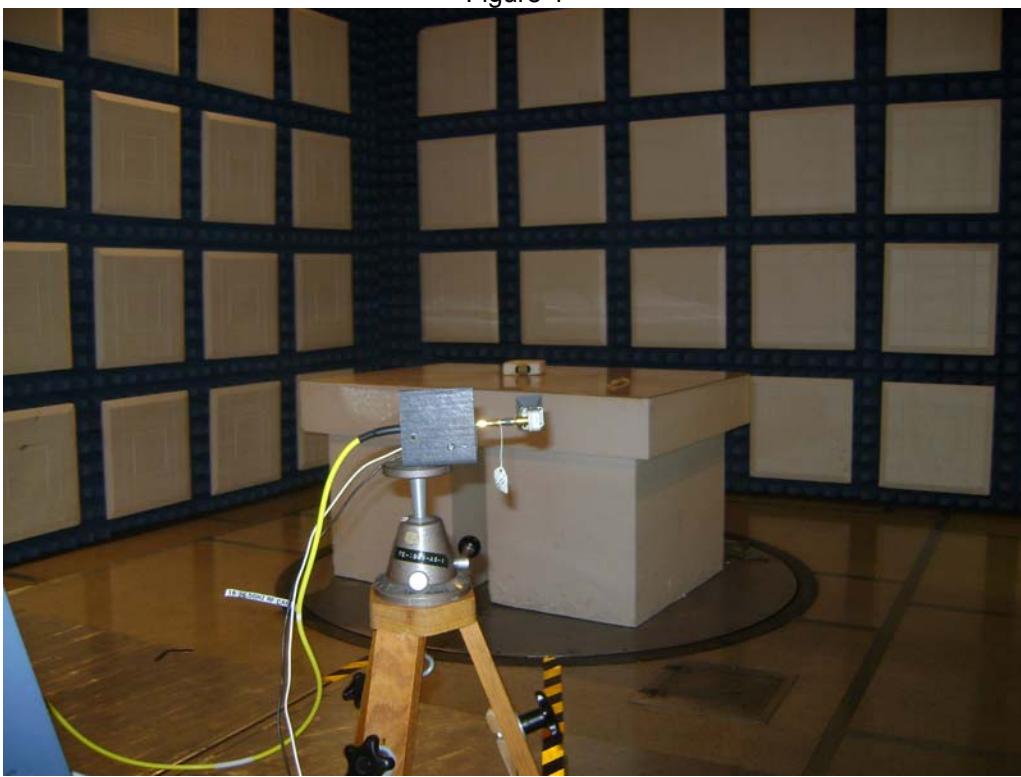
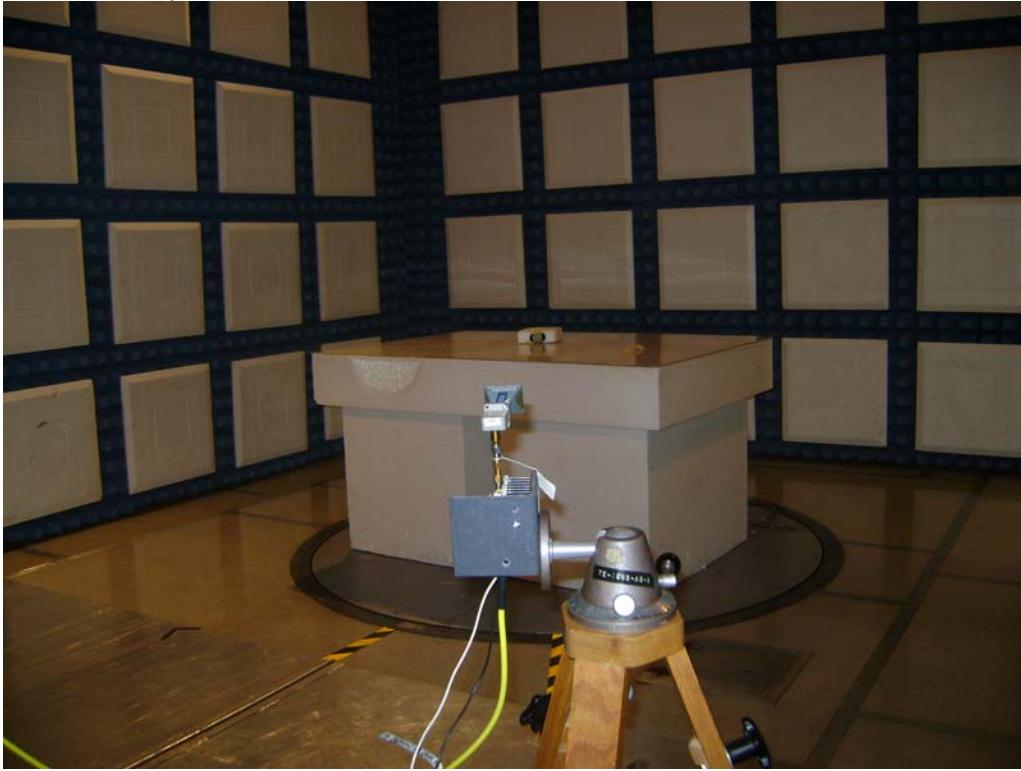




