

EVALUATION OF EMBEDDED SOLUTIONS FOR DECREASING SENSITIVITY OF END-USE EQUIPMENT

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ABSTRACT

Years of research, investigation, and demonstration of technologies for protecting end use equipment and processes from misoperation due to variations in electric power quality have helped to form the theory that the least costly and most effective measures for accomplishing this goal might be in the hands of the original equipment manufacturers themselves. Embedded solutions is the term used to describe design and equipment modification efforts that OEMs could make to substantially increase the tolerance of their product to various power quality phenomena. Embedded solutions are not common in the present day, and there are both technical and market barriers to their emergence. This report explores both aspects for four categories of end use equipment: semiconductor fabrication equipment, CNC machine, robotics, and injection molding machinery.