



Manufacturer :Twisthink, LLC
Model No. : Swim Device Rev. 5 TT50014-04
Serial No. : 020-9820
Mode : Transmit at 2405MHz
Test Specification : FCC 15.249
Date : June 14, 2010 through June 22, 2010
Test Distance : 3 meters
Note : Peak readings
: Gray rows indicate restricted bands which must meet the general limits

Freq (MHz)	Ant Pol	Meter Reading (dBuV)	Amb	CBL FAC (dB)	Ant Fac (dB)	Pre Amp (dB)	Total dBuV/m at 3 m	Total uV/m at 3m	Limit uV/m at 3m	Margin (dB)
2405.000	H	71.4		3.8	31.3	0.0	106.5	211769.7		
2405.000	V	68.0		3.8	31.3	0.0	103.1	143173.9		
4810.000	H	64.5		5.7	34.8	-37.3	67.7	2423.6	5000.0	-6.3
4810.000	V	57.1		5.7	34.8	-37.3	60.3	1033.9	5000.0	-13.7
7215.000	H	60.3		7.6	38.1	-37.4	68.7	2711.1	5000.0	-5.3
7215.000	V	58.6		7.6	38.1	-37.4	67.0	2229.1	5000.0	-7.0
9620.000	H	48.9		8.6	39.6	-37.6	59.5	947.9	21177.0	-27.0
9620.000	V	51.4		8.6	39.6	-37.6	62.0	1264.0	21177.0	-24.5
12025.00	H	41.6	Amb	9.8	41.4	-37.3	55.5	596.3	5000.0	-18.5
12025.00	V	42.1	Amb	9.8	41.4	-37.3	56.0	631.6	5000.0	-18.0
14430.00	H	31.9	Amb	10.9	43.7	-37.2	49.3	290.1	21177.0	-37.3
14430.00	V	32.2	Amb	10.9	43.7	-37.2	49.6	300.3	21177.0	-37.0
16835.00	H	30.7	Amb	11.6	44.7	-37.2	49.9	312.6	21177.0	-36.6
16835.00	V	30.8	Amb	11.6	44.7	-37.2	50.0	316.2	21177.0	-36.5
19240.00	H	33.9	Amb	2.2	40.4	-27.5	49.0	282.5	5000.0	-25.0
19240.00	V	33.5	Amb	2.2	40.4	-27.5	48.6	269.8	5000.0	-25.4
21645.00	H	27.0	Amb	2.2	40.6	-26.2	43.5	150.4	21177.0	-43.0
21645.00	V	27.9	Amb	2.2	40.6	-26.2	44.4	166.8	21177.0	-42.1
24050.00	H	26.0	Amb	2.2	40.6	-27.4	41.5	118.2	21177.0	-45.1
24050.00	V	26.3	Amb	2.2	40.6	-27.4	41.8	122.3	21177.0	-44.8

Amb = Ambient

Total = Meter Reading + Cable Loss + Antenna Factor + Preamp Gain



Manufacturer :Twisthink, LLC
Model No. : Swim Device Rev. 5 TT50014-04
Serial No. : 020-9820
Mode : Transmit at 2405MHz
Test Specification : FCC 15.249
Date : June 14, 2010 through June 22, 2010
Test Distance : 3 meters
Note : Average measurements in Restricted Bands

Freq MHz	Ant Pol	Meter Reading dBuV	Amb	Cable Loss dB	Ant Fac dB	Pre Amp Gain dB	Duty Cycle Factor dB	Total dBuV/m	Total uV/m	Limit uV/m	Margin dB
4810.0	H	57.9		5.7	34.8	-37.3	-41.2	19.9	9.9	500.0	-34.1
4810.0	V	50.0		5.7	34.8	-37.3	-41.2	12.0	4.0	500.0	-42.0
7215.0	H	54.9		7.6	38.1	-37.4	-41.2	22.1	12.7	500.0	-31.9
7215.0	V	52.2		7.6	38.1	-37.4	-41.2	19.4	9.3	500.0	-34.6
12025.0	H	28.8	Amb	9.8	41.4	-37.3	-41.2	1.5	1.2	500.0	-52.5
12025.0	V	28.4	Amb	9.8	41.4	-37.3	-41.2	1.1	1.1	500.0	-52.9
19240.0	H	21.4	Amb	2.2	40.4	-27.5	-41.2	-4.7	0.6	500.0	-58.7
19240.0	V	21.4	Amb	2.2	40.4	-27.5	-41.2	-4.7	0.6	500.0	-58.7

