



Reliability Laboratory

TEST REPORT

Report No.: HC80279/2007
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Date: August 31, 2007

TEMWELL CORPORATION
8F-1, NO. 51, SEC. 1, MIN SHENG E. RD.,
TAIPEI, TAIWAN

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

Product Description: TEMWELL BRAND Helical Filter
Style/Item No.: 7H/ No.1~ No.5
Manufacturer/Vendor: TEMWELL CORPORATION
Quantity: Total 5 pieces
Testing Period: Aug. 28, 2007 to Aug. 29, 2007
Note: (Client's declaration) The materials used for 7H series are similar.

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.)
Solderability Test by Solder Bath/ Dip and Look Test (Leads, Wires, etc.)
According to client's test specification, the test procedures are shown as below.

Test Procedure Identification

Test Action/ Item	Test Sequence
Preconditioning	1
Solder Bath / Dip and Look Test	2

Test Object: The test purpose is to verify that the solderability of component leads and terminations meets the requirements provided by client and that subsequent storage has had no adverse effect on the ability to solder components to an interconnecting substrate.

Test Results: - PLEASE SEE ATTACHED SHEETS -

Terence Hsieh
Asst. Manager

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Solderability Test by Solder Bath/ Dip and Look Test (Leads, Wires, etc.):

Test Equipment:

Name	Brand	Model	Serial No.
Steam Aging Device	Self-made	SGS-ETR-030601	ETR000005
Solderability Tester	Multicore	MUST II PLUS	9652

Materials:

Name	Brand	Designation	Chemical Composition
Solder	Multicore	3421	60Sn/40Pb
Flux	Sharemate	SM/NA (Unactivated)	25 wt.% of Colophony in 75wt.% of 2-propanol

Lab Environmental Conditions:

Ambient temperature: 25±3°C

Relative humidity: 55±20%RH

Test Method/ Specification:

Test Method: Reference to IPC/EIA/JEDEC J-STD-002B Test Method A

A. Preconditioning

Test Method: IPC/EIA/JEDEC J-STD-002B Clause 3.4

Sample Condition: See below item marked “●”.

●	As-received condition prior to preconditioning
	Specimen shall be cleaned prior to preconditioning (Immersed in a neutral organic solvent at room temperature and dried in air)

Aging Method Used: See below item marked “●”.

	Category 1	--Mini Coating Durability No steam conditioning requirements
	Category 2	--Typical Coating Durability (for nontin and nontin-lead finishes) 1 hour ±5 minutes steam conditioning
●	Category 3	--Typical Coating Durability (for tin and tin-lead finishes) 8 hours ±5 minutes steam conditioning

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Test Method/ Specification-- Continued:

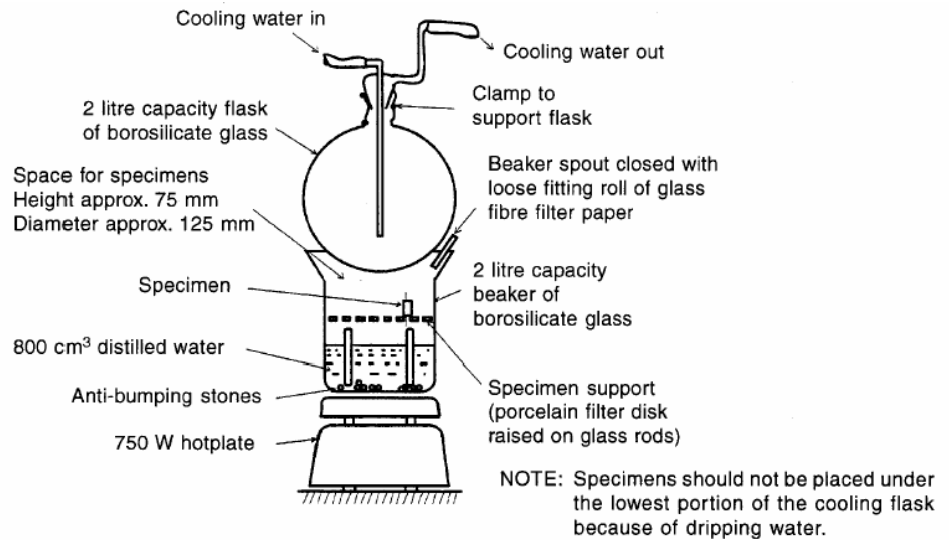


Figure 1. Diagram of apparatus for accelerated steam aging process

Altitude (m)	Average Local Boiling Point (°C)	Steam Temperature Limits (°C)
● 0~305	100	93±3
305~610	99	92±3
610~914	98	91±3
914~1219	97	90±3
1219~1524	96	89±3
1524~1829	95	88±3

Source: IPC/EIA/JEDEC J-STD-002B

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Test Method/ Specification-- Continued:

B. Solder Bath/ Dip and Look Test (Leads, Wires, etc.)

Test Method: IPC/EIA/JEDEC J-STD-002B Clause 4.2.1

Type of Flux: Unactivated

Solder Composition: 60Sn/40Pb

Test Temperature: 235±5°C

Immersion Angle: See below item marked “●”.

