

KW SERIES

15W WIDE INPUT RANGE

AvivEnergy^{tech} Ltd.

FEATURES

- 15W DIL PACKAGE
- INDUSTRY STANDARD PACKAGE
- 9-18V,18-36V,36-72V,9-27V,18-54V, 9-36V,18-72V WIDE INPUT RANGE
- NO EXTERNAL COMPONENTS REQUIRED
- REGULATED OUTPUT
- 100% BURNED IN
- HIGH EFFICIENCY
- UL 94V-0 PACKAGE MATERIAL
- CUSTOM SOLUTIONS AVAILABLE
- RoHS COMPLIANT
- 3 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	550pF max
Switching Frequency	150 KHz min
MTBF ⁶	>504,000 Hours
Weight	60.0g Typ
Case Material	Six-Side Shielded Case
Case Size	50.8mm*50.8mm*11mm
Potting Material	Epoxy(UL94-V0)
Conducted Emissions	EN55022 Class A
Radiated Emissions	EN55022 Class A

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-25°C to +71°C
Operating Temperature Case	-25°C to +90°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 12W-15W OUTPUT

MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT ¹		EFF (%) ²	ISOLATION (VDC)
				CURRENT(mA)			
				FULL LOAD	NO LOAD		
KWS-1203.3	9-18	3.3	3600	1320	40	75	1000
KWS-1205	9-18	5	3000	1623	40	77	1000
KWS-1209	9-18	9	1670	1580	30	79	1000
KWS-1212	9-18	12	1250	1563	40	80	1000
KWS-1215	9-18	15	1000	1545	38	81	1000
KWS-1224	9-18	24	625	1543	38	81	1000
KWD-1205	9-18	+/-5	+/-1500	1623	40	77	1000
KWD-1212	9-18	+/-12	+/-625	1563	40	80	1000
KWD-1215	9-18	+/-15	+/-500	1525	38	82	1000
KWD-1224	9-18	+/-24	+/-313	1510	38	83	1000
KWS-2403.3	18-36	3.3	3600	643	20	77	1000
KWS-2405	18-36	5	3000	780	20	80	1000
KWS-2409	18-36	9	1670	770	20	81	1000
KWS-2412	18-36	12	1250	762	18	82	1000
KWS-2415	18-36	15	1000	762	18	82	1000
KWS-2424	18-36	24	625	753	18	83	1000
KWS-2427	18-36	27	556	749	21	83	1000
KWD-2405	18-36	+/-5	+/-1500	750	20	83	1000
KWD-2412	18-36	+/-12	+/-625	762	18	82	1000
KWD-2415	18-36	+/-15	+/-500	753	18	83	1000
KWD-2424	18-36	+/-24	+/-313	750	20	83	1000
KWS-4803.3	36-72	3.3	3600	321	10	77	1000
KWS-4805	36-72	5	3000	396	10	79	1000
KWS-4809	36-72	9	1670	385	10	81	1000
KWS-4812	36-72	12	1250	381	9	82	1000
KWS-4815	36-72	15	1000	381	9	82	1000
KWS-4824	36-72	24	625	375	9	83	1000
KWD-4805	36-72	+/-5	+/-1500	375	10	83	1000
KWD-4812	36-72	+/-12	+/-625	381	9	82	1000
KWD-4815	36-72	+/-15	+/-500	381	9	82	1000
KWD-4824	36-72	+/-24	+/-313	375	9	83	1000

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

¹ NOMINAL INPUT VOLTAGE.

² NOMINAL INPUT VOLTAGE, FULL LOAD.

● **SELECTION GUIDE(2)**
3:1 15W OUTPUT

MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT ³ CURRENT(mA)		EFF (%) ⁴	ISOLATION (VDC)
				FULL LOAD	NO LOAD		
				KWS-1205G	9-27		
KWS-1209G	9-27	9	1670	1600	30	78	1000
KWS-1212G	9-27	12	1250	1562	40	80	1000
KWS-1215G	9-27	15	1000	1562	38	80	1000
KWS-1224G	9-27	24	625	1562	28	80	1000
KWD-1205G	9-27	+/-5	+/-1500	1623	40	77	1000
KWD-1212G	9-27	+/-12	+/-625	1562	40	80	1000
KWD-1215G	9-27	+/-15	+/-500	1562	38	80	1000
KWS-2405G	18-54	5	3000	791	20	79	1000
KWS-2409G	18-54	9	1670	782	20	80	1000
KWS-2412G	18-54	12	1250	771	18	81	1000
KWS-2415G	18-54	15	1000	762	18	82	1000
KWS-2424G	18-54	24	625	762	15	82	1000
KWD-2405G	18-54	+/-5	+/-1500	791	20	79	1000
KWD-2412G	18-54	+/-12	+/-625	771	18	81	1000
KWD-2415G	18-54	+/-15	+/-500	762	18	82	1000

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

³ NOMINAL INPUT VOLTAGE.

