

The synergy of QFD and TRIZ for solving EMC problems in electrical products - case study for the notebook PC

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20419921&lokasi=lokal>

Abstrak

This paper studies the design analysis and debugging mechanism against electrical product electromagnetic compatibility (EMC). The aim is to employ an effective electromagnetic interference suppression solution based on the integration of quality function development (QFD) and TRIZ during the early development phase of electronic products to reduce both unit cost and lunch time. The QFD relationship matrix displays potential contradictions in technical requirement, and the TRIZ contradiction matrix methodology helps to suggest generic solutions which then serve as solution triggers. This paper takes the example of reducing a Notebook PC's EMC to meet customer specification demands and with QFD applications. It then proposed an innovative approach in solving EMC contradiction including: (1) QFD-based case analysis for Notebook PC computer products, (2) key EMC issues derived out of QFD analysis, (3) innovative design solutions solving EMC issues by way of TRIZ, and (4) evaluation of multiple solution effectiveness