FCC 15.247
Telkonet, Inc.
Zigbee Temperature Sensor
Model: PST6000

Date: 02/15/2012
Lab: B
Tested By: David Tran

Low Channel
X-Axis - High Power Mode - Internal Antenna

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2405								N/A
2405								DONE VIA CONDUCTED
4810	60.45	V	74	-13.55	Peak	1.25	135	
4810	40.45	V	54	-13.55	Avg	1.25	135	
7215	66.75	V	74	-7.25	Peak	1.25	155	
7215	46.75	V	54	-7.25	Avg	1.25	155	
9620								No Emission
9620								Detected
12025								No Emission
12025								Detected
14430								No Emission
14430								Detected
16835								No Emission
16835								Detected
19240								No Emission
19240								Detected
21645								No Emission
21645								Detected
24050								No Emission
24050								Detected

FCC 15.247
Telkonet, Inc.
Zigbee Temperature Sensor
Model: PST6000

Date: 02/15/2012
Lab: B
Tested By: David Tran

Low Channel
X-Axis - High Power Mode - Internal Antenna

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2405								N/A
2405								DONE VIA CONDUCTED
4810	63.39	H	74	-10.61	Peak	1.1	320	
4810	43.39	H	54	-10.61	Avg	1.1	320	
7215	66.65	H	74	-7.35	Peak	1.1	330	
7215	46.65	H	54	-7.35	Avg	1.1	330	
9620	65.89	H	74	-8.11	Peak	2	180	
9620	45.89	H	54	-8.11	Avg	2	180	
12025								No Emission
12025								Detected
14430								No Emission
14430								Detected
16835								No Emission
16835								Detected
19240								No Emission
19240								Detected
21645								No Emission
21645								Detected
24050								No Emission
24050								Detected

FCC 15.247
Telkonet, Inc.
Zigbee Temperature Sensor
Model: PST6000

Date: 02/15/2012
Lab: B
Tested By: David Tran

Low Channel
Y-Axis - High Power Mode - Internal Antenna

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2405								N/A
2405								DONE VIA CONDUCTED
4810	64.21	V	74	-9.79	Peak	1.2	210	
4810	44.21	V	54	-9.79	Avg	1.2	210	
7215	67.29	V	74	-6.71	Peak	2	0	
7215	47.29	V	54	-6.71	Avg	2	0	
9620	63.98	V	74	-10.02	Peak	2	180	
9620	43.98	V	54	-10.02	Avg	2	180	
12025	61.7	V	74	-12.3	Peak	2	180	
12025	41.7	V	54	-12.3	Avg	2	180	
14430								No Emission
14430								Detected
16835								No Emission
16835								Detected
19240								No Emission
19240								Detected
21645								No Emission
21645								Detected
24050								No Emission
24050								Detected

FCC 15.247
Telkonet, Inc.
Zigbee Temperature Sensor
Model: PST6000

Date: 02/15/2012
Lab: B
Tested By: David Tran

Low Channel
Y-Axis - High Power Mode - Internal Antenna

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2405								N/A
2405								DONE VIA CONDUCTED
4810	57.86	H	74	-16.14	Peak	1.3	150	
4810	37.86	H	54	-16.14	Avg	1.3	150	
7215	72.8	H	74	-1.2	Peak	1.1	160	
7215	52.8	H	54	-1.2	Avg	1.1	160	
9620	66.03	H	74	-7.97	Peak	1.8	160	
9620	46.03	H	54	-7.97	Avg	1.8	160	
12025								No Emission
12025								Detected
14430								No Emission
14430								Detected
16835								No Emission
16835								Detected
19240								No Emission
19240								Detected
21645								No Emission
21645								Detected
24050								No Emission
24050								Detected

FCC 15.247
Telkonet, Inc.
Zigbee Temperature Sensor
Model: PST6000

Date: 02/15/2012
Lab: B
Tested By: David Tran

Middle Channel
X-Axis - High Power Mode - Internal Antenna

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2445								N/A
2445								DONE VIA CONDUCTED
4890	57.91	V	74	-16.09	Peak	1.2	350	
4890	37.91	V	54	-16.09	Avg	1.2	350	
7335	68.23	V	74	-5.77	Peak	1.5	50	
7335	48.23	V	54	-5.77	Avg	1.5	50	
9780	62.23	V	74	-11.77	Peak	1.5	180	
9780	42.23	V	54	-11.77	Avg	1.5	180	
12225								No Emission
12225								Detected
14670								No Emission
14670								Detected
17115								No Emission
17115								Detected
19560								No Emission
19560								Detected
22005								No Emission
22005								Detected
24450								No Emission
24450								Detected

FCC 15.247
Telkonet, Inc.
Zigbee Temperature Sensor
Model: PST6000

Date: 02/15/2012
Lab: B
Tested By: David Tran

Middle Channel
X-Axis - High Power Mode - Internal Antenna

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2445								N/A
2445								DONE VIA CONDUCTED
4890	59.38	H	74	-14.62	Peak	1.3	350	
4890	39.38	H	54	-14.62	Avg	1.3	350	
7335	68.32	H	74	-5.68	Peak	1.3	50	
7335	48.32	H	54	-5.68	Avg	1.3	50	
9780	60.11	H	74	-13.89	Peak	1.2	210	
9780	40.11	H	54	-13.89	Avg	1.2	210	
12225								No Emission
12225								Detected
14670								No Emission
14670								Detected
17115								No Emission
17115								Detected
19560								No Emission
19560								Detected
22005								No Emission
22005								Detected
24450								No Emission
24450								Detected

FCC 15.247
Telkonet, Inc.
Zigbee Temperature Sensor
Model: PST6000

Date: 02/15/2012
Lab: B
Tested By: David Tran

Middle Channel
Y-Axis - High Power Mode - Internal Antenna

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2445								N/A
2445								DONE VIA CONDUCTED
4890	62.77	V	74	-11.23	Peak	1.2	230	
4890	42.77	V	54	-11.23	Avg	1.2	230	
7335	69.08	V	74	-4.92	Peak	1.5	190	
7335	49.08	V	54	-4.92	Avg	1.5	190	
9780	61.29	V	74	-12.71	Peak	1.3	240	
9780	41.29	V	54	-12.71	Avg	1.3	240	
12225								No Emission
12225								Detected
14670								No Emission
14670								Detected
17115								No Emission
17115								Detected
19560								No Emission
19560								Detected
22005								No Emission
22005								Detected
24450								No Emission
24450								Detected

FCC 15.247
Telkonet, Inc.
Zigbee Temperature Sensor
Model: PST6000

Date: 02/15/2012
Lab: B
Tested By: David Tran

Middle Channel
Y-Axis - High Power Mode - Internal Antenna

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2445								N/A
2445								DONE VIA CONDUCTED
4890	59.2	H	74	-14.8	Peak	1.4	175	
4890	39.2	H	54	-14.8	Avg	1.4	175	
7335	72.21	H	74	-1.79	Peak	1.5	170	
7335	52.21	H	54	-1.79	Avg	1.5	170	
9780	64.32	H	74	-9.68	Peak	1.3	185	
9780	44.32	H	54	-9.68	Avg	1.3	185	
12225								No Emission
12225								Detected
14670								No Emission
14670								Detected
17115								No Emission
17115								Detected
19560								No Emission
19560								Detected
22005								No Emission
22005								Detected
24450								No Emission
24450								Detected

FCC 15.247
Telkonet, Inc.
Zigbee Temperature Sensor
Model: PST6000

Date: 11/20/2012
Lab: B
Tested By: Kyle Fujimoto

High Channel
X-Axis - High Power Mode - Internal Antenna

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2480								N/A
2480								DONE VIA CONDUCTED
4960	67.54	V	74	-6.46	Peak	1.25	155	
4960	47.54	V	54	-6.46	Avg	1.25	155	
7440	52.16	V	74	-21.84	Peak	1.55	135	
7440	32.16	V	54	-21.84	Avg	1.55	135	
9920								No Emission
9920								Detected
12400								No Emission
12400								Detected
14880								No Emission
14880								Detected
17360								No Emission
17360								Detected
19840								No Emission
19840								Detected
22320								No Emission
22320								Detected
24800								No Emission
24800								Detected

FCC 15.247
Telkonet, Inc.
Zigbee Temperature Sensor
Model: PST6000

Date: 11/20/2012
Lab: B
Tested By: Kyle Fujimoto

High Channel
X-Axis - High Power Mode - Internal Antenna

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2480								N/A
2480								DONE VIA CONDUCTED
4960	71.25	H	74	-2.75	Peak	1.25	155	
4960	51.25	H	54	-2.75	Avg	1.25	155	
7440	66.27	H	74	-7.73	Peak	1.25	165	
7440	44.27	H	54	-9.73	Avg	1.25	165	
9920								No Emission
9920								Detected
12400								No Emission
12400								Detected
14880								No Emission
14880								Detected
17360								No Emission
17360								Detected
19840								No Emission
19840								Detected
22320								No Emission
22320								Detected
24800								No Emission
24800								Detected

FCC 15.247
Telkonet, Inc.
Zigbee Temperature Sensor
Model: PST6000

Date: 11/20/2012
Lab: B
Tested By: Kyle Fujimoto

High Channel
Y-Axis - High Power Mode - Internal Antenna

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2480								N/A
2480								DONE VIA CONDUCTED
4960	62.81	V	74	-11.19	Peak	1.25	135	
4960	42.81	V	54	-11.19	Avg	1.25	135	
7440	67.97	V	74	-6.03	Peak	1.25	145	
7440	47.97	V	54	-6.03	Avg	1.25	145	
9920								No Emission
9920								Detected
12400								No Emission
12400								Detected
14880								No Emission
14880								Detected
17360								No Emission
17360								Detected
19840								No Emission
19840								Detected
22320								No Emission
22320								Detected
24800								No Emission
24800								Detected

FCC 15.247
Telkonet, Inc.
Zigbee Temperature Sensor
Model: PST6000

Date: 11/20/2012
Lab: B
Tested By: Kyle Fujimoto

High Channel
Y-Axis - High Power Mode - Internal Antenna

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2480								N/A
2480								DONE VIA CONDUCTED
4960	70.59	H	74	-3.41	Peak	1.25	155	
4960	50.59	H	54	-3.41	Avg	1.25	155	
7440	71.23	H	74	-2.77	Peak	1.25	135	
7440	51.23	H	54	-2.77	Avg	1.25	135	
9920								No Emission
9920								Detected
12400								No Emission
12400								Detected
14880								No Emission
14880								Detected
17360								No Emission
17360								Detected
19840								No Emission
19840								Detected
22320								No Emission
22320								Detected
24800								No Emission
24800								Detected

FCC 15.247
Telkonet, Inc.
Zigbee Temperature Sensor
Model: PST6000

Dates: 02/15/2012 and 11/20/2012
Lab: B & D
Tested By: David Tran
and Kyle Fujimoto

Radiated Emissions 10 kHz to 25 GHz
High Power Mode - Internal Antenna

Axis of EUT	Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Comments
								No Emissions Detected
								from 10 kHz to 25 GHz
								for the Non-Harmonic
								Emissions from the
								EUT for both the Vertical and
								Horizontal Polarizations.
								Tested on 02/15/2012 for
								Low Channel and Middle Channel
								Tested on 11/20/2012 for
								High Channel

FCC 15.247
Telkonet, Inc.
Zigbee Temperature Sensor
Model: PST6000

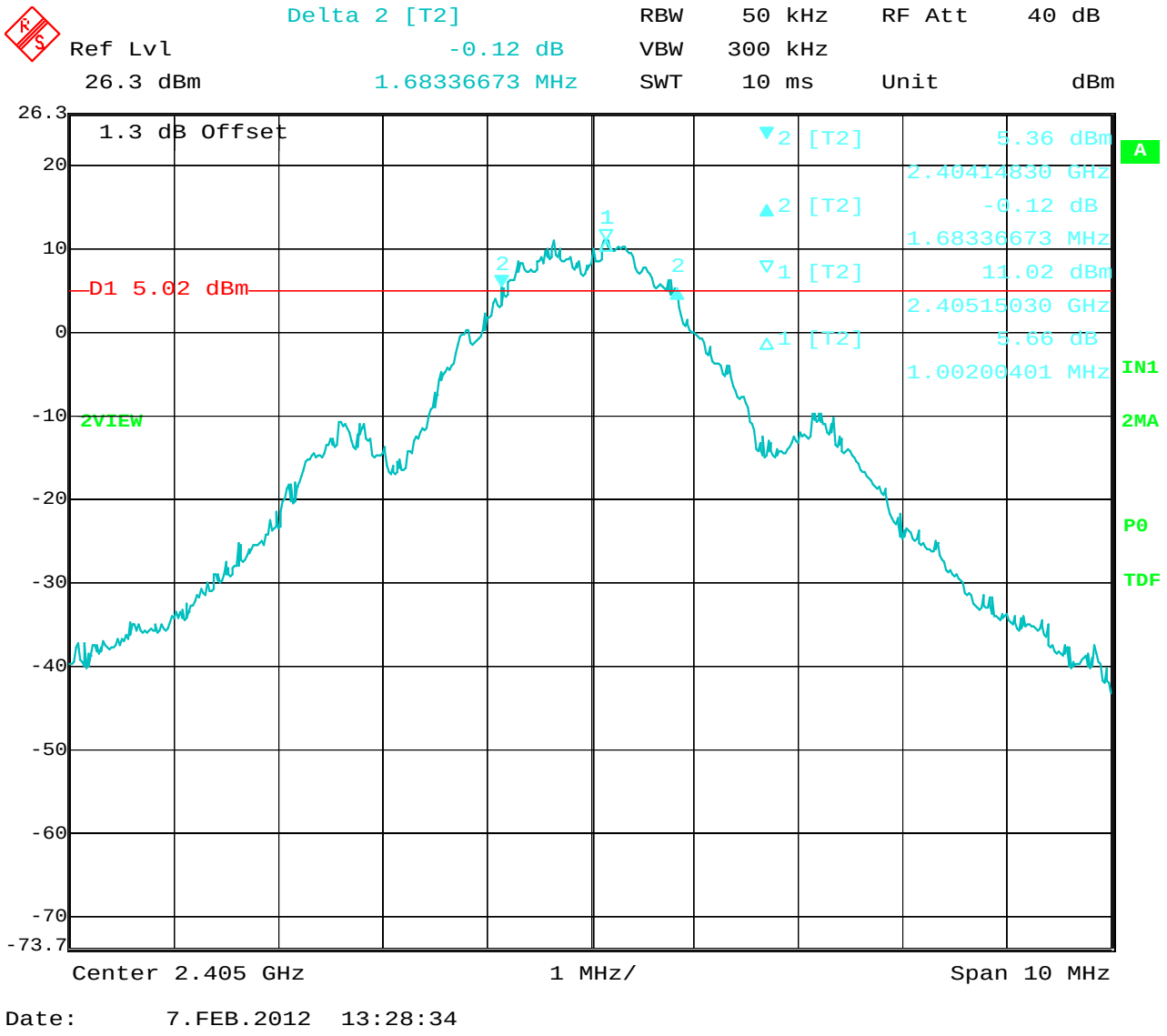
Date: 11/28/2012
Lab: B
Tested By: Kyle Fujimoto

Repeater Mode
High Power Mode - Internal Antenna

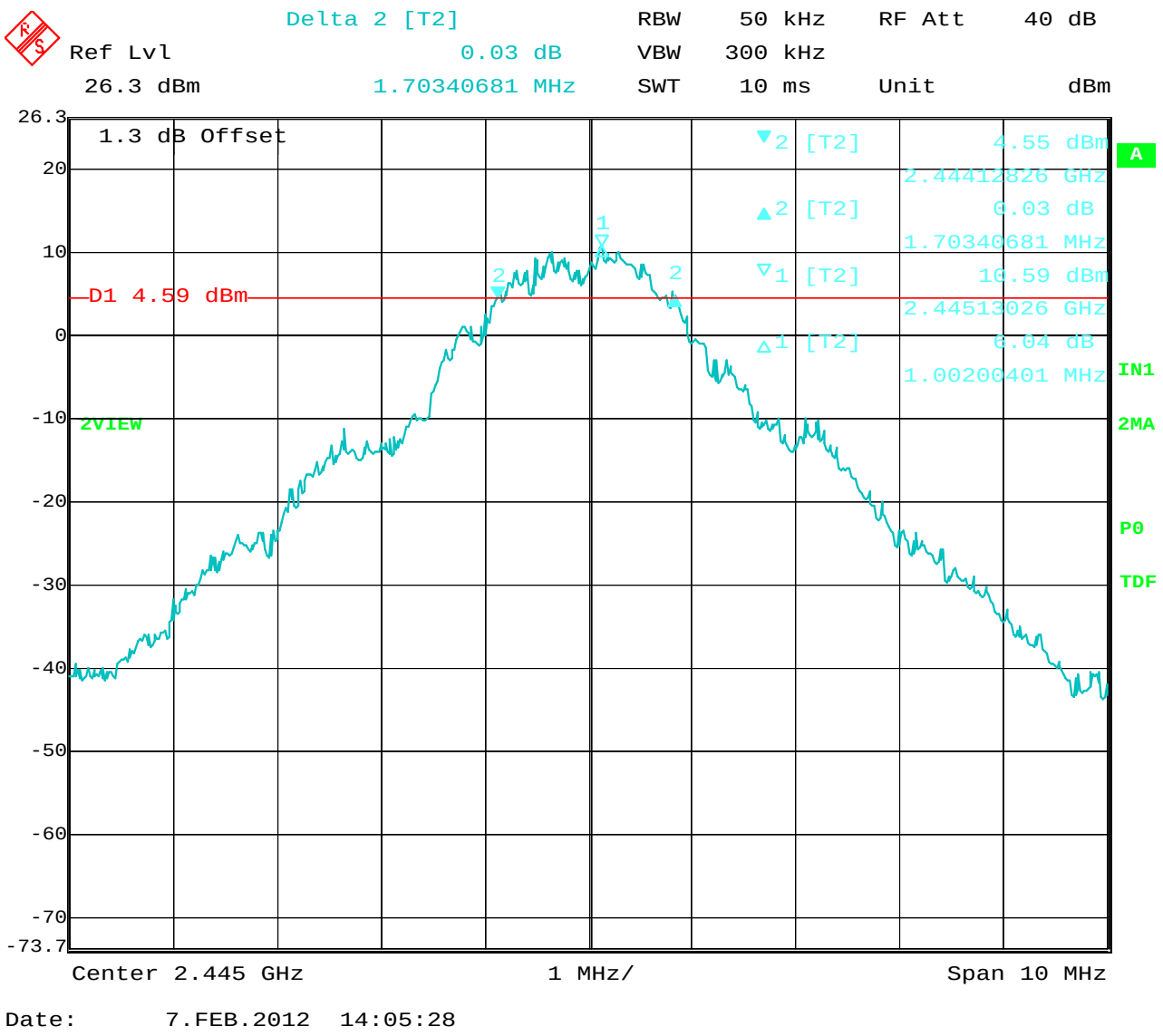
Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
								Note: The Emissions
								do not change amplitude
								when the EUT is put into
								Repeater Mode.

