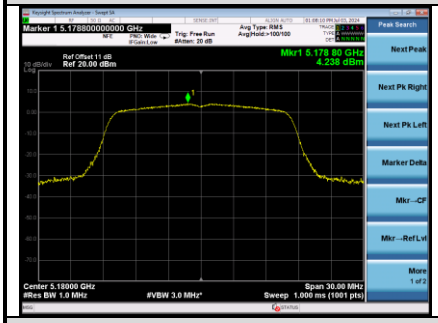
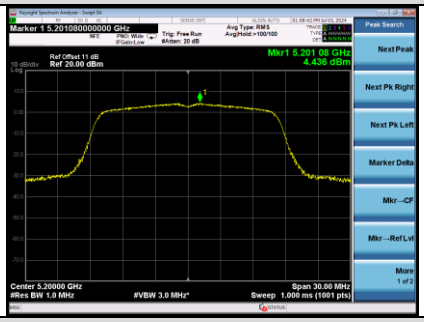
U-NII-1 Band		
IEEE 802.11a		
		
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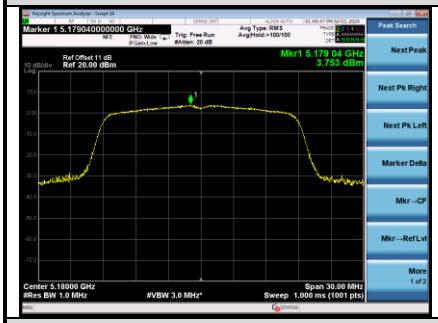	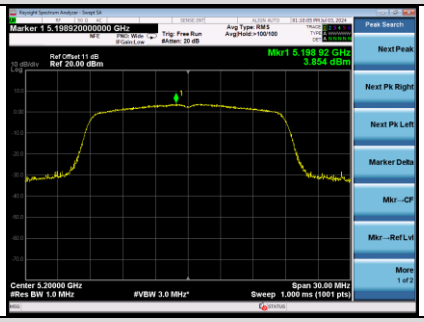	
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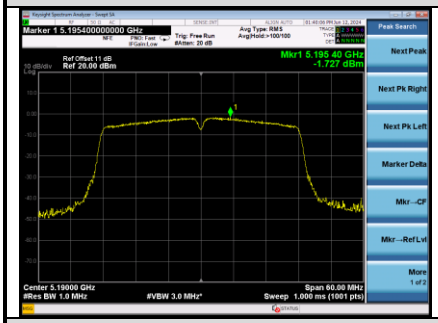	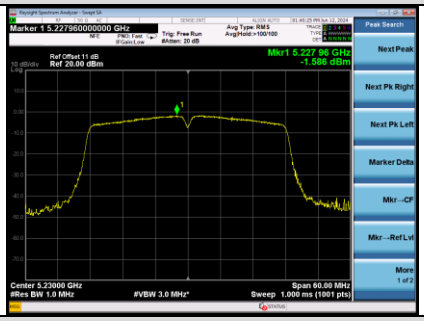	---
