

# OBD SERIES

25 Watt DC/DC Converters - Dual Output

IPD's new OBD series of isolated converters provides up to 25W of dual output power in a 2" x 2" x 0.40" package size, with an industry standard pinout. Remote shutdown is provided, output voltages can be externally trimmed  $\pm 10\%$  from factory settings, 1500V isolation is standard, and all units incorporate an input pi filter network to control reflected ripple currents. Units are encapsulated and housed in a nickel plated copper case. Six-sided shielding is provided. These converters are water washable.

## SPECIFICATIONS

Output voltage setpoint accuracy	$\pm 1\%$
Line regulation $V_{IN}$ min. - $V_{IN}$ max., $I_{OUT}$ rated	0.2% $V_o$
Load regulation $I_{OUT}$ min. - $I_{OUT}$ max., $V_{IN}$ nom.	0.5% $V_o$
Temperature coefficient	$\pm 0.03\% / ^\circ C$
Dynamic regulation, 25% loadstep	
Pk Deviation	4%
Settling time to regulation band	500 $\mu s$
Overvoltage protection trip range, % $V_{OUT}$ nom.	115 - 140%
Minimum output current, % $I_{OUT}$ rated	10%
Power limit threshold range	110 - 140%
Switching frequency	400 kHz
Remote shutdown	
Logic low	Module "Off"
Logic high	Module "On"
Remote shutdown reference	$V_{IN}$ negative
Output voltage trim range	$\pm 10\%$
Turn on time, $V_{IN}$ nom., resistive load	
12V	300 mS
24, 48V	10 mS
Input reverse voltage protection	Shunt diode
Reflected ripple current	
$V_{IN}$ nom., $I_{OUT}$ rated, 0-20 MHz	25 mA Pk-Pk
Isolation	1500 VDC
Input - output resistance	$>10 M\Omega_{OHM}$
Case temperature, operating range	
12V	-40 to +85 $^\circ C$
24V, 48V	-40 to +100 $^\circ C$
Case temperature, storage range	-40 to +110 $^\circ C$
Humidity max, non-condensing	95%
Vibration, 3 Axes, 5 minutes ea.	5g, 10-55 Hz
Safety <sup>1</sup>	UL 1950, CSA 22.2-950, EN60950
MTBF <sup>†</sup> (Bellcore TR-NWT-000332)	$1.9 \times 10^6$ hrs
Weight (approx.)	1.4 oz. (40 gms)

<sup>1</sup> Consult factory for conditions of acceptance.

<sup>†</sup> MTBF predictions may vary slightly from model to model.

Specifications typical at 25 $^\circ C$ , nominal line, and full load - unless otherwise stated.

Specifications subject to change without notice.

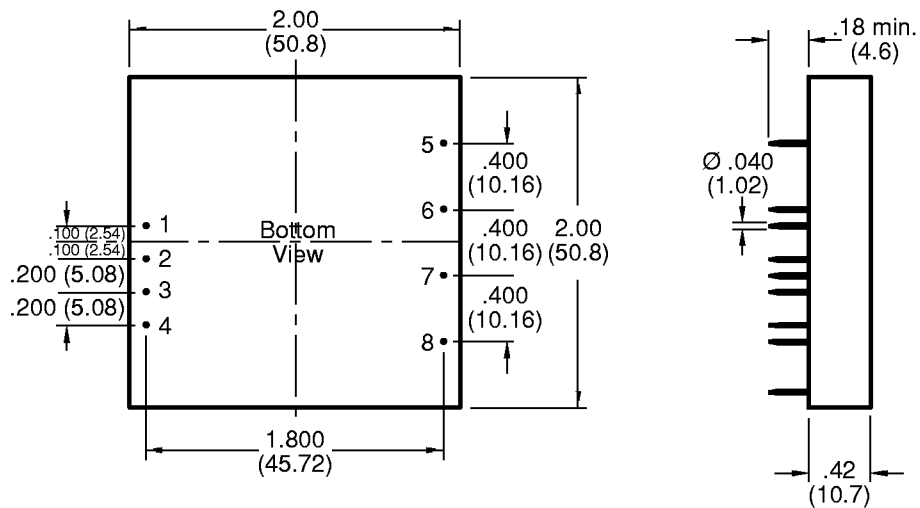
# O B D S E R I E S

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V <sub>IN</sub> (VDC)	Range (Volts)	I <sub>N</sub> max* (Amps)	V <sub>OUT</sub>	I <sub>OUT</sub> Rated (Amps)	R <sub>pp</sub> e & Noise Pk-Pk (mV)	Efficiency Typ.**	Model
12	10 - 20	3.8	± 5.0	± 2.5	75/75	80%	OBD025XGG
12	10 - 20	3.6	± 12.0	± 1.0	120/120	85%	OBD025XHH
12	10 - 20	3.6	± 15.0	± 0.85	150/150	87%	OBD025XJJ
24	18 - 36	1.8	± 5.0	± 2.5	75/75	81%	OBD025YGG
24	18 - 36	1.7	± 12.0	± 1.0	120/120	86%	OBD025YHH
24	18 - 36	1.7	± 15.0	± 0.85	150/150	88%	OBD025YJJ
48	34 - 75	0.93	± 5.0	± 2.5	75/75	80%	OBD025ZGG
48	34 - 75	0.91	± 12.0	± 1.0	120/120	86%	OBD025ZHH
48	34 - 75	0.91	± 15.0	± 0.85	150/150	88%	OBD025ZJJ

\* Max input current at minimum input voltage, maximum rated output power.

\*\* At nominal V<sub>IN</sub>, rated output.



For optional 0.11 pin length, consult factory.

Pin Function	Tolerances (unless otherwise specified)	
1 +V <sub>IN</sub>	Inches	(Millimeters)
2 -V <sub>IN</sub>	.XX ± .020	X ± 0.5
3 No Connect	.XXX ± .010	.XX ± .25
4 Shutdown		
5 +V <sub>OUT</sub>	Pin:	
6 Common	±.002	±.05
7 -V <sub>OUT</sub>		
8 Trim		

In North America, call 1-888-IPD-CONVERTERS for more information.

4 7 3 - 2 6 6 8

Case connection: 48V input units-Pin 1. All others-Pin 6.