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Mechanical Engineering Division

December 5, 2014

## **SUMMARY OF TESTS PERFORMED**

**Project Number:** 18.04481.27.101

**Company:** Panasonic System Communications Company  
Two Riverfront Plaza  
Newark, NJ 07102  
Attn: Mauricio Del Valle Gomez

**Equipment Tested:** Panasonic FZ-B2 Tablet Computer

**Test Dates:** November 21, 2014 – December 4, 2014

**Notes:** *The FZ-B2 was analyzed for hardware similarity to the FZ-M1 so that test results obtained for the FZ-M1 could also be applied to the FZ-B2. Some differences between the FZ-M1 and the FZ-B2 required testing on the FZ-B2. The evaluations and the tests are identified below. The ability of the item under test to boot into the operating system was determined at the conclusion of the test. Full details will be provided in Report Number 18.04481.27.100.FR1.*

**Report Written By:**



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Principal Engineer  
Structural Dynamics and Product Assurance Section

**Summary of Tests Performed on the Panasonic FZ-B2 Tablet Computer\***

<b>Test Description</b>	<b>Test Parameters</b>	<b>Test Results</b>
Altitude: Storage/Air Transport	MIL-STD-810G, Method 500.5, Procedure I <ul style="list-style-type: none"> <li>• 40,000ft Non-Operating</li> </ul>	EVALUATION PASS: Completed 3/18/14
Altitude: Operation/Air Carriage	MIL-STD-810G, Method 500.5, Procedure II <ul style="list-style-type: none"> <li>• 40,000ft Operating</li> </ul>	EVALUATION PASS: Completed 3/18/14
High Temperature: Storage	MIL-STD-810G, Method 501.5, Procedure I <ul style="list-style-type: none"> <li>• 160°F Non-Operating, 7 days</li> </ul>	EVALUATION PASS: Completed 3/17/14
High Temperature: Operation	MIL-STD-810G, Method 501.5, Procedure II (constant) <ul style="list-style-type: none"> <li>• 140°F Operating</li> </ul>	PASS: Completed 11/21/14
High Temperature: Tactical–Standby to Operational	MIL-STD-810G, Method 501.5, Procedure III <ul style="list-style-type: none"> <li>• High storage (non-operating) to high operating (test for operation)</li> </ul>	PASS: Completed 12/02/14
Low Temperature: Storage	MIL-STD-810G, Method 502.5, Procedure I <ul style="list-style-type: none"> <li>• -60°F Non-Operating</li> </ul>	EVALUATION PASS: Completed 3/17/14
Low Temperature: Operation	MIL-STD-810G, Method 502.5, Procedure II <ul style="list-style-type: none"> <li>• -20°F Operating</li> </ul>	PASS: Completed 11/21/14
Temperature Shock	MIL-STD-810G, Method 503.5, Procedure I <ul style="list-style-type: none"> <li>• From 200°F to -60°F, three cycles</li> </ul>	EVALUATION PASS: Completed 3/20/14
Rain: Blowing	MIL-STD-810G, Method 506.5, Procedure I <ul style="list-style-type: none"> <li>• 5.8in/hr rain, 70mph wind, 30 minutes per surface</li> <li>• Unit operating</li> </ul>	EVALUATION PASS: Completed 3/19/14
Rain: Drip	MIL-STD-810G, Method 506.5, Procedure III <ul style="list-style-type: none"> <li>• 15 minute exposure, drip test</li> </ul>	EVALUATION PASS: Completed 3/18/14
Humidity	MIL-STD-810G, Method 507.5, Procedure II (Aggravated) <ul style="list-style-type: none"> <li>• Temp. cycles 86°F to 140°F; 95%RH</li> </ul>	EVALUATION PASS: Completed 3/17/14
Sand and Dust: Dust	MIL-STD-810G, Method 510.5, Procedure I <ul style="list-style-type: none"> <li>• Blowing Dust (non-operating)</li> <li>• Non-Operating temperature of 160°F</li> </ul>	EVALUATION PASS: Completed 3/19/14
Sand and Dust: Sand	MIL-STD-810G, Method 510.5, Procedure II <ul style="list-style-type: none"> <li>• Blowing Sand (non-operating)</li> <li>• Non-Operating temperature of 160°F</li> </ul>	EVALUATION PASS: Completed 3/19/14

Test Description	Test Parameters	Test Results
Explosive Atmosphere	MIL-STD-810G, Method 511.5, Procedure I	PASS: Completed 11/14/14
Vibration: General Vibration – operating	MIL-STD-810G, Method 514.6, Procedure I (Transportation) <ul style="list-style-type: none"> <li>• Panasonic provided conditions (operating)</li> </ul>	EVALUATION PASS: Completed 3/26/14
Vibration: General Vibration – non- operating	MIL-STD-810G, Method 514.6, Procedure I (Transportation) <ul style="list-style-type: none"> <li>• Category 24, general minimal integrity (non- operating)</li> </ul>	EVALUATION PASS: Completed 3/24/14
Vibration: Helicopter – operating	MIL-STD-810G, Method 514.6, Procedure I (Transportation) <ul style="list-style-type: none"> <li>• Helicopter Minimum Integrity (operating)</li> </ul>	EVALUATION PASS: Completed 3/25/14
Vibration: Helicopter – non-operating	MIL-STD-810G, Method 514.6, Procedure I (Transportation) <ul style="list-style-type: none"> <li>• Helicopter Minimum Integrity (non-operating)</li> </ul>	EVALUATION PASS: Completed 3/25/14
Shock: Functional	MIL-STD-810G, Method 516.6, Procedure I <ul style="list-style-type: none"> <li>• 40g, 11ms - Operating</li> </ul>	EVALUATION PASS: Completed 3/26/14
Shock: Transit-Drop 48-inch	MIL-STD-810G, Method 516.6, Procedure IV <ul style="list-style-type: none"> <li>• 26 drops – 48in height on to 2in plywood – operating</li> <li>• All drops performed on the same unit</li> </ul>	EVALUATION PASS: completed 3/7/14
Shock: Transit-Drop 60-inch	MIL-STD-810G, Method 516.6, Procedure IV <ul style="list-style-type: none"> <li>• 26 drops – 60in height on to 2in plywood – operating</li> <li>• All drops performed on the same unit</li> </ul>	EVALUATION PASS: completed 3/7/14
Shock: Transit-Drop 72-inch	MIL-STD-810G, Method 516.6, Procedure IV <ul style="list-style-type: none"> <li>• 26 drops – 72in height on to 2in plywood – operating</li> <li>• All drops performed on the same unit</li> </ul>	EVALUATION PASS: completed 3/7/14
Freeze / Thaw	MIL-STD-810G, Method 524, Procedure III (Rapid Temperature Change) <ul style="list-style-type: none"> <li>• Test effects include condensation and fog</li> </ul>	PASS: completed 12/03/14

\* The date shown for the completion of the evaluation is the date that the FZ-M1 test was completed