



TEST REPORT NO: RU1074/4830
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FCC ID: NEO60-0559series

**REPORT ON THE CERTIFICATION TESTING OF A
Aerial Facilities Limited
BI_DIRECTIONAL AMPLIFIER SYSTEM (60-055903)
WITH RESPECT TO
THE FCC RULES CFR 47, PART 90 Subpart L
PRIVATE LAND MOBLIE REPEATER**

TEST DATE: 24th –30th September 2003

TESTED BY: J CHARTERS
APPROVED BY: P GREEN
PRODUCT MANAGER
EMC
DATE:

Distribution:

- Copy Nos:
1. Aerial Facilities Limited
 2. TCB: TRL Compliance Services Limited
 3. TRL EMC

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FS 21805

CONTENTS

	PAGE
CERTIFICATE OF CONFORMITY & COMPLIANCE	3
APPLICANT'S SUMMARY	4
EQUIPMENT TEST CONDITIONS	5
TESTS REQUIRED	5
TEST RESULTS	6-68

	ANNEX
PHOTOGRAPHS	A
PHOTOGRAPH No. 1: Test setup	
PHOTOGRAPH No. 2: Test setup	
APPLICANT'S SUBMISSION OF DOCUMENTATION LIST	B
SYSTEM DIAGRAM	C

Notes:

- | | | | |
|----|---|-----|-------------------------------------|
| 1. | Component failure during test | YES | <input type="checkbox"/> |
| | | NO | <input checked="" type="checkbox"/> |
| 2. | If Yes, details of failure: | | |
| 3. | The facilities used for the testing of the product contain in this report are FCC Listed. | | |



CERTIFICATE OF CONFORMITY & COMPLIANCE

FCC IDENTITY: NEO60-0559series

PURPOSE OF TEST: CERTIFICATION

TEST SPECIFICATION: FCC RULES CFR 47, Part 90 Subpart L

TEST RESULT: Compliant to Specification

EQUIPMENT UNDER TEST: BI_DIRECTIONAL AMPLIFIER SYSTEM (60-055903)

EQUIPMENT TYPE: Private Land Mobile Repeater

MAXIMUM GAIN: 58dB

MAXIMUM INPUT: -9dBm

MAXIMUM OUTPUT: +20dBm

ANTENNA TYPE: Not applicable

CHANNEL SPACING: 15kHz

Channel No.	Uplink	Downlink
1	473.0875MHz	470.0875MHz
2	473.1375MHz	470.1375MHz
3	473.3625MHz	470.3625MHz

FREQUENCY GENERATION: N/A

MODULATION TYPE: F3E

POWER SOURCE(s): 115Vac

TEST DATE(s): 24th -30th September 2003

ORDER No(s): 21071

APPLICANT: Aerial Facilities Limited

ADDRESS: Aerial House
Latimer Park, Latimer
Chesham
Buckinghamshire
HP5 1TU
United Kingdom

TESTED BY: _____ J CHARTERS

APPROVED BY: _____ P GREEN
PRODUCT
MANAGER EMC

APPLICANT'S SUMMARY

EQUIPMENT UNDER TEST (EUT):	BI_DIRECTIONAL AMPLIFIER SYSTEM (60-055903)
EQUIPMENT TYPE:	60-055903
PURPOSE OF TEST:	CERTIFICATION
TEST SPECIFICATION(s):	FCC RULES CFR 47, Part 90 Subpart L
TEST RESULT:	COMPLIANT Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
APPLICANT'S CATEGORY:	MANUFACTURER <input checked="" type="checkbox"/> IMPORTER <input type="checkbox"/> DISTRIBUTOR <input type="checkbox"/> TEST HOUSE <input type="checkbox"/> AGENT <input type="checkbox"/>
APPLICANT'S ORDER No(s):	19801
APPLICANT'S CONTACT PERSON(s):	Mr Peter Bradfield
E-mail address:	Peterb@aerial.co.uk
APPLICANT:	Aerial Facilities Limited
ADDRESS:	Aerial House Latimer Park, Latimer Chesham Buckinghamshire HP5 1TU United Kingdom
TEL:	+44 (0)1494777020
FAX:	+44 (0)149477020
MANUFACTURER:	Aerial Facilities Limited
EUT(s) COUNTRY OF ORIGIN:	United Kingdom
TEST LABORATORY:	TRL EMC
UKAS ACCREDITATION No:	0728
TEST DATE(s):	24 th –30 th September 2003
TEST REPORT No:	RU1074/4830

EQUIPMENT TEST / EXAMINATIONS REQUIRED

1.	TEST/EXAMINATION	RULE PART	APPLICABILITY	RESULT
	RF Power Output	90.205	Yes	Complies
	Audio Frequency Response	TIA EIA-603.3.2.6	N/A	N/A
	Audio Low-Pass Filter Response	TIA EIA-603.3.2.6	N/A	N/A
	Modulation Limiting	TIA EIA-603.3.2.6	N/A	N/A
	Occupied Bandwidth	90.210	Yes	Complies
	Spurious Emissions at Antenna Terminals	90.210	Yes	Complies
	Field Strength of Spurious Emissions	90.210	Yes	Complies
	Frequency Stability	90.213	N/A(note 1)	N/A
	Transient behaviour	90.214	N/A(note 2)	N/A

Notes:

1 The EUT does not contain modulation circuitry, therefore the test was not performed.

2 The EUT is not a keyed carrier system, therefore the test was not performed.

2. Product Use: Private Land Mobile Repeater
 3. Emission Designator: F3E
 4. Temperatures: Ambient (Tnom) 21°C
 5. Supply Voltages: Vnom 115Vac
- Note: Vnom voltages are as stated above unless otherwise shown on the test report page
6. Equipment Category:

Single channel	<input type="checkbox"/>
Two channel	<input type="checkbox"/>
Multi-channel	<input checked="" type="checkbox"/>
 7. Channel spacing:

Narrowband	<input checked="" type="checkbox"/>	15kHz
Wideband	<input type="checkbox"/>	
 8. Test Location:

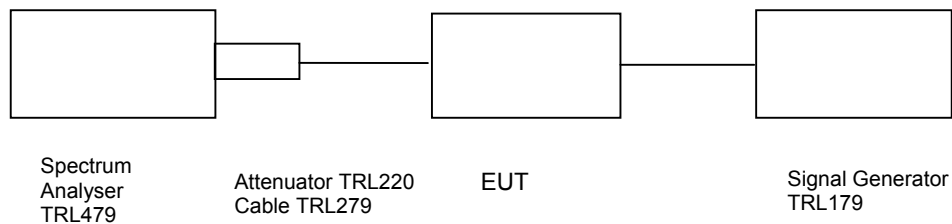
TRL Compliance Services	
Up Holland	<input checked="" type="checkbox"/>
Long Green	<input type="checkbox"/>
 9. Modifications made during test program No modifications were performed.

COMPLIANCE TESTS

AMPLIFIER GAIN – CONDUCTED – PART 2.1046 – UPLINK

Ambient temperature = 21°C
 Relative humidity = 46%
 Supply voltage = 115Vac
 Channel number = See test results

Radio Laboratory



Frequency MHz	Signal Generator input level dBm	Cable & Attenuator loss dB	Level at Spectrum Analyser dBm	Gain dB	Gain after 20dB input level increase dBm
473.0875MHz	-29.1	26.6	-9.28	46.42	46.42
473.1375MHz	-29.1	26.6	-9.0	46.7	46.7
473.3625MHz	-29.1	26.6	-8.95	46.75	46.75

Notes:

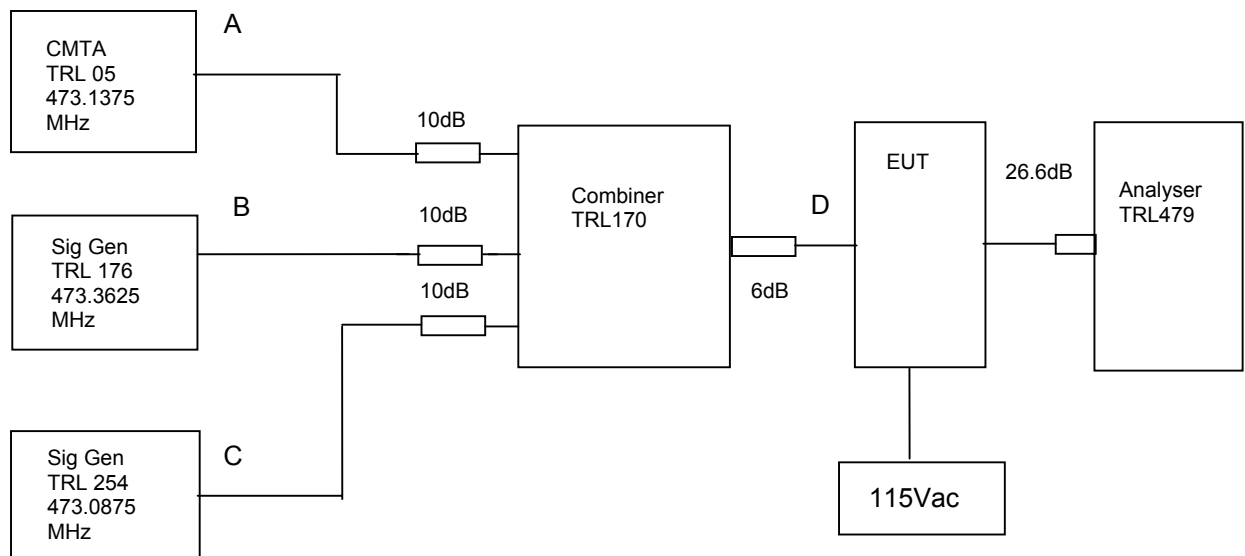
1. The level of the signal generator takes into consideration the loss from the cable.
2. The signal generator input was increased by 20dBs and the level of the output signal re-measured

TYPE OF EQUIPMENT	MAKER/ SUPPLIER	MODEL No	SERIAL No	TRL No	ACTUAL EQUIPMENT USED
SPECTRUM ANALYSER	ANRITSU	MS2665C	MT26089	479	X
ATTENUATOR	BIRD	8304-300-N	N/A	220	X
CABLE	ROSENBERGER	MICRO COAX	N/A	279	X
SIGNAL GENERATOR	MARCON	2042	119388/080	179	X

AMPLIFIER INTERMODULATION SPURIOUS EMISSIONS – CONDUCTED – PART 2.1053– UPLINK

Ambient temperature = 27°C
Relative humidity = 34%
Supply voltage = 115Vac

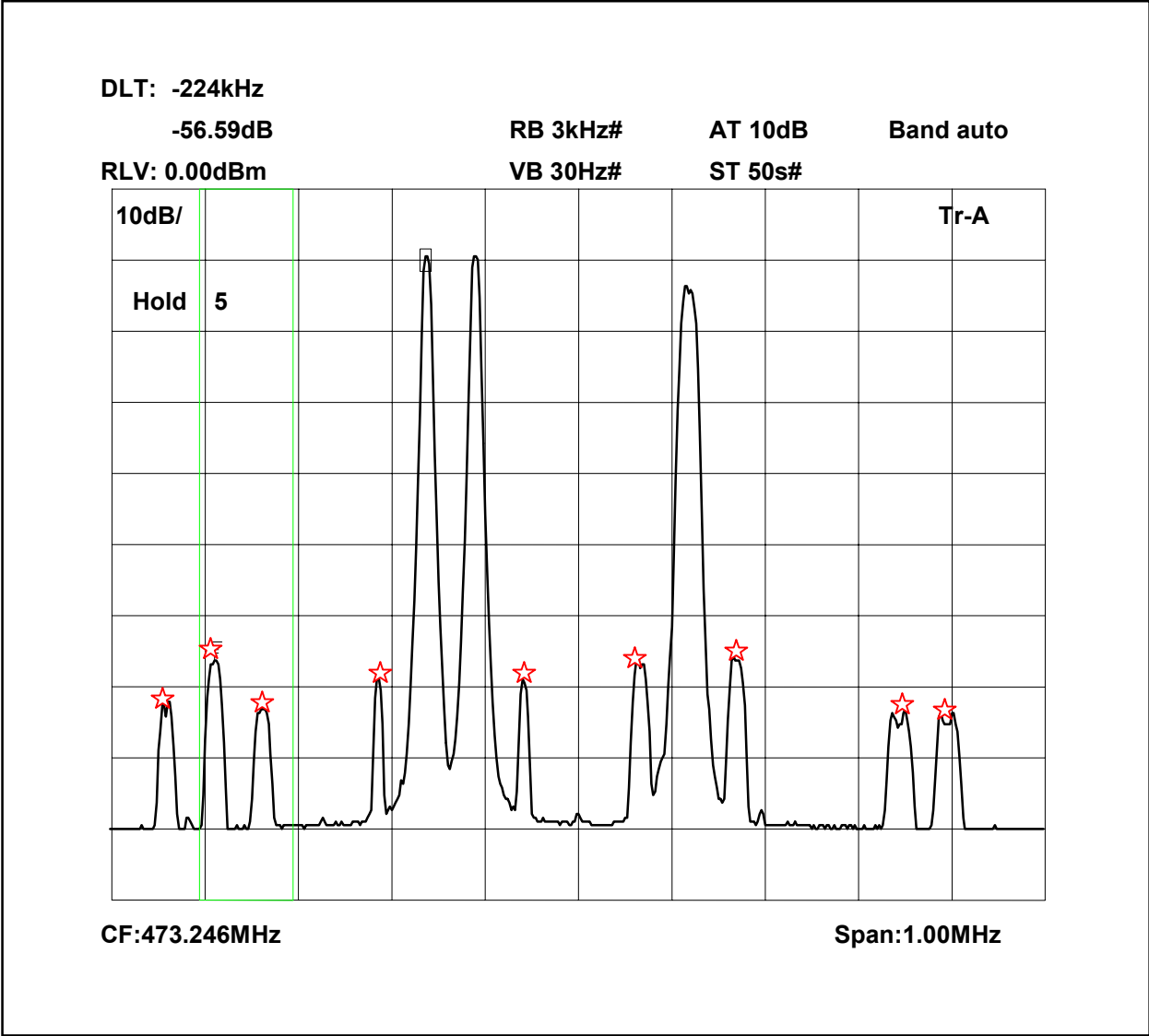
Radio Laboratory



The Intermodulation and spurious products were measured with the amplifier operating at maximum gain. A three tone test was conducted using the equipment as above. The input power level was adjusted so the level at point D was the maximum input of –29.1dBm. The cable and attenuator loss between the EUT and the spectrum analyser was 26.6dB.

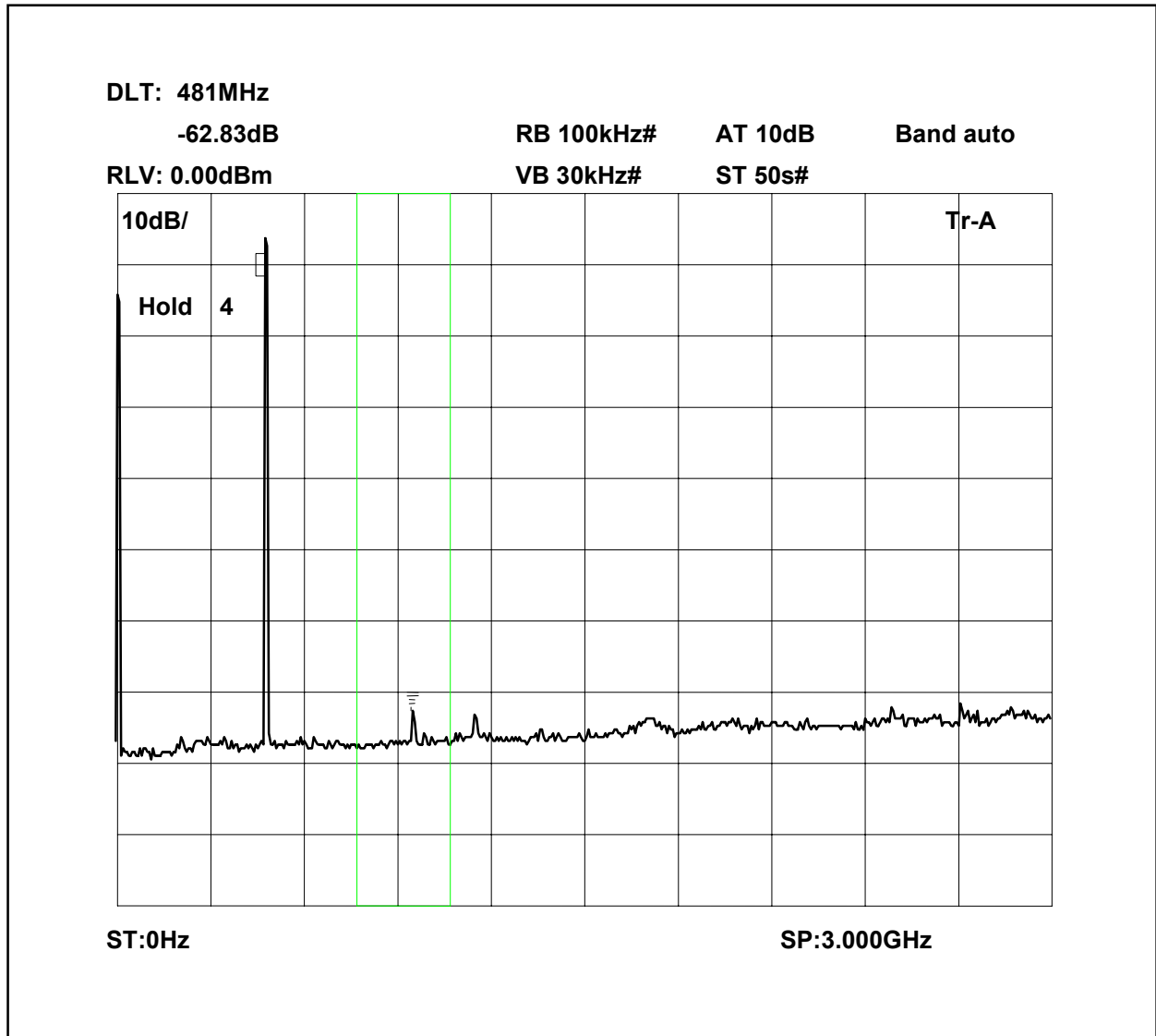
Sweep data is shown on the next page:

Intermodulaion Inband



The above plot shows that all products (designated by★) are at least 40dB below the fundamentals.

Intermodulation Wideband

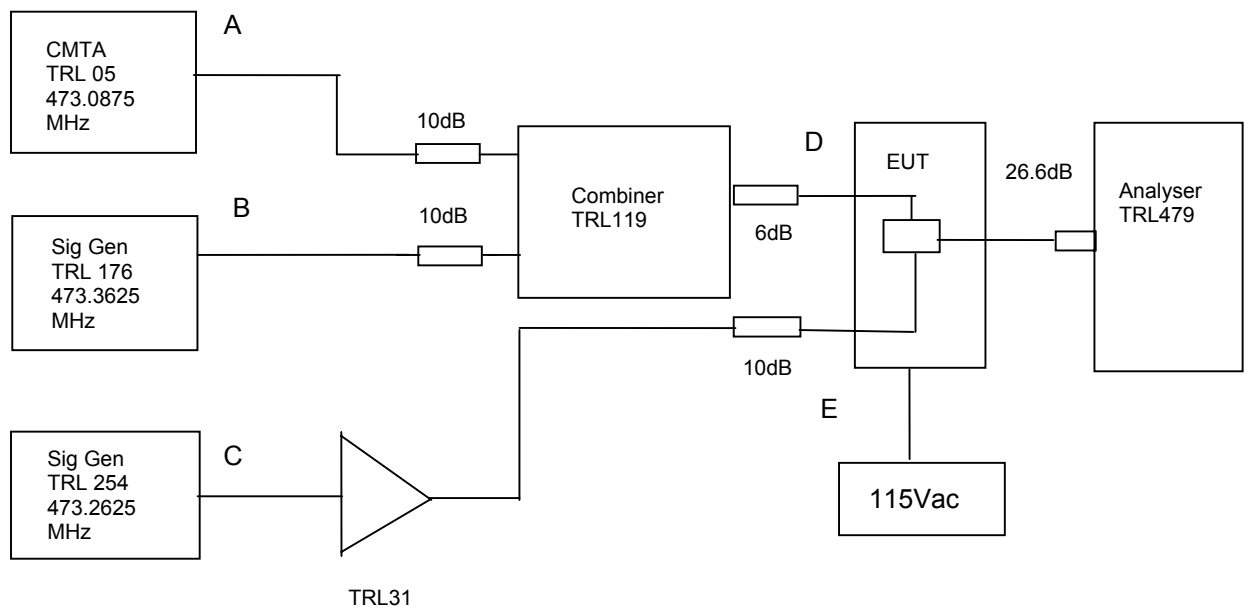


The above plot shows that there are no products outside the bands.

AMPLIFIER INTERMODULATION SPURIOUS EMISSIONS – CONDUCTED – PART 2.1053– UPLINK-cont.

