	EUT 3 – Speaker Output	Graph 35.	EUT 1 – Return
Graph 15.	EUT 3 – Effects Send	Graph 36.	EUT 1 – Send
Graph 16.	EUT 3 – Footswitch EQ/Shape	Graph 37.	EUT 1 – Link/Line Output
Graph 17.	EUT 3 – Mute F/S Sub	Graph 38.	EUT 1 – Input
Graph 18.	EUT 3 – Line Input	Graph 39.	EUT 6 – Mains
Graph 19.	EUT 3 – Instrument Input High	Graph 40.	EUT 6 – Instrument Input Low
Graph 20.	EUT 3 – Sub Output	Graph 41.	EUT 6 – Effects Send
Graph 21.	EUT 4 – Mains	Graph 42.	EUT 6 – Tuner/Line Output
Graph 22.	EUT 4 – Speaker Output	Graph 43.	EUT 2 – Mains
Graph 23.	EUT 4 – Effects Return	Graph 44.	EUT 2 – Mute F/S Tuner F/S
Graph 24.	EUT 4 – Footswitch EQ/Shape	Graph 45.	EUT 2 – Effects Return
Graph 25.	EUT 4 – Mute F/S Sub	Graph 46.	EUT 2 – Link/Line Output
Graph 26.	EUT 4 – Line Input	Graph 47.	EUT 2 – Line Input
Graph 27.	EUT 4 – Instrument Input High		
Graph 28.	EUT 4 – Sub Output		
Graph 29.	EUT 5 – Mains		
Graph 30.	EUT 5 – Speaker Output		
Graph 31.	EUT 5 – Instrument Input High		
Graph 32.	EUT 5 – Effects Return		
Graph 33.	EUT 5 – Tuner/Line Output		



RFI INDUSTRIES PTY LIMITED

CONDUCTED EMISSIONS

SIMON ELECT1

ABM 300 HEAD AMPLIFIER - S/No:1651 05 01

TEST REPORT

Number TL3492

Officer SG

Graph 1

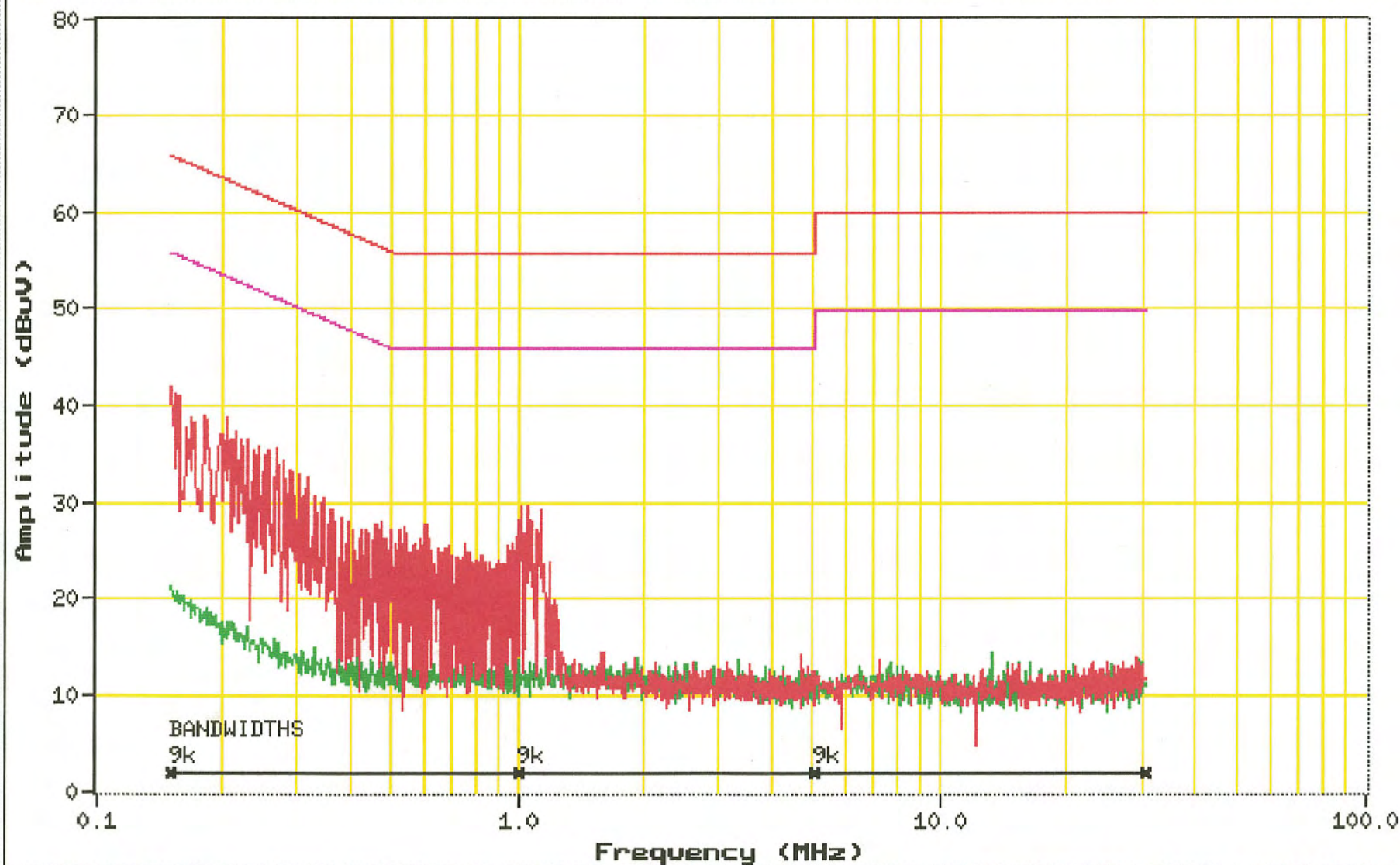
Page

LIMITS TRACES

Ambient

1053CEQP Active

1053CEAV





RFI INDUSTRIES PTY LIMITED

CONDUCTED EMISSIONS

SIMON ELECT2

ABM 300 HEAD AMPLIFIER - S/No:1651 05 01

TEST REPORT

Number TL3492

Officer SG

Graph 2

Page

LIMITS

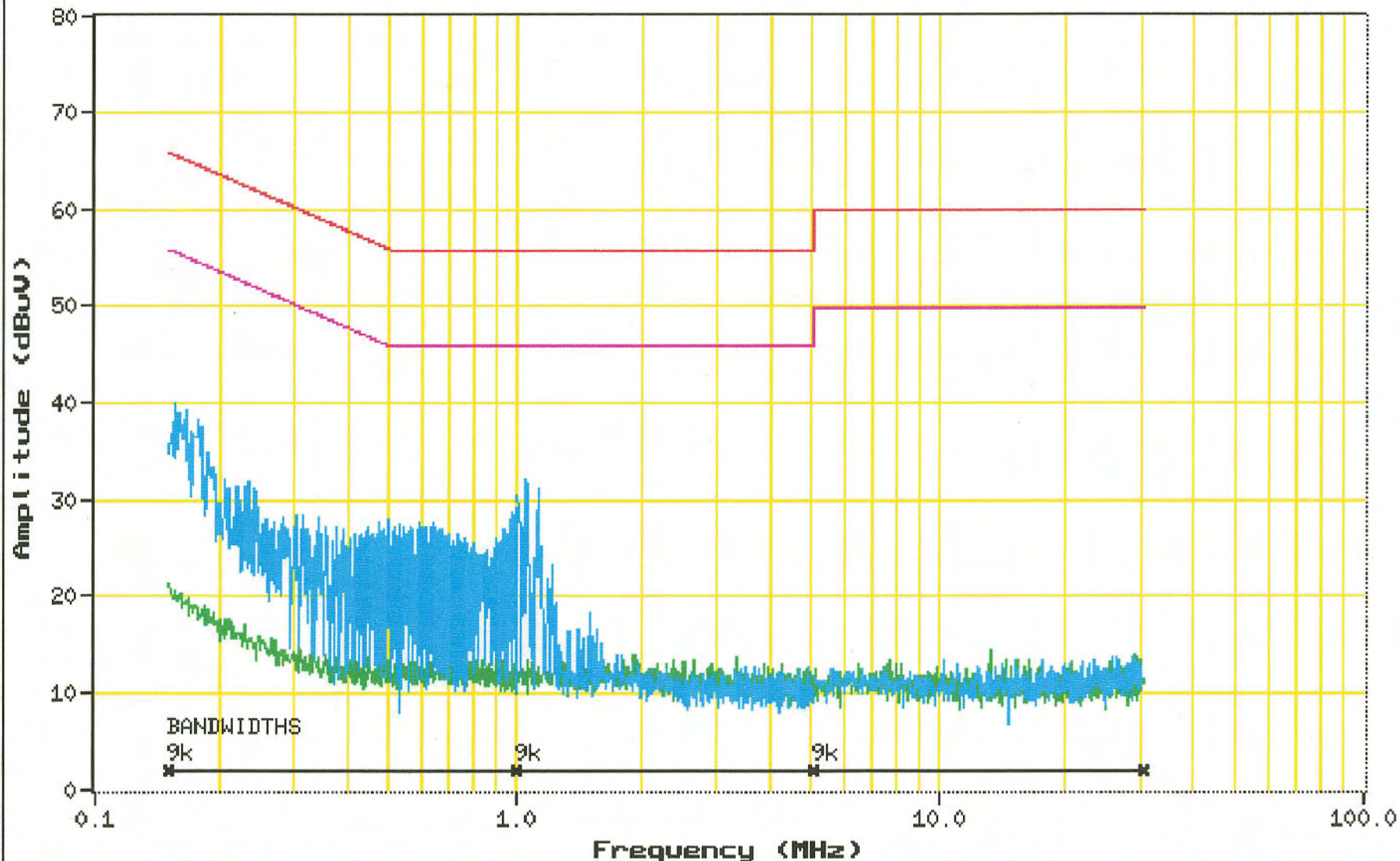
1053CEQP

1053CEAV

TRACES

Ambient

Neutral





RFI INDUSTRIES PTY LIMITED

CONDUCTED EMISSIONS

SIMON ELECT3

ABM 500 HEAD AMPLIFIER - S/No:2025 05 01

TEST REPORT

Number TL3492

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Graph 3

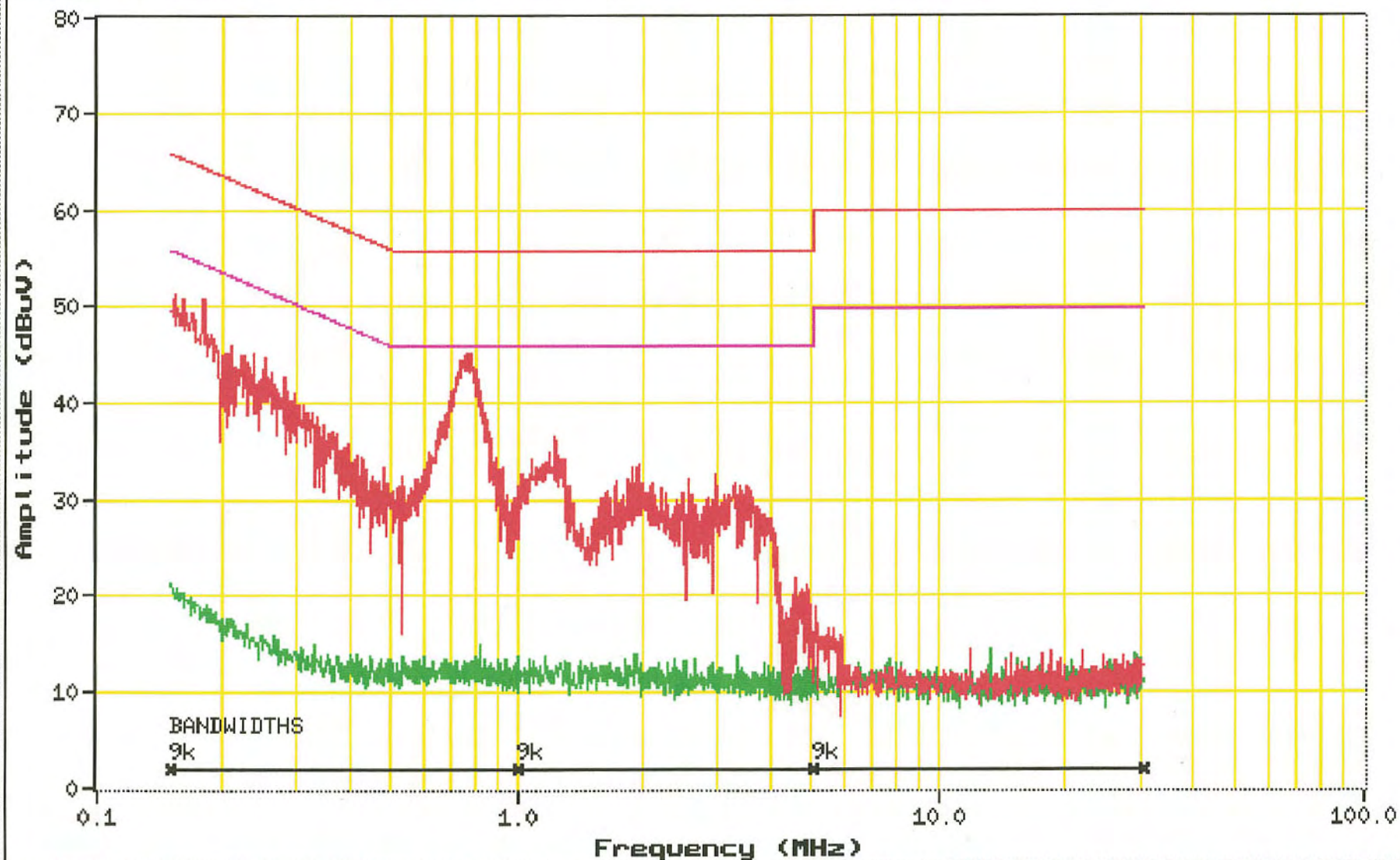
Page

LIMITS TRACES

Ambient

1053CEQP Active

1053CEAV





RFI INDUSTRIES PTY LIMITED

CONDUCTED EMISSIONS

SIMON ELECT4

ABM 500 HEAD AMPLIFIER - S/No:2025 05 01

TEST REPORT

Number TL3492

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Graph 4

Page

LIMITS

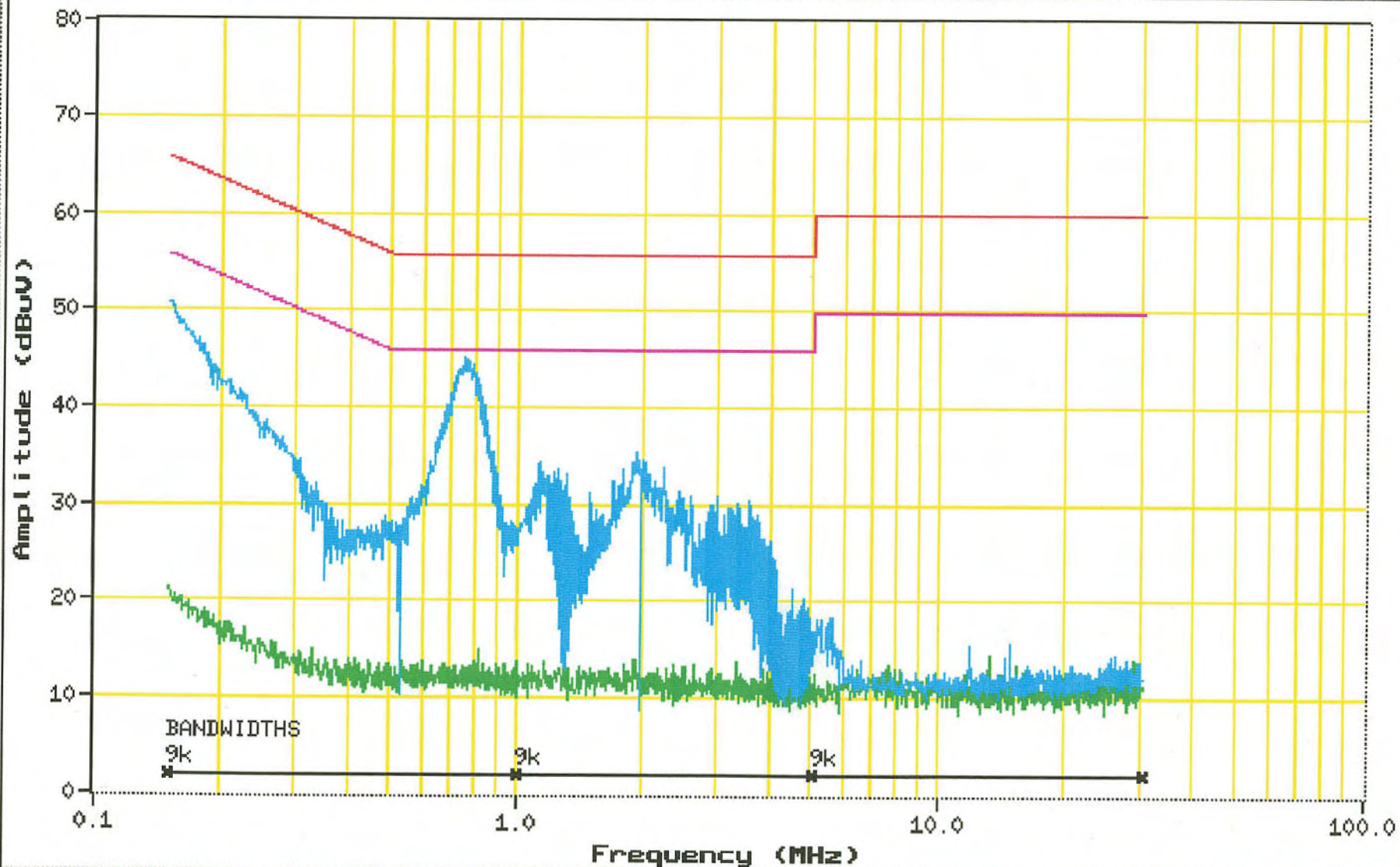
1053CEQP

1053CEAV

TRACES

Ambient

Neutral





RFI INDUSTRIES PTY LIMITED

CONDUCTED EMISSIONS

SIMON ELECT5

MAG 200 HEAD AMPLIFIER - S/No:2553 05 01

TEST REPORT

Number TL3492

Officer SG

Graph 5

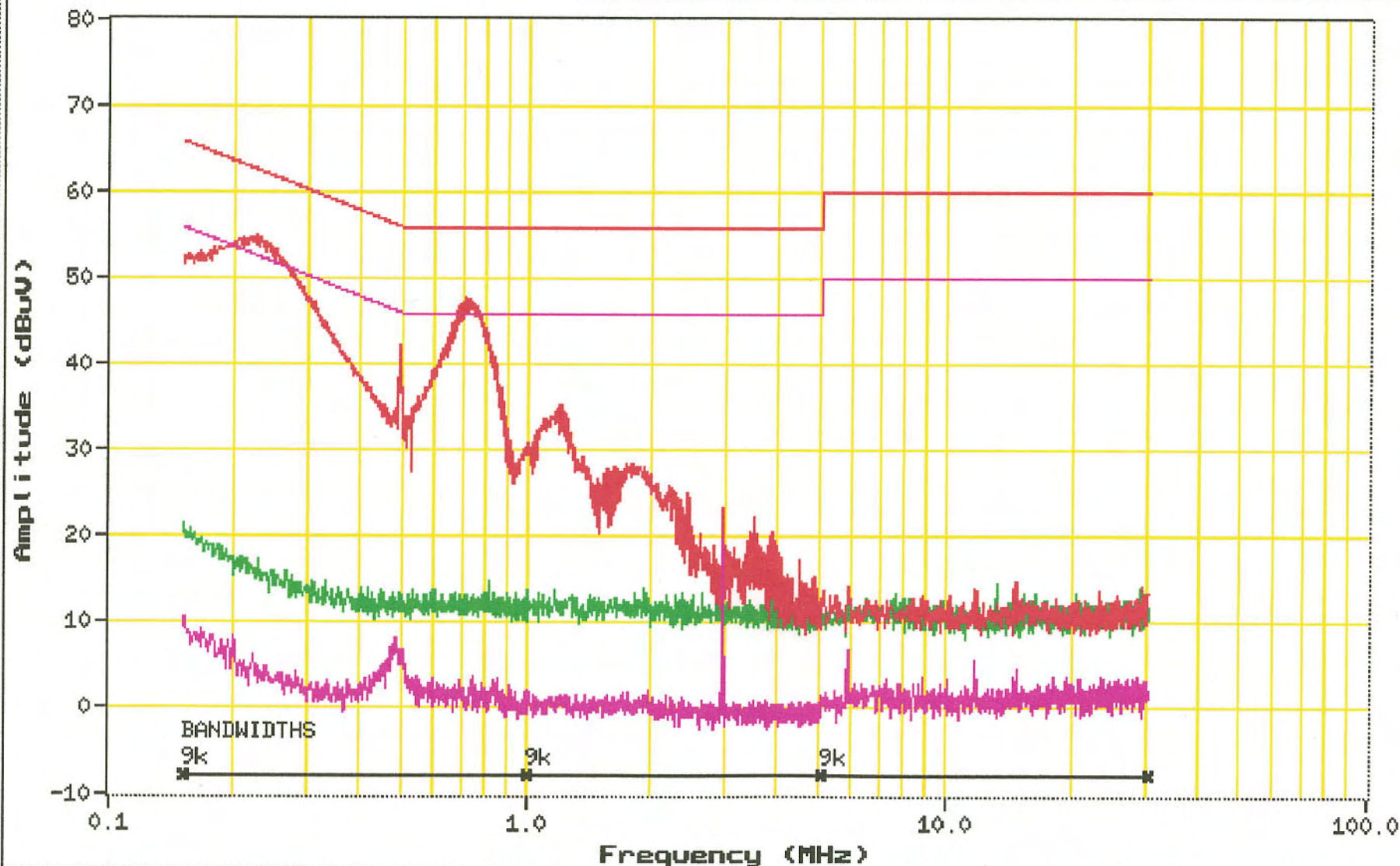
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LIMITS TRACES

