



EMC Test Data

Client:	Repeater Technologies	Job Number:	J43477
Model:	RC1920C	T-Log Number:	T43891
		Proj Eng:	David Bare
Contact:	Dirk Kieger		
Emissions Spec:	FCC 24 & IC-RSS133	Class:	N/A
Immunity Spec:		Environment:	

EMC Test Data

For The

Repeater Technologies

Model

RC1920C



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Contact:	Dirk Kieger		
Emissions Spec:	FCC 24 & IC-RSS133	Class:	N/A
Immunity Spec:	Enter immunity spec on cover	Environment:	

EUT INFORMATION

General Description

The EUT is an repeater amplifier which is designed to be used with base station PCS towers. Normally, the EUT would be placed on a table top during operation. The EUT was, therefore, treated as table-top equipment during testing to simulate the end user environment. The electrical rating of the EUT is 120V, 60 Hz, 12 Amps.

Equipment Under Test

Manufacturer	Model	Description	Serial Number	FCC ID
Repeater Technologies	RC1920C	amplifier	N/A	

EUT Enclosure

The EUT enclosure is primarily constructed of fabricated sheet steel. It measures approximately 35.6 cm wide by 29.2 cm deep by 40.6 cm high.

Modification History

Mod. #	Test	Date	Modification
1			
2			
3			



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Emissions Spec:	FCC 24 & IC-RSS133	Class:	N/A
Immunity Spec:	Enter immunity spec on cover	Environment:	

Test Configuration #1

Local Support Equipment

Manufacturer	Model	Description	Serial Number	FCC ID
HP	Pavilion 7840	PC	KR10504395	DoC
Mitsubishi	Diamond Plus 91	Monitor	011A34108	DoC
HP	5181	Keyboard	BD05106245	DoC
HP	M-S34	Mouse	LZS04915643	DoC
HP	2225C	Printer	Z714S40166	DS16XU2225

Remote Support Equipment

Manufacturer	Model	Description	Serial Number	FCC ID
None				

EUT Interface Ports

EUT Port	Connected To	Cable(s)		
		Description	Shielded or Unshielded	Length(m)
USB	Unterminated	USB	Shielded	2
Ethernet	PC	RJ-45	Unshielded	1.5
Serial	PC	RS-232	Shielded	1.5
4xTelephone	Unterminated	RJ-11	Unshielded	2

EUT Operation During Emissions

A signal generator was used to provide CDMA modulation to EUT, which was set to produce maximum output power.



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Contact: Dirk Kieger	
Spec: FCC 24 & IC-RSS133	Class: N/A

Section 2.1046 & RSS-133 (6.2): RF Power

Test Specifics

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 6/19/01

Config. Used: 1

Test Engineer: jmartinez

Config Change: None

Test Location: SVOATS #2

EUT Voltage: 120V/60Hz

General Test Configuration

The EUT was located on the turntable for radiated field strength measurements and the local support equipment was located underneath the table.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions:

Temperature: 23°C

Rel. Humidity: 31%

Summary of Results

Run #	Test Performed	Limit	Result	Comment
1	Conducted Output Power	24.232(a) & RSS-133(6.2)	Pass	Base (Forward) antenna
2	Conducted Output Power	24.232(b) & RSS-133(6.2)	Pass	Main Mobile (Reverse) antenna
3	Conducted Output Power	24.232(b) & RSS-133(6.2)	Pass	Diversity Mobile (Reverse) antenna

Modifications Made During Testing:

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

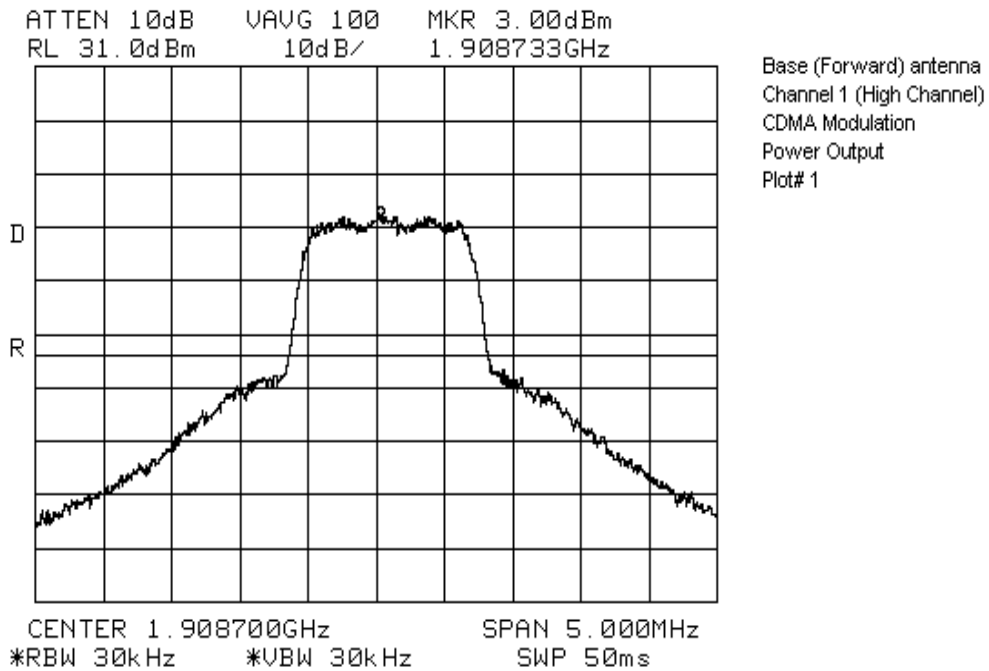


EMC Test Data

Client: Repeater Technologies	Job Number: J43477
Model: RC1920C	T-Log Number: T43891
	Proj Eng: David Bare
Contact: Dirk Kieger	
Spec: FCC 24 & IC-RSS133	Class: N/A

Run #1: Conducted Output Power (Base (forward) antenna)

Measured Value	Corredion factor	Power Output	Resolution	Comments
(dBm)	(dB)	(dBm)	(kHz)	
3.0	15.2	18.2	30	Plot# 1
3.0	15.2	18.2	30	Plot# 2





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Client: Repeater Technologies

Job Number: J43477

Model: RC1920C

T-Log Number: T43891

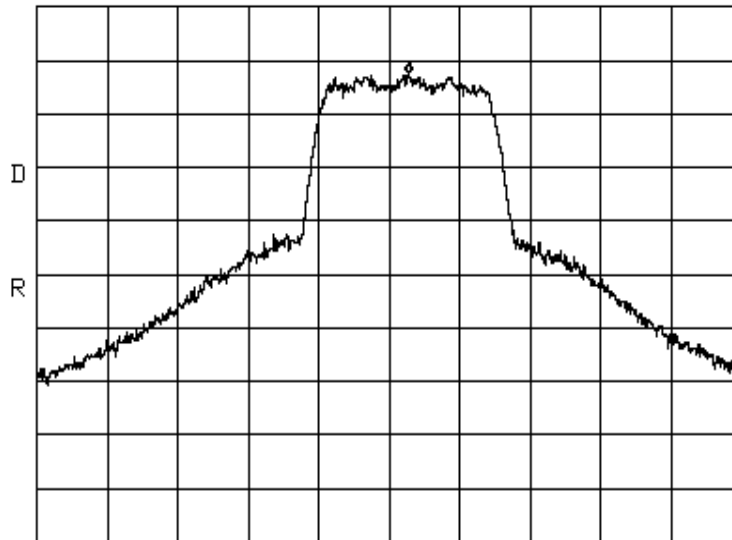
Proj Eng: David Bare

Contact: Dirk Kieger

Spec: FCC 24 & IC-RSS133

Class: N/A

*ATTEN 10dB VAUG 100 MKR 3.40dBm
RL 15.9dBm 10dB/ 1.851302GHz



Base (Forward)
Channel 2 (Low Channel)
CDMA modulation
Power Output
Plot# 2

CENTER 1.851160GHz SPAN 5.000MHz
*RBW 30kHz *VBW 30kHz SWP 50ms

Note 1:

The power output was measured with a 30 kHz resolution bandwidth. The output power was corrected using the following formula $10 \cdot \log (RB\ 1 / RB\ 2)$. RB 1 is the 1 MHz specified Resolution bandwidth and RB 2 is the Resolution bandwidth used for the measurement. $10 \cdot \log (1\text{MHz} / 30\text{KHz}) = 15.2\text{ dB}$ correction.



