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**REPORT ON THE CERTIFICATION TESTING OF A
AERIAL FACILITIES LIMITED
50-078021 MV UPGRADE
DOWNLINK ONLY
WITH RESPECT TO
THE FCC RULES CFR 47, PART 90 Subpart I
PRIVATE LAND MOBILE REPEATER.**



TEST REPORT NO: RU1313/7517
COPY NO:
ISSUE NO: 1
FCC ID: NEO50-0780-800

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AERIAL FACILITIES LIMITED
50-078021 MV UPGRADE
DOWNLINK ONLY
WITH RESPECT TO
THE FCC RULES CFR 47, PART 90 Subpart I
PRIVATE LAND MOBILE REPEATER.**

TEST DATE: 5th – 7th March 2007

TESTED BY: D WINSTANLEY

APPROVED BY: J CHARTERS
RADIO SECTION
LEADER

DATE: 2nd April 2007

Distribution:

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

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SYSTEM DIAGRAM	E		
Notes:			
1. Component failure during test	YES		[]
	NO		[X]
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:	NEO50-0780-800
PURPOSE OF TEST:	Certification
TEST SPECIFICATION:	FCC RULES CFR 47, Part 90 Subpart I
TEST RESULT:	Compliant to Specification
EQUIPMENT UNDER TEST:	50-078021 MV Upgrade (Downlink Only)
EQUIPMENT TYPE:	Private Land Mobile Repeater (Downlink Only)
MAXIMUM GAIN:	Downlink = 80.88 dB
MAXIMUM INPUT:	Downlink = -73.00 dBm
MAXIMUM OUTPUT CONDUCTED:	Downlink = 7.50 dBm
ANTENNA TYPE:	Downlink Distributed Antenna System
ANTENNA GAIN:	Downlink = N/A, Leaky Feed Antenna
MAXIMUM OUTPUT RADIATED:	Downlink N/A
NUMBER OF CHANNELS:	Downlink 43
CHANNEL SPACING:	25kHz
FREQUENCY GENERATION:	N/A
MODULATION TYPE:	F3E
POWER SOURCE(s):	+110Vac
TEST DATE(s):	5 th – 7 th March 2007
ORDER No(s):	42437
APPLICANT:	Aerial Facilities Limited
ADDRESS:	Aerial House Asheridge Road Chesham Buckinghamshire HP5 1TU
TESTED BY:	----- D WINSTANLEY
APPROVED BY:	----- J CHARTERS RADIO SECTION LEADER

APPLICANT'S SUMMARY

EQUIPMENT UNDER TEST (EUT): 50-078021 MV Upgrade

EQUIPMENT TYPE: Private Land Mobile Repeater (Downlink Only)

PURPOSE OF TEST: Certification

TEST SPECIFICATION(s): FCC RULES CFR 47, Part 90 Subpart I

TEST RESULT: COMPLIANT Yes
No

APPLICANT'S CATEGORY: MANUFACTURER
IMPORTER
DISTRIBUTOR
TEST HOUSE
AGENT

APPLICANT'S ORDER No(s): 42437

APPLICANT'S CONTACT PERSON(s): Mr Peter Bradfield
E-mail address: Peterb@aerial.co.uk

APPLICANT: Aerial Facilities Limited

ADDRESS: Aerial House
Asheridge Road
Chesham
Buckinghamshire
HP5 1TU
United Kingdom

TEL: +44 (0)1494 777000

FAX: +44 (0)1494 778456

MANUFACTURER: Aerial Facilities Limited

EUT(s) COUNTRY OF ORIGIN: United Kingdom

TEST LABORATORY: TRL Compliance Ltd

UKAS ACCREDITATION No: 0728

TEST DATE(s): 5th – 7th March 2007

TEST REPORT No: RU1313/7517

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 class: Downlink Class A Class B
3. Product Use: Private Land Mobile Repeater (Downlink Only)
4. Emission Designator: F3E
5. Temperatures: Ambient (Tnom) 18°C
6. Supply Voltages: Vnom +110Vac
- Note: Vnom voltages are as stated above unless otherwise shown on the test report page
7. Equipment Category: Single channel
Two channel
Multi-channel
8. Channel spacing: Narrowband 25kHz
Wideband
9. Test Location TRL Compliance Limited
Up Holland
Long Green
10. Modifications made during test program No modifications were performed.

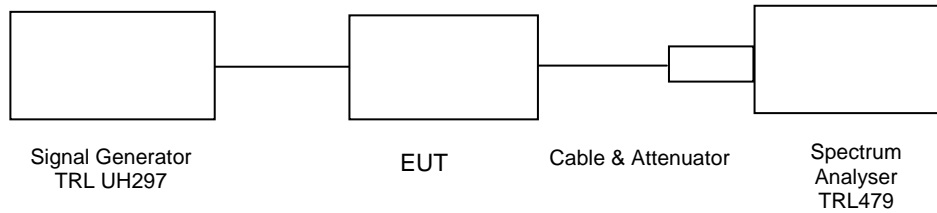
System description:

The 50-708021 MV Upgrade operates in the downlink only over the frequency range 856.025 MHz – 868.575 MHz. There EUT utilizes 43 channels. The RF is taken off air channelised and passed through the EUT. The EUT is connected to FCCIDs NEO-50-0780-VHF and NEO-50-0780-BDA. The upgrade is to increase the overall power of the amplifier from 40 watts to 80 watts to allow more simultaneously active channels. The output power of individual channels will not be affected.

AMPLIFIER GAIN – CONDUCTED – PART 2.1046 – DOWNLINK

Ambient temperature = 18°C
 Relative humidity = 69%
 Supply voltage = +110Vac
 Channel number = See test results

Radio Laboratory



Frequency MHz	Signal Generator input level dBm	Input Cable Loss dB	Output Cable & Attenuator loss dB	Level at Spectrum Analyser dBm	Gain dB	Conducted Output Power dBm	Gain after 10dB input level increase dB
856.025	-72.0	0.26	30.6	-22.62	80.24	7.98	70.37
862.050	-72.0	0.30	30.6	-22.62	80.28	7.98	70.41
868.575	-73.0	0.38	30.7	-23.20	80.88	7.50	71.04

Notes: 1. The signal generator input was increased by 10dBs and the level of the output signal remeasured.

Frequency MHz	EUT Gain dB	Conducted Output Power dBm	Antenna Gain dBi	Radaited Output Power dBm
856.025	80.24	7.98		Note 1
862.050	80.28	7.98		Note 1
868.575	80.88	7.50		Note 1

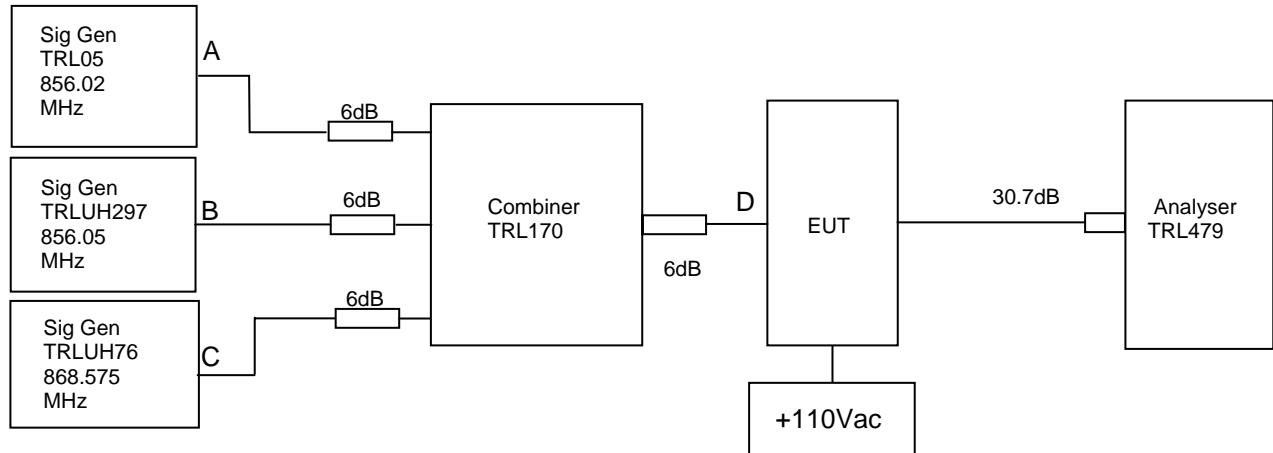
Notes: 1. The EUT does not connect to a transmitting antenna.

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	X
ATTENUATOR	BIRD	8308-100	N/A	112	X
CABLE	TRL	N/A	N/A	UH274	X
CABLE	TRL	N/A	N/A	UH273	X
SIGNAL GENERATOR	RHODE & SCHWARZ	SML 03	102268	UH297	X

AMPLIFIER INTERMODULATION SPURIOUS EMISSIONS – CONDUCTED – PART 2.1053– DOWNLINK

Ambient temperature = 18°C
 Relative humidity = 69%
 Supply voltage = +110Vac

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 10dB above the maximum input of -72dBm. The cable and attenuator loss between the EUT and the spectrum analyser was 30.7dB.

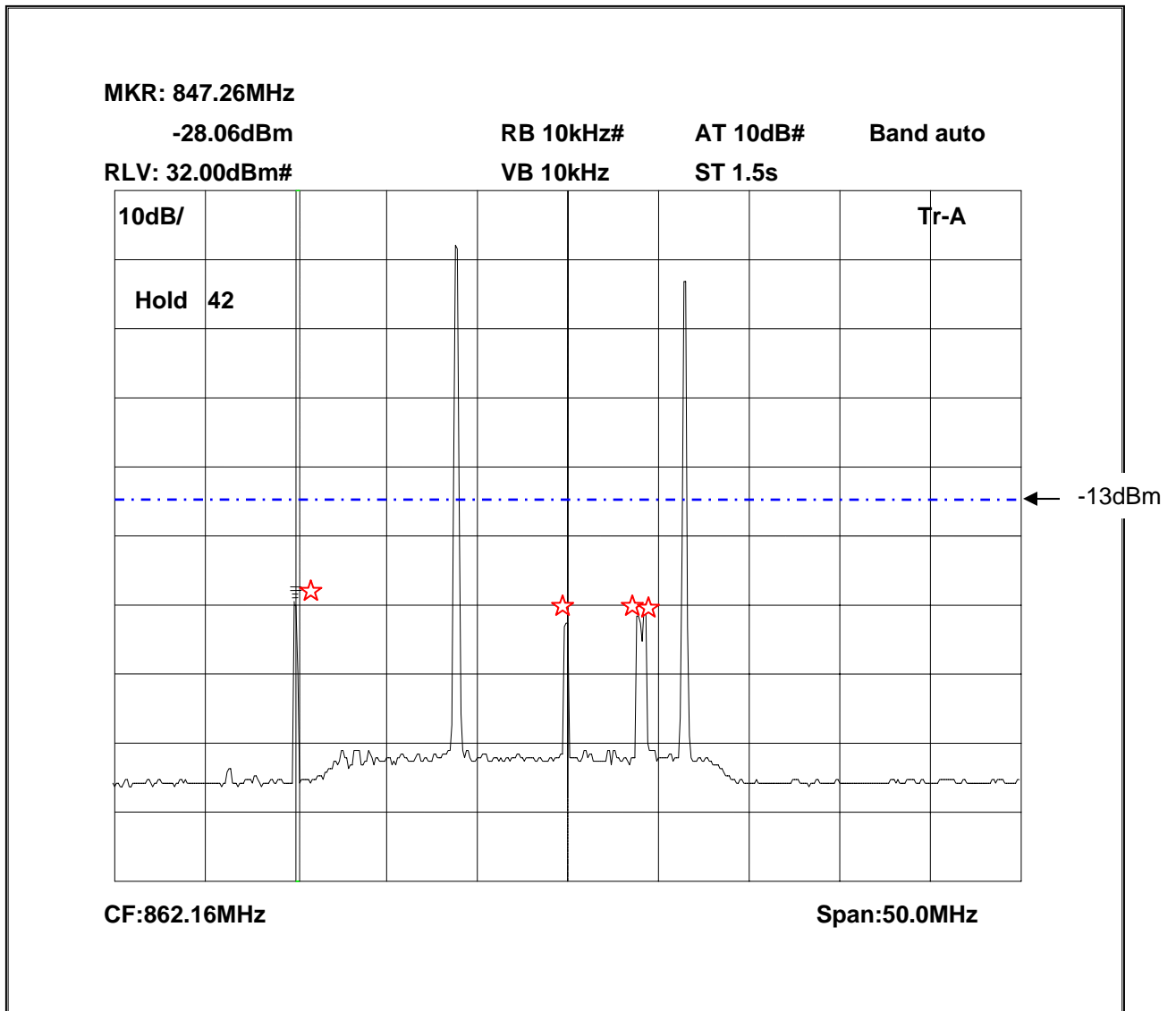
RF Input Frequency (MHz)			Highest Intermodulation Product Level (dBm)	Limit (dBm)
856.02	856.05	868.575	-28.06 dBm @ 847.26 MHz	-13

Sweep data is shown on the next page:

Test equipment used for intermodulation test

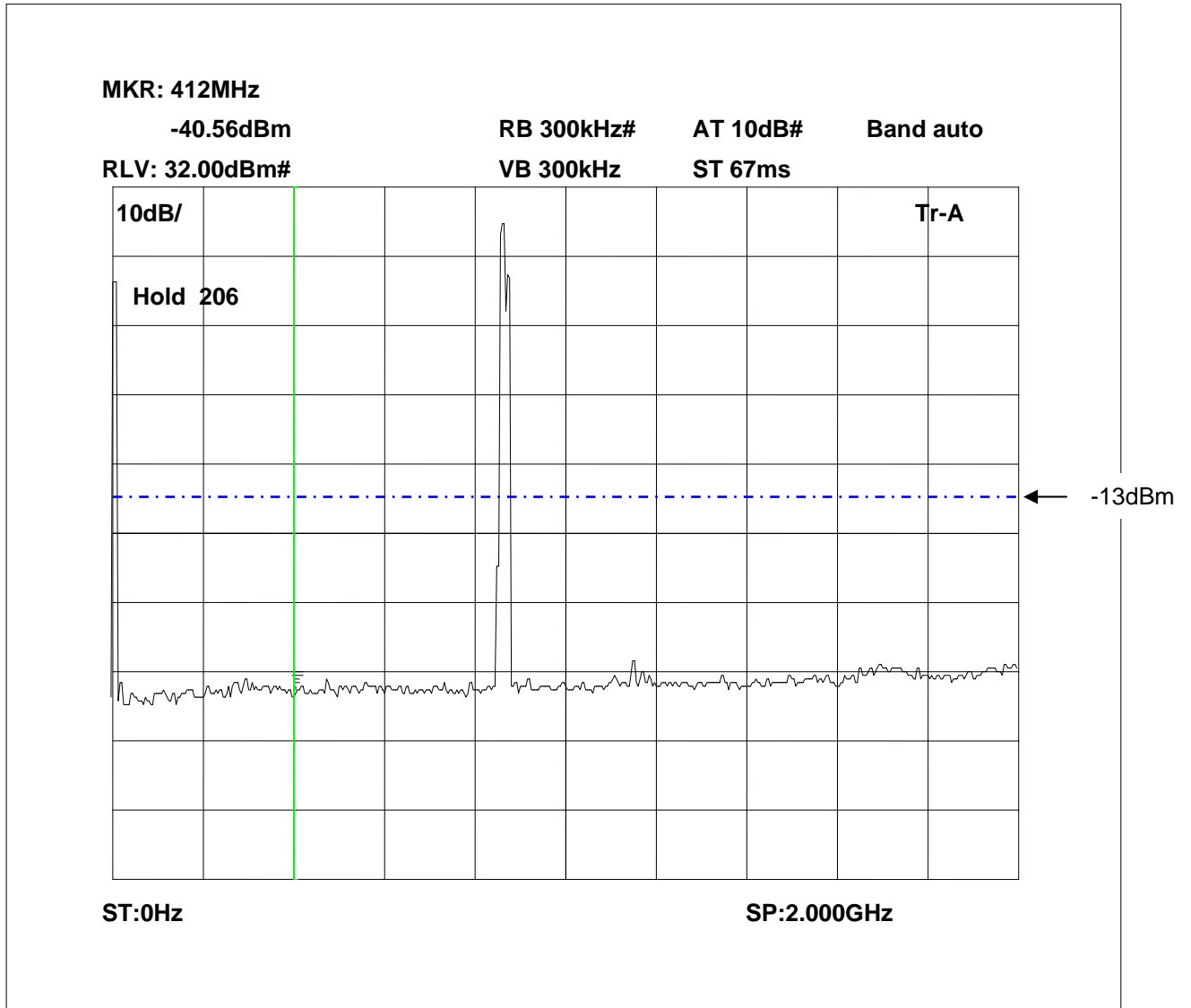
TYPE OF EQUIPMENT	MAKER/SUPPLIER	MODEL No	SERIAL No	TRL No	ACTUAL EQUIPMENT USED
SPECTRUM ANALYSER	ANRITSU	MS2665C	MT26089	479	X
SPECTRUM ANALYSER	R&S	FSU46	200034	UH281	
SIGNAL GENERATOR	MARCONI	2042	119388/080	176	
SIGNAL GENERATOR	R&S	SML 03	102268	UH297	X
SIGNAL GENERATOR	MARCONI	2022D	119215/058	UH75	X
SIGNAL GENERATOR	HP	83630B	3722A00588	UH340	
CMTA	ROHDE & SCHWARZ	CMTA52	894715/033	05	X
COMBINER	ELCOM	RC-4-50	N/A	170	X

Intermodulation Inband



The above plot shows that all products (designated by ☆) are below the spurious limit.

Intermodulation Wideband

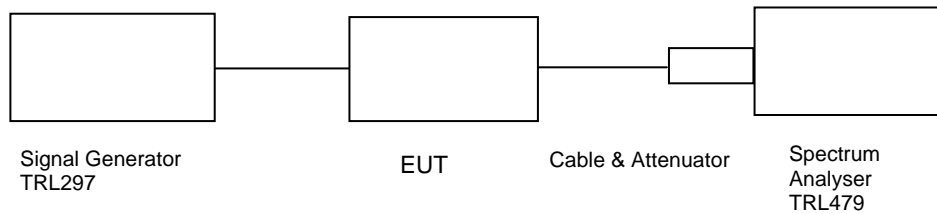


The above plot shows that there are no products outside the bands.

TRANSMITTER TESTS

AMPLIFIER MODULATED CHANNEL TEST – CONDUCTED – Part 2.1049– DOWNLINK

Ambient temperature = 19°C Radio Laboratory
 Relative humidity = 69%
 Supply voltage = +110Vac
 Channel number = See test results



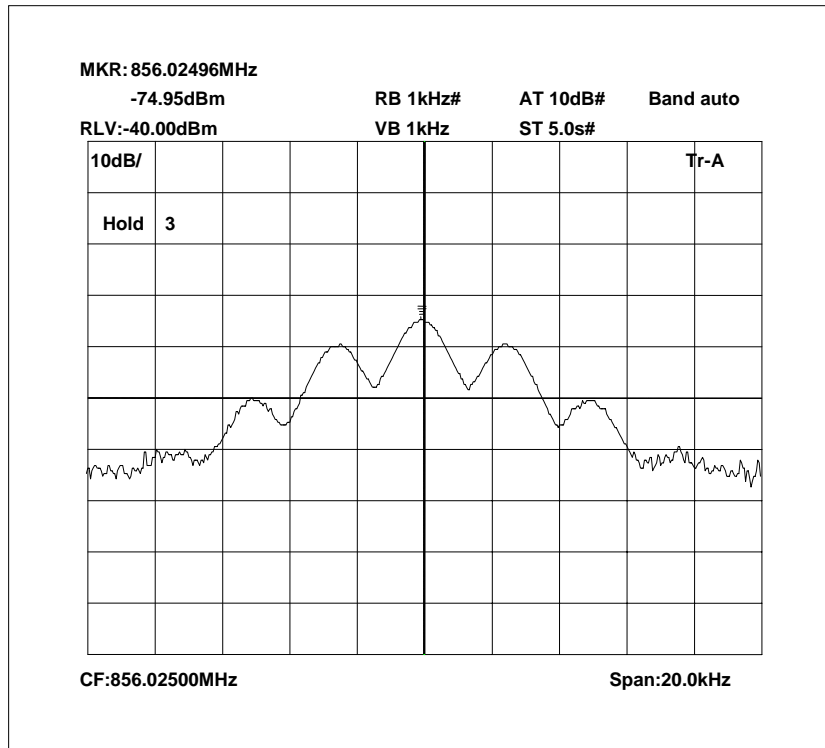
This test was performed to show that the amplifier does not alter the input signal in any way. The input signal was set to the maximum input level (-72dBm) and modulated with a 2500Hz tone. The plots show the signal measured at the signal generator and the signal measured at the output of the EUT.

Note: The cables and attenuators had the following losses.

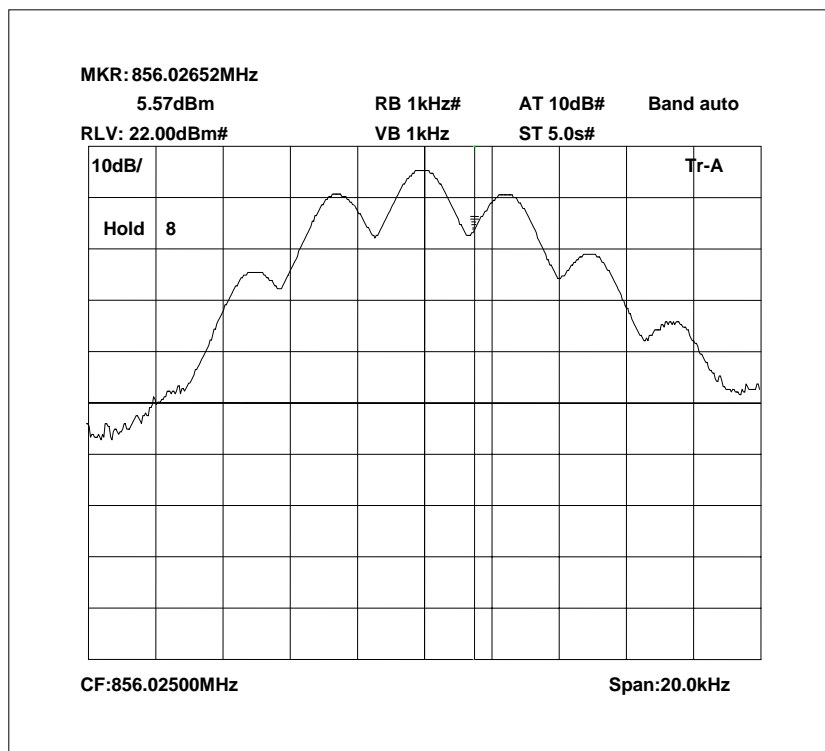
1. Cable and attenuator between EUT and spectrum analyser 30.7dB
2. Cable between signal generator and EUT 0.38dB

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	X
ATTENUATOR	BIRD	8308-100	N/A	112	X
CABLE	TRL	N/A	N/A	UH274	X
CABLE	TRL	N/A	N/A	UH273	X
SIGNAL GENERATOR	RHODE & SCHWARZ	SML 03	102268	UH297	X

856.025 MHz Signal Generator, deviation set to 2.5kHz

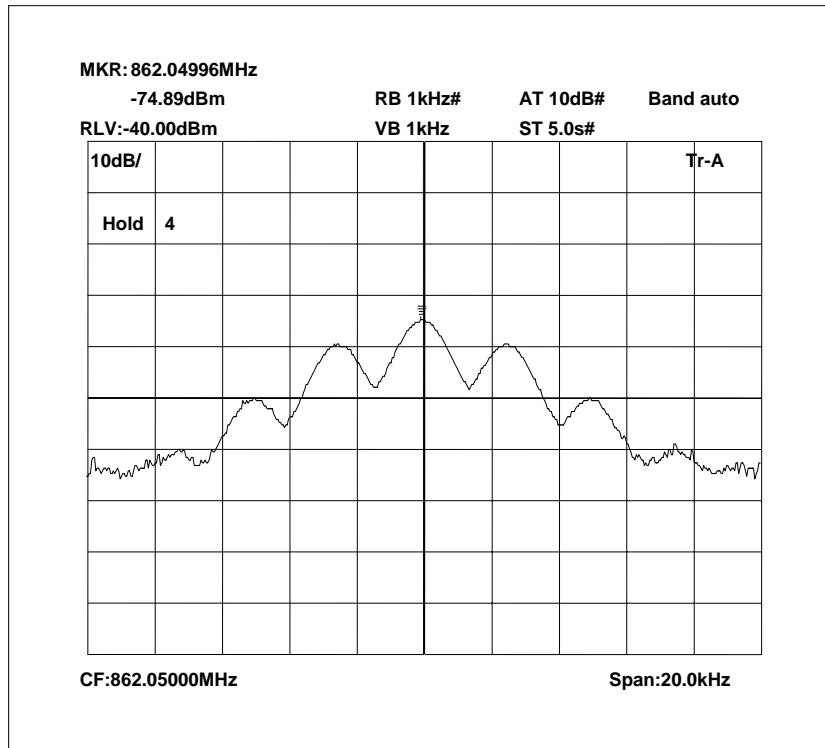


856.025 MHz Signal Generator and EUT, deviation set to 2.5kHz

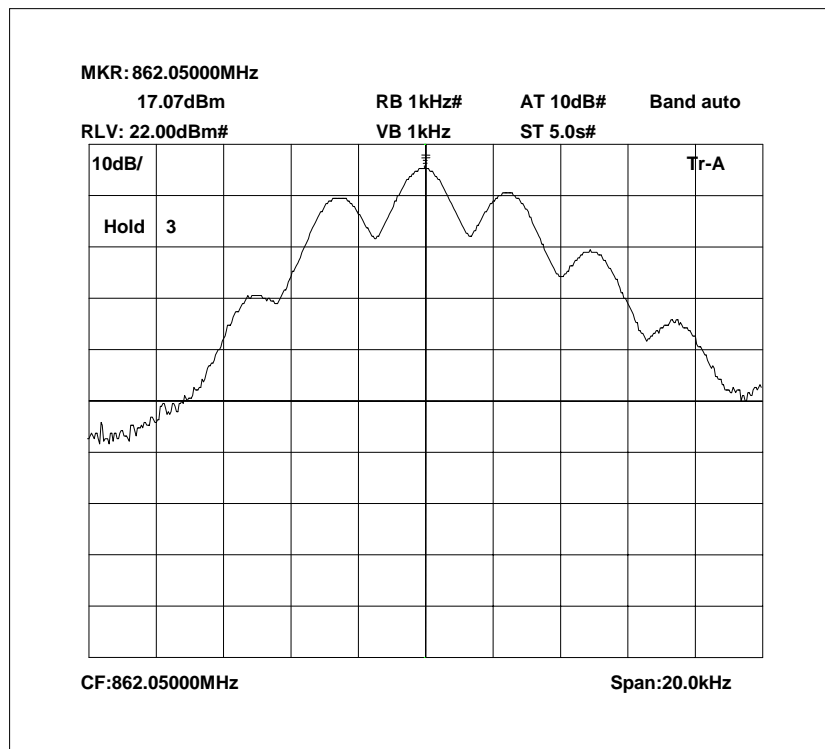


The above plots depicting the output waveshape show no measurable distortion visible when compared to the input signal.