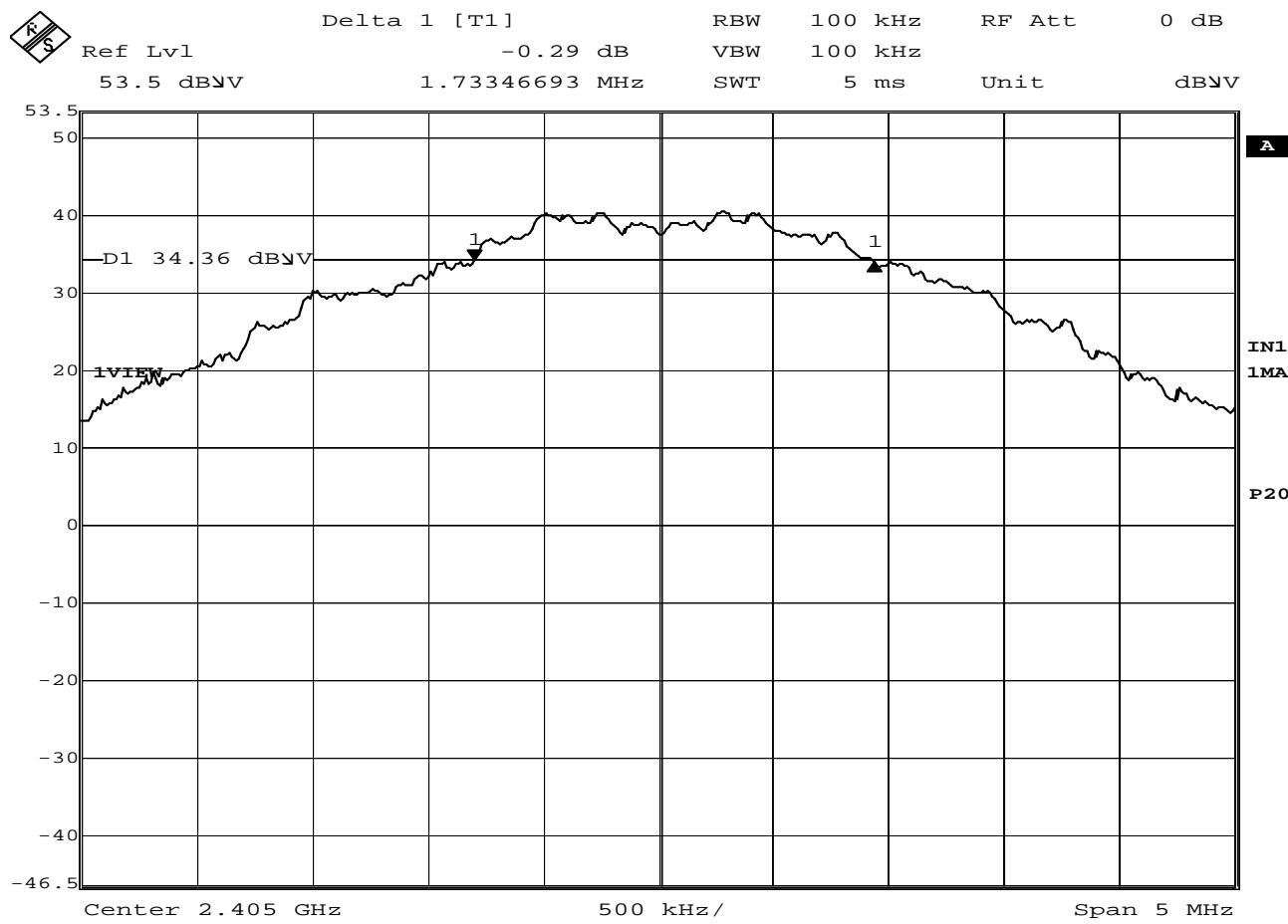
Figure 4



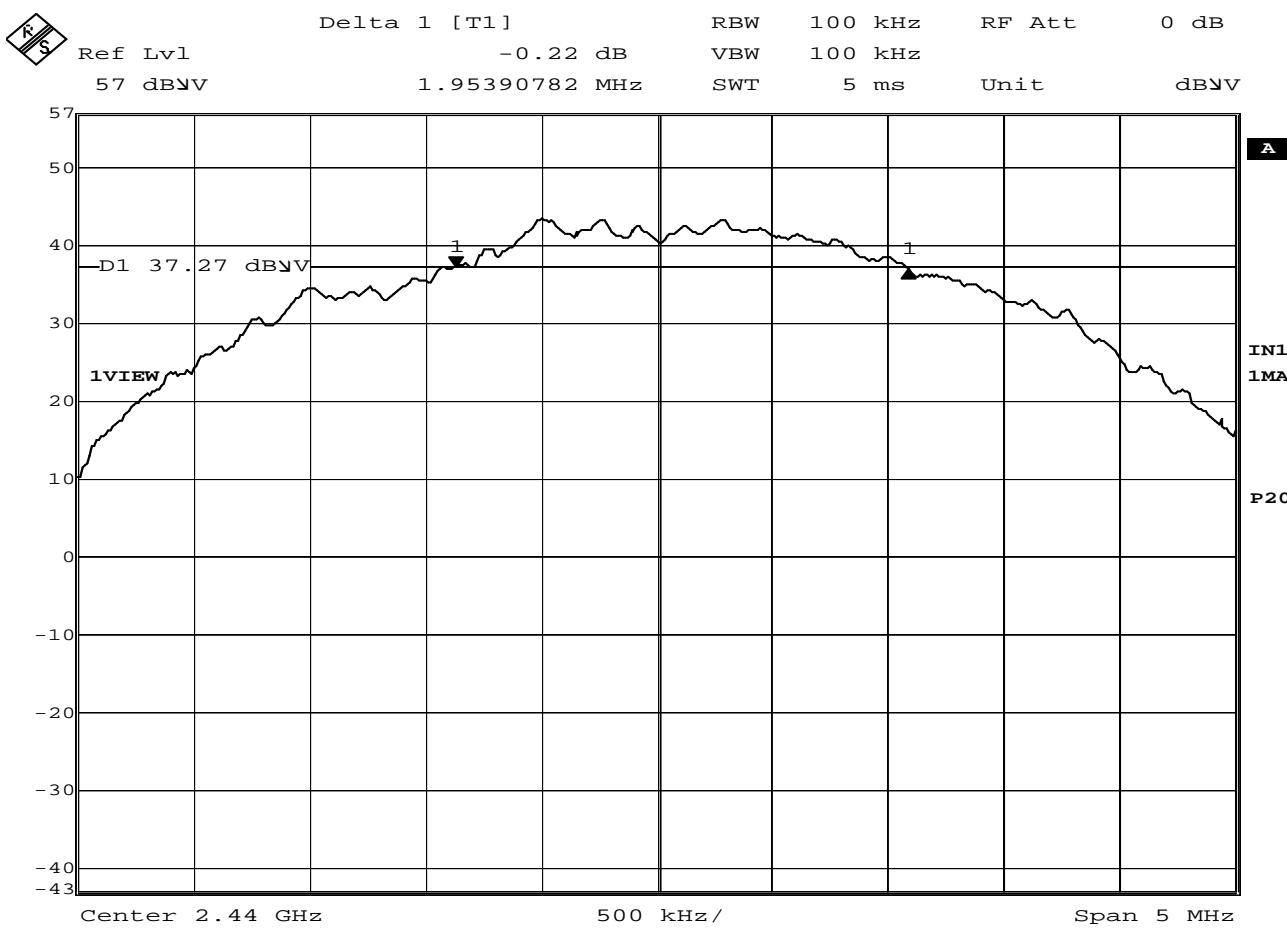
Test Setup for Radiated Emissions –18GHz to 25GHz, Horizontal Polarization



Test Setup for Radiated Emissions – 18GHz to 25GHz, Vertical Polarization

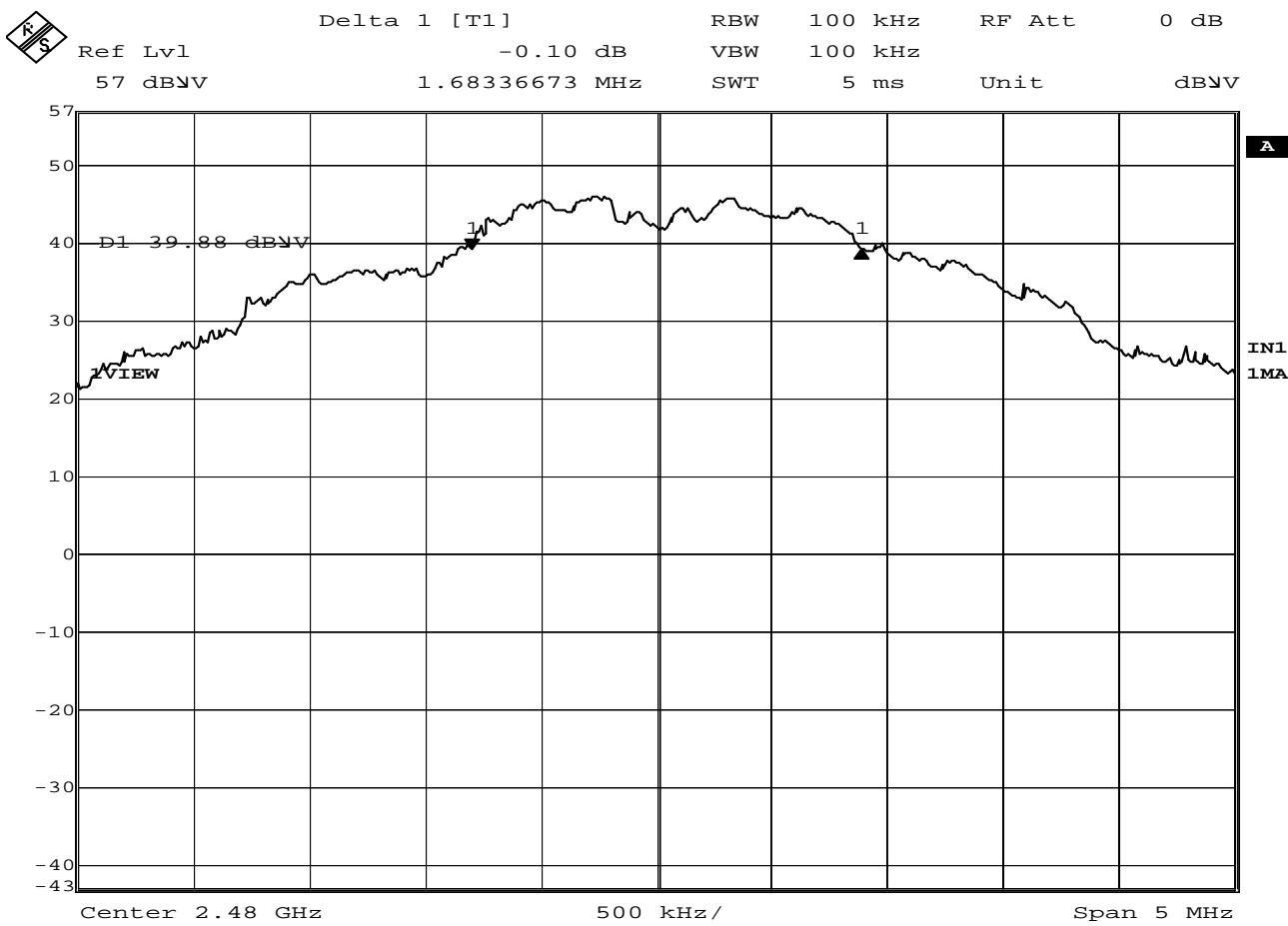

FCC 15.247(a) 6dB Band Width

MANUFACTURER	:	Twistthink
MODEL NUMBER	:	Swim Device Rev. 5, TTF0014-04
SERIAL NUMBER	:	0209828
TEST MODE	:	Tx @ 2.405GHz (Ch. 11)
TEST DATE	:	June 15, 2010
TEST PARAMETERS	:	6dB band width
NOTES	:	Display line D1 represents the 6dB down point. 6dB bandwidth = 1.73MHz
EQUIPMENT USED	:	RBB0, T2S7, NWI0



