

# IF SERIES

DC/DC Single Output: 1 Watt



## Features

- Regulated Single Output
- SIP or DIP Package
- Low Ripple & Noise
- 1000 VDC Isolation
- Optional 3000 VDC Isolation
- MTBF 3.5 Mhrs
- 10% Input range

## Specification

### Input

- Input Voltage Range • Nominal  $\pm 10\%$
- 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>(3)</sup>
- Line Regulation •  $\pm 0.5\%$  max
- Load Regulation •  $\pm 0.5\%$  max ( $\pm 1.0\%$  for 3.3 V output)
- Setpoint Accuracy •  $\pm 2\%$  max
- Ripple & Noise • 50 mV pk-pk max, 20 MHz bandwidth
- Temperature Coefficient • 0.02%/°C
- Maximum Capacitive Load • 220  $\mu$ F

### General

- Efficiency • See table
- Isolation Voltage • 1000 VDC standard, 3000 VDC option - see note 2
- Isolation Resistance • 1000 M $\Omega$  min
- Isolation Capacitance • 60 pF typical
- Switching Frequency • Variable, 50 kHz typical
- MTBF • 3.5 Mhrs to MIL-HDBK-217F at 25 °C, GB

### Environmental

- Operating Temperature • -40 °C to +85 °C (no derating)
- Storage Temperature • -40 °C to +125 °C
- Case Temperature • +100 °C max
- Cooling • Convection-cooled

### Notes

1. For DIP package, replace suffix 'S' with suffix 'D'.
2. For 3000 VDC isolation, add suffix '-H'.
3. Operation at no load will not damage unit but it may not meet all specifications.
4. All dimensions in inches (mm).
5. Pin pitch tolerance:  $\pm 0.014$  ( $\pm 0.35$ )
6. Case tolerance:  $\pm 0.02$  ( $\pm 0.5$ )
7. Weight: 0.005 lbs (2.4 g)

Input Voltage	Output Voltage	Output Current	Efficiency	Model Number <sup>(1,2)</sup>
5 V	3.3 V	333 mA	57%	IF0503S <sup>†</sup>
	5.0 V	200 mA	65%	IF0505S <sup>†</sup>
	9.0 V	111 mA	65%	IF0509S <sup>†</sup>
	12.0 V	84 mA	68%	IF0512S <sup>†</sup>
	15.0 V	67 mA	68%	IF0515S <sup>†</sup>
12 V	3.3 V	333 mA	57%	IF1203S <sup>†</sup>
	5.0 V	200 mA	63%	IF1205S <sup>†</sup>
	9.0 V	111 mA	66%	IF1209S <sup>†</sup>
	12.0 V	84 mA	68%	IF1212S <sup>†</sup>
	15.0 V	67 mA	66%	IF1215S <sup>†</sup>
24 V	3.3 V	333 mA	60%	IF2403S <sup>†</sup>
	5.0 V	200 mA	65%	IF2405S <sup>†</sup>
	9.0 V	111 mA	68%	IF2409S <sup>†</sup>
	12.0 V	84 mA	68%	IF2412S <sup>†</sup>
	15.0 V	67 mA	68%	IF2415S <sup>†</sup>

## Mechanical Details

