TEST REPORT NO: RU1175/6640

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ISSUE NO: 1

FCC ID: S30-CEL-TA

**REPORT ON THE CERTIFICATION TESTING OF A
VITEC GROUP COMMUNICATIONS
CELLCOM TRANSCEIVER/ANTENNA
WITH RESPECT TO
THE FCC OET BULLETIN 65 August 1997
SUPPLEMENT C January 2001
EVALUATION COMPLIANCE WITH FCC GUIDELINES FOR HUMAN EXPOSURE TO
RADIOFREQUENCY ELECTROMAGNETIC FIELDS.**

TEST DATE: 6th June 2005 – 30th September 2005

TESTED BY: ---------- J CHARTERS

APPROVED BY: ---------- P GREEN
EMC PRODUCT MANAGER

DATE: 30th September 2005

Distribution:

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2. FCC EVALUATION LABORATORIES

3. TRL EMC

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FS 21805

CONTENTS

Notes:

1. Component failure during test YES [ ] NO [X]
2. If Yes, details of failure:
3. The facilities used for the testing of the product contain in this report are FCC Listed.
4. The contents of the attached applicants declarations and other supplied information are not covered by the scope of this laboratory's UKAS or FCC accreditations' and is provided in good faith.

CERTIFICATE OF CONFORMITY & COMPLIANCE

FCC IDENTITY:	S30-CEL-TA
PURPOSE OF TEST:	Certification
TEST SPECIFICATION:	OET Bulletin 65 Supplement C : January 2001
TEST RESULT:	Compliant to Specification
EQUIPMENT UNDER TEST:	CellCom Transceiver/Antenna
EQUIPMENT SERIAL No:	359AX/12/05/370-2
EQUIPMENT TYPE:	UPCS Transceiver
PRODUCT USE:	Personal communications
CARRIER POWER:	19.00 dBm
ANTENNA TYPE:	Integral
ALTERNATIVE ANTENNA:	Not Applicable
BAND OF OPERATION:	1920 MHz – 1930 MHz
CHANNEL SPACING:	Not Applicable
NUMBER OF CHANNELS:	5 Frequencies, 6 double time slots per frequency giving 30 channels
FREQUENCY GENERATION:	SAW Resonator [ ] Crystal [ ] Synthesiser [X]
MODULATION METHOD:	Amplitude [ ] Digital [X] Angle [ ]
POWER SOURCE(s):	24 Vdc or 110 Vac
TEST DATE(s):	6th June 2005 – 30th September 2005
ORDER No(s):	90482
APPLICANT:	Vitec Group Communications
ADDRESS:	7400 Beach Drive Cambridge Research Park Cambridge CB5 9TP

TESTED BY: _____ J CHARTERS

APPROVED BY: _____ P GREEN
EMC PRODUCT MANAGER

APPLICANT'S SUMMARY

EQUIPMENT UNDER TEST (EUT):	CellCom Transceiver/Antenna
EQUIPMENT TYPE:	UPCS Transceiver
SERIAL NUMBER OF EUT:	359AX/12/05/370-2
PURPOSE OF TEST:	Certification
TEST SPECIFICATION(s):	OET Bulletin 65 Supplement C : January 2001
TEST RESULT:	COMPLIANT Yes [X] No [ ]
APPLICANT'S CATEGORY:	MANUFACTURER [X] IMPORTER [ ] DISTRIBUTOR [ ] TEST HOUSE [ ] AGENT [ ]
APPLICANT'S ORDER No(s):	90482
APPLICANT'S CONTACT PERSON(s):	Mr Jiou-pahn Lee
E-mail address:	Jiou-Pahn.Lee@VitecGroup.com
APPLICANT:	Vitec Group Communications
ADDRESS:	7400 Beach Drive Cambridge Research Park Cambridge CB5 9TP
TEL:	+44 (0) 1223 815 000
FAX:	+44 (0) 1223 815 001
TEST LABORATORY:	TRL EMC
UKAS ACCREDITATION No:	0728
TEST DATE(s)	6th June 2005 – 30th September 2005
TEST REPORT No:	RU1175/6640

EQUIPMENT TEST / EXAMINATIONS REQUIRED

1.

TEST/EXAMINATION	RULE PART	APPLICABILITY
Radio Frequency Radiation Exposure	15.319 (i)	Yes note 2
Note:	1. EUT is not used within 20 cm of the body. MEP calculation performed for information. 2. This report should be read in conjunction with TRL Compliance Services test report RU1175/6573 for results.	

