

ESD TEST REPORT

Human Body Model
JS-001-2017

ANSI/ESDA/JEDEC Standard, Method JS-001-2017 is an ESD test using Human Body Model where "R = 1500 ohm", "C = 100pf", one positive and one negative pulses applied to the devices per customer's specification with a minimum of 0.1 second cool down between pulses.

Customer : Alpha & Omega Semiconductor (Shanghai), Ltd.

Address: Building 8 & 9, No. 91, Lane 109, Rong Kang Road,
Songjiang Export Processing Zone, Zone B, # 888 Song Zheng Highroad, Shanghai

Device Information

Part No. :	AOCA33104E	Sample Size :	8pcs
Package Type :	AlphaDFN2.98x1.49A_10L	Pin Count :	10
Lot No. :	0301	Date Code :	-
VDD Domains :	S2 S1	VSS Domains :	S1 S2

Test Equipment

Tester :	ZAPMASTER MK.2 SE	Serial No. :	0508317
Calibration Date :	Jun 20 th 2019	Expiration Date :	Jun 19 th 2020

Environmental Condition

Temperature :	23°C	Humidity :	50% RH
Submit date :	Mar 18 th 2020	Complete date :	Mar 18 th 2020

Stress Summary

Channel_1 G1 TO S1			
Sample No.	Stress Type	Voltage Level	Spot Test Results* (Within 10μA @ 8V between G1 and S2/S1)
1#	HBM	+4.1kV	FAILED
2#	HBM	±4kV	PASS
3#	HBM	±4kV	PASS
4#	HBM	±4kV	PASS

Channel_1 G1 TO S2			
Sample No.	Stress Type	Voltage Level	Spot Test Results* (Within 10μA @ 8V between G1 and S2/S1)
5#	HBM	+4kV	FAILED
6#	HBM	±3.9kV	PASS
7#	HBM	±3.9kV	PASS
8#	HBM	±3.9kV	PASS

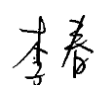
Channel_2 G2 TO S2			
Sample No.	Stress Type	Voltage Level	Spot Test Results* (Within 10μA @ 8V between G2 and S1/S2)
1#	HBM	+4kV	FAILED
2#	HBM	±3.9kV	PASS
3#	HBM	±3.9kV	PASS
4#	HBM	±3.9kV	PASS

Channel_2 G2 TO S1			
Sample No.	Stress Type	Voltage Level	Spot Test Results* (Within 10µA @ 8V between G2 and S1/S2)
5#	HBM	+4.2kV	FAILED
6#	HBM	±4.1kV	PASS
7#	HBM	±4.1kV	PASS
8#	HBM	±4.1kV	PASS

Test Result*

Model	Pin Combinations	ESD Sensitivity Pass*: <u>3.9kV</u>	V Class
HBM	Channel 1 – G1 vs. S1	±4kV	2 JS-001-2017 Class 0Z: <50V Class 0A: 50V~124V Class 0B: 125V~249V Class 1A: 250V~499V Class 1B: 500V~999V Class 1C: 1000V~1999V Class 2: 2000V~3999V Class 3A: 4000V~7999V Class 3B: ≥8000V
	Channel 1 – G1 vs. S2	±3.9kV	
	Channel 2 – G2 vs. S2	±3.9kV	
	Channel 2 – G2 vs. S1	±4.1kV	

*Note: Results will be updated based on customer final electrical test results.

Test Engineer: Fei Teng	Date: Mar 18 th 2020
Approved by FA Manager: 	Date: Mar 18 th 2020



Recommendations

EAG Shanghai certifies that above tests have been performed in accordance to the requirements stated above and per the customer purchase order and applicable documents.

EAG Shanghai recommends electrical testing as a validation of reported results. Curve Trace criteria was utilized to specify a pass or fail. Industry standards require the device to be tested functionally at post stress and should continue to meet all electrical parameters as per the data sheet.

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