

EXHIBIT 6

Report of Measurements

Para. 2.1033(b)(6)



**Retlif Testing Laboratories**

Test Report No. R-7860-2  
FCC ID: LZ6SOLO420

APPLICANT	MANUFACTURER
Fomotech International Corporation 2F-1, 286-3, Hsin Ya Road Chien Chen District, Kaohsiung, Taiwan	SAME AS APPLICANT

TEST SPECIFICATION: FCC Rules and Regulations Part 15, Subpart C, Para. 15.231

TEST PROCEDURE: ANSI C63.4:1992

**TEST SAMPLE DESCRIPTION**

BRANDNAME: Fomotech International Corporation MODEL: Solo 420

TYPE: RF Transmitter

POWER REQUIREMENTS: 4.5 VDC via 3X "AA" Batteries

FREQUENCY OF OPERATION: 301.105 MHz

**TESTS PERFORMED**

Para. 15.231(b), Radiated Emissions, Fundamental and Harmonics

Para. 15.231(c), Occupied Bandwidth

Duty Cycle Determination

I HEREBY CERTIFY THAT: The measurements shown here were in accordance with the procedure indicated and that the energy emitted by this equipment was found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements and vouch for the qualifications of all persons taking them.

I FURTHER CERTIFY THAT: On the basis of the measurements made, the device tested is capable of operation in compliance with the requirements of Part 15 of the FCC Rules under normal use and maintenance.

SIGN	PRINT	TITLE
	Thomas J. Schneider	EMC Test Engineer



**Retlif Testing Laboratories**

Test Report No. R-7860-2  
FCC ID: LZ6SOLO420

## REPORT OF MEASUREMENTS

Applicant: Fomotech International Corporation  
Device: 301.105 MHz RF Transmitter  
FCC ID: LZ6SOLO420  
Power Requirements: 4.5 VDC via 3X "AA" Batteries  
Applicable Rule Section: Part 15, Subpart C, Section 15.231

### TEST RESULTS

15.231 (a) - The device is used as a transmitter for versatile remote control safety purposes such as controlling cranes, multiple hoists, trolleys, mining equipment etc.

15.231 (a)(1) & -  
15.231(2) The transmitter is manually operated and ceases transmission within 5 seconds after deactivation.

15.231 (a)(3) - The transmitter does not perform periodic transmissions.

15.231 (a)(4)- The device is employed for RC purposes involving safety of life and may transmit during the pendency of the alarm condition.

15.231 (b) - The fundamental field strength did not exceed  $5,460 \mu\text{V/M}$  (Average) at a test distance of 3 meters. In addition, the requirements of section 15.35 for averaging pulsed emissions and for limiting peak emissions were met.  
The field strength of harmonic and spurious emissions did not exceed  $546 \mu\text{V/M}$  (AVERAGE).

15.231 (c) - The device operates at 301.105 MHz. The bandwidth of emissions did not exceed 0.25% of the operating frequency (752.7 kHz).



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Test Report No. R-7860-2  
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## REPORT OF MEASUREMENTS (continued)

### DETERMINATION OF FIELD STRENGTH LIMITS

The field strength limits shown below are found in Section 15.231.

Frequency	Limit
F1 = 260	3750 = L1
Fo = 315	Lo
F2 = 470	12500 = L2

The formula below was utilized to determine the limits:

$$\text{Limit} = L1 + [(Fo-F1)(L2-L1)/(F2-F1)]$$

Solving yields:

Fundamental Limit = 5,460  $\mu$ V/M (AVERAGE) @ 3 Meters

Harmonic Limit = 546  $\mu$ V/M (AVERAGE) @ 3 Meters

### DETERMINATION OF DUTY CYCLE

The unit's RF output was directly coupled to the input of the spectrum analyzer. The analyzer was set for a frequency span of 0Hz. The sweep time was then adjusted in order to display one full pulse train. The transmitter on time was then summed and compared to the time for one full cycle in order to obtain the duty cycle.