Amb = Ambient

Total = Meter Reading + Cable Loss + Antenna Factor + Pre Amp Gain + Duty Cycle Factor



Manufacturer :Twisthink, LLC
Model No. : Swim Device Rev. 5 TT50014-04
Serial No. : 020-9820
Mode : Transmit at 2440MHz
Test Specification : FCC 15.249
Date : June 14, 2010 through June 22, 2010
Test Distance : 3 meters
Note : Peak readings
: Gray rows indicate restricted bands which must meet the general limits

Freq (MHz)	Ant Pol	Meter Reading (dBuV)	Amb	CBL FAC (dB)	Ant Fac (dB)	Pre Amp (dB)	Total dBuV/m at 3 m	Total uV/m at 3m	Limit uV/m at 3m	Margin (dB)
2440.0	H	65.5		3.8	31.3	0.0	100.7	107950.1		
2440.0	V	66.1		3.8	31.3	0.0	101.3	115670.7		
4880.0	H	63.6		5.7	34.9	-37.3	66.9	2204.5	5000.0	-7.1
4880.0	V	60.8		5.7	34.9	-37.3	64.1	1597.0	5000.0	-9.9
7320.0	H	55.1		7.7	38.2	-37.4	63.5	1497.9	5000.0	-10.5
7320.0	V	54.4		7.7	38.2	-37.4	62.8	1381.9	5000.0	-11.2
9760.0	H	45.7		8.6	39.8	-37.6	56.4	661.3	11567.1	-24.9
9760.0	V	46.3		8.6	39.8	-37.6	57.0	708.6	11567.1	-24.3
12200.0	H	41.3	Amb	9.9	41.5	-37.1	55.5	596.8	5000.0	-18.5
12200.0	V	41.6	Amb	9.9	41.5	-37.1	55.8	617.8	5000.0	-18.2
14640.0	H	31.6	Amb	11.0	44.1	-37.1	49.6	301.9	11567.1	-31.7
14640.0	V	31.5	Amb	11.0	44.1	-37.1	49.5	298.4	11567.1	-31.8
17080.0	H	30.8	Amb	11.7	44.7	-36.8	50.4	331.0	11567.1	-30.9
17080.0	V	30.2	Amb	11.7	44.7	-36.8	49.8	308.9	11567.1	-31.5
19520.0	H	35.3	Amb	2.2	40.4	-27.2	50.7	343.1	5000.0	-23.3
19520.0	V	34.1	Amb	2.2	40.4	-27.2	49.5	298.9	5000.0	-24.5
21960.0	H	28.4	Amb	2.2	40.6	-26.9	44.3	163.4	11567.1	-37.0
21960.0	V	27.6	Amb	2.2	40.6	-26.9	43.5	149.0	11567.1	-37.8
24400.0	H	26.2	Amb	2.2	40.6	-27.5	41.6	120.1	11567.1	-39.7
24400.0	V	26.3	Amb	2.2	40.6	-27.5	41.7	121.4	11567.1	-39.6

Amb = Ambient

Total = Meter Reading + Cable Loss + Antenna Factor + Preamp Gain



Manufacturer :Twisthink, LLC
Model No. : Swim Device Rev. 5 TT50014-04
Serial No. : 020-9820
Mode : Transmit at 2440MHz
Test Specification : FCC 15.249
Date : June 14, 2010 through June 22, 2010
Test Distance : 3 meters
Note : Average measurements in Restricted Bands