-6 dB BANDWIDTH

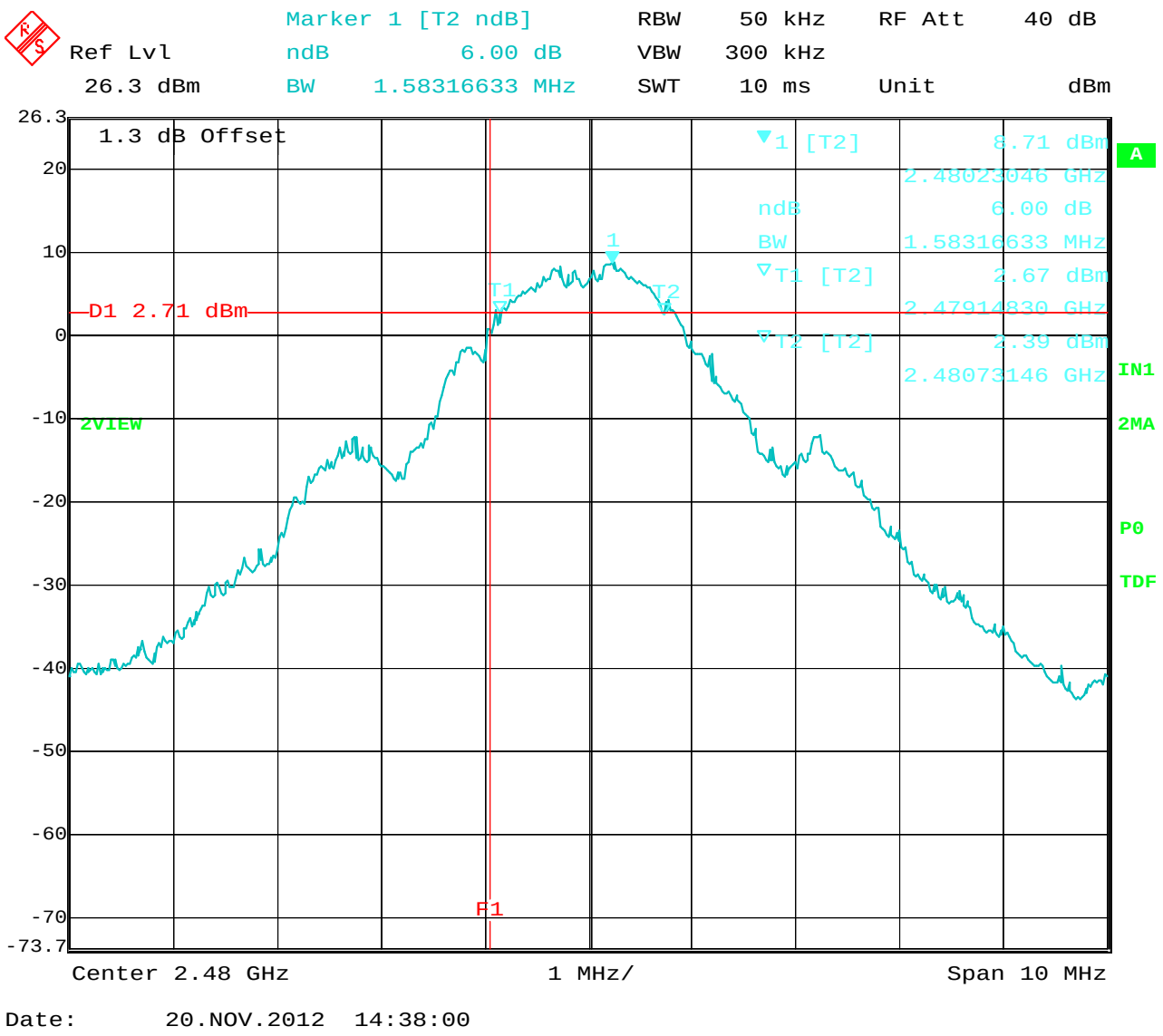
DATA SHEETS



Bandwidth 6 dB – Low Channel



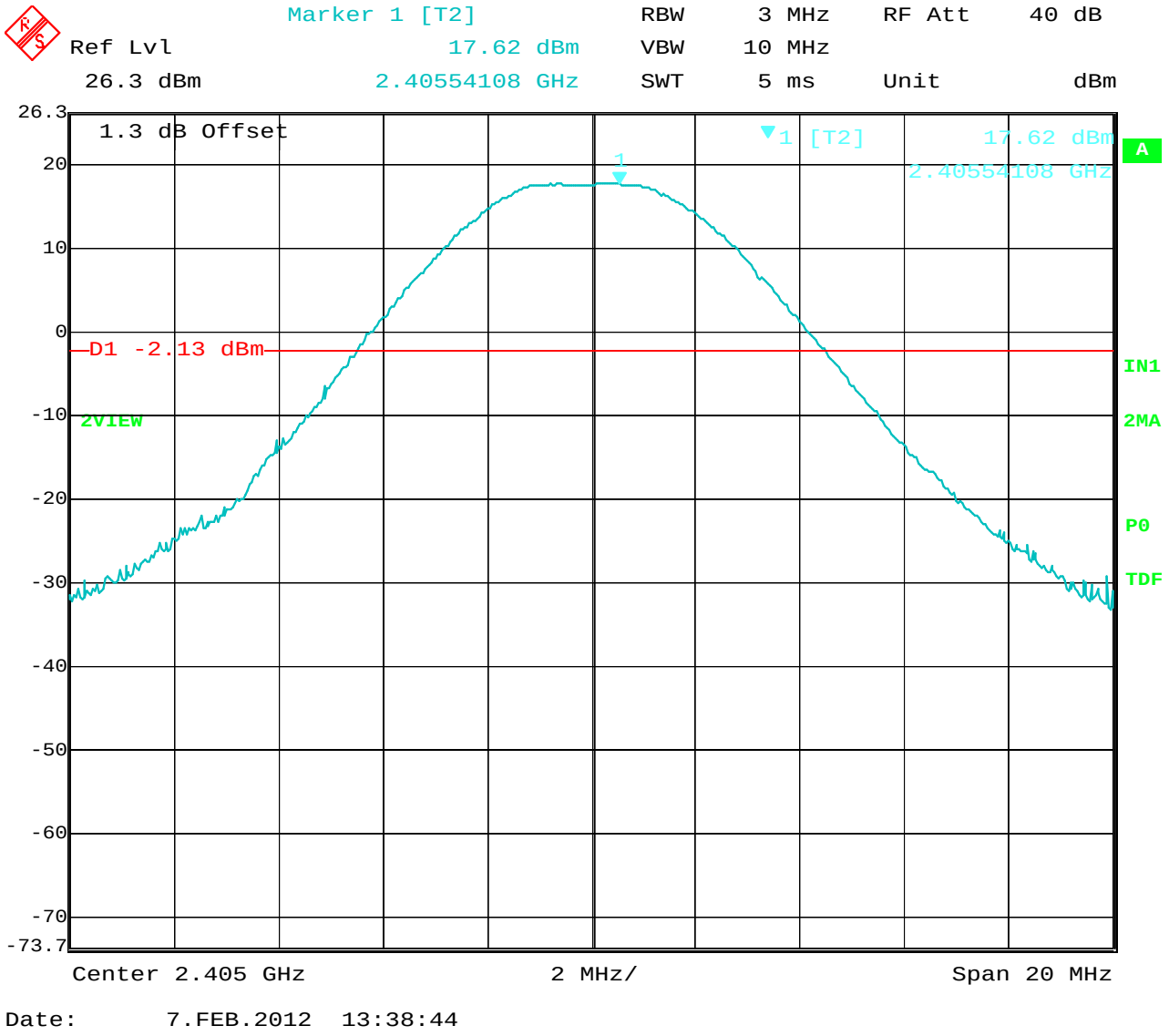
Bandwidth 6 dB – Middle Channel



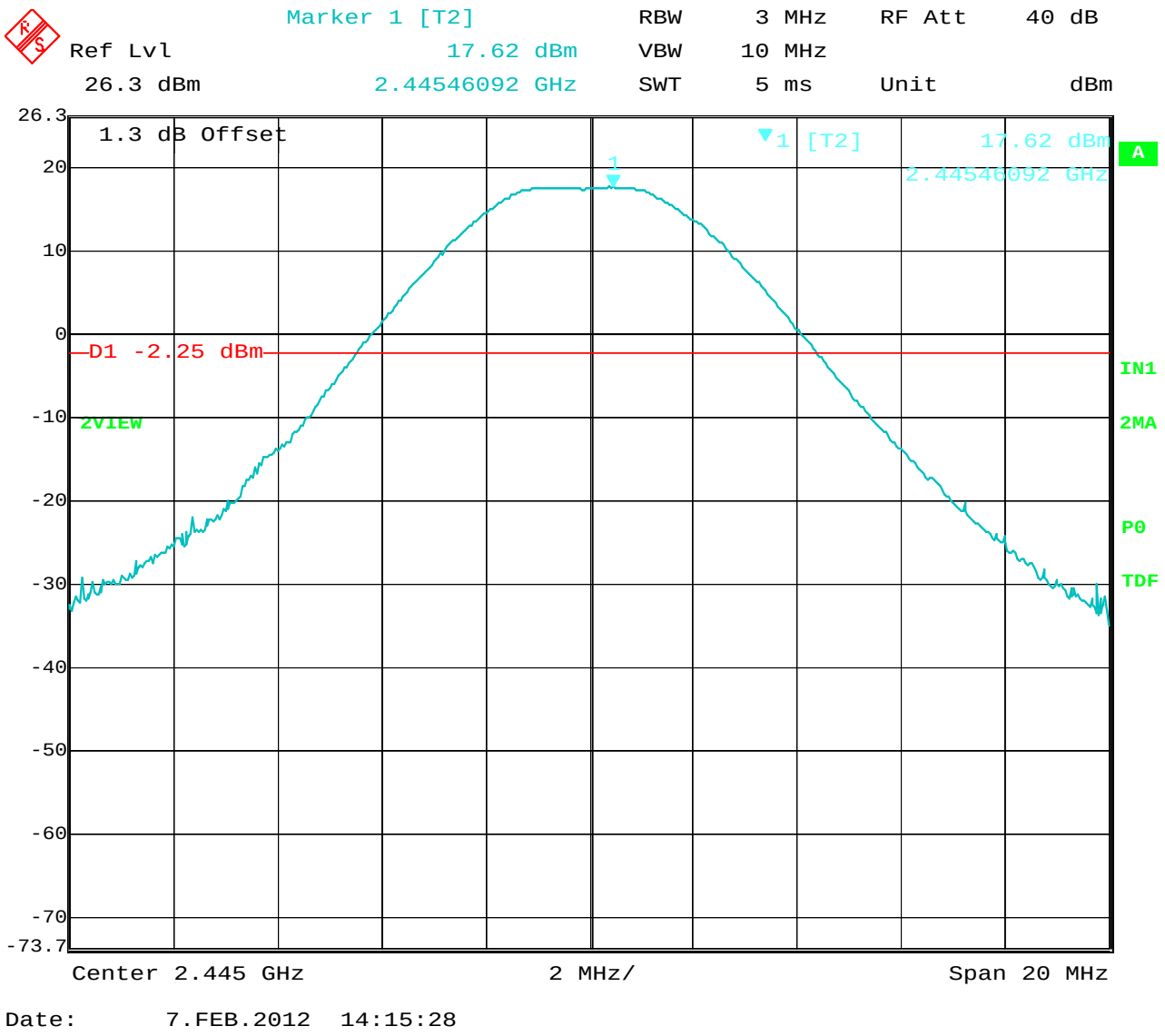
Bandwidth 6 dB – High Channel

PEAK POWER OUTPUT

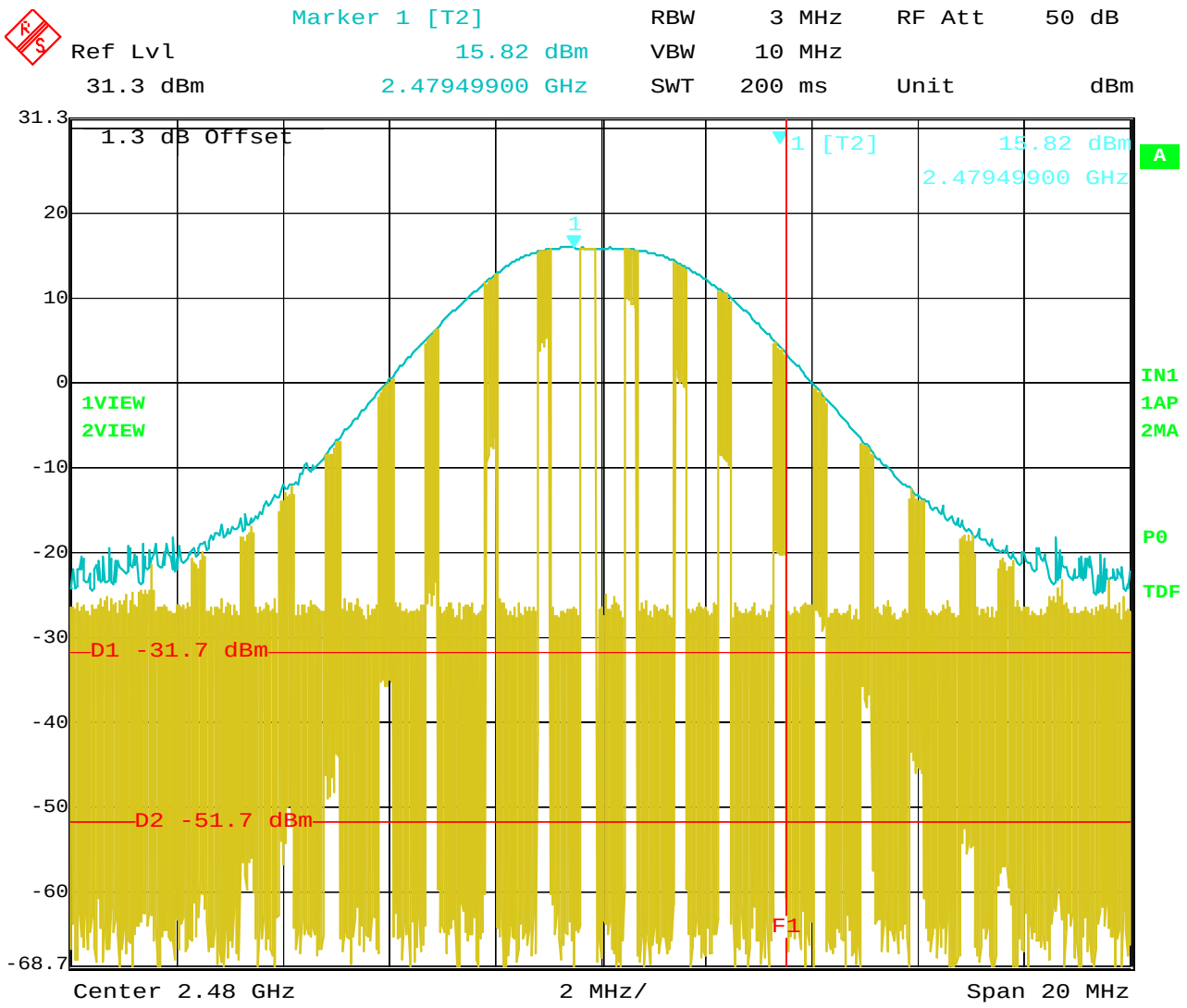
DATA SHEETS



Peak Power Output – Low Channel



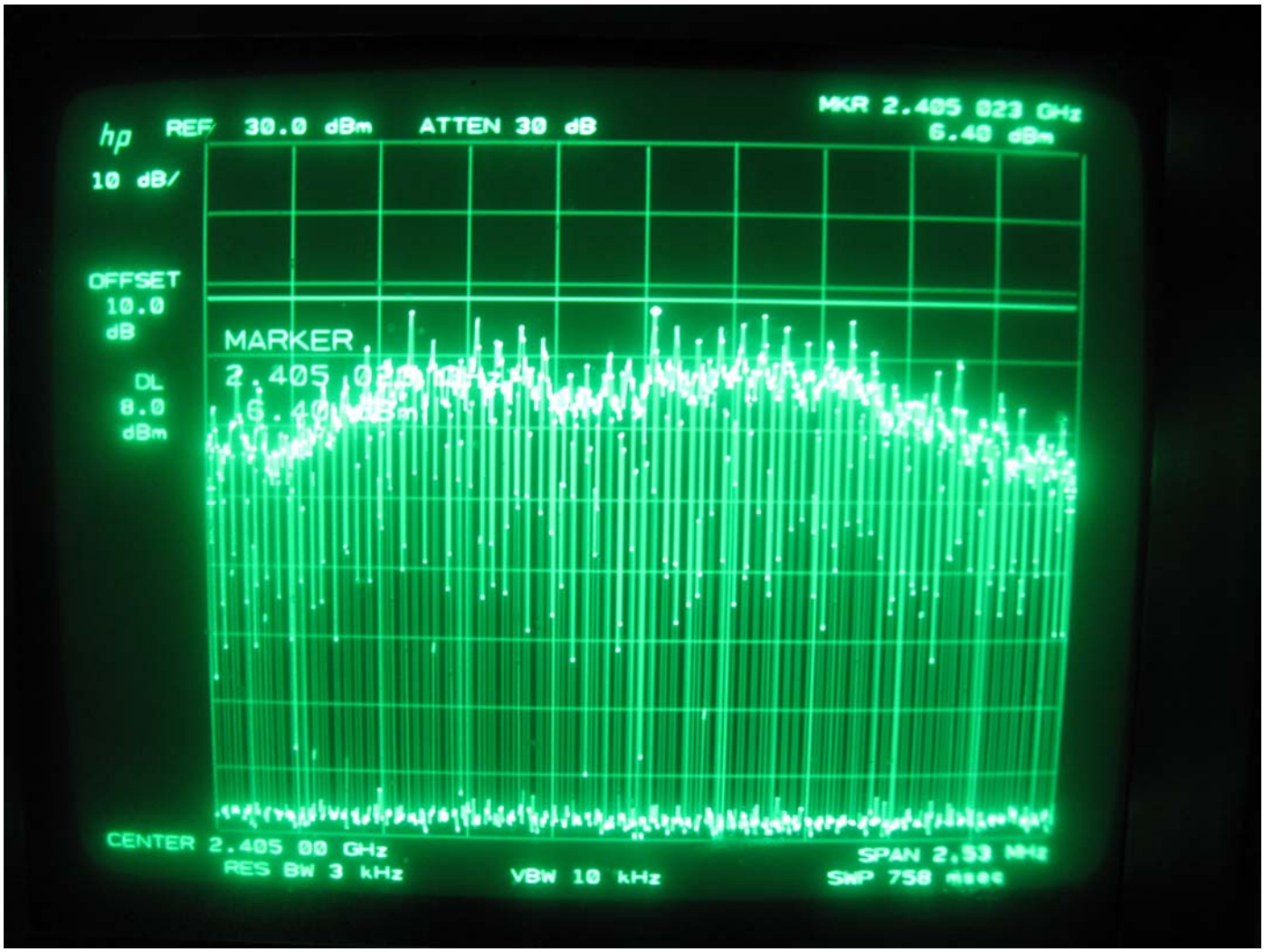
Peak Power Output – Middle Channel



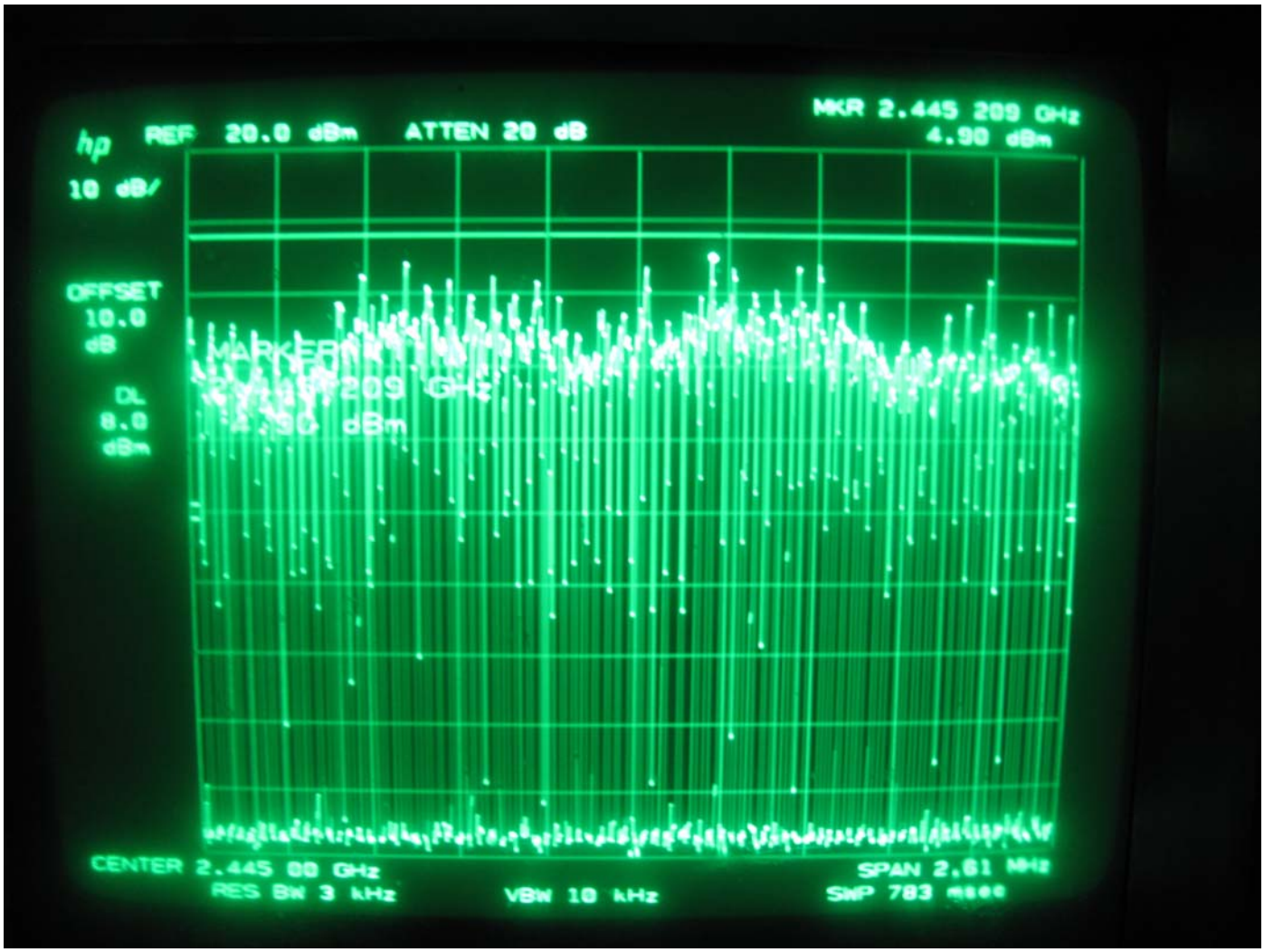
Peak Power Output – High Channel

SPECTRAL DENSITY OUTPUT

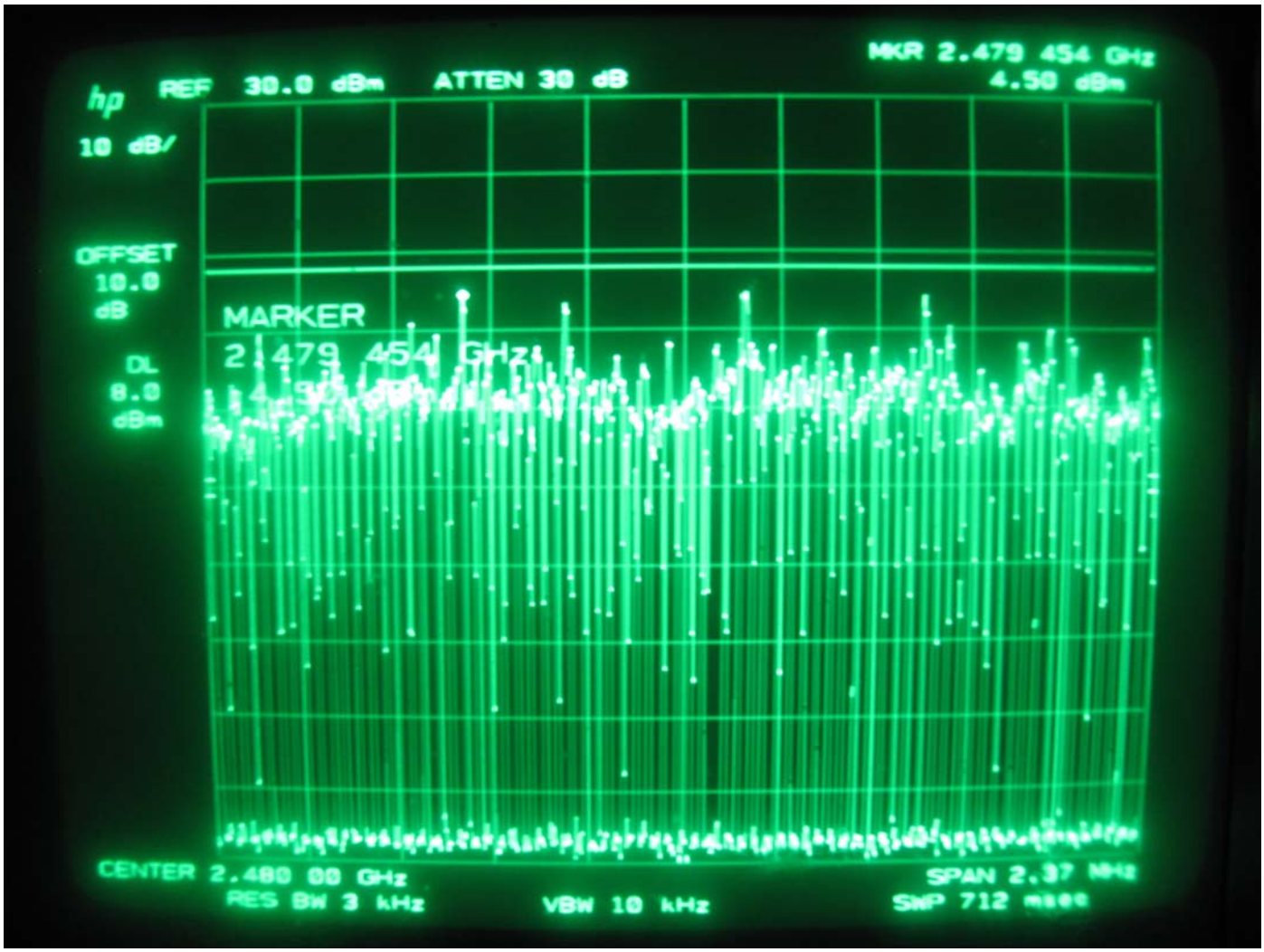
DATA SHEETS



Power Spectral Density – Low Channel – January 22, 2013



Power Spectral Density – Middle Channel – January 22, 2013



Power Spectral Density – High Channel – January 22, 2013

BAND EDGES

DATA SHEETS

FCC 15.247
Telkonet, Inc.
Zigbee Temperature Sensor
Model: PST6000

Dates: 02/16/2012 and 01/29/2013
Lab: B
Tested By: David Tran & Kyle Fujimoto

Band Edges - Vertical Polarization
High Power Mode - External Antenna

Axis Of EUT	Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
Y-AXIS	2405	110.04	V	--	--	Peak	3.5	125	Fundamental of
									Low Channel @ 3 Meters
Y-AXIS	2350.41	57.31	V	74	-16.69	Peak	3.5	125	Band Edge of
Y-AXIS	2350.4	37.31	V	54	-16.69	Avg	3.5	125	Low Channel @ 3 Meters
Y-AXIS	2480	106.37	V	--	--	Peak	1.25	155	Fundamental of
									High Channel @ 3 Meters
Y-AXIS	2480	76.33	V	74	2.33	Peak	1.25	155	Band Edge of
									High Channel @ 3 Meters
Y-AXIS	2480	72.16	V	74	-1.84	Peak	1.25	155	Marker Delta Method
Y-AXIS	2480	52.16	V	54	-1.84	Avg	1.25	155	Per Section 6.9.3

FCC 15.247
Telkonet, Inc.