EMC Test Data

Client: Repeater Technologies

Job Number: J43477

Model: RC1920C

T-Log Number: T43891

Proj Eng: David Bare

Contact: Dirk Kieger

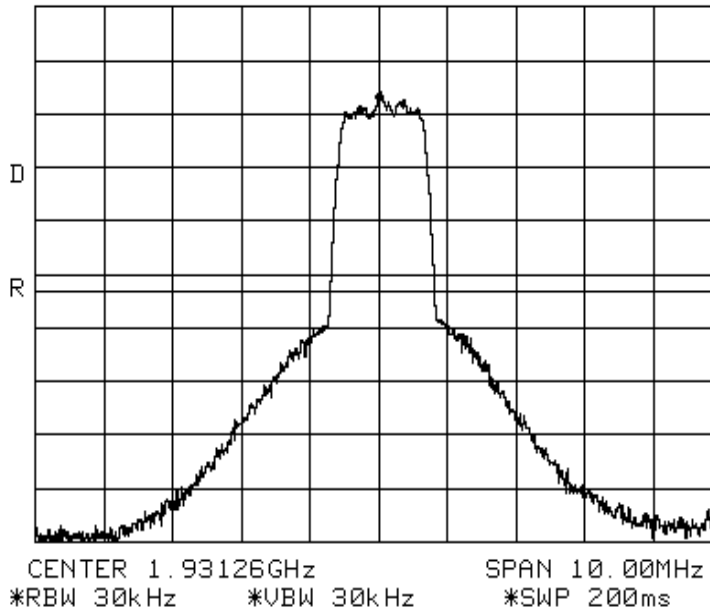
Spec: FCC 24 & IC-RSS133

Class: N/A

Run #2: Conducted Output Power (Mobile Diversity (Reverse) antenna)

Measured Value	Corredion factor	Power Output	Resolution	Comments
(dBm)	(dB)	(dBm)	(kHz)	
22.2	15.2	37.4	30	Plot# 3

ATTEN 20dB VAVG 50 MKR 22.17dBm
RL 40.0dBm 10dB/ 1.93128GHz



Note 1:

The power output was measured with a 30 kHz resolution bandwidth. The output power was corrected using the following formula $10 * \log (RB\ 1 / RB\ 2)$. RB 1 is the 1 MHz specified Resolution bandwidth and RB 2 is the Resolution bandwidth used for the measurement. $10 * \log (1\text{MHz} / 30\text{KHz}) = 15.2\text{ dB}$ correction.

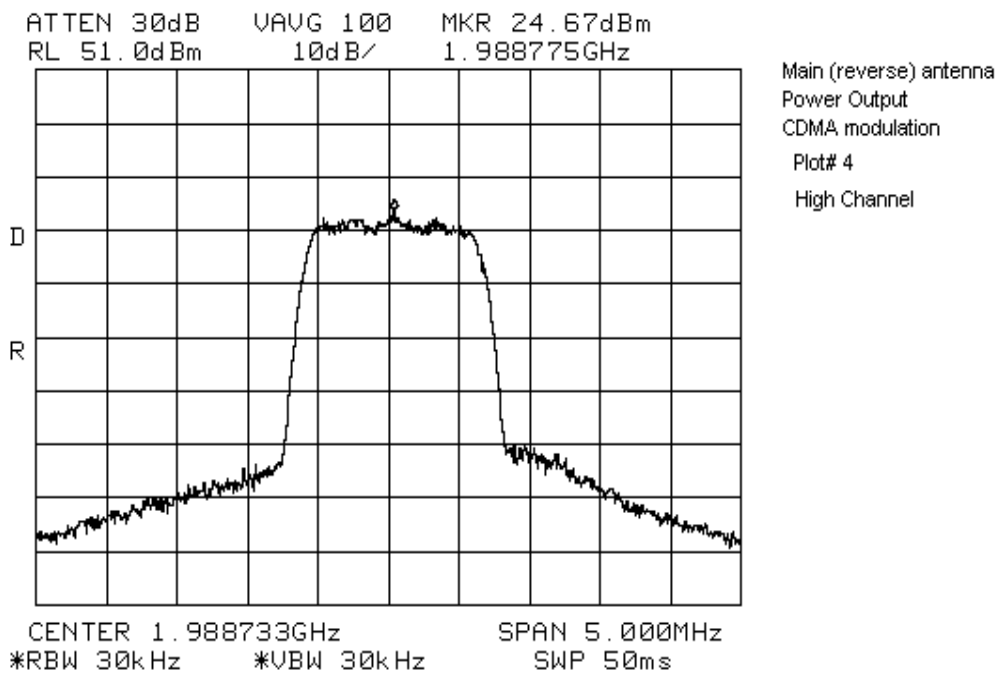


EMC Test Data

Client: Repeater Technologies	Job Number: J43477
Model: RC1920C	T-Log Number: T43891
	Proj Eng: David Bare
Contact: Dirk Kieger	
Spec: FCC 24 & IC-RSS133	Class: N/A

Run #3: Conducted Output Power (Mobile Main (Reverse) antenna)

Measured Value	Corredion factor	Power Output	Resolution	Comments
(dBm)	(dB)	(dBm)	(kHz)	
24.7	15.2	39.9	30	Plot# 4



Note 1: The power output was measured with a 30 kHz resolution bandwidth. The output power was corrected using the following formula $10 * \log (RB\ 1 / RB\ 2)$. RB 1 is the 1 MHz specified Resolution bandwidth and RB 2 is the Resolution bandwidth used for the measurement. $10 * \log (1\text{MHz} / 30\text{KHz}) = 15.2\text{ dB}$ correction.



EMC Test Data

Client: Repeater Technologies	Job Number: J43477
Model: RC1920C	T-Log Number: T43891
	Proj Eng: David Bare
Contact: Dirk Kieger	
Spec: FCC 24 & IC-RSS133	Class: N/A

Section 2.1049 & RSS-133 (5.6): Occupied Bandwidth

Test Specifics

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 6/19/01

Config. Used: 1

Test Engineer: jmartinez

Config Change: None

Test Location: SVOATS #2

EUT Voltage: 120V/60Hz

General Test Configuration

When performing conducted measurements from the EUT's antenna port, the antenna port of the EUT was connected to the spectrum analyzer or power meter via a suitable attenuator to prevent overloading the measurement system. All measurements are corrected. Modulation must not exceed manufactures stated bandwidth.