Ambient

1053CEQP Active

1053CEAV Emissions





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CONDUCTED EMISSIONS

SIMON ELECT6

MAG 200 HEAD AMPLIFIER - S/No:2553 05 01

TEST REPORT

Number TL3492

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Graph 6

Page

LIMITS

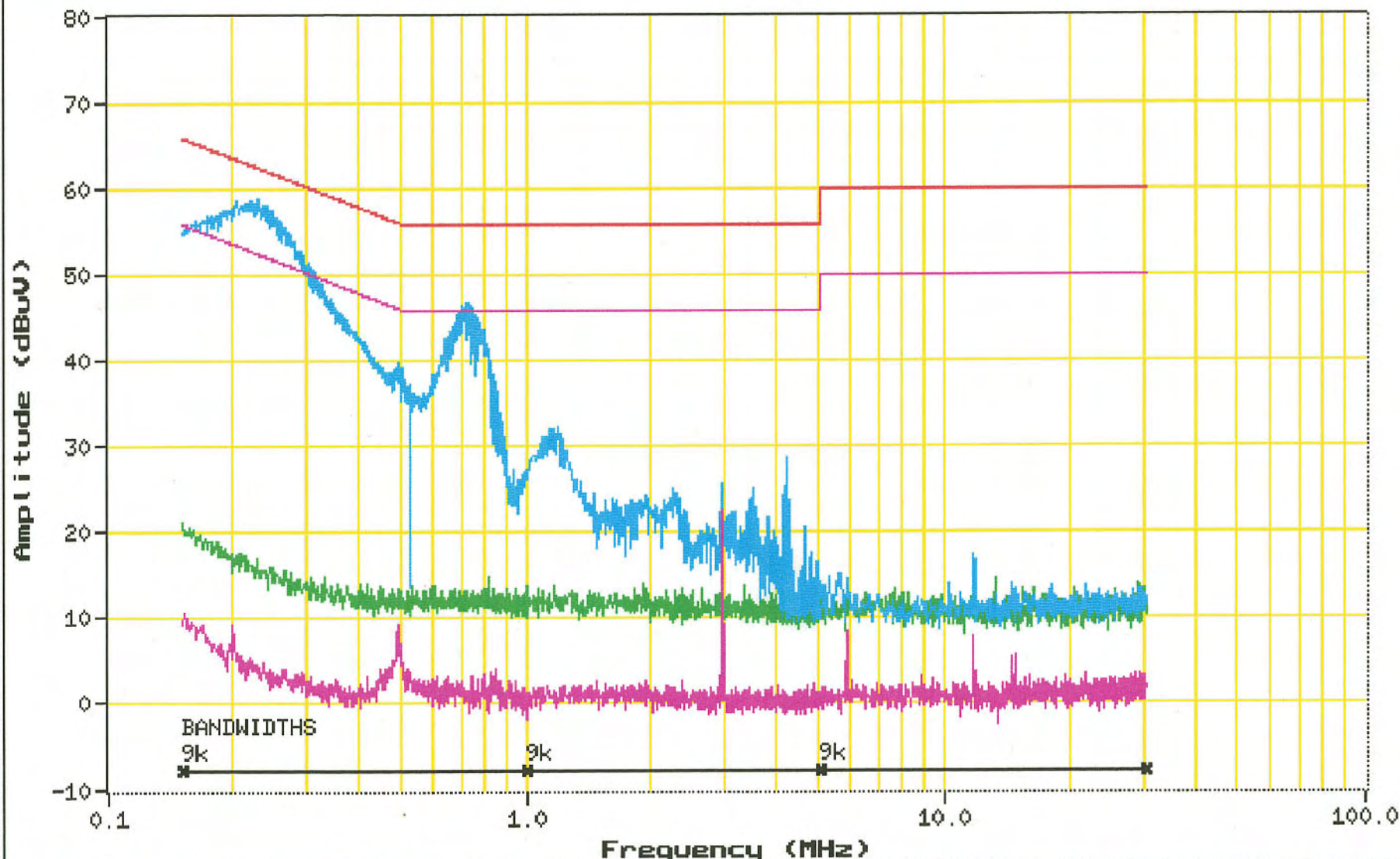
1053CEQP

TRACES

Ambient

Neutral

1053CEAV Emissions





RFI INDUSTRIES PTY LIMITED

CONDUCTED EMISSIONS

SIMON ELECT7

AAR 1V AMPLIFIER - S/No:09260501

TEST REPORT

Number TL3492

Officer SG

Graph 7

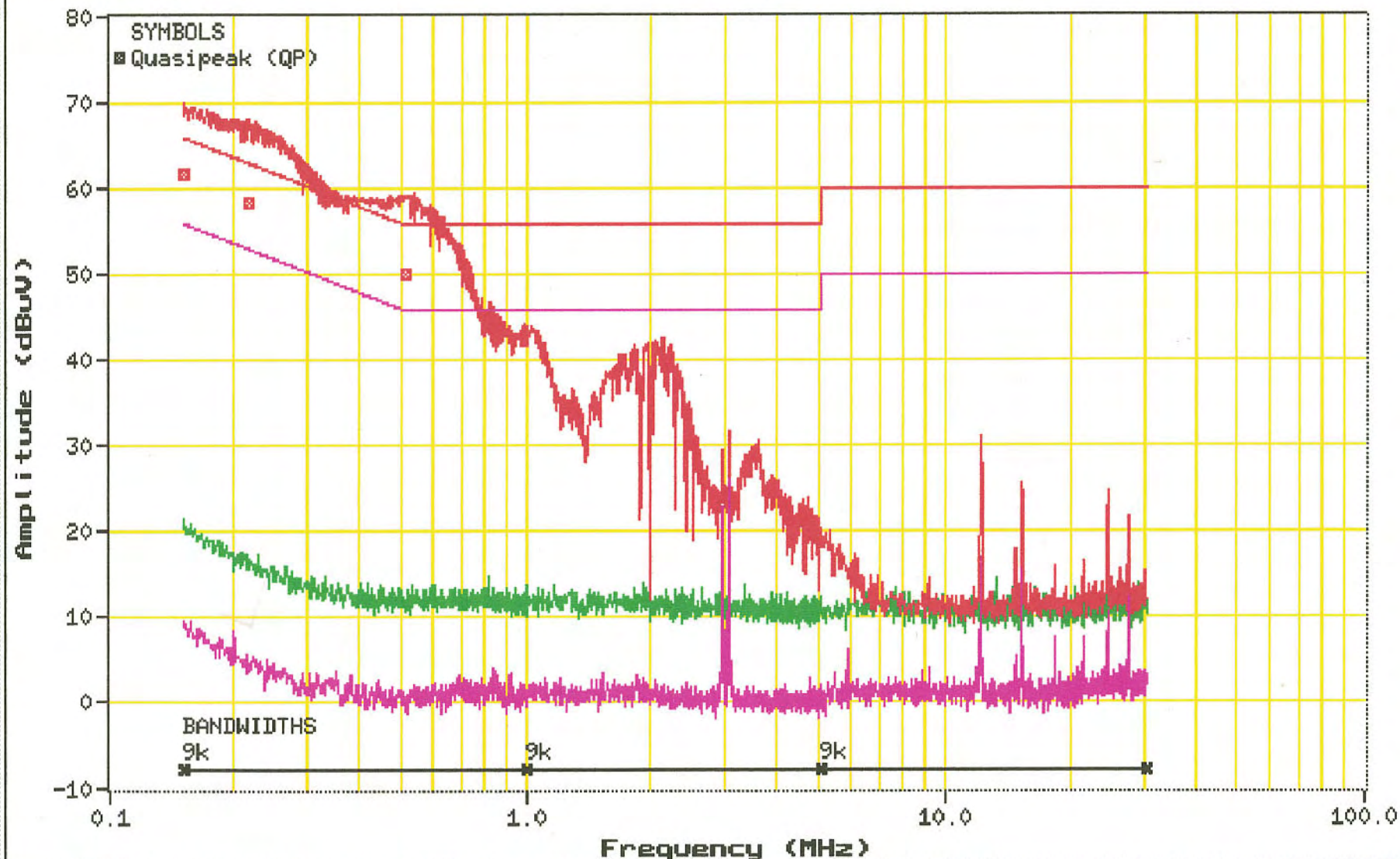
Page

LIMITS TRACES

Ambient

1053CEQP Active

1053CEAV Emissions





RFI INDUSTRIES PTY LIMITED

CONDUCTED EMISSIONS

SIMON ELECT8

AAR 1V AMPLIFIER - S/No:09260501

TEST REPORT

Number TL3492

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Graph 8

Page

LIMITS

1053CEQP

Neutral

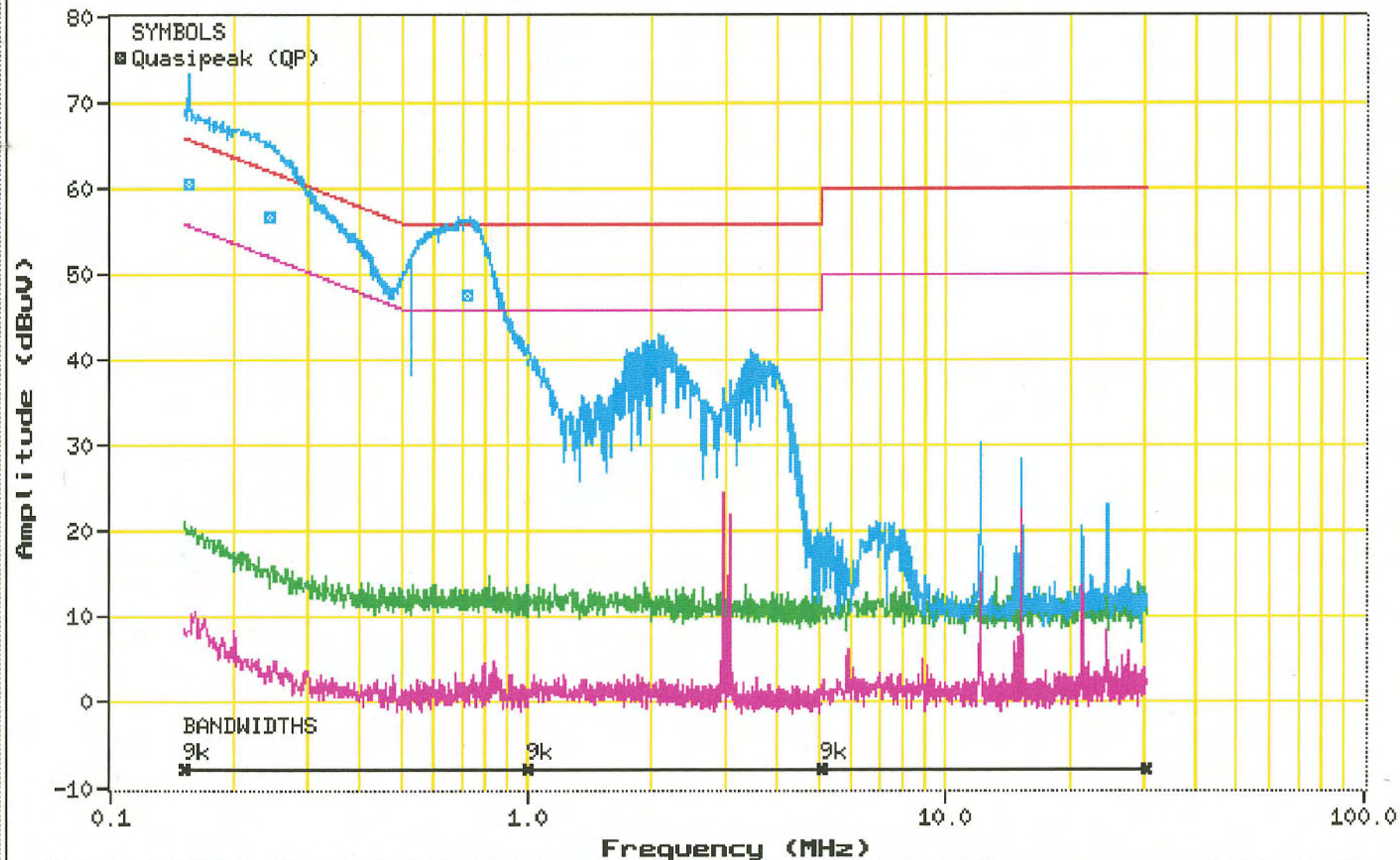
1053CEAV Emissions

TRACES

Ambient

Neutral

Emissions





RFI INDUSTRIES PTY LIMITED

CONDUCTED EMISSIONS

SIMON ELECT9

ELECTRIC BLUE 12 AMPLIFIER - S/No:1506 05 01

TEST REPORT

Number TL3492

Officer SG

Graph 9

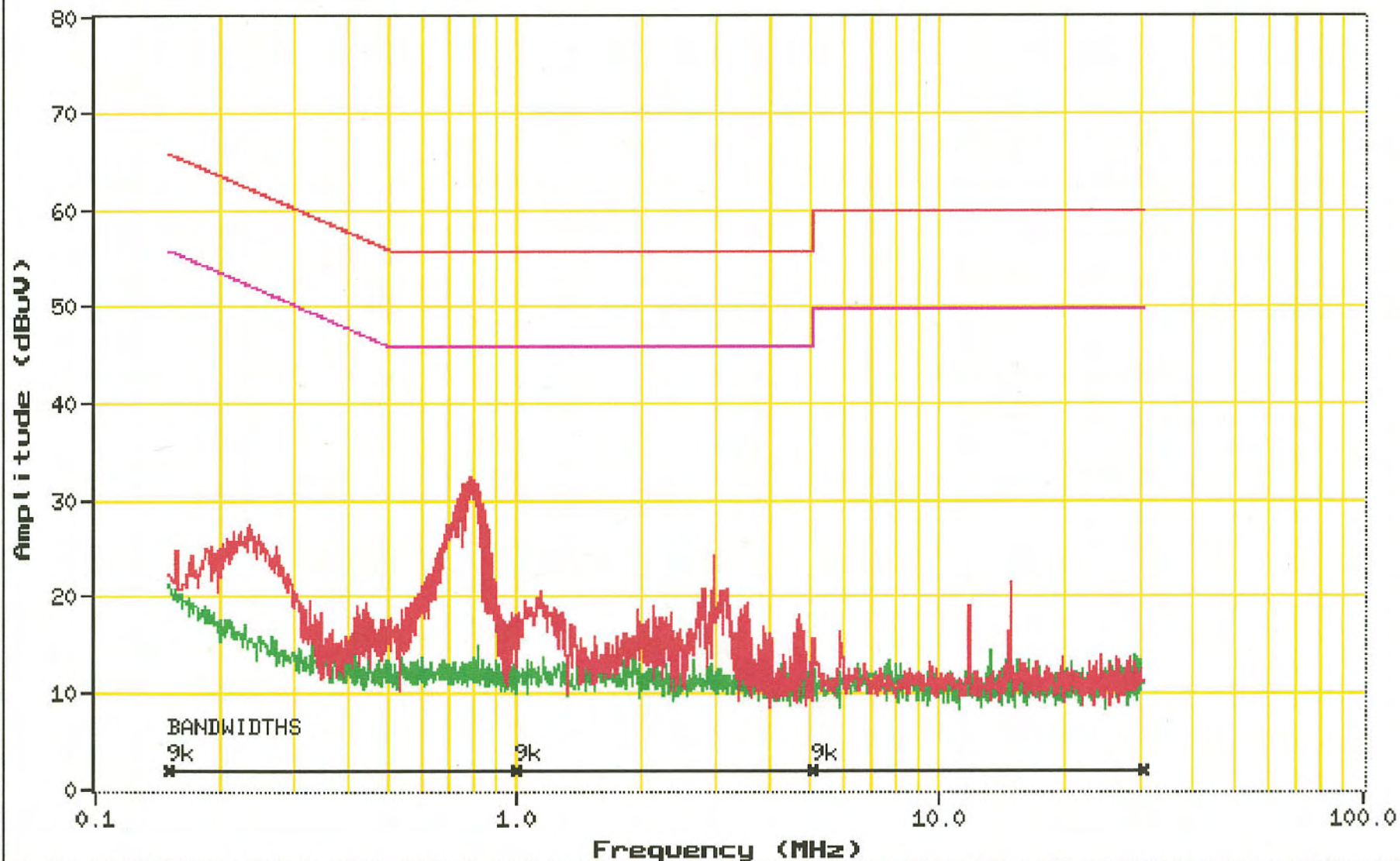
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LIMITS TRACES

