1.6-MHz Synchronous Switch-Mode Li-Ion and Li-Polymer Stand-alone Battery Charger (4A) Reference Des

(PREVIEW) TIDA-00028

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Description

This reference design is highly integrated stand-alone Li-ion and Li-polymer switch-mode battery charge solution with two integrated N-channel power MOSFETs and a power path selector gate driver. It offers a constant-frequency synchronous PWM controller with high accuracy regulation of input current, charge current and voltage. It also provides battery detection, pre-conditioning, charge termination, and charge status monitoring. The reference design is also called the HPA715 (-001). This solution is optimized for a 5V input voltage and charges a single cell 4.2V Li-ion battery.

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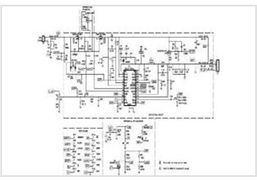
Features

- # Series Cells: 1 to 3S
- Max Input Volts: 16V
- Max Charge Current: 2.5A
- Topology: Switch-Mode

Schematic/Block Diagram

Quickly understand overall system functionality.



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Test Data

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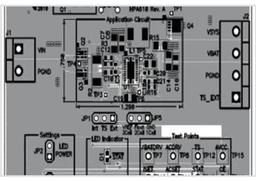

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BQ24170	1.6-MHz Synchronous Switch-Mode Li-Ion and Li-Polymer Stand-alone Battery Charger	Battery Management Products	Sample & Buy	View Design Kits & Evaluation Modules

Bill of Materials

Find the complete list of components in this reference design.

Download BOM

CAD/CAE Symbols

Part #	Package | Pins	CAD File (.bxl)	STEP Model (.stp)
BQ24170	VQFN (RGY) | 24	Download	-

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