For this specific test the occupied bandwidth was measured to provide the correct Resolution bandwidth that will be used for the bandedge measurements. This requirement is specified in 24.238(b) and RSS-133 (5.9) & (6.3)(a).

Because the EUT is an amplifier, input and output plots were made to show that the bandwidth was not altered. By altered we refer to the bandwidth increasing in width.

Ambient Conditions:

Temperature: 23°C

Rel. Humidity: 31%

Summary of Results

Run	Test Performed	Limit	Result	Comment
1	Occupied Bandwidth	24.238(b) & RSS-133(5.6)	Pass	Base (Forward) Channel 1
2	Occupied Bandwidth	24.238(b) & RSS-133(5.6)	Pass	Base (Forward) Channel 2
3	Occupied Bandwidth	24.238(b) & RSS-133(5.6)	Pass	Main Mobile (Reverse) antenna
4	Occupied Bandwidth	24.238(b) & RSS-133(5.6)	Pass	Diversity Mobile (Reverse) antenna



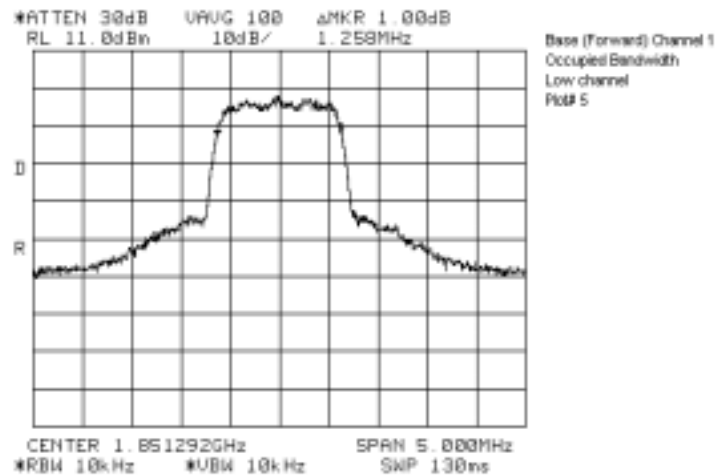
EMC Test Data

Client: Repeater Technologies	Job Number: J43477
Model: RC1920C	T-Log Number: T43891
	Proj Eng: David Bare
Contact: Dirk Kieger	
Spec: FCC 24 & IC-RSS133	Class: N/A

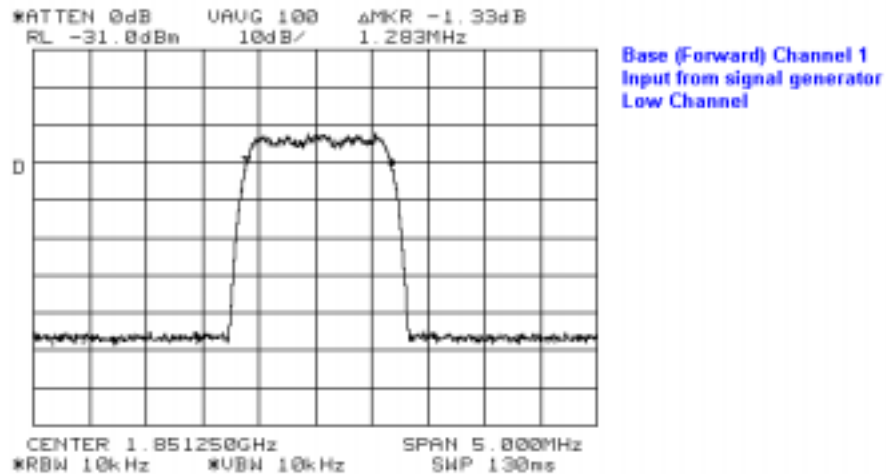
Run #1: Occupied Bandwidth (Base (forward) Channel 1)

Measured Value	Specified Bandwidth	Resolution	Comments
(dBm)	MHz	(kHz)	
1.258	1.25	10	

Output Plot



Input Plot



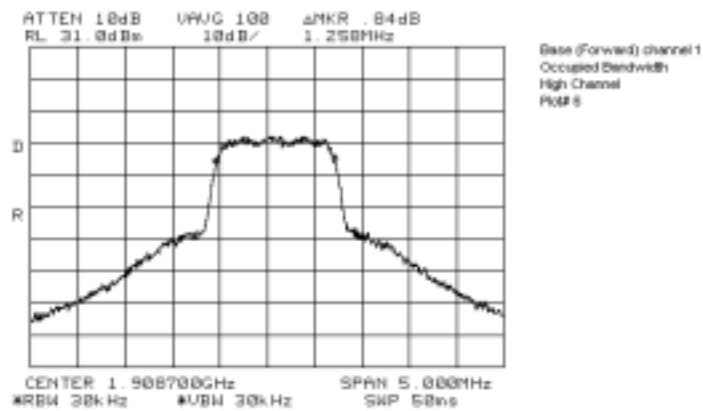


EMC Test Data

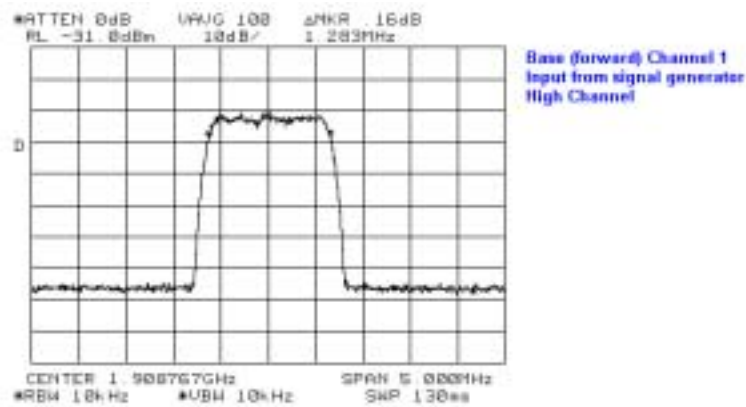
Client: Repeater Technologies	Job Number: J43477
Model: RC1920C	T-Log Number: T43891
	Proj Eng: David Bare
Contact: Dirk Kieger	
Spec: FCC 24 & IC-RSS133	Class: N/A

Measured Value	Specified Bandwidth	Resolution	Comments
(dBm)	MHz	(kHz)	
1.258	1.25	10	

Output Plot



Input Plot





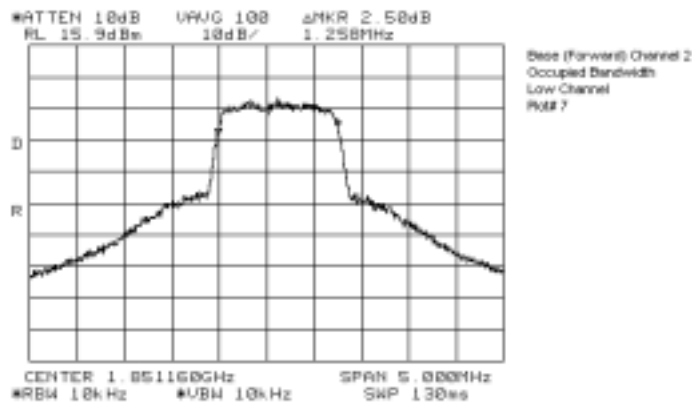
EMC Test Data

Client: Repeater Technologies	Job Number: J43477
Model: RC1920C	T-Log Number: T43891
	Proj Eng: David Bare
Contact: Dirk Kieger	
Spec: FCC 24 & IC-RSS133	Class: N/A