Ambient

1053CEQP Active

1053CEAV





RFI INDUSTRIES PTY LIMITED

CONDUCTED EMISSIONS

SIMON ELECT10

ELECTRIC BLUE 12 AMPLIFIER - S/No:1506 05 01

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Number TL3492

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Graph 10

Page

LIMITS

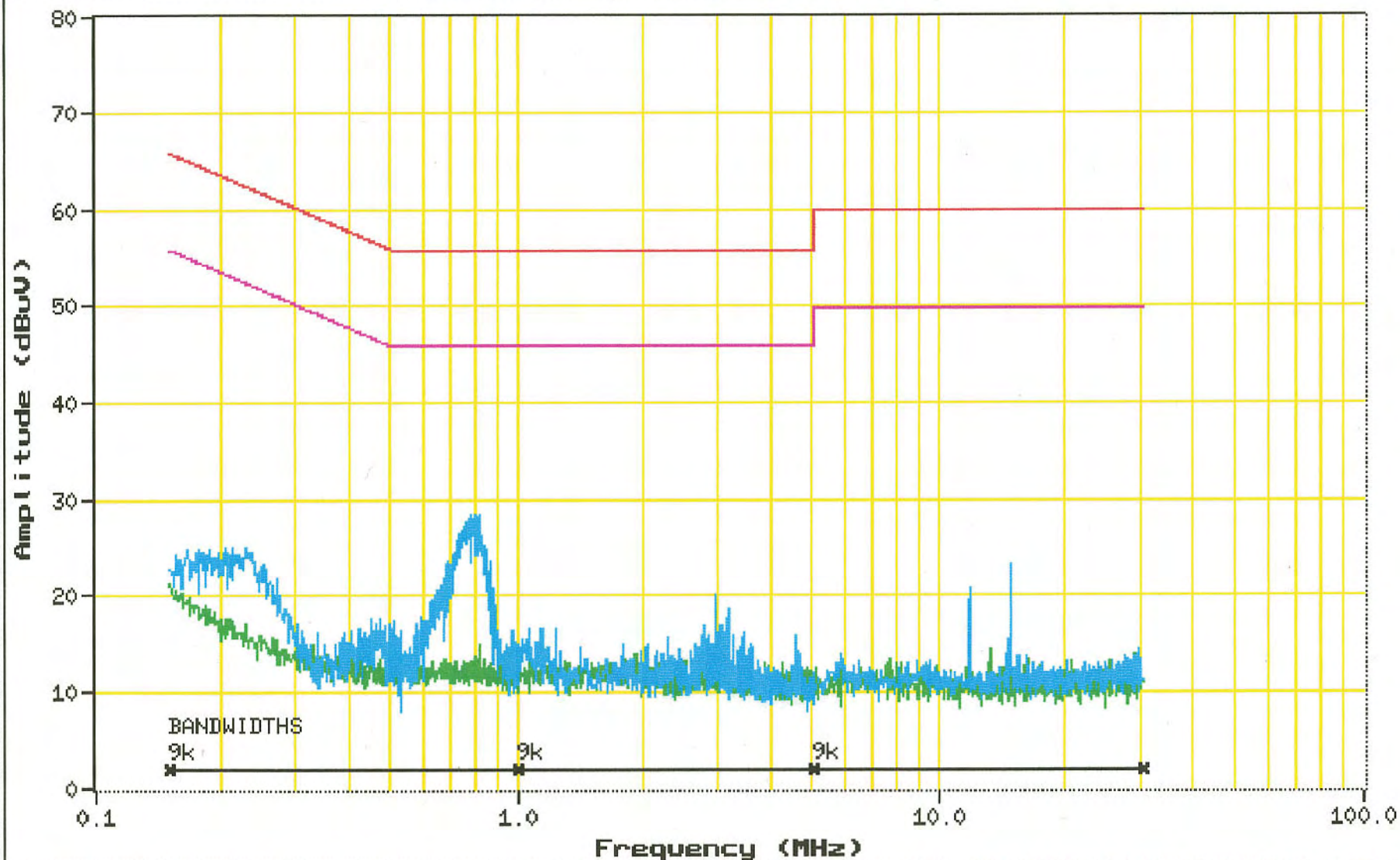
1053CEQP

1053CEAV

TRACES

Ambient

Neutral





RFI INDUSTRIES PTY LIMITED

CONDUCTED EMISSIONS

SIMON ELECT11

AAR 2V AMPLIFIER - S/No:0954 05 01

TEST REPORT

Number TL3492

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Graph 11

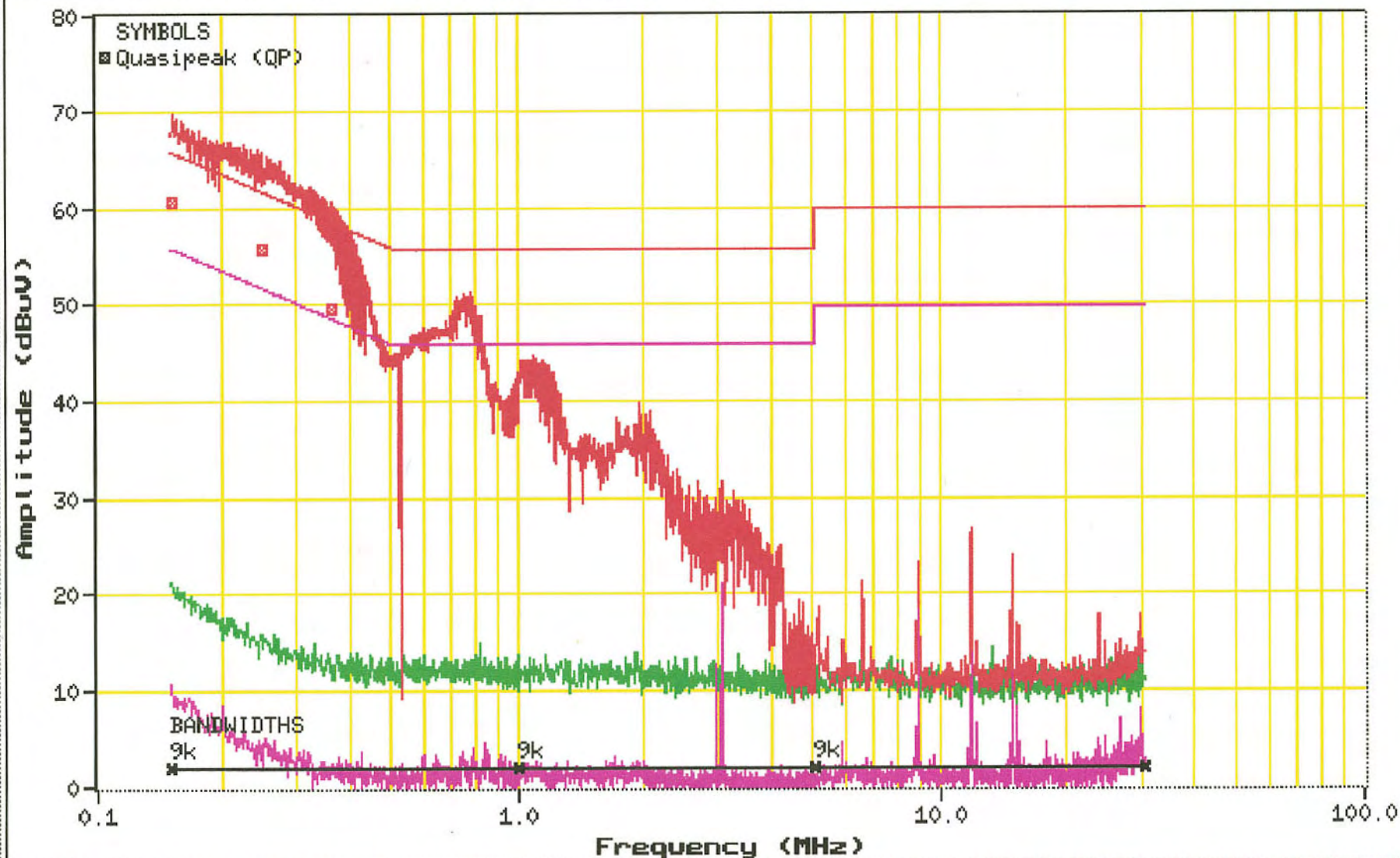
Page

LIMITS

Ambient

1053CEQP Active

1053CEAV Emissions





RFI INDUSTRIES PTY LIMITED

CONDUCTED EMISSIONS

SIMON ELECT12

AAR 2V AMPLIFIER - S/No:0954 05 01

TEST REPORT

Number TL3492

Officer SG

Graph 12

Page

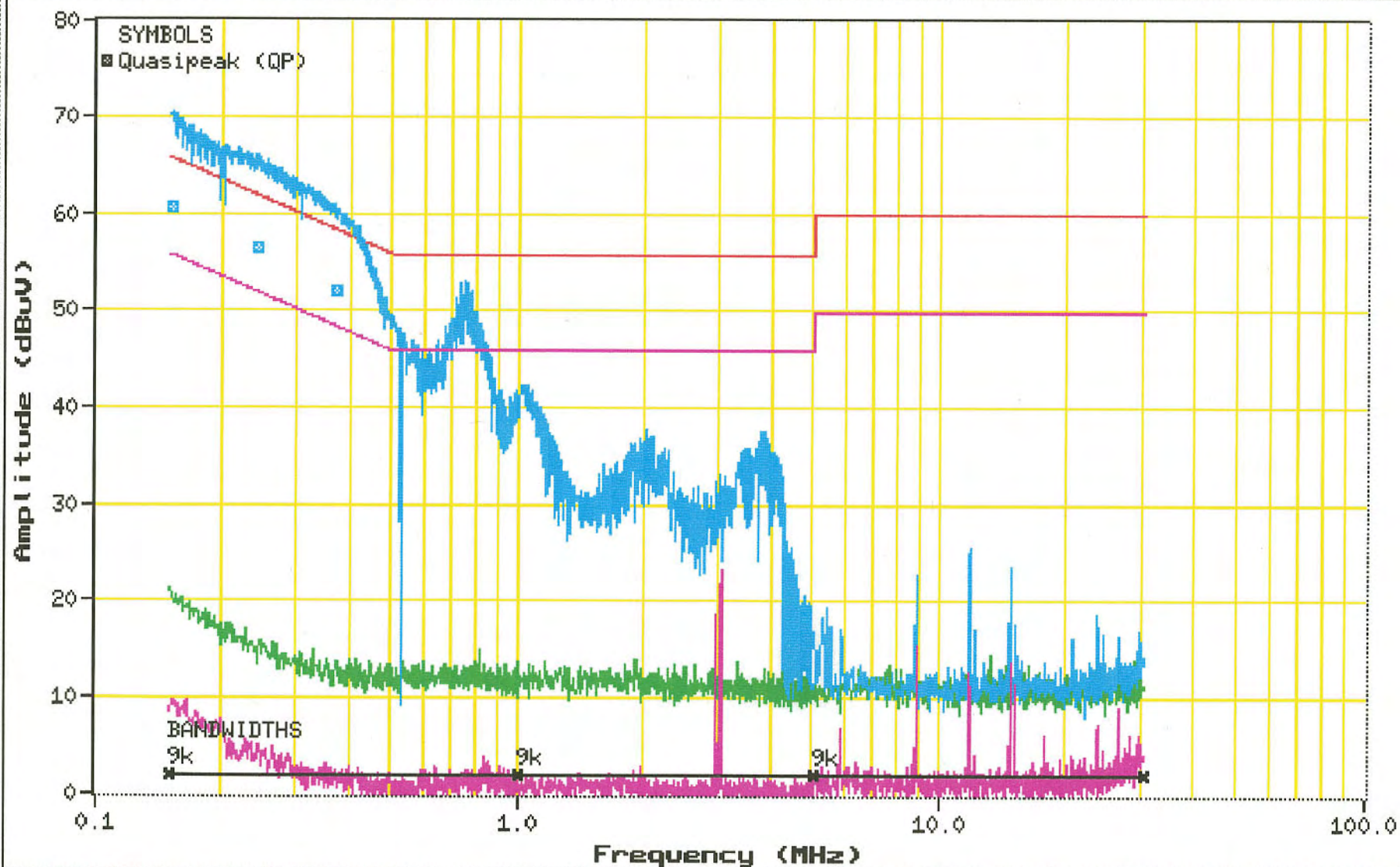
LIMITS TRACES

Ambient

1053CEQP

Neutral

1053CEAV Emissions





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RADIATED EMISSIONS

SIMON ELECT13

ABM 300 HEAD AMPLIFIER - S/No:1651 05 01 - MAINS

TEST REPORT

Number TL3492

Officer SG

Graph 13

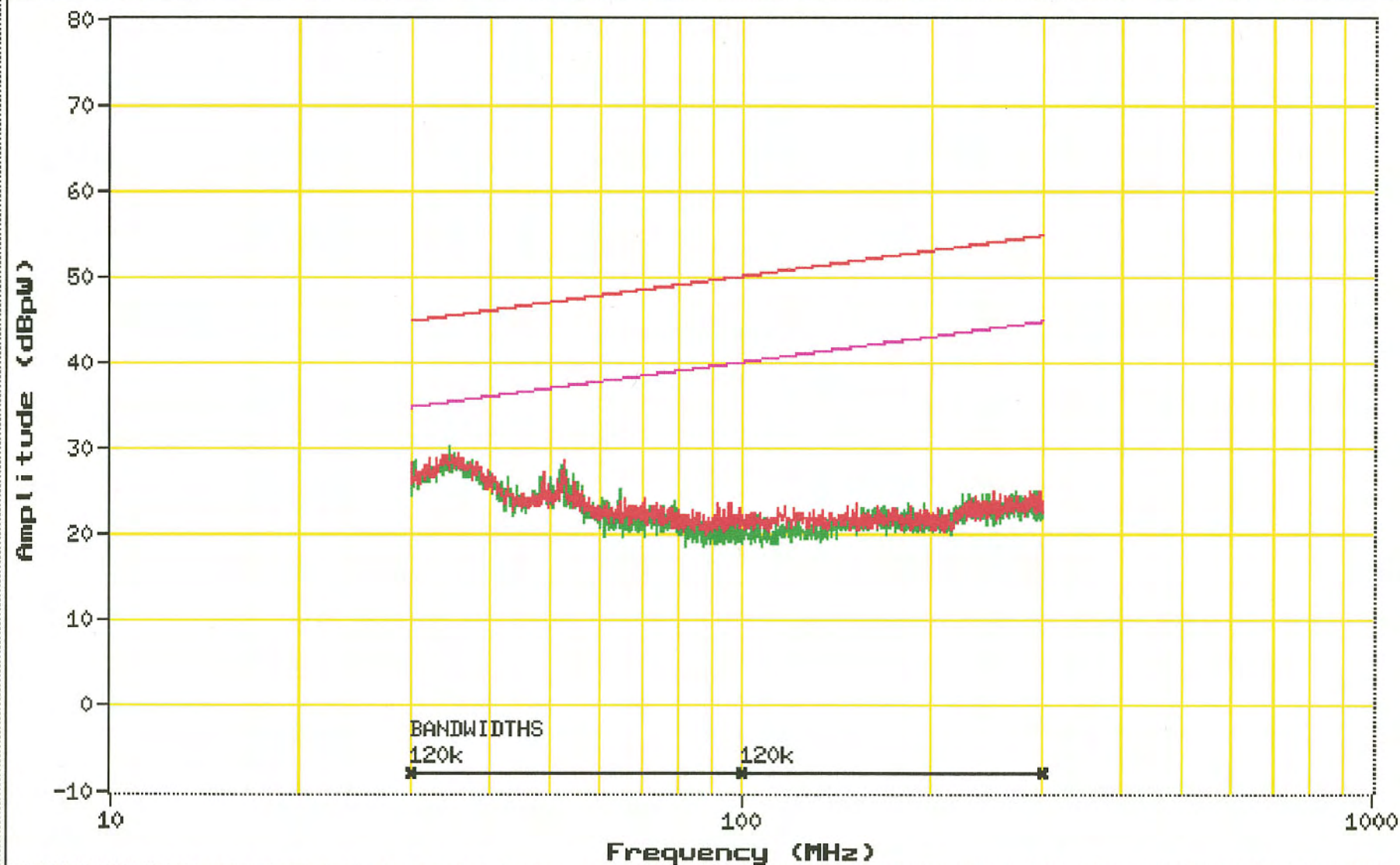
Page

LIMITS TRACES

Ambient

1053REQP Active

1053REAV





RFI INDUSTRIES PTY LIMITED

RADIATED EMISSIONS

SIMON ELECT14

ABM 300 HEAD AMPLIFIER - S/No:1651 05 01 - SPEAKER O/P

TEST REPORT

Number TL3492

Officer SG

Graph 14

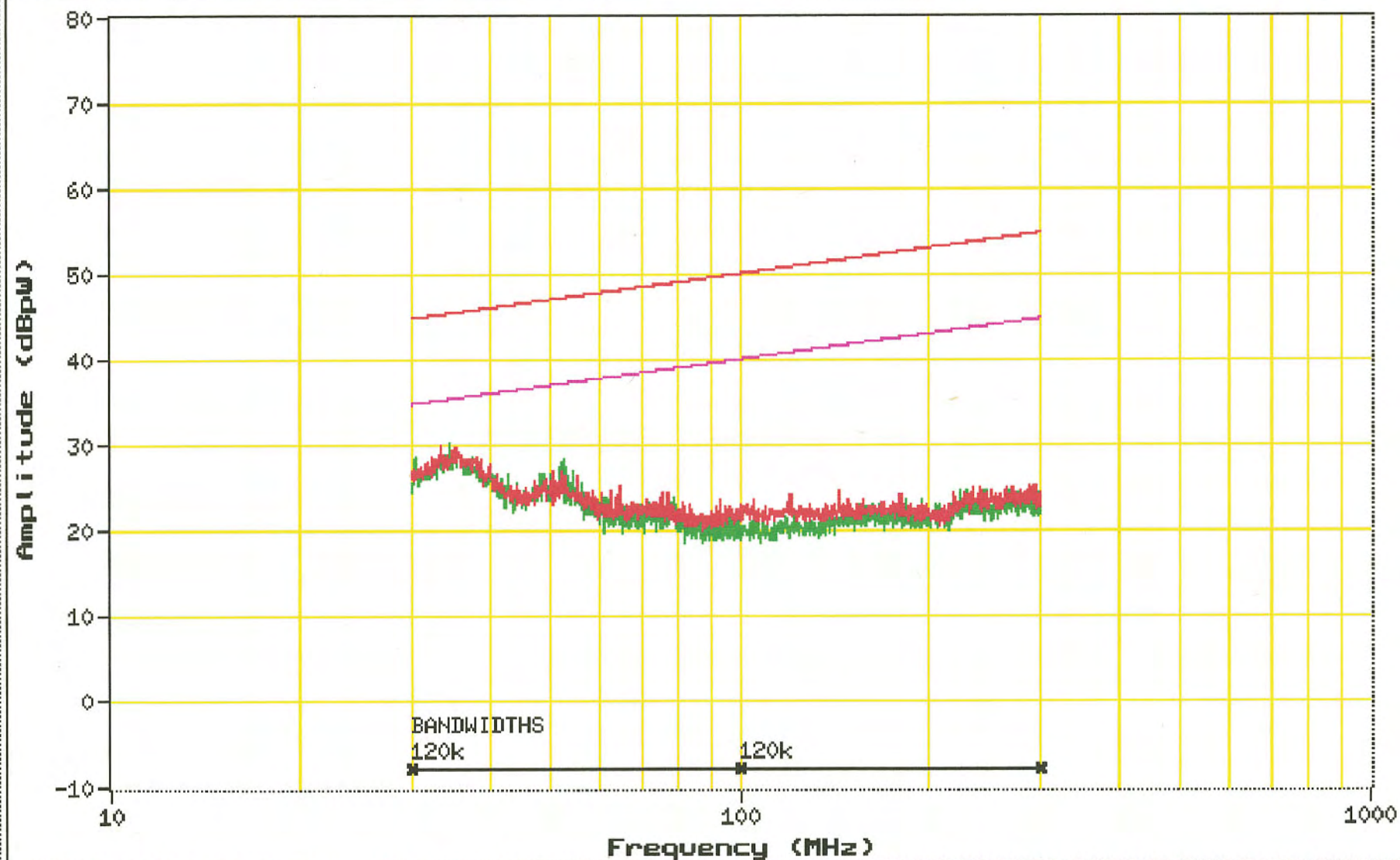
Page

LIMITS TRACES

Ambient

1053REQP Active

1053REAV





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RADIATED EMISSIONS

SIMON ELECT15

ABM 300 HEAD AMPLIFIER - S/No:1651 05 01 - EFFECTS SEND

TEST REPORT

Number TL3492

Officer SG

Graph 15

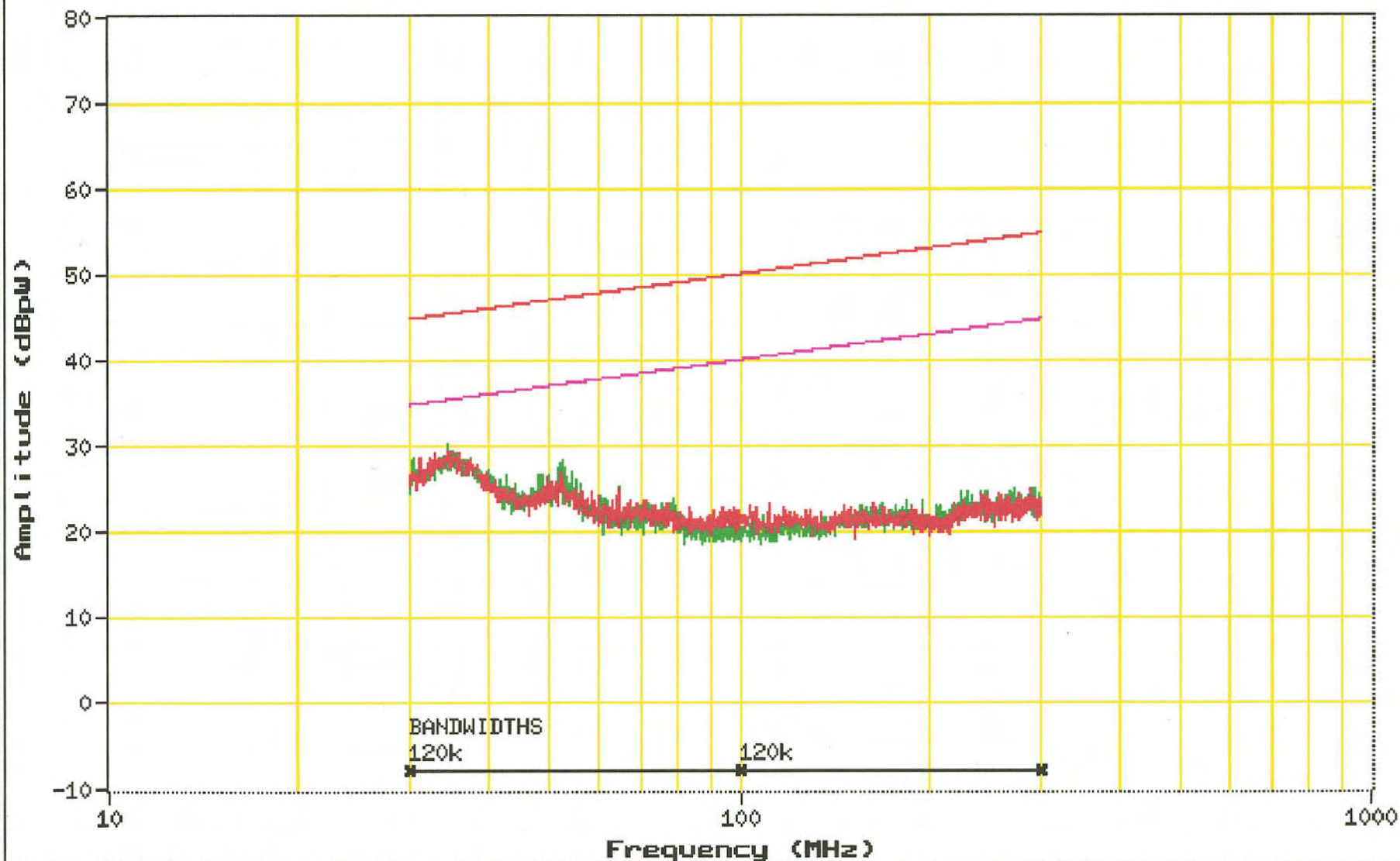
Page

LIMITS TRACES

Ambient

1053REQP Active

1053REAV





RFI INDUSTRIES PTY LIMITED

RADIATED EMISSIONS

SIMON ELECT16

ABM 300 HEAD AMPLIFIER - S/No:1651 05 01 - F-SW EQ/SHAPE Page

TEST REPORT

Number TL3492

Officer SC

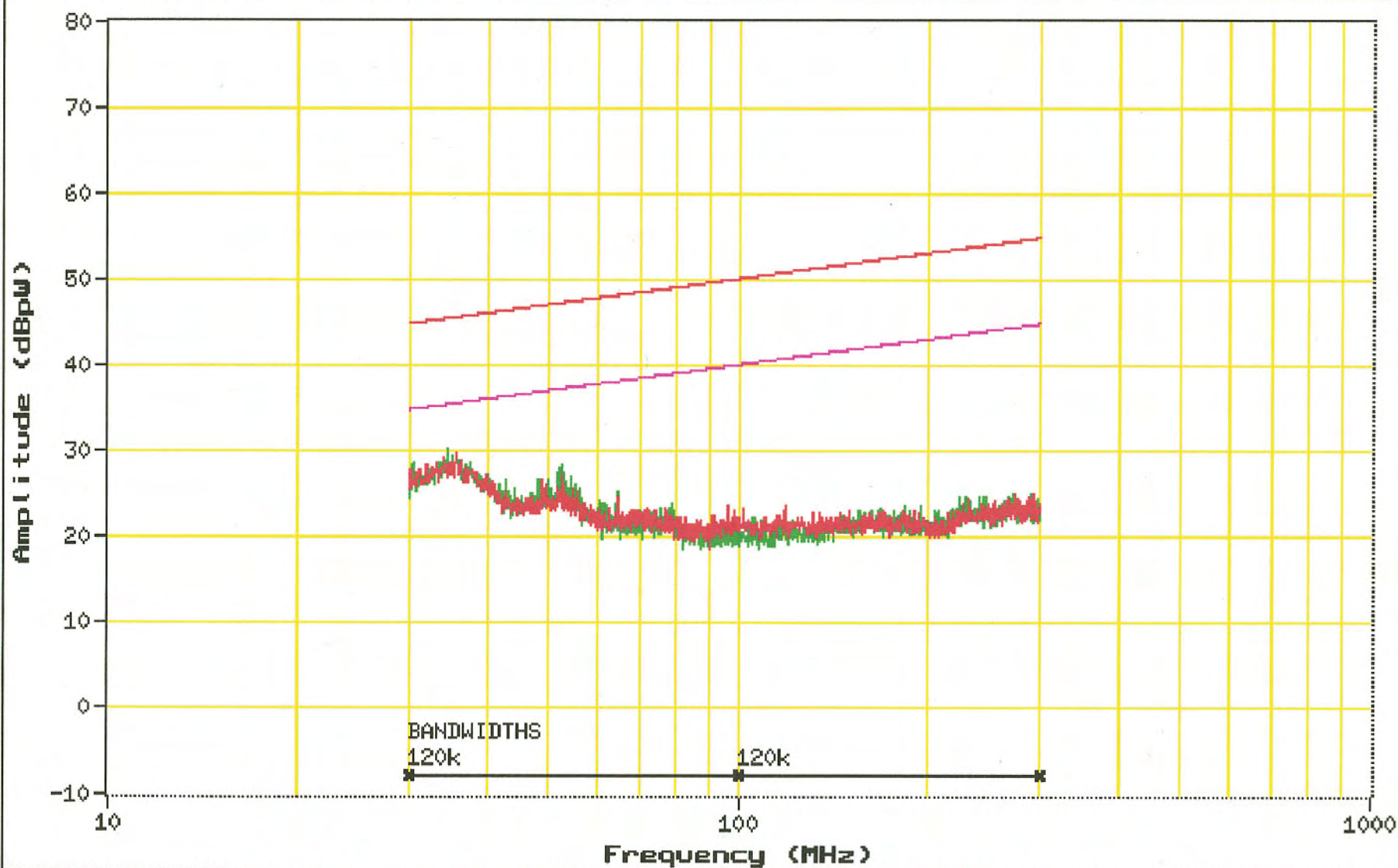
Graph 16

LIMITS TRACES

Ambient

1053REQP Active

1053REAV





RFI INDUSTRIES PTY LIMITED

RADIATED EMISSIONS

SIMON ELECT17

ABM 300 HEAD AMPLIFIER - S/No:1651 05 01 - MUTE F/S SUB

TEST REPORT

Number TL3492

Officer SG

Graph 17

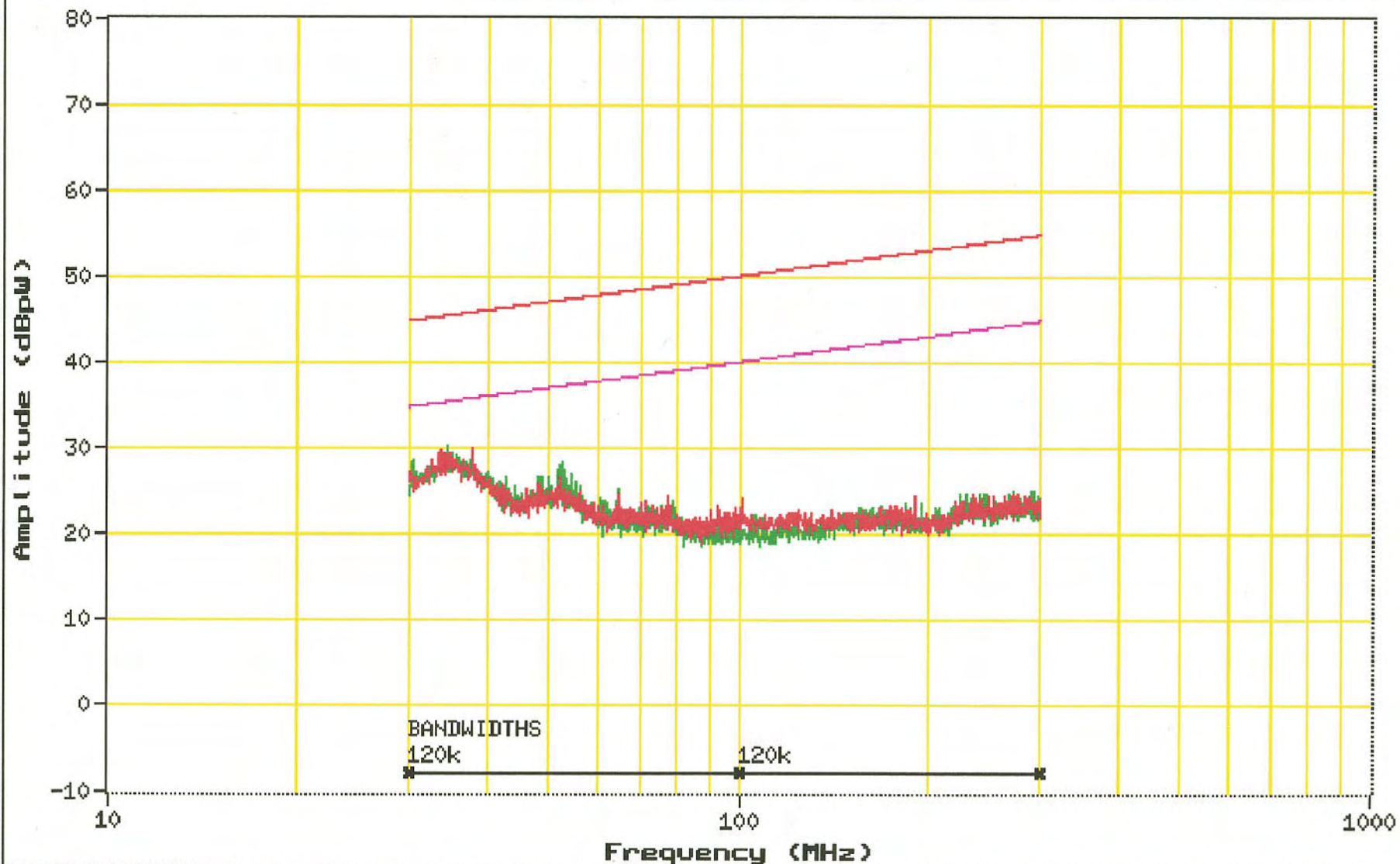
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LIMITS TRACES

