Modelithics®
Accelerating Your Design Success!

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Microchip and Modelithics Empower RF Engineers with New PIN and Varactor Diode Models Validated through Ka-band and Above

Tampa, Florida (July 22, 2026) – Modelithics®, a leading provider of high-accuracy RF, microwave, millimeter-wave, and semiconductor modeling and measurement solutions, is pleased to announce its collaboration with Microchip Technology Inc. with the release of a new family of highly accurate, measurement-validated nonlinear simulation models for Microchip's PIN diode and Varactor diode portfolio. Available through Modelithics, these new non-linear models support engineers developing next-generation RF, microwave, and high-frequency systems. The release includes models for 16 Microchip PIN diode devices, and 3 Varactor diodes all featuring broadband validation from DC to at least 30 GHz, with the MV3903-STD-P2010 flip-chip Varactor diode model validated through 110 GHz.

These advanced models, to be included with upcoming releases of Modelithics COMPLETE Library™ for leading electronic design automation (EDA) platforms, provide designers with powerful simulation capabilities, including bias-dependent and temperature-scalable behavior, enabling more accurate prediction of device performance in switching, attenuation, limiter, and control applications. Supporting both series and shunt configurations, the models have been extensively validated against measured data, including DC I-V characteristics, capacitance versus voltage, resistance versus current, multi-bias S-parameters, and selected power-compression measurements. The models incorporate temperature scalability from 25°C to 85°C and cover a broad range of forward- and reverse-bias operating conditions, depending on device type. Several devices also include large-signal power-compression validation, providing enhanced confidence for high-performance RF and microwave designs. For engineers who do not yet have access to Modelithics COMPLETE Library, FREE 90-day access to the Modelithics-Microchip model library can be requested here: www.modelithics.com/mvp/vsl.

Together, through the Sponsoring Modelithics MVP Program, Microchip and Modelithics are helping engineers shorten design cycles and improve first-pass success by providing access to accurate, measurement-validated simulation models and design resources. For more information or to request free access, visit www.modelithics.com/mvp/vsl.

About Modelithics, Inc.

Modelithics, Inc. (www.Modelithics.com) was formed in 2001 to address the industry-wide need for high-accuracy RF and microwave active and passive simulation models for use in Electronic Design Automation (EDA). Modelithics' premium product is the Modelithics® COMPLETE Library, containing highly scalable Microwave Global Models™, and advanced behavioral models for a multitude of commercially available passive component families, as well as non-linear diode models, non-linear transistor models, and system-level component models. Modelithics' services also address a wide range of custom RF and microwave measurement and modeling needs. Modelithics product offerings, which support multiple EDA software platforms, also include the Modelithics mmWave Library, Modelithics System Components Library™ the Modelithics COMPLETE+3D Library. Modelithics® is a registered trademark of Modelithics, Inc. Microwave Global Models™, and System Components Library are also trademarks of Modelithics, Inc. The Modelithics Vendor Partner (MVP) Program allows for collaboration and open communication during the development of advanced data sets and models for commercially available microwave components and devices, with flexible sponsorship and distribution arrangements for the resulting data and models. An example of such an arrangement is the Modelithics Qorvo GaN Library, a fully sponsored library distributed for free by Modelithics under the sponsorship of Qorvo®.

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