



# HIGH FREQUENCY POWER MATERIALS

The need for High-Frequency Power Materials is growing rapidly with the adoption of new semiconductor technologies such as GaN and SiC, which push operating frequencies into the Megahertz range. As these switching frequencies increase, the losses associated with the magnetics incorporated into power supply designs can cause issues with efficiency and heat management. In addition, miniaturization has been a driving force in electronics design, and magnetics are typically one of the largest components in power supplies.

In response to these market demands, Fair-Rite Products has developed a new line of High Frequency Power Magnetics as we continue to be **Your Signal Solution®**. We now offer materials that can operate up to 25 MHz with minimal power loss and temperature dependence.

Fair-Rite's **79-material** product line continues to expand and include new geometries for power supply designs. With operating frequencies up to **1 MHz**, this material is optimized for minimal losses at elevated temperatures.

Proposing Fair-Rite's new **80-material**! Our latest addition, this Manganese-Zinc ferrite has been tuned to operate in SiC and GaN switching power supplies with a stable temperature response for designs up to **5 MHz**.

Our **67-material** has superior performance up to **25 MHz**. With low-losses and good temperature stability, this material has found a new purpose in switching power supplies above 5 MHz. This material is highlighted in our HF Mini Power Kit, which allows you to test a variety of toroids or EQ cores in your design.

$Bf$  (mT-MHz)

Performance Factor (500mW/cm<sup>3</sup>, 25C)

