

CONTINUOUS IMMERSION AND DUST TEST REPORT

Company : Taiway Electronics Components Co.
 Address : 4F., No. 4, 6, 8, Lane 359, Sec. 2, Zhongshan Rd., Zhonghe Dist.,
 New Taipei City 23586, Taiwan (R.O.C.)
 Sample Name : TK SERIES
 Date Received : APR 02, 2014
 Date Tested : APR 02, 2014 ~ APR 03, 2014

TESTING LABORATORY IS ACCREDITED BY:

IEC/IECQ 17025 certificate of independent test laboratory approval

Certificate No. : 1.72.0031

ISO 17025 accredited in respect of laboratory is approved by TAF

Certificate No. : L0835-120910

ISO 9001 certificate is approved by TUV CERT certification body of TUV NORD Cert GmbH

WE HEREBY CERTIFY THAT:

The test(s) shown in the attachment were conducted according to the indicating procedures. We assume full responsibility for the accuracy and completeness of these tests and vouch for the qualifications of all personnel performing them.

	Name	Signature	Date
Test Engineer	Gin Lu	<i>Gin Lu</i>	<i>Apr 09, 2014</i>
Manager	Longson Lin	<i>Longson Lin</i>	<i>Apr 09, 2014</i>

NOTE :

1. This report will be invalid if reproduced in part or altered in any way.
2. This report refers only to the specimen(s) submitted to test, and is invalid if used otherwise.
3. This report is ONLY valid with the examination seal and signature of this institute.
4. The tested specimen(s) will only be preserved for thirty days from the date issued, if not collected by the applicant.



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1. GENERAL INFORMATION

1.1 DESCRIPTION OF UNIT

Manufacturer : Taiway Electronics Components Co.

Sample name : TK SERIES

Test item, Unit number and Sample quantity : (Total of 6 units)

Test item	Unit number	Sample quantity
Continuous immersion test	Unit no.1 to no.6	6 units
Dust test	Unit no.5 and no.6	2 units

1.2 UNIT OPERATING CONDITION

None

2. CONTINUOUS IMMERSION TEST

2.1 TEST EQUIPMENT

Model	Calibration Date
ETL-L180 Water Leakage Test Chamber	NCR

2.2 LABORATORY AMBIENCE CONDITION

Temperature : 25 °C ± 5 °C

Relative humidity : 65 % ± 5 % (RH)

2.3 REFERENCE DOCUMENT

This test is based on IEC/EN 60529 IPX8 (2013) continuous immersion Test Protected.

2.4 TEST CONDITION

Units are non-operating.

The water temperature is +25 °C

The lowest point of unit is locating 1000 mm below surface of the water.

The duration of test is 60 minutes.

2.5 SUMMARY OF TEST

Before and after testing, units function was normal.

No permeating water the inner unit inspection will be performed by customer.

3. DUST TEST

3.1 TEST EQUIPMENT

Model	Serial Number	Calibration Date
Vötsch- VDT 1000A	59566059640010	DEC 13, 2013

3.2 LABORATORY AMBIENCE CONDITION

Temperature : 25 °C ± 5 °C

Relative humidity : 65 % ± 5 % (RH)

3.3 REFERENCE DOCUMENT

The test is based on IEC/EN 60529 IP6X (2013) Dust Test Protected.

3.4 TEST CONDITION

Units are non-operating.

Dust material : Talcum powder (100% dry fine)

Particle size	Amount (%)
< 5 µm (Diameter)	42.31% ± 5
5~10 µm (Diameter)	35.85% ± 5
10~20 µm (Diameter)	21.15% ± 5
20~40 µm (Diameter)	0.69% ± 5
> 40 µm (Diameter)	0%

Amount of talcum powder : 2 kg/m³ (chamber volume)

Dust density : 2.03 g/cm³

Depression level : 10 mbar

Air direction : Vertically to achieve slowest possible downward settlement

Duration of exposure : 8 hours

3.5 SUMMARY OF TEST

Before and after testing, units function was normal.

No permeating dust the inner unit inspection will be performed by customer.

