

Product Name:Smart Phone	Report No: ITEZA2-202400107RF5
Product Model: Blade10 Pro, Blade10, Blade10 Ultra, Blade10 S, Blade10 E, Blade10 SE, Blade10 Plus, Blade10 Max, Blade10 Power	Security Classification: Open
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TIRT Testing Report

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FCCRadio Test Report

FCC ID: 2AX4YBLADE10PRO

This report concerns:Original Grant

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Address:	22, Longhua New District, Shenzhen, China
Manufacturer:	Shenzhen DOOGEE Hengtong Technology CO.,LTD
Address:	B, 2/F, Building A4, Silicon Valley Power Digital Industrial Park, No.
Address.	22, Longhua New District, Shenzhen, China
Sample No:	1000032108
Product Name:	Smart Phone
Brand Name:	DOOGEE
Model No.:	Blade10 Pro, Blade10, Blade10 Ultra, Blade10 S, Blade10 E,
Model No	Blade10 SE, Blade10 Plus, Blade10 Max, Blade10 Power
Test No.:	Blade10 Pro

Date of Receipt:	2024/04/23
Date of Test:	2024/04/23~2024/05/22
Issued Date:	2024/05/27
Testing Lab:	TIRT

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REPORT ISSUED HISTORY

Report No.	Version	Description	Issued Date	Note
ITEZA2-202400107RF5	V1.0	Original Report.	2024.05.27	Valid



1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

FCC CFR Title 47, Part 15, Subpart E							
Standard(s) Section	Test Item	Test Result	Judgment	Remark			
15.207 15.407(b)	AC Power Line Conducted Emissions	APPENDIX A	PASS				
15.407(b) 15.205(a) 15.209(a)	Radiated Emissions	APPENDIX B APPENDIX C APPENDIX D	PASS				
15.407(a) 15.407(e)	Bandwidth	APPENDIX E	PASS				
15.407(a)	Maximum Output Power	APPENDIX F	PASS				
15.407(a)	Power Spectral Density	APPENDIX G	PASS				
15.407(g)	Frequency Stability	APPENDIX H	PASS	NOTE (5)			
15.203	Antenna Requirements		PASS	NOTE (2)			
15.407(c)	Automatically Discontinue Transmission		PASS	NOTE (3)			

Note:

- (1) "N/A" denotes test is not applicable in this test report.
- (2) The device what use a permanently attached antenna were considered sufficient to comply with the provisions of 15.203.
- (3) During no any information transmission, the EUT can automatically discontinue transmission and become standby mode for power saving the EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

(4)	For UNII-1	this	device	was	functioned	as	а
(+)	I OI OINII-I	เมเจ	uevice	was	TULLULIEU	ac	•

- ☐Outdoor access point device
- ☐Indoor access point device
- ☐Fixed point-to-point access points device
- ⊠Client device
- (5) The manufacturer states that the frequency sability is in compliance with 15.407(g).
- (6) Measurement Standard Used:

FCC Rules and Regulations Part 15 Subpart E

ANSI C63.4:2014, ANSI C63.10:2013



1.1 TEST FACILITY

Company:	Beijing TIRT Technology Service Co.,Ltd Shenzhen
Address:	104 Building C, Xinmingsheng Industrial Park No.132, Zhangge Old Village East Zone, Zhangge Community, Fucheng Street, Longhua District, Shenzhen, Guangdong, P. R. China
CNAS Registration Number:	CNAS L14158
A2LA Registration Number:	6049.01
FCC Accredited Lab.Designation Number:	CN1366
FCC Test Firm Registration Number:	820690
Telephone:	+86-0755-27087573

1.2 MEASUREMENT UNCERTAINTY

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))

The TIRT measurement uncertainty as below table:

Uncertainty	
Parameter	Uncertainty
Occupied Channel Bandwidth	±142.12 KHz
RF power conducted	±0.74 dB
RF power radiated	±3.25dB
Spurious emissions, conducted	±1.78dB
Spurious emissions, radiated (30MHz~1GHz)	±4.6dB
Spurious emissions, radiated (1GHz ~ 18GHz)	±4.9dB
Conduction Emissions(150kHz~30MHz)	±3.1 dB
Humidity	±4.6%
Temperature	±0.7°C
Time	±1.25%

Note: Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.



1.3 TEST ENVIRONMENT CONDITIONS

Test Item	Temperature	Humidity	Test Voltage	Tested By
AC Power Line Conducted Emissions	25.1°C	52%	DC 3.87V from battery	Stone Tang
Radiated Emissions-9kHz to 30MHz	24.5°C	50%	DC 3.87V from battery	Stone Tang
Radiated Emissions-30MHz to 1000MHz	24.2°C	53%	DC 3.87V from battery	Stone Tang
Radiated Emissions-Above 1000 MHz	26.0°C	53%	DC 3.87V from battery	Stone Tang
Bandwidth	25.0°C	56%	DC 3.87V from battery	Stone Tang
Maximum Output Power	24.9°C	54%	DC 3.87V from battery	Stone Tang
Power Spectral Density	25.1°C	62%	DC 3.87V from battery	Stone Tang



