GLOBAL SATELLITE ENGINEERING, LLC

TEST REPORT

Prepared For:	GLOBAL SATELLITE ENGINEERING, LLC 2429 SW 44TH TERRACE FORT LAUDERDALE, FL 33317.USA
Product Name:	GSatSolar
Trade:	GSatSolar
Main Test Model:	GSatSolar
Additional Model:	none
Prepared By :	Shenzhen BST Technology Co., Ltd.
	No.1, Chaomei Industrial Park, No.445, Donghai Road, Yongan Community, Yantian Street, Yantian District, Shenzhen City, Guangdong Province
Test Date:	Dec.26.2023 To Jan.03.2024
Date of Report :	Jan.03.2024
Report No.:	XD4482428740103129AR

7DmAMS tKBQmW

IP CODE Report

EN 60529

Degrees of protection provided by enclosures

Testing Laboratory Name	Shenzhen BST Technology Co.,Ltd.
Address	Building No.23-24, Zhiheng Industrial Park, Guankouer Road, Nantou, Nanshan District,Shenzhen,Guangdong,China
Testing location	Shenzhen BST Technology Co.,Ltd.
Applicant's Name	GLOBAL SATELLITE ENGINEERING, LLC
Address	2429 SW 44TH TERRACE FORT LAUDERDALE, FL 33317.USA
Manufacturer …… ……	GLOBAL SATELLITE ENGINEERING, LLC
Address …… ……	2429 SW 44TH TERRACE FORT LAUDERDALE, FL 33317.USA
Test specification	
Standard.....	EN 60529:1992+A1:2000+A2: 2013
Procedure deviation	IP67
Non-standard test method	N/A
Test item description	See page 1
Trade	See page 1
Model and/or type reference	See page 1
Test case verdicts	N/A
Test case does not apply to the test object ... :	N/A
Test item does meet the requirement .....:	P(ass)
Test item does not meet the requirement ..... :	F(ail)

General remarks：

This report shall not be reproduced except in full without the written approval of the testing laboratory.

The test results presented in this report relate only to the item(s) tested.

”(see remark #)" refers to a remark appended to the report.

"(see Annex #)" refers to an annex appended to the report.

Prepared by : Lanya Li
Engineer

Reviewer : Jacky Zhang
Supervisor

Approved & Authorized Signer :
Manager

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Cl.	Requirement – Test	Result	Verdict
5	**Degrees of protection against access to hazardous parts and against solid foreign objects indicated by the first characteristic numeral**		P
5.1	Protection against access to hazardous parts		P
	First characteristic numeral is 4 --Protected against access to hazardous parts with a wire. The access probe of 1,0 mm shall not penetrate		N
5.2	Protection against access solid foreign objects		N
	First characteristic numeral is 6 --Dust-tight No ingress of dust	IP6X No ingress of dust	P
6	**Degrees of prote&ion against ingress of water indicated by the second characteristic numeral**		P
	Second characteristic numeral is 7 Ingress of water in quantities causing harmful effete shall not be possible when the enclosure is temporarily immersed in water under standardized conditions of pressure and time	IPX7 direction shall have no harmful effects.	P
10	**Marking**		N
	The requirements for marking shall be specified in the relevant product standard. Where appropriate, such a standard should also specify the method of marking which is to be used when - one part of an enclosure has a different degree of protection to that of another part of the same enclosure; - the mounting position has an influence on the degree of protection; -the maximum immersion depth and time are indicated.	No marking	N

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Cl.	Requirement – Test	Result	Verdict
11	**General requirements for tests**		P
11.1	Atmospheric conditions for water or dust Tests: Temperature range:15 ℃ to 35 ℃ Relative humidity: 25% to 75% Air pressure: 86 kPa to 106 kPa (860 mbar to 1 060 mbar).	Temperature range: 15 ℃ to 35 ℃ Relative humidity: 25% to 75% Air pressure: 86 kPa to 106 kPa (860 mbar to 1 060 mbar).	P
11.2	Test samples The tests specified in this standard are type tests.	Type tests.	P

