



## FCC CFR47 CERTIFICATION

## PART 24E

## **TEST REPORT**

## FOR

## **CELLULAR PHONE AMPLIFIER**

## **MODEL: CM 1000**

## FCC ID:RSNCM1000

## REPORT NUMBER: 03U2456-1

## **ISSUE DATE: JANUARY 14, 2004**

Prepared for CELLPHONE-MATE, INC. 36543 SAN PEDRO DRIVE # 277 FREMONT, CA 94536 U.S.A.

Prepared by COMPLIANCE CERTIFICATION SERVICES 561F MONTEREY ROAD, ROUTE 2 MORGAN HILL, CA 95037, USA TEL: (408) 463-0885 FAX: (408) 463-0888



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## 1. TEST RESULT CERTIFICATION

COMPANY NAME:	CELLPHONE-MATE, INC. 36543 SAN PEDRO DRIVE # 277 FREMONT, CA 94536 U.S.A.
EUT DESCRIPTION	CELLULAR PHONE AMPLIFIER
MODEL NAME:	CM 1000
DATE TESTED:	JANUARY 14, 2004

TYPE OF EQUIPMENT	INTENTIONAL RADIATOR, CELL PHONE AMPLIFIER
MEASUREMENT PROCEDURE	ANSI 63.4 / 2001, TIA/EIA 603
PROCEDURE	CERTIFICATION
FCC RULE	CFR 47 PART 24 SUBPART E

Compliance Certification Services, Inc. tested the above equipment for compliance with the requirement set forth in CFR 47, PART 24 subpart E Cellular Radiotelephone Service. The equipment in the configuration described in this report, shows the measured emission levels emanating from the equipment do not exceed the specified limit.

**Note** : This document reports conditions under which testing was conducted and results of tests performed. This document may not be altered or revised in any way unless done so by Compliance Certification Services and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Compliance Certification Services will constitute fraud and shall nullify the document.

Tested By:

-\_\_\_\_L\_\_\_\_

FRANK IBRAHIM EMC SUPERVISOR COMPLIANCE CERTIFICATION SERVICES Released For CCS By:

THU CHAN EMC SUPERVISOR COMPLIANCE CERTIFICATION SERVICES

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## 2. EUT DESCRIPTION

1900 MHz CDMA/GSM Cell Phone Amplifier:

- an EIRP of 24.8 dBm for CDMA mode, with 5 dBi gain antenna.
- an EIRP of 29.3 dBm for CDMA mode, with 3 dBi gain antenna.
- an EIRP of 23.7 dBm for GSM mode, with 5 dBi gain antenna.
- an EIRP of 26.3 dBm for GSM mode, with 3 dBi gain antenna.

## 3. TEST METHODOLOGY

Both conducted and radiated testing were performed according to the procedures documented on chapter 13 of ANSI C63.4 and FCC CFR 47 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055 and 2.1057.

## 4. TEST FACILITY

The sites and measurement facilities used to collect the radiated data are located at 561F Monterey Road, Morgan Hill, California, USA. The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22.

## 5. ACCREDITATION AND LISTING

The test facilities used to perform radiated and conducted emissions tests are accredited by National Voluntary Laboratory Accreditation Program for the specific scope of accreditation under Lab Code: 200065-0 to perform Electromagnetic Interference tests according to FCC PART 15 AND CISPR 22 requirements. No part of this report may be used to claim or imply product endorsement by NVLAP or any agency of the US Government. In addition, the test facilities are listed with Federal Communications Commission (reference no: 31040/SIT (1300B3) and 31040/SIT (1300F2))

## 6. MEASURING INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

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## 7. INSTRUMENTATION LIST AND EUT SETUP INFORMATION

TEST EQUIPMENT LIST								
Name of Equipment	Manufacturer	Model No.	Serial No.	Due Date				
Line Filter	Lindgren	LMF-3489	497	CNR				
LISN, 10 kHz ~ 30 MHz	Solar	8012-50-R-24-BNC	8379443	10/13/04				
LISN, 10 kHz ~ 30 MHz	FCC	LISN-50/250-25-2	2023	10/13/04				
EMI Test Receiver	R & S	ESHS 20	827129/006	7/17/04				
Preamplifier, 1 ~ 26.5 GHz	HP	8449B	3008A00369	4/25/04				
Spectrum Nalyzer	HP	8593EM	3710A00205	10/1/04				
Signal Generator, 2 ~ 40 GHz	R & S	SMP04	DE 34210	5/25/05				
Spectrum Nalyzer	Agilent	E4440A	US41421507	5/8/04				
Horn Antenna	ETS.Lindgren	3117	00029310	12/26/04				
Horn Antenna	ETS.Lindgren	3117	00029301	12/26/04				

#### **TEST PERIPHRALS**

TEST PERIPHERALS									
Device Type Manufacturer Model Number Serial Number FCC ID									
Signal Generator	HP	E4432B	US39341935	N/A					
Cell Phone	Nokia	6185	253/13967541	GMLNSD-3AX					
<b>Cell Phone Charger</b>	Nokia	ACP-7U	H6316	N/A					
AC/DC Adapter	HiTRON	HES10-12010-0-1	0115	N/A					

#### **TEST I/O CABLES**

TEST I / O CABLES										
Cable	I/O	# of I/O	Connector	Type of	Cable	Data				
No	Port	Port	Туре	Cable	Length	Traffic	Bundled	Remark		
1	AC/DC	1	US115	Unshielded	1.5 m	No	No	N/A		
2	Phone / Sig. Gen.	1	SMA	Shielded	10 cm	Yes	No	N/A		
3	Antenna	1	SMA	Shielded	1 m	Yes	No	N/A		
4	AC/DC	1	US115	Unshielded	1.5m	No	No	N/A		

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#### TEST SETUP



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## 8. MODIFICATIONS LIST

The following modifications were performed for the EUT to pass emissions requirements:

- 1. Copper tape was placed on the input and output ports of the EUT to close the gap.
- 2. Copper tape was also connecting the SMA connector to chassis providing a grounding path.

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## 9. TEST SETUP, PROCEDURE AND RESULT

## 9.1. SECTION 2.1046: RF POWER OUTPUT (CONDUCTED)

#### **INSTRUMENTS LIST**

EQUIPMENT	MANUFACTURE	MODEL NO.	SERIAL NO.	CAL. DUE DATE
PSA Analyzer	Agilent	E446A	US42070220	1/13/04
10dB Attenuator	Agilent	8493C	59028	N/A
DC Power Supply	Kenwood	PA36-3A	7060074	N/A

#### TEST PROCEDURE:

The output port of the EUT was connected to a spectrum analyzer, the RBW and VBW were set to 3MHz, the output peak power was recorded, the Input cable going to the EUT was connected to a spectrum analyzer, the output power was measured.