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	Smart Phone
Brand Name	DOOGEE
Test Model	Blade10 Pro
Series Model	Blade10 Pro, Blade10, Blade10 Ultra, Blade10 S, Blade10 E,
	Blade10 SE, Blade10 Plus, Blade10 Max, Blade10 Power
Model Difference(s)	There is no difference except the name of the model
Software Version	DOOGEE-Blade10Pro-EEA-Android14.0-20240512
Hardware Version	SC6020LU-MB-1.0.1-20240411
Power Rating	DC 3.87V from battery or DC 5V from adapter
	UNII-1: 5180 MHz~5240 MHz
Operation FrequencyBand(s)	UNII-2A: 5260 MHz ~ 5320 MHz
	UNII-3: 5745 MHz~5825MHz
	IEEE 802.11n: OFDM (64QAM,16QAM,QPSK,BPSK)
Modulation Type	IEEE 802.11a: OFDM (64QAM,16QAM,QPSK,BPSK)
	IEEE802.11ac: OFDM (64QAM,16QAM, 256QAM,QPSK,BPSK)
Maximum Output Power	IEEE 802.11ac80: 12.74dBm(0.018793W)
_UNII-1	12.7 4dbiii(0.010733W)
Maximum Output Power	IEEE 802.11ac40: 11.24dBm(0.013305W)
_UNII-2A	1222 002.11d0+0. 11.2+dbiii(0.0100000V)
Maximum Output Power	IEEE 802.11ac40: 11.86dBm(0.015346W)
_UNII-3	1222 002.11d0 10. 11.00dbiii(0.0100+011)

Note

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.



2. Channel List:

IEEE 802.1 IEEE 802.11	1n(HT20)	IEEE 802.11n(HT40) IEEE 802.11ac(VHT40)		IEEE 802.11ac(VHT80)	
UNI	I-1	UNII-1		UNII-1	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	38	5190	42	5210
40	5200	46	5230		
44	5220				
48	5240				

IEEE 802.	IEEE 802.11a IEEE 802.11n(HT20) IEEE 802.11ac(VHT20)		IEEE 802.11n(HT40) IEEE 802.11ac(VHT40)		c(VHT80)
UN	II-2A	UNII-2A		UNII-2	2A
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
52	5260	54	5270	58	5290
56	5280	62	5310		
60	5300				
64	5320				

IEEE 802.1	IEEE 802.11a IEEE 802.11n(HT20) IEEE 802.11ac(VHT20)		IEEE 802.11n(HT40) IEEE 802.11ac(VHT40)		1ac(VHT80)
UNI	I-3	UNII-3		UN	II-3
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	151	5755	155	5775
153	5765	159	5795		
157	5785				
161	5805				
165	5825				



3. Antenna Specification:

Ant.	Manufactured	Model Name	Antenna Type	Connector	Gain (dBi)
4	SHENZHEN HENGXIANGTONG	F1C	PIFA	N/A	1.27
'	ANTENNA TECNOLOGY CO., LTD.	FIC	PIFA	IN/A	1.27

Note:

- The antenna gain is provided by the manufacturer.
 The antenna is for testing purposes only.



2.2 TEST MODES

The test system was pre-tested based on the consideration of all possible combinations of EUT operation mode.

Pretest Mode	Description
Mode 1	TX A ModeChannel 36/40/48 (UNII-1)
Mode 2	TX N(HT20) ModeChannel 36/40/48 (UNII-1)
Mode 3	TX N(HT40) Mode Channel 38/46 (UNII-1)
Mode 4	TX AC(VHT20) ModeChannel 36/40/48 (UNII-1)
Mode 5	TX AC(VHT40) ModeChannel 38/46 (UNII-1)
Mode 6	TX AC(VHT80) Mode Channel 42 (UNII-1)
Mode 7	TX A Mode Channel 149/157/165 (UNII-3)
Mode 8	TX N(HT20) Mode Channel 149/157/165 (UNII-3)
Mode 9	TX N(HT40) Mode Channel 151/159 (UNII-3)
Mode 10	TX AC(VHT20) Mode Channel 149/157/165 (UNII-3)
Mode 11	TX AC(VHT40) Mode Channel 151/159 (UNII-3)
Mode 12	TX AC(VHT80) Mode Channel 155 (UNII-3)
Mode 13	TX A Mode Channel 52/60/64 (UNII-2A)
Mode 14	TX N(HT20) Mode Channel 52/60/64 (UNII-2A)
Mode 15	TX N(HT40) Mode Channel 54/62 (UNII-2A)
Mode 16	TX AC(VHT20) Mode Channel 52/60/64 (UNII-2A)
Mode 17	TX AC(VHT40) Mode Channel 54/62 (UNII-2A)
Mode 18	TX AC(VHT80) Mode Channel 58 (UNII-2A)



Following mode(s) was (were) found to be the worst case(s) and selected for the final test.

AC power line conducted emissions test				
Final Test Mode Description				
Mode 12 TX AC(VHT80) Mode Channel 155 (UNII-3)				

Radiated Emissions Test - Below 1GHz			
Final Test Mode	Description		
Mode 12	TX AC(VHT80) Mode Channel 155 (UNII-3)		

Radiated Emissions Test - Above 1GHz			
Final Test Mode	Description		
Mode 1	TX A ModeChannel 36/40/48 (UNII-1)		
Mode 2	TX N(HT20) Mode Channel 36/40/48 (UNII-1)		
Mode 3	TX N(HT40) Mode Channel 38/46 (UNII-1)		
Mode 6	TX AC(VHT80) Mode Channel 42 (UNII-1)		
Mode 7	TX A Mode Channel 149/157/165 (UNII-3)		
Mode 8	TX N(HT20) Mode Channel 149/157/165 (UNII-3)		
Mode 9	TX N(HT40) Mode Channel 151/159 (UNII-3)		
Mode 10	TX AC(VHT80) Mode Channel 155 (UNII-3)		

