

- Encapsulated with "A" Series power supplies
- Ripple Stripper® Output Filter
- Ultra-low output ripple
- Output voltage monitor
- Fixed-frequency, low-stored-energy design
- >400,000 Hrs MTBF @ 65°C
- UL, CUL, IEC-60950-1, and Demko Recognized



GENERAL INFORMATION:

The "F" Series of Ripple Stripper® accessories features a ripple-reduction circuit added internally to 62V through 6kV "A" Series HVPS modules prior to encapsulation at the factory.

While adding a minimum of output capacitance and output impedance, output ripple is reduced >10 times! Output voltage regulation remains at <0.01% no load to full load. Also included is an Output Voltage Monitor. For greater performance the optional, wrap-around Mu-Metal shield should be used. The Ripple Stripper® accessory is also available on the "10A-25A" Series of HVPS, see the "10A-35A" data sheet for specifications.

HIGH VOLTAGE OUTPUT FILTER:

The "F" Series strips the typical output ripple on "A" Series high-voltage power supplies down to:

Model	Voltage	Power	With -F	With -F-M	50% Lower than -F-M Ripple w/ Ext. Cap
1/16A12	62V	4W	<0.002%	<0.002%	.5uF / Metal Film
1/16A24	62V	20W	<0.003%	<0.004%	.5uF / Metal Film
1/16A24	62V	30W	<0.006%	<0.006%	.5uF / Metal Film
1/8A12	125V	4W	<0.002%	<0.002%	.5uF / Metal Film
1/8A24	125V	20W	<0.003%	<0.004%	.5uF / Metal Film
1/8A24	125V	30W	<0.006%	<0.006%	.5uF / Metal Film
1/4A12	250V	4W	<0.0016%	<0.0016%	.047uF / Metal Film
1/4A24	250V	20W	<0.004%	<0.004%	.047uF / Metal Film
1/4A24	250V	30W	<0.005%	<0.005%	.047uF / Metal Film
1/2A12	500V	4W	<0.001%	<0.001%	.022uF / Metal Film
1/2A24	500V	20W	<0.002%	<0.002%	.022uF / Metal Film
1/2A24	500V	30W	<0.002%	<0.002%	.022uF / Metal Film
1A12	1kV	4W	<0.001%	<0.0004%	.05uF / Metal Film
1A24	1kV	20W	<0.0015%	<0.0008%	.05uF / Metal Film
1A24	1kV	30W	<0.003%	<0.002%	.05uF / Metal Film
2A12	2kV	4W	<0.005%	<0.0005%	4700pF/X7R
2A24	2kV	20W	<0.01%	<0.003%	4700pF/X7R
2A24	2kV	30W	<0.015%	<0.004%	4700pF/X7R
4A12	4kV	4W	<0.01%	<0.0005%	1500pF/X7R
4A24	4kV	20W	<0.01%	<0.003%	1500pF/X7R
4A24	4kV	30W	<0.015%	<0.004%	1500pF/X7R
6A12	6kV	4W	<0.013%	<0.0005%	1500pF/X7R
6A24	6kV	20W	<0.015%	<0.002%	1500pF/X7R
6A24	6kV	30W	<0.02%	<0.004%	1500pF/X7R

HIGH VOLTAGE OUTPUT:

Square .025in pins are used for high-voltage output and high-voltage return. These pins can be used for PCB mounting or for direct wiring.

OUTPUT VOLTAGE MONITOR:

The "F" Series features a 100:1 voltage monitor on pins 12 and 13 referenced to Signal Ground pin 5. The monitor output impedance is calibrated for use with a 10 MegΩ input impedance meter. Units 2kV or higher have a 100 MegΩ/1.1 MegΩ divider; units below 2kV use a 10 MegΩ/102k divider. Overall accuracy is ± 2.5% with a temperature coefficient of ±200 ppm per °C.

For applications requiring a different scale factor, such as an ADC compatible design, an external resistor may be added in parallel with the output.

SHIELDING:

All models are available with optional, six-sided, wrap-around Mu-Metal Shielding. This shielding attenuates magnetic and electrostatic emissions, while shielding ripple reduction circuitry from outside noise.

MECHANICAL:

The "F" Series accessories are designed to be added to the basic "A" series HVPS module. The combined plastic package has a footprint of only 7.0in², a volume of just 6.35in³, and a weight of 7 oz. Mounting plates and brackets are available for chassis mounting. This series is also available in an RF-tight, metal PCB/chassis mount package. The combined metal package has a footprint of only 10.7in², a volume of just 11.8in³, and a weight of 13 oz.

ENVIRONMENT:

The "F" Series meets the same environmental specifications for temperature, shock, and vibration as the "A" series. All units receive a 24-hour burn-in prior to final test. Extended temperature range is available along with other enhanced capabilities. Please contact the factory.



"Making High Voltage Easier!"

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"F" SERIES

HIGH VOLTAGE POWER SUPPLY

PLASTIC CASE

CONSTRUCTION:

Epoxy-filled DAP box
certified to ASTM-D-5948

TOLERANCE:

Overall ± 0.050 " (1.27)
Pin to Pin ± 0.015 " (0.38)
Mounting hole location
 ± 0.025 " (0.64)

MOUNTING:

2-56 x 0.30 (7.62) 2 places
threaded post may not
be flush to cover

NOTE:

20W & 30W versions are
an additional 0.062" (1.57) in height.

-M equipped units are an
additional 0.030" (0.76) in height.

Contact UV customer service for
drawings on models equipped
with -E or -H options.