FCC 15.247(a) 6dB Band Width

MANUFACTURER	:	Twistthink
MODEL NUMBER	:	Swim Device Rev. 5, TTF0014-04
SERIAL NUMBER	:	0209828
TEST MODE	:	Tx @ 2.44GHz (Ch. 18)
TEST DATE	:	June 16, 2010
TEST PARAMETERS	:	6dB band width
NOTES	:	Display line D1 represents the 6dB down point. 6dB bandwidth = 1.95MHz
EQUIPMENT USED	:	RBB0, T2S7, NWI0


FCC 15.247(a) 6dB Band Width

MANUFACTURER	:	Twistthink
MODEL NUMBER	:	Swim Device Rev. 5, TTF0014-04
SERIAL NUMBER	:	0209828
TEST MODE	:	Tx @ 2.480GHz (Ch. 26)
TEST DATE	:	June 15, 2010
TEST PARAMETERS	:	6dB band width
NOTES	:	Display line D1 represents the 6dB down point. 6dB bandwidth = 1.68MHz
EQUIPMENT USED	:	RBB0, T2S7, NWI0

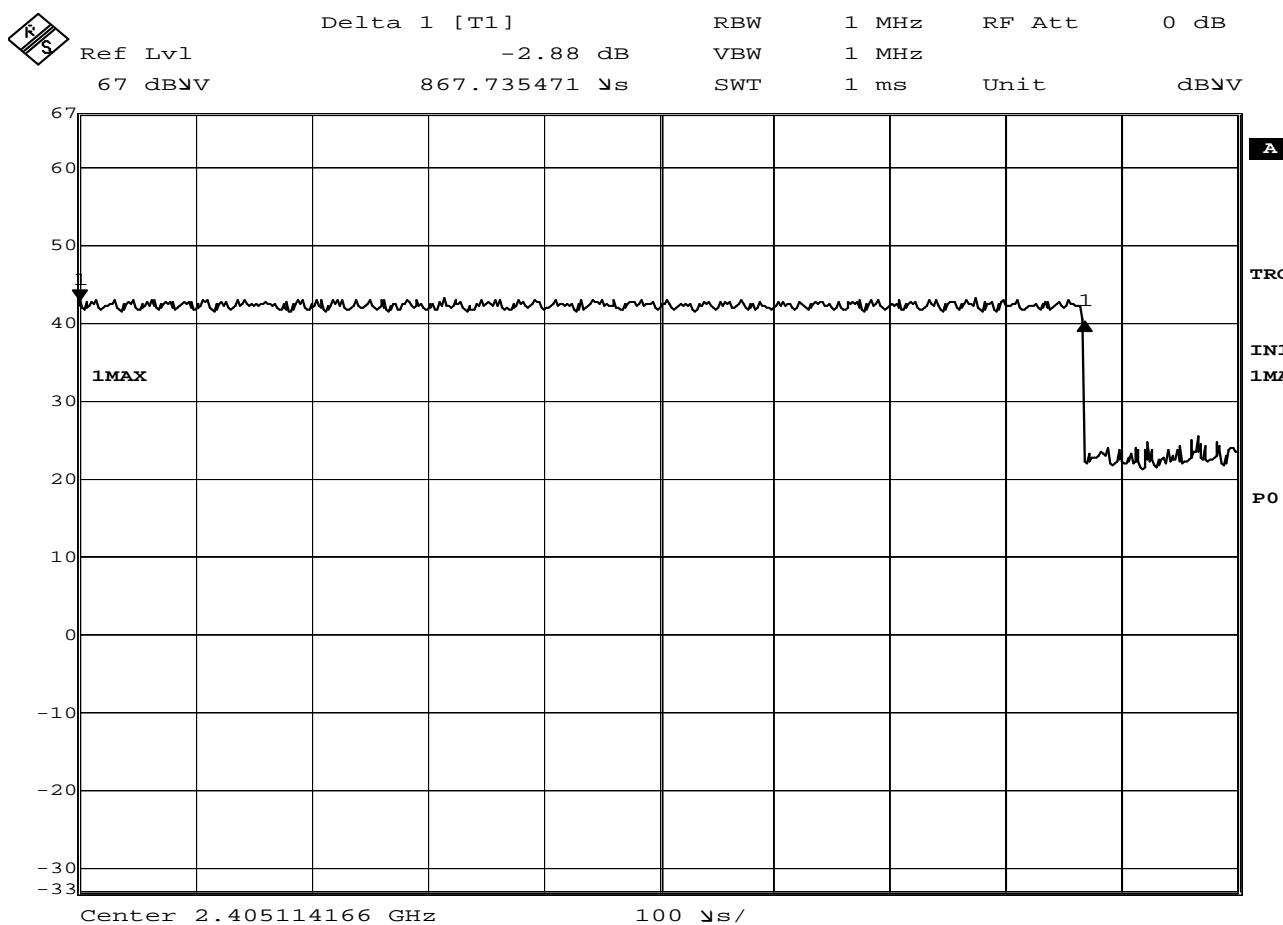


MANUFACTURER : Twistthink, LLC
MODEL NUMBER : TT50014-04
SERIAL NUMBER : 020-9820
TEST MODE : See Below
TEST DATE : June 15 and 16, 2010
TEST PARAMETERS : FCC Part 15, Subpart C, 15.247, Peak Output Power
NOTES : EIRP Measurements
EQUIPMENT USED : RBB0, NWI0, NWI1, GRE0

Frequency MHz	Antenna Polarization	Meter Reading dBuV	Matched Signal Generator Reading dBm	Antenna Gain dB	Cable Loss dB	EIRP dBm	Limit dBm
Transmit at 2405MHz							
2405.0	H	69.5	2.2	6.5	3.0	5.6	36.0
2405.0	V	76.4	8.5	6.5	3.0	11.9	36.0
Transmit at 2440MHz							
2440.0	H	70.0	2.2	6.6	3.1	5.7	36.0
2440.0	V	70.0	2.2	6.6	3.1	5.7	36.0
Transmit at 2480MHz							
2480.0	H	71.0	3.8	6.7	3.1	7.4	36.0
2480.0	V	76.6	8.5	6.7	3.1	12.1	36.0

