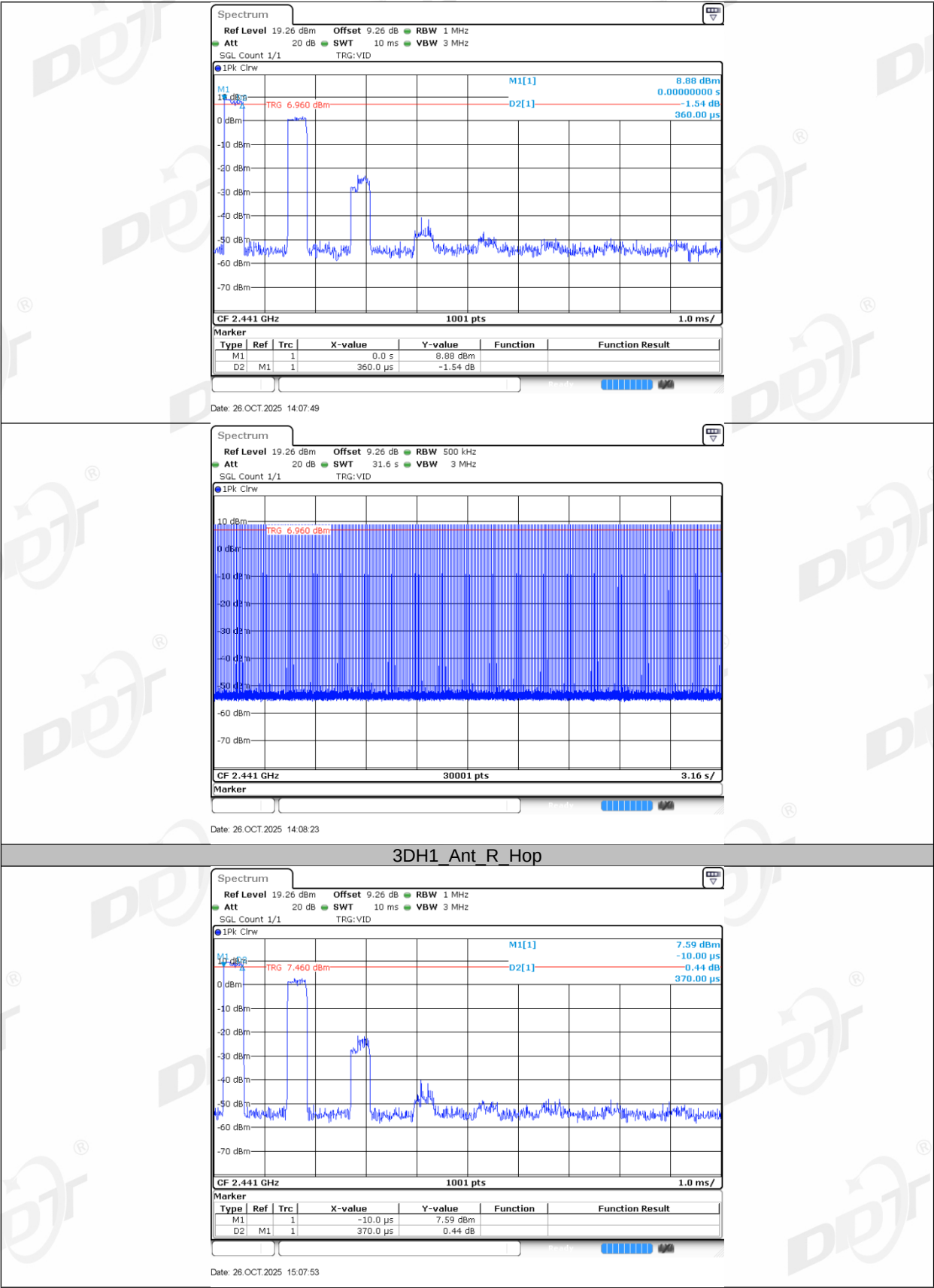
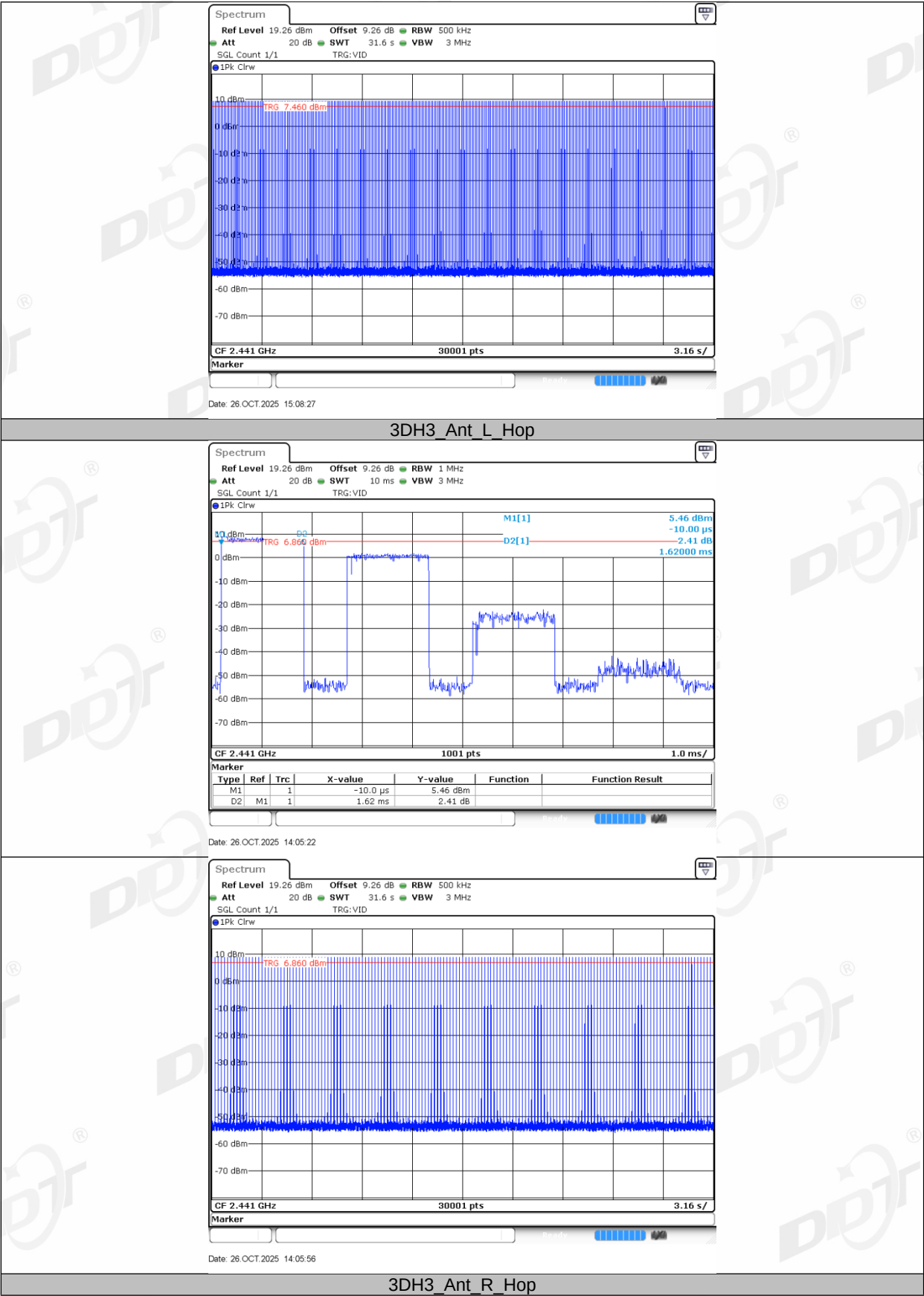
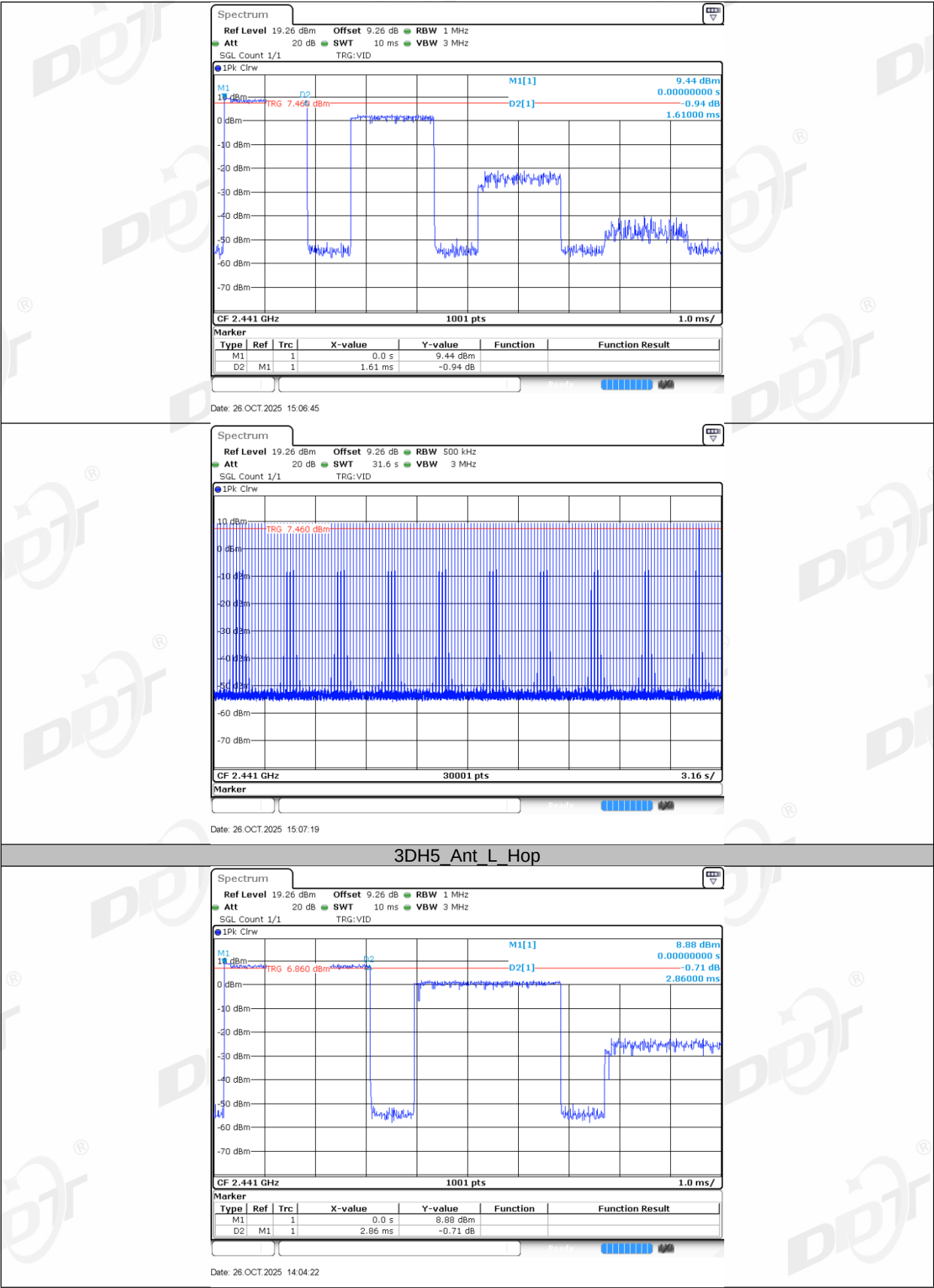
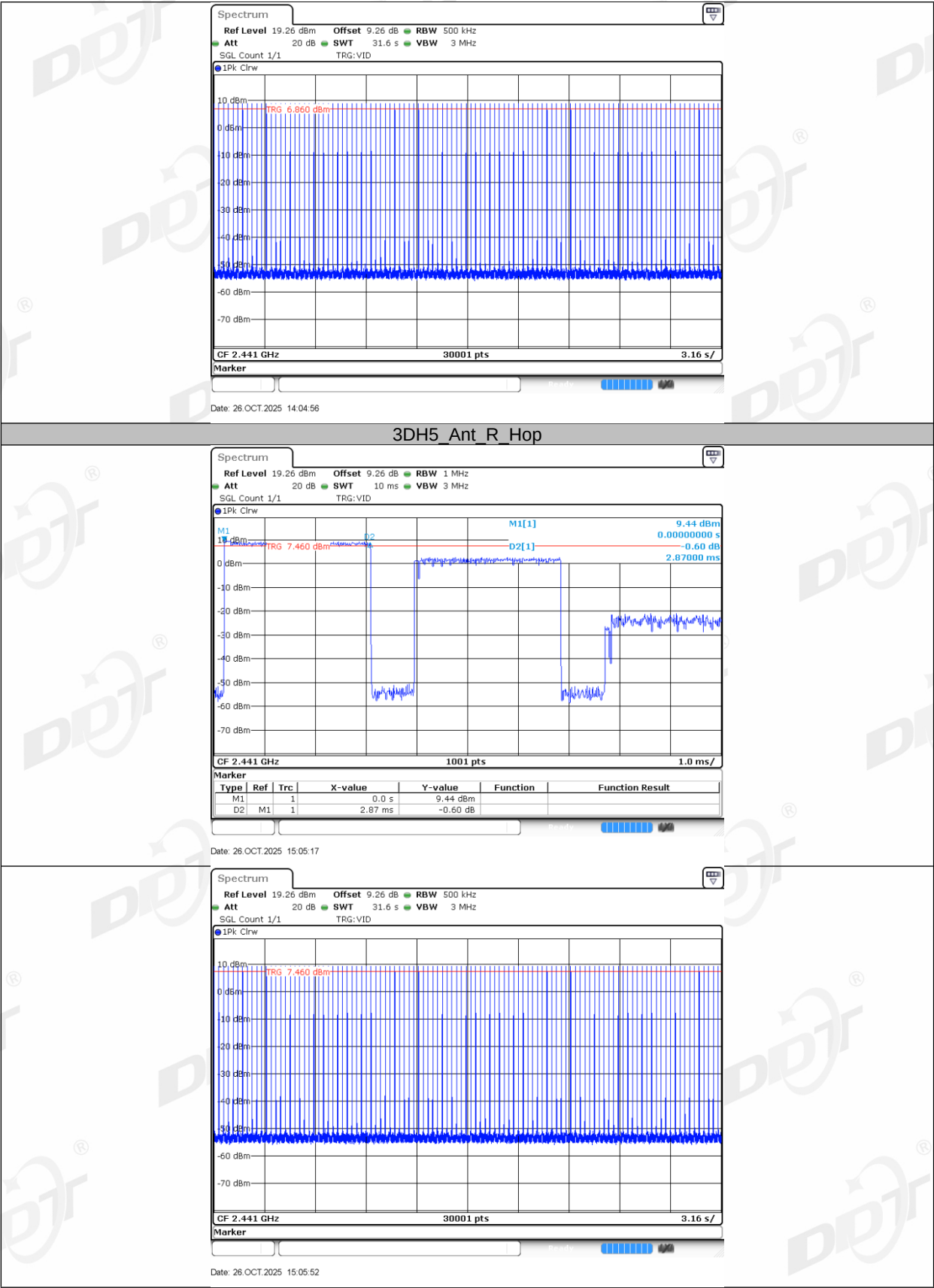




