PSMA Magnetics Committee and IEEE PELS Workshop:
Power Magnetics @ High Frequency – Eliminating the Smoke and Mirrors
Date: Saturday March 3, 2018
Location: Room 217CD, Henry B Gonzalez Convention Center, San Antonio, TX

Registration, Technical Demonstrations and Breakfast (7:00-8:00)

Introductions and Opening Remarks (8:00-8:05)

Keynote Part I (8:05-8:45)

Topic	Presenter
Core Loss: What We Know and What We Don't Know	Charles Sullivan, Dartmouth

Technical Session - Core Losses Part 1 (8:45-9:50)

Topic	Presenter
Opening Remarks	Steve Carlsen, Raytheon
Accuracy and Compensation Issues for AC Power Loss Measurements	Stefan Ehrlich, Fraunhofer Institute
Magnetic Core Dimensional Effects - Flux Propagation in Ferrites	Marek Rylko, SMA Magnetics

Break (9:50-10:10)

Technical Session - Core Losses Part 2 (10:10-12:00)

Topic	Presenter
Generic Specification for Ferrite Cores	Ed Herbert, PSMA
Multi-parameter Magnetic Material Characterization for High Power Medium Frequency Converters	Byron Beddingfiled, NCSU
What's Needed Going Forward	Ray Ridley, Ridley Engineering
Panel Discussion	Sullivan, Ehrlich, Rylko, Herbert, Beddingfield, Ridley

Technology Demonstrations and Lunch (12:00-2:00)

- Thermal vs Power Loss Efficiency limitations for Powder Core materials, Chris Oliver, Micrometals
- Spice Modelling of Winding Losses, Ray Ridley, Ridley Engineering
- Power Loss Under Square Wave Excitation, JC Sun, Bs&T
- Fundamentals of L, R, |Z| Measurments, Jenna Pollock, Independent
- Gapped Cores, Bruce Carsten, Peak
- DC Biased Chokes for High Frequency Power Applications, Martin Gruebl/Doug Malcolm, Sumida
- Drilled Core Measurements, Electrical Impedance of Ferrites, Marcin Kacki, SMA Magnetics
- Generic AC Power Loss Test Measurment System Demonstration, Tom Neville, Tektronix and Byron Beddingfield, NC
- Magnetic Supplier Technology Roadmaps
  - Chuck Wild, Dexter Magnetics
  - Kyle Jensen, Rubadue
  - Sadhab Ganda/Philipp Laurer, EPCOS
  - John Lynch/Mike Arasim, Fair-Rite

Keynote Part II (2:00-2:30)

Topic	Presenter
Fringing Effects	Charles Sullivan, Dartmouth

Technology Session - Fringing Part 1 (2:30-3:25)

Topic	Presenter
Openning Remarks	Steve Carlsen, Raytheon
Mystery Losses in Multi Air Gap (MAG) Inductor & Quantification By Means Of Advanced Thermometry	Dominik Neumayr/Johan Kolar, ETH Zurich
A simple analytical method to calcualte air gap induced eddy current losses in inductive components	Michael Baumann/Doug Malcolm, Sumida

Break (3:25-3:45)

Technical Session - Core Losses Part 2 (3:45-5:00)

Topic	Presenter
Impact of Fringing Effects on Design of DC-DC Converters	Michael Seeman, Eta One Power
Near Field Radiation of Storage Inductors in Power Electronics –Causes, Prevention & Suppression	George Slama/ Rajith Bramanpalli, Wurth Elektronik
Panel Q & A	Sullivan, Kolar, Baumann, Malcolm, Seeman, Slama

Networking Hour and Technical Demonstrations (5:00-6:00)