

RFS Series – ½ Watt Ultra small high voltage

- Output proportional to Input
- Floating output
- 100V to 1kV Output Voltages Available
- 0.125 cubic inches

The RFS Series is a broad line of micro-sized, high reliability DC to DC converters supplying up to 5,000 volts in only 0.125 cubic inches. These tiny converters are ideal for applications requiring minimal size and weight. The output is directly proportional to the input voltage and is linear from 0.7V input to maximum input voltage, allowing for an easily adjustable output. Their power output is limited to 0.5 Watts at full output voltage. All RFS modules are reverse polarity and short circuit protected.

TYPICAL APPLICATIONS

General Lab Use
Electrostatics
Bias Voltage
Op-Amp Supply
Ultrasonics
Ion Gauge

SPECIFICATIONS

Input Voltage:

5 VDC Input (dash 5Vin Models)
12 VDC Input Standard

Output Voltage:

From 100VDC to 1,000VDC
See "model selection table"

Output Polarity:

Output is floating from input

Output Current:

depends upon Vout
See "model selection table"
Power is limited to 1/2 Watt

SPECIFICATIONS Continued

Voltage Regulation

10% NL – FL (typical) Resistive load

Ripple:

1% maximum at full load each side

Temperature Coefficient:

100 ppm/ °C

Stability:

< 0.1% drift / hour after warm-up to operating temperature

Operating Temperature:

-55 °C to +100 °C case temperature

Humidity:

10% to 90% RH non-condensing

Input Terminals:

Gold pins (0.04 inch diameter x 0.25 inch length)

Output Terminals:

Gold Pins (0.04 inch diameter x 0.25 inch length)

Input Current:

No Load: 40 mA
Full Load: 150 mA (5v input)

Power Efficiency:

70% typical

Encapsulation:

Epoxy potting

Short Circuit Ability:

Fold-back circuitry

Switching Frequency:

Typical 30 - 50kHz

SPECIFICATIONS Continued

Cooling:

Convection: ½ W full load = 5° C case temperature rise

Dimensions:

0.50 L x 0.50 W x 0.50 H (12.7mm x 12.7mm x 12.7mm)
Volume = 0.125 inch³ (2 cm³)

Weight:

0.5 oz (13 grams)

Encapsulation:

Epoxy potting

Finish:

Smooth Diallyl-Phthalate Thermoset Case

Terminations:

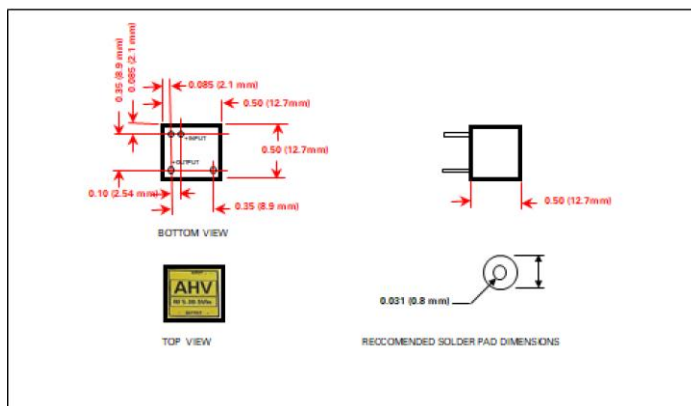
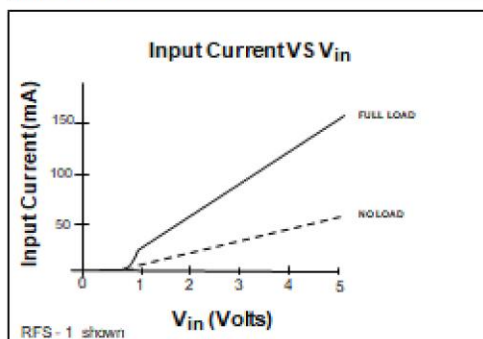
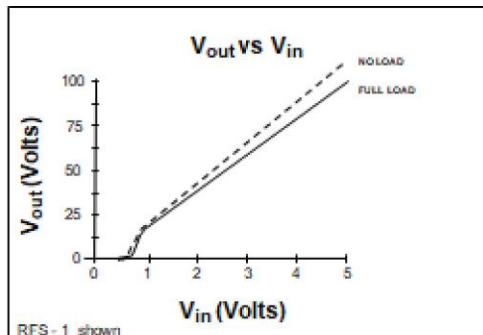
Electro-Gold Plated Brass pins (4)

MODEL SELECTION TABLE

Model	Voltage	Power Available
RFS-1 5Vin	100v	1/2w
RFS-2 5Vin	200v	1/2w
RFS-3 5Vin	300v	1/2w
RFS-5 5Vin	500v	1/2w
RFS-10 5Vin	1,000v	1/2w

The above products are available in:
5V (standard), 12V input

PERFORMANCE CHARTS



Ordering Information:

RFS – XX / ZVin

XX = Output voltage
Z = Input voltage (blank if 5VDC)

Example:

RFS – 5: Maximum output = 500V 5 VDC input

RFS – 10 /12Vin: Maximum output = 1,000V 12VDC input

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for the
WORLD

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