Conducted Test			
Final Test Mode	Description		
Mode 1	TX A ModeChannel 36/40/48 (UNII-1)		
Mode 2	TX N(HT20) Mode Channel 36/40/48 (UNII-1)		
Mode 3	TX N(HT40) Mode Channel 38/46 (UNII-1)		
Mode 4	TX AC(VHT20) Mode Channel 36/40/48 (UNII-1)		
Mode 5	TX AC(VHT40) Mode Channel 38/46 (UNII-1)		
Mode 6	TX AC(VHT80) Mode Channel 42 (UNII-1)		
Mode 7	TX A Mode Channel 149/157/165 (UNII-3)		
Mode 8	TX N(HT20) Mode Channel 149/157/165 (UNII-3)		
Mode 9	TX N(HT40) Mode Channel 151/159 (UNII-3)		
Mode 10	TX AC(VHT20) Mode Channel 149/157/165 (UNII-3)		
Mode 11	TX AC(VHT40) Mode Channel 151/159 (UNII-3)		
Mode 12	TX AC(VHT80) Mode Channel 155 (UNII-3)		

Note

- (1) For AC power line conducted emissions and radiated emission below 1 GHz test, the TX N(HT40) Mode Channel 36 (UNII-1) is found to be the worst case and recorded.
- (2) For radiated emission above 1 GHz test, the spurious points of 1GHz~26.5GHz and 26.5GHz~40GHz have been pre-tested and in this report only recorded the worst case. The remaining spurious points are all below the limit value of 20dB.
- (3) All the bit rate of transmitter have been tested and found the lowest rate is found tobe the worst case and recorded.
- (4) The measurements for Output Power are tested, the worst case are IEEE 802.11a mode, IEEE 802.11n(HT20) mode, IEEE 802.11n(HT40) mode, IEEE 802.11ac(VHT80) mode, only the worst cases are documented for other test items.



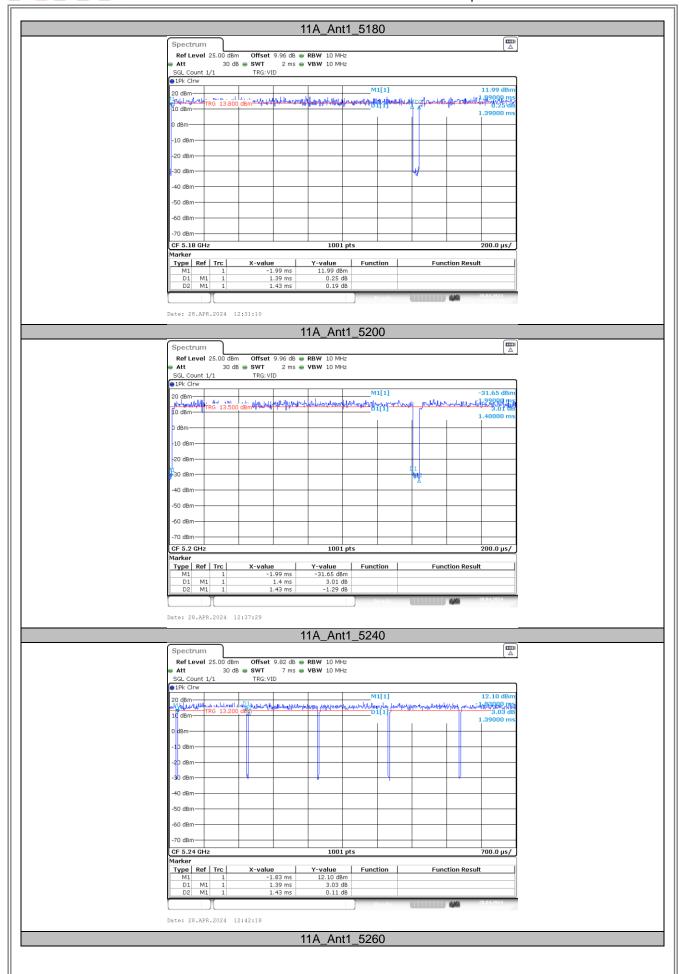
2.3DUTY CYCLE

If duty cycle is \geq 98 %, duty factor is not required. If duty cycle is < 98 %, duty factor shall be considered. The output power = measured power + duty factor.

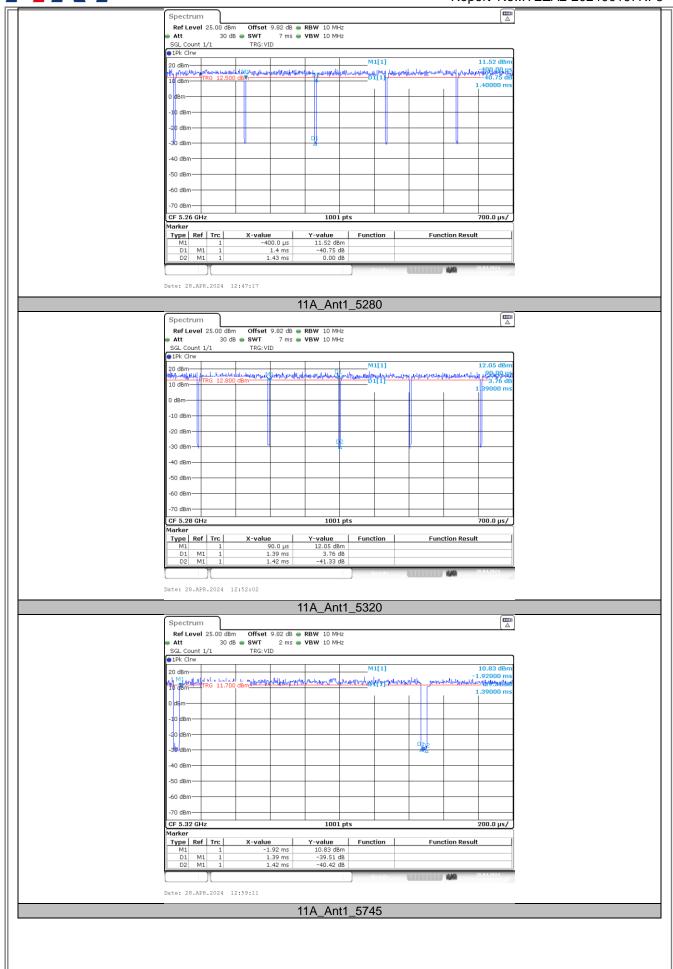
The power spectral density = measured power spectral density + duty factor.

