

### SIRIM QAS International Sdn.Bhd. (410334-X) No.1, Persiaran Dato' Menteri, Section 2, P.O.BOX 7035, 40700 Shah Alam, Selangor Darul Ehsan, Malaysia.

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#### **TEST REPORT**

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#### THIS TEST REPORT IS ISSUED IN SECURED PDF SOFTCOPY

**Applicant** : PAPI BELLA SDN. BHD.

Manufacturer PAPI BELLA SDN. BHD

> BLOCK D-2-7, PLAZA ARKADIA, NO 3, JALAN INTISARI PERDANA,

DESAPARK CITY,

52200, KUALA LUMPUR, MALAYSIA

Product HOODIE

Reference Standard

: IEEE 299 : 2006

Method of test

Method for Measuring the Effectiveness of Electromagnetic Shielding

Enclosure.

Description of

Sample

: Brand : Faraday Gear

Date Received of : 28 MARCH 2022

Complete Application

Job No.

: J20221410117

Overall Test Result : The test results for the submitted test samples as described in this test

report complied with the requirements of the above reference standard at

the respective clauses tested.

: 7 APRIL 2022 **Issued Date** 

Approved Signatories,

(AZIZUL AZMAN JAAFAR) **Group Leader EMC Laboratory** 

RF & EMC **TESTING** SECTION

(ZARISMAIL ABD RAHMAN) Head

RF & EMC Testing Section **Testing Services Department**  REPORT NO.: 2022RE0142 PAGE: 2 OF 16`

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# 1. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following standards:-

TEST METHOD	DATE OF TESTING
EMC Requirements :  IEEE 299 : Method for Measuring the Effectiveness of Electromagnetic Shielding Enclosure.	1 APRIL 2022

## **ADDITIONAL INFORMATION:-**

Tested by	MUHAMMAD ZAREF ZAINORDIN
Review by	AZIZUL AZMAN JAAFAR

AGE

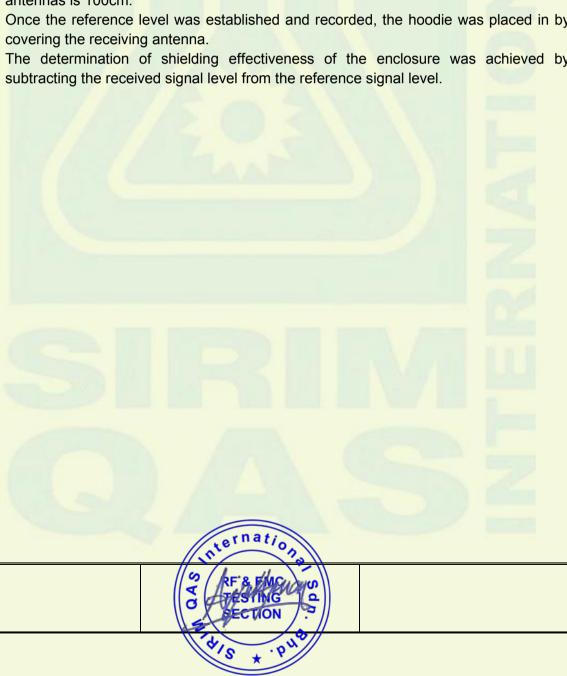


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## 2. TEST DESCRIPTION

- 2.1 The test was performed inside the shielded room with a receiver and signal generator for the frequency range of 800 MHz to 6.0 GHz. Horn antenna were used as the signal source antenna and the log periodic and horn antenna as the receiving antenna unit accordingly.
- 2.2 The reference levels were established by placing the Horn antenna (800 MHz to 6000 MHz) with associated receiving antenna without the hoodie. The distance between the antennas is 100cm.
- 2.3 Once the reference level was established and recorded, the hoodie was placed in by covering the receiving antenna.
- 2.4 The determination of shielding effectiveness of the enclosure was achieved by



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# 3. TEST MEASUREMENT RESULT

The measurement data and results as shown below:-

Table 1: Data for frequency range 800 MHz to 6000 MHz:

No.	Frequency (MHz)	Without Hoodie (dBm)	With Hoodie (dBm)	Attenuation (dB)
1	800	-21.02	-22.62	-1.60
2	850	-15.98	-19.26	-3.28
3	900	-14.80	-21.22	-6.42
4	950	-16.52	-19.26	-2.74
5	1000	-16.13	-18.32	-2.19
6	1100	-15.52	-18.92	-3.40
7	1200	-14.50	-16.82	-2.32
8	1300	-16.91	-18.25	-1.34
9	1400	-15.50	-17.42	-1.92
10	1500	-14.54	-15.81	-1.27
11	1600	-13.98	-15.39	-1.41
12	1700	-13.69	-15.05	-1.36
13	1800	-13.02	-15.96	-2.94
14	1900	-12.89	-15.41	-2.52
15	2000	-13.98	-17.71	-3.73
16	2100	-16.84	-18.03	-1.19
17	2200	19.71 ornatio	-20.93	-1.22

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No.	Frequency (MHz)	Without Hoodie (dBm)	With Hoodie (dBm)	Attenuation (dB)	
18	2300	-18.10	-20.93	-2.83	
19	2400	-17.95	-22.37	-4.42	
20	2500	-17.61	-20.23	-2.62	
21	2600	-20.47	-23.67	-3.20	
22	2700	-22.09	-25.23	-3.14	
23	2800	-21.39	-23.57	-2.18	
24	2900	-19.85	-21.25	-1.40	
25	3000	-19.02	-21.90	-2.88	
26	3100	-20.29	-23.31	-3.02	
27	3200	-19.47	-21.07	-1.60	
28	3300	-17.21	-18.95	-1.74	
29	3400	-17.33	-19.59	-2.26	
30	3500	-18.62	-19.97	-1.35	
31	3600	-19.43	-21.09	-1.66	
31	3600	-19.43	-21.09	-1.66	
32	3700	-19.61	-20.8	-1.19	
33	3800	-20.17	-21.61	-1.44	
34	3900	-19.86	-21.56	-1.70	
35	4000	-20.11	-21.16	-1.05	



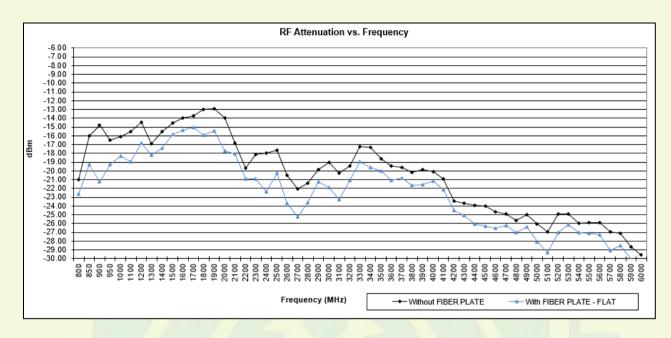
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No.	Frequency (MHz)	Without Hoodie (dBm)	With Hoodie (dBm)	Attenuation (dB)
36	4100	-20.94	-22.17	-1.23
37	4200	-23.43	-24.53	-1.10
38	4300	-23.71	-25.03	-1.32
39	4400	-23.91	-26.01	-2.10
40	4500	-23.99	-26.33	-2.34
41	4600	-24.67	-26.55	-1.88
42	4700	-24.91	-26.21	-1.30
43	4800	-25.67	-27.01	-1.34
44	4900	-25.01	-26.34	-1.33
45	5000	-26.01	-28.11	-2.10
46	5100	-26.93	-29.33	-2.40
47	5200	-24.91	-27	-2.09
48	5300	-24.93	-26.09	-1.16
49	5400	-25.95	-27.01	-1.06
50	5500	-25.90	-27.11	-1.21
51	5600	-25.90	-27.3	-1.40
52	5700	-26.95	-29.03	-2.08
53	5800	-27.11	-28.53	-1.42
54	5900	-28.69	-30.01	-1.32
55	6000	-29.55	-30.93	-1.38

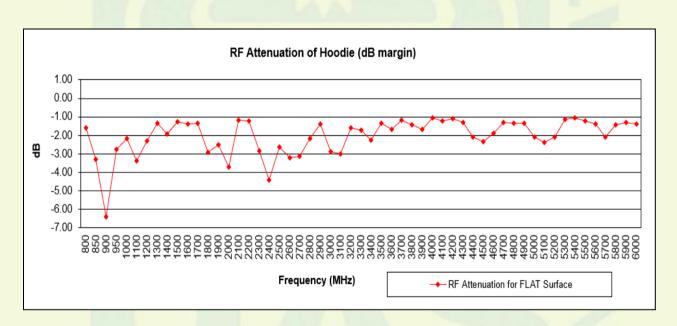


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Graph 1: RF Attenuation vs. Frequency



Graph 2: RF Attenuation of Hoodie



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#### 3.1 **General Result**

The RF attenuation (losses) for frequency of 900 (GSM) MHz is -6.42 dB.