862.050 MHz Signal Generator, deviation set to 2.5kHz

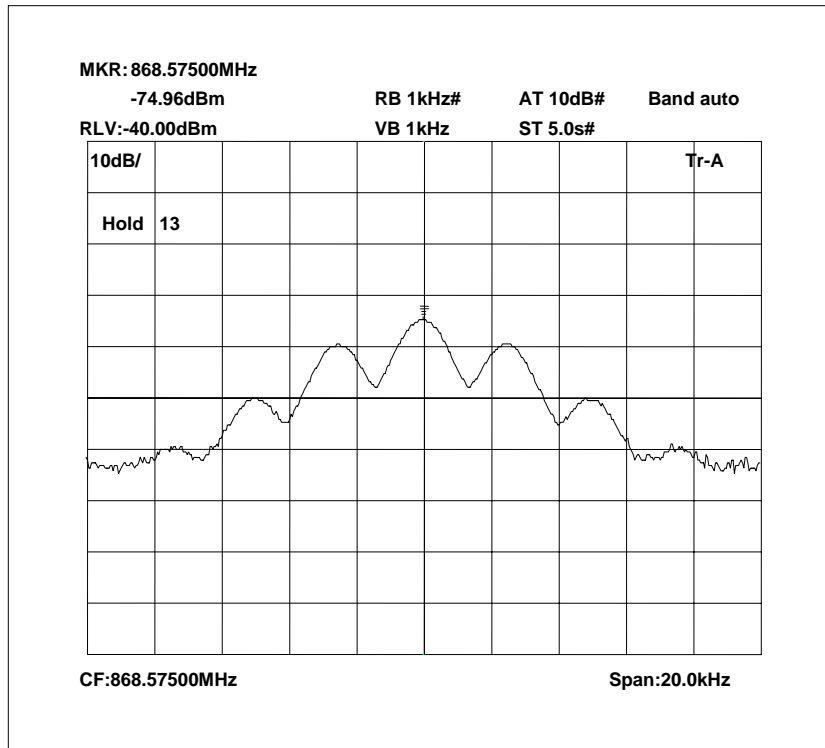


862.050 MHz Signal Generator and EUT, deviation set to 2.5kHz

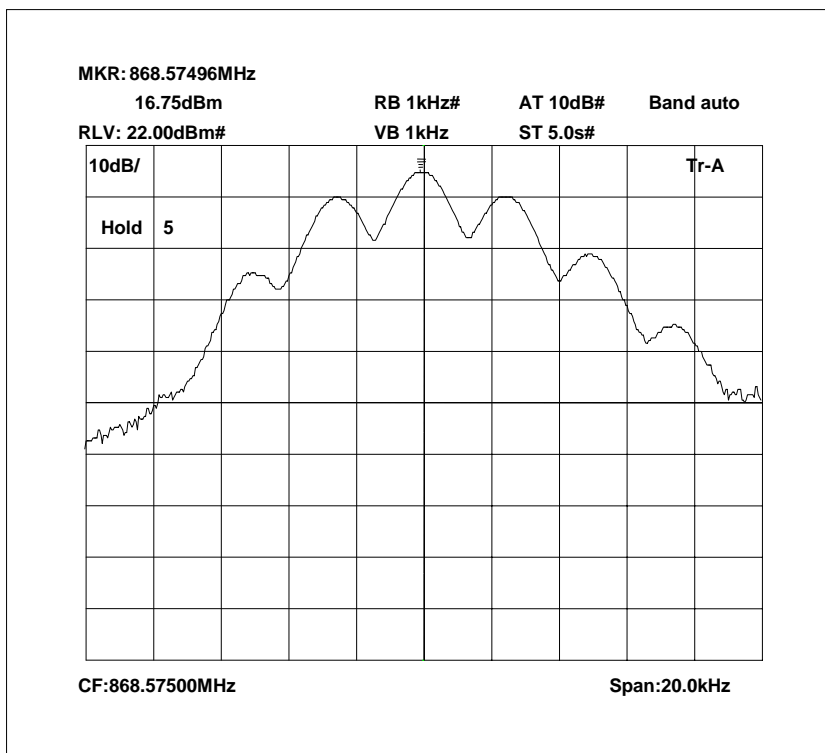


The above plots depicting the output waveshape show no measurable distortion visible when compared to the input signal.

868.575 MHz Signal Generator, deviation set to 2.5kHz



868.575 MHz Signal Generator and EUT, deviation set to 2.5kHz



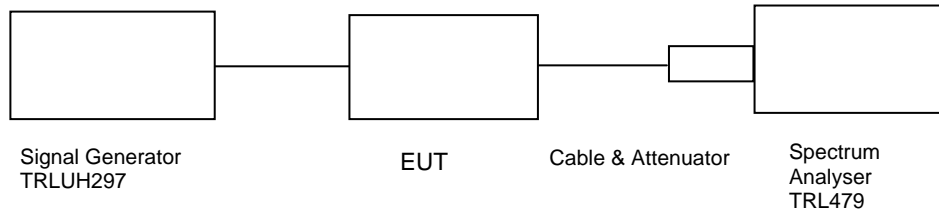
The above plots depicting the output waveshape show no measurable distortion visible when compared to the input signal.

TRANSMITTER TESTS

AMPLIFIER SPURIOUS EMISSIONS – CONDUCTED – Part 2.1053 – DOWNLINK

Ambient temperature = 18°C
 Relative humidity = 69%
 Supply voltage = +110Vac

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 $43 + 10 \log P_{dB}$

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

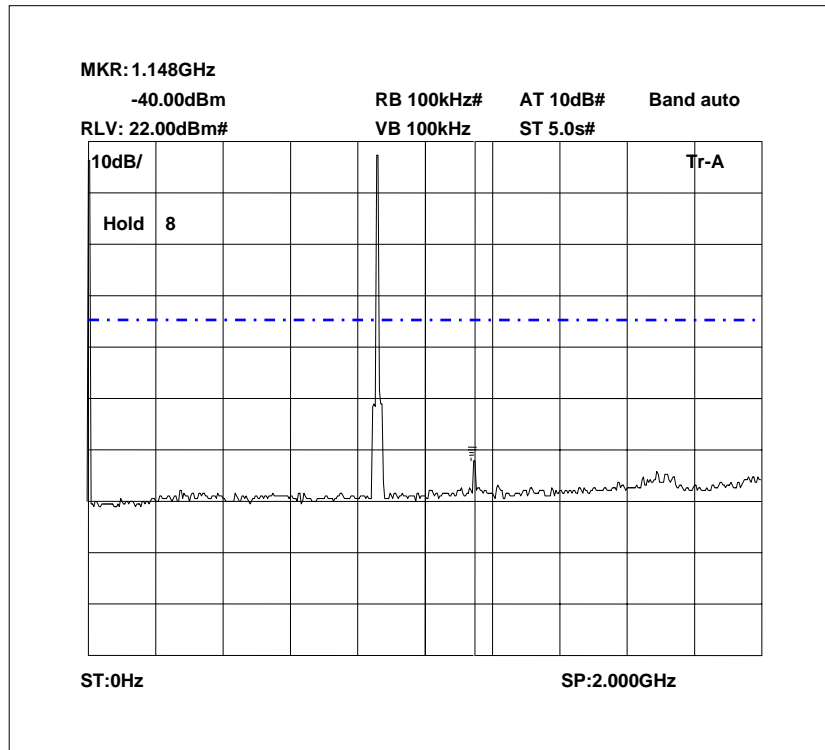
RESULTS

FREQUENCY RANGE	FREQ. (MHz)	MEASURED LEVEL (dBm)	ATTENUATOR & CABLE LOSSES (dB)	EMISSION LEVEL (dBm)	LIMIT (dBm)
0Hz – 10GHz	No Significant Emissions Within 20 dB of the Limit				-13

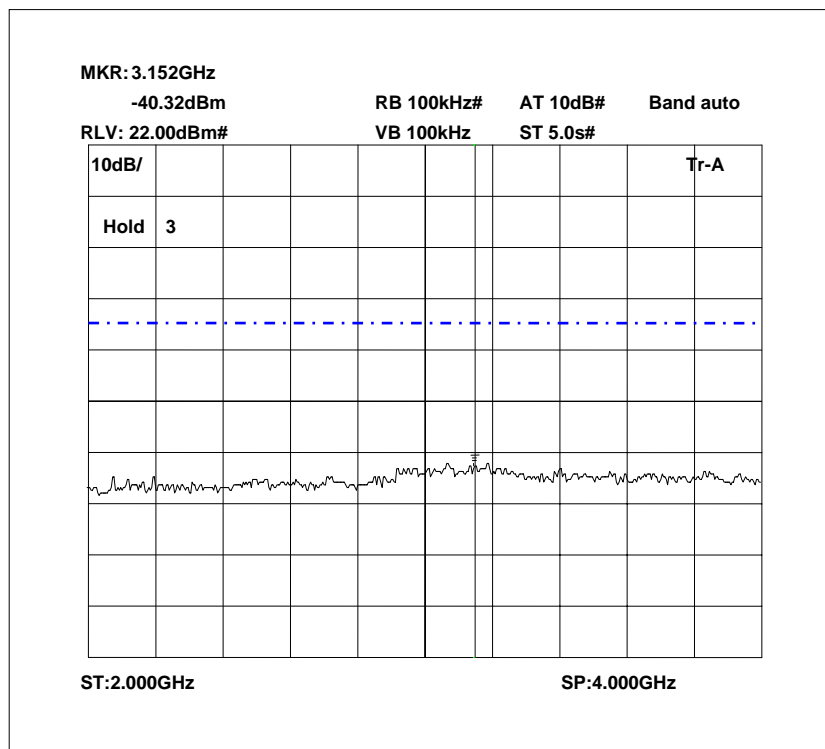
The test equipment used for the Transmitter Conducted Emissions:

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	X
ATTENUATOR	BIRD	8308-100	N/A	112	X
CABLE	TRL	N/A	N/A	UH274	X
CABLE	TRL	N/A	N/A	UH273	X
SIGNAL GENERATOR	RHODE & SCHWARZ	SML 03	102268	UH297	X

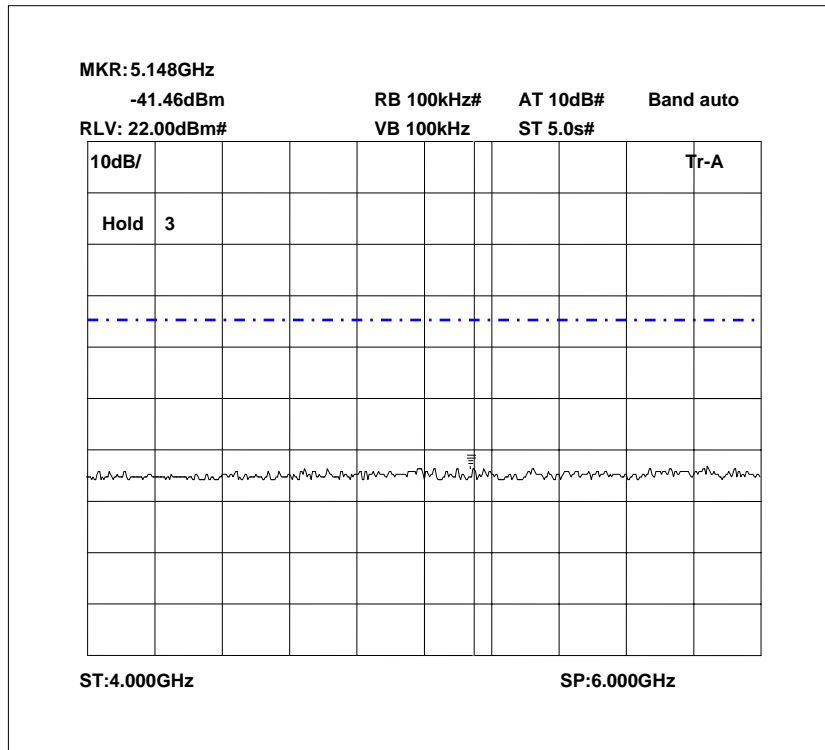
Conducted emissions 856.025 MHz 0 – 2GHz