#### TEST SETUP





DATE: JANUARY 14, 2004



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#### **RESULTS:**

#### Output Port, CDMA, Low Channel:



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#### Output Port, CDMA, Mid Channel:

🔆 Agilent 13:51:27 Jan 12, 2004	Peak Search							
Ref 35 dBm Atten 40 dB	Mkr1 1.880 06 GHz 25.93 dBm Next Peak							
*Peak Log 10 dB/ 0ffst	Next Pk Right							
10.3 dB	Next Pk Left							
LgAv	Min Search							
V1 S2 S3 FC AA	Pk-Pk Search							
£(f): FTun Swp <b>1.880060000 GHz</b>	Mkr → CF							
Center 1.880 00 GHz #Res BW 3 MHz Sw	Span 10 MHz         More           1 of 2         1 of 2							
File Operation Status, A:\SCREN298.GIF file saved								

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#### Output Port, CDMA, High Channel:



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#### Output Port, GSM, Low Channel:

🔆 Agiler	nt 13:55:1	9 Jan 12	2, 2004							Peak Search			
Ref 30.3	dBm	Atten	30 dB				Mkr1	1.850 21.5	10 GHz 7 dBm	Next Peak			
#Peak Log 10 dB/				1 <b>(</b>						Next Pk Right			
0ffst 10.3 dB										Next Pk Left			
LgAv										Min Search			
V1 S2 S3 FC AA										Pk-Pk Search			
£(†): M FTun Swp -1	larker 85010 21.57 (	10000 dBm	GHz-							Mkr → CF			
Center 1.850 20 GHz Span 10 MHz #Res BW 3 MHz #VBW 3 MHz Sweep 1.066 ms (1000 pts)								More 1 of 2					
File Oper	ration Sta	atus, A:'	SCREN	File Operation Status, A:\SCREN300.GIF file saved									

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#### Output Port, GSM, Mid Channel:

🔆 Ag	<b>ilent</b> 13	:55:52	Jan 12	2,2004							Peak Search
Ref 30	.3 dBm		Atten	30 dB				Mkr1	1.880 22.0	02 GHz 17 dBm	Next Peak
#Peak Log 10 dB/						1 >					Next Pk Right
uffst 10.3 dB											Next Pk Left
LgAv											Min Search
V1 S2 S3 FC AA											Pk-Pk Search
£(f): FTun Swp	Mark -1.88 -22 I	er 0020 07 d	1000 Rm	GHz-							Mkr → CF
Center 1.880 00 GHz Span 10 MHz #Res BW 3 MHz #VBW 3 MHz Sweep 1.066 ms (1000 pts)								More 1 of 2			
File 0	File Operation Status, A:\SCREN301.GIF file saved										

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#### Output Port, GSM, High Channel:



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## 9.4. SECTION 2.1046: RF POWER OUTPUT (RADIATED)

#### MEASUREMENT PROCEDURE

1). On a test site, the EUT shall be placed on a turntable, and in the position closest to the normal use as declared by the user.

2). The test antenna shall be oriented initially for vertical polarization located 3m from the EUT to correspond to the frequency of the transmitter.

3). The output of the test antenna shall be connected to the measuring receiver and either a peak or quasi-peak detector was used for the measurement as indicated on the report. The detector selection is based on how close the emission level was approaching the limit.

4). The transmitter shall be placed 0.80 meter above the ground plane, the X, Y, and Z positions shall be tested and the worst case reported. The transmitter shall be switched on with typical modulation and the measurement receiver shall be tuned to the frequency of the transmitter under test.

5). The test antenna shall be raised and lowered through the specified range of height until a maximum signal level is detected by the measuring receiver.

6). The transmitter shall than be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.

7). The test antenna shall be raised and lowered again through the specified range of height until a maximum signal level is detected by the measuring receiver.

8). The maximum signal level detected by the measuring receiver shall be noted.

9). The transmitter shall be replaced by a tuned dipole or horn antenna (substitution antenna).

10). The substitution antenna shall be oriented for vertical polarization and the length of the substitution antenna shall be adjusted to correspond to the frequency of the transmitter.

11). The substitution antenna shall be connected to a calibrated signal generator.

12). If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.

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13). The test antenna shall be raised and lowered through the specified range of the height to ensure that the maximum signal is received.

14). The input signal to the substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, that is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuation setting of the measuring receiver.

15). The input level to the substitution antenna shall be recorded as power level in dBm, corrected for any change of input attenuator setting of the measuring receiver.

16). The measurement shall be repeated with the test antenna and the substitution antenna oriented for horizontal polarization.

17). The measure of the effective radiated power is the larger of the two levels recorded, at the input to the substitution antenna, corrected for the gain of the substitution antenna if necessary.

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Radiated Emission Measurement 30 MHz to 1000 MHz



Radiated Emission Above 1000 MHz





Radiated Emission - Substitution Method Set-up for Freq below 1GHz



Radiated Emission - Substitution Method Set-up for Freq above 1GHz



#### **MEASUREMENT RESULT:**

1900MHz CDMA/GSM Output Power Measurement:

With 5 dBi Gain Antenna:		EIRP
	FREQUENCY	PEAK
1900 MHz (GSM)	(MHz)	(dBm)
LOW	1850.2	22.0
MID	1880.0	23.7
HI	1909.8	21.5

		EIRP
	FREQUENCY	PEAK
1900 MHz (GDMA)	(MHz)	(dBm)
LOW	1851.0	24.0
MID	1880.0	24.8
HI	1909.0	24.1

With 3 dBi Gain Antenna:	EIRP	
	FREQUENCY	PEAK
1900 MHz (GSM)	(MHz)	(dBm)
LOW	1850.2	26.1
MID	1880.0	26.3
Н	1909.8	25.7

