

Prüfbericht-Nr.: Test Report No.:	50085881 001	Auftrags-Nr.: Order No.:	154243722	Seite 1 von 10 Page 1 of 10
Kunden-Referenz-Nr.: Client Reference No.:	52195561	Auftragsdatum: Order date:	26.04.2017	
Auftraggeber: Client:	AXENT Corporation Ltd. 3 Musick, Irvine CA 92618 USA			
Prüfgegenstand: Test item:	Intelligent toilet			
Bezeichnung / Typ-Nr.: Identification / Type No.:	E322-02 FCC ID: 2AL4GAXENT-ONE-C			
Auftrags-Inhalt: Order content:	Complete test			
Prüfgrundlage: Test specification:	FCC KDB # 447498 D01 V06			
Wareneingangsdatum: Date of receipt:	11.17.2016	Please refer to the External Photos		
Prüfmuster-Nr.: Test sample No.:	A000457947-001			
Prüfzeitraum: Testing period:	Refer to test reports			
Ort der Prüfung: Place of testing:	MRT Technology(Suzhou) Co., Ltd.			
Prüflaboratorium: Testing laboratory:	TÜV Rheinland (Shanghai) Co., Ltd.			
Prüfergebnis*: Test result*:	Pass			
geprüft von / tested by:		kontrolliert von / reviewed by:		
11.07.2017 Datum Date	Elliot Zhang / Assistant Project Manager Name / Stellung Name / Position	11.07.2017 Datum Date	Shi Li / Department Manager Name / Stellung Name / Position	
	 Unterschrift Signature		 Unterschrift Signature	
Sonstiges / Other				
Zustand des Prüfgegenstandes bei Anlieferung: Condition of the test item at delivery:		Prüfmuster vollständig und unbeschädigt Test item complete and undamaged		
* Legende:	1 = sehr gut P(ass) = entspricht o.g. Prüfgrundlage(n) Legend: 1 = very good P(ass) = passed a.m. test specification(s)	2 = gut 2 = good 3 = befriedigend F(ail) = entspricht nicht o.g. Prüfgrundlage(n) 3 = satisfactory F(ail) = failed a.m. test specification(s)	4 = ausreichend N/A = nicht anwendbar 4 = sufficient N/A = not applicable	5 = mangelhaft N/T = nicht getestet 5 = poor N/T = not tested
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				

V04

TEST SUMMARY

2.2.1 EVALUATION FOR BLUETOOTH CLASSIC

RESULT: Pass

2.2.2 EVALUATION FOR BLUETOOTH LOW ENERGY

RESULT: Pass

2.2.3 EVALUATION FOR 2411MHz FSK TRANSMITTER

RESULT: Pass

2.2.4 EVALUATION FOR THE SIMULTANEOUSLY TRANSMITTING SITUATION

RESULT: Pass

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1. General Product Information

1.1 Product Function and Intended Use

The EUT (Equipment Under Test) is an intelligent toilet which contains a 2.4GHz wireless modular and a Bluetooth Dual Mode module.

The aim of this report is to evaluate the RF Exposure of the EUT.

For details refer to the User Manual and Circuit Diagram.

1.2 Ratings and System Details

Table 1: Technical Specification of EUT

General Description of EUT	
Product Name:	Intelligent toilet
Brand Name:	AXENT
Model No.:	E322-02
Rated Voltage:	AC 120V, 60Hz
Bluetooth Classical	
Frequency Range:	2402 – 2480MHz
Modulation Type:	BDR: GFSK EDR: $\pi/4$ -DQPSK; 8DPSK
Antenna Type:	PCB Antenna
Antenna Gain:	1.6dBi
Bluetooth Low Energy	
Frequency Range:	2402 – 2480MHz
Modulation Type:	GFSK
Antenna Type:	PCB Antenna
Antenna Gain:	1.6dBi
2.4GHz Wireless Module	
Frequency Range:	2411MHz
Modulation Type:	FSK
Antenna Type:	PCB
Antenna Gain:	0dBi

2. RF Exposure

2.1 FCC Requirement and Limit

According to FCC KDB # 447498 D01 V06, Clause 4.3.1

- (a) For 100MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

$$\frac{(\text{max. power of channel, including tune - up tolerance, mW})}{(\text{min. test separation distance, mm})} \times \sqrt{f(\text{GHz})}$$

