

# TEST REPORT FROM RFI GLOBAL SERVICES LTD

Test of: NTT docomo P-08A

To: FCC Part 22: 2008 Subpart H

Test Report Serial No: RFI/RPT1/RP74716JD05B

This Test Report Is Issued Under The Authority Of Brian Watson, Operations Director:	Office.
Checked By:	A.HENRIQUES
Signature:	dille
Date of Issue:	20 March 2009

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RFI Global Services Ltd

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# 1. Customer Information

Company Name:	Panasonic Mobile Communications Development of Europe Ltd
Address:	Panasonic House Willoughby Road Bracknell Berkshire RG12 8FP

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# 2. Summary of Testing

### 2.1. General Information

Specification Reference:	FCC Part 22: 2008 Subpart H
Specification Title:	Code of Federal Regulations, Part 22 (47CFR22) Public Mobile Services
Site Registration:	FCC: 209735
Location of Testing:	RFI Global Services Ltd, Wade Road, Basingstoke, Hampshire, RG24 8AH.
Test Dates:	03 March 2009 to 10 March 2009

### 2.2. Summary of Test Results

FCC Reference (47CFR)	Measurement	Port Type	Result
FCC Part 15: Section 15.107	Receiver/Idle Mode AC Conducted Spurious Emissions	AC Mains	<b>©</b>
FCC Part 15: Section 15.109	Receiver/Idle Mode Radiated Spurious Emissions	Enclosure	<b>②</b>
FCC Part 15: Section 15.207	Transmitter AC Conducted Spurious Emissions	AC Mains	<b>②</b>
FCC Part 22: Section 22.913(a)	Transmitter Effective Radiated Power (ERP)	Antenna	<b>②</b>
FCC Part 22: Section 22.355	Transmitter Frequency Stability (Temperature & Voltage Variation)	Antenna	<b>©</b>
FCC Part 22: Section 2.1049	Transmitter Occupied Bandwidth	Antenna	<b>②</b>
FCC Part 22: Section 2.1053/22.917	Transmitter Out of Band Radiated Emissions	Antenna	<b>②</b>
FCC Part 22: Section 2.1053/22.917	Transmitter Band Edge Radiated Emissions	Antenna	<b>②</b>

### **Key to Results**



= Did not comply

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### 2.3. Methods and Procedures

Reference:	ANSI/TIA-603-C-2004
Title:	Land Mobile Communications Equipment, Measurements and performance Standards
Reference:	ANSI C63.4 (2003)
Title:	American National Standard Methods of Measurement of Electromagnetic Emissions from Low Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.

### 2.4. Deviations from the Test Specification

For the measurements contained within this test report, there were no deviations from, additions to, or exclusions from the test specification identified above.

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# 3. Equipment Under Test (EUT)

## 3.1. Identification of Equipment Under Test (EUT)

3.1. Identification of Equipment Under Test (EUT)				
Brand Name:	NTT docomo			
Model Name or Number:	P-08A			
IMEI Number:	356754020050086			
Hardware Version Number:	Rev C			
Software Version Number:	B-WN908D-01.03.001 08-2H_CPF_Cv0A1352A			
FCC ID Number:	UCE208015A			
Description:	Micro SD memory card			
Brand Name:	Not stated			
Model Name or Number:	Not stated			
Description:	AC charger			
Brand Name:	NTT docomo			
Model Name or Number:	FOMA AC Adaptor 01 for Global use / MAS-BH0008-A 002			
	T			
Description:	DC charger			
Brand Name:	NTT docomo			
Model Name or Number:	FOMA DC Adaptor 02			
Description:	Charge/USB data cable			
Brand Name:	NTT docomo			
Model Name or Number:	FOMA USB Cable with Charge Function 02			
Description:	Personal hands-free			
Brand Name:	NTT docomo			
Model Name or Number:	Stereo Earphone Set 01			
Description:	Battery 3.7V 800 mAh			
Brand Name:	NTT			
Model Name or Number:	P19			

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### 3.2. Description of EUT

The equipment under test was a dual mode UMTS/GSM cellular handset with Bluetooth and RFID

### 3.3. Modifications Incorporated in the EUT

No modifications were applied to the EUT during testing.

