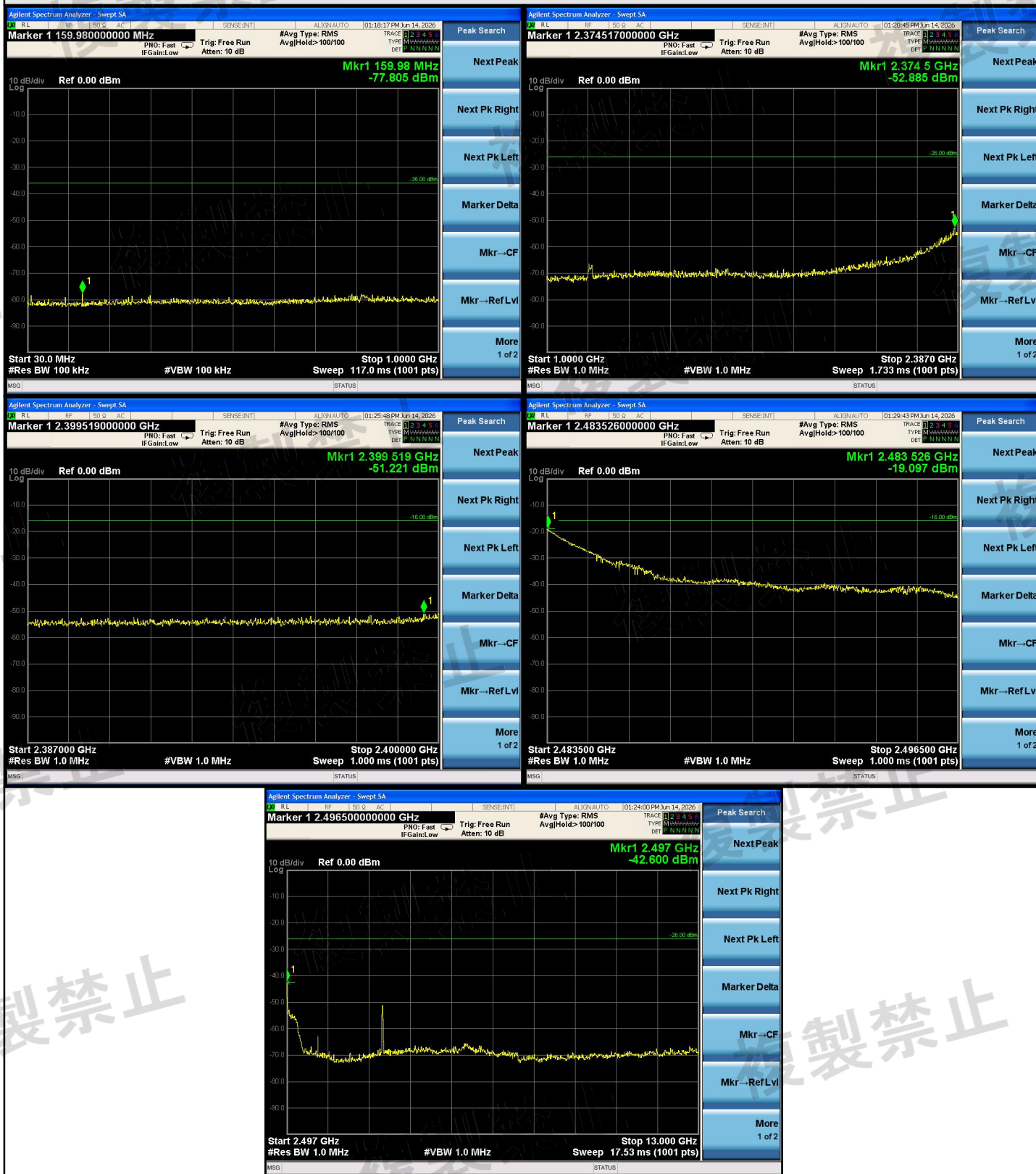
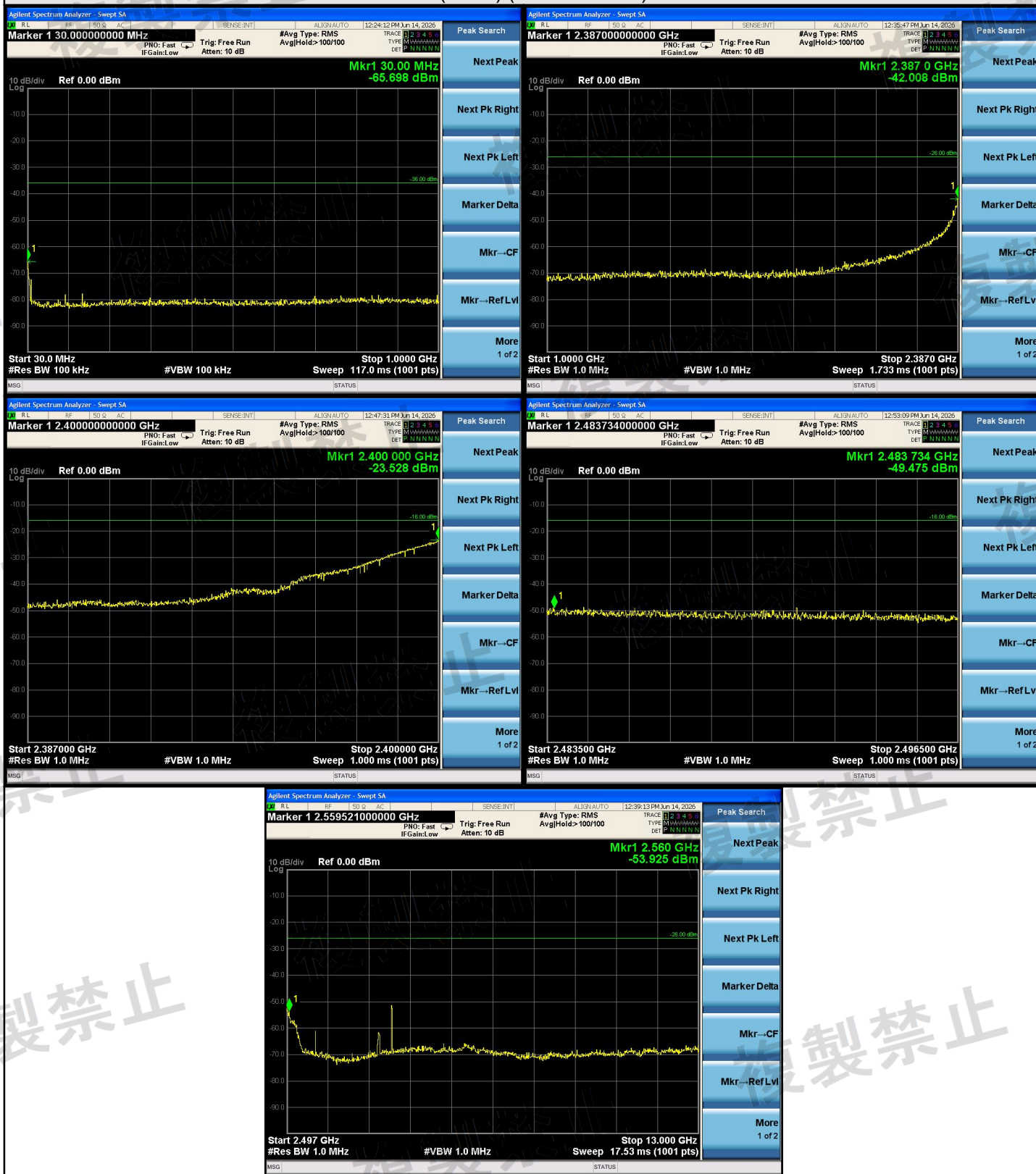


