

Produkte
Products



Prüfbericht - Nr.: 14032933 001 <i>Test Report No.:</i>		Seite 1 von 15 <i>Page 1 of 15</i>	
Auftraggeber: <i>Client:</i>	Hideki Electronics Ltd. Units 2304-06, 23/F., Riley House 88 Lei Muk Road KWAI CHUNG, N.T. Hong Kong		
Gegenstand der Prüfung: <i>Test Item:</i>	Short Range Device - Weather Station Transmitter (433.92MHz)		
Bezeichnung: <i>Identification:</i>	TS63, TS53	Serien-Nr.: <i>Serial No.:</i>	Engineering sample
Wareneingangs-Nr.: <i>Receipt No.:</i>	00130514273-001	Eingangsdatum: <i>Date of Receipt:</i>	14.05.2013
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of test item at delivery:</i>	Test sample(s) is/are not damaged and suitable for testing.		
Prüfört: <i>Testing Location:</i>	TÜV Rheinland Hong Kong Ltd. 8/F., First Group Centre, 14 Wang Tai Road, Kowloon Bay, Kowloon, Hong Kong Global United Technology Services Co., Ltd. 2nd Floor, Block No.2, Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, China		
Prüfgrundlage: <i>Test Specification:</i>	EN 300 220-2 V2.4.1:2012 ETSI EN 301 489-1 V1.9.2:2011 EN 301 489-03 V1.4.1:2002 EN 62479:2010 EN 60950-1:2006+A11+A1+A12		
Prüfergebnis: <i>Test Result:</i>	Der Prüfgegenstand entspricht oben genannter Prüfgrundlage(n). <i>The test item passed the test specification(s).</i>		
Prüflaboratorium: <i>Testing Laboratory:</i>	TÜV Rheinland Hong Kong Ltd. 8 - 10/F., Goldin Financial Global Square, 7 Wang Tai Road, Kowloon Bay Kowloon, Hong Kong		
geprüft / tested by:	kontrolliert / reviewed by:		
11.06.2013 <i>Date</i>	Joey Leung <i>Name/Position</i>	 <i>Unterschrift</i> <i>Signature</i>	11.06.2013 <i>Date</i>
			Sharon Li <i>Name/Position</i>
			 <i>Unterschrift</i> <i>Signature</i>
Sonstiges / Other Aspects:			
Abkürzungen:	P(ass) = entspricht Prüfgrundlage F(ail) = entspricht nicht Prüfgrundlage N/A = nicht anwendbar N/T = nicht getestet	Abbreviations:	P(ass) = passed F(ail) = failed N/A = not applicable N/T = not tested
<p>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.</p> <p><i>This test report relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicate in extracts. This test report does not entitle to carry any safety mark on this or similar products.</i></p>			

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Product Information

The equipment under test (EUT) is a wireless Thermo-Hygrometer operating at 433.92MHz and powered by batteries only. It measures the temperature and humidity and then send these information to the corresponding weather station receiver.

Client Declaration

General	Declared temperature range T_{nor} : 25 °C T_{min} : -10 °C T_{max} : +55 °C
	System employs transponder <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
	Primary function <input checked="" type="checkbox"/> Data, message transfer <input type="checkbox"/> Audio transfer <input type="checkbox"/> Others, ---
Transmitter	Specification <input checked="" type="checkbox"/> Wideband equipment (bandwidth > 200 kHz) <input type="checkbox"/> Narrow band equipment <input checked="" type="checkbox"/> Non-channelized Narrow band equipment <input checked="" type="checkbox"/> Not capable to produce an unmodulated carrier <input type="checkbox"/> Amplitude modulation <input type="checkbox"/> Frequency modulation <input checked="" type="checkbox"/> Sequence of pulses in frequency modulation <input type="checkbox"/> Phase modulation
	Antenna <input type="checkbox"/> Permanent External Antenna <input checked="" type="checkbox"/> Integral Antenna <input type="checkbox"/> Dedicated Antenna <input type="checkbox"/> External Telescopic Antenna Antenna gain (dBi) N/A

	<p>Carrier output power</p> <p>Different carrier power settings: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes,</p> <p>Power 10 mW</p> <p>Frequency</p> <p>Operating Frequency 433.92 MHz</p> <p>Switching Range (SR) N/A kHz</p> <p>Alignment Range (AR) AR0</p> <p>Operating frequency range (OFR) N/A</p>
	<p>Power supply</p> <p><input type="checkbox"/> Mains voltage Voltage: V Frequency: Hz</p> <p><input checked="" type="checkbox"/> Battery operated <input type="checkbox"/> Regulated lead-acid battery <input checked="" type="checkbox"/> Others, 3.0V, 2 X 1.5V AA size battery</p> <p>=> Nominal test voltage V_{nor}: 3.0 V Minimal test voltage V_{min}: 2.5 V Maximal test voltage V_{max}: 3.0 V</p>

<p>EMC</p>	<p>Type of equipment stand alone radio equipment</p> <p>Equipment classification</p> <p><input type="checkbox"/> Fixed use <input checked="" type="checkbox"/> Portable use <input type="checkbox"/> Vehicle use</p> <p>List of ports</p> <p><input checked="" type="checkbox"/> No input/output port <input type="checkbox"/> AC mains input/output ports <input type="checkbox"/> DC power input/output ports, DC-cable longer than 3 m <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Signal ports <input type="checkbox"/> Telecommunication ports <input type="checkbox"/> Control ports</p> <p>Independent Operation Modes</p> <p>Transmitter: <input checked="" type="checkbox"/> Measure temperature and humidity and transmit the data <input checked="" type="checkbox"/> Standby</p> <p>Receiver: <input checked="" type="checkbox"/> Temperature, date and time information display <input checked="" type="checkbox"/> Receiving information from transmitter</p> <p>Minimum performance level declared by the manufacturer</p> <p>Receiver may not be able to respond to the transmitter signal under the radiated immunity stress. For other immunity test, receiver can properly respond to the transmitter signal.</p> <p>Primary functions during EMC exposure</p> <p>Receiver may not be able to respond to the transmitter signal under the radiated immunity stress. For other immunity test, receiver can properly respond to the transmitter signal.</p>		
	<p>Models</p>		<p>With Function(s)</p>
		<p>TS53</p> <p>TS63</p>	<p>Without LCD display</p> <p>With LCD display</p>

Submitted Documents

- Circuit Diagrams
- PCB Layout
- User Manual
- Rating Label
- Bill of Material
- Declaration of Equivalence

Remarks

Due to the manufacturer declaration of equivalence, the model TS63 was randomly selected as a representative for testing and construction photo taking. For details on construction, please refer to Appendix 3.

Client provided a reference receiver model DV206NL to perform EMC Immunity tests.

List of Test and Measurement Instruments

Global United Technology Services Co., Ltd.

Radiated Emission

Equipment	Manufacturer	Type	S/N	Cal. Due date
3m Semi- Anechoic Chamber	ZhongYu Electron	9.0(L)*6.0(W)* 6.0(H)	---	05 Apr 2015
Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	---	N/A
ESU EMI Test Receiver	R&S	ESU26	---	06 Jul 2013
Loop Antenna	Zhinan	ZN30900A	---	25 Jul 2013
Bi-log Hybrid Antenna	SCHWARZBECK	VULB9163	---	17 Mar 2014
Double-ridged horn antenna	SCHWARZBECK	9120D	---	17 Mar 2014
Horn Antenna	ETS-LINDGREN	3160	---	17 Mar 2014
RF Amplifier	HP	8347A	---	06 Jul 2013
RF Amplifier	HP	8349B	---	06 Jul 2013
EMI Test Software	AUDIX	E3	---	N/A
Coaxial cable	GTS	N/A	---	06 Jul 2013
Coaxial Cable	GTS	N/A	---	06 Jul 2013
Thermo meter	N/A	N/A	---	05 Jul 2013

Radio Frequency Electromagnetic Field

Equipment	Manufacturer	Type	S/N	Cal. Due date
3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	---	16 Jun 2013
Signal Generator	Rohde & Schwarz	SML03	---	23 Jun 2013
RF Amplifier (30M-1GHz)	Amplifier Research	250W1000A	---	03 Nov 2013
RF Amplifier (0.8-3.0GHz)	Amplifier Research	60S1G3	---	03 Nov 2013
Power Meter	Rohde & Schwarz	NRVD	---	23 Jun 2013
Power Sensor	Rohde & Schwarz	URV5-Z2	---	23 Jun 2013
Power Sensor	Rohde & Schwarz	URV5-Z2	---	23 Jun 2013
Software EMC32	Rohde & Schwarz	EMC32-S	---	N/A
Log-periodic Antenna	Amplifier Research	AT1080	---	N/A
Antenna Tripod	Amplifier Research	TP1000A	---	N/A
High Gain Horn Antenna (0.8-5GHz)	Amplifier Research	AT4002A	---	N/A

Electrostatic Discharge

Equipment	Manufacturer	Type	S/N	Cal. Due date
ESD Simulator	EMPEK	ESD-2030A	---	06 Jul 2013
Thermo meter	KTJ	TA328	---	05 Jul 2013

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Radio Frequency Test

Equipment	Manufacturer	Type	S/N	Cal. Due date
Temperature Chamber	Binder	MK 240	9020-0028	N/A
Spectrum Analyzer	Rohde & Schwarz	FSP30	100007	03 Dec 2014

Results EN 300 220-2 V2.4.1:2012 - Essential Radio Test Suites

Transmitter

EN 300 220-2 – 5.1.3.1 Frequency Error and Drift				N/A
Applicable for transmitters which able to provide an unmodulated carrier.				
EN 300 220-2 – 5.1.3.2 Average power (conducted)				N/A
Applicable for transmitters which may be used without an integral or dedicated antenna.				
EN 300 220-2 – 5.1.3.3 Effective Radiated Power				Pass
Measurement uncertainty: ± 6 dB				
Carrier peak power (μW)	Limit (mW)	Verdict	Remark	
36.3078	10	Pass	---	
EN 300 220-2 – 5.1.3.4 Transient Power				Pass
Measurement uncertainty: ± 6 dB				
Radio system: Narrowband				
Transmission Frequency: 433.92MHz				
Measurement frequency	Transient power [dBm]	Limit [dBm]	Verdict	Remark
$f_a - 100\text{kHz}$	-43.53	-36.0	Pass	---
$f_b + 100\text{kHz}$	-43.01	-36.0	Pass	---
* Remark:				
1) The value of f_a and f_b in the above table come from EN 300 220-2 - 5.1.3.6 test results of this report.				
2) The value of the transient power is adjusted in order to correlate with the Radiated Output Power Result.				
EN 300 220-2 – 5.1.3.5 Adjacent Channel Power				N/A
Applicable for narrowband transmitters.				