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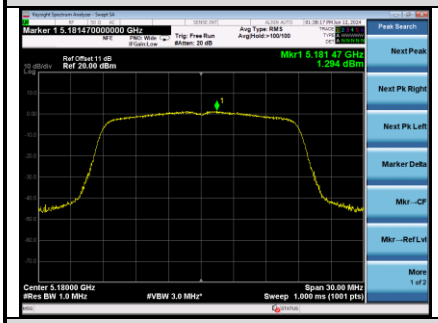	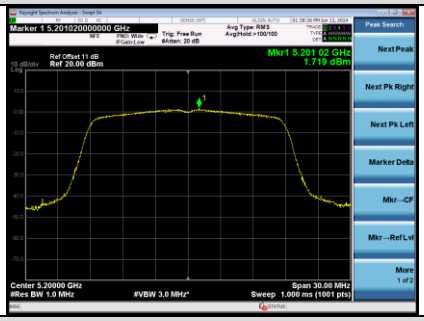	
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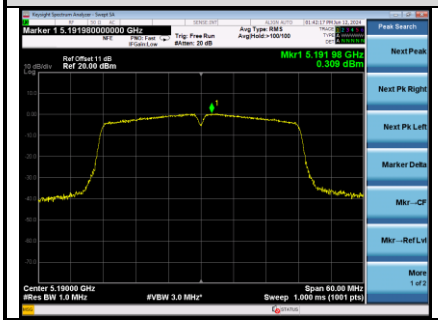
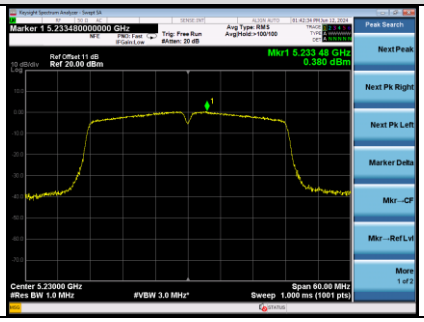
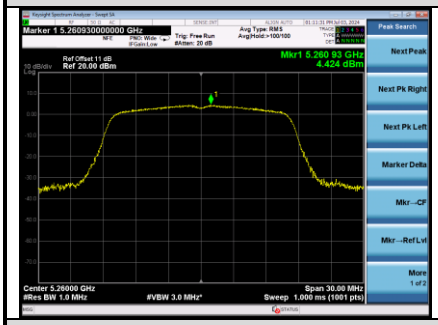
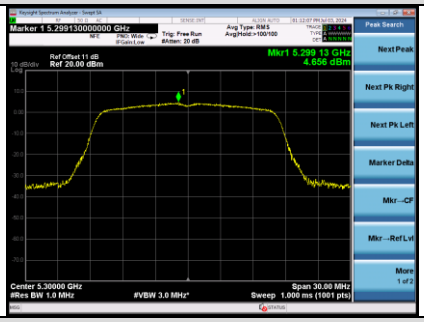
		