Transmitter On Time	=	>100 milliseconds (maximum- worst case in 100 ms)
Transmitter Cycle Time	=	0 milliseconds
Transmitter Duty Cycle	=	100.0 %
Correction Factor	=	0.0 db

### GENERAL NOTES

1. All readings were taken utilizing a peak detector function at a test distance of 3 meters.
2. The duty cycle was applied to the peak readings in order to determine the average value of the emissions.
3. All measurements were made with (3) new "AA" batteries installed in the unit.
4. The frequency range was scanned from 30 MHz to 3.1 GHz . All emissions not reported were more than 10 dB below the specified limit.



**Retlif Testing Laboratories**

Test Report No. R-7860-2  
FCC ID: LZ6SOLO420

Exhibit 6  
Report of Measurements  
Radiated Emissions Data, Para. 15.231(b)



**Retlif Testing Laboratories**

Test Report No. R-7860-2  
FCC ID: LZ6SOLO420

# RETLIF TESTING LABORATORIES

## TABULAR DATA SHEET

TEST METHOD:	FCC Part 15 Subpart C Radiated Emissions		
CUSTOMER:	Formotech Int'l Corp.	JOB No.:	R-7860-2
TEST SAMPLE:	RF Transmitter		
MODEL No.:	Solo 420	SERIAL No.:	00400007
TEST SPECIFICATION:	FCC Part 15 Subpart C		
OPERATING MODE:	Continuously Transmitting 301.105 Mhz Signal		
TECHNICIAN:	Dennis Cortes	DATE:	January 6, 1999
NOTES:	Test Distance: 3 Meters Temp:04C Humidity:46% Detector Function: Peak		

Test Frequency	Antenna Pol./Height	EUT Orientation	Meter Reading	Correction Factor	Corrected Reading	Converted Reading		Peak Limit
MHz	(H/V) / meters	X / Y / Z	dBuV	dB	dBuV/m	uV/m		uV/m
301.105	H/1.4	X	64.3	-4.3	60.0	1000.0		5460
301.105	H/1.0	Y	73.8	-4.3	69.5	2985.4		5460
301.105	H/1.0	Z	76.7	-4.3	72.4	4168.7		5460
301.105	V/1.0	X	73.2	-4.3	68.9	2786.1		5460
301.105	V/1.0	Y	61.0	-4.3	56.7	683.9		5460
301.105	V/1.0	Z	63.5	-4.3	59.2	912.0		5460
602.210	H/1.5	X	34.2	2.4	36.6	67.6		546
602.210	H/1.4	Y	32.8	2.4	35.2	57.5		546
602.210	H/1.2	Z	36.3	2.4	38.7	86.1		546
602.210	V/1.1	X	33.1	2.4	35.5	59.6		546
602.210	V/1.5	Y	33.0	2.4	35.4	58.9		546
602.210	V/1.1	Z	32.4	2.4	34.8	55.0		546
903.315	H/1.1	X	30.3	8.3	38.6	85.1		546
903.315	H/1.4	Y	31.0	8.3	39.3	92.3		546
903.315	H/1.3	Z	30.3	8.3	38.6	85.1		546
903.315	V/1.0	X	32.3	8.3	40.6	107.2		546
903.315	V/1.0	Y	31.9	8.3	40.2	102.3		546
903.315	V/1.0	Z	32.3	8.3	40.6	107.2		546
1204.420	H/1.3	X	47.2	-6.3	40.9	110.9		500
1204.420	H/1.0	Y	46.7	-6.3	40.4	104.7		500
1204.420	H/1.0	Z	47.4	-6.3	41.1	113.5		500
1204.420	V/1.0	X	46.0	-6.3	39.7	96.6		500
1204.420	V/1.1	Y	48.2	-6.3	41.9	124.5		500
1204.420	V/1.1	Z	50.8	-6.3	44.5	167.9		500
1505.525	H/1.0	X	42.0	-4.8	37.2	*72.4		500
1505.525	H/1.0	Y	42.0	-4.8	37.2	*72.4		500
1505.525	H/1.0	Z	42.0	-4.8	37.2	*72.4		500
1505.525	V/1.0	X	42.0	-4.8	37.2	*72.4		500
1505.525	V/1.0	Y	42.0	-4.8	37.2	*72.4		500
1505.525	V/1.0	Z	42.0	-4.8	37.2	*72.4		500

The frequency range was scanned from 30 MHz to 3.1 GHz.