METAL CASE

CONSTRUCTION:

Aluminum box
Chem film per MIL-C-5541
Class 1A

TOLERANCE:

Overall ± 0.025 " (0.64)
Pin to Pin ± 0.015 " (0.38)
Hole to Hole location ± 0.025 " (0.64)

Connections

1 - Input Power Ground Return
2 - Positive Power Input
3 - Iout Monitor
4 - Enable/Disable
5 - Signal Ground Return
6 - Remote Adjust Input
7 - +5VDC Reference Output
8 - HV Ground Return
9 - HV Ground Return
10 - HV Output
11 - HV Output
12 - Eout Monitor
13 - Eout Monitor

All grounds joined internally. Power-supply
mounting points isolated from internal
grounds by $>100k\Omega$, .01uF / 50V (Max)
on all models except -M-C and -M-E
configurations which are 0 Ω .



IEC-60950-1



Ripple Stripper®
Output Filter

Option (Case)

Option (Mu-Metal Shield)

Specifications subject to change without notice



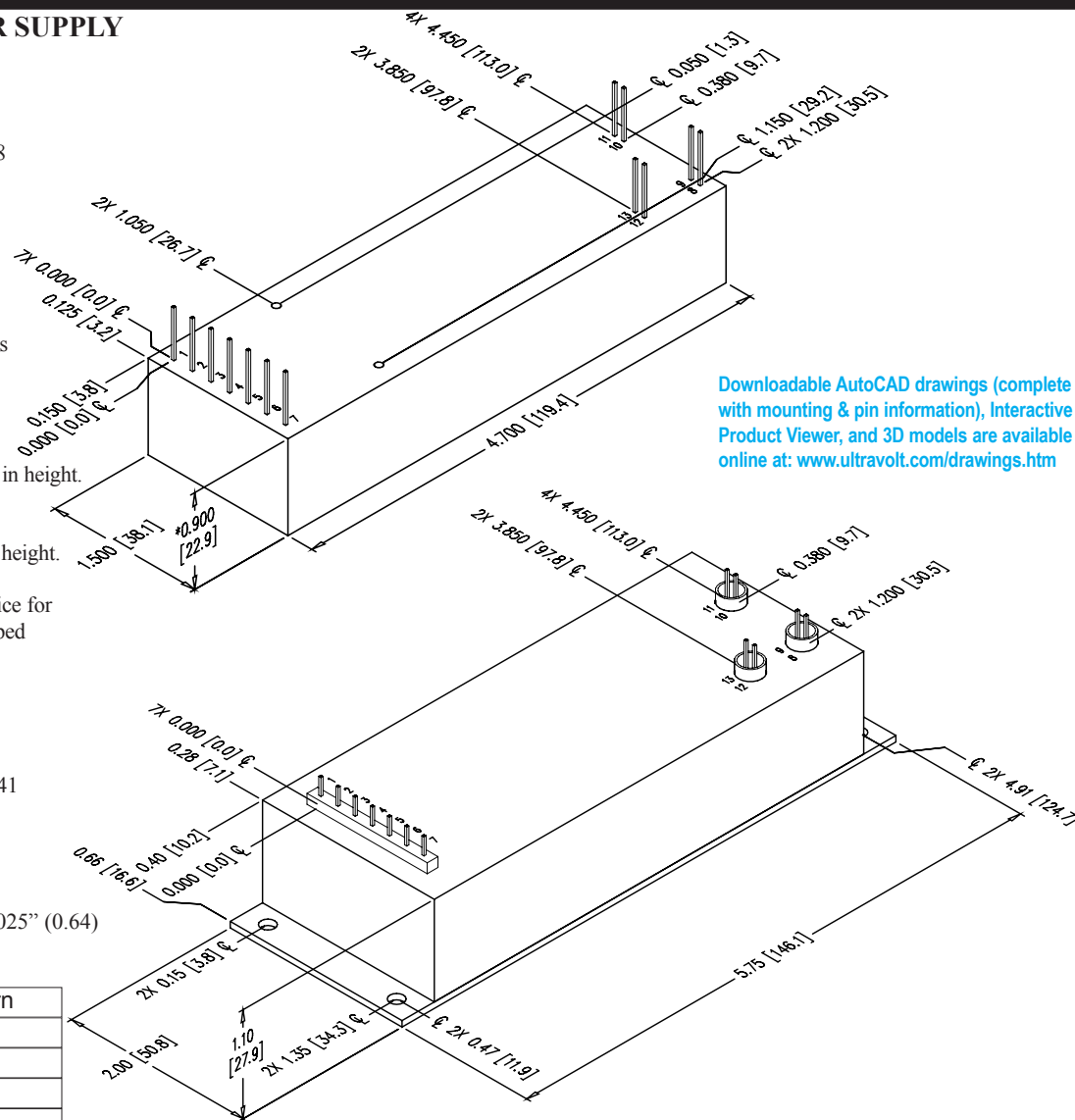
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Downloadable AutoCAD drawings (complete
with mounting & pin information), Interactive
Product Viewer, and 3D models are available
online at: www.ultravolt.com/drawings.htm

Ordering Information

Accessory:	Ripple Stripper® Output Filter	-F
Case:	Plastic Case - Diallyl Phthalate	STD
	"Eared" Chassis Mounting Plate	-E
	RF-Tight Aluminum Case	-C
Heat Sink:	.400" High (sized to fit case)	-H
Shield:	Six-Sided Mu-Metal Shield	-M

Example: 1/2A12-P4-F-M-C