Ambient

1053REQP Active

1053REAV



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RADIATED EMISSIONS

SIMON ELECT18

ABM 300 HEAD AMPLIFIER - S/No:1651 05 01 - LINE INPUT

TEST REPORT

Number TL3492

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Graph 18

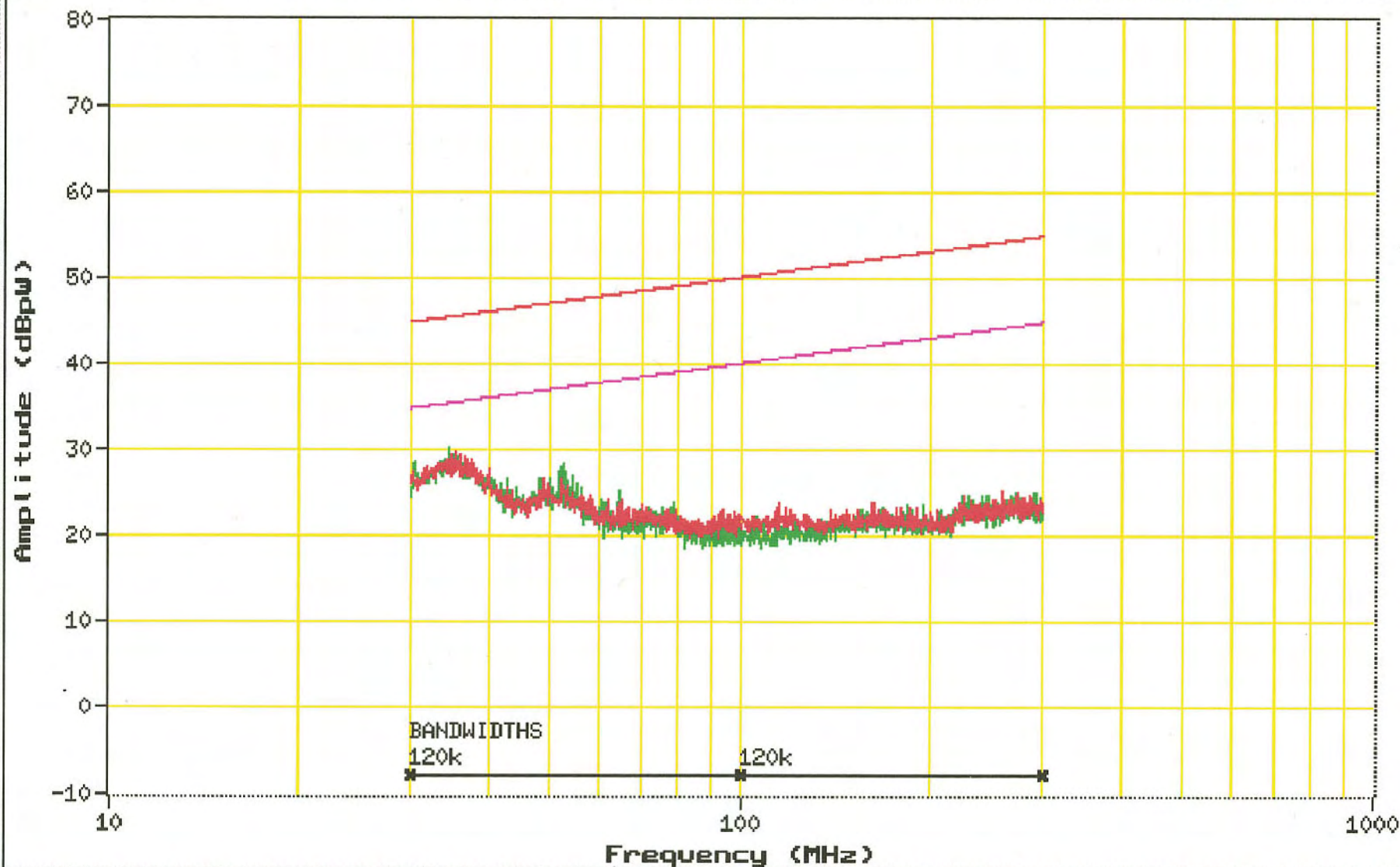
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LIMITS TRACES

Ambient

1053REQP Active

1053REAV



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RADIATED EMISSIONS

SIMON ELECT19

ABM 300 HEAD AMPLIFIER - S/No:1651 05 01 - INST I/P HIGH Page

TEST REPORT

Number TL3492

Officer SG

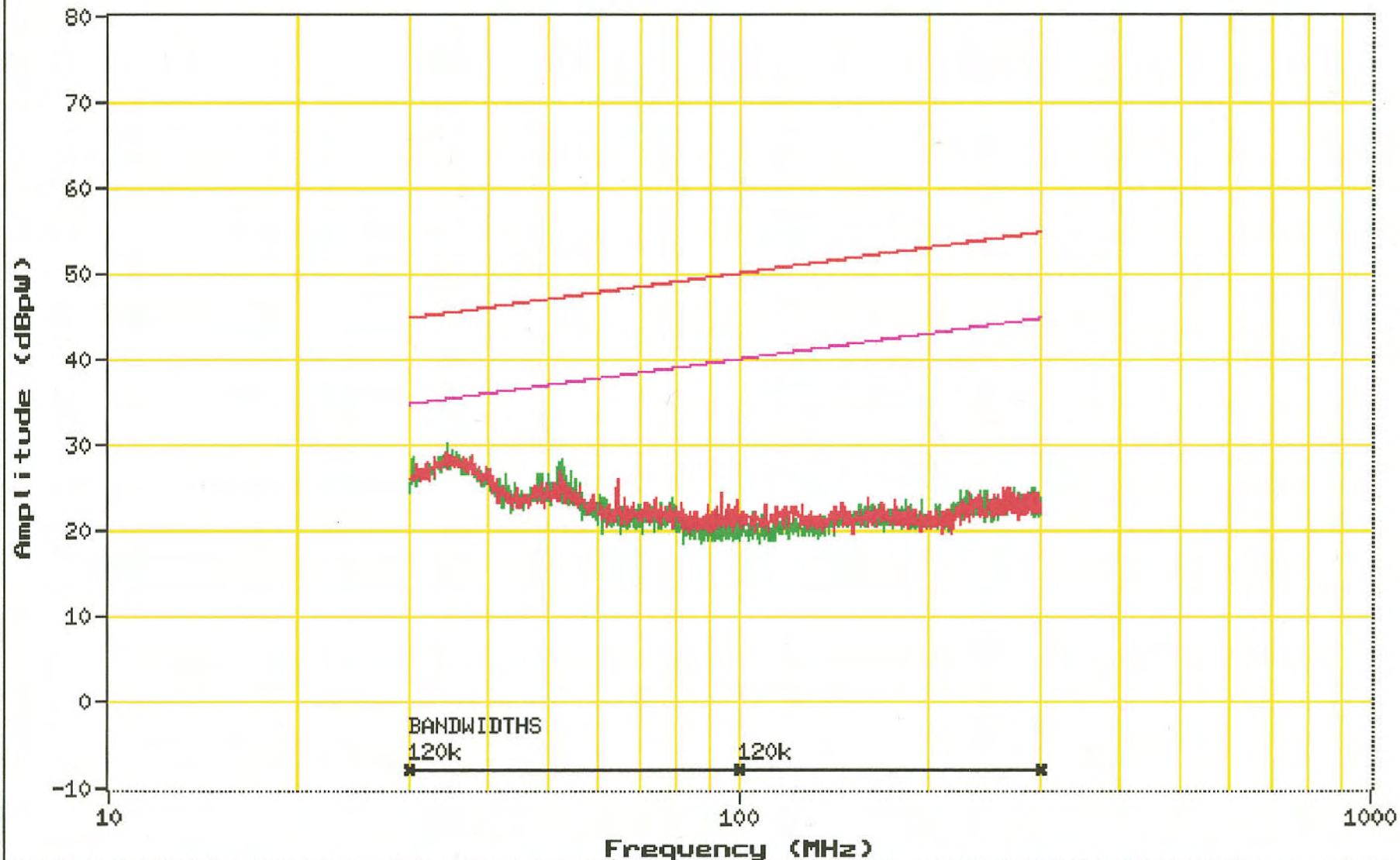
Graph 19

LIMITS TRACES

Ambient

1053REQP Active

1053REAV





RFI INDUSTRIES PTY LIMITED

RADIATED EMISSIONS

SIMON ELECT20

ABM 300 HEAD AMPLIFIER - S/No:1651 05 01 - SUB OUTPUT

TEST REPORT

Number TL3492

Officer SG

Graph 20

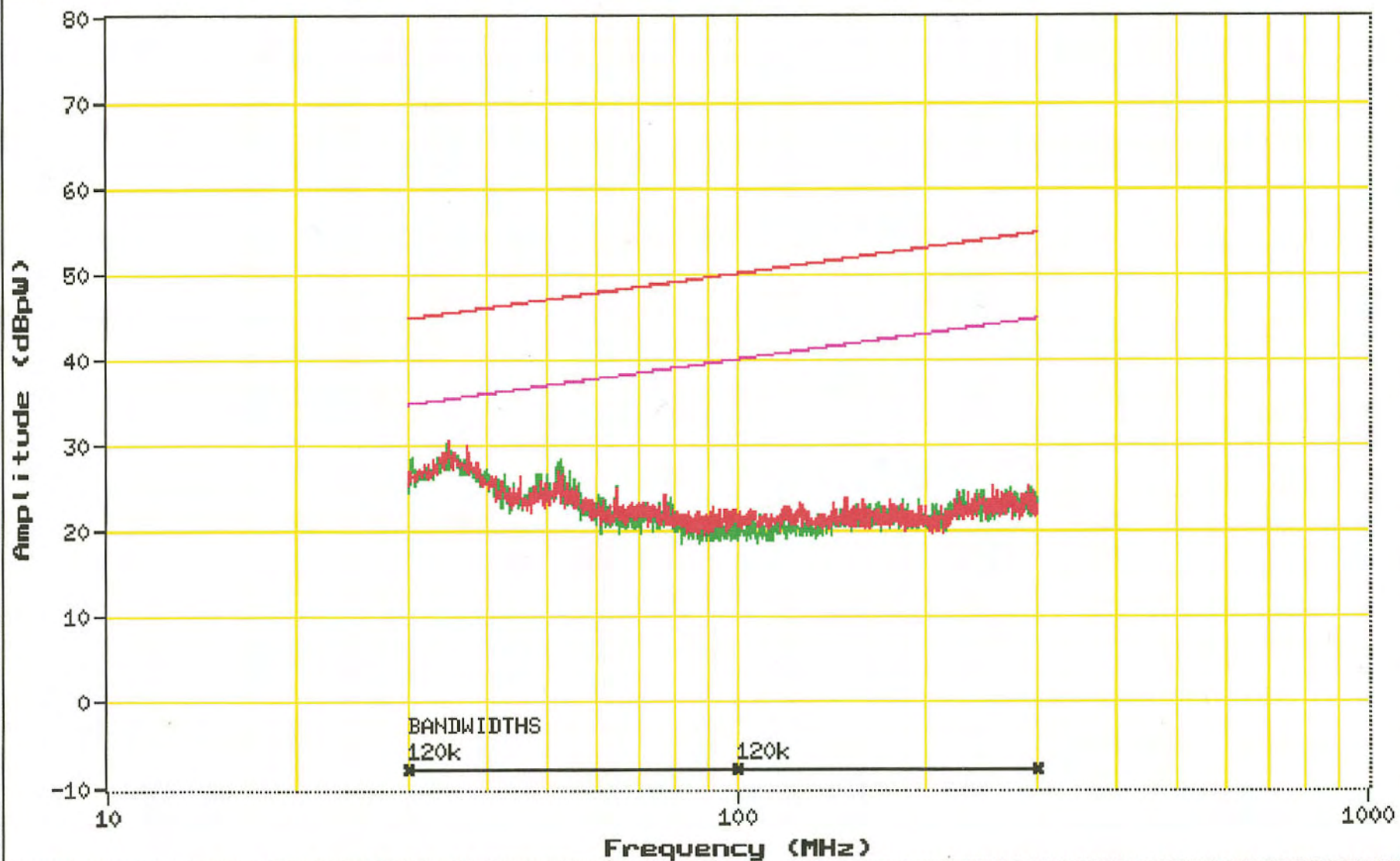
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LIMITS TRACES

Ambient

1053REQP Active

1053REAV





RFI INDUSTRIES PTY LIMITED

RADIATED EMISSIONS

SIMON ELECT21

ABM 500 HEAD AMPLIFIER - S/No:2025 05 01 - MAINS

TEST REPORT

Number TL3492

Officer SG

Graph 21

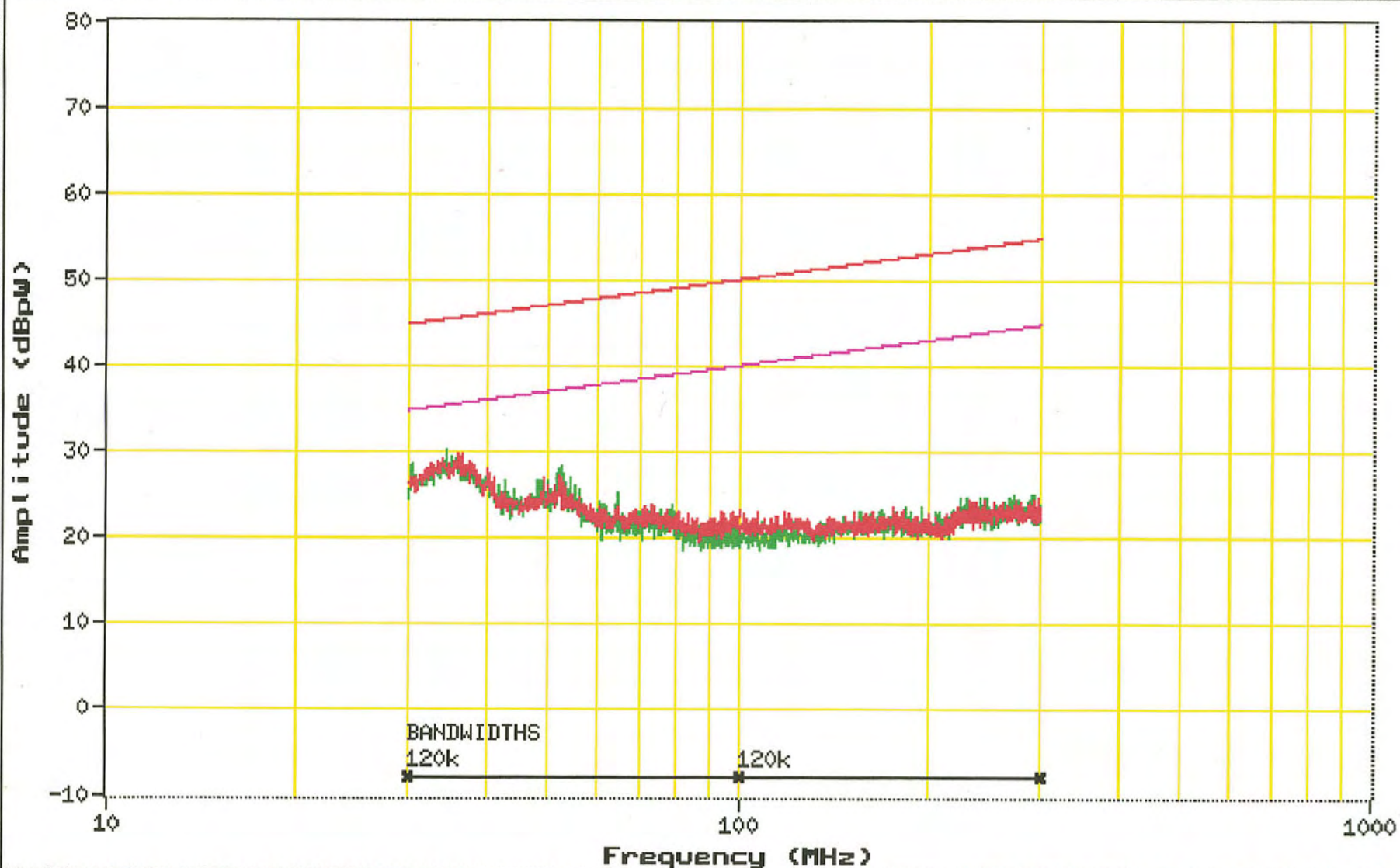
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LIMITS TRACES

Ambient

1053REQP Active

1053REAV



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RADIATED EMISSIONS

SIMON ELECT22

ABM 500 HEAD AMPLIFIER - S/No:2025 05 01 - SPEAKER O/P

TEST REPORT

Number TL3492

Officer SG

Graph 22

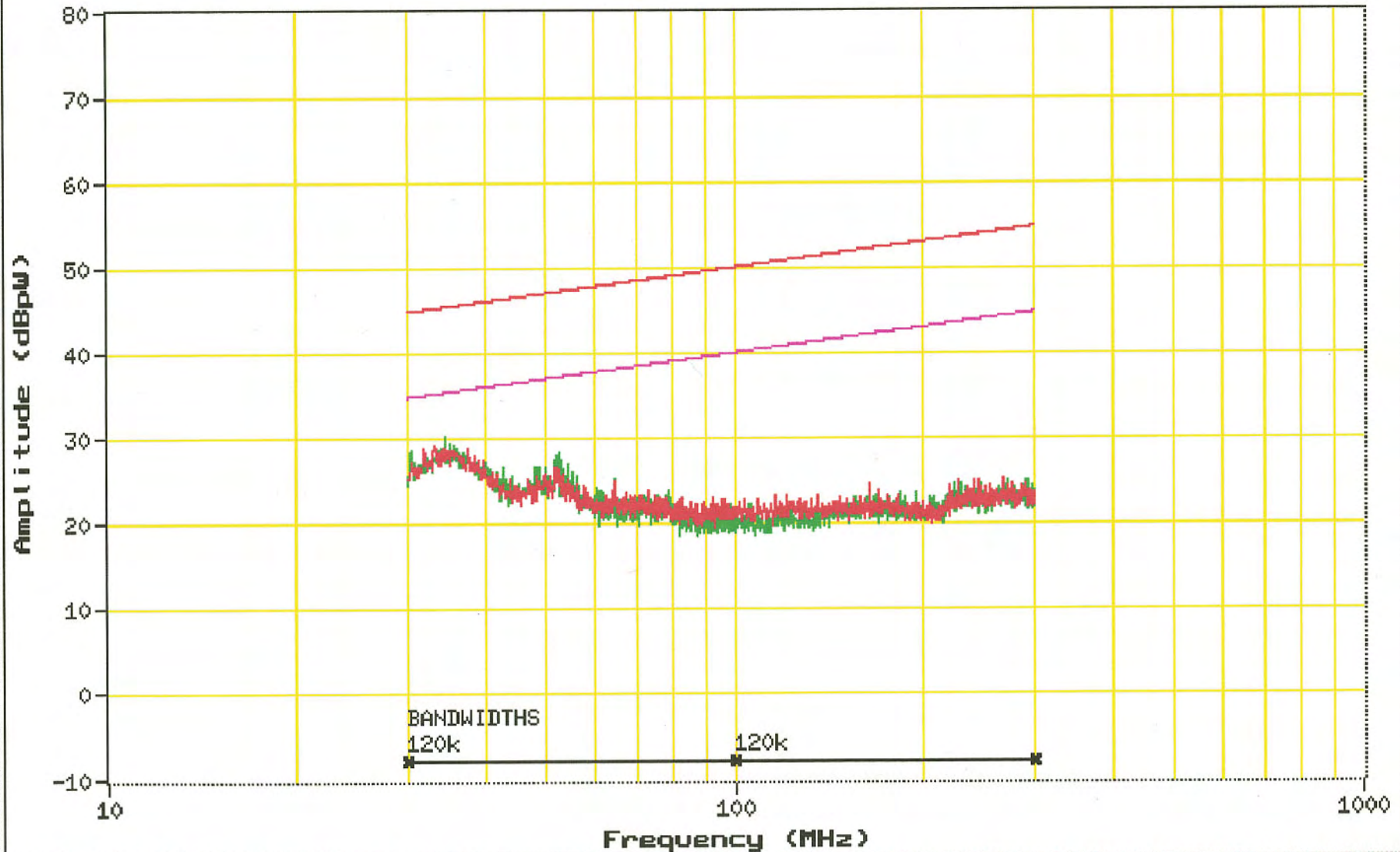
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LIMITS TRACES