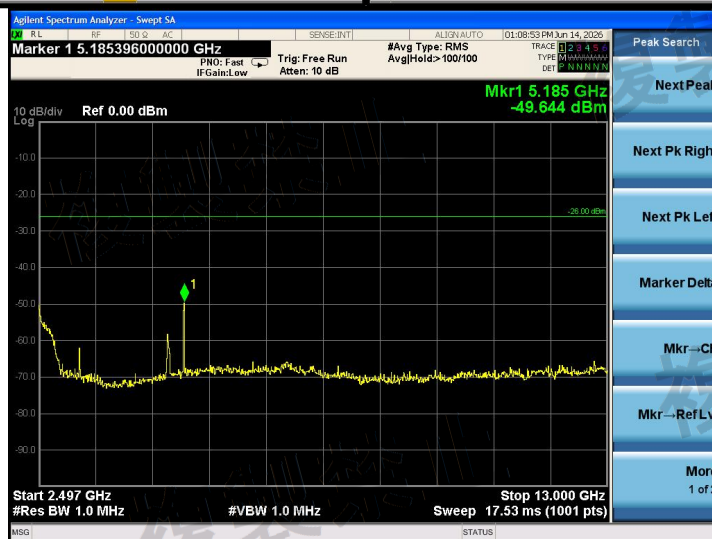
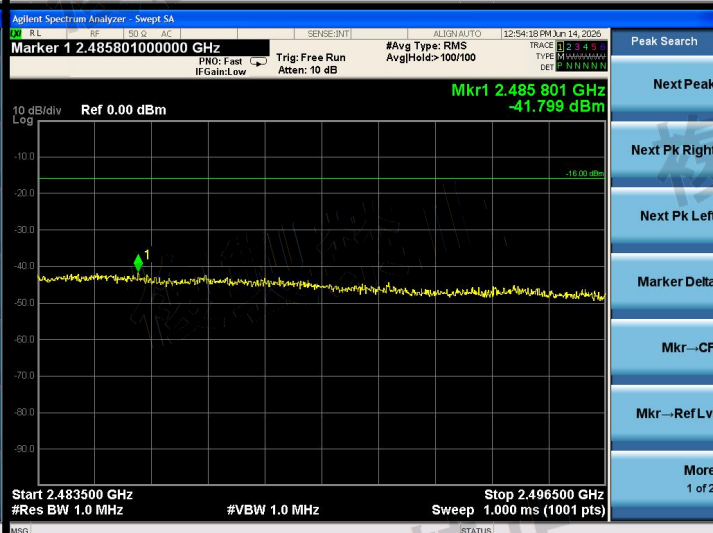
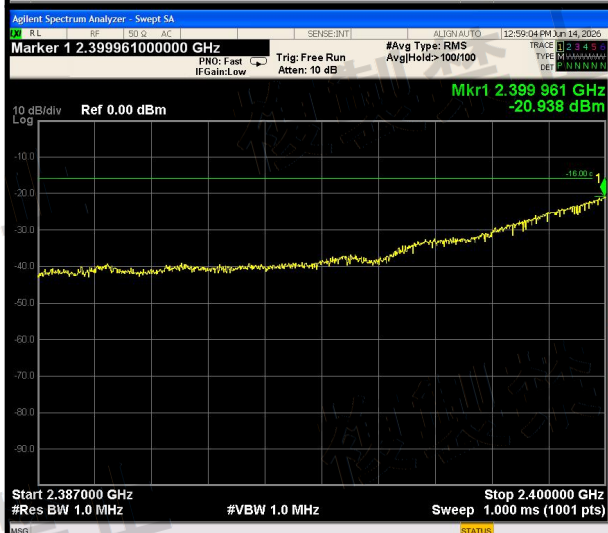
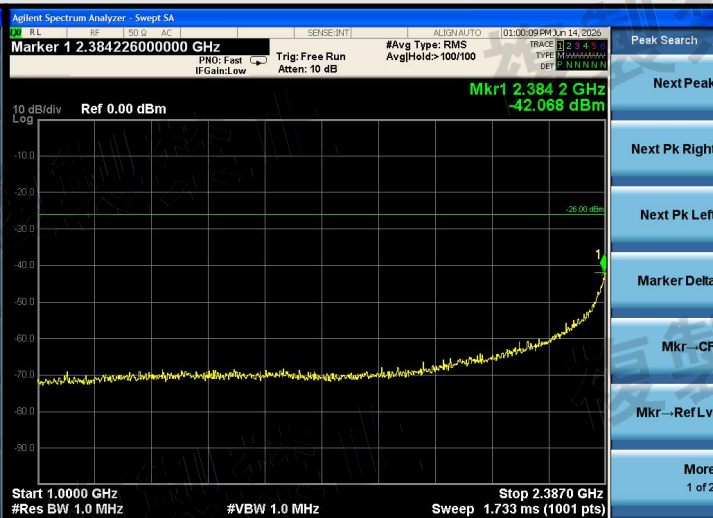
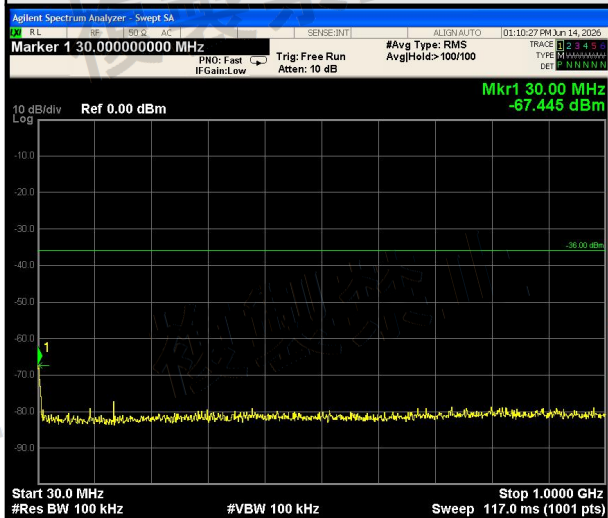
11n (HT20)(Channel:2472)



