

Report No.: HC30037A/2013

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Date: June 26, 2013

ALLTEK MARINE ELECTRONICS CORP. 7F, NO. 605, RUEI GUANG RD., NEIHU, TAIPEI, R.O.C.

The following merchandise was submitted and identified by the vendor as:

Product Description: AIS Class B Transponder

Style/ Item No.: CAMINO-108/ No. 1

Manufacturer/ Vendor: **AMEC**

Total 1 set **Quantity**:

Country of Origin: Taiwan

Mar. 29, 2013 to Apr. 1, 2013 Testing Period:

Note: Hardware: M-PCB-B108MBV1;

Software: V1.2.6

We have tested the submitted sample(s) as requested and the following results were obtained:

Test Required: (According to client's test specification, please see following sheets in detail.)

1. Vibration Test

-PLEASE SEE ATTACHED SHEETS-Test Results:

* HC30037/2013, dated on April 15, 2013, is hereby canceled and replaced by HC30037A/2013.

Signed for and on behalf of SGS TAIWAN Ltd.

Winson Tseng Asst. Manager

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1. Vibration Test:

Test Equipment:

| Name | Brand | Model | Serial No. |
|-----------------------|----------------|--------------------|------------|
| Vibration Test System | UNHOLTZ-DICKIE | SAI60-H560BAC/2/ST | 474 |
| Controller | Dactron | LASER | 7110357 |
| Control Accelerometer | PCB | 353B34 | 143549 |
| Accelerometer | PCB | 356A24 | 90696 |

Lab Environmental Conditions:

Ambient temperature: (25 ± 3) °C Ambient humidity: $(55 \pm 20) \% RH$

Test Method/ Specification:

1. Resonance Search:

Test method: Reference to IEC 62287-1 Edition 2.0: 2010, Section 9.2

Sample condition: **Operating** Wave form: Sinusoidal Frequency: $(2\sim100) \text{ Hz}$

| Frequency | Displacement: D _{p-p} | Velocity | Acceleration |
|-----------|--------------------------------|----------|--------------|
| (Hz) | (mm) | (m/s) | (m/s^2) |
| 2 | 2 | - | |
| 13.3 | 2 | - | 7 |
| 100 | - | - | 7 |

Sweep Rate: 0.2 octave/ minute

Direction: X, Y, Z axes (See photo $3 \sim 5$)

2 sweeps/ axis Test duration:

Measuring Position: as shown in photo 2

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Test Method/ Specification--Continued:

2. Dwell Vibration test:

Sample condition: **Operating**

Frequency of major peaks where the magnitude ratio ≥ 5 (if it appears) Frequency:

during Resonance Search in each direction. If no resonance frequency

found, dwell at 30 Hz.

Acceleration: Same condition as specified in resonance search.

Dwell: 2 hours/ peak

Examine the appearance of specimen(s) by visual check and perform functional check during and after this test.

Functional check: Connect the specimen with computer then examine the navigation function of specimen could be work normally or not.

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Specimen:

Style/ Item No.: CAMINO-108/No.1

Quantity: Total 1 set

Test Result:

1. Resonance Search Result:

| Style/ Item No. | Test Item | Major Resonance Frequency Unit: Hz |
|-----------------|-----------|--|
| | X axis | No resonance found |
| CAMINO-108/No.1 | Y axis | No resonance found |
| | Z axis | No resonance found |

2. Examination of produce (Appearance check and functional check):

| Check Item Style/ Item No. | Appearance check (Visual check) | Functional Check |
|----------------------------|---------------------------------|------------------|
| CAMINO-108/No.1 | No visible damage | Normal |

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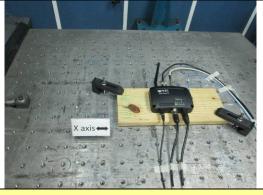
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Test Photos:



Appearance of specimen

Measuring position

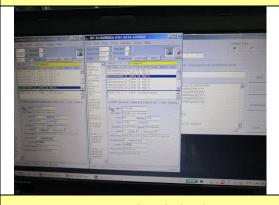




Vibration Test: X axis

Vibration Test: Y axis





Vibration Test: Z axis

Functional check

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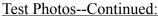
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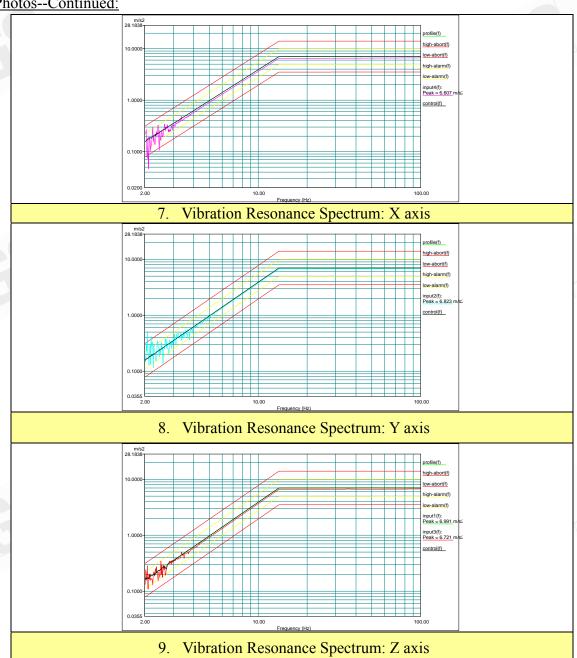
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-The End of Test Report -

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