≤ 3.0 , for 1-g SAR, and ≤ 7.5 , for 10-g extremity SAR

2.2 FCC Evaluation Results

2.2.1 Evaluation for Bluetooth Classic

RESULT:**Pass**

According to the Bluetooth Classic RF test report No. 50085877 001 issued by TÜV Rheinland (Shanghai) Co., Ltd. And the maximum conducted output power declared in the operation description. The maximum peak conducted output power is

Table 2: Evaluation for Bluetooth Classic

Frequency [GHz]	Maximum Conducted Peak Output Power measured [dBm]	Maximum Conducted Peak Output Power Declared in the OD [dBm]	Maximum Conducted Peak Output Power [mW]
2.402	6.158	6.5	4.466835922

And the EIRP is:

Frequency [GHz]	Maximum Conducted Peak Output Power [dBm]	Maximum Antenna Gain [dBi]	Duty Cycle	Maximum EIRP [mW]
2.402	6.5	1.6	100%	6.45654229

And for the frequency 2.402GHz, the SAR test exclusion thresholds at the test separation distance 5mm is,

1-g SAR test exclusion thresholds = 9.678426528mW

10-g SAR test exclusion thresholds = 24.19606632mW

Conclusion

The device is excluded for SAR test and complies with the FCC exposure requirements since the maximum peak output power is lower than the SAR test exclusion thresholds.

2.2.2 Evaluation for Bluetooth Low Energy

RESULT:**Pass**

According to the Bluetooth Low Energy RF test report No. 50085878 001 issued by TÜV Rheinland (Shanghai) Co., Ltd. And the maximum conducted output power declared in the operation description.

The maximum peak conducted output power is

Table 3: Evaluation for Bluetooth Low Energy

Frequency [GHz]	Maximum Conducted Peak Output Power measured [dBm]	Maximum Conducted Peak Output Power Declared in the OD [dBm]	Maximum Conducted Peak Output Power [mW]
2.402	2.44	2.5	1.77827941

And the EIRP is:

Frequency [GHz]	Maximum Conducted Peak Output Power [dBm]	Maximum Antenna Gain [dBi]	Duty Cycle	Maximum EIRP [mW]
2.402	2.5	1.6	100%	2.570395783

And for the frequency 2.402GHz, the SAR test exclusion thresholds at the test separation distance 5mm is,

1-g SAR test exclusion thresholds = 9.678426528mW

10-g SAR test exclusion thresholds = 24.19606632mW

Conclusion

The device is excluded for SAR test and complies with the FCC exposure requirements since the maximum conducted peak output power is lower than the SAR test exclusion thresholds.

2.2.3 Evaluation for 2411MHz FSK Transmitter

RESULT:**Pass**

According to the RF test report No. 50085880 001 issued by TÜV Rheinland (Shanghai) Co., Ltd. And the maximum conducted output power declared in the operation description.

The Max EIRP is:

Table 4: Evaluation for 2411MHz FSK Transmitter

Frequency [GHz]	Maximum EIRP [dBm]	Maximum EIRP [mW]
2.411	-6.5	0.223872114

And for the frequency 2.411GHz, the SAR test exclusion thresholds at the test separation distance 5mm is,

1-g SAR test exclusion thresholds = 9.660345383mW

10-g SAR test exclusion thresholds = 24.15086346mW

Conclusion

The device is excluded for SAR test and complies with the FCC exposure requirements since the maximum conducted peak output power is lower than the SAR test exclusion thresholds.

2.2.4 Evaluation for the Simultaneously Transmitting Suitation

RESULT:

Pass

Table 5: Evaluation for the Simultaneously Transmitting Suitation

Operating Mode	Maximum EIRP [mW]	Maximum EIRP in the simultaneously transmitting Suitation [mW]
Bluetooth	6.45654229	9.250810187
BLE	2.570395783	
2411MHz	0.223872114	

And for the frequency 2.411GHz, the SAR test exclusion thresholds at the test separation distance 5mm is,

1-g SAR test exclusion thresholds = 9.660345383mW

10-g SAR test exclusion thresholds = 24.15086346mW

Conclusion

The device is excluded for SAR test and complies with the FCC exposure requirements since the maximum conducted peak output power is lower than the SAR test exclusion thresholds.

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