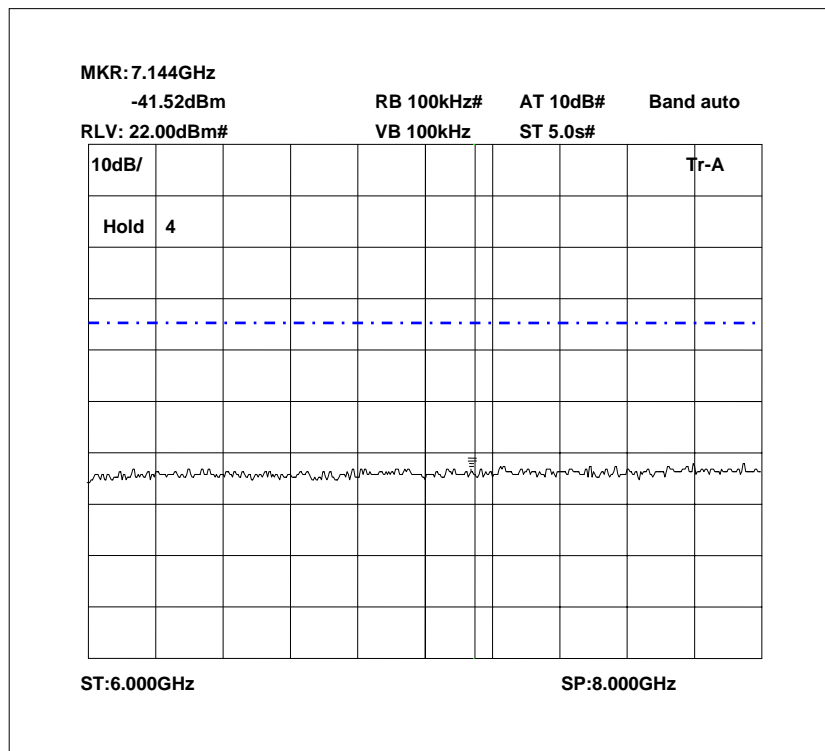
Conducted emissions 856.025 MHz 2 – 4GHz



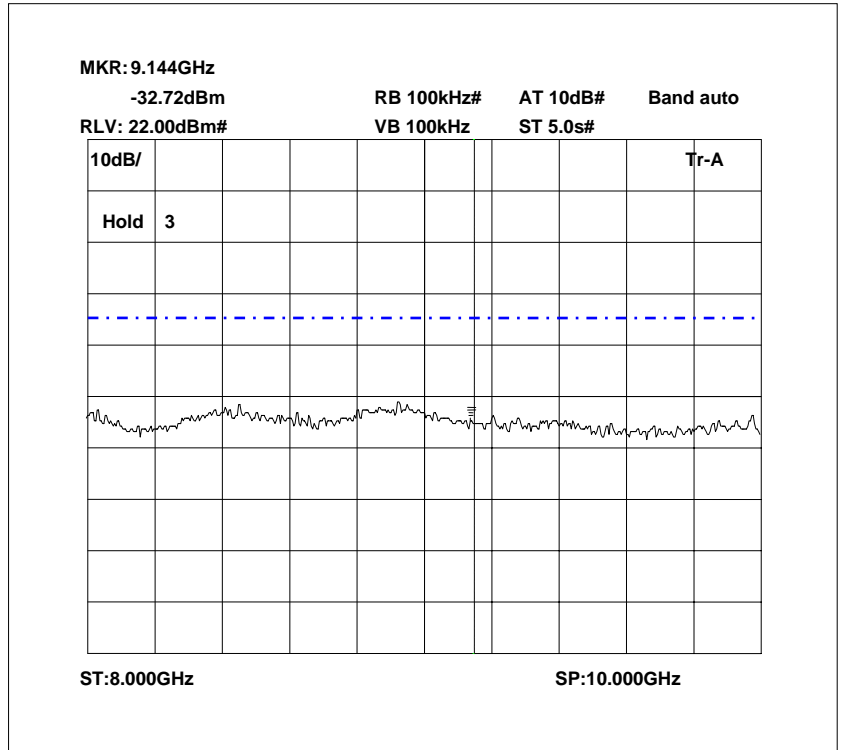
Conducted emissions 856.025 MHz 4 – 6GHz



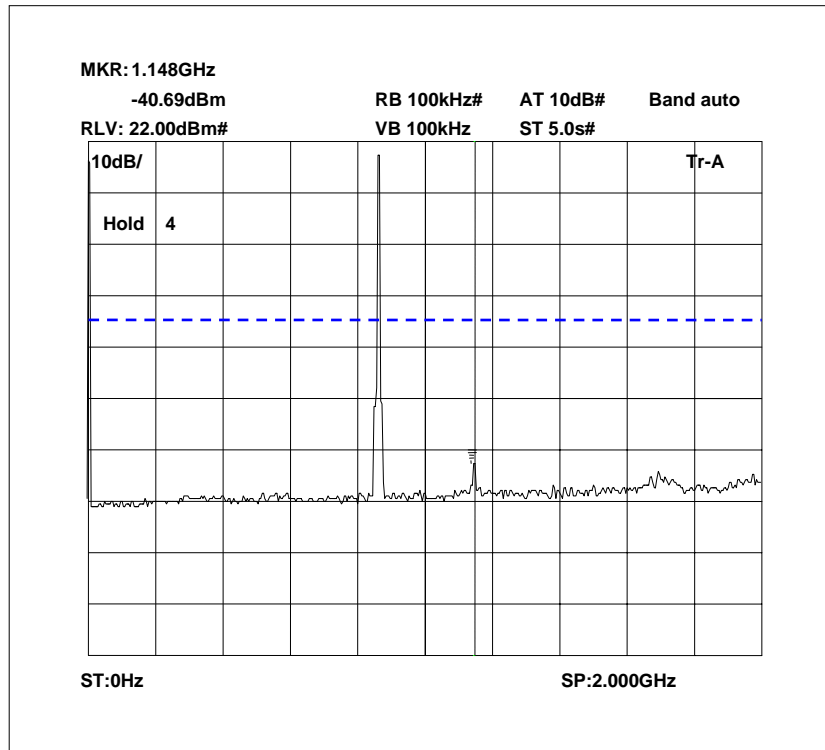
Conducted emissions 856.025 MHz 6 – 8GHz



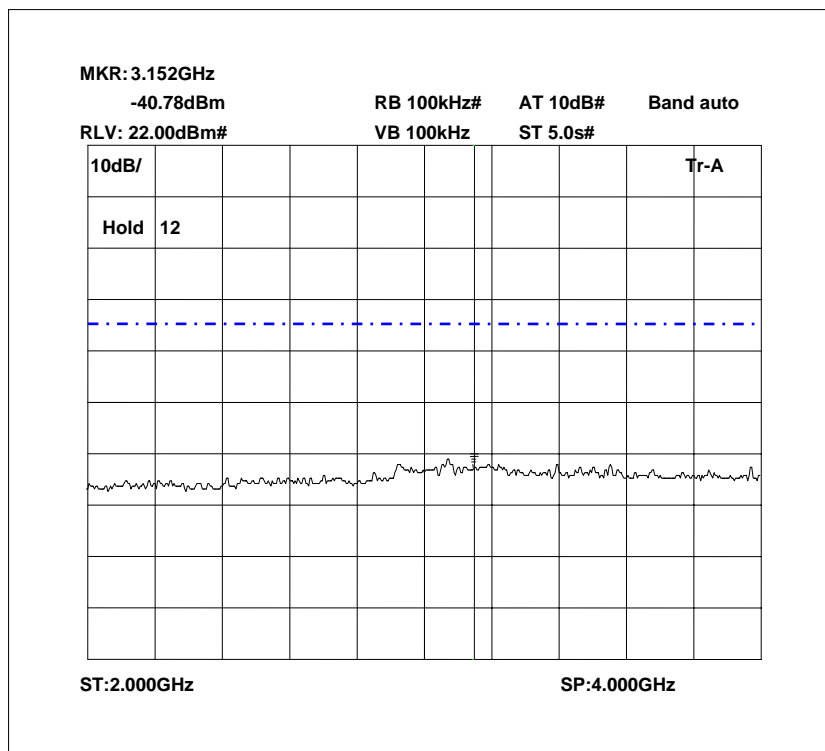
Conducted emissions 856.025 MHz 8 – 10GHz



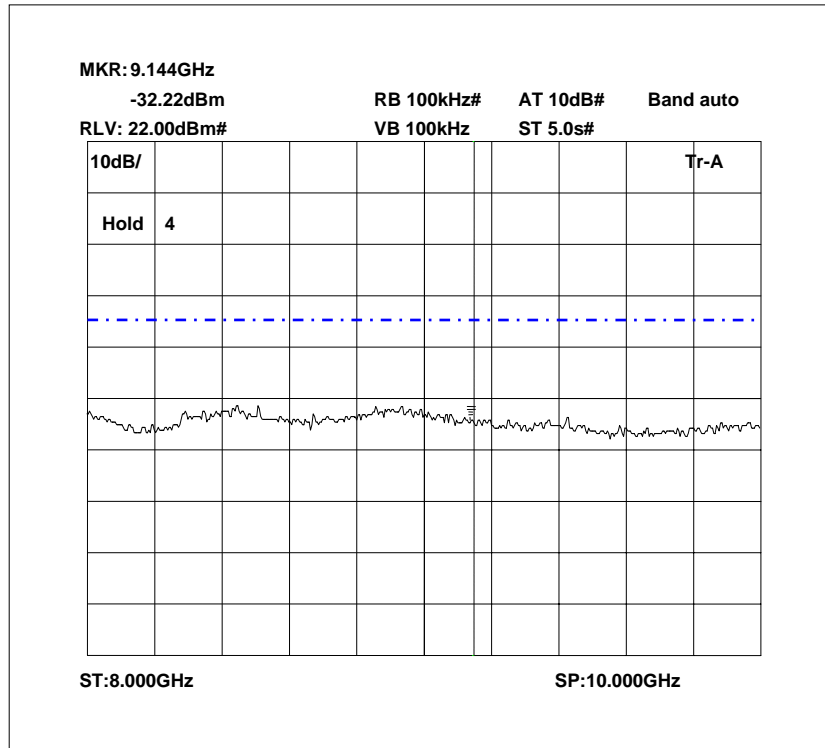
Conducted emissions 862.050 MHz 0 – 2GHz



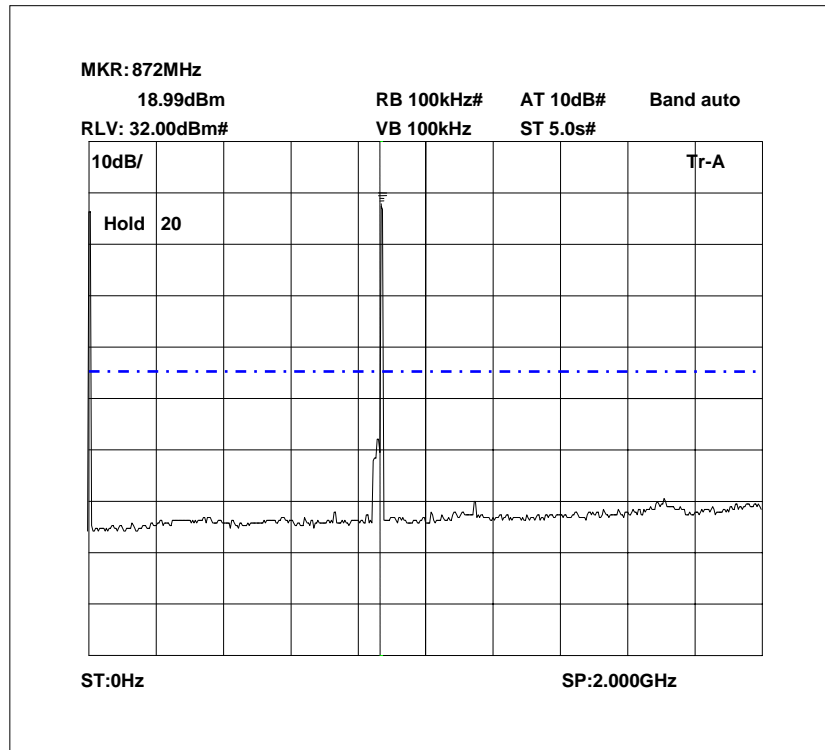
Conducted emissions 862.050 MHz 2 – 4GHz



