

Anbotek

Anbolek

Report No.:1819C40009812501

FCC ID: 2ATS9-8813E

FCC Test Report

Applicant : Cleer Limited

Address : UNITS 3306-12 33/F,SHUI ON CENTRE, NOS. 6-8

HARBOUR ROAD, WANCHAI, HK, China

Product Name : ARC 3 Pro Music Al Open Ear True Wireless

Headphone

Report Date : Aug. 29, 2024

Shenzhen Anbotek Compliance Laboratory Limited

Anbotek





Report No.:1819C40009812501

FCC ID: 2ATS9-8813E

Contents

1. General Information	Upolek V			Anbore	
1.1. Client Information	uring Test	Aupore Manager	Anotek	Anboles Anb	iek vup
1.4. Operation channel list	Anbatek	**************************************	5 _K \$200	0.00	"poler"
1.7. Test Summary		,000fey	potek	Vipore Vipore	Anotek Anotek
1.9. Disclaimer 1.10. Test Equipment List	Aupolek Vupo	Anbotek Anbotek	Pupore Vuporek	**************************************	rok or
2. Antenna requirement	"Upokek			y	o _{fe} , Vu
2.1. Conclusion		rupo _{le} ,	V _{Un}	/6/	74,00,16k
3. Conducted Emission at AC power I	ine	16k Np0	iek Vu	00.	"Dotek
3.1. EUT Operation	orek And Andorek	Huporejr V	10016k	Anborek Anborek	
4. Occupied Bandwidth	* upotek	Augo, mk	r. "Polek	Anbor	Y
4.1. EUT Operation	k Vupole Vupolek	k Aupore	V V V V V	ek <u>An</u>	ooler An
5 Maximum Conducted Output Power	ar. % a	okek Aup	240	o'ek	Anbolen
5.1. EUT Operation	1000 Yes	Pupole _k	Will Orek	Anbolek Anbolek	ek Anbolek
C. Changal Congretion	Anbole	·····VIII.	Anborok		. tek
6. Channel Separation	Anboyen	P.OD.	r vapo	16y V.	(60°
6.1. EUT Operation	ek + 40001	ek Vipo,		,,b016k	Vinole.
7. Number of Hopping Frequencies	ipolek VL		"potek	Vupo,	w.
7.1. EUT Operation	Vupo _{fek}	Vupolek Vupo	Vilpotek	Anboro Anboro	lek Yun
8. Dwell Time	* upotek	Aupo	do H	otek b	'upole
7.1. EUT Operation	, No.	^{Upoke} k ^{Pu} po _r	0010); V	^{Vigote} k	Aupoten Aupoten
Emissions in non-restricted frequer	ncv bands	, upotek	Aupo K	, botel	Anbole
9.1. EUT Operation	Anbotak Anbotak	hopotek Vilotek	Aupole	,	^{hup} ole _k Vu _p
10. Band edge emissions (Radiated).	<i>b.</i> ,	lok Yaj	ie. Vu	al	*potek





Anbotek

Anbotek

Anbolek

Anbotek

Anbotek

Anbolek

Anbolek

Anbotek

Anborek

Aupolek

Anbotek

Anbotek

Anbotek

Anbotek

Anbolek

Anbolek

Anbotek

Anbotek

Anborek

Anbolek

Aupolek

Aupolek

Anbotek

Anbotek

Anbotek

Anbolek

Anbolek

Anbotek



'upolek

otek

Aupolek

potek

Anbolek

Anbotek

'upotek

otek

Anbotek

otek

Anbolek

Anbolek

Aupolek

Aupolek

Aupolek

Anbolek

Anboiek

Anbotek

Aupotek

Anbotek

Anbotek

Anbotek

Anbotek

Anbotek

Anbotek

Aupolek

Anbotek

Anbotek

Anbotek

Anbotek

Anbotek

Anbotek

Anbotek

Anbotek

Anbolek

Anbolek

Anbotek

Anbolek

Anbotek

Anbotek

Anboiek

Anbotek

Anboiek

Anbotek

Anbotek

Anbotek

Anbotek

Anbotek

Anbolek

Anbolek

Anboiek

Aupolek

Anboiek

Anboiek

Anbolek

Report No.:1819C40009812501 Anbotek FCC ID: 2ATS9-8813E

	Aupor	Nek !	Tupole.	Ann	abole	e Vu	D.	"otek	Anbo	
<i>/</i> /-	Aupolek An	00.	potek	Anbore	W.	rek	Aupoler	VUD.	48	upotek
	10.1. EUT (Operation	W.	o/c	V V		, alek	Pupo,	27	
otek	10.1. EUT (10.2. Test S	etup		VII.		Polek	And		28	VUpo.
	10.3. Test D)ata	r	10,, 10,	ore	V1		V.	29	
Aupole	11. Emissions in	frequency l	bands (belo	w 1GHz)	Kipolek	Aupore	W	016k	30	V,
100	14 4 EUT (moration w	0,600	Up	184	Anbol	D.	191	4/20 //er	
ly.	11.1. Lot 0	etun	. o/-	Kopolek.	Ano		· otek	Aupoy	31	19.
	11.3. Test D	ata	Anbore		Nopole V	V.		V 490 tok	32	. ek
ek.	12. Emissions ir	frequency l	bands (abo\	/e 1GHz)	o/\/o	00/6k	Aupo,		34	Aupole
rek	12.1. EUT (Operation	"Ofolo	Aug.		rotek	Vupo.	<i>b.</i>	34	npo
100	12.2. Test S	etup	K1.	, tek	Poles	VUL	·~ 0	e _K	35	A.
2001	12.3. Test D	ata	3K 27D	0, V		apolen	And		36	P
VIII	APPENDIX I ⁻	TEST SETU	P PHOTOG	RAPH	Vupo.	h.	ick b	upore.	39	6
PL	APPENDIX II				* apole	Ville		polek	39	V
	APPENDIX III					e ^k	upolo	Vu.	39	OFER
tek	Aupotek 1	'upore.	Aur Vupolek	Anbotek	Wak Wupo	pojek	Aupolek	Anbore	otek Vi.	Anbotek
	49.1	. 4/0°.	V-	v ~0	La V		181	" UD.		-

Anbolek

Anbolek

Anbotek

Anbotek

Aupolek

Anbotek

Anbotek

Anbotek

Anbolek

Anbotek

Anbolek

Anboiek

Anbotek

Anbotek

Anbotek

Anbolek

Anbotek

Anboiek

Anbotek

Anbotek

Anbotek

Anbotek

Anbotek

Anbotek

Anbolek

Anbolek

Aupotek

Anbolek

Anbolek

Anbolek

Anbolek

Anbotek

Anbotek

Anbotek

Anboiek

Anbotek

Anbolek

Anbotek

Anbotek

Anbotek

Anboiek

Anbotek

Anbotek

Anboiek

Anbotek

Anboiek

Anbotek

Anbotek

Anbotek

Anbotek

Anbolek

Anbolek

Anbolek

Anbotek

Anborek

Anbotek

Anbolek

nbotek

Anbotek

Anbotek

Anbotek

Shenzhen Anbotek Compliance Laboratory Limited

Anbotek



Report No.:1819C40009812501

FCC ID: 2ATS9-8813E

TEST REPORT

Applicant

: Cleer Limited

Manufacturer

Shenzhen Grandsun Electronic Co., Ltd.

Product Name

ARC 3 Pro Music Al Open Ear True Wireless Headphone

Model No.

GS8813E

Trade Mark

Cleer

Rating(s)

Input: 5V-200mA (with DC 3.85V, 110mAh battery inside)

47 CFR Part 15.247

Test Standard(s)

ANSI C63.10-2020

KDB 558074 D01 15.247 Meas Guidance v05r02

The device described above is tested by Shenzhen Anbotek Compliance Laboratory Limited to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and Shenzhen Anbotek Compliance Laboratory Limited is assumed full of responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT (Equipment Under Test) is technically compliant with above listed standard(s) requirements.

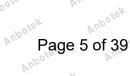
This report applies to above tested sample only and shall not be reproduced in part without written approval of Shenzhen Anbotek Compliance Laboratory Limited.

Date of Receipt:	Aug. 06, 2024
Potek Aupotes Aug Otek Vupotek	
Date of Test:	Aug. 06, 2024 to Aug. 20, 2024
	Nian xiu Chen
Prepared By:	Tupo, W. Vick Vupote, Vu
	(Nianxiu Chen)
	Bolward pan
Approved & Authorized Signer:	Ano Ano
	(Edward Pan)



400-003-0500

Hotline



Anbolek

Anbolek

Anbolek

Anbotek

Anbotek

Anbotek

Anbolek

Anbolek

Anbolek

Anbotek

Aupolek

Anbolek

Anbotek

Anbotek

Anbotek

Anbolek

Anbolek

Aupolek

Anbotek



Anbotek

Anbotek

Anbotek

Anbotek

hotek

Aupolek

Anbolek

Anbotek

Anbotek

Anbolek

Anbotek

Anbolek

Anbolek

Anbolek

Anborek

Anbotek

Aupolek

Aupolek

Anbotek

Aupolek

Aupolek

Anbolek

Anbotek

Anbotek

Report No.:1819C40009812501 FCC ID: 2ATS9-8813E

Anbolek

Anboiek

Anbolek

Revision History

And	otek Anbotek	Anbo.	Revision H	istory	k Vupolek	Aupolek Polek	V,
tek	Report Version		Descriptio	n	Issued	I Date	
^{up} oisk	Anbolic R00	Vupotek	Original Issu	ie. Vek	Aug. 29), 2024	ootek
VAPOISK	k Auporolek	Anborek	Aupote Ofek	Aupolek	Aupoles,	Andorek	Anb
Aupore	ick upolek	Aupo	er Aug Potek	Anbolek	Aupor arek	Aupotek	