12	**Tests for protection against access to hazardous parts indicated by the first characteristic numeral**		N
12.1	Access probes The test wire of 1,0 mm 0 shall not penetrate and adequate clearance shall be kept		N
12.2	Test conditions For tests on low-voltage equipment, a low-voltage supply (of not less than 40 V and not more than 50 V) in series with a suitable lamp should be connected between the probe and the hazardous parts inside the enclosure. Hazardous live parts covered only with varnish or paint, or protected by oxidation or by a similar process, are covered by a metal foil electrically connected to those parts which are normally live in operation. The signal-circuit method should also be applied to the hazardous moving parts of high-voltage equipment. Internal moving parts may be operated slowly, where this is possible.		N
12.3	Acceptance conditions :The protection is satisfactory if adequate clearance is kept between the access probe and hazardous parts.		N

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Cl.	Requirement – Test	Result	Verdict
13	**Tests for protection against solid foreign objects indicated by the first characteristic numeral**		P
13.1& 13.2	Test means & Test conditions Test means and the main test conditions are given in Table VII		N
13.3	Acceptance conditions for first characteristic numerals 1,2,3,4 The protection is satisfactory if the full diameter of the probe specified in Table VII does not pass through any opening.		N
13.4	Dust test for first characteristic numerals 5 and 6 The test is nade using a dust chamber incorporating the basic principles shown in figure 2 whereby the powder circulation pump may be replaced by other means suitable to maintain the talcum powder in suspension in a closed test chamber.the talcum powder used shall be able to pass through a square-meshed sleve the nominal wire diameter of which is 50 um and the nominal width of a gap bettween wires 75um.the amount of talcum powder to be used is 2 kg per cubic metre of the test chamber volume. It shall not have been used for more than 20 tests.	IP6X	P
14	Tests for protection against water indicated by the second characteristic numeral		P
14.1	Test means & Test conditions Test means and the main test conditions are given in Table VIII		P
14.2.7	water no entered lamp The test sample is completely soaked in water samples from the surface height of not less than 20mm, bottom of the sample from the bottom height of at least 1m. Experimental test sample was taken after 30 minutes	IPX7 The test sample is completely soaked in water samples from the surface height of not less than 20mm, bottom of the sample from the bottom height of at	P

		least 1m	
14.3	Acceptance conditions After testing in accordance with the appropriate requirements of 14.2.1 to 14.2.8 the enclosure shall be inspected for ingress of water. It is the responsibility of the relevant Technical Committee to specify the amount of water which may be allowed to enter the enclosure and the details of a dielectric strength test, if any. In general, if any water has entered, it shall not: -be sufficient to interfere with the correct operation of the equipment or impair safety; - deposit on insulation parts where it could lead to tracking along the creepage distances; - reach live parts or windings not designed to operate when wet;- accumulate near the cable end or enter the cable if any.If the enclosure is provided with drain-holes, itshould be proved by inspection that any water which enters does not accumulate and that it drains away without doing any harm to the equipment.For enclosures without drain-holes, the relevant product standard shall specify the acceptance conditions if water can accumulate to reach live parts.	No broken water no entered Test sample inside Dielectric strength test normal	P

ANNEX A:

Photo-documentation

Photo 1

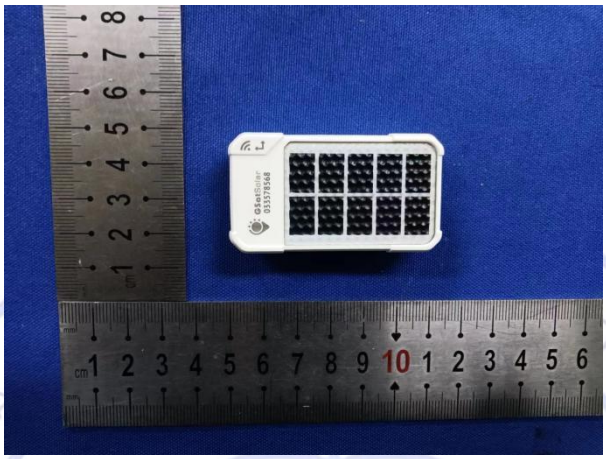

Photo 2

********** END **********