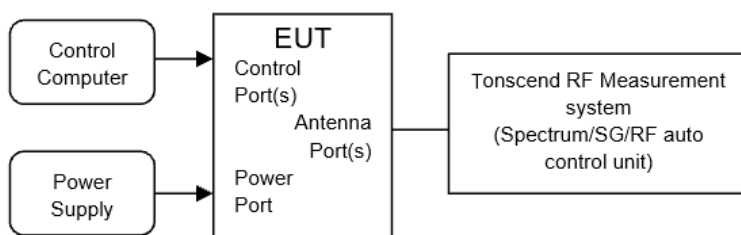






9. Number of Hopping Channel

9.1. Block diagram of test setup



9.2. Limits

Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels.

9.3. Test procedure

- (1) The test according to ANSI C63.10 clause 7.8.3.
- (2) Connect EUT's antenna output to spectrum analyzer by RF cable, the path loss was compensated to the results.
- (3) Set the EUT as maximum power setting and enable the EUT transmit continuously.
- (4) Use the following spectrum analyzer settings for the maximum peak output power measurement:

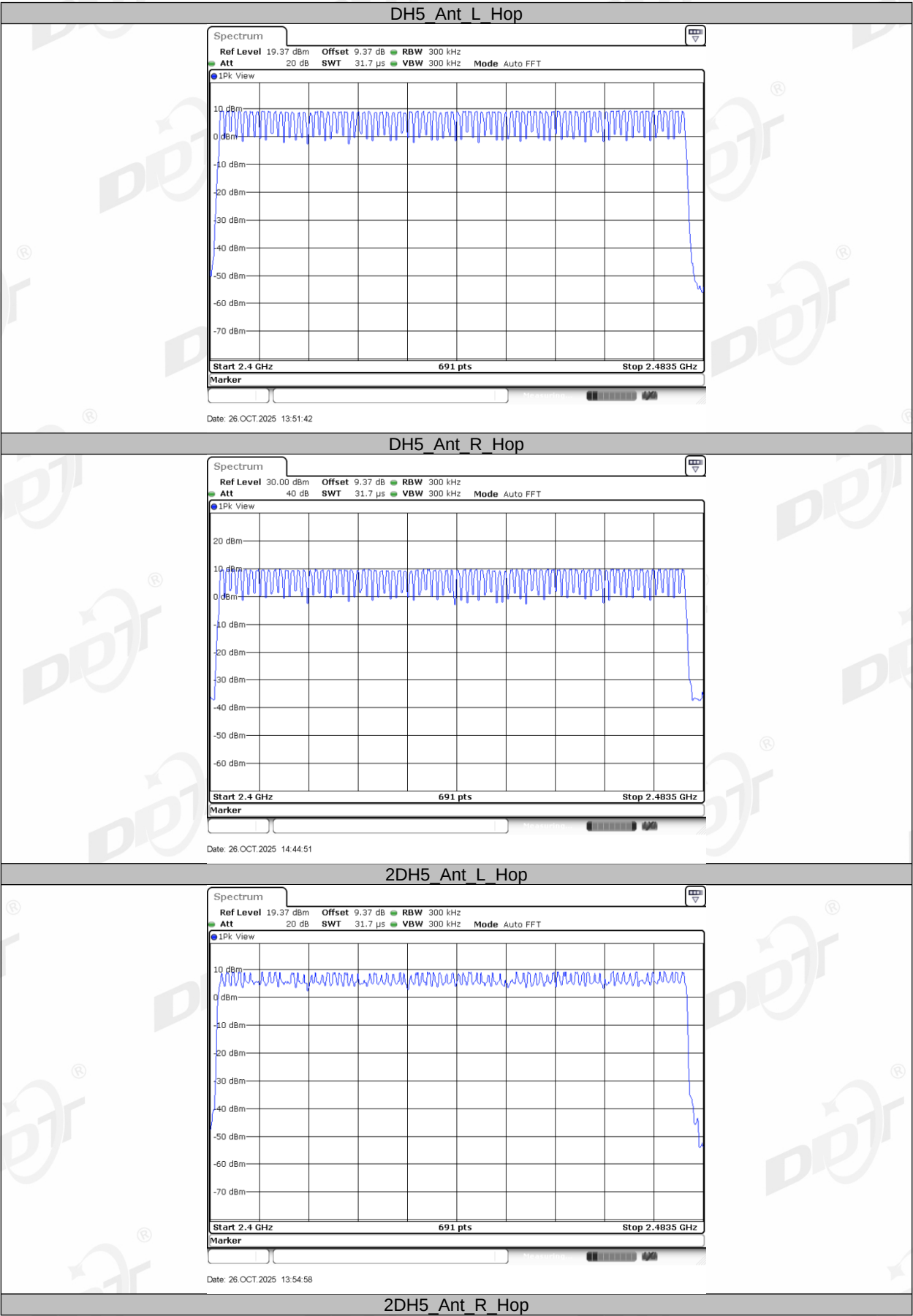
RBW:	RBW to less than 30% of the channel spacing or the 20 dB bandwidth, whichever is smaller.
VBW:	VBW $\geq$ RBW.
Span:	The frequency band of operation
Detector Mode:	Peak
Sweep time:	Auto
Trace mode:	Max hold
- (5) Measure the hopping number and record the results in the report.
- (6) Measure and record the results in the report.

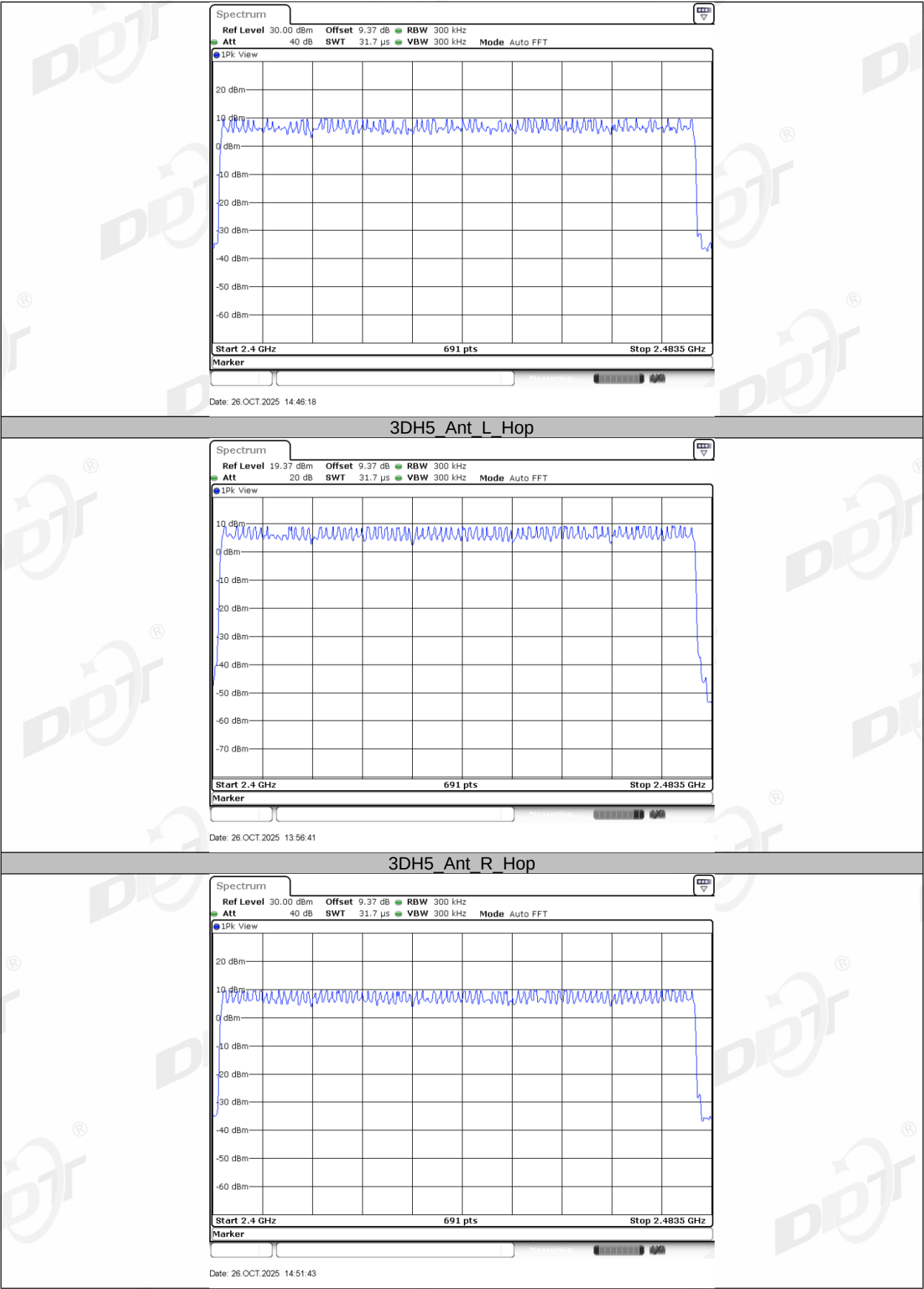
9.4. Test result

Test Engineer:	Zeng Zhongyao	Test Site:	RF Measurement System 3#
Ambient Condition:	25.1℃,33.2%RH	Test Date:	2025.10.26
Test Power Supply:	Battery	Sample Number:	s25041650-010

Test Mode	Antenna	Frequency [MHz]	Result [Num]	Limit [Num]	Verdict
DH5	Ant_L	Hop	79	≥15	PASS
	Ant_R	Hop	79	≥15	PASS
2DH5	Ant_L	Hop	79	≥15	PASS
	Ant_R	Hop	79	≥15	PASS
3DH5	Ant_L	Hop	79	≥15	PASS
	Ant_R	Hop	79	≥15	PASS

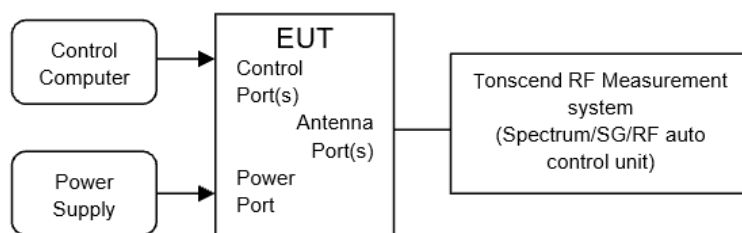
9.5. Test graphs





10. Band Edge Compliance (Conducted Method)

10.1. Block diagram of test setup



10.2. Limit

All restriction band should comply with 15.209, other emission should be at least 20dB below the fundamental.