Anbolek

Anbolek

Anbolek

Anbotek

Anbotek **Aupolek** Anbotek Anbotek Anbolek Anbolek Anbolek Anbolek Anbotek Aupolek Anbotek Anbotek Anbotek Anbotek Anbolek Anbotek Anbotek Anbolek Anbolek Anbotek Anboiek Anbotek Anbolek Anbotek Anbotek Anbotek Anbotek Anbotek Anbolek Anbotek Anborek Anbotek Anbotek Anbolek Anbotek Anbotek Aupolek Anbotek Aupolek Anbotek Aupolek Anbotek Anbolek Anbotek Anbotek Anbotek Anboiek Anbotek Anbotek Anborek Anbolek Anbolek Anbolek Anbotek Anbotek Anbotek Anbotek Anbolek Anbotek Aupotek Anbotek Anbolek Anbotek Anbotek Anbolek nbotek Anbotek Anbotek Anbolek Anbolek Anbotek Anbolek Anbotek Anbotek Anbolek Anbolek Anbotek Anbotek Anbolek Anbolek Anbotek Anbotek Anbotek Anbolek Anbotek Anbotek Anbotek Anbolek Anbotek Anbotek Anbolek Anbotek Anbotek Anbotek Anboiek Anbotek Anbotek Anbotek Anbotek Anbotek Anbotek Anbolek Anbotek Anbolek Aupolek Anbotek Anbotek Anbotek Anbotek Anbolek Anbotek Anbolek Anbotek Anbotek Anbotek Anbolek Anbotek Anbotek Anbotek Anbolek Anbotek Anbotek Anborek Anbolek Anbotek Aupolek Anbolek Anbotek Anbolek Anbotek Anbotek Anbotek Anbolek Anbotek Anborek Anbotek Anbotek Anbolek Anbotek Anbotek Anbotek Anbolek Anbolek Anbotek Anbotek otek Anbotek Aupolek Anbotek Anbolek Anbotek Aupolek Anbotek Anbolek Anbolek Anbolek Anbolek Anbotek Anbotek Anbolek Aupolek Anbolek Anbotek Anbolek Anbolek Anbotek Anbotek Anbolek Anbotek Anbotek upotek 1001ek Shenzhen Anbotek Compliance Laboratory Limited







1. General Information

1.1. Client Information

	DA.		AR. VIII.
n'	Applicant		Cleer Limited And And And And And And And And And An
	Address	·	UNITS 3306-12 33/F,SHUI ON CENTRE, NOS. 6-8 HARBOUR ROAD, WANCHAI, HK, China
	Manufacturer	:	Shenzhen Grandsun Electronic Co., Ltd.
	Address	•	East Park, Gaoqiao Industry Zone, Pingdi Street, Longgang, Shenzhen, China
e)	Factory		Shenzhen Grandsun Electronic Co., Ltd.
U.S.	Address		East Park, Gaoqiao Industry Zone, Pingdi Street, Longgang, Shenzhen, China

1.2. Description of Device (EUT)

View Vur		k kor Ar
Product Name	:	ARC 3 Pro Music Al Open Ear True Wireless Headphone
Model No.	:	GS8813E Andotek Andotek Andotek Andotek Andotek
Trade Mark	:	Cleer Andotek Andotek Andotek Andotek Andotek Andotek
Test Power Supply	:	DC 5V from Charging Case, DC 3.85V battery inside
Test Sample No.	:	1-2-1(Normal Sample), 1-2-2(Engineering Sample)
Adapter	:	N/A Anbotek Anbotek Anbotek Anbotek Anbotek
RF Specification		
Operation Frequency	:	2402MHz to 2480MHz
Number of Channel	:	79 Andotek Andotek Andotek Andotek Andotek
Modulation Type	:	GFSK, π/4 DQPSK, 8DPSK
Antenna Type	:	PIFA Antenna Antonia A
Antenna Gain(Peak)	:	Left Earphone:1.97dBi Right Earphone:1.93dBi
Remark:		Poter Vun

- (1) All of the RF specification are provided by customer.
- (2) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
- (3) The EUT consists of two parts, the left and right earphone, both have been tested and only the test data of Left earphone recorded in this report.









1.3. Auxiliary Equipment Used During Test

	Title	Manufacturer	Model No.	Serial No.
3.6	Xiaomi 33W adapter	Xiaomi	MDY-11-EX	SA62212LA04358J
O.	Charging Case	Shenzhen Grandsun Electronic Co., Ltd.	GS1399C	k Aupotek Aupo

1.4. Operation channel list

Operation Band:

Operation b	K	Pr-		760	111.	400	202
Channel	Frequency (MHz)	Channel N	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2402	Anboie	2422	40	2442	60 _{ND} ot	2462
inbore 1	2403	21	2423	41 nbote	2443	61	oo ^{vek} 2463 M
Anbore	2404	22/boles	2424	ek 42 Ant	otek 2444 Anb	62	2464
3/poter	2405	× 23 Anb	2425	43	2445	63 _k	2465
4 Anbo	2406	otek 24	2426	44	2446	64	2466
otek 5 M	2407	25	2427	And 45 tek	2447	65	2467
6910dn	2408	26,04	2428	46	2448 nbole	66 Anbo	2468
Ziek	2409	27	2429	47 ^{Anbb}	2449	otek 67 A	2469
8 botek	2410	28	otek 2430 And	48 An	2450	68 (₀₀₀	2470
8 ₁₀₀ 10 ¹	tek 2411 _{Anbol}	29 Am	2431	nbote49	2451	69	2471
10	2412	10018 30	2432	Ant 50° K	2452	70 notek	2472
11	2413	An 31	2433	51borek	2453	71	2473 And
Anbotto	2414	320101	2434	52 _{Anb} o'	2454 nbox	72	2474
13	2415	33 _{Anbole}	2435	11ek 53	1001ex 2455 AT	73	2475
14 nbole	2416	tek 34 An	2436	54	2456	Anbord	2476
ek 15 And	2417	35 35	2437	55 _{ek}	2457	75	2477
, ₆₀ te ^k 16	2418	36	2438	156 NOV	2458	76. nb o te	2478
17	2419	And 37 tek	2439	57 ^{nb}	2459	ek 77 And	2479
18 tek	2420	38	ek 2440 Anbote	58 Anbs	2460	,,,,ote ^k 78	2480
19	2421,0010	39 ^{Anbu}	2441	o ^{tek} 59	2461	2016K	Aupole:







1.5. Description of Test Modes

Pretest Modes			Descriptions				
atek AnboTM1 Anbou			Keep the EUT in continuously transmitting mode (non-hopping) with GFSK modulation.				
<i>Inpotek</i>	TM2	Ando	Keep the EUT in continuously transmitting mode (non-hopping) with π/4 DQPSK modulation.				
Aupolek	TM3	rek VI	Keep the EUT in continuously transmitting mode (non-hopping) with 8DPSK modulation.				
Aupolek	TM4 And	abolek	Keep the EUT in continuously transmitting mode (hopping) with GFSK modulation,.				
k Aupo,	TM5	Anbotek	Keep the EUT in continuously transmitting mode (hopping) with $\pi/4$ DQPSK modulation.				
oler V	TM6	Anbore	Keep the EUT in continuously transmitting mode (hopping) with 8DPSK modulation.				

1.6. Measurement Uncertainty

Parameter	Uncertainty
Conducted emissions (AMN 150kHz~30MHz)	3.8dB Anbott
Occupied Bandwidth	925Hz Andrew Andrew Andrew
Conducted Output Power	0.76dBek Anbore
Conducted Spurious Emission	1.24dB
Radiated spurious emissions (above 1GHz)	1G-6GHz: 4.78dB; 6G-18GHz: 4.88dB 18G-40GHz: 5.68dB
Radiated emissions (Below 30MHz)	3.53dB
Radiated spurious emissions (30MHz~1GHz)	Horizontal: 3.92dB; Vertical: 4.52dB

The measurement uncertainty and decision risk evaluated according to AB/WI-RF-F-032.

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.









1.7. Test Summary

Test Items	Test Modes	Status
Antenna requirement	otek / Aupotek	Auba rek
Conducted Emission at AC power line	Mode1,2,3	Pupos
Occupied Bandwidth	Mode1,2,3	B Vup.
Maximum Conducted Output Power	Mode1,2,3	ookek B k
Channel Separation	Mode4,5,6	Anbot P
Number of Hopping Frequencies	Mode4,5,6	An Brek
Dwell Time Otek Anbotek Anbotek	Mode4,5,6	Panbole
Emissions in non-restricted frequency bands	Mode1,2,3,4,5,6	ek P Anb
Band edge emissions (Radiated)	Mode1,2,3	NOTEK P
Emissions in frequency bands (below 1GHz)	Mode1,2,3	" Polish
Emissions in frequency bands (above 1GHz)	Mode1,2,3	And Polek
Note: P: Pass N: N/A, not applicable	Will Worker Williams Williams	Aupore

1.8. Description of Test Facility

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

FCC-Registration No.: 434132

Shenzhen Anbotek Compliance Laboratory Limited, EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No. 434132.

ISED-Registration No.: 8058A

Shenzhen Anbotek Compliance Laboratory Limited, EMC Laboratory has been registered and fully described in a report filed with the (ISED) Innovation, Science and Economic Development Canada. The acceptance letter from the ISED is maintained in our files. Registration 8058A.