		EIRP
	FREQUENCY	PEAK
1900 MHz (GDMA)	(MHz)	(dBm)
LOW	1851.0	29.3
MID	1880.0	29.3
HI	1909.0	28.4

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#### **Radiated Emissions**

#### Front, with 5 dBi Gain antenna:



#### Back, with 5 dBi Gain antenna:





#### Front, with 3 dBi Gain antenna:



#### Back, with 3 dBi Gain antenna:





#### Output Power (EIRP), 1900 MHz CDMA/GSM - Low / Mid/ High Channel Fundamental

1/8/04	High Freq	uency Substit	ution Measu	irement							
Compli	iance Certific	ation Service	s, Morgan H	lill Open Fi	eld Site						
Test Eng	gr:	Frank Ibrahim									
Project #	#:	03U2456-1									
Compan	ıy:	Cellphone Mate									
EUT De	scrip.:	Cellphone Amplifi	Cellphone Amplifier								
EUT M/	N:	CM 1000	20 1000								
Test Tar	rget:	FCC PART 24									
Mode O	ner	TX ON maximun	nower								
mout O	per.	TA OIV, maximum	i power								
Test Fai	uinmont.										
Test Equ	upment.										
		1									
ЕМСО	Horn 1-18GHz	Pre-ampli	fer 1-26GHz	Spe	ctrum Analyzer	•		Horn >1	8GHz	Limit	
		J		-							
	<del>.</del>		-			-					
1				I						·	
🗖 Hi Fre	quency Cables				Pool Moosu	romonte .					
	_		_		Fundamental	ements.		Dandadaa		Cumions	
<b>⊻</b> (2	2 ft) □ (2 ~	~ 3 ft) $\Box$ (4 ~ 6	6 ft) [] (12 ft)		PRW>000/ ~~ '	AdB Emission	e BW	PBW=>10/ E	missions BW DW	=1MHz	
					VDW-DDW	200B Emission	SDW	VDW-> 2*DE			
					V D W-KD W			V D W => 5 KI	5 W V	DW-INIIZ	
£	SA manding	SC mading	CI	Cain	Cain	FIDD	I imit	Mangin	Note		
	SA reauling	, SG reading		Gain	Gain			wiai gili	INOLE	3	
GHZ	(dBm)	(dBm)	(ab)	( <b>dB</b> 1)	(aBa)	(aBm)	(abm)	(ab)			
Low Chai	nnel (1851 MHz),	CDMA, 5 dBi An	tenna								
1.8510	86.5	19.7	0.2	4.4	2.3	23.9	33.0	-9.1	v		
1.8510	86.4	19.8	0.2	4.4	2.3	24.0	33.0	-9.0	Н		
Mid Char	nnel (1880 MHz),	CDMA, 5 dBi Ant	tenna								
1.8800	87.5	20.6	0.2	4.4	2.3	24.8	33.0	-8.2	V		
1.8800	87.2	19.6	0.2	4.4	2.3	23.8	33.0	-9.2	Н		
High Cha	nnel (1909 MHz).	, CDMA, 5 dBi An	itenna								
1.9090	86.2	19.9	0.2	4.4	2.3	24.1	33.0	-8.9	V		
1.9090	83.9	17.2	0.2	4.4	2.3	21.4	33.0	-11.6	Н		
Low Chai	nnel (1851 MHz),	CDMA, 3 dBi An	tenna								
1.8510	91.3	25.1	0.2	4.4	2.3	29.3	33.0	-3.7	V		
1.8510	81.6	14.7	0.2	4.4	2.3	18.9	33.0	-14.1	Н		
Mid Char	nnel (1880 MHz),	CDMA, 3 dBi Ant	tenna								
1.8800	91.8	25.1	0.2	4.4	2.3	29.3	33.0	-3.7	V		
1.8800	82.3	16.1	0.2	4.4	2.3	20.3	33.0	-12.7	Н		
High Cha	nnel (1909 MHz),	, CDMA, 3 dBi An	itenna								
1.9090	89.7	24.2	0.2	4.4	2.3	28.4	33.0	-4.6	<u>V</u>		
1.9090	81.2	14.8	0.2	4.4	2.3	19.0	33.0	-14.0	Н		
Low Char	nnei (1850.2 MHz	t), GSM, 5 dBi Ant	tenna								
1.8502	84.8	17.8	0.2	4.4	2.3	22.0	33.0	-11.0	V		
1.8502	83.8	15.9	0.2	4.4	2.3	20.1	33.0	-12.9	Н		
Mid Char	nnel (1880 MHz),	GSM, 5 dBi Antei	nna								
1.8800	85.5	19.5	0.2	4.4	2.3	23.7	33.0	-9.3	V		
1.8800	84.8	18.3	0.2	4.4	2.3	22.5	33.0	-10.5	Н		
High Cha	innel (1909.8 MH:	z), GSM, 5 dBi An	tenna	L			22.0	11.0			
1.9098	84.0	16.9	0.2	4.4	2.3	21.1	33.0	-11.9	V		
1.9098	85.0	17.3	0.2	4.4	2.3	21.5	55.0	-11.5	Н		
Low Char	nnel (1850.2 MHz	c), GSM, 3 dBi Ant	tenna					6.0			
1.8502	89.3	21.9	0.2	4.4	2.3	26.1	33.0	-6.9	V		
1.8502	84.5	18.2	0.2	4.4	2.3	22.4	33.0	-10.6	Н		
Mid Char	nnel (1880 MHz),	GSM, 3 dBi Anter	nna				22.0	( <b>-</b>			
1.8800	89.3	22.1	0.2	4.4	2.3	26.3	33.0	-6.7	<u>V</u>		
1.8800	85.5	19.0	0.2	4.4	2.3	23.2	55.0	-9.8	Н		
High Cha	innei (1909.8 MH:	z), GSM, 3 dBi An	tenna	L			22.0				
1.9098	88.9	21.5	0.2	4.4	2.3	25.7	33.0	-7.3	V V		
1.9098	81.3	14.8	0.2	4.4	2.3	19.0	33.0	-14.0	Н		

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#### 9.2. SECTION 2.1047: MODULATION CHARACTERISTICS

Not applicable.

## 9.3. SECTION 2.1049: OCCUPIED BANDWIDTH

#### INSTRUMENTS LIST

EQUIPMENT	MANUFACTURE	MODEL NO.	SERIAL NO.	CAL. DUE DATE
PSA Analyzer	Agilent	E446A	US42070220	1/13/04
10dB Attenuator	Agilent	8493C	59028	N/A
DC Power Supply	Kenwood	PA36-3A	7060074	N/A

#### TEST PROCEDURE:

A comparison of the input- modulated spectrum and the output- modulated spectrum of the EUT was performed. RBW was set to 1 % of EBW, VBW was set to 3 times the RBW, the signal generator with CDMA or GSM modulation was connected to the input port of the EUT, the output port was connected to the spectrum analyzer, the analyzer was tuned to the transmit frequency, 26 dB BW was measured and recorded for Low, Mid and High channels.

