7. Band Edge

7.1 Test Method and test Procedure:

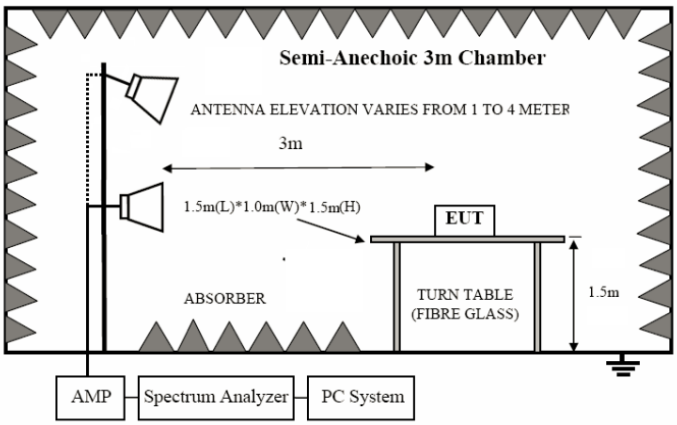
(1) The EUT was tested according to ANSI C63.10–2013. The radiated test was performed at Timeway EMC Laboratory. This site is on file with the FCC laboratory division, Registration No. 744189

(2) Set Spectrum as RBW=1MHz, VBW=3MHz and Peak detector used for PK value. RBW=1MHz, VBW=10Hz and Peak detector used for AV value.

(3) The antenna high is varied from 1 m to 4 m high to find the maximum emission for each frequency.

(4) The antenna polarization: Vertical polarization and Horizontal polarization.

7. 2 Radiated Test Setup



For the actual test configuration, please refer to the related items – Photos of Testing

7.3 Configuration of the EUT

Same as section 5.3 of this report

7.4 EUT Operating Condition

Same as section 5.4 of this report.

7.5 Band Edge Limit

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

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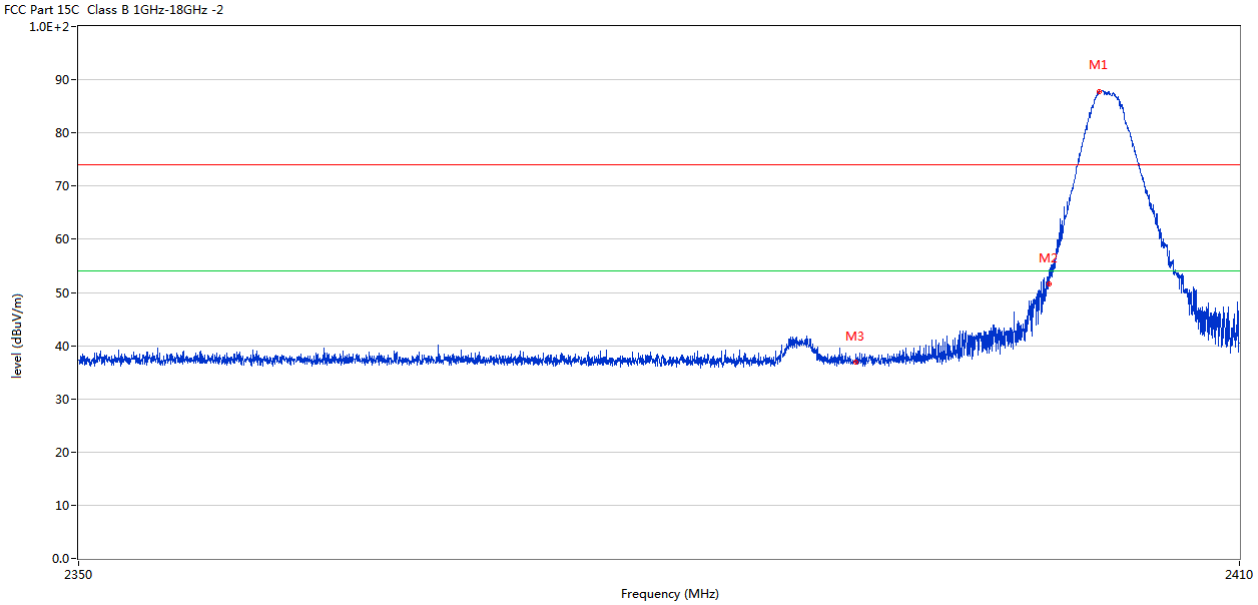
7.6 Test Result

Product:	2.4GHz Transmitter	Polarity	Horizontal
Mode	Keeping Transmitting	Test Voltage	DC6.0V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	--	--



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2402.697	87.68	-3.57	74.0	13.68	Peak	343.00	100	Horizontal	N/A
2	2400.057	51.65	-3.57	74.0	-22.35	Peak	338.00	100	Horizontal	Pass
3	2390.025	36.89	-3.53	74.0	-37.11	Peak	17.00	100	Horizontal	Pass