Test Location

Shenzhen Anbotek Compliance Laboratory Limited.

Sogood Industrial Zone Laboratory & 1/F. of Building D, Sogood Science and Technology Park, Sanwei Community, Hangcheng Subdistrict, Bao'an District, Shenzhen, Guangdong, China.









1.9. Disclaimer

- 1. The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.
- 2. The test report is invalid if there is any evidence and/or falsification.
- 3. The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein.
- 4. This document may not be altered or revised in any way unless done so by Anbotek and all revisions are duly noted in the revisions section.
- 5. Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
- 6. The authenticity of the information provided by the customer is the responsibility of the customer and the laboratory is not responsible for its authenticity.

The laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant.



Anbolek

Anbol

Anbolek

AND



Report No.:1819C40009812501 FCC ID: 2ATS9-8813E

1.10. Test Equipment List

Cond	ucted Emission at A	C power line	Aupoler	Ann	Anbotek	Aupo.
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.Due Date
10 lek	L.I.S.N. Artificial Mains Network	Rohde & Schwarz	ENV216	100055	2024-01-18	2025-01-17
,200h	Three Phase V- type Artificial Power Network	CYBERTEK	EM5040DT	E215040D T001	2024-01-17	2025-01-16
3 💆	EMI Test Receiver	Rohde & Schwarz	ESCI	100627	2024-01-17	2025-01-16
4	Artificial Mains Network	Schwarzbeck	PVDC 8301	8301- 00097	2024-01-17	2025-01-16
5	Artificial Power Network	Schwarzbeck	PVDC 8301	8301- 01021	2024-01-17	2025-01-16
6	Software Name EZ-EMC	Farad Technology	ANB-03A	N/A	onbotek/	upolek An

Emissions in non-restricted frequency bands

Occupied Bandwidth

Maximum Conducted Output Power

Channel Separation

Number of Hopping Frequencies

Dwell Time

Anbotek

Anbotek

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.Due Date
1 1	Constant Temperature Humidity Chamber	ZHONGJIAN	ZJ- KHWS80B	N/Aek	2023-10-16	2024-10-15
2	DC Power Supply	IVYTECH IVYTECH	IV3605	1804D360 510	2023-10-20	2024-10-19
100 ter	Spectrum Analyzer	Rohde & Schwarz	FSV40-N	102150	2024-05-06	2025-05-05
Agbot.	MXA Spectrum Analysis	KEYSIGHT	N9020A	MY505318 23	2024-02-22	2025-02-21
5 An	Oscilloscope	Tektronix	MDO3012	C020298	2023-10-12	2024-10-11
6	MXG RF Vector Signal Generator	Agilent	N5182A	MY474206 47	2024-02-04	2025-02-03



Anbotek

Anbotek

upotek

Aupolek

Anbore'

Aupolek

Anbolek

Anbotek



nbotek

Aupolek

Anbolek

Anbotek

Anbotek

Anbotek

Aupolek

Aupolek

Anbotek

Anbotek

Anbotek

Anbo

Anbotek

Aupolek

Aupok

Anbotek

Report No.:1819C40009812501 FCC ID: 2ATS9-8813E

Aupolek

Aupolek

Anboiek

Anbolek

	sions in frequency ba edge emissions (Ra		Aupolek b	Polek	Anbotek	Aupor
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.Due Dat
e¥1	EMI Test Receiver	Rohde & Schwarz	ESR26	101481	2024-01-23	2025-01-22
,bc2ek	EMI Preamplifier	SKET Electronic	LNPA- 0118G-45	SKET-PA- 002	2024-01-17	2025-01-16
300	Double Ridged Horn Antenna	SCHWARZBECK	BBHA 9120D	02555	2022-10-16	2025-10-15
4 🔊	EMI Test Software EZ-EMC	SHURPLE	N/A	N/A	Vupore, rek	Vup Yek
5	Horn Antenna	A-INFO	LB-180400- KF	J21106062 8	2023-10-12	2024-10-11
6	Spectrum Analyzer	Rohde & Schwarz	FSV40-N	102150	2024-05-06	2025-05-05
7 7	Amplifier	Talent Microwave	TLLA18G40 G-50-30	23022802	2024-05-07	2025-05-06

	-k %0,,	b.,	7,6.	VUL	-ar	~/00
Emis	sions in frequency b	ands (below 1GHz)	Aupo ofek	Vupolek	Aupore	V. Josek
Item	m Equipment Manufacturer		Model No.	Serial No.	Last Cal.	Cal.Due Date
tet.	EMI Test Receiver	Rohde & Schwarz	ESR26	101481	2024-01-23	2025-01-22
2,10	Pre-amplifier	SONOMA	310N	186860	2024-01-17	2025-01-16
3 Anb	Bilog Broadband Antenna	Schwarzbeck	VULB9163	345	2022-10-23	2025-10-22
4	Loop Antenna (9K- 30M)	Schwarzbeck	FMZB1519 B	00053	2023-10-12	2024-10-11
5	EMI Test Software SHURPLE EZ-EMC		N/A	N/A	Vupor	ek Anbotek
otek	k Volek	Anbotek Anbote	rek Vupo,	ick Aup	rek Vup	bolek Anbol

Aupolek

Anbolek

nbotek

Anbotek

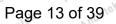
Anbotek



Anbolek

Anbolek

Anbolek





Aupolek

Report No.:1819C40009812501 FCC ID: 2ATS9-8813E

2. Antenna requirement

Test Requirement:

Refer to 47 CFR Part 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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

2.1. Conclusion

The antenna is a PIFA Antenna which permanently attached, and the best case gain of the antenna is 1.97dBi for Left Earphone and 1.93dBi for Right Earphone. It complies with the standard requirement.





3. Conducted Emission at AC power line

Test Requirement:	Refer to 47 CFR 15.207(a), Except as shown in paragraphs (b)and (c)of thi section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, a measured using a 50 μ H/50 ohms line impedance stabilization network (LISN).						
upotek Anbore	Frequency of emission (MHz)	Conducted limit (dBµV)	Aupa				
A. OK	oker, Vun	Quasi-peak	Average				
ekabole Air	0.15-0.5	66 to 56* 10°	56 to 46*				
Test Limit:	0.5-5	56 And	46 nbo				
Potek Aupor	5-30 or Anhors	60 Notes A	50				
Jiek Wupotek	*Decreases with the logarithm of th	ne frequency.	Anbore. Ans				
Test Method:	ANSI C63.10-2020 section 6.2	Auporer, Yun	unpoiek b				
Procedure:	Refer to ANSI C63.10-2020 section line conducted emissions from unli		od for ac power-				

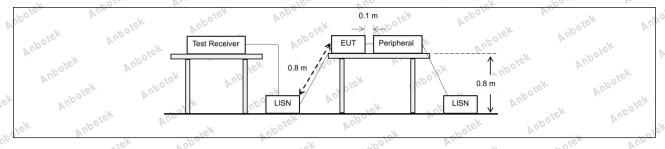
3.1. EUT Operation

Operating Envi	ronment:	bolek	Aupolo	bu. Polek	Vupo ier	Ans
Test mode:	1: TX-GFSK (Non- hopping) with GFS 2: TX-π/4-DQPSK (non-hopping) with 3: TX-8DPSK (Nor hopping) with 8DP	K modulation. (Non-Hopping) π/4 DQPSK m n-Hopping): Kee	: Keep the El lodulation. ep the EUT in	JT in continuous	ly transmittin	g mode

3.2. Test Setup

Anbotek

Anbotek





Hotline

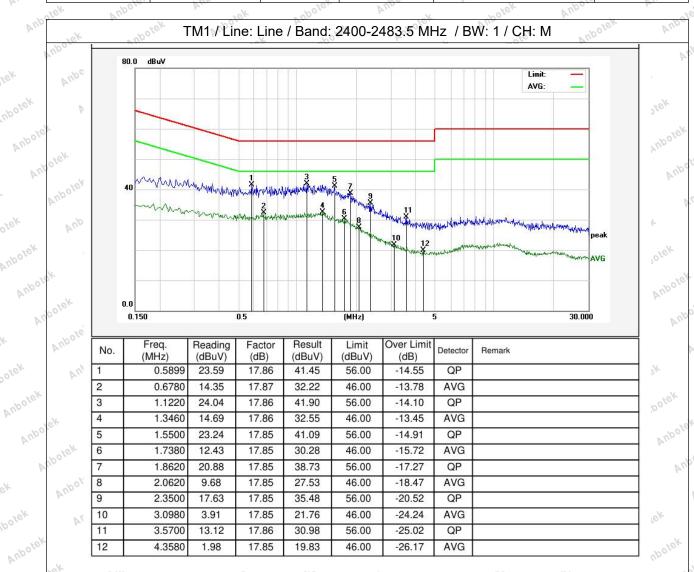
400-003-0500



Report No.:1819C40009812501 FCC ID: 2ATS9-8813E

3.3. Test Data

Temperature: 24.4 °C Humidity: 48 % Atmospheric Pressure: 101 kPa

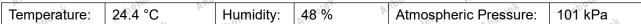


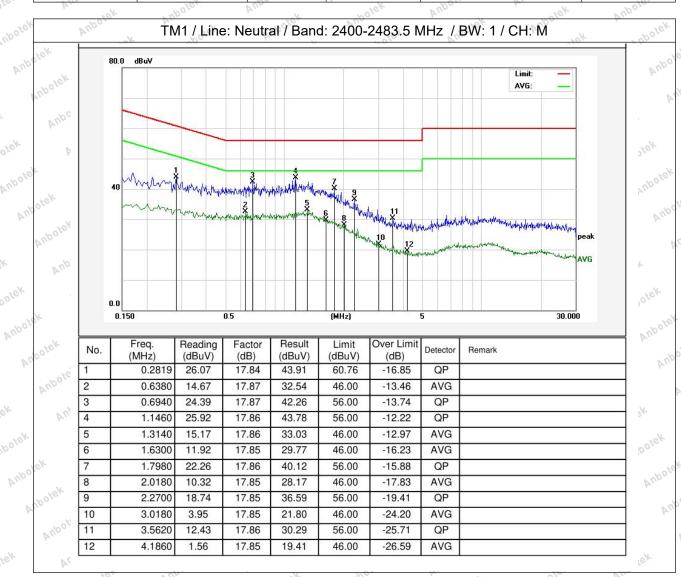




Report No.:1819C40009812501

FCC ID: 2ATS9-8813E





Note:Only record the worst data in the report.





