



宜特科技股份有限公司



Integrated Service Technology Inc.

No.:T1091

TEL : (03) 578-2266

RA No: 9303151-E

FAX : (03) 578-2299

Date : 12/01/2004

Email: esd@isti.com.tw

Test Site Address: 1F, No.22, Pu-Ding Rd., Hsin-Chu, Taiwan, R.O.C.

可靠度測試報告

RELIABILITY TEST REPORT

Applicant/Department: Avant Electronics Corporation	
Address : 6F , No.56 , Ln.258 Jui Kuang Rd. , Nei Hu District , Taipei , Taiwan	
Product : SBN6400G	
Testing Item : LATCH-UP	Package/Pin Count: QFP - 100
Application Date : 11/30/2004	Date Finished : 12/01/2004
Test Condition : JEDEC STANDARD NO.78 MARCH 1997	
Failure Criteria	< 25mA 10mA + I normal
	> 25mA 1.4 x I normal
Trigger Current : 25mA~200mA(±) , 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: Jay Fang

Report Review: Kosa Liu

Laboratory Head: Frank Wu



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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	

ALL:1-22,24-27,29-33,35,37,39,42-44,46-47,49,50,52
54-57,59-100NC: 34,36,38,41,45,48,51,53
O/P:1-22,43-44,46,59-100

VSS:23,40,58

I/O:29,33,35,47,50,52

I/P: 24-27,30-32,37,39,42,49,54-57

POSITIVE I									
(UNIT: mA)									
Test Pin	TRIGGER CURRENT	#1	#2	#3	Test Pin	TRIGGER CURRENT	#1	#2	#3
1		PASS	PASS	PASS	27		PASS	PASS	PASS
2		PASS	PASS	PASS	29		PASS	PASS	PASS
3		PASS	PASS	PASS	30		PASS	PASS	PASS
4		PASS	PASS	PASS	31		PASS	PASS	PASS
5		PASS	PASS	PASS	32		PASS	PASS	PASS
6		PASS	PASS	PASS	33		PASS	PASS	PASS
7		PASS	PASS	PASS	35		PASS	PASS	PASS
8		PASS	PASS	PASS	37		PASS	PASS	PASS
9		PASS	PASS	PASS	39		PASS	PASS	PASS
10		PASS	PASS	PASS	42		PASS	PASS	PASS
11		PASS	PASS	PASS	43		PASS	PASS	PASS
12		PASS	PASS	PASS	44		PASS	PASS	PASS
13		PASS	PASS	PASS	46		PASS	PASS	PASS
14		PASS	PASS	PASS	47		PASS	PASS	PASS
15		PASS	PASS	PASS	49		PASS	PASS	PASS
16		PASS	PASS	PASS	50		PASS	PASS	PASS
17		PASS	PASS	PASS	52		PASS	PASS	PASS
18		PASS	PASS	PASS	54		PASS	PASS	PASS
19		PASS	PASS	PASS	55		PASS	PASS	PASS
20		PASS	PASS	PASS	56		PASS	PASS	PASS
21		PASS	PASS	PASS	57		PASS	PASS	PASS
22		PASS	PASS	PASS	59		PASS	PASS	PASS
24		PASS	PASS	PASS	60		PASS	PASS	PASS
25		PASS	PASS	PASS	61		PASS	PASS	PASS
26		PASS	PASS	PASS	62		PASS	PASS	PASS

POSITIVE I									
(UNIT: mA)									
Test Pin	TRIGGER CURRENT	#1	#2	#3	Test Pin	TRIGGER CURRENT	#1	#2	#3
63		PASS	PASS	PASS	82		PASS	PASS	PASS
64		PASS	PASS	PASS	83		PASS	PASS	PASS
65		PASS	PASS	PASS	84		PASS	PASS	PASS
66		PASS	PASS	PASS	85		PASS	PASS	PASS
67		PASS	PASS	PASS	86		PASS	PASS	PASS
68		PASS	PASS	PASS	87		PASS	PASS	PASS
69		PASS	PASS	PASS	88		PASS	PASS	PASS
70		PASS	PASS	PASS	89		PASS	PASS	PASS
71		PASS	PASS	PASS	90		PASS	PASS	PASS
72		PASS	PASS	PASS	91		PASS	PASS	PASS
73		PASS	PASS	PASS	92		PASS	PASS	PASS
74		PASS	PASS	PASS	93		PASS	PASS	PASS
75		PASS	PASS	PASS	94		PASS	PASS	PASS
76		PASS	PASS	PASS	95		PASS	PASS	PASS
77		PASS	PASS	PASS	96		PASS	PASS	PASS
78		PASS	PASS	PASS	97		PASS	PASS	PASS
79		PASS	PASS	PASS	98		PASS	PASS	PASS
80		PASS	PASS	PASS	99		PASS	PASS	PASS
81		PASS	PASS	PASS	100		PASS	PASS	PASS