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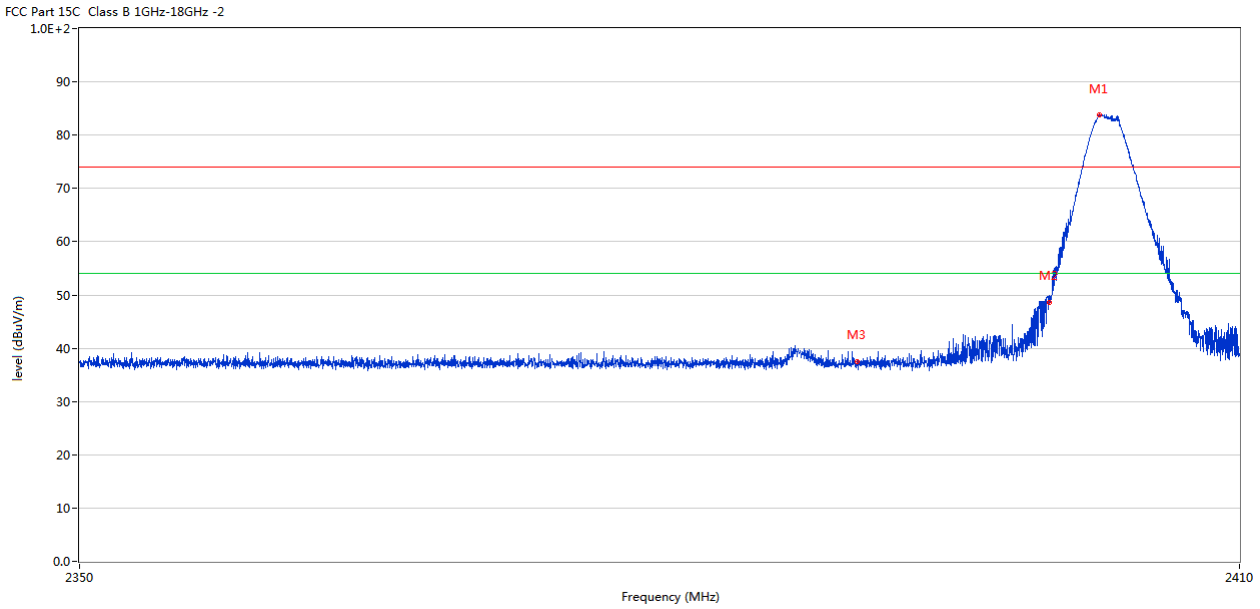
Product:	2.4GHz Transmitter	Detector	Vertical
Mode	Keeping Transmitting	Test Voltage	DC6.0V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	--	--



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2402.652	83.74	-3.57	74.0	9.74	Peak	113.00	100	Vertical	N/A
2	2400.057	48.66	-3.57	74.0	-25.34	Peak	234.00	100	Vertical	Pass
3	2390.055	37.44	-3.53	74.0	-36.56	Peak	78.00	100	Vertical	Pass

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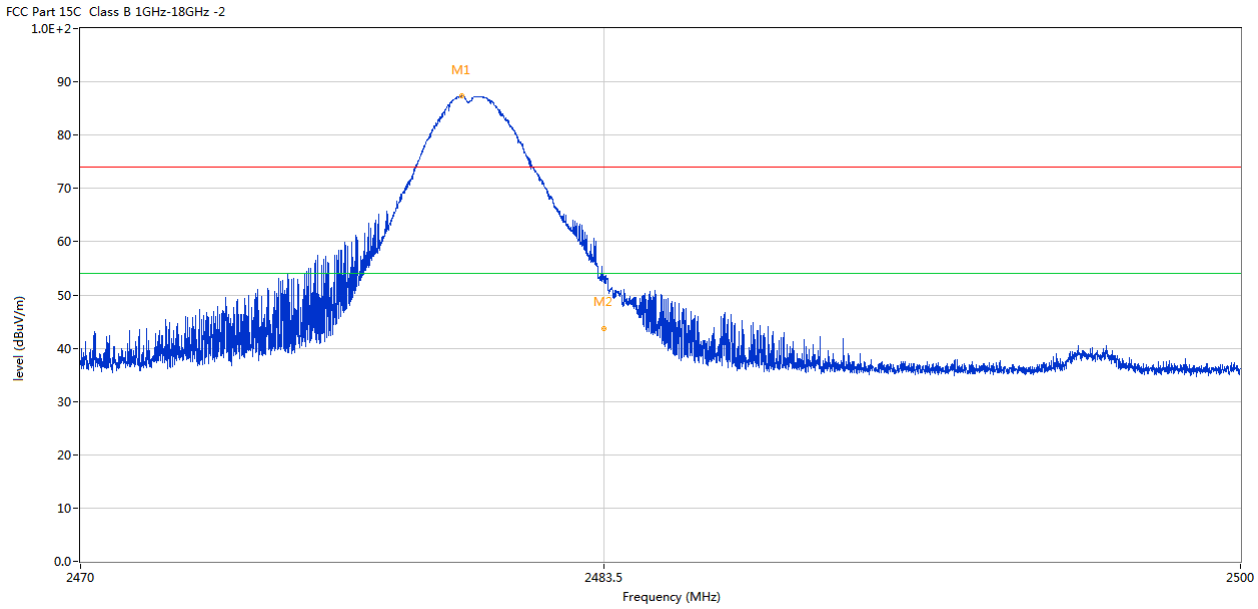
Product:	2.4GHz Transmitter	Polarity	Horizontal
Mode	Keeping Transmitting	Test Voltage	DC6.0V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	--	--



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2479.823	87.30	-3.57	74.0	13.30	Peak	179.00	100	Horizontal	N/A
2	2483.500	53.72	-3.57	74.0	-20.28	Peak	179.00	100	Horizontal	Pass
2**	2483.500	43.64	-3.57	54.0	-10.36	AV	179.00	100	Horizontal	Pass