⁴ NOMINAL INPUT VOLTAGE, FULL LOAD.

● **SELECTION GUIDE(3)**
4:1 15W OUTPUT

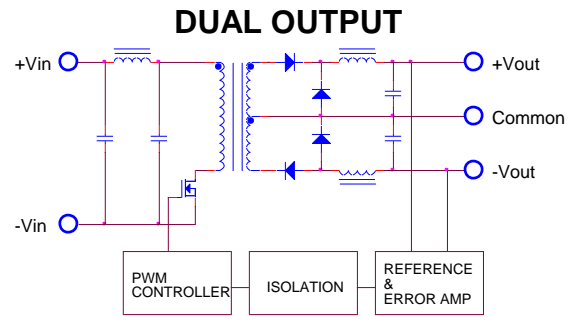
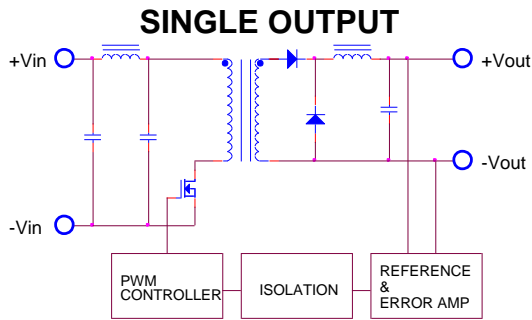
MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT ⁵		EFF (%) ⁶	ISOLATION (VDC)
				CURRENT(mA)			
				FULL LOAD	NO LOAD		
KWS-1203.3TA	9-36	3.3	4000	1430	40	77	1000
KWS-1205T	9-36	5	3000	1623	40	77	1000
KWS-1209T	9-36	9	1670	1600	30	78	1000
KWS-1212T	9-36	12	1250	1562	40	80	1000
KWS-1215T	9-36	15	1000	1562	38	80	1000
KWS-1224T	9-36	24	625	1562	28	80	1000
KWD-1205T	9-36	+/-5	+/-1500	1623	40	77	1000
KWD-1212T	9-36	+/-12	+/-625	1562	40	80	1000
KWD-1215T	9-36	+/-15	+/-500	1562	38	80	1000
KWS-2405T	18-72	5	3000	791	20	79	1000
KWS-2409T	18-72	9	1670	782	20	80	1000
KWS-2412T	18-72	12	1250	771	18	81	1000
KWS-2415T	18-72	15	1000	762	18	82	1000
KWS-2424T	18-72	24	625	780	18	80	1000
KWD-2405T	18-72	+/-5	+/-1500	791	20	79	1000
KWD-2412T	18-72	+/-12	+/-625	771	18	81	1000
KWD-2415T	18-72	+/-15	+/-500	762	18	82	1000

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

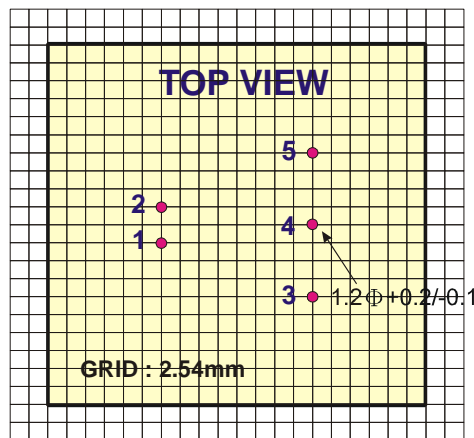
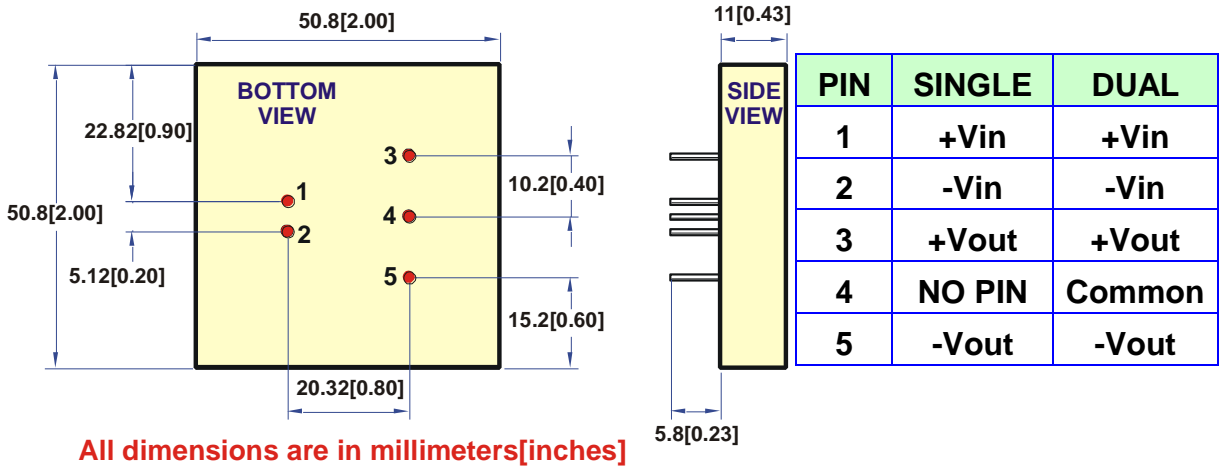
⁵ NOMINAL INPUT VOLTAGE.

