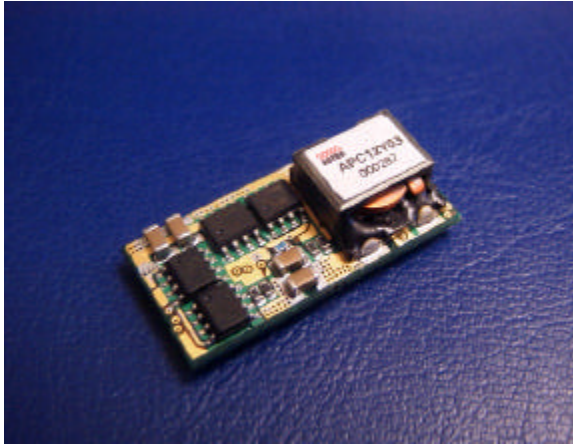


40 Watts

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 (Pending)
 TUV EN60950 Licensed (Pending)

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 noise¹ 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 μS 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	Availability
1.8V-6.0V	0.9V @ 12A	76% (Typ) ¹	APC12J03	Samples Available
1.8V-6.0V	1.2V @ 12A	81% (Typ)	APC12K03	Samples Available
1.8V-6.0V	1.5V @ 12A	86% (Typ)	APC12M03	Samples Available
1.8V-6.0V	1.8V @ 12A	87% (Typ)	APC12Y03	Samples Available
1.8V-6.0V	2.5V @ 12A	90% (Typ)	APC12G03	Samples Available
1-8V-6.0V	3.3V @ 12A	92% (Typ)	APC12F03	Samples Available
1-8V-6.0V	0.9V @ 12A	76% (Typ)	APC12J03-9 ³	Samples Available
5.0V-13.0V	0.9V @ 12A	73% (Typ)	APC12J08	Samples Available
5.0V-13.0V	1.2V @ 12A	77% (Typ)	APC12K08	Samples Available
5.0V-13.0V	1.5V @ 12A	81% (Typ)	APC12M08	Samples Available
5.0V-13.0V	1.8V @ 12A	82% (Typ)	APC12Y08	Samples Available
5.0V-13.0V	2.5V @ 12A	87% (Typ)	APC12G08	Samples Available
5.0V-13.0V	3.3V @ 12A	90% (Typ)	APC12F08	Samples Available
5.0V-13.0V	0.9V @ 12A	74% (Typ)	APC12J08-9 ³	Samples Available

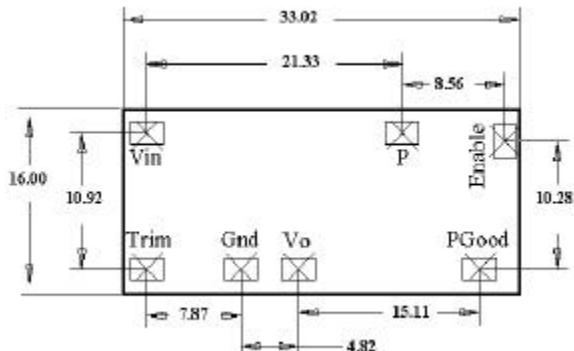
- Note:
1. Typical Efficiency is measured at full load, mid range input, and Tc=25 Deg C
 2. "-9MA" (suffix) - Output Trim, PGood and Parallel Options available on all modules
 3. "-9" (suffix) - Output Trim option available on 0.9V version.

Mechanical Dimensions

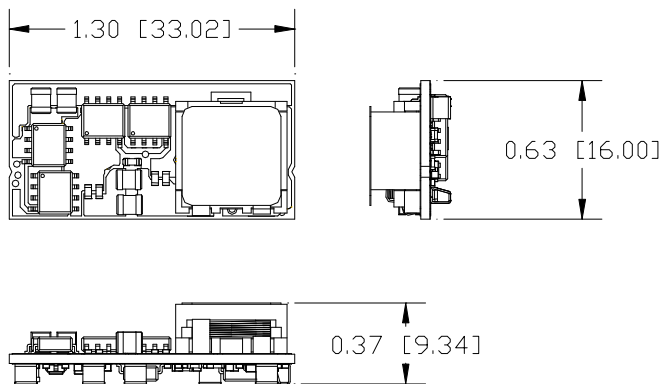
Notes:

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)