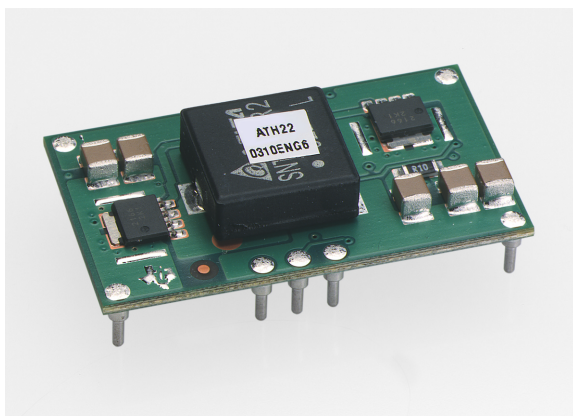


# 22Amps ATH22

PRELIMINARY

Total Power: 99W  
 Input Voltages: 3.3V, 5V, 12V  
 No. of Outputs: Single



## Special Features

- Point-of-Load Alliance product
- Open frame TH or SMT termination
- Auto-Track™ Sequencing
- Margin Up/Down Controls
- Remote sense compensation
- Output Voltage Adjust (Resistor Programming)
- Under Voltage Lockout
- Pre-Biased start-up<sup>2</sup>
- Output On/Off Inhibit
- -40°C to +85°C Ambient Air Operation
- Non Isolated module

## Environmental

Ambient air operating temperature range:  
 -40°C to +85°C

Storage temperature: -40°C to +125°C

Calculated MTBF: > 4.9M hours

## Safety

UL,cUL 60950 Recognition (Pending)

EN 60950 through TUV or VDE (Pending)

## Electrical Specs

### Input

Input Range 3.0 - 3.6V  
 4.5 - 5.5V  
 10.8 - 13.2V

Under Voltage Lockout with hysteresis

Efficiency up to 96%

### Output

Overall Regulation 1% of Vo Typ

Noise/Ripple 32mV Typ (2.5Vo and below)

1% Vo Typ (Vo > 2.5V)

Remote sense Up to 300mV max

Transient Response 130mV typical for 3.3Vo  
 for 50% to 100% I<sub>O,MAX</sub> step change  
 70us recovery time (Co = 330uF)

Over Current Protection 175% I<sub>O,MAX</sub> typical (autorecovery)

### Control

Inhibit On/Off Positive Enable Logic

Output Voltage Adjust See output range on page 2

Output Margin ±5% V<sub>O,NOM</sub>

Output Auto-Track™ (See Note 5)

Specifications subject to change without notice

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## Ordering Information

| Input Voltage  | Output Voltage | Output <sup>3</sup> Current | Efficiency <sup>4</sup> | Model Number      |
|----------------|----------------|-----------------------------|-------------------------|-------------------|
| 3.0V to 3.6V   | 0.8V to 2.5V   | 22A                         | 95%                     | ATH22T033-9(S)(J) |
| 4.5V to 5.5V   | 0.8V to 3.6V   | 22A                         | 96%                     | ATH22T05-9(S)(J)  |
| 10.8V to 13.2V | 1.2V to 5.5V   | 18A                         | 95%                     | ATH18K12-9(S)(J)  |

## OPTIONS:

- "-9J" - Output Trim, TH termination, Tray Packaging
- "-9SJ" - Output Trim, SMT termination, Tray Packaging
- "-9S" - Output Trim, SMT Termination, T&R packaging

## Pin Assignments

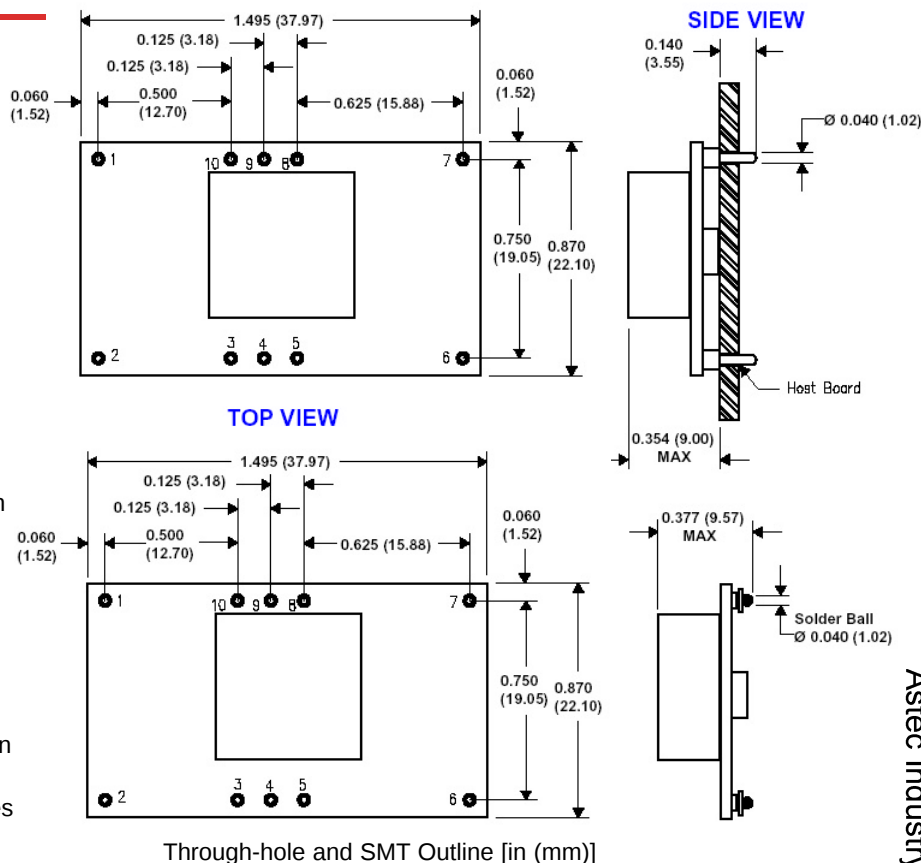
## Single Output

|             | PINS |
|-------------|------|
| GND         | : 1  |
| Vin         | : 2  |
| Inhibit     | : 3  |
| Vo Adjust   | : 4  |
| Vo Sense    | : 5  |
| Vout        | : 6  |
| GND         | : 7  |
| Track       | : 8  |
| Margin Down | : 9  |
| Margin Up   | : 10 |

## Notes:

- Nominal values apply with sense pins connected to +Vout and Ground Return with other control pins unconnected.
- Pre-Bias startup capability exists for 3.3Vin and 5Vin devices.
- Output derating applies at elevated ambient temperature.
- Typical efficiency taken at 10A load, 2.5V output (3.3Vin device); 10A load, 3.3V output (5Vin device); 10A load, 5V output (12Vin device).
- Consult the technical reference notes when available.
- Mechanical Dimensions are nominal values
- Auto-Track™ is a trademark of Texas Instruments.
- Specification subject to change without notice.

\* This is a Preliminary Data Sheet. Astec reserves the right to make changes to the information contained herein without notice and assumes no liability as a result of its use or application.  
(REV01: JULY 31, 2003)



Through-hole and SMT Outline [in (mm)]

Astec Industry Standard