

DCWS SERIES

15W WIDE INPUT RANGE

DANUBE

FEATURES

- 15 WATTS OUTPUT POWER
- ULTRA COMPACT SIZE:1.0"x1.0"x0.4"
- INDUSTRY STANDARD PACKAGE
- 9V-18V,18V-36V,36V-75V WIDE INPUT RANGE
- 100% BURN IN
- HIGH EFFICIENCY
- UL 94V-0 PACKAGE MATERIAL
- CUSTOM SOLUTIONS AVAILABLE
- 3 YEARS WARRANTY



OUTPUT SPECIFICATIONS		INPUT SPECIFICATIONS	
Voltage Set-point Accuracy	+/-2% max.	Input Voltage Range	2:1
Temperature Coefficient	+/-0.03%/°C	Input Filter	Pi Network
Ripple & Noise(20MHz BW) ¹	100mVp-p max.	Remote ON/OFF Control	Table 1
Line Regulation ²	+/-0.5% max.	Protection	Fuse Recommended
Load Regulation ³	+/-0.5% max.	GENERAL SPECIFICATIONS	
Minimum load	10% of Full Load	Efficiency	86% typ.
Short Circuit Protection	Continuous	Isolation Voltage ⁴	1500 VDC min.
Short Circuit Restart	Automatic	Isolation Resistance	10 ⁹ ohms min.
External Trim Adj. Range	+/-10%	Isolation Capacitance	1500pF max.
Over Load Protection	150% typ.	Switching Frequency	400KHz typ.
Transient Response ⁵	500uS max.	Weight	15g typ.
ENVIRONMENTAL SPECIFICATIONS		Case Material	Six-Side Shielded Case
Operating Temperature	-40°C to +100°C (with derating)	Case Size	25.4mm*25.4mm*10.2mm
Case Temperature	+110°C max.	Potting Material	Epoxy(UL94V-0)
Storage Temperature	-55°C to +125°C	Radiated Emissions	EN55032 Class A
Humidity	95% max.	MTBF ⁶	>400000 Hours
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 @Ta=25 °C, Ground Benign.

● SELECTION GUIDE 2:1 15W OUTPUT

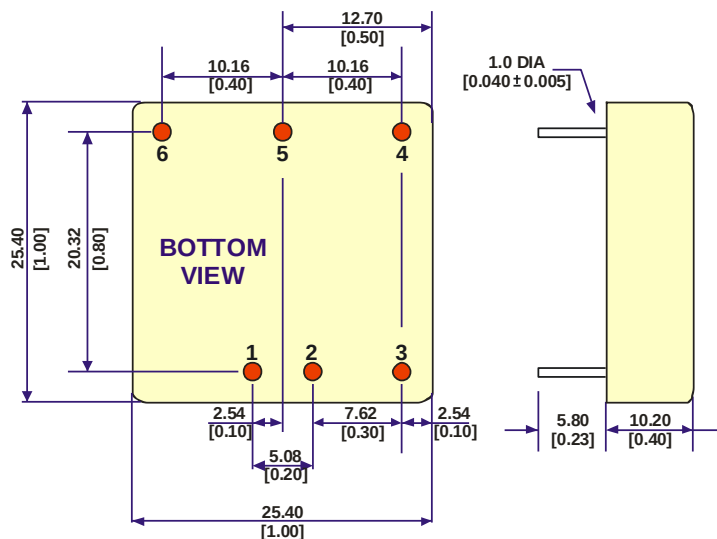
MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT ⁷ CURRENT (mA)		EFF (%) ⁸	ISOLATION (VDC)	CAPACITOR LOAD MAX.
				FULL LOAD	NO LOAD			
DCWS-1203.3	9-18	3.3	4000	1341	90	82	1500	1000uF
DCWS-1205	9-18	5	3000	1453	80	86	1500	1000uF
DCWS-1212	9-18	12	1250	1437	30	87	1500	470uF
DCWS-1215	9-18	15	1000	1420	30	88	1500	330uF
DCWS-2403.3	18-36	3.3	4000	671	70	82	1500	1000uF
DCWS-2405	18-36	5	3000	718	60	87	1500	1000uF
DCWS-2412	18-36	12	1250	718	30	87	1500	470uF
DCWS-2415	18-36	15	1000	710	30	88	1500	330uF
DCWS-4803.3	36-75	3.3	4000	336	45	82	1500	1000uF
DCWS-4805	36-75	5	3000	363	40	86	1500	1000uF
DCWS-4812	36-75	12	1250	363	30	86	1500	470uF
DCWS-4815	36-75	15	1000	359	30	87	1500	330uF