EN 300 220-2 – 5.1.3.6 Modulation Bandwidth for Wideband Equipment						Pass
Measurement uncertainty: $\pm 1 \times 10^{-7}$						
$f_a = 433.90762$ MHz $f_b = 433.93688$ MHz Modulation Bandwidth = $f_b - f_a = 29.26$ KHz						
RBW = 1kHz, Level = -30dBm						
Temp. (°C)	Voltage (V)	Lower frequency (MHz)	Upper frequency (MHz)	Limit	Verdict	Remarks
T_{nor}	V_{nor}	433.92918	433.93392	> 433.05 MHz < 434.79 MHz	Pass	Refer to Appendix 1
T_{min}	V_{min}	433.93084	433.93388		Pass	
T_{min}	V_{max}	433.93252	433.93688		Pass	
T_{max}	V_{min}	433.90864	433.91272		Pass	
T_{max}	V_{max}	433.90762	433.91296		Pass	
RBW = 1kHz, Level = -36dBm						
Temp. (°C)	Voltage (V)	Lower frequency (MHz)	Upper frequency (MHz)	Limit	Verdict	Remarks
T_{nor}	V_{nor}	433.92666	433.93644	> 432.85 MHz < 434.99 MHz	Pass	Refer to Appendix 1
T_{min}	V_{min}	433.92982	433.93484		Pass	
T_{min}	V_{max}	433.93084	433.93784		Pass	
T_{max}	V_{min}	433.90744	433.91380		Pass	
T_{max}	V_{max}	433.90996	433.90504		Pass	
RBW = 10kHz, Level = -36dBm						
Temp. (°C)	Voltage (V)	Lower frequency (MHz)	Upper frequency (MHz)	Limit	Verdict	Remarks
T_{nor}	V_{nor}	433.90466	433.95464	> 432.65 MHz < 435.19 MHz	Pass	Refer to Appendix 1
T_{min}	V_{min}	433.91326	433.94886		Pass	
T_{min}	V_{max}	433.90844	433.95504		Pass	
T_{max}	V_{min}	433.88766	433.92906		Pass	
T_{max}	V_{max}	433.87964	433.93606		Pass	
RBW = 100kHz, Level = -36dBm						
Temp. (°C)	Voltage (V)	Lower frequency (MHz)	Upper frequency (MHz)	Limit	Verdict	Remarks
T_{nor}	V_{nor}	433.77866	434.07864	> 432.05MHz < 435.79 MHz	Pass	Refer to Appendix 1
T_{min}	V_{min}	433.80866	434.05264		Pass	
T_{min}	V_{max}	433.79444	434.07304		Pass	
T_{max}	V_{min}	433.77044	434.03904		Pass	
T_{max}	V_{max}	433.75964	434.06206		Pass	
* Remark: The value of the level is adjusted in order to correlate with the Radiated Output Power Result.						

EN 300 220-2 – 5.1.3.7 Unwanted emissions in the spurious domain				Pass
Measurement uncertainty: ± 6 dB				
EUT Operating – Vertical Polarization				
Frequency range (MHz)	Spurious Frequency (MHz)	Power (dBm/nW)	Verdict	Remark
25 – 30	No peak found	---	Pass	---
30 – 1 000	867.600	-49.5/11.3501	Pass	
1 000 – 4 000	No peak found	---	Pass	
EUT Operating – Horizontal Polarization				
Frequency range (MHz)	Spurious Frequency (MHz)	Power (dBm/nW)	Verdict	Remark
25 – 30	No peak found	---	Pass	---
30 – 1 000	No peak found	---	Pass	
1 000 – 4 000	No peak found	---	Pass	
EUT Standby – Vertical Polarization				
Frequency range (MHz)	Spurious Frequency (MHz)	Power (dBm/nW)	Verdict	Remark
25 – 30	No peak found	---	Pass	---
30 – 1 000	No peak found	---	Pass	
1 000 – 4 000	No peak found	---	Pass	
EUT Standby – Horizontal Polarization				
Frequency range (MHz)	Spurious Frequency (MHz)	Power (dBm/nW)	Verdict	Remark
25 – 30	No peak found	---	Pass	---
30 – 1 000	No peak found	---	Pass	
1 000 – 4 000	No peak found	---	Pass	
Limit:				
State	47 – 74MHz 87.5 – 118MHz 174 – 230MHz 470 – 862MHz	Other frequencies below 1000MHz	Frequencies above 1000MHz	
Operating	4nW / -54dBm	250nW / -36dBm	1 μ W / -30dBm	
Standby	2nW / -57dBm	2nW / -57dBm	20nW / -47dBm	
Remark: If the spurious emissions are 20dB below the limit, the result column will mention no peak found.				

EN 300 220-2 – 5.1.3.8 Frequency Stability under Low Voltage Conditions	Pass
<p>Result: The test power source was reduced below the lower extreme test voltage limit towards zero.</p> <ol style="list-style-type: none">1) The operating frequency of the equipment remains on channel whilst the radiated or conducted power is greater than the spurious emission limits.2) The equipment ceases to function below the voltage at DC 2.0V.	
EN 300 220-2 – 4.2.1.10 Duty Cycle	Pass
<p>Result: EUT type: Manual operated Total on time in a trunk of burst signal within 300s = 42.87ms Duty cycle = 0.057% < 10%</p>	

Results EN 301 489-03 V1.4.1:2002

Emission

EN 301 489-03 - 7.1 EMC Emission EN 301 489-01 - 8.2 Radiated Emission - Enclosure of Ancillary Equipment	N/A
No ancillary equipment was provided for testing.	
EN 301 489-03 - 7.1 EMC Emission EN 301 489-01 - 8.3 Conducted Emission - DC Power Input/Output Ports	N/A
There is no DC power input or output ports on the EUT.	
EN 301 489-03 - 7.1 EMC Emission EN 301 489-01 - 8.4 Conducted Emission - AC Mains Power Input/Output Ports	N/A
There is no AC power input or output ports on the EUT.	
EN 301 489-03 - 7.1 EMC Emission EN 301 489-01 - 8.5 Harmonic Current Emissions - AC Mains Input Port	N/A
There is no AC power input port on the EUT.	
EN 301 489-03 - 7.1 EMC Emission EN 301 489-01 - 8.6 Voltage Fluctuations and Flicker - AC Mains Input Port	N/A
There is no AC power input port on the EUT.	
EN 301 489-03 - 7.1 EMC Emission EN 301 489-01 - 8.7 Conducted Emission - Telecommunication Ports	N/A
There is no telecommunication ports on the EUT.	

Immunity

EN 301 489-03 - 7.2 EMC Immunity EN 301 489-01 - 9.2 Radio Frequency Electromagnetic Field						Pass
Ambient Temperature: 25°C,			Relative Humidity: 50%			
Test EUT: TS63 and DV206NL Operating mode: TS63 transmitting temperature and humidity information to DV206NL						
Frequency range [MHz]	Pol.	Mod.	Level	Result	Crit.	Verdict
80 - 1000 1400 - 2700	Vertical	80% AM 1kHz	3 V/m	Mode of operation: I & II No unintentional response found. No degradation of performance.	A	Pass
80 - 1000 1400 - 2700	Horizontal	80% AM 1kHz	3 V/m	Mode of operation: I & II No unintentional response found. No degradation of performance.	A	Pass

EN 301 489-03 - 7.2 EMC Immunity EN 301 489-01 - 9.3 Electrostatic Discharge						Pass
Ambient Temperature: 25°C,			Relative Humidity: 50%			
Test EUT: TS63 and DV206NL Operating mode: TS63 transmitting temperature and humidity information to DV206NL						
Direct application of discharge						
Discharge location	Discharge type	Test level	Result	Crit.	Verdict	
Enclosure	Air	±8kV	Mode of operation: I and II No unintentional response found. Operated as intended.	B	Pass	
Antenna	Contact	±4kV	Mode of operation: I and II No unintentional response found. Operated as intended.	B	Pass	
Indirect application of discharge						
Discharge location	Discharge type	Test level	Result	Crit.	Verdict	
Horizontal Coupling Plane	Contact	±4kV	Mode of operation: I and II No unintentional response found. Operated as intended.	B	Pass	
Vertical Coupling Plane	Contact	±4kV	Mode of operation: I and II No unintentional response found. Operated as intended.	B	Pass	
Remark: Intermediate levels of ESD were evaluated and the EUT passes with the ESD test at the highest severity level.						