Ambient temperature = 27°C
 Relative humidity = 34%
 Supply voltage = 115Vac

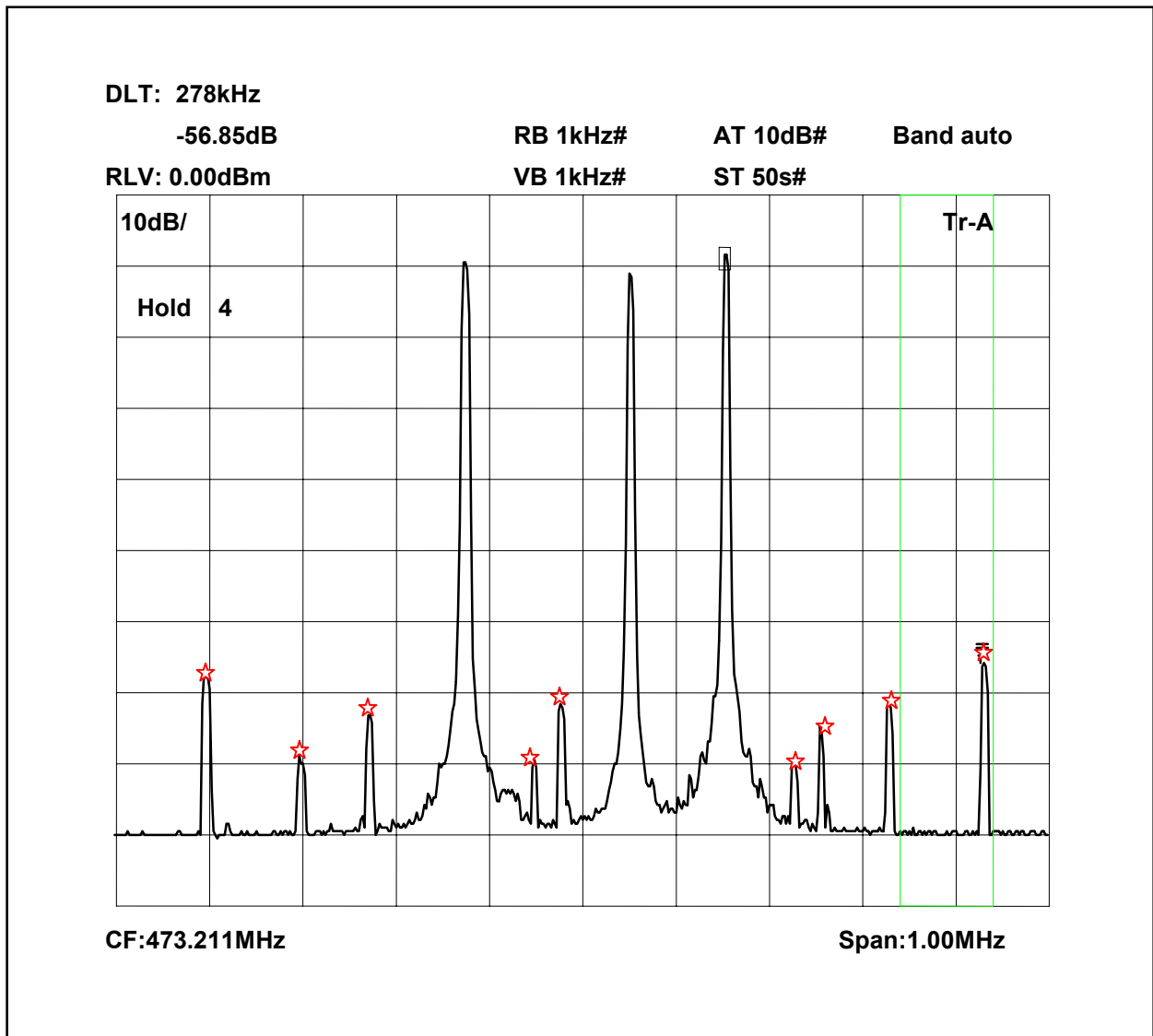
Radio Laboratory



The Intermodulation and spurious products were measured with the amplifier operating at maximum gain. A three tone test was conducted using the equipment as above. The input power level was adjusted so the level at point D was the maximum input of –29.1dBm. The input power level was adjusted so the level at E was 20dBm. This is representative of a signal coming from another amplifier within the system. (See appendix C system block diagram.) The cable and attenuator loss between the EUT and the spectrum analyser was 26.6dB.

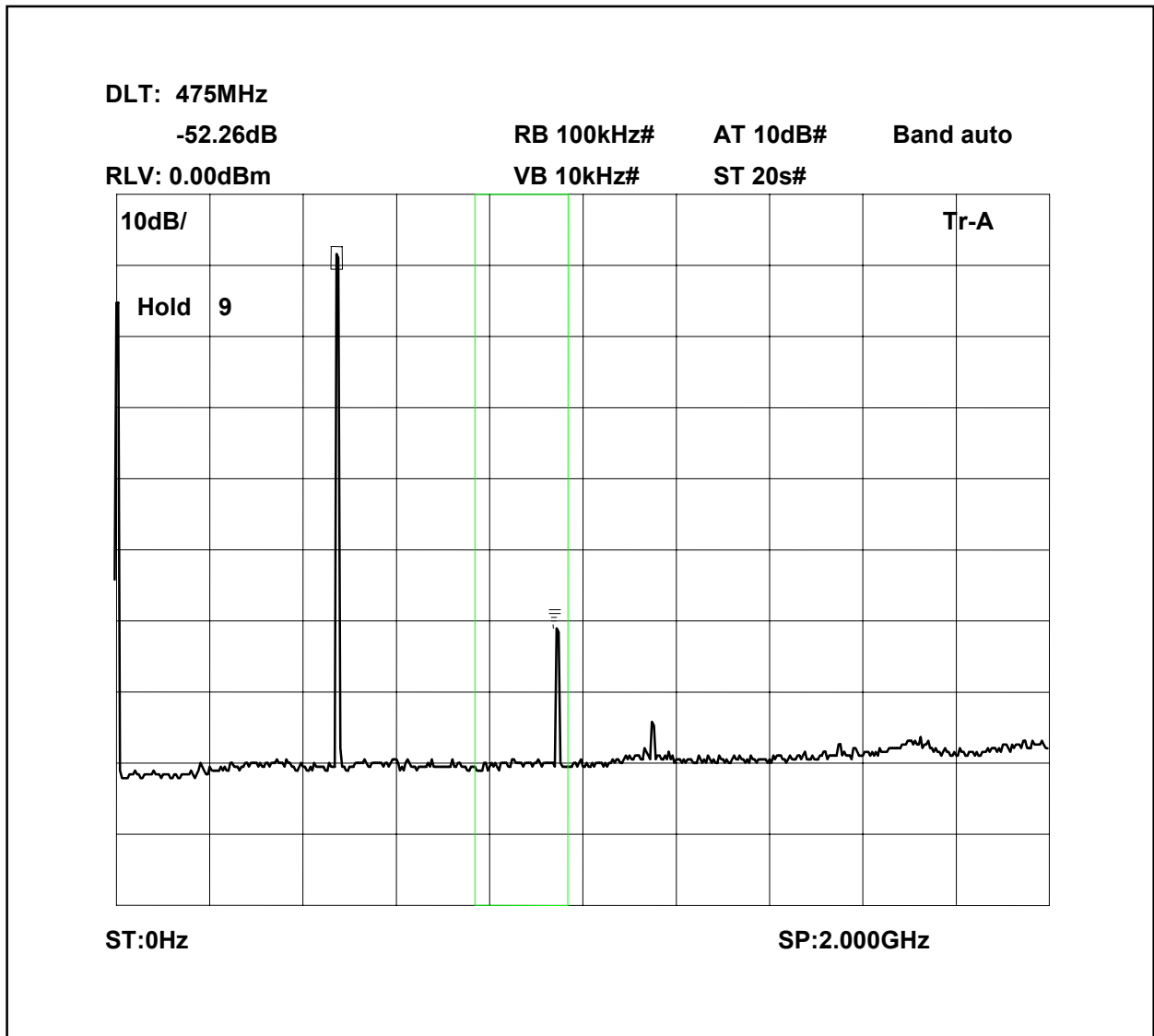
Sweep data is shown on the next page:

Intermodulaion Inband



The above plot shows that all products (designated by ☆) are at least 40dB below the fundamentals.

Intermodulation Wideband

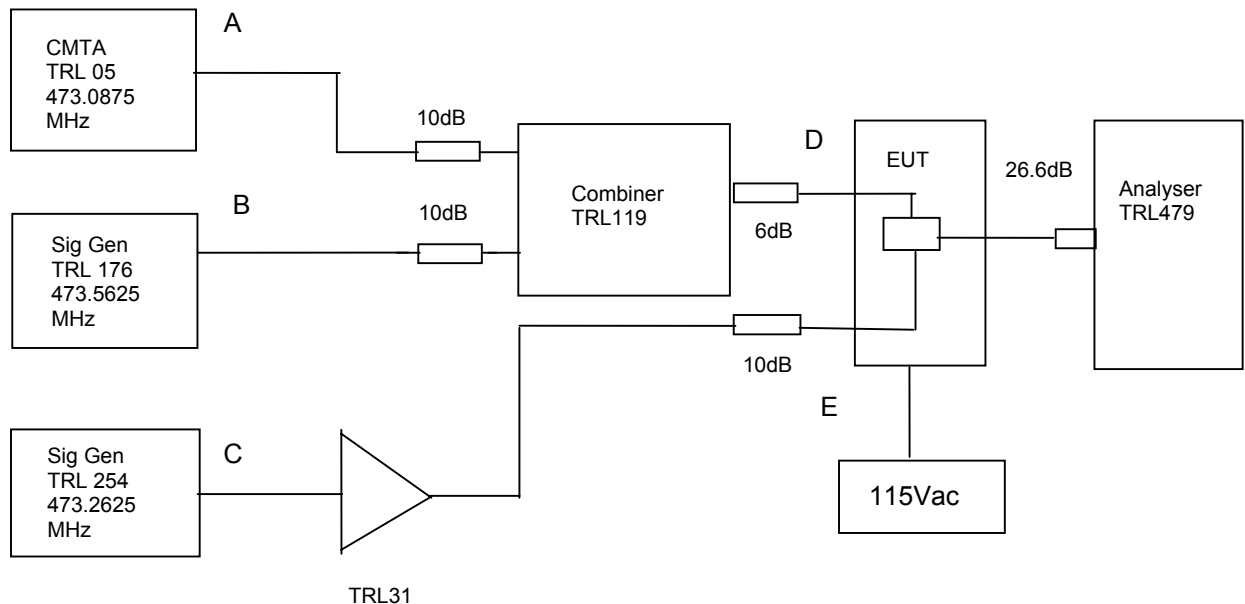


The above plot shows that there are no products outside the bands.

AMPLIFIER INTERMODULATION SPURIOUS EMISSIONS – CONDUCTED – PART 2.1053– UPLINK

Ambient temperature = 27°C
 Relative humidity = 34%
 Supply voltage = 115Vac

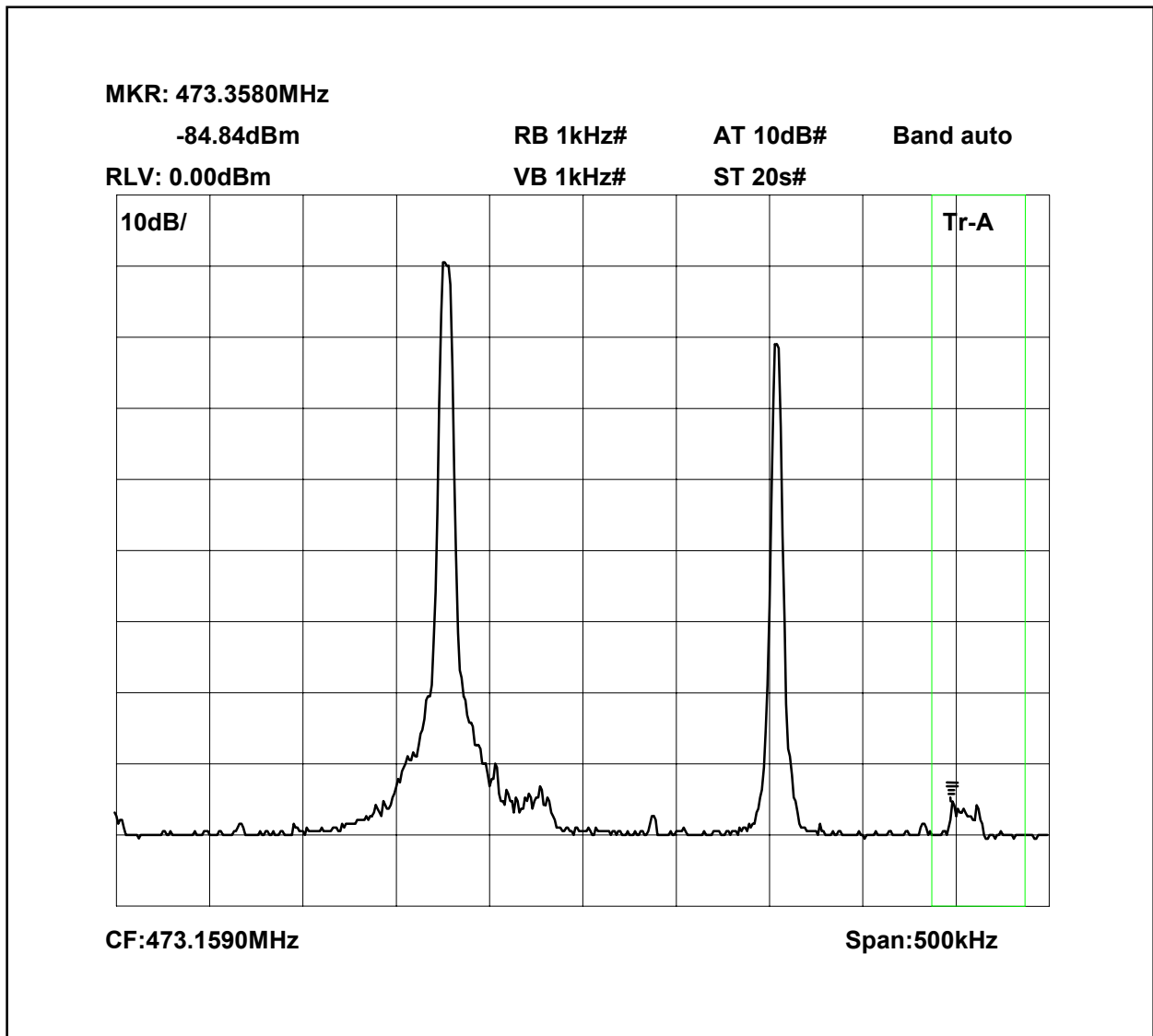
Radio Laboratory



The Intermodulation and spurious products were measured with the amplifier operating at maximum gain. A three tone test was conducted using the equipment as above. The input power level was adjusted so the level at point D was the maximum input of -29.1dBm . The input power level was adjusted so the level at E was 20dBm . This is representative of a signal coming from another amplifier within the system. (See appendix C system block diagram.) The cable and attenuator loss between the EUT and the spectrum analyser was 26.6dB .

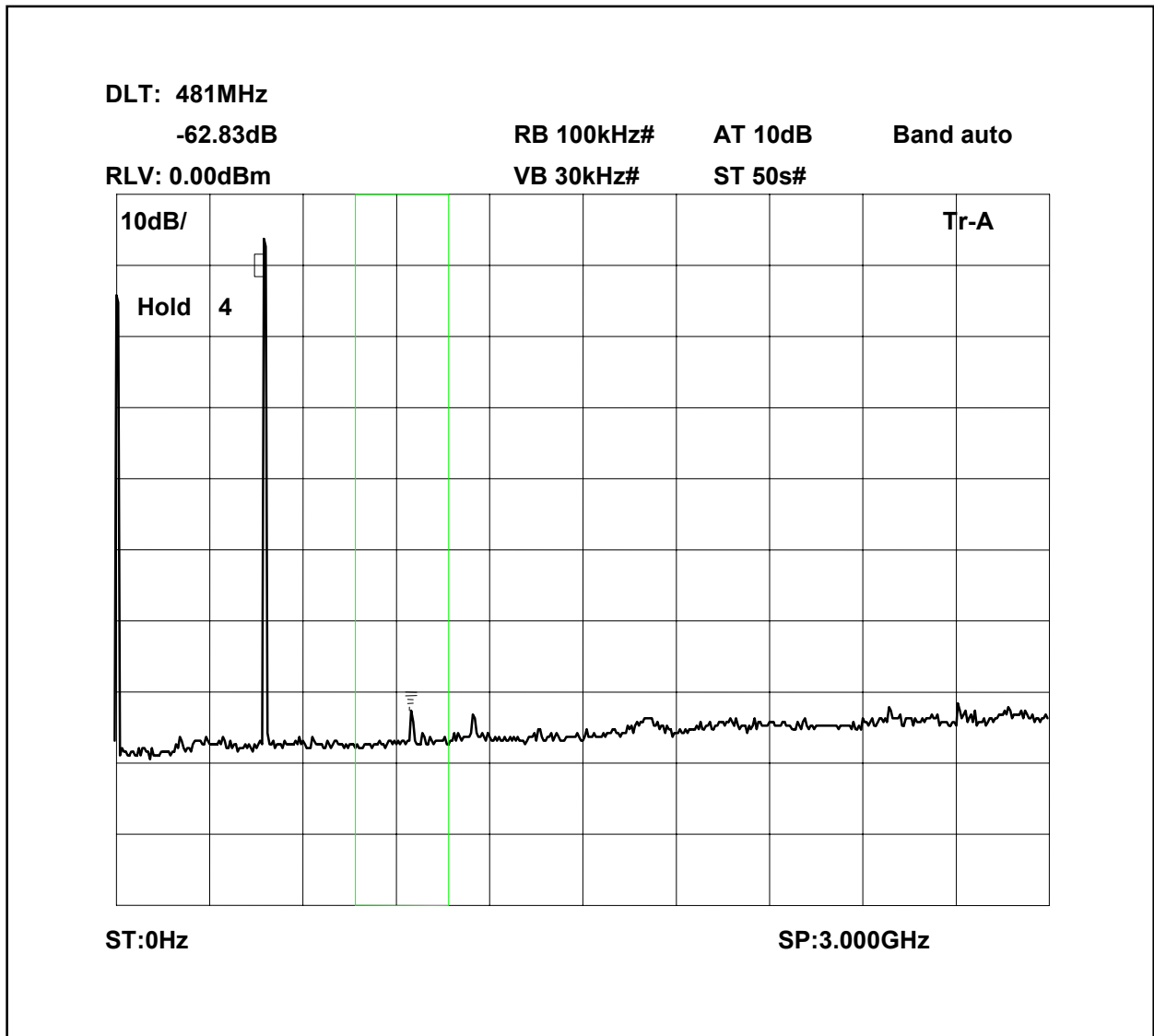
Sweep data is shown on the next page:

Intermodulaion Inband



The above plot shows that all products (designated by ☆) are at least 40dB below the fundamentals.

Intermodulation Wideband



The above plot shows that there are no products outside the bands.

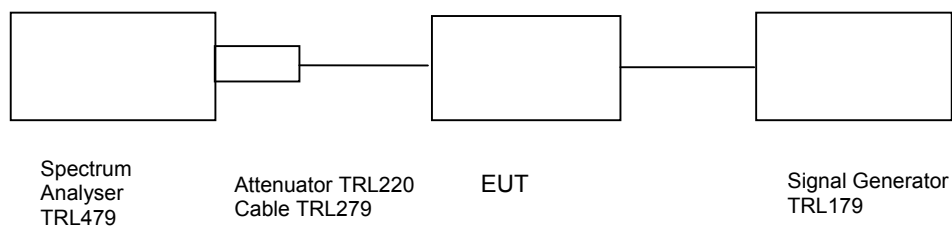
Test equipment used for intermodulation test

TYPE OF EQUIPMENT	MAKER/ SUPPLIER	MODEL No	SERIAL No	TRL No	ACTUAL EQUIPMENT USED
SPECTRUM ANALYSER	ANRITSU	MS2665C	MT26089	479	X
SIGNAL GENERATOR	MARCON	2042	119562/02	254	X
CMTA	ROHDE & SCHWARZ	CMTA52	894715/033	05	X
SIGNAL GENERATOR	MARCON	2042	119388/080	179	X
AMPLIFIER	ENI	6032	1240	31	X
COMBINER	ELCOM	RC-3-50	N/A	119	X
COMBINER	ELCOM	RC-4-50	N/A	170	X

TRANSMITTER TESTS

AMPLIFIER MODULATED CHANNEL TEST – CONDUCTED – Part 2.1049– UPLINK

Ambient temperature	=	21°C	Radio Laboratory
Relative humidity	=	46%	
Supply voltage	=	115Vac	
Channel number	=	See test results	

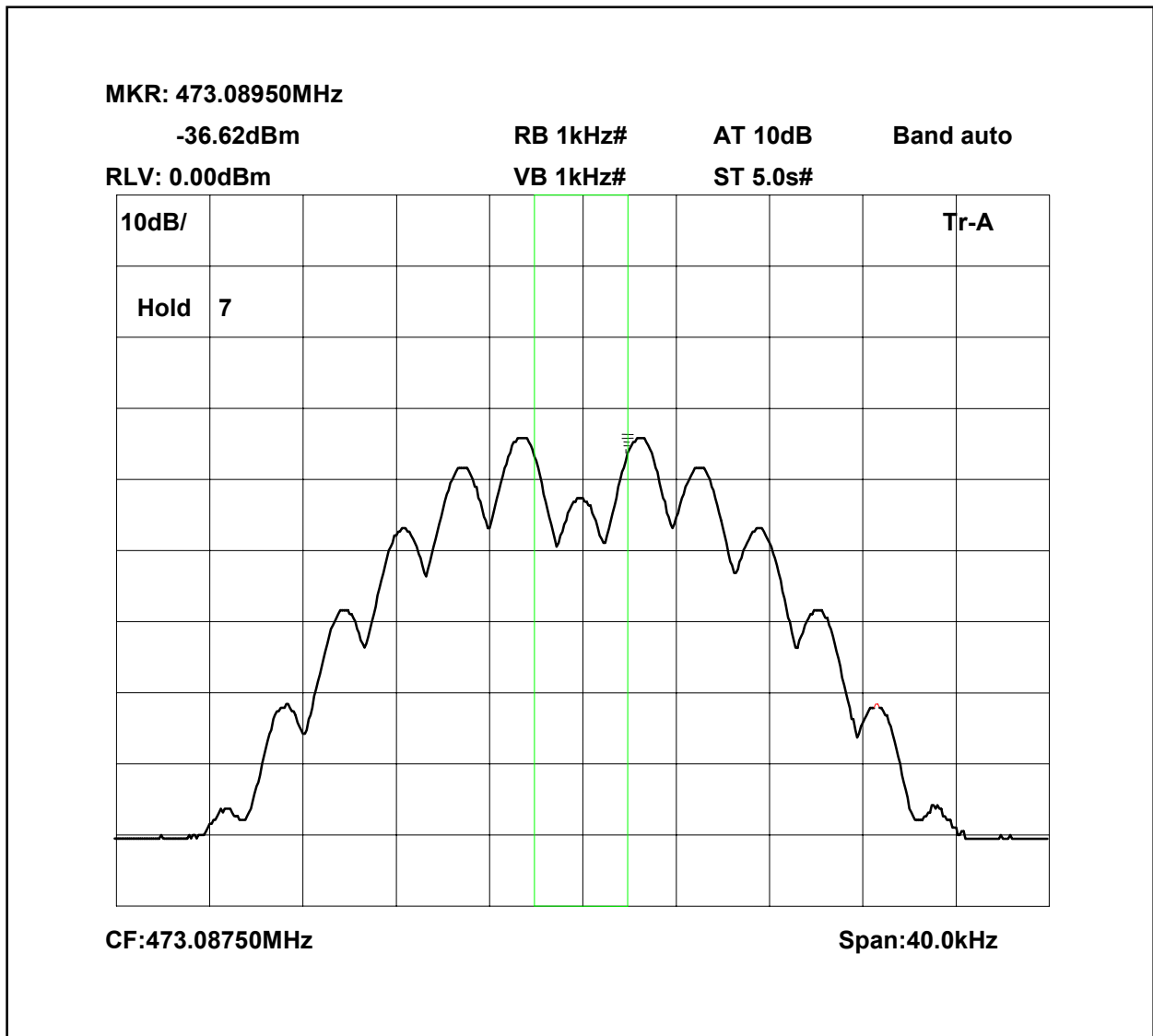


This test was performed to show that the amplifier does not alter the input signal in any way. The input signal was set to the maximum input level (-29.1dBm) and modulated with a 2500Hz tone. The plots show the signal measured at the signal generator and the signal measured at the output of the EUT.

Note: The cables and attenuators had the following losses.

