TCT 通测检测 TESTING CENTRE TECHNOLOGY

TEST REPORT

FCC ID. ..... :	2AQRM-S67	
Test Report No..... :	TCT240910E041	
Date of issue..... :	Oct. 09, 2024	
Testing laboratory ..... :	SHENZHEN TONGCE TESTING LAB	
Testing location/ address:	2101 & 2201, Zhenchang Factory Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China	
Applicant's name..... :	FOXX Development Inc.	
Address..... :	3480 Preston Ridge Road, Suite500, Alpharetta, GA 30005, USA	
Manufacturer's name ... :	FOXX Development Inc.	
Address..... :	3480 Preston Ridge Road, Suite500, Alpharetta, GA 30005, USA	
Standard(s) ..... :	FCC CFR Title 47 Part 2 FCC CFR Title 47 Part22 FCC CFR Title 47 Part24 FCC CFR Title 47 Part27	
Product Name..... :	Smart Phone	
Trade Mark ..... :	MIRO, FOXXD, AIRVOICE, FOXXD HTH	
Model/Type reference..... :	S67	
Rating(s)..... :	Power supply: DC 5V from adaptor or DC 3.87V from battery Adapter Information: Model: HJ-0502000W2-US Input: 100-240V 50/60Hz 0.3A Output: 5.0V 2.0A 10W	
Date of receipt of test item ..... :	Aug. 26, 2024	
Date (s) of performance of test..... :	Aug. 27, 2024 ~ Sep. 30, 2024	
Tested by (+signature) ... :	Rleo LIU	
Check by (+signature).... :	Beryl ZHAO	
Approved by (+signature):	Tomsin	

General disclaimer:

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1. General Product Information

1.1. EUT description

Product Name.....:	Smart Phone
Model/Type reference.....:	S67
Sample Number.....:	TCT240910E034-0102
Tx Frequency.....:	5G NR n 2: 1850 MHz ~ 1910 MHz 5G NR n 5: 824 MHz ~ 849 MHz 5G NR n 25: 1850 MHz ~ 1915 MHz 5G NR n 41: 2496 MHz ~ 2690 MHz 5G NR n 66: 1710 MHz ~ 1780 MHz 5G NR n 71: 663 MHz ~ 698 MHz 5G NR n 77: 3700 MHz ~ 3980 MHz 5G NR n 78a: 3700 MHz ~ 3800 MHz 5G NR n 78e: 3450 MHz ~ 3550 MHz
Rx Frequency .....:	5G NR n 2: 1930 MHz ~ 1990 MHz 5G NR n 5: 869 MHz ~ 894 MHz 5G NR n 25: 1930 MHz ~ 1995 MHz 5G NR n 41: 2496 MHz ~ 2690 MHz 5G NR n 66: 2110 MHz ~ 2180 MHz 5G NR n 71: 617 MHz ~ 652 MHz 5G NR n 77a: 3700 MHz ~ 3980 MHz 5G NR n 78a: 3700 MHz ~ 3800 MHz 5G NR n 78e: 3450 MHz ~ 3550 MHz
Maximum Output Power to Antenna.....:	5G NR n 2: 25.08dBm 5G NR n 5: 19.89dBm 5G NR n 25: 25.65dBm 5G NR n 41: 22.84dBm 5G NR n 66: 25.25dBm 5G NR n 71: 18.73dBm 5G NR n 77a: 21.47dBm 5G NR n 78a: 25.79dBm 5G NR n 78e: 26.09dBm
Type of Modulation.....:	QPSK, PI/2 BPSK, 64QAM, 256QAM, 16QAM
SCS Suport .....:	15kHz, 30kHz
Antenna Type.....:	Internal Antenna
Antenna Gain.....:	5G NR n 2: 0.91dBi 5G NR n 5: -1.15dBi 5G NR n 25: 0.82dBi 5G NR n 41: 1.75dBi 5G NR n 66: 0.64dBi 5G NR n 71: -2.12dBi 5G NR n 77a: 0.35dBi

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	5G NR n 78a: 0.35dBi 5G NR n 78e: 0.35dBi
Rating(s).....:	Power supply: DC 5V from adaptor or DC 3.87V from battery Adapter Information: Model: HJ-0502000W2-US Input: 100-240V 50/60Hz 0.3A Output: 5.0V 2.0A 10W

Note: The antenna gain listed in this report is provided by applicant, and the test laboratory is not responsible for this parameter.

1.2. Model(s) list

None.

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2. Test Result Summary

Requirement	CFR 47 Section	Result
Conducted Output Power	§2.1046; §22.913; §24.232(c) §27.50(d); §27.50(h); §27.50(j); §27.50(k)	PASS
Peak-to-Average Ratio	§2.1046; §24.232(d) §27.50(d); §27.50(h); §27.50(j); §27.50(k)	PASS
Effective Radiated Power	§2.1046; §22.913	PASS
Equivalent Isotropic Radiated Power	§2.1046; §22.913; §24.232(c); §27.50(d); §27.50(h); §27.50(j); §27.50(k)	PASS
Occupied Bandwidth	§2.1049; §24.238(b); §27.53	PASS
Band Edge	§2.1051; §22.917(a); §24.238(a) §27.53(h); §27.53(i); §27.53(m); §27.53(n)	PASS
Conducted Spurious Emission	§2.1051; §22.917(a); §24.238(a) §27.53(h); §27.53(i); §27.53(m); §27.53(n)	PASS
Field Strength of Spurious Radiation	§2.1051; §22.917(a); §24.238(a) §27.53(h); §27.53(i); §27.53(m); §27.53(n)	PASS
Frequency Stability for Temperature & Voltage	§2.1055; §22.355; §24.235; §27.54	PASS

Note:

1. PASS: Test item meets the requirement.

2. Fail: Test item does not meet the requirement.

3. N/A: Test case does not apply to the test object.

4. The test result judgment is decided by the limit of test standard.

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3. General Information

3.1. Test environment and mode

Operating Environment:	
Temperature:	25.0 °C
Humidity:	56 % RH
Atmospheric Pressure:	1010 mbar
Remark: This product has a built-in rechargeable battery, so in an independent test, the EUT battery was fully-charged.	

