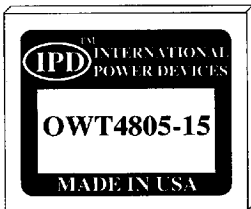




OW Series of 25 Watt DC/DC Converters

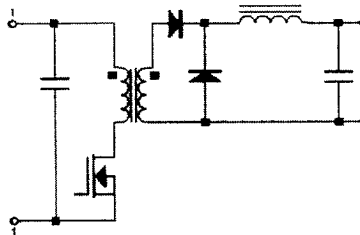


STANDARD HIGH-DENSITY DC/DC CONVERTERS WITH SINGLE, DUAL OR TRIPLE REGULATED OUTPUTS. AN INTERNAL INPUT FILTER IS STANDARD AND IS USED TO REDUCE REFLECTED RIPPLE CURRENT. ALL MODELS FEATURE A NICKEL-PLATED COPPER CASE WITH SIX-SIDED SHIELDING.



DIMENSIONS:
2.00" x 2.00" x 0.50"
(50.80) x (50.80) x (12.70)mm

BLOCK DIAGRAM



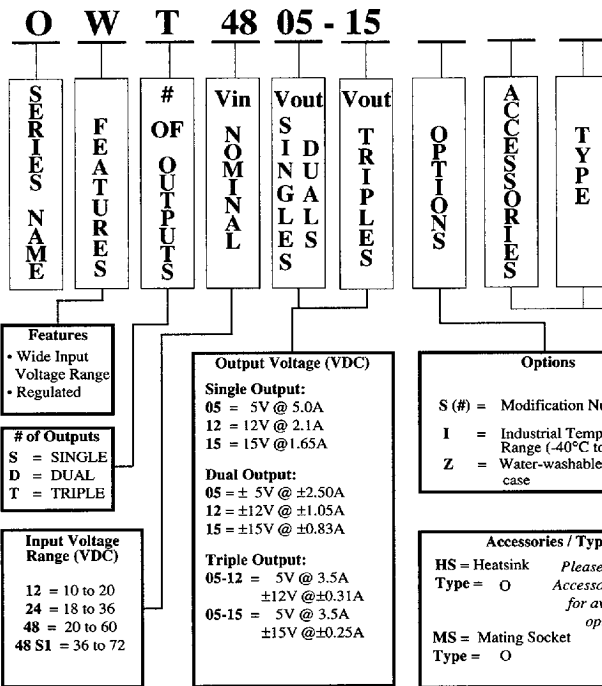
FEATURES

- Industry Standard Pin Out
- Up to 86% Efficiency
- Current Mode Control
- Wide Input Voltage
- 500VDC I/O Isolation
- Continuous Short Circuit Protection

APPLICATIONS

- Telecommunication
- Data Processing Equipment
- Industrial Equipment
- Medical Equipment
- A/D and D/A Converters
- Distributed Power Systems

PART NUMBER SELECTION GUIDE



INTERNATIONAL POWER DEVICES, INC.
20 Linden Street, Boston, MA 02134 • Phone: (617)782-3331 • Fax: (617)782-7416



■ 4853809 0000326 74T ■



OW Series of 25 Watt DC/DC Converters



PARAMETER	MIN	TYP	MAX	UNITS	CONDITIONS	NOTES	
GENERAL:							
Switching Frequency	250	300	350	KHz		1. No derating required up to a maximum case temperature of 85°C. See efficiency and thermal impedance data provided. Internal Power Dissipation = $P_{out} * (1 - \text{Eff}) / \text{Eff}$.	
Isolation Voltage							
Input to Output	500			VDC			
Input to Case				VDC	Note 4		
Output to Case				VDC	Note 4		
Isolation Resistance							
Input to Output	10 ⁹			Ohms			
Short Circuit Protection					Note 3		
ENVIRONMENTAL:							
Operating Temperature	-25		85	°C	Note 1		
Storage Temperature	-40		125	°C	Ambient		
Operating Humidity			95%		Non-Condensing		
Storage Humidity			95%		Non-Condensing		
REMOTE ON/OFF CONTROL:							
Compatibility					TTL, CMOS, Relay	3. Continuous Short Circuit Protection is provided. For dual output units the short circuit current on each individual output is equivalent to the short circuit current for a single output unit.	
On Control				VDC			
Off Control				VDC			
INPUT:							
Input Voltage						4. For 48V input models, the case is connected to +Vin. For all other input voltages, the case is tied to either -Vout (Singles) or the Output Common (Duals).	
12 Vin	10.0	12.0	20.0	VDC			
24 Vin	18.0	24.0	36.0	VDC			
48 Vin	20.0	48.0	60.0	VDC			
48S1 Vin	36.0	48.0	72.0	VDC			
Input Current							
12Vin			3.50	Amps	Note 2		
24 Vin			1.60	Amps	Note 2		
48 Vin			0.80	Amps	Note 2		
Reverse Input Current			100%	Iin max			
Input Ripple Current			20%	Iin max			
OUTPUT:							
Singles:							
Trim			±10.0%	Vout		Full Load 10% to 100% LL to HL Note 3	
Voltage Accuracy			±1.00%	Vout			
Load Regulation			±1.00%	Vout			
Line Regulation			±1.00%	Vout			
Current Limit			130%	Iout			
Duals:							
Trim			±10.0%	Vout			
Voltage Accuracy							
+Vout			±1.00%	Vout	Full Load		
-Vout			±1.00%	Vout	Full Load		
Load Regulation							
+Vout			±1.00%	Vout	10% to 100%		
-Vout			±5.00%	Vout	10% to 100%		
Line Regulation			±1.00%	Vout	LL to HL		
Current Limit			130%	Iout	Note 3		

* All specifications typical at +25°C Nominal Line and Full Load unless otherwise noted.
 * Specifications subject to change without notice.



