

REV	DESCRIPTION	DATE / APPD

RS-2405/2W


Drawn	DATE	 <p style="text-align: center;">Reliability Datasheet RS-2405/2W</p>						
Tracy	08/Jul/11'							
Checked	DATE							
RECOM Development	DATE							
	DATE							
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	DATE							REV
	DATE							

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1. Thermal Cycle Test

Procedure:

- Electrical and visual test before test
- 100 thermal cycles
30min @ -55°C
30min @ 125°C
- Electrical and visual test after test

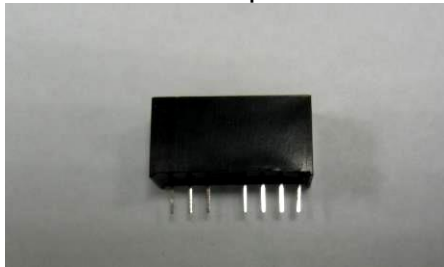
Chamber used: Hitachi Thermal Shock Chamber ES-53LS
Series No.U5538185

Function test used: Tekronix TDS 2022B→Ripple & noise
Series No:C102310
Chroma 63006→Load
Series No.: 63011902
Epe-6003→Input Voltage
Series No.: 990040368
STATELY DP-42D→lin & Vin
Test tooling for RS-series

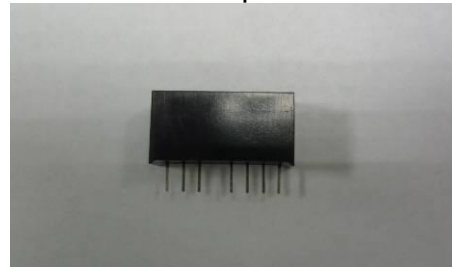
Test performed: 11.Mar.2011 to 18.Mar.2011
Test performed at: RECOM Manufacturing & Trading
2F No.206 Feng Jen Road
Feng Shan City
Kaohsiung County 830
Taiwan, R.O.C

