



Fujitsu LIFEBOOK® E559 Notebook PC

Environmental MIL-STD-810G w/Change 1 Testing Summary

P/N: 5089-2019-0005
 REV: A

Equipment tested	Fujitsu LIFEBOOK E559	
Independent test company	Quanta Laboratories, 3199 De La Cruz Boulevard, Santa Clara, CA95054 http://www.quantalabs.com/	American Association for Laboratory Accreditation: Certificate #2454.01 (Valid to August 31,2020)
Independent test company	Element Materials Technology Minneapolis LLC 9725 Girard Ave, South Minneapolis, MN 55431 http://www.element.com/locations/usa/minneapolis	American Association for Laboratory Accreditation: Certificate #1719.01 (Valid to August 31,2019)



Fujitsu LIFEBOOK E559

Notes: All environmental testing listed in the table below was performed and reported independently by accredited testing companies listed above.

Documented MIL-STD-810G testing guidelines were followed, a summary listing of the tests are presented in the following table.

LIFEBOOK E559 Notebook PC MIL-STD-810G Testing Summary Table

#	Test Listing	Test Method	Description/Parameters	Result ^{1,2}
1	Altitude	MIL-STD-810G Method 500.6 Procedures I & II	Storage/Air Transport test at 30,000 ft, duration 1 hour, unit is non-operational Operational/Air Carriage test at 15,000 ft, duration 1 hour, unit is operational	Pass
2	Low temperature	MIL-STD-810G Method 502.6 Procedures I & II	Non-operational test at -51°C, duration 7 hours, unit is non-operational Operational test at -29°C, duration 4 hours, unit is operational	Pass
3	High temperature	MIL-STD-810G Method 501.6 Procedures I & II	Non-operational test , temperature cycled between 35°C and 71°C Test cycle 24 hours; test consisted of seven cycles. Operational test at +60°C duration 4 hours , unit is operational	Pass
4	Humidity	MIL-STD-810G Method 507.6 Procedure II	Aggravated humidity. Temperature cycled between 30°C and 60°C Test duration: ten 24-hours cycles. Relative humidity maintained at 95% Unit is non-operational, functional test after 5th and 10th cycles	Pass
5	Functional shock	MIL-STD-810G Method 516.7 Procedure I	3 shocks, ± per axis. Non-operational test - 40G, 11ms, saw-tooth pulse configuration, unit is non-operational Operational test - 20G, 11 ms, half sine wave configuration, unit is operational	Pass
6	Vibration, integrity	MIL-STD-810G Method 514.7 Category 24	Non-operational test, Minimum integrity test 20-2000Hz; 20-1000 Hz at 0.04G ² /Hz, 1000-2000Hz at 6dB, overall 7.7G RMS; test profile see in figure 514.7E-1. Test duration: 1 hours x 3 axis. Unit is non-operational	Pass
7	Vehicle Vibration	MIL-STD-810G Method 514.7 Category 4	Operational test - Ground vehicle, US Highways 1,000 miles of transportation, test profile see figure 514.7C-2 and table 514.7C-I. Test duration: 1 hours x 3 axis. Unit is operational.	Pass
8	Blowing Dust	MIL-STD-810G Method 510.6 Procedure I	Dust density 10±7 g/m ³ , air velocity 8.9m/s, 140 mesh silica flower. Non-operational test duration 6 hours at 23°C ambient. Unit is non-operational. Operational test duration 6 hours at 35°C ambient. Unit is operational.	Pass
9	Transit Drop	MIL-STD-810G Method 516.7 Procedure IV	Non-operational test, transit drop from 30" height on 2" plywood over steel over concrete. 26 drops: drop on each corner, each edge and each face on a single unit.	Pass *

¹Pass for Operational test indicates that unit remained operational during the entirety of the test. After the test ran and verified one complete pass of Fujitsu proprietary diagnostic software.

²Pass for Non-operational test indicates that after the test unit powered, booted to Windows OS, ran and verified one complete pass of Fujitsu proprietary diagnostic software.

* Test unit passed functional performance test after each drop and remained operational after all tests were completed. Some mechanical damage was observed.

Contact

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