#### Title:

### **Countering Threats from Transients in Magnetics**

#### **Description:**

Transient conditions may cause unexpected responses from magnetic components. These responses may threaten system functions and reliability.

Presentation content will help attendees understand potential threats from transients in magnetic components and learn related risk mitigation strategies starting at initial specification phase through qualified production.

The presentation content is expected to benefit component engineers, design engineers, project managers and other magnetics sourcing authorities interested in preventing failures from transient conditions.

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#### **Biography of Presenter:**

Victor W. Quinn directs Exxelia's US Magnetics Design Center with responsibilities for research and technology implementation on new products. Mr. Quinn specializes in magnetic component design and development for a wide variety of industrial, aerospace, space and defense applications. He holds longstanding interest in advancing magnetic components and developing novel technologies that increase efficiency and reliability.

# **Countering Threats from Transients in Magnetics**

# List of slides

- 1. Introduction: Causes of Transients
- 2. Background: Threats from Transients
- 3. Science: Voltage, Current & Impedance Dynamics
- 4. Science: Nonlinearity Impacts
- 5. Risks: Susceptibilities
- 6. Risks: Mitigations
- 7. Technique: Design Methods
- 8. Technique: Performance Tradeoffs
- 9. Technique: Prevention & Control
- 10. Technique: Design & Development Plan
- 11. Testing: Material Test Methods
- 12. Testing: Assembly Test Methods
- 13. Summary: Final Recommendations