

FAW SERIES

10W WIDE INPUT RANGE

AvivEnergy^{tech} Ltd.

FEATURES

- 10W DIL PACKAGE
- INDUSTRY STANDARD PACKAGE
- 9-18V,18-36V,36-72V,9-27V,18-54V, 9-36V,18V-72V WIDE INPUT RANGE
- SHORT CIRCUIT PROTECTION
- REGULATED OUTPUT
- 100% BURNED IN
- HIGH EFFICIENCY
- UL 94V-0 PACKAGE MATERIAL
- CUSTOM SOLUTIONS AVAILABLE
- RoHS COMPLIANT
- 2 YEARS WARRANTY



OUTPUT SPECIFICATIONS

Voltage Setpoint Accuracy	+/-2% max
Temperature Coefficient	+/-0.05%/°C
Ripple & Noise(20MHz BW) ¹	100mVp-p max
Line Regulation ²	+/-0.5% max
Load Regulation ³	+/-0.5% max
Minimum Load	10% of Full Load
Short Circuit Protection	Continuous
Short Circuit Restart	Automatic
Over Load Protection	180% Typ
Transient Response ⁵	200uS max

INPUT SPECIFICATIONS

Input Voltage Range	2:1 3:1 4:1 Input Range
Input Filter	Pi Network
Protection	Fuse Recommended

GENERAL SPECIFICATIONS

Efficiency	70% min
Isolation Voltage ⁴	1000VDC min
Isolation Resistance	10 ⁹ ohms min
Isolation Capacitance	500pF max
Switching Frequency	200 KHz min
MTBF ⁶	>700,000 Hours
Weight	31.2g Typ
Case Material	Six-Side Shielded Case
Case Size	50.8mm*25.4mm*11.2mm
Potting Material	Epoxy(UL94-V0)
Conducted Emissions	EN55022 Class A
Radiated Emissions	EN55022 Class A

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-25°C to +71°C
Storage Temperature	-55°C to +125°C
Humidity	95% max
Cooling	Free-Air Convection

ALL SPECIFICATIONS TYPICAL AT NOMINAL LINE, FULL LOAD, AND 25°C UNLESS OTHERWISE NOTED.

¹ Measured with 1uF ceramic capacitor connect to the output pins.

² High Line to Low Line.

³ Load Regulation is for output load current change from 10% to 100%.

⁴ For 10 seconds.

⁵ 25% Step Load Change.

⁶ MIL-HDBK-217F @25°C, Ground Benign.

● **SELECTION GUIDE(1)**
2:1 7W-10W OUTPUT

MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT ⁷		EFF (%) ⁸	ISOLATION (VDC)
				CURRENT(mA)			
				FULL LOAD	NO LOAD		
FAWD-0505	4.7-7.25	+/-5	+/-700	1772	40	79	1000
FAWD-0515	4.7-7.25	+/-15	+/-275	2089	40	79	1000
FAWS-1203.3	9-18	3.3	2400	891	30	74	1000
FAWS-1205	9-18	5	2000	1068	30	78	1000
FAWS-1209	9-18	9	1111	1050	30	79	1000
FAWS-1212	9-18	12	830	1040	28	80	1000
FAWS-1215	9-18	15	670	1020	28	81	1000
FAWS-1224	9-18	24	416	1020	28	82	1000
FAWD-1205	9-18	+/-5	+/-1000	1068	30	78	1000
FAWD-1209	9-18	+/-9	+/-556	1046	30	80	1000
FAWD-1212	9-18	+/-12	+/-416	1029	28	81	1000
FAWD-1215	9-18	+/-15	+/-333	1020	28	82	1000
FAWD-1224	9-18	+/-24	+/-208	1052	30	79	1000
FAWS-2403.3	18-36	3.3	2400	434	16	76	1000
FAWS-2405	18-36	5	2000	527	16	79	1000
FAWS-2409	18-36	9	1111	523	20	80	1000
FAWS-2412	18-36	12	830	508	15	82	1000
FAWS-2415	18-36	15	670	502	15	83	1000
FAWS-2424	18-36	24	416	502	15	83	1000
FAWD-2405	18-36	+/-5	+/-1000	527	16	79	1000
FAWD-2409	18-36	+/-9	+/-556	523	18	80	1000
FAWD-2412	18-36	+/-12	+/-416	508	15	82	1000
FAWD-2415	18-36	+/-15	+/-333	510	15	82	1000
FAWD-2424	18-36	+/-24	+/-208	520	20	80	1000

⁷ NOMINAL INPUT VOLTAGE.