EN 301 489-03 - 7.2 EMC Immunity EN 301 489-01 - 9.4 Fast Transients, Common Mode	N/A
There is no AC mains power port on the EUT. In addition, there is no signal ports, telecommunication ports, control ports and DC power ports on the radio equipment with cable length longer than 3 m.	
EN 301 489-03 - 7.2 EMC Immunity EN 301 489-01 - 9.5 Radio Frequency, Common Mode	N/A
There is no AC mains power port on the EUT. In addition, there is no signal ports, telecommunication ports, control ports and DC power ports on the radio equipment with cable length longer than 3 m.	
EN 301 489-03 - 7.2 EMC Immunity EN 301 489-01 - 9.6 Transients and Surges - Vehicular Environment	N/A
The EUT is not intended for vehicular use.	
EN 301 489-03 - 7.2 EMC Immunity EN 301 489-01 - 9.7 Voltage Dips and Interruptions	N/A
There is no AC mains power port on the EUT.	
EN 301 489-03 - 7.2 EMC Immunity EN 301 489-01 - 9.8 Surges	N/A
There is no AC mains power port and telecommunication ports on the EUT.	

Results EN 62479:2010

EN 62479:2010 – Human exposure to electromagnetic fields (10 MHz to 300 GHz)			Pass
Test Case	Result	Limit	Verdict
4.2	See Test results EN 300 220–2 5.1.3.3 Transmitter effective radiated power, 5.1.3.7 Transmitter unwanted emissions in spurious domain	Low-power electronic and electrical equipment is deemed to comply with the provisions of this standard if available antenna power and/or the average total radiated power is less than or equal to the applicable low-power exclusion level Pmax. $P_{max} = SAR_{max} \cdot m$ $= 20W/Kg \cdot 10g$ $= 20mW$ Pmax: Low-power exclusion level (mW) SARmax: SAR limit (W/Kg) m: averaging mass (g)	Pass

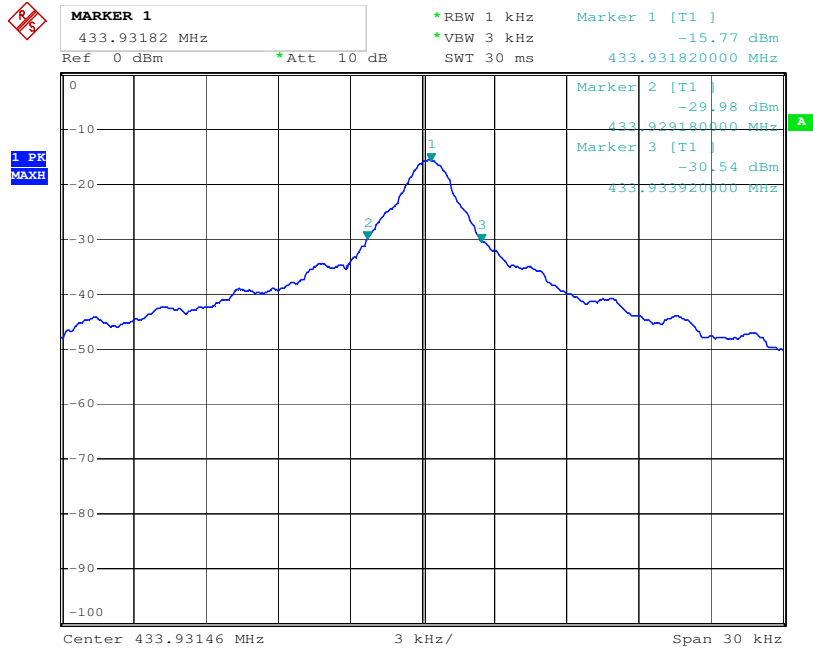
Results EN 60950-1:2006+A11:2009+A1:2010+A12:2011

EN 60950-1:2006+A11:2009+A1:2010+A12:2011
Please refer to test report no. 14032934 001 issued by TÜV Rheinland Hong Kong Ltd..