### 3.4. Additional Information Related to Testing

Technology Tested:	UMTS				
Type of Radio Device:	Transceiver				
Mode:	UMTS FDD V and	UMTS Release 5 HSDP	Α		
Modulation Type:	QPSK(UMTS / HSI	OPA)			
Channel Spacing:	5 MHz				
Power Supply Requirement(s):	Nominal	3.7 V			
	Minimum	3.4 V			
	Maximum	4.2 V			
Transmit Frequency Range:	824 to 849 MHz				
Transmit Channels Tested:	Channel ID	Channel Number	Channel Frequency (MHz)		
	Bottom 4132		826.4		
	Middle	Middle 4182 836.4			
	Тор	Top 4233 846.6			
Receive Frequency Range:	869 to 894 MHz	·			
Receive Channels Tested:	Channel ID Channel Number Fr		Channel Frequency (MHz)		
	Bottom	4357	871.4		
	Middle	Middle 4407 881.4			
	Top 4458 891.6				

### 3.5. Support Equipment

The following support equipment was used to exercise the EUT during testing:

Description:	Dummy battery	
Brand Name:	Not stated	
Model Name or Number:	Not stated	
Serial Number:	Not stated	

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### 4. Operation and Monitoring of the EUT during Testing

### 4.1. Operating Modes

The EUT was tested in the following operating mode(s):

- Receiver/Idle mode.
- Constantly transmitting at full power on bottom, middle and top channels as required.
- Occupied bandwidth, ERP and band edge tests were performed with the EUT in Voice (RMC/12.2 kbps) or HSDPA (Sets 1 to 4) modes.
- Transmitter radiated spurious emissions were checked in all modes during prescans. Voice (RMC/12.2 kbps) was found to be the worst case and all final measurements were performed with the EUT in this mode.

### 4.2. Configuration and Peripherals

The EUT was tested in the following configuration(s):

- Connected to a UMTS Band V system simulator, operating in transceiver mode.
- Idle mode and transmitter mode radiated spurious emissions tests were performed with the
  personal hands free connected to the EUT and as this was found to be the worst case
  during prescans. All accessories were individually connected and measurements made
  during prescans to determine the worst case combination.

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### 5. Measurements, Examinations and Derived Results

### **5.1. General Comments**

Measurement uncertainties are evaluated in accordance with current best practice. Our reported expanded uncertainties are based on standard uncertainties, which are multiplied by an appropriate coverage factor to provide a statistical confidence level of approximately 95%. Please refer to Section 6. Measurement Uncertainty for details.

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### 5.2. Test Results

### 5.3. Receive/Idle Mode AC Conducted Spurious Emissions

### **Test Summary:**

FCC Part:	15.107(a)
Test Method Used:	As detailed in ANSI C63.4 Section 7 and relevant annexes

### **Environmental Conditions:**

Temperature (°C):	18
Relative Humidity (%):	42

### **Results: Quasi Peak Detector Measurements**

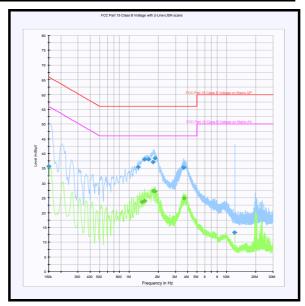
Frequency (MHz)	Line	Quasi Peak Level (dBμV)	Limit (dΒμV)	Margin (dB)	Result
0.150000	Live	35.7	66.0	30.3	Complied
1.243500	Neutral	35.5	56.0	20.5	Complied
1.437000	Neutral	38.1	56.0	17.9	Complied
1.576500	Neutral	38.1	56.0	17.9	Complied
1.765500	Neutral	37.2	56.0	18.8	Complied
1.837500	Neutral	38.5	56.0	17.5	Complied
3.624000	Neutral	35.3	56.0	20.7	Complied
3.633000	Neutral	35.2	56.0	20.8	Complied
12.115500	Live	13.3	60.0	46.7	Complied

### **Results: Average Detector Measurements**

Frequency (MHz)	Line	Average Level (dBμV)	Limit (dBμV)	Margin (dB)	Result
1.360500	Neutral	23.6	46.0	22.4	Complied
1.437000	Neutral	23.9	46.0	22.1	Complied
1.774500	Neutral	27.4	46.0	18.6	Complied
1.842000	Neutral	27.2	46.0	18.8	Complied
3.687000	Neutral	24.9	46.0	21.1	Complied

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### Receive/Idle Mode AC Conducted Spurious Emissions (continued)



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### 5.4. Receive/Idle Mode Radiated Spurious Emissions

### **Test Summary:**

FCC Part:	15.109
Frequency Range:	30 MHz to 1000 MHz
Test Method Used:	As detailed in ANSI C63.4 Section 8 and relevant annexes