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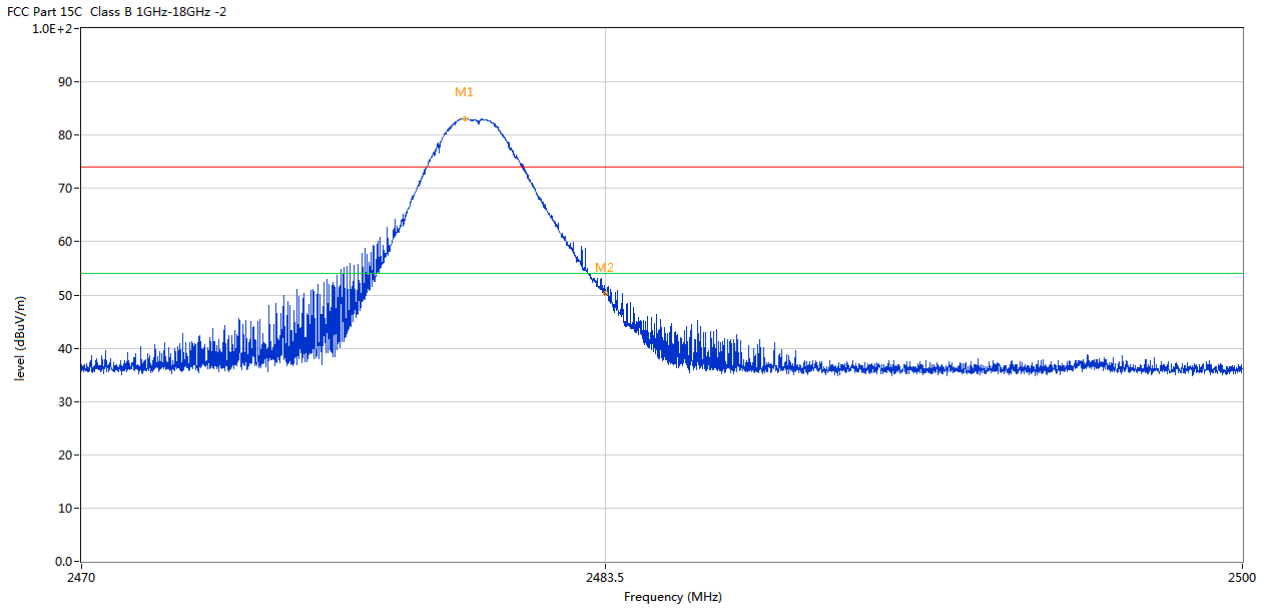
Product:	2.4GHz Transmitter	Detector	Vertical
Mode	Keeping Transmitting	Test Voltage	DC6.0V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	--	--



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2479.875	83.07	-3.57	74.0	9.07	Peak	124.00	100	Vertical	N/A
2	2483.500	50.23	-3.57	74.0	-23.77	Peak	232.00	100	Vertical	Pass

Note: The PK emission level less than the AV limit. No necessary to record the AV emission level.

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8.0 Antenna Requirement

Applicable Standard

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

This product has an Integral antenna with gain 2.84dBi maximum. It fulfills the requirement of this section.

Test Result: Pass

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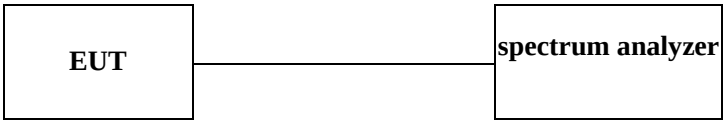
9.0 20dB Bandwidth Measurement

Test Configuration



Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100kHz RBW and 300kHz VBW.

The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

Limit

N/A

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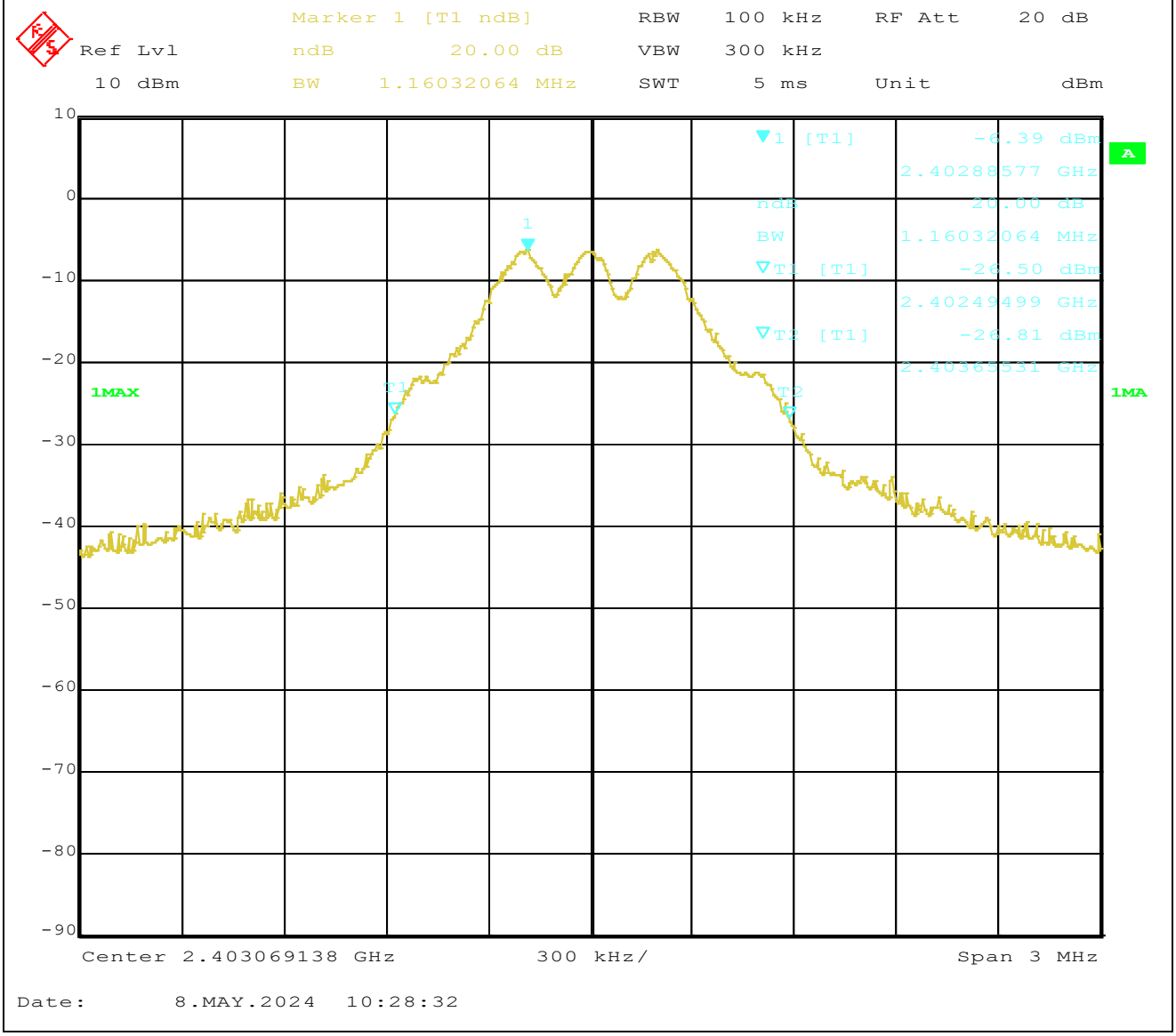
Test Result