Ambient

1053REQP Active

1053REAV





RFI INDUSTRIES PTY LIMITED

RADIATED EMISSIONS

SIMON ELECT23

ABM 500 HEAD AMPLIFIER - S/No:2025 05 01 - FX RETURN

TEST REPORT

Number TL3492

Officer SG

Graph 23

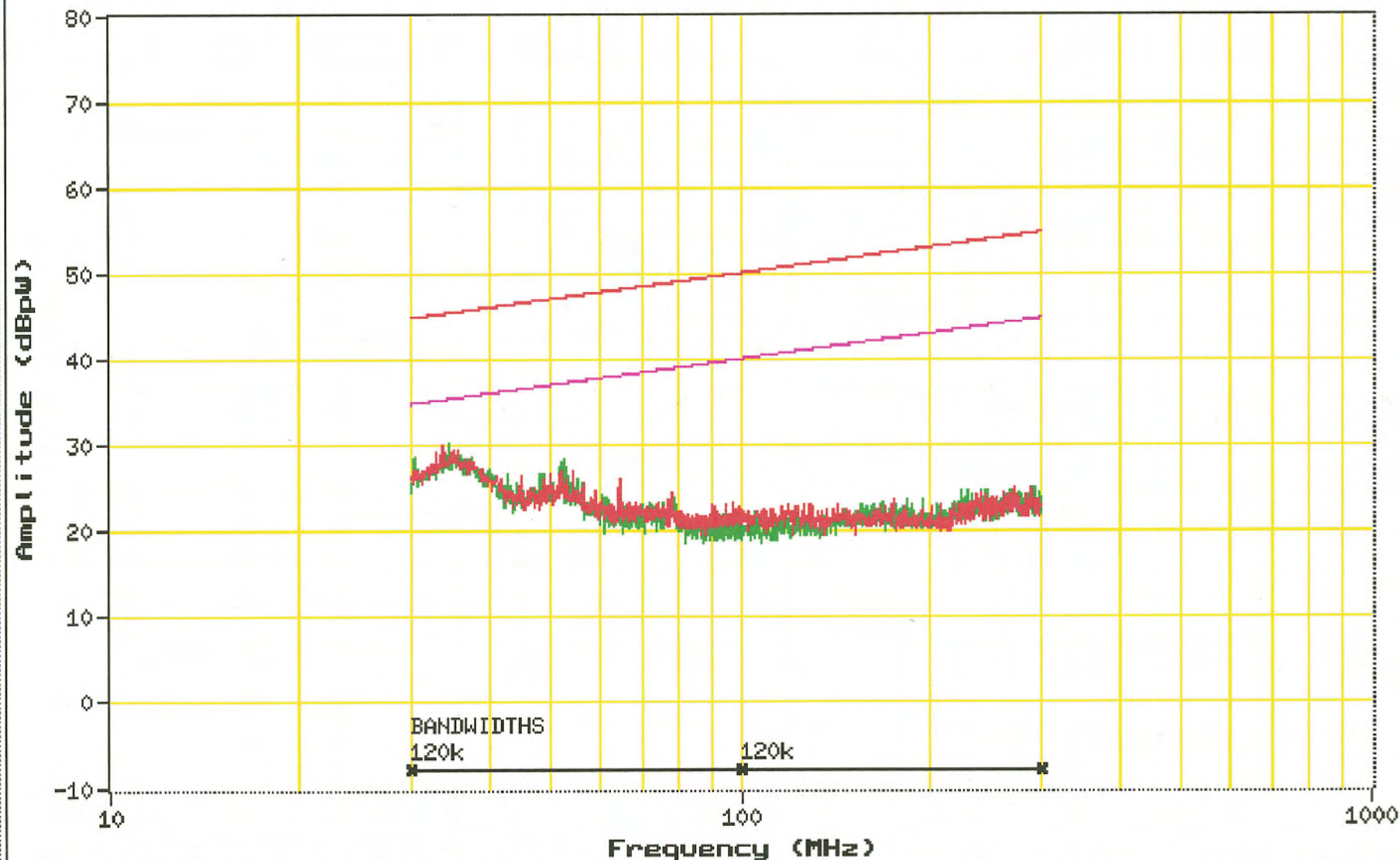
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LIMITS TRACES