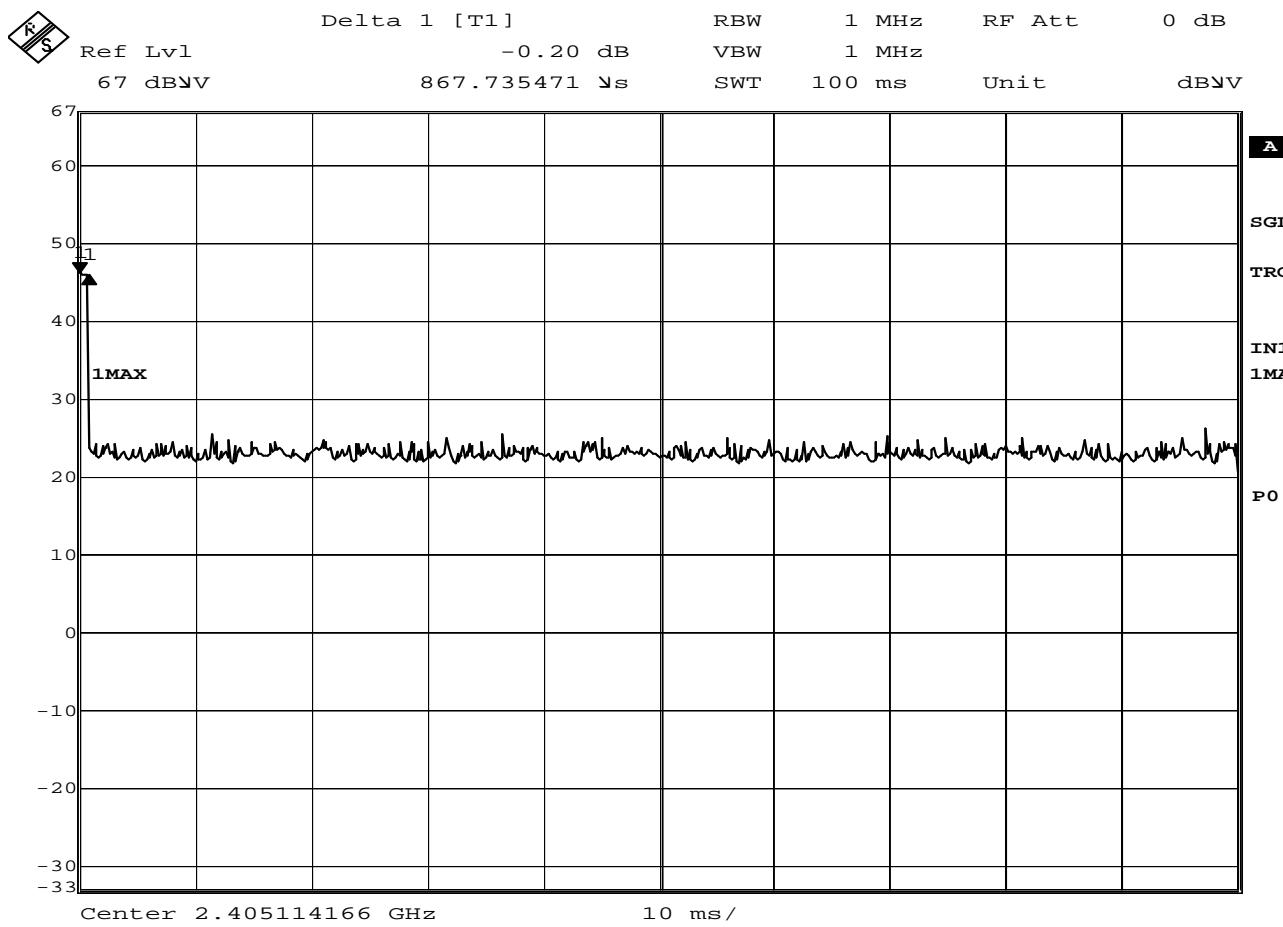
EIRP (dBm) = Sig. Gen. (dBm) + Antenna Gain (dBm) – Cable Loss (dB)

Checked By: MARK E. LONGINOTTI
Mark E. Longinotti



FCC 15.247 Duty Cycle Correction Factor

MANUFACTURER	:	Twistthink
MODEL NUMBER	:	Swim Device Rev. 5, TTF0014-04
SERIAL NUMBER	:	0209828
TEST MODE	:	Tx @ 2.405GHz (Ch. 11)
TEST DATE	:	July 13, 2010
TEST PARAMETERS	:	Duty Cycle Correction Factor
NOTES	:	Pulse width = 867.7usec
EQUIPMENT USED	:	RBA1, T2S8, T2D2, T1N6



Date: 13.JUL.2010 11:13:06

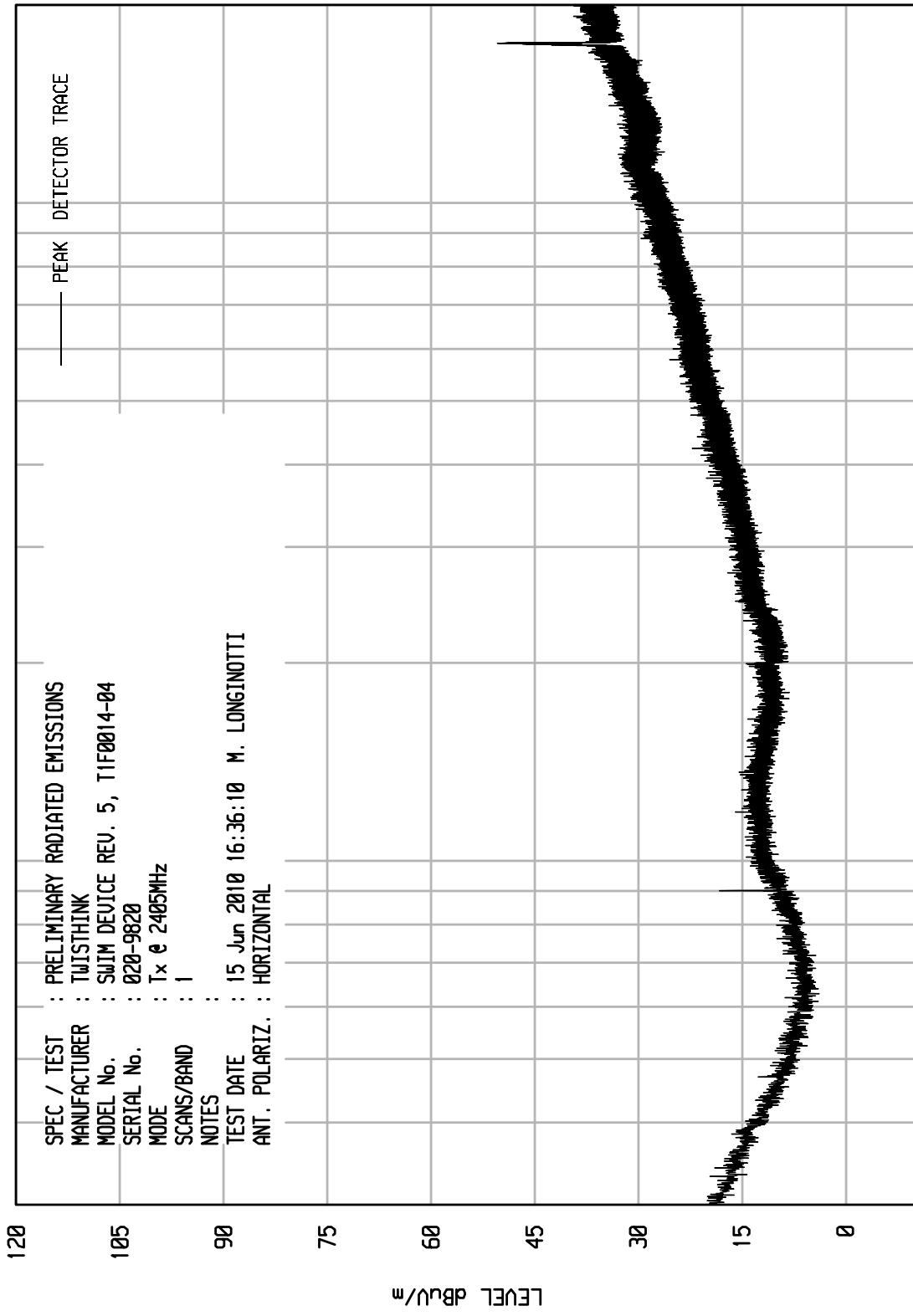
FCC 15.247 Duty Cycle Correction Factor

MANUFACTURER : Twistthink
MODEL NUMBER : Swim Device Rev. 5, TTF0014-04
SERIAL NUMBER : 0209828
TEST MODE : Tx @ 2.405GHz (Ch. 11)
TEST DATE : July 13, 2010
TEST PARAMETERS : Duty Cycle Correction Factor
NOTES : Pulse width = 867.7usec, 1 pulse in a 100msec period.
: Duty Cycle Correction Factor = $20 \times \log((\text{on time})/100\text{msec})$
: Duty Cycle Correction Factor = $20 \times \log((0.8677\text{msec})/100\text{msec})$
: Duty Cycle Correction Factor = -41.2dB
EQUIPMENT USED : RBA1, T2S8, T2D2, T1N6