U-NII-2A Band		
IEEE 802.11a		
		
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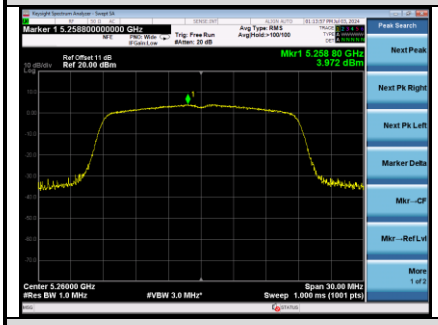	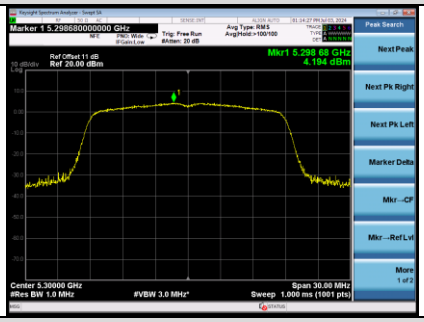	
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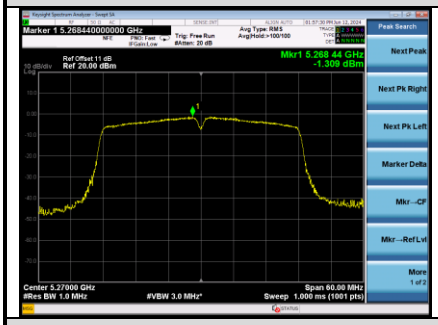	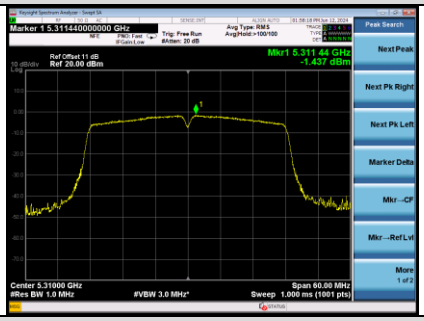	---
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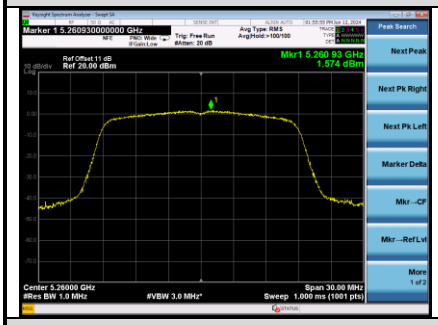	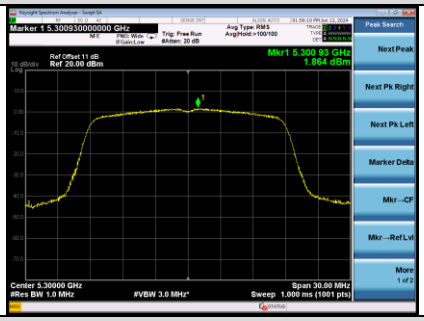	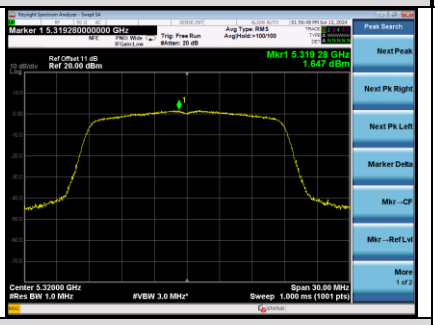
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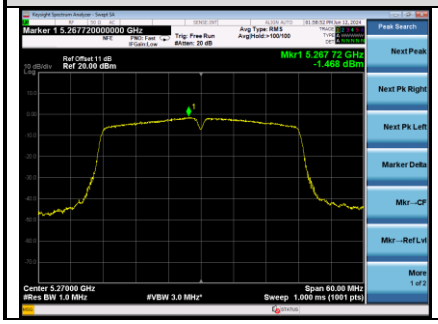
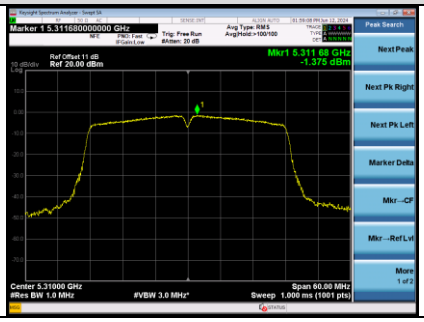
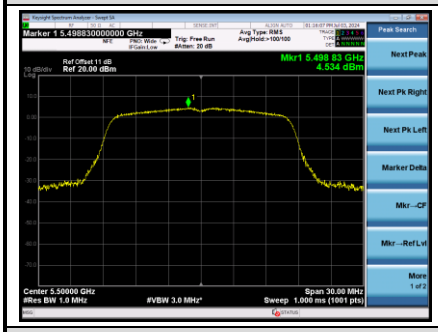
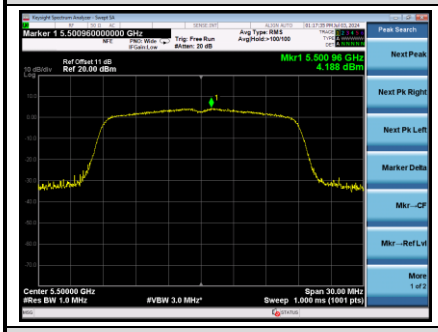
		