Appendix 1

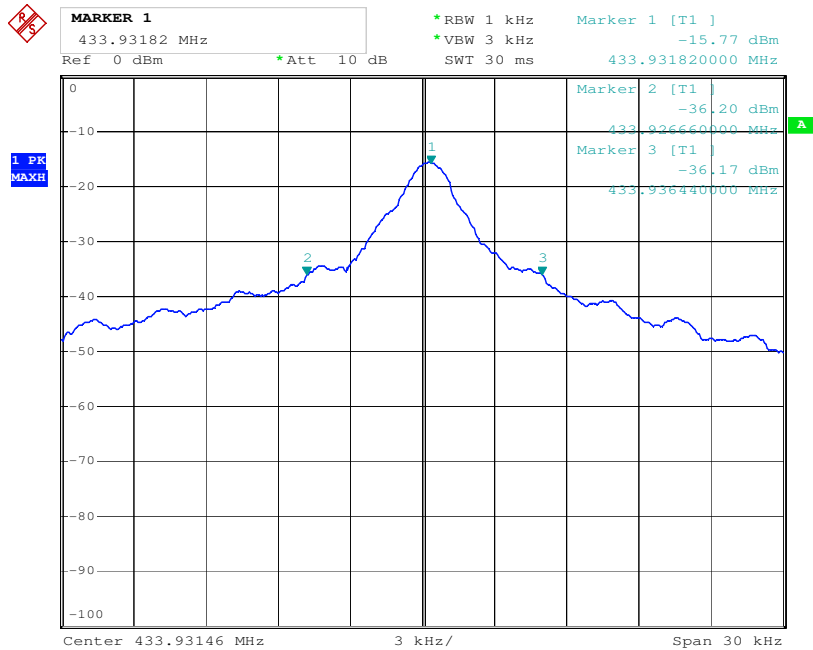
Test protocols

Test results for Modulation Bandwidth measurement



Date: 29.MAY.2013 16:47:34

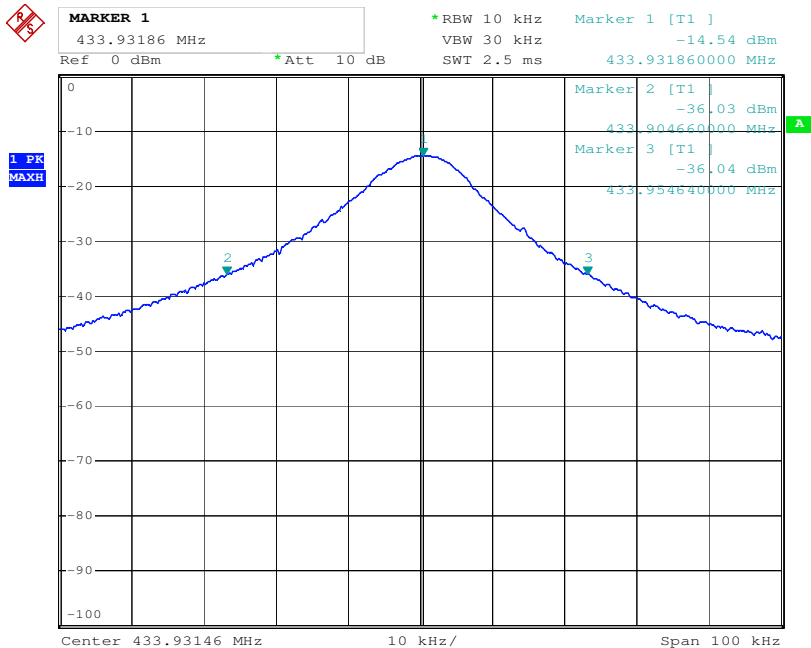
Test Condition: 25°C, 3.0V



Date: 29.MAY.2013 16:48:21

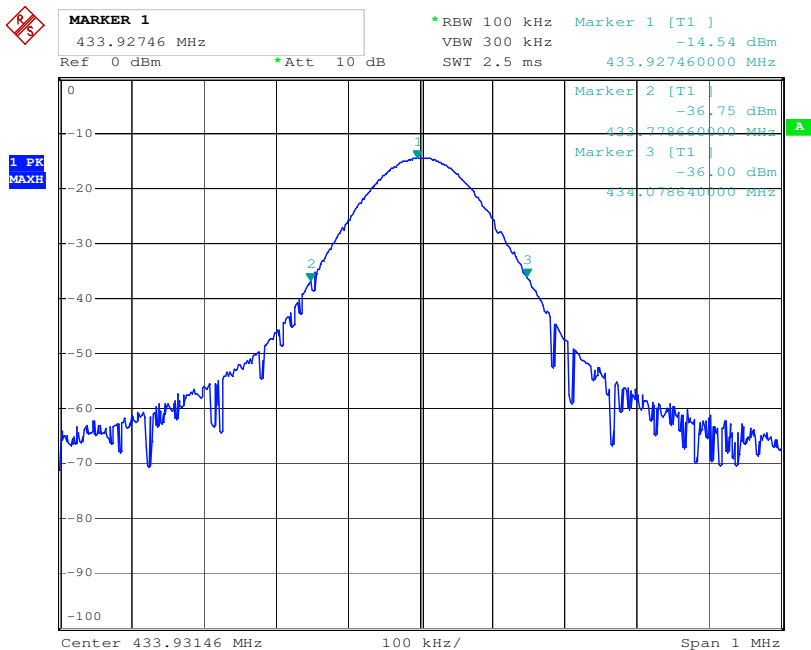
Test Condition: 25°C, 3.0V

Test results for Modulation Bandwidth measurement



Date: 29.MAY.2013 17:13:57

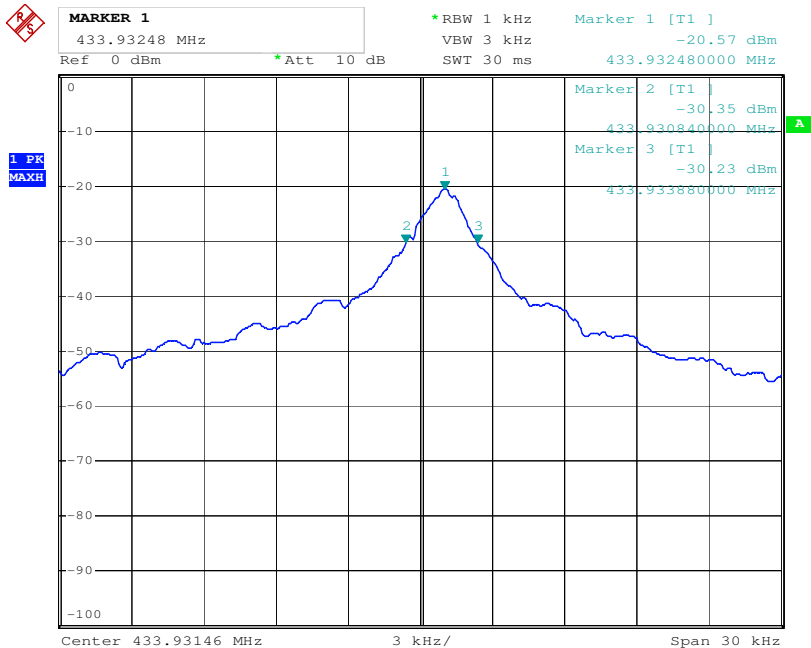
Test Condition: 25°C, 3.0V



Date: 29.MAY.2013 17:57:59

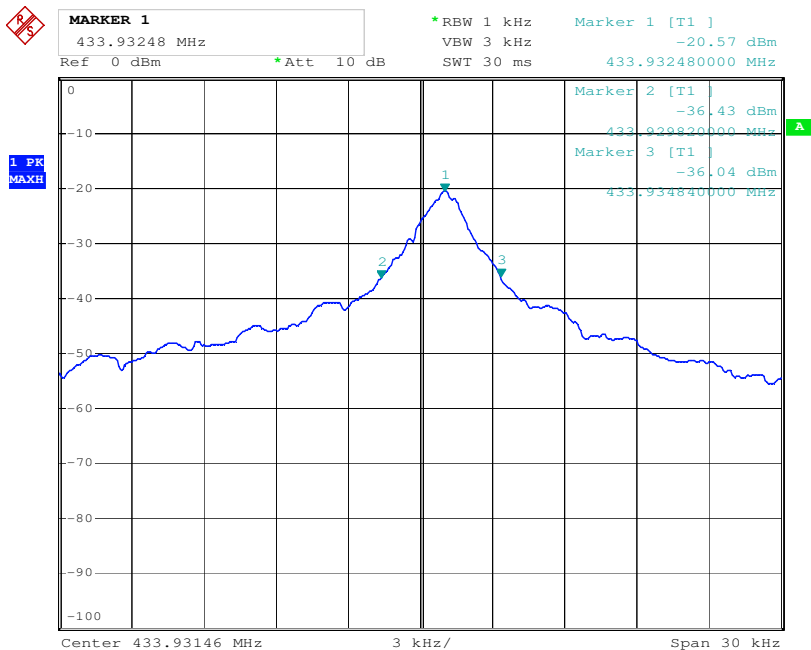
Test Condition: 25°C, 3.0V

Test results for Modulation Bandwidth measurement



Date: 30.MAY.2013 11:12:02

