4+1 Channel DC-DC converter for DV

Features

- **1.8V ~ 5.5V BAT Input Voltage Operation.**
- **3.0V ~ 5.5V VCC Input Voltage Operation.**
- **95% Efficient DC/DC Converter.**
- **Combine Step-Up and Step-Down for 90% Efficient Boost-Buck and Buck-Boost.**
- **Highly Integrated 4+1 CH DC/DC with integrated Power MOSFETs.**
- **CH2 Selectable Buck or Boost for Li-ion Battery Application.**
- **4 Channel Built-in Synchronous Rectified Current-Mode PWM Converters.**
- **Low Power Consumption (Sleep Mode) <10uA.**
- **Built-In Short-circuit Protection (SCP) and Over Current Protection (OCP) for MOSFETs.**
- **Built-In Over Voltage Protection (OVP) and Over Load Protection (OLP).**
- **Built-In Soft-Start Function.**
- **Built-In Power ON/OFF Sequence Control.**
- **Built-In RTC LDO**
- **Built-In RESET function**
- **Fixed 1MHz Operating Frequency.**
- **TQFN28 Package (4mm x 4mm).**

General Description

The AT1865 provide a complete power supply solution for digital video. They improve performance, component count, and size compared to other multi-channel controllers in 1-cell Li-Ion battery designs. On-chip MOSFETs provide up to 92~95% efficiency for critical power supplies. Channel 1/2/3/4 operate at one fixed frequency of 1MHz to optimize size, cost, and efficiency. Channel 5 operate as LDO.

Applications

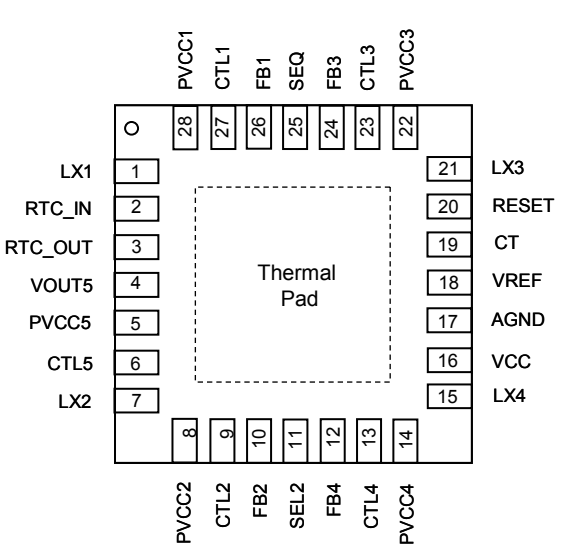
- **DV**

Ordering Information

ORDER NUMBER	MARKING	TEMP. RANGE	PACKAGE (Green)
AT1865RV1U	A1865	0°C to +85°C	TQFN4X4-28

Note: RV: TQFN4X4-28
1: Bonding Code
U: Tape & Reel

Pin Configuration



AT1865 TQFN4X4-28

Note: Recommend connecting the Thermal Pad to the Ground for excellent power dissipation.