Compact, 10 Watt, High Voltage Modules

0 to + or - 100 through 0 to + or - 12,000 VDC @ 10 Watts F Series





FEATURES

Metal Case and Shielded Transformer result in:

Low EMI/RFI Low Ripple Short Circuit Protection Compact Package PCB Mountable Input/Output Isolation Input/Output Filtering Proven Reliability

No external components required MTBF:>810k hours per Bellcore TR-332

OPTIONS

Mounting Holes, F01 – F60 add H to model number (e.g. F10H)

RoHS (- 'R' suffix denotes the product is designed to meet RoHS requirements (e.g. F10R)

Output Center Tap, See CT Series

Epoxy: Low Outgassing (NASA approved per ASTM E-959-93)

UL 94 V0 flammability rating

Extended Operating & Storage Temperature: Contact Factory

APPLICATIONS

Capacitor Charging

Spectrometry

Piezo Devices

Lamp Ignition Lamp Drive

Q Switches

Ion Pumps

Electrostatic Field Generation

Grid Bias

Electrophoresis

Lasers

Electrostatic Chucks

PHYSICAL CHARACTERISTICS

F01-F60: 2.8 x 1.7 x 0.85 (71 x 43 x 21) see Dwg on Sheet 2 F70-F121: 2.8 x 1.7 x 0.95 (71 x 43 x 24) see Dwg on Sheet 2

WEIGHT: <5 Ounces (142 grams) PACKAGING: Epoxy Encapsulated

CASE MATERIAL: Black Anodized Aluminum

The F Series is a broad line of versatile. robust. DC to HV DC converters providing 100 VDC to 12,000 VDC (positive or negative polarity) at 10 Watts continuous output power.*1 The output is proportional to the input voltage and features a low 0.7 typical turn-on voltage. Nineteen models are available covering the range of 0 to 100 through 0 to 12,000 volts, positive or negative. These modules exhibit very low EMI/RFI, noise and ripple by means of a

quasi-sinewave oscillator, a fully enclosed transformer, input and output filtering, and a five sided metal enclosure. The isolated output allows for user selectable output polarity. Options include two mounting holes and an output center-tap option which, when grounded, provides both positive and negative outputs from one compact, low cost module. Contact our Applications Department for immediate technical assistance.

MODEL	INPUT VOLTAGE	OUTPUT* ² VOLTAGE	OUTPUT* ⁴ CURRENT	RIPPLE P-P
F01	0 to 12V	0 to +/-100V	100 mA	<1.0%
F02	0 to 12V	0 to +/-200V	50 mA	<1.0%
F03	0 to 12V	0 to +/-300V	33.3 mA	<1.0%
F04	0 to 12V	0 to +/-400V	25 mA	<1.0%
F05	0 to 12V	0 to +/-500V	20 mA	<0.1%
F06	0 to 12V	0 to +/-600V	16 mA	<0.1%
F08	0 to 12V	0 to +/-800V	12.5 mA	<0.1%
F10	0 to 12V	0 to +/-1,000V	10 mA	<0.1%
F12	0 to 12V	0 to +/-1,200V	8.3 mA	<0.1%
F15	0 to 12V	0 to +/-1,500V	6.6 mA	<0.1%
F20	0 to 12V	0 to +/-2,000V	5 mA	<1.0%
F30	0 to 15V	0 to +/-3,000V	3.3 mA	<1.0%
F40	0 to 15V	0 to +/-4,000V	2.5 mA	<1.0%
F50	0 to 15V	0 to +/-5,000V	2 mA	<1.0%
F60	0 to 15V	0 to +/-6,000V	1.66 mA	<1.0%
F70	0 to 15V	0 to +/-7,000V	1.5 mA	<2.5%
F80	0 to 15V	0 to +/-8000V	1.25 mA	<2.5%
F101	0 to 15V	0 to +/-10,000V	1 mA	<2.5%
F121	0 to 15V	0 to +/-12,000V	.834 mA	<2.5%

*Note 1. At Maximum Rated Output Voltage.

- 2. Output Voltage is load dependent. Under light or no load conditions, reduce input voltage so maximum rated output voltage is not exceeded.
- Specifications after 30 minute warm-up, full load, at 25°C unless otherwise noted.
- 4. The rated output current is available at full output voltage and must be derated proport ionally as the input voltage decreases. For example: a 500V, 1.5W unit, rated at 3mA at 500V will provide 1.5mA at 250V out.

ELECTRICAL SPECIFICATIONS*3

INPUT VOLTAGE: See Table

INPUT CURRENT*1: (NO LOAD) < 500mA

(FULL LOAD) < 1.5A

TYPICAL TURN-ON VOLTAGE: 0.7 Volts

ISOLATION: 3.500 Volts + Vout F70 - F121: 500V + Vout EFFICIENCY: >70% Typical OPERATING TEMP: -10° to +50°C STORAGE TEMP: -25 to +90°C

MAXIMUM CASE TEMP:+85°C (measured at point indicated)

F70 - F121: +70°C (measured at point indicated)

"HOT SPOT" CASE TEMPERATURE POINT 2.80 (71.12) 1.70 (43.18)

> Dimensions are in inches Dimensional Tolerances: ± .03 (.76mm) (Metric equivalents in parenthesis)

4722AM

We reserve the right to make changes without notification

SEE SHEET 2

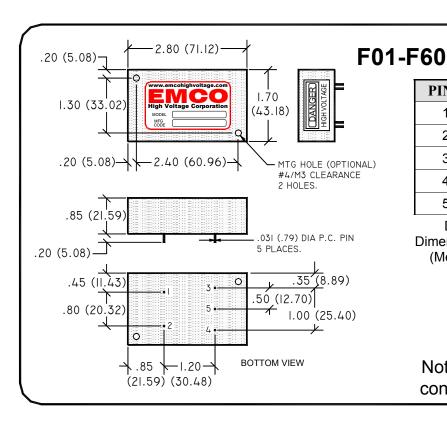
MECHANICAL DETAILS

FOR

Compact, 10 Watt High Voltage Modules

0 to + or - 100 through 0 to + or - 12,000 VDC @ 10 Watts F Series





PIN#	FUNCTION		
1	(+) Input		
2	(-) Input		
3	(+) Output		
4	(-) Output		

Dimensions are in Inches
Dimensional Tolerances: ±.03 (±.76)
(Metric equivalents in parenthesis)

Center tap (optional)

Note: Case is internally connected to (-) input.