### **Environmental Conditions:**

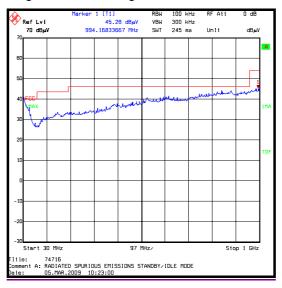
Temperature (°C):	24
Relative Humidity (%):	22

#### **Results:**

Frequency	Antenna	Level	Limit	Margin	Result
(MHz)	Polarity	(dBμV/m)	(dBμV/m)	(dB)	
994.168	Horizontal	45.3	54.0	8.7	Complied

### Note(s):

1. No spurious emissions were detected above the noise floor of the measuring receiver; therefore, the highest peak noise floor reading of the measuring receiver was recorded as shown in the table above.



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### Receive/Idle Mode Radiated Spurious Emissions (continued)

### **Test Summary:**

FCC Part:	15.109
Frequency Range:	1 GHz to 12.75 GHz
Test Method Used:	As detailed in ANSI C63.4 Section 8 and relevant annexes

### **Environmental Conditions:**

Temperature (°C):	24
Relative Humidity (%):	22

### **Results: Highest Peak Level**

Frequency (GHz)	Antenna Polarity	Detector Level (dBμV/m)	Transducer Factor (dB)	Peak Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
12.598	Horizontal	41.0	13.1	54.1	74.0	19.9	Complied

### **Results: Highest Average Level**

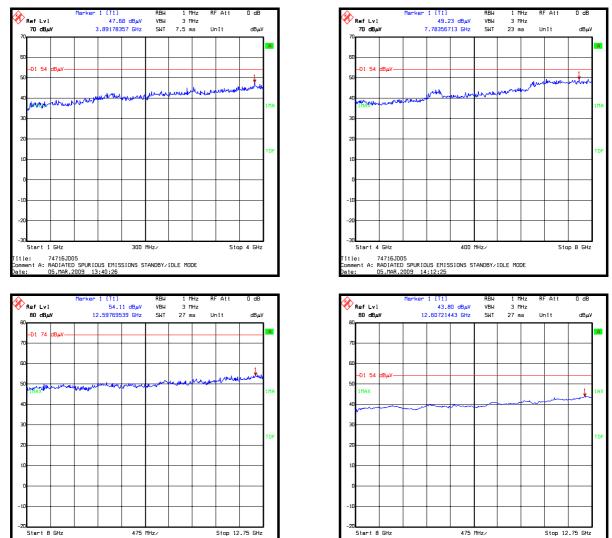
Frequency (GHz)	Antenna Polarity	Detector Level (dB <sub>µ</sub> V/m)	Transducer Factor (dB)	Peak Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
12.607	Horizontal	30.7	13.1	43.8	54.0	10.2	Complied

### Note(s):

1. No spurious emissions were detected above the noise floor of the measuring receiver; therefore, the highest peak noise floor reading of the measuring receiver was recorded as shown in the table above.

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### Receive/Idle Mode Radiated Spurious Emissions (continued)



Note: These plots are pre-scans and for indication purposes only. For final measurements, see accompanying tables.

itle: 74716JD05 omment A: RADIATED SPURIOUS EMISSIONS STANDBY/IDLE MODE ate: 05.MAR.2009 14:53:06

Title: 74716JD05 Comment A: RADIATED SPURIOUS EMISSIONS STANDBY/IDLE MODE Date: 05.MAR.2009 14:50:50

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### 5.5. Transmitter AC Conducted Spurious Emissions

### **Test Summary:**

FCC Part:	15.207(a)		
Test Method Used:	As detailed in ANSI C63.4 Section 7 and relevant annexes		

### **Environmental Conditions:**

Temperature (°C):	18
Relative Humidity (%):	42

### **Results: Quasi Peak Detector Measurements**

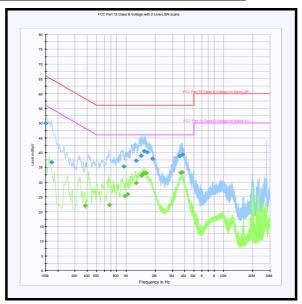
Frequency (MHz)	Line	Quasi Peak Level (dBμV)	Limit (dΒμV)	Margin (dB)	Result
0.150000	Neutral	50.0	66.0	16.0	Complied
0.172500	Neutral	36.7	64.8	28.1	Complied
0.951000	Neutral	35.4	56.0	20.6	Complied
1.270500	Neutral	37.3	56.0	18.7	Complied
1.423500	Live	39.0	56.0	17.0	Complied
1.522500	Live	40.5	56.0	15.5	Complied
1.644000	Live	40.1	56.0	15.9	Complied
1.873500	Neutral	37.9	56.0	18.1	Complied
3.565500	Neutral	38.8	56.0	17.2	Complied
3.790500	Neutral	39.4	56.0	16.6	Complied