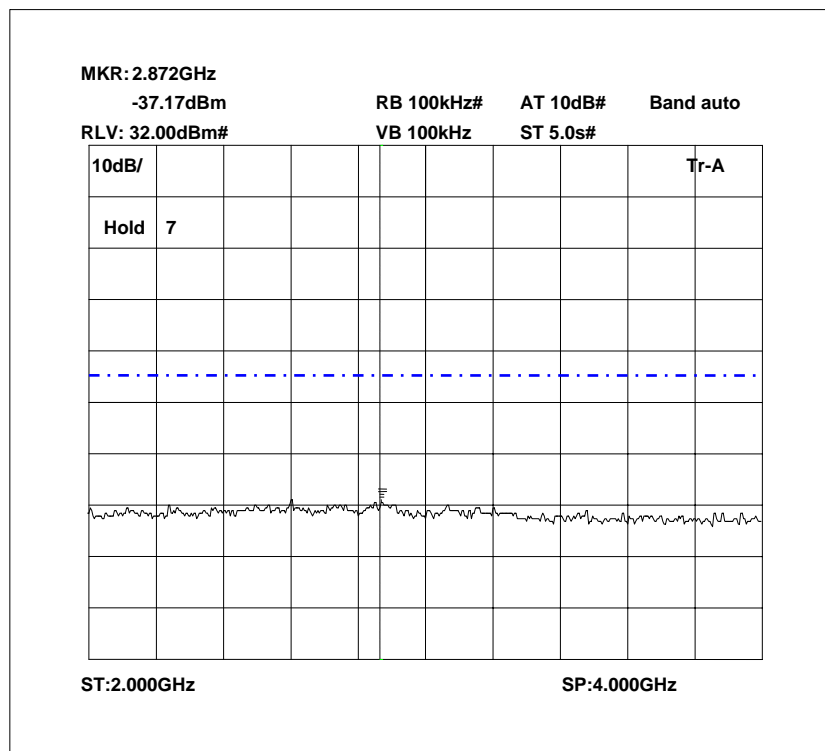
Conducted emissions 862.050 MHz 8 – 10GHz



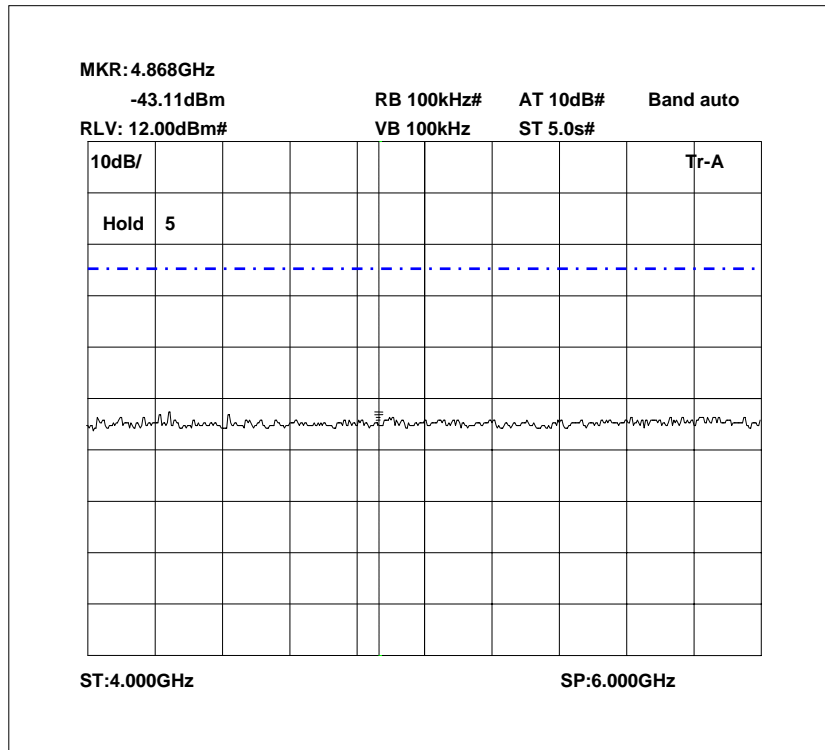
Conducted emissions 868.575 MHz 0 – 2GHz



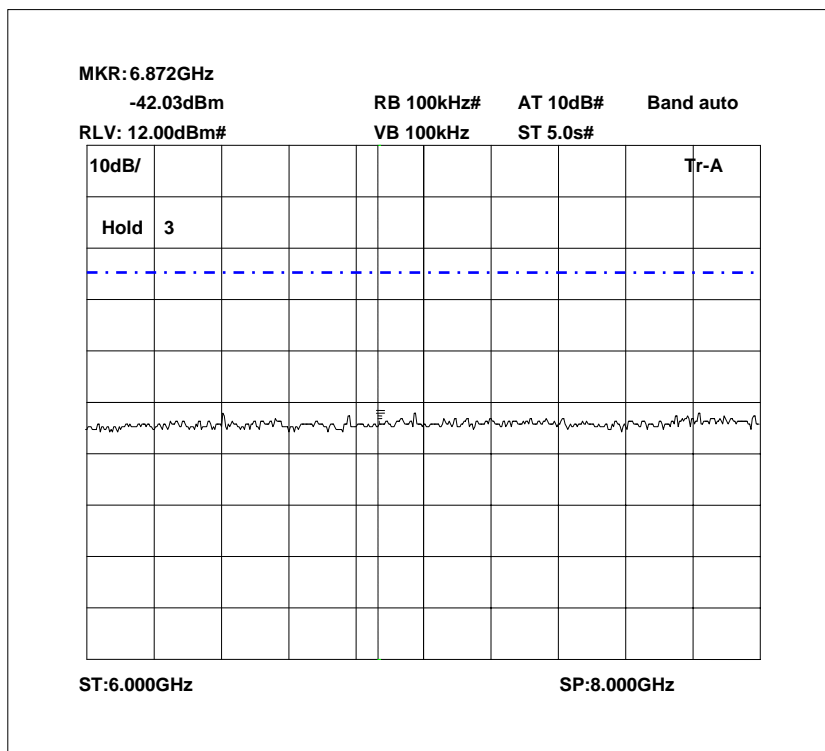
Conducted emissions 868.575 MHz 2 – 4GHz



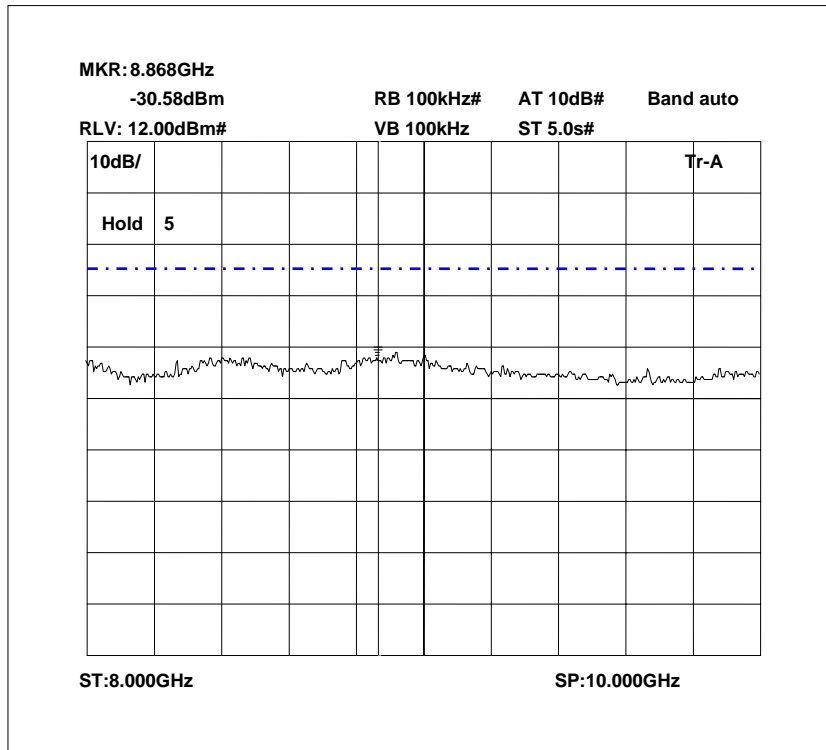
Conducted emissions 868.575 MHz 4 – 6GHz



Conducted emissions 868.575 MHz 6 – 8GHz



Conducted emissions 868.575 MHz 8 – 10GHz

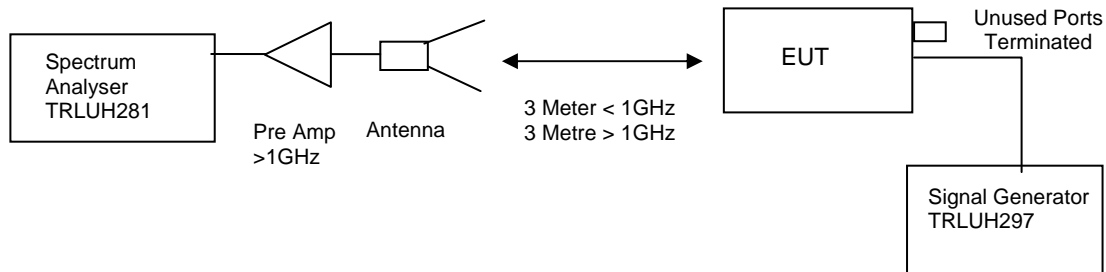


TRANSMITTER TESTS

AMPLIFIER SPURIOUS EMISSIONS – RADIATED – Part 2.1053– DOWNLINK

Ambient temperature = 18°C
 Relative humidity = 69%
 Conditions = OATS
 Supply voltage = +110Vac
 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 $43 + 10 \log P_{dB}$

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

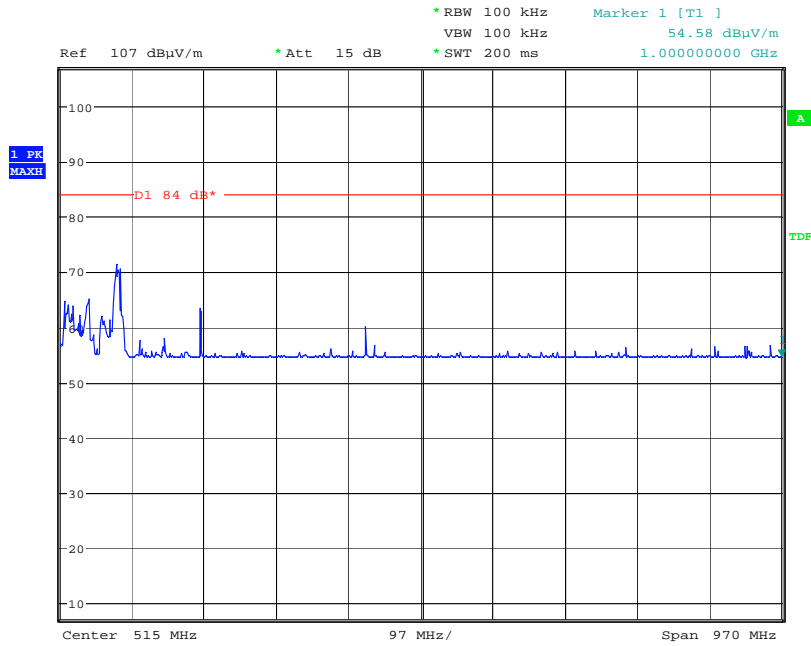
RESULTS

FREQUENCY RANGE	FREQ. (MHz)	MEAS. Rx. (dBµV)	CABLE LOSS (dB)	ANT FACTOR	FIELD STRENGTH (dBµV/m)	CALCULATED EIRP (dBm)	LIMIT (dBm)
0 Hz – 10 GHz	No Significant Emissions Within 20 dB of the Limit						-13

The test equipment used for the Transmitter Spurious Emissions:

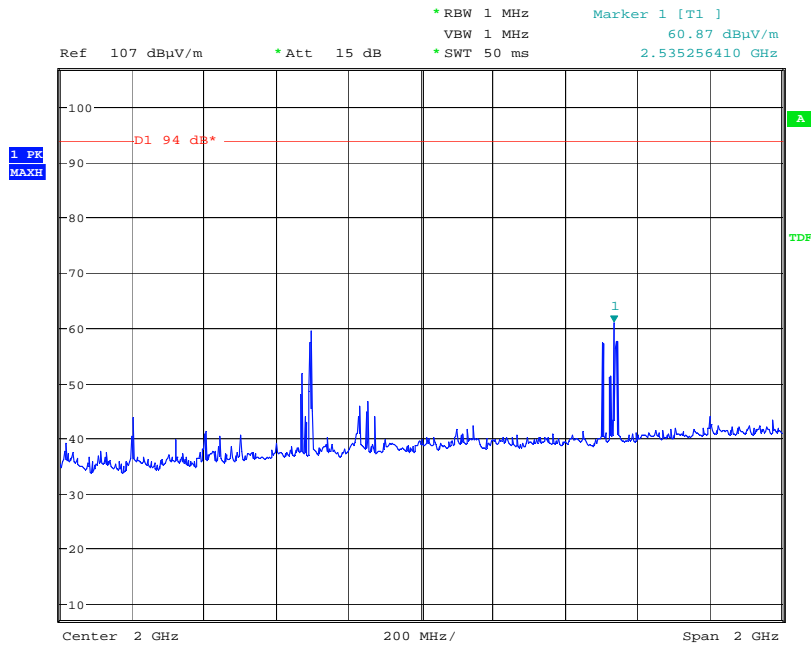
TYPE OF EQUIPMENT	MAKER/SUPPLIER	MODEL No	SERIAL No	TRL No	ACTUAL EQUIPMENT USED
SPECTRUM ANALYSER	ANRITSU	MS2665C	MT26089	479	
HORN	EMCO	3115	9010-3581	139	X
SPECTRUM ANALYSER	R&S	FSU46	200034	UH281	X
PRE AMPLIFIER	HP	8449B	3008A016	572	X
SIGNAL GENERATOR	RHODE & SCHWARZ	SML 03	102268	UH297	X
ANTENNA	YORK	CBL611/A	1618	UH191	X

