

## IN Series



- Regulated Dual Output
- DIP-24 Package
- 1000 VDC Isolation
- Optional Isolation Up To 6000 VDC
- Continuous Short Circuit Protection
- MTBF >3 Mhrs
- 3 Year Warranty

### Specification

#### Input

- Input Voltage Range • Nominal  $\pm 10\%$
- Input Filter • Pi network
- Input Reflected Ripple Current • 35 mA pk-pk through 12  $\mu$ H inductor 5 Hz to 20 MHz
- Input Reverse Voltage Protection • None

#### Output

- Output Voltage • See table
- Minimum Load • None <sup>(2)</sup>
- Voltage Balance •  $\pm 1\%$
- Line Regulation •  $\pm 0.5\%$  max
- Load Regulation •  $\pm 0.5\%$  max
- Setpoint Accuracy •  $\pm 2\%$  max
- Ripple & Noise • 75 mV pk-pk max, 20 MHz bandwidth
- Temperature Coefficient • 0.02%/°C
- Short Circuit Protection • Continuous with auto recovery (foldback)
- Maximum Capacitive Load •  $\pm 1000 \mu$ F for  $\pm 5$  V output  
 $\pm 470 \mu$ F for  $\pm 9$  V to  $\pm 15$  V output  
 $\pm 220 \mu$ F for  $\pm 24$  V output

#### General

- Efficiency • See table
- Isolation Voltage • 1000 VDC (6000 VDC max, see note 1)
- Isolation Resistance •  $10^9 \Omega$
- Isolation Capacitance • 60 pF typical
- Switching Frequency • 350 kHz typical
- MTBF • >3 Mhrs to MIL-HDBK-217F at 25  $\mu$ C, GB

#### Environmental

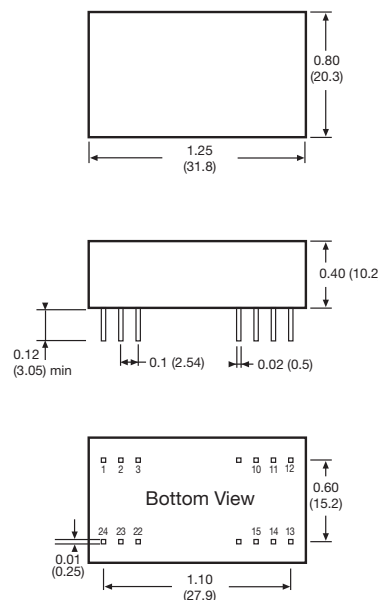
- Operating Temperature • -40 °C to +85 °C
- Storage Temperature • -40 °C to +125 °C
- Case Temperature • +100 °C max
- Cooling • Convection-cooled

#### Notes

1. Add suffix '-H' to model number for 3 kVDC isolation, '-H4' for 4 kVDC isolation, '-H5' for 5.2 kVDC isolation and '-H6' for 6 kVDC isolation.
2. Operation at no load will not damage unit but it may not meet all specifications.
3. All dimensions in inches (mm).
4. Pin pitch tolerance:  $\pm 0.014$  ( $\pm 0.35$ )
5. Case tolerance:  $\pm 0.02$  ( $\pm 0.5$ )
6. Weight: 0.02 lbs (12.2 g)

Input Voltage	Output Voltage	Output Current	Efficiency	Model Number <sup>(1)</sup>
5 VDC	$\pm 5.0$ V	$\pm 150$ mA	65%	IN0505D
	$\pm 9.0$ V	$\pm 84$ mA	67%	IN0509D
	$\pm 12.0$ V	$\pm 63$ mA	70%	IN0512D
	$\pm 15.0$ V	$\pm 50$ mA	67%	IN0515D
	$\pm 24.0$ V	$\pm 32$ mA	66%	IN0524D
12 VDC	$\pm 5.0$ V	$\pm 150$ mA	68%	IN1205D
	$\pm 9.0$ V	$\pm 84$ mA	70%	IN1209D
	$\pm 12.0$ V	$\pm 63$ mA	75%	IN1212D
	$\pm 15.0$ V	$\pm 50$ mA	72%	IN1215D
	$\pm 24.0$ V	$\pm 32$ mA	71%	IN1224D
24 VDC	$\pm 5.0$ V	$\pm 150$ mA	70%	IN2405D
	$\pm 9.0$ V	$\pm 84$ mA	73%	IN2409D
	$\pm 12.0$ V	$\pm 63$ mA	78%	IN2412D
	$\pm 15.0$ V	$\pm 50$ mA	75%	IN2415D
	$\pm 24.0$ V	$\pm 32$ mA	74%	IN2424D

### Mechanical Details



Pin	Pin Connections	
	Standard	'-H'
1	+Vin	+Vin
2	-Vout	+Vin
3	Common	No Pin
10	Common	Common
11	+Vout	Common
12	-Vin	No Pin
13	-Vin	-Vout
14	+Vout	No Pin
15	Common	+Vout
22	Common	No Pin
23	-Vout	-Vin
24	+Vin	-Vin