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Charge Pump Delivers 72 W To Power Robotic Hands

From pSemi, the PE25304 integrated charge pump switching-capacitor power module enables high-efficiency power conversion in humanoid robotic, dexterous-hand power applications. Designed to divide input voltage by four, the PE25304 is purpose-built for 48-V input architectures, with a wide operating range from 20 V to 60 V, making it a versatile power solution for emerging dexterous hand robotics and mechatronic systems, says the vendor.

The PE25304 comes in an ultra-low-profile package (2 mm) and can deliver up to 72 W of output power. It achieves 97% conversion efficiency, significantly reducing power loss and thermal buildup, says the vendor, which adds that these are key advantages in tightly packed electromechanical assemblies.

Beyond robotics, the PE25304 is suitable for drones, medical devices, embedded AI modules, industrial automation systems, and anywhere designers need efficient high-voltage stepdown conversion without compromising system size or thermal performance.

For more product information, see the PE25304 page or contact the company.

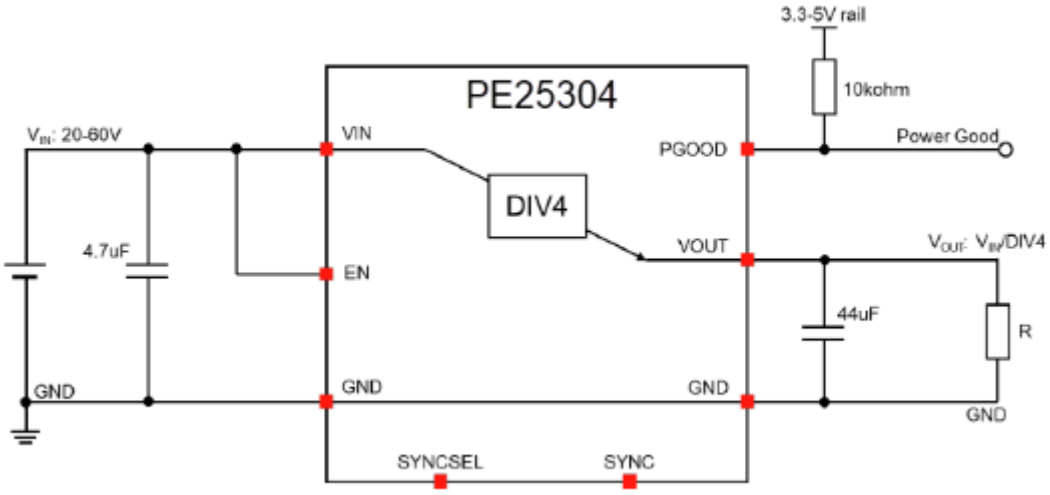

Figure. The PE25304 is a 48-V divide-by-4 charge-pump capacitor divider in a fully integrated module. Capable of delivering up to 72 W of power with peak efficiency of 97%, it allows multiple devices to be connected in parallel to provide high-power, high-efficiency solutions suitable for a variety of 48-V to 12-V stepdown applications.

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