Freq MHz	Ant Pol	Meter Reading dBuV	Amb	Cable Loss dB	Ant Fac dB	Pre Amp Gain dB	Duty Cycle Factor dB	Total dBuV/m	Total uV/m	Limit uV/m	Margin dB
4880.0	H	57.6		5.7	34.9	-37.3	-41.2	19.7	9.6	500.0	-34.3
4880.0	V	53.0		5.7	34.9	-37.3	-41.2	15.1	5.7	500.0	-38.9
7320.0	H	47.3		7.7	38.2	-37.4	-41.2	14.5	5.3	500.0	-39.5
7320.0	V	46.7		7.7	38.2	-37.4	-41.2	13.9	5.0	500.0	-40.1
12200.0	H	28.2	Amb	9.9	41.5	-37.1	-41.2	1.2	1.2	500.0	-52.8
12200.0	V	28.6	Amb	9.9	41.5	-37.1	-41.2	1.6	1.2	500.0	-52.4
19520.0	H	21.5	Amb	2.2	40.4	-27.2	-41.2	-4.3	0.6	500.0	-58.3
19520.0	V	21.5	Amb	2.2	40.4	-27.2	-41.2	-4.3	0.6	500.0	-58.3

Amb = Ambient

Total = Meter Reading + Cable Loss + Antenna Factor + Pre Amp Gain + Duty Cycle Factor



Manufacturer :Twisthink, LLC
Model No. : Swim Device Rev. 5 TT50014-04
Serial No. : 020-9820
Mode : Transmit at 2480MHz
Test Specification : FCC 15.249
Date : June 14, 2010 through June 22, 2010
Test Distance : 3 meters
Note : Peak readings
: Gray rows indicate restricted bands which must meet the general limits

Freq (MHz)	Ant Pol	Meter Reading (dBuV)	Amb	CBL FAC (dB)	Ant Fac (dB)	Pre Amp (dB)	Total dBuV/m at 3 m	Total uV/m at 3m	Limit uV/m at 3m	Margin (dB)
2480.0	H	66.7		3.8	31.4	0.0	101.9	124703.5	200.0	55.9
2480.0	V	72.7		3.8	31.4	0.0	107.9	248816.2	200.0	61.9
4960.0	H	66.5		5.8	34.9	-37.3	69.9	3109.0	5000.0	-4.1
4960.0	V	56.6		5.8	34.9	-37.3	60.0	994.5	5000.0	-14.0
7440.0	H	51.7		7.7	38.2	-37.5	60.2	1018.8	5000.0	-13.8
7440.0	V	53.6		7.7	38.2	-37.5	62.1	1268.0	5000.0	-11.9
9920.0	H	44.6		8.5	39.9	-37.7	55.4	588.1	24881.6	-32.5
9920.0	V	44.8		8.5	39.9	-37.7	55.6	601.8	24881.6	-32.3
12400.0	H	39.8	Amb	9.9	41.5	-36.9	54.4	522.5	5000.0	-19.6
12400.0	V	39.4	Amb	9.9	41.5	-36.9	54.0	499.0	5000.0	-20.0
14880.0	H	31.0	Amb	11.2	44.6	-37.0	49.7	307.0	24881.6	-38.2
14880.0	V	30.7	Amb	11.2	44.6	-37.0	49.4	296.6	24881.6	-38.5
17360.0	H	29.6	Amb	11.9	44.6	-36.6	49.6	301.6	24881.6	-38.3
17360.0	V	30.0	Amb	11.9	44.6	-36.6	50.0	315.8	24881.6	-37.9
19840.0	H	34.7	Amb	2.2	40.4	-26.9	50.4	331.8	5000.0	-23.6
19840.0	V	33.7	Amb	2.2	40.4	-26.9	49.4	295.7	5000.0	-24.6
22320.0	H	35.4	Amb	2.2	40.6	-27.1	51.1	360.1	5000.0	-22.9
22320.0	V	36.1	Amb	2.2	40.6	-27.1	51.8	390.3	5000.0	-22.2
24800.0	H	26.3	Amb	2.2	40.7	-27.2	42.0	125.3	24881.6	-46.0
24800.0	V	25.8	Amb	2.2	40.7	-27.2	41.5	118.3	24881.6	-46.5

