



宜特科技股份有限公司



Integrated Service Technology Inc.

No.:T1091

TEL : (02) 2656-2289

RA No : 9401548-E

FAX : (02) 2656-2285

Date : 06/20/2005

Email: esd@isti.com.tw

Test Site Address: 1F, No. 9, Alley 2, Lane 35, Jihu Rd., Neihu District, Taipei City, Taiwan, R.O.C..

可靠度測試報告

RELIABILITY TEST REPORT

| | |
|--|------------------------------------|
| Applicant/Department: Anant Electronics Corporation | |
| Address : 6F , No.56 , Ln.258 Jui Kuang Rd. , Nei Hu District , Taipei , Taiwan | |
| Product : SCN6400G | |
| Testing Item : LATCH-UP | Package/Pin Count: QFP / 80 |
| Application Date : 06/17/2005 | Date Finished : 06/20/2005 |
| Test Condition : JEDEC STANDARD NO.78 MARCH 1997 | |
| Failure Criteria | < 25mA 10mA + I normal |
| | > 25mA 1.4 x I normal |
| Trigger Current : 200mA~250mA(±) , Step : 25mA(±) | |
| V_{supply} OVERVOLTAGE TEST :5V~7.5V(+) , Step : 0.5V(+) | |

Testing Item

Random LATCH-UP Test.....P2

Remark:

Ground pins are not latch-up tested.

The positive or negative current pulse (I-Test) or voltage pulse (V_{supply} overvoltage test) applied to any pin under test in an attempt to induce latch-up.

This report refers only to the specimen submitted to testing, and be invalid as separately used.

Testing Engineer: **Nelly Hsueh**

Report Review: **Kosa Liu**

Laboratory Head: **Frank Wu**



宜特科技股份有限公司



Integrated Service Technology Inc.

No.:T1091

TEL : (02) 2656-2289

RA No: 9401548-E

FAX : (02) 2656-2285

Date : 06/20/2005

Email: esd@isti.com.tw

Test Site Address: 1F,No. 9, Alley 2, Lane 35, Jihu Rd., Neihu District, Taipei City, Taiwan, R.O.C

LATCH-UP Testing Report

Test Equipment:

KEYTEK ZAPMASTER

Environmental Condition of Laboratory:

Temperature: 25°C±5°C

Humidity: 55%±10% RH

Test Condition:

POSITIVE I

NEGATIVE I

Vsupply OVERVOLTAGE TEST

Test Result:

| TRIGGER MODEL | TEST PIN | SAMPLE SIZE | TRIGGER SOURCE INDUCE LATCH-UP | IT CLASS: <u>3</u> |
|---------------------------------------|----------|-------------|--------------------------------|---|
| +IT | I/O | 3 | PASS | NOTE: CLASS1: +IT:0mA~39mA -IT:0mA~ -39mA CLASS2: +IT: 40mA~+99mA -IT: -40mA~-99mA CLASS3: +IT:>100mA -IT:<-100mA |
| | I/P | | PASS | |
| | O/P | | PASS | |
| -IT | I/O | 3 | PASS | |
| | I/P | | PASS | |
| | O/P | | PASS | |
| V _{supply} OVER VOLTAGE TEST | VCC | 3 | PASS | |