GFSK			
Product:	2.4GHz Transmitter	Test Mode:	Keep transmitting
Mode	Keeping Transmitting	Test Voltage	DC6.0V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK
20dB Bandwidth	1.160MHz	--	--



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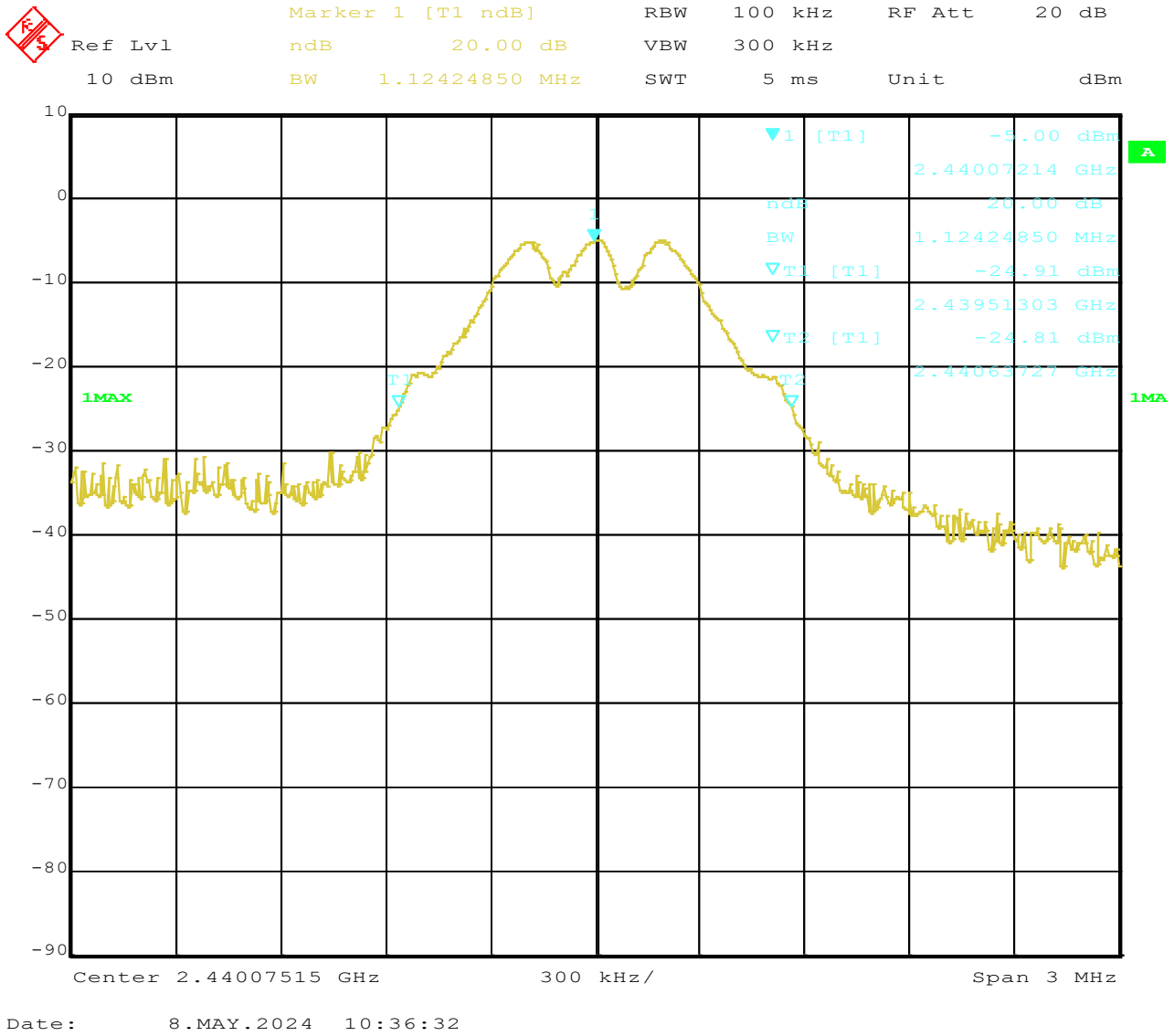
GFSK			
Product:	2.4GHz Transmitter	Test Mode:	Keep transmitting
Mode	Keeping Transmitting	Test Voltage	DC6.0V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK
20dB Bandwidth	1.124MHz	--	--