Ambient

1053REQP Active

1053REAV





RFI INDUSTRIES PTY LIMITED

RADIATED EMISSIONS

SIMON ELECT24

ABM 500 HEAD AMPLIFIER - S/No:2025 05 01 - F-SW EQ/SHAPE Page

TEST REPORT

Number TL3492

Officer SG

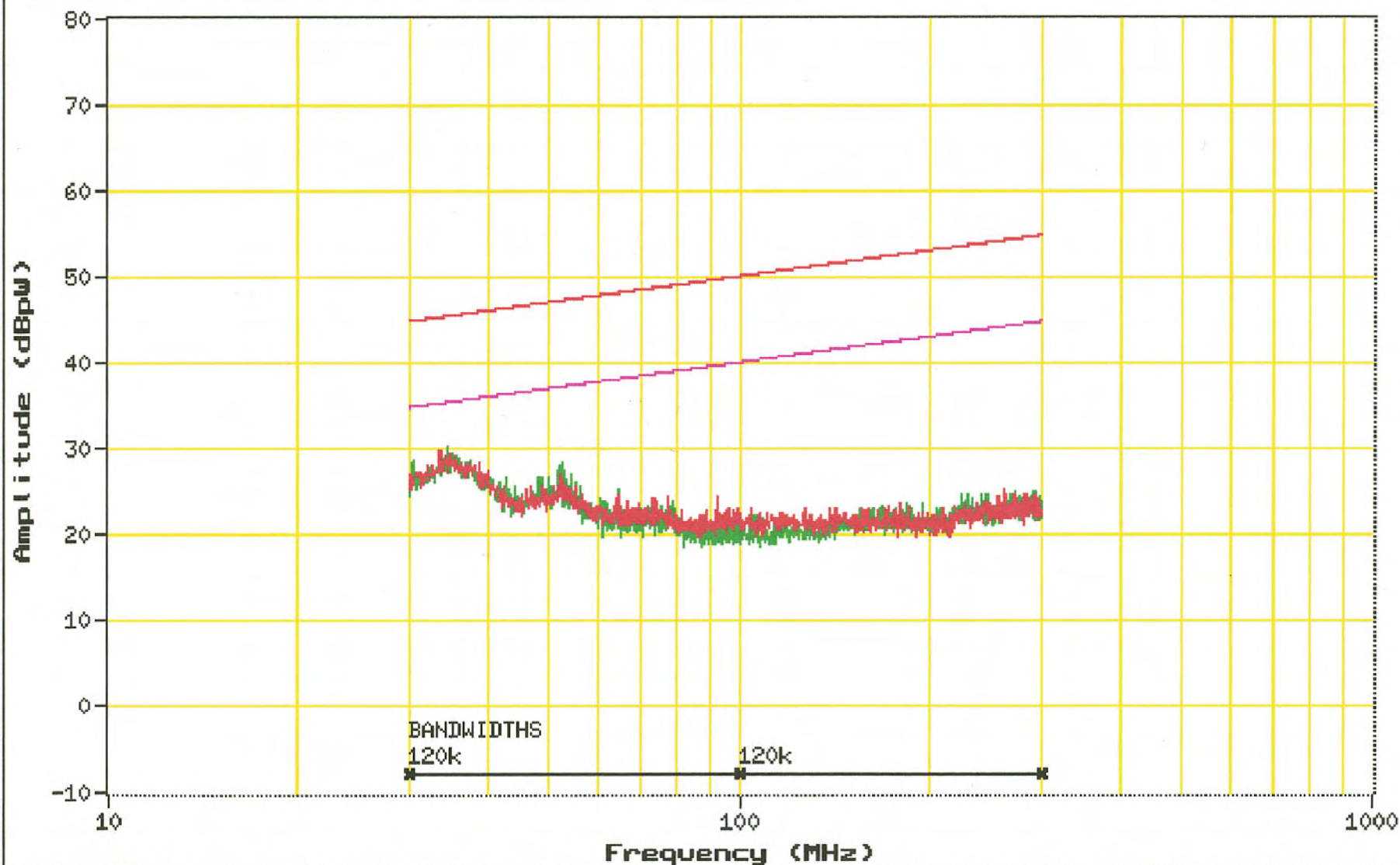
Graph 24

LIMITS TRACES

Ambient

1053REQP Active

1053REAV





RFI INDUSTRIES PTY LIMITED

RADIATED EMISSIONS

SIMON ELECT25

ABM 500 HEAD AMPLIFIER - S/No:2025 05 01 - MUTE F/S SUB

TEST REPORT

Number TL3492

Officer SG

Graph 25

Page

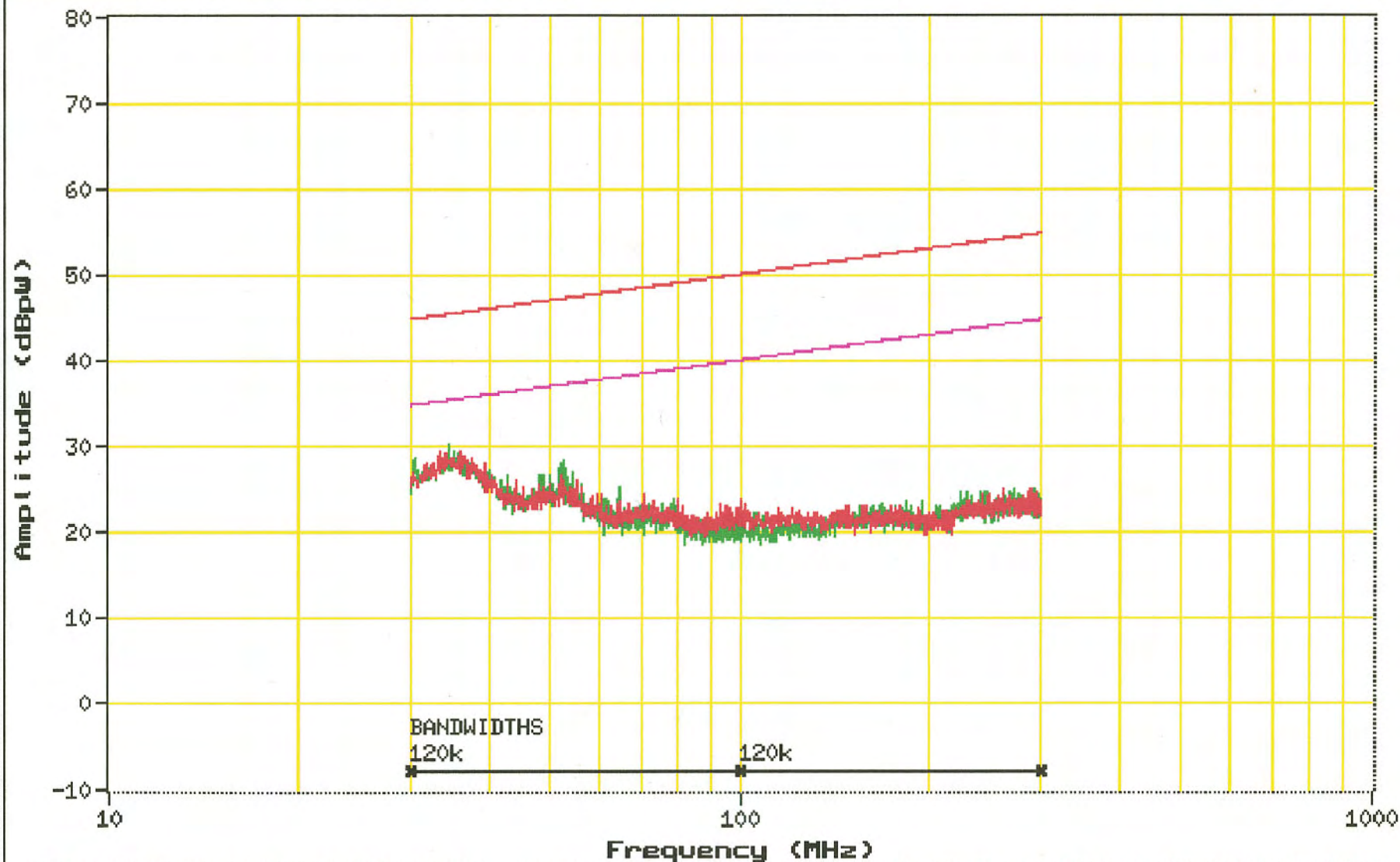
LIMITS

TRACES

Ambient

1053REQP Active

1053REAV





RFI INDUSTRIES PTY LIMITED

RADIATED EMISSIONS

SIMON ELECT26

ABM 500 HEAD AMPLIFIER - S/No:2025 05 01 - LINE INPUT

TEST REPORT

Number TL3492

Officer SG

Graph 26

Page

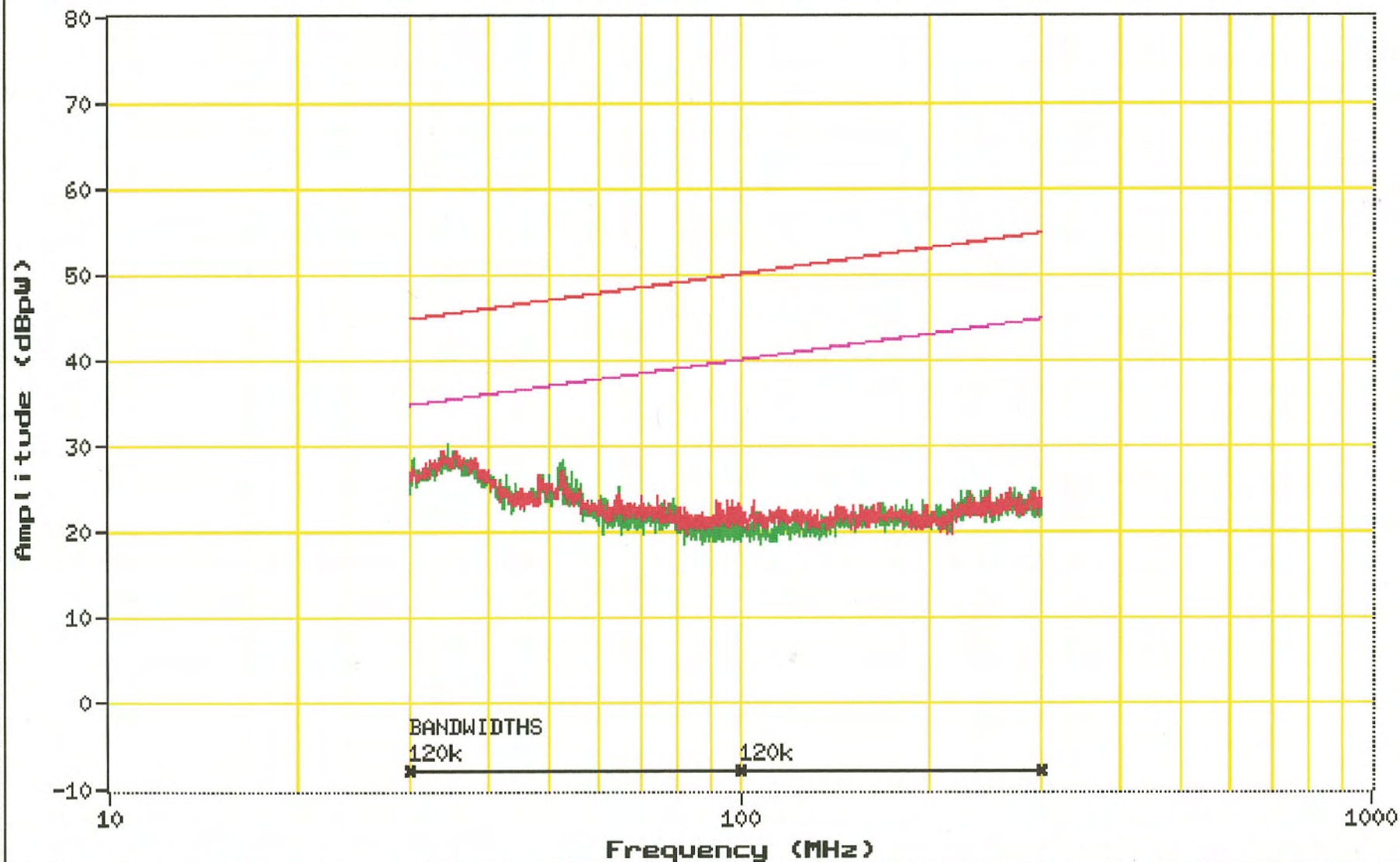
LIMITS

TRACES

Ambient

1053REQP Active

1053REAV





RFI INDUSTRIES PTY LIMITED

RADIATED EMISSIONS

SIMON ELECT27

ABM 500 HEAD AMPLIFIER - S/No:2025 05 01 - INST I/P HIGH Page

TEST REPORT

Number TL3492

Officer SG

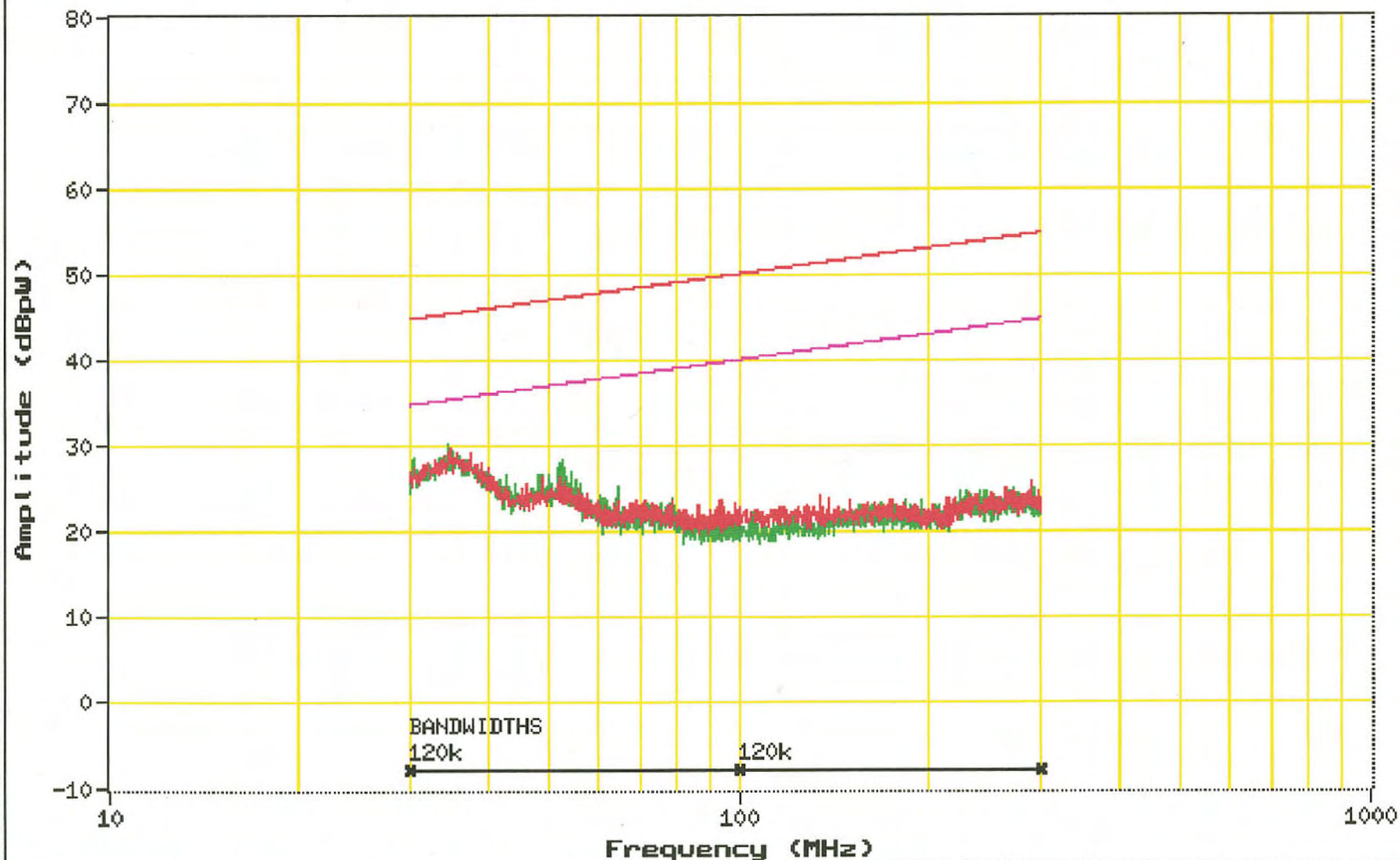
Graph 27

LIMITS TRACES

Ambient

1053REQP Active

1053REAV



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RADIATED EMISSIONS

SIMON ELECT28

ABM 500 HEAD AMPLIFIER - S/No:2025 05 01 - SUB OUTPUT

TEST REPORT

Number TL3492

Officer SG

Graph 28

Page

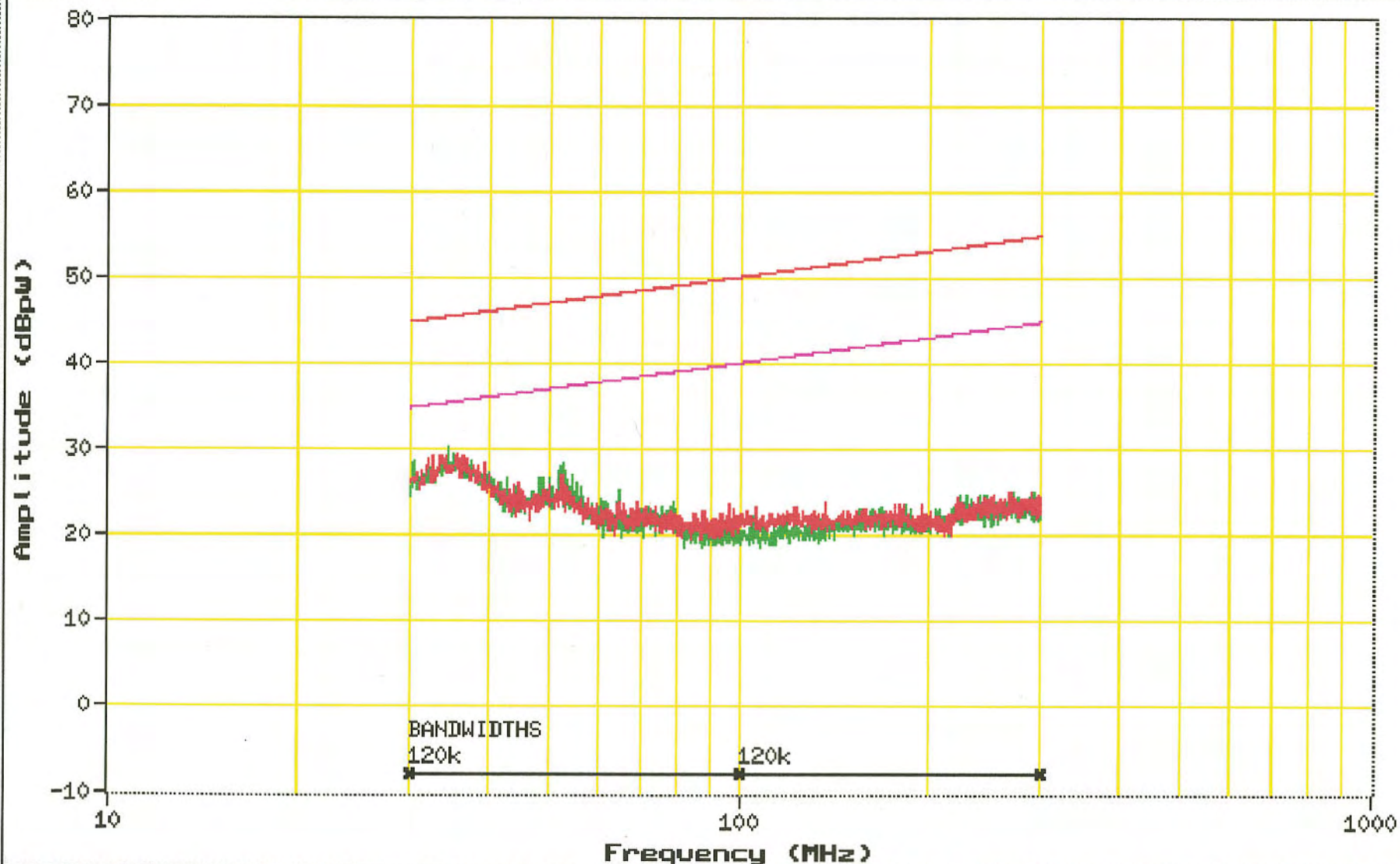
LIMITS

TRACES

Ambient

1053REQP Active

1053REAV



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RADIATED EMISSIONS

SIMON ELECT29

MAG 200 HEAD AMPLIFIER - S/No:2553 05 01 - MAINS

TEST REPORT

Number TL3492

Officer SG

Graph 29

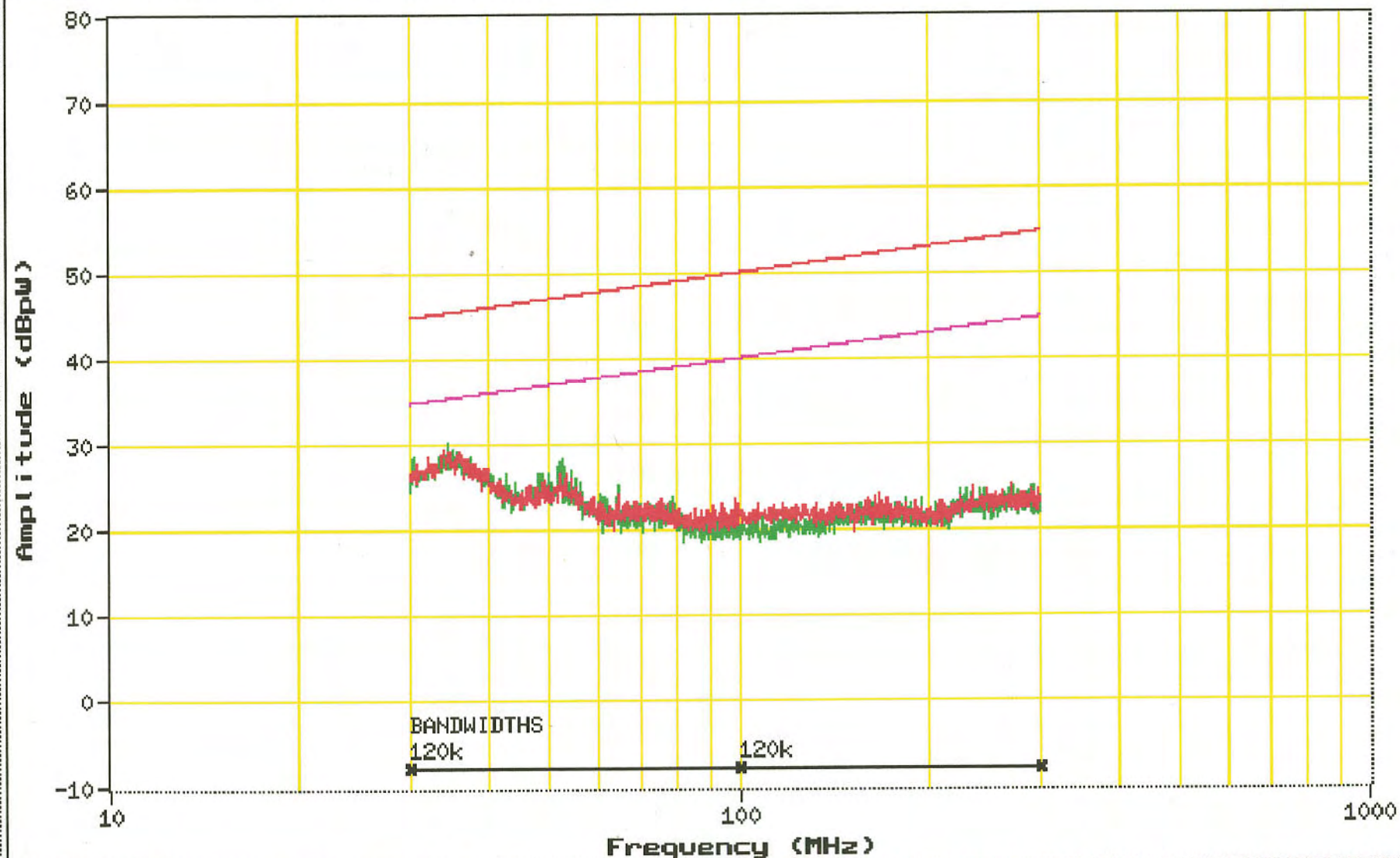
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LIMITS TRACES

Ambient

1053REQP Active

1053REAV



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RFI INDUSTRIES PTY LIMITED

RADIATED EMISSIONS

SIMON ELECT31

MAG 200 HEAD AMPLIFIER - S/No:2553 05 01 - INST I/P HIGH Page

TEST REPORT

Number TL3492

Officer SG

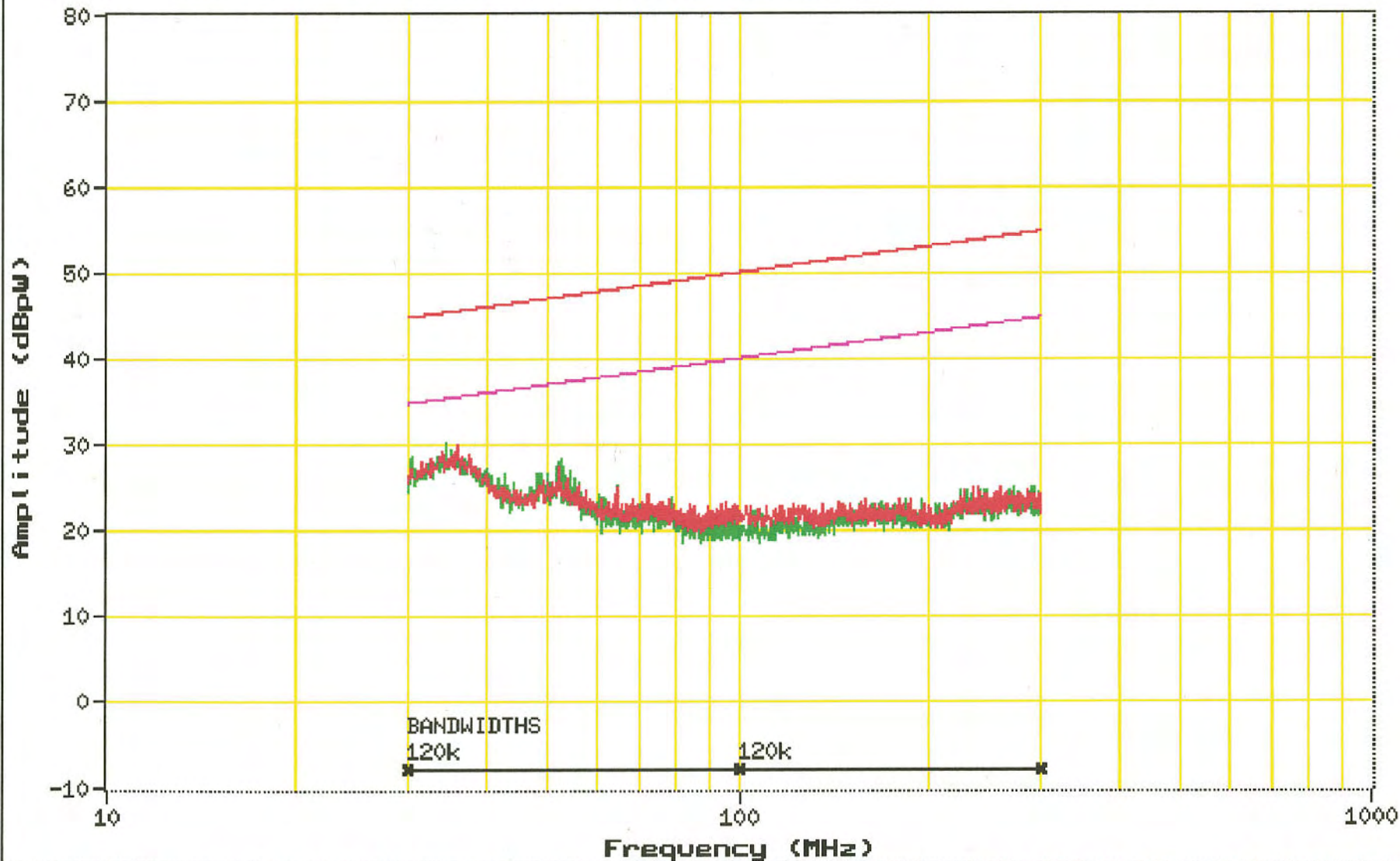
Graph 31

LIMITS TRACES

Ambient

1053REQP Active

1053REAV



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RADIATED EMISSIONS

SIMON ELECT32

MAG 200 HEAD AMPLIFIER - S/No: 2553 05 01 - FX RETURN

TEST REPORT

Number TL3492

Officer SG

Graph 32

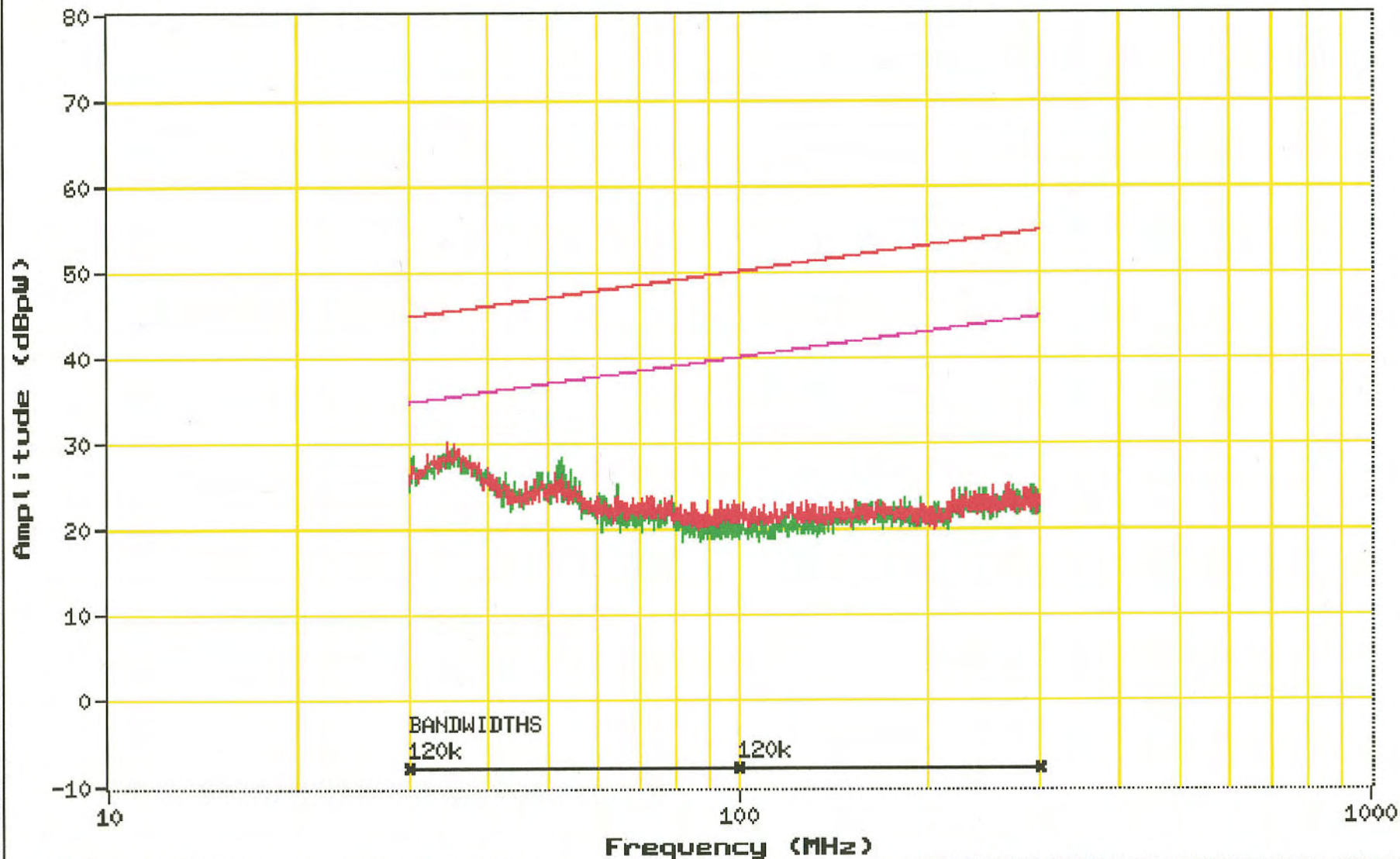
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LIMITS TRACES

Ambient

1053REQP Active

1053REAV



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RFI INDUSTRIES PTY LIMITED

RADIATED EMISSIONS

SIMON ELECT33

MAG 200 HEAD AMPLIFIER - S/No:2553 05 01 - TUNER/LINE OP Page

TEST REPORT

Number TL3492

Officer SG

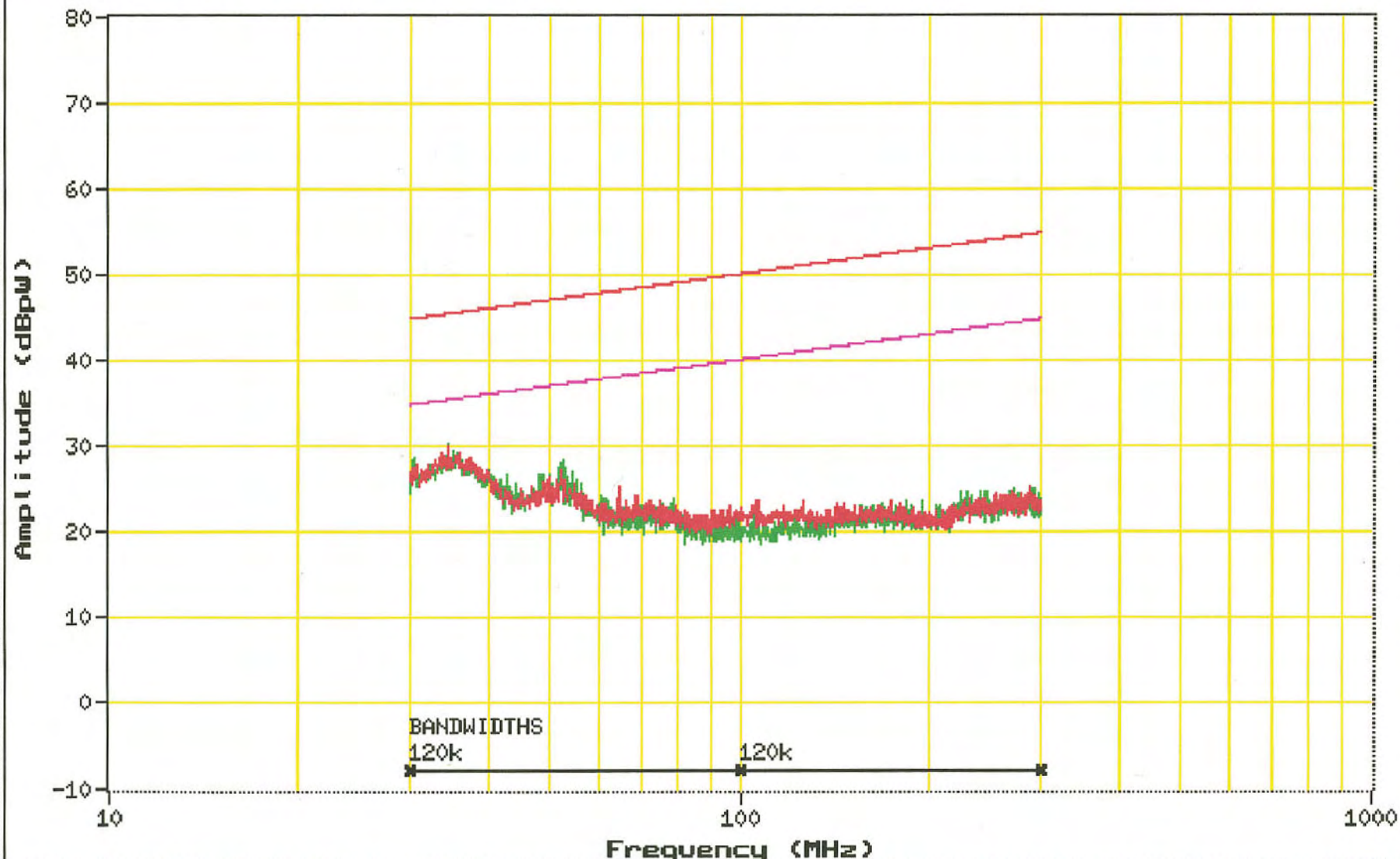
Graph 33

LIMITS TRACES

Ambient

1053REQP Active

1053REAV



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RFI INDUSTRIES PTY LIMITED

RADIATED EMISSIONS

SIMON ELECT34

AAR 1V AMPLIFIER - S/No:09260501 - MAINS

TEST REPORT

Number TL3492

Officer SG

Graph 34

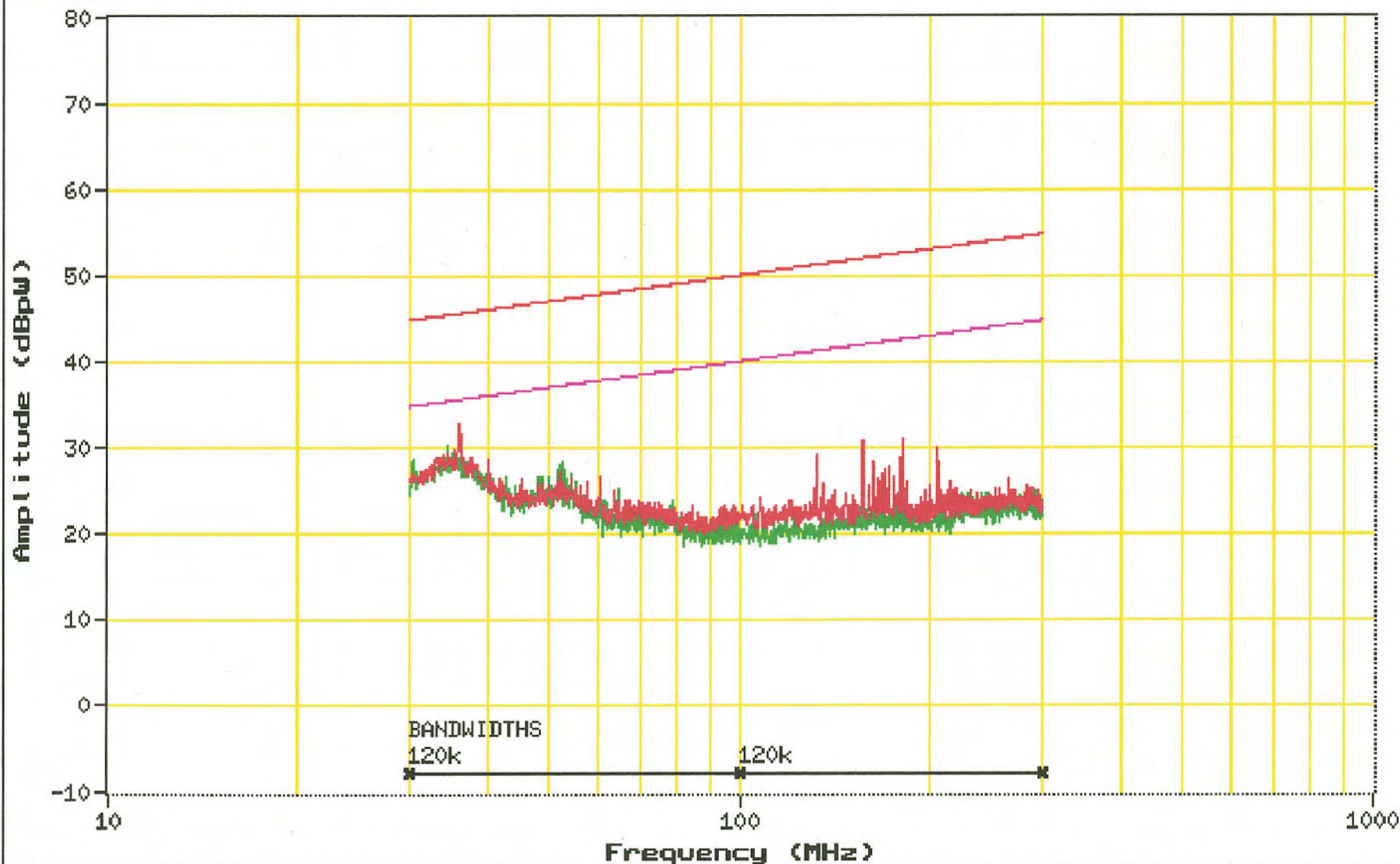
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LIMITS TRACES

Ambient

1053REQP Active

1053REAV



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RFI INDUSTRIES PTY LIMITED

RADIATED EMISSIONS

SIMON ELECT35

AAR 1V AMPLIFIER - S/No:09260501 - RETURN

TEST REPORT

Number TL3492

Officer SG

Graph 35

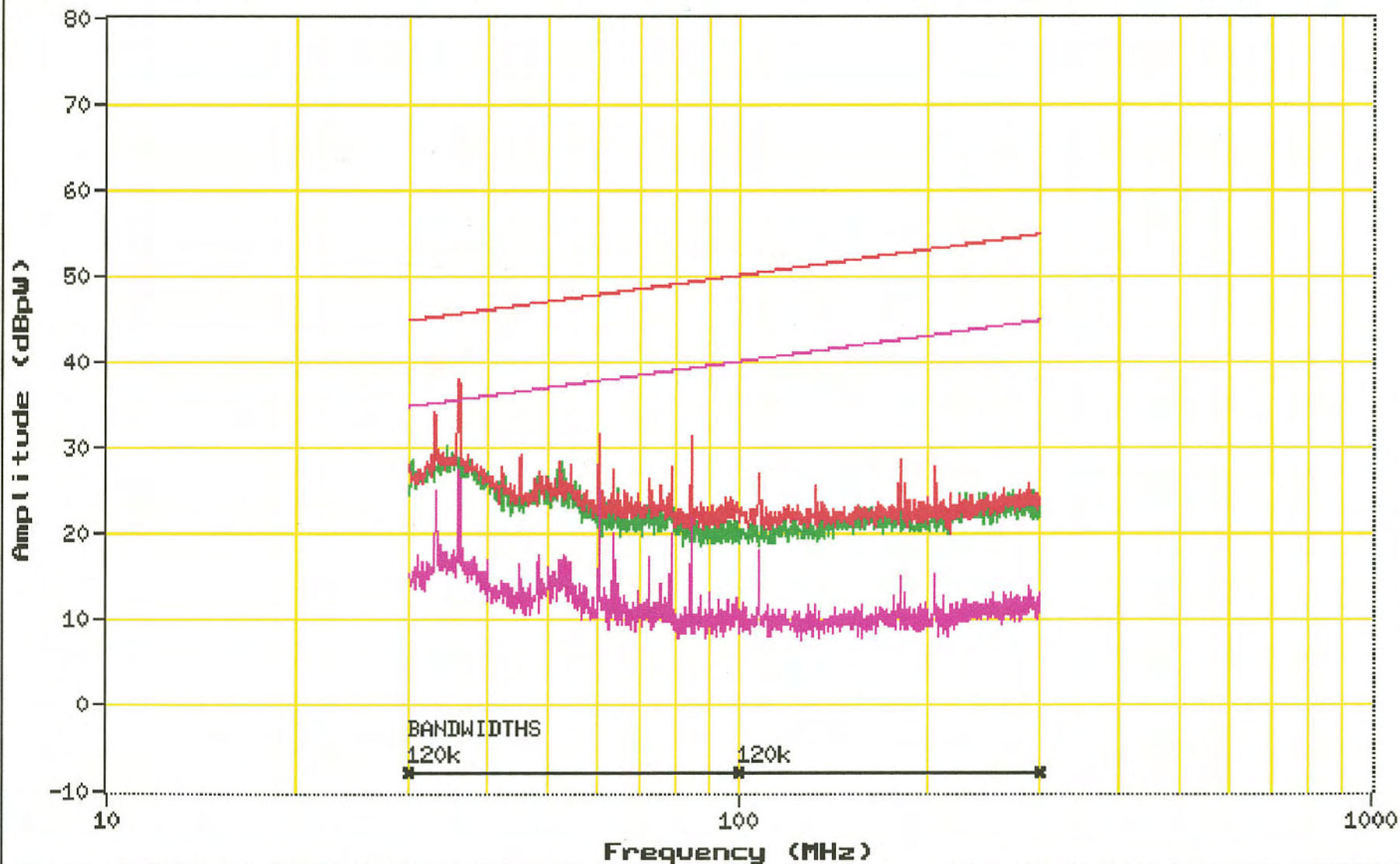
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LIMITS TRACES