Zigbee Temperature Sensor
Model: PST6000

Dates: 02/16/2012 and 01/29/2013
Lab: B
Tested By: David Tran & Kyle Fujimoto

Band Edges - Horizontal Polarization
High Power Mode - External Antenna

Axis Of EUT	Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
X-AXIS	2405	111.33	H	--	--	Peak	1.25	135	Fundamental of
									Low Channel @ 3 Meters
X-AXIS	2340.9	62.48	H	74	-11.52	Peak	1.25	135	Band Edge of
X-AXIS	2340.9	42.48	H	54	-11.52	Peak	1.25	135	Low Channel @ 3 Meters
X-AXIS	2480	104.04	H	--	--	Peak	1.25	155	Fundamental of
									High Channel @ 3 Meters
Y-AXIS	2483.5	74.18	H	74	0.18	Peak	1.25	155	Band Edge of
									High Channel @ 3 Meters
Y-AXIS	2483.5	69.92	H	74	-4.08	Peak	1.25	155	Marker Delta Method
Y-AXIS	2483.5	49.92	H	54	-4.08	Avg	1.25	155	Per Section 6.9.3

FCC 15.247
Telkonet, Inc.
Zigbee Temperature Sensor
Model: PST6000

Dates: 02/16/2012 and 1/29/2013
Lab: B
Tested By: David Tran & Kyle Fujimoto

Band Edges - Vertical Polarization
High Power Mode - Internal Antenna

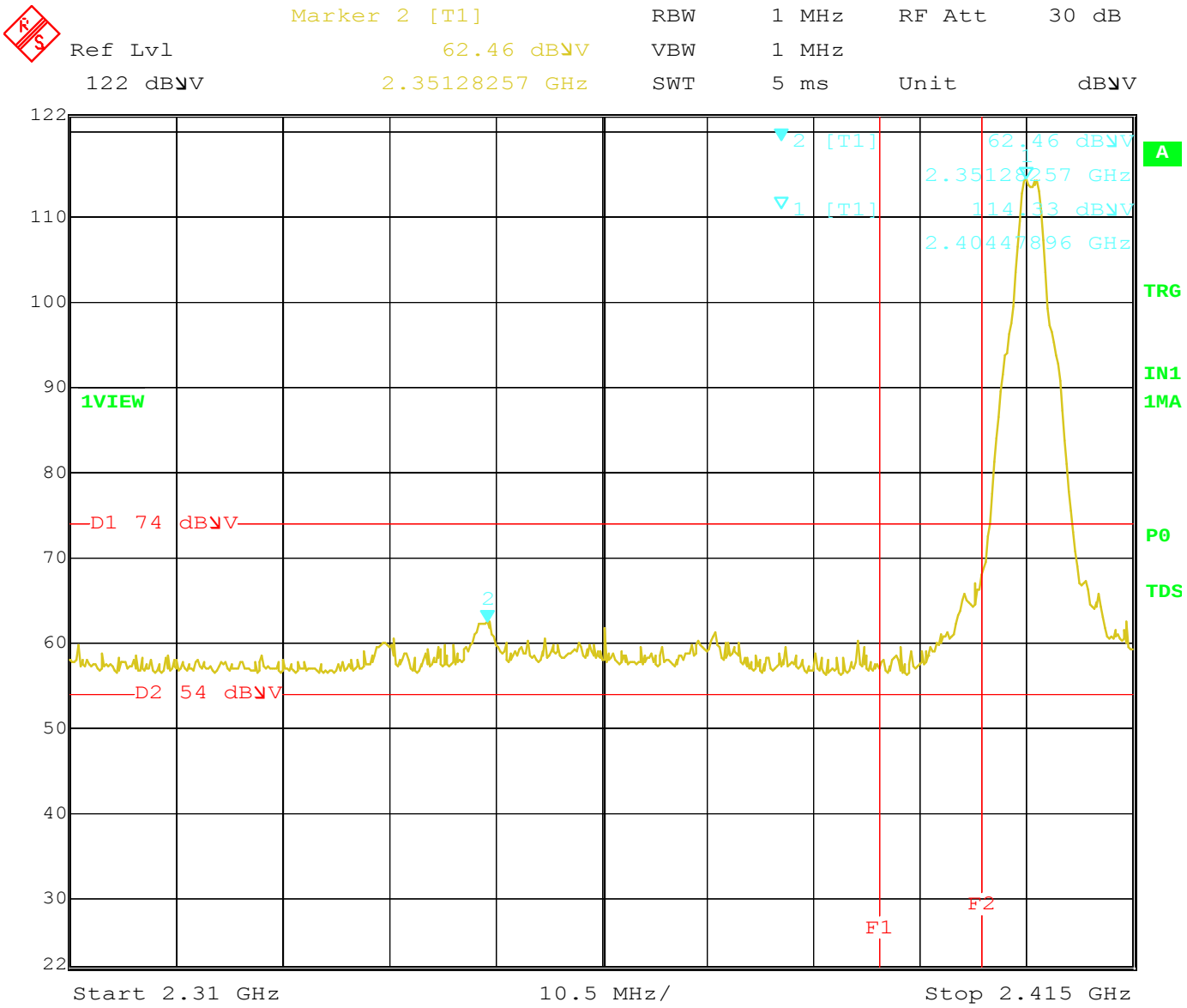
Axis Of EUT	Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
Y-AXIS	2405	114.33	V	--	--	Peak	3.5	125	Fundamental of
									Low Channel @ 3 Meters
Y-AXIS	2351.28	62.46	V	74	-11.54	Peak	3.5	125	Band Edge of
Y-AXIS	2351.28	42.46	V	54	-11.54	Avg	3.5	125	Low Channel @ 3 Meters
Y-AXIS	2480	113.52	V	--	--	Peak	1.25	155	Fundamental of
									High Channel @ 3 Meters
Y-AXIS	2480	77.22	V	74	3.22	Peak	1.25	155	Band Edge of
									High Channel @ 3 Meters
Y-AXIS	2480	70.00	V	74	-4.00	Peak	1.25	155	Marker Delta Method
Y-AXIS	2480	50.00	V	54	-4.00	Avg	1.25	155	Per Section 6.9.3