Antenna port conducted and radiated test items were performed according to KDB 971168 D01 Power Meas License Digital Systems v03r01 with maximum output power. Radiated measurements were performed with rotating EUT in different three orthogonal test planes to find the maximum emission. The sample was placed 0.8m/1.5m above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarization. The emissions worst-case are shown in Test Results of the following pages.

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3.2. Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

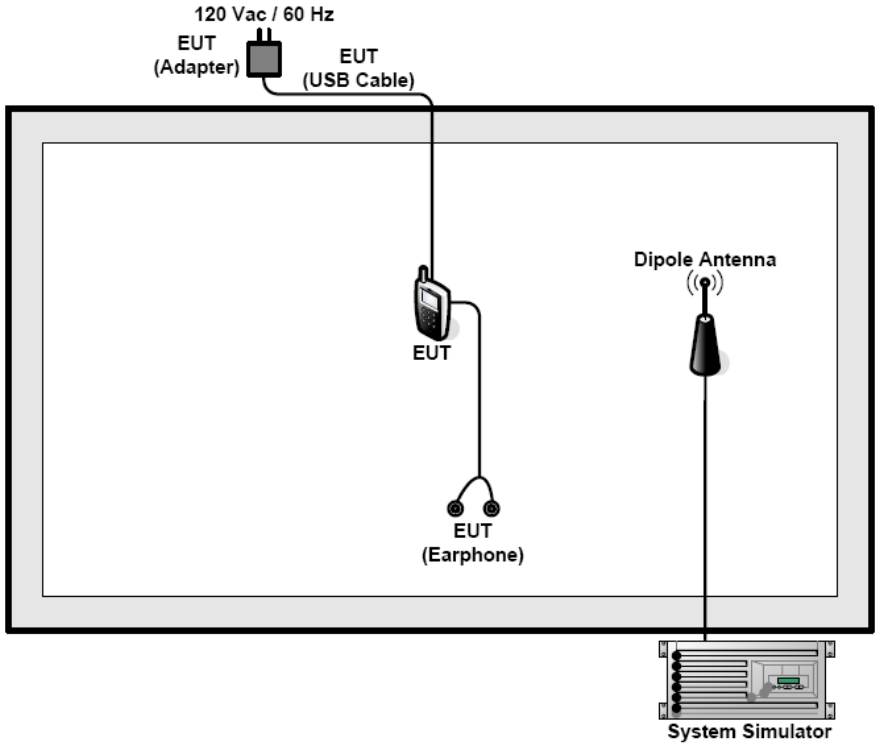
Equipment	Model No.	Serial No.	FCC ID	Trade Name
/	/	/	/	/

Note:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.

2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

3.3. Configuration of Tested System



3.4. Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between RF conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level will be exactly the RF output level. The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

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4. Facilities and Accreditations

4.1. Facilities

The test facility is recognized, certified, or accredited by the following organizations:

- FCC - Registration No.: 645098

  SHENZHEN TONGCE TESTING LAB

  Designation Number: CN1205

  The testing lab has been registered and fully described in a report with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

- IC - Registration No.: 10668A

  SHENZHEN TONGCE TESTING LAB

  CAB identifier: CN0031

  The testing lab has been registered by Innovation, Science and Economic Development Canada for radio equipment testing.

4.2. Location

SHENZHEN TONGCE TESTING LAB

Address: 2101 & 2201, Zhenchang Factory, Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China

TEL: 86-755-27673339

4.3. Measurement Uncertainty

The reported uncertainty of measurement y ± U, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

No.	Item	MU
1	Conducted Emission	±3.32 dB
2	RF power, conducted	±1.08 dB
3	Spurious emissions, conducted	±2.94 dB
4	All emissions, radiated(<1 GHz)	±4.86 dB
5	All emissions, radiated(1 GHz - 18 GHz)	±4.91 dB
6	All emissions, radiated(18 GHz- 40 GHz)	±4.36 dB

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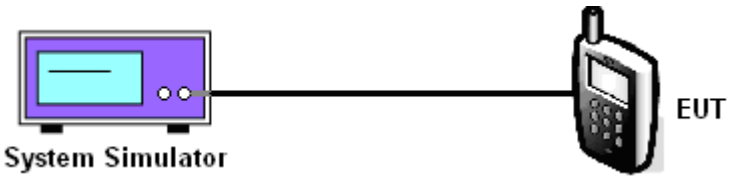
5. Test Results and Measurement Data

5.1. Effective Radiated Power and Effective Isotropic Radiated Power Measurement

5.1.1. Test Specification

Test Requirement:	FCC part 22.913, FCC part 24.232(c), FCC part 27.50(d), FCC part 27.50(h), FCC part 27.50(j), FCC part 27.50(k)
Test Method:	FCC part 2.1046
Limit:	5G NR n 2/n41: 2W 5G NR n 5/n25: 7W 5G NR n 7/n41: 2W 5G NR n 66/n77a/n78a/n78e: 1W 5G NR n 71: 3W
Test Setup:	
Test Procedure:	1. The transmitter output port was connected to the system simulator. 2. Set EUT at maximum power through system simulator. 3. Select lowest, middle, highest channels for each band and different modulation. 4. Measure and record the power level from the system simulator. 5. Calculate the ERP and EIRP The relevant equation for determining the ERP or EIRP from the conducted RF output power measured using the guidance provided above is: ERP or EIRP = $P_{Meas} + G_T - L_C$ where: ERP or EIRP = effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as P Meas , typically dBW or dBm); P_{Meas} = measured transmitter output power or PSD, in dBm or dBW; G_T = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP); L_C = signal attenuation in the connecting cable