Attachment 1 : Photo of unit before all tests

Function was normal

Unit no.1



Unit no.2



Unit no.3



Function was normal

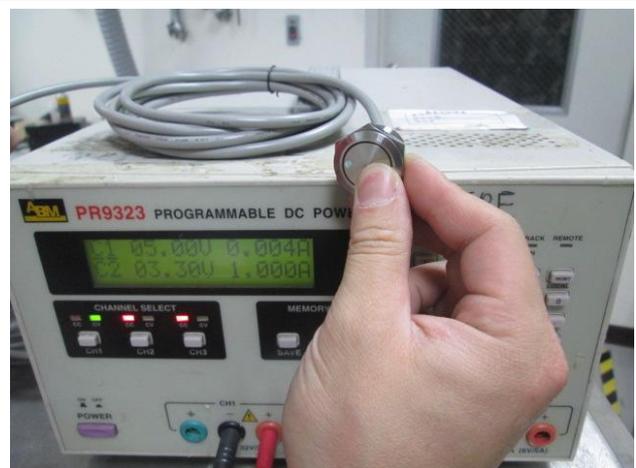
Unit no.4



Unit no.5



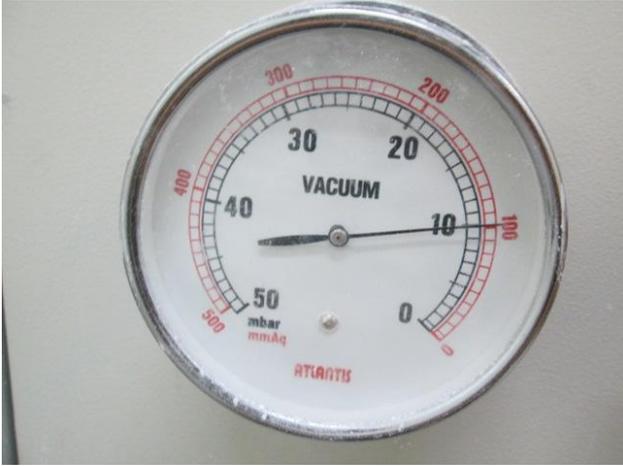
Unit no.6



Attachment 2 : Photo of continuous immersion test setup



Attachment 3 : Photo of dust test setup

Unit no.5	
Before testing	
	
Depression level	After testing
	

Unit no.6

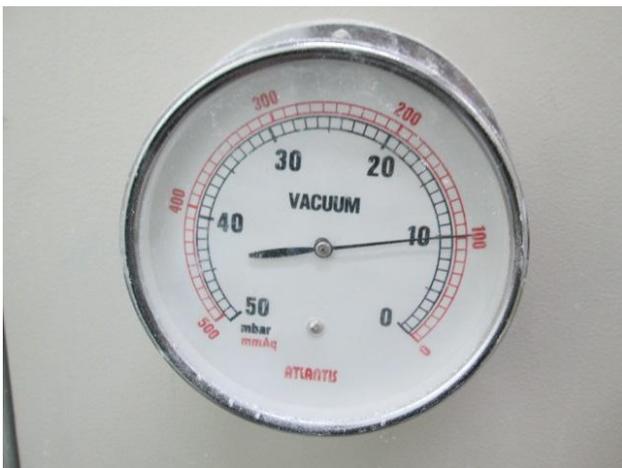
Before testing



Depression level



After testing



Attachment 4 : Photo of unit after continuous immersion test

Function was normal

Unit no.1



Unit no.2



Unit no.3



Function was normal

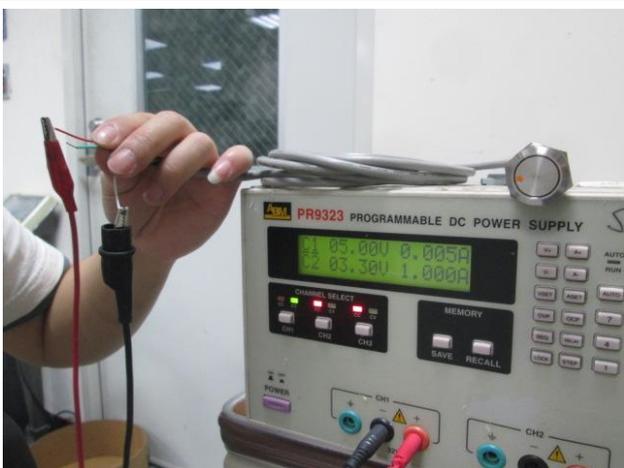
Unit no.4



Unit no.5



Unit no.6



Attachment 5 : Photo of unit after dust test

Function was normal

Unit no.5



Unit no.6



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