REPORT NO:030118 -CON-TST
DATE: 11-01-2018

TEST REPORT

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Equipment used</th>
<th>Calibration Report Reference</th>
<th>Valid upto</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hot Air Oven</td>
<td>North Lab –6040817-05</td>
<td>01.08.2018</td>
</tr>
</tbody>
</table>

2.0 Test Instruments used & Traceability details: (Equipments used are traceable to national standards)

TESTED BY

[Signature]

AUTHORISED SIGNATORY

Central Electronics Centre
Indian Institute of Technology Madras
Chennai, India

Phone: 044-2257 4946 / 45
Fax: 044-2257 4986
E-mail: headcec@iitm.ac.in
Laboratory ambient condition: Temperature: 25 ± 2.5 °C  
Relative Humidity: 35% - 65%

<table>
<thead>
<tr>
<th>S.No</th>
<th>Clause No., Test Description, &amp; Test Condition</th>
<th>Customer Requirement</th>
<th>Observation</th>
<th>Result / Remarks</th>
</tr>
</thead>
</table>
| 1.   | Thermal Testing  
As per Customer Specification  
a) Thermal range: 105°C  
duration 15 Hours  
b) Thermal range: 55°C - 105°C  
duration 1 Hour | After the test the unit has to work without any failure | After temperature test units has been tested, No malfunction happened | PASS |

TESTED BY

AUTHORIZED SIGNATORY
This report refers only to the particular item actually submitted for testing.

Results reported are valid at the time of and under the stated conditions of testing.

CEC, IIT, Madras shall not be liable for any change in data.

The report is not to be used for any legal purposes and shall not be produced in a court of law.

This report shall not be reproduced except in full, without the written approval from the IIT, Madras.

In case of any disputes, the decision of the IIT, Madras shall be final and binding.

If any anomaly is found in the test report, it shall be brought to the notice of the Head, CEC, within 45 days from the date of the report so as to review and amend the report, wherever necessary and send the amendments to the client, after the receipt of the corresponding original report.
## TEST REPORT

**REPORT NO:** 030118-CON-TST  
**DATE:** 15-02-2018

<table>
<thead>
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<th>Equipment used</th>
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<th>Valid up to</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Vibration testing System, Spectral Dynamics</td>
<td>ETDC 49564</td>
<td>26-10-18</td>
</tr>
</tbody>
</table>

**Test Instruments used & Traceability details:** (Equipments used are traceable to national standards)

**Deviations if any:** Nil

**Issue No:** 02  
**Version No:** 02

**Issue Date:** 13-08-2016

**Customer:** Sosaley Technologies, Velachery Chennai

**Description of the equipment under test:** Car Battery Monitoring System

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**Date of receiving the equipment:** 09-02-2018

**Date of testing:** 12-02-2018

**Customer’s Requirements:** Vibration & Bump/Shock Testing


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**Testing Laboratory, CEC, IIT Madras.**

**Vibration & Bump/Shock Testing**


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**Test Instruments used & Traceability details:** (Equipments used are traceable to national standards)

**Sl. No.** | **Equipment used** | **Calibration Report Reference** | **Valid up to** |
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**AUTHORISED SIGNATORY**

Dr. C.R. Jeevaroopan  
Instrumentation Engineer
Indian Institute of Technology Madras

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**TESTED BY**

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**Phone:** 044-2257 4946 / 45  
**Fax:** 044-2257 4986  
**E-mail:** headcec@iitm.ac.in
REPORT NO: 030118-CON-TST  
DATE: 15-02-2018

TEST RESULTS

Laboratory ambient condition: Temperature: 25 ± 2.5 °C  
Relative Humidity: 35% - 65%

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<th>Result /Remarks</th>
</tr>
</thead>
</table>
| 1.   | **Vibration Test**  
As per IEC 60068-2-6:2007  
Acceleration level : 2G rms  
Frequency range : 10-800Hz  
No. of Axis : 3(X,Y,Z)  
Each Axis : 60 minutes  
Condition : Power on | | After the test there shall be no loosened parts impairing safety | **PASS** |
| 2.   | **Bump / Shock Test**  
As per IEC 60068-2-29:1987  
Peak Acceleration : 100 m/s²  
Pulse Duration : 15 ms  
No. of Bumps : 4000 No’s  
No. of Axis : 1 (Z)  
Each Axis : 36 minutes  
Condition : Power on | | After the test the unit has to work without any failure | **PASS** |
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ANNEXURE-I

Acceleration X-axis Graph:

Acceleration Y-axis Graph:
Acceleration Z-axis Graph:
ANNEXURE-II

Bump / Shock Test Graph