### **Results: Average Detector Measurements**

Frequency (MHz)	Line	Average Level (dBμV)	Limit (dBμV)	Margin (dB)	Result
0.379500	Neutral	22.0	48.3	26.3	Complied
0.676500	Neutral	22.3	46.0	23.7	Complied
0.969000	Neutral	25.2	46.0	20.8	Complied
1.045500	Neutral	26.0	46.0	20.0	Complied
1.266000	Neutral	29.7	46.0	16.3	Complied
1.446000	Live	32.2	46.0	13.8	Complied
1.518000	Live	33.0	46.0	13.0	Complied
1.612500	Live	33.1	46.0	12.9	Complied
3.637500	Neutral	33.2	46.0	12.8	Complied
3.736500	Neutral	33.4	46.0	12.6	Complied

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# **Transmitter AC Conducted Spurious Emissions (continued)**



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### 5.6. Transmitter Effective Radiated Power (ERP)

### **Test Summary:**

FCC Part:	22.913(a)
Test Method Used:	As detailed in ANSI TIA-603-C-2004 Section 2.2.17.2

### **Environmental Conditions:**

Temperature (°C):	23
Relative Humidity (%):	25

### Results:

М	odes		нѕі	)PA		Voice			
	Sets	1	2	3	4	RMC 12.2kbps			
Band	Channel	Power (dBm)	Power (dBm)	Power (dBm)	Power (dBm)	Power (dBm)	Limit (dBm)	Margin	Result
	4132	26.8/ 24.0	27.0/ 22.2	27.6/ 22.9	27.0/ 22.1	26.7/ 23.9	38.5	10.9	Complied
850	4183	27.2/ 24.3	27.5/ 22.5	28.1/ 23.3	27.5/ 22.4	27.2/ 24.2	38.5	10.4	Complied
	4233	27.4/ 24.7	27.8/ 22.8	28.3/ 23.5	27.8/ 22.8	27.4/ 24.6	38.5	10.2	Complied
	ßc	2	12	15	15				
	ßd	15	15	8	4				
	., ΔNACK, ΔCQI	8	8	8	8				

### Note(s):

1. All modes were compared on each channel and the highest power recorded was subtracted from the limit to show the margin.

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### 5.7. Transmitter Frequency Stability (Temperature Variation)

# **Test Summary:**

FCC Part:	22.355
Test Method Used:	As detailed in ANSI TIA-603-C-2004 Section 2.2.2 referencing FCC CFR Part 2.1055

### **Environmental Conditions:**

Temperature (°C):	24
Relative Humidity (%):	27

### **Results: Middle Channel (836.4 MHz)**

Temperature (°C)	Measured Frequency (MHz)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)	Margin (ppm)	Result
-30	836.399964	-36	0.04	2.5	2.46	Complied
-20	836.399964	-36	0.04	2.5	2.46	Complied
-10	836.400038	38	0.05	2.5	2.45	Complied
0	836.400038	38	0.05	2.5	2.45	Complied
10	836.399966	-34	0.04	2.5	2.46	Complied
20	836.399964	-36	0.04	2.5	2.46	Complied
30	836.399967	-33	0.04	2.5	2.46	Complied
40	836.399968	-32	0.04	2.5	2.46	Complied
50	836.399964	-36	0.04	2.5	2.46	Complied

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### 5.8. Transmitter Frequency Stability (Voltage Variation)

### **Test Summary:**

FCC Part:	22.355
Test Method Used:	As detailed in ANSI TIA-603-C-2004 Section 2.2.2 referencing FCC CFR Part 2.1055

### **Environmental Conditions:**

Temperature (°C):	25
Relative Humidity (%):	25

### **Results: Middle Channel (836.4 MHz)**

Supply Voltage (V)	Measured Frequency (MHz)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)	Margin (ppm)	Result
3.4	836.399965	-35	0.04	2.5	2.46	Complied
4.2	836.399965	-35	0.04	2.5	2.46	Complied