TestMode	Antenna	Freq(MHz)	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
		5180	1.39	1.43	97.20
		5200	1.40	1.43	97.90
		5240	1.39	1.43	97.20
		5260	1.40	1.43	97.90
11A	Ant1	5280	1.39	1.42	97.89
		5320	1.39	1.42	97.89
		5745	1.39	1.43	97.20
		5785	1.40	1.43	97.90
		5825	1.39	1.43	97.20
		5180	1.30	1.33	97.74
		5200	1.29	1.33	96.99
		5240	1.31	1.34	97.76
		5260	1.30	1.33	97.74
11N20SISO	Ant1	5280	1.30	1.34	97.01
		5320	1.29	1.33	96.99
		5745	1.30	1.34	97.01
		5785	1.30	1.34	97.01
		5825	1.29	1.33	96.99
		5190	0.65	0.68	95.59
		5230	0.65	0.69	94.20
4411400100	A == 4.4	5270	0.65	0.69	94.20
11N40SISO	Ant1	5310	0.65	0.68	95.59
		5755	0.65	0.69	94.20
		5795	0.65	0.68	95.59
		5180	1.31	1.35	97.04
		5200	1.31	1.35	97.04
		5240	1.30	1.35	96.30
		5260	1.31	1.35	97.04
11AC20SISO	Ant1	5280	1.31	1.35	97.04
		5320	1.31	1.34	97.76
		5745	1.31	1.35	97.04
		5785	1.31	1.35	97.04
		5825	1.32	1.35	97.78
		5190	0.65	0.69	94.20
		5230	0.66	0.69	95.65
11 1 0 10 0 10 0	A n+1	5270	0.66	0.69	95.65
11AC40SISO	Ant1	5310	0.65	0.69	94.20
		5755	0.65	0.69	94.20
		5795	0.65	0.69	94.20
		5210	0.32	0.36	88.89
11AC80SISO	Ant1	5290	0.32	0.36	88.89
		5775	0.32	0.36	88.89