10.3. Test procedure

- (1) Connect EUT's antenna output to spectrum analyzer by RF cable.
- (2) Establish a reference level by using the following procedure:

RBW:	100 kHz
VBW:	300 kHz
Span	Encompass frequency range to be measured
Detector Mode:	Peak
Sweep time:	Auto
Trace mode	Max hold
- (3) Allow the trace to stabilize, use the peak marker function to determine the maximum peak power level to establish the reference level.
- (4) Then mark the maximum amplitude of all unwanted emissions outside of the authorized frequency band.

10.4. Test result

Test Engineer:	Zeng Zhongyao	Test Site:	RF Measurement System 3#
Ambient Condition:	25.1℃,33.2%RH	Test Date:	2025.10.26
Test Power Supply:	Battery	Sample Number:	s25041650-010

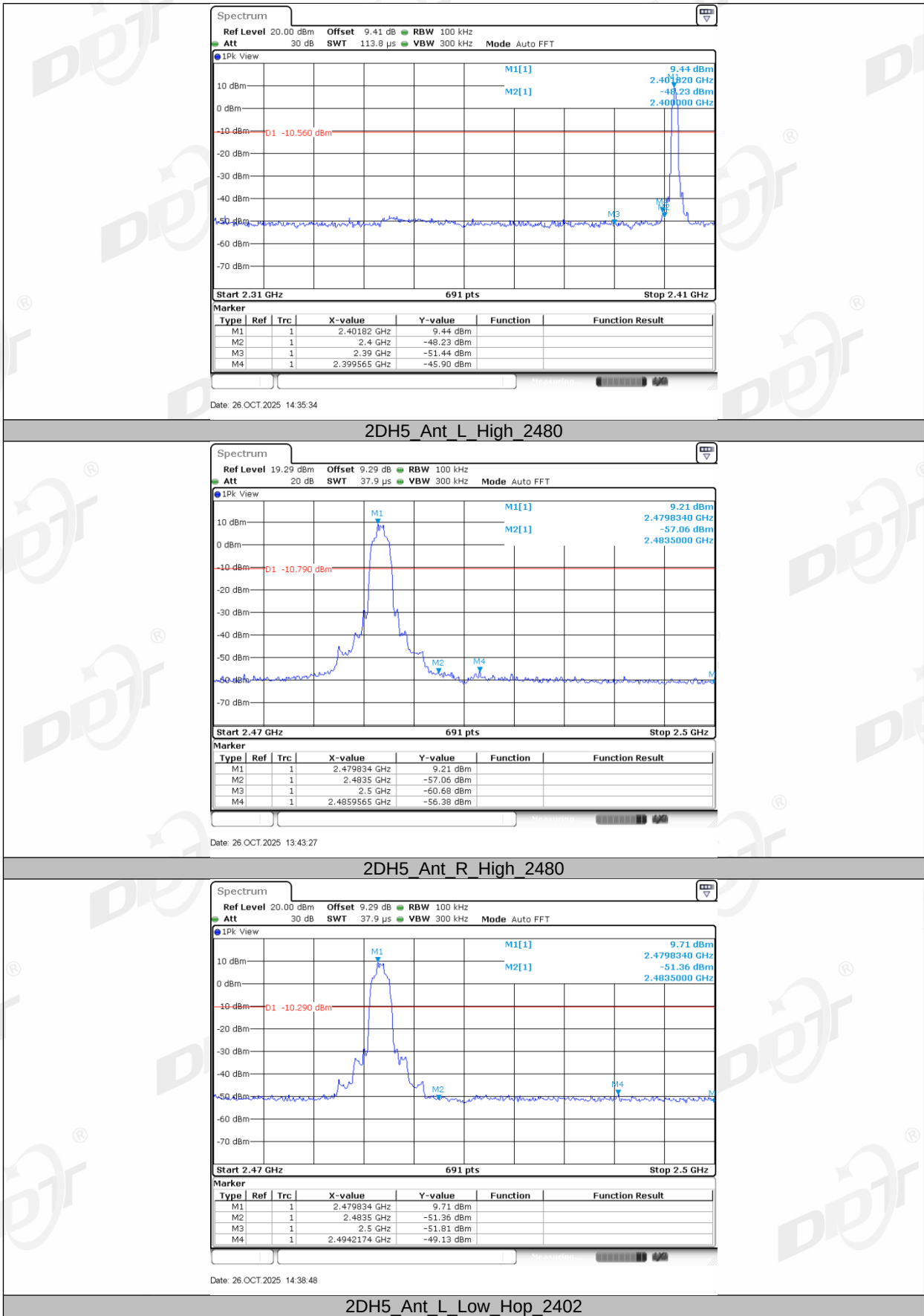
Mode	Freq. (MHz)	Verdict
GFSK	Hopping off 2402	Pass
	Hopping off 2480	Pass
	Hopping on	Pass
$\pi/4$ -DQPSK	Hopping off 2402	Pass
	Hopping off 2480	Pass
	Hopping on	Pass
8DPSK	Hopping off 2402	Pass
	Hopping off 2480	Pass
	Hopping on	Pass

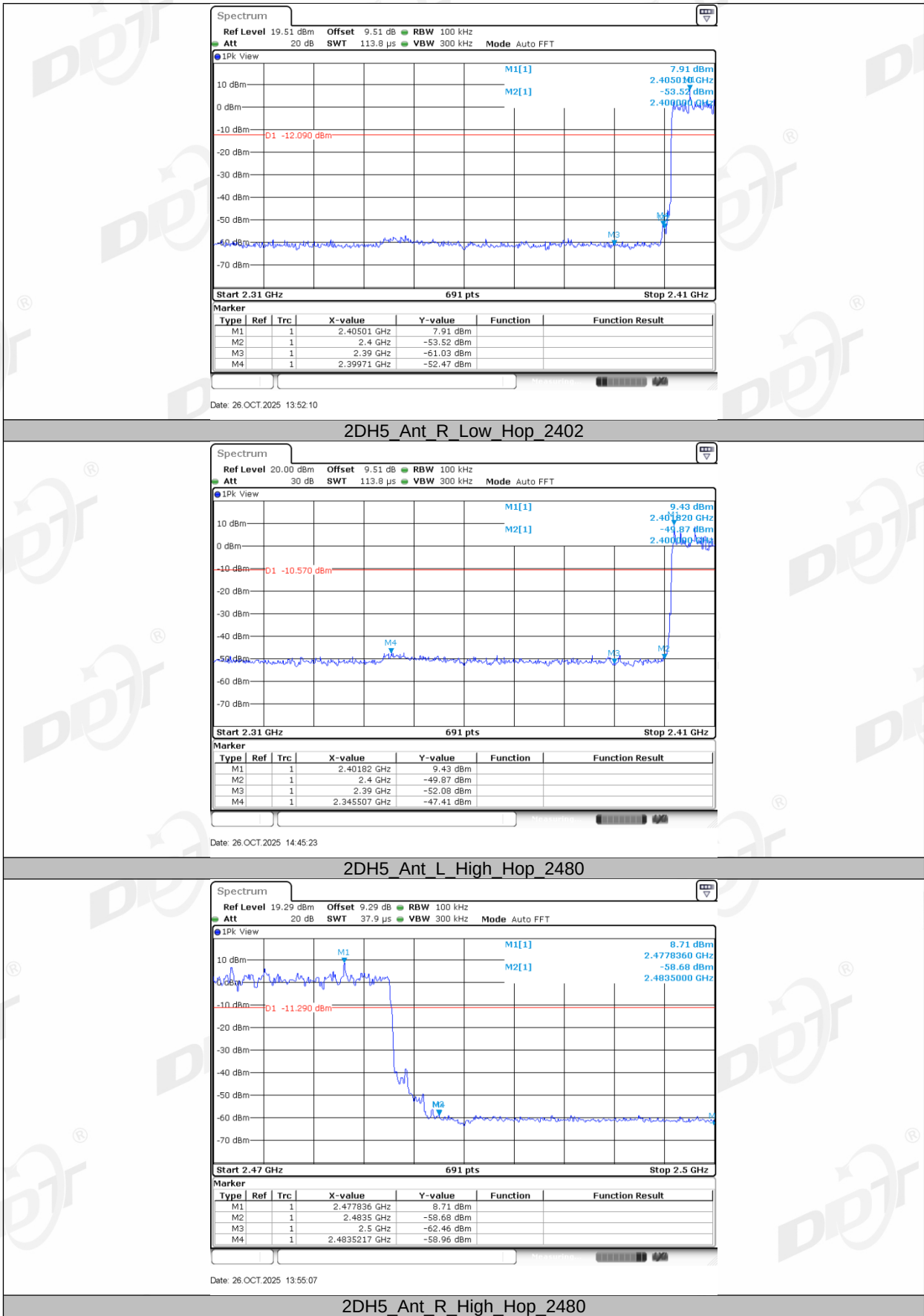
10.5. Test graphs











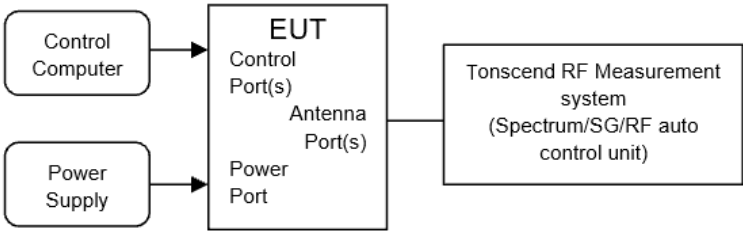






11. RF Conducted Spurious Emissions

11.1. Block diagram of test setup



11.2. Limits

In any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

11.3. Test procedure

- (1) Connect EUT's antenna output to spectrum analyzer by RF cable.
- (2) Establish a reference level by using the following procedure:
 - Center frequency Test frequency
 - RBW: 100 kHz
 - VBW: 300 kHz
 - Span Wide enough to capture the peak level of the in-band emission
 - Detector Mode: Peak
 - Sweep time: Auto
 - Trace mode Max hold
- (3) Allow the trace to stabilize, use the peak marker function to determine the maximum peak power level to establish the reference level.
- (4) Set the spectrum analyzer as follows:
 - RBW: 100 kHz
 - VBW: 300 kHz
 - Span Encompass frequency range to be measured
 - Number of measurement points ≥Span/RBW
 - Detector Mode: Peak
 - Sweep time: Auto
 - Trace mode Max hold

Allow the trace to stabilize, use the peak marker function to determine the maximum amplitude of all unwanted emissions outside of the authorized frequency band