FCC 15.247
Telkonet, Inc.
Zigbee Temperature Sensor
Model: PST6000

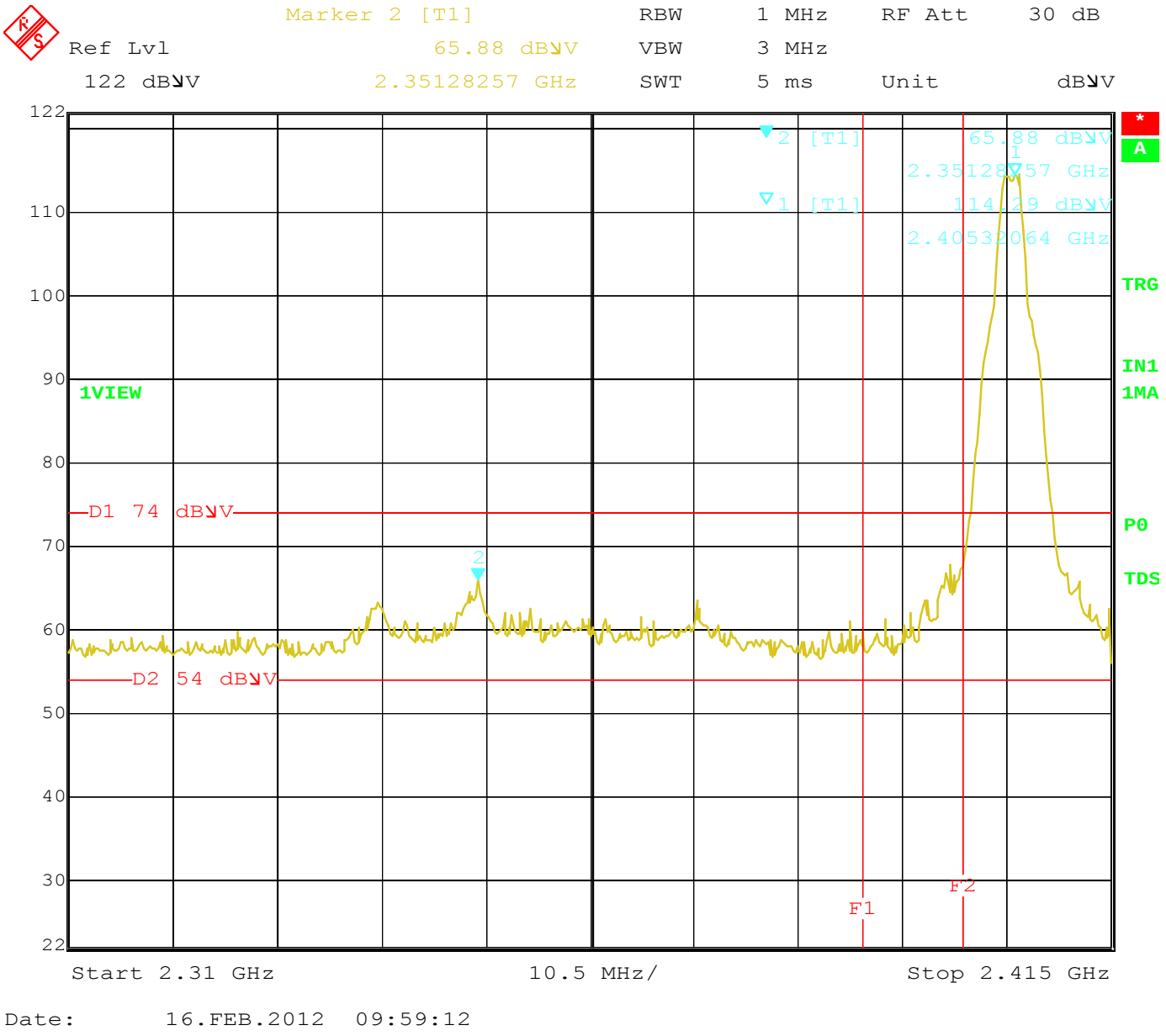
Dates: 02/16/2012 and 1/29/2013
Lab: B
Tested By: David Tran & Kyle Fujimoto

Band Edges - Horizontal Polarization
High Power Mode - Internal Antenna

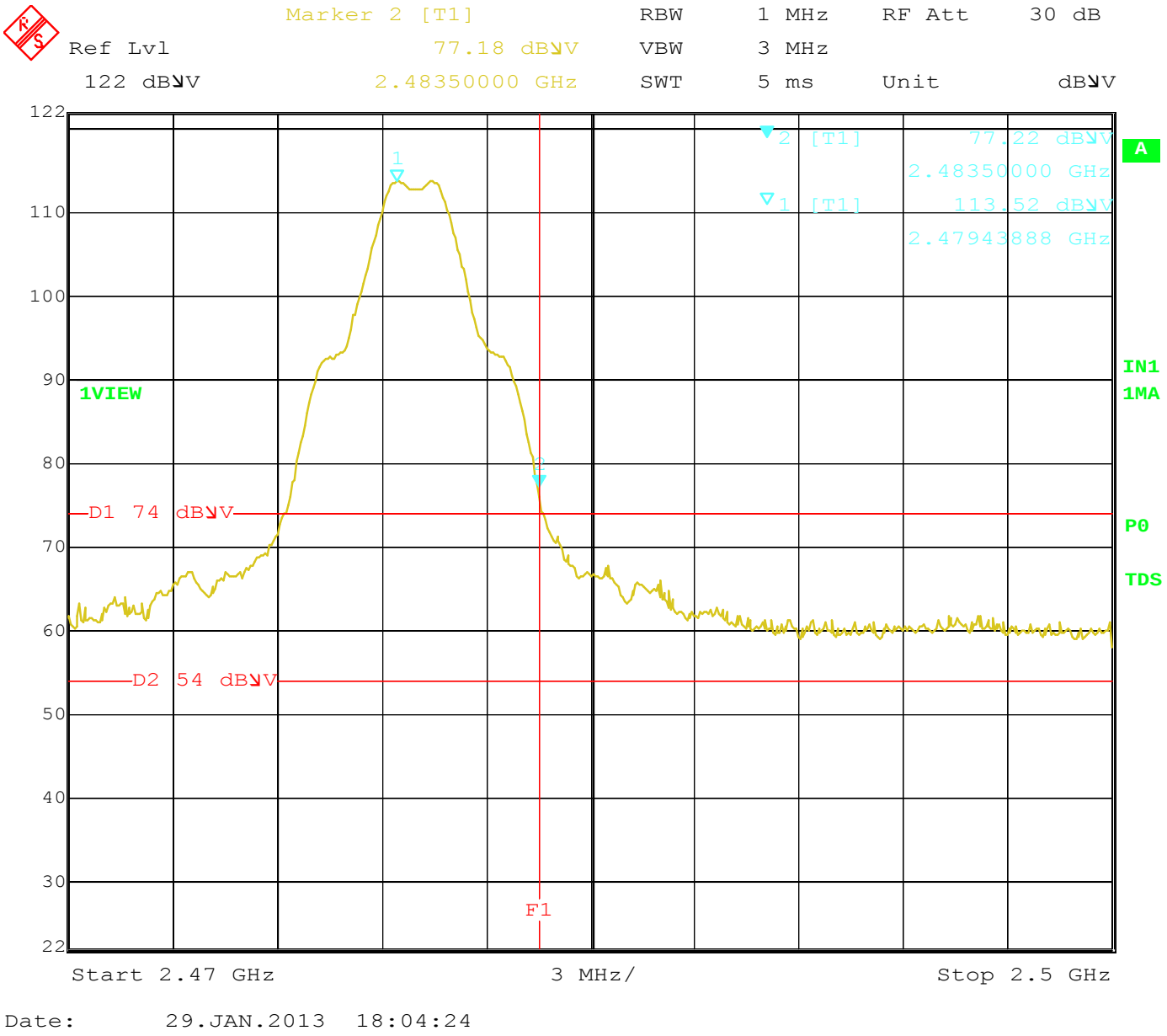
Axis Of EUT	Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
X-AXIS	2405	114.29	H	--	--	Peak	1.25	135	Fundamental of
									Low Channel @ 3 Meters
X-AXIS	2351.3	65.88	H	74	-8.12	Peak	1.25	135	Band Edge of
X-AXIS	2351.3	45.88	H	54	-8.12	Peak	1.25	135	Low Channel @ 3 Meters
X-AXIS	2480	112.34	H	--	--	Peak	1.25	155	Fundamental of
									High Channel @ 3 Meters
X-AXIS	2483.5	75.86	H	74	1.86	Peak	1.25	155	Band Edge of
									High Channel @ 3 Meters
X-AXIS	2483.5	69.60	H	74	-4.40	Peak	1.25	155	Marker Delta Method
X-AXIS	2483.5	49.60	H	54	-4.40	Avg	1.25	155	Per Section 6.9.3



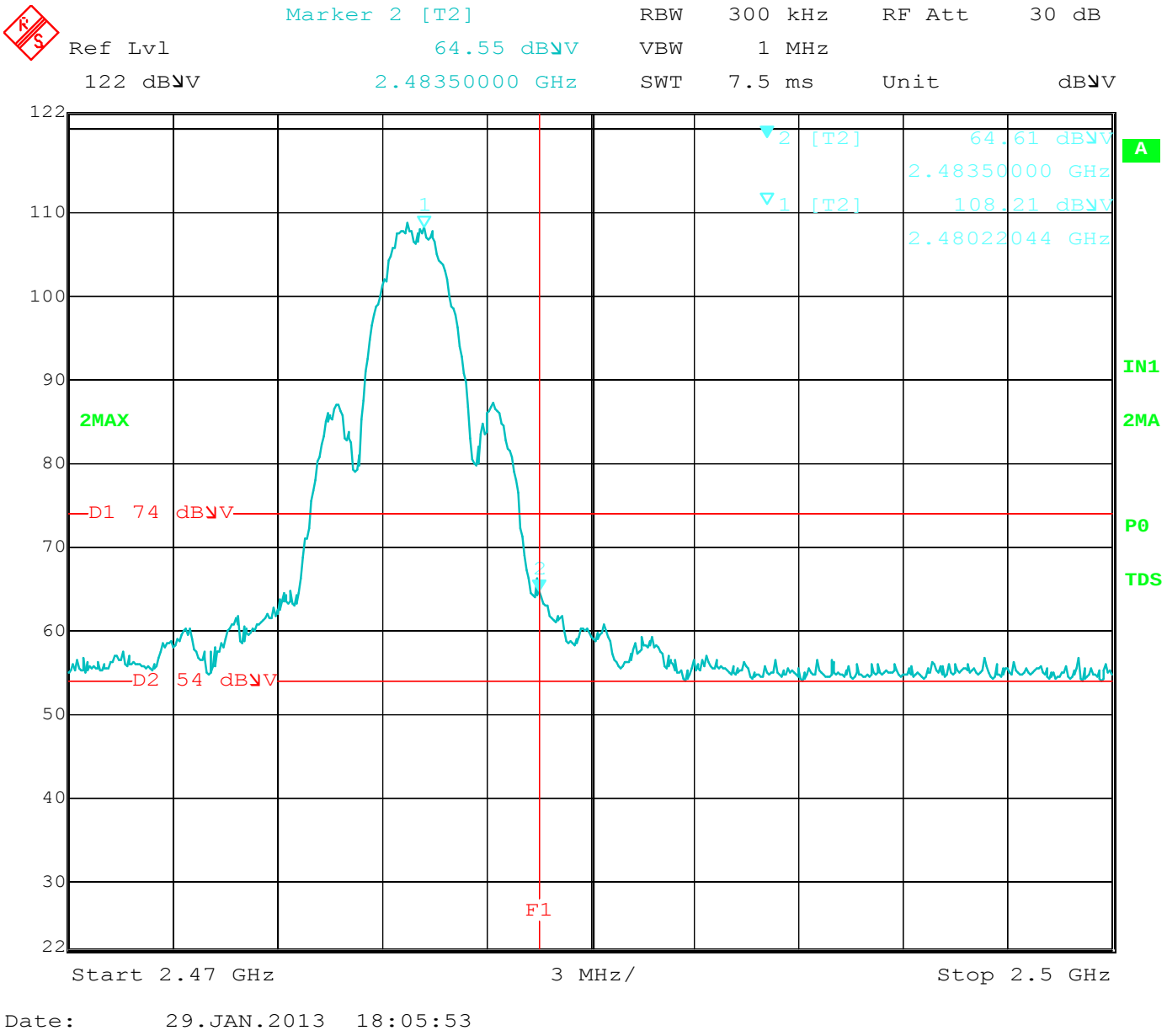
Band Edge for Low Channel – Vertical Polarization – Internal Antenna – Y-Axis (Worst Case)



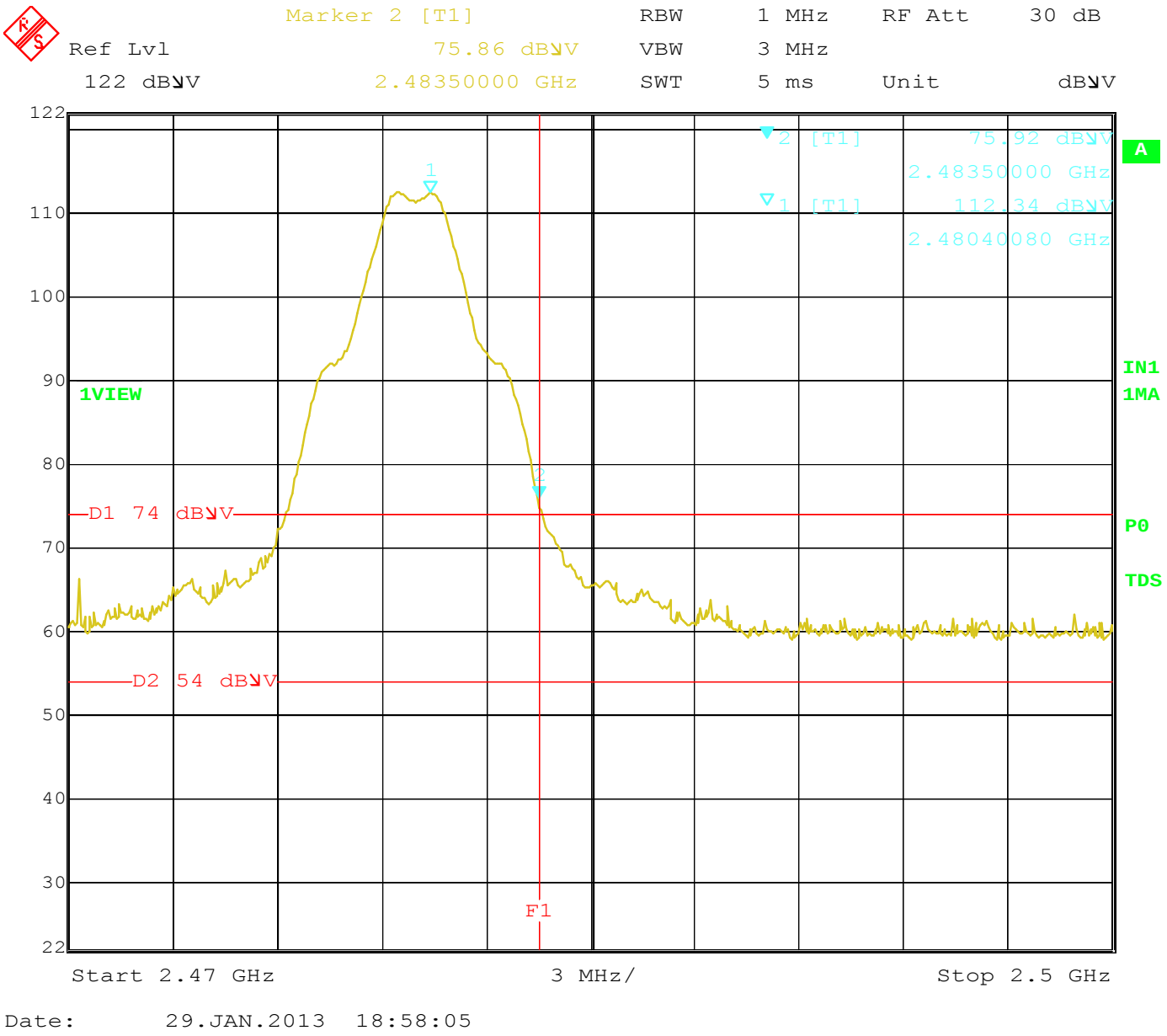
Band Edge for Low Channel – Horizontal Polarization – Internal Antenna (Worst Case)



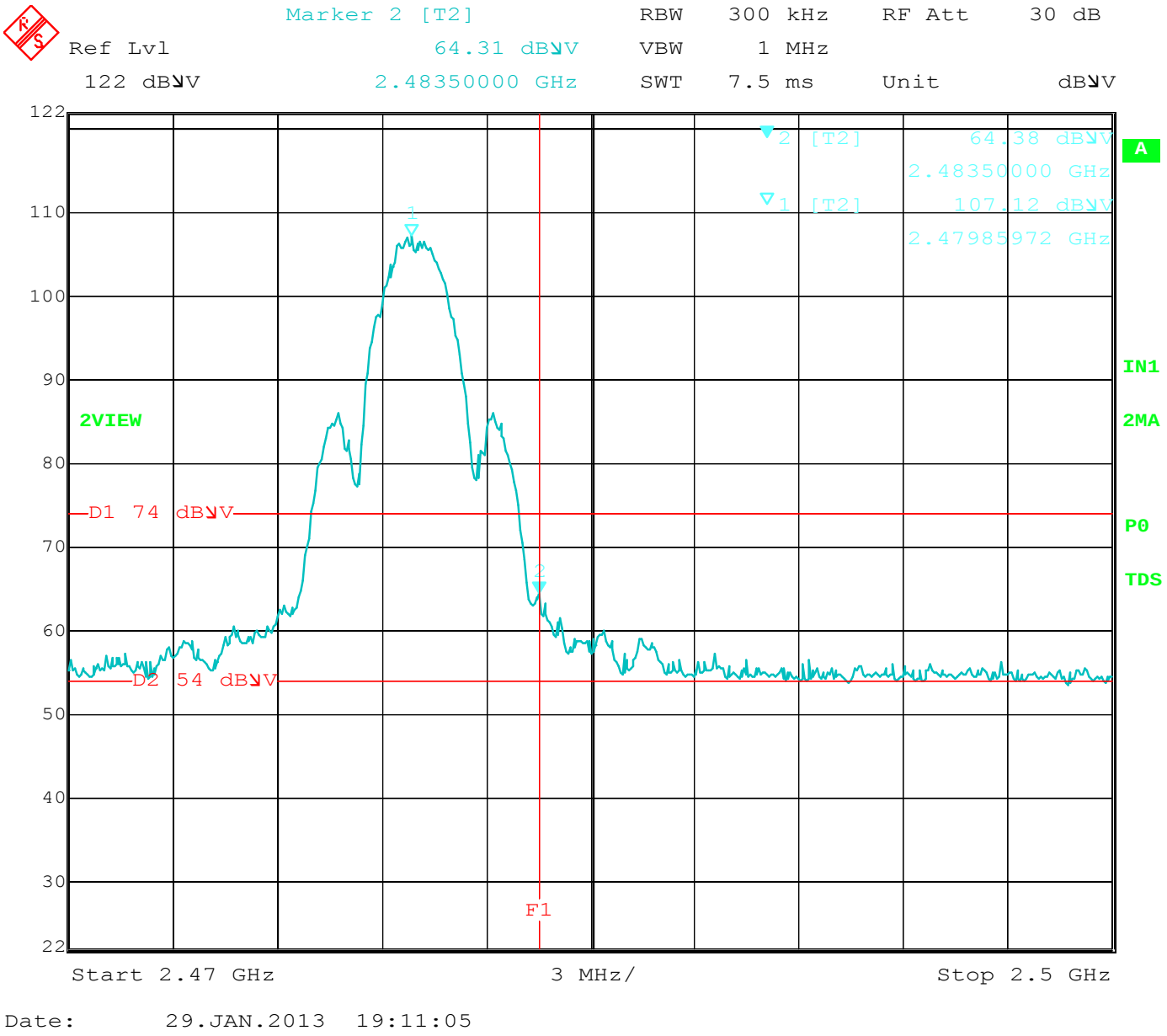
Band Edge for High Channel – Vertical Polarization – Internal Antenna – Y-Axis (Worst Case)
Reference Level = 113.52 dBuV/m Peak