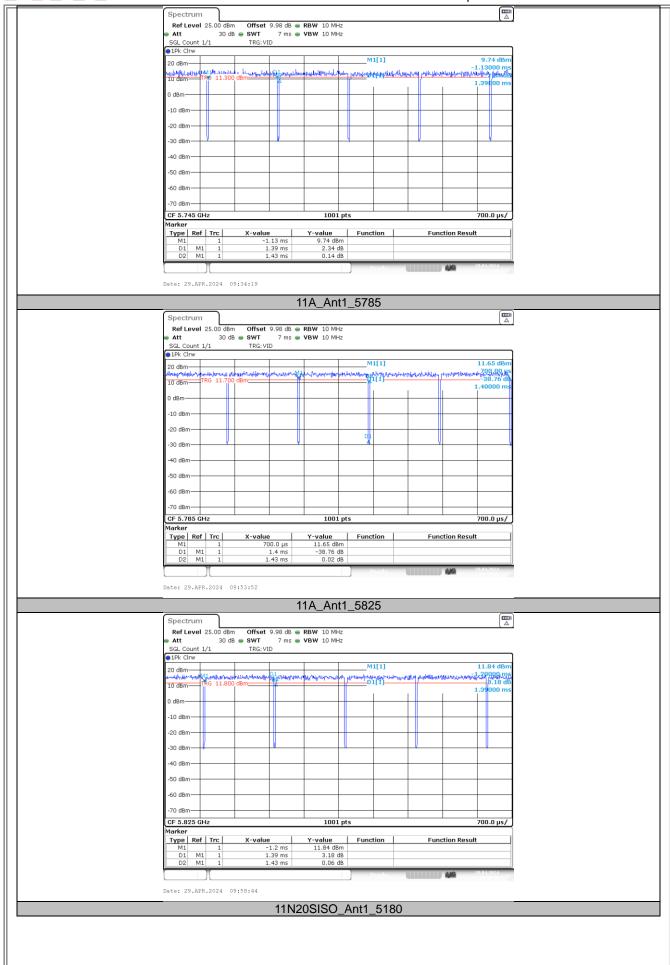




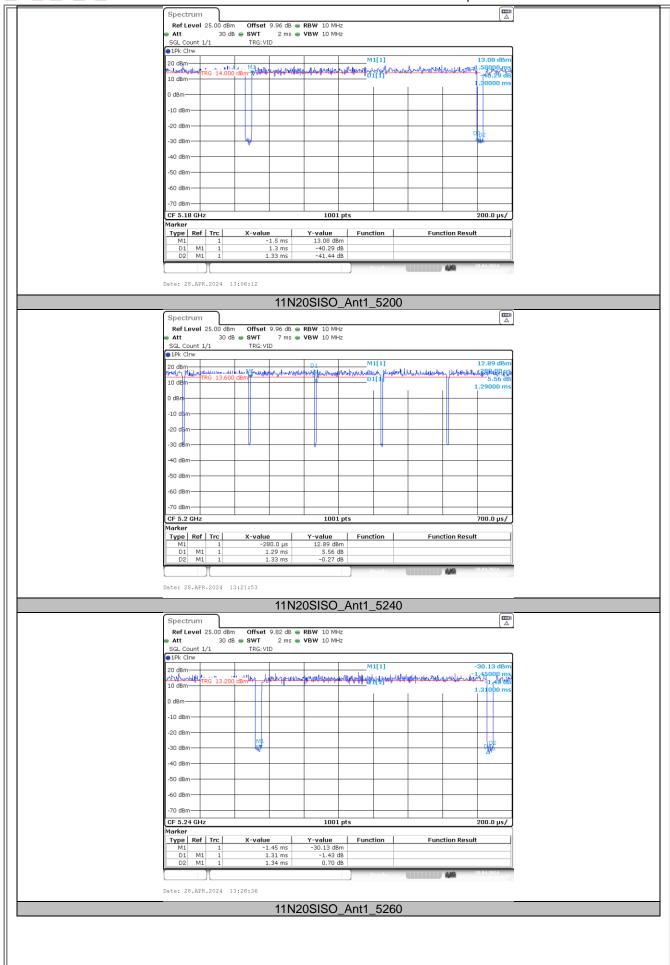




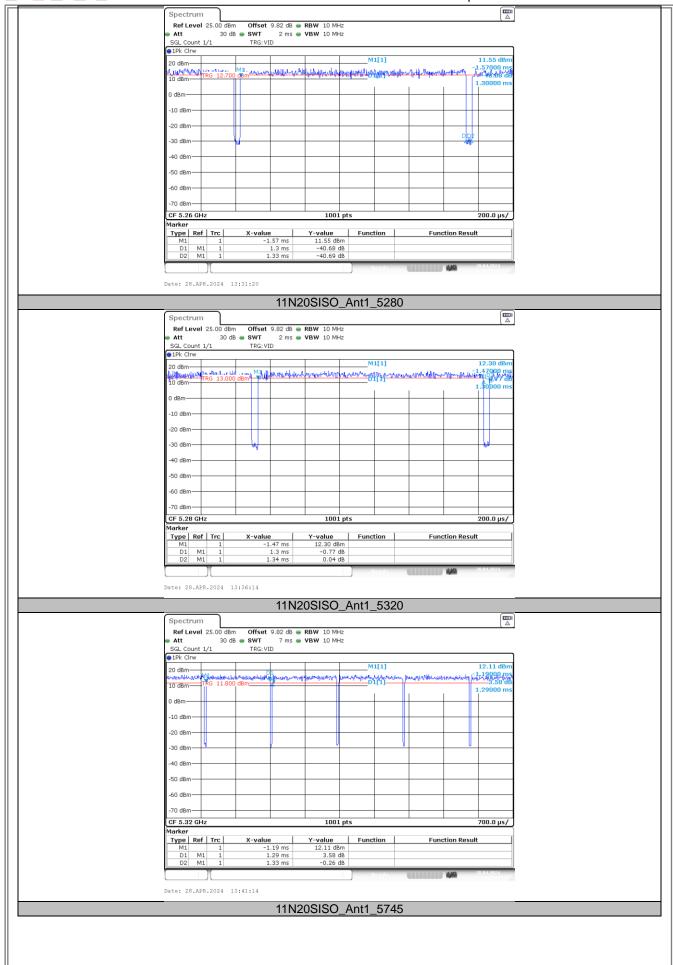








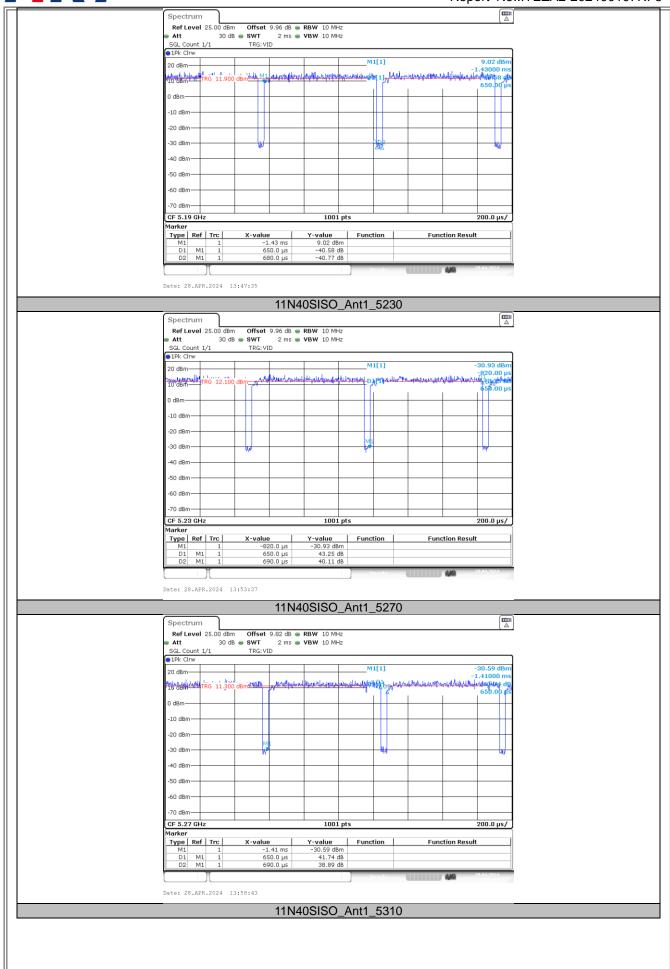




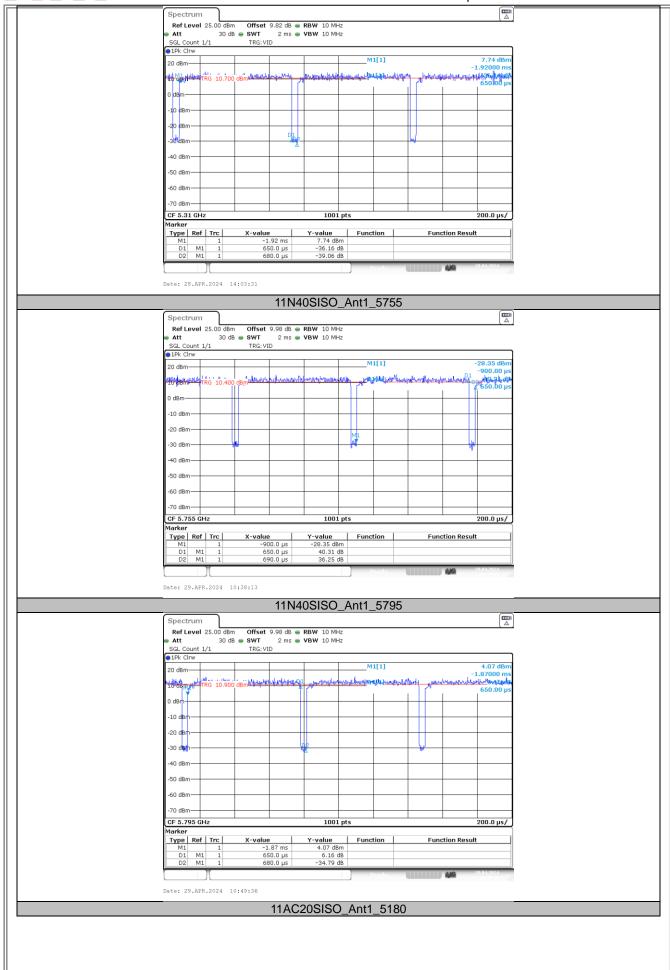




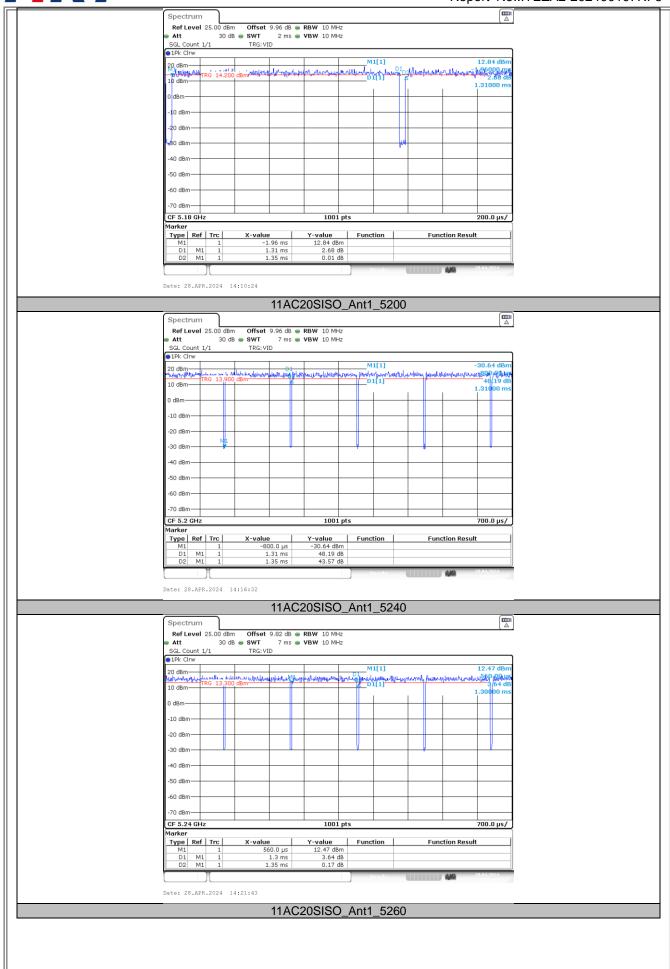




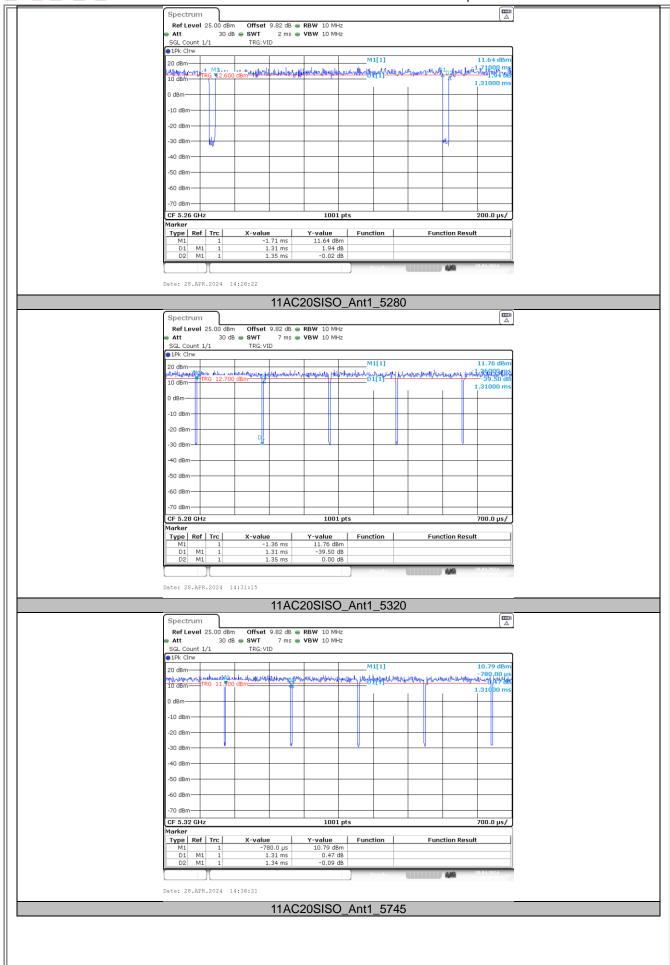




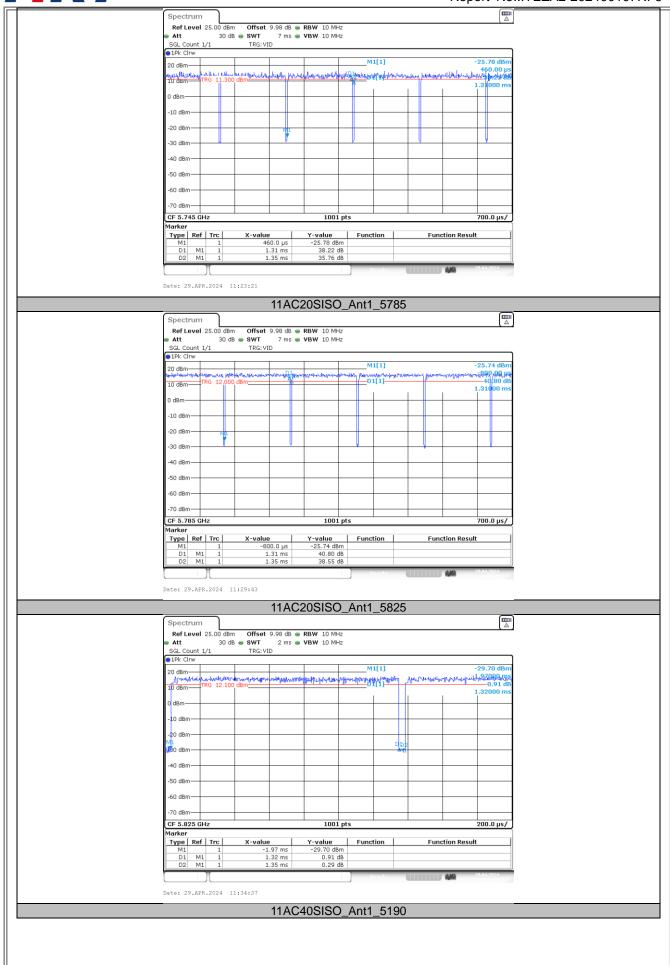




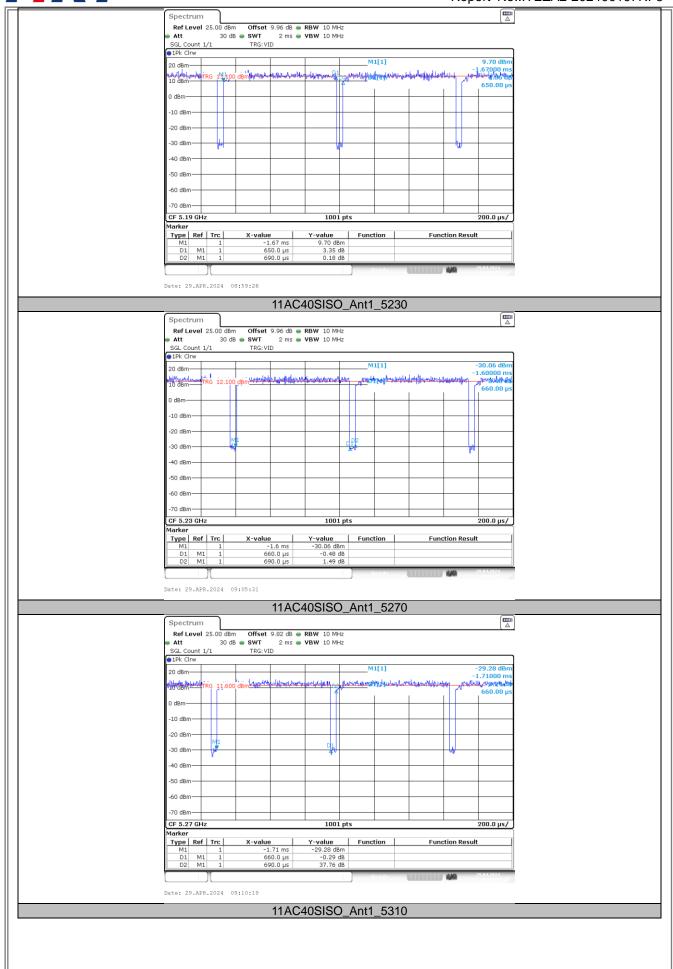




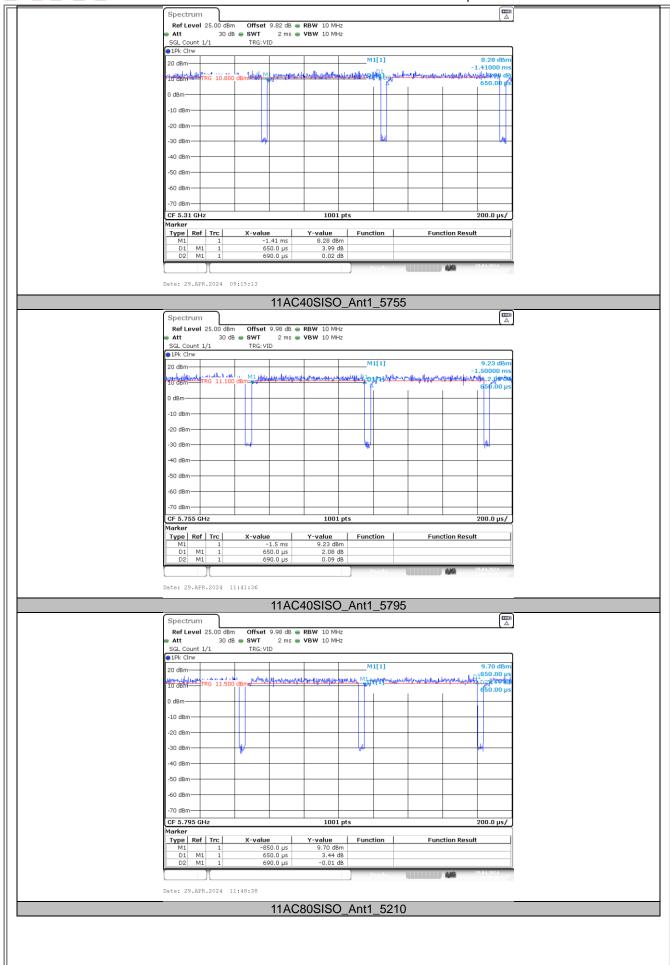




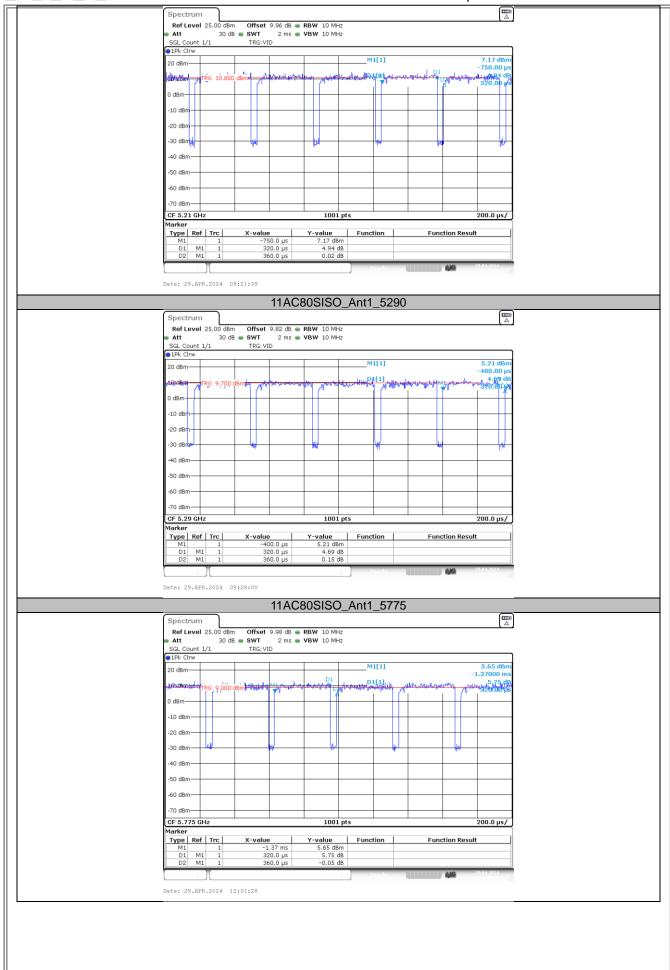














NOTE

For IEEE 802.11a:

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth set VBW> 1/T, Trefers to the minimum transmission duration over which the transmitter is on and istransmitting at its maximum power control level for the tested mode of operation.