The RF attenuation (losses) for frequency of 2.4 (WiFi) GHz is -4.42 dB.

The RF attenuation (losses) for frequency of 5.4 (WiFi) GHz is -1.06 dB.



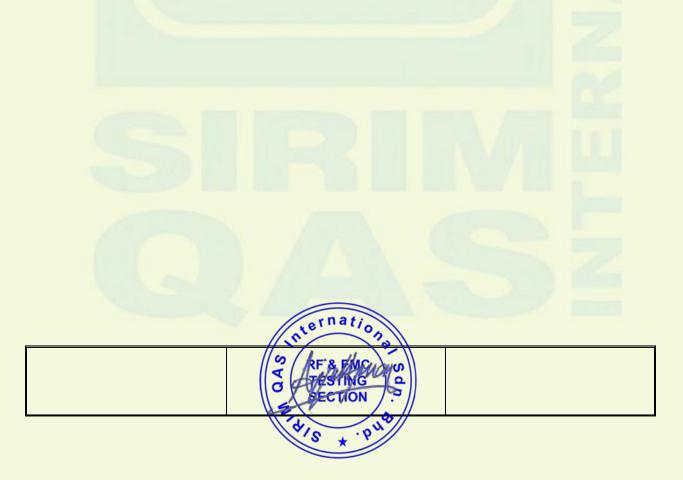
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## 4. TEST INSTRUMENTS

The following test instrumentation were used for the screen effectiveness test

Equipments	Brand	Model	Serial No.
For Transmit RF/MW			
1. Signal Generator	Rohde & Schwarz	SMR 20	100156
2. Signal Generator	Marconi	IFR 2025	202309/022
3. Horn antenna	Schwarzbeck	BBHA 9120D	D221
For Receive RF/MW			
4. RF Receiver	Rohde & Schwarz	ESW 8	429819
5. Horn antenna	Schwarzbeck	BBHA 9120D	D222
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# 5. TEST PHOTOGRAPHS



Photo 1: Front View of Test Sample



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Photo 2: Rear View of Test Sample



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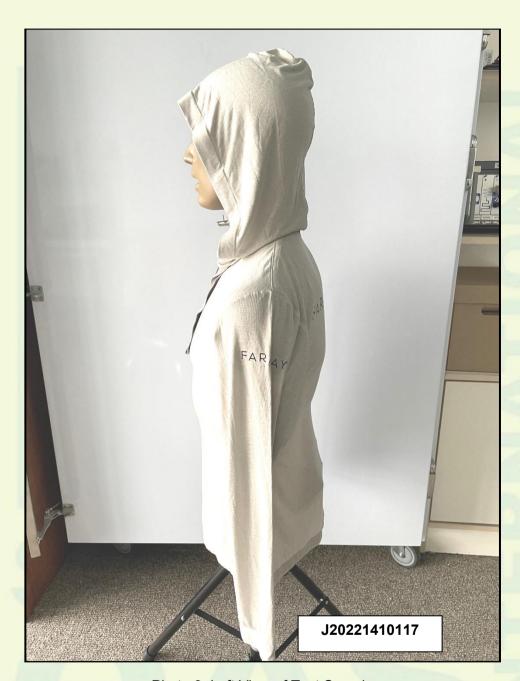


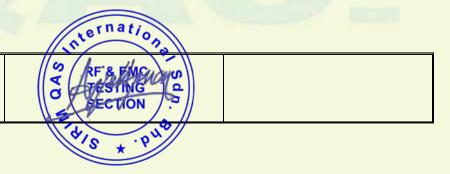
Photo 3: Left View of Test Sample



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Photo 4: Right View of Test Sample