Amb = Ambient

Total = Meter Reading + Cable Loss + Antenna Factor + Preamp Gain

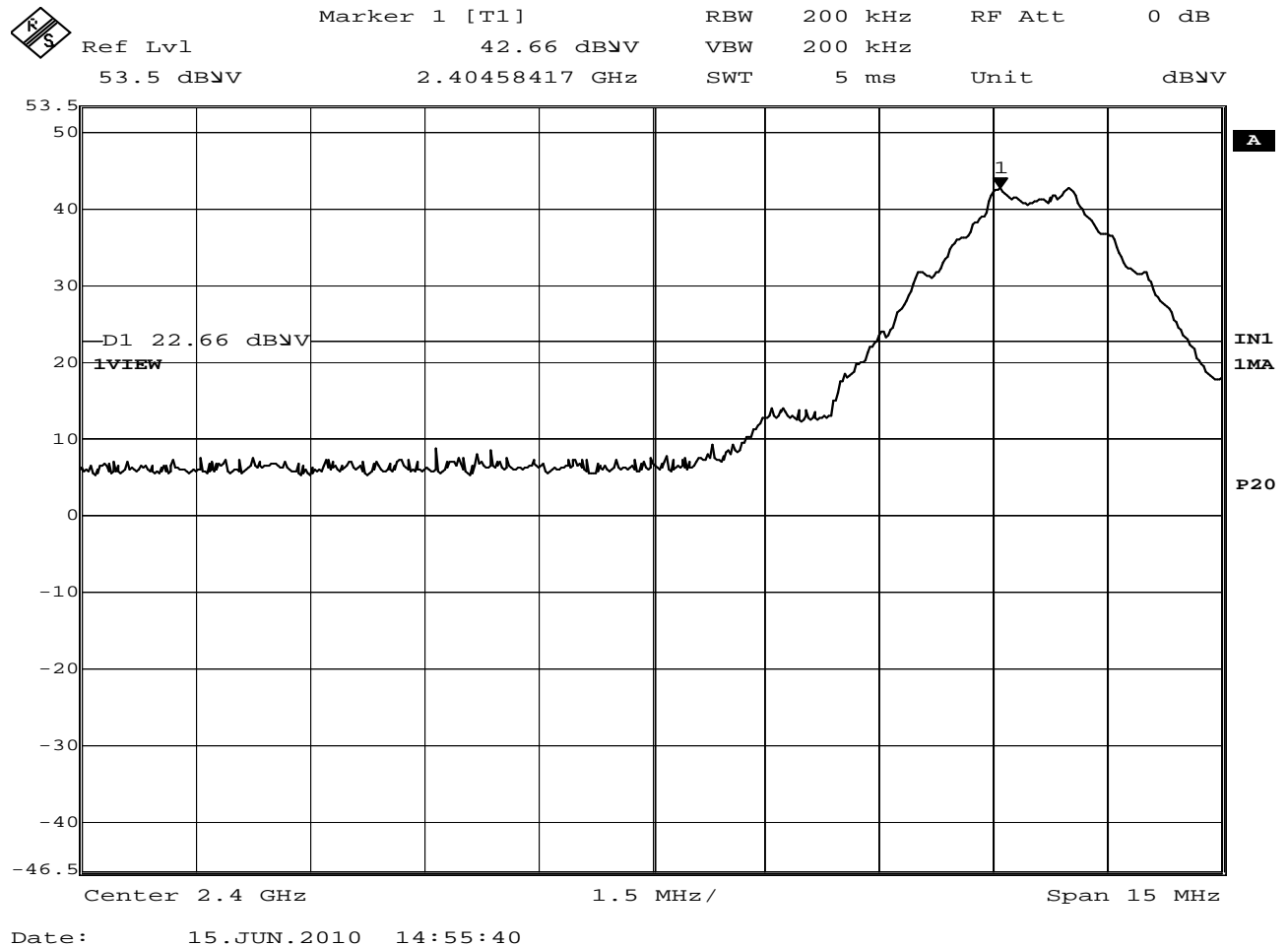


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Mode : Transmit at 2480MHz
Test Specification : FCC 15.249
Date : June 14, 2010 through June 22, 2010
Test Distance : 3 meters
Note : Average measurements in Restricted Bands