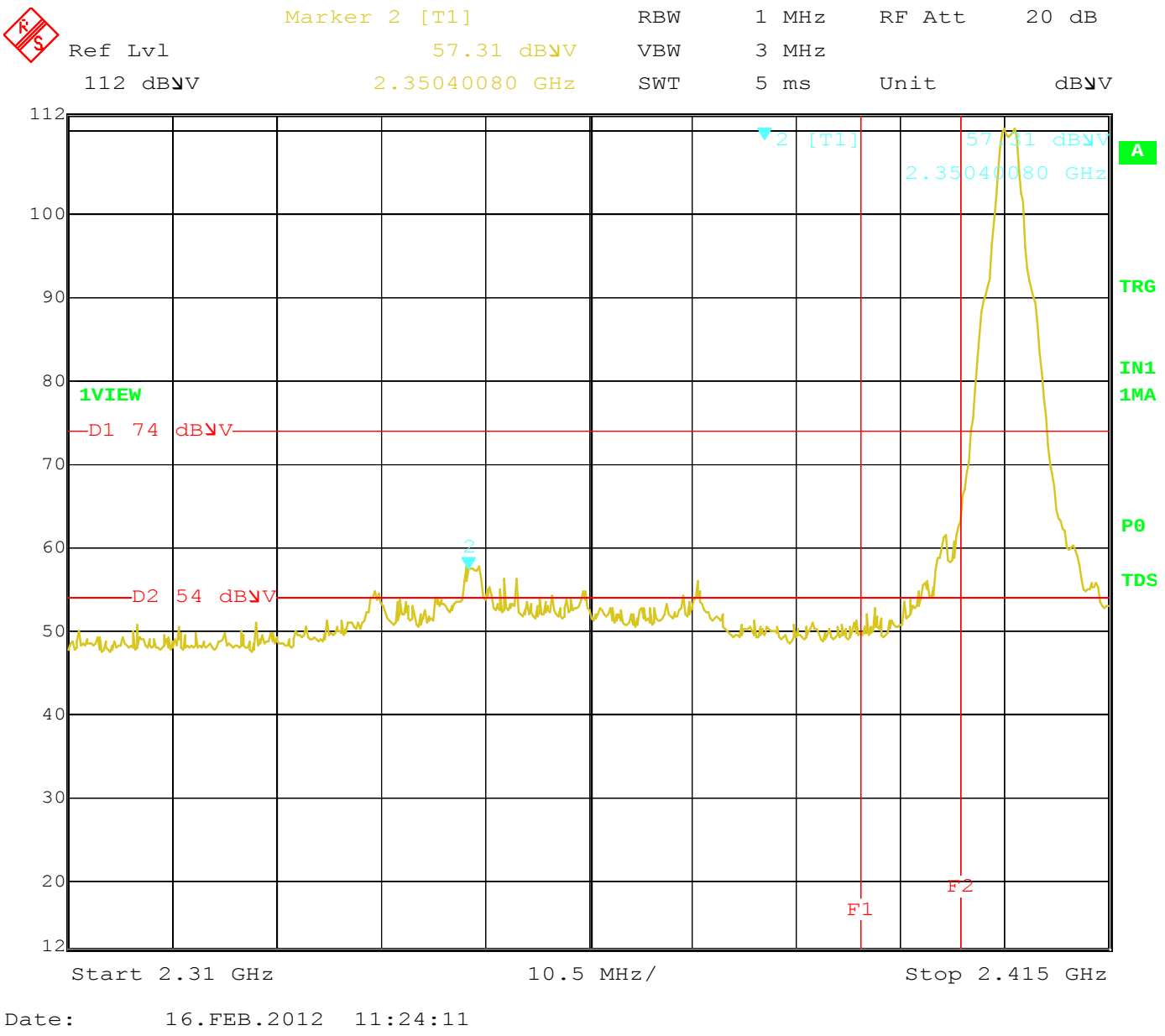
Band Edge for High Channel – Vertical Polarization – Internal Antenna – Y-Axis (Worst Case)
Marker Delta Method
Delta [Step b) of section 6.9.3 of ANSI C63.10: 2009] = 108.21-64.61 = 43.60 dBuV/m Peak
Marker Delta Method [Step c) of section 6.9.3 of ANSI C63.10: 2009] = 113.52 – 43.60 = 70.00 dBuV/m Peak
The Average reading is shown on the data sheet.



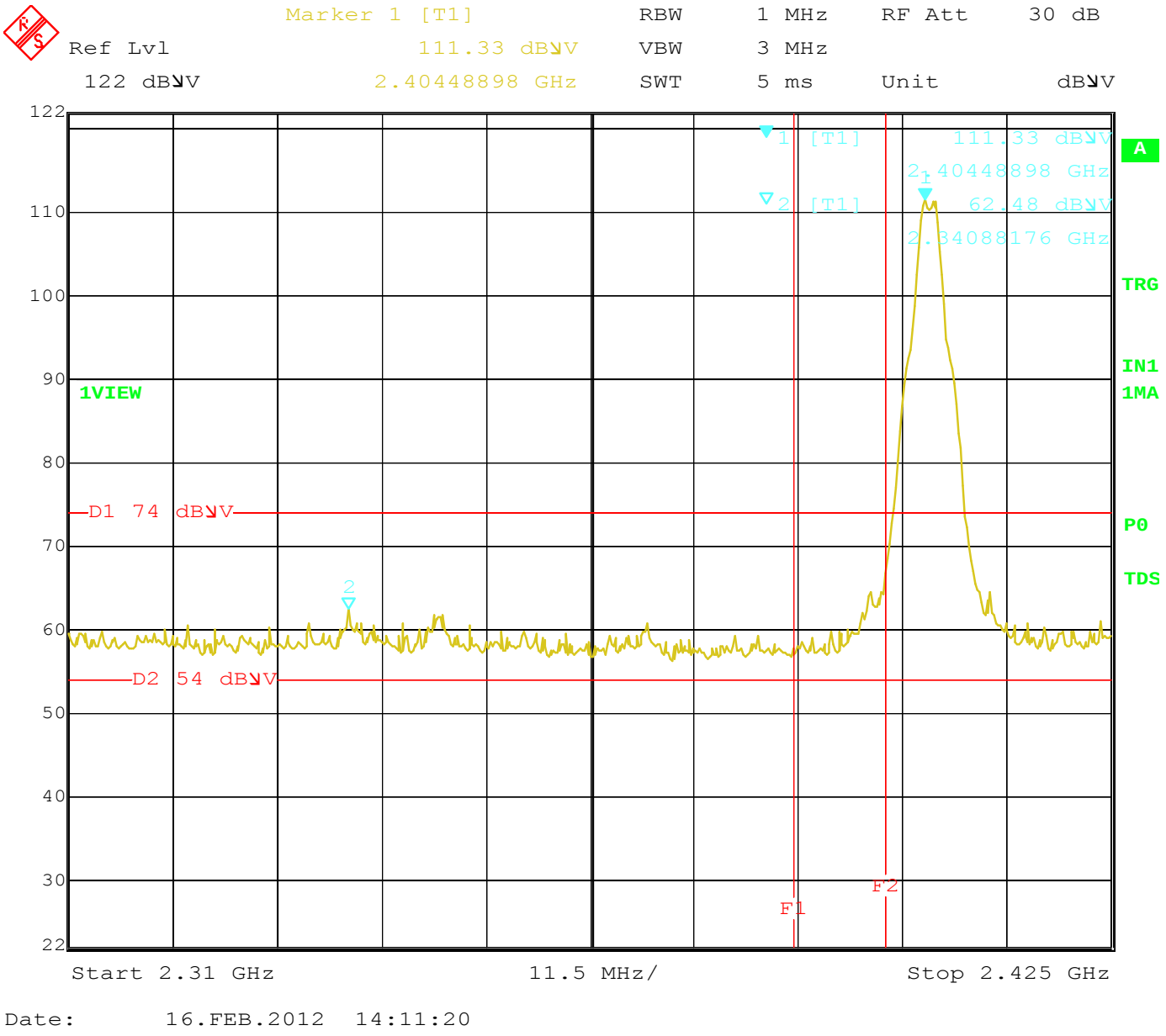
Band Edge for High Channel – Horizontal Polarization – Internal Antenna – X-Axis (Worst Case)
Reference Level = 112.34 dBuV/m Peak



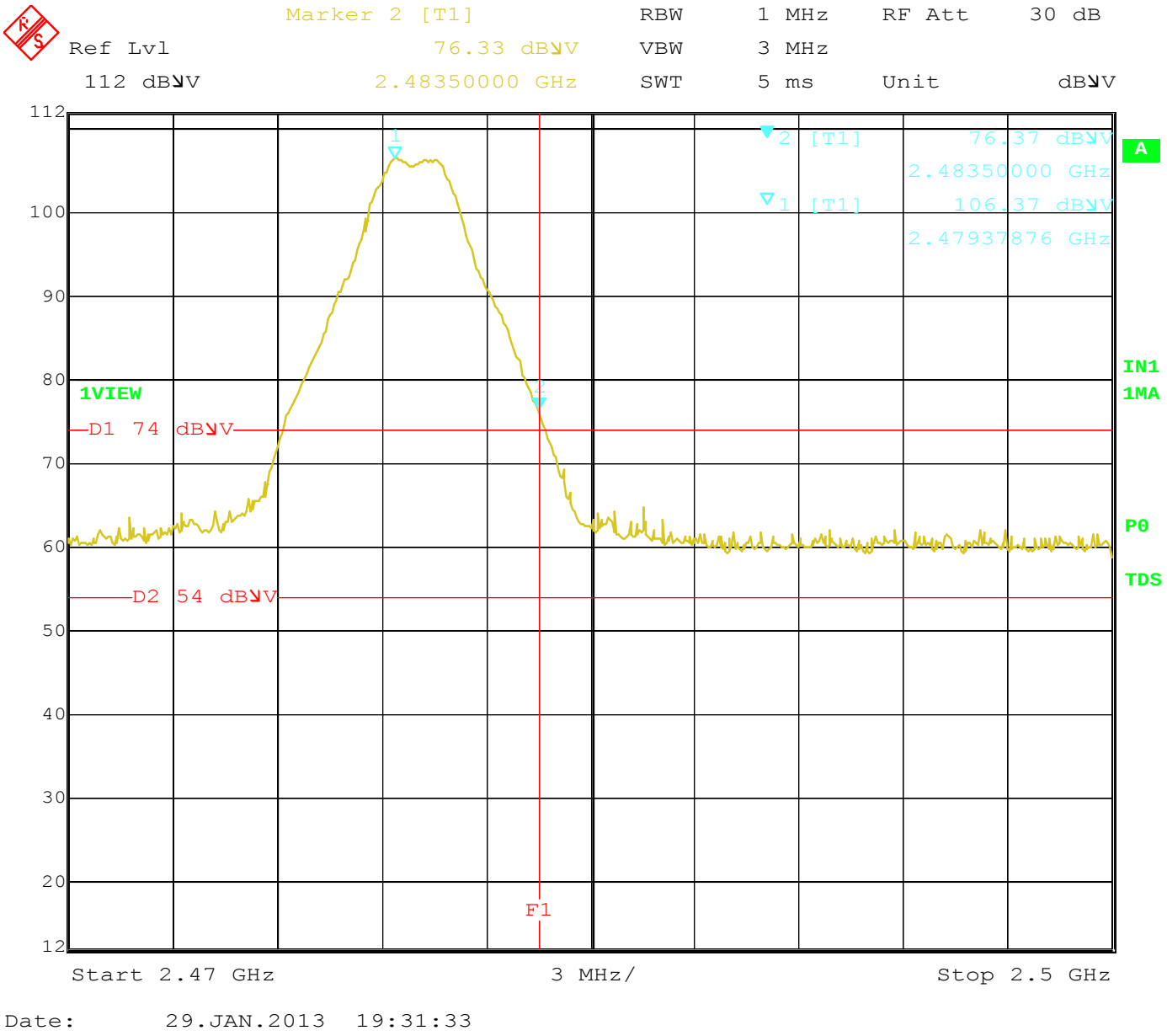
Band Edge for High Channel – Horizontal Polarization – Internal Antenna – X-Axis (Worst Case)
Marker Delta Method
Delta [Step b) of section 6.9.3 of ANSI C63.10: 2009] = 107.12-64.38 = 42.74 dBuV/m Peak
Marker Delta Method [Step c) of section 6.9.3 of ANSI C63.10: 2009] = 112.34 – 42.74 = 69.60 dBuV/m Peak
The Average reading is shown on the data sheet.



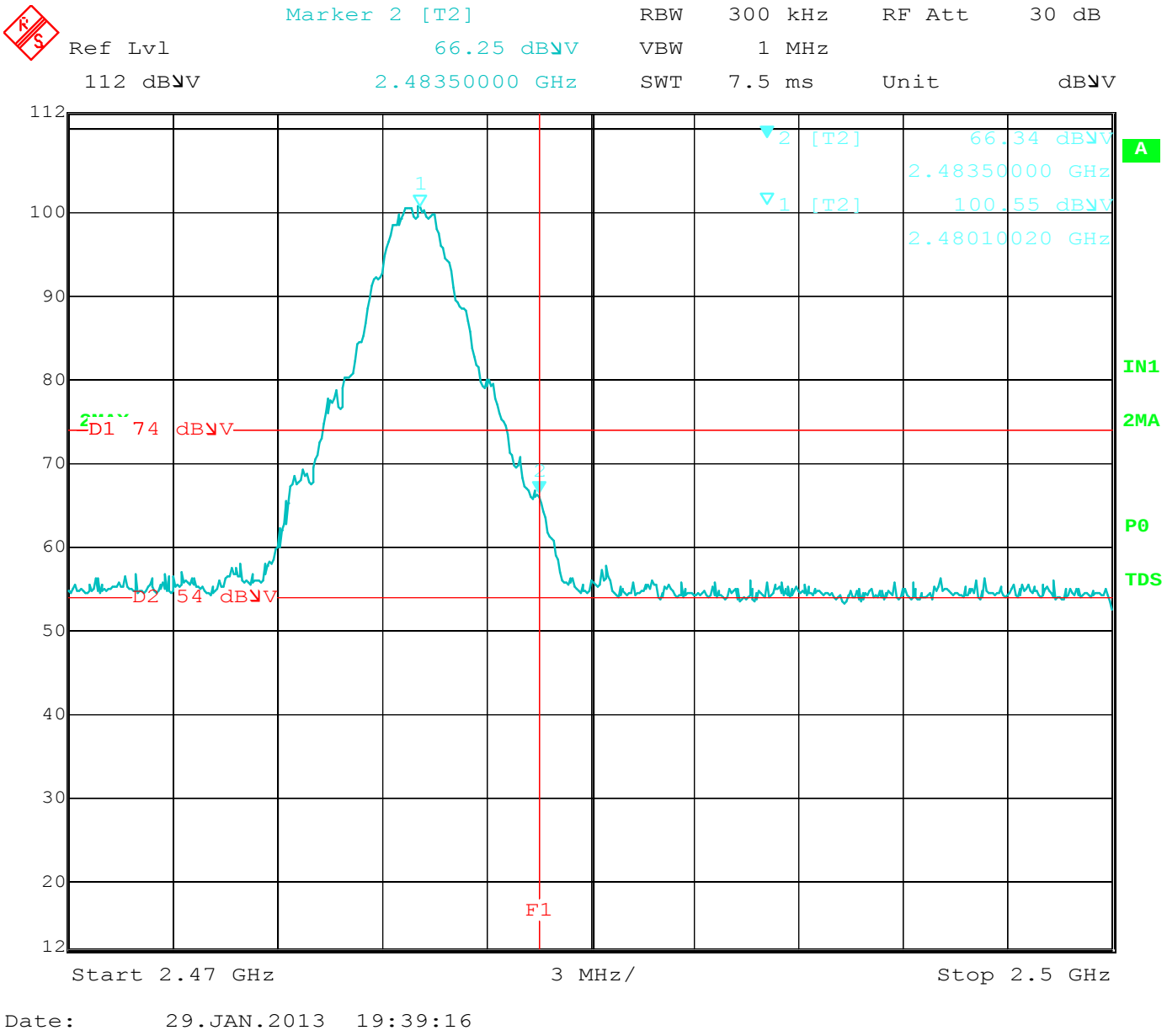
Band Edge for Low Channel – Vertical Polarization – External Antenna – Y-Axis (Worst Case)