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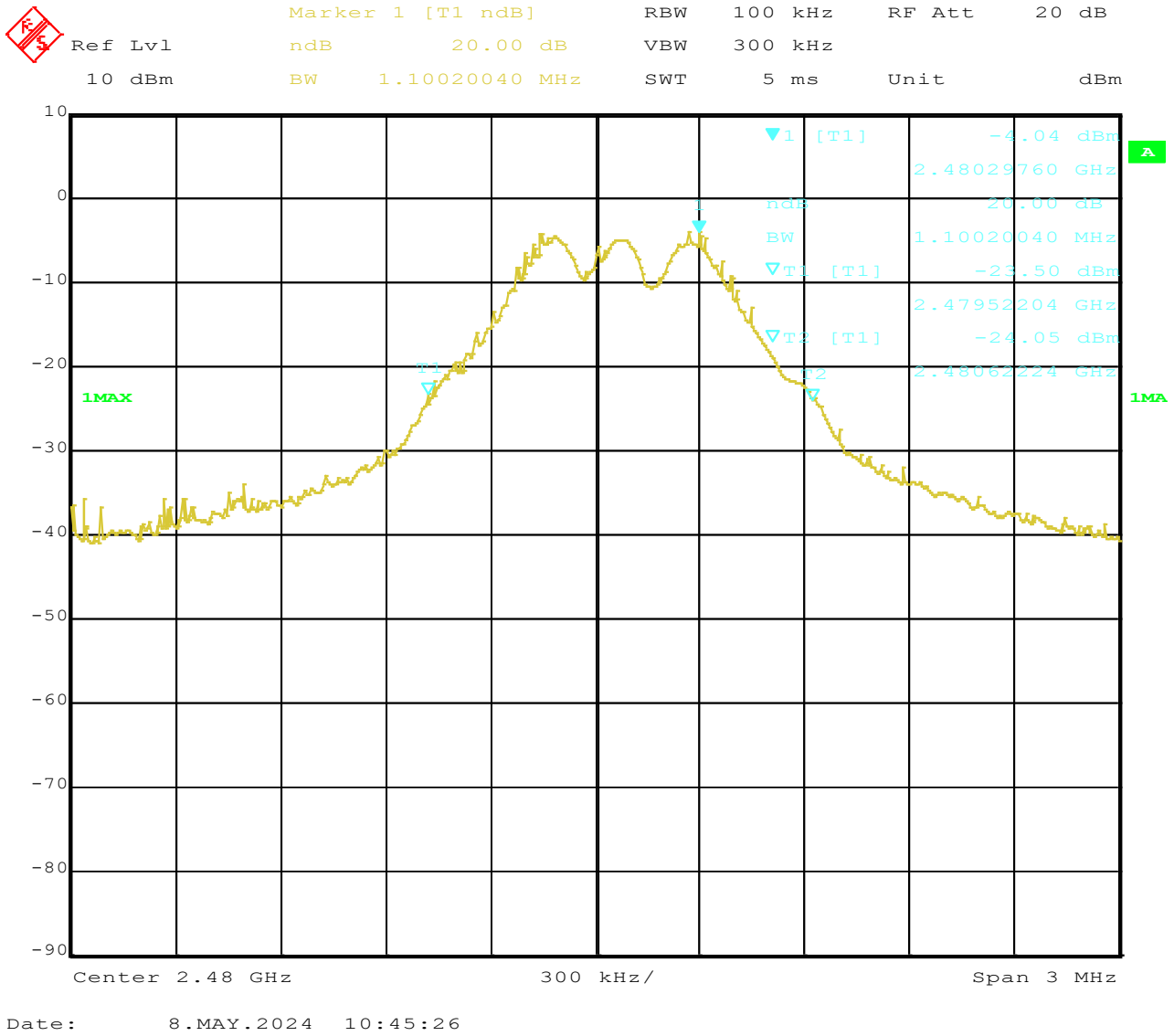
GFSK			
Product:	2.4GHz Transmitter	Test Mode:	Keep transmitting
Mode	Keeping Transmitting	Test Voltage	DC6.0V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK
20dB Bandwidth	1.100MHz	--	--



Date: 8.MAY.2024 10:45:26

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10.0 FCC ID Label

FCC ID: 2BHINJ5C001

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation

The label must not be a stick-on paper label. The label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

Mark Location:

FCC Label Location

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11.0 Photo of testing

11.1 Conducted test View

N/A

Radiated emission test view

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11.2 Photographs – EUT Outside View