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### 5.9. Transmitter Occupied Bandwidth

### **Test Summary:**

FCC Part:	2.1049
Test Method Used:	As detailed in ANSI C63.4 Section13.1.7 and relevant annexes referencing FCC CFR Part 2.1049 (see note below)

### **Environmental Conditions:**

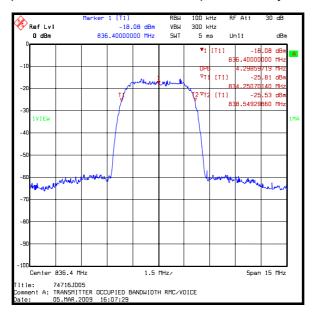
Temperature (°C):	25
Relative Humidity (%):	25

### **Results: RMC/Voice**

Channel	Frequency (MHz)	Occupied Bandwidth (kHz)
Middle	836.4	4298.597

### Note(s):

1. In lieu of the test method detailed in ANSI C63.4 Section 13.1.7 the 99% occupied bandwidth was measured using the Occupied Bandwidth function of the spectrum analyser



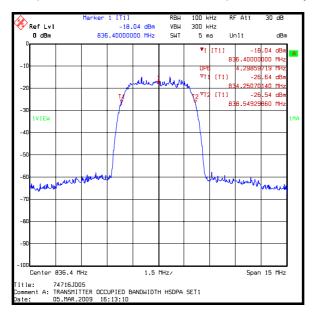
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### **Results: HSDPA 1**

Channel	Frequency (MHz)	Occupied Bandwidth (kHz)
Middle	836.4	4298.597

### Note(s):

1. In lieu of the test method detailed in ANSI C63.4 Section 13.1.7 the 99% occupied bandwidth was measured using the Occupied Bandwidth function of the spectrum analyser



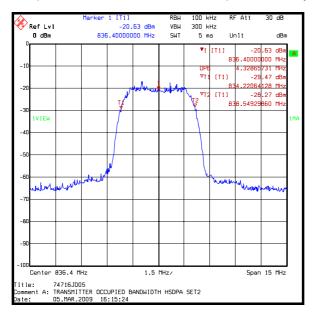
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### Results: HSDPA 2

Channel	Frequency (MHz)	Occupied Bandwidth (kHz)
Middle	836.4	4328.657

### Note(s):

1. In lieu of the test method detailed in ANSI C63.4 Section 13.1.7 the 99% occupied bandwidth was measured using the Occupied Bandwidth function of the spectrum analyser



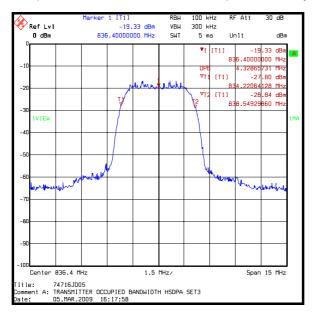
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### **Results: HSDPA 3**

Channel	Frequency (MHz)	Occupied Bandwidth (kHz)
Middle	836.4	4328.657

### Note(s):

1. In lieu of the test method detailed in ANSI C63.4 Section 13.1.7 the 99% occupied bandwidth was measured using the Occupied Bandwidth function of the spectrum analyser



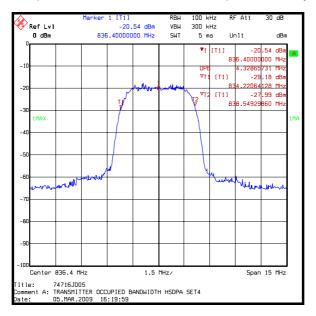
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### Results: HSDPA 4

Channel	Frequency (MHz)	Occupied Bandwidth (kHz)
Middle	836.4	4328.657

### Note(s):

1. In lieu of the test method detailed in ANSI C63.4 Section 13.1.7 the 99% occupied bandwidth was measured using the Occupied Bandwidth function of the spectrum analyser



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### 5.10. Transmitter Out of Band Radiated Emissions

### **Test Summary:**

FCC Part:	2.1053 & 22.917
Frequency Range:	30 MHz to 10 GHz
Test Method Used:	As detailed in ANSI TIA-603-C-2004 Section 2.2.12 referencing FCC CFR Part 2.1053
Modulation:	Voice / RMC 12.2 kbps

#### **Environmental Conditions:**

Temperature (°C):	24
Relative Humidity (%):	22

### **Results: Bottom Channel**

Frequency	Peak Emission	Limit	Margin	Result
(MHz)	Level (dBm)	(dBm)	(dBm)	
1654.875	-23.2	-13.0	10.2	Complied

