

HAP5001

The HAP5001 is a high efficiency Buck-Boost dc-dc converter designed for use in conjunction with RF power amplifiers in multi-mode 3G/4G/5G devices with HPUE/PC2 support. The buck-boost mechanism allows HAP5001 to maintain a wide range of output voltage with minimal ripple, while still maintaining high performance such as linearity, output power and efficiency. Patented loop control technology allows HAP5001 to have excellent transient performance such as voltage ramping/line regulation/ load regulation transient.

Key features

- Wide Input Voltage Range 2.5V-5.5V
- Output Voltage Range 0.3-5.5V with 50mV Step
- Internal Fast-Start and Soft On/Off, Typical Start-Up Time within 10 μ s
- $V_{BAT}=3.6V$ Input, $V_{OUT}=4.85V$ $I_{LOAD}=0.5A$, Efficiency = 88%
- $V_{BAT}=4V$ Input, $V_{OUT}=3.4V$ $I_{LOAD}=0.5A$, Efficiency = 94.5%
- Thermal Warning/Protection and Overload/Short-Circuit Protection
- External Passive Device Fail-Safe Protection
- Fast APT Voltage Ramping, Typical 5 μ s Transiting Time
- MIPI@RFFE Programmable Control Interface
- Ambient Working Temperature from -40°C to 85°C

Application

- 3G/4G/5G, Multi-Band Smart Phone
- 3G/4G/5G, Multi-Band Handheld Devices, Data Cards
- Satellite Terminal

WLCSP-24 Package



HAP5001 Application Diagram

