

DC/DC Converters Single/Dual Outputs FC Series

- Ultra low noise
- Pi input filter
- Continuous short circuit protection with auto restart
- Regulated output

The FC Series are ultra-low noise, high performance DC/DC converters that are packaged in low profile (0.4 inch high) cases. Essential quality performance features are designed and built-in. A high performance Pi input filter minimizes input reflected ripple, while 5-sided electrostatic shielding and tape-wound toroids, rather than pot cores, minimize radiated EMI. Advanced circuit design techniques reduce conducted output noise in the form of current spikes, to an extremely low level.

Applications

The FC Series converters are ideal for noise-sensitive analog and digital applications having high component density and stringent performance requirements. For ease of use and system reliability, all FC Series models feature I/O-isolated outputs which are overcurrent protected by a self-resetting current limit circuit.



Specifications

INPUT

Voltage Range
Reflected Ripple

See Table — Reverse Side
Less than 1% of V_{in} (max.)

OUTPUT

Voltage Tolerance
Ripple and Noise

Overcurrent Protection
Temperature Coefficient

$\pm 1\%$ (fixed)
Dual Outputs: 5 mV pk-pk (max.)
Single Outputs: 8 mV pk-pk (max.)
Current Limit
0.02%/°C max.

GENERAL

Regulation: Line/Load

Efficiency
I/O Isolation

Oscillator Frequency Range

Dual Output Models: 0.02/0.02%
5V Out Models: 0.02/0.1%
65% (typ)
Voltage: 300 Vdc
Resistance: 100 Megohms
6 to 20 kHz

ENVIRONMENTAL

Operating Temperature Range
Storage Temperature Range
Cooling

-25°C to +71°C (No derating)
-40°C to +85°C
Free-air Convection

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All specifications are typical at nominal line and full load at 25°C unless otherwise noted.

FC Series Ordering Information

ASTEC AMERICA/SEMICON

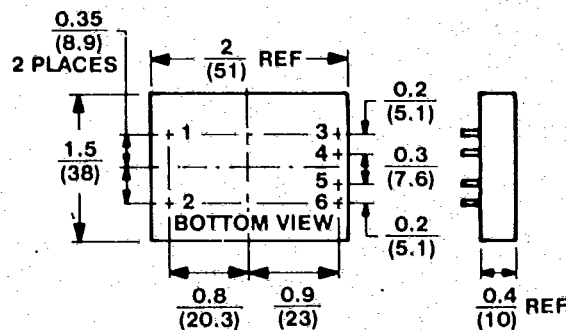
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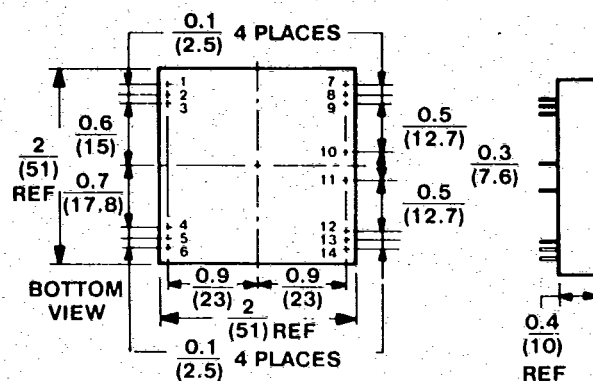
Input Voltage Range (Vdc)	Output Voltage (Vdc)	Output Current (mA)	Pkg. (Fig.)	Model Number
4.5-5.5	5V	600	2	FC11-060-5
10.8-15.0	5V	600	2	FC11-060-12
21.6-30.0	5V	600	2	FC11-060-24
42.0-56.0	5V	600	2	FC11-060-48
4.5-5.5	±12V	±35	1	FC22-007-5
10.8-15.0	±12V	±35	1	FC22-007-12
21.6-30.0	±12V	±35	1	FC22-007-24
42.0-56.0	±12V	±35	1	FC22-007-48
4.5-5.5	±12V	±125	2	FC22-025-5
10.8-15.0	±12V	±125	2	FC22-025-12
21.6-30.0	±12V	±125	2	FC22-025-24
42.0-56.0	±12V	±125	2	FC22-025-48
4.5-5.5	±15V	±30	1	FC23-006-5
10.8-15.0	±15V	±30	1	FC23-006-12
21.6-30.0	±15V	±30	1	FC23-006-24
42.0-56.0	±15V	±30	1	FC23-006-48
4.5-5.5	±15V	±100	2	FC23-020-5
10.8-15.0	±15V	±100	2	FC23-020-12
21.6-30.0	±15V	±100	2	FC23-020-24
42.0-56.0	±15V	±100	2	FC23-020-48

Dimensions and Connections



PIN CONNECTIONS

- PIN 1. + Vdc in
 2. - Vdc in
 3. + Vdc out
 4. & 5. Do Not Connect
 6. - Vdc out*



- PIN 1 to 3 +Vdc in
 4 to 6 - Vdc in
 7 to 9 + Vdc out
 10 & 11 Common out
 12 to 14 - Vdc out

*Metal case (shield) connected to output common

NOTE:

1. Connecting Pins 0.020 (0.51) Dia x 0.150 (3.8) Lg Min (Fig 1 & 2)

*Measured with 3.3 MF 25V tantalum capacitor across each output.
 Specification subject to change without notice.

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