TEST SETUP





#### **RESULTS:**

Mode	Channel	26 dB BW (MHz) Input Port	
CDMA	Low	1.376	1.371
CDMA	Mid	1.381	1.383
CDMA	High 1.364		1.374
GSM	Low	0.297912	0.290365
GSM	Mid	0.295447	0.298322
GSM	High	0.296141	0.299641

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#### Output Port, CDMA, Low Channel:



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#### Output Port, CDMA, Mid Channel:



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Output Port, CDMA, High Channel:



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#### Output Port, GSM, Low Channel:



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#### Output Port, GSM, Mid Channel:



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#### Output Port, GSM, High Channel:



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#### Input Port, CDMA, Low Channel:



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#### Input Port, CDMA, Mid Channel:



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#### Input Port, CDMA, High Channel:



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#### Input Port, GSM, Low Channel:



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#### Input Port, GSM, Mid Channel:



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#### Input Port, GSM, High Channel:



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# 9.4. SECTION 2.1051: SPURIOUS EMISSIONS AT ANTENNA TERMINAL

#### TEST PROCEDURE:

The output of the EUT was connected to a spectrum analyzer, RBW & VBW were set to 1 MHz, the spectrum from 30MHz to 10<sup>th</sup> harmonic of the fundamental was investigated for CDMA/ GSM modes, for Low, Mid and High channels. For the frequency span of 1MHz close to the fundamental frequency the RBW was reduced to 1% of the EBW.

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#### **RESULTS:**

#### BAND EDGE, CDMA, Low Channel:



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#### BAND EDGE, CDMA, High Channel:



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#### BAND EDGE, GSM, Low Channel:



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#### BAND EDGE, GSM, High Channel:



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🔆 Agilent 12:20:22 J	Jan 12, 2004		Marker		
Ref 25 dBm At	itten 30 dB	Mkr1 9.2 -34.35	6 GHz dBm 1 2 3 4		
#reak Log					
10			Normal		
dB/			i i i i i i i i i i i i i i i i i i i		
10.3					
dB			Delta		
-13.0 dBm			Delta Pair		
LgAv	1		(Tracking Ref)		
V1 S2 S3 EChina and muchania	about all and a start and a	المراجع ومعار المراجع والمراجع والمحمو والمراجع ومعادي ومعاديهم والمراجع	🚧 🚽 Span Pair		
			Span <u>Center</u>		
£(f): Marker					
	אמי בח≃ מטו		Off		
SMD -3.20000000					
-34.35 GBI			More		
#Res BW 1 MHz	#VBW 1_MHz	Sweep 49.95 ms (1000	nts)		
File Operation Status, A:\SCREN294.GIF file saved					

#### RF Conducted Emissions (30 MHz – 20 GHz), CDMA, Low Channel:

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✤ Agilent 12:20:52 Jan 12, 2004	Marker				
Mkr1 3.78 GHz Ref 25 dBm Atten 30 dB -38.10 dBm	Select Marker				
#Peak Log	<u> </u>				
10	Normal				
05/ 0ffst					
10.3 dB	Delta				
	Deita				
-13.0 dBm	Delta Pair				
LgAv	(Tracking Ref) Ref <u>∆</u>				
V1 S2	Span Pair				
AA	Span <u>Center</u>				
£(f): Marker	044				
Swp 3.78000000 GHz	UIT				
-38.10 dBm	More				
Start 30 MHz	1 of 2				
#Kes BW I MHZ #VBW I MHZ Sweep 49.95 ms (1000 pts)					

#### RF Conducted Emissions (30 MHz – 20 GHz), CDMA, Mid Channel:

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🔆 Agilent 12:21:17 Jan 12, 2004	Marker					
Mkr1 3.82 GH: Ref 25 dBm Atten 30 dB -37.44 dBm	Select Marker					
#Peak Log	<u> </u>					
10	Normal					
10.3						
dB	Delta					
	-					
dBm	Delta Pair (Tracking Ref)					
LgAv	Ref <u>A</u>					
V1 S2 S3 FC provely particular and marked and the second and the s	<b>Span Pair</b> Span Center					
E(f): Marker	0ff					
Swp 3.82000000 GHz						
-37.44 dBm	Maura					
Start 30 MHz Stop 20.00 GHz	nore 1 of 2					
#Res BW 1 MHz #VBW 1 MHz Sweep 49.95 ms (1000 pts)						
File Operation Status, A:\SCREN296.GIF file saved						

#### RF Conducted Emissions (30 MHz – 20 GHz), CDMA, High Channel:

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🔆 Agilent 12:19:45	Jan 12, 2004		Marker			
Ref 25 dBm f #Peak	Atten 30 dB	Mkr1 	9.24 GHz 42.07 dBm <u>1</u> 2 3 4			
Log 10 dB/			Normal			
Offst 10.3 dB			Delta			
UI -13.0 dBm Laθv			<b>Delta Pair</b> (Tracking Ref)			
V1 S2 S3 FC	window when the main water	harrowland hanged black and a share	Ket <u>▲</u> Span Pair Span Center			
AA £(f): FTun Swp <b>9.240000</b>	000 GHz		Off			
<b>–42.07 dE</b> Start 30 MHz #Res BW 1 MHz	<b>3m</b> ⊭VBW 1 M	Stop Hz Sweep 49.95 ms (	20.00 GHz 1 of 2 1000 pts)			
File Operation Statu	File Operation Status, A:\SCREN293.GIF file saved					

RF Conducted Emissions (30 MHz - 20 GHz), GSM, Low Channel:

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🔆 Ag	<b>ilent</b> 12	2:19:13	Jan 12	2,2004							Marker
Ref 25	dBm		Atten	30 dB				M	lkr1 3. -39.6	78 GHz 0 dBm	Select Marker
#геак Log											<u> </u>
10											Normal
dB/ Affst											
10.3											
aB											Delta
-13.0											Delta Pair
dBm L∝⊖u											(Tracking Ref)
LGHA		1									Ref 🛕
V1 S2 S2 EC	an ala		A. swimple	لمغديهم لاسطح لحيابط	Muly Saly	day the Al	ر ملاطن المار الماري ماريد الم	der Providence	Aret work		Span Pair
SS FC AA											Span <u>Center</u>
<b>£</b> (f):	Mark	er									
Flun Swp	3.78	0000	000	GHz-							Uff
	-39	.60 d	Bm								
Start 3	BØ MHz							St	top 20.0	00 GHz	More 1 of 2
#Res B	W 1 MH	z		#V	BW 1 M	IHz	Sweep	49.95 n	ns (100	0 pts)	
File 0	File Operation Status, A:\SCREN292.GIF file saved										