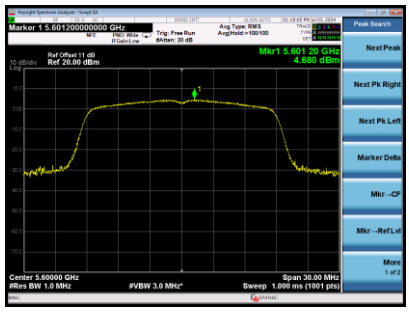
U-NII-2C Band

IEEE 802.11a

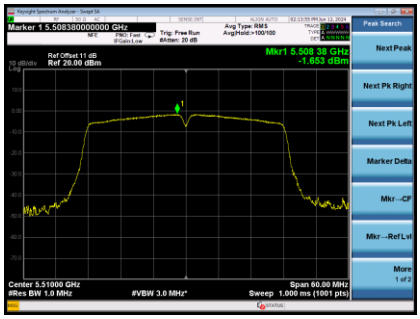


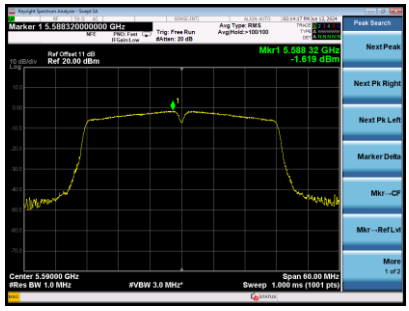
IEEE 802.11n HT20



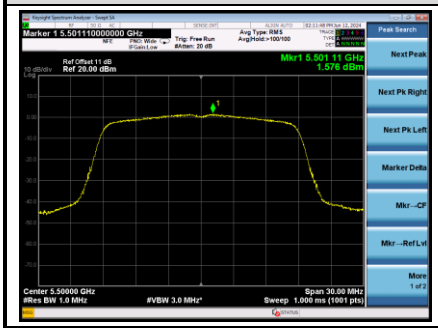


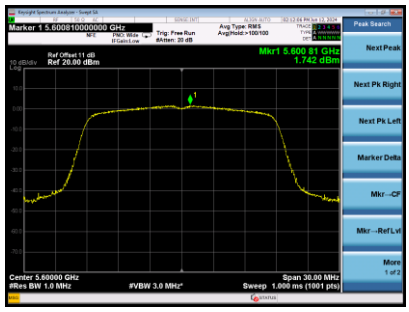
IEEE 802.11n HT40

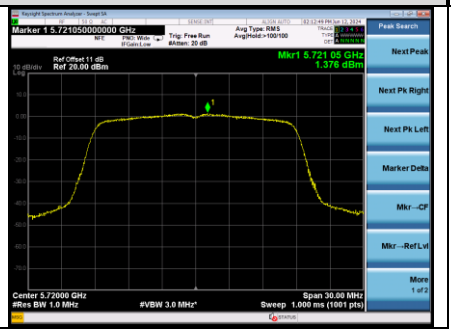




IEEE 802.11ac VHT20







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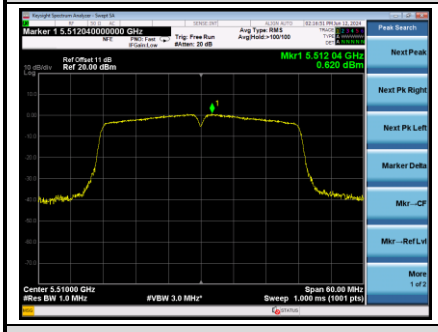	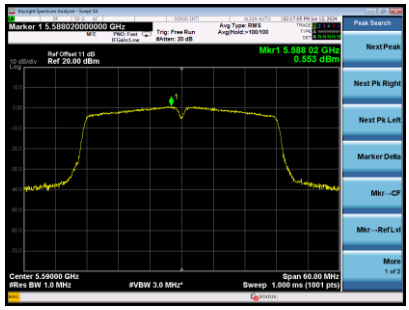	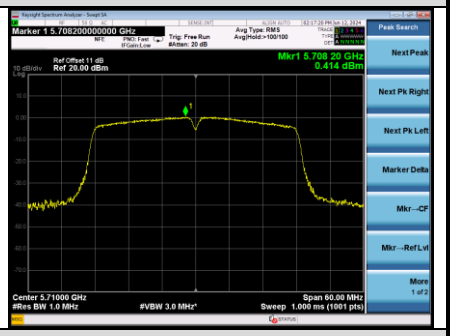
