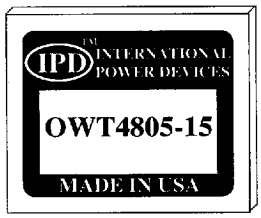
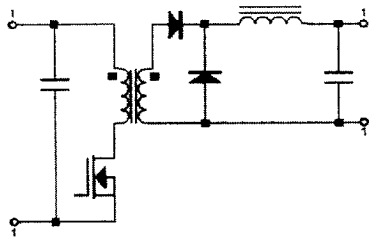
STANDARD HIGH-DENSITY DC/DC CONVERTERS WITH SINGLE, DUAL OR TRIPLE REGULATED OUTPUTS. AN INTERNAL INPUT FILTER IS STANDARD AND IS USED TO REDUCE REFLECTED RIPPLE CURRENT. ALL MODELS FEATURE A NICKEL-PLATED COPPER CASE WITH SIX-SIDED SHIELDING.



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

O W T 48 05 - 15

O	W	T	48	05	-	15			
SERIES NAME	FEATURES	# OF OUTPUTS	Vin NOMINAL	Vout SINGLES DUALS		Vout TRIPLES	OPTIONS	ACCESSORIES	TYPE

Features
- Wide Input Voltage Range
- Regulated

# of Outputs
S = SINGLE
D = DUAL
T = TRIPLE

Input Voltage Range (VDC)
12 = 10 to 20
24 = 18 to 36
48 = 20 to 60
48 S1 = 36 to 72

Output Voltage (VDC)

Single Output:
05 = 5V @ 5.0A
12 = 12V @ 2.1A
15 = 15V @1.65A

Dual Output:
05 = ± 5V @ ±2.50A
12 = ±12V @ ±1.05A
15 = ±15V @ ±0.83A

Triple Output:
05-12 = 5V @ 3.5A ±12V @±0.31A
05-15 = 5V @ 3.5A ±15V @±0.25A

Options
S (#) = Modification Number
I = Industrial Temperature Range (-40°C to +85°C)
Z = Water-washable sealed case

Accessories / Type
HS = Heatsink Type = O
MS = Mating Socket Type = O
Please Consult Accessories Page for available options

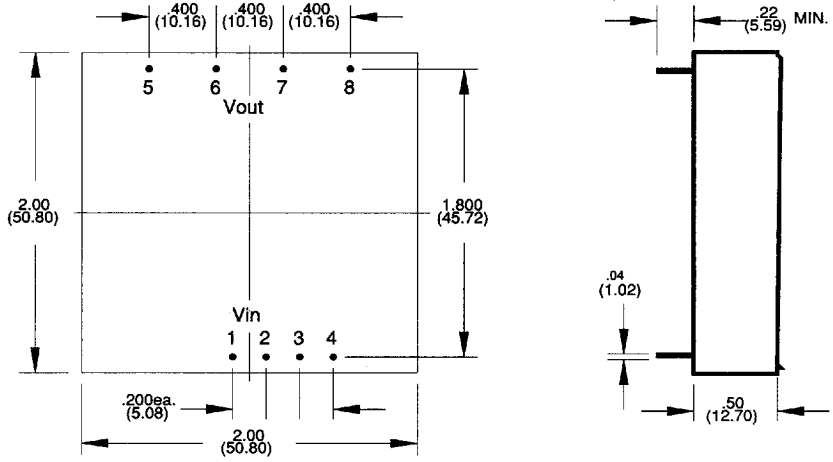
PARAMETER	MIN	TYP	MAX	UNITS	CONDITIONS	NOTES
GENERAL:						
Switching Frequency	250	300	350	KHz		1. No derating required up to a maximum case temperature of 85°C. See efficiency and thermal impedence data provided. Internal Power Dissipation = Pout* (1-Eff) / Eff.
Isolation Voltage						
Input to Output	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	2. Provided for input fuse selection.
Storage Humidity			95%		Non-Condensing	
REMOTE ON/OFF CONTROL:						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.
Compatibility					TTL, CMOS, Relay	
On Control				VDC		
Off Control				VDC		
INPUT:						
Input Voltage						
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	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).
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		
Voltage Accuracy			±1.00%	Vout	Full Load	
Load Regulation			±1.00%	Vout	10% to 100%	
Line Regulation			±1.00%	Vout	LL to HL	
Current Limit			130%	Iout	Note 3	
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.

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			±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"



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All Dimensions are in inches (MM)

PIN CONNECTIONS

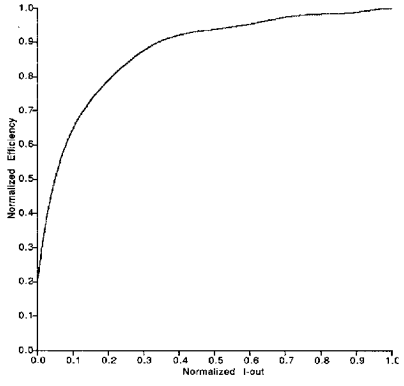
PIN #	SINGLE	DUAL	TRIPLE
1	+Vin	+Vin	+Vin
2	-Vin	-Vin	-Vin
3	No Pin	No Pin	No Connect
4	On/Off	On/Off	On/Off
5	No Connect	+Vout	+Aux. Out
6	+Vout	Common	+5Vout
7	-Vout	-Vout	Common
8	Trim	Trim	-Aux. Out

THERMAL IMPEDANCE

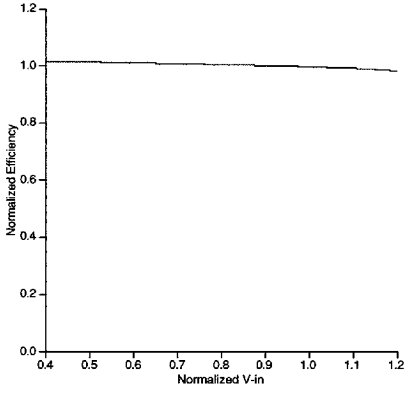
	Typical RθCA
NATURAL CONVECTION	16°C/W
100 LFPM	12°C/W
200 LFPM	8.0°C/W
300 LFPM	6.5°C/W
400 LFPM	5.0°C/W

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.

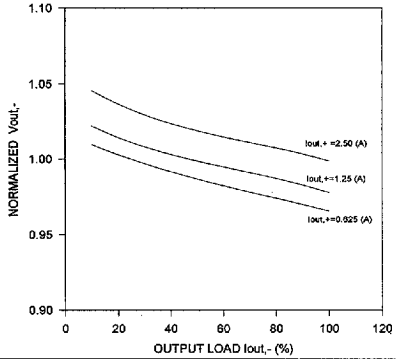
EFFICIENCY vs. LOAD (Typical)



EFFICIENCY vs. Vin (Typical)



TYPICAL CROSS-REGULATION (Dual Output Units)



TYPICAL CROSS-REGULATION (Triple Output Units)