1. Cable TRL279 and attenuator TRL220 26.6dB
2. Cable between signal generator and EUT 0.4dB

473.0875MHz Signal Generator deviation set to 5kHz



MKR: 473.08550MHz
-16.53dBm
RLV: 0.00dBm

RB 1kHz#
VB 1kHz#

AT 10dB
ST 5.0s#

Band auto

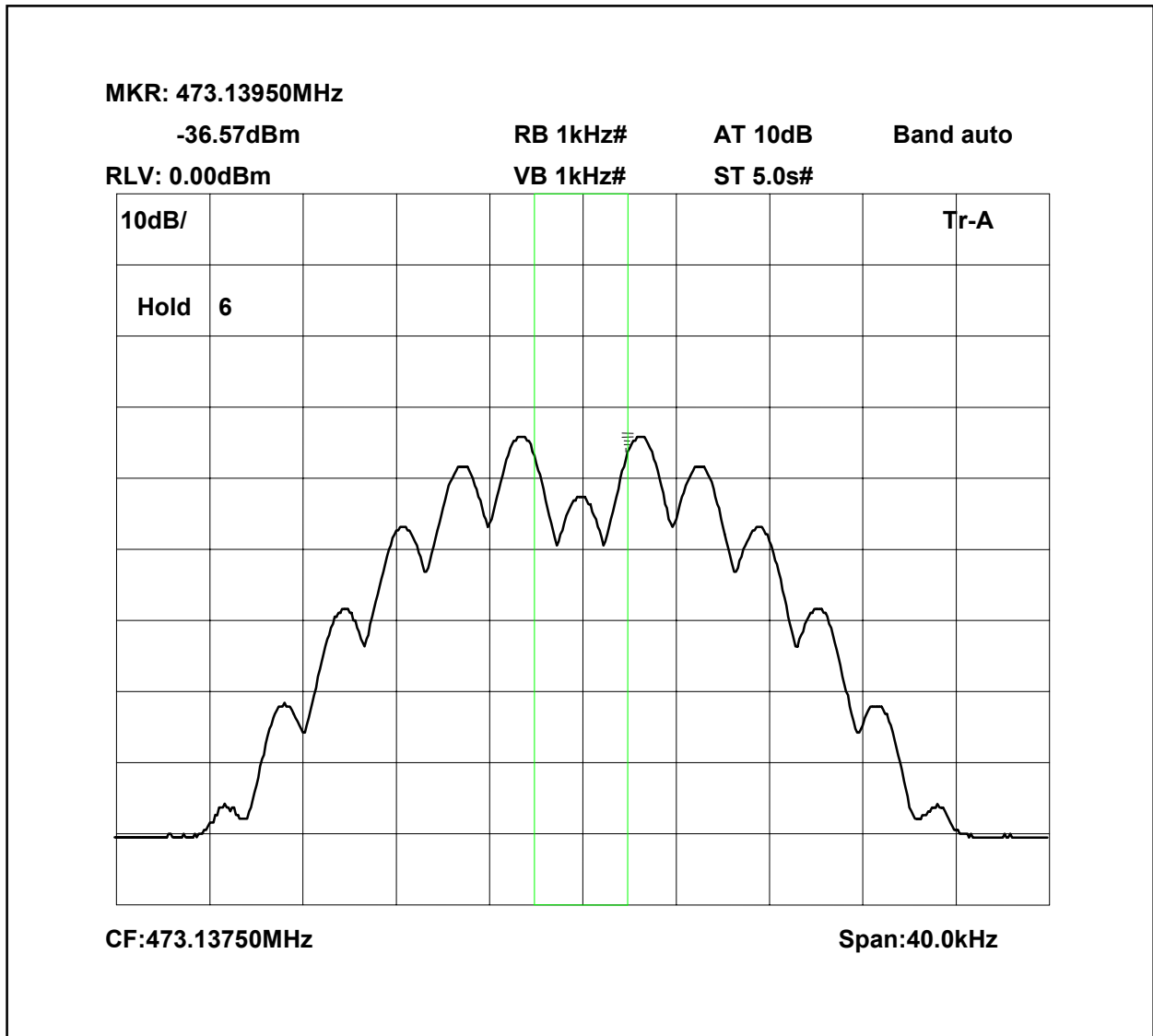
10dB/
Hold 8

Tr-A

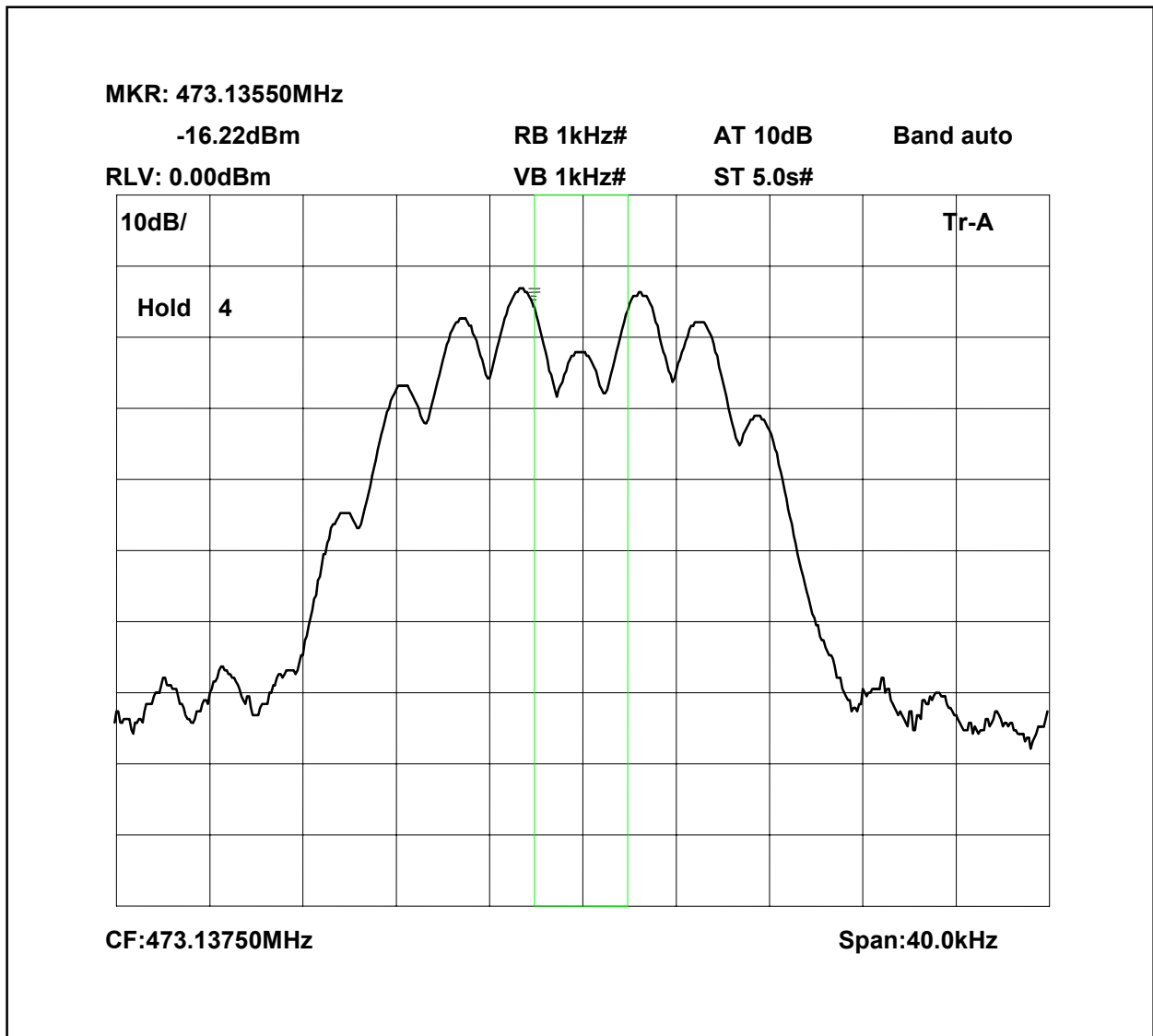
CF:473.08750MHz
Span:40.0kHz

Page 19 of 75

473.1375MHz Signal Generator deviation set to 5kHz

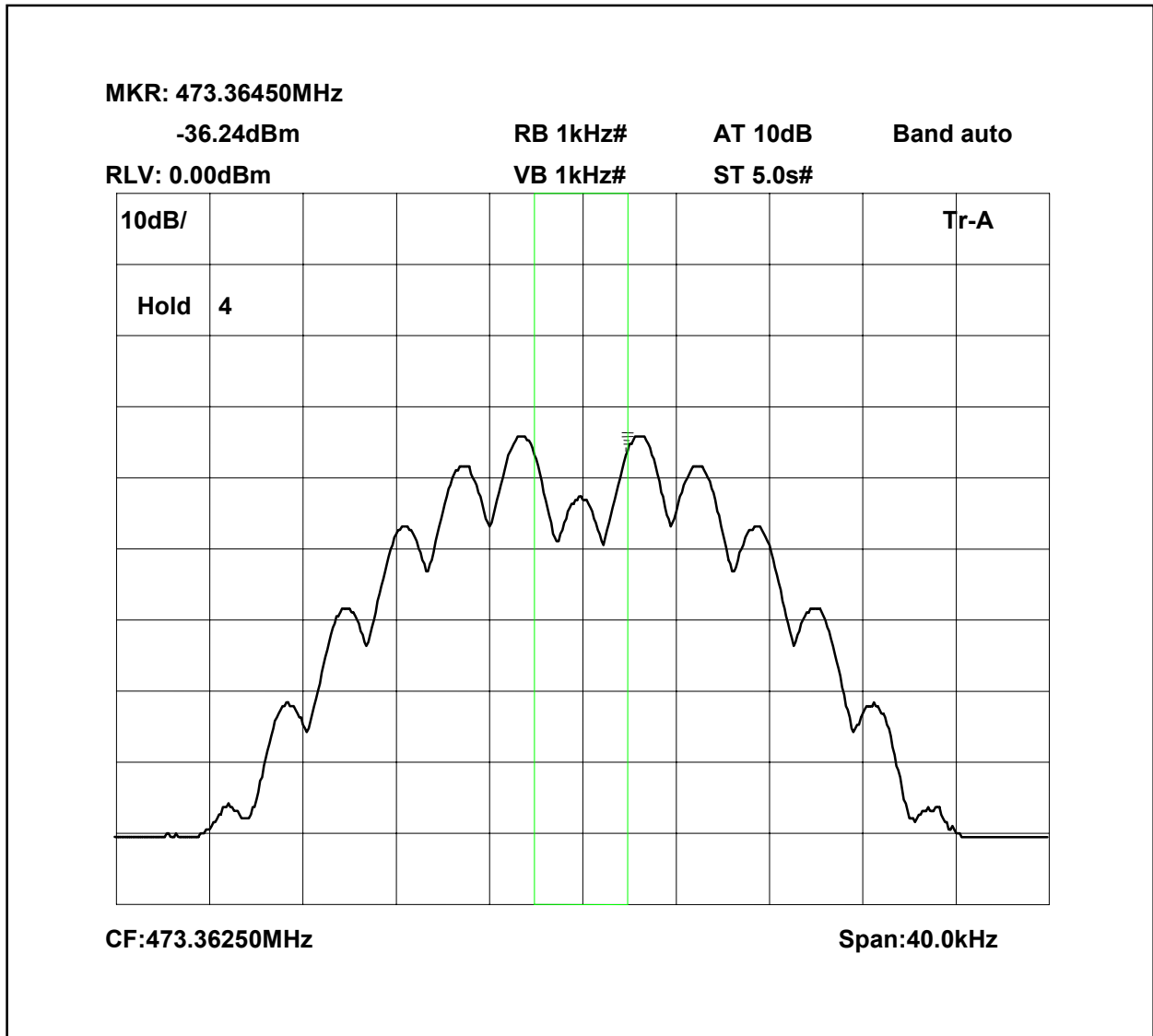


473.1375MHz Signal Generator and amplifier deviation set to 5kHz

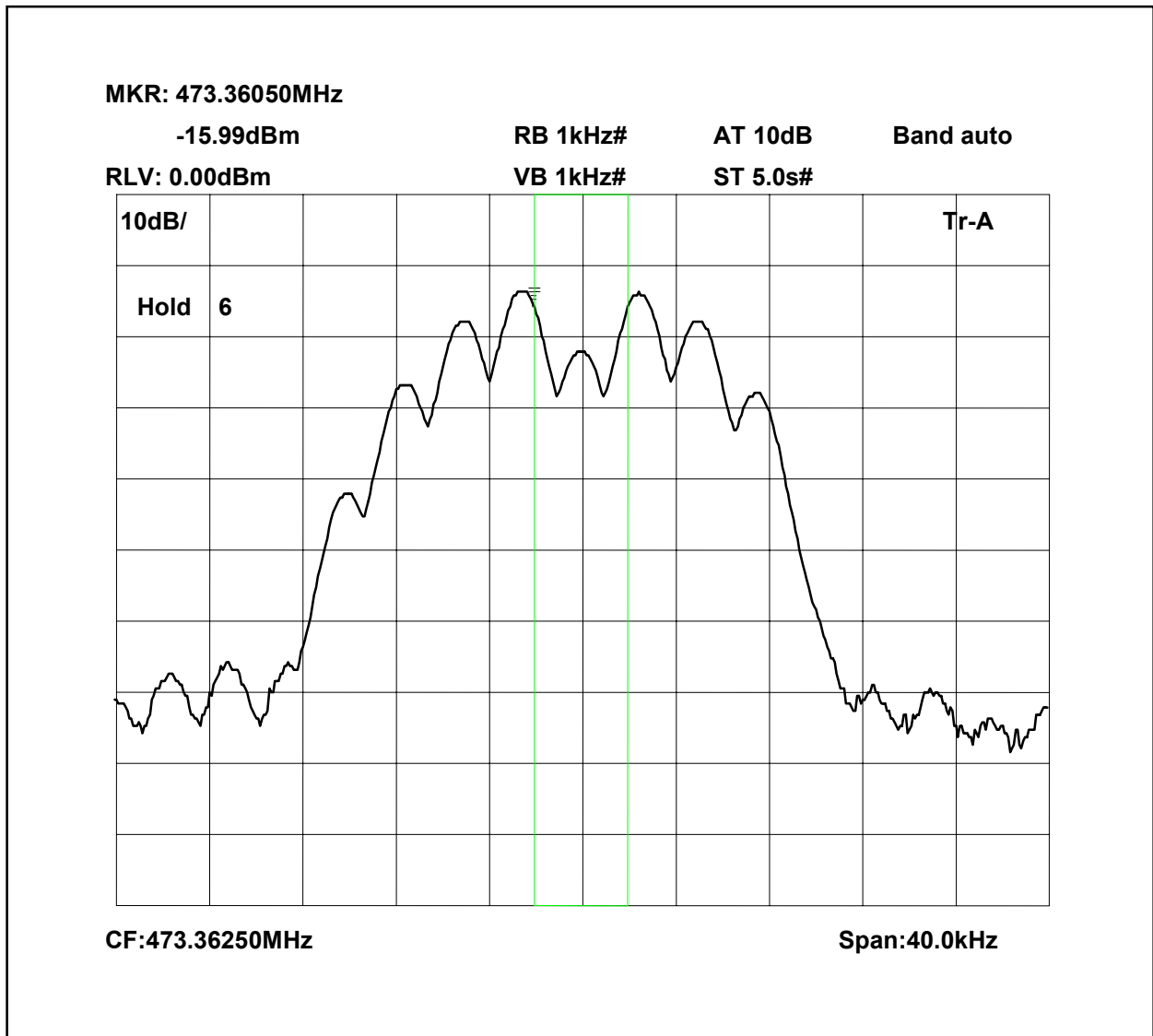


The above plots depicting the output waveshape show no measurable distortion visible when compared to the input signal.

473.3625MHz Signal Generator deviation set to 5kHz



473.3625MHz Signal Generator deviation set to 5kHz



The above plots depicting the output waveshape show no measurable distortion visible when compared to the input signal.

The test equipment used for the Transmitter Modulated Channel tests is shown overleaf:

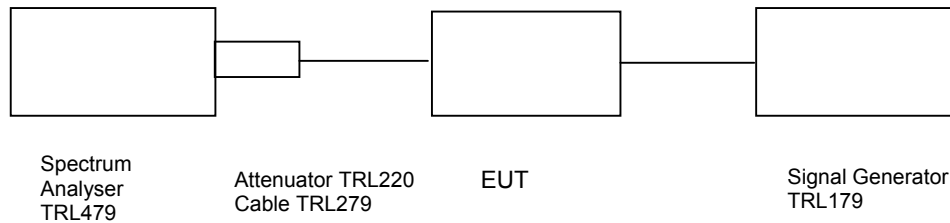
TYPE OF EQUIPMENT	MAKER/ SUPPLIER	MODEL No	SERIAL No	TRL No	ACTUAL EQUIPMENT USED
SPECTRUM ANALYSER	ANRITSU	MS2665C	MT26089	479	X
ATTENUATOR	BIRD	8304-300-N	N/A	220	X
CABLE	ROSENBERGER	MICRO COAX	N/A	279	X
SIGNAL GENERATOR	MARCON	2042	119388/080	179	X

TRANSMITTER TESTS

AMPLIFIER SPURIOUS EMISSIONS – CONDUCTED – Part 2.1051– UPLINK

Ambient temperature = 21°C
 Relative humidity = 46%
 Supply voltage = 115Vac

Radio Laboratory
 Test Signal = F3E



The test was set up as per the diagram. The level at the input was adjusted to compensate for the loss of the interconnecting cable. The unit was tested operating at maximum power and on three test frequencies.

The Spurious limit was calculated as follows:

On any frequency removed from the assigned frequency by more than 250% of the authorised bandwidth

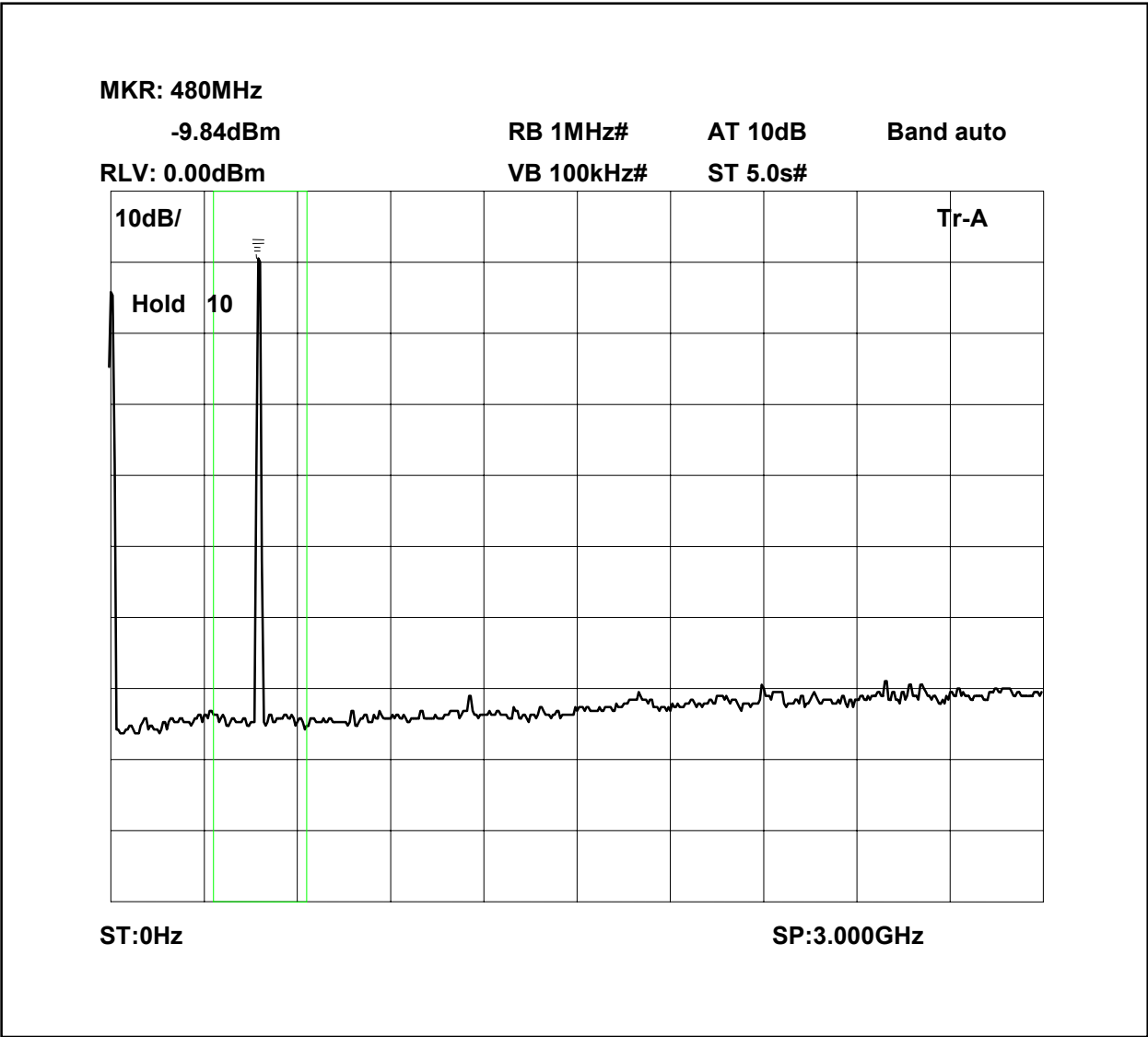
At least $43 + 10 \log P_{dB}$

$$(10 \log P_{\text{watts}}) - (43 + 10 \log (P_{\text{watts}} * 1000)) = \text{LIMIT} = -13 \text{ dBm}$$

The test equipment used for the Transmitter Conducted Emissions:

TYPE OF EQUIPMENT	MAKER/SUPPLIER	MODEL No	SERIAL No	TRL No	ACTUAL EQUIPMENT USED
SPECTRUM ANALYSER	ANRITSU	MS2665C	MT26089	479	X
ATTENUATOR	BIRD	8304-300-N	N/A	220	X
CABLE	ROSENBERGER	MICRO COAX	N/A	279	X
SIGNAL GENERATOR	MARCON	2042	119388/080	179	X

Conducted emissions 473.0875MHz 0 - 3GHz



MR: 3.144GHz
-67.01dBm
RB 1MHz#
AT 10dB
Band auto
RLV: 0.00dBm
VB 100kHz#
ST 5.0s#