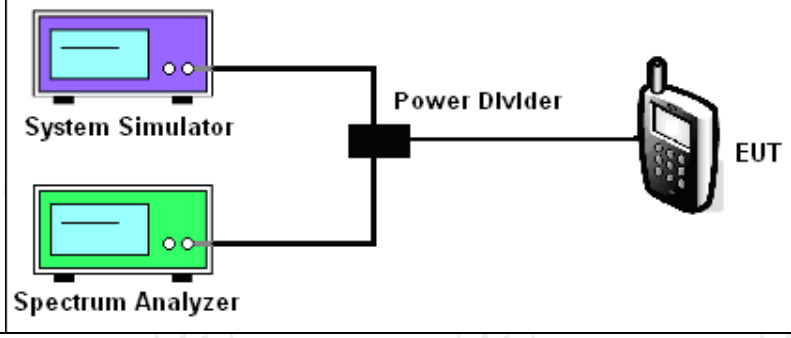
	between the transmitter and antenna, in dB. *Note: For personal/portable radios utilizing an integral antenna, the factor L C is typically negligible. However, in a fixed station transmit system that utilizes a long cable run between the transmitter and the transmitting antenna, this factor can be significant.*
Test Result:	PASS

5.1.2. Test Instruments

Equipment	Manufacturer	Model	Serial Number	Calibration Due
Wireless communication test platform	Anritsu	MT8000A	6262208369	Jan. 31, 2025
Radio communication analyzer	Anritsu	MT8821C	6262192286	Jan. 31, 2025
Spectrum Analyzer	R&S	FSV40-N	102188	Jan. 31, 2025

5.2. Peak to Average Ratio

5.2.1. Test Specification

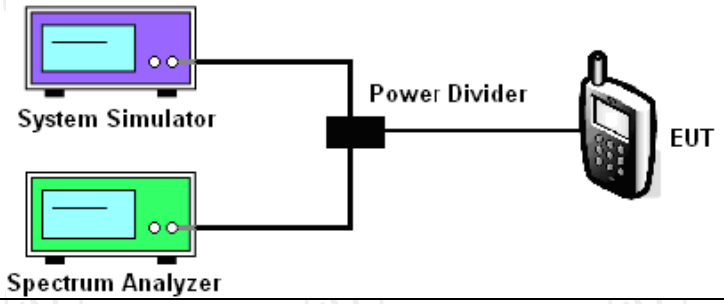
Test Requirement:	FCC part 22.913, FCC part 24.232(d), FCC part 27.50(d), FCC part 27.50(h), FCC part 27.50(j), FCC part 27.50(k)
Test Method:	FCC KDB 971168 D01v03r01
Limit:	The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.
Test Setup:	
Test Procedure:	1. The testing follows FCC KDB 971168 D01v03r01 Section 5.7.1. 2. The EUT was connected to spectrum analyzer and system simulator via a power divider. 3. Set EUT to transmit at maximum output power. 4. Set the CCDF (Complementary Cumulative Distribution Function) option of the spectrum analyzer. Record the maximum PAPR level associated with a probability of 0.1%.
Test Result:	PASS

5.2.2. Test Instruments

Equipment	Manufacturer	Model	Serial Number	Calibration Due
Wireless communication test platform	Anritsu	MT8000A	6262208369	Jan. 31, 2025
Radio communication analyzer	Anritsu	MT8821C	6262192286	Jan. 31, 2025
Spectrum Analyzer	R&S	FSV40-N	102188	Jan. 31, 2025
Test software	MW	MTS 8200 NR	/	/

5.3. 99% Occupied Bandwidth and 26dB Bandwidth Measurement

5.3.1. Test Specification

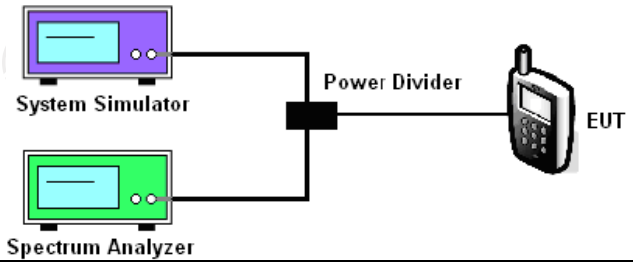
Test Requirement:	FCC part 27.53 and FCC part 24.238(b)
Test Method:	FCC part 2.1049
Limit:	N/A
Test Setup:	
Test Procedure:	1. The testing follows FCC KDB 971168 D01v03r01 Section 4.2. 2. The EUT was connected to the spectrum analyzer and system simulator via a power divider. 3. The RF output of the EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement. 4. The 99% occupied bandwidth were measured, set RBW= 1% of OBW, VBW= 3*RBW, sample detector, trace maximum hold. 5. The 26dB bandwidth were measured, set RBW= 1% of EBW, VBW= 3*RBW, peak detector, trace maximum hold.
Test Result:	PASS

