

V1000M RELIABILITY TEST REPORT (ESD/LATCH _UP)

Part 1 ESD-HBM Test Report

Products:	V1000M(SOP-16)
Manufacturer	Coolaudio Semiconductor
Time	09/20/2006
Test Item	ESD-HBM(Human Body Mode)
Test Equipment	KEYTEK ZAPMASTER 7/4
Test Mode	MIL-STD 883F Method 3015.7
Failure Criteria	For V Change at 1uA \pm 30%
Test Voltage	1000V-4000V; Step(500V \pm)
Test Condition	IO TO VDD (+) IO TO GND (+) IO TO IO (+) VDD TO GND (+)

TEST RESULT:

ESD Sensitivity Pass:		V Class: <u>3</u>
Pin Combination	Passed Voltage	Note: FOR MIL-STD-883F 3015.7 TEST NO. CLASSIFICATION CLASS 1:0 Volt to 1999 volts CLASS 2:2000 volts to 3999 Volts CLASS 3:4000 volts and above
IO TO VDD(+/-)	4000V	
IO TO GND(+/-)	4000V	
VDD TO GND(+/-)	4000V	
IO TO IO(+/-)	4000V	

VDD: Pin14
 GND: Pin13
 IO: Pin1-12, 16
 NC: Pin15

ESD Test report in detail

IO TO VDD (- /+)			
Test Pin	#1-1	#1-2	#1-3
1	PASS	PASS	PASS
2	PASS	PASS	PASS
3	PASS	PASS	PASS
4	PASS	PASS	PASS
5	PASS	PASS	PASS
6	PASS	PASS	PASS
7	PASS	PASS	PASS
8	PASS	PASS	PASS
9	PASS	PASS	PASS
10	PASS	PASS	PASS
11	PASS	PASS	PASS
12	PASS	PASS	PASS
16	PASS	PASS	PASS

IO TO GND(- /+)			
Test Pin	#2-1	#2-2	#2-3
1	PASS	PASS	PASS
2	PASS	PASS	PASS
3	PASS	PASS	PASS
4	PASS	PASS	PASS
5	PASS	PASS	PASS
6	PASS	PASS	PASS
7	PASS	PASS	PASS
8	PASS	PASS	PASS
9	PASS	PASS	PASS
10	PASS	PASS	PASS
11	PASS	PASS	PASS
12	PASS	PASS	PASS
16	PASS	PASS	PASS

IO TO IO (+/-)			
Test Pin	#3-1	#3-2	#3-3
1	PASS	PASS	PASS
2	PASS	PASS	PASS
3	PASS	PASS	PASS
4	PASS	PASS	PASS
5	PASS	PASS	PASS
6	PASS	PASS	PASS
7	PASS	PASS	PASS
8	PASS	PASS	PASS
9	PASS	PASS	PASS
10	PASS	PASS	PASS
11	PASS	PASS	PASS
12	PASS	PASS	PASS
16	PASS	PASS	PASS

VDD TO GDN (+/-)			
Test Pin	#4-1	#4-2	#4-3
14	PASS	PASS	PASS

Part 2 Latch_up Test Report

Test Item	Latch up (EIA/JESD78)
Time	09/20/2006
Test Condition	V_{CC} : _____ PIN14 V_{SS} : _____ PIN13 I/P Pin: _____ PIN2/3/5-8/12/16 I/O Pin: _____ NA O/P Pin: _____ PIN4/9-11 N/C Pin: _____ PIN15

Test Result

TEST PIN	POSI (UNIT:mA)		
	1#	2#	3#
1	PASS	PASS	PASS
2	PASS	PASS	PASS
3	PASS	PASS	PASS
4	PASS	PASS	PASS
5	PASS	PASS	PASS
6	PASS	PASS	PASS
7	PASS	PASS	PASS
8	PASS	PASS	PASS
9	PASS	PASS	PASS
10	PASS	PASS	PASS
11	PASS	PASS	PASS
12	PASS	PASS	PASS
16	PASS	PASS	PASS

NEGI			(UNIT:mA)
TEST PIN	1#	2#	3#
1	PASS	PASS	PASS
2	PASS	PASS	PASS
3	PASS	PASS	PASS
4	PASS	PASS	PASS
5	PASS	PASS	PASS
6	PASS	PASS	PASS
7	PASS	PASS	PASS
8	PASS	PASS	PASS
9	PASS	PASS	PASS
10	PASS	PASS	PASS
11	PASS	PASS	PASS
12	PASS	PASS	PASS
16	PASS	PASS	PASS

Vsupply Overtage Test			(UNIT:V)
TEST PIN	1#	2#	3#
14	PASS	PASS	PASS