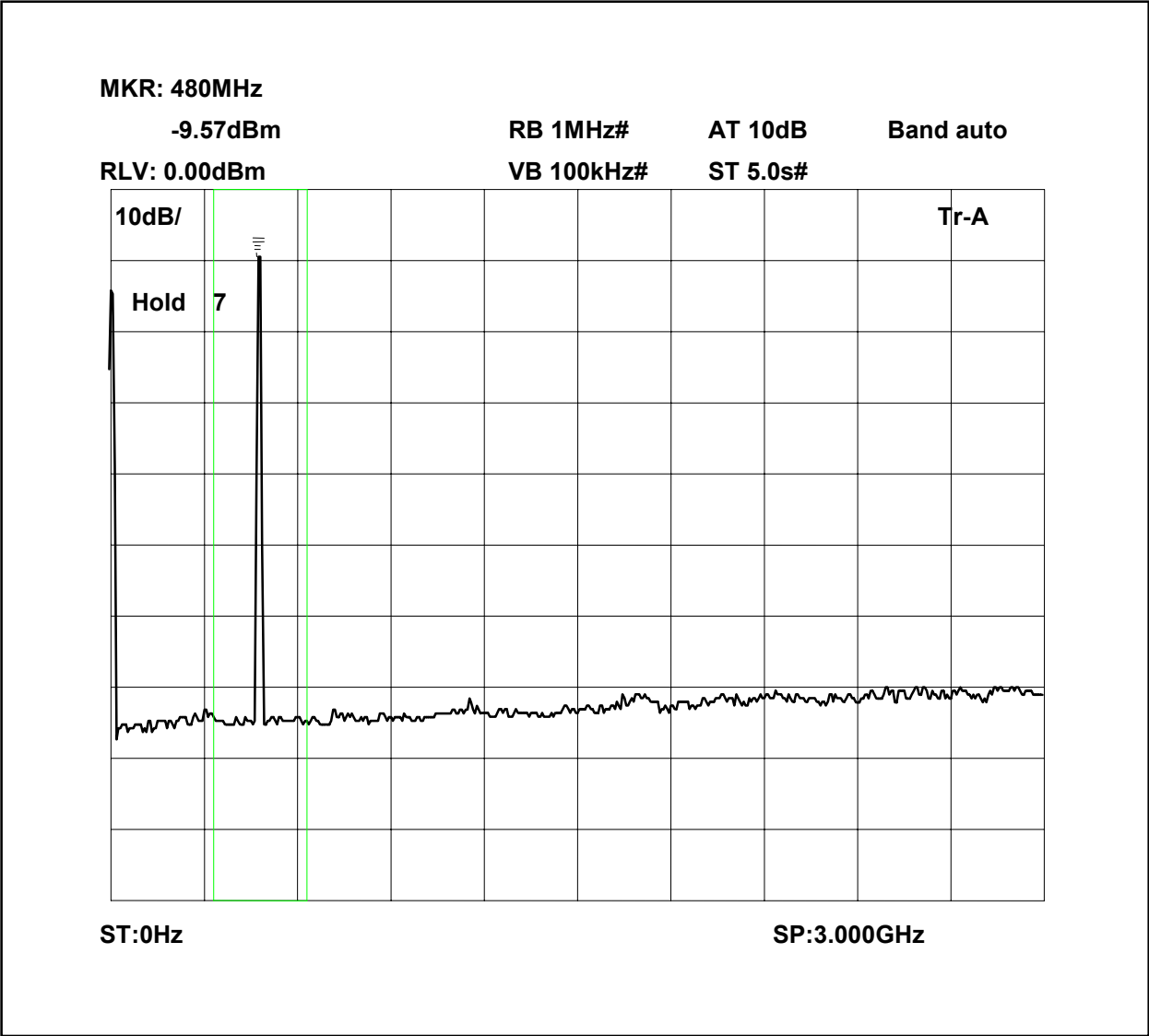
10dB/

Hold 5

Tr-A

ST:2.900GHz
SP:5.000GHz

Conducted emissions 473.1375MHz 0 - 3GHz



MKR: 3.219GHz
-67.44dBm
RB 1MHz#
AT 10dB
Band auto

RLV: 0.00dBm
VB 100kHz#
ST 5.0s#

10dB/

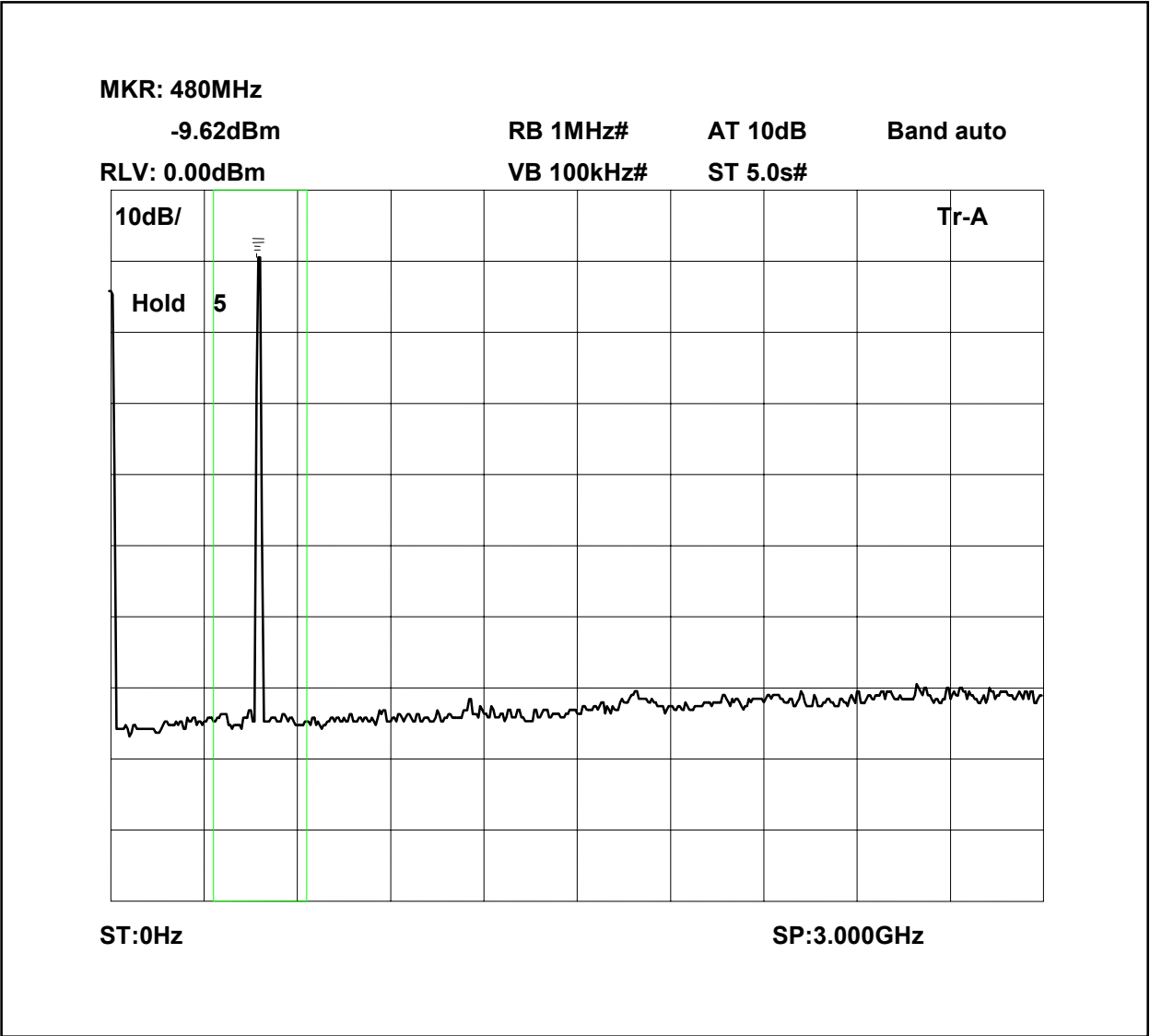
Hold 7

Tr-A

ST:2.900GHz

SP:5.000GHz

Conducted emissions 473.3625MHz 0 - 3GHz



MKR: 3.236GHz
-68.17dBm
RB 1MHz#
AT 10dB
Band auto
RLV: 0.00dBm
VB 100kHz#
ST 5.0s#

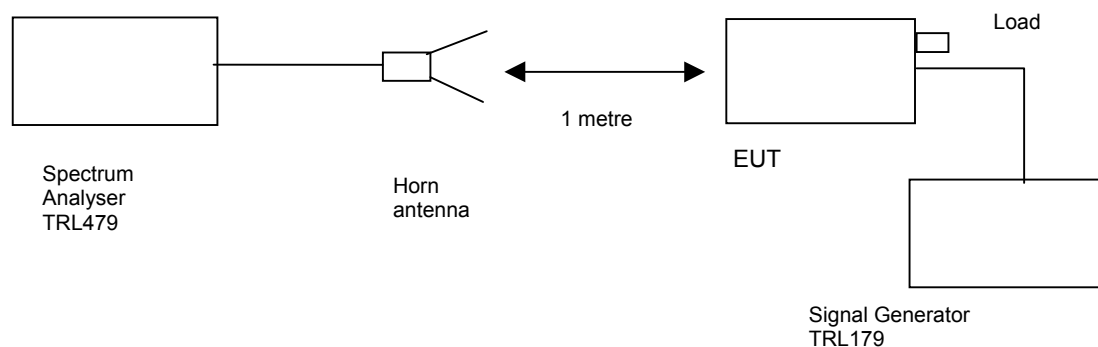
10dB/
Hold 6
Tr-A
ST:2.900GHz
SP:5.000GHz

TRANSMITTER TESTS

AMPLIFIER SPURIOUS EMISSIONS – RADIATED – Part 2.1053– UPLINK

Ambient temperature = 17°C
Relative humidity = 50%
Conditions = OATS
Supply voltage = 115Vac
Supply Frequency = N/A

Test Signal = F3E



The test was set up as per the diagram. The level at the input was adjusted to compensate for the loss of the interconnecting cable. The unit was tested operating maximum power on three test frequencies with a 50 ohm load on the output. The unit was also tested with the signal generator replaced by another 50ohm load.

The Spurious limit was calculated as follows:

On any frequency removed from the assigned frequency by more that 250% of the authorised bandwidth

At least $43 + 10 \log \text{ PdB}$

$$(10\log P_{\text{watts}}) - (43 + 10\log (P_{\text{watts}} * 1000)) = \text{LIMIT} = -13 \text{ dBm}$$

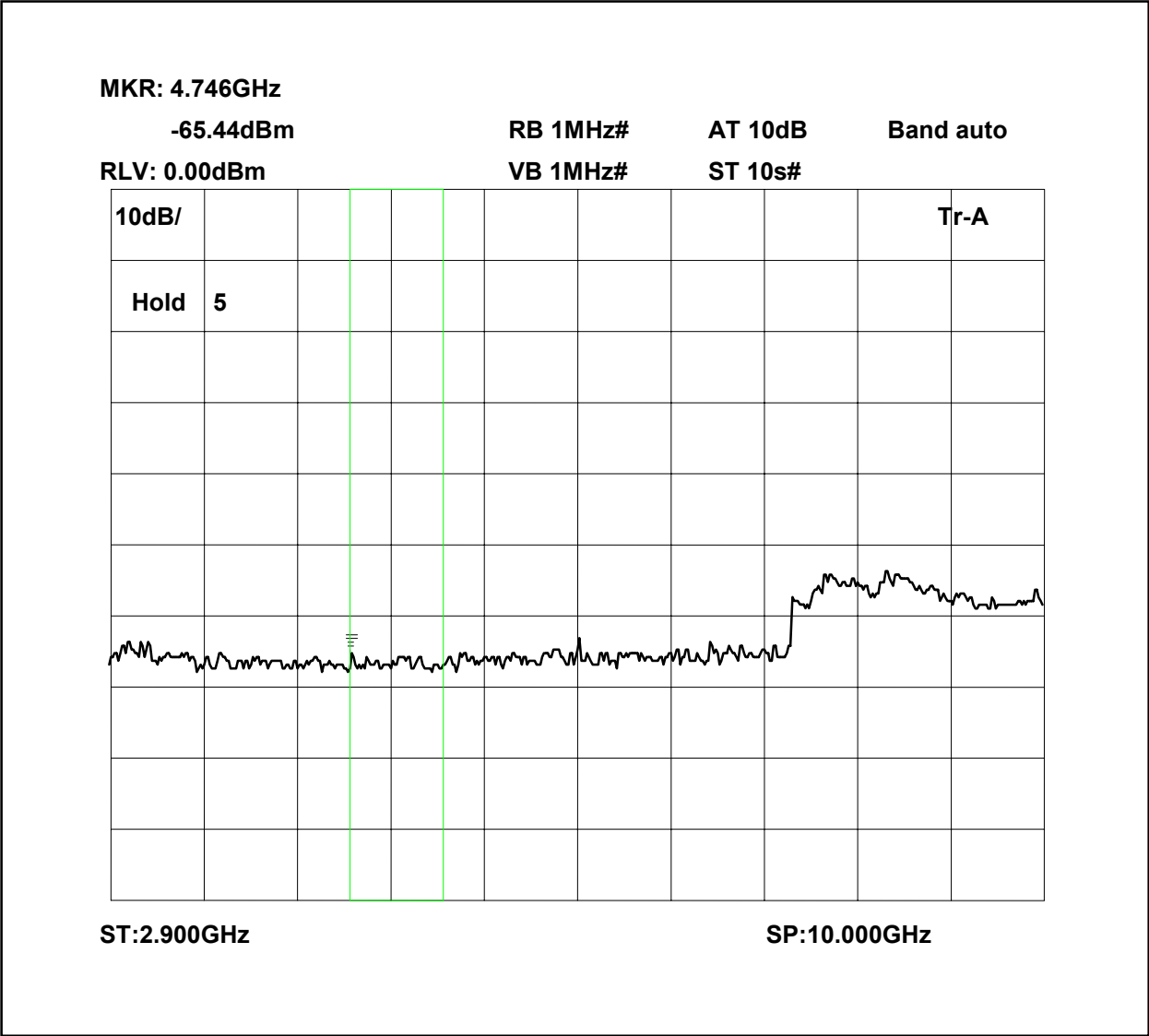
MKR: 1.062GHz
-73.13dBm **RB 100kHz#** **AT 10dB** **Band auto**
RLV: 0.00dBm **VB 100kHz#** **ST 10s#**

10dB/ Tr-A
 Hold 6

ST:0Hz SP:3.000GHz

RF335 iss02

Radiated emissions 473.0875MHz 2.9-10GHz



The above test results show that there were no emissions within 20dBs of the –13dBm limit.

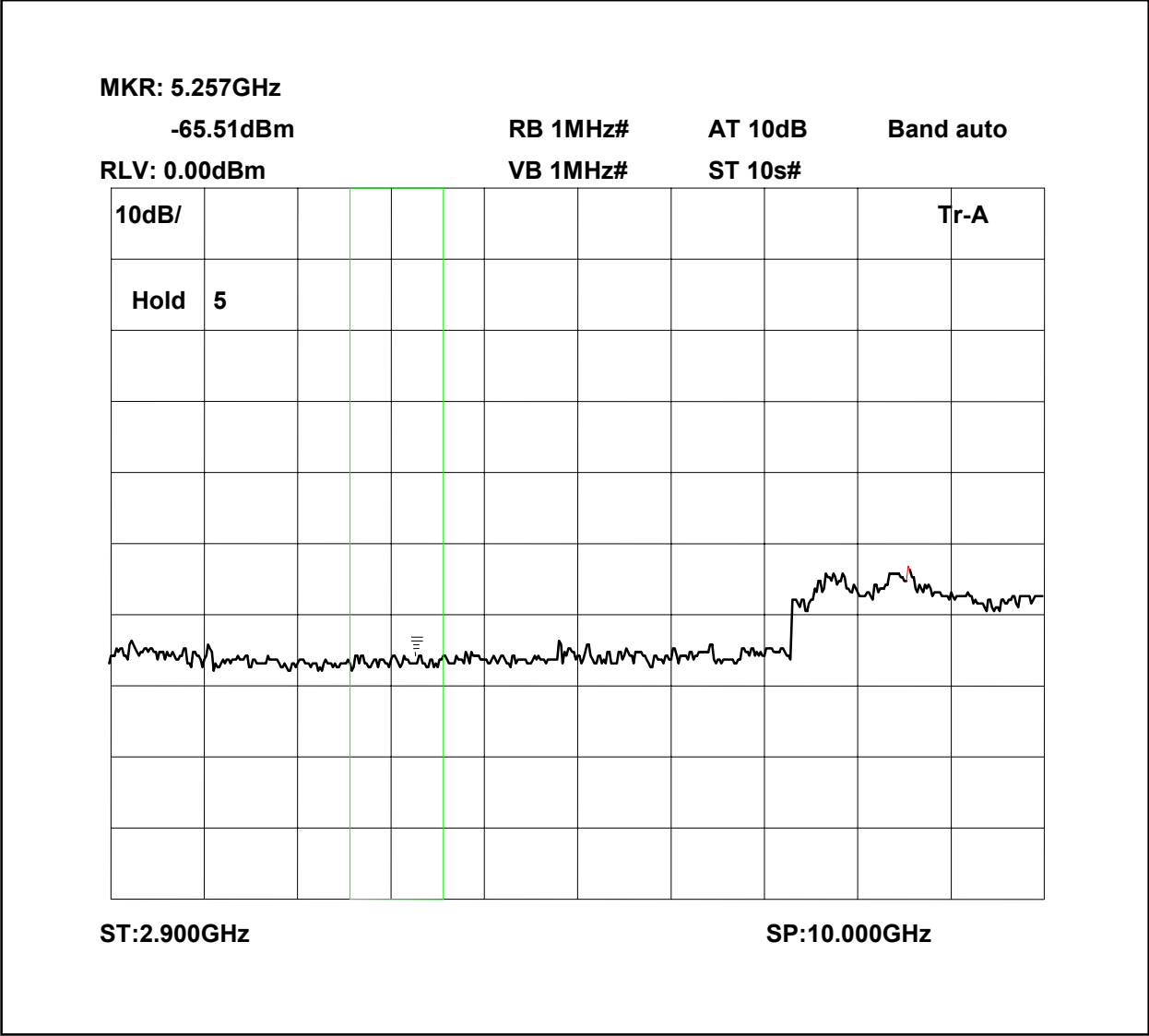
MKR: 936MHz
-73.74dBm **RB 100kHz#** **AT 10dB** **Band auto**
RLV: 0.00dBm **VB 100kHz#** **ST 10s#**

10dB/ Tr-A
 Hold 5

ST:0Hz **SP:3.000GHz**

Page 35 of 75

Radiated emissions 473.1375MHz 2.9-10GHz



The above test results show that there were no emissions within 20dBs of the –13dBm limit.

MKR: 1.032GHz
-74.09dBm
RB 100kHz#
AT 10dB
Band auto

RLV: 0.00dBm
VB 100kHz#
ST 10s#

10dB/

Hold 6

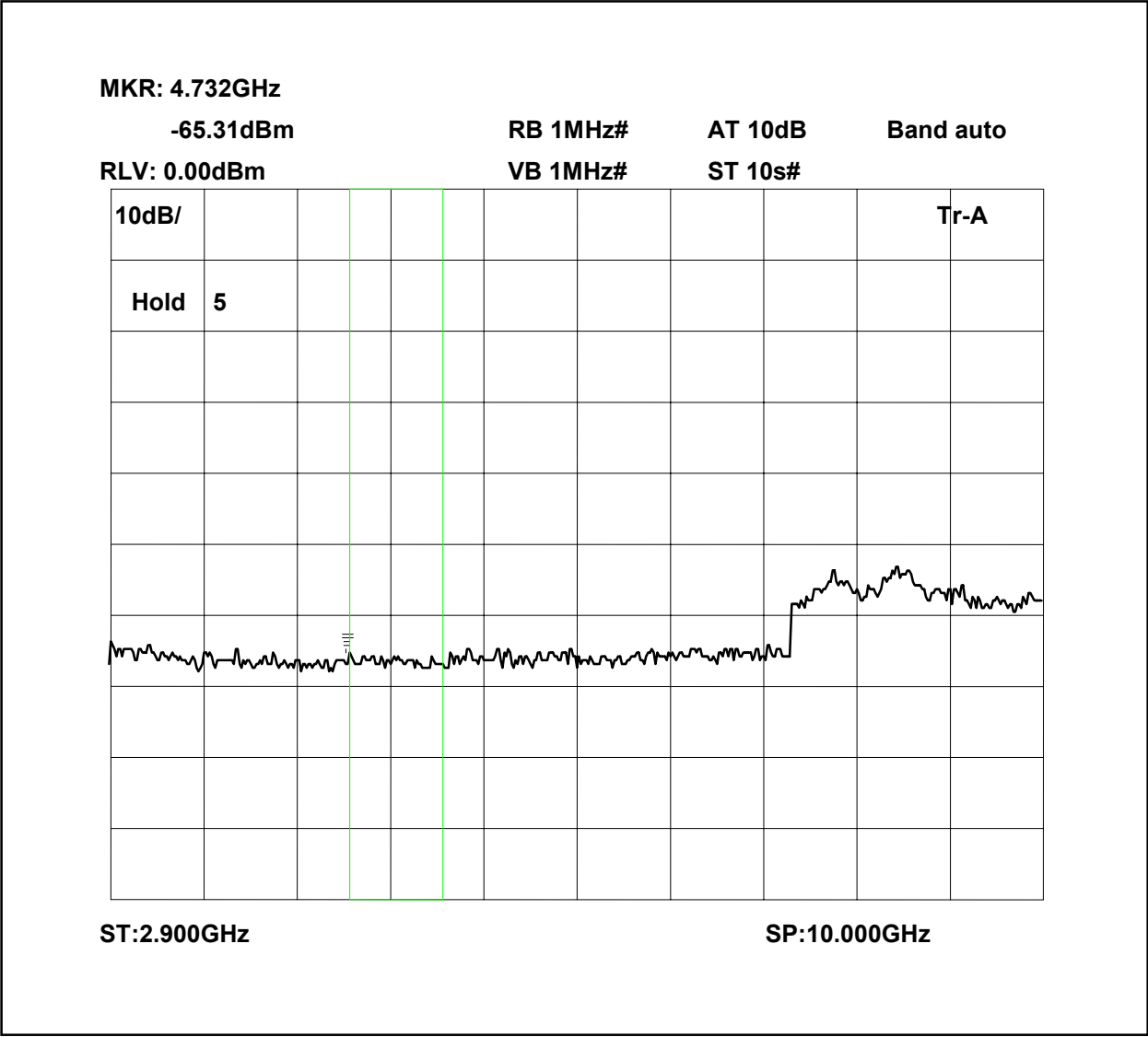
Tr-A

ST:0Hz

SP:3.000GHz

RF335 iss02

Radiated emissions 473.3625MHz 2.9-10GHz



The above test results show that there were no emissions within 20dBs of the –13dBm limit.

