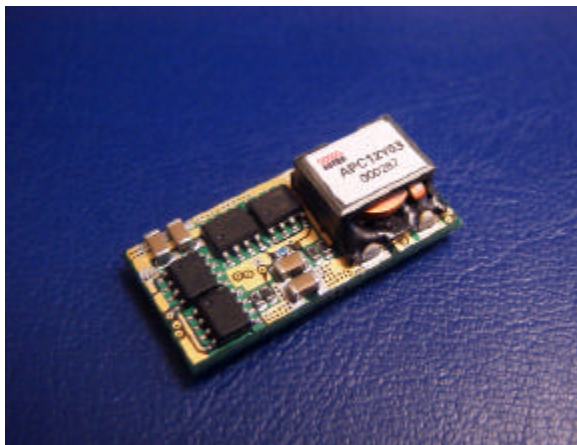


40 Watts

APC12 (12 Amps)

Preliminary



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

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 μ S recovery

Isolation Non-Isolated module

Specifications subject to change without notice.

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

AMERICAS

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Ordering Information

APC12

Astec Industry Standard

Input Voltage	Output Voltage	Efficiency Full Load	Model Number
1.8V-6.0V	0.9V @ 12A	76% (Typ) ¹	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 ³
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 ³

Note:

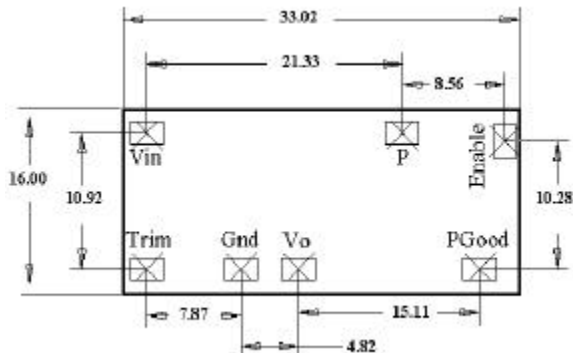
1. Typical Efficiency is measured at full load, mid range input, and Tc=25 Deg C
2. "-9MA" (suffix) - Output Trim, PGood and Parallel Options available on all modules
3. "-9" (suffix) - Output Trim option available on 0.9V version.

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)