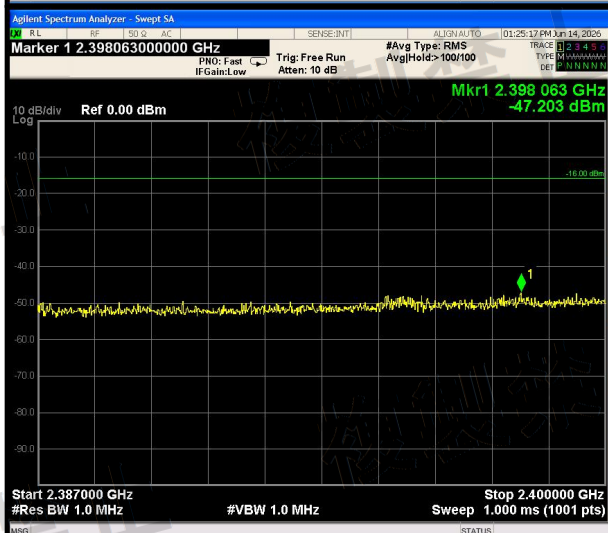
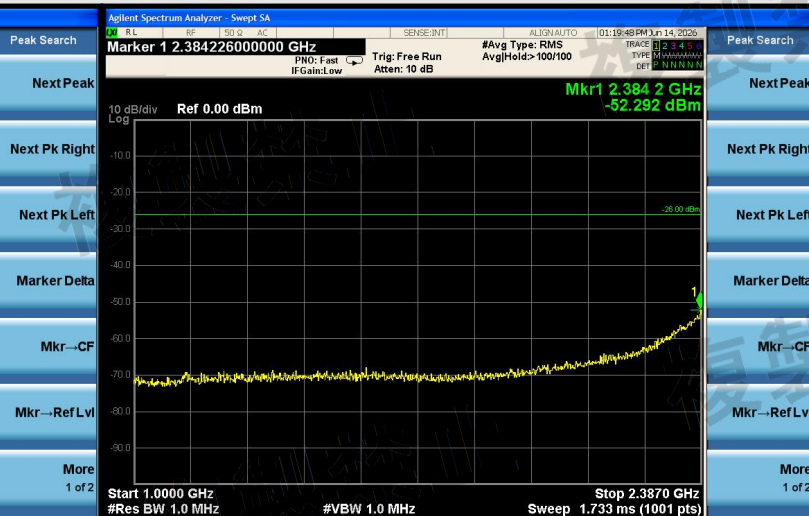
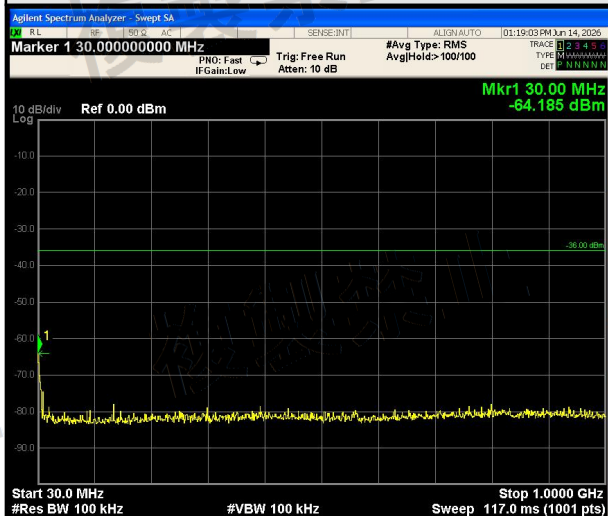
11n (HT40) (Channel:2422)