Ambient

1053REQP Active

1053REAV Emissions



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RFI INDUSTRIES PTY LIMITED

RADIATED EMISSIONS

SIMON ELECT36

AAR 1V AMPLIFIER - S/No:09260501 - SEND

TEST REPORT

Number TL3492

Officer SG

Graph 36

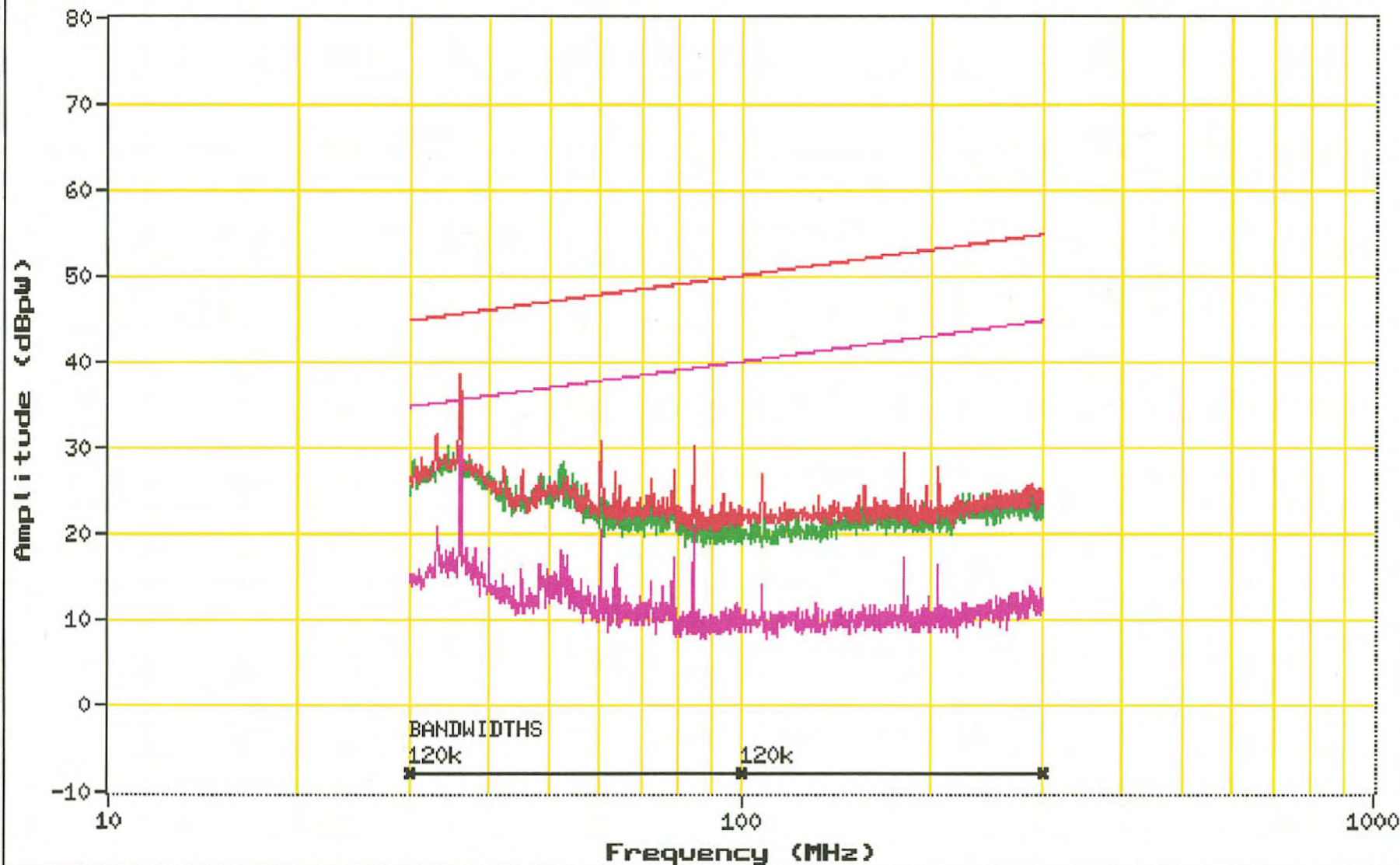
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LIMITS TRACES

Ambient

1053REQP Active

1053REAV Emissions



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RFI INDUSTRIES PTY LIMITED

RADIATED EMISSIONS

SIMON ELECT37

AAR 1V AMPLIFIER - S/No:09260501 - LINK/LINE OUT

TEST REPORT

Number TL3492

Officer SC

Graph 37

Page

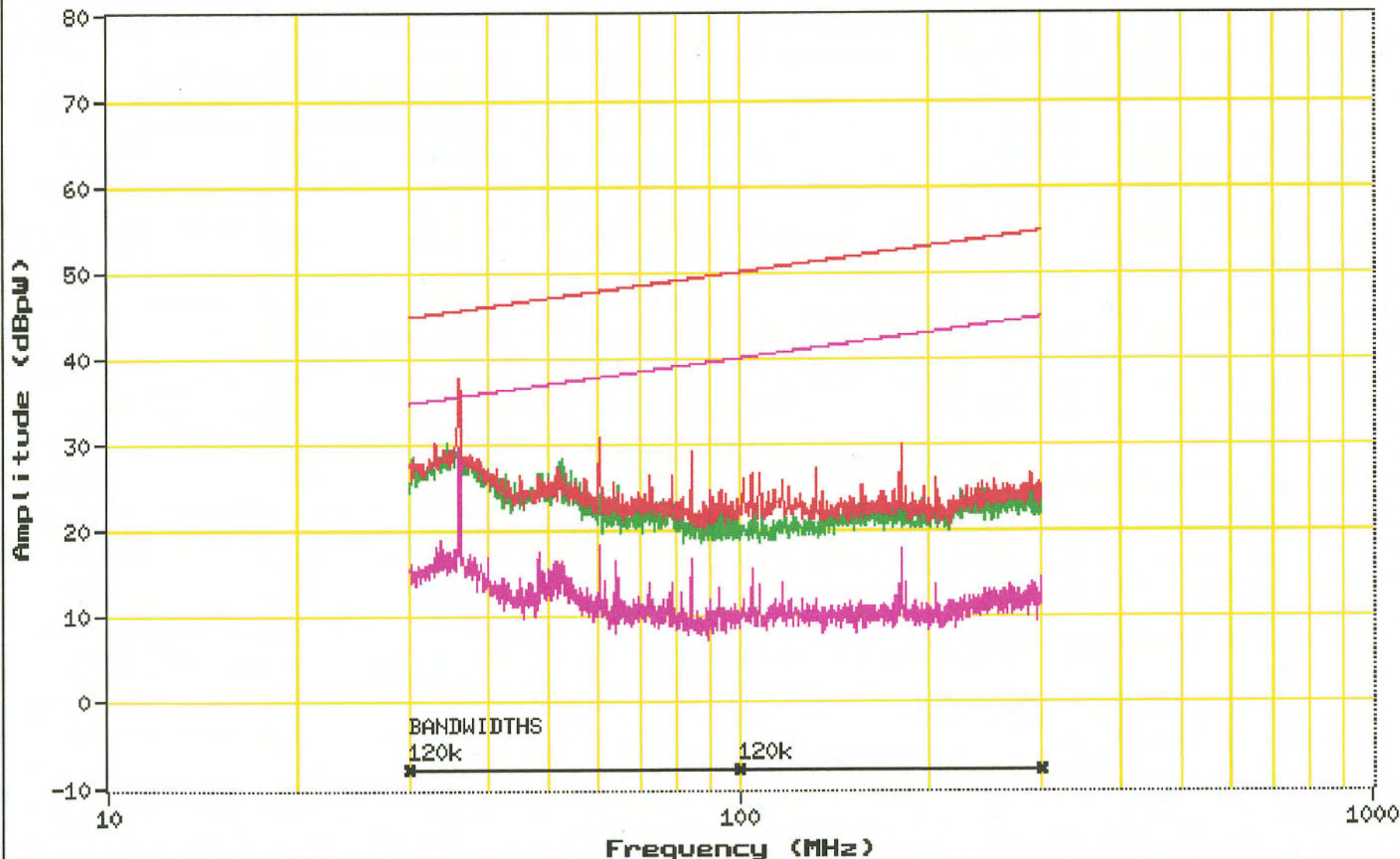
LIMITS

TRACES

Ambient

1053REQP Active

1053REAV Emissions



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RFI INDUSTRIES PTY LIMITED

RADIATED EMISSIONS

SIMON ELECT38

AAR 1V AMPLIFIER - S/No:09260501 - LINE INPUT

TEST REPORT

Number TL3492

Officer SG

Graph 38

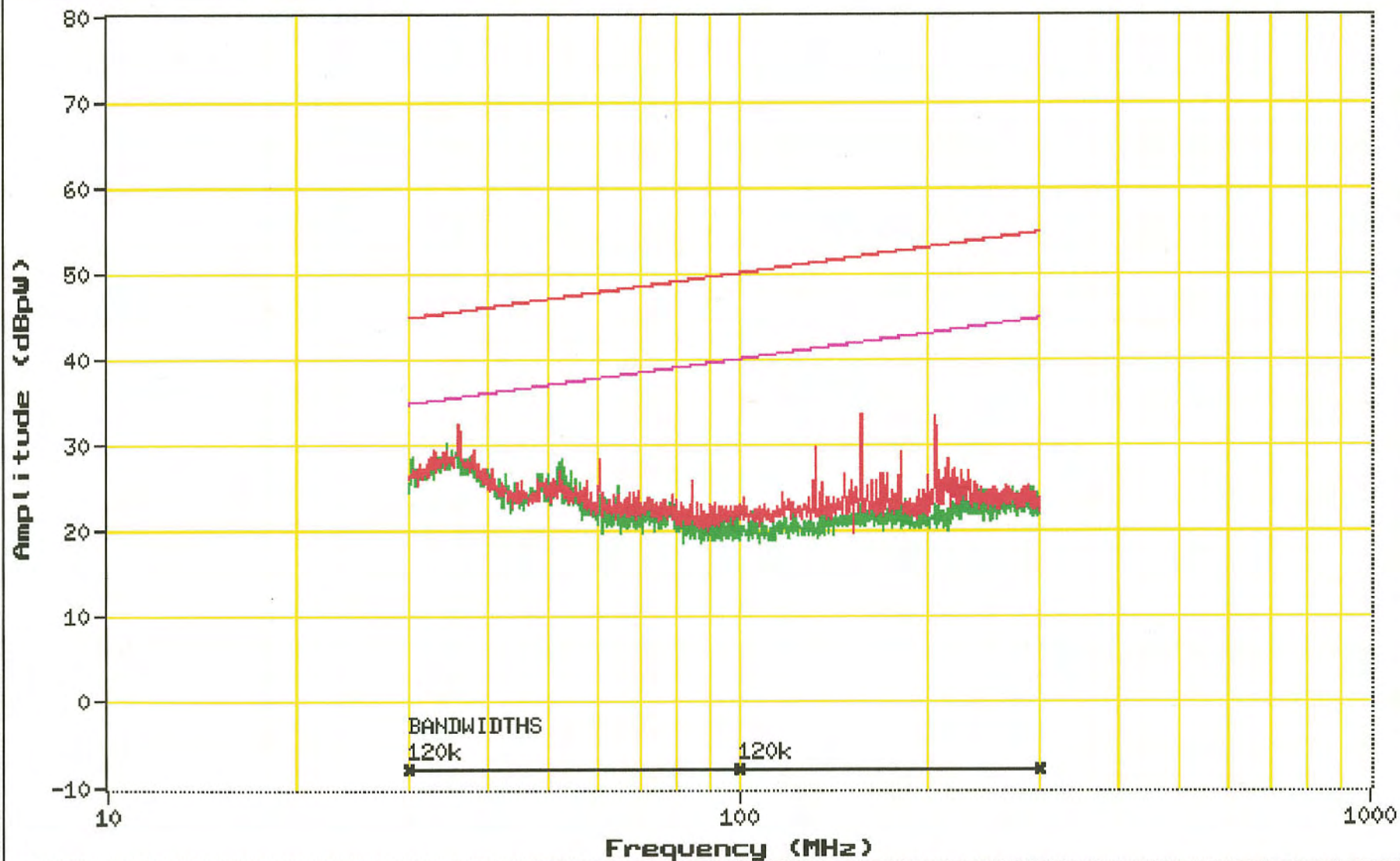
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LIMITS TRACES