Radiated emissions 856.025 MHz 30 – 1GHz



Date: 6.MAR.2007 15:04:07

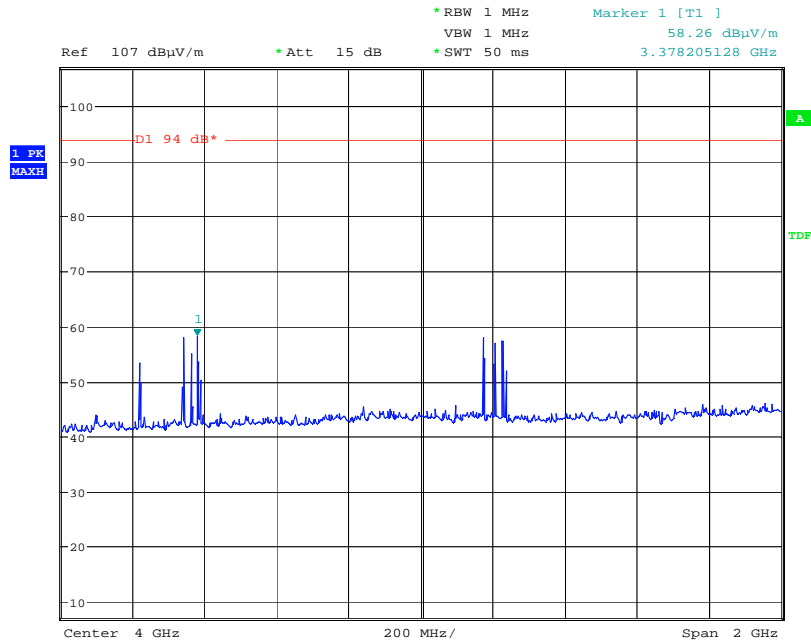
Radiated emissions 856.025 MHz 1 – 3GHz



Date: 6.MAR.2007 14:04:15

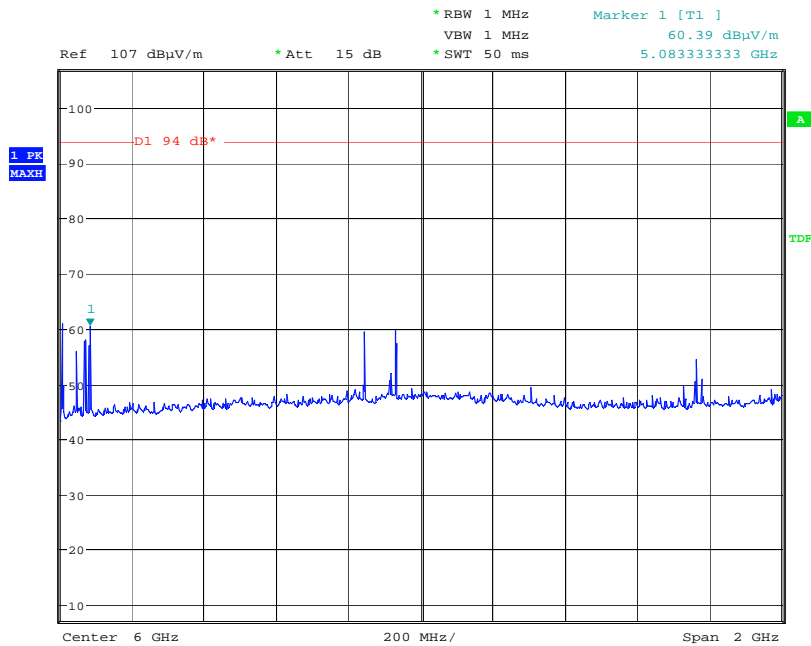
The above test results show that there were no emissions within 20dBs of the -13dBm limit.

Radiated emissions 856.025 MHz 3 – 5GHz



Date: 6.MAR.2007 14:03:55

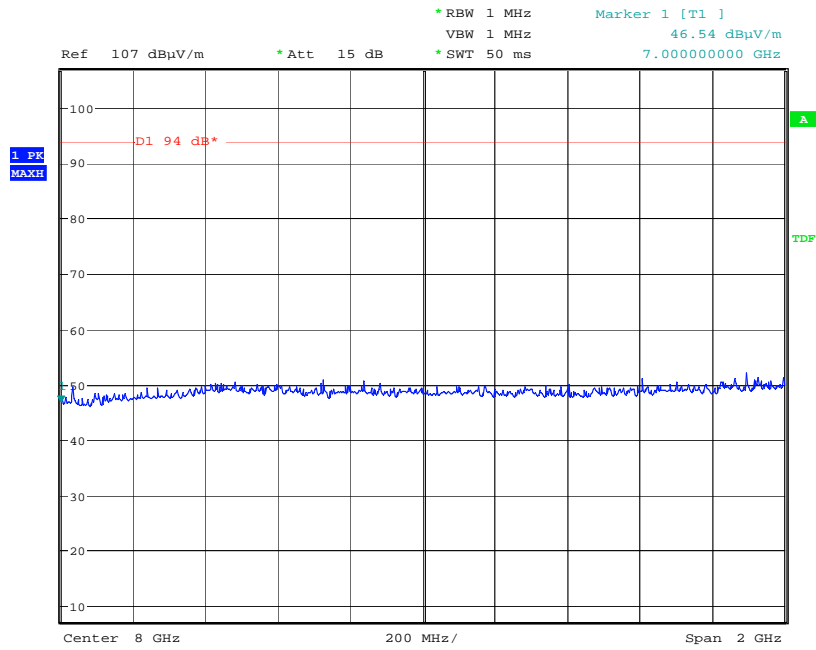
Radiated emissions 856.025 MHz 5 – 7GHz



Date: 6.MAR.2007 14:03:18

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

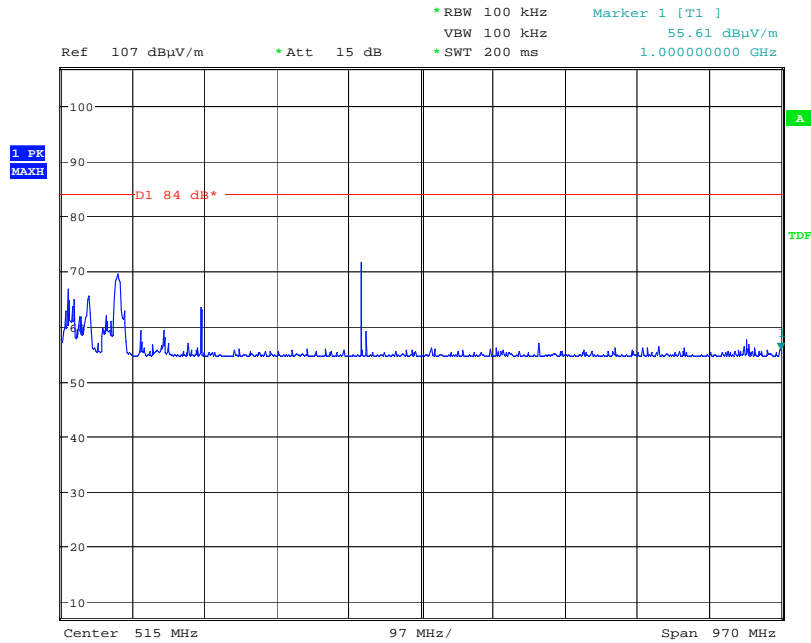
Radiated emissions 856.025 MHz 7 – 9GHz



Date: 6.MAR.2007 14:02:51

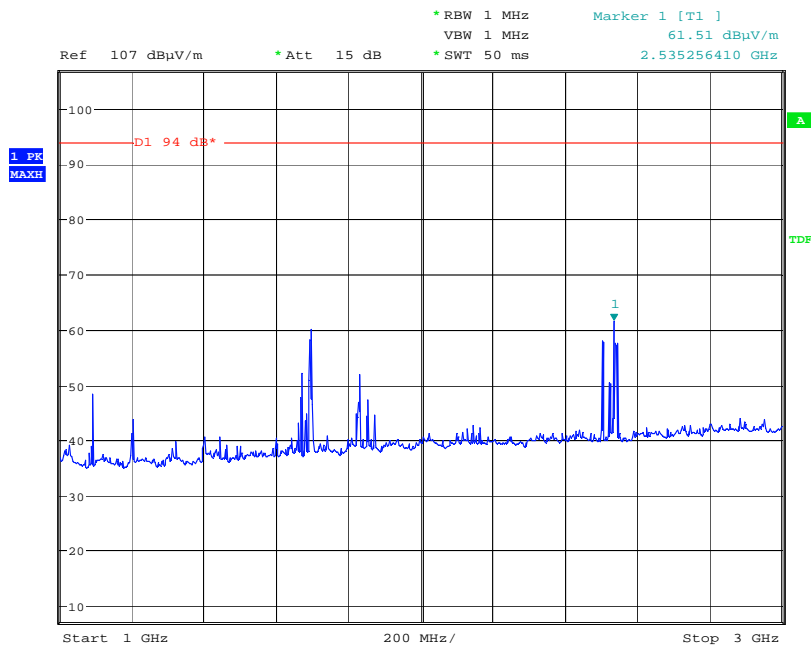
The above test results show that there were no emissions within 20dBs of the -13dBm limit.

Radiated emissions 862.050 MHz 30MHz – 1GHz



Date: 6.MAR.2007 15:03:36

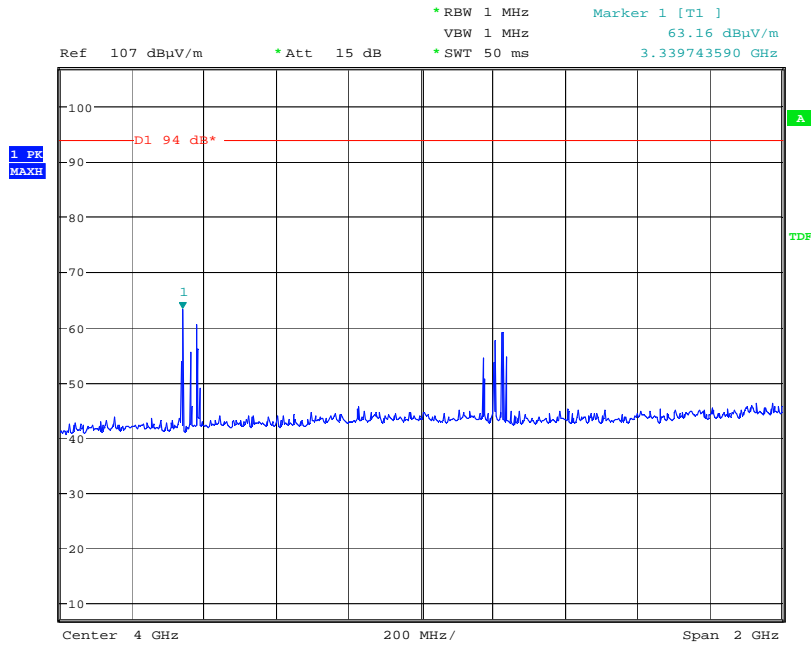
Radiated emissions 862.050 MHz 1 – 3GHz



Date: 6.MAR.2007 12:44:55

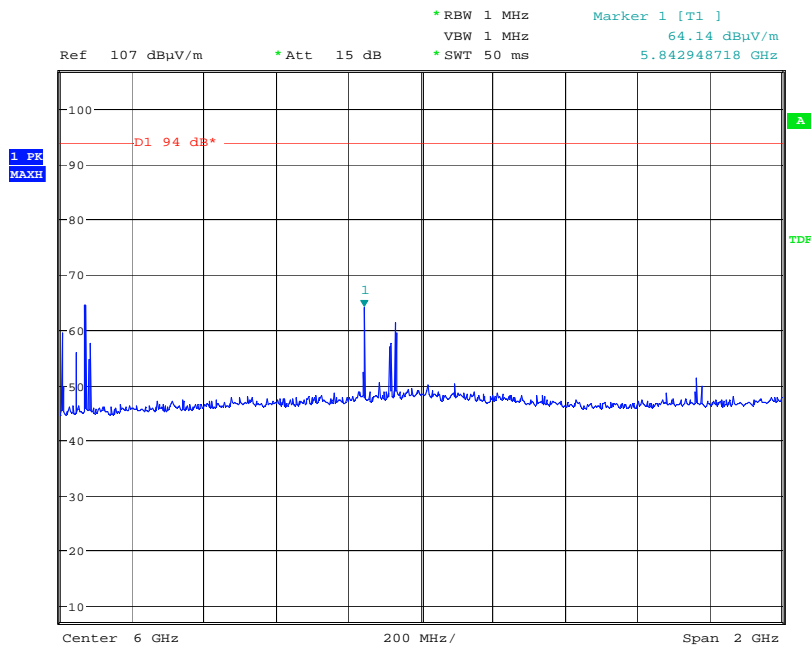
The above test results show that there were no emissions within 20dBs of the -13dBm limit.

