

## **SPURIOUS RADIATED EMISSIONS**

## RESULTS

The maximum field strength of any spurious emission, with respect to the applicable limit, to 1,000 MHz, while transmitting or receiving was:

Handset: Maximum field strength of 105.1  $\mu$ V/M at 390.08 MHz; Channel 01  
Maximum field strength of 089.3  $\mu$ V/M at 399.76 MHz; Channel 25

Base Station: Maximum field strength of 140.9  $\mu$ V/M at 830.64 MHz; Channel 01  
Maximum field strength of 137.7  $\mu$ V/M at 798.45 MHz; Channel 25  
Maximum field strength of: NONE FOUND RECEIVE

## TEST CONDITIONS

### **Equipment Positioning:**

**Handset:** laying on its side  
**Base Station:** standing on its back with the antenna extended in the vertical plane.

### Antenna Polarization:

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Handset:	horizontal
Base Station:	horizontal
Base Station: Receive	vertical and horizontal

Measurement Bandwidth: 100 KHz/120 KHz Q.P. (IF)

### Supply Voltages:

Handset: 3.6 VDC from an internal battery.  
Base Station: 120 VAC/60 Hz to 09 VDC (adaptEr)

## METHODS OF MEASUREMENT

The cordless phone components were placed in turn on a one metre high, non-metallic turntable. Measurements were made in a minimum of 3 positions for the handset and 2 for the base station. If adjustable, the whip antennas were fully extended.

For each of the above conditions the turntable was rotated through 360 degrees while the receiving antenna, at three (3) metres from the EUT, was varied in height from 1 to 4 metres and set in both planes of polarization to find the maximum signal strength. The level was measured using a spectrum analyzer. The measured level was converted to a field strength using the antenna correction factors and cable losses.

All base station measurements were made with the equipment under test connected to an artificial telephone line network, with 48 VDC applied.

RADIATED EMISSION RESULTS

BW: 100/120 KHz  
 Span: 5 to 50 MHz

## BASE STATION: CHANNEL 01

TEST #	TEST MODE	FREQ MHz BAND	LEVEL $\mu$ V	ANT. TYPE (PZ)	ANT. FACT.	F.S. $\mu$ V/M	LIMIT $\mu$ V/M	DIFF TO LIMIT dB	DETECTOR & BW KHZ
CARRIER		43.72	7046	RT.1 V	1.31	9230.3	10000	-0.70	PK 100
01 TX		131.14	11.6	B/C V	5.6	65.0	150	-7.27	QP 120
02 TX		174.85	8	B/C H	7.6	60.8	150	-7.84	QP 120
03 TX		262.29	10.3	B/C H	13.6	140.1	200	-3.09	QP 120
04 TX		306.03	5.2	L/P H	20.3	105.6	200	-5.55	QP 120
05 TX		349.74	5.9	L/P H	9.1	53.7	200	-11.42	QP 120
06 TX		393.45	5	L/P H	9.4	47.0	200	-12.58	QP 120
07 TX		437.17	10	L/P H	9	90.0	200	-6.94	QP 120
08 TX		524.6	5.2	L/P H	13.1	68.1	200	-9.36	QP 120
09 TX		612.03	7.3	L/P H	14.1	102.9	200	-5.77	QP 120
10 TX		743.22	5.9	L/P H	22.1	130.4	200	-3.72	QP 120
11 TX		786.96	3.6	L/P H	22.6	81.4	200	-7.81	QP 120
12 TX		830.64	5.4	L/P H	26.1	140.9	200	-3.04	QP 120
13 TX		918.09	3.8	L/P H	36.6	139.1	200	-3.16	QP 120

