

Human Exposure Report

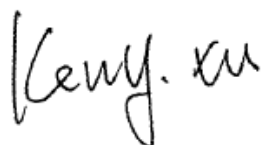
Application No.: SZEM1907016747CR
Applicant: Pelican Products, Inc.
Address of Applicant: 23215 Early Avenue, Torrance, California, 90505 United States
Manufacturer: Pelican Products, Inc.
Address of Manufacturer: 23215 Early Avenue, Torrance, California, 90505 United States
Factory: SHENZHEN TOPBAND CO., LTD.
Address of Factory: Topband Building, Liyuan Industrial Park, Shiyan Town, Bao'an District, Shenzhen, China.

Equipment Under Test (EUT):
EUT Name: G40 Charge Case
Model No.: GOG400-0050-DGRY
Trade mark: Pelican
FCC ID: 2AOIUGOG400
Standards: 47 CFR PART 1, Subpart I, Section 1.1310
 47 CFR PART 2, Subpart J, Section 2.1093

Date of Receipt: 2019-07-25
Date of Test: 2019-07-31 to 2019-08-15
Date of Issue: 2019-08-19

Test Result :	Pass*
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* In the configuration tested, the EUT complied with the standards specified above



Keny Xu
 EMC Laboratory Manager



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2 General Information

2.1 Details of E.U.T.

Power supply: Lithium Ion Battery: DC 3.7V
 Capacity: 10000mAh/37Wh
 Input: Micro USB Port DC 5V/2A
 Output:
 USB Port: DC5V/2A
 WPC: 5W(DC 5V/1A)

Cable: USB cable: 37cm shielded

Operation Frequency: 114.26kHz to 185.26kHz

Modulation Type: Load Modulation

Antenna Type: Loop Antenna

2.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Adapter	LeTV	EQ-248CN	16041847014
iPhone 8	Apple	A1863	F4GVQ656JC6D



2.3 Test Location

All tests were performed at:

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

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

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

No tests were sub-contracted.

2.4 Test Facility

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

- **CNAS (No. CNAS L2929)**

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

- **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**

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. 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: CN1178**

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

Designation Number: CN1178. Test Firm Registration Number: 406779.

- **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.

2.5 Deviation from Standards

None.

2.6 Abnormalities from Standard Conditions

None.



3 Equipments Used during Test

Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Due date
1	Electric and Magnetic Field Analyzer	Narda	EHP-50F	EMC092	2020-02-05



4 Test Results

4.1 RF Exposure test

Test Requirement: 47 CFR PART 1, Subpart I, Section 1.1310
 Measurement Distance: 0/2/4/6/8/10/15cm
 Limit:

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f ²)	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	f/300	6
1500-100,000	/	/	5	6
(B) 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

F=frequency in MHz
 *=Plane-wave equivalent power density
 RF exposure compliance will need to be determined with respect to 1.1307(c) and (d) of the FCC rules. The emissions should be within the limits at 300kHz in Table 1 of 1.1310(use the 300kHz limits for 150kHz:614V/m,1.63A/m).

4.1.1 E.U.T. Operation

Operating Environment:
 Temperature: 25.0 °C Humidity: 52% RH Atmospheric Pressure: 1015 mbar
 EUT Operation:
 This device has been tested with load at zero charge, intermediate charge, and full charge.



4.1.2 Measurement Data

Output Voltage=DC 5V; The max output power =5W;Calculation of resistor value=5Ω

Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (A/m)	50% Limit (A/m)
122.3 kHz	0	Side 1	0.3604	0.815
		Side 2	0.3119	0.815
		Side 3	0.4015	0.815
		Side 4	0.2703	0.815
		Top	0.2219	0.815

Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (A/m)	50% Limit (A/m)
122.3 kHz	2	Side 1	0.3234	0.815
		Side 2	0.2747	0.815
		Side 3	0.3663	0.815
		Side 4	0.2351	0.815
		Top	0.1847	0.815

Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (A/m)	50% Limit (A/m)
122.3 kHz	4	Side 1	0.2901	0.815
		Side 2	0.2446	0.815
		Side 3	0.3268	0.815
		Side 4	0.1939	0.815
		Top	0.1518	0.815



Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (A/m)	50% Limit (A/m)
122.3 kHz	6	Side 1	0.2541	0.815
		Side 2	0.2052	0.815
		Side 3	0.2927	0.815
		Side 4	0.1675	0.815
		Top	0.1189	0.815

Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (A/m)	50% Limit (A/m)
122.3 kHz	8	Side 1	0.2216	0.815
		Side 2	0.1693	0.815
		Side 3	0.2570	0.815
		Side 4	0.1299	0.815
		Top	0.0804	0.815

Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (A/m)	50% Limit (A/m)
122.3 kHz	10	Side 1	0.1834	0.815
		Side 2	0.1403	0.815
		Side 3	0.2298	0.815
		Side 4	0.0963	0.815
		Top	0.0439	0.815



Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (A/m)	50% Limit (A/m)
122.3 kHz	15	Side 1	0.1062	0.815
		Side 2	0.0817	0.815
		Side 3	0.1348	0.815
		Side 4	0.0539	0.815
		Top	0.0265	0.815

Mobile phone has been charge at zero charge, intermediate charge, and full charge.

Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result(A/m)			50%Limit (A/m)
			zero charge	intermediate charge	full charge	
122.3 kHz	0	Side 1	0.3721	0.3602	0.3451	0.815
		Side 2	0.3217	0.3094	0.2956	0.815
		Side 3	0.4142	0.4026	0.3886	0.815
		Side 4	0.2805	0.2665	0.2531	0.815
		Top	0.2325	0.2189	0.2057	0.815



Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result(A/m)			50%Limit (A/m)
			zero charge	intermediate charge	full charge	
122.3 kHz	2	Side 1	0.3337	0.3228	0.3093	0.815
		Side 2	0.2852	0.2693	0.2568	0.815
		Side 3	0.3755	0.3638	0.3496	0.815
		Side 4	0.2452	0.2338	0.2186	0.815
		Top	0.1975	0.1855	0.1713	0.815

Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result(A/m)			50%Limit (A/m)
			zero charge	intermediate charge	full charge	
122.3 kHz	4	Side 1	0.3025	0.2878	0.2744	0.815
		Side 2	0.2543	0.2411	0.2259	0.815
		Side 3	0.3357	0.3239	0.3088	0.815
		Side 4	0.2062	0.1920	0.1769	0.815
		Top	0.1644	0.1526	0.1395	0.815

Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result(A/m)			50%Limit (A/m)
			zero charge	intermediate charge	full charge	
122.3 kHz	6	Side 1	0.2670	0.2539	0.2400	0.815
		Side 2	0.2173	0.2018	0.1891	0.815
		Side 3	0.3033	0.2888	0.2736	0.815
		Side 4	0.1764	0.1631	0.1506	0.815
		Top	0.1305	0.1168	0.1030	0.815



Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result(A/m)			50%Limit (A/m)
			zero charge	intermediate charge	full charge	
122.3 kHz	8	Side 1	0.2315	0.2178	0.2053	0.815
		Side 2	0.1818	0.1706	0.1563	0.815
		Side 3	0.2693	0.2561	0.2425	0.815
		Side 4	0.1411	0.1285	0.1136	0.815
		Top	0.0906	0.0762	0.0638	0.815

Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result(A/m)			50%Limit (A/m)
			zero charge	intermediate charge	full charge	
122.3 kHz	10	Side 1	0.1964	0.1809	0.1672	0.815
		Side 2	0.1534	0.1402	0.1269	0.815
		Side 3	0.2392	0.2260	0.2108	0.815
		Side 4	0.1065	0.0904	0.0764	0.815
		Top	0.0556	0.0420	0.0287	0.815

Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result(A/m)			50%Limit (A/m)
			zero charge	intermediate charge	full charge	
122.3 kHz	15	Side 1	0.1171	0.1020	0.0893	0.815
		Side 2	0.0924	0.0793	0.0645	0.815
		Side 3	0.1464	0.1312	0.1174	0.815
		Side 4	0.0665	0.0536	0.0410	0.815
		Top	0.0372	0.0278	0.0253	0.815





5 Photographs- RF exposure Setup photos

Refer to setup photos.

- End of the Report -