Radiated emissions 862.050 MHz 3 – 5GHz



Date: 6.MAR.2007 12:50:14

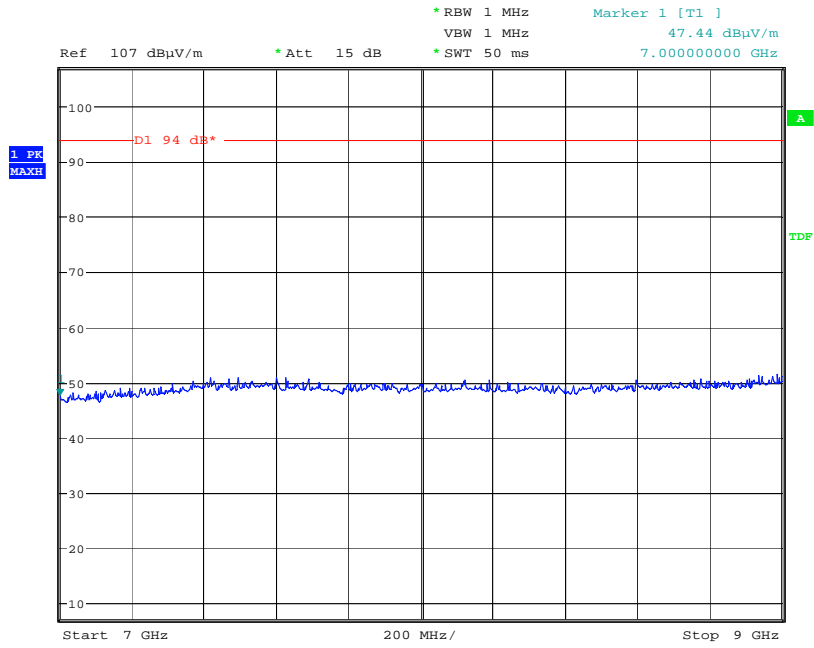
Radiated emissions 862.050 MHz 5 – 7GHz



Date: 6.MAR.2007 12:49:43

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

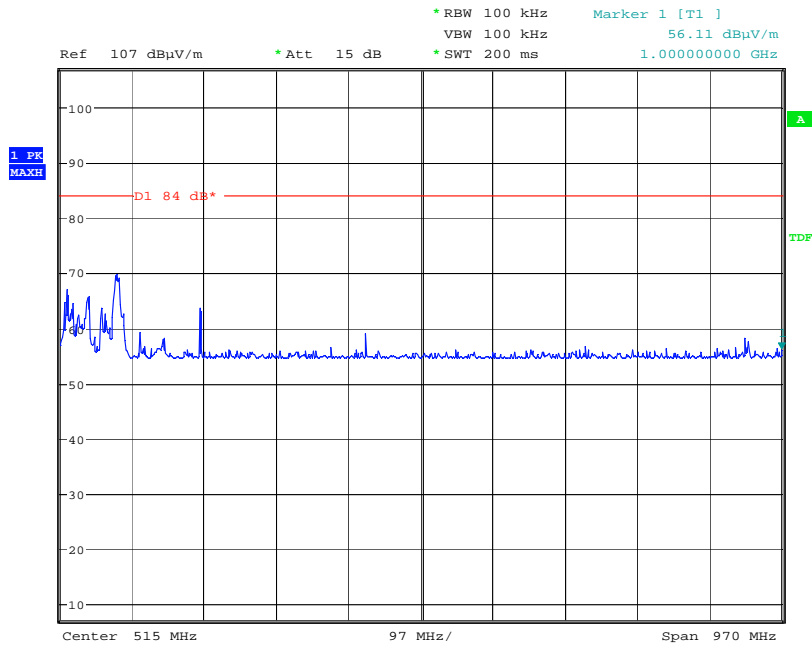
Radiated emissions 862.050 MHz 7 – 9GHz



Date: 6.MAR.2007 12:47:49

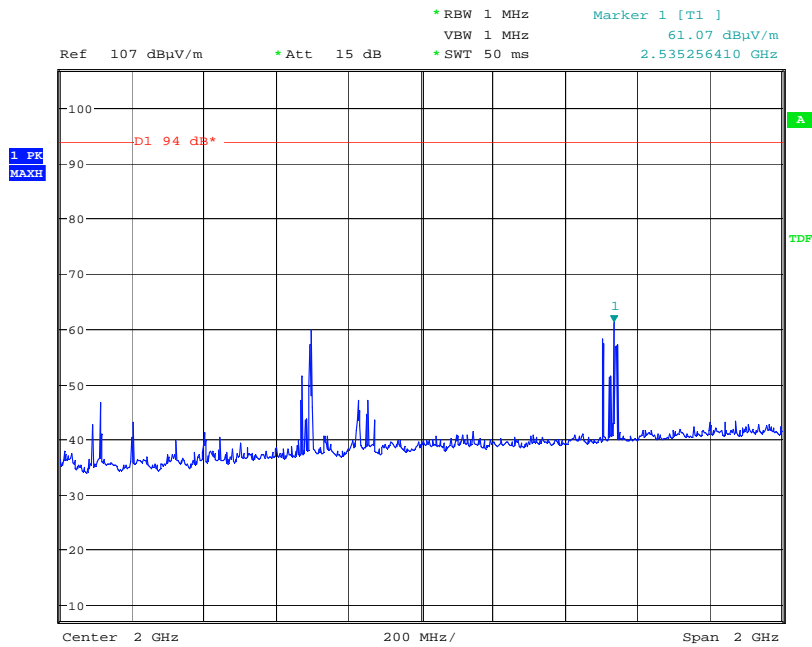
The above test results show that there were no emissions within 20dBs of the -13dBm limit.

Radiated emissions 868.575 MHz 30MHz – 1GHz



Date: 6.MAR.2007 15:02:54

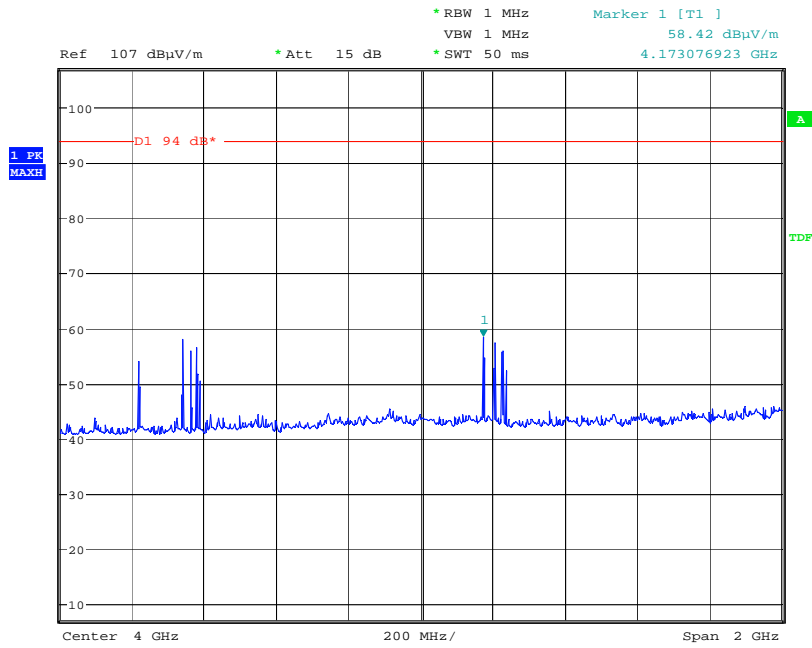
Radiated emissions 868.575 MHz 1 – 3GHz



Date: 6.MAR.2007 14:10:05

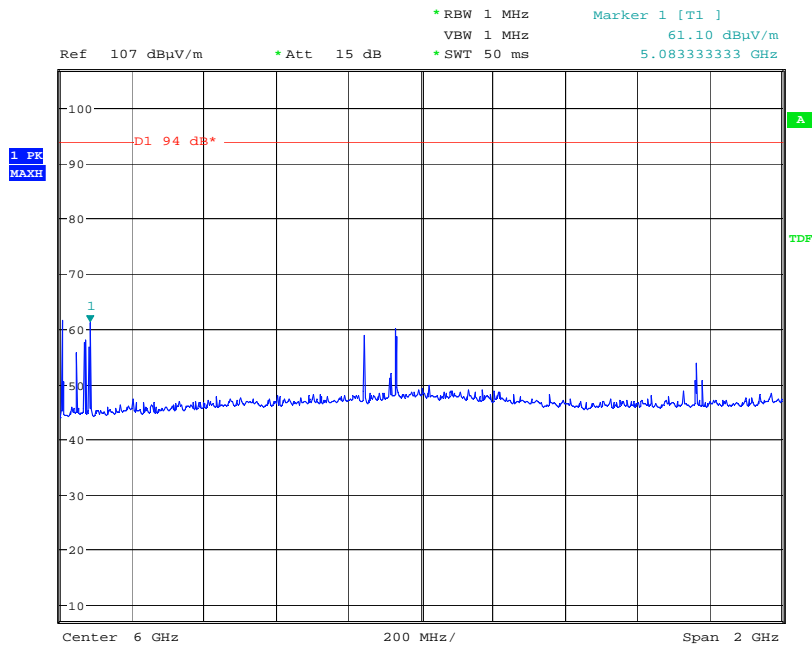
The above test results show that there were no emissions within 20dBs of the -13dBm limit.

Radiated emissions 868.575 MHz 3 – 5GHz



Date: 6.MAR.2007 14:10:23

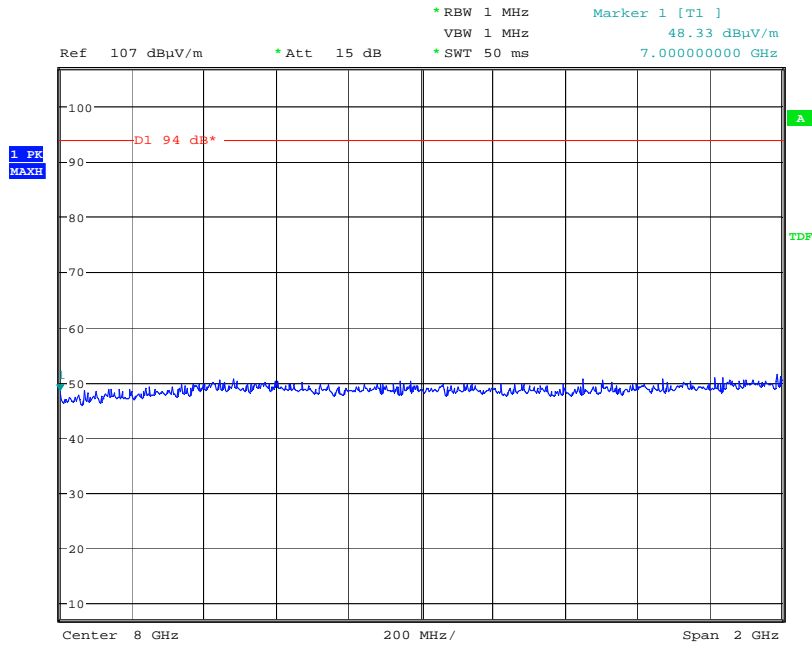
Radiated emissions 868.575 MHz 5 – 7GHz



Date: 6.MAR.2007 14:10:55

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

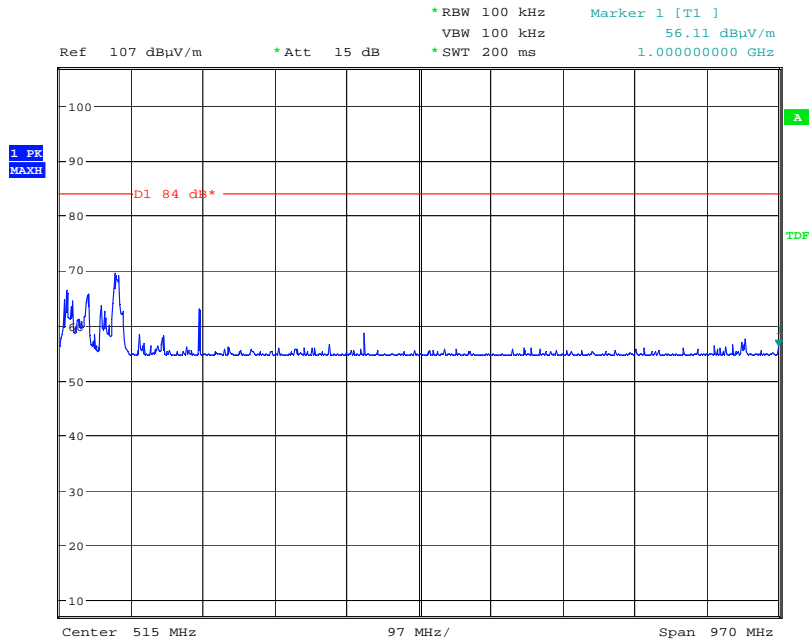
Radiated emissions 868.575 MHz 7 – 9GHz



Date: 6.MAR.2007 14:11:13

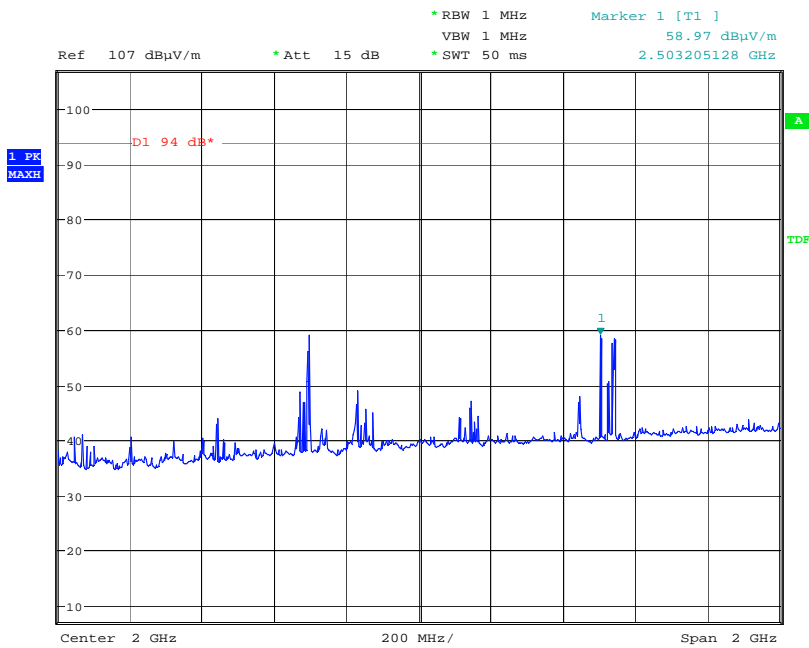
The above test results show that there were no emissions within 20dBs of the -13dBm limit.