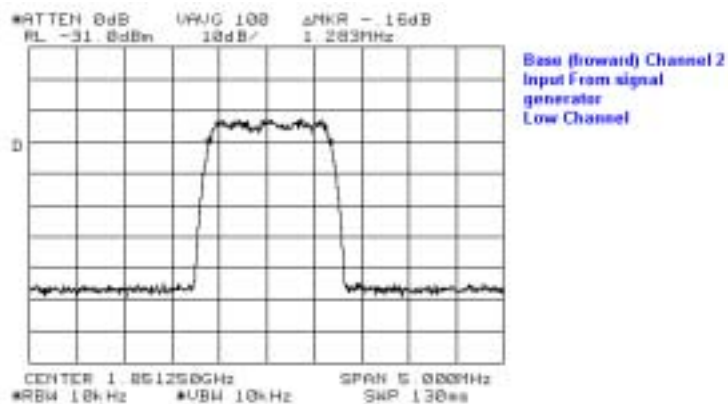
Run #2: Occupied Bandwidth (Base (forward) Channel 2)

Measured Value	Specified Bandwidth	Resolution	Comments
(dBm)	MHz	(kHz)	
1.258	1.25	10	

Output Plot



Input Plot



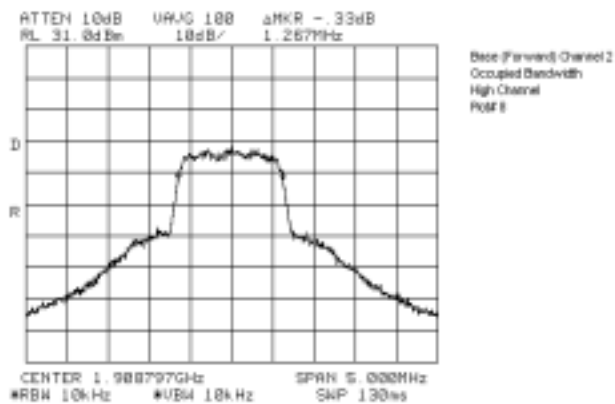


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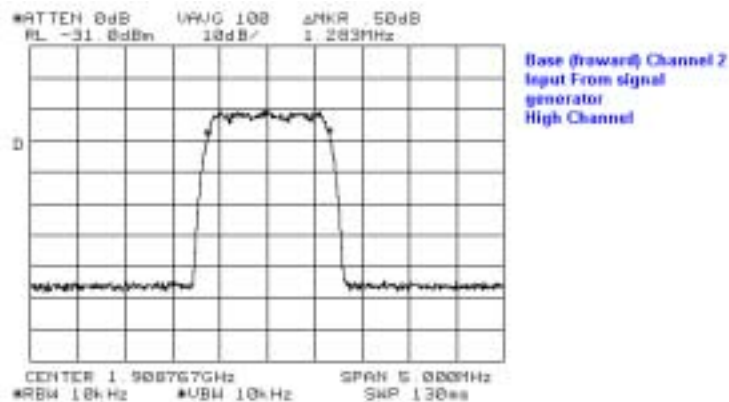
Client: Repeater Technologies	Job Number: J43477
Model: RC1920C	T-Log Number: T43891
	Proj Eng: David Bare
Contact: Dirk Kieger	
Spec: FCC 24 & IC-RSS133	Class: N/A

Measured Value	Specified Bandwidth	Resolution	Comments
(dBm)	MHz	(kHz)	
1.258	1.25	10	

Output Plot



Input Plot





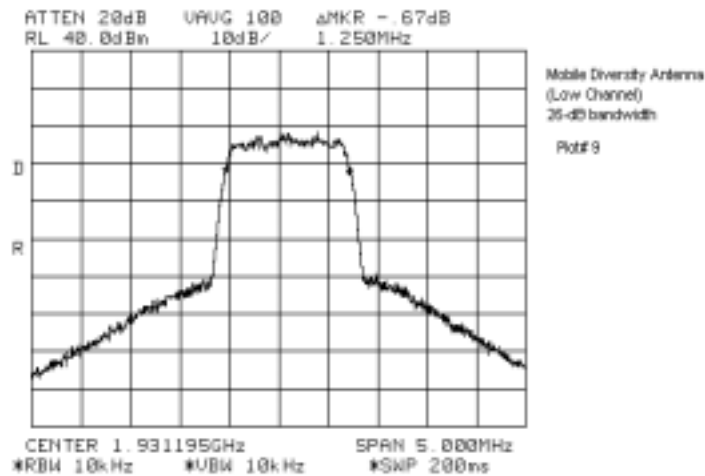
EMC Test Data

Client: Repeater Technologies	Job Number: J43477
Model: RC1920C	T-Log Number: T43891
Contact: Dirk Kieger	Proj Eng: David Bare
Spec: FCC 24 & IC-RSS133	Class: N/A

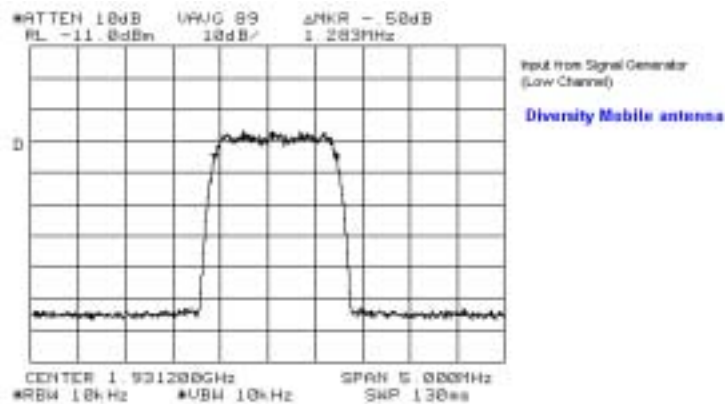
Run #3: Occupied Bandwidth (Diversity Mobile (Reverse) antenna)

Measured Value	Specified Bandwidth	Resolution	Comments
(dBm)	MHz	(kHz)	
1.250	1.25	10	

Output Plot



Input Plot





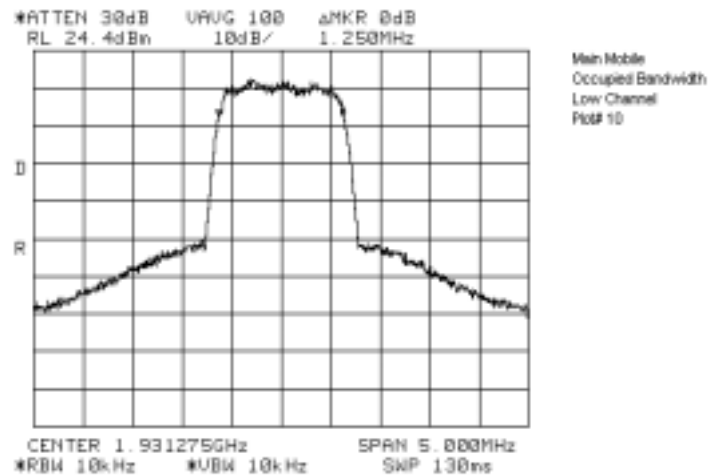
EMC Test Data

Client: Repeater Technologies	Job Number: J43477
Model: RC1920C	T-Log Number: T43891
	Proj Eng: David Bare
Contact: Dirk Kieger	
Spec: FCC 24 & IC-RSS133	Class: N/A