RADIATED EMISSION RESULTS

BW: 100/120 KHz  
 Span: 5 to 50 MHz

## BASE STATION: CHANNEL 25

TEST #	FREQ MHZ	LEVEL	ANT.	ANT.	F.S.	LIMIT	DIFF TO	DETECTOR
MODE	BAND	μV	TYPE (PZ)	FACT.	μV/M	μV/M	LIMIT dB	& BW KHZ
CARRIER	46.97	6380	RT.1 V	1.36	8676.8	10000	-1.23	PK 100
01 TX	140.9	9.6	B/C V	6	57.6	150	-8.31	QP 120
02 TX	187.92	3.8	B/C H	7.4	28.1	150	-14.54	QP 120
03 TX	234.85	4.1	B/C H	9.2	37.7	200	-14.49	QP 120
04 TX	281.82	3	B/C H	16.2	48.6	200	-12.29	QP 120
05 TX	328.74	5.9	L/P H	14.5	85.6	200	-7.38	QP 120
06 TX	375.76	7.7	L/P H	9.2	70.8	200	-9.02	QP 120
07 TX	469.65	9.3	L/P H	10.5	97.7	200	-6.23	QP 120
08 TX	563.64	4.6	L/P H	13.2	60.7	200	-10.35	QP 120
09 TX	610.61	5	L/P H	14.1	70.5	200	-9.06	QP 120
10 TX	657.58	4.9	L/P H	15.7	76.9	200	-8.30	QP 120
11 TX	704.55	4.1	L/P H	20	82.0	200	-7.74	QP 120
12 TX	751.52	5.6	L/P H	22.6	126.6	200	-3.97	QP 120
13 TX	798.45	5.1	L/P H	27	137.7	200	-3.24	QP 120
14 TX	986.35	2.2	L/P H	37.2	81.8	500	-15.72	QP 120

RADIATED EMISSION RESULTS

BW: 100/120 KHz

Span: 5 to 50 MHz

## HANDSET

#	TEST MODE	FREQ MHz BAND	LEVEL $\mu$ V	ANT. TYPE (PZ)	ANT. FACT.	F.S. $\mu$ V/M	LIMIT $\mu$ V/M	DIFF TO LIMIT dB	DETECTOR & BW KHZ
CARRIER		48.76	1430	RT.1 V	1.43	2044.9	10000	-13.79	PK 100
01 TX		195.3	4.8	B/C H	7.2	34.6	150	-12.75	QP 120
02 TX		244.12	6.5	B/C H	10.9	70.9	200	-9.01	QP 120
03 TX		292.56	4	B/C H	17.7	70.8	200	-9.02	QP 120
04 TX		341.32	8.8	L/P H	11.3	99.4	200	-6.07	QP 120
05 TX		390.08	11.3	L/P H	9.3	105.1	200	-5.59	QP 120
06 TX		438.8	8.5	L/P H	9	76.5	200	-8.35	QP 120
07 TX		585.12	4	L/P H	13.6	54.4	200	-11.31	QP 120
CARRIER		49.97	3540	RT.1 V	1.47	5203.8	10000	-5.67	PK 100
08 TX		149.93	6.7	B/C H	6.4	42.9	150	-10.88	QP 120
09 TX		299.83	3.6	B/C H	20.3	73.1	200	-8.74	QP 120
10 TX		349.79	8.2	L/P H	9.2	75.4	200	-8.47	QP 120
11 TX		399.76	9.5	L/P H	9.4	89.3	200	-7.00	QP 120
12 TX		599.64	3.8	L/P H	13.9	52.8	200	-11.56	QP 120

**POWER LINE CONDUCTED EMISSIONS**

**RESULTS**

The largest RF voltages on the AC power lines, over the frequency range of 450 KHz to 30 MHz, was **8.19  $\mu$ V (18.27 dB $\mu$ V)** at **7.14 MHz** from the base station while transmitting and/or receiving. (A side of the line in the telephone mode) Refer to the attached results.

**TEST CONDITIONS**

Measurement Bandwidth: 9 KHz Q.P. (IF)  
AC Test Voltage: 120 VAC (filtered and stabilized)  
Mode of Operation: Telephone

**METHODS OF MEASUREMENT**

The base station portion of the cordless phone was placed on a wooden table directly above a 50 ohm line impedance stabilization network.(LISN) If adjustable, the whip antenna was fully extended vertically and the AC power attachment cord went directly down to the LISN. The LISN is grounded directly to the floor of the test facility. Excess AC cord was coiled in a figure eight pattern before connecting directly to the 50 micro-henry LISN.