MKR: 2.310GHz
-71.83dBm
RB 100kHz#
AT 10dB#
Band auto

RLV: 0.00dBm
VB 100kHz#
ST 20s#

10dB/

Hold 25

Tr-A

ST:0Hz

SP:3.000GHz

Page 39 of 75

MKR: 8.523GHz
-53.15dBm RB 1MHz# AT 10dB# Band auto
RLV:-30.00dBm VB 1MHz# ST 10s#

5dB/ Tr-A

Hold 5

ST:2.900GHz SP:10.000GHz

RF335 iss02

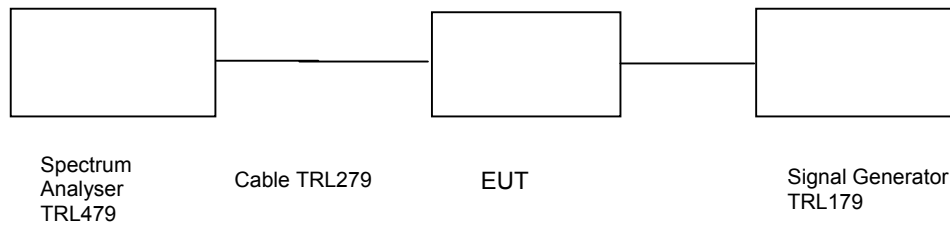
The test equipment used for the Transmitter Spurious Emissions:

TYPE OF EQUIPMENT	MAKER/ SUPPLIER	MODEL No	SERIAL No	TRL No	ACTUAL EQUIPMENT USED
SPECTRUM ANALYSER	ANRITSU	MS2665C	MT26089	479	X
HORN	EMCO	3115	9010-3581	139	X
ATTENUATOR	BIRD	8304-300-N	N/A	220	X
CABLE	ROSENBERGER	MICRO COAX	N/A	279	X
SIGNAL GENERATOR	MARCON	2042	119388/080	179	X

AMPLIFIER GAIN – CONDUCTED – PART 2.1046 – DOWNLINK

Ambient temperature = 23°C
 Relative humidity = 35%
 Supply voltage = 115Vac
 Channel number = See test results

Radio Laboratory



Frequency MHz	Signal Generator input level dBm	Cable & Attenuator loss dB	Level at Spectrum Analyser dBm	Gain dB	Gain after 20dB input level increase dBm
470.0875	-62.6	0.5	-3.9	58.7	58.7
470.1375	-62.3	0.5	-4.9	57.4	57.4
470.3625	-61.9	0.5	-4.3	57.6	57.6

Notes:

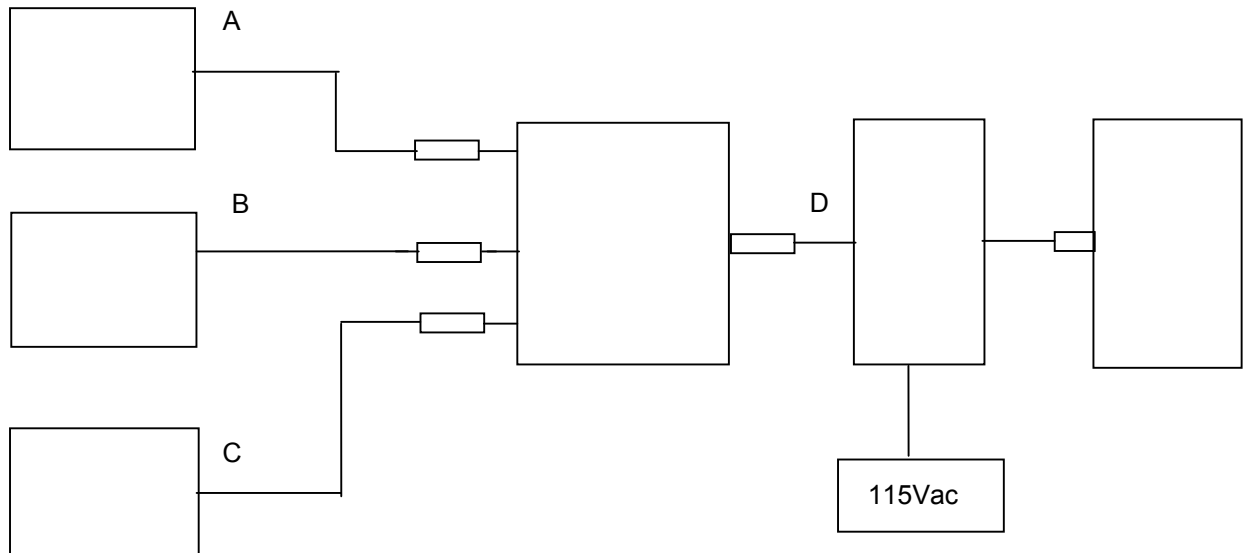
1. The level of the signal generator takes into consideration the loss from the cable.
2. The signal generator input was increased by 20dBs and the level of the output signal re-measured

TYPE OF EQUIPMENT	MAKER/ SUPPLIER	MODEL No	SERIAL No	TRL No	ACTUAL EQUIPMENT USED
SPECTRUM ANALYSER	ANRITSU	MS2665C	MT26089	479	X
ATTENUATOR	BIRD	8304-200	N/A	103	
ATTENUATOR	BIRD	8304-300-N	N/A	220	
CABLE	ROSENBERGER	MICRO COAX	N/A	279	X
SIGNAL GENERATOR	MARCON	2042	119388/080	179	X

AMPLIFIER INTERMODULATION SPURIOUS EMISSIONS – CONDUCTED – PART 2.1053– DOWNLINK

Ambient temperature = N/A
Relative humidity = N/A
Supply voltage = 115Vac

Radio Laboratory

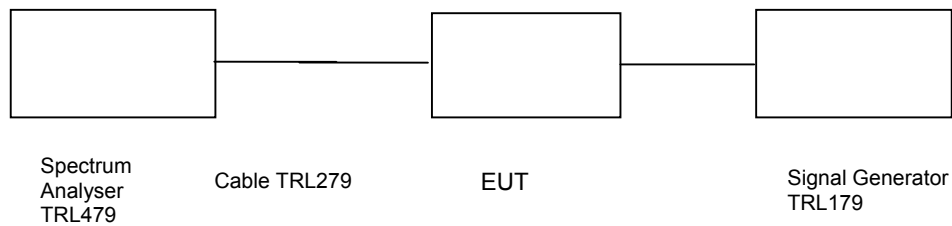


The Intermodulation was deemed not appropriate to the downlink part of the amplifier as the output of the amplifier feeds into an RF to optical converter. See annex C system diagram.

TRANSMITTER TESTS

AMPLIFIER MODULATED CHANNEL TEST – CONDUCTED – Part 2.1049– DOWNLINK

Ambient temperature	=	21°C	Radio Laboratory
Relative humidity	=	47%	
Supply voltage	=	115Vac	
Channel number	=	See test results	

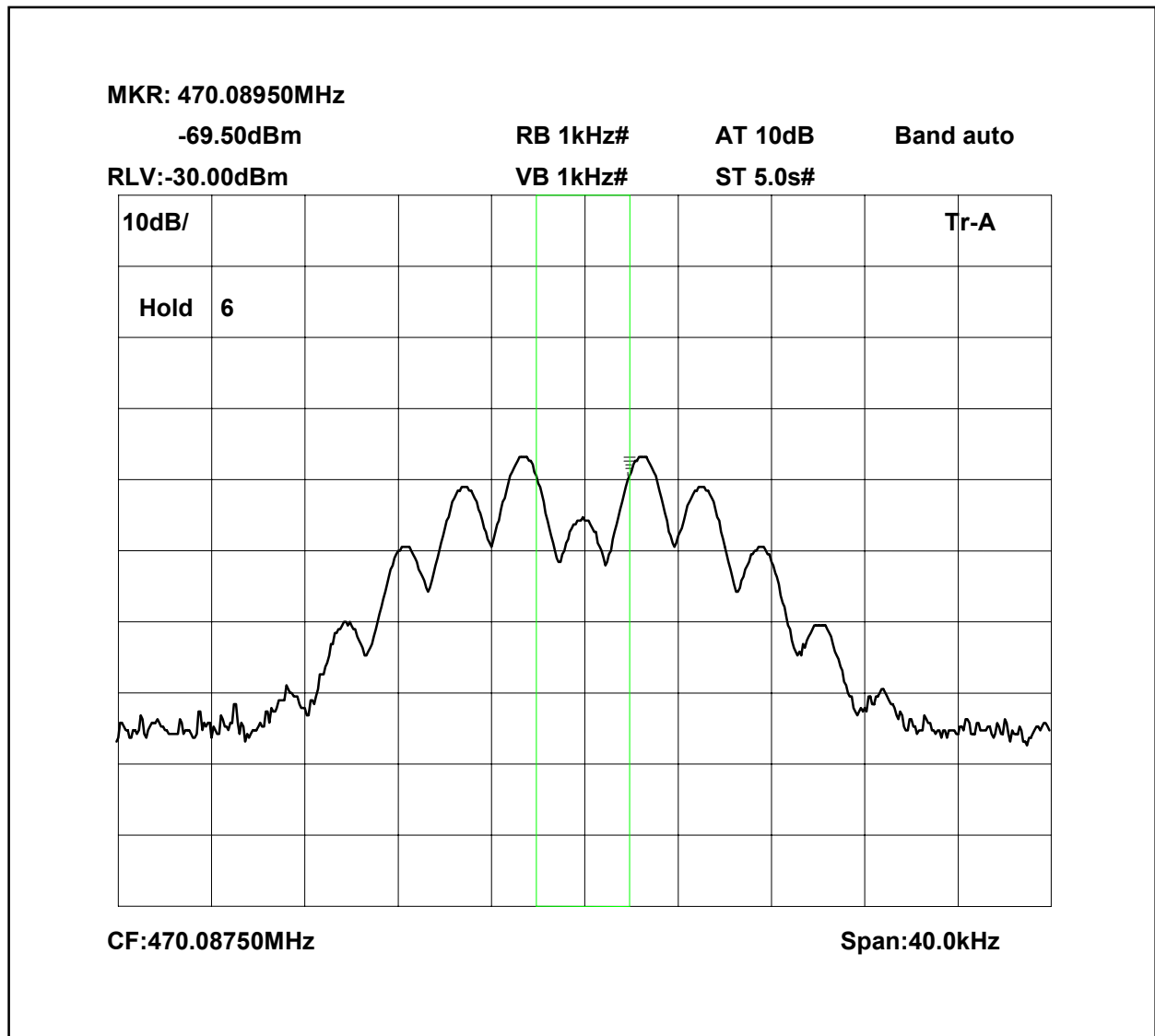


This test was performed to show that the amplifier does not alter the input signal in any way. The input signal was set to the maximum input level (dBm) and modulated with a 2500Hz tone. The plots show the signal measured at the signal generator and the signal measured at the output of the EUT.

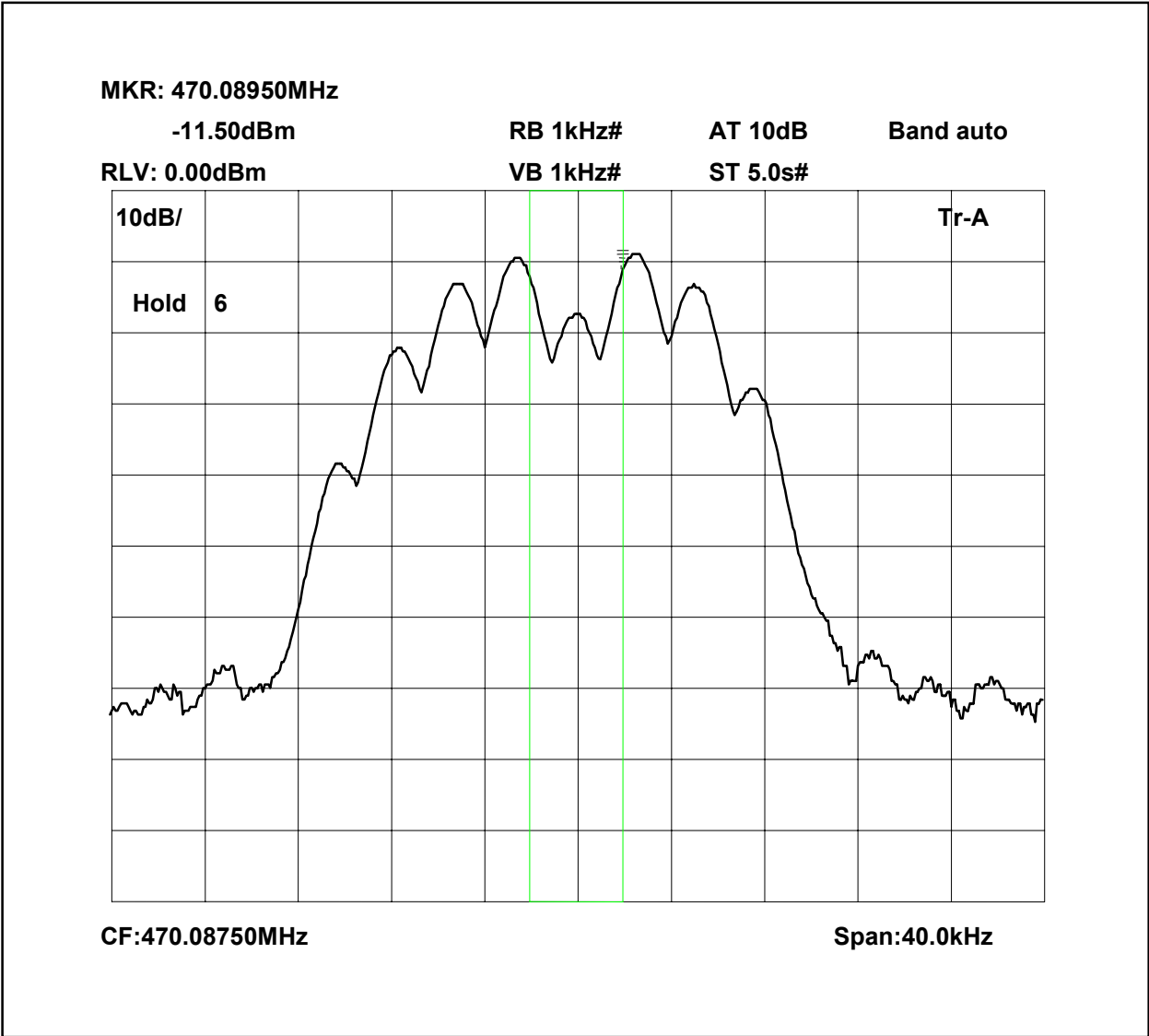
Note: The cables and attenuators had the following losses.

1. Cable TRL279 and analyser = 0.5dB
2. Cable between signal generator and EUT = 0.4dB

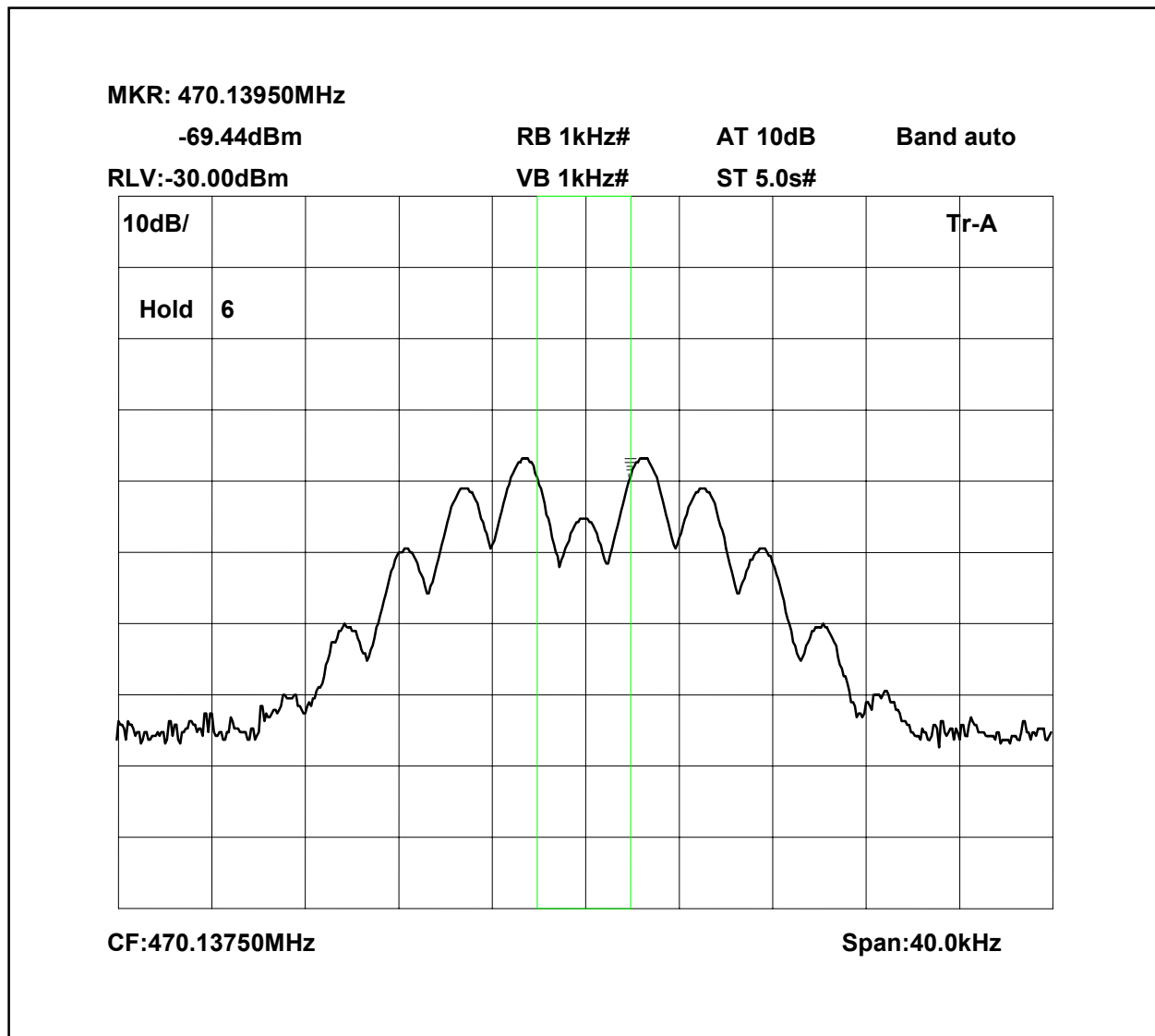
470.0875 Signal Generator deviation set to 5kHz



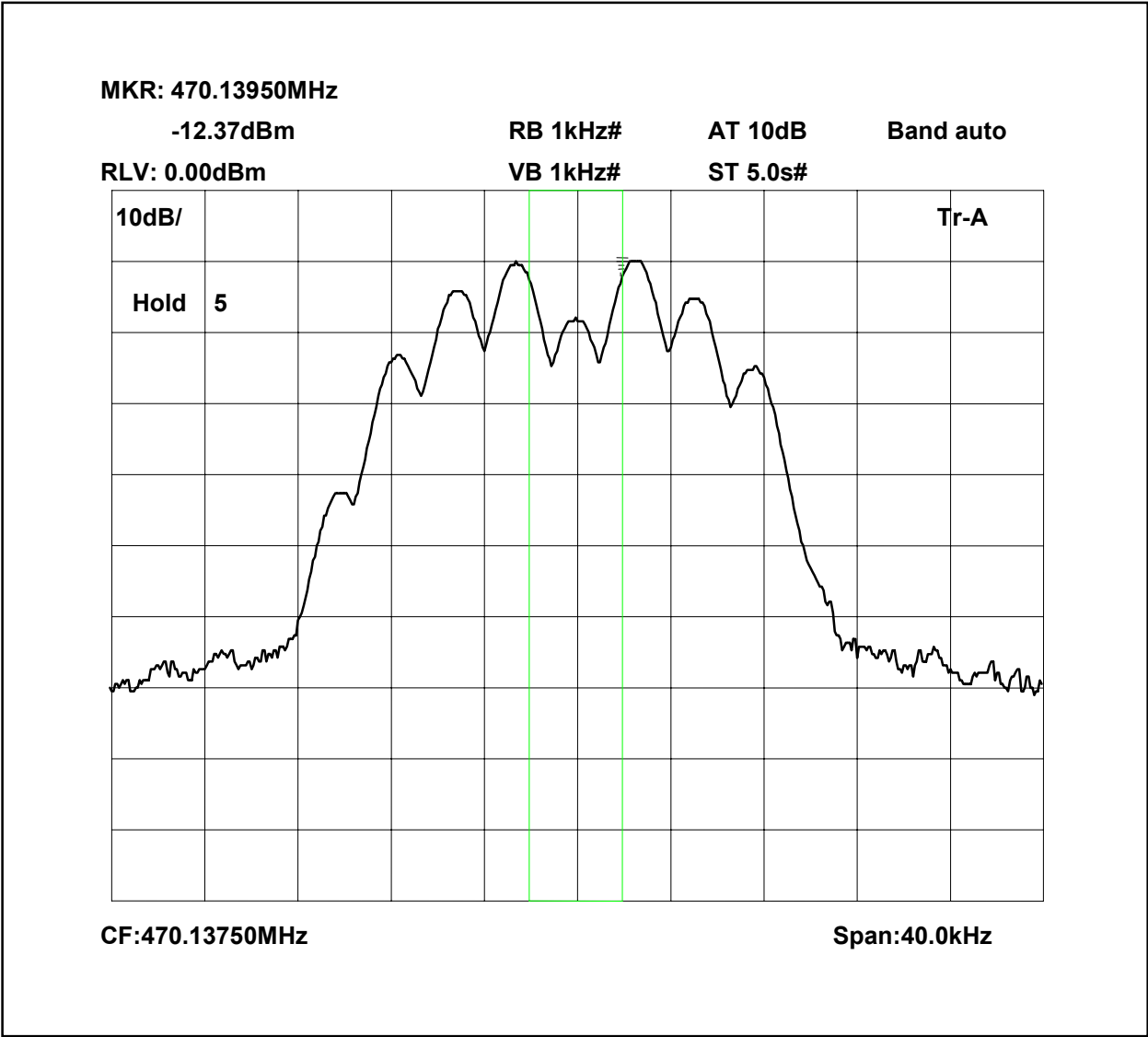
470.0875 Signal Generator and EUT deviation set to 5kHz



The above plots depicting the output wave shape show no measurable distortion visible. When compared to the input signal.