Freq MHz	Ant Pol	Meter Reading dBuV	Amb	Cable Loss dB	Ant Fac dB	Pre Amp Gain dB	Duty Cycle Factor dB	Total dBuV/m	Total uV/m	Limit uV/m	Margin dB
4960.0	H	59.0		5.8	34.9	-37.3	-41.2	21.2	11.4	500.0	-32.8
4960.0	V	50.6		5.8	34.9	-37.3	-41.2	12.8	4.3	500.0	-41.2
7440.0	H	43.3		7.7	38.2	-37.5	-41.2	10.6	3.4	500.0	-43.4
7440.0	V	45.4		7.7	38.2	-37.5	-41.2	12.7	4.3	500.0	-41.3
12400.0	H	26.4	Amb	9.9	41.5	-36.9	-41.2	-0.2	1.0	500.0	-54.2
12400.0	V	26.3	Amb	9.9	41.5	-36.9	-41.2	-0.3	1.0	500.0	-54.3
19840.0	H	21.7	Amb	2.2	40.4	-26.9	-41.2	-3.8	0.6	500.0	-57.8
19840.0	V	21.4	Amb	2.2	40.4	-26.9	-41.2	-4.1	0.6	500.0	-58.1
22320.0	H	22.8	Amb	2.2	40.6	-27.1	-41.2	-2.7	0.7	500.0	-56.7
22320.0	V	22.7	Amb	2.2	40.6	-27.1	-41.2	-2.8	0.7	500.0	-56.8

Amb = Ambient

Total = Meter Reading + Cable Loss + Antenna Factor + Pre Amp Gain + Duty Cycle Factor

**FCC 15.247(d) Band Edge**

MANUFACTURER : Twistthink
MODEL NUMBER : Swim Device Rev. 5, TT50014-04
SERIAL NUMBER : 0209828
TEST MODE : Tx @ 2.405GHz (Ch. 11)
TEST DATE : June 15, 2010
TEST PARAMETERS : Band edge
NOTES : Display line D1 represents the 20dB down point. The center frequency (2.4GHz)
: represents the band edge. All emissions to the left of the center frequency must
: be below D1.
EQUIPMENT USED : RBB0, T2S7, NWI0



Manufacturer :Twisthink, LLC
Model No. : Swim Device Rev. 5 TT50014-04
Serial No. : 020-9820
Mode : Transmit at 2480MHz
Test Specification : FCC 15.249 band edge
Date : June 14, 2010 through June 22, 2010
Test Distance : 3 meters
Note : Peak readings

Freq (MHz)	Ant Pol	Meter Reading (dBuV)	Amb	CBL FAC (dB)	Ant Fac (dB)	Pre Amp (dB)	Total dBuV/m at 3 m	Total uV/m at 3m	Limit uV/m at 3m	Margin (dB)
2483.500	H	34.2		3.8	31.4	0.0	69.4	2958.8	5000.0	-4.6
2483.500	V	30.8		3.8	31.4	0.0	66.0	2000.4	5000.0	-8.0

