

fiXtress™ Integration with Altium: Higher Reliability in Less Time

Overview

BQR offers Altium users direct integration with fiXtress, for Reliability Analysis, Automated Schematic Review, Electrical Stress analysis and derating, supporting back annotations of the results to the schematic view.

With the added value provided by fiXtress suite, electronic engineers will be able to design reliable and robust PCBs, shortening time-to-market, improving the design process and reducing field failures.

The integration was enabled by BQR's partnership with Altium Ltd, a global leader in electronic design automation.

Customer's View

Baker Hughes Inc. Design for Reliability team has been piloting fiXtress with impressive results.

Dr. Josh Liew, Reliability Program Manager: "This Altium-fiXtress integration will help accelerate our efforts to harden electrical designs prior to PCB layout by significantly reducing the time it takes for us to prepare inputs for our simulations. It is both a time-saver and a productivity enhancer."



fiXtress™ Automated Schematic Review

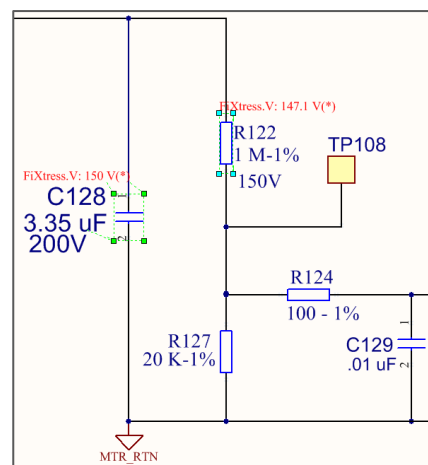
Easy Detection of Design Errors Using Logical and Parametric Functional Verification

fiXtress™ Schematic Review automatically detects schematic design errors based on component parameters using predefined and custom rules.

PCB design requires adhering to good engineering practices and rules, which result in a highly complex manually design review process. fiXtress™ Schematic Review simplifies and automates this process, reduces design time, increases design quality and verifies implementation of the required functionalities.

Benefits

- Streamlines the design process
- Improves design robustness by detecting design and electrical stress errors during schematic review
- Corrects hard-to-detect design errors before fab-out
- Plug-in for Altium Schematic, suitable for any analog or digital PCB size
- Applicable for all industries requiring highly reliable electronics boards



fiXtress™ Precise Stress Analysis

Detailed Analysis before Final Layout and Production, Performs DC & AC Stress Analysis and BUS Simulation

fiXtress™ Precise performs innovative automated electrical stress analysis calculation, providing highly accurate results. It accounts for component operational modes, identifies over-stressed and over-designed components, offers thermal-placement guidance, generates stress derating reports, and provides actual MTBF and service life information.

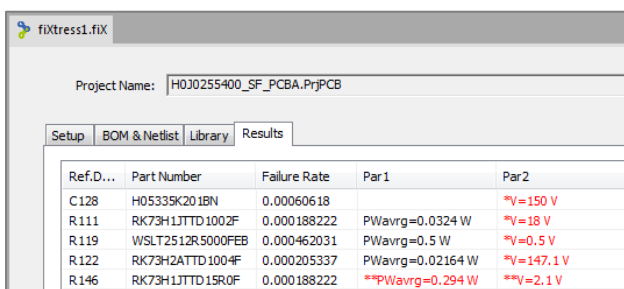
Finally, it verifies that the design is clean from electrical stress and design errors before PCB production.

Benefits

- Accelerates time to market by reducing design cycles
- Optimizes component selection, reliability & MTBF
- Ensures adherence to derating guidelines
- Optimizes thermal design placement
- Reduces potential field failures
- Reduces power consumption, facilitating compliance with green standards
- Facilitates warranty period and spare parts planning

fiXtress™ MTBF

Supporting all MTBF methods: Mil-Hdbk-217, Telcordia, Siemens, CNET, FIDES and Service life.



Ref.D...	Part Number	Failure Rate	Par1	Par2
C128	H05335K201BN	0.00060618		*V=150 V
R111	RK73H1JTTD1002F	0.000188222	PWavrg=0.0324 W	*V=18 V
R119	WSLT2512R5000FEB	0.000462031	PWavrg=0.5 W	*V=0.5 V
R122	RK73H2ATTD1004F	0.000205337	PWavrg=0.02164 W	*V=147.1 V
R146	RK73H1JTTD15R0F	0.000188222	**PWavrg=0.294 W	**V=2.1 V

fiXtress™ Rapid Stress Analysis

Swift Analysis during Schematic Drafting, Performs DC Stress Analysis

fiXtress™ Rapid replaces manual electrical stress calculations, performing effective detection of design and reliability issues.

fiXtress™ Rapid identifies problems early in the design process when they are easier and most cost-effective to correct, and enables multiple engineers to work concurrently.

Benefits

- Easy selection of components based on appropriate derating levels
- Identification of voltage-level conflicts in IC and Net-name pins and implementation of Net-naming guidelines
- Preliminary thermal placement suggestions
- Ensuring each IC power supply input complies with manufacturer specifications

BQR Reliability Engineering Ltd.

BQR is a world leader in Reliability Analysis and Maintenance Optimization solutions for the EDA market. BQR software tools help engineers create more robust and reliable products, as well as improving the design process.

Throughout its 25 years of experience, the company has been serving leading companies in Israel and worldwide, including Elbit, IAI, Rafael, DSO, Israel Electric Corporation, Cisco, Becker-Hughes, IBM, Philips, Bombardier, BAE, MobilEye and others.