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Downers Grove, Ill. 60515

UNI U RCU EMI RUN 15

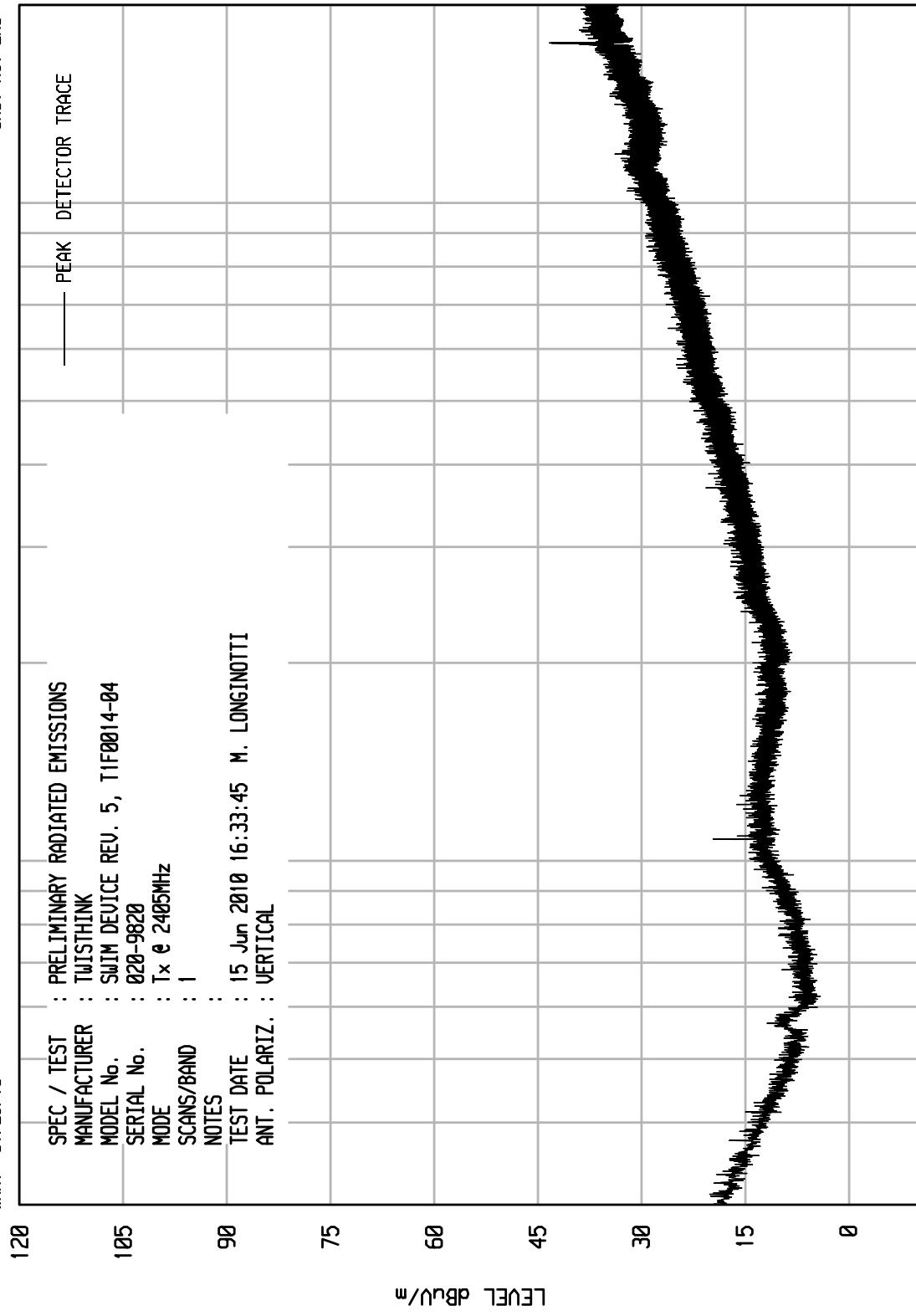
WKAI	01/25/10	SPEC / TEST	PRELIMINARY RADIATED EMISSIONS
MANUFACTURER	TWISTTHINK	MODEL No.	SWIM DEVICE REV. 5, T1F0014-04
SERIAL No.	020-9820	MODE	Tx & 2405MHz
SCANS/BAND	1	NOTES	
TEST DATE	15 Jun 2010 16:36:10	M. LONGINOTTI	
ANT. POLARIZ.	HORIZONTAL		



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Downers Grove, Ill. 60515

UNI TU RCU EMI RUN 14

WKAI	01/25/10	SPEC / TEST	PRELIMINARY RADIATED EMISSIONS
MANUFACTURER	TWISTTHINK	MODEL No.	SWIM DEVICE REV. 5, T1F0014-04
SERIAL No.	020-9820	MODE	Tx & 2405MHz
SCANS/BAND	1	NOTES	
TEST DATE	15 Jun 2010 16:33:45	M. LONGINOTTI	
ANT. POLARIZ.	VERTICAL		



START = 30

100

FREQUENCY MHz

1000

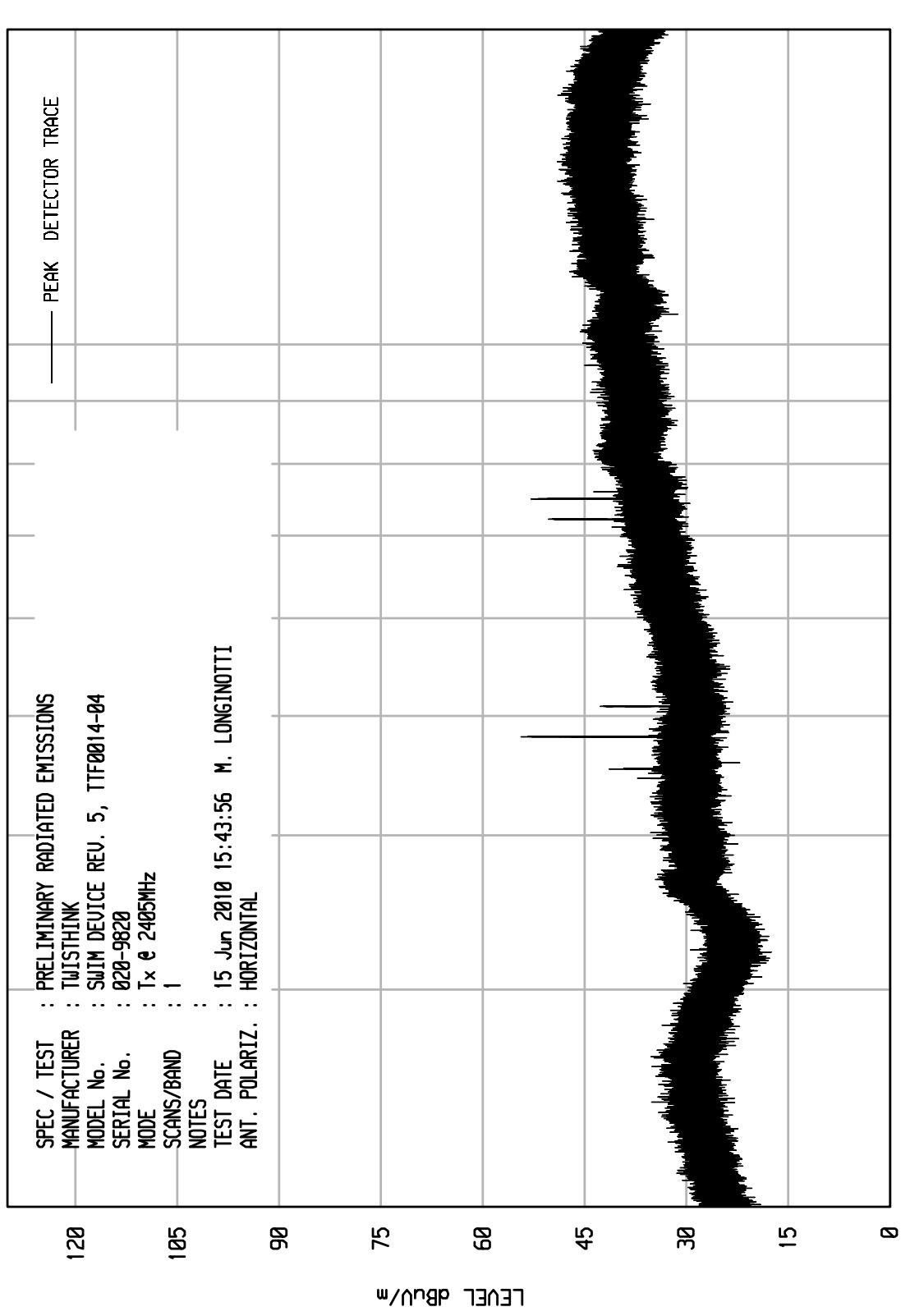
STOP = 2000

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515

WKA1 01/25/10

UNIT RCU EMI RUN 8

SPEC / TEST		PRELIMINARY RADIATED EMISSIONS	
MANUFACTURER	: TWISTTHINK	MODEL No.	: SWIM DEVICE REV. 5, TTF0014-04
SERIAL No.	: 020-9820	MODE	: Tx & 2405MHz
SCANS/BAND	: 1	NOTES	
TEST DATE	: 15 Jun 2010 15:43:56	M.	LONGINOTTI
ANT. POLARIZ.	: HORIZONTAL		

