

ISSUE: [July 2022](#)

### ***Test Kits With Cooling Speed Evaluation Of SiC-Based Inverter Designs***

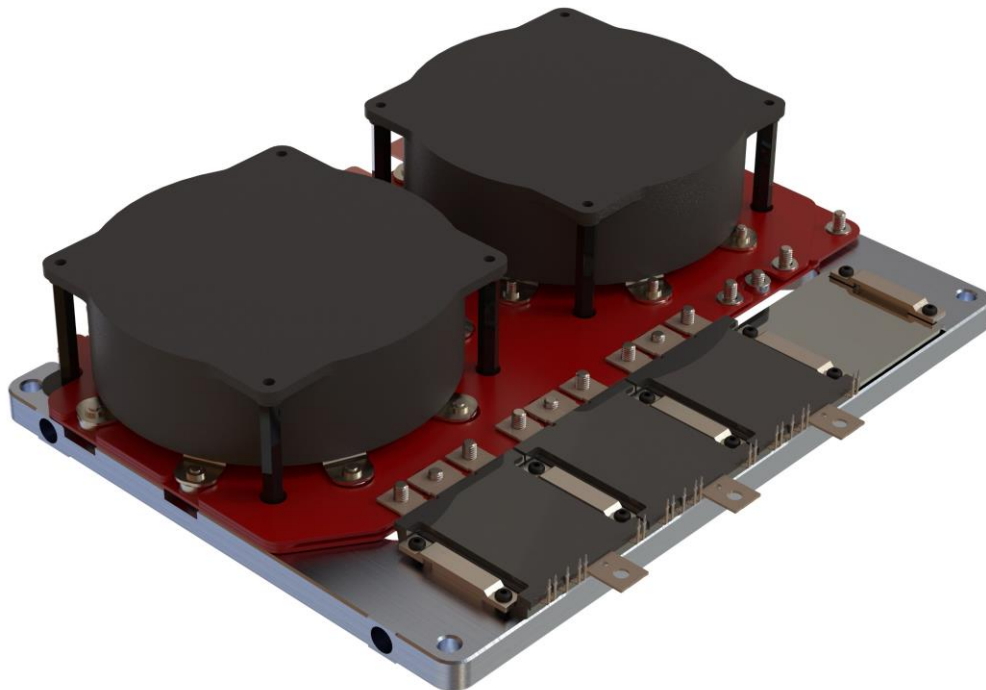
[PPM Power](#)'s inverter test kits feature dc link cap and cooling, enabling rapid, high-performance prototype evaluation. A range of standard options with various current ratings and dc link capacitance are available. Additionally, bus structures are available for simple two-level, three-phase, four-phase and center-tapped capacitor configurations.

PPM's Test Kits with Cooling are compatible with SanRex TechnoBlock modules or a range of RoadPak automotive modules (see the figure and table) and incorporate Power Ring capacitors from Advanced Conversion, plus an engineered cold plate and busbar designed by PPM. Developed in-house by PPM, the cold plates offer high thermal performance and facilitate integrated cooling of the capacitors in a combined solution for quicker, more streamlined prototype evaluation.

These test kits can be used for a range of applications but are typically used in aerospace and automotive applications.

Phil Surman, PPM Power sales director explained, "PPM Power has recognized the need for an engineered dc link and cold plate, to enable engineers to start working with these next-generation power modules quickly. Cooling the module and providing a low inductance dc link has been taken care of, allowing work to start on gate drive and optimizations."

While this product allows customers to choose from a range of standard options, PPM Power also offers fully bespoke test kits to suit customer requirements. For more information, call PPM Power at +44 (0) 1793 784389 or visit the SiC Test Kits with Cooling [page](#).



*Figure. PPM Power's SiC Test Kits with Cooling are integrated power conversion solutions consisting of an engineered cold plate, busbar and dc link capacitor. Using standard Power Ring capacitors from Advanced Conversion and custom cold plates and busbars designed by PPM Power, they provide rapid and high-performance prototype evaluation of inverters and similar topologies. Shown here is the RoadStar Test Kit with cooling, consisting of custom cold plate, Hitachi Energy RoadPak SiC modules, capacitor and busbar.*

Table. RoadPak Test Kit with Cooling specifications.

Part No.	Vdc	Capacitance	RMS current*
RS-450-1600	450	1.6 mF	450 A
RS-600-1000	600	1 mF	420 A
RS-700-1000	700	1 mF	350 A
RS-900-850	900	850 $\mu$ F	350 A
RS-1200-230	1200	230 $\mu$ F	310 A
RS-1500-150	1500	150 $\mu$ F	280 A

\* All current ratings are subject to the bus thermal limits—these are determined by your application. Note that the core conductor size is 1.5 mm<sup>2</sup> for each conductor.