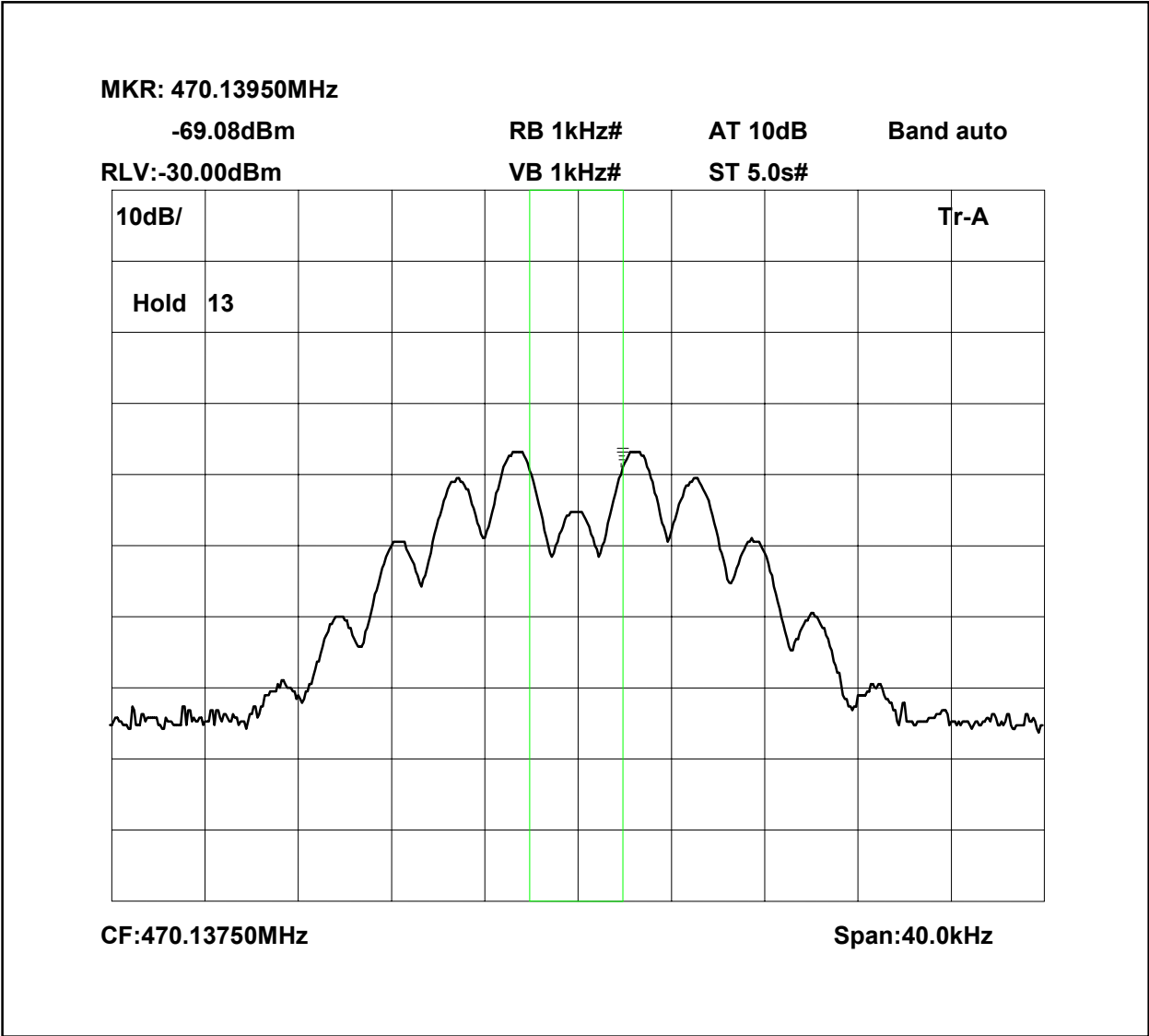


470.1375 Signal Generator and amplifier deviation set to 5kHz

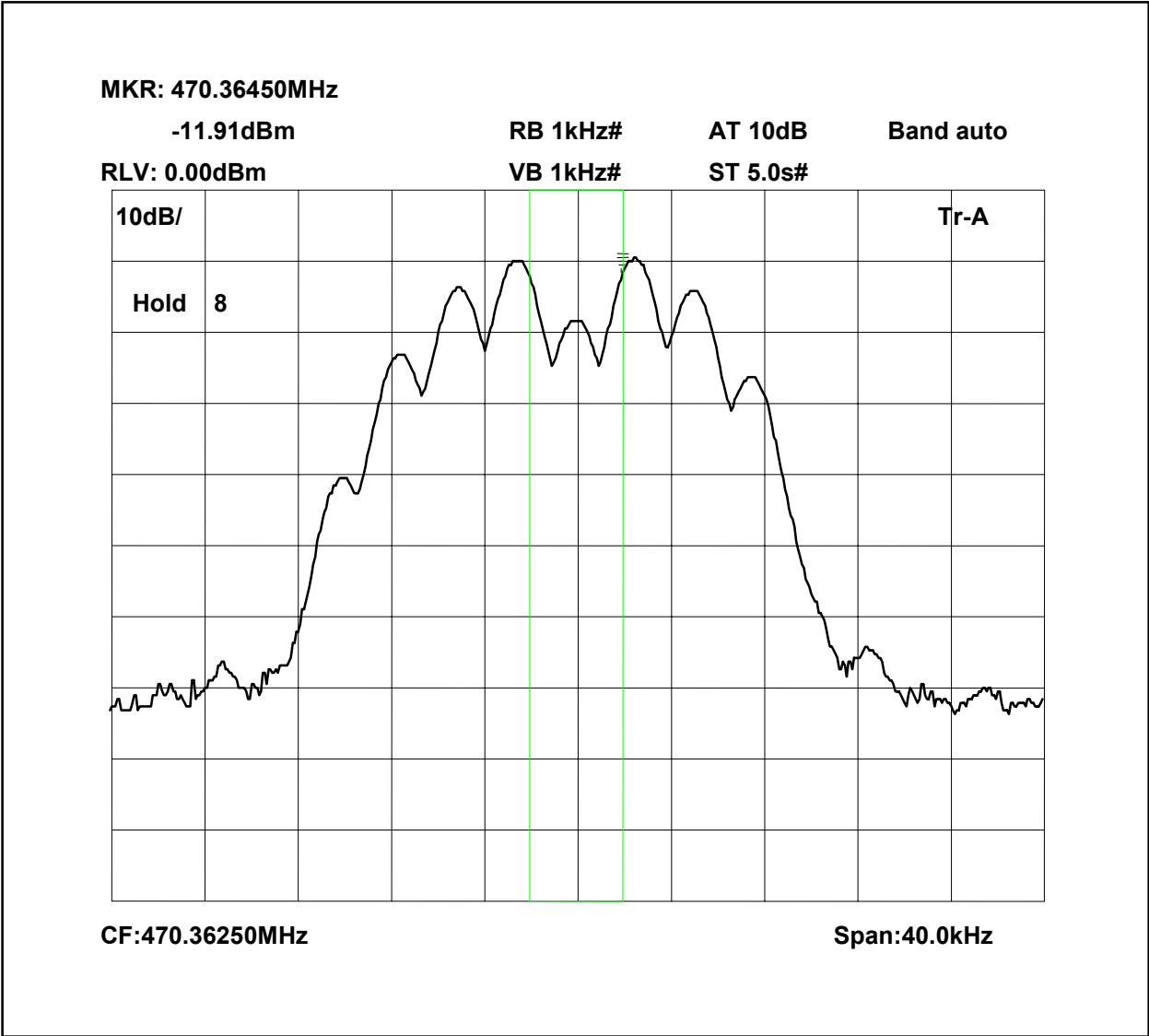


The above plots depicting the output wave shape show no measurable distortion visible. When compared to the input signal.

470.3625 Signal Generator deviation set to 5kHz



470.3625 Signal Generator deviation set to 5kHz



The above plots depicting the output wave shape show no measurable distortion visible. When compared to the input signal.

The test equipment used for the Transmitter modulated channel tests is shown overleaf:

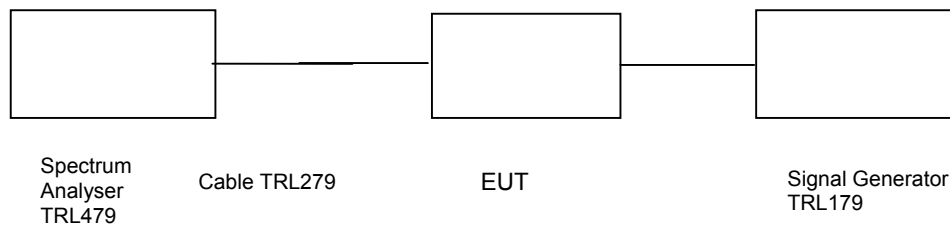
TYPE OF EQUIPMENT	MAKER/ SUPPLIER	MODEL No	SERIAL No	TRL No	ACTUAL EQUIPMENT USED
SPECTRUM ANALYSER	ANRITSU	MS2665C	MT26089	479	X
ATTENUATOR	BIRD	8304-200	N/A	103	
ATTENUATOR	BIRD	8304-300-N	N/A	220	
CABLE	ROSENBERGER	MICRO COAX	N/A	279	X
SIGNAL GENERATOR	MARCON	2042	119388/080	179	X

TRANSMITTER TESTS

AMPLIFIER SPURIOUS EMISSIONS – CONDUCTED – Part 2.1051– DOWNLINK

Ambient temperature = 23°C
 Relative humidity = 35%
 Supply voltage = 115Vac

Radio Laboratory
 Test Signal = F3E



The test was set up as per the diagram. The level at the input was adjusted to compensate for the loss of the interconnecting cable. The unit was tested operating at maximum power and on three test frequencies.

The Spurious limit was calculated as follows:

On any frequency removed from the assigned frequency by more that 250% of the authorised bandwidth

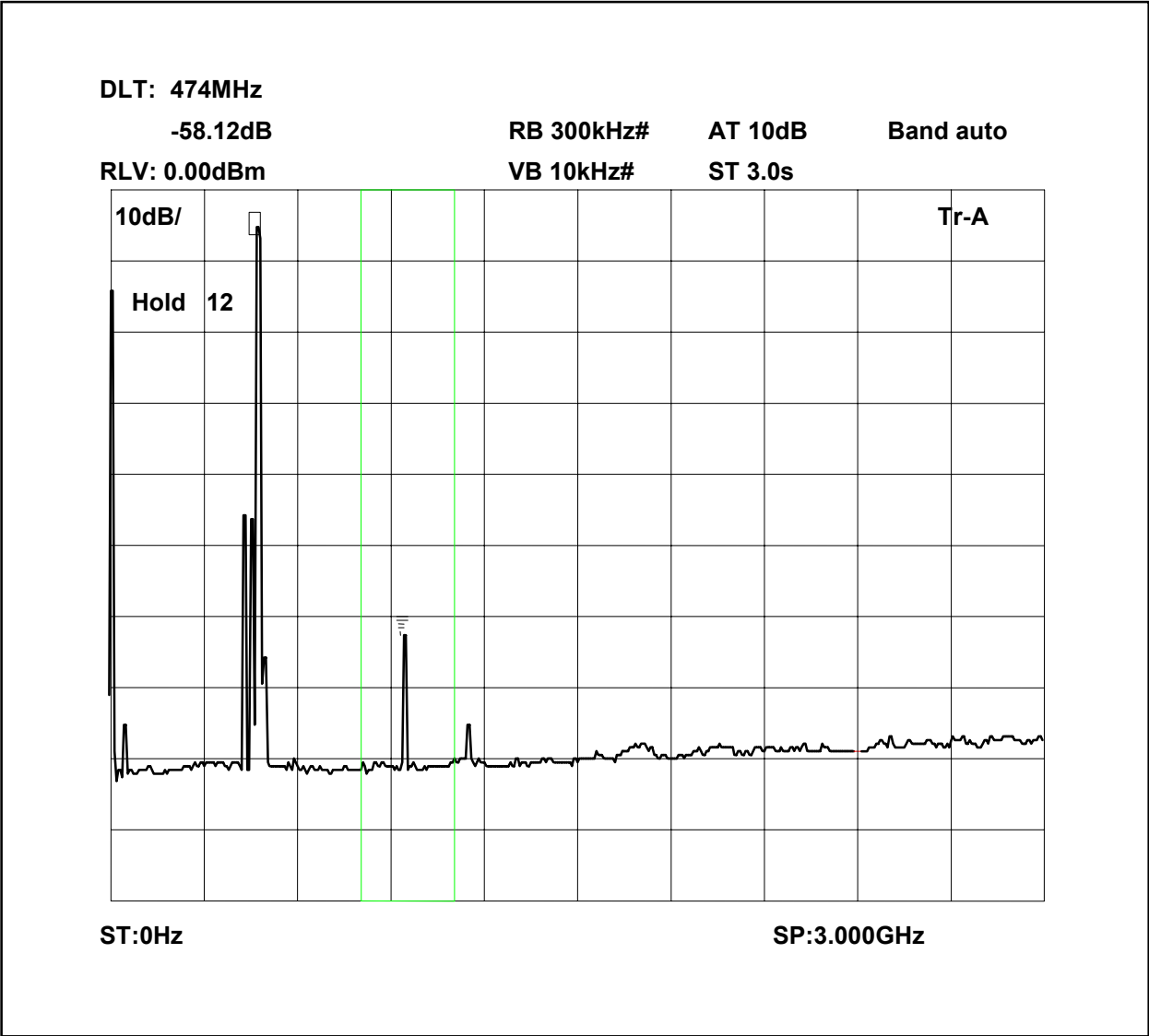
At least 43 + 10 log PdB

$$(10\log P_{\text{watts}}) - (43 + 10\log (P_{\text{watts}} * 1000)) = \text{LIMIT} = -13 \text{ dBm}$$

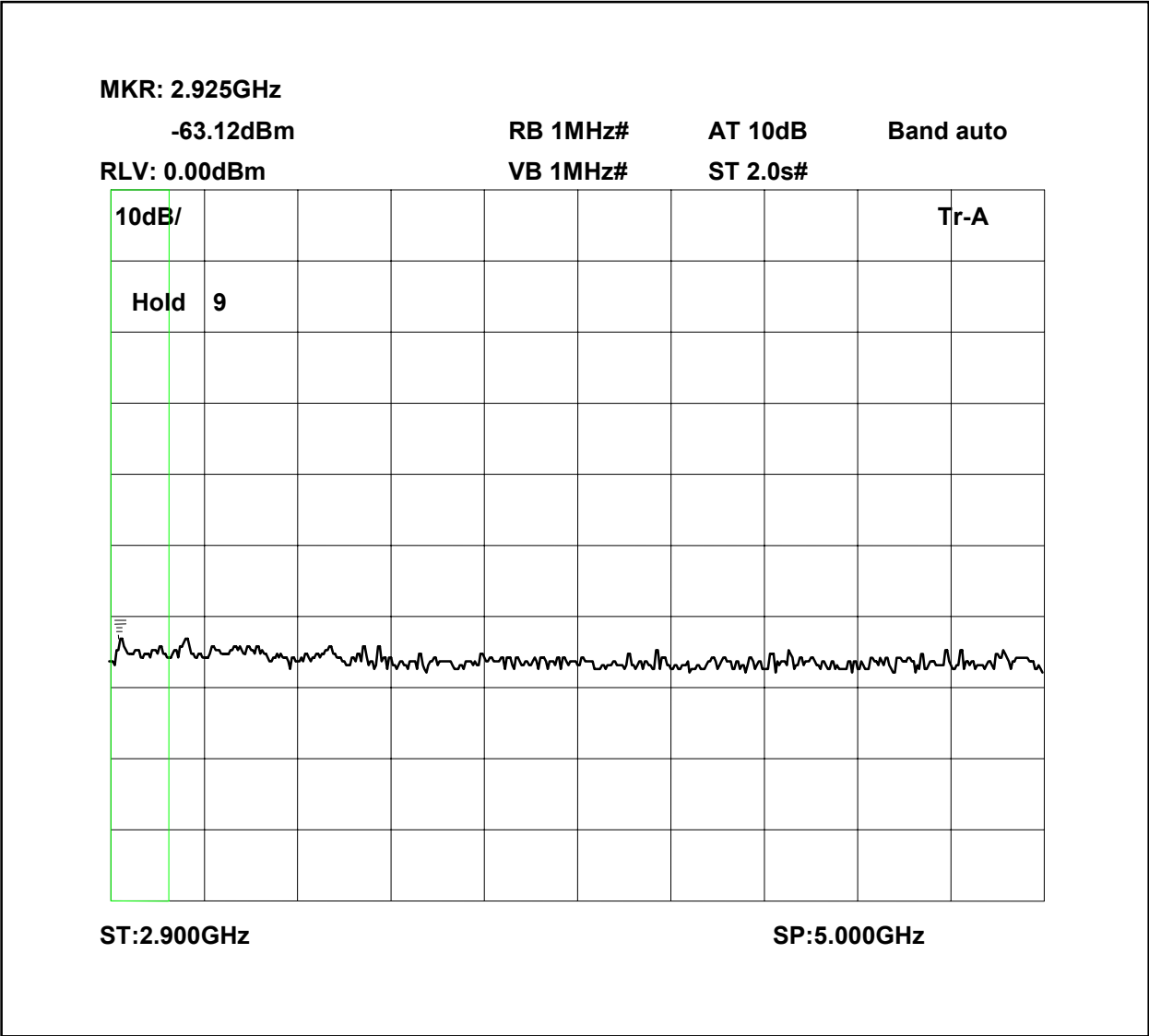
The test equipment used for the Transmitter Conducted Emissions:

TYPE OF EQUIPMENT	MAKER/ SUPPLIER	MODEL No	SERIAL No	TRL No	ACTUAL EQUIPMENT USED
SPECTRUM ANALYSER	ANRITSU	MS2665C	MT26089	479	X
ATTENUATOR	BIRD	8304-200	N/A	103	
ATTENUATOR	BIRD	8304-300-N	N/A	220	
CABLE	ROSENBERGER	MICRO COAX	N/A	279	X
SIGNAL GENERATOR	MARCON	2042	119388/080	179	X

