



## **AFC5-F SERIES**

Dual output

- Linear regulated outputs
- Very low output noise
- 2 x 1 x 0.375 inch package
- Six sided shielding
- Short circuit protection
- UL94V-0 case

The AFC5-F Series of fixed frequency DC/DC converters provide 5 Watts of power, low output noise and tight output regulation, all housed within a 2 x 1 inch case. Six sided shielding to negate radiated noise and a non conductive base to prevent shorting to the PCB are standard features. Short circuit protection, isolation voltage of 500VDC, and a voltage accuracy of  $\pm 1\%$  are included to offer the best possible solution to a system designer's low power needs. Ideal applications for the AFC5-F are data acquisition, digital to analog and analog to digital conversion. AFC5-F Series DC/DC converters are suitable for a wide range of general industrial applications, especially where low noise levels are required.

[ 2 YEAR WARRANTY ]

## **SPECIFICATION** All specifications are typical at nominal input, full load at 25°C unless otherwise stated

OUTPUT SPECIFICATI	ONS		
Voltage accuracy			±1.0%
Voltage balance			±1%,7maxSh
Line regulation	LL to HL	±	:0.5%, max.
Load regulation	NL to FL		±0.5%
Total error band	See Note 2		±3.0%
Ripple and noise 5Hz to 20MHz		1r	pk-pk, typ., nV rms, typ. pk-pk, max.
Transient response	50% to 100% load	step	50µs, max.
Temperature coefficient		±0.03	%/°C, max.
Minimum output current			0A
Short circuit protection	Output to common +output to –output		Indefinite 10s, max.
INPUT SPECIFICATION	IS		
Input voltage range	5VDC 12VDC		to 5.25VDC to 13.2VDC
Input filter			LC filter
Input overvoltage	No damage, 5V no No damage, 12V no		7V, 10s 15V, 10s
Reflected ripple current		40	00mA pk-pk

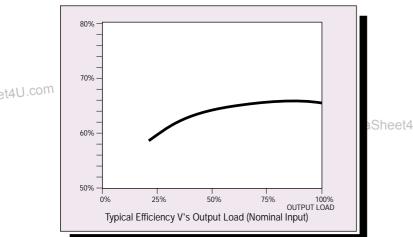
EMC CHARACTERIST	ICS	
Radiated emissions	EN55022, EN55011, F	CC Level A
GENERAL SPECIFICA	TIONS	
Efficiency		64% to 70%
Isolation voltage	Input to output	500VDC, min.
Switching frequency	Fixed, See Note 3	20kHz, min.
Case material		dised aluminium conductive base
Flammability rating		Meets UL94V-0
Weight		30g (1.1oz)
MTBF	Dual output	580,000 hours
ENVIRONMENTAL SPI	ECIFICATIONS	
Thermal performance	Operating, see curve Non-operating Derating Cooling Free-air co	-55°C to +125°C See chart
Relative humidity	Non-condensing	5% to 95% RH
Altitude		10,000 feet max. 40,000 feet max.
Vibration, See Note 4	5Hz to 500Hz 2.	4G rms (approx.)

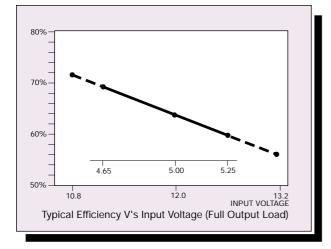
## 5 Watt Nominal input DC/DC converters

INPUT	OUTPUT	OUTPUT	INPUT CURRENT		TYPICAL	MODEL
VOLTAGE	VOLTAGE	CURRENT	NO LOAD	FULL LOAD <sup>(1)</sup>	EFFICIENCY	NUMBER
5VDC	±12VDC	±150mA	37mA	1.16A	65%	AFC5-05D12-F
5VDC	±15VDC	±150mA	44mA	1.45A	65%	AFC5-05D15-F
12VDC	±12VDC	±150mA	14mA	0.48A	65%	AFC5-12D12-F
12VDC	±15VDC	±150mA	17mA	0.61A	65%	AFC5-12D15-F

## Notes

- 1 Maximum value at nominal line voltage.
- 2 Error band is defined as the static output regulation at 25°C, including initial setting accuracy, input voltage within stated limits and output current within stated limits.
- 3 Fixed frequency design provides for easier input filtering and better noise performance.
- 4 Three orthogonal axes, random vibration, 10 minute test for each axis.





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PIN CONNECTIONS		
PIN NUMBER	DUAL OUTPUT	
1	+ Input	
2	– Input	
3	+ Output	
4	Common	
5	– Output	