#### RF Conducted Emissions (30 MHz – 20 GHz), GSM, Mid Channel:

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🔆 Agilent 12:17:26 Jan 12, 2004	Marker					
Mkr1 5.74 Ref 25 dBm Atten 30 dB -37.62	GHz dBm 1 2 3 4					
Teak	<u> </u>					
10	Normal					
10.3						
	Delta					
-13.0						
dBm	(Tracking Ref)					
	Ref <u>A</u>					
V1 S2	Span Pair					
S3 FC	Span <u>Center</u>					
FTun Marker	Off					
Swp -5.740000000 GHz						
-37.62 dBm	More					
Start 30 MHz Stop 20.00	GHZ 1 of 2					
File Operation Status, 0:\SCDEN291 GIE file saved						
File Operation Status, H:\Screnz91.61 file saved						

#### RF Conducted Emissions (30 MHz - 20 GHz), GSM, High Channel:

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## 9.5. SECTION 2.1053: FIELD STRENGTH OF SPURIOUS RADIATION

Frequency Range (MHz)	Detector Function	Resolution Bandwidth	Video Bandwidth
Above 1000	⊠ Peak	☐ 1 MHz	⊠ 1 MHz
	□ Average	☐ 1 MHz	□ 10 Hz

Detector Function Setting of Test Receiver

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Radiated Emission Measurement



Radiated Emission - Substitution Method set-up

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#### TEST PROCEDURE

1). On a test site, the EUT shall be placed on a turntable, and in the position closest to the normal use as declared by the user.

2). The test antenna shall be oriented initially for vertical polarization located 1m from the EUT to correspond to the frequency of the transmitter.

3). The output of the test antenna shall be connected to the measuring receiver and either a peak or average detector was used for the measurement as indicated on the report. The detector selection is based on how close the emission level was approaching the limit.

4). The transmitter shall be switched on, if possible, without the modulation and the measurement receiver shall be tuned to the frequency of the transmitter under test.

5). The test antenna shall be raised and lowered through the specified range of height until a maximum signal level is detected by the measuring receiver.

6). The transmitter shall than be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.

7). The test antenna shall be raised and lowered again through the specified range of height until a maximum signal level is detected by the measuring receiver.

8). The maximum signal level detected by the measuring receiver shall be noted.

9). The transmitter shall be replaced by a substitution antenna.

10). The substitution antenna shall be oriented for vertical polarization.

11). The substitution antenna shall be connected to a calibrated signal generator.

12). If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.

13). The test antenna shall be raised and lowered through the specified range of the height to ensure that the maximum signal is received.

14). The input signal to the substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, that is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuation setting of the measuring receiver.

15). The input level to the substitution antenna shall be recorded as power level in dBm, corrected for any change of input attenuator setting of the measuring receiver.

16). The measurement shall be repeated with the test antenna and the substitution antenna oriented for horizontal polarization.

17). The measure of the effective radiated power is the larger of the two levels recorded, at the input to the substitution antenna, corrected for the gain of the substitution antenna if necessary.

#### MEASUREMENT RESULT

No non-compliance noted, as shown below

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#### REPORT NO: 03U2456-1 EUT: CELLULAR PHONE AMPLIFIER, MODEL: CM 1000 FCC ID: RSNCM1000

#### <u>1900MHz Band CDMA/GSM - Harmonics / Spurious and Substitution Emissions, Low / Mid / High</u> <u>Channels:</u>

1/8/04	1/8/04 High Frequency Substitution Measurement										
Complia	nce Certifica	ation Services	, Morgan H	lill Open Fie	eld Site						
Test Engr Project #: Company EUT Dese EUT M/N Test Targ Mode Op	:: : crip.: N: set: er:	Frank Ibrahim 03U2456-1 Cellphone Mate Cellphone Amplifi CM 1000 FCC PART 24 TX ON, maximum	er 1 power								
<u>Test Equi</u>	pment:										
EMCO Horn 1-18GHz Pre-amplifer 1-26GHz			Spe	ctrum Analyzei	r T		Horn > 18GHz				
Hi Frequ	ft) (2 ~	3 ft) (4 ~ 6		Peak Measu Fundamental: RBW>99% or 2 VBW=RBW	<b>rements:</b> 26dB Emission	ns BW	Bandedge: RBW=>1% E VBW=> 3*RI	missions BW RBW=1MHz BW VBW=1MHz			
f	SA reading	sG reading	CL	Gain	Gain	EIRP	Limit	Margin	Notes		
GHz	(dBm)	(dBm)	(dB)	(dBi)	(dBd)	(dBm)	(dBm)	(dB)			
Low Chanr	nel (1851 MHz), (	CDMA, 3 dBi Ant	enna	8.0	5.0	15.4	12.0	2.4	¥7		
5.702 5.553	40.1	-23.0	0.4	8.0	5.9	-15.4	-13.0	-2.4	V		
5.555 7.404	52.3	-32.3	0.3	11.3	9.2	-23.2	-13.0	-24.8	V		
9.255	67.4	-33.9	0.8	12.2	10.1	-22.5	-13.0	-9.5	V		
11.106	49.5	-50.1	0.9	12.5	10.4	-38.5	-13.0	-25.5	V		
3.702	39.8	-29.7	0.4	8.0	5.9	-22.1	-13.0	-9.1	Н		
5.553	63.7	-37.8	0.5	9.8	7.7	-28.5	-13.0	-15.5	Н		
7.404	54.2	-46.2	0.7	11.3	9.2	-35.6	-13.0	-22.6	H		
9.255	00.2 49.5	-33.5	0.8	12.2	10.1	-22.1	-13.0	-9.1	H		
Mid Chann	el (1880 MHz) (	-40.4 CDMA 3 dBi Ante	enna	12.5	10.4	-50.0	-13.0	-25.0	11		
3.760	45.9	-23.2	0.4	8.0	5.9	-15.6	-13.0	-2.6	V		
5.640	68.8	-31.8	0.5	9.8	7.7	-22.5	-13.0	-9.5	V		
7.520	53.6	-47.1	0.7	11.3	9.2	-36.5	-13.0	-23.5	V		
9.400	62.4	-38.2	0.8	12.2	10.1	-26.8	-13.0	-13.8	V		
11.280	49.9	-48.0	0.9	12.5	10.4	-30.4	-13.0	-23.4	V H		
5.640	62.5	-29.4	0.4	9.8	7.7	-21.8	-13.0	-16.6	Н		
7.520	54.2	-46.0	0.7	11.3	9.2	-35.4	-13.0	-22.4	H		
9.400	59.8	-40.1	0.8	12.2	10.1	-28.7	-13.0	-15.7	Н		
11.280	50.2	-48.0	0.9	12.5	10.4	-36.4	-13.0	-23.4	Н		
High Chan	nel (1909 MHz),	CDMA, 3 dBi Ant	tenna								
3.8180	46.2	-23.5	0.4	8.0	5.9	-15.9	-13.0	-2.9	V		
3.7270 7.6360	49.6	-31.9	0.5	<sup>9.8</sup>	9.2	-22.0	-13.0	-9.0	v V		
9.5450	63.5	-37.0	0.8	12.2	10.1	-25.6	-13.0	-12.6	· · · · · · · · · · · · · · · · · · ·		
11.4540	48.7	-50.5	0.9	12.5	10.4	-38.9	-13.0	-25.9	V		
3.8180	38.9	-31.1	0.4	8.0	5.9	-23.5	-13.0	-10.5	Н		
5.7270	63.4	-38.0	0.5	9.8	7.7	-28.7	-13.0	-15.7	H		
7.6360	48.7	-51.4	0.7	11.3	9.2	-40.8	-13.0	-27.8	<u>H</u>		
11.4540	50.6	-39.5	0.9	12.2	10.1	-35.4	-13.0	-13.1	H H		
-	<b>40</b> 30.0 <b>-4</b> 7.0 0.7 12.3 10.4 -33.4 -13.0 -22.4 11										