I/P: 28-31,33,36,38
 GND:27,34
 NC :26,35,37,39

VDD:32
 O/P : 1-24,41-80
 I/O : 25,40

| POSITIVE I | | | | | | | |
|-----------------------------|------|------|------|-----------------------------|------|------|------|
| | | | | (UNIT: mA) | | | |
| Test TRIGGER Pin CURRENT | #1 | #2 | #3 | Test TRIGGER Pin CURRENT | #1 | #2 | #3 |
| 1 | PASS | PASS | PASS | 26 | NC | NC | NC |
| 2 | PASS | PASS | PASS | 27 | VEE | VEE | VEE |
| 3 | PASS | PASS | PASS | 28 | PASS | PASS | PASS |
| 4 | PASS | PASS | PASS | 29 | PASS | PASS | PASS |
| 5 | PASS | PASS | PASS | 30 | PASS | PASS | PASS |
| 6 | PASS | PASS | PASS | 31 | PASS | PASS | PASS |
| 7 | PASS | PASS | PASS | 32 | VDD | VDD | VDD |
| 8 | PASS | PASS | PASS | 33 | PASS | PASS | PASS |
| 9 | PASS | PASS | PASS | 34 | VSS | VSS | VSS |
| 10 | PASS | PASS | PASS | 35 | NC | NC | NC |
| 11 | PASS | PASS | PASS | 36 | PASS | PASS | PASS |
| 12 | PASS | PASS | PASS | 37 | NC | NC | NC |
| 13 | PASS | PASS | PASS | 38 | PASS | PASS | PASS |
| 14 | PASS | PASS | PASS | 39 | NC | NC | NC |
| 15 | PASS | PASS | PASS | 40 | PASS | PASS | PASS |
| 16 | PASS | PASS | PASS | 41 | PASS | PASS | PASS |
| 17 | PASS | PASS | PASS | 42 | PASS | PASS | PASS |
| 18 | PASS | PASS | PASS | 43 | PASS | PASS | PASS |
| 19 | PASS | PASS | PASS | 44 | PASS | PASS | PASS |
| 20 | PASS | PASS | PASS | 45 | PASS | PASS | PASS |
| 21 | PASS | PASS | PASS | 46 | PASS | PASS | PASS |
| 22 | PASS | PASS | PASS | 47 | PASS | PASS | PASS |
| 23 | PASS | PASS | PASS | 48 | PASS | PASS | PASS |
| 24 | PASS | PASS | PASS | 49 | PASS | PASS | PASS |
| 25 | PASS | PASS | PASS | 50 | PASS | PASS | PASS |

| POSITIVE I | | | | | | | |
|-----------------------------|------|------|------|-----------------------------|------|------|------|
| | | | | (UNIT: mA) | | | |
| Test TRIGGER Pin CURRENT | #1 | #2 | #3 | Test TRIGGER Pin CURRENT | #1 | #2 | #3 |
| 51 | PASS | PASS | PASS | 66 | PASS | PASS | PASS |
| 52 | PASS | PASS | PASS | 67 | PASS | PASS | PASS |
| 53 | PASS | PASS | PASS | 68 | PASS | PASS | PASS |
| 54 | PASS | PASS | PASS | 69 | PASS | PASS | PASS |
| 55 | PASS | PASS | PASS | 70 | PASS | PASS | PASS |
| 56 | PASS | PASS | PASS | 71 | PASS | PASS | PASS |
| 57 | PASS | PASS | PASS | 72 | PASS | PASS | PASS |
| 58 | PASS | PASS | PASS | 73 | PASS | PASS | PASS |
| 59 | PASS | PASS | PASS | 74 | PASS | PASS | PASS |
| 60 | PASS | PASS | PASS | 75 | PASS | PASS | PASS |
| 61 | PASS | PASS | PASS | 76 | PASS | PASS | PASS |
| 62 | PASS | PASS | PASS | 77 | PASS | PASS | PASS |
| 63 | PASS | PASS | PASS | 78 | PASS | PASS | PASS |
| 64 | PASS | PASS | PASS | 79 | PASS | PASS | PASS |
| 65 | PASS | PASS | PASS | 80 | PASS | PASS | PASS |