Emissions from the EUT do not exceed the specified limits.

\*=Noise Floor Measurements (Minimum System Sensitivity)

## RETLIF TESTING LABORATORIES

## TABULAR DATA SHEET

TEST METHOD:	FCC Part 15 Subpart C Radiated Emissions		
CUSTOMER:	Fomotech Int'l Corp	JOB No.:	R-7860-2
TEST SAMPLE:	RF Transmitter		
MODEL No.:	Solo 420	SERIAL No.:	00400007
TEST SPECIFICATION:	FCC Part 15 Subpart C		
	PARAGRAPH: 15.231		
OPERATING MODE:	Continuously Transmitting 301.105 Mhz Signal		
TECHNICIAN:	Dennis Cortes	DATE:	January 6, 1999
NOTES:	Test Distance: 3 Meters Detector Function: Peak		

Detector Function: Peak							
Test Frequency	Antenna Pol./Height	EUT Orientation	Meter Reading	Correction Factor	Corrected Reading	Converted Reading	
MHz	(H/V) / meters	X / Y / Z	dBuV	dB	dBuV/m	uV/m	uV/m
1806.630	H/1.0	X	43.0	1.7	44.7	*171.8	546
1806.630	H/1.0	Y	43.0	1.7	44.7	*171.8	546
1806.630	H/1.0	Z	43.0	1.7	44.7	*171.8	546
1806.630	V/1.0	X	43.0	1.7	44.7	*171.8	546
1806.630	V/1.0	Y	43.0	1.7	44.7	*171.8	546
1806.630	V/1.0	Z	43.0	1.7	44.7	*171.8	546
2107.735	H/1.0	X	42.7	-1.4	41.3	*116.1	546
2107.735	H/1.0	Y	42.7	-1.4	41.3	*116.1	546
2107.735	H/1.0	Z	42.7	-1.4	41.3	*116.1	546
2107.735	V/1.0	X	42.7	-1.4	41.3	*116.1	546
2107.735	V/1.0	Y	42.7	-1.4	41.3	*116.1	546
2107.735	V/1.0	Z	42.7	-1.4	41.3	*116.1	546
2408.840	H/1.0	X	42.6	-0.3	42.3	*130.3	546
2408.840	H/1.0	Y	42.6	-0.3	42.3	*130.3	546
2408.840	H/1.0	Z	42.6	-0.3	42.3	*130.3	546
2408.840	V/1.0	X	42.6	-0.3	42.3	*130.3	546
2408.840	V/1.0	Y	42.6	-0.3	42.3	*130.3	546
2408.840	V/1.0	Z	42.6	-0.3	42.3	*130.3	546
2709.945	H/1.0	X	42.8	0.9	43.7	*153.1	500
2709.945	H/1.0	Y	42.8	0.9	43.7	*153.1	500
2709.945	H/1.0	Z	42.8	0.9	43.7	*153.1	500
2709.945	V/1.0	X	42.8	0.9	43.7	*153.1	500
2709.945	V/1.0	Y	42.8	0.9	43.7	*153.1	500
2709.945	V/1.0	Z	42.8	0.9	43.7	*153.1	500
3011.050	H/1.0	X	42.9	3.1	46.0	*199.5	546
3011.050	H/1.0	Y	42.9	3.1	46.0	*199.5	546
3011.050	H/1.0	Z	42.9	3.1	46.0	*199.5	546
3011.050	V/1.0	X	42.9	3.1	46.0	*199.5	546
3011.050	V/1.0	Y	42.9	3.1	46.0	*199.5	546
3011.050	V/1.0	Z	42.9	3.1	46.0	*199.5	546

The frequency range was scanned from 30 MHz to 3.1 GHz.

