

Preliminary 5 to 6 Watt HW Dual Series DC/DC Converters

Features

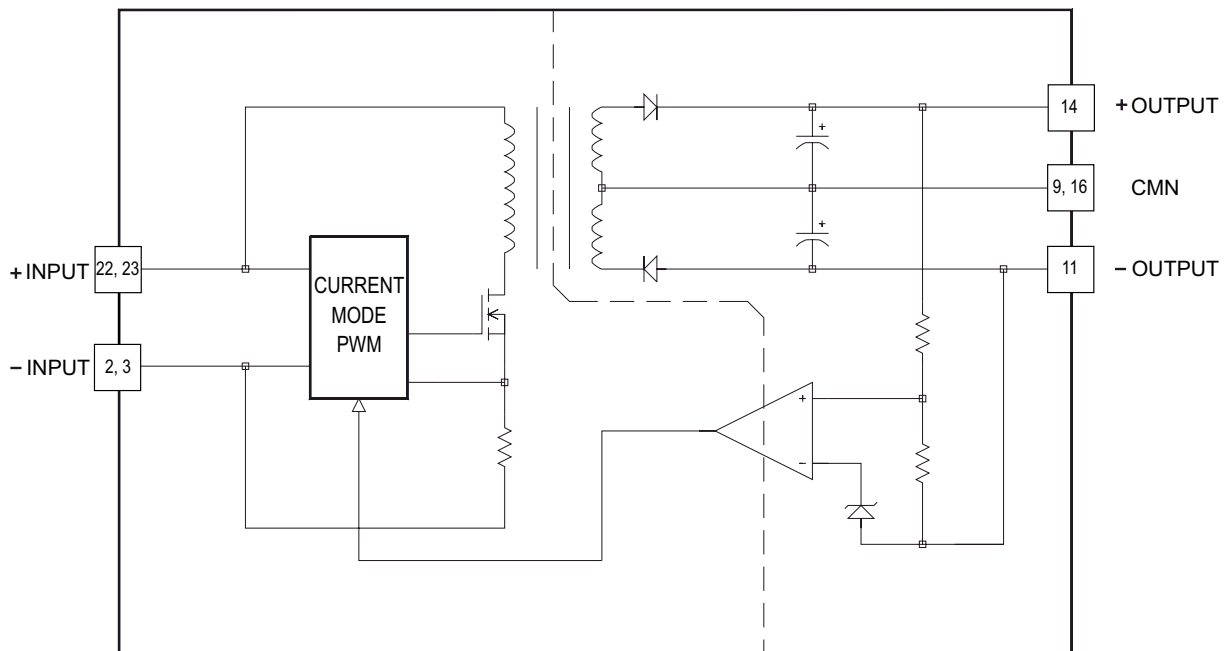
- 2:1 Input Voltage Range
- Internal Input Filter
- Industry Standard Pinout
- Isolation Voltage to 1544 VDC
- Water Washable Case Design
- Fully Self Contained,
No External Parts Required for Operation

Description

These 5 Watt DC/DC Converters were designed for fast integration with your systems power needs. With no external components or filtering necessary for all but the most critical applications, these converters can provide power instantly. This saves you costly engineering time required to design your system around the power converter.

Selection Chart				
Model	Input Range VDC		Output VDC	Output mA
	Min	Max		
12D5.500HW	9	18	±5	500
12D12.250HW	9	18	±12	250
12D15.200HW	9	18	±15	200
24D5.500HW	18	36	±5	500
24D12.250HW	18	36	±12	250
24D15.200HW	18	36	±15	200
48D5.500HW	36	75	±5	500
48D12.250HW	36	75	±12	250
48D15.200HW	36	75	±15	200

5 to 6 Watt Dual HW Series Block Diagram



Preliminary 5 to 6 Watt HW Dual Series DC/DC Converters

Input Parameters								
Model		12D5.500HW	12D12.250HW	12D15.200HW	24D5.500HW	24D12.250HW	24D15.200HW	Units
Voltage Range (1)	MIN MAX	9 18			18 36			VDC
Input Current, Full Load	MAX	541	641	641	264	308	308	mA
Efficiency	TYP	77	78	78	79	81	81	%
Switching Frequency	TYP	400						kHz
Turn-on Time, 1% Output Error	TYP	45						ms
Recommended Fuse		(3)						AMPS
Model		48D5.500HW		48D12.250HW		48D15.200HW		Units
Voltage Range (1)	MIN MAX	36 75						VDC
Input Current, Full Load	MAX	128		150		150		mA
Efficiency	TYP	81		83		83		%
Switching Frequency	TYP	400						kHz
Turn-on Time, 1% Output Error	TYP	45						ms
Recommended Fuse		(3)						AMPS