11n (HT40) (Channel:2442)



111n (HT40) (Channel:2462)

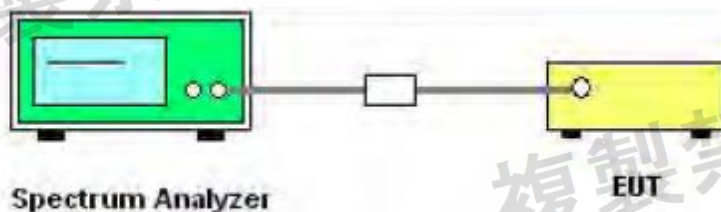


8. SECONDARY RADIATED EMISSIONS

8.1 LIMIT

Item	Limits
RX Spurious Emission	Below 1GHz $\leq$ 4nW (-54dBm)
	1 GHz or higher $\leq$ 20nW (-47dBm)

8.2 TEST SETUP



8.3 MEASURING EQUIPMENT CONDITIONS

Spectrum Parameter	Setting
Attenuation	Auto
RB/VB	100 kHz / 100 kHz (Below 1GHz) 1 MHz / 1 MHz (1 GHz or higher)
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

8.4 MEASURING OPERATION PROCEDURES

- EUT have the continuous reception mode and fixed only one channelize.
- Setting of SA is following as: RB:100KHz / VB:100KHz(Below 1G), RB:1MHz / VB:1MHz(Above1G)
- AT: 10dB / Ref: 0dBm / Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak / Trace mode: Max hold
- Setting of SA is following as 30MHz and stop frequency 1000MHz Then to mark peak reading value + cable loss shall be less than 4nW.
- SA adjusted to start frequency 1000MHz and stop frequency 12500MHz. Then to mark peak reading value + cable loss shall be less than 20nW.

Test Data(worst case):

Test Mode	Channel (MHz)	Band(MHz)	Frequency (MHz)	Max Value (dBm)	Max Value (nW)	Limit (nW)	Result
11b	2412	30-1000	320.03	-78.389	0.014491	4	PASS
		1000-12500	3221	-61.978	0.634162	20	PASS
	2442	30-1000	887.48	-78.532	0.014022	4	PASS
		1000-12500	3256	-63.373	0.459939	20	PASS
	2472	30-1000	320.03	-78.726	0.013409	4	PASS
		1000-12500	3291	-64.275	0.373680	20	PASS
11g	2412	30-1000	320.03	-78.648	0.013652	4	PASS
		1000-12500	3221	-61.840	0.654636	20	PASS
	2442	30-1000	320.03	-78.538	0.014002	4	PASS
		1000-12500	3256	-62.883	0.514873	20	PASS
	2472	30-1000	775.93	-79.378	0.011540	4	PASS
		1000-12500	3291	-64.596	0.347056	20	PASS
11n(HT20)	2412	30-1000	737.13	-80.161	0.009636	4	PASS
		1000-12500	3221	-62.183	0.604923	20	PASS
	2442	30-1000	320.03	-78.272	0.014887	4	PASS
		1000-12500	3256	-62.500	0.562341	20	PASS
	2472	30-1000	819.58	-78.855	0.013017	4	PASS
		1000-12500	3291	-64.202	0.380014	20	PASS
11n(HT40)	2422	30-1000	868.08	-78.389	0.014491	4	PASS
		1000-12500	3221	-62.105	0.615886	20	PASS
	2442	30-1000	320.03	-78.760	0.013305	4	PASS
		1000-12500	3233	-62.860	0.517607	20	PASS
	2462	30-1000	320.03	-78.927	0.012803	4	PASS
		1000-12500	3280	-64.058	0.392826	20	PASS

