

TESTS PLANNING & TRACKING SHEET v2.0

REV
Last Modified:

PRODUCT NAME:	NEONODE zForce AIR(TM) Touch Sensor	TEST PLANNER:	MEYYAPPAN	NO. OF TESTS COMPLETED:	12	% PASSED:	100%	2	28-sep-17
----------------------	--	----------------------	-----------	--------------------------------	-----------	------------------	-------------	----------	------------------

For new test plan, please fill in the Product Name, the tests, applicable standards etc. Sample size shall be a minimum of 2 per test, however 6 is recommended for previously failed tests. This sheet shall be updated and the revision level tallied. Earlier revisions shall be archived for reference purposes. The cycle shall continue until all tests show "PASSED" results. All test reports shall be documented separately. Issues arising from tests shall be logged in a separate "Issues List" for eventual Root-Cause Analysis. It is also mandatory to cross-reference the actual test report in the last column. Product Development shall be the owner of this document.

Passed	
Marginal	
Failed	
Plan	

Test Name	Design Requirements Specification#	Reference Standard or Test Method	Test Conditions	S/S	Serial#	Build 1	Build 2	Lead-Time	Test Start on	Test Finish on	Location of Test	Test Status	Test Results	Issue#	Test Report#
ENVIRONMENTAL TESTS															
High temperature High Humidity operation test	N/A	IEC 60068-2-2	Ta=50°C RH=95%; 96 hrs ; Power On	3 units	3 tested units return to Neonode	YES	TBD	4 days	WK 29	WK 29	Salutica	Done	PASSED	NO	
Low temperature operation test	N/A	IEC 60068-2-1	Ta=-20°C ; 96 hrs ; Power On	3 units	3 tested units return to Neonode	YES	TBD	4 days	WK 29	WK 29	Salutica	Done	PASSED	NO	
Low temperature storage test	N/A	IEC 60068-2-1	Ta= -40°C ; 96 hrs ; Power Off	3 units	3 tested units return to Neonode	YES	TBD	4 days	21.8.17	25.8.17	Salutica	Done	PASSED	NO	
Temperature cycling operation test	N/A	IEC 60068-2-14	Ta: 0°C / 65°C , Cycle time: 60min RH: 60% Duration: 20 minutes at each temperature extreme with a 10 minute transition time. 240 cycles in total ; Power On ;Functionality test every 24 hours.	3 units	3 tested units return to Neonode	YES	TBD	10 days	28.8.17	7.9.17	MTSC	Done	PASSED	NO	
Thermal shock	N/A	IEC 60068-2-14	Ta: +85°C to -40°C Humidity: Off Duration: 25 minutes at each temperature extreme with a 5 minute transition time. 120 cycles in total ; Operation mode: The DUT is powered off during testing.	3 units	3 tested units return to Neonode	YES	TBD	5 days	WK 29	WK 29	Salutica	Done	PASSED	NO	
Condensation Test	N/A	IEC 60068-2-30	Ta: +25°C to +65°C RH: 95% 50 cycles, cycle time:30 + 30 min ; Power Off	3 units	3 tested units return to Neonode	YES	TBD	2 days	28.8.17	31.8.17	MTSC	Done	PASSED	NO	
Vibration test	N/A	IEC 60068-2-64	Wave form : random Vibration level : 1.0GRMS Bandwidth : 10-300Hz Cycle: X,Y,Z, 60 min each Number of cycles: 4 DUT on vibration table: Clamped on 3 positions along sensor.	6 units	6 tested units return to Neonode	YES	TBD	1 day	23.8.17	24.8.17	Salutica	Done	PASSED	NO	
Shock test	N/A	IEC 60068-2-27	Shock level : 50G Waveform : half sine wave, 2msec Direction :±X, ±Y, ±Z One time each direction	3 units	3 tested units return to Neonode	YES	TBD	1 day	24.8.17	25.8.17	Salutica	Done	PASSED	NO	
Pressure Intensity	N/A	Salutica internal spec	Pressure on surface with a flat ø 10 mm rod with a force of 10 N. The force should be applied at the center of the PCB. Test for 168hrs. Power Off	3 units	3 tested units return to Neonode	YES	TBD	7 days	30.8.17	6.9.17	Salutica	Done	PASSED	NO	
Contact wear test	N/A	IEC 60068-2-64	Wave form : random Vibration level : 1.0GRMS Bandwidth : 10-300Hz Cycle: X,Y,Z, 60 min Number of cycles: 1 One time each direction DUT on vibration table: Clamped on 3 positions along sensor. The FPC is clamped to the table at one position (center). The FFC-connector will not be clamped to the table.	6 units	6 tested units return to Neonode	YES	TBD	1 day	6.9.17	7.9.17	Salutica	Done	PASSED	NO	
Cleansing test	N/A	Salutica internal spec	Rubbed 5 times using a piece of cotton soaked with 2-5 ml (depending on size of object). Apply the solutions below in following order on the same place of the object: o Denatured alcohol (ethanol 99.5%). o All purpose cleaning solution containing ammonia (e.g. AJAX Tornado). o Water.	3 units	3 tested units return to Neonode	YES	TBD	2 days	23.8.17	24.8.17	Salutica	Done	PASSED	NO	
ESD	N/A	IEC-61000-4-2	EN55024 (61000-4-2) Direct contact discharge: 2,4,8kV Indirect contact discharge: 2,4,8kV Air discharge: 4,8,16kV	3 units	3 tested units return to Neonode	YES	TBD	2 days	18.8.17	22.8.17	Salutica	Done	PASSED	NO	