Emissions from the EUT do not exceed the specified limits.

\*=Noise Floor Measurements (Minimum System Sensitivity)

Exhibit 6

Report of Measurements

Occupied Bandwidth, Para. 15.231(c)

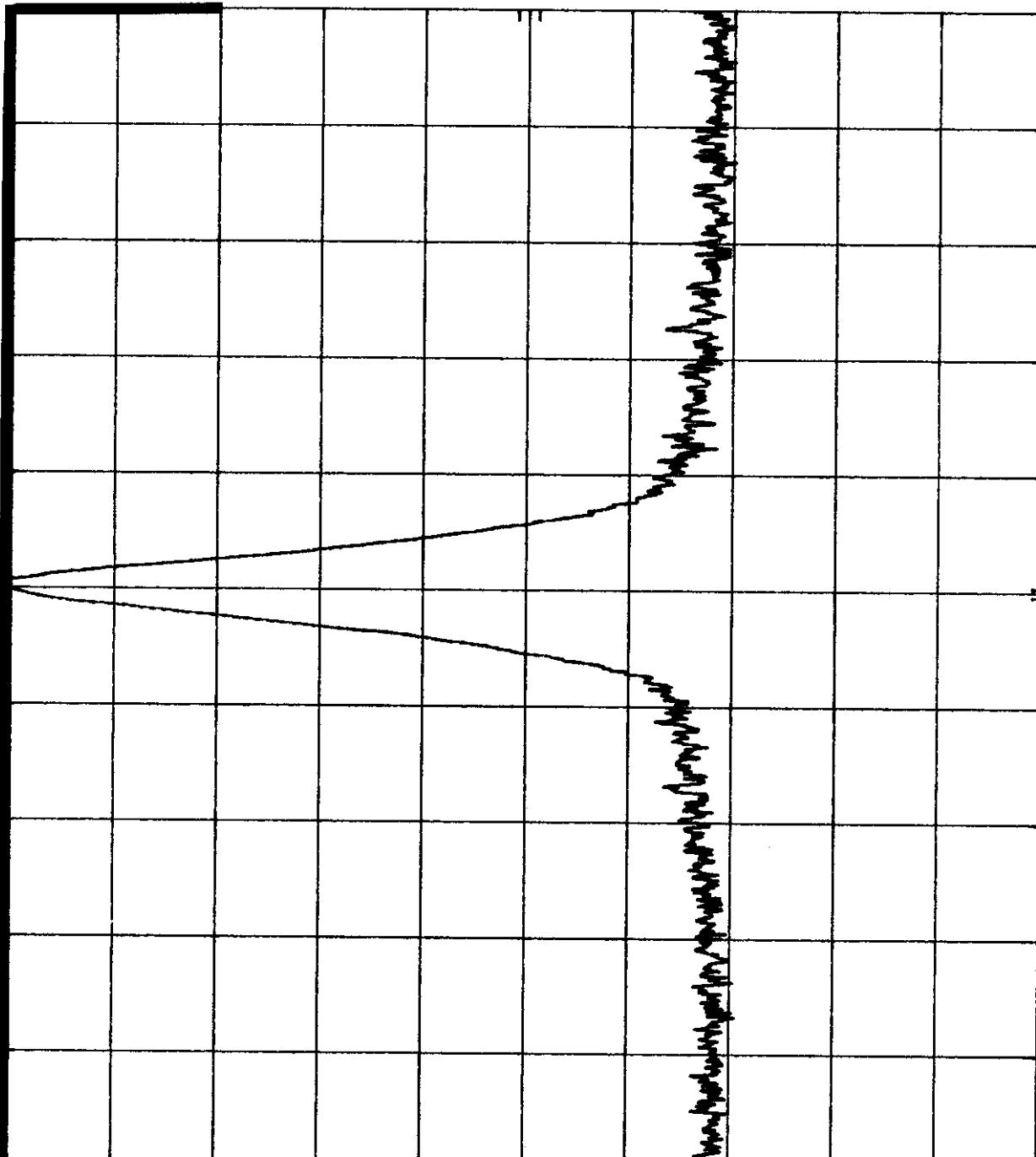


**Retlif Testing Laboratories**

Test Report No. R-7860-2  
FCC ID: LZ6SOLO420

R-7860-2 SOLO420 FCC15.231 (C) OCC BW DC  
REF 86.7 dB $\mu$ V ATTEM 10 dB

10 dB/  
Hz



SPAN 752 kHz  