8.5 TEST RESULT

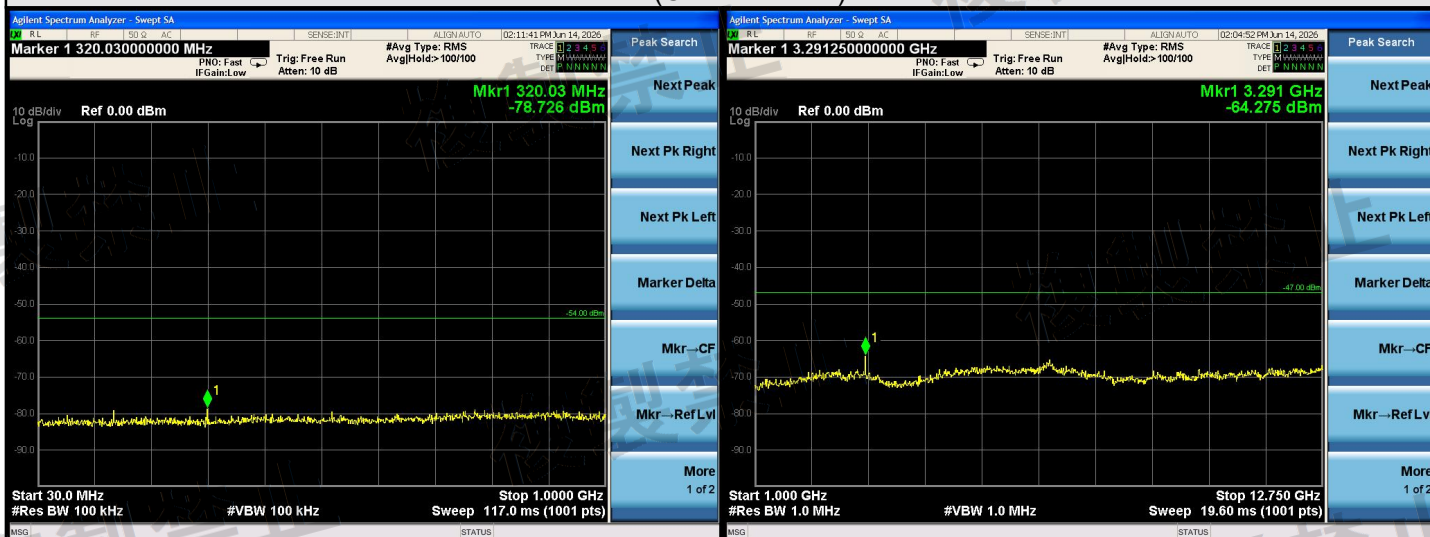
11b (Channel:2412)



11b (Channel:2442)



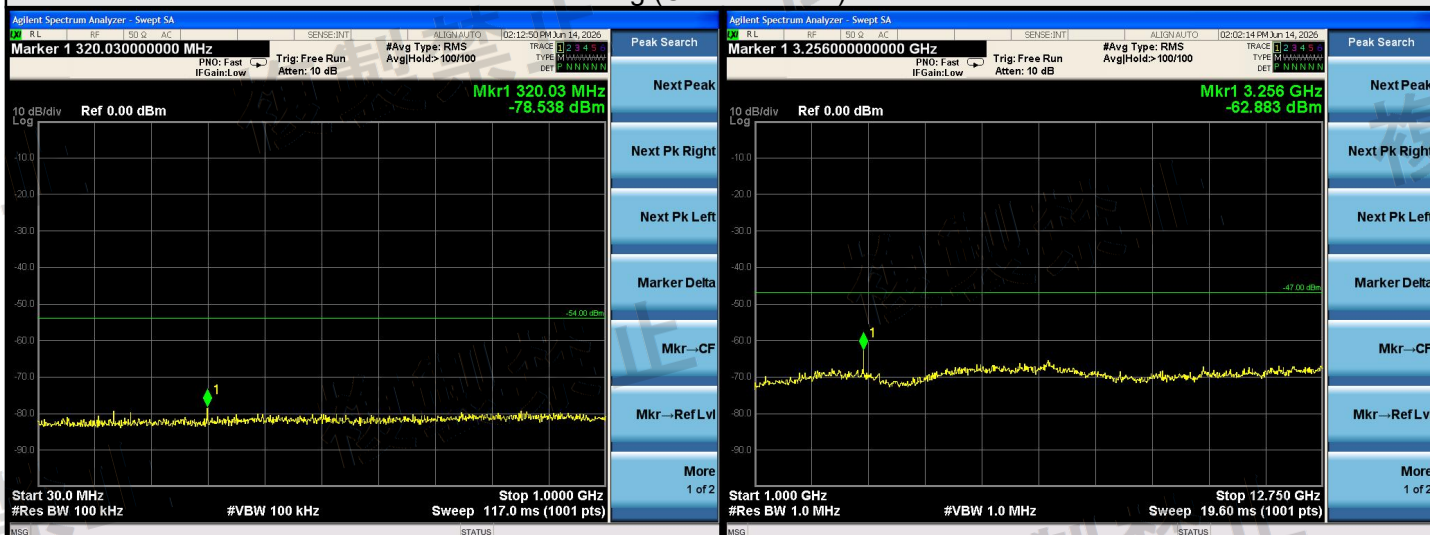
11b (Channel:2472)