2. Product Use: Personal Communications

3. Duty Cycle: 8.33%

4. Transmitter bit or pulse rate and level: 2Mbps

5. Temperatures: Ambient (Tnom) 20°C

6. Supply Voltages: Vnom +24 Vdc or +110 Vac

Note: Vnom voltages are as stated above unless otherwise shown on the test report page

7. Equipment Category:

Single channel	[ ]
Two channel	[ ]
Multi-channel	[X]

8. Channel spacing:

Narrowband	[ ]
Wideband	[X]

9. System Description:

The system is made up of two parts, a fixed part and a portable part. The portable part is a beltpack worn about the body. The fixed part constitutes two parts, an active antenna and a base unit. The base unit is rack mounted and is connected to the active antenna via a CAT-5 cable. This cable carries the data stream between the two units. It can also provide power from the base unit to the active antenna. The active antenna can also be powered from an additional power source.

The system operates in the 1920MHz -1930MHz band. The system use 5 different frequency channels 1.728MHz apart using MC/TDMA/TDD (Multi Carrier / Time Division Multiple Access / Time Division Duplex) using QPSK modulation.

The system employs a 10ms frame, divided into 24 equal timeslots, numbered 0-23. The system uses double-slots only, where a double-slot always begins on an even-numbered slot. The Base station always transmits in the first half of the frame, and the Portable always transmits on the duplex mate in the second half. A physical bearer is composed of a transmit double-slot and a receive double-slot. The two halves of a given bearer are always exactly half a frame (5ms, 12 slots) apart.

During the testing the belt pack was frequency administered to allow operation on only certain channels during the test. The frequency administration was performed using software.

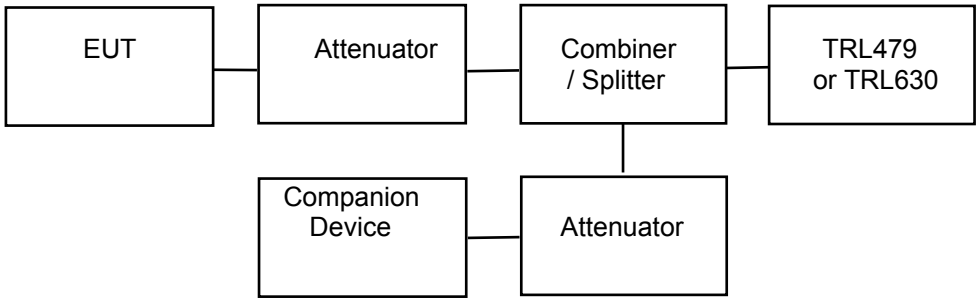
RADIO FREQUENCY RADIATION EXPOSURE - PART15.319 (i)

Consideration of radio frequency exposure:

SAR testing Portable Part(PP)	Not applicable
MPE Calculation Fixed Part (FP	Applicable

MPE calculation:

Test setup 1:



Formula:

$$S=EIRP /4\pi R^2$$

S = Power Density (mW/cm^2)
EIRP = Radiated power (mW)
R = distance for body (cm)

Calculation:

$$S = 79.43/4\ \pi 20^2 = 0.015 mW/cm^2$$

Notes:

1. The unit will be mounted more 20cm away from the body.
2. The carrier power EIRP of 19 dBm was the worst case peak level measured in TRL Compliance Services test report RU1175/6573
3. See Annex A for worst case peak plot.
4. Antenna gain not include in peak power measurement as antenna gain is lest than 2dBi.
5. See statement by manufacturer declaring maximum antenna gain exhibit.

Limit

The limit of Power density for the General Population/ Uncontrolled Exposure is $1.0mW/cm^2$.