Datecodes: RD Sample 20pcs

Before test photo



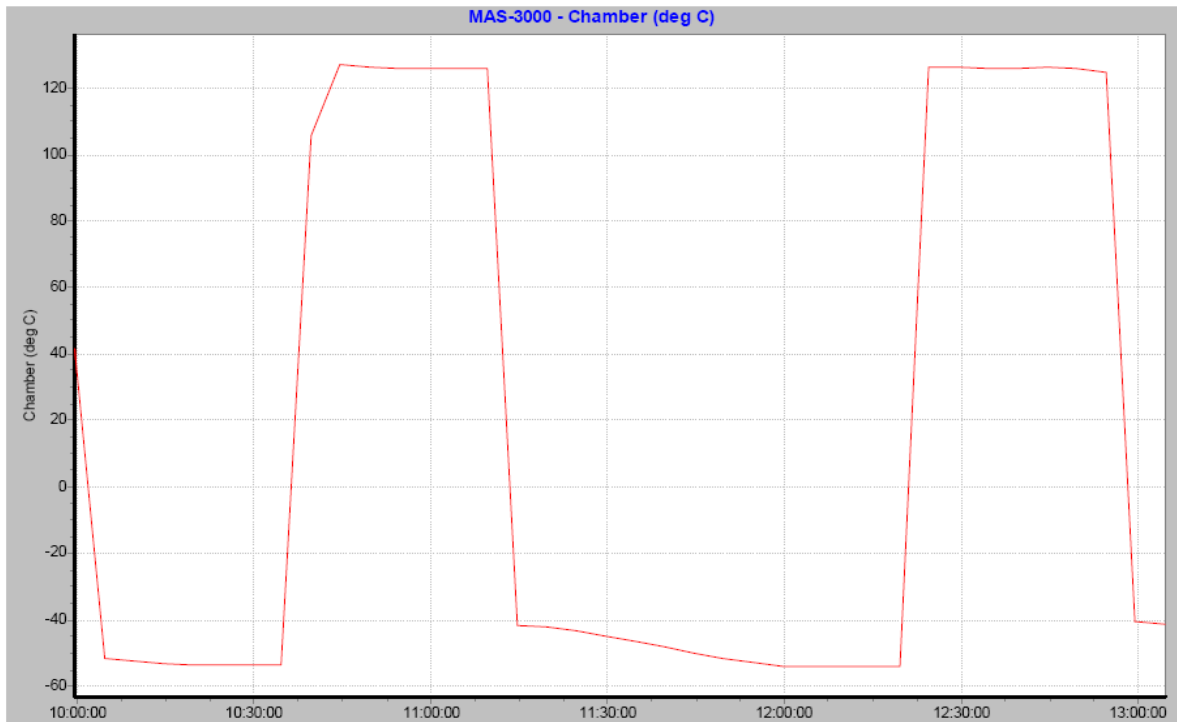
After test photo



RS-2405S				
NO.	@ Nominal Input Full Load 25°C		before test	after test
NO.1	Output voltage	5Vdc±2%	4.98V	4.99V
NO.2			4.96V	4.97V
NO.3			4.98V	4.98V
NO.4			4.97V	4.97V
NO.5			4.95V	4.96V
NO.6			4.97V	4.98V
NO.7			4.99V	5.0V
NO.8			4.97V	4.96V
NO.9			4.94V	4.95V
NO.10			4.98V	4.98V
NO.11			4.98V	4.98V
NO.12			4.99V	4.99V
NO.13			4.97V	4.96V
NO.14			4.96V	4.96V
NO.15			4.98V	4.99V
NO.16			4.95V	4.96V
NO.17			4.94V	4.95V
NO.18			4.97V	4.96V
NO.19			4.99V	4.99V
NO.20			4.96V	4.97V
NO.1	Ripple & noise	50mVp-p max	26 mVp-p	28 mVp-p
NO.2			24 mVp-p	26 mVp-p
NO.3			24 mVp-p	26 mVp-p
NO.4			26 mVp-p	28 mVp-p
NO.5			22 mVp-p	24 mVp-p
NO.6			24 mVp-p	24 mVp-p
NO.7			28 mVp-p	26 mVp-p
NO.8			26 mVp-p	26 mVp-p
NO.9			26 mVp-p	28 mVp-p
NO.10			24 mVp-p	26 mVp-p
NO.11			24 mVp-p	26 mVp-p

NO.12			24 mVp-p	26 mVp-p
NO.13			26 mVp-p	26 mVp-p
NO.14			22 mVp-p	24 mVp-p
NO.15			24 mVp-p	20 mVp-p
NO.16			24 mVp-p	22 mVp-p
NO.17			26 mVp-p	28 mVp-p
NO.18			28 mVp-p	26 mVp-p
NO.19			26 mVp-p	26 mVp-p
NO.20			26 mVp-p	24 mVp-p
NO.1			Line regulation	$\pm 0.5\%$
NO.2	0%	0%		
NO.3	0%	0%		
NO.4	0%	0%		
NO.5	0%	0%		
NO.6	0%	0%		
NO.7	0%	0%		
NO.8	0%	0%		
NO.9	0%	0%		
NO.10	0.2%	0.2%		
NO.11	0%	0%		
NO.12	0%	0%		
NO.13	0%	0%		
NO.14	0%	0%		
NO.15	0%	0%		
NO.16	0%	0%		
NO.17	0%	0%		
NO.18	0%	0%		
NO.19	0.2%	0.2%		
NO.20	0%	0%		
NO.1	Load regulation	$\pm 0.5\%$	0.2%	0%
NO.2			0.4%	0.4%
NO.3			0.4%	0.2%
NO.4			0.4%	0.4%
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NO.5			0.2%	0.4%
NO.6			0.2%	0.2%
NO.7			0.2%	0.4%
NO.8			0.4%	0.2%
NO.9			0.4%	0.4%
NO.10			0.2%	0.2%
NO.11			0.2%	0.2%
NO.12			0.2%	0.2%
NO.13			0.2%	0.4%
NO.14			0.4%	0.2%
NO.15			0.2%	0.2%
NO.16			0.2%	0.4%
NO.17			0.4%	0.4%
NO.18			0.4%	0.2%
NO.19			0.4%	0.4%
NO.20			0.4%	0.2%
NO.1~ 20	Appearance	No cracks	PASS	PASS



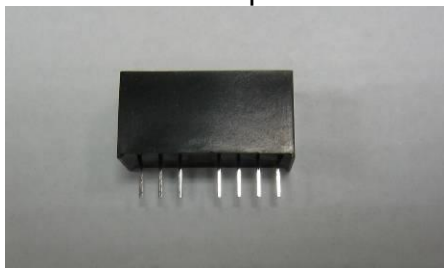
2. High Temperature High Humidity Test

Procedure:

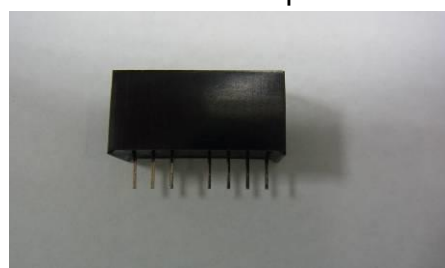
- Electrical and visual test before storage
- 1000 hours for 85°C / 95% RH @ Normal input & Full load
- Electrical and visual test after storage

Chamber used: TAICHY MHU-408LU
Series No. T062
Data Recorder: GRAPHTEC GL820
Series No: H00961566
Power used: GW PSM-6003
Series No. 36408008004
Function test used: Tekronix TDS 2022B→Ripple & noise
Series No:C102310
Chroma 63006→Load
Series No.: 63011902
Epe-6003→Input Voltage
Series No.: 990040368
STATELY DP-42D→lin & Vin
Test tooling for RS-series
Test performed: 14.Mar.2011 to 28.Apr.2011
Test performed at: RECOM Manufacturing & Trading
2F No.206 Feng Jen Road
Feng Shan City
Kaohsiung County 830
Taiwan, R.O.C
Datecodes: RD sample 20pcs

Before test photo



After test photo

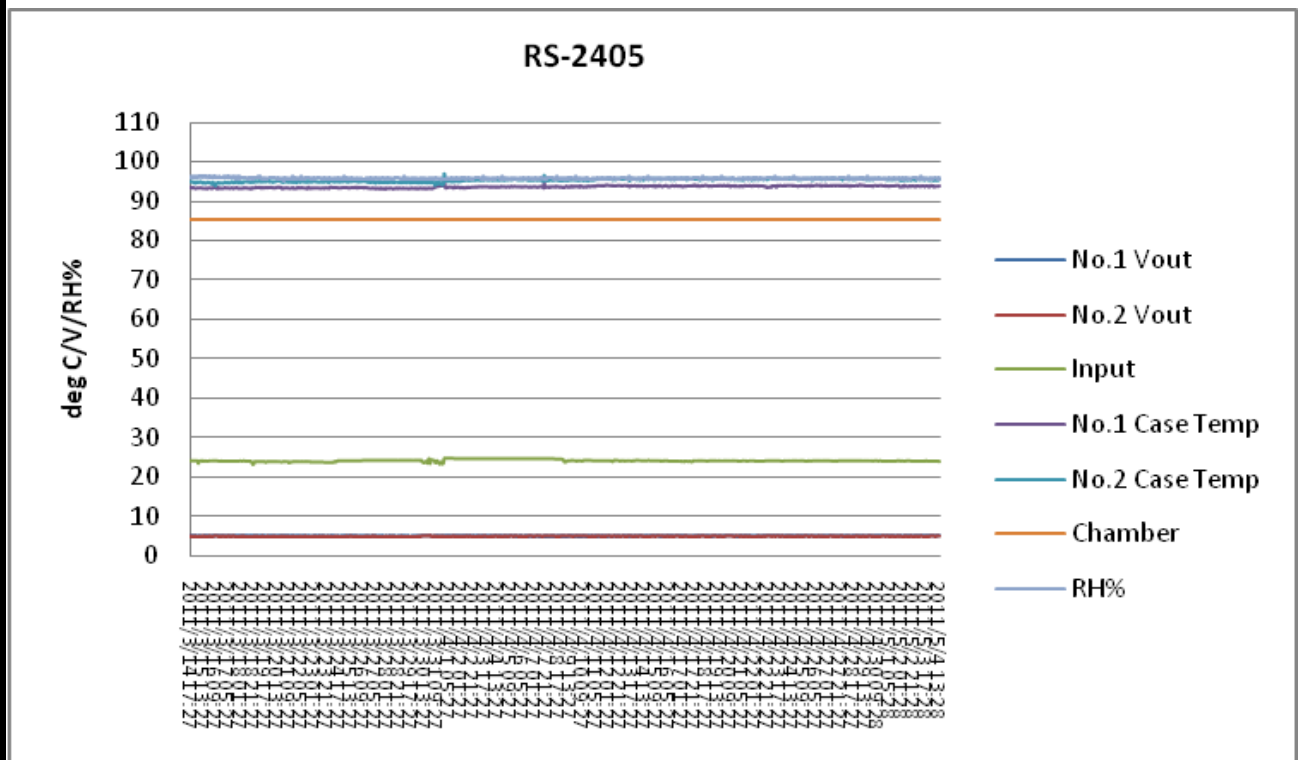


RS-2405S

NO.	@ Nominal Input Full Load 25°C		before test	after test
NO.1	Output voltage	5Vdc±2%	4.98V	4.98V
NO.2			4.97V	4.97V
NO.3			4.96V	4.97V
NO.4			4.95V	4.96V
NO.5			4.97V	4.96V
NO.6			4.97V	4.97V
NO.7			4.97V	4.98V
NO.8			4.98V	4.98V
NO.9			4.97V	4.98V
NO.10			4.95V	4.96V
NO.11			4.97V	4.98V
NO.12			4.96V	4.97V
NO.13			4.96V	4.97V
NO.14			4.99V	4.99V
NO.15			4.98V	4.98V
NO.16			4.98V	4.98V
NO.17			4.96V	4.97V
NO.18			4.98V	4.98V
NO.19			4.97V	4.98V
NO.20			4.96V	4.96V
NO.1	Ripple & noise	50mVp-p max	28 mVp-p	30 mVp-p