5.3.2. Test Instruments

Equipment	Manufacturer	Model	Serial Number	Calibration Due
Wireless communication test platform	Anritsu	MT8000A	6262208369	Jan. 31, 2025
Radio communication analyzer	Anritsu	MT8821C	6262192286	Jan. 31, 2025
Spectrum Analyzer	R&S	FSV40-N	102188	Jan. 31, 2025
Test software	MW	MTS 8200 NR	/	/

5.4. Band Edge and Conducted Spurious Emission Measurement

5.4.1. Test Specification

Test Requirement:	FCC part 22.917(a), FCC part 24.238(a), FCC part 27.53(h), FCC part 27.53(i), FCC part 27.53(m), FCC part 27.53(n)
Test Method:	FCC part2.1051
Limit:	For 5G NR n 2, 5, 26, 66, 77, 78: -13dBm; For 5G NR n 7, 41: the power of any unwanted emissions measured as above shall be attenuated (in dB) below the transmitter power, P (dBW), by at least: (i) 40 + 10 log10 p from the channel edges to 5 MHz away (ii) 43 + 10 log10 p between 5 MHz and X MHz from the channel edges, and (iii) 55 + 10 log10 p at X MHz and beyond from the channel edges. In addition, the attenuation shall not be less than 43 + 10 log10 p on all frequencies between 2490.5 MHz and 2496 MHz, and 55 + 10 log10 p at or below 2490.5 MHz.
Test Setup:	
Test Procedure:	1. The testing follows FCC KDB 971168 D01v03r01 Section 6.0. 2. The EUT was connected to the spectrum analyzer and system simulator via a power divider. 3. The RF output of EUT was connected to the spectrum analyzer by an RF cable and attenuator. The path loss was compensated to the results for each measurement. 4. The band edges of low and high channels for the highest RF powers were measured. 5. The conducted spurious emission for the whole frequency range was taken. 6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
Test Result:	PASS

5.4.2. Test Instruments

Equipment	Manufacturer	Model	Serial Number	Calibration Due
Wireless communication test platform	Anritsu	MT8000A	6262208369	Jan. 31, 2025
Radio communication analyzer	Anritsu	MT8821C	6262192286	Jan. 31, 2025
Spectrum Analyzer	R&S	FSV40-N	102188	Jan. 31, 2025
Test software	MW	MTS 8200 NR	/	/

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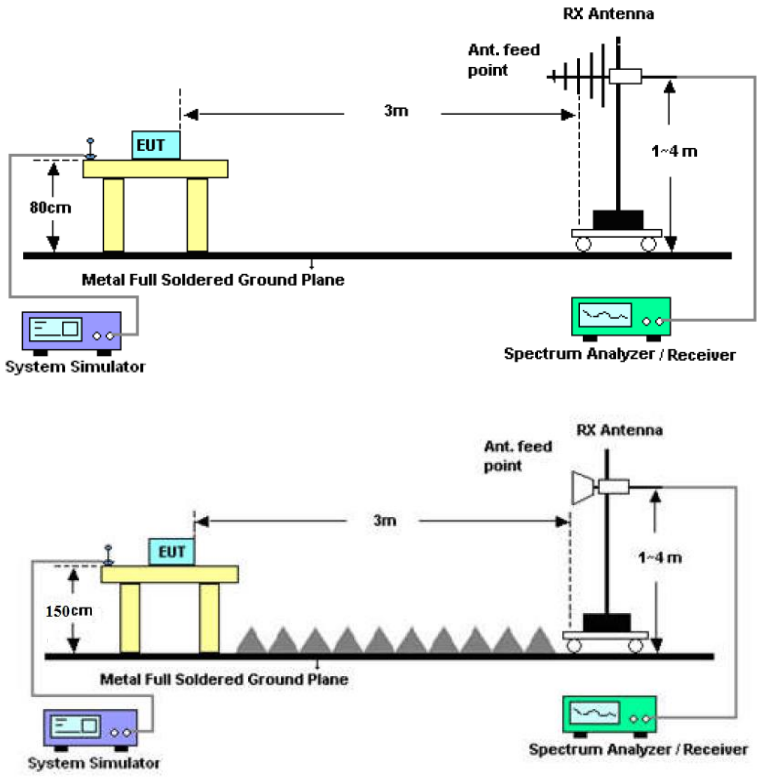
5.5. Field Strength of Spurious Radiation Measurement

5.5.1. Test Specification

Test Requirement:	FCC part 27.53(g), FCC part 27.53(h), FCC part 27.53(m)(4), FCC part 22.917(a), 24.238(b)
Test Method:	FCC part 2.1053
Limit:	For 5G NR n 2, 5, 25,41 66, 71,77a, 78a,78e: -13dBm; For 5G NR n41: -25dBm
Test setup:	
Test Procedure:	1. The testing follows FCC KDB 971168 D01v03r01 Section 5.8 and ANSI / TIA-603-D-2010Section 2.2.12. 2. The EUT was placed on a rotatable wooden table 0.8 meters above the ground. 3. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower. 4. The table was rotated 360 degrees to determine the position of the highest spurious emission. 5. The height of the receiving antenna is varied between one meter and four meters to search for the maximum spurious emission for both horizontal and vertical polarizations. 6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking record of maximum spurious emission.

	7. A horn antenna was substituted in place of the EUT and was driven by a signal generator. 8. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission. 9. Taking the record of output power at antenna port. 10. Repeat step 7 to step 8 for another polarization. 11. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain 12. ERP (dBm) = EIRP - 2.15 13. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
Test results:	PASS
Remark:	All modulations have been tested, but only the worst modulation show in this test item.