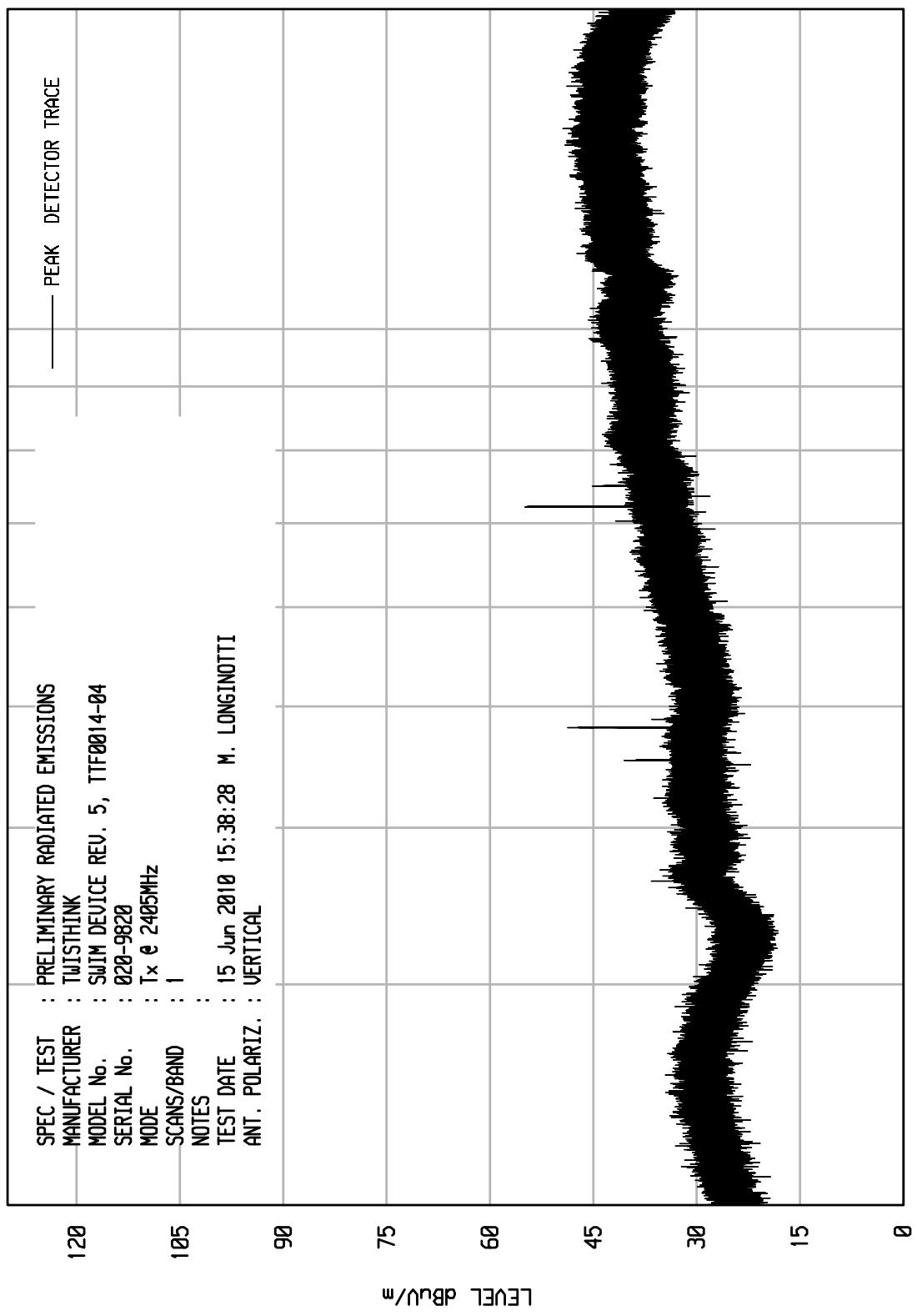


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WKA1 01/25/10

UNITU RCU EMI RUN 7

	SPEC / TEST	PRELIMINARY RADIATED EMISSIONS
120	MANUFACTURER	: TWISTTHINK
	MODEL No.	: SWIM DEVICE REV. 5, TTF0014-04
105	SERIAL No.	: 020-9820
	MODE	: Tx & 2405MHz
105	SCANS/BAND	: 1
	NOTES	
	TEST DATE	: 15 Jun 2010 15:38:28
	ANT. POLARIZ.	: VERTICAL



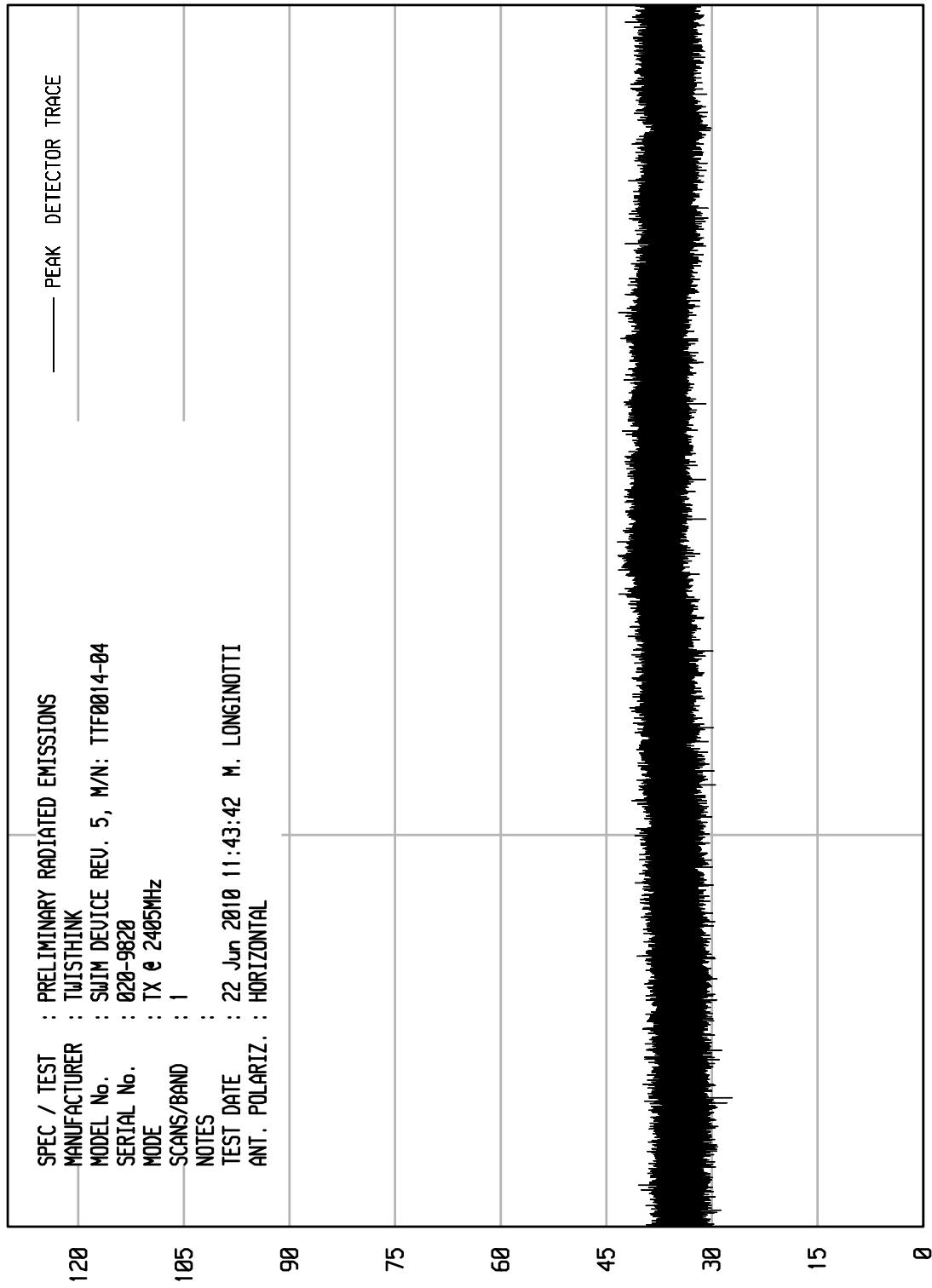
ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515