SWP 30.0 msec  
CENTER 301.105 MHz  
RES BW 10 kHz  
VBW 30 kHz

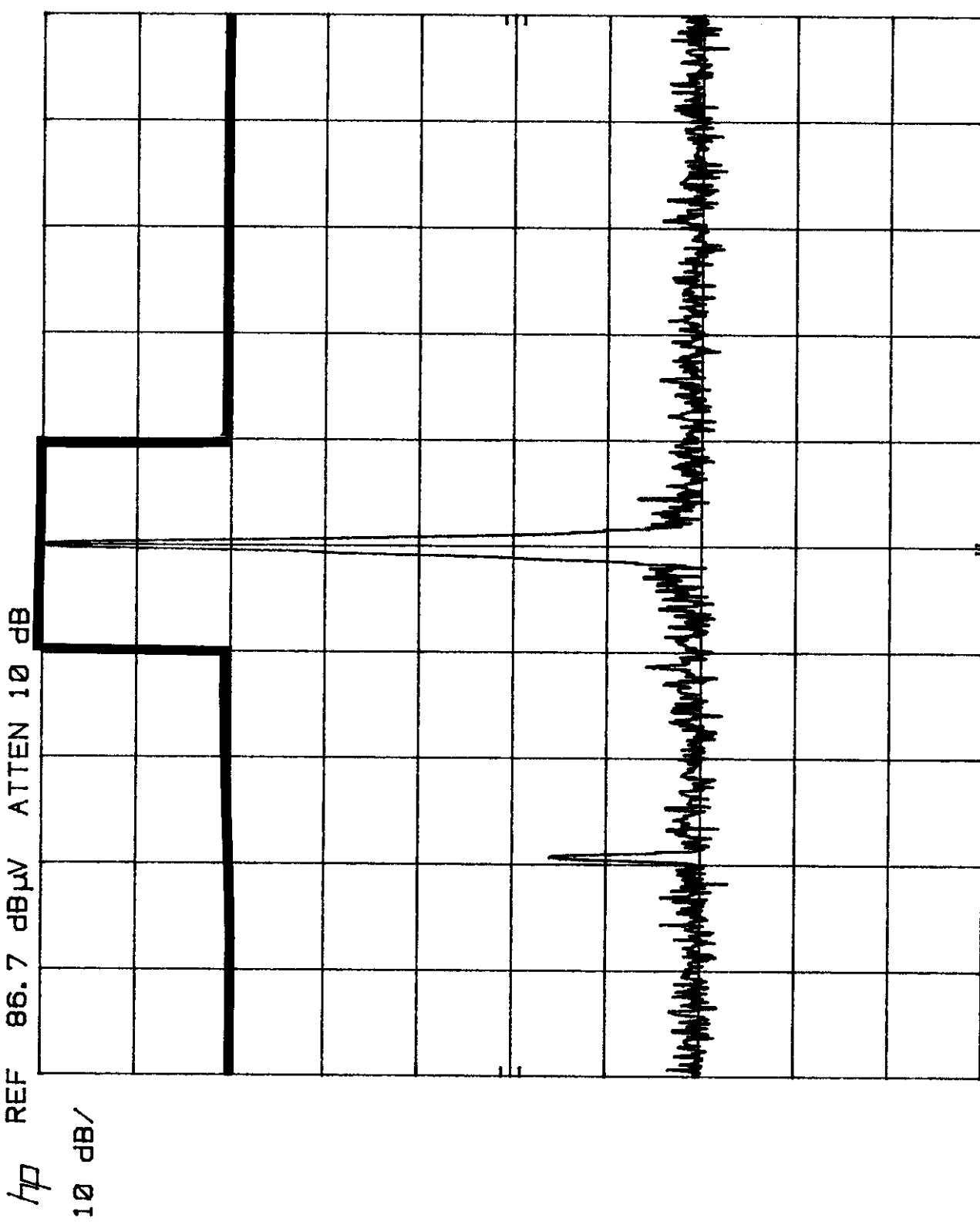
Customer:	Formotech Int'l Corp
Test Sample:	RF Transmitter
Model No.:	SOLO 420
Test Method:	FCC 15.231(c) Occupied Bandwidth
Notes:	The Bandwidth of the emission is not greater than .25% of the center frequency 20dB down from the modulated carrier
Date:	January 7, 1999
Tech:	Dennis Cortes
Sheet:	1
	2