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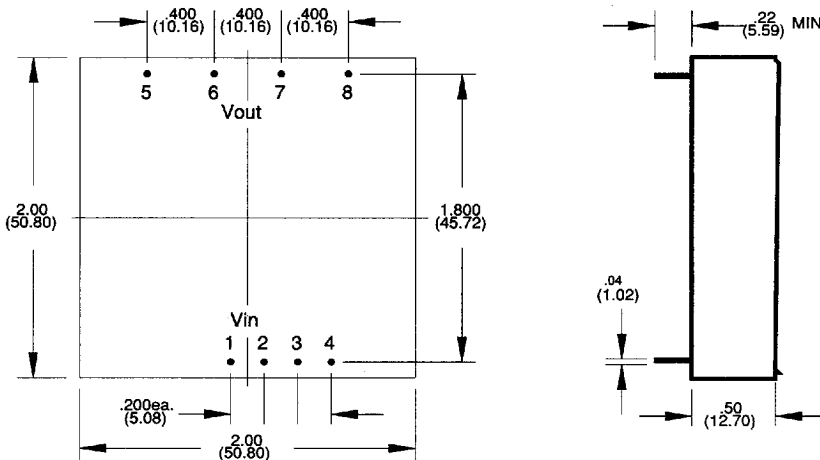
OW Series of 25 Watt DC/DC Converters



PARAMETER	MIN	TYP	MAX	UNITS	CONDITIONS	NOTES
OUTPUT (Con't.) Triples:						3. Continuous Short Circuit Protection is provided. For dual output units the short circuit current on each individual output is equivalent to the short circuit current for a single output unit.
Voltage Accuracy						
Vout 1			±1.00%	Vout	Full Load	
Vout 2			±5.00%	Vout	Full Load	
Vout 3			±5.00%	Vout	Full Load	
Load Regulation						
Vout1			±1.00%	Vout	10% to 100%	
Vout 2			±5.00%	Vout	10% to 100%	
Vout 3			±5.00%	Vout	10% to 100%	
Line Regulation						
Vout			±1.00%	Vout	LL to HL	
Current Limit			130%	Iout	Note 3	
Temp. Coefficient			+0.02%	°C		
Voltage Stability			+0.05%	Vout		
Ripple and Noise			1.00%	Vout	p-p, 20 MHz BW	
Transient Response			500	µS	1% Error Band	
25% step full load						

BOTTOM VIEW

Mechanical tolerances are ± 0.040"



Specifications are subject to change without notice.

All Dimensions are in inches (MM)



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PIN CONNECTIONS

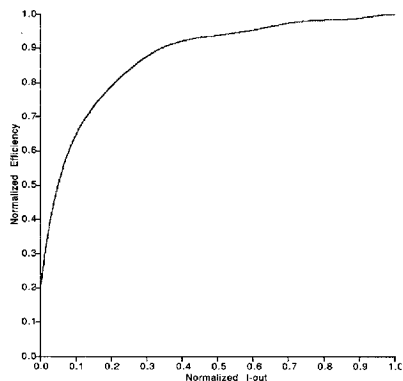
PIN #	SINGLE	DUAL	TRIPLE
1	+Vin	+Vin	+Vin
2	-Vin	-Vin	-Vin
3	No Pin	No Pin	No Connect
4	On/Off	On/Off	On/Off
5	No Connect	+Vout	+Aux. Out
6	+Vout	Common	+5Vout
7	-Vout	-Vout	Common
8	Trim	Trim	-Aux. Out

THERMAL IMPEDANCE

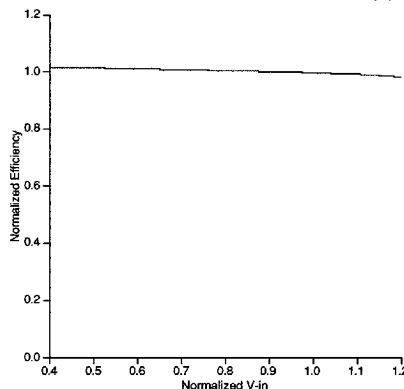
NATURAL CONVECTION	Typical R _{θCA}
100 LFPM	16°C/W
200 LFPM	12°C/W
300 LFPM	8.0°C/W
400 LFPM	6.5°C/W
	5.0°C/W

Thermal Impedance data depends upon many environmental factors and may vary from application to application. The numbers provided are intended as a guide. The exact thermal performance should be validated in each application.

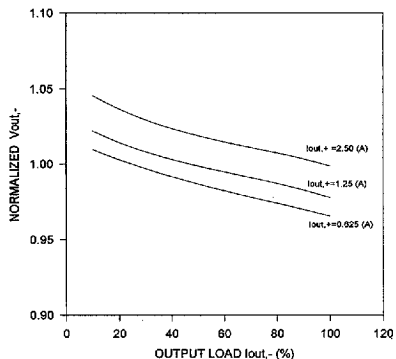
EFFICIENCY vs. LOAD (Typical)



EFFICIENCY vs. Vin (Typical)



TYPICAL CROSS-REGULATION (Dual Output Units)



TYPICAL CROSS-REGULATION (Triple Output Units)

