

**SUMMARY OF RESULTS**

The Radio Shack, Model 43-727 (XX) is a 900 MHZ Digital Spread Spectrum Cordless Telephone. Testing in accordance with 47 CFR, Parts 15.207 and 15.247, was conducted by Sanyo Electric Co. Ltd. and Marstech Limited in accordance with the FCC rules, and presented herewith. Test setups and processing gain calculations are included with the applicable test results.

		COMPLIANCE	
		(yes)	(no)
15.207	<b>POWER LINE CONDUCTED EMISSIONS</b> Pages D(3)-2 to D(3)-4	(X)	( )
15.209 (15.247(c))	<b>SPURIOUS RADIATED EMISSIONS</b> Pages D(3)-5 to (D)3-7	(X)	( )
15.247 (a)	<b>BANDWIDTH</b> Pages D(3)-8 to D(3)-14	(X)	( )
15.247(b)	<b>POWER OUTPUT</b> Pages D(3)-15 to D(3)-21	(X)	( )
15.247(c)	<b>OUT OF BAND EMISSIONS</b> Pages D(3)-22 to D(3)-26	(X)	( )
15.247(d)	<b>POWER DENSITY</b> Pages D(3)-27 to D(3)-33	(X)	( )
15.247(e)	<b>PROCESSING GAIN</b> Pages D(3)-34 to D(3)-35	(X)	( )

**EQUIPMENT REQUIREMENTS AND IDENTIFICATION**

a) Manufacturers or applicants name:	( x ) ( )
b) FCC ID:	( x ) ( )
c) Serial number:	(N/M) ( )
d) Antenna:	( x ) ( )
e) Operator controls:	( x ) ( )
f) Security Coding	( x ) ( )
g) Equipment/Packaging Marking	( x ) ( )

15.207

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 **8.61  $\mu$ V (18.70 dB $\mu$ V) at 2.88 MHz** from the base station while transmitting and/or receiving (B side of the line in the off hook 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.

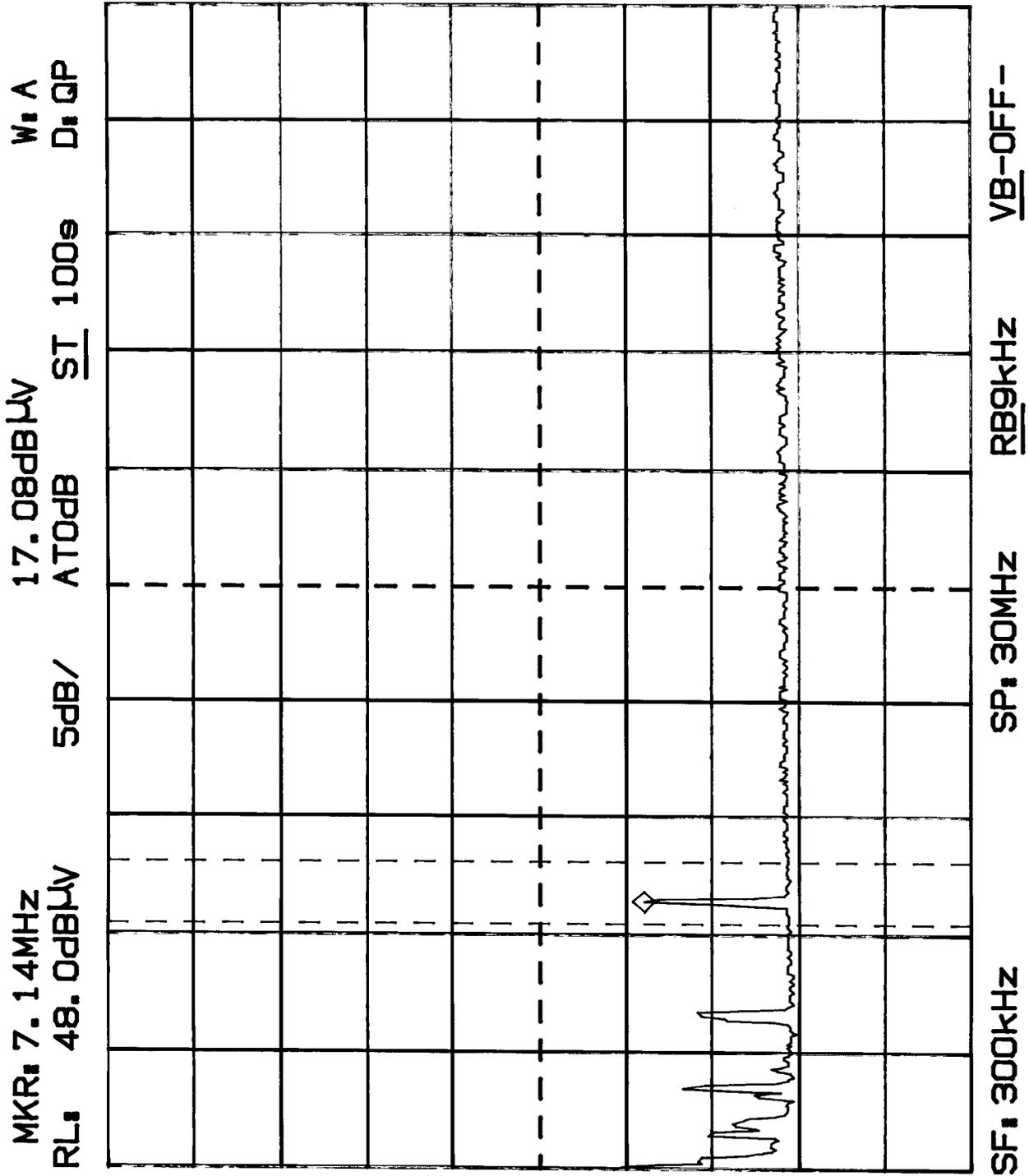
The base station was connected to a simulated 9,000 foot phone line and 48 VDC was applied. The 9,000 foot phone line network was grounded to the nearest AC outlet with a test lead.