<u>Between 20° and 45°</u>	●	<u>90°</u>
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Immersion Speed: 25±6 mm/s

Withdraw Speed: 25±6 mm/s

Immersion Depth: Within 1.25 mm of the component body or to the seating plane (whichever is further from the component body)

Dwell Time: 5 +0/-0.5 seconds

* Leads should be immersed in the flux for 5 to 10 seconds before soldering.

* Before examination, all leads shall have all visible flux residues removed by alcohol.

Test Requirement: All leads shall exhibit a continuous solder coating free from defects for a minimum of 95% of the criteria area of any individual lead. Anomalies other than dewetting, nonwetting, and pin holes are not cause for rejection.

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Specimen:

Style/Item No.: 7H/ No.1~ No.5
 Quantity: Total 5 pieces
 Specimen Type: See below items marked “●”,


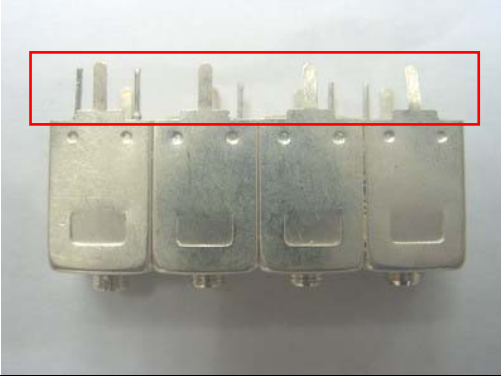

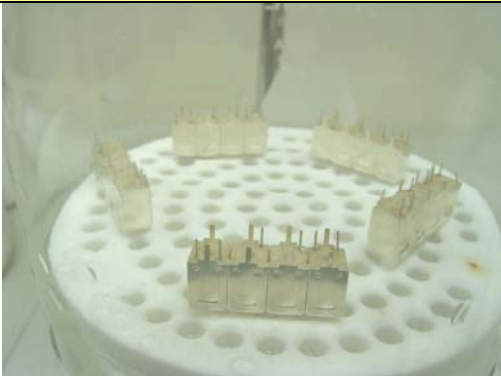


Through-Hole Mount	Surface Mount		Wires
	L-Lead	Gull Wing	
●			

Test Result:

Solder wetting area:

Style/Item No.	Solder wetting area	Note
7H/ No.1	>95%	See photo 7, 8
7H/ No.2	>95%	Similar to photo 7, 8
7H/ No.3	>95%	Similar to photo 7, 8
7H/ No.4	>95%	Similar to photo 7, 8
7H/ No.5	>95%	Similar to photo 7, 8

Test Photos:

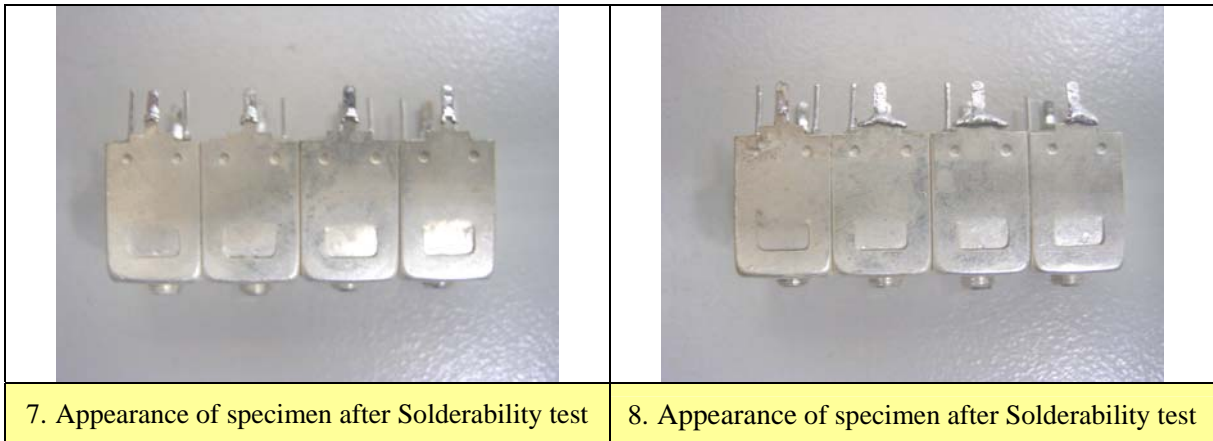
	
<p>1. Appearance of specimen-- (7H)</p>	<p>2. Testing area of specimen</p>
	
<p>3. Steam aging device</p>	<p>4. Steam aging for 8 hours</p>
	
<p>5. Solder Bath / Dip and Look Test</p>	<p>6. Solder Bath / Dip and Look Test</p>

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Test Photos--Continued:



— — — **The End of Test Report** — — —