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1/8/04	High Frequ	ency Substitu	tion Measur	ement							
Complia	nce Certificat	ion Services, N	Morgan Hill	Open Field	Site						
Test Engr	•	Frank Ibrahim									
Project #	•	03112456-1									
Comnany	•	Cellphone Mate									
	• 	Collphone Ampli	fior								
EUT Desc	crip.:	Celiphone Ampli	ner								
EUT M/N	:	CM 1000									
Test Targ	et:	FCC PART 24									
Mode Op	er:	TX ON, maximu	m power								
Test Equi	pment:										
ЕМСО Н	forn 1-18GHz	Pre-ampli	fer 1-26GHz	Spe	ectrum Analyze	r		Horn >1	8GHz	Limit	
	, 					-			-	-	
Hi Frequ											
in riequ	acticy cables				Peak Measu	rements:					
<b>I</b> (2 :	ft) 🗌 🗌 (2 ~	3 ft) 🔲 (4 ~ 6	ft) 🔲 (12 ft)		Fundamental:			Bandedge:		<u>Spurious</u>	
					RBW>99% or	26dB Emissio	ons BW	RBW=>1% I	Emissions BW	RBW=1MHz	
					VBW=RBW			VBW=> 3*R	BW	VBW=1MHz	
f	SA reading	SG reading	CL	Gain	Gain	EIRP	Limit	Margin		Notes	-
GHz	(dBm)	(dBm)	(dB)	(dBi)	(dBd)	(dBm)	(dBm)	(dB)	-		
Low Chan	nel (1851 MHz).	CDMA, 5 dBi A	ntenna								-
3.702	45.9	-24.1	0.4	8.0	5.9	-16.5	-13.0	-3.5		V	
5.553	70.2	-31.7	0.5	9.8	7.7	-22.4	-13.0	-9.4		V	-
7.404	53.2	-47.4	0.7	11.3	9.2	-36.8	-13.0	-23.8		V	_
9.255	68.9	-31.2	0.8	12.2	10.1	-19.8	-13.0	-6.8		V	
11.106	50.1	-48.1	0.9	12.5	10.4	-36.5	-13.0	-23.5		V	_
3.702	38.5	-31.1	0.4	8.0	5.9	-23.5	-13.0	-10.5		Н	
5.553	65.2	-36.0	0.5	9.8	7.7	-26.7	-13.0	-13.7		Н	
7.404	55.2	-44.7	0.7	11.3	9.2	-34.1	-13.0	-21.1		Н	
9.255	65.8	-35.0	0.8	12.2	10.1	-23.6	-13.0	-10.6		Н	
11.106	50.1	-48.3	0.9	12.5	10.4	-36.7	-13.0	-23.7		Н	
Mid Chanı	nel (1880 MHz),	CDMA, 5 dBi A	ntenna								
3.760	46.2	-23.5	0.4	8.0	5.9	-15.9	-13.0	-2.9		V	
5.640	69.4	-31.8	0.5	9.8	7.7	-22.5	-13.0	-9.5		V	
7.520	53.8	-47.0	0.7	11.3	9.2	-36.4	-13.0	-23.4		V	
9.400	63.2	-37.3	0.8	12.2	10.1	-25.9	-13.0	-12.9		V	_
11.280	49.5	-48.4	0.9	12.5	10.4	-36.8	-13.0	-23.8		V H	_
5.760	38.5	-31.1	0.4	8.0	5.9	-23.5	-13.0	-10.5		H	_
5.040	03.4 56.8	-37.9	0.5	9.8	0.7	-28.0	-13.0	-15.0		H U	
9.400	50.8	30.0	0.7	12.2	7.2 10.1	-33.4	-13.0	-20.4		п	_
11 280	49.8	-38.4	0.0	12.2	10.1	-26.8	-13.0	-13.5		н	-
High Chan	nel (1909 MHz)	CDMA 5 dBi A	ntenna	12.5	10.4	-20.0	-10.0	-10.0		n	-
3.8180	46.4	-24.4	0.4	8.0	5.9	-16.8	-13.0	-3.8		V	-
5.7270	69.5	-31.7	0.5	9.8	7.7	-22.4	-13.0	-9.4		v	_
7.6360	48.7	-49.4	0.7	11.3	9.2	-38.8	-13.0	-25.8		v	
9.5450	64.3	-36.0	0.8	12.2	10.1	-24.6	-13.0	-11.6		v	-
11.4540	49.6	-48.1	0.9	12.5	10.4	-36.5	-13.0	-23.5		V	
3.8180	38.7	-30.0	0.4	8.0	5.9	-22.4	-13.0	-9.4		Н	
5.7270	64.3	-36.4	0.5	9.8	7.7	-27.1	-13.0	-14.1		Н	-
7.6360	48.9	-51.8	0.7	11.3	9.2	-41.2	-13.0	-28.2		Н	-
9.5450	62.5	-37.8	0.8	12.2	10.1	-26.4	-13.0	-13.4		Н	-
11.4540	49.6	-48.4	0.9	12.5	10.4	-36.8	-13.0	-23.8		Н	-

