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# RF Exposure Evaluation Report

**Product** : Long-middle range radar

Trade mark : CUBTEK

Model/Type reference : B122-035 (VS-93G016)

Serial Number : N/A

Report Number : EED32Q80555302

**FCC ID** : 2BGAB-3602300X9D05

Date of Issue : May 30, 2024

**Test Standards** : 47 CFR Part 1.1307 47 CFR Part 1.1310

KDB 447498 D04 Interim General RF

Exposure Guidance v01

Test result : PASS

Prepared for:

CUBTEK (Shanghai) INC.
Building 6,No. 51, Jinwen Road, Zhuqiao Town, Pudong New Area,
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Prepared by:

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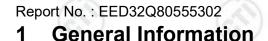
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# 1.1 Client Information

Applicant:	CUBTEK (Shanghai) INC.		
Address of Applicant:	Building 6,No. 51, Jinwen Road, Zhuqiao Town, Pudong New Area, Shanghai		
Manufacturer:	CUBTEK (Shanghai) INC.		
Address of Manufacturer:	Building 6,No. 51, Jinwen Road, Zhuqiao Town, Pudong New Area, Shanghai		
Factory:	CUBTEK (Shanghai) INC.		
Address of Factory:	Building 6,No. 51, Jinwen Road, Zhuqiao Town, Pudong New Area, Shanghai		

# 1.2 General Description of EUT

Product Name:	Long-middle range radar	(0,)
Model No.:	B122-035 (VS-93G016)	
Trade mark:	CUBTEK	
Product Type:		
Type of Modulation:	FMCW	
Operating Frequency	76.50GHz	
Test Power Grade:	Default	
Test Software of EUT:	N/A	/°>
Antenna Type:	PCB Antenna	(37)
Antenna Gain:	20.99dBi	
Power Supply:	DC 9.0V to DC 32.0V	
Test Voltage:	DC 24V	
Sample Received Date:	Apr. 26, 2024	
Sample tested Date:	Apr. 26, 2024 to Apr. 30, 2024	
	ess shown on Report, the sample(s) and sample Information was/ were who should be responsible for the authenticity which CTI hasn't verified.	







#### 1.3 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax:+86 (0) 755 33683385

No tests were sub-contracted. FCC Designation No.: CN1164

### 1.4 Deviation from Standards

None.

#### 1.5 Abnormalities from Standard Conditions

None.







#### SAR Evaluation

# 2.1 RF Exposure Compliance Requirement

#### **2.1.1 Limits**

According to KDB 447498 D04 Interim General RF Exposure Guidance v01, for all devices, MPE limits in § 1.1310(e)(1) - Table1.The SAR-based exemption formula of § 1.1310(e)(1), Table 1 to § 1.1310(e)(1) sets forth limits for Maximum Permissible Exposure (MPE) to radiofrequency electromagnetic fields.

Table 1 to § 1.1310(e)(1)—Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm²)	Averaging time (minutes)
	(i) Limits for O	ccupational/Controlled Expos	ure	•
0.3-3.0	614	1.63	*(100)	≤6
3.0-30	1842/f	4.89/f	*(900/f <sup>2</sup> )	<6
30-300	61.4	0.163	1.0	<6
300-1,500			f/300	<6
1,500-100,000			5	<6
	(ii) Limits for Gener	al Population/Uncontrolled E	xposure	. II
0.3-1.34	614	1.63	*(100)	<30
1.34-30	824/f	2.19/f	*(180/f <sup>2</sup> )	<30
30-300	27.5	0.073	0.2	<30
300-1,500			f/1500	<30
1,500-100,000			1.0	<30

f = frequency in MHz. \* = Plane-wave equivalent power density.

Friis Formula,

Friis transmission formula: Pd = (Pout\*G)/(4\*pi\*r2);

Pd = power density in mW/cm<sup>2</sup>

Pout = output power to antenna in mW G = gain of antenna in linear scale Pi = 3.1416;

R = distance between observation point and center of the radiator in cm.

General population/uncontrolled exposure limits apply in situations in which the general public may be exposed, or in which persons who are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure. For example, RF sources intended for consumer use shall be subject to the limits for general population/ uncontrolled exposure in this section.

#### 2.1.2 Test Mode

TX mode\_Make EUT continuously emit radar signals.















### 2.1.3 EUT RF Exposure Evaluation

#### For Stand alone:

3	Frequency	R	Corrected EIRP	Tune-up EIRP	Tune-up EIRP	Power	Limit	Result
•	(GHz)	(cm)	(dBm/MHz)	(dBm)	(mW)	density	(mW/cm <sup>2</sup> )	(()
_						(mW/cm <sup>2</sup> )		
	76.50	20	32.27	35.00	3162.2777	0.6291	1	PASS

#### Note:

- $1EIRP(mW) = 10^{(EIRP (dBm)/10)};$
- 2)The estimation distance is 20cm;
- ③Tune-up EIRP was declared by manufacturer;
- (4) The test data of Corrected EIRP please refer to the report of EED32Q80555301 and only the worst case data was recorded in the report.

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.