Anbolek



Report No.:1819C40009812501 FCC ID: 2ATS9-8813E

4. Occupied Bandwidth

T. Occupied Dail	kek Yupo, kek Vupolo VII.
Test Requirement:	47 CFR 15.247(a)(1)
Anbotek Anbotek Anbotek Anbotek Anbotek Anbotek Anbotek	Refer to 47 CFR 15.215(c), intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.
Test Method:	ANSI C63.10-2020, section 7.8.6, For occupied bandwidth measurements, use the procedure in 6.9.3. Frequency hopping shall be disabled for this test. KDB 558074 D01 15.247 Meas Guidance v05r02
Aupotek Aupotek	The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission. The following procedure shall be used for measuring 99% power bandwidth: a) The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between
rootek Aupotek Au	1.5 times and 5.0 times the OBW.b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be at least three times the RBW, unless otherwise specified by the applicable requirement.
Aupotek Aupotek Aupotek Aupotek	c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.6.2. d) Step a) through step c) might require iteration to adjust within the
Procedure:	specified range. e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max-hold mode (until the trace stabilizes) shall be used.
k Aupotek Aupotek	f) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth. g) If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms.
Vapotek Vapotek V	The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99%
Anbotek Anbotek	power bandwidth is the difference between these two frequencies. h) The occupied bandwidth shall be reported by providing spectral plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).
VL.	LIIC PIOL(3). AND THE MAN TO LET





Anbolek

Anbotek

Anbotek

Report No.:1819C40009812501 FCC ID: 2ATS9-8813E

4.1. EUT Operation

Operating Environment:

1: TX-GFSK (Non-Hopping): Keep the EUT in continuously transmitting mode (non-

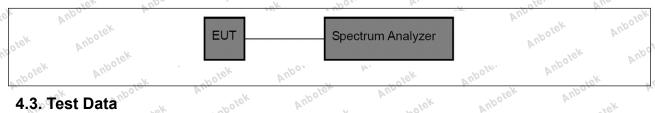
hopping) with GFSK modulation.

Test mode:

2: TX-π/4-DQPSK (Non-Hopping): Keep the EUT in continuously transmitting mode (non-hopping) with $\pi/4$ DQPSK modulation.

3: TX-8DPSK (Non-Hopping): Keep the EUT in continuously transmitting mode (nonhopping) with 8DPSK modulation.

4.2. Test Setup



4.3. Test Data

Temperature:	26.3 °C	Humidity:	45 %	Atmospheric Pressure:	101 kPa
Ib.	18.	V 412	- ~/~	200	1-0/0

Please Refer to Appendix for Details.





 $A_{U_{k}}$

Anbe

Report No.:1819C40009812501

FCC ID: 2ATS9-8813E

5. Maximum Conducted Output Power

Wit.	the Publication of the Popularies of the Popular
Test Requirement:	47 CFR 15.247(b)(1)
Test Limit: Anbotek	Refer to 47 CFR 15.247(b)(1), For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.
Test Method:	ANSI C63.10-2020, section 7.8.5 KDB 558074 D01 15.247 Meas Guidance v05r02
Aupotek Aupotek Aupotek Aupotek Aupotek Aupotek Aupotek Aupotek	This is an RF-conducted test to evaluate maximum peak output power. Use a direct connection between the antenna port of the unlicensed wireless device and the spectrum analyzer, through suitable attenuation. Frequency hopping shall be disabled for this test. Use the following spectrum analyzer settings: a) Span: Approximately five times the 20 dB bandwidth, centered on a hopping channel. b) RBW > 20 dB bandwidth of the emission being measured. c) VBW ≥ RBW.
Procedure: Notick	d) Sweep: No faster than coupled (auto) time. e) Detector function: Peak. f) Trace: Max-hold. g) Allow trace to stabilize.
Aupotek Aupotek	 h) Use the marker-to-peak function to set the marker to the peak of the emission. i) The indicated level is the peak output power, after any corrections for external attenuators and cables. j) A spectral plot of the test results and setup description shall be included in the test report.
Vipotek Vipotek	NOTE—A peak responding power meter may be used, where the power meter and sensor system video bandwidth is greater than the occupied bandwidth of the unlicensed wireless device, rather than a spectrum analyzer.

5.1. EUT Operation

y.	Operating Envir	onment: Anbote Anbote Antone Antone Antone
Test mode: Ando		1: TX-GFSK (Non-Hopping): Keep the EUT in continuously transmitting mode (non-hopping) with GFSK modulation. 2: TX-π/4-DQPSK (Non-Hopping): Keep the EUT in continuously transmitting mode
0.00	inde. A	(non-hopping) with π/4 DQPSK modulation. 3: TX-8DPSK (Non-Hopping): Keep the EUT in continuously transmitting mode (non-
	Aupore A	hopping) with 8DPSK modulation.







Anbotek

Anbolek

Aupolek

Anbotek

Anbotek

Anbolek

Report No.:1819C40009812501

FCC ID: 2ATS9-8813E

Aupolek

Aupolek

Anboiek

Aupolek

Anbotek

Anbolek

Anbolek

Anbotek

Anbolek

Page 20 of 39

Anbolek

Anbotek

Anbotek

Anbolek

Anbotek

Anbolek

Anbotek

Anbotek

Aupolek

Anbolek

Anbolek

Anbotek

Anbotek

Anbotek

Anbolek

Anbotek

Anbotek

Anboiek

Anbolek

Anbolek

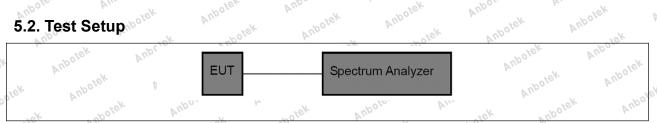
Anbolek

Anbotek

Anbotek

Anbolek

5.2. Test Setup



5.3. Test Data

Anbolek

Anbotek

Anbotek

Anboiek

5.3. Test Dat	a _{hotek}	Aupore.	Vupolek Vur	Aupolek	Aupapolek	Aupolek	An
Temperature:	26.3 °C	And Hur	midity: 45 %	Atmosph	neric Pressure:	101 kPa	
Anbo	lote!	4 Aupor	P.	rek "upoter	Vun	abote)	6
Please Refer to	o Appendix	for Details.	rek vul	, , , , , , , , , , , , , , , , , , ,	ak abole.	VIII	V

Anborek

Anbotek

Anbotek

Anbotek

Anbotek

Anbotek

Anbolek

Anbolek

Anbotek

Anbotek

Please Refer to Appendix for Details.

Shenzhen Anbotek Compliance Laboratory Limited

Anbotek

Hotline 400-003-0500 www.anbotek.com





Report No.:1819C40009812501

FCC ID: 2ATS9-8813E

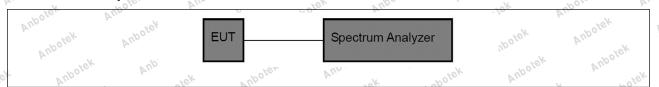
6. Channel Separation

Di.	16 10 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Test Requirement:	47 CFR 15.247(a)(1)
Anbotek Anbotek Anbotek Anbotek Anbotek Anbotek	Refer to 47 CFR 15.247(a)(1), Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.
Test Method:	ANSI C63.10-2020, section 7.8.2 KDB 558074 D01 15.247 Meas Guidance v05r02
Anbotek Anbotek Anbotek Anbotek	The EUT shall have its hopping function enabled. Use the following spectrum analyzer settings: a) Span: Wide enough to capture the peaks of two adjacent channels. b) RBW: Start with the RBW set to approximately 30% of the channel spacing; adjust as necessary to best identify the center of each individual channel.
Procedure:	c) Video (or average) bandwidth (VBW) ≥ RBW. d) Sweep: No faster than coupled (auto) time. e) Detector function: Peak. f) Trace: Max-hold. g) Allow the trace to stabilize.
Aupotek Aupote	Use the marker-delta function to determine the separation between the peaks of the adjacent channels. Compliance of an EUT with the appropriate regulatory limit shall be determined. A spectral plot of the data shall be included in the test report.

6.1. EUT Operation

	NO. N.			VIII	1.01	" "D"	· V	
4	Operating Envir	onment:	Vup.	abotek	Aupor	P. Potek	Aupoles	Vu
0°	Test mode:	with GFS 5: TX-π/4 (hopping 6: TX-8D	SK modulation 4-DQPSK (Ho) with π/4 DC	n,. opping): Keep t QPSK modulation g): Keep the E	he EUT in cor	usly transmitting ntinuously transr ously transmittin	mitting mode	iek

6.2. Test Setup



6.3. Test Data

Temperature:	26.3 °C	Hum	nidity: 45 %	Atmosp	heric Pressure:	101 kPa	

Please Refer to Appendix for Details.