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1/8/04	High Freq	uency Substit	ution Meas	urement								
Complia	Compliance Certification Services, Morgan Hill Open Field Site											
-				•								
Test Engr	:	Frank Ibrahim										
Project #:		03U2456-1										
Company	:	Cellphone Mate										
EUT Desc	erip.:	Cellphone Amplifi	er									
EUT M/N	1:	CM 1000										
Test Targ	et:	FCC PART 24										
Mode Op	er:	TX ON, maximum	n power									
<u>Test Equi</u>	pment:											
EMCOL	Low 1 19CHa	Preampli	for 1-26CHz	Sne	etrum Analyzei			Horn >1	8CHz Limit			
EMCOF	IOTIL 1-18GHZ	rie-ampin	101 1-20011Z	spe	c. un Analyzei			1011 21				
	•		-			-			•			
Hi Frequ	uency Cables				Peak Measu	rements:						
	€) <b>□</b> (2)	2 <del>0</del> )	e) [ (12.e)		Fundamental:			Bandedge:	Spurious			
I <b>™</b> (2 :	π) <u>Γ</u> (2 ~	5 Π) [] (4~0	π) [] (12 π)		RBW>99% or 2	26dB Emission	is BW	RBW=>1% E	missions BW RBW=1MHz			
					VBW=RBW			VBW=> 3*RI	BW VBW=1MHz			
f	SA reading	SG reading	CL	Gain	Gain	EIRP	Limit	Margin	Notes			
GHz	(dBm)	(dBm)	(dB)	(dBi)	(dBd)	(dBm)	(dBm)	(dB)				
Low Chann	nel (1850.2 MHz)	. GSM. 3 dBi Ante	enna	(4251)	(424)	(ubiii)	(42)11)	(42)				
3.700	45.8	-24.4	0.4	8.0	5.9	-16.8	-13.0	-3.8	V			
5.551	64.8	-37.1	0.5	9.8	7.7	-27.8	-13.0	-14.8	V			
7.401	55.7	-45.2	0.7	11.3	9.2	-34.6	-13.0	-21.6	V			
9.251	66.3	-33.5	0.8	12.2	10.1	-22.1	-13.0	-9.1	V			
11.101	50.6	-48.1	0.9	12.5	10.4	-36.5	-13.0	-23.5	V			
3.700	45.6	-24.4	0.4	8.0	5.9	-16.8	-13.0	-3.8	Н			
5.551	60.8	-40.7	0.5	9.8	7.7	-31.4	-13.0	-18.4	Н			
7.401	57.0	-42.7	0.7	11.3	9.2	-32.1	-13.0	-19.1	Н			
9.251	64.8	-36.0	0.8	12.2	10.1	-24.6	-13.0	-11.6	Н			
11.101 Mid Chann	50.0	-47.4 SM 2 dDi Anton	0.9	12.5	10.4	-35.0	-13.0	-22.0	Н			
NHU CHAIN 3 760		-24 0	na 0.4	8.0	5.9	-16.4	-13.0	-3.4	V			
5.640	62.5	-24.0	0.4	9.8	7.7	-29.8	-13.0	-16.8	V			
7.520	54.6	-46.0	0.7	11.3	9.2	-35.4	-13.0	-22.4	V			
9.400	64.2	-36.0	0.8	12.2	10.1	-24.6	-13.0	-11.6	V			
11.280	52.8	-45.0	0.9	12.5	10.4	-33.4	-13.0	-20.4	V			
3.760	46.1	-24.1	0.4	8.0	5.9	-16.5	-13.0	-3.5	Н			
5.640	58.0	-42.7	0.5	9.8	7.7	-33.4	-13.0	-20.4	Н			
7.520	56.5	-44.2	0.7	11.3	9.2	-33.6	-13.0	-20.6	Н			
9.400	62.3	-37.8	0.8	12.2	10.1	-26.4	-13.0	-13.4	Н			
11.280	53.0	-45.2	0.9	12.5	10.4	-33.6	-13.0	-20.6	Н			
High Chani	nel (1909.8 MHz	, GSM, 3 dBi Ant	tenna	0.0	5.0	16.0	12.0	2.0				
5.820	46.3	-24.4	0.4	8.0	5.9	-10.8	-13.0	-3.8	V V			
7 639	57.0	-33.9	0.5	9.0 11 3	9.2	-24.0	-13.0	-11.0	v V			
9.549	63.5		0.7	12.2	7.2 10 1	-32.1	-13.0	-17.1	v V			
11.459	53.0	-45.2	0.9	12.5	10.4	-33.6	-13.0	-12.7	V			
3.820	46.2	-24.4	0.4	8.0	5.9	-16.8	-13.0	-3.8	H			
5.729	63.7	-36.7	0.5	9.8	7.7	-27.4	-13.0	-14.4	Н			
7.639	59.0	-40.7	0.7	11.3	9.2	-30.1	-13.0	-17.1	Н			
9.549	65.6	-35.0	0.8	12.2	10.1	-23.6	-13.0	-10.6	Н			
11.459	52.9	-45.5	0.9	12.5	10.4	-33.9	-13.0	-20.9	Н			