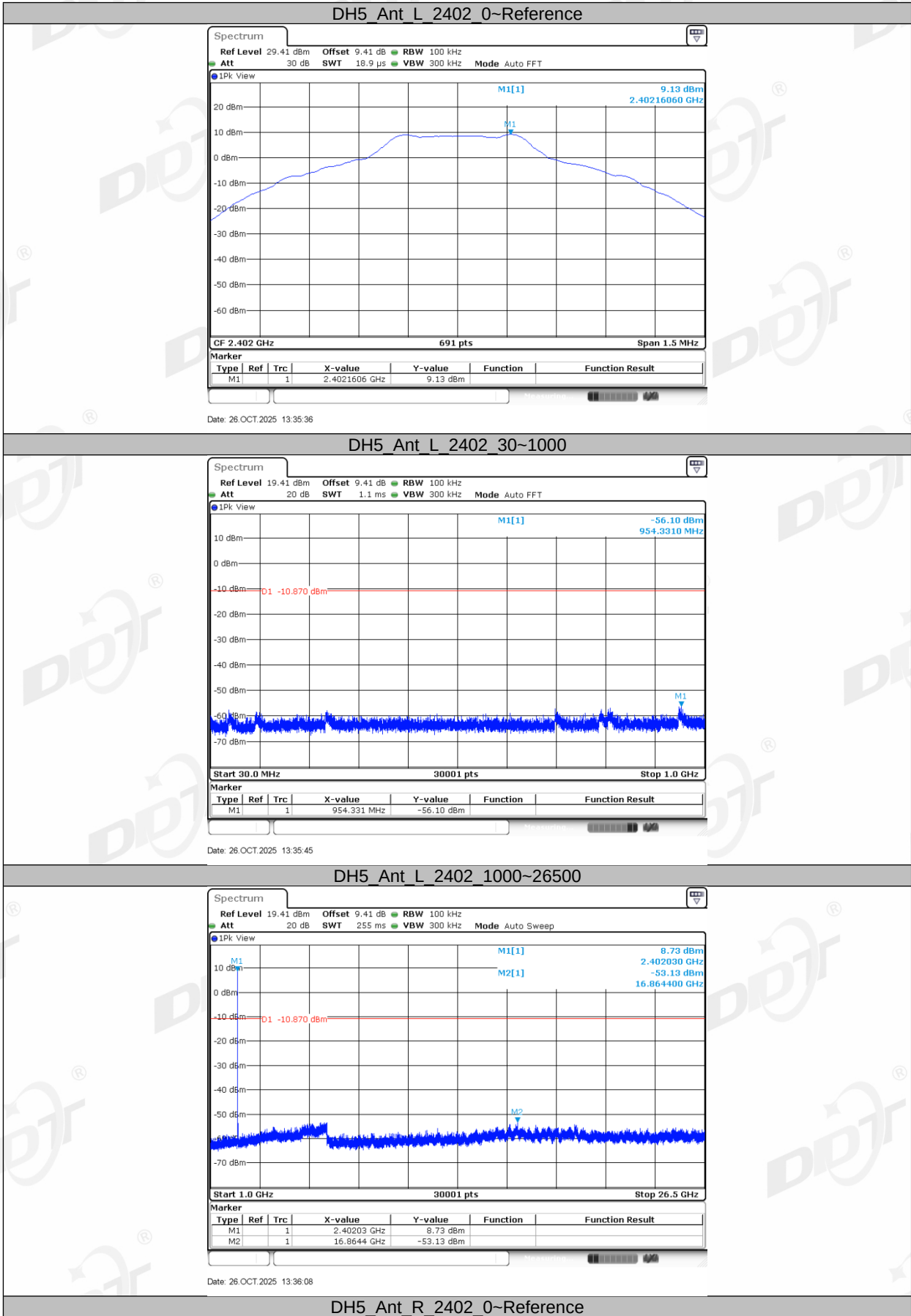
11.4. Test result

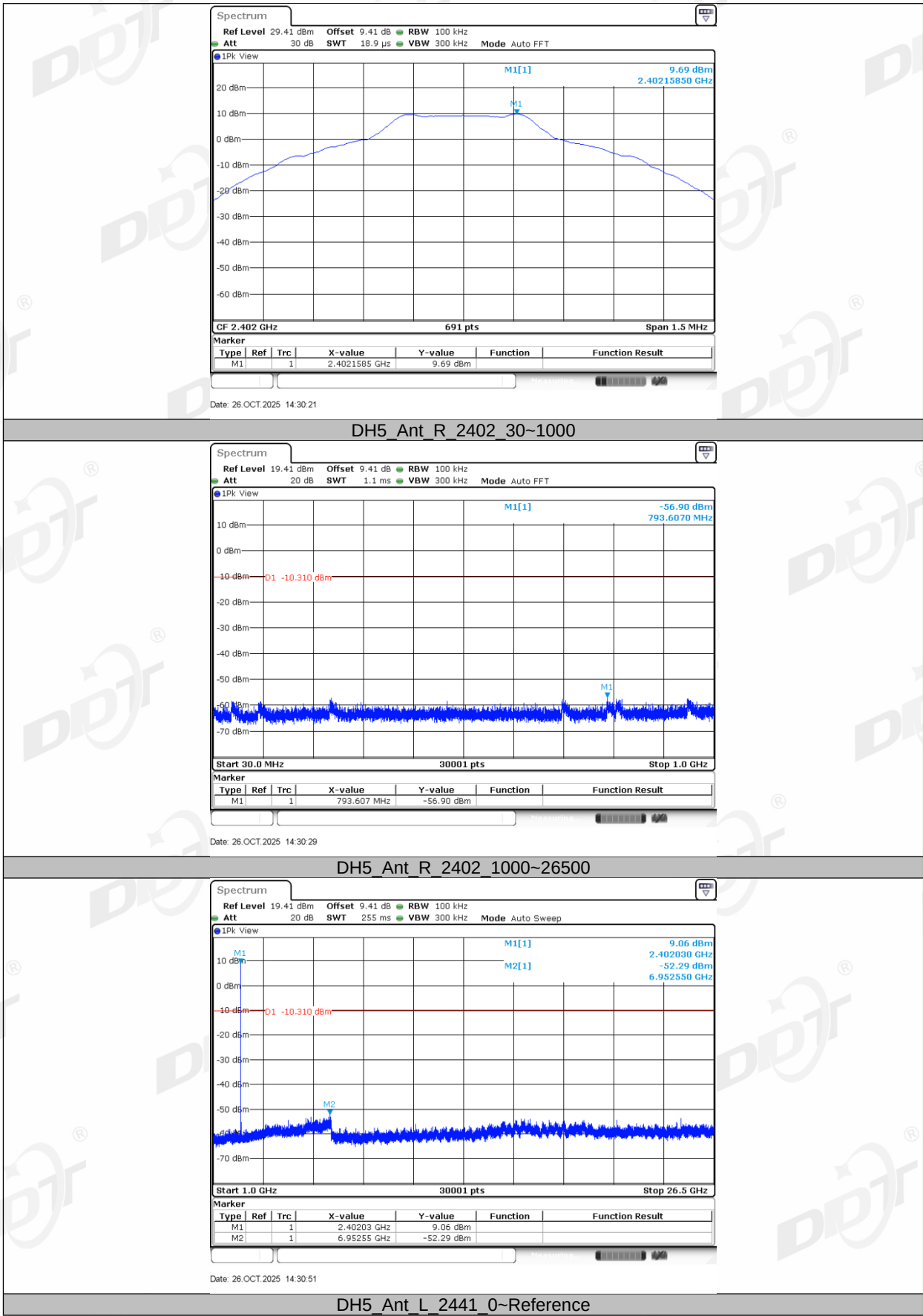
Test Engineer:	Zeng Zhongyao	Test Site:	RF Measurement System 3#
Ambient Condition:	25.1℃,33.2%RH	Test Date:	2025.10.26
Test Power Battery		Sample Number:	s25041650-010

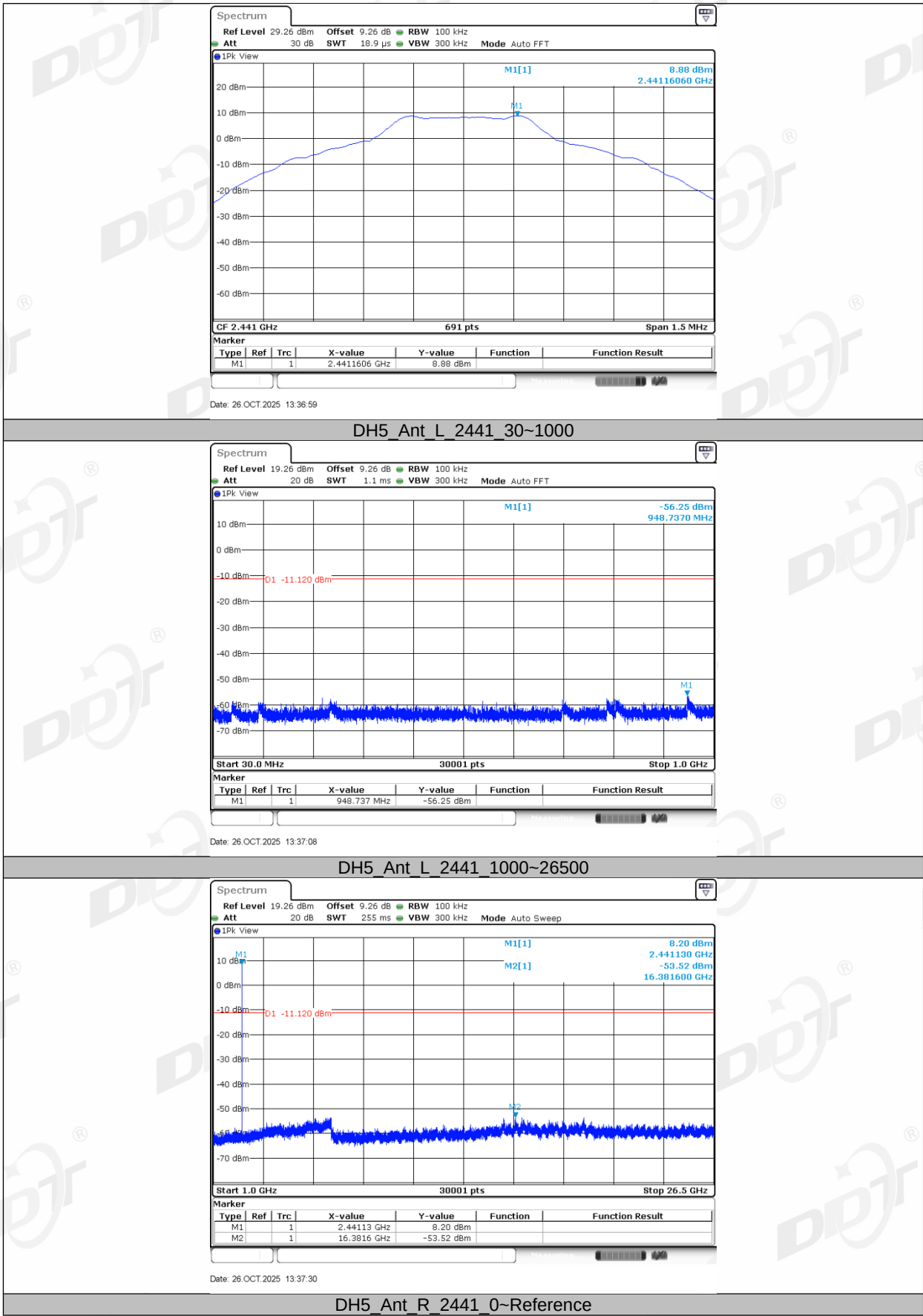
Supply:			
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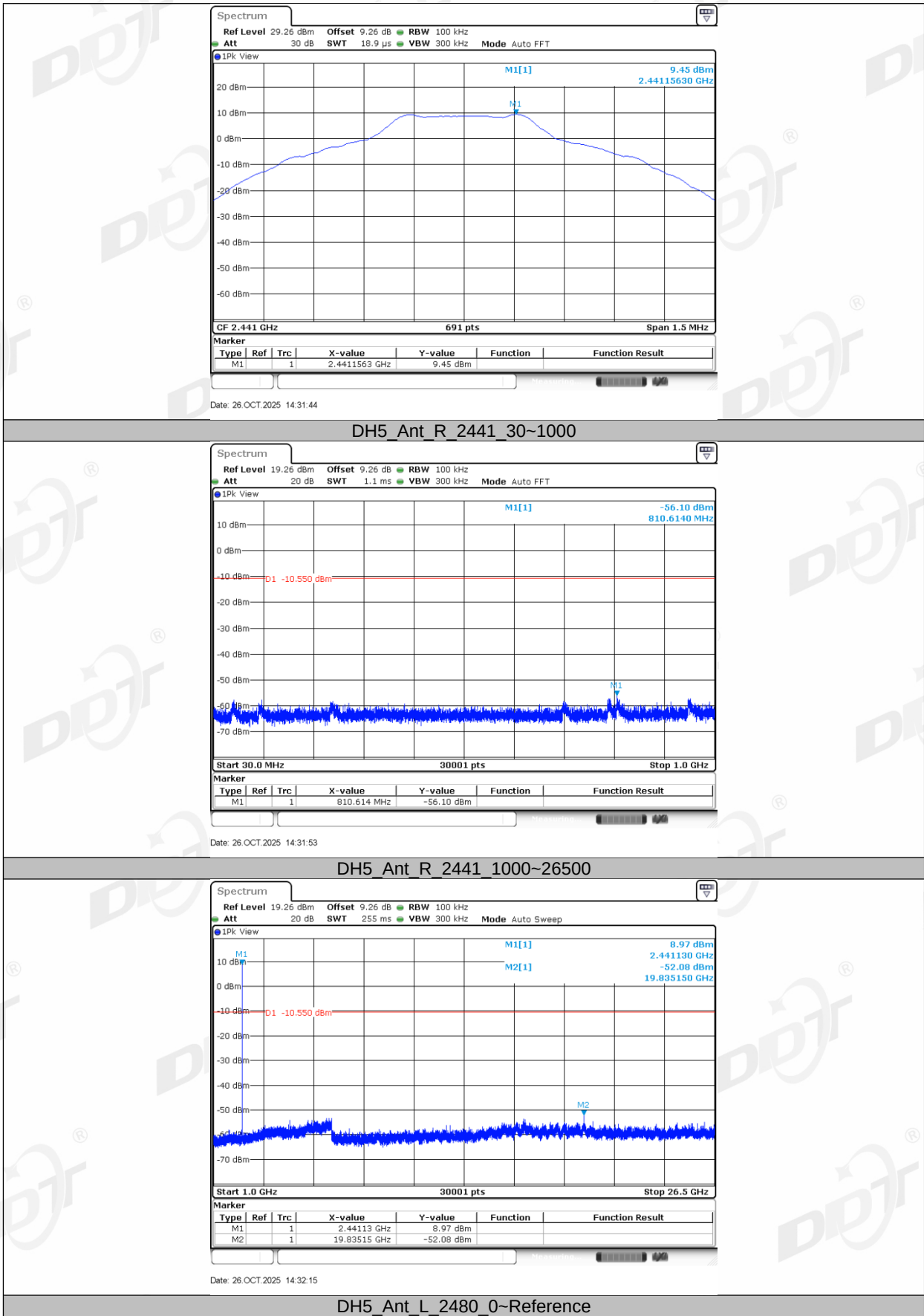
Mode	Freq. (MHz)	Verdict
GFSK	Hopping off 2402	Pass
	Hopping off 2441	Pass
	Hopping off 2480	Pass
$\pi/4$ -DQPSK	Hopping off 2402	Pass
	Hopping off 2441	Pass
	Hopping off 2480	Pass
8DPSK	Hopping off 2402	Pass
	Hopping off 2441	Pass
	Hopping off 2480	Pass