Report No.:1819C40009812501

FCC ID: 2ATS9-8813E

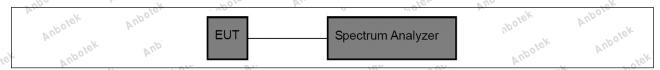
7. Number of Hopping Frequencies

D.,	16 VID VID
Test Requirement:	47 CFR 15.247(a)(1)(iii)
Test Limit: Anborek Anborek Anborek	Refer to 47 CFR 15.247(a)(1)(iii), Fequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.
Test Method:	ANSI C63.10-2020, section 7.8.3 KDB 558074 D01 15.247 Meas Guidance v05r02
Aupotek Aupotek Vipotek Vipotek Vipotek Vipotek	The EUT shall have its hopping function enabled. Use the following spectrum analyzer settings: a) Span: The frequency band of operation. Depending on the number of channels the device supports, it could be necessary to divide the frequency range of operation across multiple spans, to allow the individual channels to be clearly seen. b) RBW: To identify clearly the individual channels, set the RBW to less than
Procedure:	30% of the channel spacing or the 20 dB bandwidth, whichever is smaller. c) VBW ≥ RBW. d) Sweep: No faster than coupled (auto) time. e) Detector function: Peak. f) Trace: Max-hold. g) Allow the trace to stabilize.
ek Aupotek Aupo	It might prove necessary to break the span up into subranges to show clearly all of the hopping frequencies. Compliance of an EUT with the appropriate regulatory limit shall be determined for the number of hopping channels. A spectral plot of the data shall be included in the test report.

7.1. EUT Operation

Operating E	Environment:	Aupolek	Aup	abolek	Aupor	Polek.
Test mode:	with GFSK 5: TX-π/4-D (hopping) w	modulation,. QPSK (Hopp ith π/4 DQPS	oing): Keep the SK modulation.	EUT in contin	uously transm	mode (hopping) itting mode mode (hopping)
Ye.Y	with 8DPSk	modulation.	Polek V.	upo.	rek	Anbore Air

7.2. Test Setup



7.3. Test Data

Temperature:	26.3 °C	Humidity	/: 45 %	VUD	Atmospheric Pressure:	101 kPa	P.
700	N/	~ 0 Y	N. Y.		161.		

Please Refer to Appendix for Details.







Report No.:1819C40009812501

FCC ID: 2ATS9-8813E

Anborek Anborek	Aupolek Aupo olek Aupolek Aupole ek
8. Dwell Time	tek Yupotek Vipotek Vipotek Vipotek
Test Requirement:	47 CFR 15.247(a)(1)(iii)
ntek Anbotek nTest Limit: Anbotek Anbotek Anbotek	Refer to 47 CFR 15.247(a)(1)(iii), Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.
Test Method:	ANSI C63.10-2020, section 7.8.4 KDB 558074 D01 15.247 Meas Guidance v05r02
Vupotek Vupotek Vupotek Vupotek Vupotek Vupotek	The dwell time per hop on a channel is the time from the start of the first transmission to the end of the last transmission for that hop. If the device has a single transmission per hop then the dwell time is the duration of that transmission. If the device has a multiple transmissions per hop then the dwell time is measured from the start of the first transmission to the end of the last transmission.
Volek Vupotek Vupotek	The time of occupancy is the total time that the device dwells on a channel over an observation period specified in the regulatory requirement. To determine the time of occupancy the spectrum analyzer will be configured to measure both the dwell time per hop and the number of times the device transmits on a specific channel in a given period.
Aupotek Aupot	The EUT shall have its hopping function enabled. Compliance with the requirements shall be made with the minimum and with the maximum number of channels enabled. If the dwell time per channel does not vary with the number of channels than compliance with the requirements may be
Procedure:	based on the minimum number of channels. If the device supports different dwell times per channel (example Bluetooth devices can dwell on a channel for 1, 3 or 5 time slots) then measurements can be limited to the longest dwell time with the minimum number of channels.
Polek Aupole	Use the following spectrum analyzer settings to determine the dwell time per
tek Aupotek Aupo	hop: a) Span: Zero span, centered on a hopping channel. b) RBW shall be ≤ channel spacing and where possible RBW should be set >> 1 / T, where T is the expected transmission time per hop.
nbotek Anbotek	c) Sweep time: Set so that the start of the first transmission and end of the last transmission for the hop are clearly captured. Setting the sweep time to be slightly longer than the hopping period per channel (hopping period =
Vuporek Vupores	1/hopping rate) should achieve this. d) Use a video trigger, where possible with a trigger delay, so that the start of the transmission is clearly observed. The trigger level might need adjustment to reduce the chance of triggering when the system hops on an adjacent
ofek Aupolek	channel. e) Detector function: Peak. f) Trace: Clear-write, single sweep. g) Place markers at the start of the first transmission on the channel and at
Anbotek Anbotek	the end of the last transmission. The dwell time per hop is the time between these two markers.

Shenzhen Anbotek Compliance Laboratory Limited





Aupolek



To determine the number of hops on a channel in the regulatory observation period repeat the measurement using a longer sweep time. When the device uses a single hopping sequence the period of measurement should be sufficient to capture at least 2 hops. When the device uses a dynamic hopping sequence, or the sequence varies, the period of measurement may need to capture multiple hops to better determine the average time of occupancy. Count the number of hops on the channel across the sweep time.

The average number of hops on the same channel within the regulatory observation period is calculated from the number of hops on the channel divided by the spectrum analyzer sweep time multiplied by the regulatory observation period. For example, if three hops are counted with an analyzer sweep time of 500 ms and the regulatory observation period is 10 s, then the number of hops in that ten seconds is $3/0.5 \times 10$, or 60 hops.

The average time of occupancy is calculated by multiplying the dwell time per hop by the number of hops in the observation period.

8.1. EUT Operation

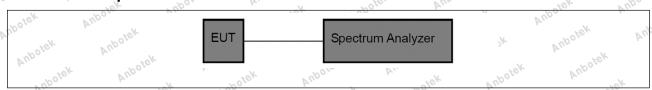
Operating Environment:

4: TX-GFSK (Hopping): Keep the EUT in continuously transmitting mode (hopping) with GFSK modulation,.

Test mode:

- 5: TX- π /4-DQPSK (Hopping): Keep the EUT in continuously transmitting mode (hopping) with π /4 DQPSK modulation.
- 6: TX-8DPSK (Hopping): Keep the EUT in continuously transmitting mode (hopping) with 8DPSK modulation.

8.2. Test Setup



8.3. Test Data

20	Temperature:	26.3 °C	Humidity:	45 %	Atmospheric Pressure:	101 kPa
----	--------------	---------	-----------	------	-----------------------	---------

Please Refer to Appendix for Details.









9. Emissions in non-restricted frequency bands

Test Requirement:	47 CFR 15.247(d), 15.209, 15.205
nbotek Anbotek Test Limit: Anbotek Anbotek Anbotek Anbotek Anbotek	Refer to 47 CFR 15.247(d), In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in § 15.209(a) is not required.
Test Method:	ANSI C63.10-2020 section 7.8.7 KDB 558074 D01 15.247 Meas Guidance v05r02
k Aupotek Aupote	7.8.7.1 General considerations To demonstrate compliance with the relative out-of-band emissions requirements conducted spurious emissions shall be measured for the transmit frequencies, per 5.5 and 5.6, and at the maximum transmit powers.
Aupotek Aupotek	Frequency hopping shall be disabled for this test with the exception of measurements at the allocated band-edges which shall be repeated with hopping enabled.
potek Anbotek Anbotek Anbotek	Connect the primary antenna port through an attenuator to the spectrum analyzer input; in the results, account for all losses between the unlicensed wireless device output and the spectrum analyzer. The frequency range of testing shall span 30 MHz to 10 times the operating frequency and this may be done in a single sweep or, to aid resolution, across a number of sweeps. The resolution bandwidth shall be 100 kHz, video bandwidth 300 kHz, and a coupled sweep time with a peak detector.
Procedure: Anbotek Anbotek Anbotek Anbotek	The limit is based on the highest in-band level across all channels measured using the same instrument settings (resolution bandwidth of 100 kHz, video bandwidth of 300 kHz, and a coupled sweep time with a peak detector). To help clearly demonstrate compliance a display line may be set at the required offset (typically 20 dB) below the highest in-band level. Where the highest in-band level is not clearly identified in the out-of-band measurements a separate spectral plot showing the in-band level shall be
Vipotek Vipotek	when conducted measurements cannot be made (for example a device with integrated, non-removable antenna) radiated measurements shall be used. The reference level for determining the limit shall be established by
Otek Anbotek Anbotek Anbotek	maximizing the field strength from the highest power channel and measuring using the resolution and video bandwidth settings and peak detector as described above. The field strength limit for spurious emissions outside of restricted-bands shall then be set at the required offset (typically 20 dB) below the highest in-band level. Radiated measurements will follow the standards measurement procedures described in Clause 6 with the exception that the resolution bandwidth shall be 100 kHz, video bandwidth





300 kHz, and a coupled sweep time with a peak detector. Note that use of wider measurement bandwidths are acceptable for measuring the spurious emissions provided that the peak detector is used and that the measured value of spurious emissions are compared to the highest in-band level measured with the 100 kHz / 300 kHz bandwidth settings to determine compliance.

7.8.7.2 Band-edges

Compliance with a relative limit at the band-edges (e.g., -20 dBc) shall be made on the lowest and on the highest channels with frequency hopping disabled and repeated with frequency hopping enabled. For the latter test the hopping sequence shall include the lowest and highest channels.