Radiated emissions no input signal 30MHz – 1GHz



Date: 6.MAR.2007 15:02:22

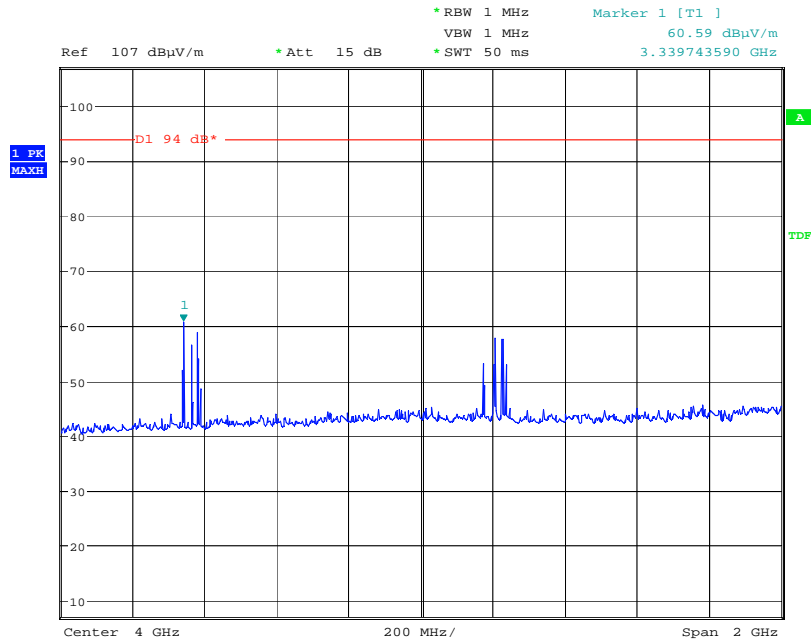
Radiated emissions no input signal 1 – 3GHz



Date: 6.MAR.2007 14:19:34

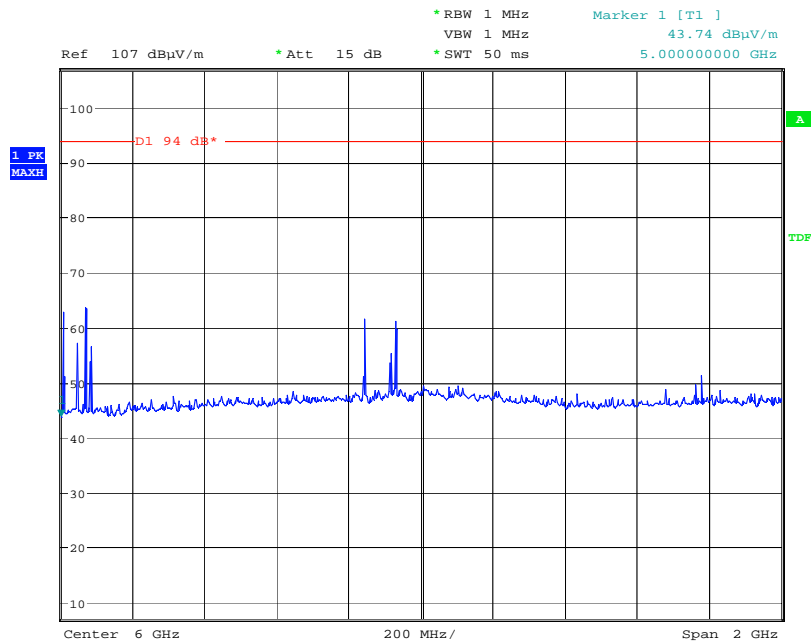
The above test results show that there were no emissions within 20dBs of the -13dBm limit.

Radiated emissions no input signal 3 – 5GHz



Date: 6.MAR.2007 14:19:54

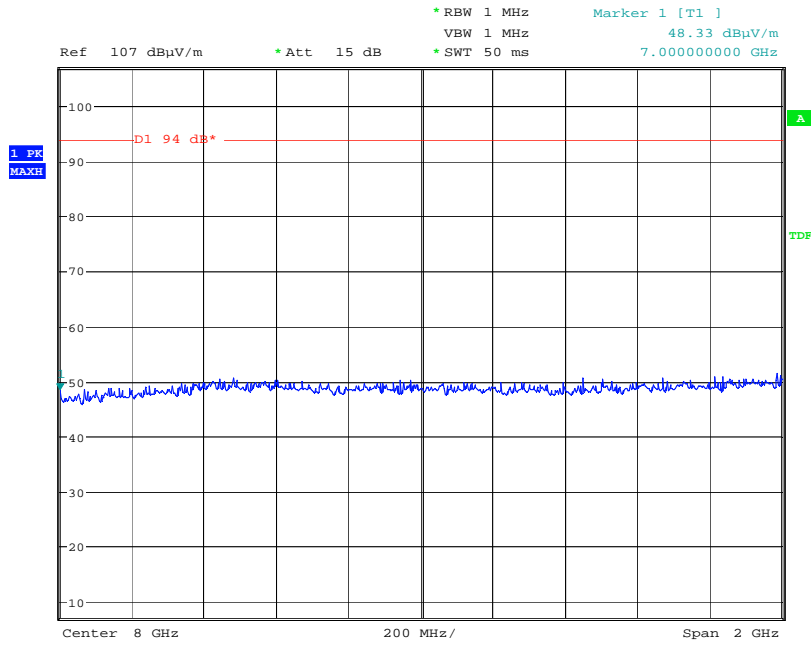
Radiated emissions no input signal 5 – 7GHz



Date: 6.MAR.2007 14:20:19

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

Radiated emissions no input signal 7 – 9GHz



Date: 6.MAR.2007 14:11:13

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

ANNEX A
PHOTOGRAPHS

PHOTOGRAPH No. 1

TEST SETUP



ANNEX B
APPLICANT'S SUBMISSION OF DOCUMENTATION LIST

APPLICANT'S SUBMISSION OF DOCUMENTATION LIST

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

ANNEX C
EQUIPMENT CALIBRATION

TRL Number	Equipment Type	Manufacturer	Last Cal Calibration	Calibration Period	Due For Calibration
UH006	3m Range ERP CAL	TRL	08/12/2006	12	08/12/2007
UH028	Log Periodic Ant	Schwarbeck	28/04/2005	24	28/04/2007
UH029	Bicone Antenna	Schwarbeck	27/04/2005	24	27/04/2007
UH041	Multimeter	AVometer	04/01/2007	12	04/01/2008
UH075	Signal Generator	Marconi		12	
UH122	Oscilloscope	Tektronix	07/06/2005	24	07/06/2007
UH132	Power meter	Marconi	10/01/2007	12	10/01/2008
UH162	ERP Cable Cal	TRL	02/01/2007	12	02/01/2008
UH191	Antenna	York		24	
UH228	Power Sensor	Marconi	15/01/2007	12	15/01/2008
UH253	1m Cable N type	TRL	07/12/2006	12	07/12/2007
UH254	1m Cable N type	TRL	07/12/2006	12	07/12/2007
UH265	Notch filer	Telonic	11/01/2006	24	11/01/2008
UH269	1m Cable N type	TRL	07/12/2006	12	07/12/2007
UH270	1m Cable N type	TRL	07/12/2006	12	07/12/2007
UH271	1.5m Cable N type	TRL	07/12/2006	12	07/12/2007
UH272	1.5m Cable N type	TRL	07/12/2006	12	07/12/2007
UH273	2m Cable N type	TRL	07/12/2006	12	07/12/2007
UH274	2m Cable N type	TRL	07/12/2006	12	07/12/2007
UH281	Spectrum Analyser	R&S	24/07/2006	12	24/07/2007
UH297	Signal Generator	R&S			
L005	CMTA	R&S	10/01/2007	12	10/01/2008
L007	Loop Antenna	R&S	29/03/2005	24	29/03/2007
L103	Attenuator	Bird		Calibrate in Use	
L112	Attenuator	Bird		Calibrate in Use	
L138	1-18GHz Horn	EMCO	15/04/2005	24	15/04/2007
L139	1-18GHz Horn	EMCO	03/05/2005	24	03/05/2007
L170	Combiner	Elcom		Calibrate in Use	
L176	Signal Generator	Marconi	15/02/2006	12	15/02/2007
L193	Bicone Antenna	Chase	12/10/2003	24	12/10/2005
L203	Log Periodic Ant	Chase	21/10/2003	24	21/10/2005
L343	CCIR Noise Filter	TRL	20/09/2006	12	20/09/2007
L426	Temperature Indicator	Fluke	09/01/2007	12	09/01/2008
L479	Analyser	Anritsu	09/01/2007	12	09/01/2008
L552	Signal Generator	Agilent	24/07/2006	12	24/07/2007
L572	Pre Amplifier	Agilent		Calibrate in Use	

ANNEX D
MEASUREMENT UNCERTAINTY

Radio Testing – General Uncertainty Schedule

All statements of uncertainty are expanded standard uncertainty using a coverage factor of 1.96 to give a 95% confidence where no required test level exists.

[1] Adjacent Channel Power

Uncertainty in test result = **1.86dB**

[2] Carrier Power

Uncertainty in test result (Equipment - TRLUH120) = **2.18dB**

Uncertainty in test result (Equipment – TRL05) = **1.08dB**

Uncertainty in test result (Equipment – TRL479) = **2.48dB**

[3] Effective Radiated Power

Uncertainty in test result = **4.71dB**

[4] Spurious Emissions

Uncertainty in test result = **4.75dB**

[5] Maximum frequency error

Uncertainty in test result (Equipment - TRLUH120) = **119ppm**

Uncertainty in test result (Equipment – TRL05) = **0.113ppm**

Uncertainty in test result (Equipment – TRL479) = **0.265ppm**

[6] Radiated Emissions, field strength OATS 14kHz-18GHz Electric Field

Uncertainty in test result (14kHz – 30MHz) = **4.8dB**, Uncertainty in test result (30MHz – 1GHz) = **4.6dB**, Uncertainty in test result (1GHz-18GHz) = **4.7dB**

[7] Frequency deviation

Uncertainty in test result = **3.2%**

[8] Magnetic Field Emissions

Uncertainty in test result = **2.3dB**

[9] Conducted Spurious

Uncertainty in test result (Equipment TRL479) Up to 8.1GHz = **3.31dB**

Uncertainty in test result (Equipment TRL479) 8.1GHz – 15.3GHz = **4.43dB**

Uncertainty in test result (Equipment TRL479) 15.3GHz – 21GHz = **5.34dB**

Uncertainty in test result (Equipment TRLUH120) Up to 26GHz = **3.14dB**

[10] Channel Bandwidth

Uncertainty in test result = **15.5%**

[11] Amplitude and Time Measurement – Oscilloscope

Uncertainty in overall test level = **2.1dB**, Uncertainty in time measurement = **0.59%**, Uncertainty in Amplitude measurement = **0.82%**

[11] Power Line Conduction

Uncertainty in test result = **3.4dB**

[12] Spectrum Mask Measurements

Uncertainty in test result = **2.59% (frequency)**

Uncertainty in test result = **1.32dB (amplitude)**

[13] Adjacent Sub Band Selectivity

Uncertainty in test result = **1.24dB**

[14] Receiver Blocking – Listen Mode, Radiated

Uncertainty in test result = **3.42dB**

[15] Receiver Blocking – Talk Mode, Radiated

Uncertainty in test result = **3.36dB**

[16] Receiver Blocking – Talk Mode, Conducted

Uncertainty in test result = **1.24dB**

[17] Receiver Threshold

Uncertainty in test result = **3.23dB**

[18] Transmission Time Measurement

Uncertainty in test result = **7.98%**

ANNEX E
SYSTEM DIAGRAM