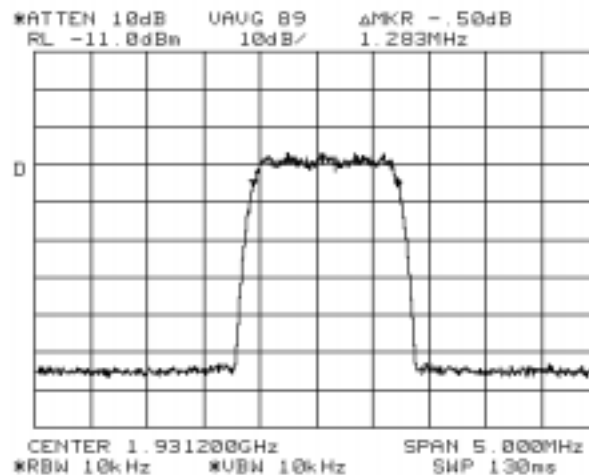
Run #4: Occupied Bandwidth (Main Mobile (Reverse) antenna)

Measured Value	Specified Bandwidth	Resolution	Comments
(dBm)	MHz	(kHz)	
1.250	1.25	10	

Output Plot



Input Plot





EMC Test Data

Client: Repeater Technologies	Job Number: J43477
Model: RC1920C	T-Log Number: T43891
	Proj Eng: David Bare
Contact: Dirk Kieger	
Spec: FCC 24 & IC-RSS133	Class: N/A

Section 2.1051, RSS-133 (6.3): Spurious emission at the Antenna Terminal

Test Specifics

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 6/19/01	Config. Used: 1
Test Engineer: jmartinez	Config Change: None
Test Location: SVOATS #2	EUT Voltage: 120V/60Hz

General Test Configuration

The EUT and all local support equipment were located on the table for testing. The Eut was connected directly to Test Receiver. A 20-dB attenuator was used between the EUT and Test Receiver.

Ambient Conditions: Temperature: 23°C
Rel. Humidity: 31%

Summary of Results

Run	Test Performed	Limit	Result	Comment
1	Bandedge Measurement & Out-Of-Band emission	24.238(a) & RSS-133 (6.3)	Pass	Base (Forward) Channel 1
2	Bandedge Measurement & Out-Of-Band emission	24.238(a) & RSS-133 (6.3)	Pass	Base (Forward) Channel 2
3	Bandedge Measurement & Out-Of-Band emission	24.238(a) & RSS-133 (6.3)	Pass	Main Mobile (Reverse) antenna
4	Bandedge Measurement & Out-Of-Band emission	24.238(a) & RSS-133 (6.3)	Pass	Diversity Mobile (Reverse) antenna

Modifications Made During Testing:

No modifications were made to the EUT during testing

Deviations From The Standard

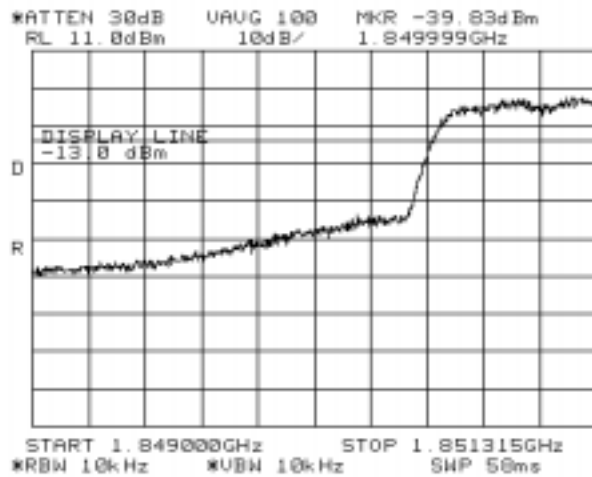
No deviations were made from the requirements of the standard.



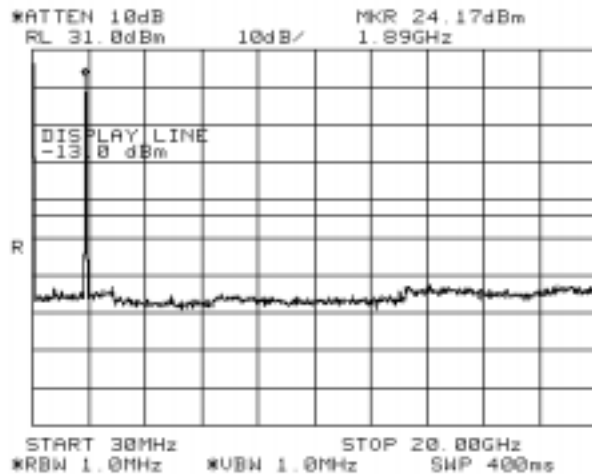
EMC Test Data

Client: Repeater Technologies	Job Number: J43477
Model: RC1920C	T-Log Number: T43891
	Proj Eng: David Bare
Contact: Dirk Kieger	
Spec: FCC 24 & IC-RSS133	Class: N/A

Run #1: Bandedge Measurement & Out-Of-Band emissions; (Base (forward) Channel 1)



Base (Reverse) Channel 1
Bandedge
Low channel

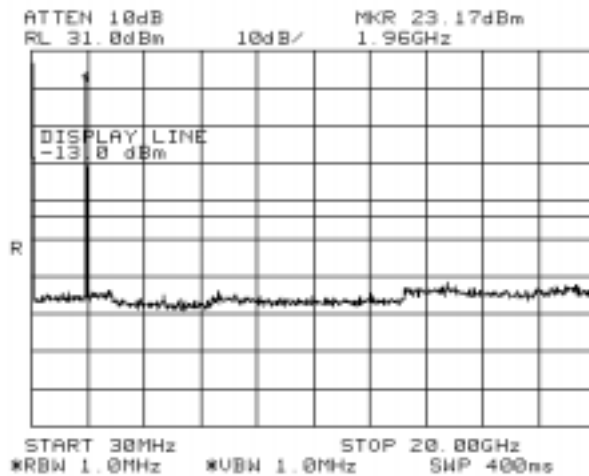
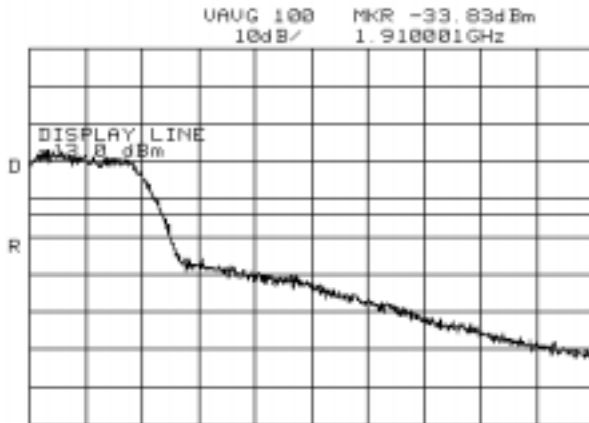


Base (Forward) Channel 1
Out-of-Band emission
Low Channel



EMC Test Data

Client: Repeater Technologies	Job Number: J43477
Model: RC1920C	T-Log Number: T43891
	Proj Eng: David Bare
Contact: Dirk Kieger	
Spec: FCC 24 & IC-RSS133	Class: N/A