5.5.2. Test Instruments

Radiated Emission Test Site (966)				
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
Wideband Radio Communication Tester	R&S	CMW500	137557	Jan. 31, 2025
Spectrum Analyzer	R&S	FSQ40	200061	Jun. 26, 2025
Signal Generator	Agilent	N5173B	MY58108823	Jan. 31, 2025
Broadband Antenna	Schwarzbeck	VULB9163	340	Jun. 28, 2025
Horn Antenna	Schwarzbeck	BBHA 9120D	631	Jun. 28, 2025
Broadband Antenna	Schwarzbeck	VULB9163	412	Jun. 28, 2025
Horn Antenna	Schwarzbeck	BBHA 9120D	1201	Jun. 28, 2025
Horn Antenna	Schwarzbeck	BBHA 9170	00956	Feb. 02, 2025
Coaxial cable	SKET	RE-03-D	/	Jun. 26, 2025
Coaxial cable	SKET	RE-03-M	/	Jun. 26, 2025
Coaxial cable	SKET	RE-03-L	/	Jun. 26, 2025
Coaxial cable	SKET	RE-04-D	/	Jun. 26, 2025
Coaxial cable	SKET	RE-04-M	/	Jun. 26, 2025
Coaxial cable	SKET	RE-04-L	/	Jun. 26, 2025
Antenna Mast	Keleto	RE-AM	/	/
EMI Test Software	EZ_EMC	FA-03A2 RE+	1.1.4.2	/

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5.5.3. Test Data

Frequency Range (9 kHz-30MHz)

Frequency (MHz)	Level@3m (dBμV/m)	Limit@3m (dBμV/m)
--	--	--
--	--	--
--	--	--
--	--	--

Note: *1. Emission Level=Reading+ Cable loss + Antenna factor-Amp factor*

2. The emission levels are 20 dB below the limit value, which are not reported. It is deemed to comply with the requirement

Band	n 2(BPSK, 20MHz)	Test channel:	Lowest
Test mode:		Temperature:	25°C
		Relative Humidity:	56%

Note: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Frequency (MHz)	Spurious Emission				Limit (dBm)	Result
	Polarization	Level (dBm)	Correction Factor(dB)	Spurious emissions (dBm)		
3705	Vertical	-42.49	1.05	-41.44	-13	PASS
5557.5	V	-47.37	6.98	-40.39		
7410	V	-62.63	10.40	-52.23		
3705	Horizontal	-42.10	2.08	-40.02		
5557.5	H	-49.00	7.46	-41.54		
7410	H	-61.05	10.00	-51.05		

Band	n 2(BPSK, 20MHz)	Test channel:	Middle
Test mode:		Temperature:	25°C
		Relative Humidity:	56%

Note: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Frequency (MHz)	Spurious Emission				Limit (dBm)	Result
	Polarization	Level (dBm)	Correction Factor(dB)	Spurious emissions (dBm)		
3760	Vertical	-44.40	1.32	-43.08	-13	PASS
5640	V	-56.34	7.21	-49.13		
7520	V	-64.56	10.43	-54.13		
3760	Horizontal	-42.55	2.48	-40.07		
5640	H	-48.27	7.63	-40.64		
7520	H	-63.41	10.03	-53.38		

Band	n 2(BPSK, 20MHz)	Test channel:	Highest
Test mode:		Temperature:	25°C
		Relative Humidity:	56%

Note: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Frequency (MHz)	Spurious Emission				Limit (dBm)	Result
	Polarization	Level (dBm)	Correction Factor(dB)	Spurious emissions (dBm)		
3815	Vertical	-45.39	1.59	-43.80	-13	PASS
5723	V	-54.30	7.43	-46.87		
7630	V	-62.63	10.53	-52.10		
3815	Horizontal	-40.16	2.88	-37.28		
5723	H	-48.83	7.81	-41.02		
7630	H	-63.25	10.23	-53.02		

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Band	n 5(BPSK, 20MHz)	Test channel:	Lowest
Test mode:		Temperature:	25°C
		Relative Humidity:	56%

Note: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Frequency (MHz)	Spurious Emission				Limit (dBm)	Result
	Polarization	Level (dBm)	Correction Factor(dB)	Spurious emissions (dBm)		
1653	Vertical	-42.49	1.05	-41.44	-13	PASS
2479.5	V	-47.37	6.98	-40.39		
3306	V	-62.63	10.40	-52.23		
1653	Horizontal	-42.10	2.08	-40.02		
2479.5	H	-49.00	7.46	-41.54		
3306	H	-61.05	10.00	-51.05		

Band	n 5(BPSK, 20MHz)	Test channel:	Middle
Test mode:		Temperature:	25°C
		Relative Humidity:	56%

Note: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Frequency (MHz)	Spurious Emission				Limit (dBm)	Result
	Polarization	Level (dBm)	Correction Factor(dB)	Spurious emissions (dBm)		
1673	Vertical	-44.40	1.32	-43.08	-13	PASS
2509.5	V	-56.34	7.21	-49.13		
3346	V	-64.56	10.43	-54.13		
1673	Horizontal	-42.55	2.48	-40.07		
2509.5	H	-48.27	7.63	-40.64		
3346	H	-63.41	10.03	-53.38		

Band	n 5(BPSK, 20MHz)	Test channel:	Highest
Test mode:		Temperature:	25°C
		Relative Humidity:	56%

Note: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Frequency (MHz)	Spurious Emission				Limit (dBm)	Result
	Polarization	Level (dBm)	Correction Factor(dB)	Spurious emissions (dBm)		
1693	Vertical	-45.39	1.59	-43.80	-13	PASS
2539.5	V	-54.30	7.43	-46.87		
3386	V	-62.63	10.53	-52.10		
1693	Horizontal	-40.16	2.88	-37.28		
2539.5	H	-48.83	7.81	-41.02		
3386	H	-63.25	10.23	-53.02		