NO.2			36 mVp-p	38 mVp-p
NO.3			28 mVp-p	30 mVp-p
NO.4			26 mVp-p	38 mVp-p
NO.5			24 mVp-p	26 mVp-p
NO.6			26 mVp-p	26 mVp-p
NO.7			26 mVp-p	26 mVp-p
NO.8			26 mVp-p	28 mVp-p
NO.9			24 mVp-p	26 mVp-p
NO.10			24 mVp-p	24 mVp-p
NO.11			30 mVp-p	30 mVp-p

NO.12			28 mVp-p	30 mVp-p
NO.13			24 mVp-p	24 mVp-p
NO.14			26 mVp-p	24 mVp-p
NO.15			26 mVp-p	24 mVp-p
NO.16			28 mVp-p	28 mVp-p
NO.17			24 mVp-p	26 mVp-p
NO.18			22 mVp-p	24 mVp-p
NO.19			22 mVp-p	24 mVp-p
NO.20			26 mVp-p	26 mVp-p
NO.1	Line regulation	±0.5%	0%	0%
NO.2			0%	0%
NO.3			0%	0%
NO.4			0%	0%
NO.5			0%	0%
NO.6			0%	0%
NO.7			0%	0%
NO.8			0%	0%
NO.9			0%	0%
NO.10			0.2%	0.2%
NO.11			0%	0%
NO.12			0%	0%
NO.13			0%	0%
NO.14			0%	0%
NO.15			0%	0%
NO.16			0%	0%
NO.17			0%	0%
NO.18			0%	0.2%
NO.19			0%	0%
NO.20			0%	0%
NO.1	Load regulation	±0.5%	0.2%	0.2%
NO.2			0.2%	0.2%
NO.3			0.2%	0.2%
NO.4			0.2%	0.2%
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NO.5			0.4%	0.4%
NO.6			0.2%	0.2%
NO.7			0.4%	0.4%
NO.8			0.4%	0.4%
NO.9			0.4%	0.4%
NO.10			0.4%	0.4%
NO.11			0.2%	0.2%
NO.12			0.4%	0.4%
NO.13			0.2%	0.2%
NO.14			0.2%	0.2%
NO.15			0.4%	0.4%
NO.16			0.4%	0.4%
NO.17			0.4%	0.2%
NO.18			0.2%	0.2%
NO.19			0.2%	0.2%
NO.20			0.2%	0.2%
NO.1~ 20	Appearance	No cracks	PASS	PASS



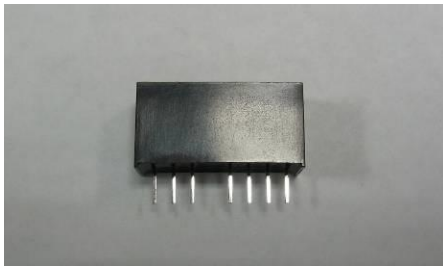
3. Resistance to Soldering Heat Test

Procedure:

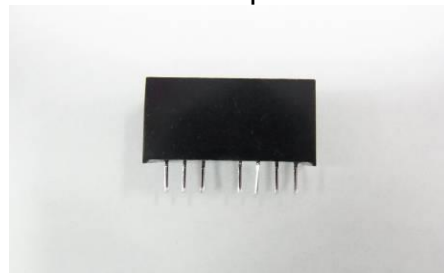
- Electrical and visual test before test
- Expose to wave solder process @ 260°C for 3-5s
- Electrical and visual test after test

Equipment used: Ching Ying wave solder
Function test used: Tekronix TDS 2022B→Ripple & noise
Series No:C102310
Chroma 63006→Load
Series No.: 63011902
Epe-6003→Input Voltage
Series No.: 990040368
STATELY DP-42D→lin & Vin
Test tooling for RS-series
Test performed: 17.Mar.2011 to 17.Mar.2011
Test performed at: RECOM Manufacturing & Trading
2F No.206 Feng Jen Road
Feng Shan City
Kaohsiung County 830
Taiwan, R.O.C
Datecodes: RD sample 20pcs

Before test photo



After test photo



RS-2405S				
NO.	@ Nominal Input Full Load 25°C		before test	after test
NO.1	Output voltage	5Vdc±2%	4.98V	4.99V
NO.2			4.95V	4.96V
NO.3			4.97V	4.97V
NO.4			4.99V	4.99V
NO.5			4.97V	4.98V
NO.6			4.97V	4.98V
NO.7			4.94V	4.95V
NO.8			4.96V	4.96V
NO.9			4.96V	4.96V
NO.10			4.98V	4.98V
NO.11			4.96V	4.96V
NO.12			4.96V	4.96V
NO.13			4.98V	4.98V
NO.14			4.98V	4.98V
NO.15			4.97V	4.97V
NO.16			4.94V	4.95V
NO.17			4.96V	4.96V
NO.18			4.96V	4.96V
NO.19			4.95V	4.95V
NO.20			4.96V	4.96V
NO.1	Ripple & noise	50mVp-p max	26 mVp-p	28 mVp-p
NO.2			28 mVp-p	28 mVp-p
NO.3			30 mVp-p	28 mVp-p
NO.4			30 mVp-p	30 mVp-p
NO.5			32 mVp-p	30 mVp-p
NO.6			24 mVp-p	26 mVp-p
NO.7			28 mVp-p	26 mVp-p
NO.8			30 mVp-p	30 mVp-p
NO.9			28 mVp-p	30 mVp-p
NO.10			26 mVp-p	28 mVp-p
NO.11			28 mVp-p	28 mVp-p

NO.12			26 mVp-p	26 mVp-p
NO.13			30 mVp-p	28 mVp-p
NO.14			24 mVp-p	26 mVp-p
NO.15			28 mVp-p	28 mVp-p
NO.16			22 mVp-p	24 mVp-p
NO.17			26 mVp-p	30 mVp-p
NO.18			26 mVp-p	32 mVp-p
NO.19			24 mVp-p	26 mVp-p
NO.20			28 mVp-p	32 mVp-p
NO.1	Line regulation	±0.5%	0%	0%
NO.2			0%	0%
NO.3			0%	0%
NO.4			0.2%	0.2%
NO.5			0%	0%
NO.6			0%	0%
NO.7			0%	0.2%
NO.8			0%	0%
NO.9			0%	0%
NO.10			0.2%	0.2%
NO.11			0%	0%
NO.12			0%	0%
NO.13			0%	0%
NO.14			0%	0%
NO.15			0%	0%
NO.16			0%	0%
NO.17			0%	0%
NO.18			0.2%	0.2%
NO.19			0%	0%
NO.20			0%	0%
NO.1	Load regulation	±0.5%	0.2%	0.2%
NO.2			0.4%	0.4%
NO.3			0.2%	0.2%
NO.4			0.4%	0.4%
NO.5			0.2%	0.2%
		Page 13 - 18		

NO.6			0.2%	0.2%
NO.7			0.2%	0.2%
NO.8			0.4%	0.2%
NO.9			0.4%	0.4%
NO.10			0.4%	0.4%
NO.11			0.4%	0.4%
NO.12			0.2%	0.4%
NO.13			0.2%	0.2%
NO.14			0.2%	0.4%
NO.15			0.2%	0.4%
NO.16			0.2%	0.4%
NO.17			0.4%	0.2%
NO.18			0.4%	0.2%
NO.19			0.2%	0.2%
NO.20			0.2%	0.2%
NO.1~ 20	Appearance	No cracks	PASS	PASS