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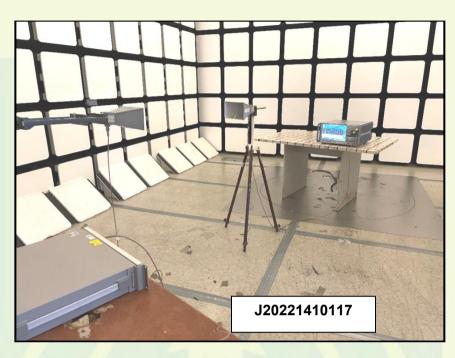


Photo 5: Test Setup Without Test Sample



Photo 6: Test Setup Without Test Sample



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- 2. The Test Report shall not be misused, amended, changed, varied or modified in any manner whatsoever by the Applicant or otherwise.
- 3. If the Test Report is to be furnished to any third party or to the public, each such Test Report shall be furnished in full, legible and in its entirety.
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- 5. Customer (Applicant/Manufacture/Factory,etc.) is not permitted to use any SIRIM QAS International, SIRIM or other SIRIM's subsidiaries logo or words on packaging, sample's manual, technical specification, items and products.
- 6. Subject to consent and written approval from the Head of Quality, Occupational Safety and Health & Environment (QOSHE) of SIRIM QAS International, the customer (Applicant/Manufacture/Factory,etc.) may use SIRIM QAS International logo or word on the promotional materials and the Applicant shall only include the phrase, "A sample of this product has been tested by SIRIM QAS International ...(Test Report No) ...(dated) ...(for what test) ...(to which standard)" or such similar words which stress that only the sample was actually tested. This phrase shall only be used for the purpose of product advertisement or product promotion (eg; brochures/flyers/official website). For avoidance of doubt, the statement shall not be used on the sample, packaging of the sample, items and products.
- 7. In the event there is an investigation from a Government Regulatory Agency concerning the Applicant's Test Report, SIRIM QAS International may disclose the information pertaining to the Test Report for purposes of such investigation.
- 8. Further or in the alternative, it is strictly forbidden unless with prior written approval from the Chief Executive Officer of SIRIM QAS International, to represent in any manner whatsoever that SIRIM QAS International, SIRIM and/or other SIRIM's subsidiaries has endorsed, approved or validated the Product of the Applicant in any manner whatsoever.
- 9. In the event the Applicant is found in breach of this provision, SIRIM QAS International, SIRIM and/or other SIRIM's subsidiaries without prejudice to any other rights and remedies may take whatever action necessary including but not limited to:
  - Informing and placing a notice in the media;
  - b) Obtaining an injunction from Court (cost on a solicitor-client basis to be borne by the Applicant);
  - c) Refusing to accept any further Product for Testing Services from the Applicant or whosoever related to the Applicant, whether subsidiary or otherwise;
  - d) Instructing the Applicant to withdraw and recall the advertisement, statement or document in question and advertise a clarification and apology to SIRIM QAS International, SIRIM and/or other SIRIM's subsidiaries twice in a national publication of SIRIM QAS International's choice at the Applicant's sole cost; and
  - e) Informing or lodging a report pertaining the Applicant's Test Report with the relevant authorities.
- 10. SIRIM QAS International is committed in supporting an environmentally-friendly business practices by reducing paper consumption, therefore we do not issue any hard copy of Test Report to the Applicant. However, additional certified true copy(ies) or softcopy of the Test Report may be issued upon request by the Applicant upon payment of the relevant fee. The certified true copy(ies) or softcopy of test report shall only be given for test report issued not more than three (3) years from the date of issuance.
- 11. Issuance of Amendment Report due to the following reasons are chargeable to the Applicant:
  - a) Changes in details of the Applicant name and/or address;
  - b) Changes in details of the Manufacturer's name and/or address;
  - c) Changes in details of the Factory location name and/or address;
  - d) Changes in details of the model and/or type designation
- 12. However, issuance of Supplementary Report due to the following reasons are FOC:
  - a) Misprints and typo errors;
  - b) Missing technical information as agreed in PP1 form;
  - c) Test data not reported;
  - d) Mistake in reporting of test data

Corrections to report shall only be allowed if the date of issuance of the original report has not exceeded 6 months and shall be limited to a maximum 3 times, after either case whichever occurs earlier, an Amendment or a Supplementary Report shall not be issued.