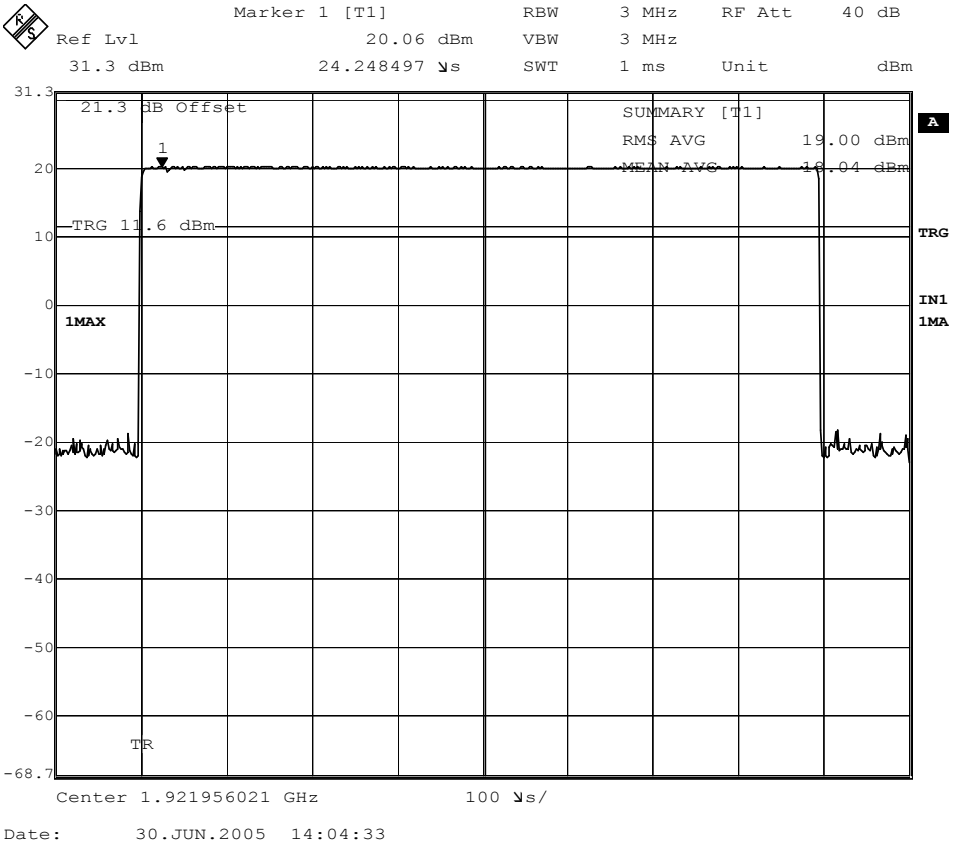
Result

The EUT meet the $1.0mW/cm^2$ limit.

ANNEX A

PEAK TRANSMIT POWER

PEAK TRANSMIT POWER



ANNEX B

EQUIPMENT CALIBRATION

UH006	3m Range ERP CAL	TRL	01/03/2005	12	01/03/2006
UH028	Log Periodic Ant	Schwarbeck	28/04/2005	24	28/04/2007
UH029	Bicone Antenna	Schwarbeck	27/04/2005	24	27/04/2007
UH041	Multimeter	AVOmeter	14/12/2004	12	14/12/2005
UH120	Spectrum Analyser	Marconi	15/03/2005	12	15/03/2006
UH122	Oscilloscope	Tektronix	07/06/2005	24	07/06/2007
UH162	ERP Cable Cal	TRL	23/05/2005	12	23/05/2006
UH179	Power Sensor	Marconi	14/12/2004	12	14/12/2005
UH228	Power Sensor	Marconi	17/01/2005	12	17/01/2006
UH253	1m Cable N type	TRL	10/01/2005	12	10/01/2006
UH254	1m Cable N type	TRL	10/01/2005	12	10/01/2006
UH265	Notch filer	Telonic	24/06/2005	12	24/06/2006
L005	CMTA	R&S	22/10/2004	12	22/10/2005
L007	Loop Antenna	R&S	29/03/2005	24	29/03/2007
L138	1-18GHz Horn	EMCO	15/04/2005	24	15/04/2007
L139	1-18GHz Horn	EMCO	03/05/2005	24	03/05/2007
L176	Signal Generator	Marconi	31/01/2005	12	31/01/2006
L193	Bicone Antenna	Chase	12/10/2003	24	12/10/2005
L203	Log Periodic Ant	Chase	21/10/2003	24	21/10/2005
L254	Signal Generator	Marconi	13/12/2004	12	13/12/2005
L280	18GHz Cable	Rosenberger	10/01/2005	12	10/01/2006
L343	CCIR Noise Filter	TRL	07/06/2005	12	07/06/2006
L426	Temperature Indicator	Fluke	14/12/2004	12	14/12/2005
L478	Signal Generator	R&S	19/05/2004	12	19/05/2005
L479	Analyser	Anritsu	05/10/2004	12	05/10/2005
L552	Signal Generator	Agilent	25/04/2005	12	25/04/2006