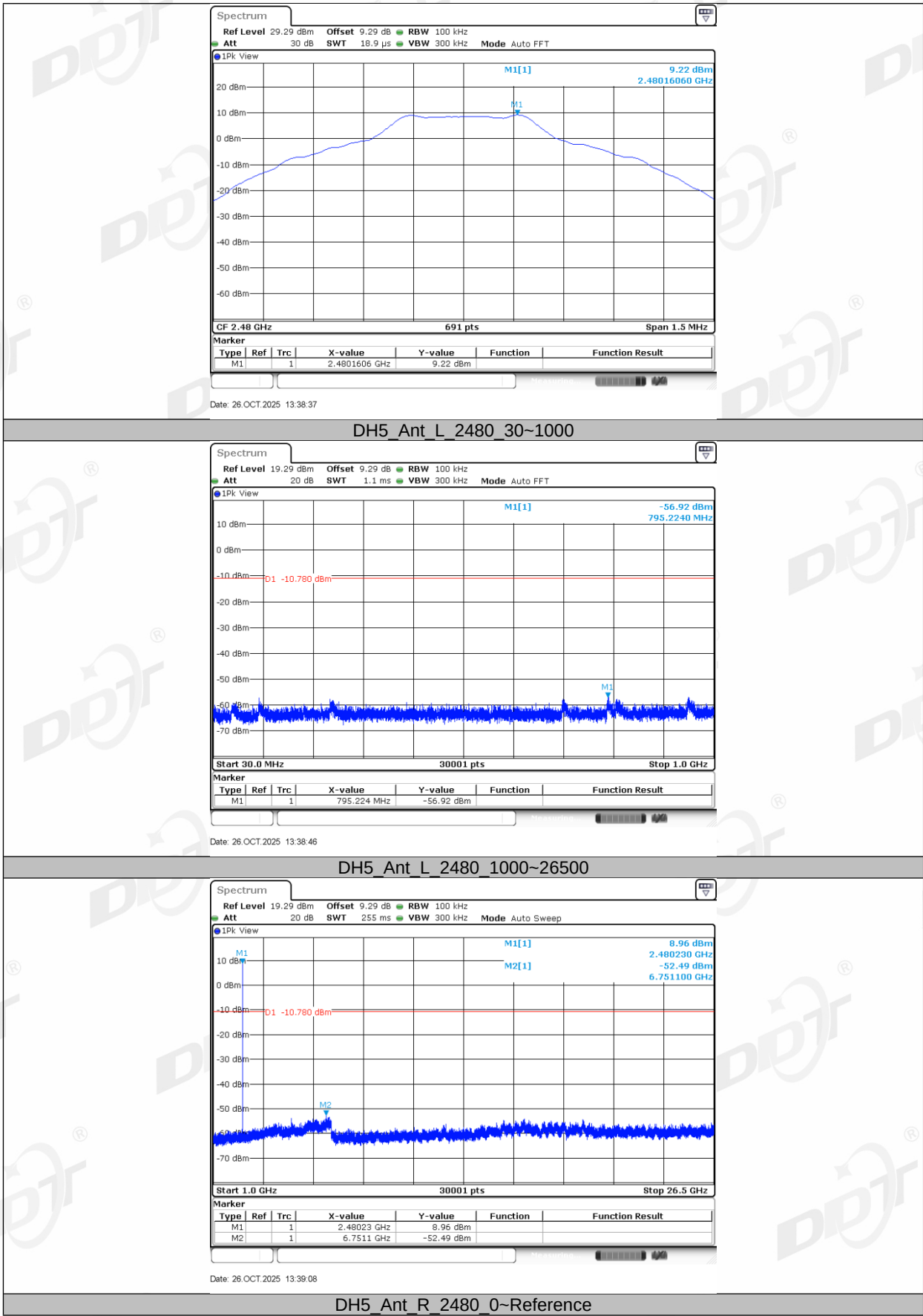
11.5. Test graphs

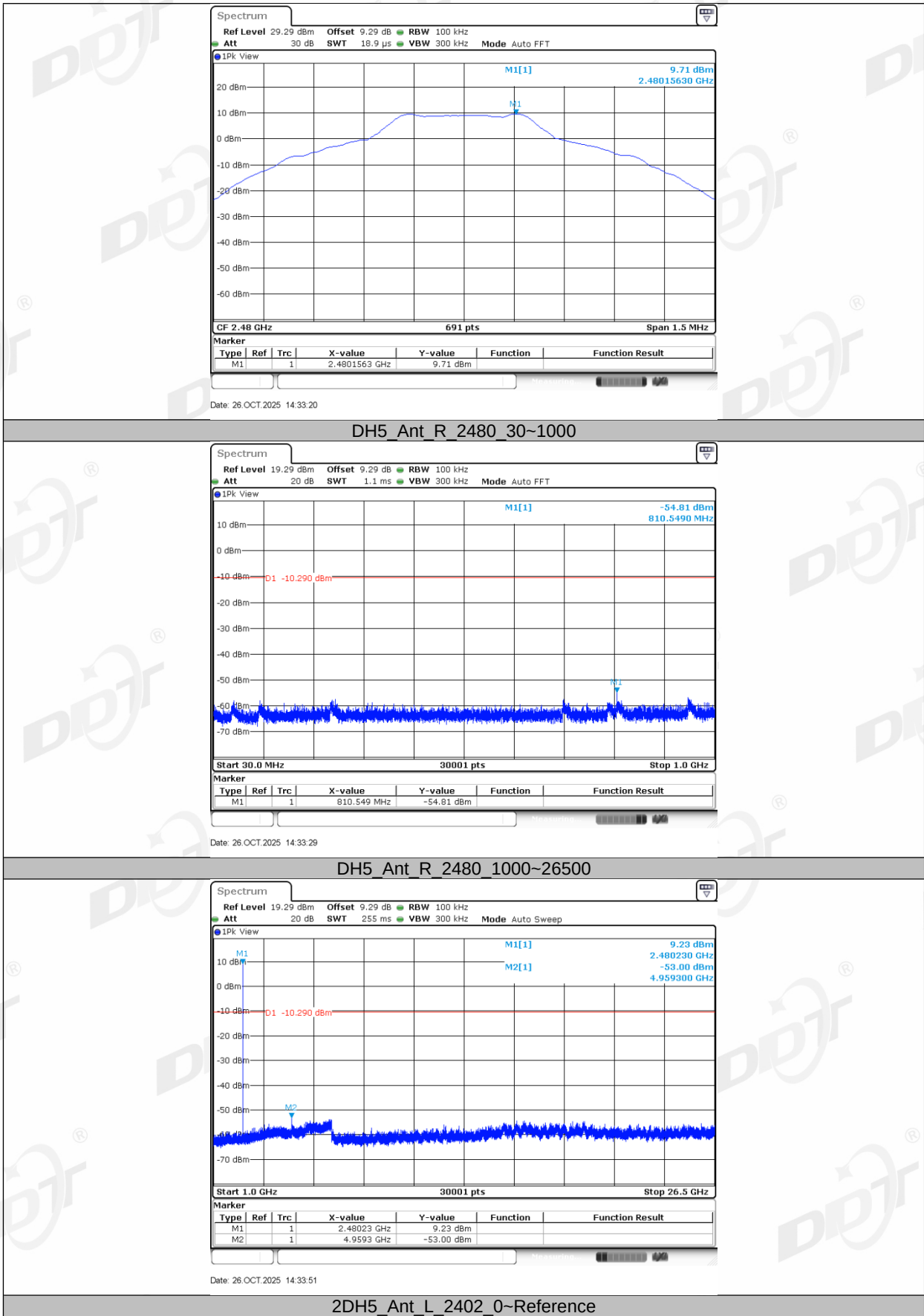


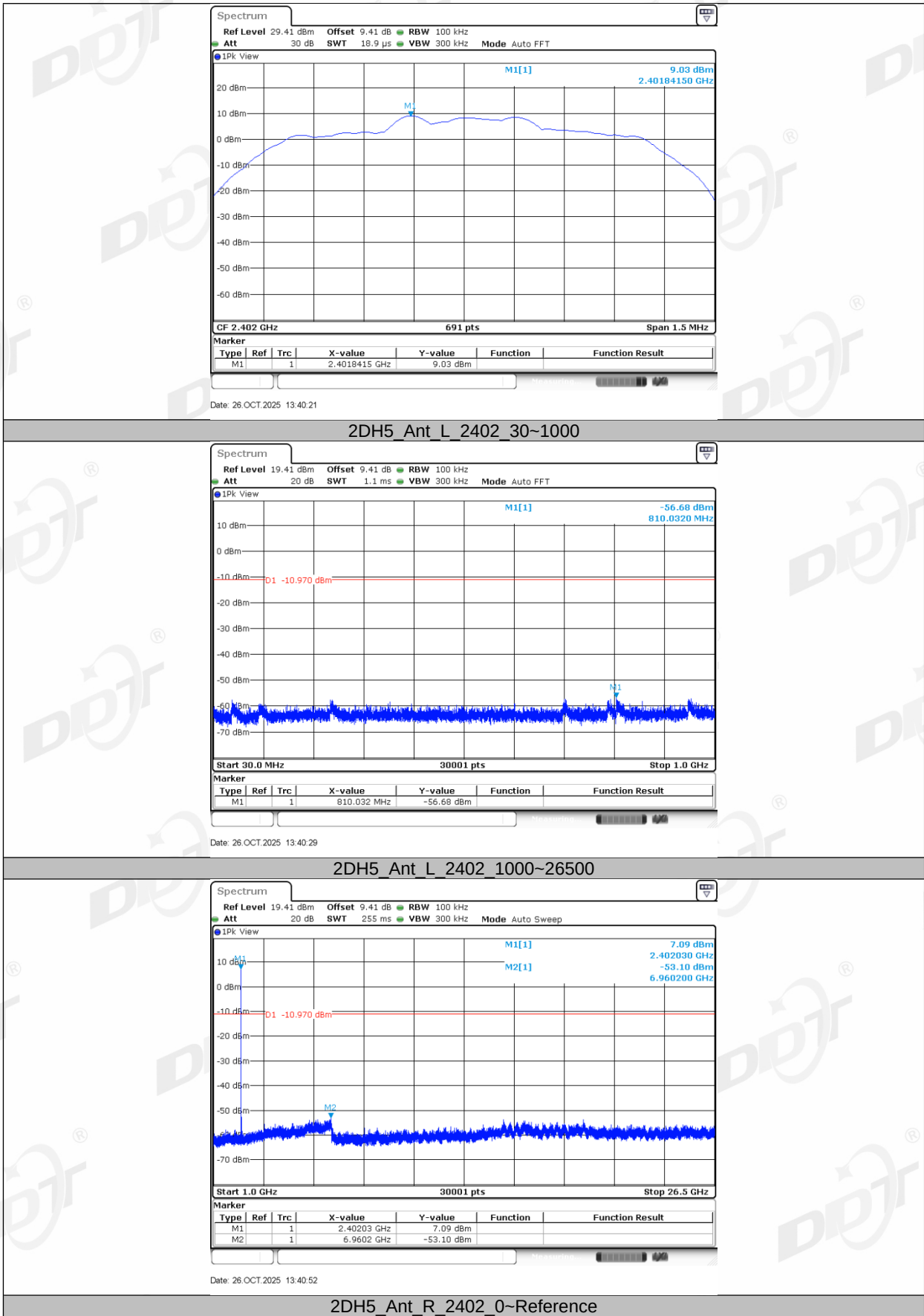


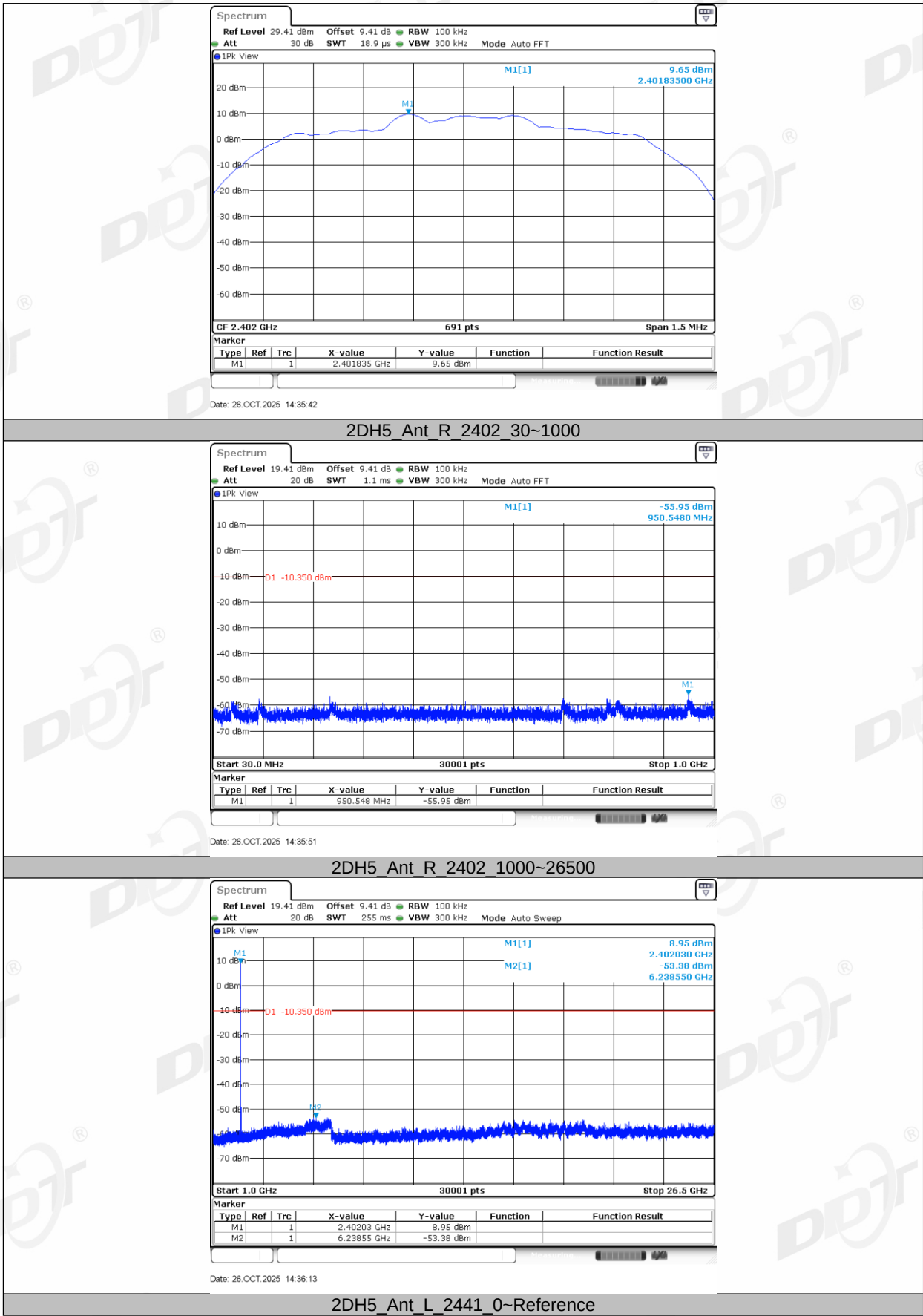


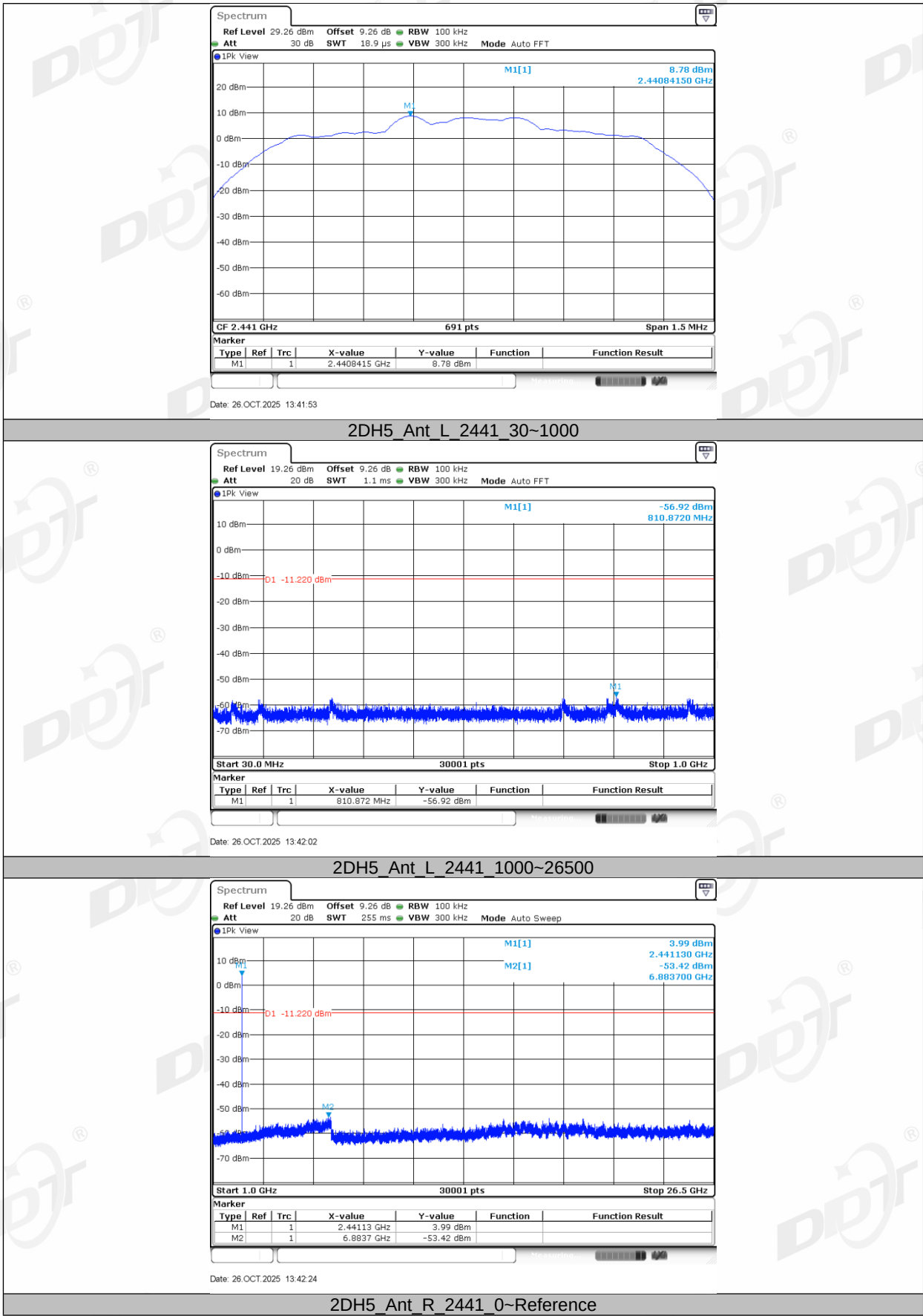


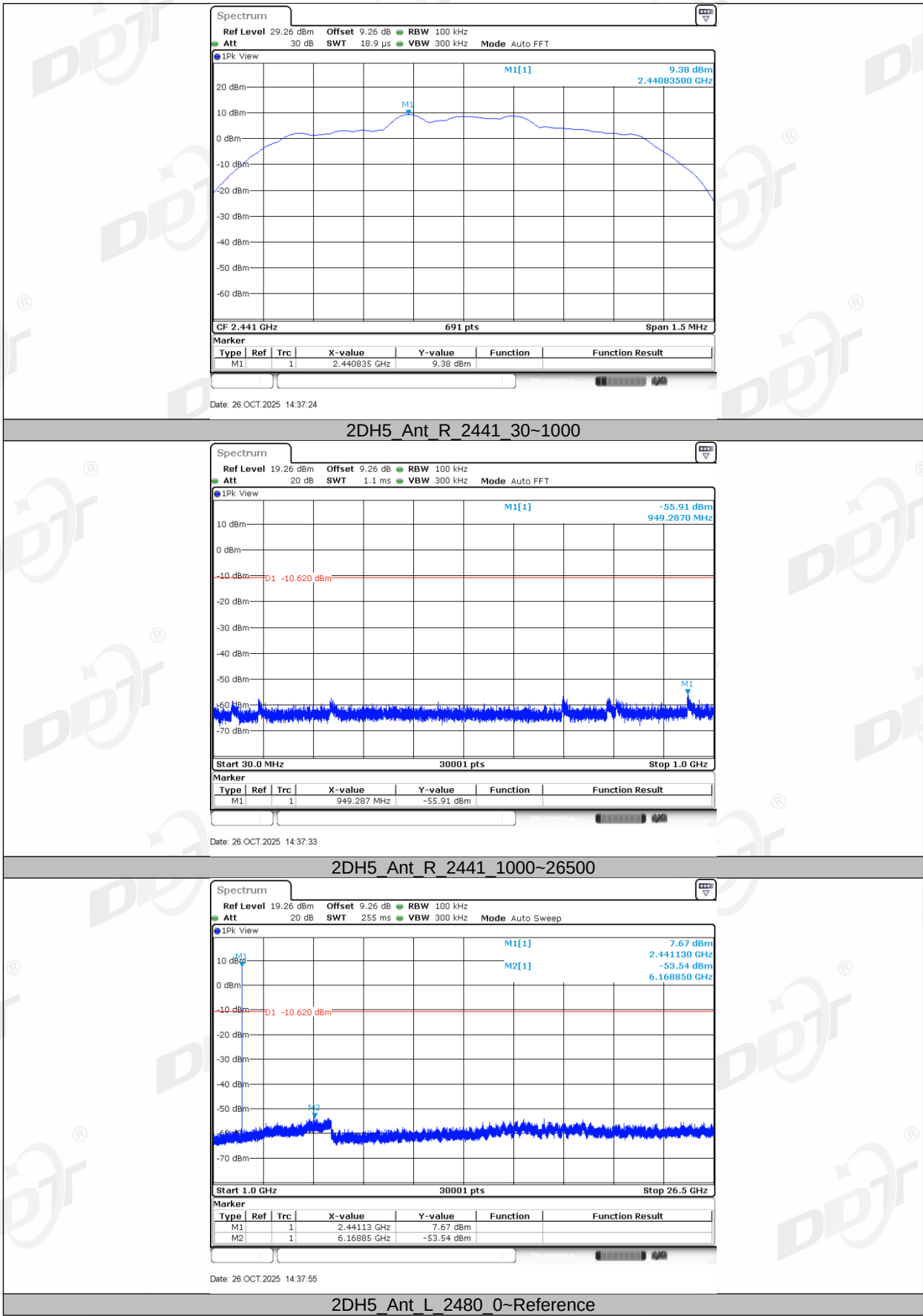


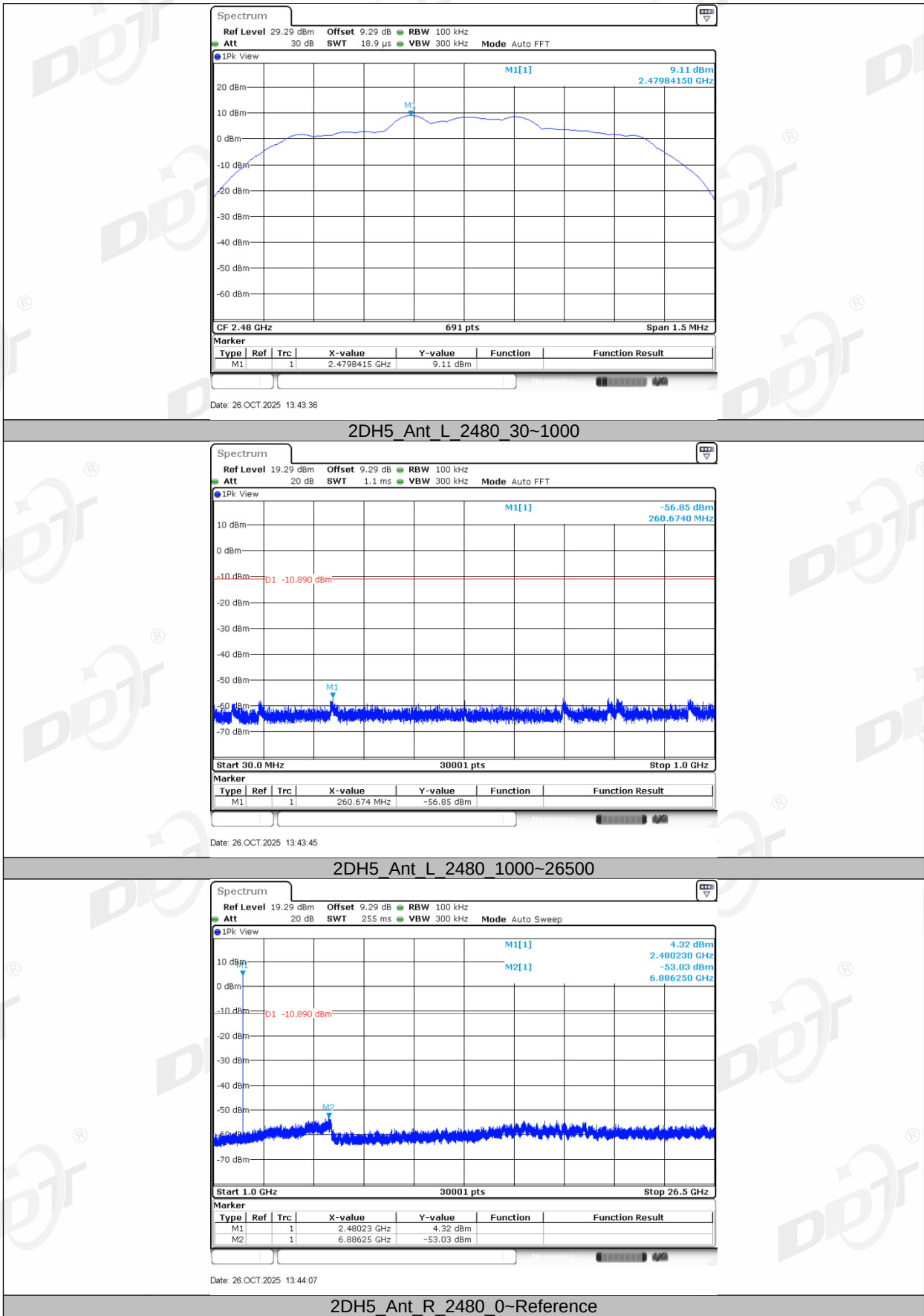


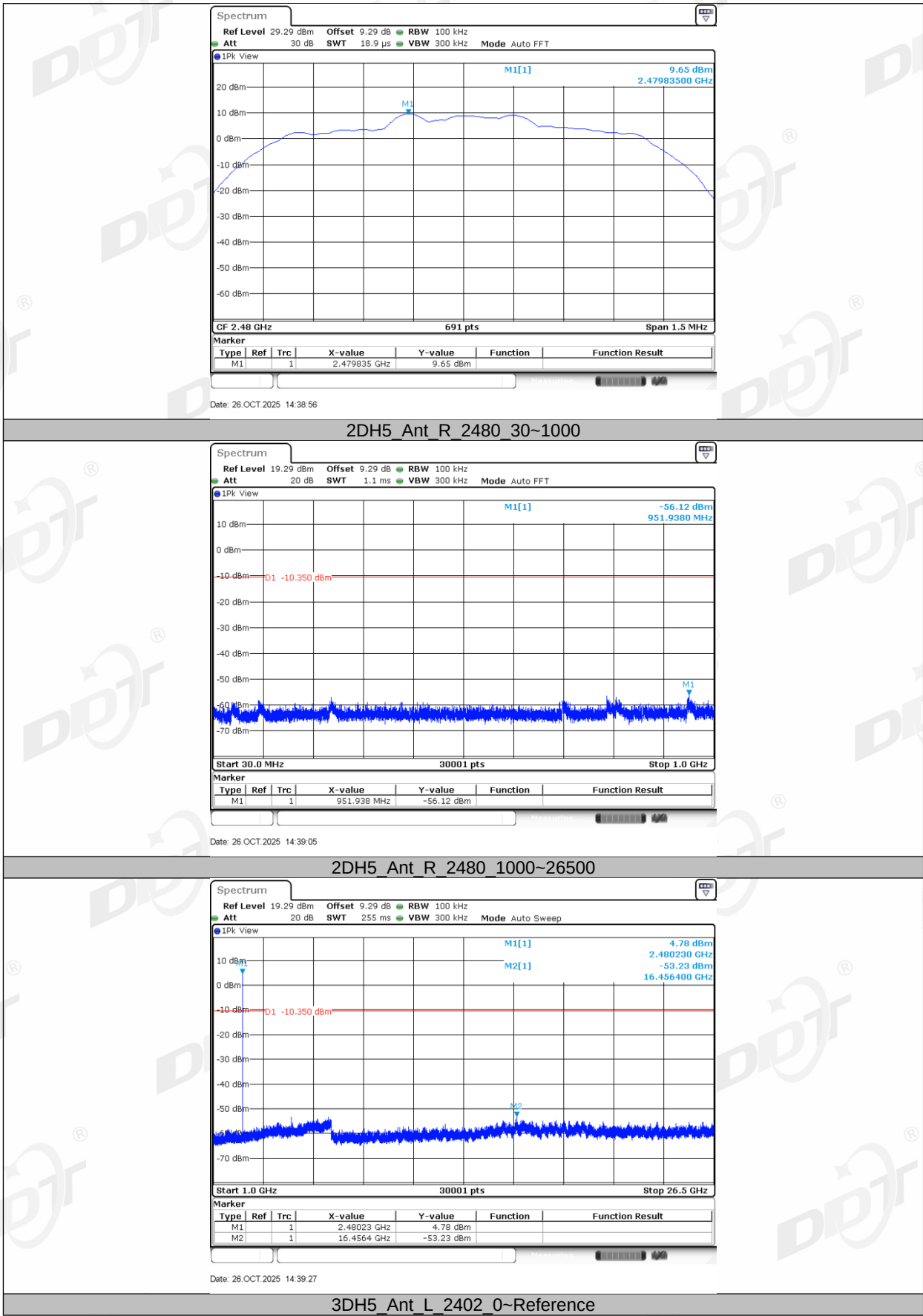


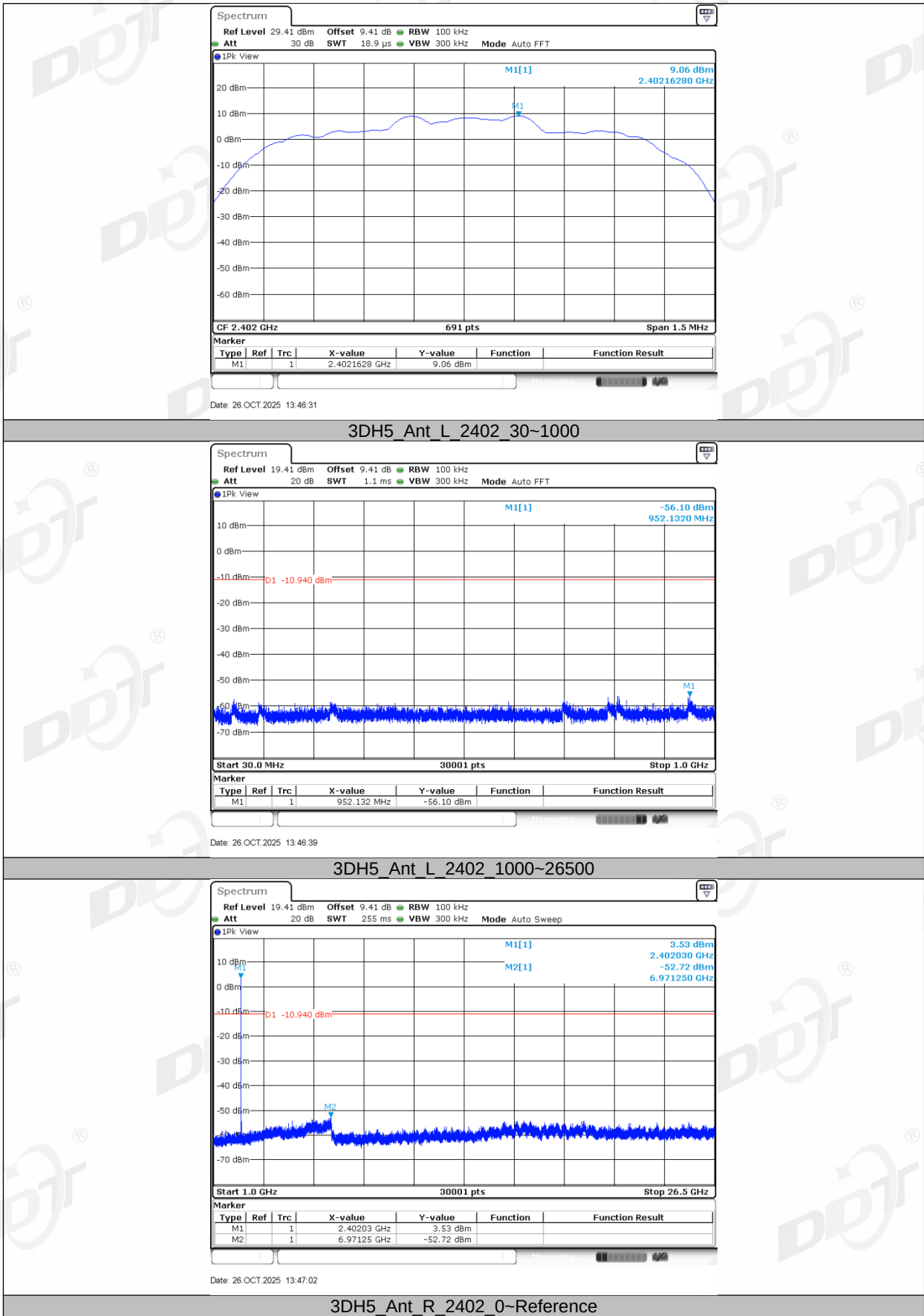




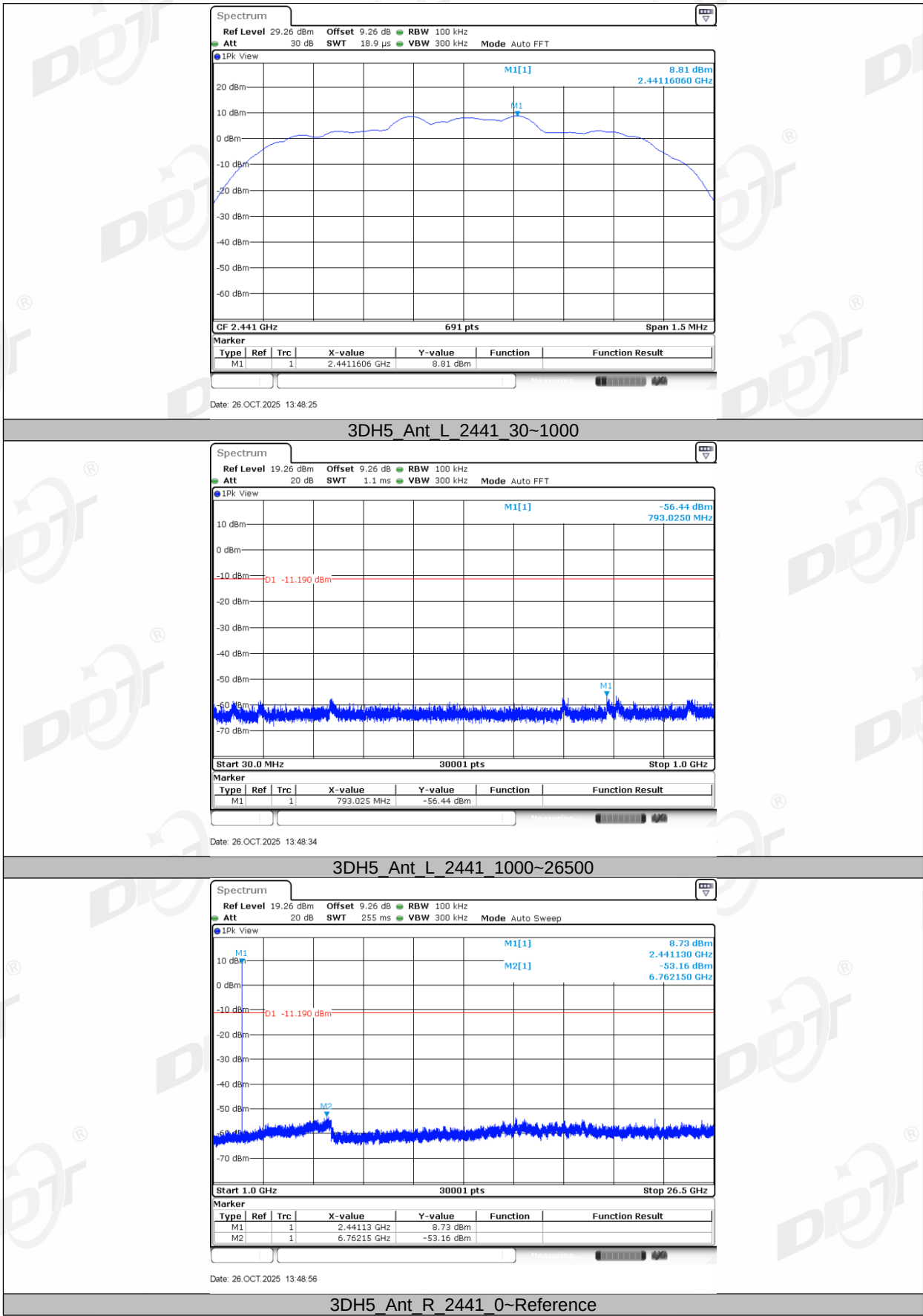


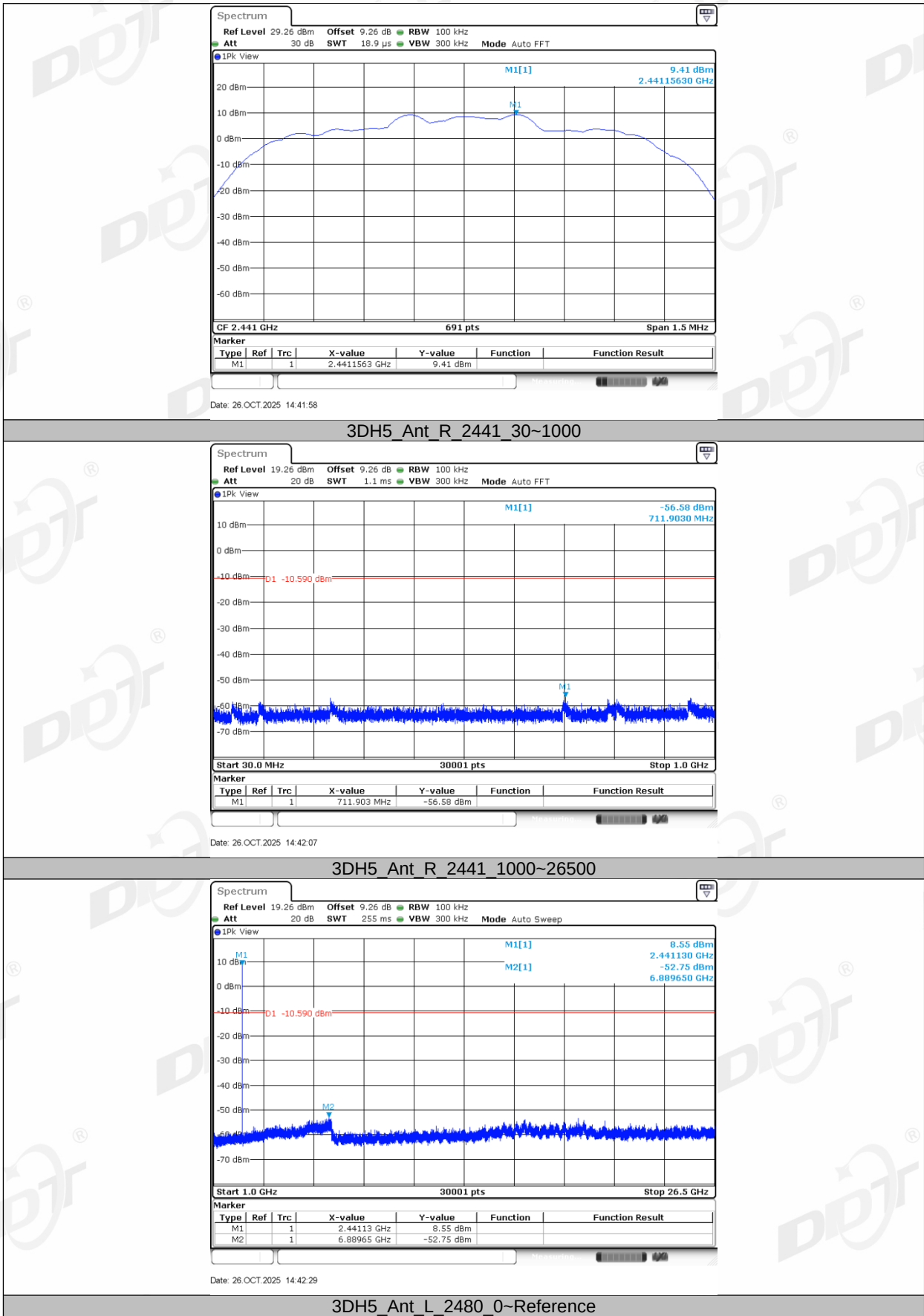




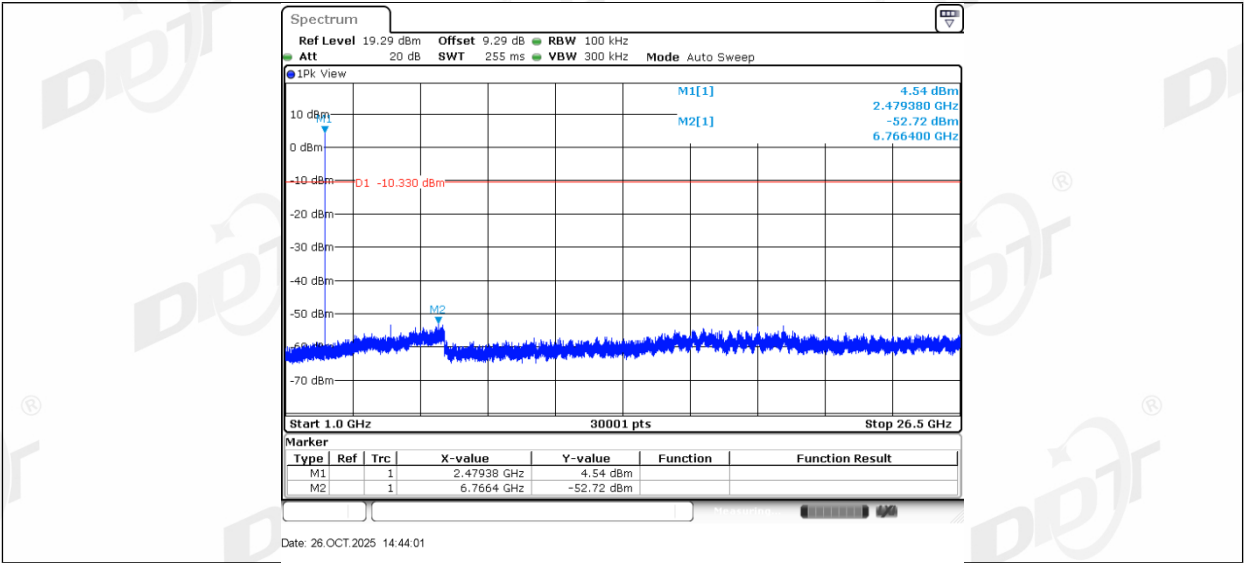