Output Parameters				
Model		12D5.500HW 24D5.500HW 48D5.500HW	12D12.250HW 24D12.250HW 48D12.250HW	12D15.200HW 24D15.200HW 48D15.200HW
Output Voltage		±5	±12	±15
Rated Load Range	MIN MAX	±50 ±500	±25 ±250	±20 ±200
Initial Setpoint Accuracy	TYP MAX	±1 ±3		
Output Balance	TYP	±1		
Load Regulation, Both Loads changed from Max to Min load (5)	TYP	±1		
Cross Regulation, One Load at Min	TYP	±1		
Line Regulation Vin=Max to Min	TYP	±0.3		
Noise, 20mHz bw (2)	TYP	1% of Output		
Noise, 20mHz bw	TYP	3		
Temperature Coefficient (4)	TYP	100		
Short Circuit to CMN Room Amb, Nominal Vin		Continuous Auto Restart		

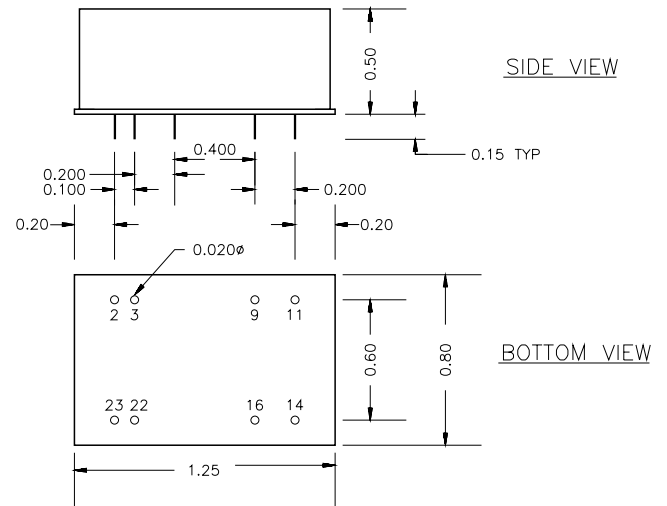
Preliminary 5 to 6 Watt HW Dual Series DC/DC Converters

General Specifications			
All Models			Units
Isolation			
Isolation Voltage Input to Either Output	MIN	1544	VDC
Input to Output Capacitance	TYP	1500	pF
Environmental			
Case Operating Range	MIN MAX	-40 +100	°C
Ambient Temperature	MIN MAX	-40 +71	°C
Storage Range	MIN MAX	-40 +110	°C
Thermal Impedance (7)	TYP	20	°C/Watt
General			
Unit Weight	TYP	0.5	oz
Case Dimension	0.80" x 1.25" x 0.50"		
Agency Approvals Pending	UL/CUL 60950		

NOTES:

- (1) All parameters measured at Tc=25°C, nominal input voltage and full rated load unless otherwise noted. Refer to the CALEX Application Notes for the definition of terms.
- (2) Output Noise is measured with a 1μF tantalum capacitor and a 0.01μF ceramic capacitor across the output. The fundamental component of noise is at the switching frequency and also is commonly referred to as ripple.
- (3) External fusing should be used for system protection due to a catastrophic failure. See CALEX Application Note 9 in the Calex DC/DC Catalog to determine correct fuse.
- (4) Temperature coefficient is defined for case temperatures. Output voltage deviation is calculated as the maximum resulting from either 1) 25°C case to maximum operating case temperature, or 2) 25°C case to minimum operating case temperature.
- (5) Below the minimum rated load, the output may exhibit noise performance degradation. Operation with less than minimum rated load will not damage the unit, and the DC regulation is not significantly affected.
- (6) Water washable units will not be damaged by a water wash process. However, they are not hermetically sealed.
- (7) The case thermal impedance is specified and the case temperature rise over ambient per package watt dissipated.
- (8) Specifications subject to change without notice.

Mechanical Outline and Connector Pin Assignments



Mechanical tolerances unless otherwise noted:

X.XX dimensions: ±0.030 inches

X.XXX dimensions: ±0.005 inches

All dimensions in inches.

Pin	Function
2, 3	-INPUT
9, 16	OUTPUT CMN
11	-OUTPUT
14	+OUTPUT
22, 23	+INPUT