⁶ NOMINAL INPUT VOLTAGE, FULL LOAD.

● SIMPLIFIED SCHEMATIC

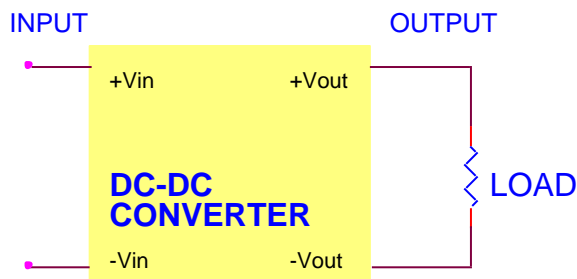


● MECHANICAL DIMENSIONS & RECOMMENDED FOOTPRINT DETAILS

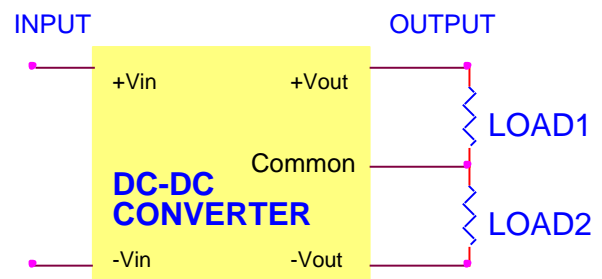


● TYPICAL APPLICATIONS

SINGLE OUTPUT



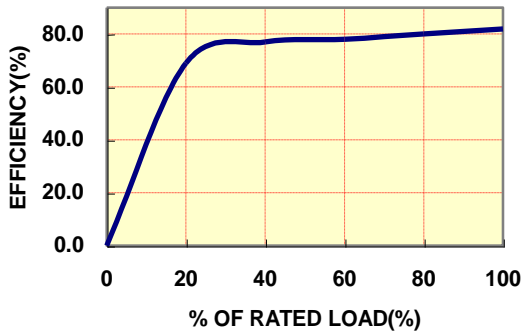
DUAL OUTPUT



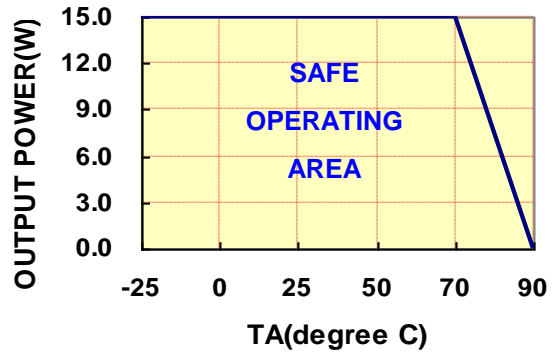
● TYPICAL PERFORMANCE CURVES

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

9-18V or 9-27V or 9-36V INPUT VOLTAGE(VDC)	18-36V or 18-54V or 18-72V INPUT VOLTAGE(VDC)	36-72V INPUT VOLTAGE(VDC)
3000mA Slow-Blow Type	1500mA Slow-Blow Type	750mA Slow-Blow Type

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

KW SERIES APPLICATION NOTES:

EXTERNAL CAPACITANCE REQUIREMENTS:

No external capacitance is required for operation of the KW 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.