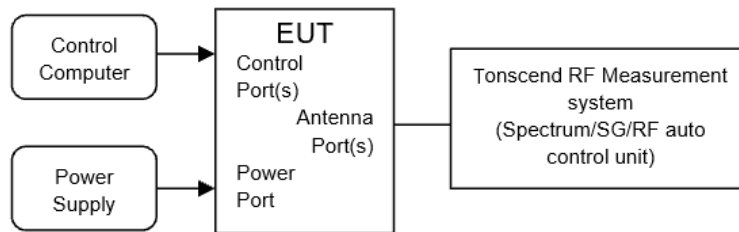






12. Duty cycle

12.1. Block diagram of test setup



12.2. Limit

Just for Report.

12.3. Test procedure

- (1) Connected the EUT's antenna port to the Spectrum Analyzer by suitable attenuator, The cable loss and attenuator loss have been put into spectrum analyzer as amplitude offset.
set the Spectrum Analyzer as below:
Centre Frequency: The centre frequency of the middle hopping channel.
Resolution BW: 10 MHz.
Video BW: 10 MHz.
Span: Zero span.
Detector: Peak.
Trace Mode: Clear Write.
Sweep: Video Trigger
- (2) When the trace is complete, measure the sending time of 1 burst and the duty cycle of 1 burst cycle.
- (3) Calculate dwell time follow below formula:
$$\text{Duty cycle} = \text{Pulse's on time} / \text{Burst cycle}$$

12.4. Test result

Test Engineer:	Zeng Zhongyao	Test Site:	RF Measurement System 3#
Ambient Condition:	25.1℃,33.2%RH	Test Date:	2025.10.26
Test Power Supply:	Battery	Sample Number:	s25041650-010

Test Mode	Antenna	Frequency [MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor[dB]
DH5	Ant_L	2402	2.89	3.75	77.07	1.13
	Ant_R	2402	2.89	3.75	77.07	1.13
	Ant_L	2441	2.89	3.75	77.07	1.13
	Ant_R	2441	2.89	3.75	77.07	1.13
	Ant_L	2480	2.89	3.76	76.86	1.14
	Ant_R	2480	2.89	3.75	77.07	1.13
2DH5	Ant_L	2402	2.88	3.75	76.80	1.15
	Ant_R	2402	2.89	3.75	77.07	1.13
	Ant_L	2441	2.89	3.76	76.86	1.14
	Ant_R	2441	2.88	3.76	76.60	1.16
	Ant_L	2480	2.88	3.75	76.80	1.15
	Ant_R	2480	2.89	3.76	76.86	1.14
3DH5	Ant_L	2402	2.88	3.75	76.80	1.15
	Ant_R	2402	2.88	3.75	76.80	1.15
	Ant_L	2441	2.89	3.76	76.86	1.14
	Ant_R	2441	2.88	3.76	76.60	1.16
	Ant_L	2480	2.89	3.75	77.07	1.13
	Ant_R	2480	2.89	3.75	77.07	1.13