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Band	n 25(BPSK, 20MHz)	Test channel:	Lowest
Test mode:		Temperature:	25°C
		Relative Humidity:	56%

Note: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Frequency (MHz)	Spurious Emission				Limit (dBm)	Result
	Polarization	Level (dBm)	Correction Factor(dB)	Spurious emissions (dBm)		
3705	Vertical	-45.06	5.93	-39.13	-13	PASS
5557.5	V	-48.23	10.45	-37.78		
7410	V	-64.43	14.82	-49.61		
3705	Horizontal	-39.02	6.33	-32.69		
5557.5	H	-47.37	10.06	-37.31		
7410	H	-60.32	14.48	-45.84		

Band	n 25(BPSK, 20MHz)	Test channel:	Middle
Test mode:		Temperature:	25°C
		Relative Humidity:	56%

Note: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Frequency (MHz)	Spurious Emission				Limit (dBm)	Result
	Polarization	Level (dBm)	Correction Factor(dB)	Spurious emissions (dBm)		
3765	Vertical	-44.24	6.01	-38.23	-13	PASS
5647.5	V	-55.50	10.54	-44.96		
7530	V	-62.81	14.89	-47.92		
3765	Horizontal	-40.58	6.42	-34.16		
5647.5	H	-48.35	10.24	-38.11		
7530	H	-61.64	14.65	-46.99		

Band	n 25(BPSK, 20MHz)	Test channel:	Highest
Test mode:		Temperature:	25°C
		Relative Humidity:	56%

Note: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Frequency (MHz)	Spurious Emission				Limit (dBm)	Result
	Polarization	Level (dBm)	Correction Factor(dB)	Spurious emissions (dBm)		
3825	Vertical	-46.00	6.09	-39.91	-13	PASS
5737.5	V	-54.05	10.63	-43.42		
7650	V	-61.17	14.95	-46.22		
3825	Horizontal	-41.61	6.52	-35.09		
5737.5	H	-50.06	10.43	-39.63		
7650	H	-64.42	14.82	-49.60		

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Band	n 41 (BPSK, 50MHz)	Test channel:	Lowest
Test mode:		Temperature:	25°C
		Relative Humidity:	56%

Note: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Frequency (MHz)	Spurious Emission				Limit (dBm)	Result
	Polarization	Level (dBm)	Correction Factor(dB)	Spurious emissions (dBm)		
5002.02	Vertical	-42.73	6.04	-36.69	-25	PASS
7503.03	V	-48.48	10.58	-37.90		
10004.04	V	-65.72	14.92	-50.80		
5002.02	Horizontal	-42.40	6.46	-35.94		
7503.03	H	-49.52	10.33	-39.19		
10004.04	H	-62.43	14.72	-47.71		

Band	n 41 (BPSK, 50MHz)	Test channel:	Middle
Test mode:		Temperature:	25°C
		Relative Humidity:	56%

Note: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Frequency (MHz)	Spurious Emission				Limit (dBm)	Result
	Polarization	Level (dBm)	Correction Factor(dB)	Spurious emissions (dBm)		
5186.01	Vertical	-42.77	6.19	-36.58	-25	PASS
7779.015	V	-55.50	10.74	-44.76		
10372.02	V	-61.88	15.04	-46.84		
5186.01	Horizontal	-40.50	6.64	-33.86		
7779.015	H	-49.67	10.68	-38.99		
10372.02	H	-62.36	15.04	-47.32		

Band	n 41 (BPSK, 50MHz)	Test channel:	Highest
Test mode:		Temperature:	25°C
		Relative Humidity:	56%

Note: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Frequency (MHz)	Spurious Emission				Limit (dBm)	Result
	Polarization	Level (dBm)	Correction Factor(dB)	Spurious emissions (dBm)		
5370	Vertical	-44.24	6.34	-37.90	-25	PASS
8055	V	-54.86	10.91	-43.95		
10740	V	-61.76	15.17	-46.59		
5370	Horizontal	-41.53	6.82	-34.71		
8055	H	-50.47	11.04	-39.43		
10740	H	-65.10	15.36	-49.74		

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Band	n 66 (BPSK, 40MHz)	Test channel:	Lowest
Test mode:		Temperature:	25°C
		Relative Humidity:	56%

Note: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Frequency (MHz)	Spurious Emission				Limit (dBm)	Result
	Polarization	Level (dBm)	Correction Factor(dB)	Spurious emissions (dBm)		
3425	Vertical	-43.22	-0.46	-43.68	-13	PASS
5137.5	V	-49.47	6.15	-43.32		
6850	V	-64.22	9.78	-54.44		
3425	Horizontal	-44.46	-0.11	-44.57		
5137.5	H	-46.26	6.59	-39.67		
6850	H	-62.06	9.70	-52.36		

Band	n 66 (BPSK, 40MHz)	Test channel:	Middle
Test mode:		Temperature:	25°C
		Relative Humidity:	56%

Note: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Frequency (MHz)	Spurious Emission				Limit (dBm)	Result
	Polarization	Level (dBm)	Correction Factor(dB)	Spurious emissions (dBm)		
3490	Vertical	-41.21	-0.45	-41.66	-13	PASS
5235	V	-53.24	6.27	-46.97		
6980	V	-63.85	10.21	-53.64		
3490	Horizontal	-40.20	-0.11	-40.31		
5235	H	-47.69	6.73	-40.96		
6980	H	-61.92	10.07	-51.85		

Band	n 66 (BPSK, 40MHz)	Test channel:	Highest
Test mode:		Temperature:	25°C
		Relative Humidity:	56%