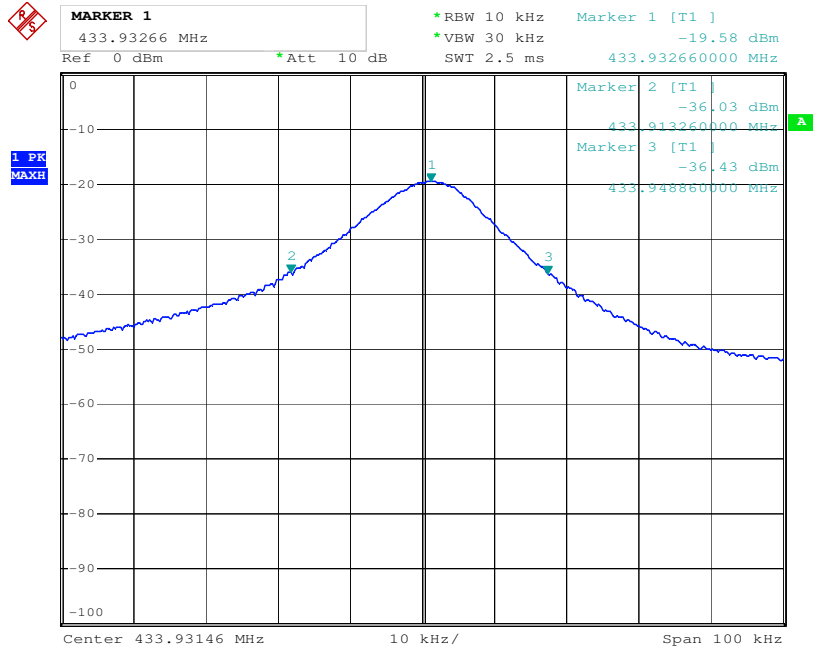
Test Condition: -10°C, 2.5V



Date: 30.MAY.2013 11:11:39

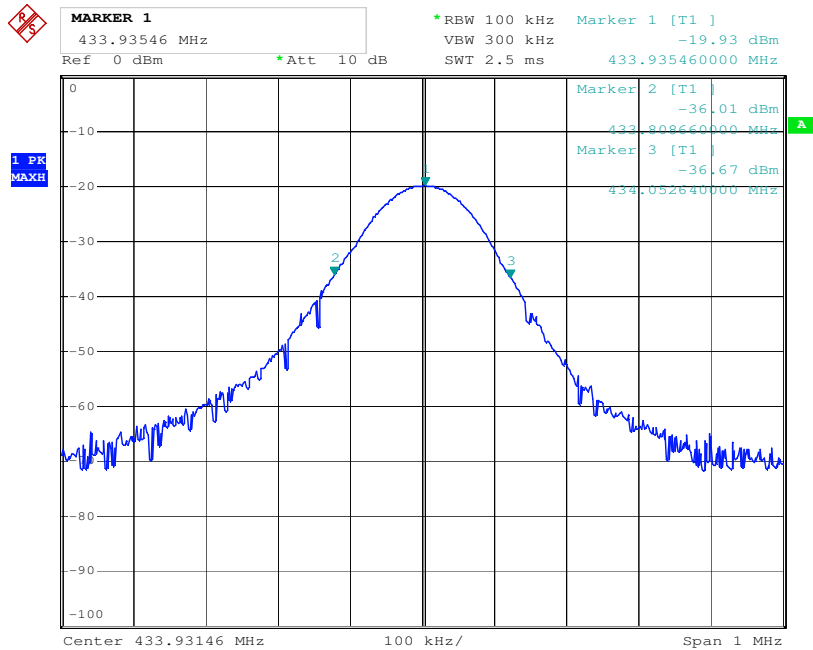
Test Condition: -10°C, 2.5V

Test results for Modulation Bandwidth measurement



Date: 30.MAY.2013 10:58:44

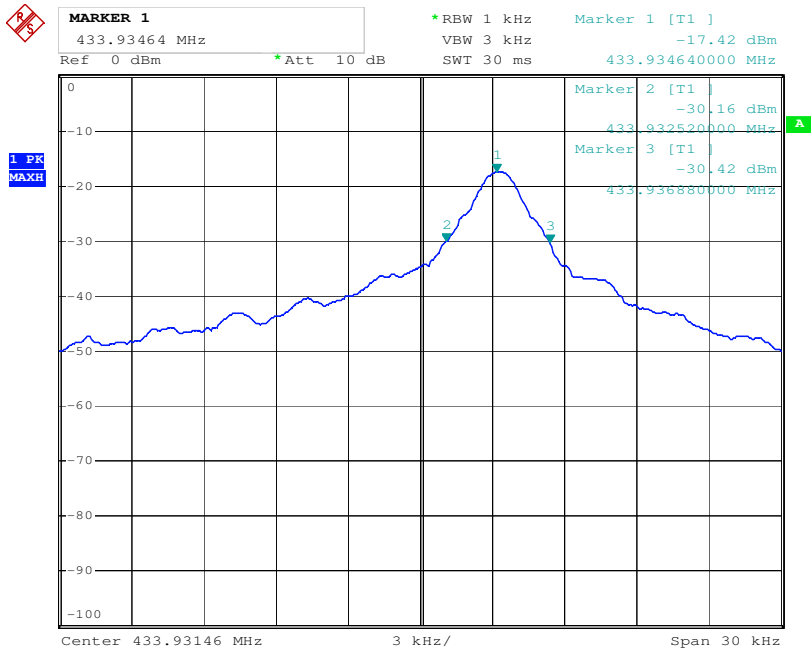
Test Condition: -10°C, 2.5V



Date: 30.MAY.2013 10:34:23

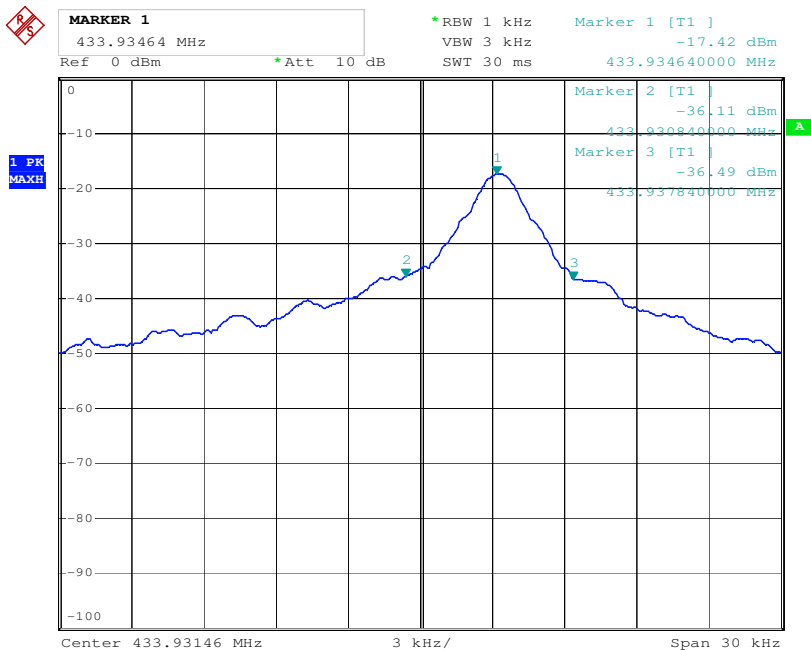
Test Condition: -10°C, 2.5V

Test results for Modulation Bandwidth measurement



Date: 30.MAY.2013 11:51:25

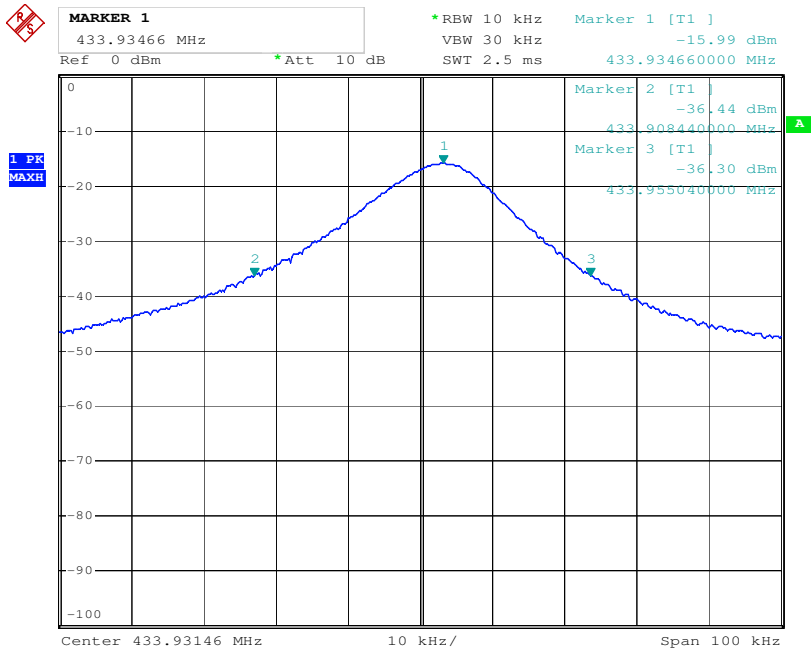
Test Condition: -10°C, 3.0V



Date: 30.MAY.2013 11:51:48

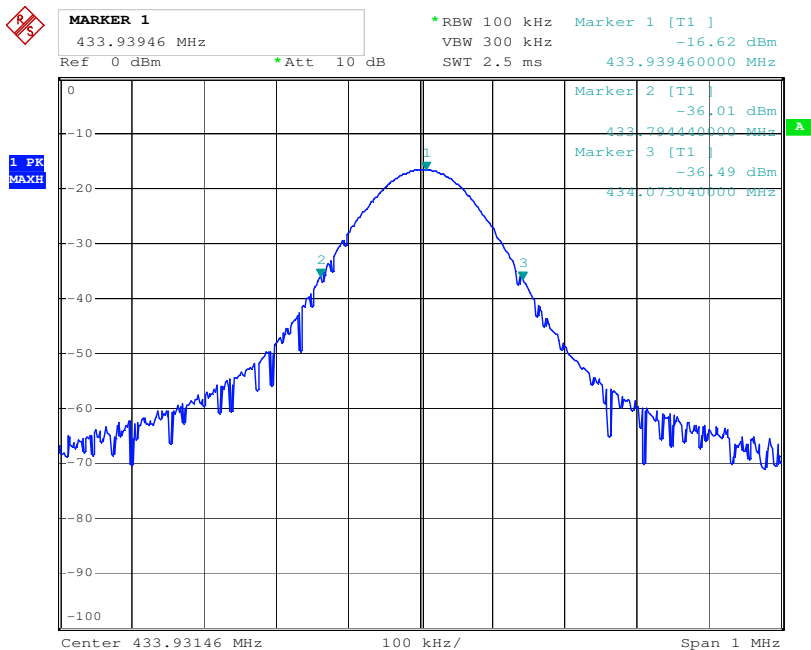
Test Condition: -10°C, 3.0V

