



SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

SZEMC-TRF-01 Rev. A/0 Aug01,2022

Report No.: SZCR230300083603

Page: 1 of 7

RF EXPOSURE EVALUATION REPORT

Application No.: SZCR2303000836AT
Applicant: Leax Arkivator Telecom USA Inc.
Address of Applicant: 833 E Arapaho Rd Suite 203, Richardson, Texas 75081 United States
Manufacturer: Leax Arkivator Telecom USA Inc.
Address of Manufacturer: 833 E Arapaho Rd Suite 203, Richardson, Texas 75081 United States
Factory: Leax Arkivator Telecom USA Inc.
Address of Factory: 833 E Arapaho Rd Suite 203, Richardson, Texas 75081 United States
Equipment Under Test (EUT):
EUT Name: TD LTE Base Station
Model No.: LBS8529
FCC ID: 2AVFNLBS8529
Standard(s) : FCC Rules 47 CFR §2.1091
KDB 447498 D04 interim General RF Exposure Guidance v01
Date of Receipt: 2023-03-28
Date of Evaluation: 2023-03-29 to 2023-05-04
Date of Issue: 2023-05-18

Evaluation Result:

Pass*

* In the configuration evaluated, the EUT complied with the standards specified above.

Keny Xu

Keny Xu
EMC Laboratory Manager



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Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2023-05-18		Original

Authorized for issue by:				
		Benson Wang		
		Benson Wang/Project Engineer		
		Eric Fu		
		Eric Fu/Reviewer		



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3 General Information

3.1 General Description of E.U.T.

Product Type:	☐ Portable device
	☐ Mobile device
	☒ Fixed device

3.2 Details of E.U.T.

Power supply:	Adapter Model: HEP-480-54 INPUT: 100-240V 5.5A-2.2A 50/60Hz OUTPUT: DC54V 8.9A DC adapter: INPUT: DC48V OUTPUT: DC13V 4A
Cable:	GND Cable: 480cm unshielded Adapter Cable: 190cm unshielded DC Adapter cable: 87cm unshielded + 20cm unshielded
EUT Type:	CBSD
Category of EUT:	Category B
LTE Operation Frequency Band:	Band 48 (3550-3700MHz)
Test Mode:	E-TM1.1; E-TM3.2; E-TM3.1;
Modulation Type:	QPSK, 16QAM, 64QAM
Bandwidth:	5MHz; 10MHz; 15MHz; 20MHz
Transmission (TX) and Receiving (RX) Antenna Ports:	TX port: 2
MIMO supported	2*2 UL
Antenna Type:	N-Type connector for external high gain antenna
Antenna Gain:	16.5dBi

Note:

(1)The antenna gain value is provided by the customer. The test lab will not be responsible for wrong test result due to incorrect information about antenna gain values.

3.3 Separation Distance

Minimum test separation distance:	90cm
Remark: This minimum test separation distance is determined by the smallest distance from the antenna and radiating structures or outer surface of the device, according to the host form factor, exposure conditions and platform requirements, to any part of the body or extremity of a user or bystander.	

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3.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China. 518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

3.5 Test Facility

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

• A2LA (Certificate No. 3816.01)

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

• VCCI (Member No. 1937)

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen EMC laboratory have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

• FCC –Designation Number: CN1336

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1336. Test Firm Registration Number: 787754.

• Innovation, Science and Economic Development Canada

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

3.6 Deviation from Standards

None

3.7 Abnormalities from Standard Conditions

None



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4 FCC Radiofrequency radiation exposure limits

According to §1.1310, the limit for general population/uncontrolled exposures

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30



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5 Measurement and Calculation

5.1 Maximum transmit power

LTE:

The Power Data is based on the RF Test Report SZCR230300083602 and Tune up procedure.

Antenna Gain: 16.5dBi

MPE Calculation

According to the formula $S = P / 4\pi R^2$, we can calculate S which is MPE.

Note:

- 1) P (mW)
- 2) R = distance to the center of radiation of antenna (in centimeter)
- 3) MPE limit = 1mW/cm²

Test Mode	Frequency Band (MHz)	Max Conducted power (dBm)	Operation Distance R(cm)	Power Density (mW/cm ²)	Limit of Power Density S(mW/cm ²)	Result
LTE Band 48	3625	33	90	0.88	1.00	Pass

--End of the Report--



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