⁸ NOMINAL INPUT VOLTAGE, FULL LOAD.

● **SELECTION GUIDE(2)**
2:1 8W-10W OUTPUT

MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT ⁹		EFF (%) ¹⁰	ISOLATION (VDC)
				CURRENT(mA)			
				FULL LOAD	NO LOAD		
FAWS-4803.3	36-72	3.3	2400	217	8	76	1000
FAWS-4805	36-72	5	2000	264	8	79	1000
FAWS-4809	36-72	9	1111	254	8	80	1000
FAWS-4812	36-72	12	830	254	7	82	1000
FAWS-4815	36-72	15	670	254	7	82	1000
FAWS-4824	36-72	24	416	264	7	82	1000
FAWD-4805	36-72	+/-5	+/-1000	262	8	79	1000
FAWD-4809	36-72	+/-9	+/-556	254	8	80	1000
FAWD-4812	36-72	+/-12	+/-416	254	7	82	1000
FAWD-4815	36-72	+/-15	+/-333	254	7	82	1000
FAWD-4824	36-72	+/-24	+/-208	254	16	82	1000

Note: Other input to output voltages may be available. Please contact factory.

⁹ NOMINAL INPUT VOLTAGE.

¹⁰ NOMINAL INPUT VOLTAGE, FULL LOAD.

● **SELECTION GUIDE(3)**
3:1 8W-10W OUTPUT

MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT ¹¹		EFF (%) ¹²	ISOLATION (VDC)
				CURRENT(mA)			
				FULL LOAD	NO LOAD		
FAWS-1203.3G	9-27	3.3	2400	880	40	76	1000
FAWS-1205G	9-27	5	2000	1082	40	77	1000
FAWS-1209G	9-27	9	1111	1065	40	78	1000
FAWS-1212G	9-27	12	830	1054	40	79	1000
FAWS-1215G	9-27	15	670	1041	40	80	1000
FAWS-1224G	9-27	24	417	1057	40	79	1000
FAWD-1205G	9-27	+/-5	+/-1000	1082	40	77	1000
FAWD-1209G	9-27	+/-9	+/-556	1068	40	78	1000
FAWD-1212G	9-27	+/-12	+/-416	1041	40	80	1000
FAWD-1215G	9-27	+/-15	+/-333	1028	40	81	1000
FAWS-2403.3G	18-54	3.3	2400	434	20	76	1000
FAWS-2405G	18-54	5	2000	527	20	79	1000
FAWS-2409G	18-54	9	1111	515	20	81	1000
FAWS-2412G	18-54	12	830	520	20	80	1000
FAWS-2415G	18-54	15	670	514	20	81	1000
FAWS-2424G	18-54	24	416	510	20	81	1000
FAWD-2405G	18-54	+/-5	+/-1000	527	20	79	1000
FAWD-2409G	18-54	+/-9	+/-556	526	20	79	1000
FAWD-2412G	18-54	+/-12	+/-416	520	20	80	1000
FAWD-2415G	18-54	+/-15	+/-333	514	20	81	1000

Note: Other input to output voltages may be available. Please contact factory.

¹¹ NOMINAL INPUT VOLTAGE.

¹² NOMINAL INPUT VOLTAGE, FULL LOAD.