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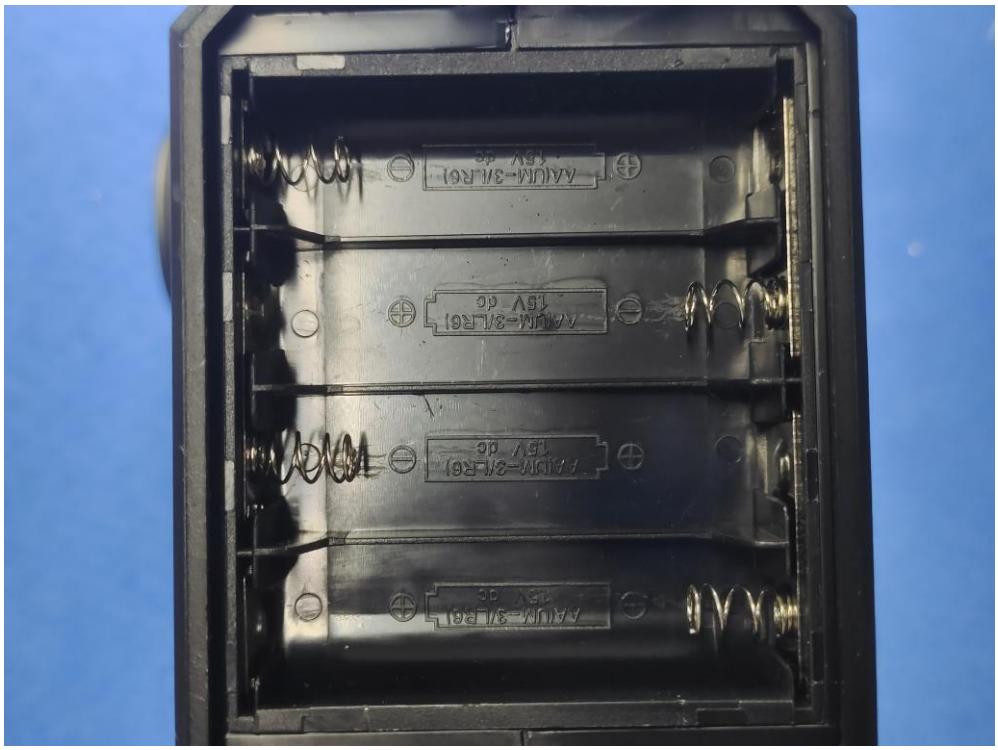
Inside View



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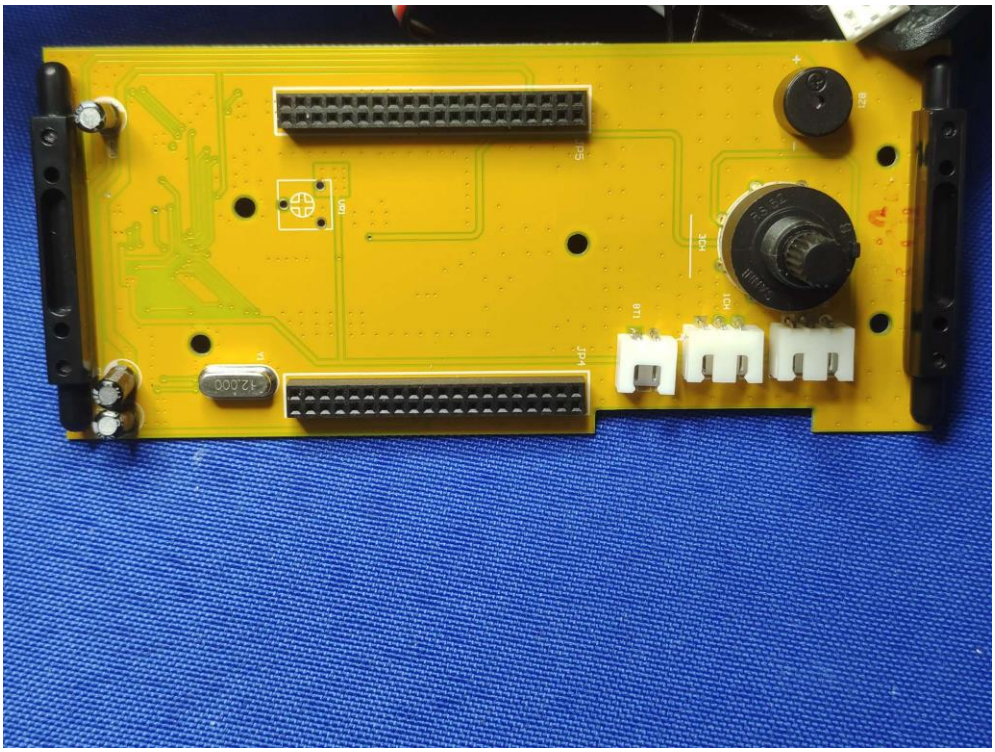
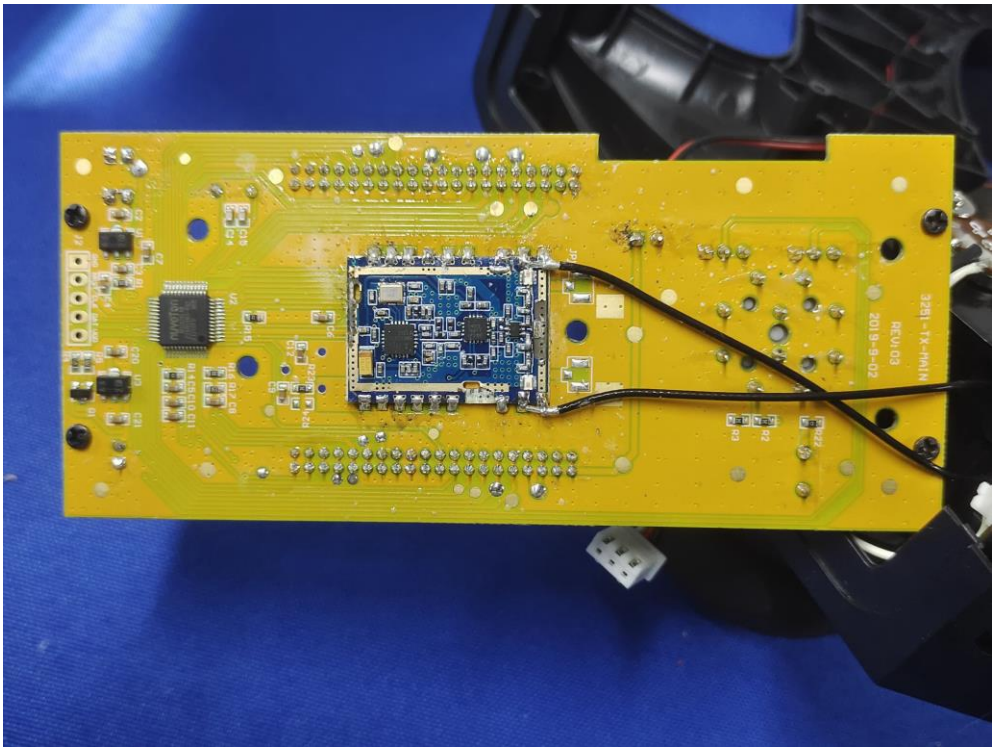
Inside View