Ambient

1053REQP Active

1053REAV



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RFI INDUSTRIES PTY LIMITED

RADIATED EMISSIONS

SIMON ELECT39

ELECTRIC BLUE 12 AMPLIFIER - S/No:1506 05 01 - MAINS

TEST REPORT

Number TL3492

Officer SG

Graph 39

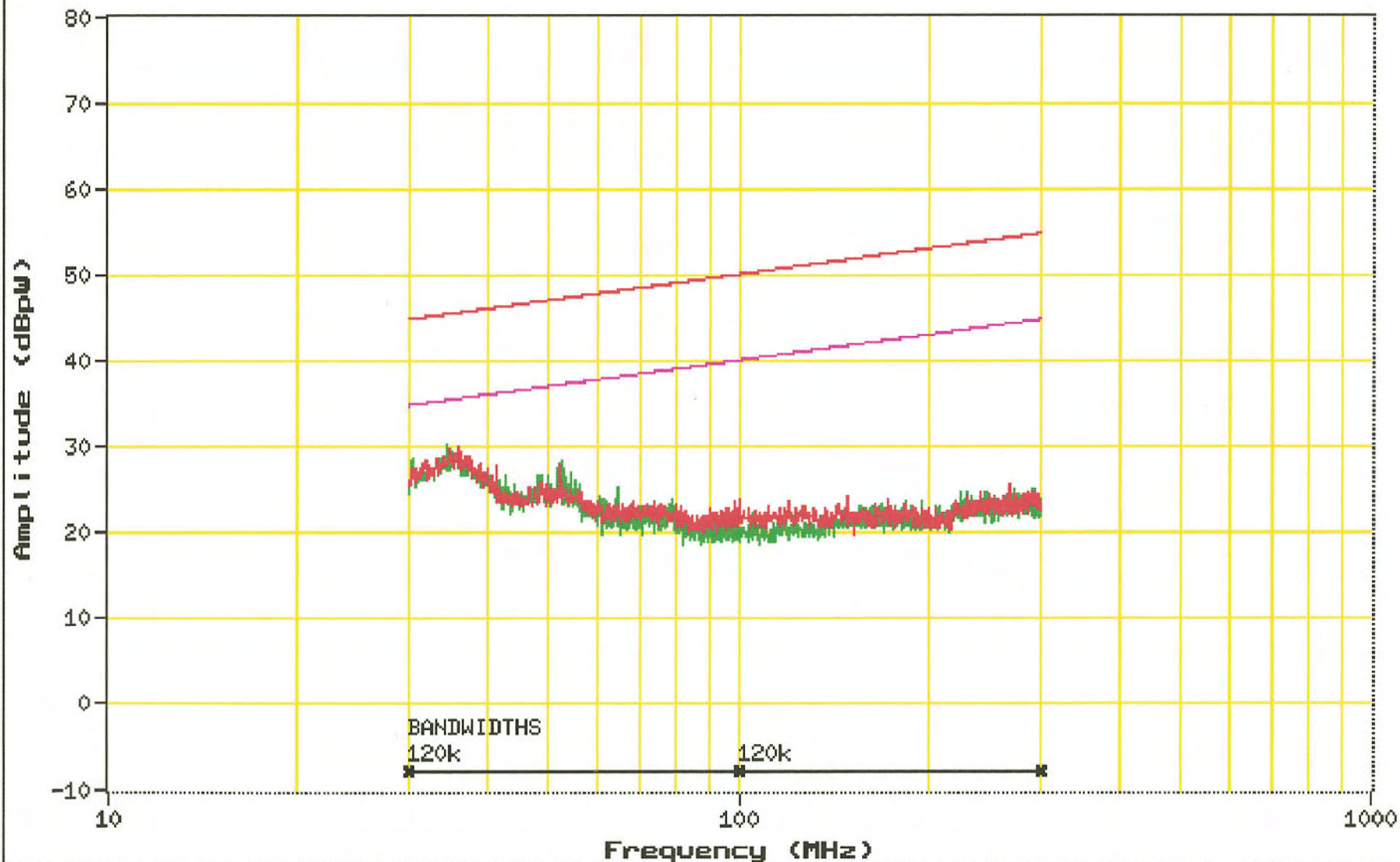
Page

LIMITS TRACES

Ambient

1053REQP Active

1053REAV



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RADIATED EMISSIONS

SIMON ELECT40

ELECTRIC BLUE 12 AMPLIFIER - S/No:1506 05 01 -INS I/P L0 Page

TEST REPORT

Number TL3492

Officer SG

Graph 40

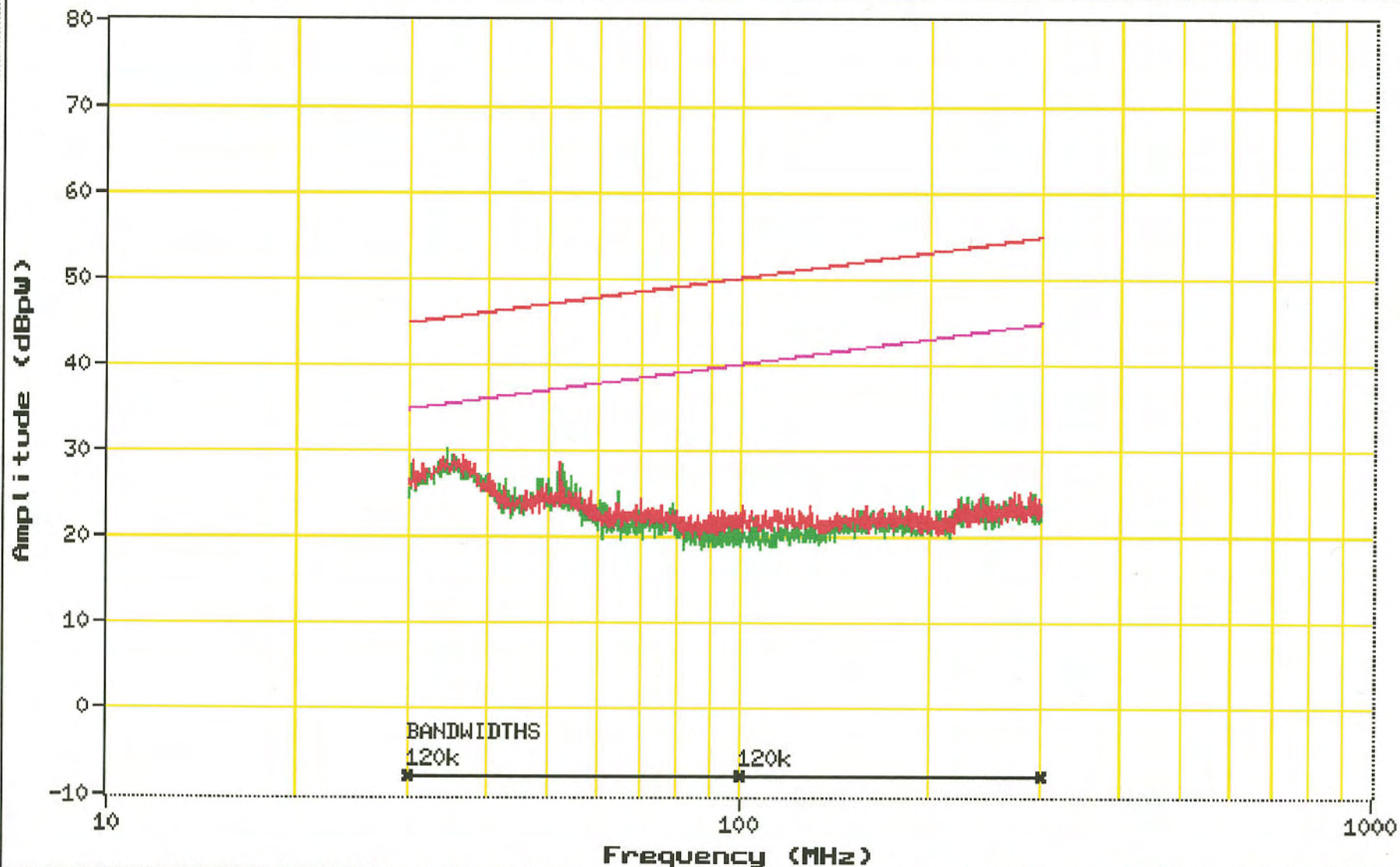
LIMITS

TRACES

Ambient

1053REQP Active

1053REAV



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RFI INDUSTRIES PTY LIMITED

RADIATED EMISSIONS

SIMON ELECT41

ELECTRIC BLUE 12 AMPLIFIER - S/No:1506 05 01 - FX SEND

TEST REPORT

Number TL3492

Officer SG

Graph 41

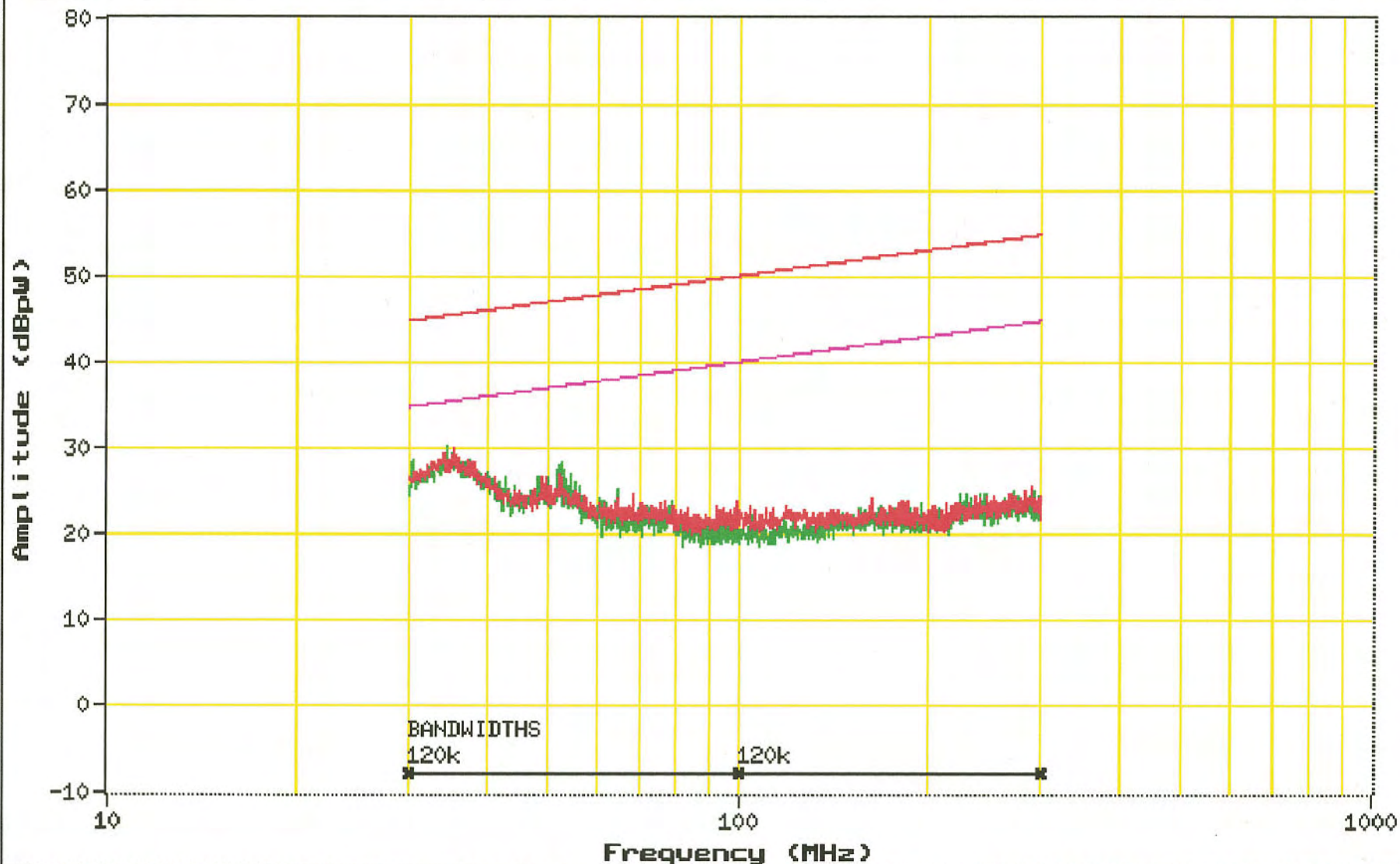
Page

LIMITS TRACES

Ambient

1053REQP Active

1053REAV



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RADIATED EMISSIONS

SIMON ELECT42

ELECTRIC BLUE 12 AMPLIFIER - S/No:1506 05 01 -TNR/LIN OP Page

TEST REPORT

Number TL3492

Officer SG

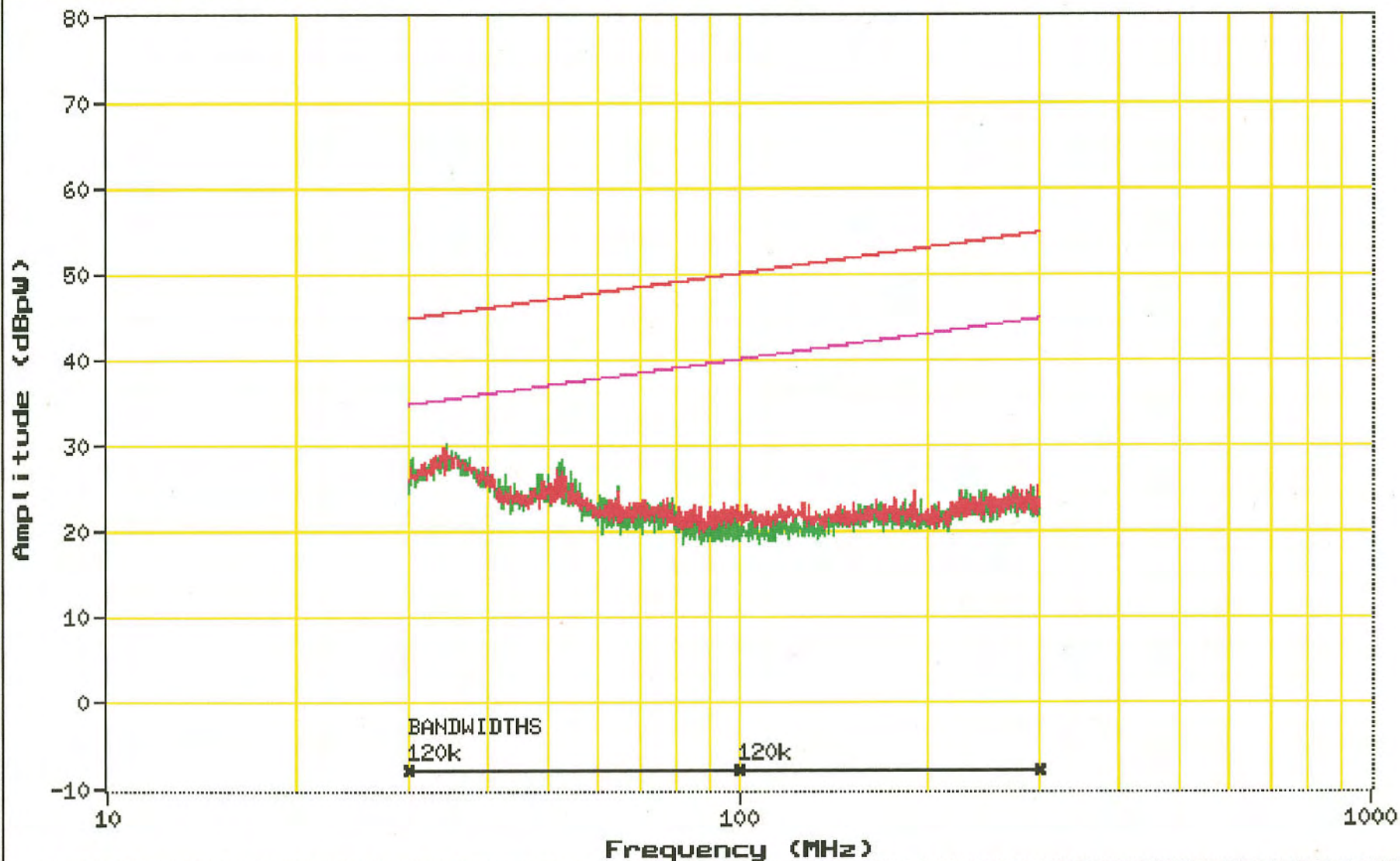
Graph 42

LIMITS TRACES

Ambient

1053REQP Active

1053REAV



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RFI INDUSTRIES PTY LIMITED

RADIATED EMISSIONS

SIMON ELECT43

AAR 2V AMPLIFIER - S/No:0954 05 01 - MAINS

TEST REPORT

Number TL3492

Officer SG

Graph 43

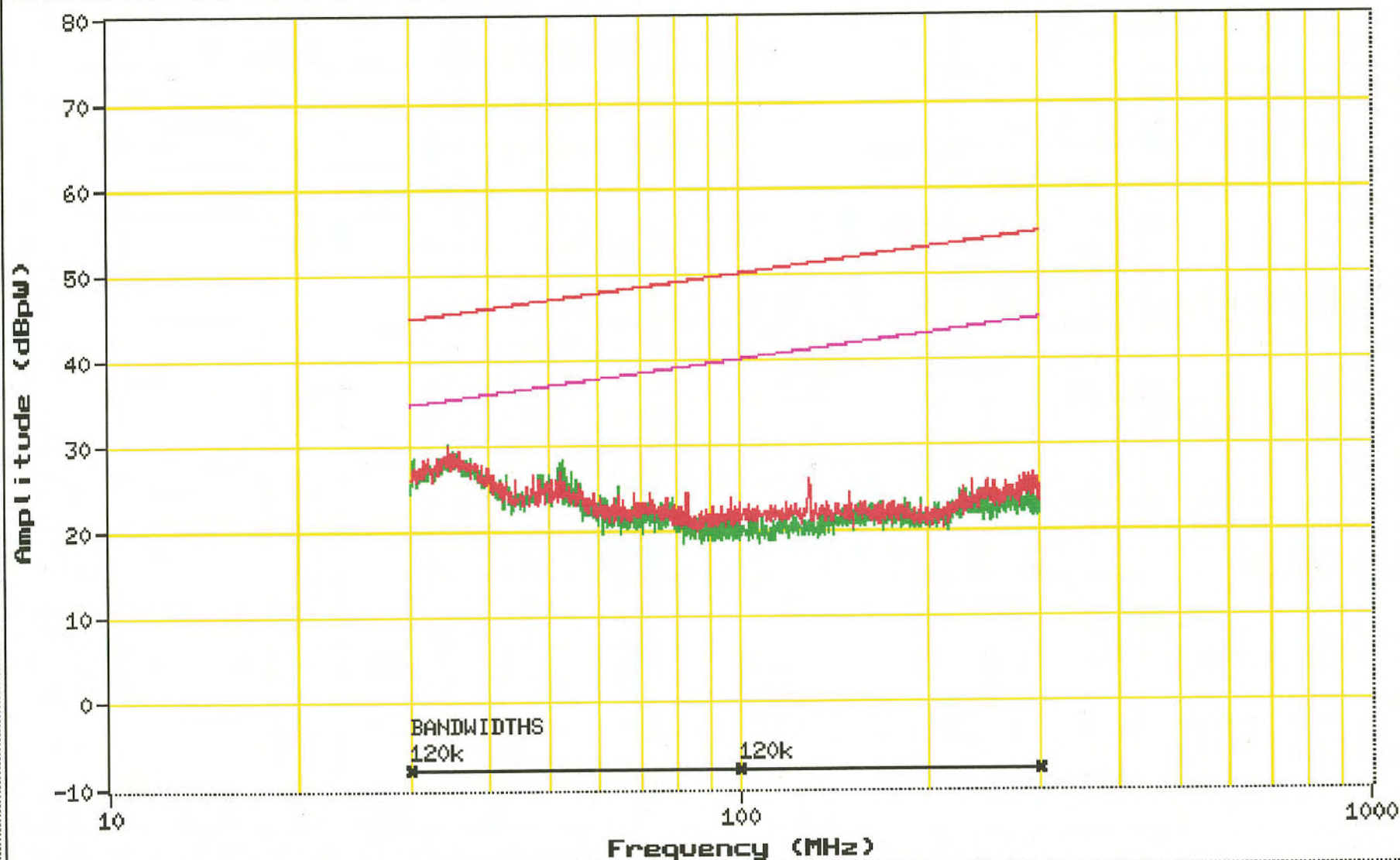
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LIMITS TRACES

Ambient

1053REQP Active

1053REAV



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RFI INDUSTRIES PTY LIMITED

RADIATED EMISSIONS

SIMON ELECT44

AAR 2V AMPLIFIER - S/No:0954 05 01 - MUTE F/S TUNER F/S

TEST REPORT

Number TL3492

Officer SG

Graph 44

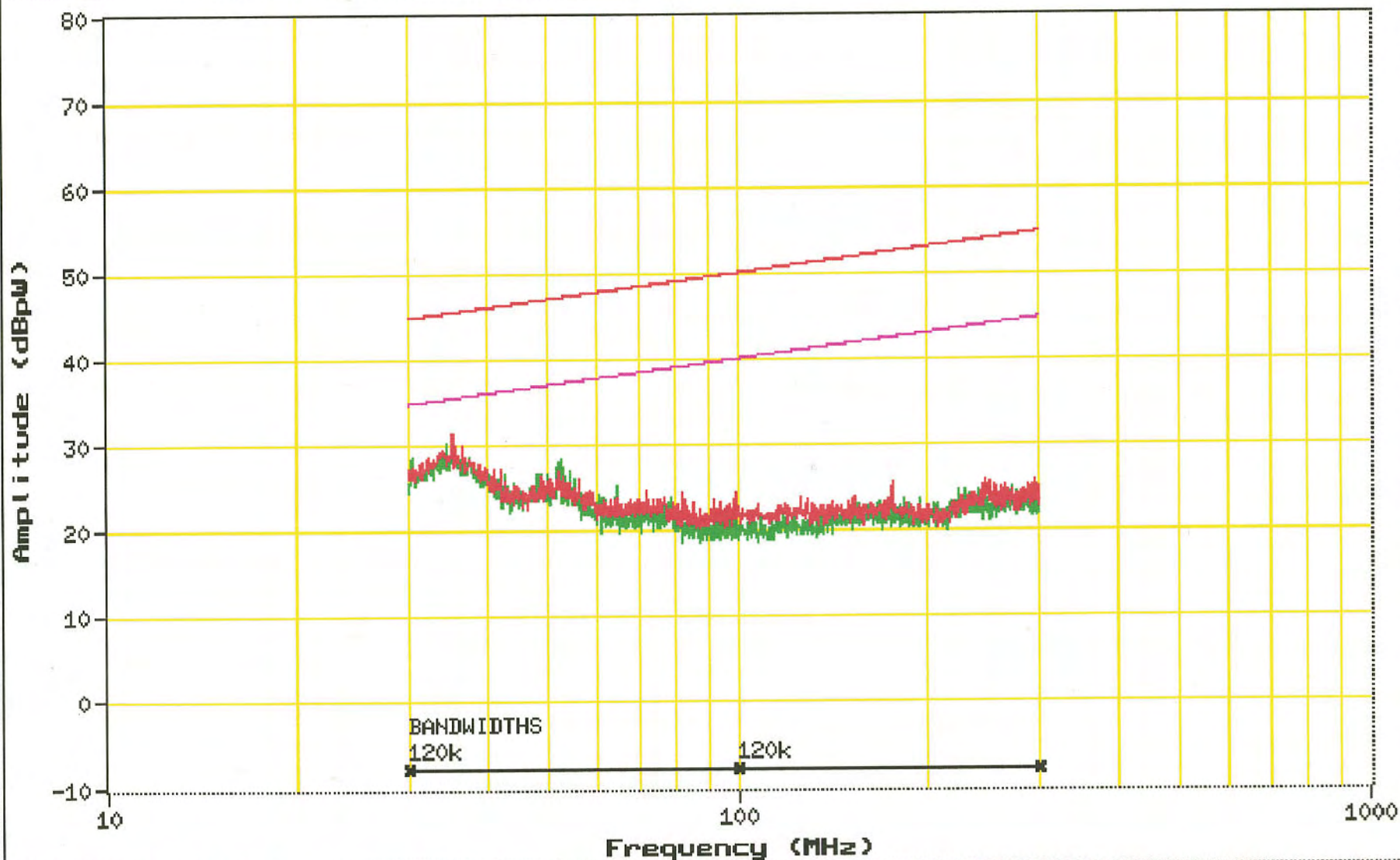
Page

LIMITS TRACES

Ambient

1053REQP Active

1053REAV



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RFI INDUSTRIES PTY LIMITED

RADIATED EMISSIONS

SIMON ELECT45

AAR 2V AMPLIFIER - S/No:0954 05 01 - RETURN EFFECTS

TEST REPORT

Number TL3492

Officer SG

Graph 45

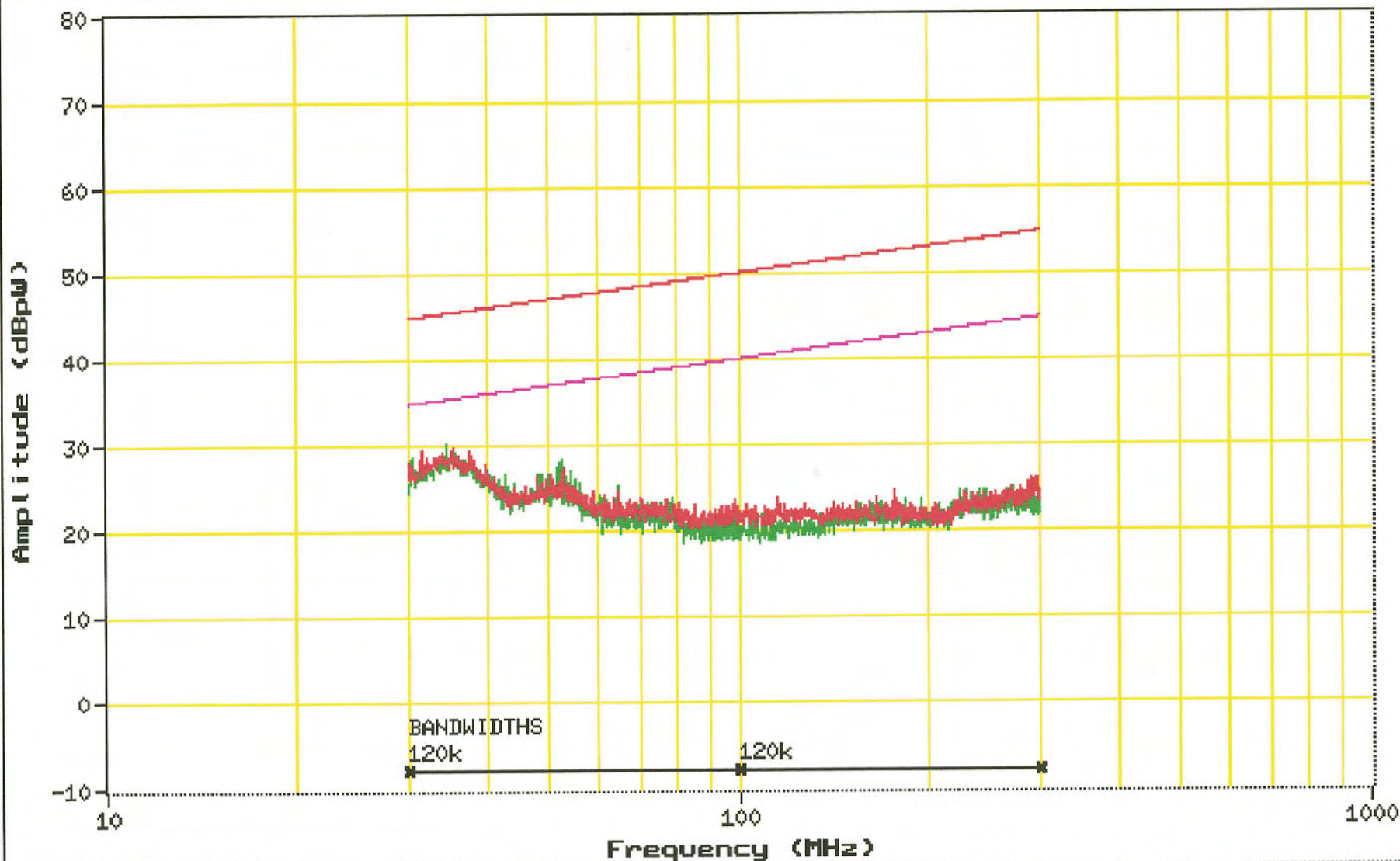
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LIMITS TRACES

Ambient

1053REQP Active

1053REAV





RFI INDUSTRIES PTY LIMITED

RADIATED EMISSIONS

SIMON ELECT47

AAR 2V AMPLIFIER - S/No:0954 05 01 - INPUT LINE

TEST REPORT

Number TL3492

Officer SG

Graph 47

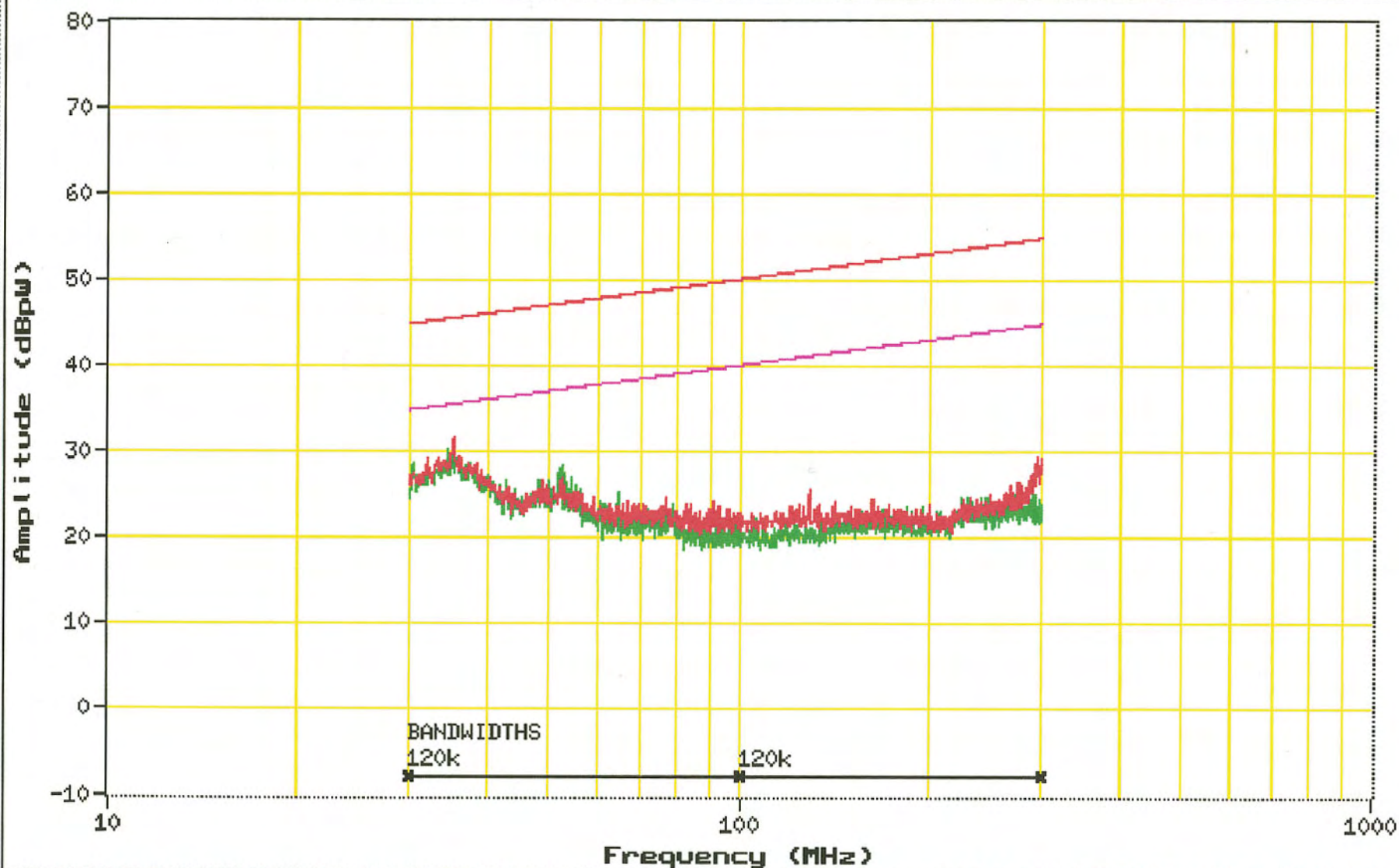
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LIMITS TRACES

Ambient

1053REQP Active

1053REAV



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