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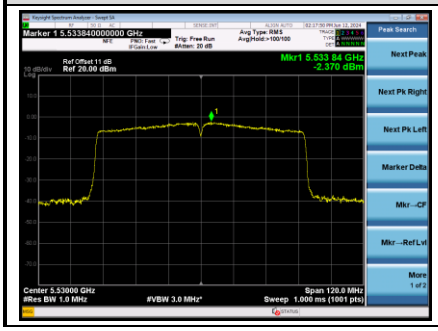
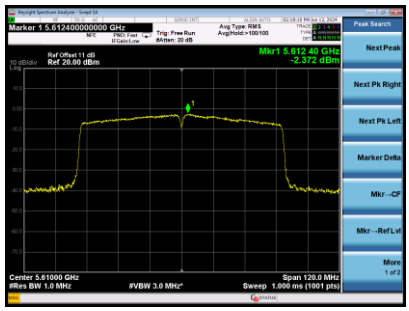
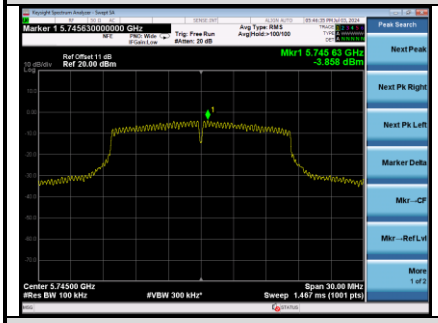
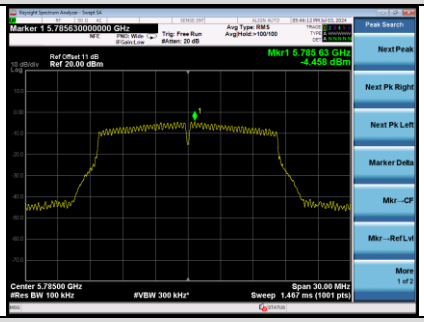
		

U-NII-3 Band		
IEEE 802.11a		
		
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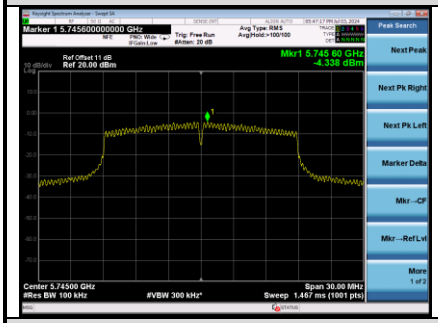
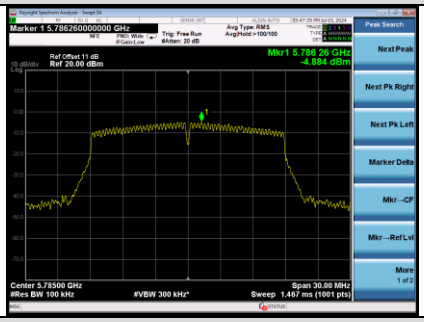
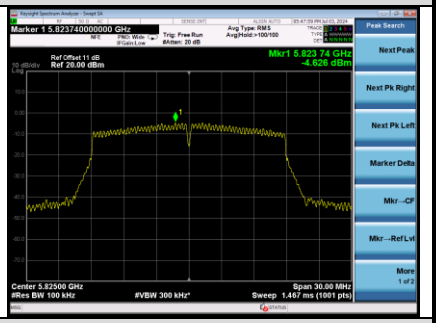
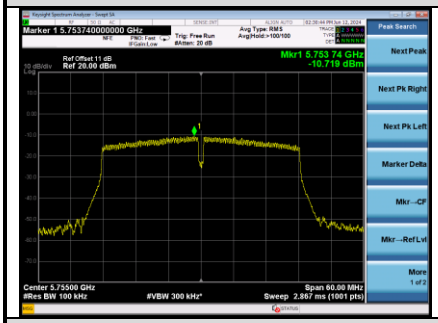
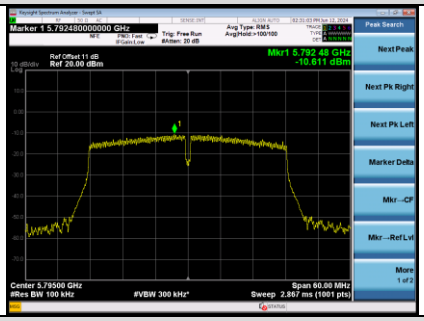
		