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

⁷ NOMINAL INPUT VOLTAGE.

⁸ NOMINAL INPUT VOLTAGE, FULL LOAD.

● MECHANICAL DIMENSIONS & RECOMMENDED FOOTPRINT DETAILS



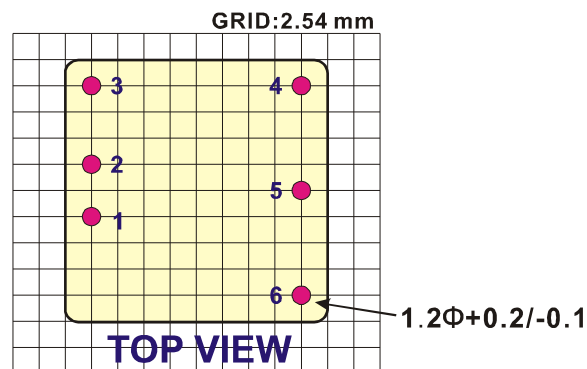
PIN	SINGLE
1	+Vin
2	-Vin
3	Remote On/Off
4	-Vout
5	Trim
6	+Vout

NOTE: Pin Size is Tolerance $1.0\Phi \pm 0.10\text{mm}$

All dimensions are in millimeters [inches]

Tolerance .X or .XX = $\pm 1.0\text{mm}$

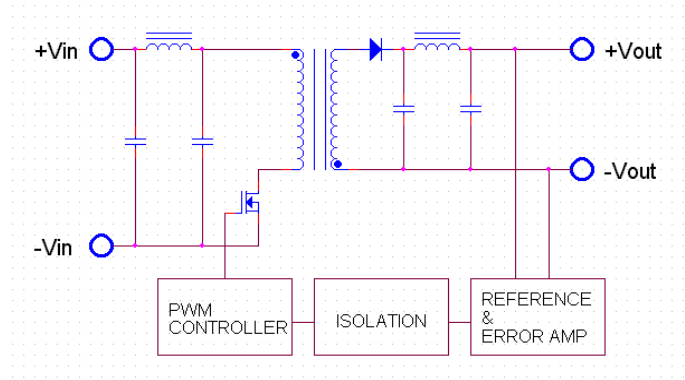
All dimensions are in mm[inches]



● Table1 (Remote On/Off Control)

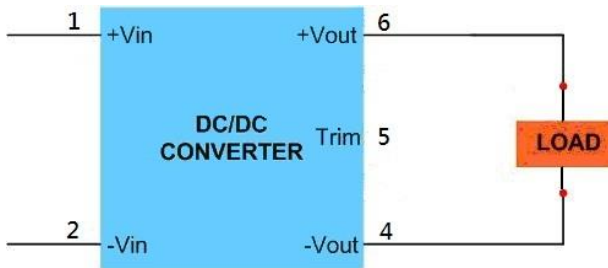
Remote On/Off Control			
Control Input		PIN3	Control Common
Control Voltage			PIN2
ON		>+2.5VDC or Open Circuit	Converter Shutdown Idle Current
OFF		<+0.5VDC or Jumper to PIN2	10mA
			Logic Compatibility
			CMOS or Open Collector TTL