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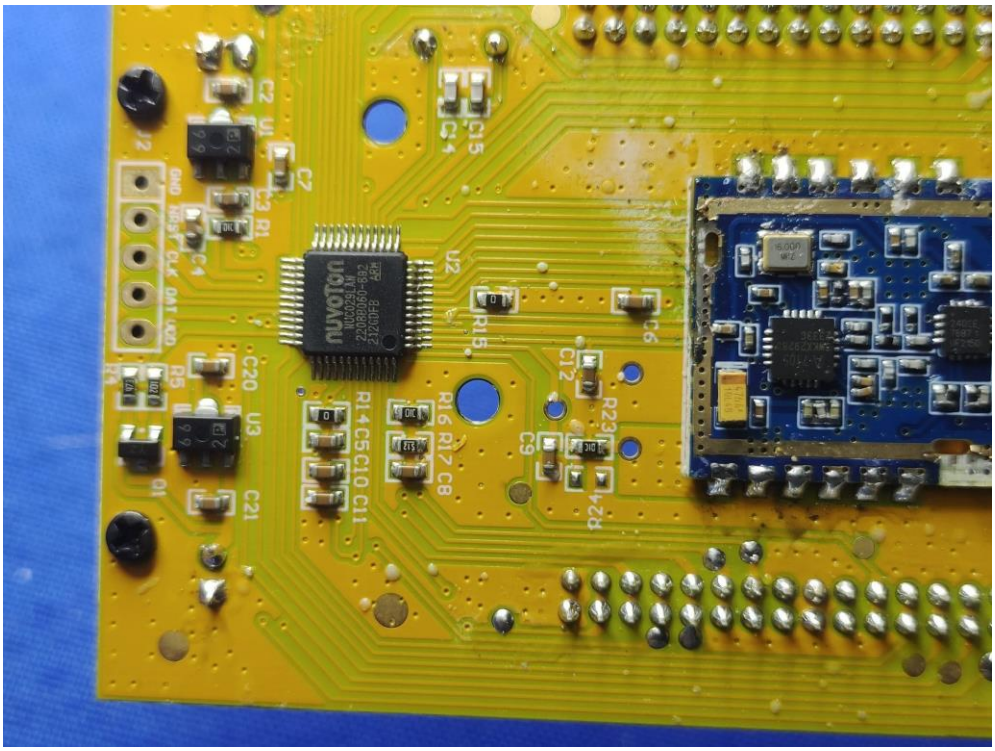