● **SELECTION GUIDE(4)**
4:1 8W-10W OUTPUT

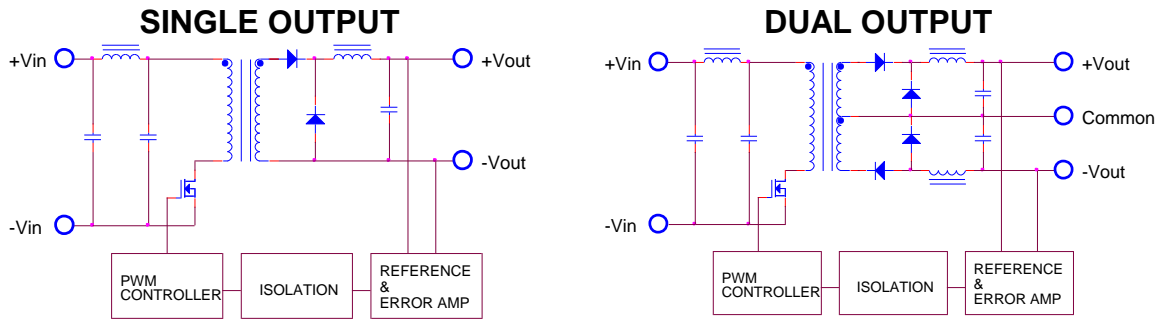
MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT ¹³		EFF (%) ¹⁴	ISOLATION (VDC)
				CURRENT(mA)			
				FULL LOAD	NO LOAD		
FAWS-1203.3T	9-36	3.3	2400	880	40	76	1000
FAWS-1205T	9-36	5	2000	1082	40	77	1000
FAWS-1209T	9-36	9	1111	1065	40	78	1000
FAWS-1212T	9-36	12	830	1054	40	79	1000
FAWS-1215T	9-36	15	670	1041	40	80	1000
FAWS-1224T	9-36	24	417	1057	40	79	1000
FAWD-1205T	9-36	+/-5	+/-1000	1082	40	77	1000
FAWD-1209T	9-36	+/-9	+/-556	1063	40	78	1000
FAWD-1212T	9-36	+/-12	+/-416	1041	40	80	1000
FAWD-1215T	9-36	+/-15	+/-333	1028	40	81	1000
FAWS-2403.3T	18-72	3.3	2400	434	20	76	1000
FAWS-2405T	18-72	5	2000	527	20	79	1000
FAWS-2409T	18-72	9	1111	515	20	81	1000
FAWS-2412T	18-72	12	830	520	20	80	1000
FAWS-2415T	18-72	15	670	514	20	81	1000
FAWS-2424T	18-72	24	416	510	20	81	1000
FAWD-2405T	18-72	+/-5	+/-1000	527	20	79	1000
FAWD-2409T	18-72	+/-9	+/-556	525	20	79	1000
FAWD-2412T	18-72	+/-12	+/-416	520	20	80	1000
FAWD-2415T	18-72	+/-15	+/-333	514	20	81	1000

Note: Other input to output voltages may be available. Please contact factory.

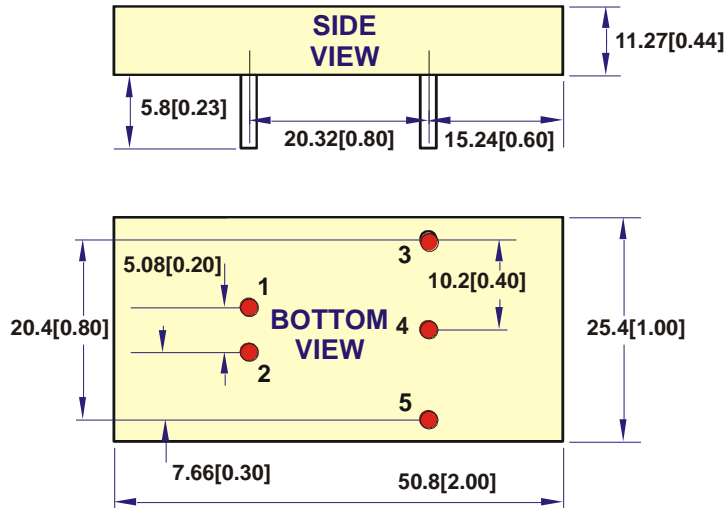
¹³ NOMINAL INPUT VOLTAGE.

¹⁴ NOMINAL INPUT VOLTAGE, FULL LOAD.

