

3M Launches High-Performance Embedded Capacitance Material at DesignCon 2013

-- ECM C2006 with capacitance density of 20 nF per square inch now available for high-volume manufacturing --

3M announced today at DesignCon 2013 the full launch of its [Embedded Capacitance Material \(ECM\) C2006](#). The ultra-thin laminate material is now available for high-volume manufacturing. With a capacitance density of approximately 20 nF per square inch, the material offers one of the highest capacitance densities currently available on the market in a halogen-free* product.

ECM C2006 boosts design engineers' ability to improve power integrity and reduce electromagnetic interference (EMI) in small devices – such as microphones, sensors, IC packaging and interposers – where space limitations require the highest capacitance density feasible to achieve the desired performance. The material's high capacitance density helps designers achieve hi-fidelity signals, high signal-to-noise ratio in radio frequencies and higher speed digital signals in a variety of high-performance applications.

“The trend toward smaller devices with better performance shows no signs of slowing,” said Abhay Joshi, global business development manager, 3M Electronic Solutions Division, Interconnect Business. “Embedded Capacitance Material C2006 from 3M offers one of the highest capacitance densities available today. Now that we are ramped up to full production, design engineers can take advantage of this tool to help them design smaller, higher-performing products.”

3M's line of ECM offerings can be embedded into printed circuit boards (PCBs) and integrated circuit chip packages where the applications include decoupling and low-pass filtering. With a high-capacitance density offering, the functionality of the material can now be ideally leveraged for microphone makers in the miniaturization of their products.

When used as a power-ground core in a multilayer PCB, ECM effectively becomes a decoupling capacitor inside the board, which can allow designers to eliminate large numbers of decoupling capacitors. The material can increase useable board area, enable faster signaling, lower radiated emissions and save engineering time associated with power-distribution design and board layout.

Fabricators and OEMs worldwide can use ECM from 3M without purchasing a license from 3M. The material is halogen-free* and RoHS compliant**.

Samples of ECM C2006 are available at the 3M booth (#414) at the DesignCon 2013 Expo, which takes place Jan. 29-30 at the Santa Clara Convention Center. To learn more about ECM solutions from 3M, visit www.3Mcapacitance.com.

About 3M Electronic Solution Division – Interconnect

3M Electronic Solutions Division's Interconnect business offers a variety of innovative connectors, cables and cable assemblies, embedded capacitance materials and Textool brand test and burn-in sockets for component engineers and designers in the electronics industry. For more information about 3M's Interconnect solutions, visit: <http://www.3Mconnectors.com>. Information about 3M Company is available [online](#).

3M and Textool are trademarks of 3M Company.

All other trademarks listed herein are owned by their respective companies.

*Halogen-free is defined as both (1) no halogen compounds are intentionally added to the product or used in the

manufacturing process for the product, and (2) any impurities present are less than 900 ppm bromine, less than 900 ppm chlorine, and/or less than 1500 ppm total bromine and chlorine. The latter are the levels set forth in certain industry standards for printed circuit boards, such as the International Electrotechnical Commission (IEC) 61249-2-21 standard.

**"RoHS 2011/65/EU" means that the product or part does not contain any of the substances in excess of the maximum concentration values ("MCVs") in EU RoHS Directive 2011/65/EU. The MCVs are by weight in homogeneous materials. This information represents 3M's knowledge and belief, which may be based in whole or in part on information provided by third party suppliers to 3M.

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