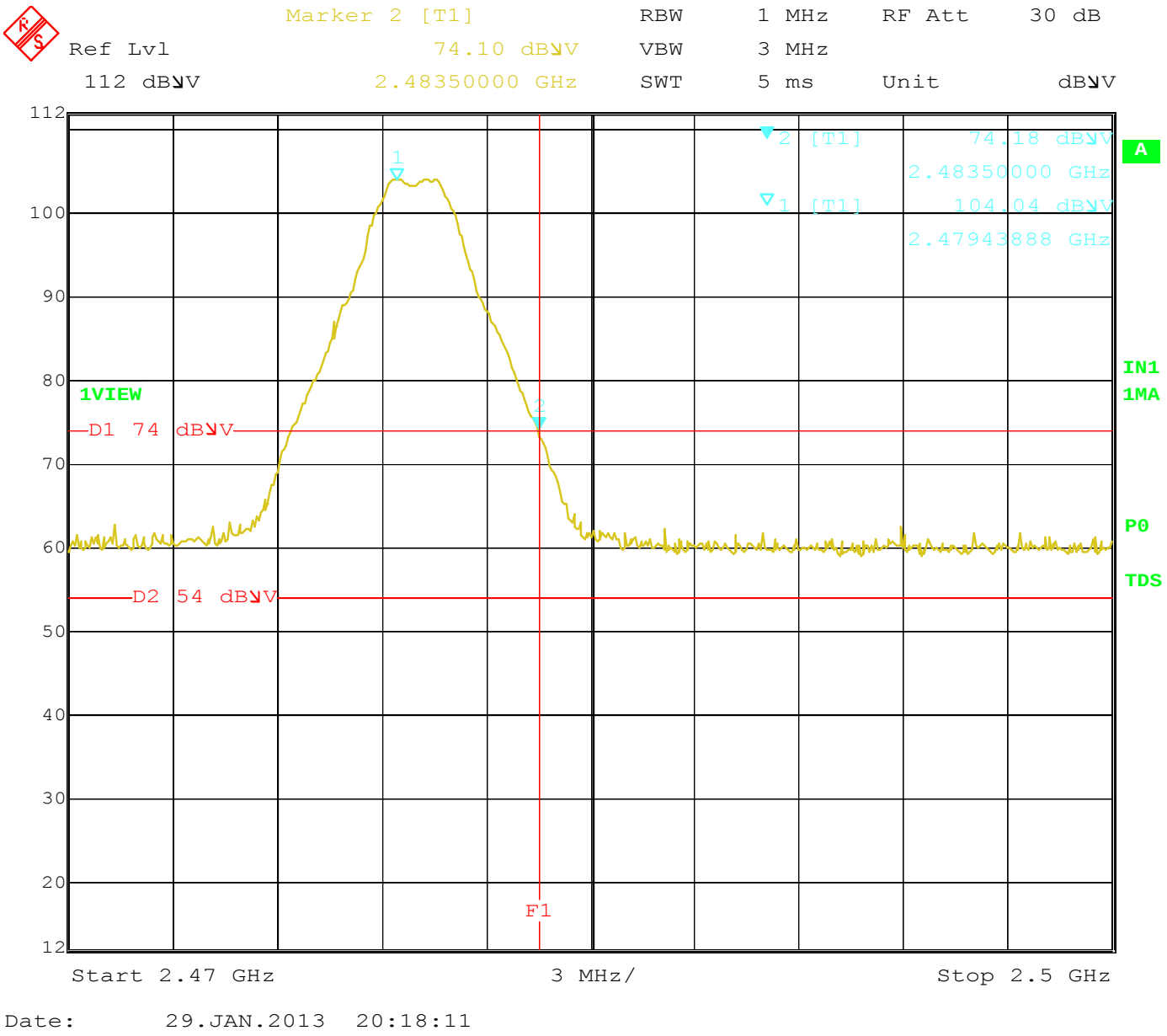
Band Edge for Low Channel – Horizontal Polarization – External Antenna – X-Axis (Worst Case)



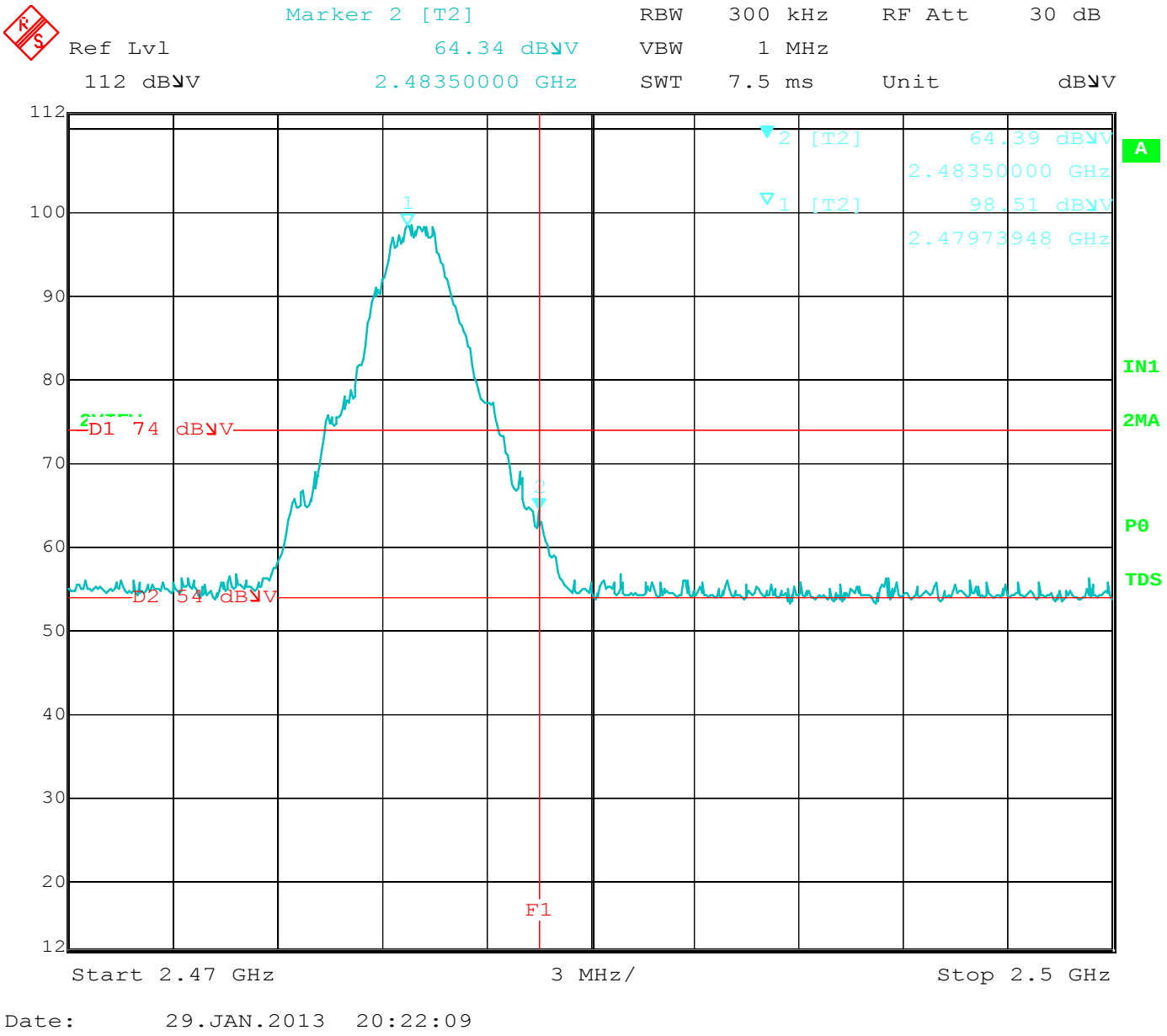
Band Edge for High Channel – Vertical Polarization – External Antenna – Y-Axis (Worst Case)
Reference Level = 106.37 dBuV/m Peak



Band Edge for High Channel – Vertical Polarization – External Antenna – Y-Axis (Worst Case)
Marker Delta Method
Delta [Step b) of section 6.9.3 of ANSI C63.10: 2009] = 100.55-66.34 = 34.21 dBuV/m Peak
Marker Delta Method [Step c) of section 6.9.3 of ANSI C63.10: 2009] = 106.37 – 34.21 = 72.16 dBuV/m Peak
The Average reading is shown on the data sheet.



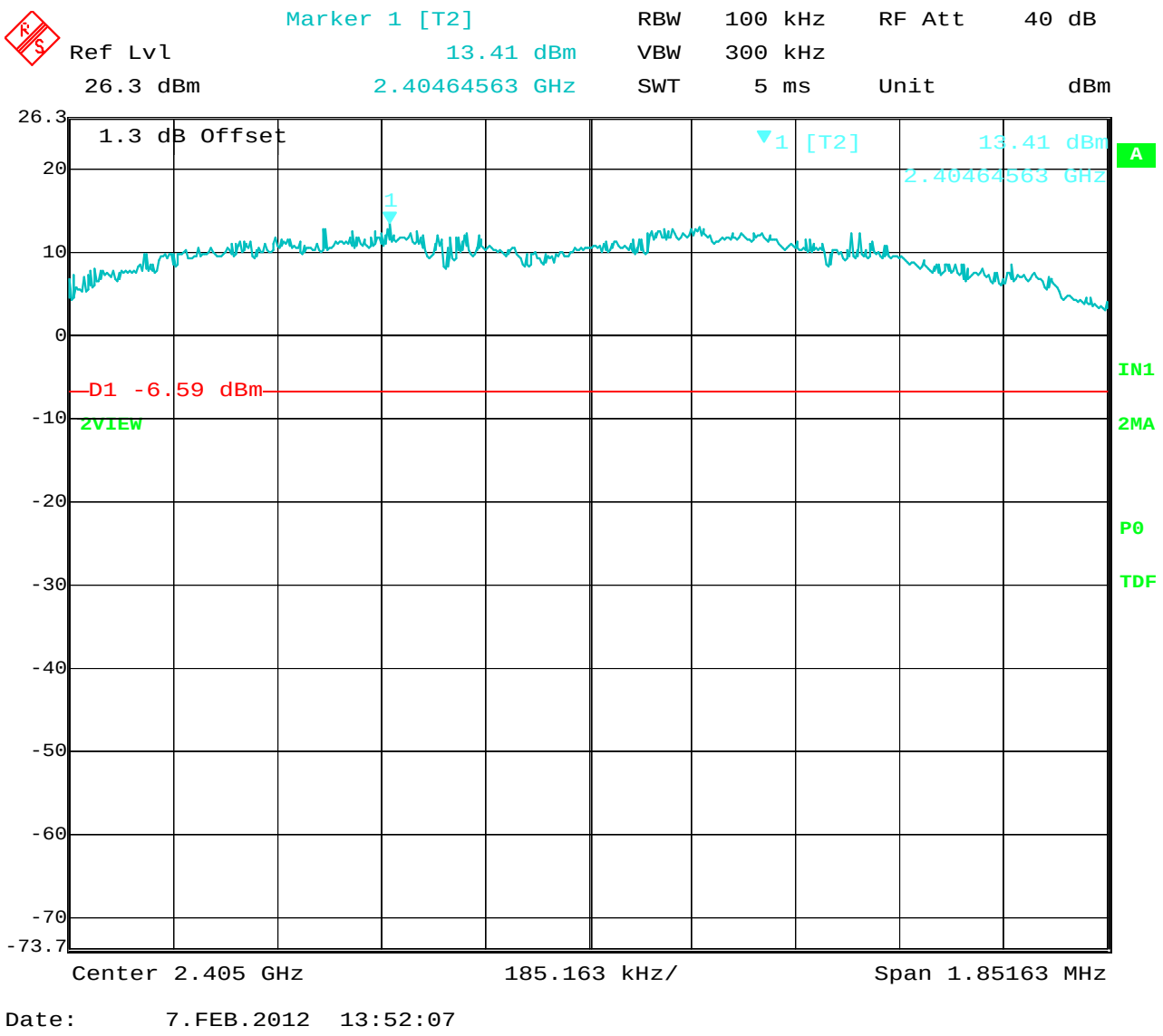
Band Edge for High Channel – Horizontal Polarization – External Antenna – X-Axis (Worst Case)
Reference Level = 104.04 dBuV/m Peak



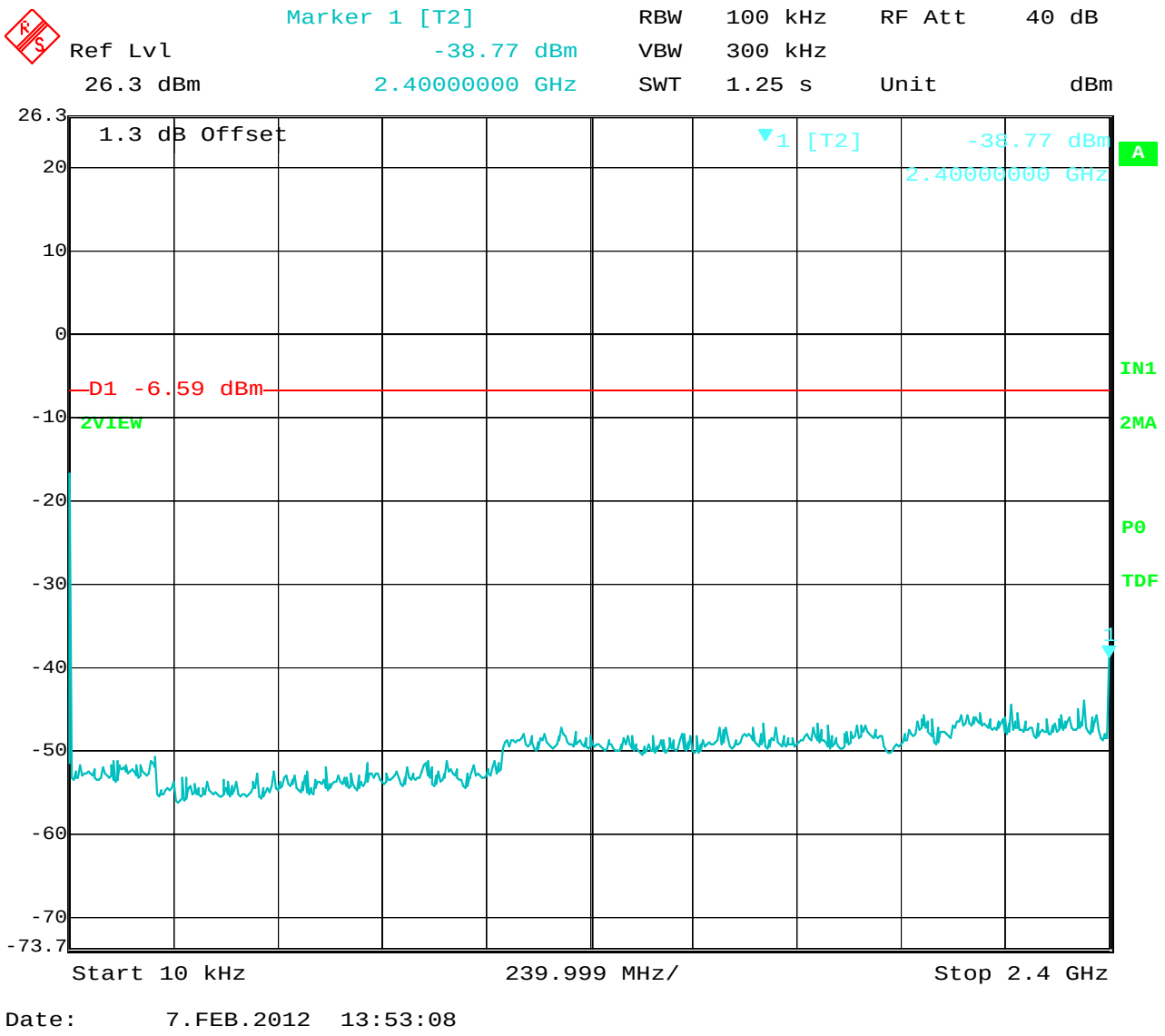
Band Edge for High Channel – Horizontal Polarization – External Antenna – X-Axis (Worst Case)
Marker Delta Method
Delta [Step b) of section 6.9.3 of ANSI C63.10: 2009] = 98.51-64.39 = 34.12 dBuV/m Peak
Marker Delta Method [Step c) of section 6.9.3 of ANSI C63.10: 2009] = 104.04-34.12 = 69.92 dBuV/m Peak
The Average reading is shown on the data sheet.