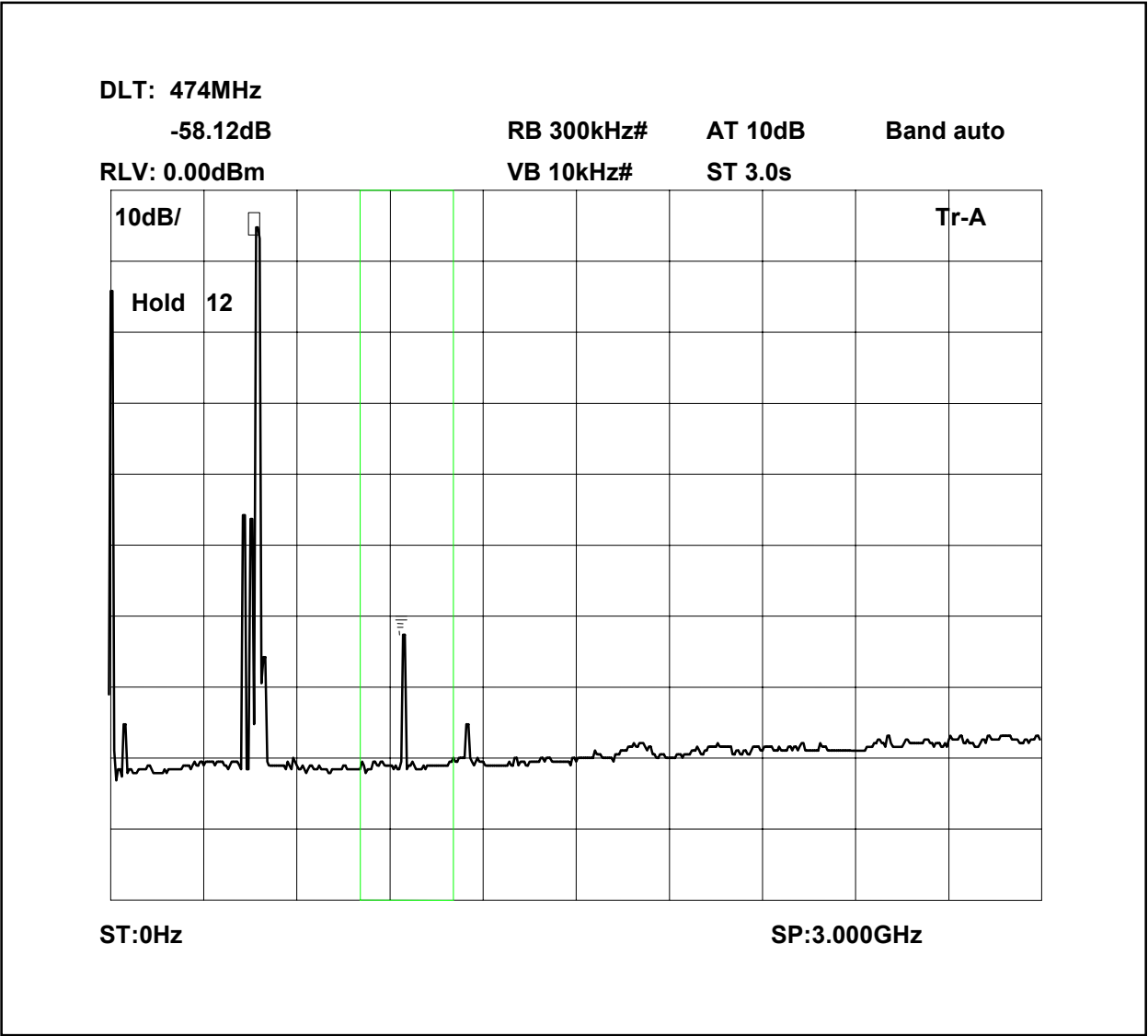
Conducted emissions 470.0875 0-3GHz



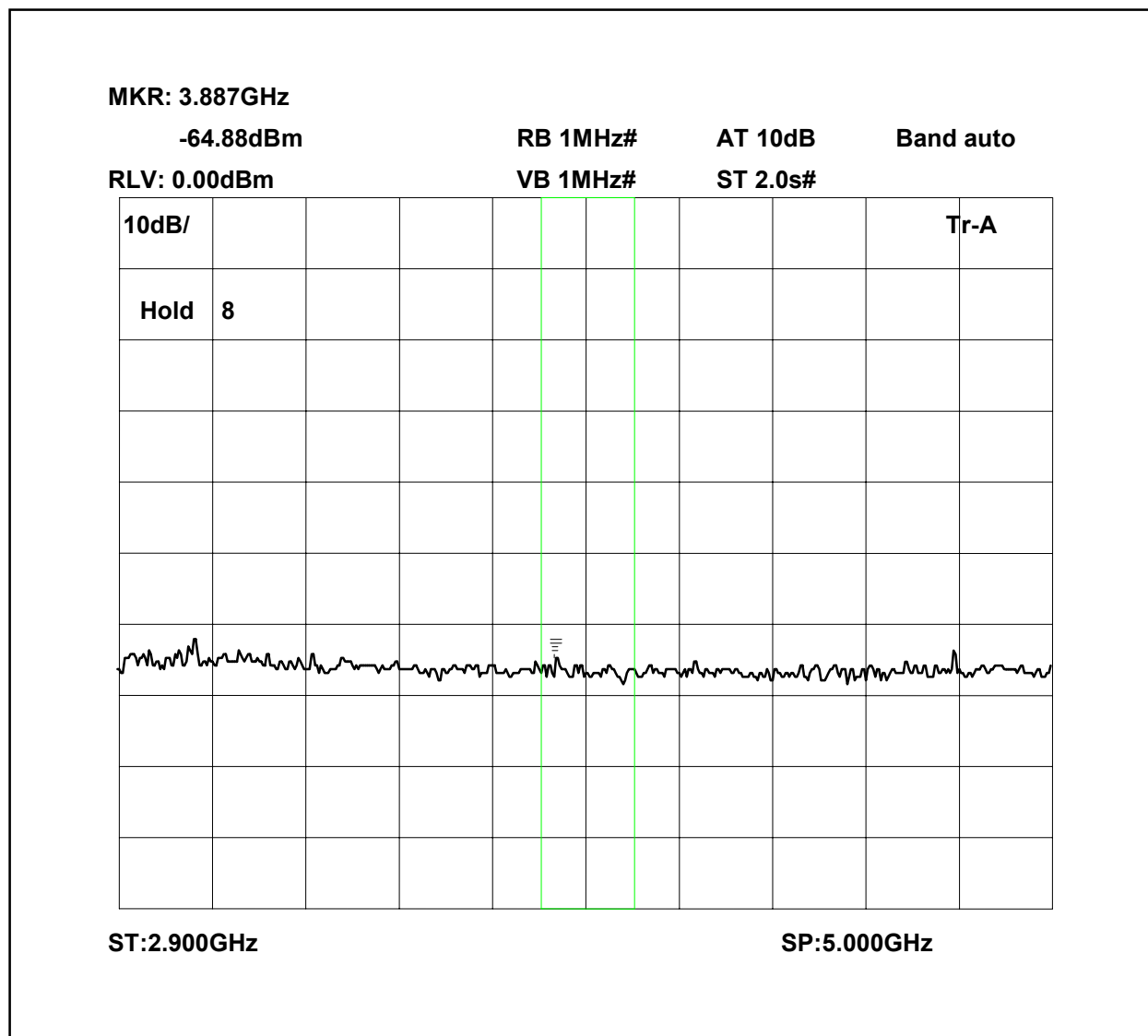
Conducted emissions 470.0875 2.9-5GHz



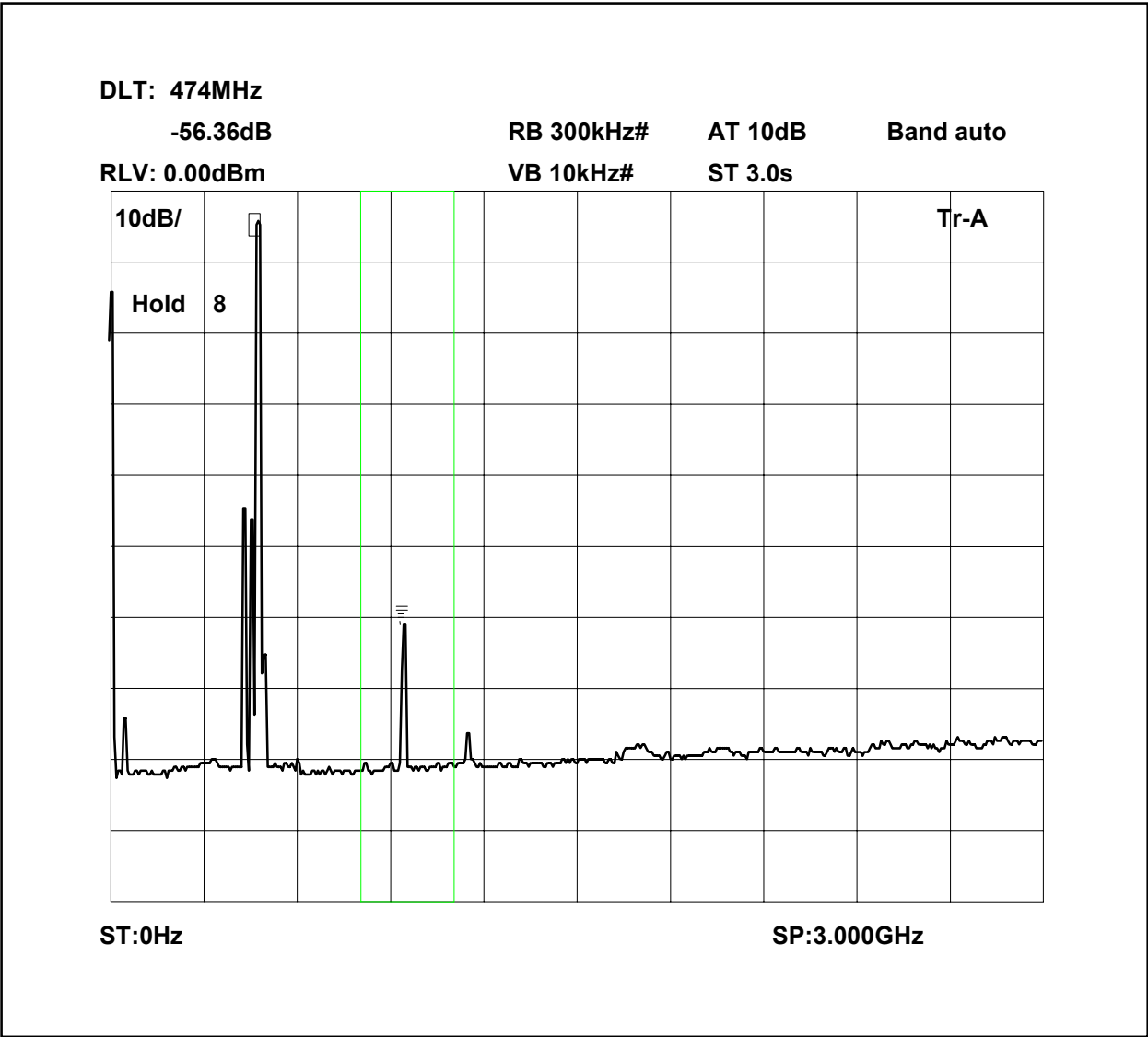
Conducted emissions 470.1375 0-3GHz



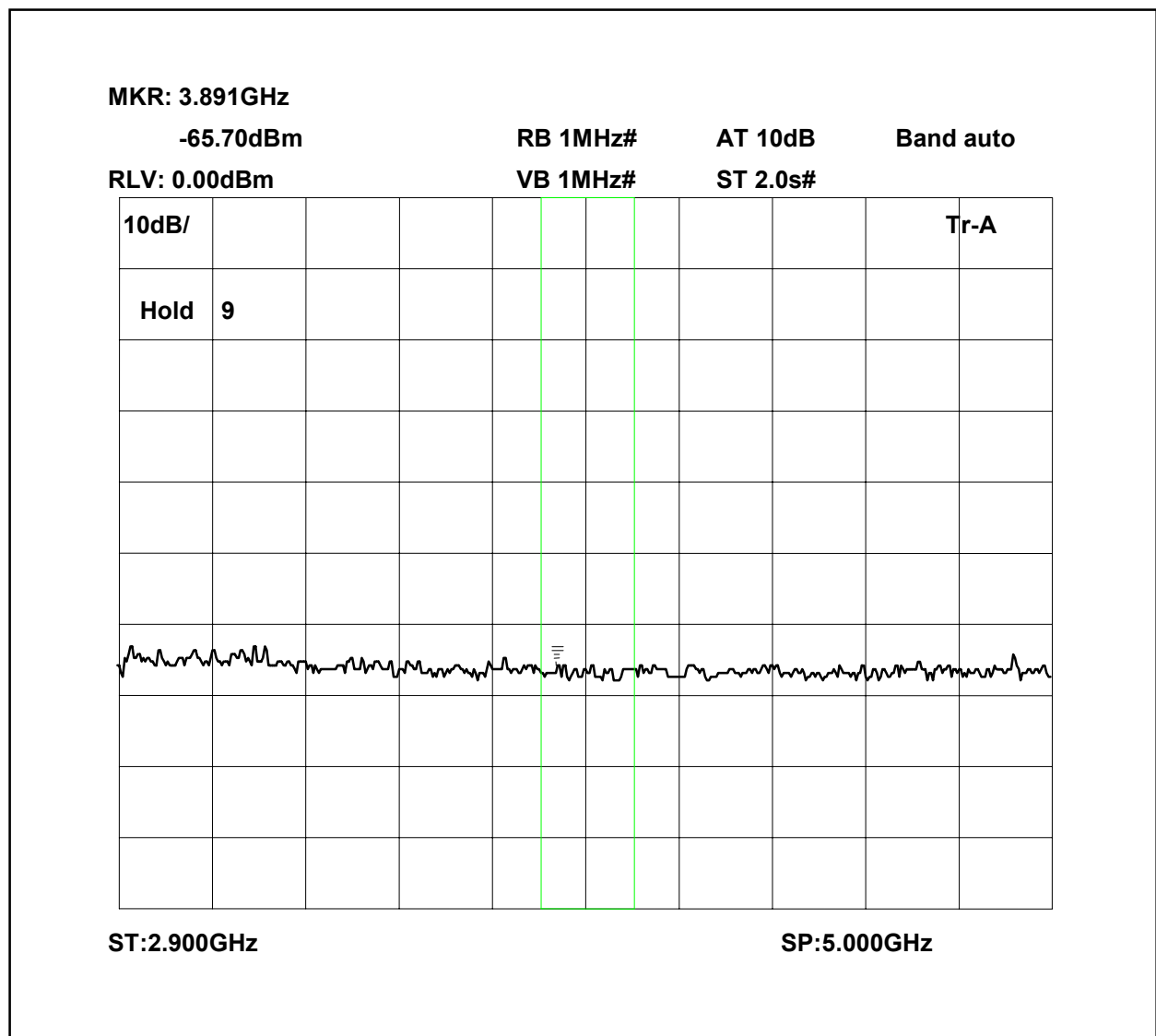
Conducted emissions 470.1375 2.9-5GHz



Conducted emissions 470.3625 0-3GHz



Conducted emissions 470.3625 2.9-5GHz

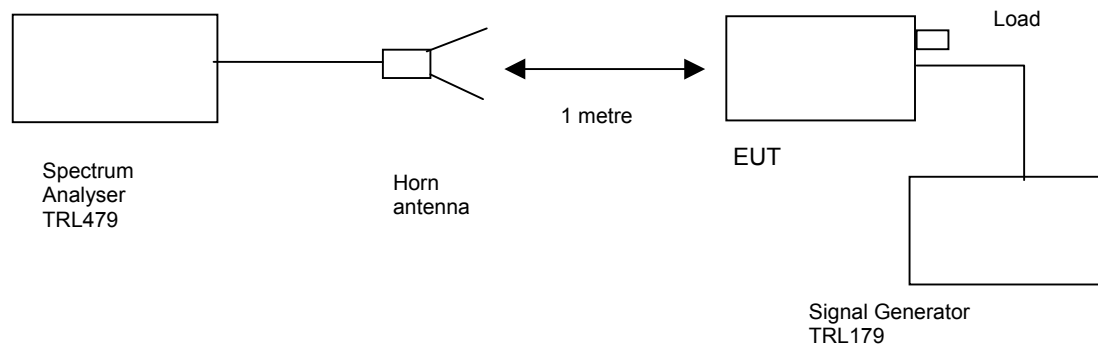


TRANSMITTER TESTS

AMPLIFIER SPURIOUS EMISSIONS – RADIATED – Part 2.1053– DOWNLINK

Ambient temperature = 17°C
Relative humidity = 46%
Conditions = OATS
Supply voltage = 115Vac
Supply Frequency = N/A

Test Signal = F3E



The test was set up as per the diagram. The level at the input was adjusted to compensate for the loss of the interconnecting cable. The unit was tested operating maximum power on three test frequencies with a 50 ohm load on the output. The unit was also tested with the signal generator replaced by another 50ohm load.

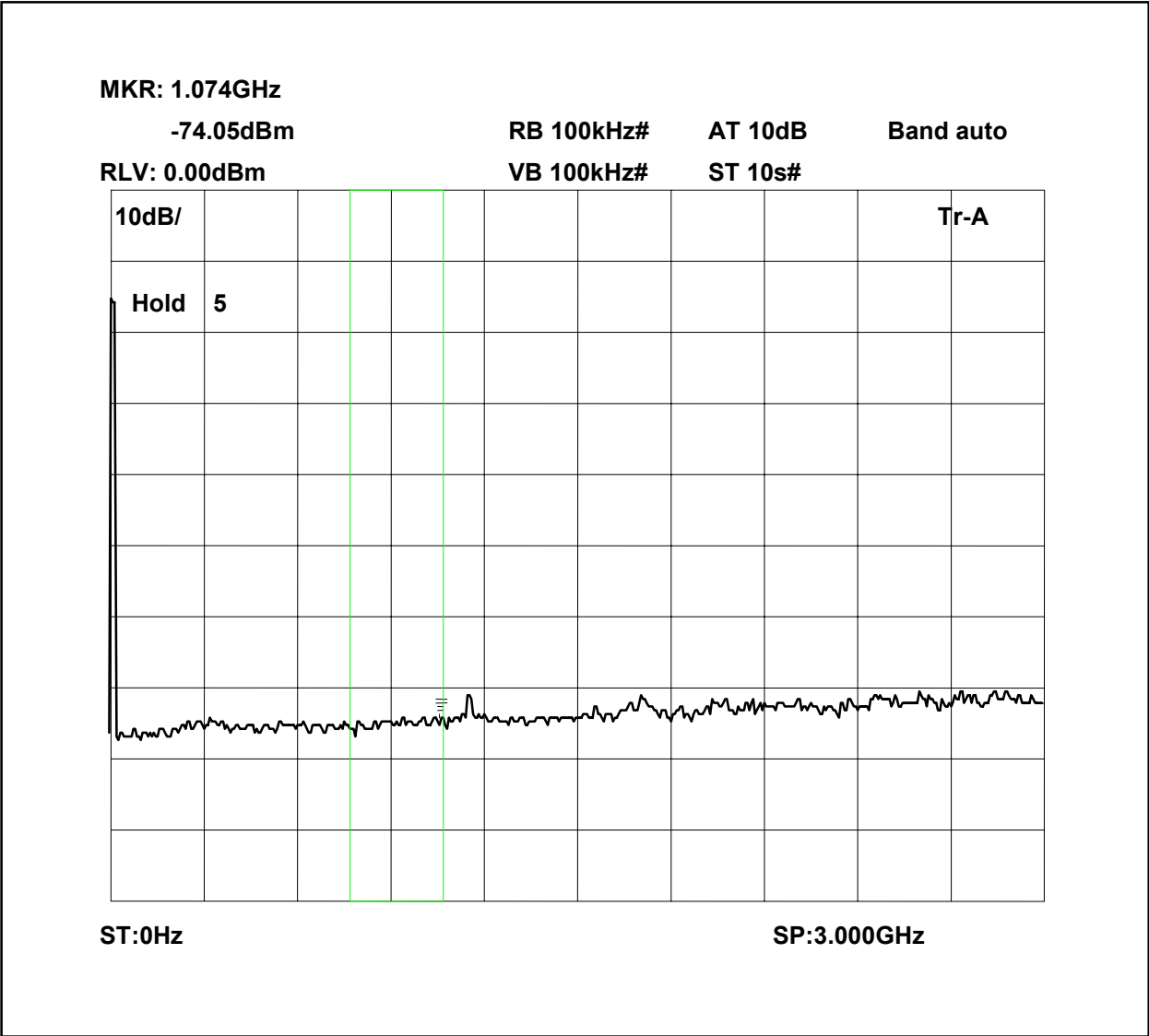
The Spurious limit was calculated as follows:

On any frequency removed from the assigned frequency by more that 250% of the authorised bandwidth

At least $43 + 10 \log P_{dB}$

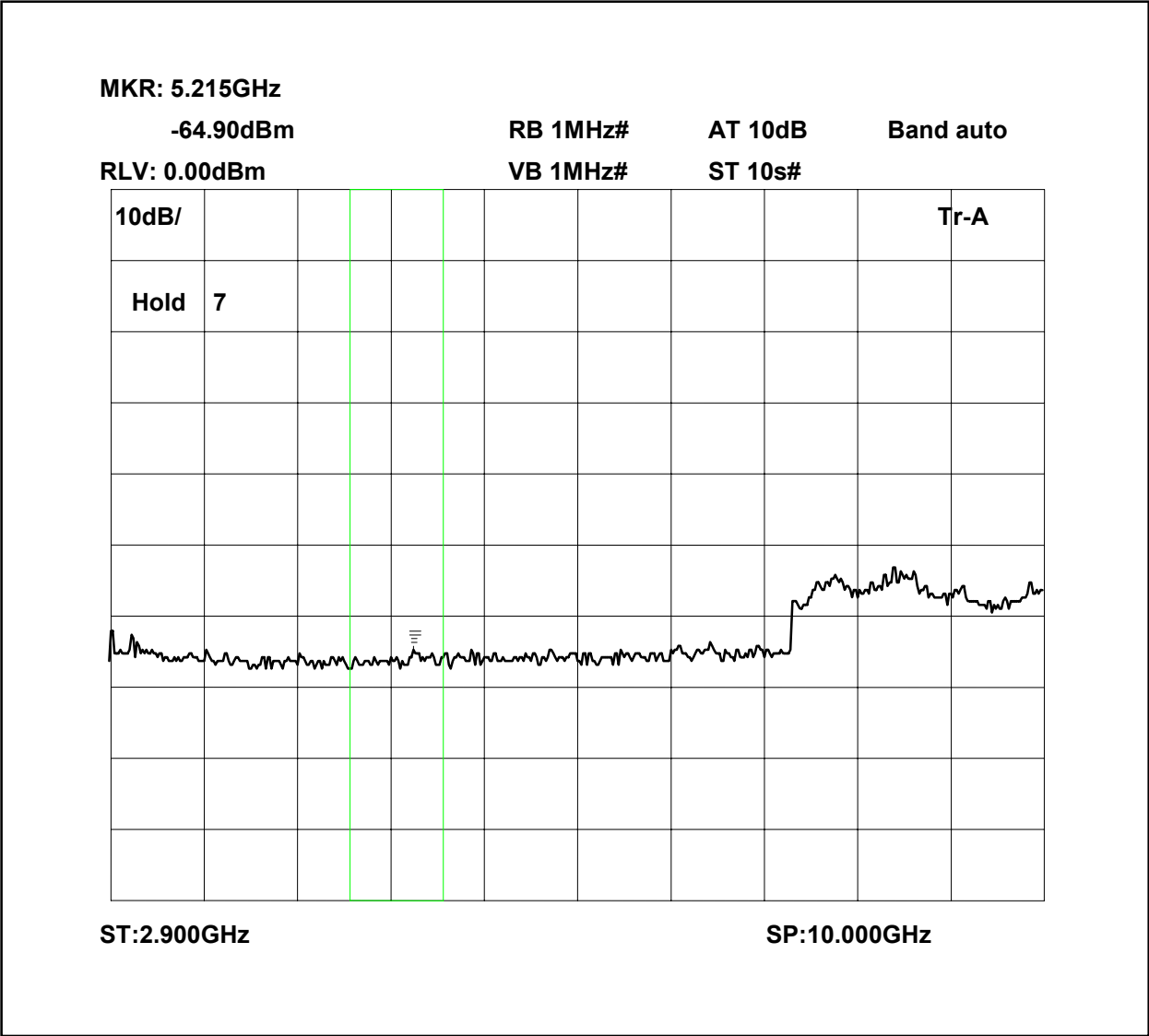
$$(10 \log P_{\text{watts}}) - (43 + 10 \log (P_{\text{watts}} * 1000)) = \text{LIMIT} = -13 \text{ dBm}$$

Radiated emissions 470.0875 0-3GHz



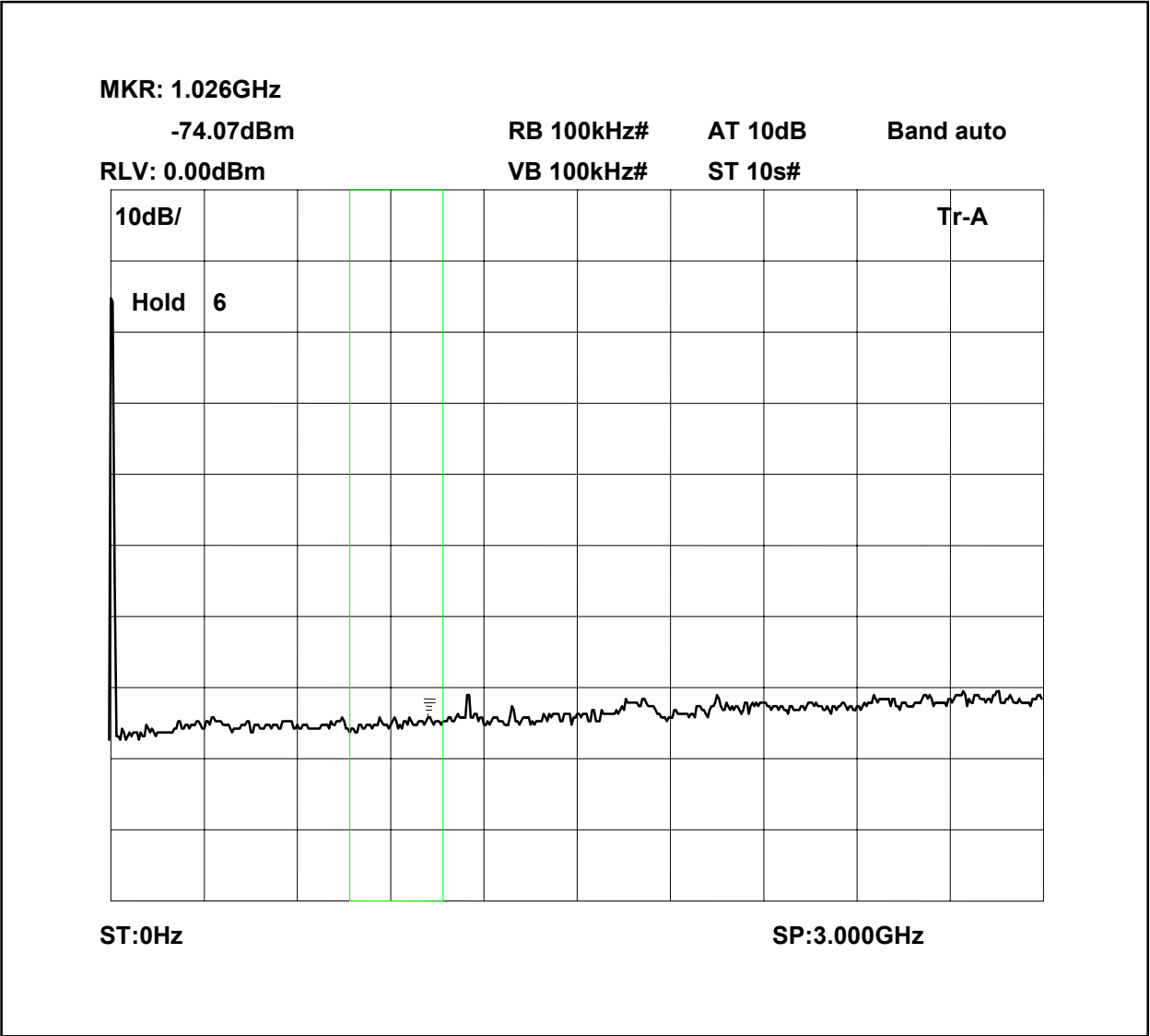
The above test results show that there were no emissions within 20dBs of the –13dBm limit.

