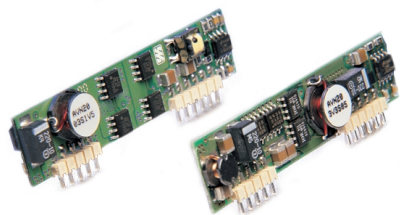


# 20 Watts

## APA06

## APA04 - Boost

Total Power: 20 Watts  
Input Voltages: 3.3V, 5V  
No. of Outputs: Single



### Electrical Specs

#### Input

|             |                                           |
|-------------|-------------------------------------------|
| Input range | 3.0 to 5.5V (Buck)<br>3.0 to 4.0V (Boost) |
| Efficiency  | 90% (5/3.3) , 83% (1.8V)                  |

#### Output

|                          |               |
|--------------------------|---------------|
| Voltage tolerance        | $\pm 1.0\%$   |
| Line regulation          | $\pm 0.5\%$   |
| Load regulation          | $\pm 0.5\%$   |
| Noise/ripple             | 50mV P-P      |
| Short circuit protection | Auto-recovery |
| Transient response       | 4%Vo, 200us   |

Temperature Regulation  $\pm 0.02\% \text{Vo}/^{\circ}\text{C}$

Switching frequency 430kHz typ

Temperature coefficient  $\pm 0.03\% \text{Vo}/^{\circ}\text{C}$

#### Isolation

Non Isolated

### Special Features

- Excellent for POL Applications
- High Efficiency - Non Isolated
- 3.3V and 5V input,
- Standard SIP package 2.5 X .55 X .31"
- Enable and Trim Function
- Overcurrent Protection
- Sense Pins

### Environmental

Operating ambient temperature: -25°C to 55°C (full load, 200LFM)

Storage temperature: -40°C to +125°C

MTBF: =7,000,000 hours (Bellcore TR332, Ta=25°C)

Weight: = 7.5 grams max

### Safety

**UL** UL 1950 Recognized  
**CSA** CAN22.2-950 Recognized

**TUV** EN60950 Certified

## AMERICAS

5810 Van Allen Way  
Carlsbad, CA 92008  
Telephone: 760-930-4600  
Facsimile: 760-930-0698

## EUROPE

Astec House, Waterfront Business Park  
Merry Hill, Dudley  
West Midlands, DY5 1LX, UK  
Telephone: 44 (1384) 842-211  
Facsimile: 44 (1384) 843-355

## ASIA

Units 2111-2116, Level 21  
Tower1, Metroplaza  
223, Hing Fong Road  
Fwai Fong, New Territories  
Hong Kong  
Telephone: 852-2437-9662  
Facsimile: 852-2402-4426



APA06/04

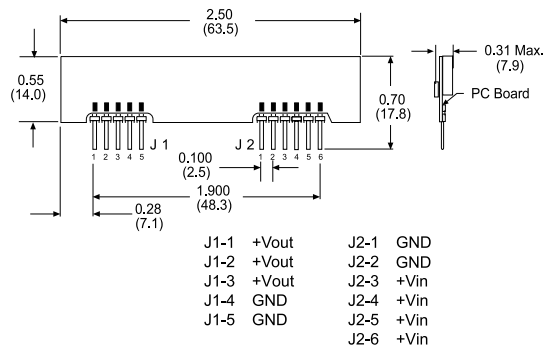
## Ordering Information

| Input Voltage | Output Voltage | Efficiency | Model Number |
|---------------|----------------|------------|--------------|
| <b>Buck</b>   |                |            |              |
| 3.0-5.5 V     | 1.5V @ 6.0 A   | 81%        | APA06M04     |
| 3.0-5.5 V     | 1.8V @ 6.0 A   | 83%        | APA06Y04     |
| 3.0-5.5 V     | 2.1V @ 6.0 A   | 86%        | APA06D04     |
| 3.0-5.5 V     | 2.5V @ 6.0 A   | 87%        | APA06G04     |
| 4.5-5.5 V     | 3.3V @ 6.0 A   | 90%        | APA06F05     |
| <b>Boost</b>  |                |            |              |
| 3.3-4.0 V     | 5.0V @ 4.0 A   | 89%        | APA04A03     |

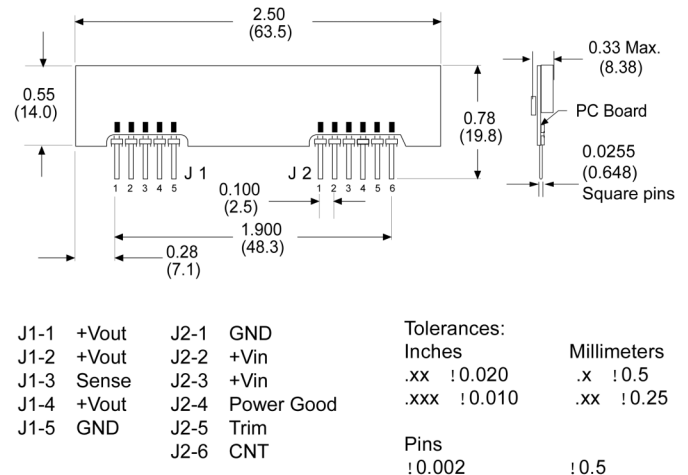
## Notes:

1. Add -E to eliminate Sense and Power Good feature
2. Right Angle Pins Available

### APA04 ( Boost ) Pinout



### APA06 ( Buck ) Pinout



### Notes:

1. Recommended Input Filter - 220uF Electrolytic Cap in parallel with 2.2uF Ceramic Cap Vin+ to GND
2. Recommended Output Filter - 2.2uF Ceramic Cap in parallel with 1000uF Electrolytic Cap (Vout+ to GND)
3. 20 MHz bandwidth. An external 0.1 uF ceramic capacitor is recommended to be placed from +V out to comm.
4. All specifications are typical at nominal line, full load, and 25°C unless otherwise noted.
5. All specifications subject to change without notice.
6. Mechanical drawings are for reference only.