IEEE 802.11n HT40		---
		---
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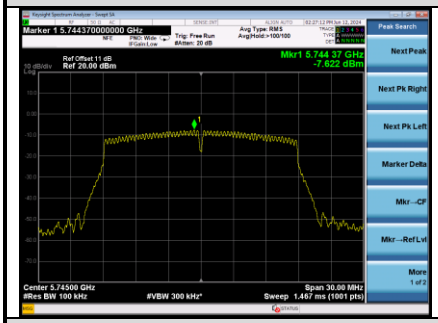	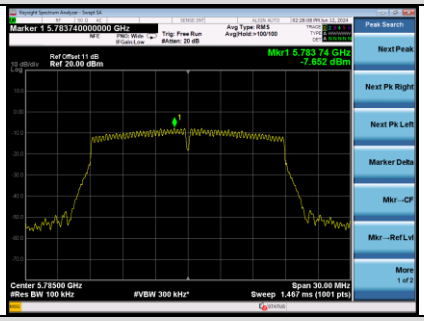	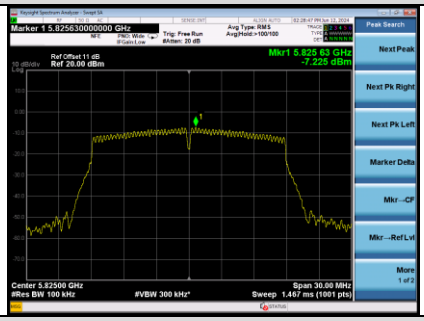
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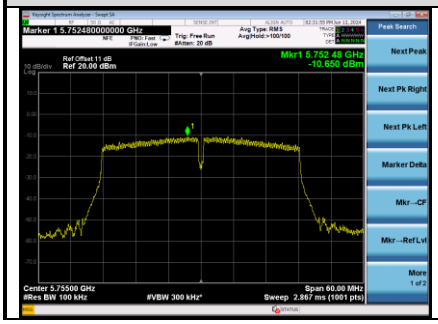	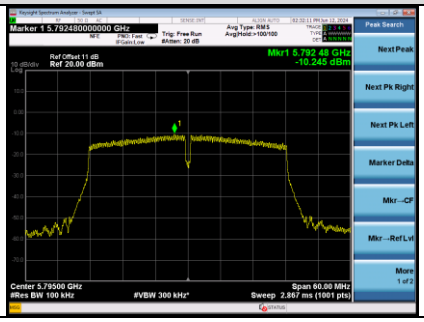	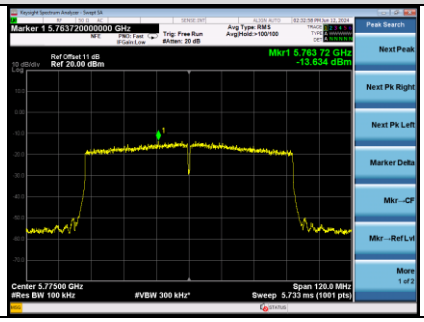

9. FREQUENCY STABILITY MEASUREMENT

9.1.Limit

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

9.2.Test Procedure

Use the test method described in ANSI C63.10 clause 6.8:

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
   EUT have transmitted absence of modulation signal and fixed channelise. Set the spectrum analyzer span to view the entire absence of modulation emissions bandwidth. Set RBW = 10 kHz, VBW = 10 kHz with peak detector and maxhold settings. fc is declaring of channel frequency. Then the frequency error formula is $(fc-f)/f \times 10^{-6}$ppm. The test extreme voltage is to change the primary supply voltage from 3.47V to 4.24V.
2. Extreme temperature is 0℃~60℃.