For IEEE 802.11n(HT20):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth set VBW> 1/T, Trefers to the minimum transmission duration over which the transmitter is on and istransmitting at its maximum power control level for the tested mode of operation.

For IEEE 802.11n(HT40):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth set VBW> 1/T, Trefers to the minimum transmission duration over which the transmitter is on and istransmitting at its maximum power control level for the tested mode of operation.

For IEEE 802.11ac(VHT20):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth set VBW> 1/T, Trefers to the minimum transmission duration over which the transmitter is on and istransmitting at its maximum power control level for the tested mode of operation.

For IEEE 802.11ac(VHT40):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth set VBW> 1/T, Trefers to the minimum transmission duration over which the transmitter is on and istransmitting at its maximum power control level for the tested mode of operation.

For IEEE 802.11ac(VHT80):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth set VBW> 1/T, Trefers to the minimum transmission duration over which the transmitter is on and istransmitting at its maximum power control level for the tested mode of operation.

2.4BLOCKDIAGRAMSHOWINGTHECONFIGURATIONOFSYSTEMTESTED

EUT

2.5SUPPORT UNITS

Support Equipment							
No.	o. Equipment Brand Name Model Name Remarks						
1	/	/	/	/			



3.AC POWER LINE CONDUCTED EMISSIONS

3.1LIMIT

Frequency	Limit (dBµV)	
(MHz)	Quasi-peak	Average
0.15 - 0.5	66 to 56*	56 to 46*
0.5 - 5.0	56	46
5.0 - 30.0	60	50

NOTE:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

3.2 TEST PROCEDURE

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipmentpowered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the groundplane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item -EUT Test Photos.

The following table is the setting of the receiver:

Receiver Parameter	Setting
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

3.3DEVIATIONFROMTESTSTANDARD

No deviation