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**Rogers Corporation to Highlight Materials for Millimeter Wave Designs at PCB West 2023**

**Chandler, Arizona, Sept. 11, 2023** – Rogers Corporation (NYSE:ROG) will exhibit at PCB West in Santa Clara, CA (booth #201) highlighting some of its high performance circuit materials used in multilayer structures which include a family of thin laminates and bonding materials.

PCB West provides in-depth technical training and access to a host of leading suppliers to the printed circuit board design, fabrication, and assembly industry. Held at the Santa Clara Convention Center, the event takes place September 20<sup>th</sup> from 10:00 a.m. – 6:00 p.m.

**Rogers' Materials at Booth 201:**

**[SpeedWave® 300P](#)** Ultra-Low Loss Prepreg. With the increasing need for stackup flexibility in high layer count designs for 5G millimeter wave, high resolution 77 GHz automotive radar, aerospace & defense and high speed digital designs, SpeedWave 300P prepreg offers a broad range of competitively priced high performance options for the circuit designer. SpeedWave 300P prepreg can be used to bond a variety of Rogers' materials including CLTE-MW™, and RO4000® series laminates.

This prepreg system offers a low dielectric constant of 3.0 – 3.3 and a low dissipation factor of 0.0019 – 0.0022 at 10 GHz with stable performance over a broad frequency range. This material is offered in multiple spread and open weave glass styles and resin content combinations to maximize stackup options.

**[RO3003G2™ 9 micron Laminates with Electrodeposited HVLP Foil](#)**

Thin copper foil can simplify the PCB fabrication steps required to consistently produce reliable millimeter wave radar PCBs. Utilizing 9 micron foils on antenna outer layers for millimeter wave radar PCBs can help PCB fabricators achieve tighter final feature tolerance for signal lines and antenna patterns. Additionally, starting with 9 micron copper on RO3003G2 laminate, instead of 18 micron copper, can reduce the copper reduction steps needed by the PCB fabricator to meet the final PCB copper thickness requirements after filled via formation.

## [RO4835IND™ LoPro® Laminates](#)

RO4835IND LoPro thermoset laminates are specially designed for 60-81 GHz short-range industrial radar applications, where excellent electrical performance and cost-efficiency are equally important. These laminates also provide environmental reliability and interconnection stability, which are critical criteria for PCB material selection.

With a low insertion loss of 2.13dB/inch at 60 GHz, these laminates meet customers' critical radar coverage requirements. The expanded weave fiber provides excellent Dk uniformity, and Rogers' tight quality control provides low Dk variation from lot to lot. RO4835IND LoPro laminates are compatible with standard epoxy/glass (FR-4) processes and have a higher fabrication yield rate than conventional PTFE-based laminates. Low material and fabrication costs make RO4835IND LoPro laminates a cost-effective solution for industrial radar.

[CLTE-MW laminates](#) provide a cost-effective, high performance material for the circuit designer. This unique laminate system is well suited for millimeter wave applications that have limitations in thickness due to either physical or electrical constraints. The seven available thickness options from 3 mils to 10 mils ensure that ideal signal to ground spacing exists for today's millimeter wave designs.

CLTE-MW laminates are reinforced with spread glass, which along with a high filler loading help minimize the high frequency glass weave effects on electromagnetic wave propagation. The woven glass reinforcement also provides excellent dimensional stability. Other key features of the laminate include low z-axis CTE (30ppm/°C) for excellent plated through hole and component board level reliability.

CLTE-MW laminates are well suited for a range of applications including millimeter wave automotive and industrial radar antennas, 5G millimeter wave base stations and backhaul radios, and phased array radar systems.

### **RO4000® Products for Multilayer Structures:**

Next generation products designed to meet the existing and emerging needs of advanced millimeter wave multilayer designs. RO4835T™ laminates, offered in a 2.5 mil, 3 mil and 4 mil core thickness, are 3.3 Dk, low loss, spread glass reinforced, ceramic filled thermoset materials designed for inner-layer use in multilayer board designs, and they complement RO4835™ laminates when thinner cores are needed.

[RO4450T™](#) 3.2-3.3 Dk, low loss, spread glass reinforced, ceramic filled bonding materials were designed to complement RO4835T laminates and the existing RO4000 laminate family, and come in 2.5, 3, 3.5, 4, 4.5, 5 or 6 mil thicknesses.

[RO4835T](#) laminates and RO4450T bonding materials exhibit excellent Dk control for repeatable electrical performance, a low z-axis expansion for plated through-hole reliability and are compatible with standard epoxy/glass (FR-4) processes. These materials are an excellent choice for multilayer designs requiring sequential laminations, as fully cured RO4000 products are capable of withstanding multiple lamination cycles. RO4835T laminates and RO4450T bondplys have the UL 94 V-0 flame retardant rating and are compatible with lead-free processes.

**About Rogers Corporation**

Rogers Corporation (NYSE:ROG) is a global leader in engineered materials to power, protect and connect our world. Rogers delivers innovative solutions to help our customers solve their toughest material challenges. Rogers' advanced electronic and elastomeric materials are used in applications for EV/HEV, automotive safety and radar systems, mobile devices, renewable energy, wireless infrastructure, energy-efficient motor drives, industrial equipment and more. Headquartered in Chandler, Arizona, Rogers operates manufacturing facilities in the United States, Asia and Europe, with sales offices worldwide. For more information, visit [www.rogerscorp.com](http://www.rogerscorp.com).