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1/8/04 High Frequency Substitution Measurement											
Complia	nce Certificat	tion Services, N	Morgan Hill	Open Field	Site						
Test Engr	r:	Frank Ibrahim									
Project #:		03U2456-1									
Company	•	Cellphone Mate									
EUT Desc	· rin ·	Cellphone Ampli	fier								
EUT Desc		Cempilone Ampli	nei								
		CM 1000									
Test Targ	get:	FCC PART 24									
Mode Op	er:	TX ON, maximu	m power								
<u>Test Equi</u>	pment:										
ЕМСО Н	lorn 1-18GHz	Pre-ampli	fer 1-26GHz	Spe	ectrum Analyze	r		Horn >1	8GHz Limit		
	-		•			-			<u> </u>	•	
🖵 Hi Frequ	uency Cables				Deals Moore						
	o) = //				Fundamental:	rements:		Bandedaa.	Spurious		
[ (2 :	ft) [] (2~	3 ft) $\square$ (4 ~ 6	ft) [ (12 ft)		PDW/>00% or	26dD Emissi	one DW	DDW-\1%	Emissions DW PDW-1MHz		
					VDW-DDW	200B EIIIISSI	UIIS D W	VDW-> 2*D	DW VDW-1MU7		
					VDW-KDW			V D W-> 5 K	BW VBW-IMIZ		
£	CA useding	SC mading	CI	Cain	Cain	FIDD	I insi4	Manain	Natas		
I	SA reading	SG reading		Gain	Gain	EIRP	Limit	Margin	INOTES		
GHz	(dBm)	(dBm)	(dB)	(dBi)	(dBd)	(dBm)	(dBm)	(dB)			
Low Chan	nel (1850.2 MHz	z), GSM, 5 dBi A	ntenna								
3.700	44.8	-24.5	0.4	8.0	5.9	-16.9	-13.0	-3.9	V		
5.551	66.1	-34.7	0.5	9.8	7.7	-25.4	-13.0	-12.4	V		
7.401	54.2	-46.2	0.7	11.3	9.2	-35.6	-13.0	-22.6	V		
9.251	64.1	-36.3	0.8	12.2	10.1	-24.9	-13.0	-11.9	V		
11.101	50.1	-48.0	0.9	12.5	10.4	-36.4	-13.0	-23.4	V		
3.700	40.1	-29.1	0.4	8.0	5.9	-21.5	-13.0	-8.5	Н		
5.551	58.2	-42.7	0.5	9.8	7.7	-33.4	-13.0	-20.4	Н		
7.401	56.4	-44.3	0.7	11.3	9.2	-33.7	-13.0	-20.7	H		
9.251	57.6	-42.8	0.8	12.2	10.1	-31.4	-13.0	-18.4	H		
11.101	49.8	-48.3	0.9	12.5	10.4	-36.7	-13.0	-23.7	Н		
Mid Chan	nel (1880 MHz),	GSM, 5 dBi Ant	enna								
3.760	45.8	-24.4	0.4	8.0	5.9	-16.8	-13.0	-3.8	V		
5.640	64.1	-36.7	0.5	9.8	1.7	-27.4	-13.0	-14.4	V V		
/.520	53.4	-47.0	0.7	11.3	9.2	-36.4	-13.0	-23.4	V xy		
9.400	62.4	-38.2	0.8	12.2	10.1	-20.8	-13.0	-13.8	V V		
3 760	34.3	-44./	0.9	14.5	10.4	-33.1	-13.0	-20.1	V TT		
5.700	40.1	-29.0	0.4	0.0	3.9	-21.4	-13.0	-0.4	<u>п</u> ц		
7.520	58.2	-42.5	0.5		92	-31.0	-13.0	-19.0	н		
9.400	53.8	-46.1	0.8	12.2	10.1	-34.7	-13.0	-21.7	Н		
11.280	48.2	-50.5	0.9	12.5	10.4	-38.9	-13.0	-25.9	Н		
High Chan	nel (1909.8 MH	z), GSM, 5 dBi A	ntenna								
3.820	45.7	-24.3	0.4	8.0	5.9	-16.7	-13.0	-3.7	V		
5.729	68.5	-32.4	0.5	9.8	7.7	-23.1	-13.0	-10.1	v		
7.639	57.4	-43.0	0.7	11.3	9.2	-32.4	-13.0	-19.4	· V		
9.549	62.4	-38.3	0.8	12.2	10.1	-26.9	-13.0	-13.9	· V		
11.459	54.2	-44.0	0.9	12.5	10.4	-32.4	-13.0	-19.4	v		
3.820	39.8	-29.0	0.4	8.0	5.9	-21.4	-13.0	-8.4	H		
5.729	58.4	-43.1	0.5	9.8	7.7	-33.8	-13.0	-20.8	H		
7.639	50.2	-50.3	0.7	11.3	9.2	-39.7	-13.0	-26.7	H		
9.549	54.3	-45.5	0.8	12.2	10.1	-34.1	-13.0	-21.1	Н		
11.459	50.2	-48.1	0.9	12.5	10.4	-36.5	-13.0	-23.5	Н		

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## 9.6. SECTION 2.1055: FREQUENCY STABILITY

No applicable, EUT is an amplifier.

## 9.7. POWERLINE CONDUCTED EMISSION

Detector Function Setting of Test Receiver

Frequency Range (MHz)	Detector Function	Resolution Bandwidth	Video Bandwidth
150 KHz to 30 MHz	Peak	9 KHz	9 KHz

#### TEST PROCEDURE

1. The EUT was placed on a wooden table 40 cm from a vertical ground plane and approximately 80 cm above the horizontal ground plane on the floor. The EUT was set to transmit in a continuous mode.

2. Line conducted data was recorded for both NEUTRAL and HOT lines.

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#### **MEASUREMENT RESULT**



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#### LINE CONDUCTION DATA

	CONDUCTED EMISSIONS DATA (115VAC 60Hz)										
Freq.		Closs	Limit	EN_B	Mar	Remark					
(MHz)	PK (dBuV)	QP (dBuV)	AV (dBuV)	(dB)	QP	AV	QP (dB)	AV (dB)	L1 / L2		
0.15	42.94			0.00	66.00	56.00	-23.06	-13.06	L1		
0.22	44.38			0.00	64.00	54.00	-19.62	-9.62	L1		
0.97	40.96			0.00	56.00	46.00	-15.04	-5.04	L1		
0.15	42.70			0.00	65.94	55.94	-23.24	-13.24	L2		
0.22	41.76			0.00	64.00	54.00	-22.24	-12.24	L2		
1.27	41.00			0.00	56.00	46.00	-15.00	-5.00	L2		
6 Worst I	Data										

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#### **LINE CONDUCTION - FRONT**



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#### **LINE CONDUCTION - BACK**



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#### 10. APENDIX

- 10.1. EXTERNAL & INTERNAL PHOTOS
- 10.2. SCHEMATICS
- 10.3. BLOCK DIAGRAM
- 10.4. USER MANUAL

## **END OF REPORT**

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