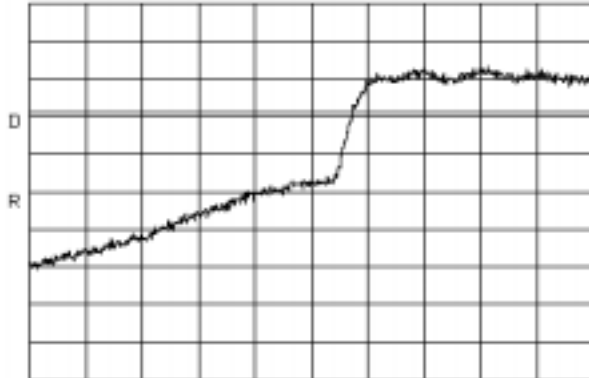


EMC Test Data

Client: Repeater Technologies	Job Number: J43477
Model: RC1920C	T-Log Number: T43891
	Proj Eng: David Bare
Contact: Dirk Kieger	
Spec: FCC 24 & IC-RSS133	Class: N/A

Run #2: Bandedge Measurement & Out-Of-Band emissions; (Base (forward) Channel 2)

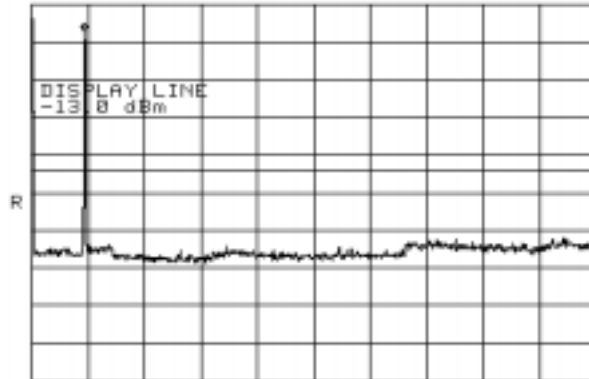
*ATTEN 10dB UAUG 100 MKR -39.10dBm
RL 15.9dBm 10dB/ 1.850002GHz



START 1.849000GHz STOP 1.851850GHz
*RBW 10kHz *UBW 10kHz SWP 72ms

Base (Forward) Channel 2
Bandedge
Low Channel

*ATTEN 10dB UAUG 0 MKR 24.17dBm
RL 31.0dBm 10dB/ 1.89GHz



START 30MHz STOP 20.88GHz
*RBW 1.0MHz *UBW 1.0MHz SWP 400ms

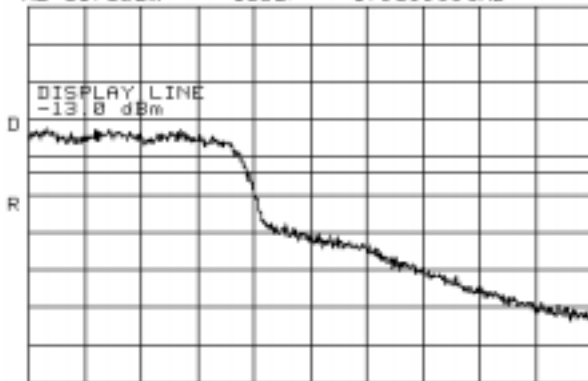
Base (Forward) Channel 2
Out-of-Band emissions
Low Channel



EMC Test Data

Client: Repeater Technologies	Job Number: J43477
Model: RC1920C	T-Log Number: T43891
	Proj Eng: David Bare
Contact: Dirk Kieger	
Spec: FCC 24 & IC-RSS133	Class: N/A

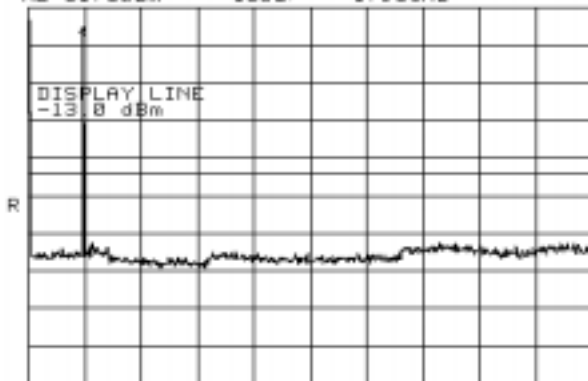
ATTEN 10dB UAG 82 MKR -35.50dBm
RL 31.8dBm 10dB/ 1.909999GHz



START 1.908377GHz STOP 1.911000GHz
*RBW 10kHz *VBW 10kHz SWP 66ms

Base (forward) Channel 2
Bandedge
High Channel

ATTEN 10dB UAG 82 MKR 23.67dBm
RL 31.8dBm 10dB/ 1.96GHz



START 30MHz STOP 20.00GHz
*RBW 1.0MHz *VBW 1.0MHz SWP 400ms

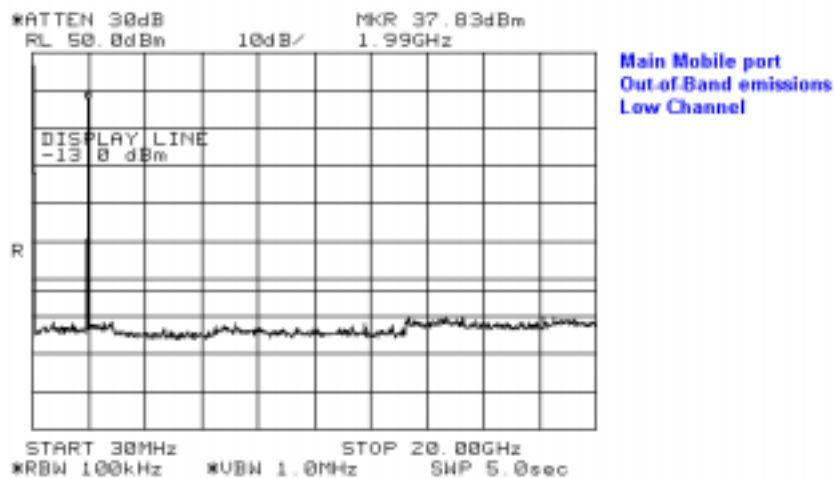
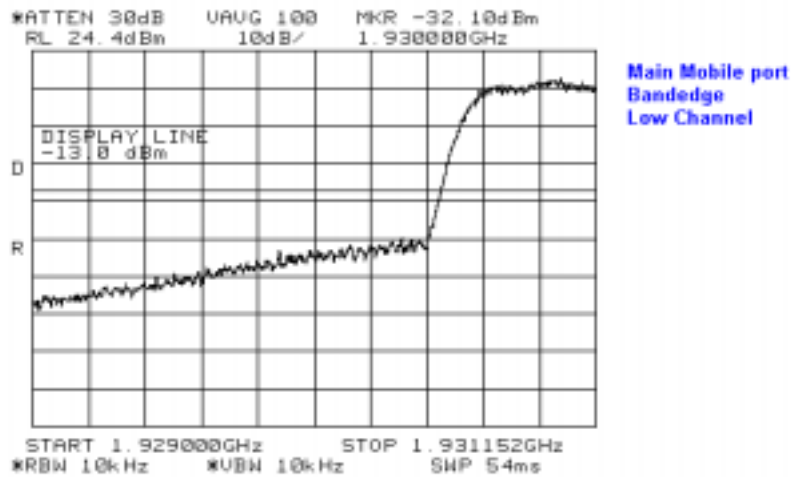
Base (forward) Channel 2
Out-of-Band emissions
High Channel



EMC Test Data

Client: Repeater Technologies	Job Number: J43477
Model: RC1920C	T-Log Number: T43891
	Proj Eng: David Bare
Contact: Dirk Kieger	
Spec: FCC 24 & IC-RSS133	Class: N/A