Test results for Modulation Bandwidth measurement



Date: 30.MAY.2013 13:13:42

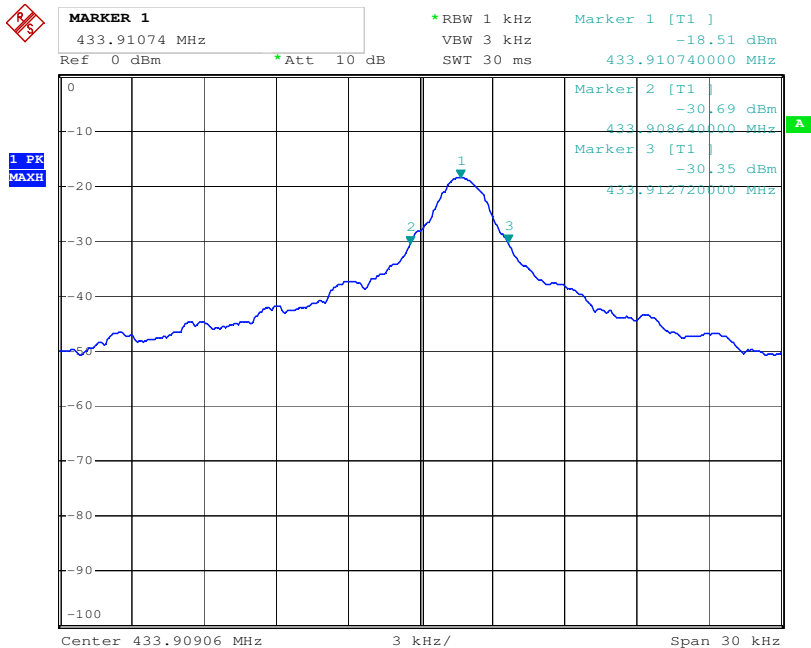
Test Condition: -10°C, 3.0V



Date: 30.MAY.2013 13:31:46

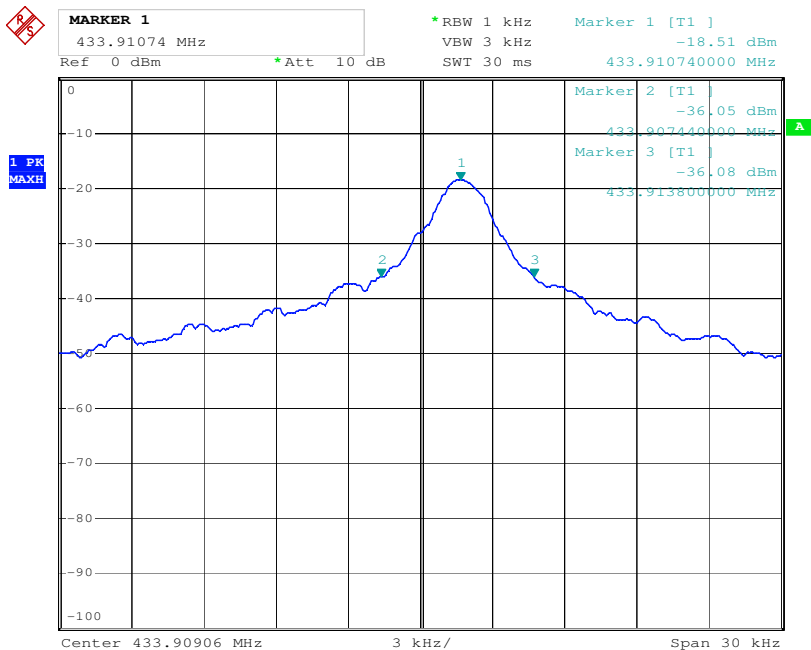
Test Condition: -10°C, 3.0V

Test results for Modulation Bandwidth measurement



Date: 30.MAY.2013 16:44:39

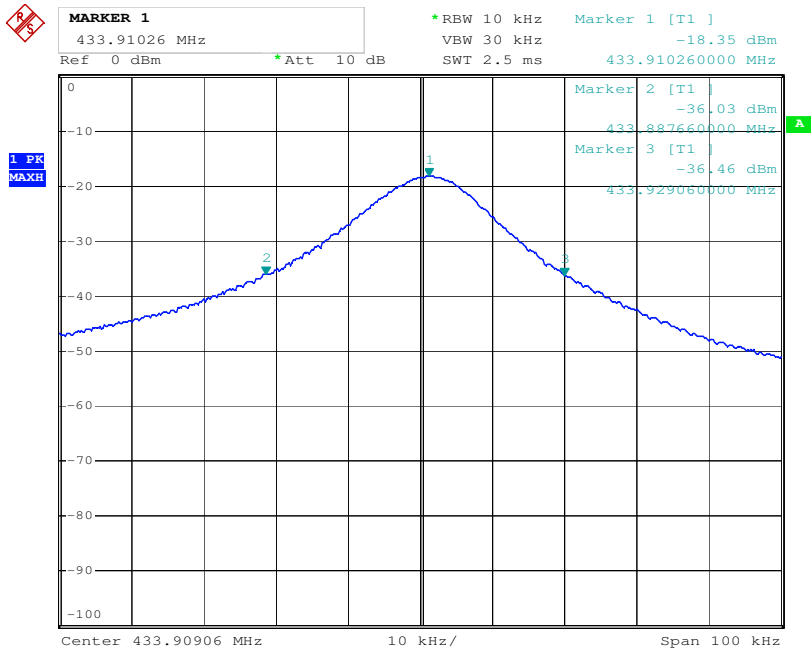
Test Condition: +55°C, 2.5V



Date: 30.MAY.2013 16:44:20

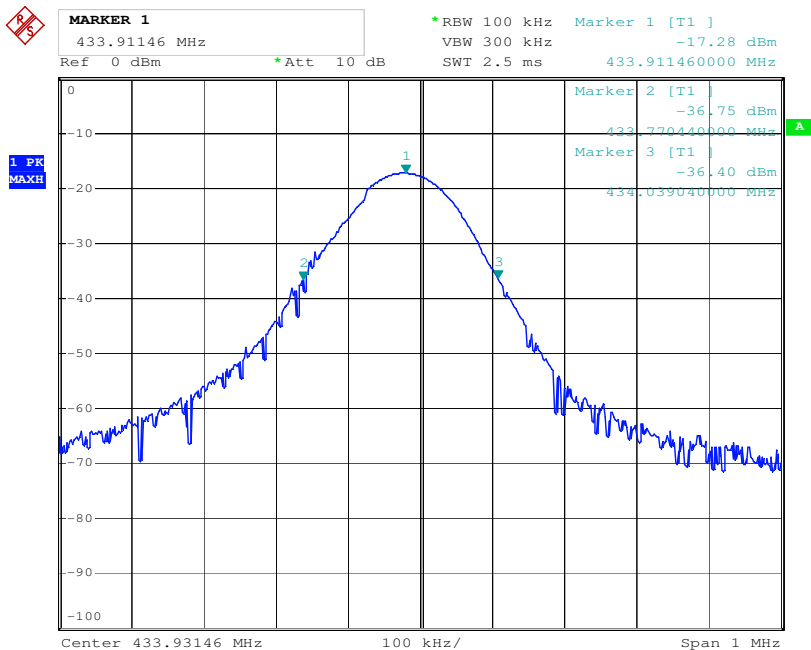
Test Condition: +55°C, 2.5V

Test results for Modulation Bandwidth measurement



Date: 30.MAY.2013 16:36:41

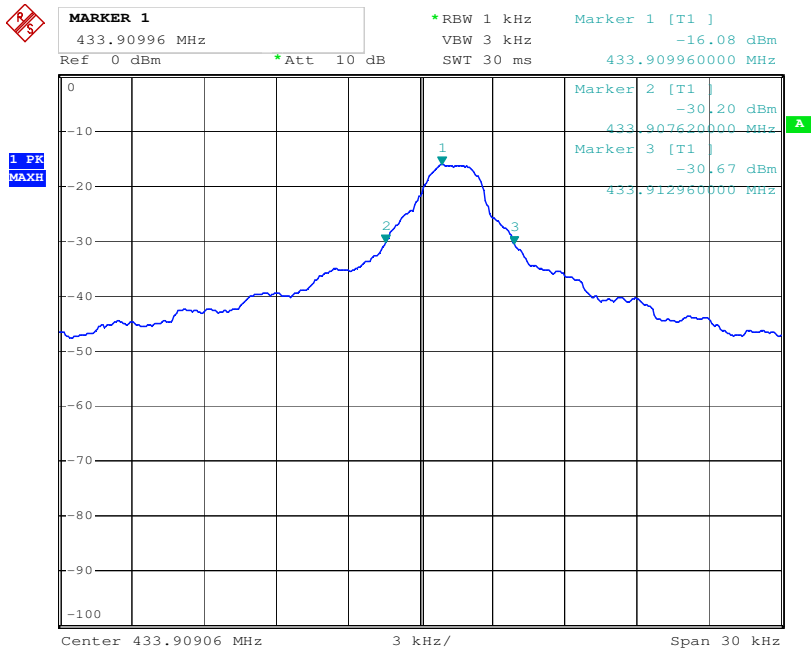
Test Condition: +55°C, 2.5V