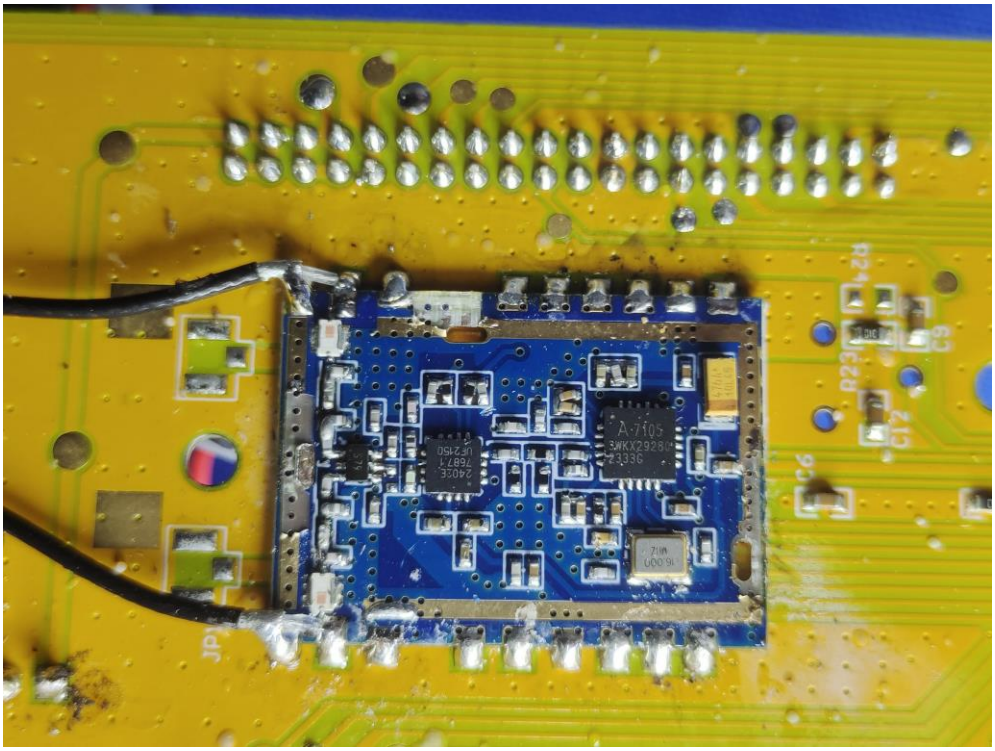

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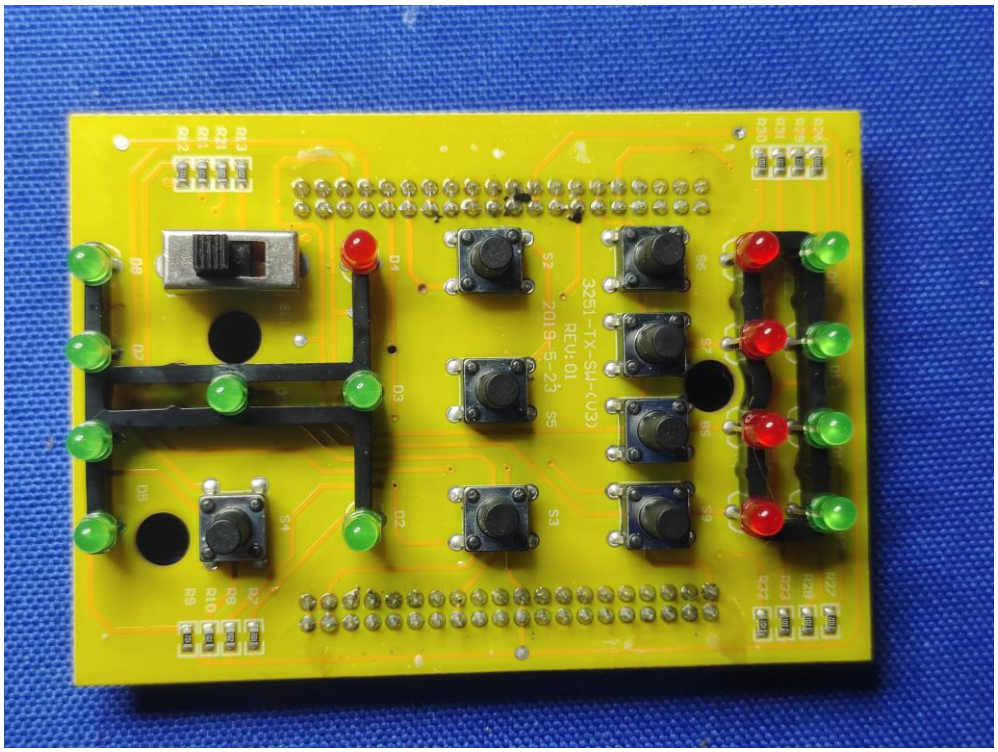

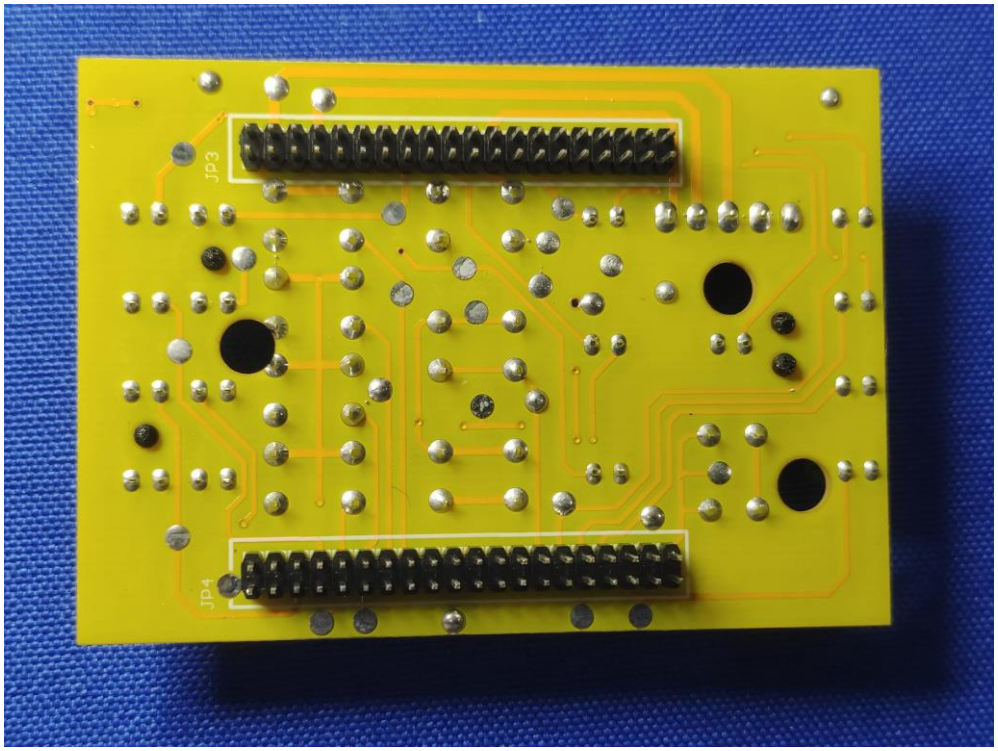

--End of the report--

The report refers only to the sample tested and does not apply to the bulk.
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