### **Results: Middle Channel**

Frequency	Peak Emission	Limit	Margin	Result
(MHz)	Level (dBm)	(dBm)	(dBm)	
1674.835	-20.7	-13.0	7.7	Complied

### **Results: Top Channel**

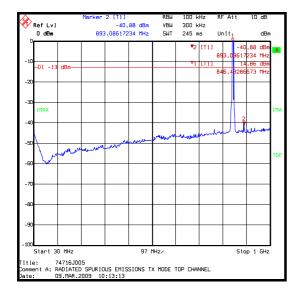
Frequency	Peak Emission	Limit	Margin	Result
(MHz)	Level (dBm)	(dBm)	(dBm)	
1691.305	-18.2	-13.0	5.2	Complied

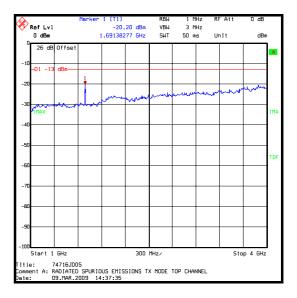
### Note(s):

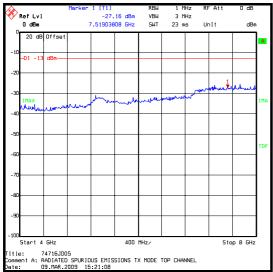
1. The uplink and downlink traffic channels are shown on the 30 MHz to 1 GHz plot

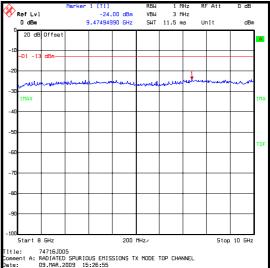
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### **Transmitter Out of Band Radiated Emissions (continued)**









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### 5.11. Transmitter Radiated Emissions at Band Edges

### **Test Summary:**

FCC Part:	2.1053 & 22.917
Test Method Used:	As detailed in ANSI TIA-603-C-2004 Section 2.2.12 referencing FCC CFR Parts 2.1053 and 22.917
Modulation:	RMC/Voice

#### **Environmental Conditions:**

Temperature (°C):	22
Relative Humidity (%):	28

#### **Results: Bottom Band Edge**

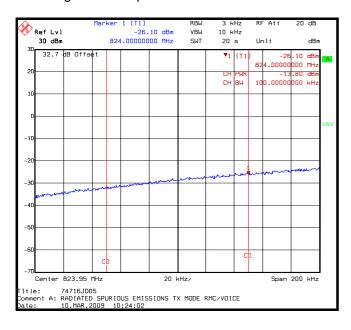
Frequency	Peak Emission	Limit	Margin	Result
(MHz)	Level (dBm)	(dBm)	(dBm)	
824	-13.8	-13.0	0.8	Complied

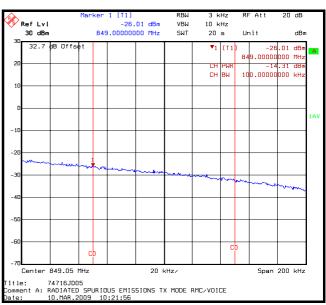
### **Results: Top Band Edge**

Frequency	Peak Emission	Limit	Margin	Result
(MHz)	Level (dBm)	(dBm)	(dBm)	
849	-14.3	-13.0	1.3	Complied

#### Note(s):

1. The band edge result was obtained by integrating the 100 kHz strip immediately adjacent to the band edge using a channel power function of the measurement analyser.





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### **Test Summary:**

FCC Part:	2.1053 & 22.917
Test Method Used:	As detailed in ANSI TIA-603-C-2004 Section 2.2.12 referencing FCC CFR Parts 2.1053 and 22.917
Modulation:	HSDPA 1

### **Environmental Conditions:**

Temperature (°C):	22
Relative Humidity (%):	28

#### **Results: Bottom Band Edge**

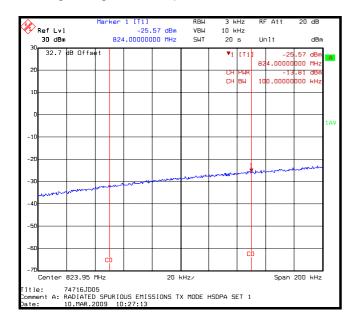
Frequency	Peak Emission	Limit	Margin	Result
(MHz)	Level (dBm)	(dBm)	(dBm)	
824	-13.8	-13.0	0.8	Complied