**Retlif Testing Laboratories**

Report No. R-7860-2

R-7860-2 SOLO 420 FCC15.231 (C) OCC BW DC  
REF 86.7 dB $\mu$ V ATTEN 10 dB



Customer:	Formotech Int'l Corp
Test Sample:	RF Transmitter
Model No.:	SOLO 420
Test Method:	FCC 15.231(c) Occupied Bandwidth
Notes:	The Bandwidth of the emission is not greater than .25% of the center frequency 20dB down from the modulated carrier
Date:	January 7, 1999
Test:	Dennis Cortes
Sheet:	2 of 2



Retlif Testing Laboratories

Report No. R-7860-2

Exhibit 6

Report of Measurements

Duty Cycle Determination



**Retlif Testing Laboratories**

Test Report No. R-7860-2  
FCC ID: LZ6SOLO420

Tek Stop: 100 S/s

△: 1.30 S  
@: 1.29 S  
Ch1 Max  
508mV

Ch1 Low  
76mV

18 Jan 1999  
17:22:17

240mV

Ch1

500ms

Ch1

500ms

Ch1

500ms

Ch1

500ms

Ch1

500ms

Ch1

Report No. R-7860-2

Customer:	FOMOTECH INT'L Corp.
Test Sample:	RF Transmitter
Test Method:	Duty Cycle Determination
Date:	January 18, 1999

Model No.:	SOLO 420
Notes:	Transmitter on time greater than 100ms

Tech:

Dennis Cortes

Sheet 1 of 1

Exhibit 6

Report of Measurements

TEST EQUIPMENT LIST



**Retlif Testing Laboratories**

Test Report No. R-7860-2  
FCC ID: LZ6SOLO420

## EQUIPMENT LIST

### FCC Part 15 Radiated Emissions, 30 MHz to 3.1 GHz

EN	Type	Manufacturer	Frequency Range	Model No.	Cal Date	Due Date
067	Open Area Test Site	Retlif	3 Meter	RNY	8/30/97	8/30/99
088A	Conical Log Spiral	Electro-Mechanics	200 MHz - 1 GHz	3101	12/28/98	12/28/99
133	Broadband Pre-Amplifier	Electro-Metrics	10 kHz - 1 GHz, 26dB	BPA-1000	6/22/98	6/22/99
141	Spectrum Analyzer	Hewlett Packard	100 Hz - 40 GHz	8566B	9/19/98	3/19/99
141A	Graphics Plotter	Hewlett Packard	N/A	7470A	3/4/98	3/4/99
141B	Quasi-Peak Adaptor	Hewlett Packard	100 Hz - 1 GHz	85650A	9/19/98	3/19/99
206B	6.0 dB Attenuator	Texscan	0 - 1.0 GHz	FP-50 - 6 dB	6/22/98	6/22/99
523	Biconilog	Electro-Mechanics	26 - 2000 MHz	3142B	10/22/98	4/22/00
530	AM/FM Signal Generator	Marconi Instru.	10 kHz - 1.2 GHz	2023	4/29/98	4/29/99



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