● SIMPLIFIED SCHEMATIC

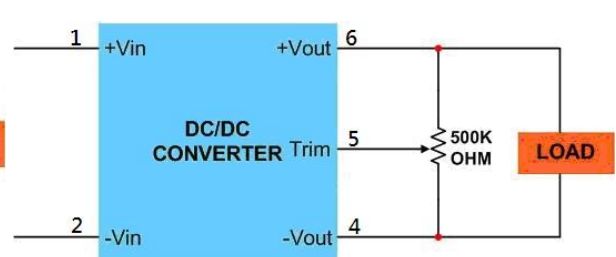


● TYPICAL APPLICATIONS

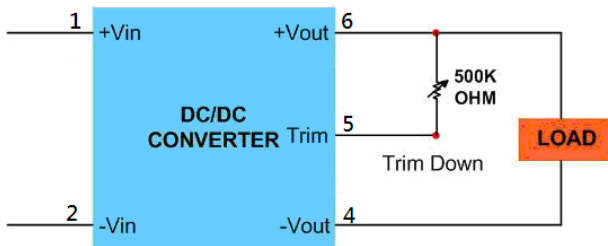
FIXED VOLTAGE OUTPUT



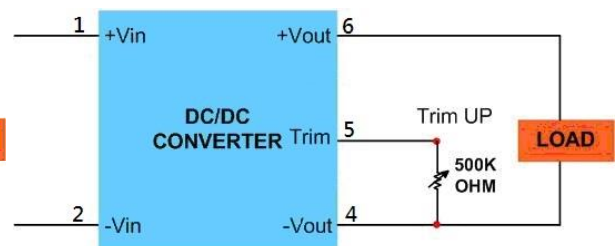
TRIM CONNECTIONS USING A TRIMPOT



FIXED-VALUE TRIM DOWN RESISTOR



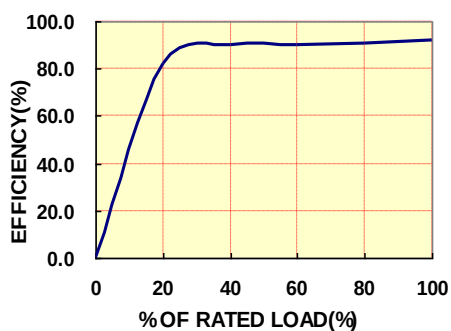
FIXED-VALUE TRIM UP RESISTOR



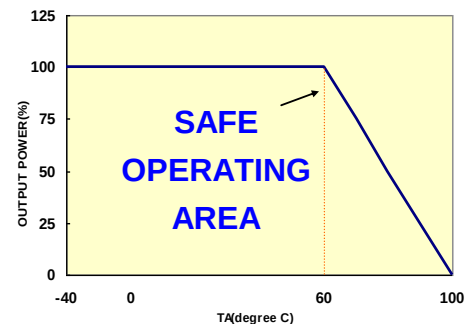
● TYPICAL PERFORMANCE CURVES

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 INPUT VOLTAGE(VDC)	18-36V INPUT VOLTAGE(VDC)	36-75V INPUT VOLTAGE(VDC)
4000 mA Slow-Blow Type	2000 mA Slow-Blow Type	1000 mA Slow-Blow Type

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

DCWS SERIES APPLICATION NOTES:

EXTERNAL CAPACITANCE REQUIREMENTS:

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

Negative Outputs:

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

Remote ON/OFF:

The remote ON/OFF pin may be left floating if this function is not use. It is recommended to drive this pin with an open collector arrangement or a relay contact. When the ON/OFF pin is pulled low with respect to the -Vin, the converter is placed in a low power drain state.

Output TRIM:

The TRIM pin may be used to adjust the output +/-10% from the nominal setting .this function allows adjustment for voltage drops in the system wiring. If the TRIM function is not required the pin may be left floating.

FOR MORE INFORMATION CALL:

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Home Page

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