Date: 30.MAY.2013 15:58:03

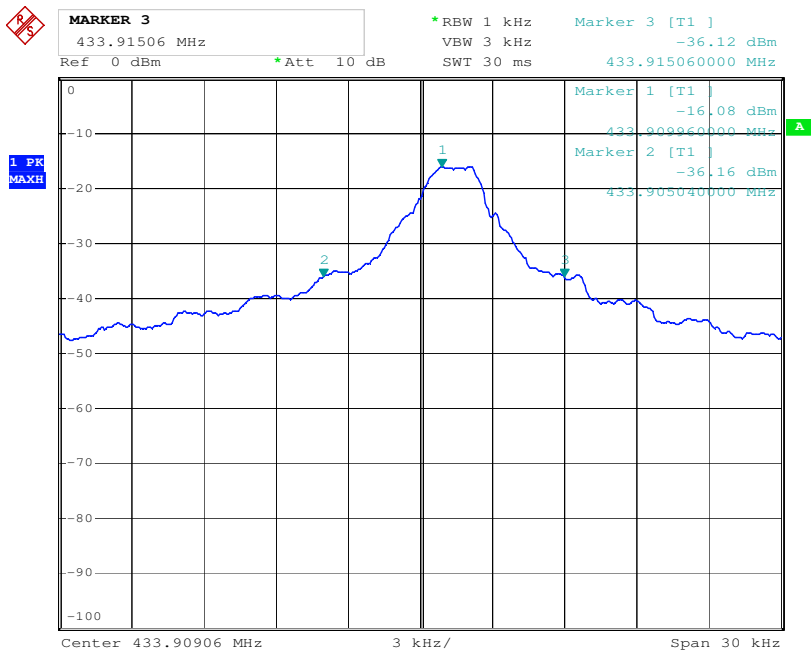
Test Condition: +55°C, 2.5V

Test results for Modulation Bandwidth measurement



Date: 30.MAY.2013 17:29:47

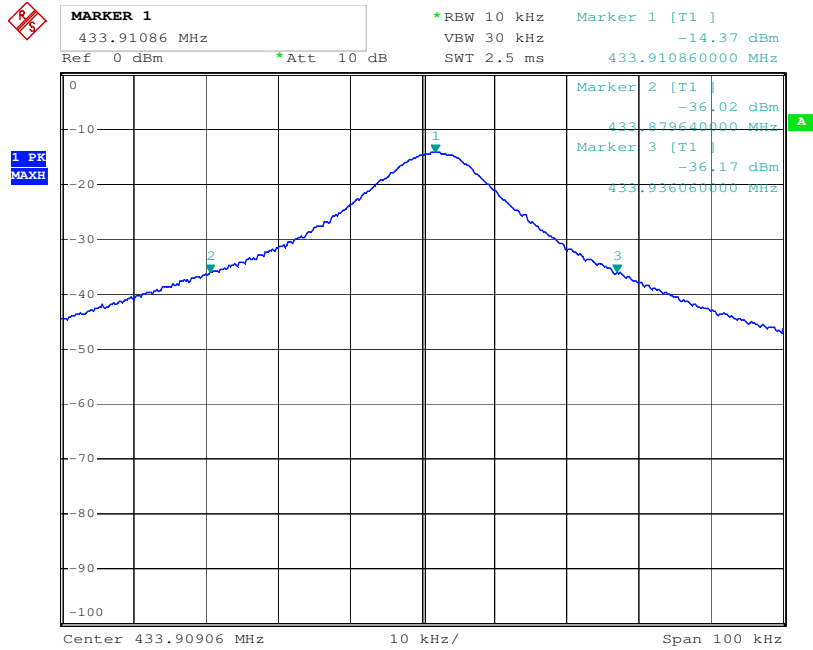
Test Condition: +55°C, 3.0V



Date: 30.MAY.2013 17:30:14

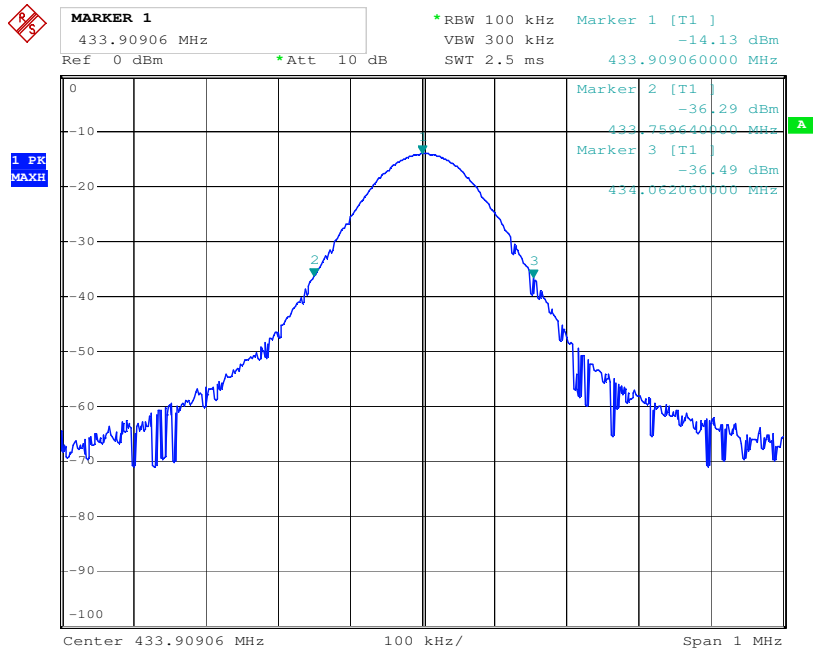
Test Condition: +55°C, 3.0V

Test results for Modulation Bandwidth measurement



Date: 30.MAY.2013 17:47:12

Test Condition: +55°C, 3.0V

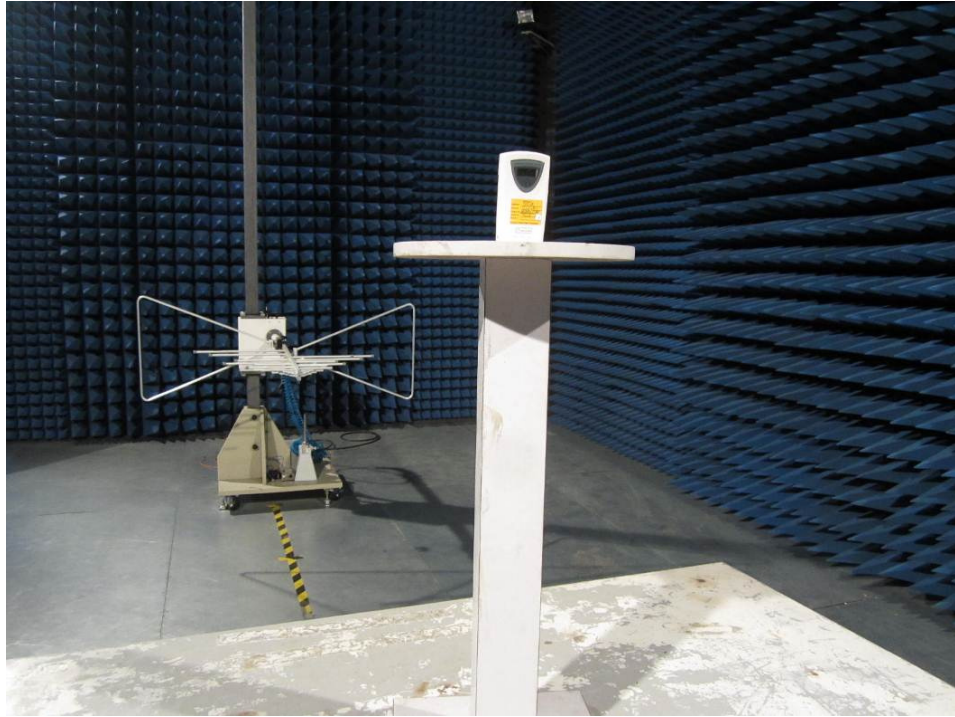


Date: 30.MAY.2013 18:08:10

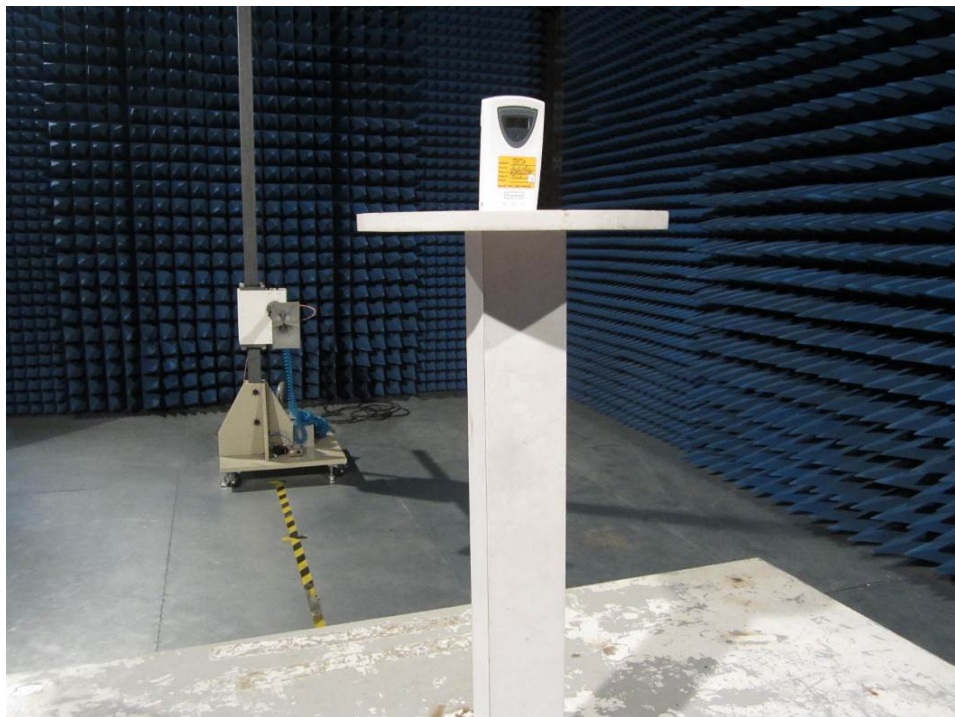
Test Condition: +55°C, 3.0V

Appendix 2

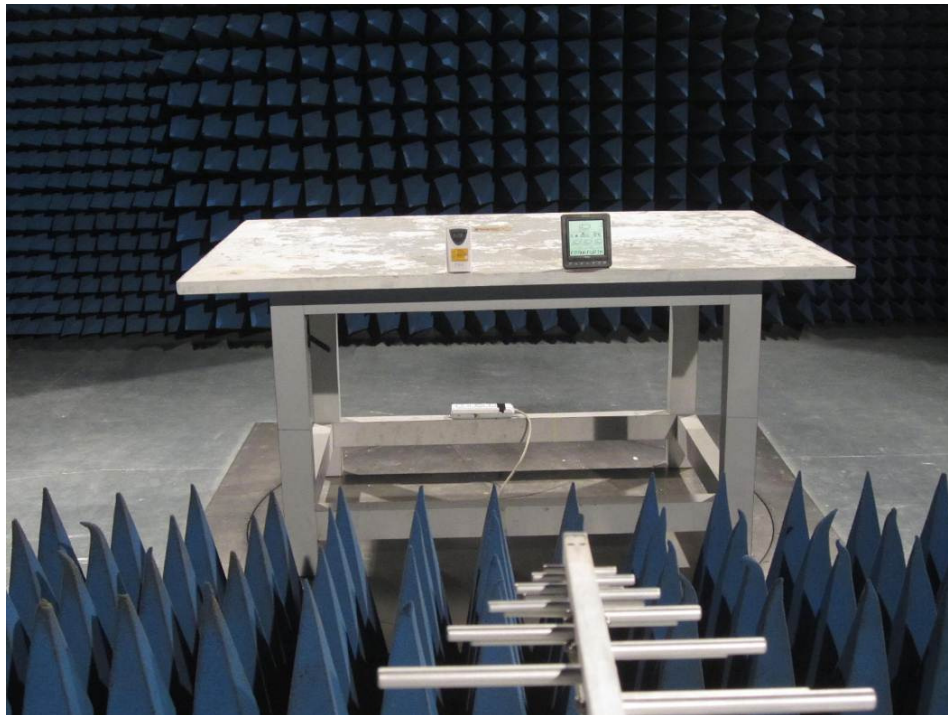