9.3.Test Result

EUT: Tablet PC		
M/N: 8188G		
Test date:2024-06-27	Pressure: 102.1±1.0 kpa	Humidity: 53.2±3.0%
Tested by: lili	Test site: RF site	Temperature: 22.3±0.6℃

Frequency Stability vs.Voltage:

Test Voltage	Temperature	CH	Reading (MHz)	Target Frequency (MHz)	Result (ppm)
DC 3.85V	25℃	CH36	5180.0000	5180	0.00
		CH40	5199.9980	5200	-0.38
		CH48	5239.9970	5240	-0.57
		CH52	5259.9955	5260	-0.86
		CH60	5299.9950	5300	-0.94
		CH64	5319.9945	5320	-1.03
		CH100	5499.9940	5500	-1.09
		CH120	5599.9935	5600	-1.16
		CH144	5719.9930	5720	-1.22
		CH149	5744.9920	5745	-1.39
		CH157	5784.9915	5785	-1.47
		CH165	5824.9915	5825	-1.46

Test Voltage	Temperature	CH	Reading (MHz)	Target Frequency (MHz)	Result (ppm)
DC4.24V	25℃	CH36	5180.0023	5180	0.44
		CH40	5199.9981	5200	-0.37
		CH48	5239.9974	5240	-0.50
		CH52	5259.9957	5260	-0.82
		CH60	5299.9956	5300	-0.83
		CH64	5319.9947	5320	-1.00
		CH100	5499.9943	5500	-1.04
		CH120	5599.9940	5600	-1.07
		CH144	5719.9939	5720	-1.07
		CH149	5744.9925	5745	-1.31
		CH157	5784.9919	5785	-1.40
		CH165	5824.9917	5825	-1.42

Test Voltage	Temperature	CH	Reading (MHz)	Target Frequency (MHz)	Result (ppm)
DC3.47V	25℃	CH36	5179.9986	5180	-0.27
		CH40	5199.9971	5200	-0.56
		CH48	5239.9964	5240	-0.69
		CH52	5259.9950	5260	-0.95
		CH60	5299.9943	5300	-1.08
		CH64	5319.9940	5320	-1.13
		CH100	5499.9935	5500	-1.18
		CH120	5599.9930	5600	-1.25
		CH144	5719.9928	5720	-1.26
		CH149	5744.9914	5745	-1.50
		CH157	5784.9912	5785	-1.52
		CH165	5824.9914	5825	-1.48

Frequency Stability vs.Temperature:

Test Voltage	Temperature	CH	Reading (MHz)	Target Frequency (MHz)	Result (ppm)
DC 3.85V	0℃	CH36	5180.0021	5180	0.41
		CH40	5199.9987	5200	-0.25
		CH48	5239.9973	5240	-0.52
		CH52	5259.9959	5260	-0.78
		CH60	5299.9951	5300	-0.92
		CH64	5319.9947	5320	-1.00
		CH100	5499.9944	5500	-1.02
		CH120	5599.9936	5600	-1.14
		CH144	5719.9932	5720	-1.19
		CH149	5744.9927	5745	-1.27
		CH157	5784.9916	5785	-1.45
		CH165	5824.9917	5825	-1.42

Test Voltage	Temperature	CH	Reading (MHz)	Target Frequency (MHz)	Result (ppm)
DC 3.85V	10℃	CH36	5180.0027	5180	0.52
		CH40	5199.9988	5200	-0.23
		CH48	5239.9981	5240	-0.36
		CH52	5259.9962	5260	-0.72
		CH60	5299.9955	5300	-0.85
		CH64	5319.9950	5320	-0.94
		CH100	5499.9947	5500	-0.96
		CH120	5599.9941	5600	-1.05
		CH144	5719.9936	5720	-1.12
		CH149	5744.9929	5745	-1.24
		CH157	5784.9920	5785	-1.38
		CH165	5824.9920	5825	-1.37