RF ANTENNA CONDUCTED

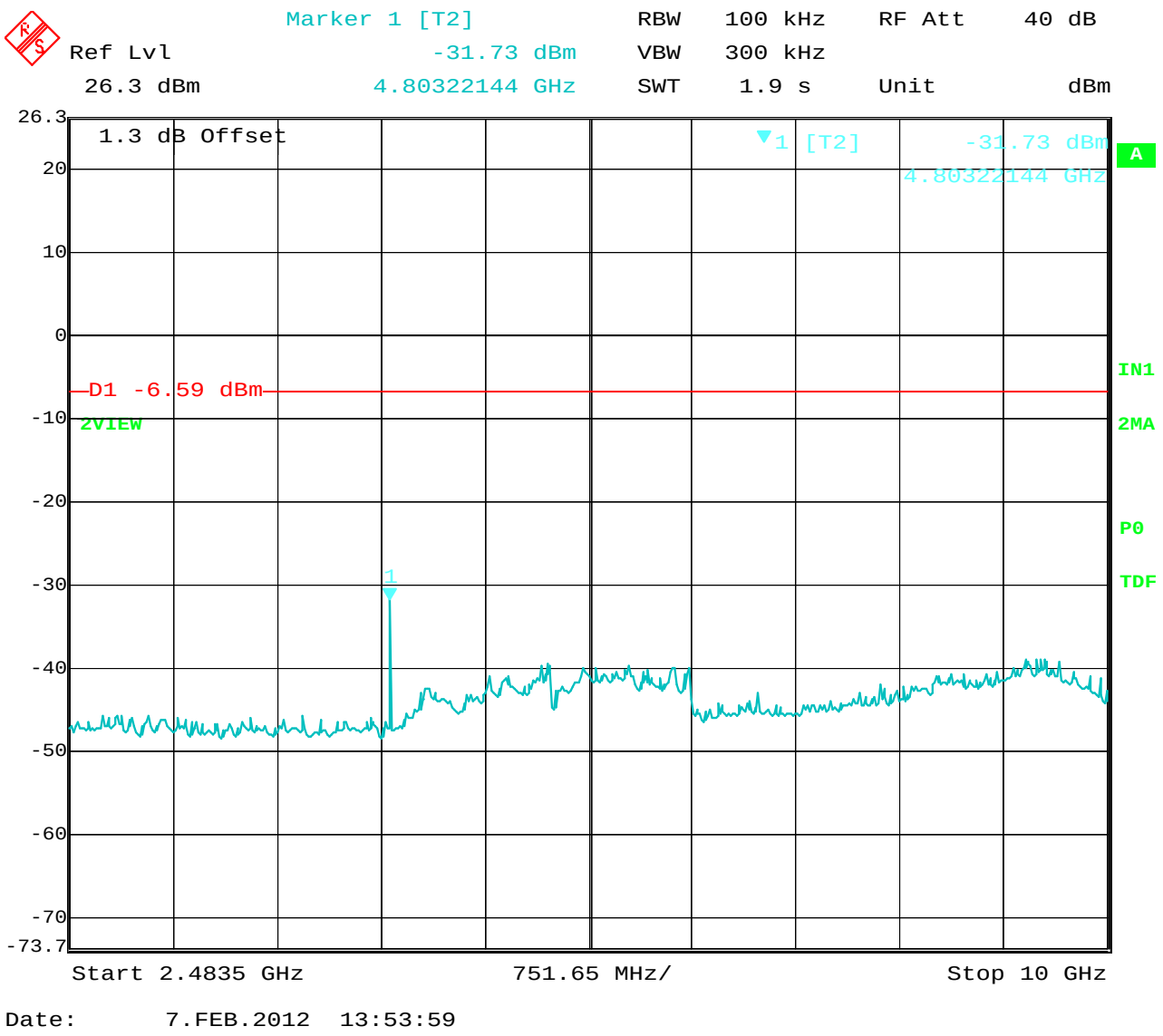
DATA SHEETS



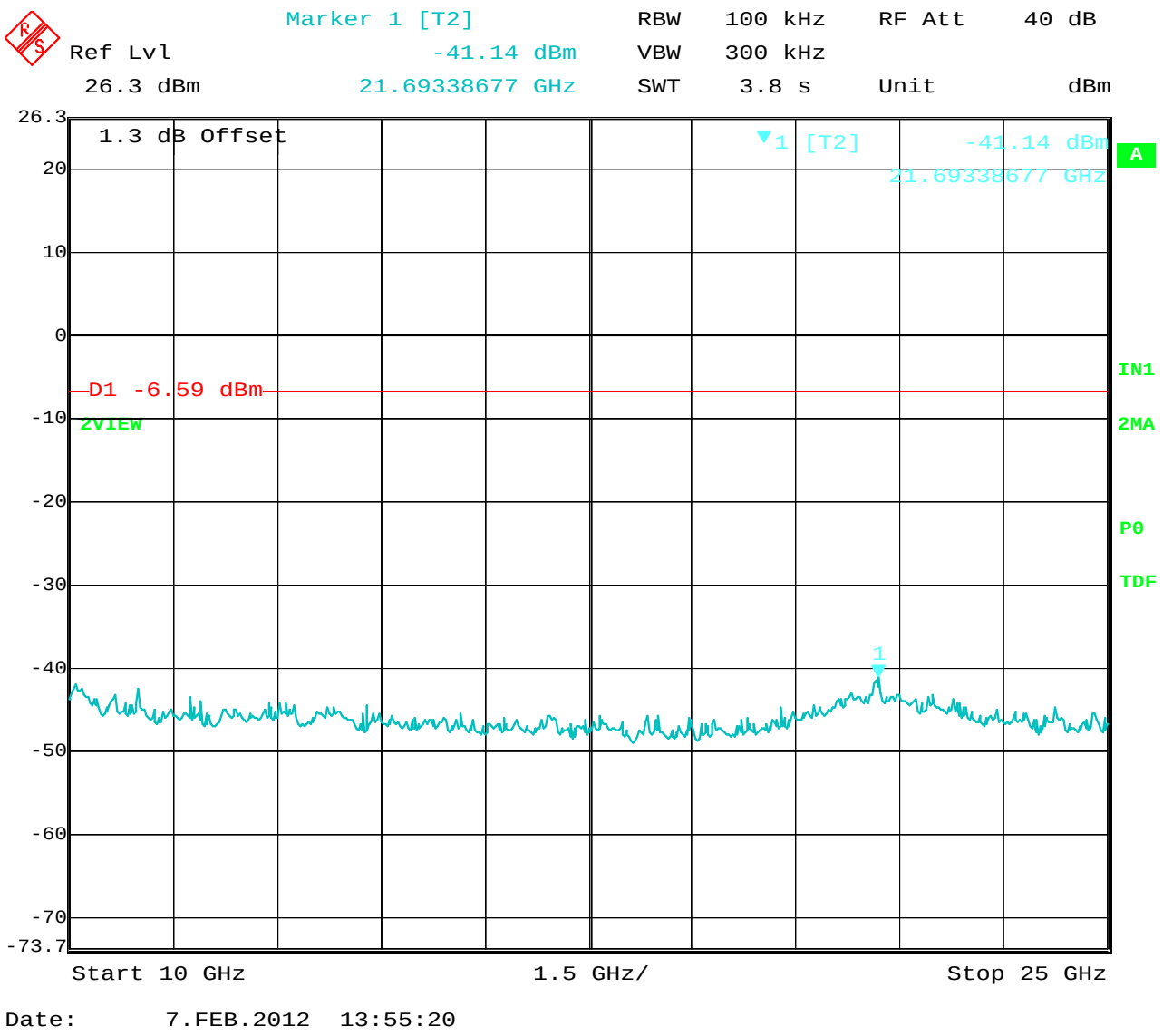
RF Antenna Conducted Test – Low Channel – Reference Level



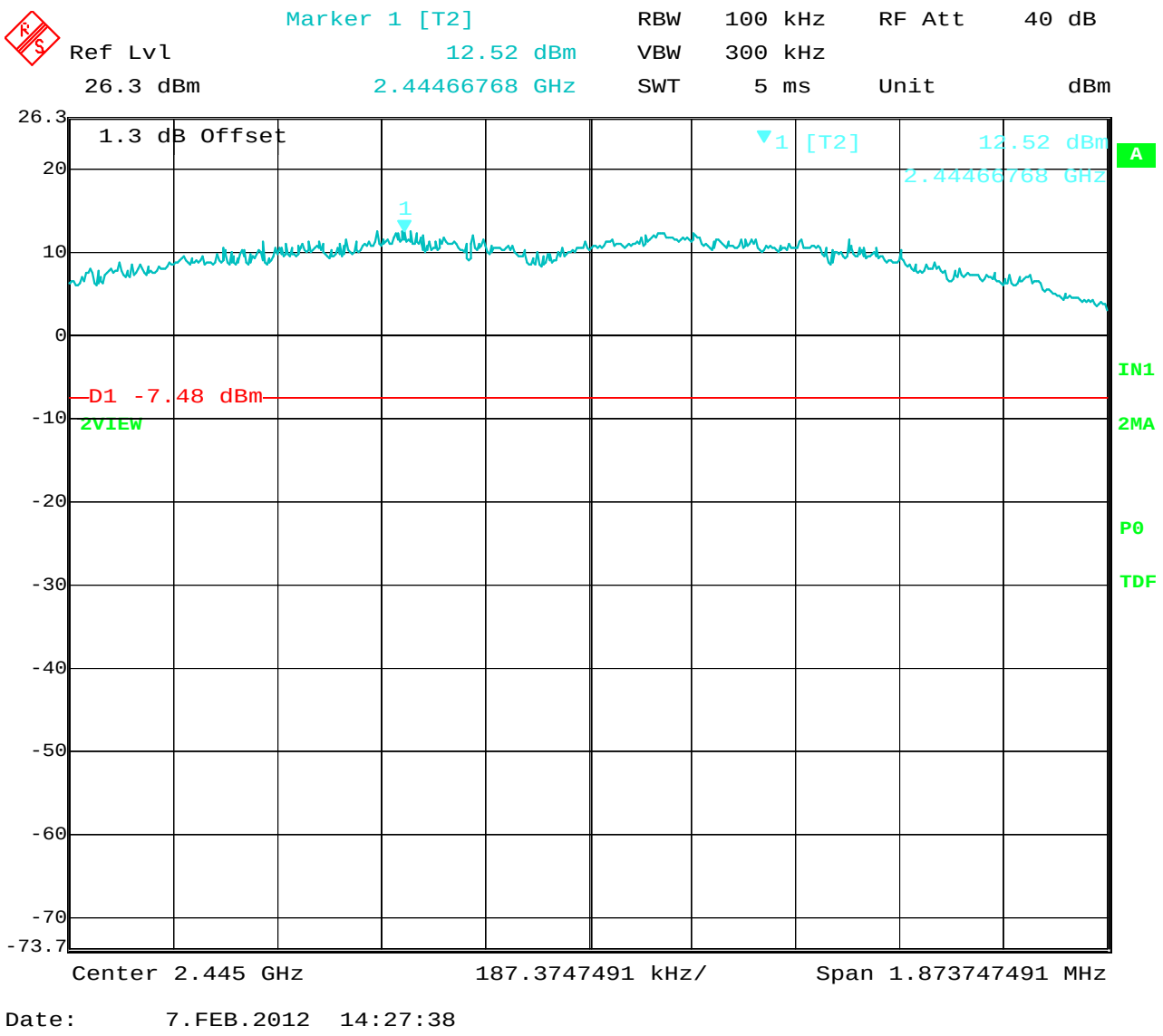
RF Antenna Conducted Test – Low Channel – 10 kHz to 2.4 GHz



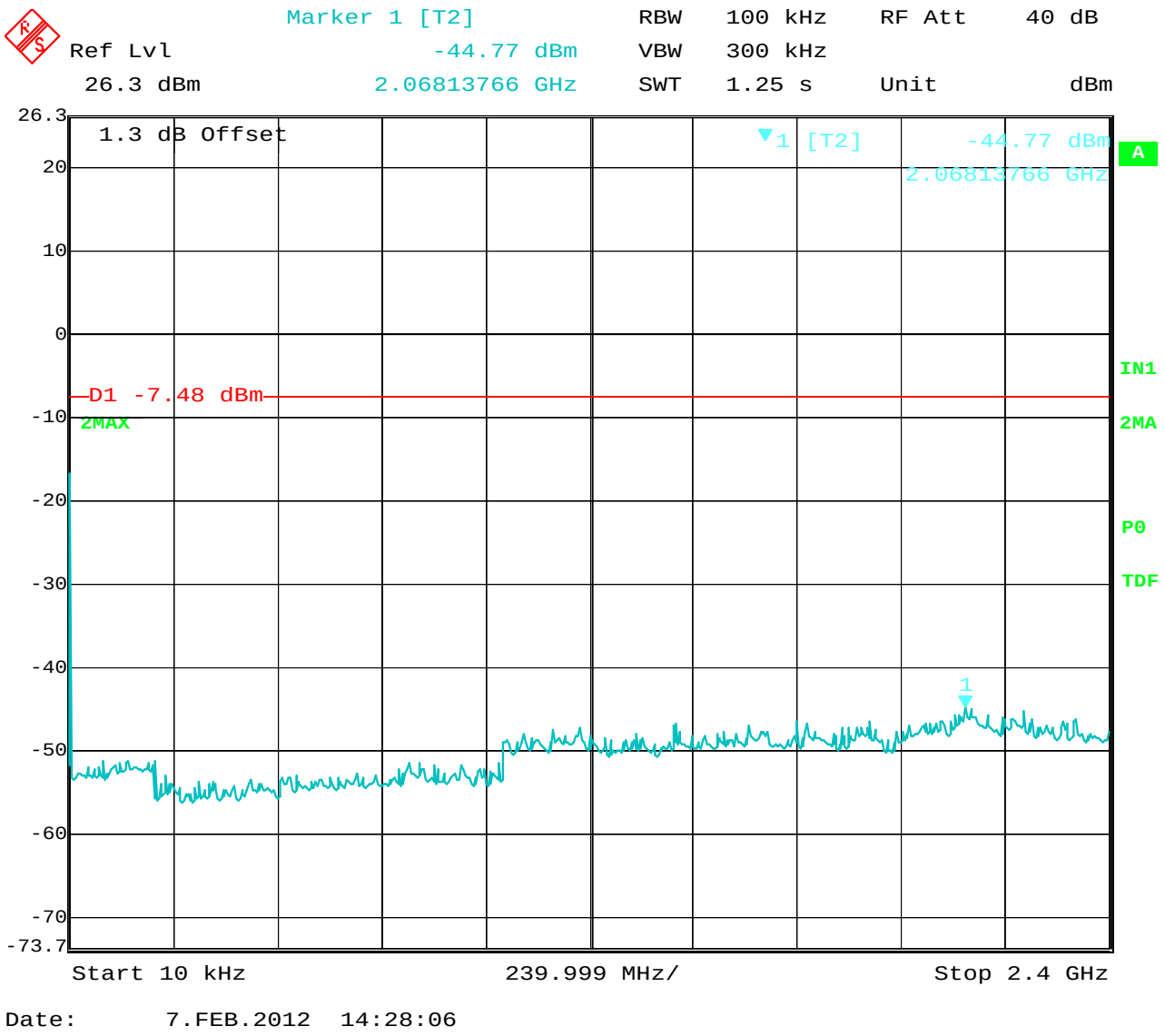
RF Antenna Conducted Test – Low Channel – 2.4835 GHz to 10 GHz



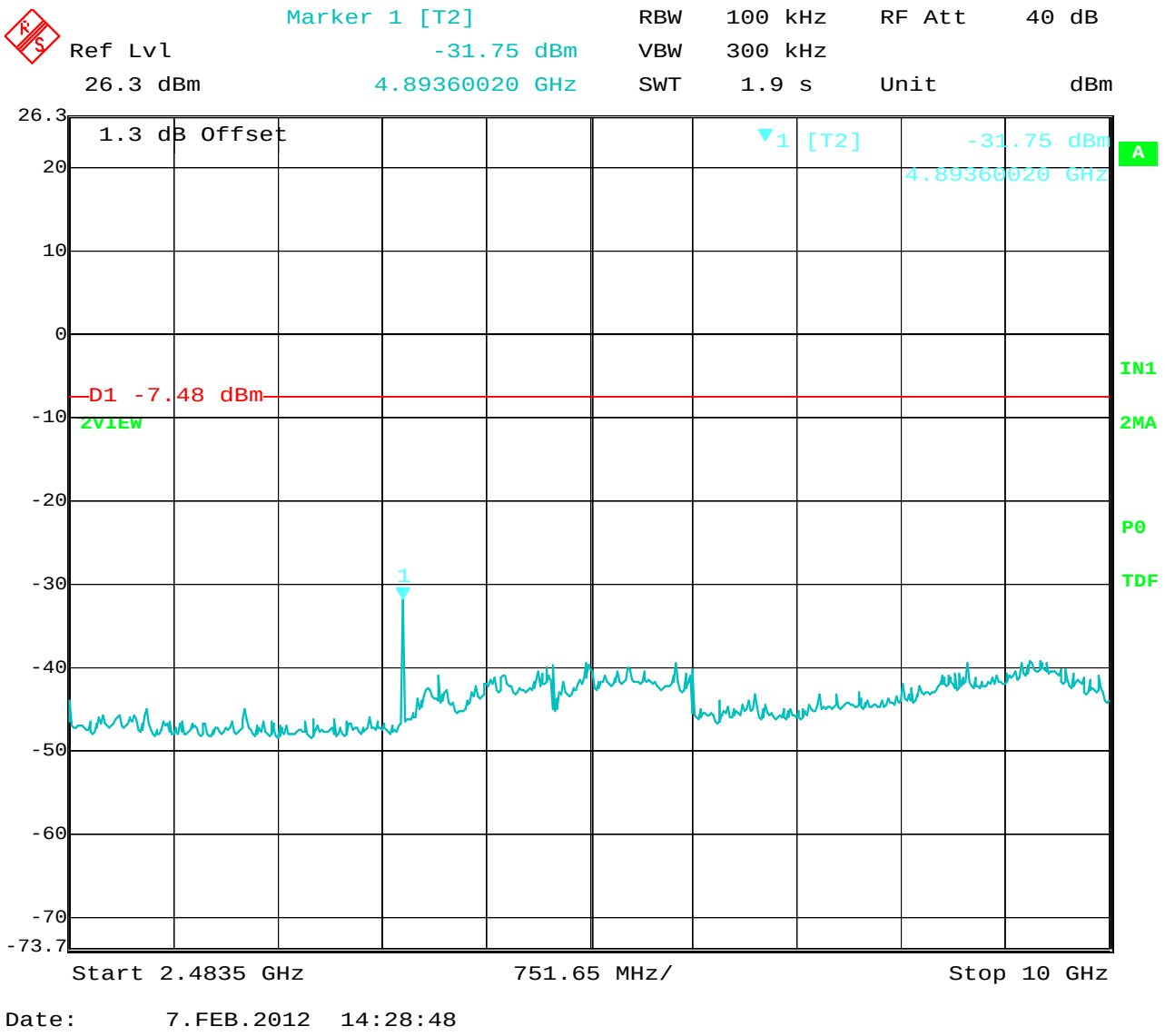
RF Antenna Conducted Test – Low Channel – 10 GHz to 25 GHz