Test setup



Setup for Radiated Emission



Setup for Radiated Emission



Setup for RF Electromagnetic Field



Setup for Electrostatic Discharge

Appendix 3

Photo documentation



External View



External View



External View



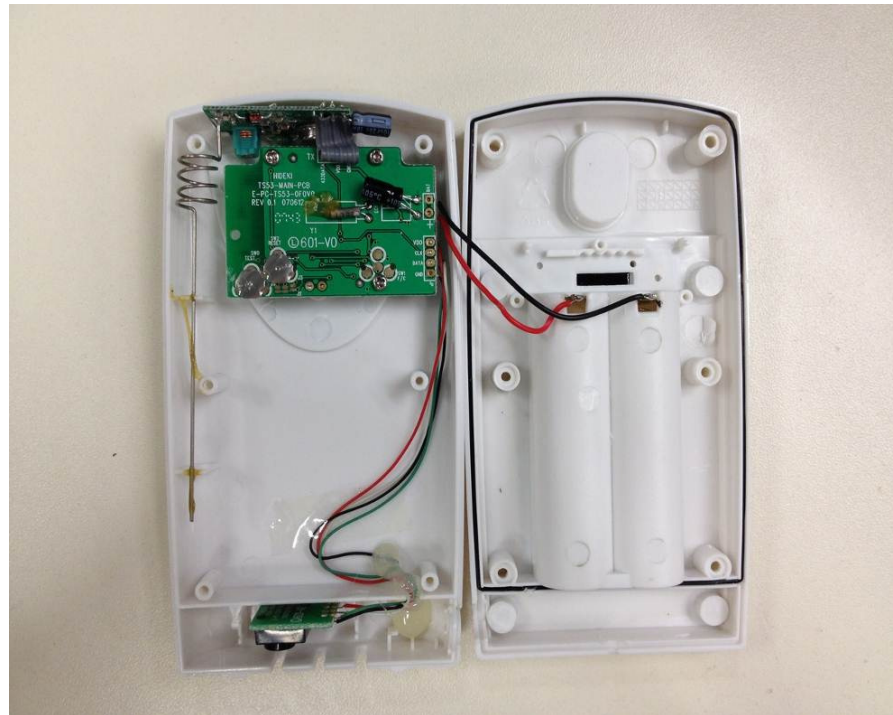
External View



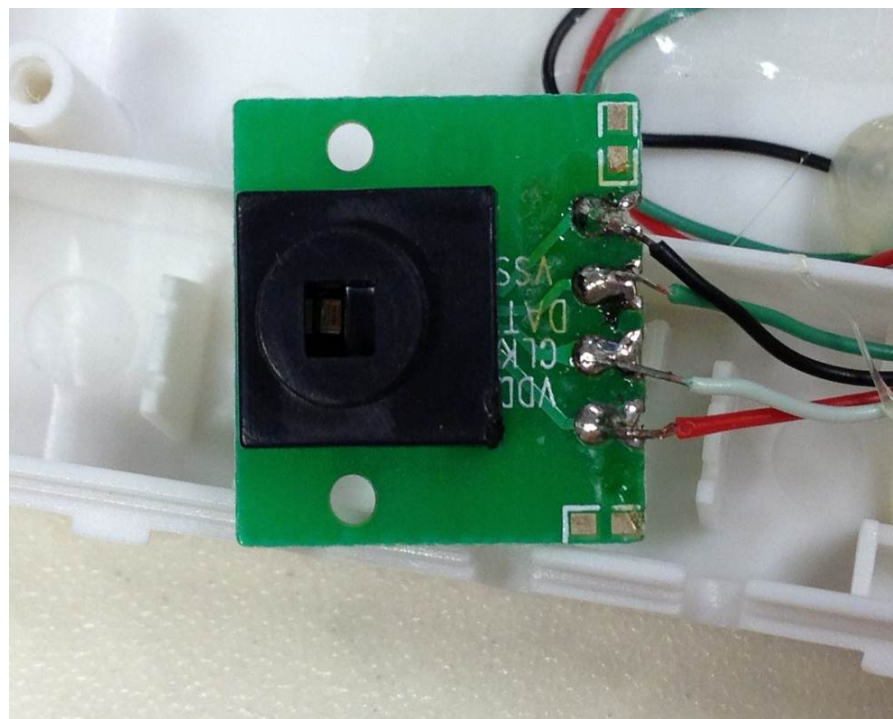
External View



External View



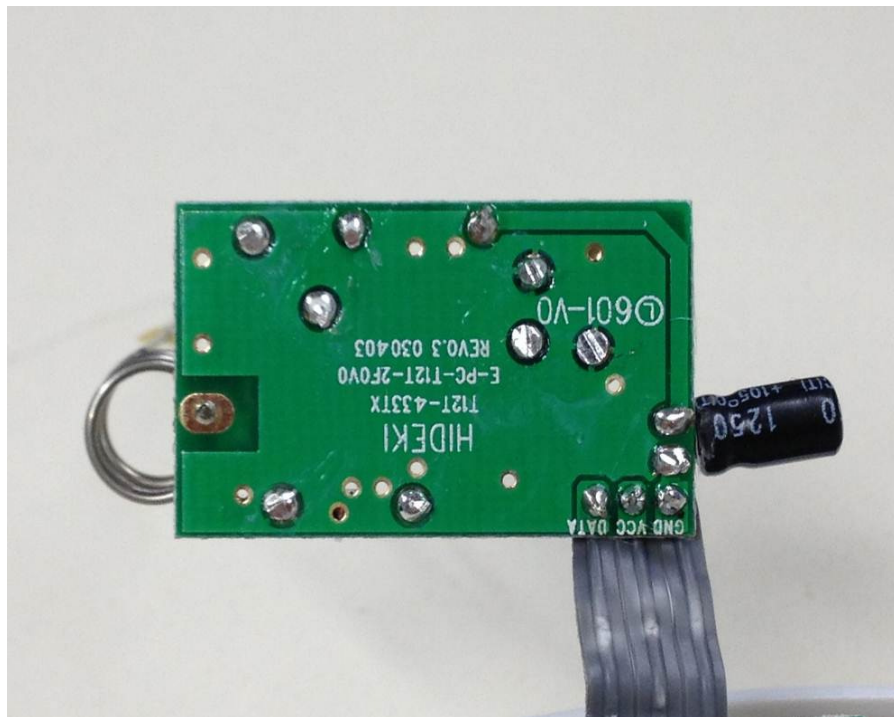
Internal View



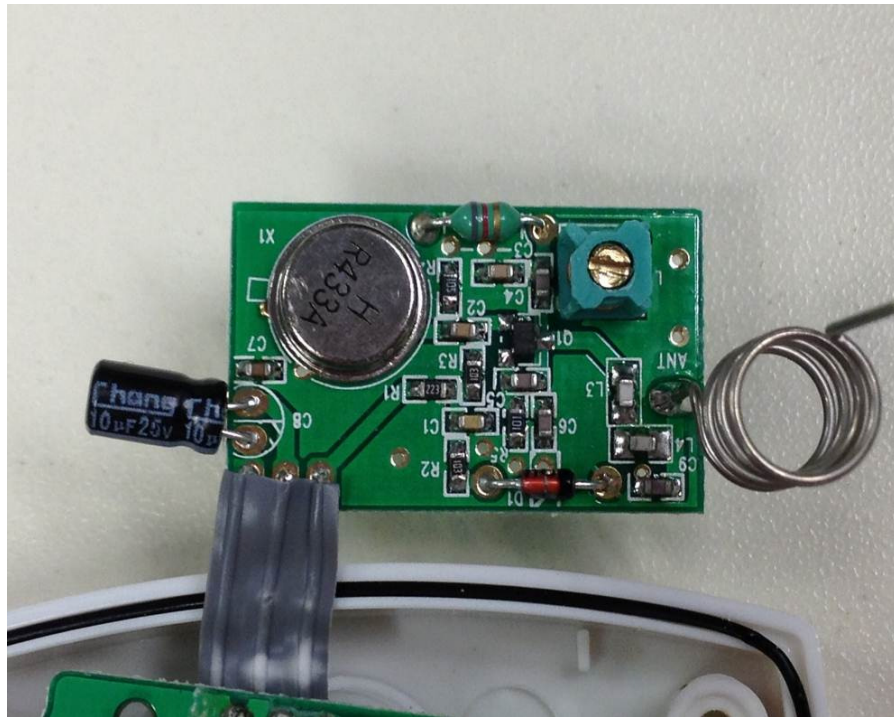
Internal View



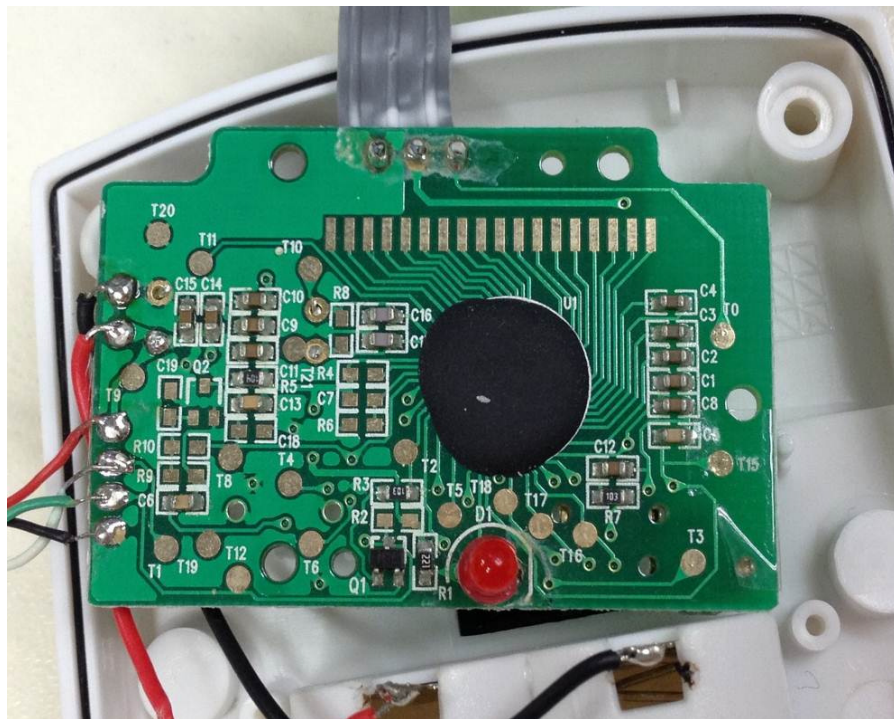
Internal View



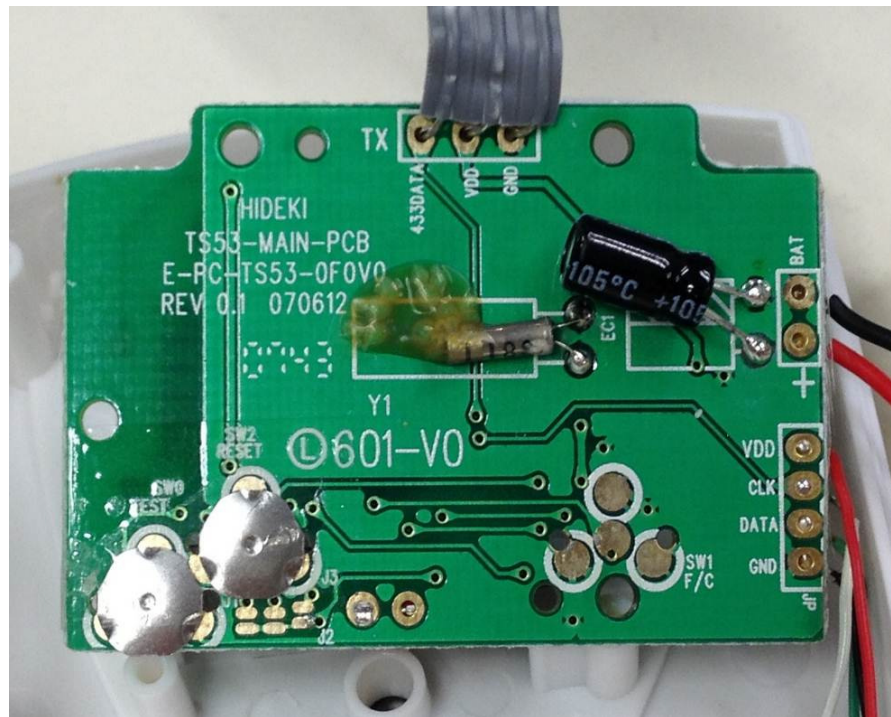
Internal View



Internal View



Internal View



Internal View