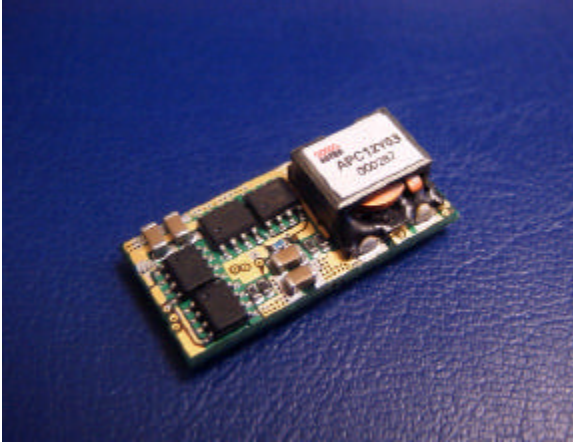


# 40 Watts

## APC12 (12 Amps)

Total Power: 40 Watts  
 Input Voltages: 1.8 to 13 V  
 No. of Outputs: Single

Preliminary



### Special Features

- Point of load (POL) applications
- High efficiency, 3.3V @ 92% (Typ)
- -40°C to +85°C Ambient operating temperature
- Open Frame SMT
- Positive enable function
- Low output ripple and noise
- Regulation to zero load
- Programmable Output from 0.9V to 3.6V (External Trim Resistor or Voltage Source)
- Fixed frequency switching (200 kHz)

### Environmental

Operating temperature  
 -40°C to +85°C  
 Storage temperature: -40°C to +125°C  
 MTBF: >1 million hours

### Safety

UL, cUL 609500 Recognized  
 TUV EN60950 Licensed

### Electrical Specs

#### Input

Input range 1.8-6.0VDC and 5.6-13.0VDC  
 Input Surge 7V for 03 version  
 14V for 08 version  
 Efficiency 3V3 @ 92% (Typ)

#### Control

Enable TTL compatible  
 (positive enable)

#### Output

Regulation (Line, Load, Temp) <3%  
 Ripple and noise<sup>1</sup> 75mV - (2.5V to 3.6V Output)  
 50mV - (0.9V to 2.4V Output)  
 Output voltage adjust range 0.9V to 3.6V  
 Transient Response typical 5% deviation with  
 50% to 75% full load  
 650  $\mu$ S recovery  
 Isolation Non-Isolated module

Specifications subject to change without notice.

**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



**Ordering Information**

Input Voltage	Output Voltage	Efficiency Full Load	Model Number
1.8V-6.0V	0.9V @ 12A	76% (Typ) <sup>1</sup>	APC12J03
1.8V-6.0V	1.2V @ 12A	81% (Typ)	APC12K03
1.8V-6.0V	1.5V @ 12A	86% (Typ)	APC12M03
1.8V-6.0V	1.8V @ 12A	87% (Typ)	APC12Y03
1.8V-6.0V	2.5V @ 12A	90% (Typ)	APC12G03
1-8V-6.0V	3.3V @ 12A	92% (Typ)	APC12F03
1-8V-6.0V	0.9V @ 12A	76% (Typ)	APC12J03-9 <sup>3</sup>
5.0V-13.0V	0.9V @ 12A	73% (Typ)	APC12J08
5.0V-13.0V	1.2V @ 12A	77% (Typ)	APC12K08
5.0V-13.0V	1.5V @ 12A	81% (Typ)	APC12M08
5.0V-13.0V	1.8V @ 12A	82% (Typ)	APC12Y08
5.0V-13.0V	2.5V @ 12A	87% (Typ)	APC12G08
5.0V-13.0V	3.3V @ 12A	90% (Typ)	APC12F08
5.0V-13.0V	0.9V @ 12A	74% (Typ)	APC12J08-9 <sup>3</sup>

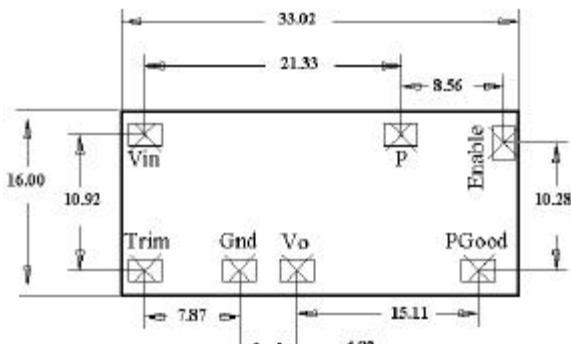
- Note:
1. Typical Efficiency is measured at full load, mid range input, and Tc=25 Deg C
  2. "-9MA" (suffix) - Output Trim, PGood and Parallel Options available on all modules
  3. "-9" (suffix) - Output Trim option available on 0.9V version.

**Mechanical Dimensions**

**Notes:**

1. 20 MHz bandwidth. External 56 uF (ESR < 75mohm) for 03 device and 100uF (ESR < 40mohm) for 08 device across Vout and Gnd.
2. Meet FCC class A and ETS300-386-1 requirements for conducted noise. Consult Factory for filtering information to meet FCC class B, VDE or EIC specifications.
3. All specifications are typical at nominal line, full load, and 25°C unless otherwise noted.
4. All specifications subject to change without notice. Mechanical drawings are for reference only
5. Technical Reference Notes should be consulted for detailed information
6. Warranty: 1yr

**Pad Layout**



**Top View of Board**

Optional Pins:

- PGood - Power Good Logic Signal
- P - Active Current Share Pin
- Trim - Trim Pin (0.9 to 3.6V)