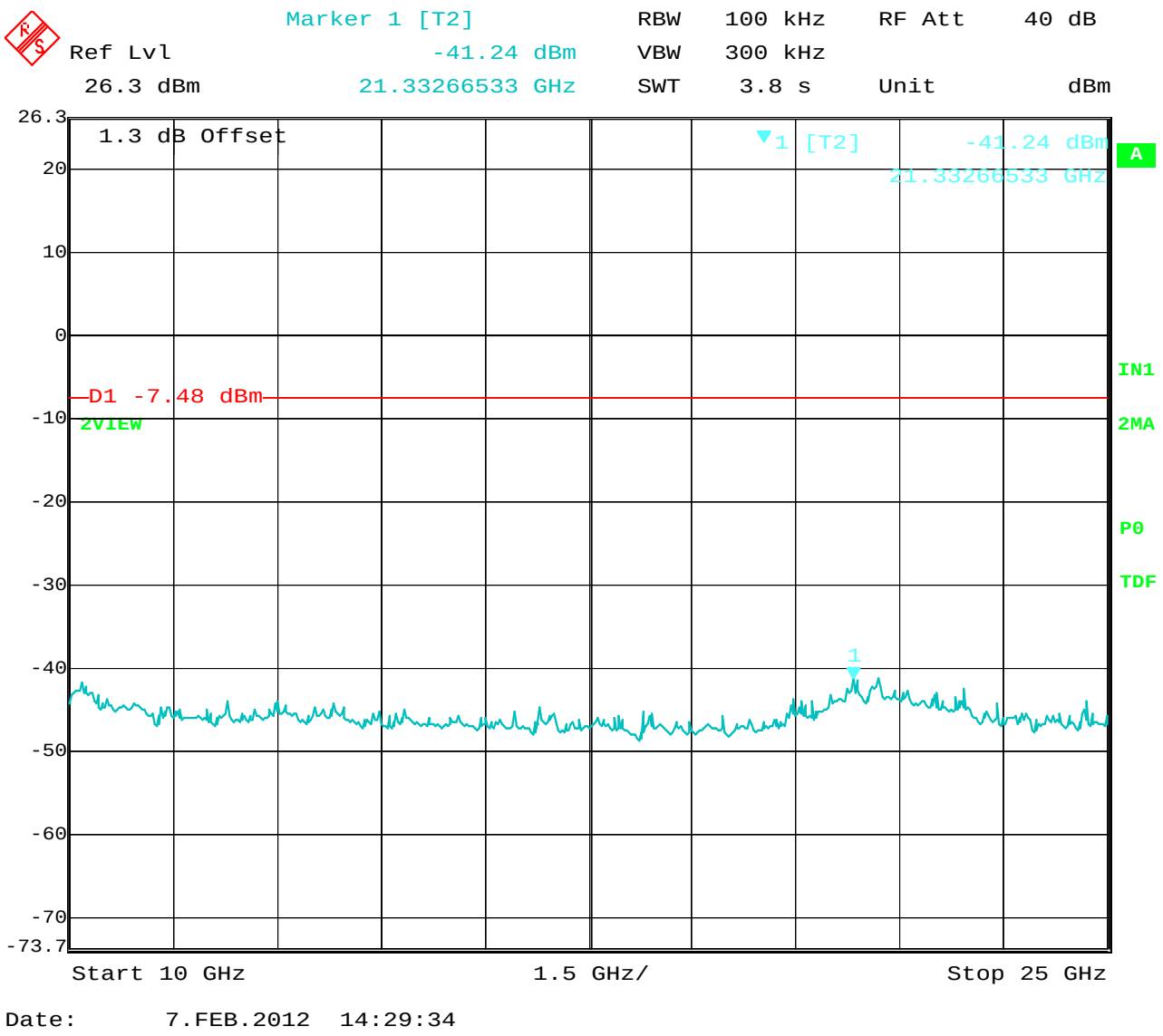
RF Antenna Conducted Test – Middle Channel – Reference Level



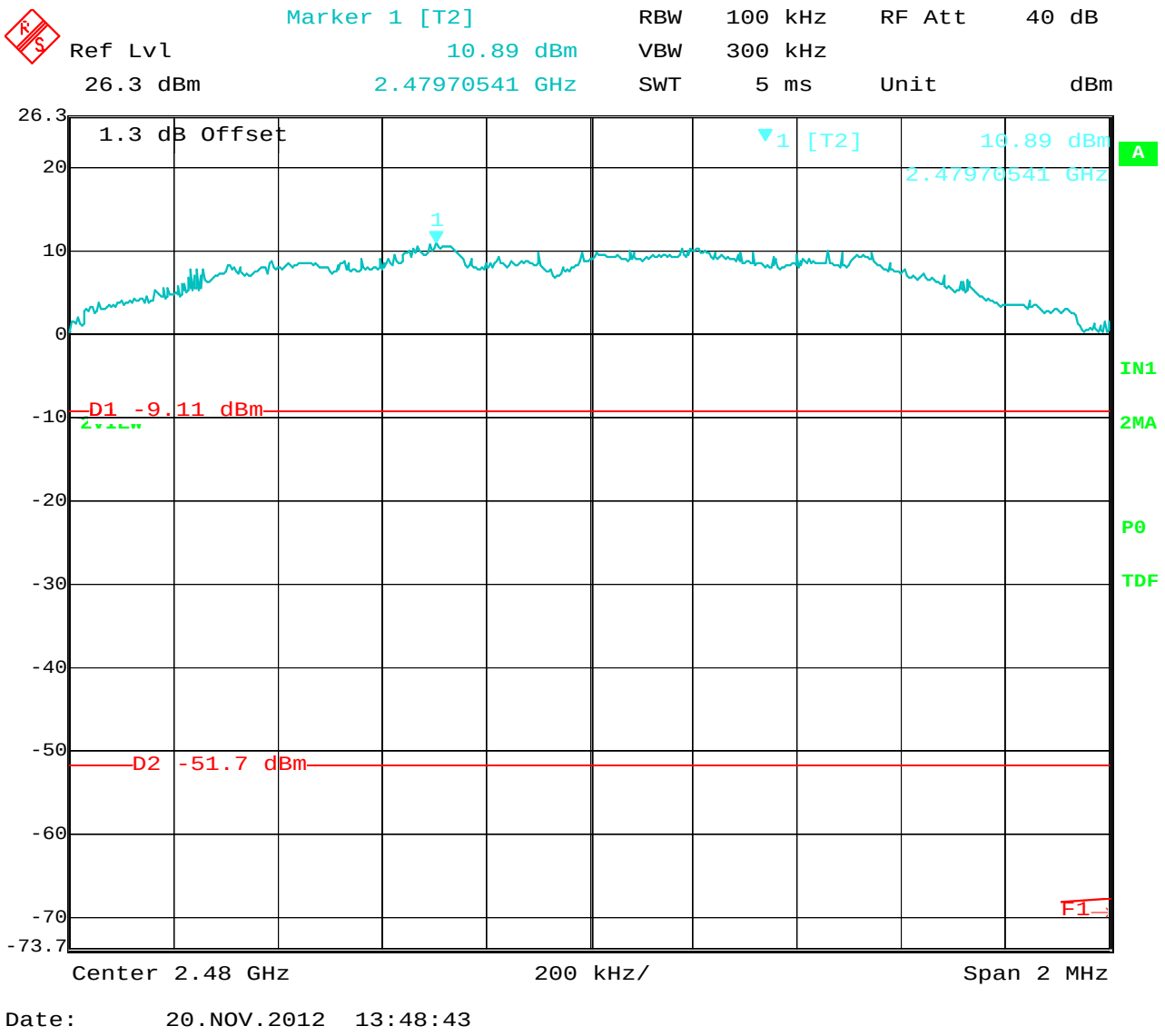
RF Antenna Conducted Test – Low Channel – 10 kHz to 2.4 GHz



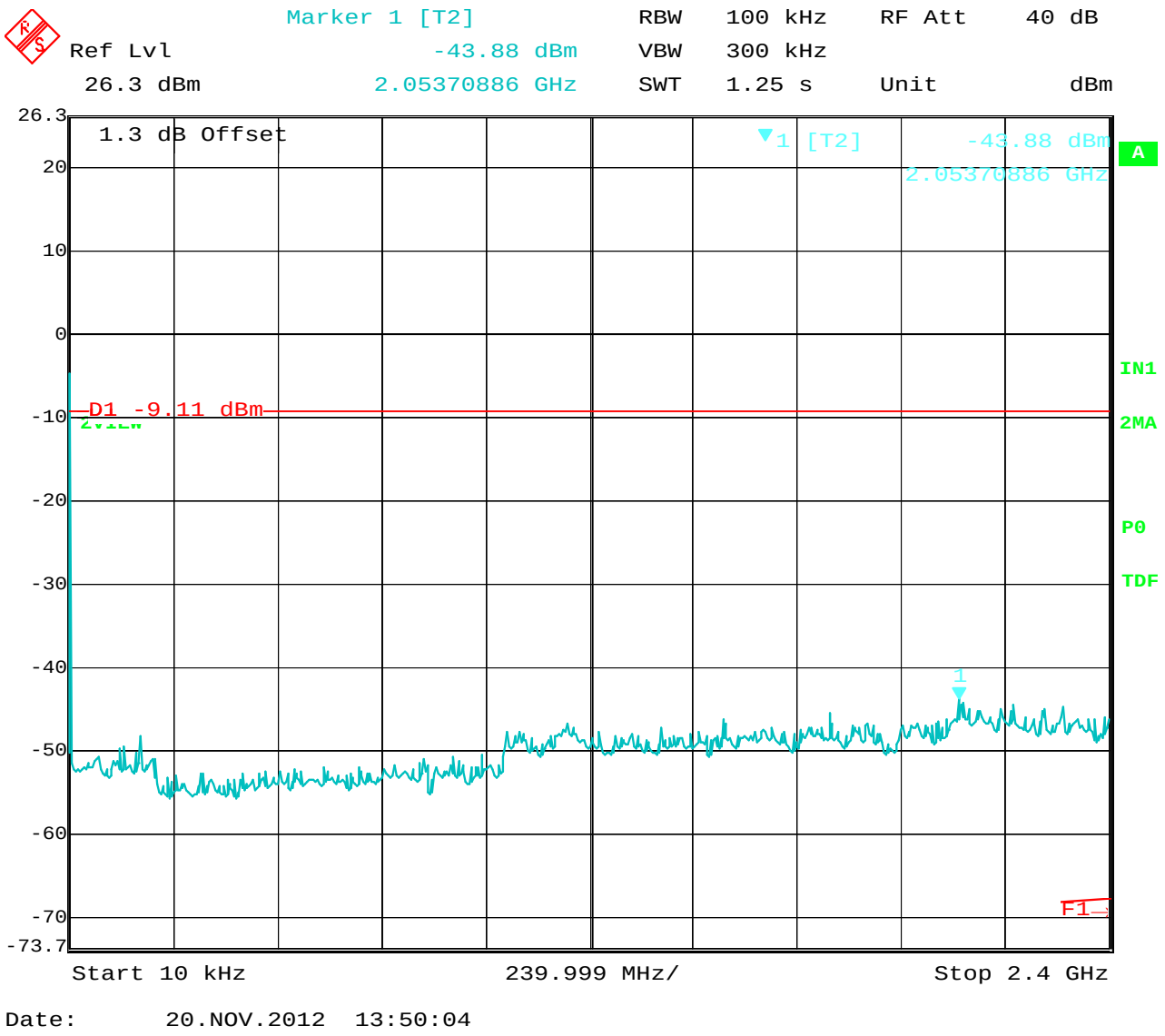
RF Antenna Conducted Test – Middle Channel – 2.4835 GHz to 10 GHz



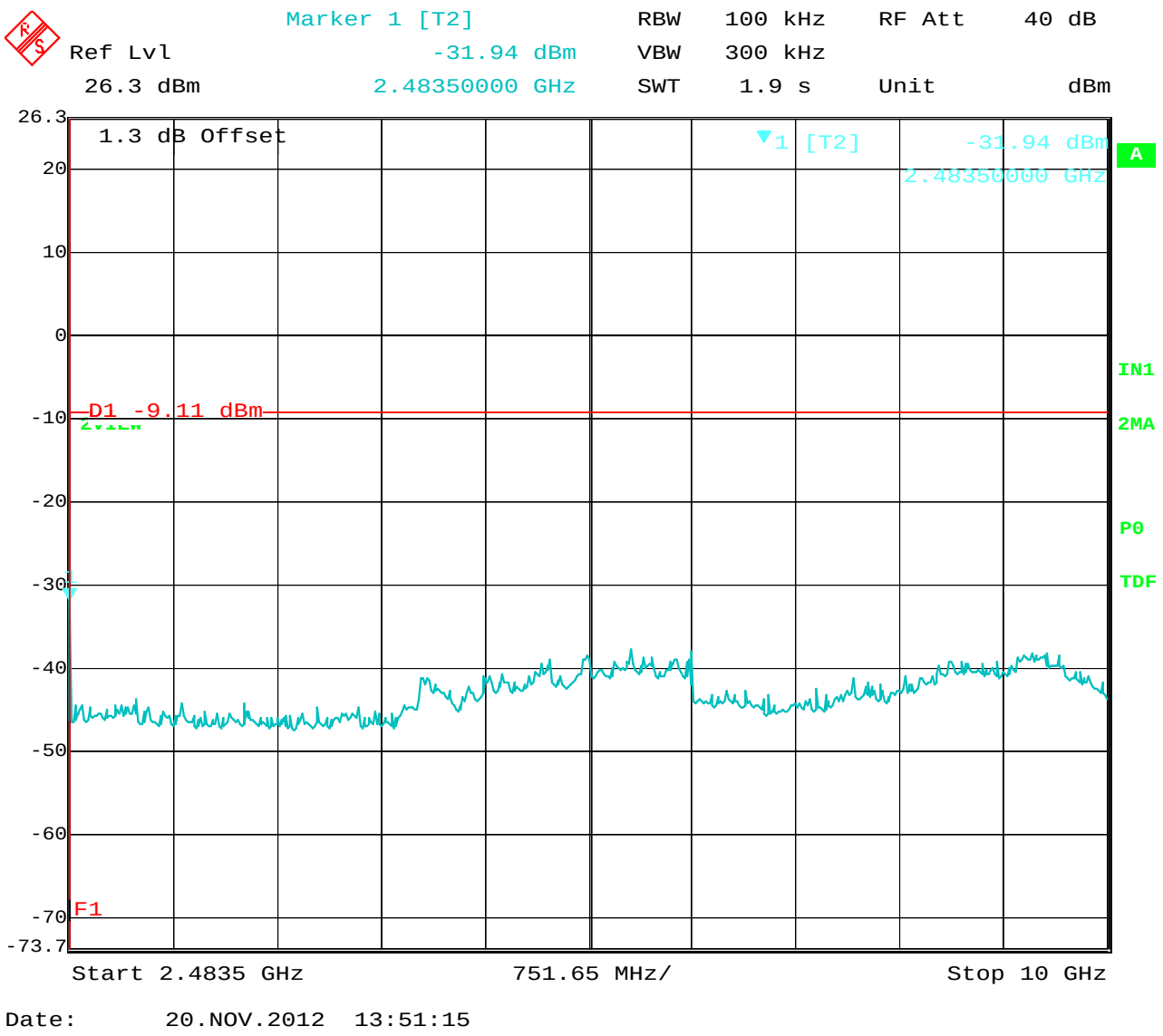
RF Antenna Conducted Test – Middle Channel – 10 GHz to 25 GHz



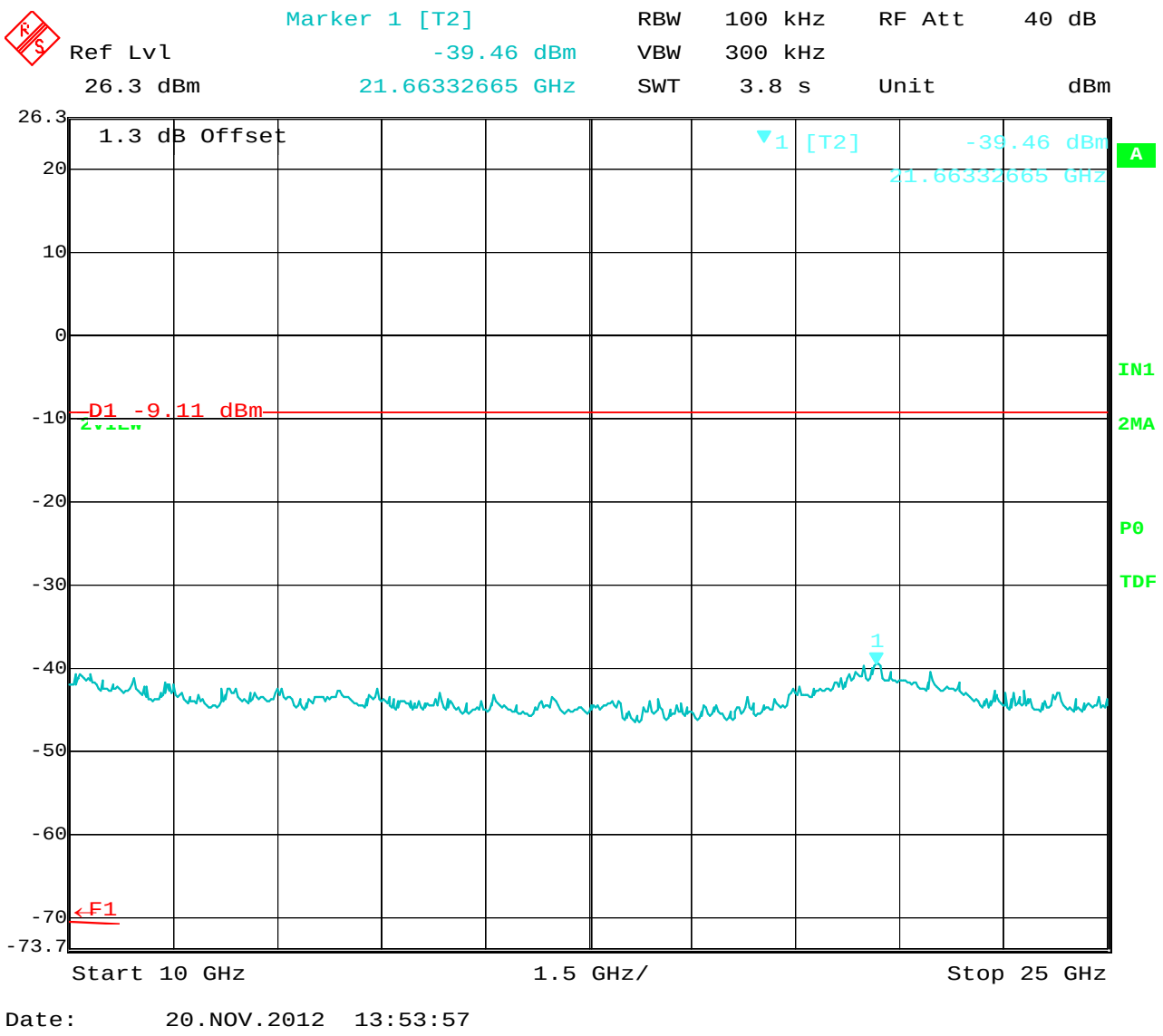
RF Antenna Conducted Test – High Channel – Reference Level



RF Antenna Conducted Test – High Channel – 10 kHz to 2.4 GHz



RF Antenna Conducted Test – High Channel – 2.4835 GHz to 10 GHz



RF Antenna Conducted Test – High Channel – 10 GHz to 25 GHz