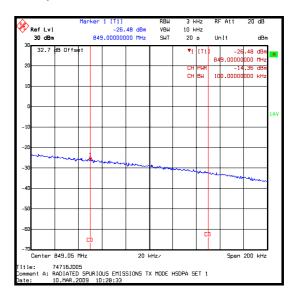
### **Results: Top Band Edge**

Frequency	Peak Emission	Limit	Margin	Result
(MHz)	Level (dBm)	(dBm)	(dBm)	
849	-14.4	-13.0	1.4	Complied

#### Note(s):

1. The band edge result was obtained by integrating the 100 kHz strip immediately adjacent to the band edge using a channel power function of the measurement analyser.





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### **Test Summary:**

FCC Part:	2.1053 & 22.917
Test Method Used:	As detailed in ANSI TIA-603-C-2004 Section 2.2.12 referencing FCC CFR Parts 2.1053 and 22.917
Modulation:	HSDPA 2

### **Environmental Conditions:**

Temperature (°C):	22
Relative Humidity (%):	28

### **Results: Bottom Band Edge**

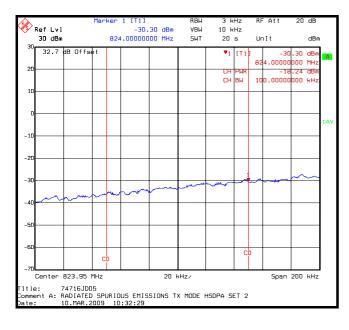
Frequency	Peak Emission	Limit	Margin	Result
(MHz)	Level (dBm)	(dBm)	(dBm)	
824	-18.2	-13.0	5.2	Complied

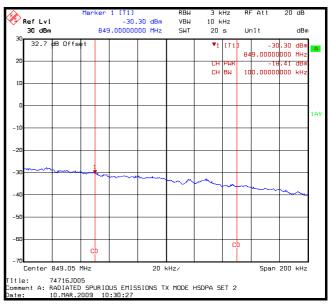
### **Results: Top Band Edge**

Frequency	Peak Emission	Limit	Margin	Result
(MHz)	Level (dBm)	(dBm)	(dBm)	
849	-18.4	-13.0	5.4	Complied

#### Note(s):

1. The band edge result was obtained by integrating the 100 kHz strip immediately adjacent to the band edge using a channel power function of the measurement analyser.





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### **Test Summary:**

FCC Part:	2.1053 & 22.917
Test Method Used:	As detailed in ANSI TIA-603-C-2004 Section 2.2.12 referencing FCC CFR Parts 2.1053 and 22.917
Modulation:	HSDPA 3

### **Environmental Conditions:**

Temperature (°C):	22
Relative Humidity (%):	28

### **Results: Bottom Band Edge**

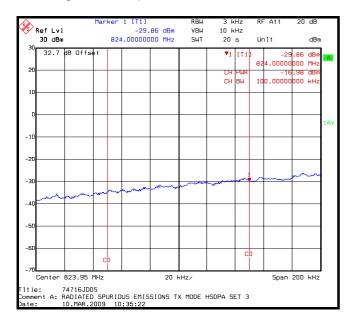
Frequency	Peak Emission	Limit	Margin	Result
(MHz)	Level (dBm)	(dBm)	(dBm)	
824	-17.0	-13.0	4.0	Complied

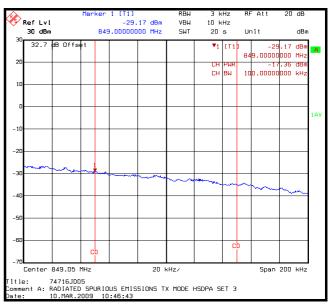
### **Results: Top Band Edge**

Frequency	Peak Emission	Limit	Margin	Result
(MHz)	Level (dBm)	(dBm)	(dBm)	
849	-17.4	-13.0	4.4	Complied

#### Note(s):

1. The band edge result was obtained by integrating the 100 kHz strip immediately adjacent to the band edge using a channel power function of the measurement analyser.





