

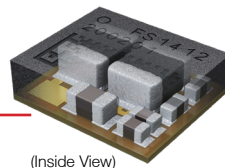
μPOL™ DC-DC Power Modules for AMD-Xilinx

TDK's μPOL technology provides endless opportunities to save space and design time without compromising performance. These power modules, containing matching MOSFET, Driver, Inductor, Cap and thermally enhanced package make it possible to provide the optimal power solution while reducing the number of external components and overall system cost. Plug and Play concept saves design time and allows a system designer to work on a system solution versus fine tuning individual components.

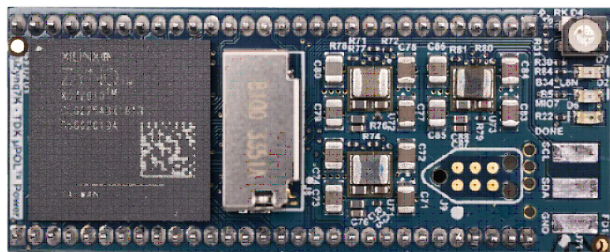
Below is a summary of TDK μPOL for AMD-Xilinx families.

		Artix	Spartan	Zynq 7	Zynq US+	Zynq RFSoc	Kintex	Virtex	Versal ACAP
TDK μPOL Power Modules	FS1525 (coming soon)				12A-40A 0.85V, 0.72V	12A - 40A 0.85V, 0.72V	12A - 80A 0.85V, 0.72V	12A - 150A 0.85V, 0.72V	50A - 200A 0.70V, 0.78V
	FS1412			6A - 10A 1V	6A - 12A 0.85V, 0.72V	6A - 12A 0.6V - 1.8V	6A - 12A 0.6V - 1.8V	6A - 12A 0.6V - 1.8V	6A - 12A 0.6V - 1.8V
	FS1406	1A - 6A 0.85V - 1.8V	1A - 6A 0.85V - 1.8V	1A - 6A 0.85V - 1.8V	1A - 6A 0.85V - 1.8V	1A - 6A 0.85V - 1.8V	1A - 6A 0.85V - 1.8V	1A - 6A 0.85V - 1.8V	1A - 6A 0.85V - 1.8V
	FS1404	3.3V, 2.5V	3.3V, 2.5V	3.3V, 2.5V	3.3V, 2.5V	3.3V, 2.5V	3.3V, 2.5V	3.3V, 2.5V	3.3V, 2.5V
	FS1403 / FS1703	3.3V, 5.0V	3.3V, 5.0V	3.3V, 5.0V	3.3V, 5.0V	3.3V, 5.0V	3.3V, 5.0V	3.3V, 5.0V	3.3V, 5.0V

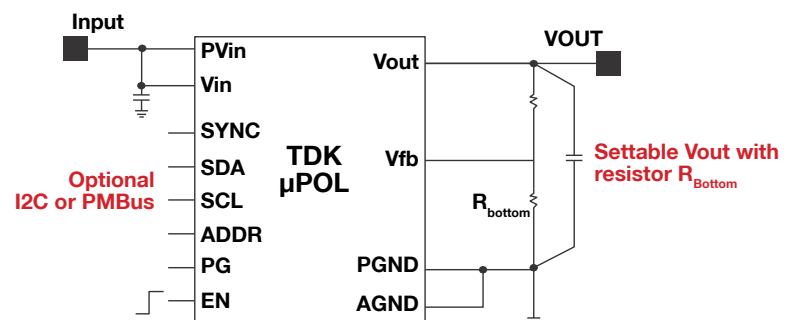
3D Chip Embedded Power Modules



(Inside View)



Design Example:
AMD-Xilinx Zynq 7 with TDK μPOL Power Modules



FS1406, FS1404, FS1403, FS1703

- Vin: 4.5V to 16V single supply
- Vout: 0.6V to 5V (see options)
- 6A - 3A / 15W in 3.3mm x 3.3mm x 1.5mm
- Analog, I2C

FS1412

- Vin: 4.5V to 16V
- Vout: 0.6V to 1.8V
- 12A / 20W+ in 4.9mm x 5.8mm x 1.6mm
- Analog, I2C / PMBUS plus telemetry

FS1525 (sampling soon)

- Vin: 4.5V to 16V
- Vout: 0.5V to 1.8V
- 25A shareable n=8 phase to 200A
- 6.8mm x 7.6mm x 3.8mm height
- Analog, I2C / PMBUS plus telemetry

Highlights

- μPOL technology includes Inductor, Controller, Cap, Power MOSFET, Driver, & Digital Engine
- Chip embedded Power IC in thermal enhanced package
- Total solution: 25% to 50% smaller than competitors
- Analog DC-DC or Digital DC-DC design (I2C / PMBUS Serial BUS)
- -40°C to 125°C operating temperature