Note: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Frequency (MHz)	Spurious Emission				Limit (dBm)	Result
	Polarization	Level (dBm)	Correction Factor(dB)	Spurious emissions (dBm)		
3555	Vertical	-46.52	-0.18	-46.70	-13	PASS
5332.5	V	-57.15	6.38	-50.77		
7110	V	-66.99	10.31	-56.68		
3555	Horizontal	-42.63	0.29	-42.34		
5332.5	H	-48.11	6.87	-41.24		
7110	H	-65.70	10.11	-55.59		

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Band	n 71 (BPSK, 20MHz)	Test channel:	Lowest
Test mode:		Temperature:	25°C
		Relative Humidity:	56%

Note: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Frequency (MHz)	Spurious Emission				Limit (dBm)	Result
	Polarization	Level (dBm)	Correction Factor(dB)	Spurious emissions (dBm)		
1331	Vertical	-43.22	-0.46	-43.68	-13	PASS
1996.5	V	-49.47	6.15	-43.32		
2662	V	-64.22	9.78	-54.44		
1331	Horizontal	-44.46	-0.11	-44.57		
1996.5	H	-46.26	6.59	-39.67		
2662	H	-62.06	9.70	-52.36		

Band	n 71 (BPSK, 20MHz)	Test channel:	Middle
Test mode:		Temperature:	25°C
		Relative Humidity:	56%

Note: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Frequency (MHz)	Spurious Emission				Limit (dBm)	Result
	Polarization	Level (dBm)	Correction Factor(dB)	Spurious emissions (dBm)		
1361	Vertical	-41.21	-0.45	-41.66	-13	PASS
2041.5	V	-53.24	6.27	-46.97		
2722	V	-63.85	10.21	-53.64		
1361	Horizontal	-40.20	-0.11	-40.31		
2041.5	H	-47.69	6.73	-40.96		
2722	H	-61.92	10.07	-51.85		

Band	n71 (BPSK, 20MHz)	Test channel:	Highest
Test mode:		Temperature:	25°C
		Relative Humidity:	56%

Note: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Frequency (MHz)	Spurious Emission				Limit (dBm)	Result
	Polarization	Level (dBm)	Correction Factor(dB)	Spurious emissions (dBm)		
1391	Vertical	-46.52	-0.18	-46.70	-13	PASS
2086.5	V	-57.15	6.38	-50.77		
2782	V	-66.99	10.31	-56.68		
1391	Horizontal	-42.63	0.29	-42.34		
2086.5	H	-48.11	6.87	-41.24		
2782	H	-65.70	10.11	-55.59		

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Band	n 77a (BPSK, 50MHz)	Test channel:	Lowest
Test mode:		Temperature:	25°C
		Relative Humidity:	56%

Note: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Frequency (MHz)	Spurious Emission				Limit (dBm)	Result
	Polarization	Level (dBm)	Correction Factor(dB)	Spurious emissions (dBm)		
7410	Vertical	-43.52	10.41	-33.11	-13	PASS
11115	V	-46.58	15.26	-31.32		
14820	V	-65.48	15.00	-50.48		
7410	Horizontal	-43.86	9.98	-33.88		
11115	H	-47.65	15.91	-31.74		
14820	H	-63.66	14.90	-48.76		

Band	n 77a (BPSK, 50MHz)	Test channel:	Middle
Test mode:		Temperature:	25°C
		Relative Humidity:	56%

Note: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Frequency (MHz)	Spurious Emission				Limit (dBm)	Result
	Polarization	Level (dBm)	Correction Factor(dB)	Spurious emissions (dBm)		
7680	Vertical	-42.48	10.63	-31.85	-13	PASS
11520	V	-54.04	15.00	-39.04		
15360	V	-62.83	14.00	-48.83		
7680	Horizontal	-41.61	10.43	-31.18		
11520	H	-49.44	15.70	-33.74		
15360	H	-63.39	14.20	-49.19		

Band	n 77a (BPSK, 50MHz)	Test channel:	Highest
Test mode:		Temperature:	25°C
		Relative Humidity:	56%

Note: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Frequency (MHz)	Spurious Emission				Limit (dBm)	Result
	Polarization	Level (dBm)	Correction Factor(dB)	Spurious emissions (dBm)		
7950	Vertical	-45.03	10.84	-34.19	-13	PASS
11925	V	-53.95	14.80	-39.15		
15900	V	-61.85	13.00	-48.85		
7950	Horizontal	-41.54	10.89	-30.65		
11925	H	-48.40	15.50	-32.90		
15900	H	-63.40	13.50	-49.90		

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Band	n 78a (BPSK, 50MHz)	Test channel:	Lowest
Test mode:		Temperature:	25°C
		Relative Humidity:	56%

Note: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Frequency (MHz)	Spurious Emission				Limit (dBm)	Result
	Polarization	Level (dBm)	Correction Factor(dB)	Spurious emissions (dBm)		
7410	Vertical	-43.91	10.21	-33.70	-13	PASS
11115	V	-50.54	15.12	-35.42		
14820	V	-65.29	19.10	-46.19		
7410	Horizontal	-46.40	10.07	-36.33		
11115	H	-46.46	15.23	-31.23		
14820	H	-62.82	17.80	-45.02		

Band	n 78a (BPSK, 50MHz)	Test channel:	Middle
Test mode:		Temperature:	25°C
		Relative Humidity:	56%

Note: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Frequency (MHz)	Spurious Emission				Limit (dBm)	Result
	Polarization	Level (dBm)	Correction Factor(dB)	Spurious emissions (dBm)		
7500	Vertical	-45.24	10.29	-34.95	-13	PASS
11250	V	-54.48	15.13	-39.35		
15000	V	-65.66	19.20	-46.46		
7500	Horizontal	-41.75	10.14	-31.61		
11250	H	-48.03	15.26	-32.77		
15000	H	-63.01	17.90	-45.11		