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### **Test Summary:**

FCC Part:	2.1053 & 22.917	
Test Method Used:	As detailed in ANSI TIA-603-C-2004 Section 2.2.12 referencing FCC CFR Parts 2.1053 and 22.917	
Modulation:	HSDPA 4	

### **Environmental Conditions:**

Temperature (°C):	22
Relative Humidity (%):	28

#### **Results: Bottom Band Edge**

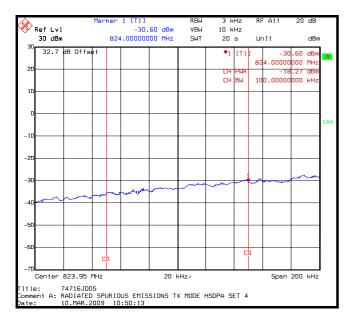
Frequency	Peak Emission	Limit	Margin	Result
(MHz)	Level (dBm)	(dBm)	(dBm)	
824	-18.3	-13.0	5.3	Complied

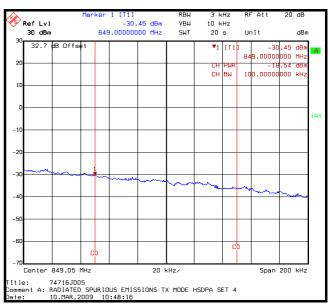
### **Results: Top Band Edge**

Frequency	Peak Emission	Limit	Margin	Result
(MHz)	Level (dBm)	(dBm)	(dBm)	
849	-18.5	-13.0	5.5	Complied

#### Note(s):

1. The band edge result was obtained by integrating the 100 kHz strip immediately adjacent to the band edge using a channel power function of the measurement analyser.





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### **6. Measurement Uncertainty**

No measurement or test can ever be perfect and the imperfections give rise to error of measurement in the results. Consequently the result of a measurement is only an approximation to the value of the measurand (the specific quantity subject to measurement) and is only complete when accompanied by a statement of the uncertainty of the approximation.

The expression of uncertainty of a measurement result allows realistic comparison of results with reference values and limits given in specifications and standards.

The uncertainty of the result may need to be taken into account when interpreting the measurement results.

The reported expanded uncertainties below are based on a standard uncertainty multiplied by an appropriate coverage factor such that a confidence level of approximately 95% is maintained. For the purposes of this document "approximately" is interpreted as meaning "effectively" or "for most practical purposes".

Measurement Type	Range	Confidence Level (%)	Calculated Uncertainty
AC Conducted Spurious Emissions	0.15 MHz to 30 MHz	95%	±3.72 dB
Effective Radiated Power (ERP)	Not applicable	95%	±2.94 dB
Frequency Stability	Not applicable	95%	±11.4 ppm
Occupied Bandwidth	824 to 849 MHz	95%	±11.4 ppm
Radiated Spurious Emissions	30 MHz to 1000 MHz	95%	±4.64 dB
Radiated Spurious Emissions	1 GHz to 26 GHz	95%	±2.94 dB

The methods used to calculate the above uncertainties are in line with those recommended within the various measurement specifications. Where measurement specifications do not include guidelines for the evaluation of measurement uncertainty the published guidance of the appropriate accreditation body is followed.

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# **Appendix 1. Test Equipment Used**

RFI No.	Instrument	Manufacturer	Type No.	Serial No.	Date Last Calibrated	Cal. Interval
A004	LISN	Rohde & Schwarz	ESH3-Z5	890604/027	19 May 2008	12
A1299	Antenna	Schaffner	CBL6143	5094	28 Jul 2008	12
A1534	Pre Amplifier	Hewlett Packard	8449B OPT H02	3008A00405	Calibrated before use	12
A1818	Antenna	EMCO	3115	00075692	25 Oct 2008	12
A1830	Pulse Limiter	Rhode & Schwarz	ESH3-Z2	100668	05 Jan 2009	12
E013	Environmental Chamber	Sanyo	ATMOS chamber	None	Calibrated before use	12
K0002	3m RSE Chamber	Rainford EMC	N/A	N/A	26 Aug 2008	12
L0990	Telecommunications Test Set	Rhode & Schwarz	CMU 200	S220447	18 Feb 2009	12
M1068	Thermometer	Iso-Tech	RS55	93102884	09 Jul 2008	12
M1242	Spectrum Analyser	Rhode & Schwarz	FSEM30	845986/022	09 Dec 2008	12
M127	Spectrum Analyser	Rohde & Schwarz	FSEB 30	842 659/016	21 Aug 2008	12
M1379	Test Receiver	Rhode & Schwarz	ESIB7	100330	14 Aug 2008	12

**NB** In accordance with UKAS requirements. All the measurement equipment is on a calibration schedule.

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