For measurements with the hopping disabled the analyzer screen shall clearly show compliance with the requirement within 10 MHz of the allocated band-edge.

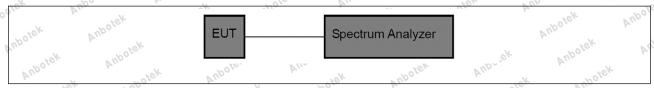
For measurements with the hopping enabled the analyzer screen shall clearly show compliance with the requirement within 10 MHz of both of the allocated band-edges. This could require separate spectral plots for each band-edge.

9.1. EUT Operation

Operating Environment:

- 1: TX-GFSK (Non-Hopping): Keep the EUT in continuously transmitting mode (nonhopping) with GFSK modulation.
- 2: TX-π/4-DQPSK (Non-Hopping): Keep the EUT in continuously transmitting mode (non-hopping) with $\pi/4$ DQPSK modulation.
- 3: TX-8DPSK (Non-Hopping): Keep the EUT in continuously transmitting mode (nonhopping) with 8DPSK modulation.
- Test mode: 4: TX-GFSK (Hopping): Keep the EUT in continuously transmitting mode (hopping) with GFSK modulation...
 - 5: TX-π/4-DQPSK (Hopping): Keep the EUT in continuously transmitting mode (hopping) with $\pi/4$ DQPSK modulation.
 - 6: TX-8DPSK (Hopping): Keep the EUT in continuously transmitting mode (hopping) with 8DPSK modulation.

9.2. Test Setup



9.3. Test Data

Temperature:	26.3 °C	Humidity:	45 %	Atmospheric Pressure:	101 kPa
--------------	---------	-----------	------	-----------------------	---------

Please Refer to Appendix for Details.







10. Band edge emissions (Radiated)

DA.	16. 8Um	-6K - 4D2	- K - WO) -
Test Requirement:		, In addition, radiated emissions d in § 15.205(a), must also comp	
rek Aupole.		ecified in § 15.209(a)(see § 15.2	
ek abolek	Frequency (MHz)	Field strength	Measurement
Tupore Wir.	Aupolen Aug	(microvolts/meter)	distance
spotek Aupo	0.009-0.490	2400/[///]	(meters)
Aun ick upote	0.490-1.705	2400/F(kHz) 24000/F(kHz)	300
Auporg	1.705-30.0	30	30
k abotek And	30-88	100 **	3
V. Kok	88-216	150 **	3 tek Anbole
otek Aupo	216-960	200 ** A	3
ek upotek	Above 960	500 no seek	3 upotes Pur
Test Limit:	** Except as provided in pa	ragraph (g), fundamental emissi	ons from
abolek Anbo		ng under this section shall not b	
All rek anbote		z, 76-88 MHz, 174-216 MHz or	
Anbo		hese frequency bands is permitt	ed under other
ek Aupolek Au	sections of this part, e.g., § In the emission table above	৪ ।5.23। and ।5.24।. e, the tighter limit applies at the b	and edges.
ok spokek		in the above table are based on	
Dore, VII.		peak detector except for the freq	
Polek Vupos	10.7	above 1000 MHz. Radiated emis	V
Aur apolek	these three bands are base detector.	ed on measurements employing	an average
Aupore Air	ok spole Ai.	-or polek Mpo,	W. Olek
Test Method:	ANSI C63.10-2020 section KDB 558074 D01 15.247 N		k Aupo
Procedure:	ANSI C63.10-2020 section	6.10.5.2	ole. VIII
	hor An	View VUD	100

10.1. EUT Operation

D. 1	100	10.	702		1-01	Dr.	. 48,	0 177
1	Operating Envir	onment:	VII.	Anborek	Vup.	anbolek	Anbo	<i>b</i> .
	Anbotek	hopping) v	with GFSK m	odulation.	ne EUT in contir	Anbe	V	N _S
1	Test mode:	(non-hopp	oing) with π/4	DQPSK mod		OLO. VA.	rek n	poler
00	rek Vupore.		PSK (Non-Ho with 8DPSK r		the EUT in cont	inuously transr	nitting mode (ı	non-







Anbotek

Anbotek

Anbotek

Anbolek

Anbolek

Anbotek

Anbolek

Anbotek

Anbotek

Anbolek

Anbolek

Aupolek

Anbotek

Anborek

Anbotek

Anbotek

Anbotek

Anbotek

Anboiek

Anbolek

Report No.:1819C40009812501

FCC ID: 2ATS9-8813E

Anbolek

Aupolek

Anbotek

Aupolek

Anbolek

Anbotek

Anbolek

Anbolek

Anbotek

Anbotek

Anbotek

Page 28 of 39

Anbolek

Anbolek

Anbotek

Anbolek

Anbotek

Anbotek

Anbolek

Anbotek

Anbotek

Aupolek

Anbolek

Anbolek

Anbotek

Anbotek

Anbotek

Anbotek

Anbotek

Anbotek

Anbotek

Aupolek

Anbotek

Anbolek

Anbotek

Anbotek

Anbolek

Anbotek

Anbotek

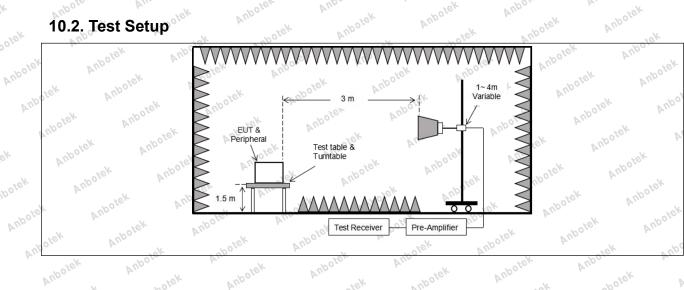
Anbolek

Anbolek

Anbotek

Anbotek

Anbotek



Anbotek

Anbotek

Anbotek

Anbotek

Anbotek

Anbotek

Anbolek

Anbolek

Anbolek

Shenzhen Anbotek Compliance Laboratory Limited

Anbotek

Hotline 400-003-0500 www.anbotek.com



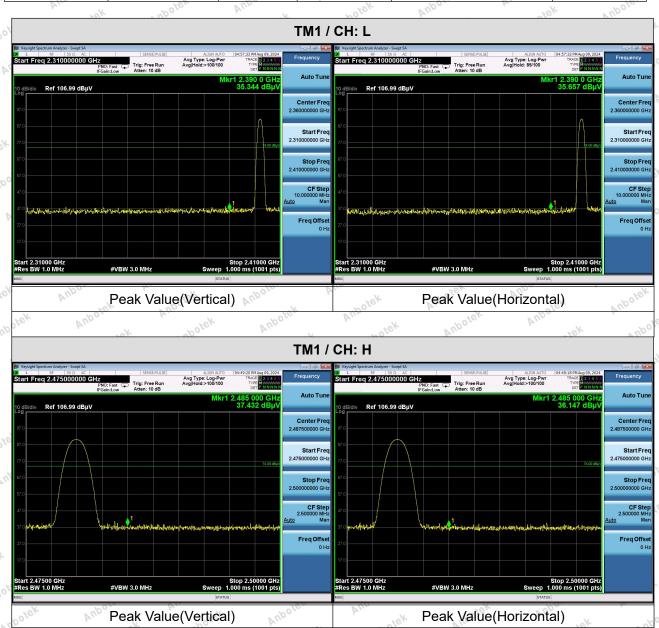


Report No.:1819C40009812501

FCC ID: 2ATS9-8813E

10.3. Test Data

Temperature: 26.3 °C Humidity: 45 % 101 kPa Atmospheric Pressure:



Remark:

Aupolek

- 1. During the test, pre-scan all modes, the report only record the worse case mode.
- 2. When the PK measure result value is less than the AVG limit value, the AV measure result values test not applicable.





Anbotek



Report No.:1819C40009812501

FCC ID: 2ATS9-8813E

11. Emissions in frequency bands (below 1GHz)

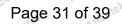
Test Requirement:	restricted bands, as defined	, In addition, radiated emissions d in § 15.205(a), must also comp ecified in § 15.209(a)(see § 15.2	oly with the
Wipotek Wipotek	Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
Anbo	0.009-0.490	2400/F(kHz)	300 Joseph
Vuporer Vun	0.490-1.705	24000/F(kHz)	30 And
rotek Anb	1.705-30.0	100 **	30
And	30-88 88-216	150 **	3
Jiek Vuporer	216-960	200 **	3
's "ofek	Above 960	500	3 work
ATest Limit: Anbotek Anbotek Anbotek Anbotek Anbotek Anbotek Anbotek Anbotek	intentional radiators operat frequency bands 54-72 MH However, operation within sections of this part, e.g., § In the emission table above The emission limits shown employing a CISPR quasi-	e, the tighter limit applies at the t in the above table are based on beak detector except for the freq	pe located in the 470-806 MHz. ted under other pand edges. measurements juency bands 9–
Aupotek Aupotek	these three bands are base detector.	above 1000 MHz. Radiated emised on measurements employing	
Test Method:	ANSI C63.10-2020 section KDB 558074 D01 15.247 N	V 140*	k Yupo
Procedure:	ANSI C63.10-2020 section	6.6.4	Pole VIII
11.1. EUT Operatio	n Anbarek Anbarek	Vupoler Vupolek	Aupotek Vuoc