Band	n 78a (BPSK, 50MHz)	Test channel:	Highest
Test mode:		Temperature:	25°C
		Relative Humidity:	56%

Note: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Frequency (MHz)	Spurious Emission				Limit (dBm)	Result
	Polarization	Level (dBm)	Correction Factor(dB)	Spurious emissions (dBm)		
7590	Vertical	-46.63	10.29	-36.34	-13	PASS
11385	V	-55.59	15.14	-40.45		
15180	V	-67.50	19.10	-48.40		
7590	Horizontal	-41.82	10.14	-31.68		
11385	H	-50.02	15.29	-34.73		
15180	H	-66.77	17.80	-48.97		

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Band	n 78e (BPSK, 50MHz)	Test channel:	Lowest
Test mode:		Temperature:	25°C
		Relative Humidity:	56%

Note: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Frequency (MHz)	Spurious Emission				Limit (dBm)	Result
	Polarization	Level (dBm)	Correction Factor(dB)	Spurious emissions (dBm)		
6910.02	Vertical	-43.91	10.21	-33.70	-13	PASS
10365.03	V	-50.54	15.12	-35.42		
13820.04	V	-65.29	19.10	-46.19		
6910.02	Horizontal	-46.40	10.07	-36.33		
10365.03	H	-46.46	15.23	-31.23		
13820.04	H	-62.82	17.80	-45.02		

Band	n 78e (BPSK, 50MHz)	Test channel:	Middle
Test mode:		Temperature:	25°C
		Relative Humidity:	56%

Note: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Frequency (MHz)	Spurious Emission				Limit (dBm)	Result
	Polarization	Level (dBm)	Correction Factor(dB)	Spurious emissions (dBm)		
7000.02	Vertical	-45.24	10.29	-34.95	-13	PASS
10500	V	-54.48	15.13	-39.35		
14000	V	-65.66	19.20	-46.46		
7000.02	Horizontal	-41.75	10.14	-31.61		
10500	H	-48.03	15.26	-32.77		
14000	H	-63.01	17.90	-45.11		

Band	n 78e (BPSK, 50MHz)	Test channel:	Highest
Test mode:		Temperature:	25°C
		Relative Humidity:	56%

Note: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Frequency (MHz)	Spurious Emission				Limit (dBm)	Result
	Polarization	Level (dBm)	Correction Factor(dB)	Spurious emissions (dBm)		
7089.99	Vertical	-46.63	10.29	-36.34	-13	PASS
10634.985	V	-55.59	15.14	-40.45		
14179.98	V	-67.50	19.10	-48.40		
7089.99	Horizontal	-41.82	10.14	-31.68		
10634.985	H	-50.02	15.29	-34.73		
14179.98	H	-66.77	17.80	-48.97		

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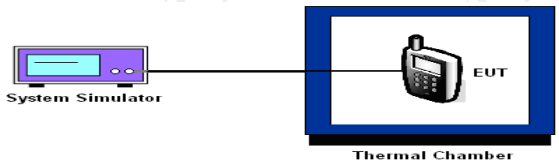
5.6. Frequency Stability Measurement

5.6.1. Test Specification

Test Requirement:	FCC part 22.355, FCC part 24.235, FCC part 27.54
Test Method:	FCC Part 2.1055
Limit:	For 5G NR n 5, 26: 1.5 ppm is for base and fixed station. 2.5 ppm is for mobile station. For 5G NR n 2, 7, 41, 66, 77, 78: The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation (authorized frequency block).
Test Setup:	
Test Procedure:	**Test Procedures for Temperature Variation** 1. The testing follows FCC KDB 971168 D01v03r01 Section 9.0. 2. The EUT was set up in the thermal chamber and connected with the system simulator. 3. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute. 4. With power OFF, the temperature was raised in 10°C steps up to 50°C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute. **Test Procedures for Voltage Variation** 1. The testing follows FCC KDB 971168 D01v03r01 Section 9.0. 2. The EUT was placed in a temperature chamber at 25±5° C and connected with the system simulator. 3. The power supply voltage to the EUT was varied from BEP to 115% of the nominal value measured at the input to the EUT. 4. The variation in frequency was measured for the worst case. 5. The worst case(worst bandwidth) for frequency stability reported in the Test Data. The worst bandwidth is as follow: 5M is for 5G NR n 2, 5M is for 5G NR n 5, 5M is for 5G NR n 7, 5M is for 5G NR n 26-1, 5M is for 5G NR n 26-2, 20M is for 5G NR n 41, 5M is for 5G NR n 66, 20M is for 5G NR n 77, 20M is for 5G NR n 78

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Test Result:	PASS

5.6.2. Test Instruments

Equipment	Manufacturer	Model	Serial Number	Calibration Due
Wireless communication test platform	Anritsu	MT8000A	6262208369	Jan. 31, 2025
Radio communication analyzer	Anritsu	MT8821C	6262192286	Jan. 31, 2025
Programable tempratuce and humidity chamber	JQ	JQ-2000	510101234	Jun. 26, 2025
DC power supply	Kingrang	KR3005K	/	Jun. 26, 2025

Appendix A: Test Result of Conducted Test

please refer to appendix document of test date.

Appendix B: Photographs of Test Setup

Please refer to document Appendix No.: TCT240910E034-A

Appendix C: Photographs of EUT

Please refer to document Appendix No.: TCT240910E034-B & TCT240910E034-C

*****END OF REPORT*****

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