4. Over stress test

Procedure:

- Electrical and visual test before storage
- Nominal input voltage, Full load and increase temperature to 100°C
- Electrical and visual test after storage

Chamber used: GIANT FORCE GCT-099-60S
Serial No.: MAF-0006-017

Data Recorder: GRAPHTEC GL450
Series No: F61112579

Power used: Power:GPR-6030D
Serial No. E1132479

Function test used: Tektronix-TDS-2022B→Ripple & noise
Series No.C102310
Chroma 63006→Load
Series No.: 63011902
Epe-6003→Input Voltage
Series No.: 990040368
STATELY DP-42D→Iin & Vin
Test tooling for RS-series

Test performed Date: 13.Jun.2011 to 14.Jun.2011

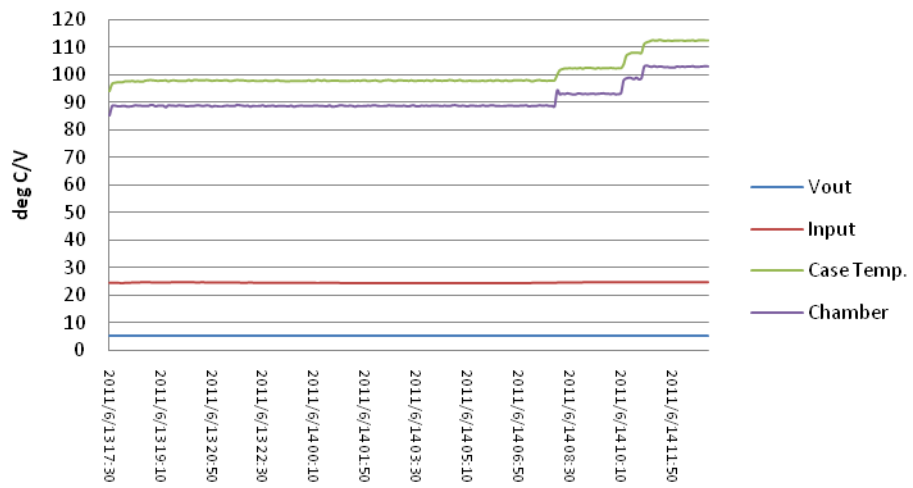
Test performed at: RECOM Manufacturing & Trading
2F No.206 Feng Jen Road
Feng Shan City
Kaohsiung County 830
Taiwan, R.O.C

Date Codes: RSO-2405S*1pc

RS-2405S

NO.	@ Nominal Input Full Load 25°C		before test	after test
NO.1	Output voltage	5Vdc±2%	4.98V	4.97V
NO.1	Ripple & noise	50mVp-p max	28 mVp-p	26 mVp-p
NO.1	Line regulation	±0.4%	0.2%	0.2%
NO.1	Load regulation	±0.5%	0.2%	0.2%
NO.1	Appearance	No cracks	PASS	PASS

RS-2405 Stress test



5. ESD-Test

This test has been performed at

ELECTRONICS TESTING CENTER(ETC), TAIWAN
NO.34 LIN 5. DINGFU TSUEN, LINKOU SHIANG
TAIPE COUNTY, TAIWAN, 24442, R.O.C.

following IEC 61000-4-2:1995 +A1:1998 + A2:2000 Criterion B, 8kV air discharge with positive and negative pulses

under report No. 11-06-RBF-082

The RS-2405 has been found **PASS**

6. Vibration Test

Procedure:

- Electrical and visual test before test
- Shaking in X,Y,Z-axis 3 minutes/sweepcycle, 1 hour/axis, Frequency 10 to 55 Hz, sinusoidal, not operating, sticked to vibration table
- Electrical and visual test after test

Equipment used: King Design EM-600F2K-40N120
Temperature: 23°C ± 3 °C / 55 ± 3% RH
Test performed: 30.May.2011
Test performed at: Integrated Service Technology Inc.
Reliability Engineering Division
1F,No.19,No.35 Pu-ding Road
Hsin-chu City
Taiwan, R.O.C
Report No.: HS1105300142A

7. Summary

Test	Rating
Thermal Cycle	PASS
High Temperature – High Humidity	PASS
Resistance to Soldering Heat	PASS
Stress test up to 100°C	PASS
ESD	PASS
Vibration	PASS
Total Rating	PASS