Run #3: Bandedge Measurement & Out-Of-Band emissions; (Main Mobile port)

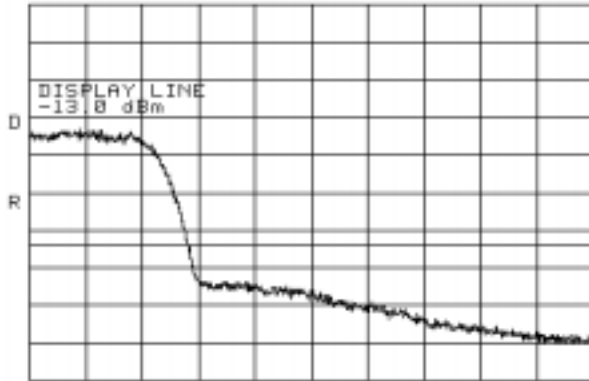




EMC Test Data

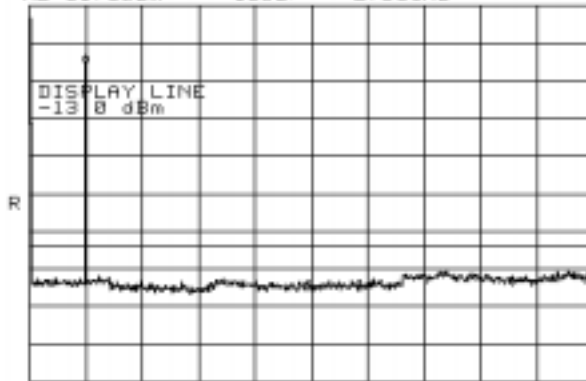
Client: Repeater Technologies	Job Number: J43477
Model: RC1920C	T-Log Number: T43891
	Proj Eng: David Bare
Contact: Dirk Kieger	
Spec: FCC 24 & IC-RSS133	Class: N/A

ATTEN 30dB UAG 100 MKR -28.33dBm
RL 51.8dBm 10dB/ 1.989999GHz



Main Mobile port
Bandedge
High Channel

ATTEN 30dB UAG 100 MKR 35.83dBm
RL 51.8dBm 10dB/ 2.03GHz



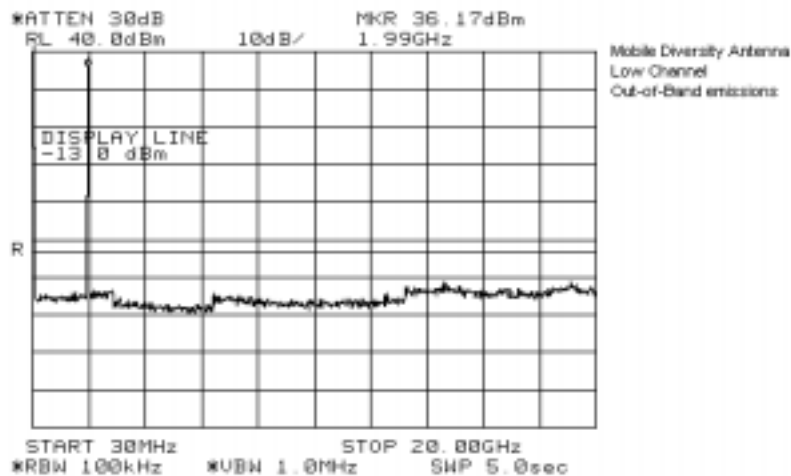
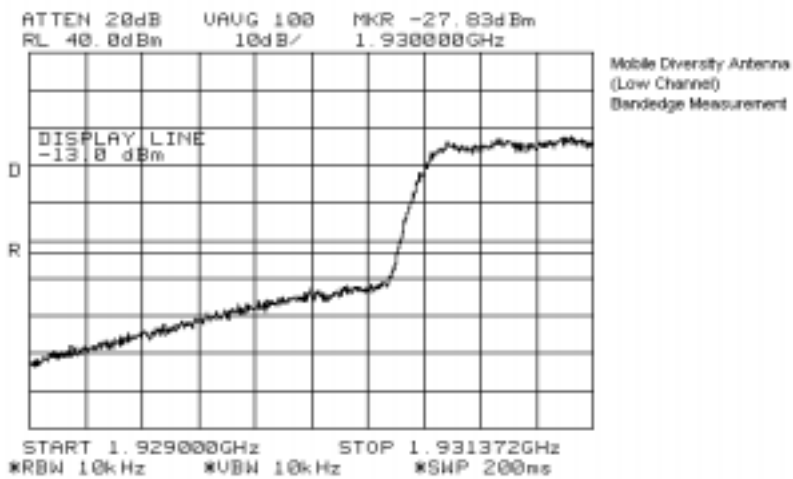
Main Mobile port
Out-of-Band
High Channel



EMC Test Data

Client: Repeater Technologies	Job Number: J43477
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	Proj Eng: David Bare
Contact: Dirk Kieger	
Spec: FCC 24 & IC-RSS133	Class: N/A

Run #4: Bandedge Measurement & Out-Of-Band emissions; (Mobile Diversity Antenna)





EMC Test Data

Client: Repeater Technologies

Job Number: J43477

Model: RC1920C

T-Log Number: T43891

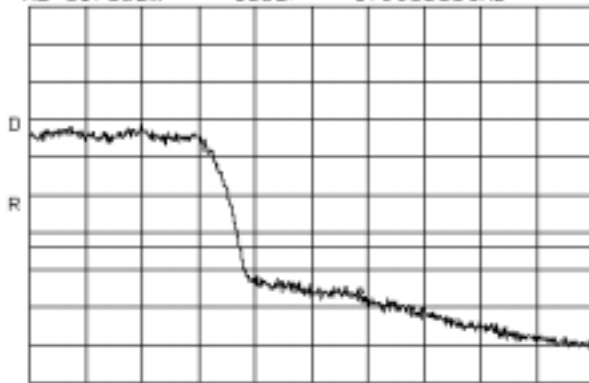
Proj Eng: David Bare

Contact: Dirk Kieger

Spec: FCC 24 & IC-RSS133

Class: N/A

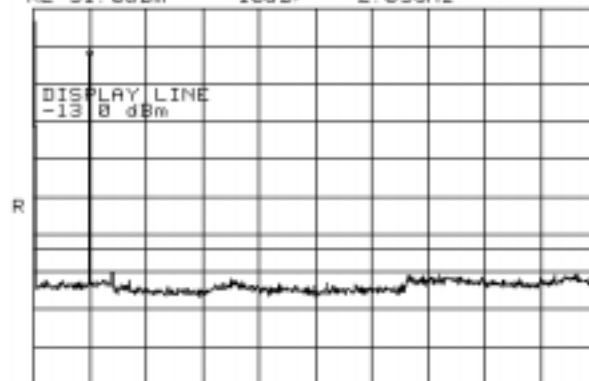
ATTEN 30dB URG 100 MKR -25.83dBm
RL 51.8dBm 10dB/ 1.990000GHz



Mobile diversity antenna
High Channel
Bandedge Measurement

START 1.988580GHz STOP 1.991000GHz
*RBW 10kHz *VBW 10kHz SWP 61ms

ATTEN 30dB URG 100 MKR 38.17dBm
RL 51.8dBm 10dB/ 2.03GHz



Mobile Diversity antenna
High Channel
Out-of-Band Emissions

START 30MHz STOP 20.00GHz
*RBW 100kHz *VBW 1.0MHz SWP 5.0sec



EMC Test Data

Client: Repeater Technologies	Job Number: J43477
Model: RC1920C	T-Log Number: T43891
	Proj Eng: David Bare
Contact: Dirk Kieger	
Spec: FCC 24 & IC-RSS133	Class: N/A

Section 2.1053 & RSS-133 (6.3): Field strenght of Spurious emissions

Test Specifics

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 6/19/01

Config. Used: 1

Test Engineer: jmartinez

Config Change: None

Test Location: SVOATS #2

EUT Voltage: 120V/60Hz

General Test Configuration

The EUT was located on the turntable for radiated emissions testing.

