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3.3- And 1.7-kV SiC MOSFETs Offer Higher Performance, Ruggedness

NoMIS Power's 3.3-kV, 35-mΩ N3PT035MP330K and 1.7-kV, 100-mΩ N3PT100MP170K are sampling as TO-247-4L packaged parts or bare die. The latter device is the company's first 1.7-kV SiC MOSFET. Key features include stable performance up to 175°C and design flexibility with devices rated for +18-V and +20-V gate drive for legacy compatibility.

Built on NoMIS' next-generation planar SiC platform, these MOSFETs use optimized unit-cell structures to deliver higher efficiency, higher-frequency operation for increased converter power density, and long-term reliability in harsh operating environments—with higher dv/dt capability and an improved efficiency–ruggedness tradeoff.

Target applications include energy and grid infrastructure (BESS, renewables, HVDC interfaces, solid-state transformers (SSTs); dc solid-state protection (SSCBs); aerospace and defense mission power; transportation electrification (rail and heavy-duty EV); industrial drives and marine electrification.

Other benefits include strong figures of merit (FOMs)—low $R_{on}*C_{oss}$ and $R_{on}*C_{rss}$ (and for 1.7 kV, low $R_{on}*C_{iss}$). The company plans to introduce 3.3-kV, 50-mΩ and 25-mΩ MOSFETs, high-resistance small-die devices for MV switching, and 3.3-kV SiC diodes to complement the roadmap.

These devices are sampling as packaged parts and bare die; other package types are available on request. For more information, see the N3PT035MP330K and N3PT100MP170K datasheets. To order samples, click here. For Europe and additional global regions, NoMIS devices are also available through the company's authorized distribution partner**,** Astute Group.

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