



## Boeing Satellites use Radiation-Tolerant Power Modules from Vicor

January 5, 2021

### Tested and proven resiliency to 50 kilorad of total ionizing dose and immune to single-event upsets

ANDOVER, Mass., Jan. 05, 2021 (GLOBE NEWSWIRE) -- Vicor (VICR NASDAQ) today announced the launch of its first radiation-fault-tolerant DC-DC converter power modules, housed in the new Vicor plated SM-ChiP™ package. Capable of powering low-voltage ASICs of up to 300 watts from a 100V nominal power source, the ChiPs were tested by Boeing to be resilient to 50krad of total ionizing dose and immune to single-event upsets. Immunity to single-event upsets is achieved using a redundant architecture, where two identical and parallel powertrains with fault-tolerant control ICs are housed in a single high-density SM-ChiP package.

Advanced communication satellites require high power density and low noise. Vicor soft-switching, high-frequency ZCS/ZVS power stages within metal-shielded ChiPs, reduce the power system noise floor, enabling signal integrity and total system performance with the requisite high level of reliability.

The complete power-source-to-point-of-load solution consists of four SM-ChiPs: the BCM3423, a 100V nominal, 300 watt  $K = 1/3$  bus converter in a 34 x 23mm package; the PRM2919, a 33V nominal 200W regulator in a 29 x 19mm package; and two VTM2919 current multipliers, a  $K = 1/32$  with an output of 0.8V at 150A and a  $K = 1/8$  with an output of 3.4V at 25 amps. The solution powers the ASIC directly from the 100V power source with minimal external components and low-noise operation.

All of the modules are available in the Vicor high-density SM-ChiP package with BGA (ball grid array) connections and optional solder mask for the top and bottom surfaces. Operating temperature for the ChiPs is  $-30$  to  $125^{\circ}\text{C}$ .

[Contact Vicor](#) for evaluation boards and samples.

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#### About Vicor Corporation

Vicor Corporation designs, develops, manufactures and markets modular power components and complete power systems based upon a portfolio of patented technologies. Headquartered in Andover, Massachusetts, Vicor sells its products to the power systems market, including enterprise and high-performance computing, industrial equipment and automation, telecommunications and network infrastructure, vehicles and transportation, and aerospace and defense. [www.vicorpower.com](http://www.vicorpower.com)

#### About Boeing

Boeing is the world's largest aerospace company and leading manufacturer of commercial jetliners, defense, space and security systems, and service provider of aftermarket support. As America's biggest manufacturing exporter, the company supports airlines and U.S. and allied government customers in more than 150 countries. Boeing products and tailored services include commercial and military aircraft, satellites, weapons, electronic and defense systems, launch systems, advanced information and communication systems, and performance-based logistics and training.

[www.boeing.com](http://www.boeing.com)

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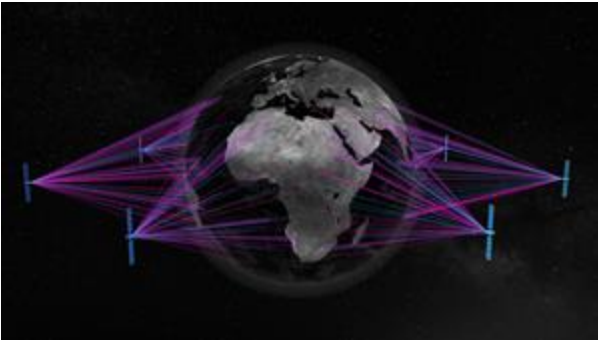
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A photo accompanying this announcement is available at <https://www.globenewswire.com/NewsRoom/AttachmentNg/a88a1d39-5f1b-4407-adc4-978513019779>



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**Vicor supports Boeing's OB3 satellite with radiation-fault-tolerant DC-DC converter power modules, housed in the new Vicor plated SM-ChiP™ package (image credit: SES)**

Source: Vicor Corporation