Test Voltage	Temperature	CH	Reading (MHz)	Target Frequency (MHz)	Result (ppm)
DC 3.85V	20℃	CH36	5180.0031	5180	0.60
		CH40	5199.9991	5200	-0.17
		CH48	5239.9988	5240	-0.23
		CH52	5259.9966	5260	-0.65
		CH60	5299.9957	5300	-0.81
		CH64	5319.9954	5320	-0.86
		CH100	5499.9950	5500	-0.91
		CH120	5599.9946	5600	-0.96
		CH144	5719.9944	5720	-0.98
		CH149	5744.9932	5745	-1.18
		CH157	5784.9927	5785	-1.26
		CH165	5824.9922	5825	-1.34

Test Voltage	Temperature	CH	Reading (MHz)	Target Frequency (MHz)	Result (ppm)
DC 3.85V	30℃	CH36	5179.9980	5180	-0.39
		CH40	5199.9969	5200	-0.60
		CH48	5239.9960	5240	-0.76
		CH52	5259.9943	5260	-1.08
		CH60	5299.9940	5300	-1.13
		CH64	5319.9938	5320	-1.17
		CH100	5499.9930	5500	-1.27
		CH120	5599.9928	5600	-1.29
		CH144	5719.9924	5720	-1.33
		CH149	5744.9911	5745	-1.55
		CH157	5784.9911	5785	-1.54
		CH165	5824.9910	5825	-1.55

Test Voltage	Temperature	CH	Reading (MHz)	Target Frequency (MHz)	Result (ppm)
DC 3.85V	40℃	CH36	5179.9976	5180	-0.46
		CH40	5199.9965	5200	-0.67
		CH48	5239.9957	5240	-0.82
		CH52	5259.9940	5260	-1.14
		CH60	5299.9935	5300	-1.23
		CH64	5319.9934	5320	-1.24
		CH100	5499.9934	5500	-1.20
		CH120	5599.9926	5600	-1.32
		CH144	5719.9922	5720	-1.36
		CH149	5744.9910	5745	-1.57
		CH157	5784.9908	5785	-1.59
		CH165	5824.9910	5825	-1.55

Test Voltage	Temperature	CH	Reading (MHz)	Target Frequency (MHz)	Result (ppm)
DC 3.85V	50℃	CH36	5179.9971	5180	-0.56
		CH40	5199.9960	5200	-0.77
		CH48	5239.9955	5240	-0.86
		CH52	5259.9936	5260	-1.22
		CH60	5299.9932	5300	-1.28
		CH64	5319.9931	5320	-1.30
		CH100	5499.9934	5500	-1.20
		CH120	5599.9925	5600	-1.34
		CH144	5719.9921	5720	-1.38
		CH149	5744.9908	5745	-1.60
		CH157	5784.9906	5785	-1.62
		CH165	5824.9902	5825	-1.68

Test Voltage	Temperature	CH	Reading (MHz)	Target Frequency (MHz)	Result (ppm)
DC 3.85V	60℃	CH36	5179.9969	5180	-0.60
		CH40	5199.9956	5200	-0.85
		CH48	5239.9950	5240	-0.95
		CH52	5259.9933	5260	-1.27
		CH60	5299.9930	5300	-1.32
		CH64	5319.9930	5320	-1.32
		CH100	5499.9931	5500	-1.25
		CH120	5599.9924	5600	-1.36
		CH144	5719.9919	5720	-1.42
		CH149	5744.9905	5745	-1.65
		CH157	5784.9904	5785	-1.66
		CH165	5824.9900	5825	-1.72

10. ANTENNA REQUIREMENT

10.1. Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, 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. And according to FCC 47 CFR Section 15.407 (a), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

10.2. Antenna Connected Construction

The antennas used for this product is PIFA Antenna that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is 1.76dBi.

11. DEVIATION TO TEST SPECIFICATIONS

[NONE]

THE END