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.

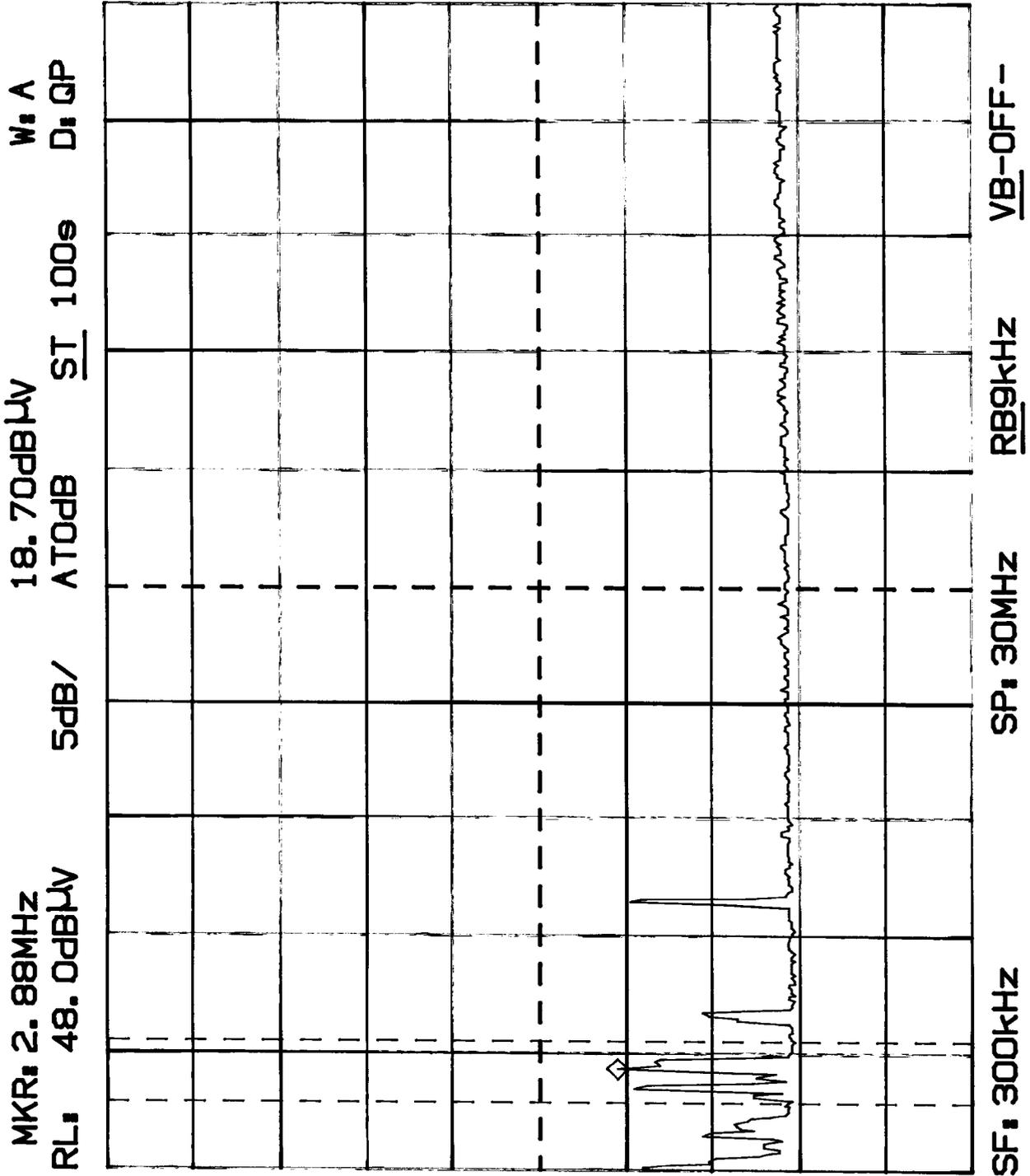
The base station was tested in all modes of operation which were applicable to the specific equipment under test. This included operating modes such as "calling/paging", quiescent or receive mode and standard telephone/transmit operation while switching the transmit channels..

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 and frequency band.

POWER LINE CONDUCTED EMISSIONS  
SIDE: A



POWER LINE CONDUCTED EMISSIONS  
SIDE: B



**15.209 (15.247 (c))**

**SPURIOUS RADIATED EMISSIONS**

**RESULTS**

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

**Handset:**                    **Maximum field strength of: 105.0  $\mu$ V/M at 326.40 MHz**  
**Maximum field strength of: NONE FOUND over 1000 MHz**

**Base Station:**                    **Maximum field strength of: 80.1  $\mu$ V/M at 358.60 MHz**  
**Maximum field strength of: NONE FOUND over 1000 MHz**

*Note: A remote headset was attached to the handset during spurious emission tests.*

**TEST CONDITIONS**

**Equipment Positioning:**

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

**Antenna Polarization:**

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

**Measurement Bandwidth:**        100/120 KHz(IF) & 1 MHz(IF) for frequencies above 1.0 GHz.

**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 and 1.0 MHz  
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
01	TX	326.40	07.0	L/P H	15.0	105.0	200	-5.60
02	TX	336.00	05.0	L/P H	12.6	63.0	200	-10.03
03	TX	345.40	06.0	L/P H	10.1	60.6	200	-10.37
04	TX	364.40	04.9	L/P H	9.1	44.6	200	-13.04

**BASE STATION**

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
01	TX	358.60	08.9	L/P H	9.0	80.1	200	-7.95