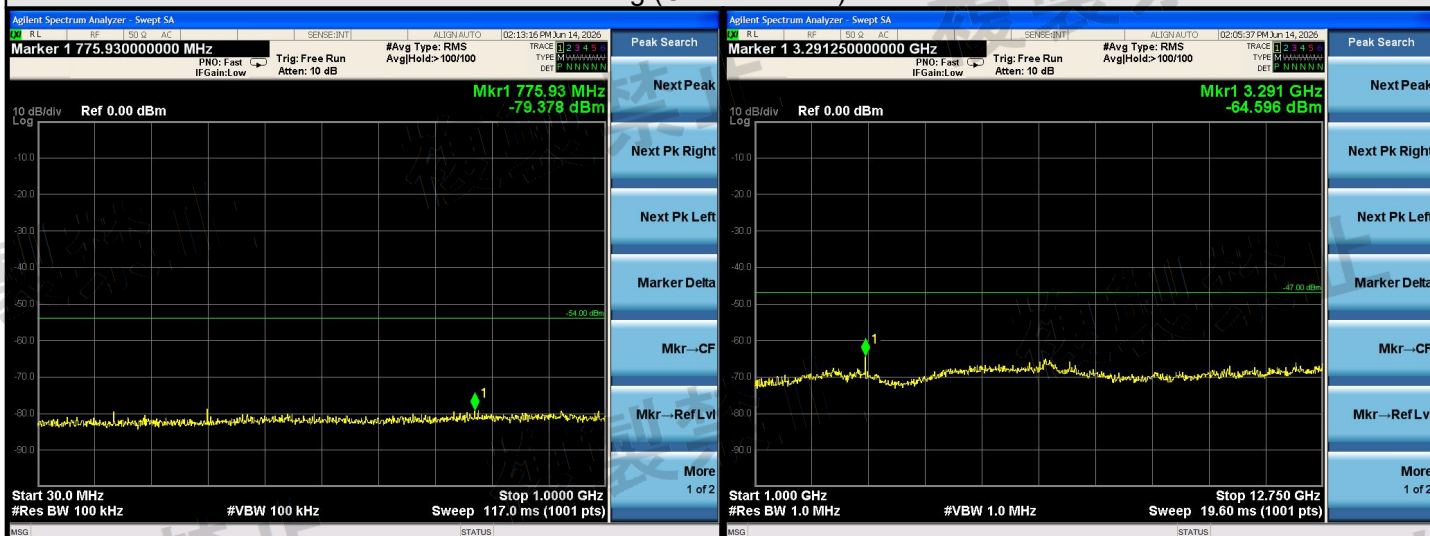
11g (Channel:2412)



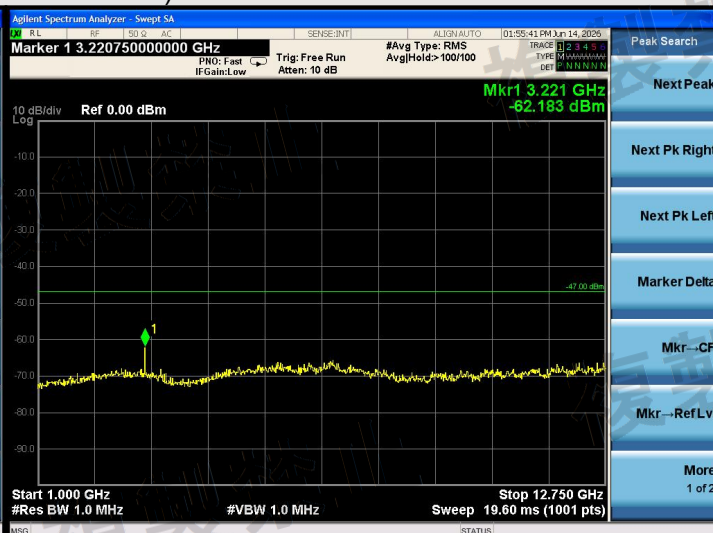
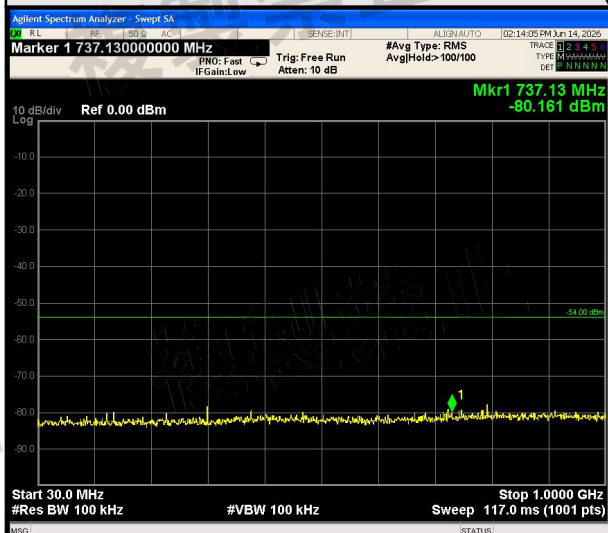
11g (Channel:2442)



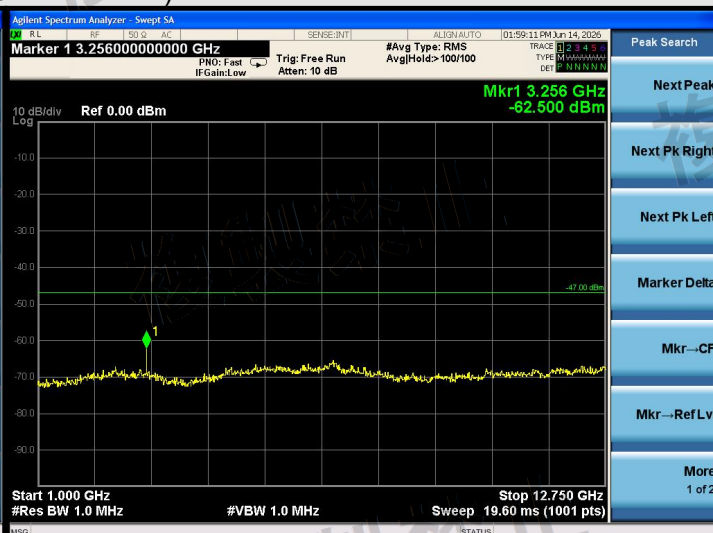
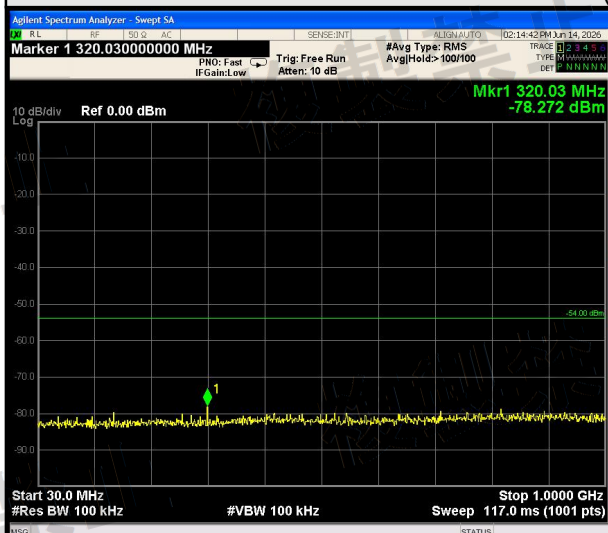
11g (Channel:2472)