| NEGATIVE I | | | | | | | |
|-----------------------------|------|------|------|-----------------------------|------|------|------|
| | | | | (UNIT: mA) | | | |
| Test TRIGGER Pin CURRENT | #1 | #2 | #3 | Test TRIGGER Pin CURRENT | #1 | #2 | #3 |
| 1 | PASS | PASS | PASS | 26 | NC | NC | NC |
| 2 | PASS | PASS | PASS | 27 | VEE | VEE | VEE |
| 3 | PASS | PASS | PASS | 28 | PASS | PASS | PASS |
| 4 | PASS | PASS | PASS | 29 | PASS | PASS | PASS |
| 5 | PASS | PASS | PASS | 30 | PASS | PASS | PASS |
| 6 | PASS | PASS | PASS | 31 | PASS | PASS | PASS |
| 7 | PASS | PASS | PASS | 32 | VDD | VDD | VDD |
| 8 | PASS | PASS | PASS | 33 | PASS | PASS | PASS |
| 9 | PASS | PASS | PASS | 34 | VSS | VSS | VSS |
| 10 | PASS | PASS | PASS | 35 | NC | NC | NC |
| 11 | PASS | PASS | PASS | 36 | PASS | PASS | PASS |
| 12 | PASS | PASS | PASS | 37 | NC | NC | NC |
| 13 | PASS | PASS | PASS | 38 | PASS | PASS | PASS |
| 14 | PASS | PASS | PASS | 39 | NC | NC | NC |
| 15 | PASS | PASS | PASS | 40 | PASS | PASS | PASS |
| 16 | PASS | PASS | PASS | 41 | PASS | PASS | PASS |
| 17 | PASS | PASS | PASS | 42 | PASS | PASS | PASS |
| 18 | PASS | PASS | PASS | 43 | PASS | PASS | PASS |
| 19 | PASS | PASS | PASS | 44 | PASS | PASS | PASS |
| 20 | PASS | PASS | PASS | 45 | PASS | PASS | PASS |
| 21 | PASS | PASS | PASS | 46 | PASS | PASS | PASS |
| 22 | PASS | PASS | PASS | 47 | PASS | PASS | PASS |
| 23 | PASS | PASS | PASS | 48 | PASS | PASS | PASS |
| 24 | PASS | PASS | PASS | 49 | PASS | PASS | PASS |
| 25 | PASS | PASS | PASS | 50 | PASS | PASS | PASS |

| NEGATIVE I | | | | | | | |
|-----------------------------|------|------|------|-----------------------------|------|------|------|
| | | | | (UNIT: mA) | | | |
| Test TRIGGER Pin CURRENT | #1 | #2 | #3 | Test TRIGGER Pin CURRENT | #1 | #2 | #3 |
| 51 | PASS | PASS | PASS | 66 | PASS | PASS | PASS |
| 52 | PASS | PASS | PASS | 67 | PASS | PASS | PASS |
| 53 | PASS | PASS | PASS | 68 | PASS | PASS | PASS |
| 54 | PASS | PASS | PASS | 69 | PASS | PASS | PASS |
| 55 | PASS | PASS | PASS | 70 | PASS | PASS | PASS |
| 56 | PASS | PASS | PASS | 71 | PASS | PASS | PASS |
| 57 | PASS | PASS | PASS | 72 | PASS | PASS | PASS |
| 58 | PASS | PASS | PASS | 73 | PASS | PASS | PASS |
| 59 | PASS | PASS | PASS | 74 | PASS | PASS | PASS |
| 60 | PASS | PASS | PASS | 75 | PASS | PASS | PASS |
| 61 | PASS | PASS | PASS | 76 | PASS | PASS | PASS |
| 62 | PASS | PASS | PASS | 77 | PASS | PASS | PASS |
| 63 | PASS | PASS | PASS | 78 | PASS | PASS | PASS |
| 64 | PASS | PASS | PASS | 79 | PASS | PASS | PASS |
| 65 | PASS | PASS | PASS | 80 | PASS | PASS | PASS |

| V_{supply} OVERVOLTAGE TEST (UNIT: V) | | | | |
|--|-----------------|------|------|------|
| Test pin | TRIGGER VOLTAGE | #1 | #2 | #3 |
| | 32 | PASS | PASS | PASS |