Amb = Ambient

Total = Meter Reading + Cable Loss + Antenna Factor + Preamp Gain

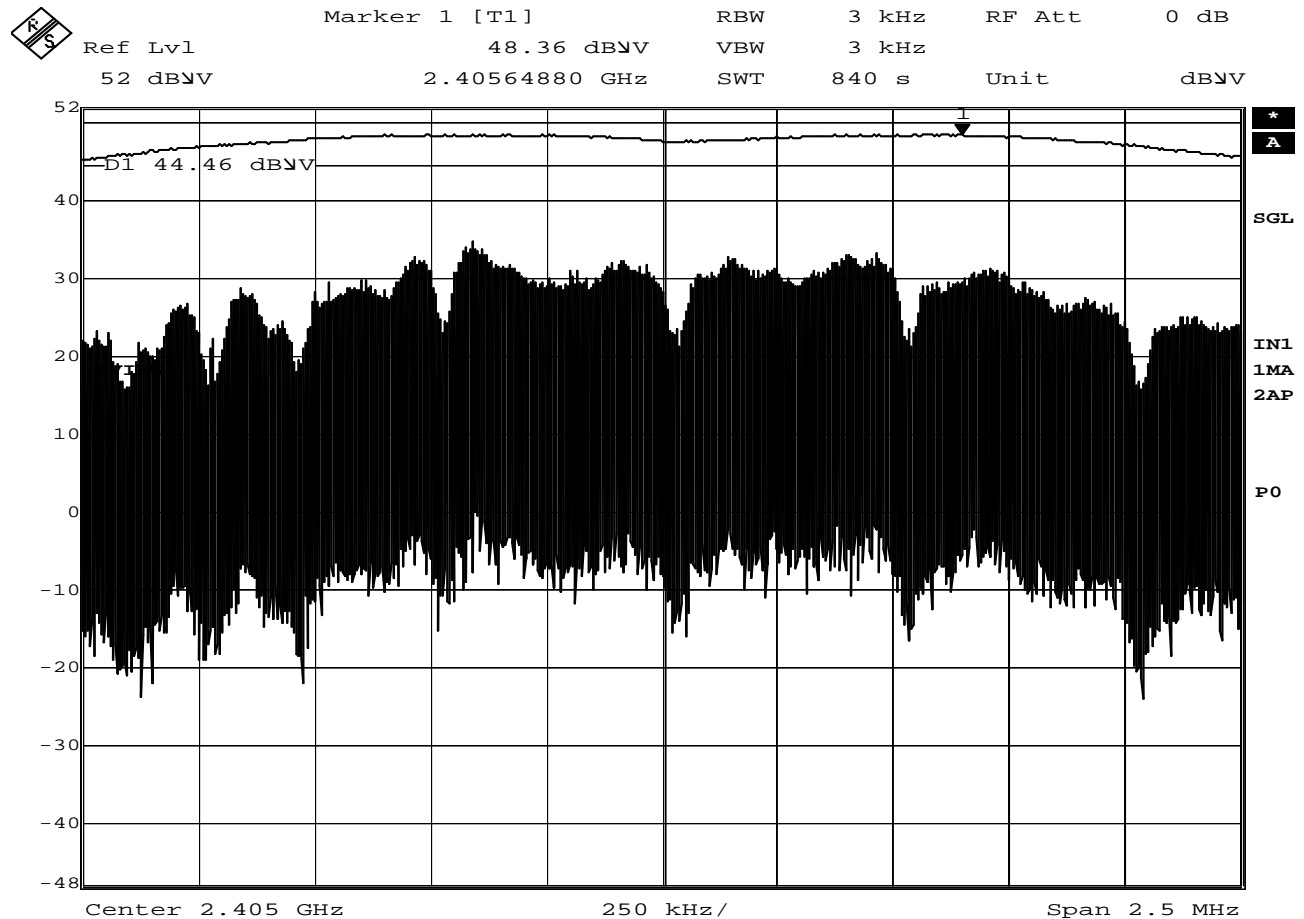


Manufacturer :Twisthink, LLC
Model No. : Swim Device Rev. 5 TT50014-04
Serial No. : 020-9820
Mode : Transmit at 2480MHz
Test Specification : FCC 15.249 band edge
Date : June 14, 2010 through June 22, 2010
Test Distance : 3 meters
Note : Peak readings

Freq MHz	Ant Pol	Meter Reading dBuV	Amb	Cable Loss dB	Ant Fac dB	Pre Amp Gain dB	Duty Cycle Factor dB	Total dBuV/m	Total uV/m	Limit uV/m	Margin dB
2483.50	H	15.1		3.8	31.4	0.0	-41.2	9.1	2.9	500	-44.9
2483.50	V	22.7		3.8	31.4	0.0	-41.2	16.7	6.9	500	-37.3

Amb = Ambient

Total = Meter Reading + Cable Loss + Antenna Factor + Pre Amp Gain + Duty Cycle Factor



Date: 15.JUN.2010 11:09:22

FCC 15.247(e) Power Spectral Density

MANUFACTURER : Twistink
MODEL NUMBER : Swim Device Rev. 5, TT50014-04
SERIAL NUMBER : 0209828
TEST MODE : Tx @ 2.405GHz (Ch. 11)
TEST DATE : June 15, 2010
TEST PARAMETERS : Power Spectral Density
NOTES : Top trace represents the peak power in a 1MHz bandwidth. That corresponds to an EIRP of 11.9dBm. The 8.0dBm limit is 3.9dB (11.9dBm-8.0dBm) down from the EIRP reading of 11.9dBm. This corresponds to 44.46dBμV (48.36dB-3.9dB). Display Line D1 represents the 8dBm PSD limit.
EQUIPMENT USED : RBB0, T2S7, NWI0