WKA1 01/25/10

UNIT RCU EMI RUN 9

SPEC / TEST		PRELIMINARY RADIATED EMISSIONS	
MANUFACTURER	: TWISTTHINK	PEAK	DETECTOR TRACE
MODEL No.	: SWIM DEVICE REV. 5, M/N: TTF0014-04		
SERIAL No.	: 020-9820		
MODE	: TX & 2405MHz		
SCANS/BAND	: 1		
NOTES			
TEST DATE	: 22 Jun 2010 11:43:42	M. LONGINOTTI	
ANT. POLARIZ.	: HORIZONTAL		

LEVEL dBUL/m



START = 18000

FREQUENCY MHz

STOP = 25000

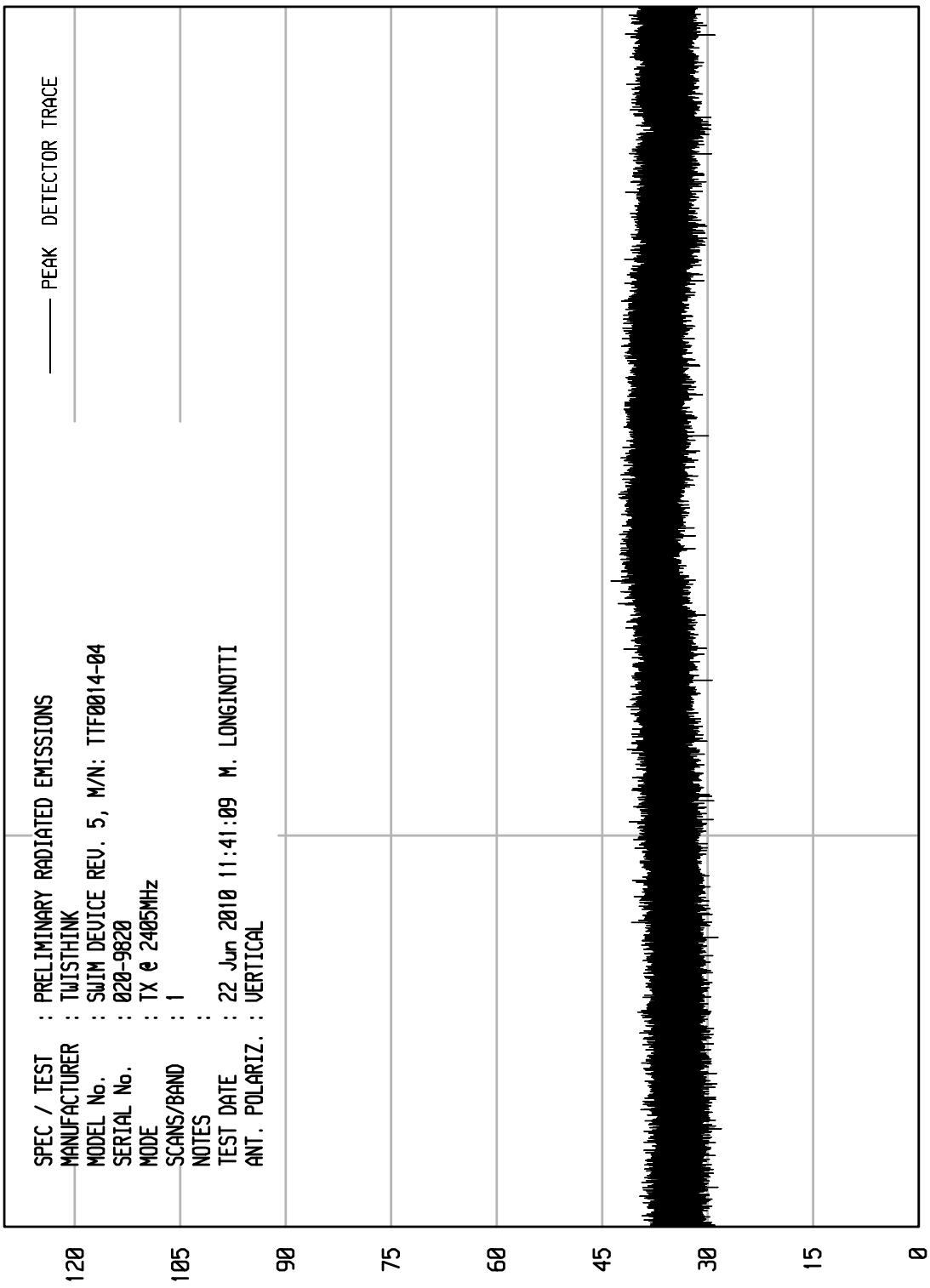
ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515

WKA1 01/25/10

UNIT RCU EMI RUN 8

SPEC / TEST		PRELIMINARY RADIATED EMISSIONS	
MANUFACTURER	: TWISTTHINK	PEAK	DETECTOR TRACE
MODEL No.	: SWIM DEVICE REV. 5, M/N: TTF0014-04		
SERIAL No.	: 020-9820		
MODE	: TX & 2405MHz		
SCANS/BAND	: 1		
NOTES			
TEST DATE	: 22 Jun 2010 11:41:09	M. LONGINOTTI	
ANT. POLARIZ.	: VERTICAL		

LEVEL dBUL/m



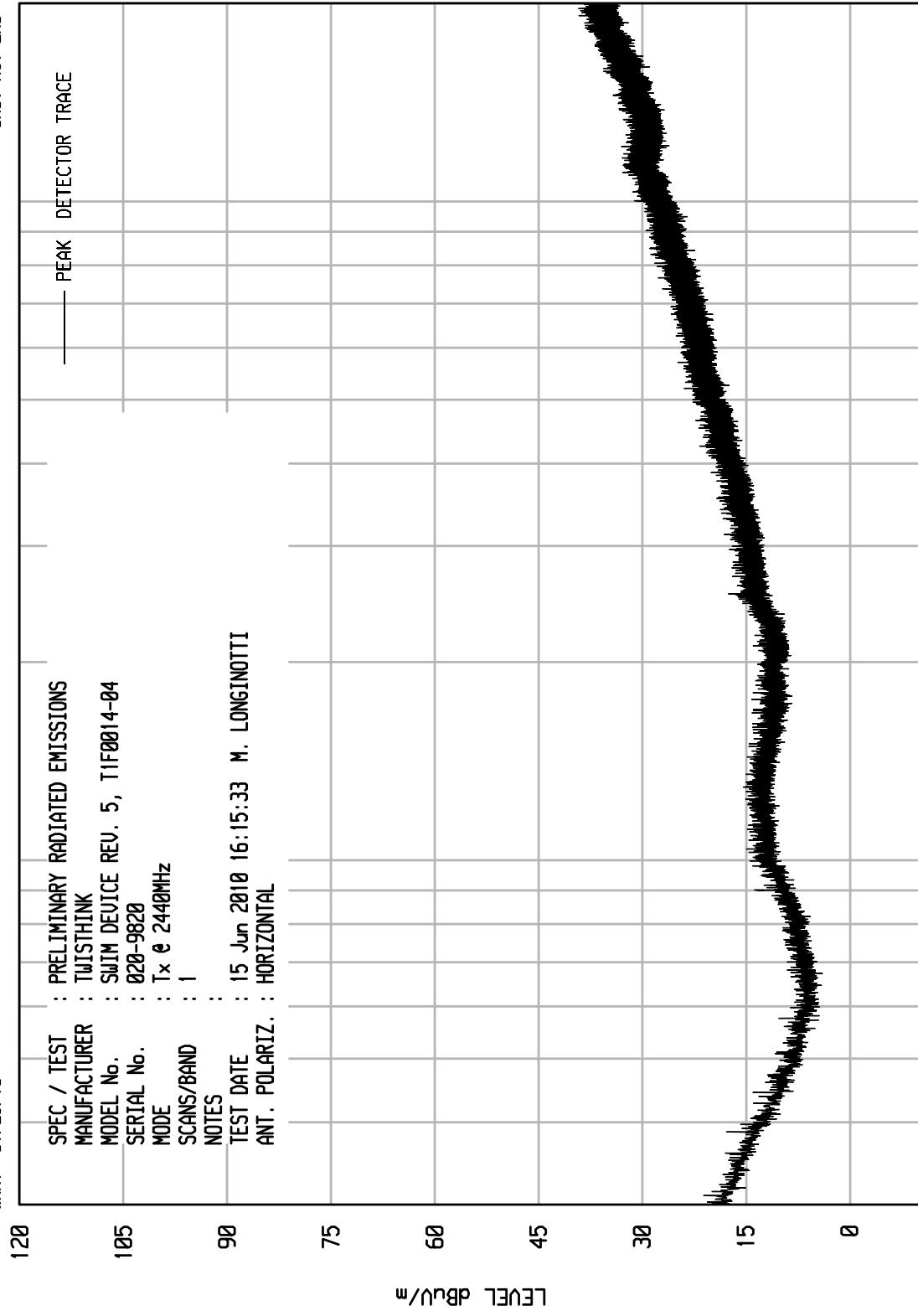
START = 18000

STOP = 25000

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UNIT RCU EMI RUN 12

WK#1	01/25/10	SPEC / TEST	PRELIMINARY RADIATED EMISSIONS
105		MANUFACTURER	TWISTTHINK
		MODEL No.	SWIM DEVICE REV. 5, T1F0014-04
		SERIAL No.	020-9820
		MODE	Tx & 240MHz
		SCANS/BAND	1
		NOTES	
		TEST DATE	15 Jun 2010 16:15:33 M. LONGINOTTI
		ANT. POLARIZ.	HORIZONTAL



