

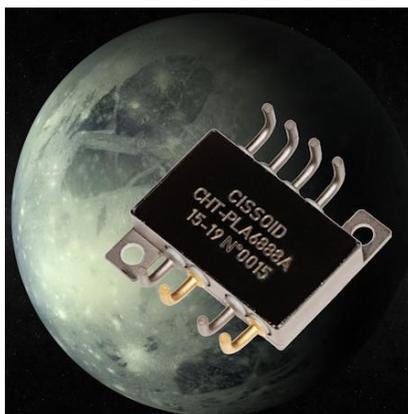
PRESS RELEASE
 

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## CISSOID extends its offering of High Temperature SiC Power Modules

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Mont-Saint-Guibert, Belgium – December 10th, 2015. CISSOID, the leader in high temperature semiconductor solutions, extends its family of high temperature Silicon Carbide (SiC) power modules dedicated to power conversion and motor drive applications: CHT-PLUTO SiC MOSFET modules and CHT-EUROPA SiC Schottky diodes modules are rated for operation between -55°C and +225°C.

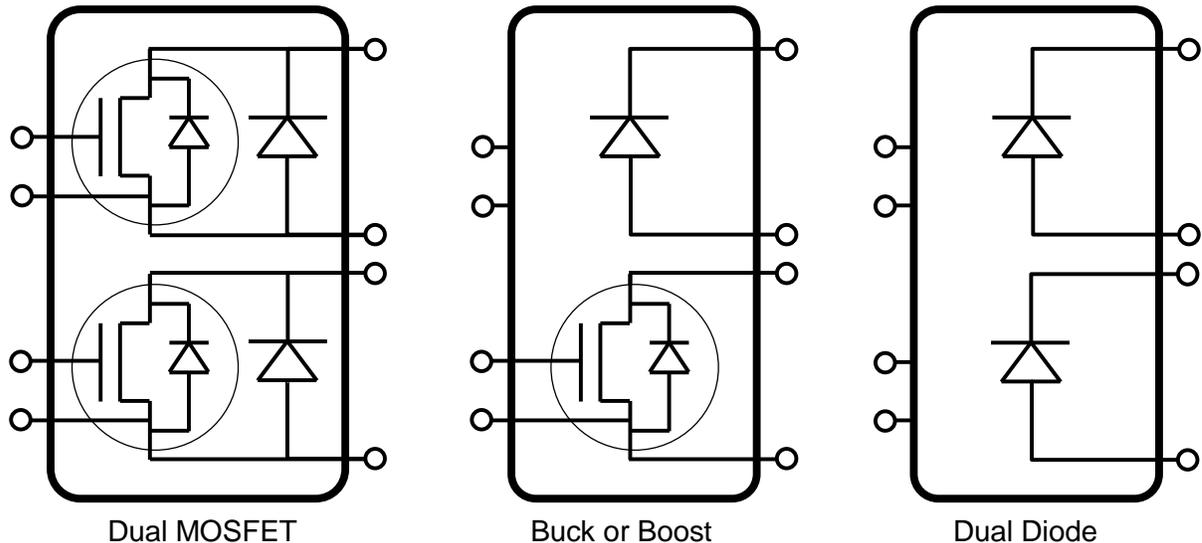


Today, 7 new power modules are introduced with different current ratings and topologies offering optimal trade-off between performance and cost:

Product Name	Product description
CHT-PLUTO-A1230	1200V/30A Dual SiC MOSFET Module with freewheeling Schottky diodes
CHT-PLUTO-A1220	1200V/20A Dual SiC MOSFET Module with freewheeling Schottky diodes (new)
CHT-PLUTO-B1230	1200V/30A Dual SiC MOSFET Module (new)
CHT-PLUTO-B1220	1200V/20A Dual SiC MOSFET Module (new)
CHT-PLUTO-C1230	1200V/30A Buck or Boost Module: 1 SiC MOSFET + 1 SiC Schottky Diode (new)
CHT-PLUTO-C1220	1200V/20A Buck or Boost Module: 1 SiC MOSFET + 1 SiC Schottky Diode (new)
CHT-EUROPA-A1230	1200V/30A Dual SiC Schottky Diode Module (new)
CHT-EUROPA-A1220	1200V/20A Dual SiC Schottky Diode Module (new)

CHT-PLUTO and CHT-EUROPA power modules are available in hermetically sealed 8 pins proprietary “HM8A” metal package with dimensions of 18mm x 29mm excluding mounting tabs. The devices are electrically isolated from the case of the package. These new components benefit from CISSOID long experience in the manufacturing, packaging, testing and qualifying of high temperature semiconductors.

Depending on the converter (DC-DC/AC-DC/DC-AC, isolated/non-isolated, step-up/step-down), the user can choose between different topologies: dual SiC MOSFET, with or without embedded freewheeling SiC Schottky diode; Buck or Boost configuration featuring independent SiC MOSFET and SiC Schottky Diode; or a dual SiC Schottky diode. CHT-PLUTO and CHT-EUROPA modules allow designers to address current ratings from 20A up to 60A, using 2 devices of a single module in parallel. Selecting the right current rating offers the optimal trade-off between conduction and switching losses as well as the right cost for the application.



The On-resistance and thermal resistance of CHT-PLUTO SiC MOSFET modules directly scale with the current rating, respectively from 90mOhms down to 23mOhms at  $V_{GS}=20V$  and from 1.2°C/W down to 0.35°C/W. This allows for the optimal selection of the module rating depending on total losses and the temperature mission profile of the power converter. The high operating junction temperature, up to 225°C, and the low switching energies of SiC MOSFET's, which are lower than 600μJ at 20A, offers further design headroom. All the modules are rated with a breakdown voltage in excess of 1200V at 225°C.

With two additional source connectors for an easy and robust connection to the gate driver, CHT-PLUTO MOSFET modules are ideally controlled by CISSOID new high temperature gate driver, HADES<sup>®</sup>v2, featuring high peak current capability and its high dV/dT robustness, enabling very fast switching and low switching losses. Dave Hutton, CEO at

CISSOID, said: “The extension of CHT-PLUTO family shows our ongoing commitment to delivering high temperature semiconductor solutions for power conversion and motor drives applications. This paves the way of SiC MOSFET Intelligent Power Modules (IPM's), including both the power devices and the gate drivers, which are currently in development by CISSOID. Switching currents in excess of 150A, these IPM's will address the needs for high power density and high reliability in Industrial, Aerospace, Transportation and EV/HEV markets.”

CHT-PLUTO modules datasheets and part numbers are available from CISSOID web site at <http://www.cisoid.com/high-temperature-electronics/planet/>. For more information, visit [www.cisoid.com](http://www.cisoid.com) or find the company's representatives at [www.cisoid.com/company/about-us/contacts.html](http://www.cisoid.com/company/about-us/contacts.html).