On the OATS, the measurement antenna was located 3m from the EUT for the frequency range 1 - 20 GHz.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT. For any Spurious emission more than 20-dB of the field strenght limit, substitution was performed. Substitution Method is not required for Spurious emissions 20-dB below the calculated field strength limit.

Ambient Conditions:

Temperature: 21°C

Rel. Humidity: 35%

Summary of Results

Run #	Test Performed	Limit	Result	Margin
1	RE, 1000 - 19000 MHz Maximized Emissions	24.238(a) & RSS-133 (6.3)(a)(ii)	Pass	-20dB @ 3977.5 MHz
2	RE, 1000 - 19000 MHz Maximized Emissions	24.238(a) & RSS-133 (6.3)(a)(ii)	Pass	-22.45dB @ 3952 MHz

Modifications Made During Testing:

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.



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Spec: FCC 24 & IC-RSS133	Class: N/A

Run #1: Maximized readings, 1000 - 19000 MHz

Harmonic measurements of the Fundamental Frequency of 1988.75 MHz

Frequency	Level	Pol	24.238(a)		Detector	Azimuth	Height	Comments
MHz	dBμV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
Power set to Maximum.								
3977.500	64.2	H	84.2	-20.0	Pk	145	1.1	Peak reading, peak limit (Note 2)
3977.500	63.8	V	84.2	-20.4	Pk	140	1.0	Peak reading, peak limit (Note 2)
7955.000	49.2	H	84.2	-35.0	Pk	165	1.2	Peak reading, peak limit (Note 2)
7955.000	47.4	V	84.2	-36.8	Pk	169	1.1	Peak reading, peak limit (Note 2)
5966.250	47.3	H	84.2	-37.0	Pk	203	1.0	Peak reading, peak limit (Note 2)
5966.250	46.6	V	84.2	-37.6	Pk	193	1.0	Peak reading, peak limit (Note 2)
9943.75	45.3	H	84.2	-38.9	Pk	125	1.1	Peak reading, peak limit (Note 2)
13921.25	44.5	H	84.2	-39.7	Pk	0	1.1	Note 1
19887.50	44.3	V	84.2	-39.9	Pk	0	1.1	Note 1
11932.50	44.2	H	84.2	-40.0	Pk	0	1.1	Note 1
19887.50	44.2	H	84.2	-40.0	Pk	0	1.1	Note 1
17898.75	44.2	V	84.2	-40.0	Pk	0	1.1	Note 1
17898.75	44.1	H	84.2	-40.1	Pk	0	1.1	Note 1
15910.00	43.2	H	84.2	-41.0	Pk	0	1.1	Note 1
9943.75	43.2	V	84.2	-41.0	Pk	228	1.1	Peak reading, peak limit (Note 2)
13921.25	42.2	V	84.2	-42.0	Pk	0	1.1	Note 1
15910.00	40.5	V	84.2	-43.7	Pk	0	1.1	Note 1
11932.50	40.2	V	84.2	-44.0	Pk	0	1.1	Note 1

Note 1: No other emission detected, within 20-dB of the limit, beyond the 4th harmonic.

Note 2: Substitution was not performed since the measured field strength is 20-dB below the limit.



EMC Test Data

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Model: RC1920C	T-Log Number: T43891
	Proj Eng: David Bare
Contact: Dirk Kieger	
Spec: FCC 24 & IC-RSS133	Class: N/A

Run #2: Maximized readings, 1000 - 19000 MHz

Harmonic measurements of the Fundamental Frequency of 1976.25 MHz

Frequency	Level	Pol	24.238(a)		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
Power set to Maximum.								
3952.000	61.8	V	84.2	-22.5	Pk	56	1.1	Peak reading, peak limit (Note 2)
3952.000	57.8	H	84.2	-26.4	Pk	91	1.2	Peak reading, peak limit (Note 2)
5928.000	51.3	V	84.2	-32.9	Pk	25	1.1	Peak reading, peak limit (Note 2)
5928.000	48.8	H	84.2	-35.4	Pk	45	1.2	Peak reading, peak limit (Note 2)
7905.000	47.6	V	84.2	-36.6	Pk	35	1.1	Peak reading, peak limit (Note 2)
7905.000	47.1	H	84.2	-37.1	Pk	315	1.2	Peak reading, peak limit (Note 2)
19762.00	44.8	V	84.2	-39.4	Pk	0	1.1	Note 1
17786.00	44.5	V	84.2	-39.7	Pk	0	1.1	Note 1
9881.00	44.2	H	84.2	-40.0	Pk	0	1.1	Note 1
13833.00	44.2	V	84.2	-40.0	Pk	0	1.1	Note 1
15810.00	44.1	H	84.2	-40.1	Pk	0	1.1	Note 1
11857.00	43.2	H	84.2	-41.0	Pk	0	1.1	Note 1
15810.00	43.2	V	84.2	-41.0	Pk	0	1.1	Note 1
19762.00	42.3	H	84.2	-41.9	Pk	0	1.1	Note 1
13833.00	42.1	H	84.2	-42.1	Pk	0	1.1	Note 1
11857.00	42.1	V	84.2	-42.1	Pk	0	1.1	Note 1
17786.00	40.2	H	84.2	-44.0	Pk	0	1.1	Note 1
9881.00	40.2	V	84.2	-44.0	Pk	0	1.1	Note 1

Note 1: No other emission detected, within 20-dB of the limit, beyond the 3th harmonic.

Note 2: Substitution was not performed since the measured field strength is 20-dB below the limit.



EMC Test Data

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	Proj Eng: David Bare
Contact: Dirk Kieger	
Spec: FCC 24 & IC-RSS133	Class: N/A

Section 2.1055 & RSS-133 (7): Frequency Stability

Test Specifics

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test:	Config. Used:
Test Engineer:	Config Change:
Test Location: Enviromental Chamber	EUT Voltage:

General Test Configuration

EUT was place inside the Temperature Chamber and all local support equipment were located outside on a table for testing. The Eut was connected directly to Test Receiver. An attenuator was used between the EUT and Test Receiver.

Chamber was set to -30 to 50 degrees Celsius (60 degrees Celsius for Canada). Incremented 10 degree per temperature and let unit stabilized for every temperature.

Voltage stability was done at 20 degree Celsius. For battery operated units decrease DC voltage until battery end-point was found.

Voltage stability was done at 20 degree Celsius. For AC operated units varied voltage at 85% and 115% of the nomial AC voltage.

Ambient Conditions: Temperature: N/A
Rel. Humidity: N/A

Summary of Results

Run #	Test Performed	Limit	Result	Comment
1a	Temperature Vs. Frequency	24.235		No test

Modifications Made During Testing:

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.



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Spec: FCC 24 & IC-RSS133	Class: N/A

Run# 1a: Temperature Vs. Frequency

Customer has provided explanation as to the frequency correction during extreme temperature or voltage changes.
Please refer to Schematics label "S87-1304-01 rev. 11a" page 5 of 7.