START = 30

100

FREQUENCY MHz

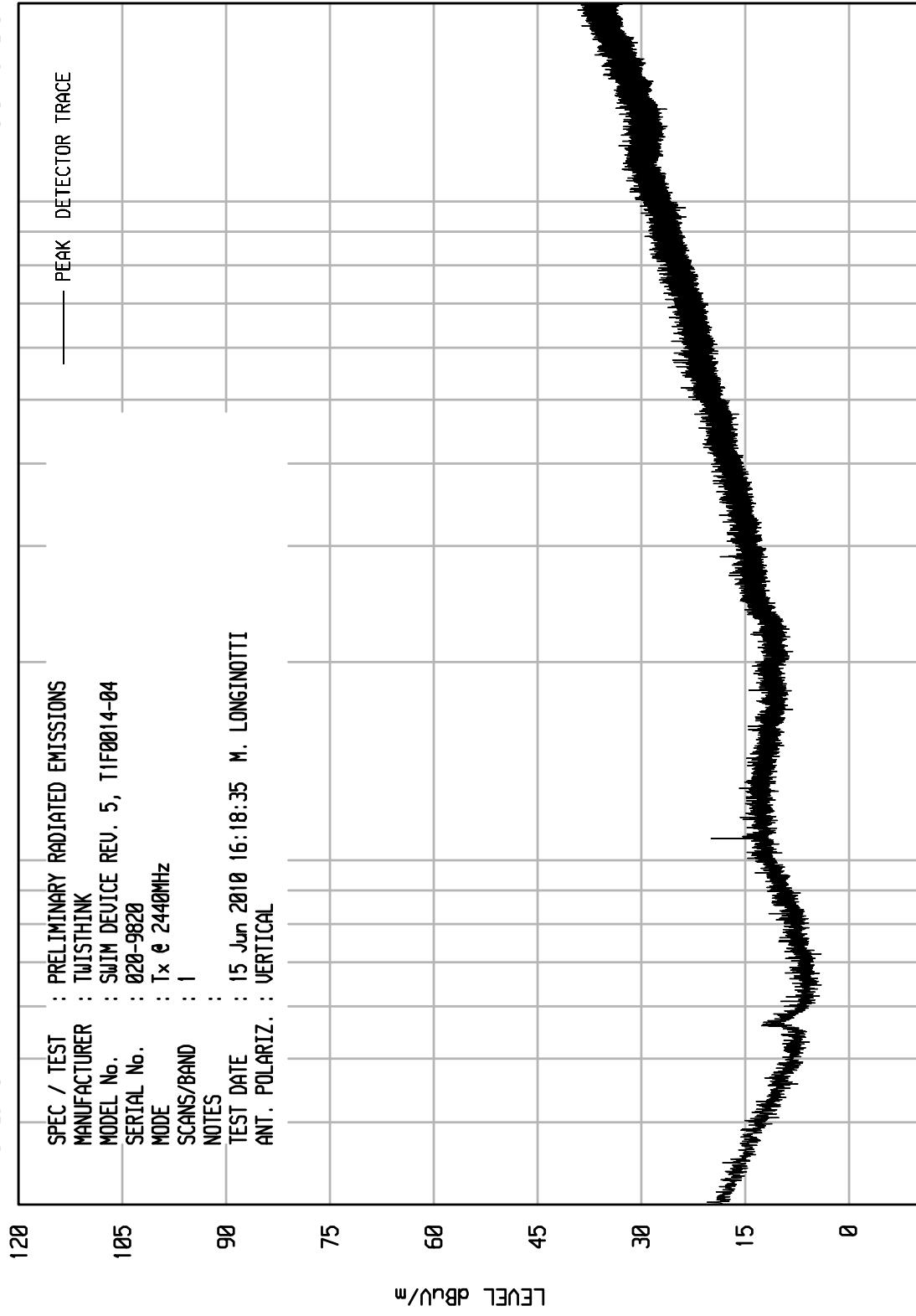
1000

STOP = 2000

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UNIT RCU EMI RUN 13

WKAI	01/25/10	SPEC / TEST	PRELIMINARY RADIATED EMISSIONS
MANUFACTURER	TWISTTHINK	MODEL No.	SWIM DEVICE REV. 5, T1F0014-04
SERIAL No.	020-9820	MODE	Tx & 240MHz
SCANS/BAND	1	NOTES	
TEST DATE	15 Jun 2010 16:18:35	M. LONGINOTTI	
ANT. POLARIZ.	VERTICAL		



START = 30

100

FREQUENCY MHz

1000

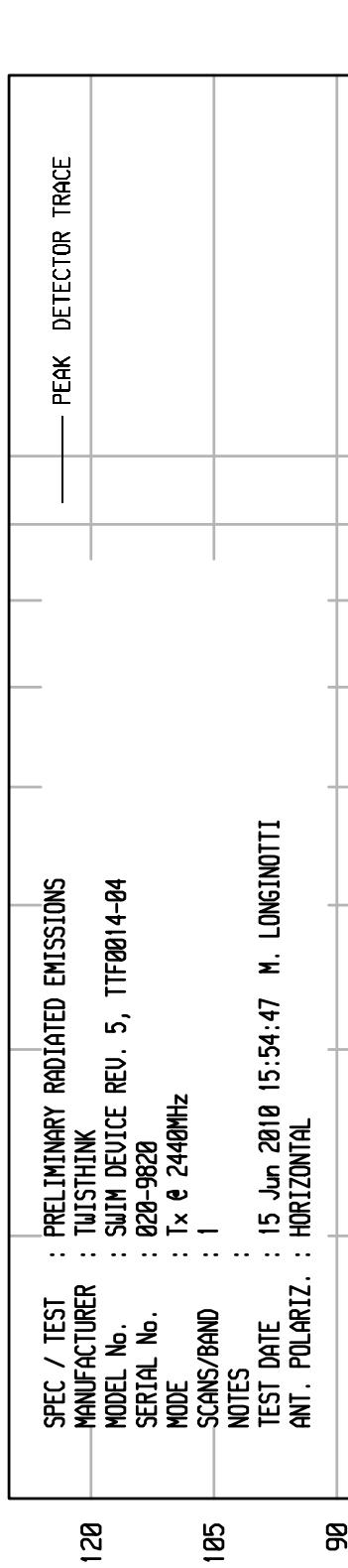
STOP = 2000

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WKA1 01/25/10

UNIT RCU EMI RUN 9

SPEC / TEST	:	PRELIMINARY RADIATED EMISSIONS
MANUFACTURER	:	TWISTTHINK
MODEL No.	:	SWIM DEVICE REV. 5, TTF0014-04
SERIAL No.	:	020-9820
MODE	:	Tx & 240MHz
SCANS/BAND	:	1
NOTES	:	
TEST DATE	:	15 Jun 2010 15:54:47
ANT. POLARIZ.	:	HORIZONTAL



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WKA1 01/25/10

UNITU RCU EMI RUN 10

SPEC / TEST	: PRELIMINARY RADIATED EMISSIONS
MANUFACTURER	: TWISTTHINK
MODEL No.	: SWIM DEVICE REV. 5, TTF0014-04
SERIAL No.	: 020-9820
MODE	: Tx & 240MHz
SCANS/BAND	: 1
NOTES	
TEST DATE	: 15 Jun 2010 16:00:01
ANT. POLARIZ.	: VERTICAL

