

# IA SERIES

## DC/DC Dual Output: 1 Watt



### Features

- Dual Output
- SIP or DIP Package
- Industry Standard Pinout
- 1000 VDC Isolation
- -40 °C to +85 °C Operation
- MTBF >1.1 Mhrs

### Specification

#### Input

Input Voltage Range	• Nominal $\pm 10\%$ <sup>(5)</sup>
Input Reflected Ripple Current	• 20 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>(6)</sup>
Line Regulation	• 1.2%/1% $\Delta$ Vin
Load Regulation	• 10% 20-100% load change (3.3 V models $\pm 20\%$ )
Setpoint Accuracy	• $\pm 3\%$
Ripple & Noise	• 75 mV pk-pk max, 20 MHz bandwidth
Temperature Coefficient	• 0.02%/°C
Maximum Capacitive Load	• $\pm 100 \mu$ F

#### General

Efficiency	• See table
Isolation Voltage	• 1000 VDC minimum
Isolation Resistance	• 10 $^{\circ}$ $\Omega$
Isolation Capacitance	• 60 pF typical
Switching Frequency	• Variable, 80 KHz typical
MTBF	• >1.12 Mhrs to MIL-HDBK-217F at 25 °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. Replace 'S' in model number with 'D' for DIP package.
2. SIP 48 Vin models, dimension is 0.28 (7.20) max.
3. DIP 48 Vin models, dimension is 0.27 (6.88) max.
4. Outputs power-trade.
5. For 48 V models a 10  $\mu$ F capacitor is required between +Vin and -Vin pins.
6. Operation at no load will not damage unit but it may not meet all specifications.
7. All dimensions in inches (mm).
8. Pin pitch tolerance:  $\pm 0.014$  ( $\pm 0.35$ )
9. Case tolerance  $\pm 0.02$  ( $\pm 0.5$ )
10. Weight: SIP 0.006 lbs (2.6 g), DIP 0.005 lbs (2.3 g)

Input Voltage	Output Voltage	Output Current <sup>(4)</sup>	Efficiency	Model Number <sup>(1)</sup>
3.3 VDC	$\pm 5.0$ V	$\pm 100$ mA	66%	IA0305S
5 VDC	$\pm 3.3$ V	$\pm 151$ mA	65%	IA0503S $\wedge$
	$\pm 5.0$ V	$\pm 100$ mA	74%	IA0505S $\dagger \wedge$
	$\pm 9.0$ V	$\pm 55$ mA	78%	IA0509S $\dagger \wedge$
	$\pm 12.0$ V	$\pm 42$ mA	78%	IA0512S $\dagger \wedge$
	$\pm 15.0$ V	$\pm 33$ mA	80%	IA0515S $\dagger \wedge$
	$\pm 24.0$ V	$\pm 21$ mA	80%	IA0524S $\wedge$
12 VDC	$\pm 3.3$ V	$\pm 151$ mA	66%	IA1203S $\wedge$
	$\pm 5.0$ V	$\pm 100$ mA	75%	IA1205S $\dagger \wedge$
	$\pm 9.0$ V	$\pm 55$ mA	76%	IA1209S $\dagger \wedge$
	$\pm 12.0$ V	$\pm 42$ mA	78%	IA1212S $\dagger \wedge$
	$\pm 15.0$ V	$\pm 33$ mA	80%	IA1215S $\dagger \wedge$
	$\pm 24.0$ V	$\pm 21$ mA	76%	IA1224S $\wedge$
24 VDC	$\pm 3.3$ V	$\pm 151$ mA	68%	IA2403S $\wedge$
	$\pm 5.0$ V	$\pm 100$ mA	74%	IA2405S $\dagger \wedge$
	$\pm 9.0$ V	$\pm 55$ mA	76%	IA2409S $\wedge$
	$\pm 12.0$ V	$\pm 42$ mA	78%	IA2412S $\dagger \wedge$
	$\pm 15.0$ V	$\pm 33$ mA	78%	IA2415S $\dagger \wedge$
	$\pm 24.0$ V	$\pm 21$ mA	78%	IA2424S $\wedge$
48 VDC <sup>(5)</sup>	$\pm 3.3$ V	$\pm 151$ mA	60%	IA4803S
	$\pm 5.0$ V	$\pm 100$ mA	70%	IA4805S $\dagger$
	$\pm 9.0$ V	$\pm 55$ mA	72%	IA4809S
	$\pm 12.0$ V	$\pm 42$ mA	74%	IA4812S $\dagger$
	$\pm 15.0$ V	$\pm 33$ mA	74%	IA4815S
	$\pm 24.0$ V	$\pm 21$ mA	70%	IA4824S

### Mechanical Details