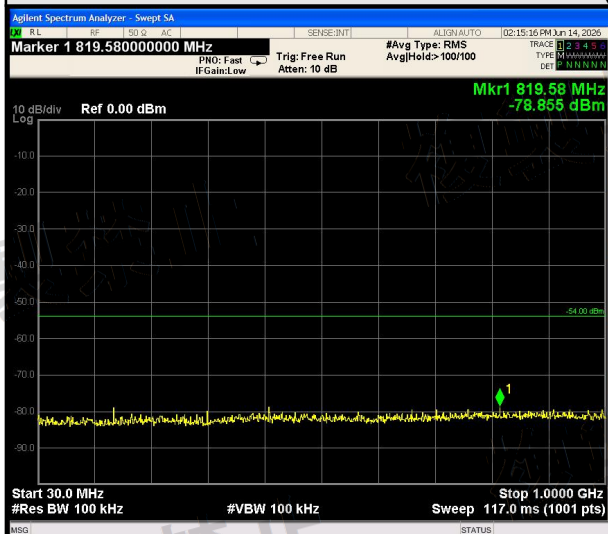
11n(HT20) (Channel:2412)



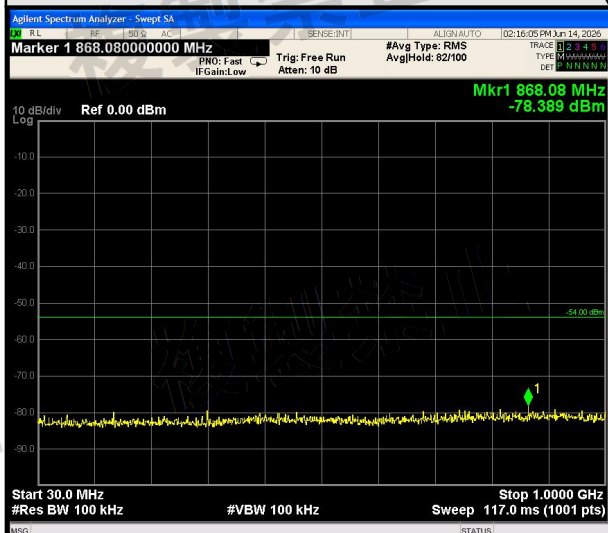
11n(HT20) (Channel:2442)



11n(HT20) (Channel:2472)



11n(HT40) (Channel:2422)

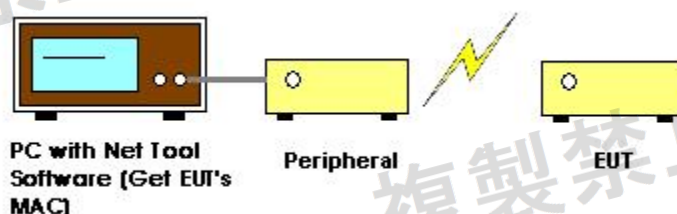


9. INTERFERENCE PREVENTION FUNCTION

9.1 LIMIT

Item	Limits
Identification Code	≥48bits

9.2 TEST SETUP



9.3 MEASURING REQUIREMENT

1. The demodulator shall be able to demodulate the transmitting signal from the radio equipment and to display contents of the identification code.
2. The opposite equipment shall be able to transmit the identification code as same as the transmitting signal from the radio equipment

9.4 MEASURING OPERATION PROCEDURES

1. The radio equipment with automatic transmitting function of identification code
 - A. Transmit the assigned identification code from the radio equipment.
 - B. Confirm the identification code received by the demodulator.
2. The radio equipment with automatic receiving function of identification code
 - A. Transmit the assigned identification code from the opposite equipment.
 - B. Confirm that the usual communication is available.
 - C. Transmit the identification code distinct from the assigned one from the opposite equipment.
 - D. Confirm that the radio equipment is stopped or an indication is displayed as the identification code is different.