● SIMPLIFIED SCHEMATIC

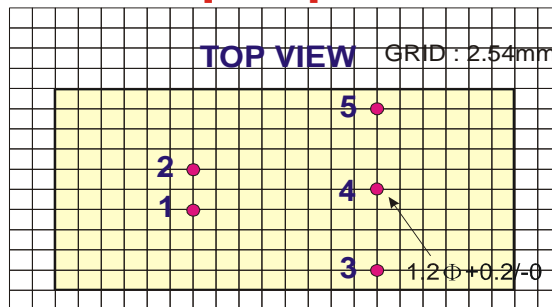


● MECHANICAL DIMENSIONS & RECOMMENDED FOOTPRINT DETAILS



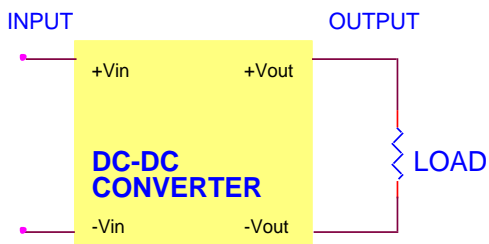
PIN	SINGLE	DUAL
1	+Vin	+Vin
2	-Vin	-Vin
3	+Vout	+Vout
4	NO PIN	Common
5	-Vout	-Vout

TOLERANCE : mm +/- 0.25 / (inch) +/- 0.01
All dimensions are in millimeters[inches]

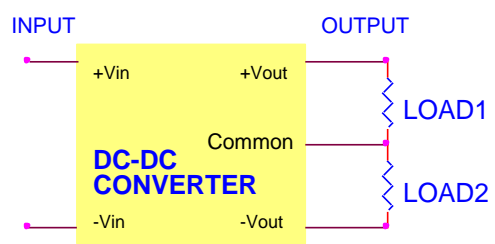


● TYPICAL APPLICATIONS

SINGLE OUTPUT



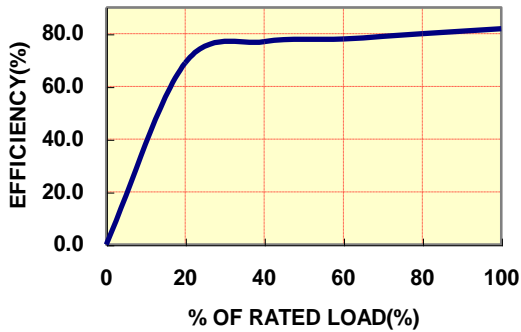
DUAL OUTPUT



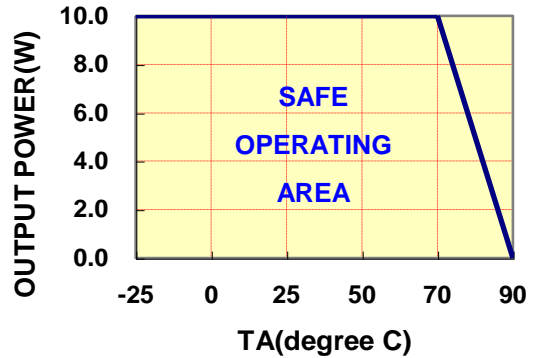
● TYPICAL PERFORMANCE CURVES

Specifications typical at $t_a=25^{\circ}\text{C}$, nominal input voltage, rated output current unless otherwise specified.

OUTPUT LOAD VS EFFICIENCY



TEMPERATURE DERATING



● INPUT FUSE SELECTION GUIDE

4.7-7.25V	9-18V or 9-27V or 9-36V	18-36V or 18-54V or 18-72V	36-72V
INPUT VOLTAGE(VDC)	INPUT VOLTAGE(VDC)	INPUT VOLTAGE(VDC)	INPUT VOLTAGE(VDC)
3800mA Slow-Blow Type	2000mA Slow-Blow Type	900mA Slow-Blow Type	450mA Slow-Blow Type

Note: Certain applications may require the installation of external fuse in front of the input.

FAW SERIES APPLICATION NOTES:

EXTERNAL CAPACITANCE REQUIREMENTS:

No external capacitance is required for operation of the FAW series.

To meet the reflected ripple requirements of the converter, an input impedance of less than 0.5 ohm from DC to 220KHz is required.

External output capacitance is not required for operation, however it is recommended that 10uF tantalum and 0.1uF ceramic capacitance be selected for reduced system noise.

Additional output capacitance may be added for increased filtering, but should not exceed 1000uF.

We Can Offer EMC-Filter According To EN55011/22 Class B.

Negative Outputs:

A negative output voltage may be obtained by connecting the +OUT to circuit ground and connecting -OUT as the negative output.