11.1. EUT Operation

Anbotek

P.		40.	200	A	1000	12.	187	" Uh
N	Operating Envir	onment:	"Olek	Aupolek	And	upotek	Aupo.	h.
hotek	Aupolek	hopping) wi	th GFSK m	nodulation.	or spore	nuously transm	, , , , o/6	3/4
nbotek	Test mode:	(non-hopping	ng) with π/4	1 DQPSK modu	ılation.	continuously tr	ie. Ye.	00,61
V.	lek Vupore	3: TX-8DPS hopping) wi			ne EUT in con	tinuously transr	nitting mode (r	non-





Anbotek

Anbolek

Anbotek

Anbolek

Anbolek

Anbotek

Anbolek

Anbotek

Anbolek

Anbotek

Anbolek

Anbolek

Anbolek

Anbotek

Anbolek

Anbotek

Anbolek

Anbotek

Anbolek

Anbotek

Anbotek

Anbotek

Anbotek

Anbotek

Anbotek

Anbotek

Anbolek

Anbotek

Anbotek

Anbolek

Anbolek



Anbolek

Anbotek

Anbolek

Anbolek

Anbotek

Aupolek

Aupolek

Aupolek

Anbotek

Anbotek

Anbotek

Anbotek

Anbotek

Anbolek

Anbolek

Anbotek

Anbolek

Report No.:1819C40009812501 FCC ID: 2ATS9-8813E

Anbolek

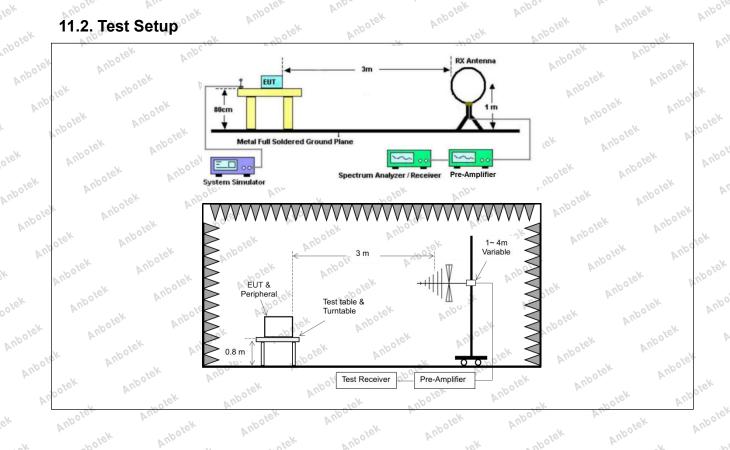
Aupolek

Anbotek

Aupolek

Anbolek

11.2. Test Setup



Anbotek

Anbotek

Anbotek

Anbotek

Anbotek

Anbolek

Anbolek

Anboiek

Anbolek

Anbotek

Anbotek

Anbotek

Shenzhen Anbotek Compliance Laboratory Limited

Anbotek

Anbotek

Anbotek

Anboiek

Anbotek

Anbolek





Aupolek

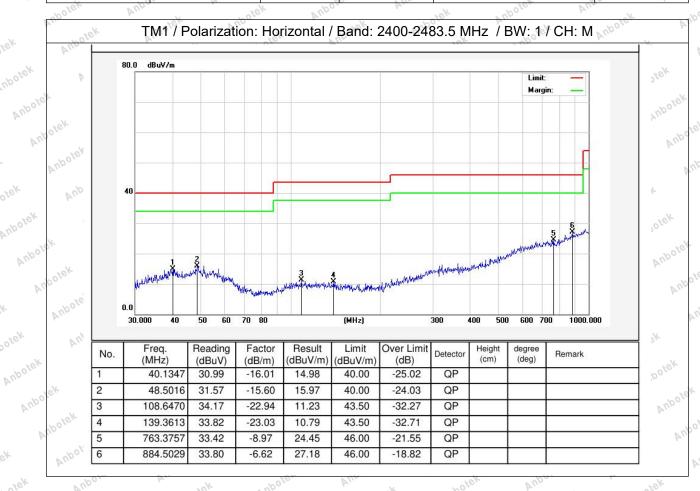
Report No.:1819C40009812501

FCC ID: 2ATS9-8813E

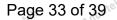
11.3. Test Data

The test results of 9kHz-30MHz was attenuated more than 20dB below the permissible limits, so the results don't record in the report.

Temperature: 24.8 °C Humidity: 48 % Atmospheric Pressure: 101 kPa



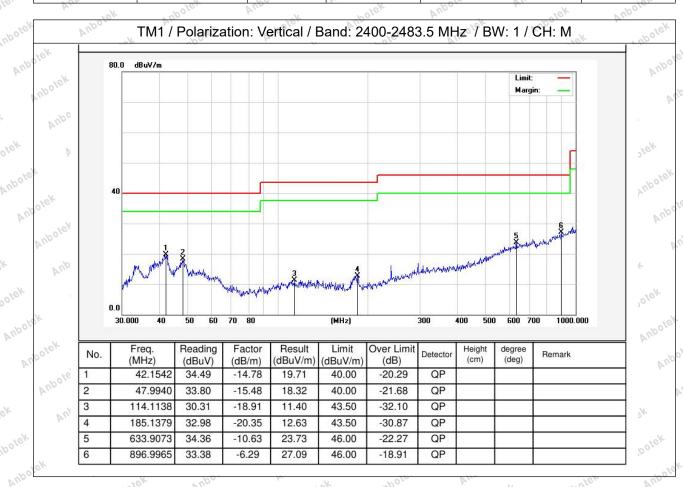






Report No.:1819C40009812501 FCC ID: 2ATS9-8813E

Temperature: 24.8 °C Humidity: 48 % Atmospheric Pressure: 101 kPa



Note:Only record the worst data in the report.







Report No.:1819C40009812501

FCC ID: 2ATS9-8813E

12. Emissions in frequency bands (above 1GHz)

Test Requirement:	in § 15.205(a), must also on in § 15.209(a)(see § 15.20	comply with the radiated emission (05(c)).`	on limits specified
Vupotek Vupotek	Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
Anbo	0.009-0.490	2400/F(kHz)	300
polek Anbo	0.490-1.705	24000/F(kHz)	30 And
Aur	1.705-30.0	30 Anbor	30 nboke
k Anbole A	30-88	100 ** An	3
otek	88-216	150 **	3 rek An
Olek Vupe	216-960	200 **	3
"ek "poler	Above 960	500,000	3 nbote
Test Limit:	intentional radiators opera	aragraph (g), fundamental emis ting under this section shall not	be located in the
VIII	fraguanay handa 54 70 MI	U-176 00 MU-174 016 MU- 0	r 170 006 MILIT
Aupolek Aup	However, operation within	Hz, 76-88 MHz, 174-216 MHz of these frequency bands is permi	
k Aupotek Aup	However, operation within sections of this part, e.g., In the emission table above	these frequency bands is permi §§ 15.231 and 15.241. e, the tighter limit applies at the	itted under other band edges.
ootek Aupotek Aupotek	However, operation within sections of this part, e.g., In the emission table above The emission limits shown employing a CISPR quasi-90 kHz, 110–490 kHz and	these frequency bands is permiss 15.231 and 15.241. Ye, the tighter limit applies at the in the above table are based of peak detector except for the free above 1000 MHz. Radiated em	itted under other band edges. n measurements equency bands 9 ission limits in
Anbotek Anbotek Anbotek Anbotek Anbotek Anbotek	However, operation within sections of this part, e.g., In the emission table above The emission limits shown employing a CISPR quasi-90 kHz, 110–490 kHz and	these frequency bands is permiss 15.231 and 15.241. Ye, the tighter limit applies at the in the above table are based of peak detector except for the fre	itted under other band edges. n measurements equency bands 9 ission limits in
Anbotek	However, operation within sections of this part, e.g., In the emission table above The emission limits shown employing a CISPR quasi-90 kHz, 110–490 kHz and these three bands are based to the section of the section o	these frequency bands is permiss 15.231 and 15.241. Ye, the tighter limit applies at the in the above table are based or peak detector except for the free above 1000 MHz. Radiated emised on measurements employing 6.6.4	itted under other band edges. n measurements equency bands 9 ission limits in

12.1. EUT Operation

Anbotek

Operating Envi	ronment:	"" olek	Anborek	And	· upotek	Aupo	<i>b</i> .
Test mode:	hopping) wi 2: TX-π/4-E (non-hopping) 3: TX-8DPS	ith GFSK mo OQPSK (Non ng) with π/4	odulation. n-Hopping): K DQPSK mod oping): Keep t	eep the EUT ulation.	ntinuously transi in continuously ontinuously tran	transmitting m	ode ve _k