Radiated emissions 470.0875 2.9-10GHz



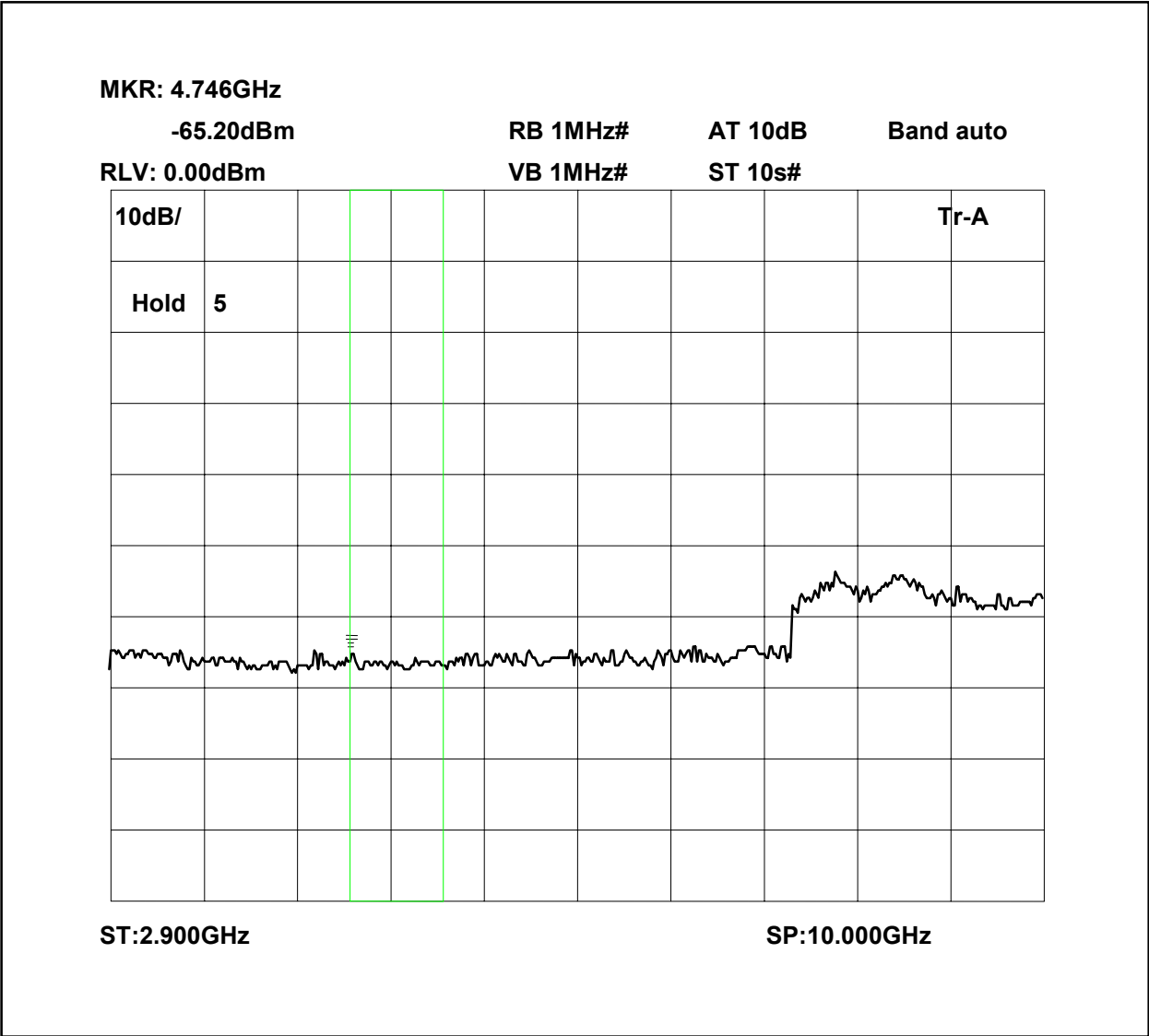
The above test results show that there were no emissions within 20dBs of the –13dBm limit.

Radiated emissions 470.1375 0-3GHz



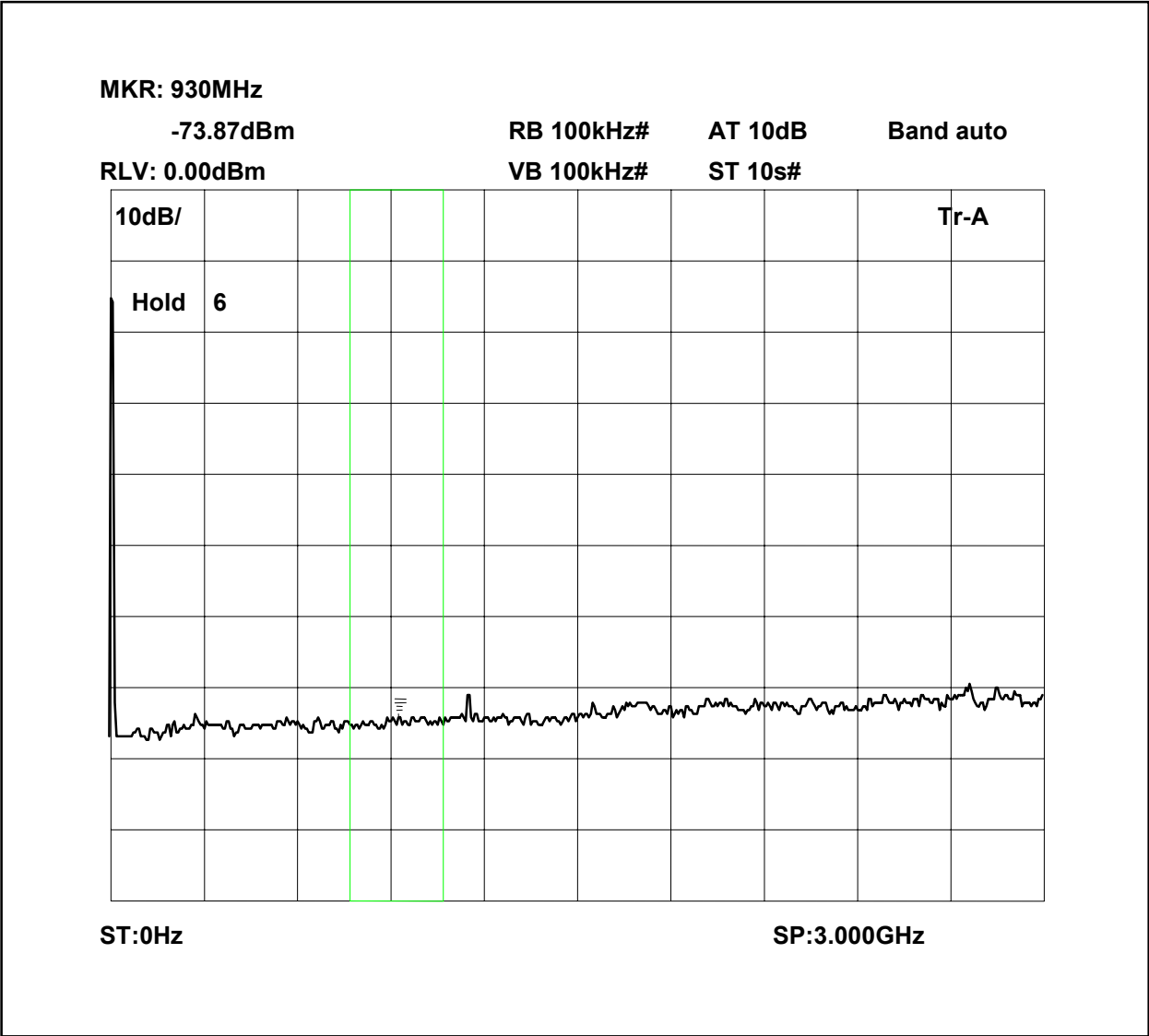
The above test results show that there were no emissions within 20dBs of the –13dBm limit.

Radiated emissions 470.1375 2.9-10GHz



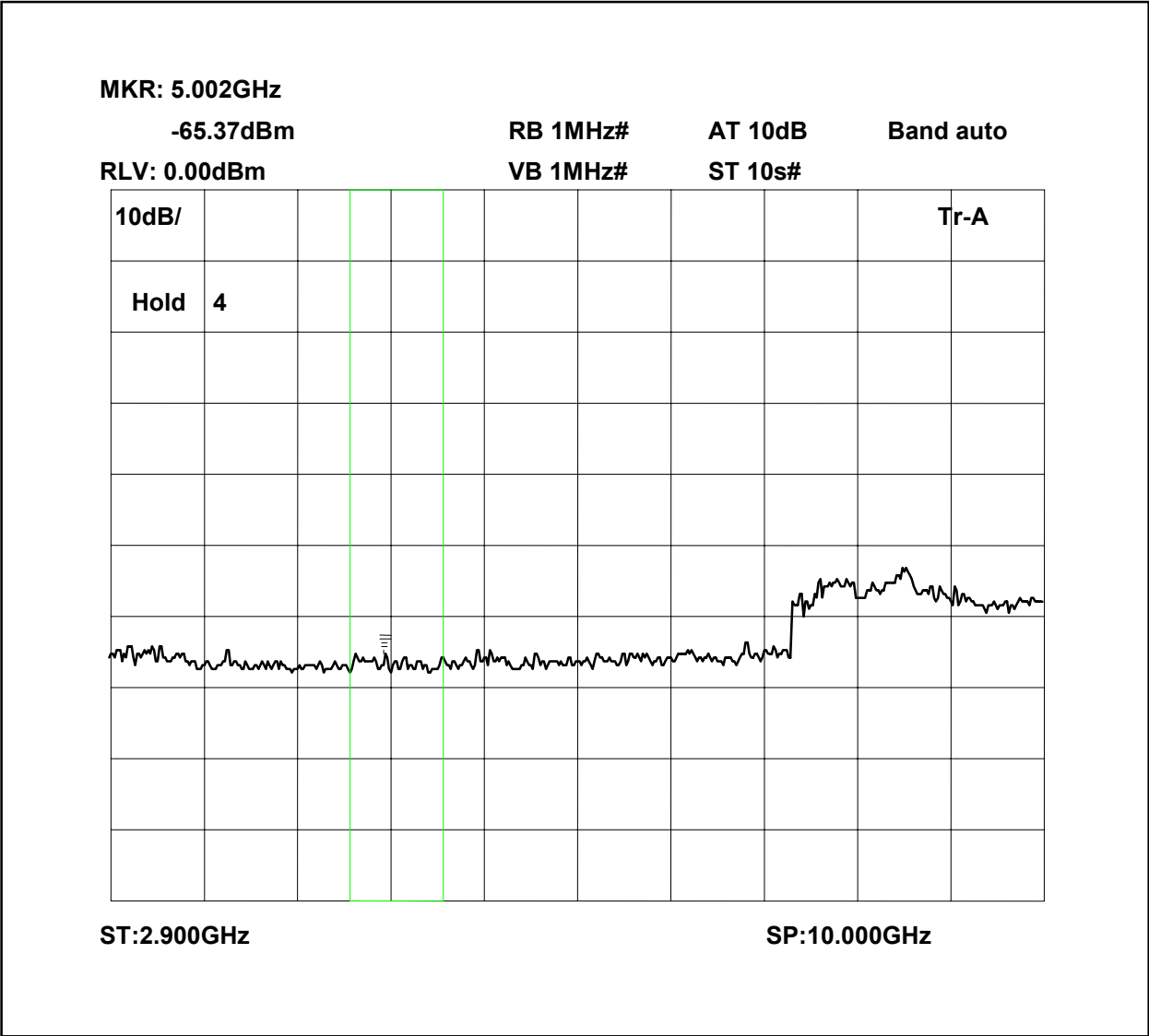
The above test results show that there were no emissions within 20dBs of the –13dBm limit.

Radiated emissions 470.3625 0-3GHz



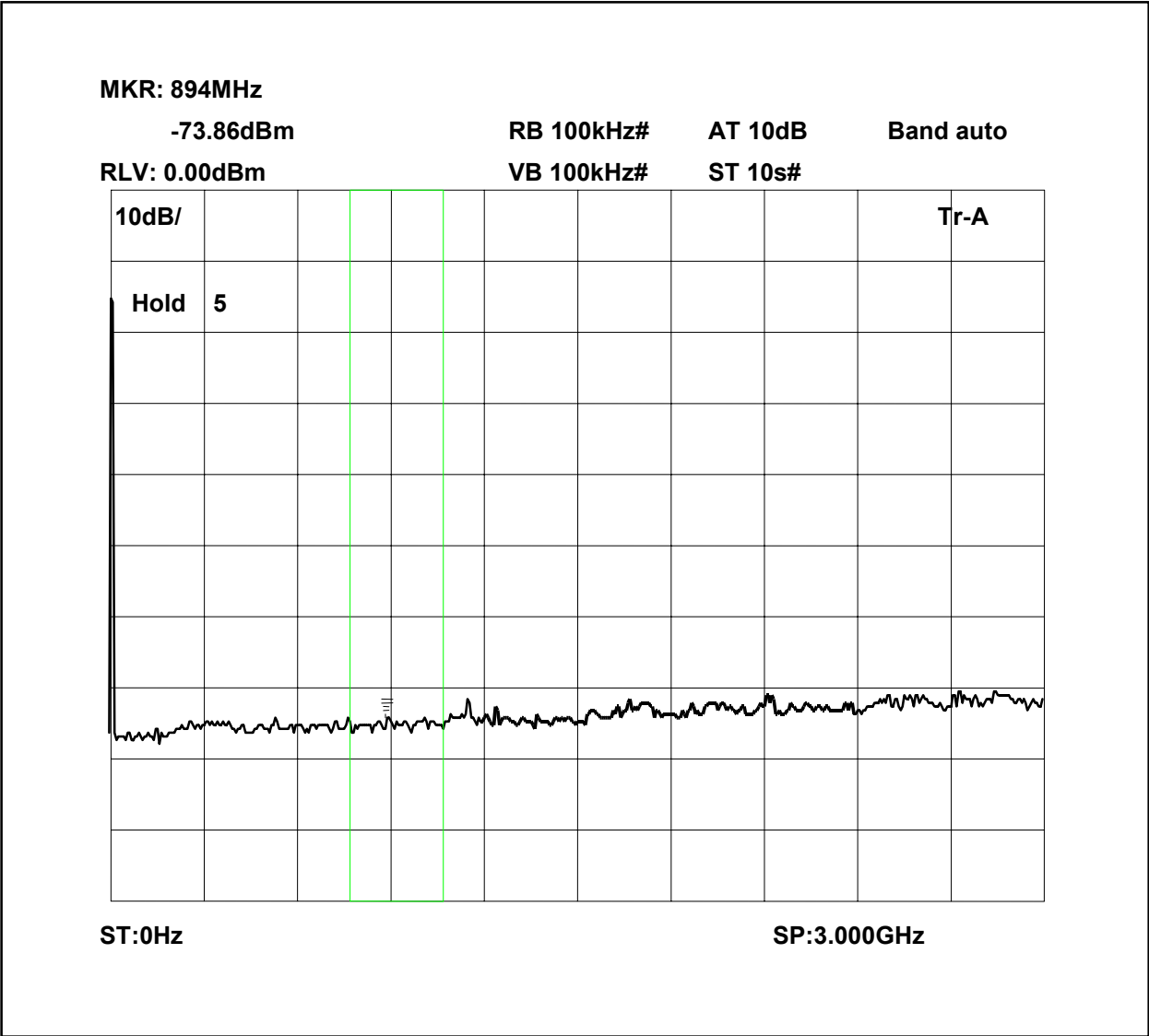
The above test results show that there were no emissions within 20dBs of the –13dBm limit.

Radiated emissions 470.3625 2.9-10GHz



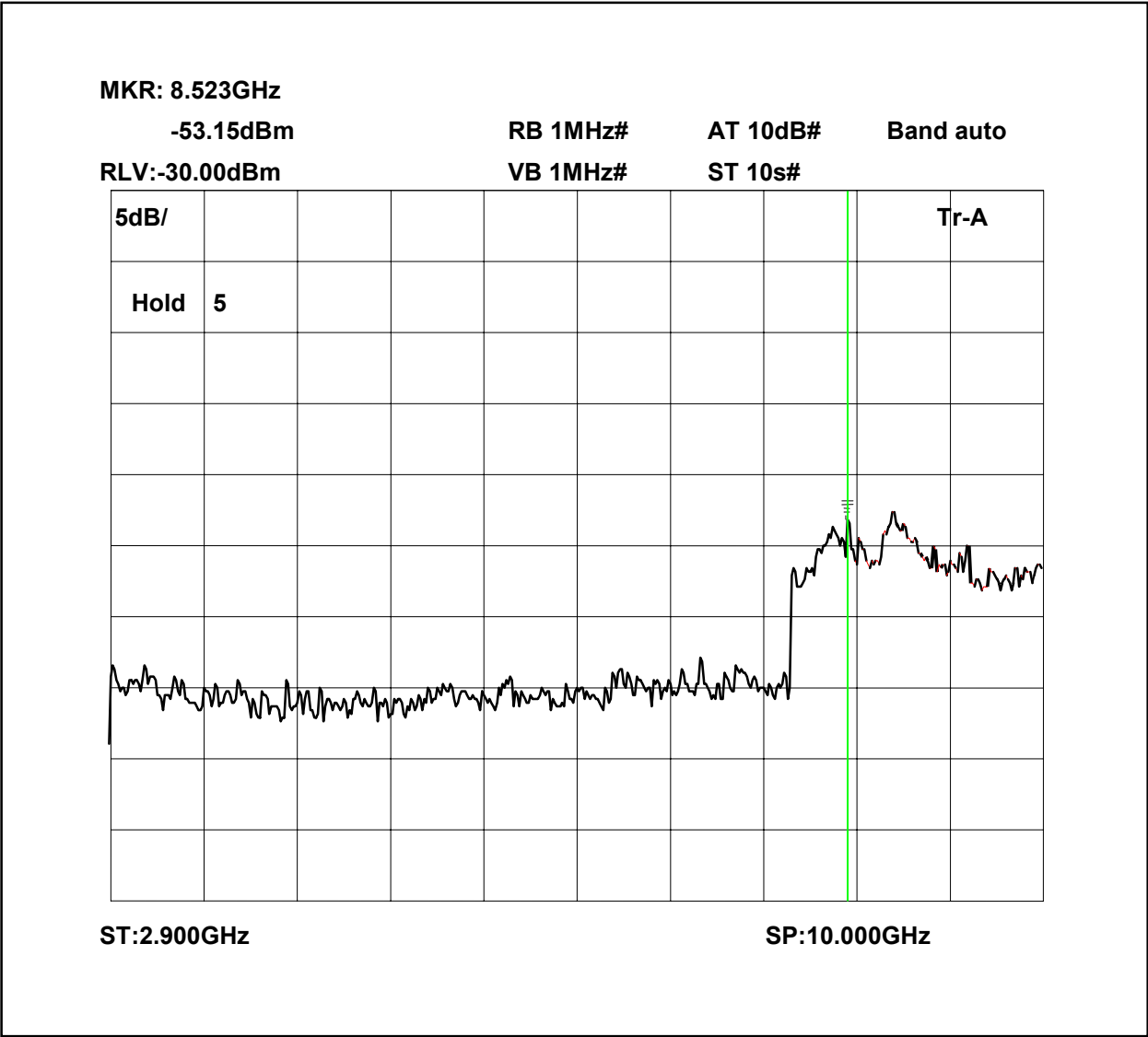
The above test results show that there were no emissions within 20dBs of the –13dBm limit.

Radiated emissions no input signal 0-3GHz



The above test results show that there were no emissions within 20dBs of the –13dBm limit.

Radiated emissions no input signal 2.9-10GHz



The above test results show that there were no emissions within 20dBs of the –13dBm limit.

The test equipment used for the Transmitter Spurious Emissions:

TYPE OF EQUIPMENT	MAKER/ SUPPLIER	MODEL No	SERIAL No	TRL No	ACTUAL EQUIPMENT USED
SPECTRUM ANALYSER	ANRITSU	MS2665C	MT26089	479	X
HORN	EMCO	3115	9010-3581	139	X
ATTENUATOR	BIRD	8304-300-N	N/A	220	X
ATTENUATOR	BIRD	8308-100	N/A	112	X
CABLE	ROSENBERGER	MICRO COAX	N/A	279	X
SIGNAL GENERATOR	MARCON	2042	119388/080	179	X

ANNEX A
PHOTOGRAPHS





ANNEX B

APPLICANT'S SUBMISSION OF DOCUMENTATION LIST

APPLICANT'S SUBMISSION OF DOCUMENTATION LIST

a.	TCB	-	APPLICATION	<input checked="" type="checkbox"/>
		-	FEE	<input checked="" type="checkbox"/>
b.	AGENT'S LETTER OF AUTHORISATION	-		<input checked="" type="checkbox"/>
c.	MODEL(s) vs IDENTITY	-		<input type="checkbox"/>
d.	ALTERNATIVE TRADE NAME DECLARATION(s)	-		<input type="checkbox"/>
e.	LABELLING	-	PHOTOGRAPHS	<input type="checkbox"/>
		-	DECLARATION	<input type="checkbox"/>
		-	DRAWINGS	<input type="checkbox"/>
f.	TECHNICAL DESCRIPTION	-		<input checked="" type="checkbox"/>
g.	BLOCK DIAGRAMS	-	Tx	<input checked="" type="checkbox"/>
		-	Rx	<input type="checkbox"/>
		-	PSU	<input type="checkbox"/>
		-	AUX	<input type="checkbox"/>
h.	CIRCUIT DIAGRAMS	-	Tx	<input type="checkbox"/>
		-	Rx	<input type="checkbox"/>
		-	PSU	<input type="checkbox"/>
		-	AUX	<input type="checkbox"/>
i.	COMPONENT LOCATION	-	Tx	<input type="checkbox"/>
		-	Rx	<input type="checkbox"/>
		-	PSU	<input type="checkbox"/>
		-	AUX	<input type="checkbox"/>
j.	PCB TRACK LAYOUT	-	Tx	<input type="checkbox"/>
		-	Rx	<input type="checkbox"/>
		-	PSU	<input type="checkbox"/>
		-	AUX	<input type="checkbox"/>
k.	BILL OF MATERIALS	-	Tx	<input type="checkbox"/>
		-	Rx	<input type="checkbox"/>
		-	PSU	<input type="checkbox"/>
		-	AUX	<input type="checkbox"/>
l.	USER INSTALLATION / OPERATING INSTRUCTIONS	-		<input checked="" type="checkbox"/>

ANNEX C
SYSTEM DIAGRAM

System Block Diagram Location One