NEGATIVE I									
(UNIT: mA)									
Test Pin	TRIGGER CURRENT	#1	#2	#3	Test Pin	TRIGGER CURRENT	#1	#2	#3
1		PASS	PASS	PASS	27		PASS	PASS	PASS
2		PASS	PASS	PASS	29		PASS	PASS	PASS
3		PASS	PASS	PASS	30		PASS	PASS	PASS
4		PASS	PASS	PASS	31		PASS	PASS	PASS
5		PASS	PASS	PASS	32		PASS	PASS	PASS
6		PASS	PASS	PASS	33		PASS	PASS	PASS
7		PASS	PASS	PASS	35		PASS	PASS	PASS
8		PASS	PASS	PASS	37		PASS	PASS	PASS
9		PASS	PASS	PASS	39		PASS	PASS	PASS
10		PASS	PASS	PASS	42		PASS	PASS	PASS
11		PASS	PASS	PASS	43		PASS	PASS	PASS
12		PASS	PASS	PASS	44		PASS	PASS	PASS
13		PASS	PASS	PASS	46		PASS	PASS	PASS
14		PASS	PASS	PASS	47		PASS	PASS	PASS
15		PASS	PASS	PASS	49		PASS	PASS	PASS
16		PASS	PASS	PASS	50		PASS	PASS	PASS
17		PASS	PASS	PASS	52		PASS	PASS	PASS
18		PASS	PASS	PASS	54		PASS	PASS	PASS
19		PASS	PASS	PASS	55		PASS	PASS	PASS
20		PASS	PASS	PASS	56		PASS	PASS	PASS
21		PASS	PASS	PASS	57		PASS	PASS	PASS
22		PASS	PASS	PASS	59		PASS	PASS	PASS
24		PASS	PASS	PASS	60		PASS	PASS	PASS
25		PASS	PASS	PASS	61		PASS	PASS	PASS
26		PASS	PASS	PASS	62		PASS	PASS	PASS

NEGATIVE I										
(UNIT: mA)										
Test Pin	TRIGGER CURRENT	#1	#2	#3		Test Pin	TRIGGER CURRENT	#1	#2	#3
63		PASS	PASS	PASS		82		PASS	PASS	PASS
64		PASS	PASS	PASS		83		PASS	PASS	PASS
65		PASS	PASS	PASS		84		PASS	PASS	PASS
66		PASS	PASS	PASS		85		PASS	PASS	PASS
67		PASS	PASS	PASS		86		PASS	PASS	PASS
68		PASS	PASS	PASS		87		PASS	PASS	PASS
69		PASS	PASS	PASS		88		PASS	PASS	PASS
70		PASS	PASS	PASS		89		PASS	PASS	PASS
71		PASS	PASS	PASS		90		PASS	PASS	PASS
72		PASS	PASS	PASS		91		PASS	PASS	PASS
73		PASS	PASS	PASS		92		PASS	PASS	PASS
74		PASS	PASS	PASS		93		PASS	PASS	PASS
75		PASS	PASS	PASS		94		PASS	PASS	PASS
76		PASS	PASS	PASS		95		PASS	PASS	PASS
77		PASS	PASS	PASS		96		PASS	PASS	PASS
78		PASS	PASS	PASS		97		PASS	PASS	PASS
79		PASS	PASS	PASS		98		PASS	PASS	PASS
80		PASS	PASS	PASS		99		PASS	PASS	PASS
81		PASS	PASS	PASS		100		PASS	PASS	PASS

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