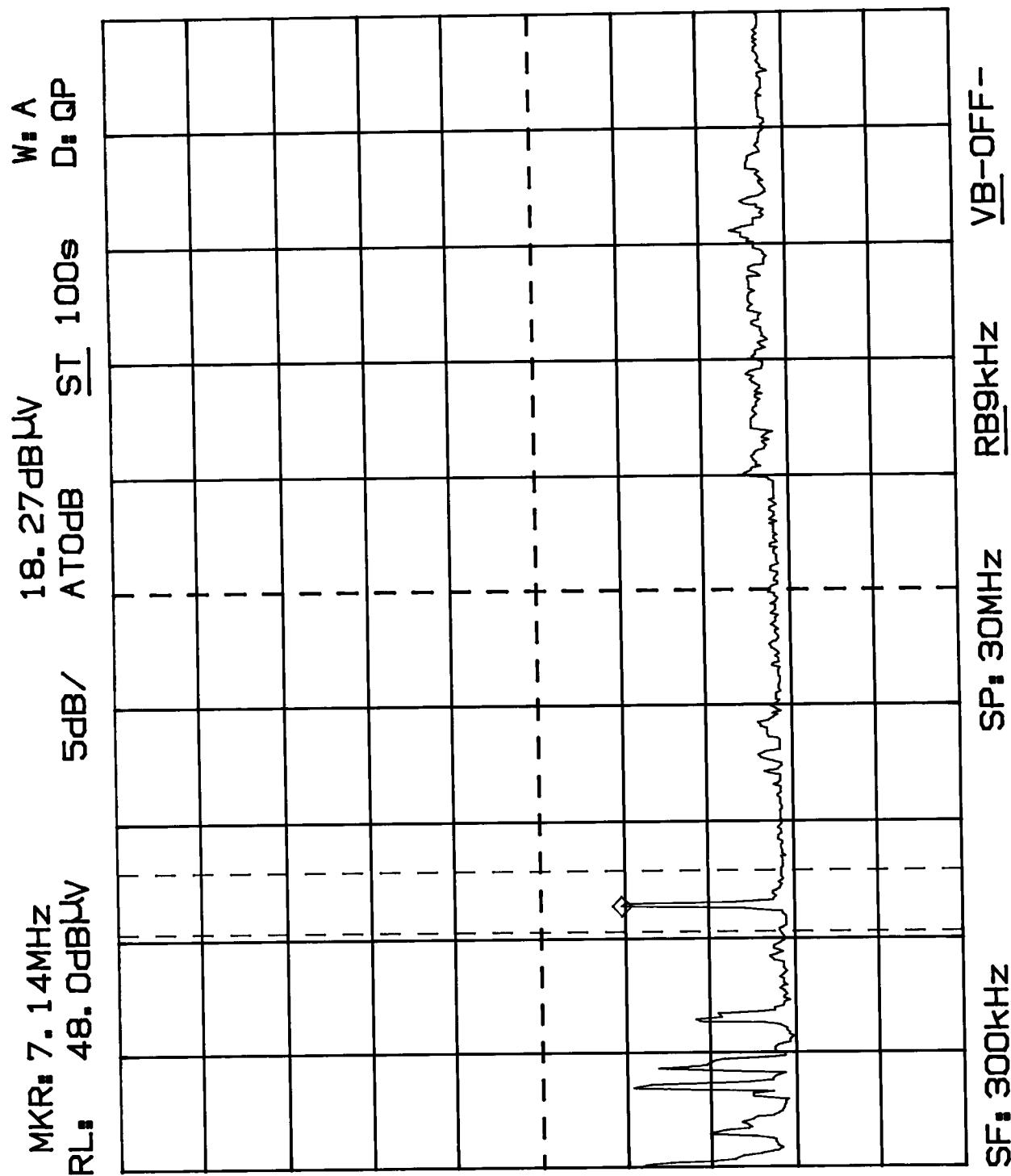
The base station was connected to a simulated 9,000 foot phone line and 48 VDC was applied. The 9,000 foot phone line network was grounded to the nearest AC outlet with a test lead.

A length of low loss RF foam cable was used to couple the RF voltages from the LISN to the spectrum analyzer. The base station transmitter was keyed on by the handset transmitting nearby. All of the RF voltages were recorded and are attached.

The base station was tested in all modes of operation which were applicable to the specific equipment under test. This included operating modes such as "calling/paging", quiescent or receive mode and standard telephone/transmit operation.

If the cordless phone contained an intercom mode of operation, then this test was repeated in that mode. The attached results represent the **worst case results** in each test condition.

POWER LINE CONDUCTED EMISSIONS  
MODEL 26700XXX-C  
SIDE A - OFF HOOK



POWER LINE CONDUCTED EMISSIONS  
MODEL 26700XXX-C  
SIDE B - OFF HOOK