Anbotek

Anbotek

Anbotek

Anbotek

Anbotek

Anbotek

Anbolek

Anbolek

Anbotek

Anbolek

Aupotek

Anbotek

Anbolek

Anbolek

Aupolek

Anbotek

Anboiek

Anbotek

Anborek

Anbolek

Report No.:1819C40009812501

FCC ID: 2ATS9-8813E

Anbolek

Aupolek

Anbotek

Aupolek

Anbolek

Anbotek

Anbolek

Anbolek

Anbotek

Anbotek

Anbotek

Anbotek

Anboiek

Page 35 of 39

Anbolek

Anbolek

Anbotek

Anbolek

Anbolek

Anbotek

Anbolek

Anbotek

Anbotek

Anbolek

Anbolek

Anbolek

Anbotek

Anbotek

Anbotek

Anbotek

Anbotek

Anbotek

Anbotek

Aupolek

Anbotek

Anbolek

Anbotek

Anbotek

Anbotek

Anbotek

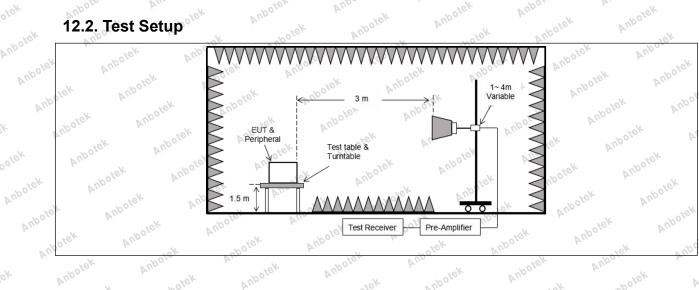
Anbolek

Anbolek

Anbotek

Anbotek

Anbotek



Anbotek

Anbotek

Anbotek

Anbotek

Anbotek

Anbolek

Anbolek

Anbolek

Anbotek

Anbolek

Shenzhen Anbotek Compliance Laboratory Limited

Anbotek

Hotline 400-003-0500 www.anbotek.com



Anboiek

Anbolek

Anbotek



nbotek

Anbolek

Anbolek

Anbotek

Anbotek

Anbotek

Anbotek

Aupolek

Anbotek

Anbotek

Anbolek

Report No.:1819C40009812501 Anbotek

Anbolek

FCC ID: 2ATS9-8813E

Aupolek

otek

12.3. Test Data

Temperature:	24.8 °C	Humidity:	48 %	Atmospheric Pressure:	101 kPa
--------------	---------	-----------	------	-----------------------	---------

Lok Lok	"pole.	VIII.	Polek	Anbo	, tek	Aupore
			ГМ1 / CH: L			
Peak value:						
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	polarization
4804.00	31.26	15.27	46.53	74.00	-27.47	Vertical
7206.00	31.72	18.09	49.81	74.00	-24.19	Vertical
9608.00	33.95	23.76	57.71	74.00	-16.29	Vertical
12010.00	* "pole"	Anbore	-K NO.	74.00	V.	Vertical vo
14412.00	*	otek Anbo	ie. Vue	74.00	olek Vupe	Vertical
4804.00	31.29 And	15.27	46.56	74.00	-27.44	Horizontal
7206.00	33.41	18.09	51.50	74.00	-22.50	Horizontal
9608.00	29.99	23.76	53.75	74.00	-20.25	Horizontal
12010.00	Ano*	abolek	Aupole	74.00	Aupoles	Horizontal
14412.00	K,Upor	r zotek	Aupoles	74.00	k "Upolek	Horizontal
Average value:						
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	polarization
4804.00	20.64	15.27	35.91	54.00	-18.09	Vertical
7206.00	20.75	18.09	38.84	54.00	-15.16	Vertical
9608.00	22.97	23.76	46.73	54.00	-7.27	Vertical
12010.00	* * *	Sk Vupor	Pr.	54.00 mo	e. And	Vertical
14412.00	*	Ulek Auk	loier Vun	54.00	Potek Vul	Vertical
4804.00	19.64	15.27	34.91	54.00	-19.09	Horizontal
7206.00	22.47	18.09	40.56	54.00	-13.44	Horizontal
9608.00	19.30	23.76	43.06	54.00	-10.94	Horizontal
12010.00	Vu*	abolek	Aupor	54.00	Aupole	Horizontal
14412.00	*Anbore	b	K Aupore	54.00	ek abov	Horizontal

Shenzhen Anbotek Compliance Laboratory Limited

Anbotek



Anbolek

Anbo'



nbotek

Aupolek

Anbotek

Anbotek

Anbotek

Aupolek

Aupolek

Anbolek

Aupolek

Anbotek

Aupolek

Anbotek

Anbotek

Anbotek

Anbolek

Anbolek

Aupolek

Anbotek

Report No.:1819C40009812501

FCC ID: 2ATS9-8813E

	upotek Vup	otek Anbot	rek al	DOFER AUD	okek Aupo	hotek An	ootek b
	/up		10012 EV	ГМ1 / CH: M	ro _{ler} v	ur.	*ek
	Peak value:						
	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	polarizatio
	4882.00	31.28	15.42	46.70	74.00	-27.30	Vertical
	7323.00	otek 31.57 Anbo	18.02	49.59	74.00	-24.41	Vertical
	9764.00	32.96	23.80	56.76	74.00	-17.24	Vertical
	12205.00	Anb *	abotek	Anbor	74.00	Vupore _k	Vertical
	14646.00	Anbo*	Viek	Aupolek	74.00	"potek	Vertical
	4882.00	30.99	15.42	46.41	74.00	-27.59	Horizont
	7323.00	33.40	18.02	51.42	74.00	-22.58	Horizont
	9764.00	29.69	23.80 ,,,,,	53.49	74.00	-20.51 And	Horizont
	12205.00	potek * And	- A	sporek An	74.00	rotek b	Horizont
	14646.00	Polek*	Aupolo	olek.	74.00	And	Horizont
	Average value:						
	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	polarizati
)	4882.00	× 20.37 10018	15.42	35.79 ,,,,,,,	54.00	-18.21	√° Vertica
	7323.00	20.85	o ^{tek} 18.02 And	38.87	54.00 M	-15.13	Vertica
	9764.00	22.83	23.80	46.63	54.00	7.37	Vertica
	12205.00	Aupole*	Vun	V Upolek	54.00	spoiek	Vertica
	14646.00	" Up lek	Aupor	Potek	54.00	Al.	Vertica
-	4882.00	19.55	15.42	34.97	54.00	-19.03	Horizont
6	7323.00	22.03	18.02 ₀₀ 010	40.05	54.00	-13.95 ¹⁰⁰¹	Horizont
3	9764.00	19.81 nbox	23.80	otek 43.61 And	54.00	10.39 N	Horizont
0,000	12205.00	work *	Poles Vu	rek .	54.00	100 K	Horizont
	14646.00	, nb , *k	Pupolek	Aupo	54.00	Aupotek	Horizont

Anbo

Anbotek

Aupolek

Anbolek

nbotek

Anbotek

Aupolek

Shenzhen Anbotek Compliance Laboratory Limited

Anbotek



Aupolek

Anbotek

Anbot

Anbolek

Anbotek

Anb'



Report No.:1819C40009812501 FCC ID: 2ATS9-8813E

AUD	10,	100. K.	\r	POLO. V	U	16K		
TM1 / CH: H								
Peak value:								
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	polarization		
4960.00	31.55	15.58	47.13,001°	74.00	-26.87	Vertical		
7440.00	31.58	17.93	49.51	otek 74.00 kno	-24.49	Vertical 📈		
9920.00	33.51	23.83	57.34	74.00	-16.66	Vertical		
12400.00	Anbole * P	"In.	Aupoles	74.00	abolek	Vertical		
14880.00	Vupo*	Aupo	abotek	74.00	b.	Vertical		
4960.00	31.06	15.58	46.64	74.00	-27.36	Horizontal		
7440.00	33.43	17.93	51.36	74.00	-22.64	Horizontal		
9920.00	30.37	23.83	54.20 m	74.00	19.80 AND	Horizontal		
12400.00	potek * Anb	oto Am	otek ar	74.00 Ani	· ek	Horizontal		
14880.00	Vek*	inpolek A	up.	74.00	Aupor	Horizontal		
Average value:								
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	polarization		
4960.00	21.49	15.58	37.07	54.00 noot	-16.93	Vertical		
7440.00 km20	21.86	ntek 17.93 And	39.79	54.00	o ^{tek} -14.21 And	Vertical		
9920.00	23.38	23.83	47.21	54.00	-6.79	Vertical		
12400.00	abole*	Vupo.	"otek	54.00	Yun iek	Vertical		
14880.00	* tek	Anborek	Vur.	54.00	Auporg	Vertical		
4960.00	20.99	15.58	36.57	54.00	-17.43	Horizontal		
7440.00	23.40	17.93	41.33	54.00	-12.67 ₀₀ 010	Horizontal		
9920.00	19.71 noot	23.83	43.54	54.00 And 0	-10.46	Horizontal		
12400.00	*	potek Ant	0. 1	54.00	Pole, Vu	Horizontal		
14880.00	"upolo * A	i otek	Aupole	54.00	" upolek	Horizontal		

Remark:

Anbotek

- 1. Result =Reading + Factor
- 2. Test frequency are from 1GHz to 25GHz, "*" means the test results were attenuated more than 20dB below the permissible limits, so the results don't record in the report.

3. Only the worst case is recorded in the report.





Hotline

Anbotek

Anbolek

Anbotek

Anbotek

Anbolek

Anbotek

Anbotek

Anbotek

Anbolek

Anbotek

Anbotek

Anbolek

Anbotek

Anbotek

Anbolek

Anbolek

Anbotek



Anbolek

Anbolek

Aupotek

Anbotek

Aupolek

Anbolek

Anbotek

Anbotek

Aupolek

Report No.:1819C40009812501 FCC ID: 2ATS9-8813E

APPENDIX I -- TEST SETUP PHOTOGRAPH

Aupolek

Anbotek

Anboiek

Please refer to separated files Appendix I -- Test Setup Photograph RF

APPENDIX II -- EXTERNAL PHOTOGRAPH

Please refer to separated files Appendix II -- External Photograph

APPENDIX III -- INTERNAL PHOTOGRAPH

Please refer to separated files Appendix III -- Internal Photograph

Anbotek

Anbolek

Anbotek

Anboiek

----- End of Report

Anbolek

Anbotek

Anbotek

Anbolek

Anbolek

Shenzhen Anbotek Compliance Laboratory Limited

Anbolek



Anbotek

Anbotek