9.5 TEST RESULT

Identification Code	Length(bits)	Limit(bits)	Result
00:7F:1D:19:2C:49	48	≥48	Pass

10. CARRIER SENSING FUNCTION

10.1 LIMIT

Carrier sensing function ①

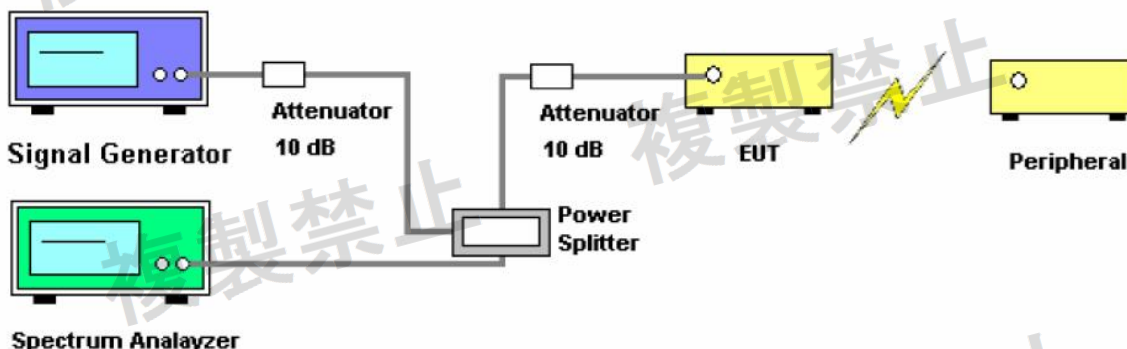
Apply to EIRP requires to be compensated through Antenna Power.

Carrier sensing function ②

Apply to the Occupied bandwidth within 26MHz-40MHz.

EUT stop RF transmission signal after carrier inject to EUT

10.2 TEST SETUP



10.3 MEASURING OPERATION PROCEDURES

1. SG adjusted the frequency as same as the EUT transmitted signal and emitted the absence of modulation from SG and power level is $(on\ 22.79dBm + G(dBi) - 20 \cdot \log(f)dBm)$ (G is antenna gain, dBi; f is test frequency, MHz).
2. turn off the RF signal of the SG.
3. EUT have transmitted the maximum modulation signal and fixed channelize.
4. Setting of SA :RBW/VBW=1MHz/1MHz, Span=50MHz, Sweep time=auto, Sweep mode=continuous, Detect mode=positive peak, SG RF signal on.
6. EUT shall be stop the transmitted any signal and SG RF signal off, the EUT will be continuous transmitted signal.

10.4 TEST RESULT

Test Voltage	DC 24V		
Test Mode	Test Frequency (MHz)	Interference Level (dBm)	Result
802.11n HT40	2422	-45.93	GOOD
	2442	-45.87	GOOD
	2462	-45.91	GOOD

11. TRANSMISSION RADIATION ANGLE WIDTH (3DB BEAMWIDTH) MEASUREMENT

11.1 LIMIT

Item	Limits
3dB antenna beam width	$360/A$ (If $A < 1$; then $A = 1$) $A = \{\text{EIRP Power [mW]} / 16.36 \text{ for DS, OFDM}\}$ or $A = \{\text{EIRP Power [mW]} / 4.9 \text{ for FH}\}$
Note: This test item is not applied for radio equipment with equivalent isotropic radiation power lower than 12.14dBm/MHz, but Antenna Power(Conducted) limit is 10 mW/MHz (10 dBm/MHz), So the test item will not be applied to the transmission antenna which has a gain of 2.14dBi or less	

11.2 MEASURING INSTRUMENTS AND SETTING

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	0 MHz
RBW	1 MHz
VBW	1 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

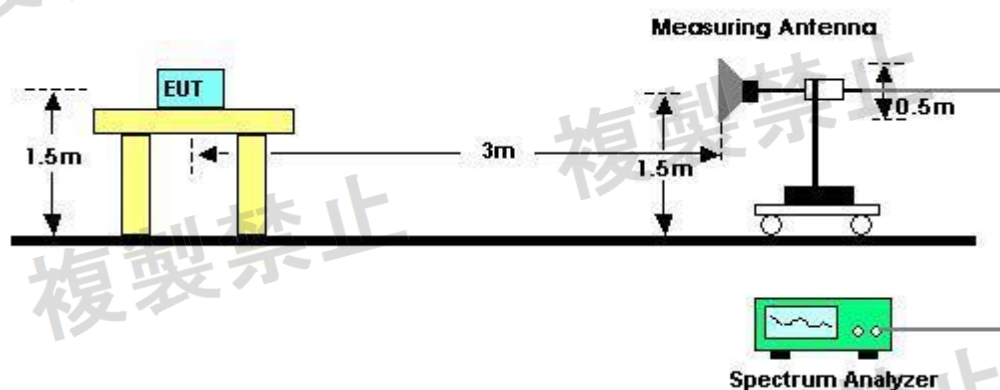
11.3 TEST PROCEDURES

- Set EUT and measuring antenna at the same height and roughly facing each other.
- Set spectrum analyzer with condition in section 4.7.2 and tune reference level to observe receiving signal position.
- Rotate directions of the EUT horizontally and vertically to find the maximum receiving power.
- Move the measuring antenna height up and down within $\pm 50\text{cm}$ of EUT height and swing it to find the maximum output of measuring antenna. The output level at the spectrum

analyzer is read as “E”

- e. Calculate permitted radiation angle in horizontal and vertical using EIRP measured in another test method.
- f. Calculate 3dB antenna beam width by the formula below $360/A$ (If $A < 1$; then $A = 1$).
 $A = \{\text{EIRP Power [mW]} / 16.36 \text{ for DS, OFDM}\}$ or $A = \{\text{EIRP Power [mW]} / 4.9 \text{ for FH}\}$

11.4 TEST SETUP LAYOUT



11.5 TEST RESULTS

N/A

Note: Since the calculated EIRP is lower than 12.14 dBm/MHz for 802.11b/g/n(HT20) and 9.13dBm/MHz for 802.11n(HT40), So there is no need to test.

---END---