# 2 Watts
## IH Series

- Dual Output Unregulated
- SIP or DIP Package
- 1.0kV DC Isolation
- Optional 3.0kV–6.0kV DC Isolation
- MTBF > 1.1 MHrs
- -40 °C to +85 °C Operation
- 3 Year Warranty

## Specification

### Input
- **Input Voltage Range**: Nominal ±10%
- **Input Reflected**: 20mA pk-pk through 12μH inductor, 5Hz to 20 MHz
- **Input Reverse Current**: None
- **Input Filter**: Capacitor

### Output
- **Output Voltage**:See table
- **Minimum Load**: None
- **Line Regulation**: 1.2%/1% ΔVin
- **Load Regulation**: ±10% 20-100% load change (3.3 V models ±20%)
- **Setpoint Accuracy**: ±3%
- **Ripple & Noise**: 75 mV pk-pk max, 20 MHz bandwidth
- **Temperature Coefficient**: 0.02%/°C
- **Maximum Capacitive Load**: ±220 μF
- **Cross Regulation**: 3.3 V and 5 V: ±8%, all others: ±5%*4

### General
- **Efficiency**: See table
- **Isolation Voltage**: 1000 VDC**3
- **Isolation Resistance**: 10¹ Ω
- **Isolation Capacitance**: 60 pF typical
- **MTBF**: 3000 VDC to MIL-HDBK-217F at 25 °C, GB
- **Mechanical Details**

### Environmental
- **Operating Temperature**: -40°C to +85°C
- **Storage Temperature**: -40°C to +125°C
- **Case Temperature**: 100°C max
- **Cooling**: Convection-cooled

### Safety
- **Safety Agency**: CE & UKCA meets all applicable directives & legislation.

## Table: Input Voltage, No Load Current, Output Voltage, Output Current, Efficiency, Model Number**1,2

<table>
<thead>
<tr>
<th>Input Voltage</th>
<th>No Load Current</th>
<th>Output Voltage</th>
<th>Output Current</th>
<th>Efficiency</th>
<th>Model Number**1,2</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 VDC</td>
<td></td>
<td>±3.3 V</td>
<td>±200 mA</td>
<td>65%</td>
<td>IH0503S</td>
</tr>
<tr>
<td></td>
<td>30 mA</td>
<td>±5.0 V</td>
<td>±200 mA</td>
<td>72%</td>
<td>IH0505S</td>
</tr>
<tr>
<td></td>
<td>30 mA</td>
<td>±8.0 V</td>
<td>±111 mA</td>
<td>77%</td>
<td>IH0509S</td>
</tr>
<tr>
<td></td>
<td>30 mA</td>
<td>±10.0 V</td>
<td>±94 mA</td>
<td>78%</td>
<td>IH0510S</td>
</tr>
<tr>
<td></td>
<td>30 mA</td>
<td>±15.0 V</td>
<td>±66 mA</td>
<td>80%</td>
<td>IH0515S</td>
</tr>
<tr>
<td>12 VDC</td>
<td></td>
<td>±24.0 V</td>
<td>±42 mA</td>
<td>80%</td>
<td>IH0524S</td>
</tr>
<tr>
<td></td>
<td>20 mA</td>
<td>±3.3 V</td>
<td>±200 mA</td>
<td>57%</td>
<td>IH1203S</td>
</tr>
<tr>
<td></td>
<td>20 mA</td>
<td>±5.0 V</td>
<td>±111 mA</td>
<td>75%</td>
<td>IH1205S</td>
</tr>
<tr>
<td></td>
<td>20 mA</td>
<td>±9.0 V</td>
<td>±84 mA</td>
<td>82%</td>
<td>IH1212S</td>
</tr>
<tr>
<td></td>
<td>20 mA</td>
<td>±12.0 V</td>
<td>±66 mA</td>
<td>82%</td>
<td>IH1215S</td>
</tr>
<tr>
<td>24 VDC</td>
<td></td>
<td>±24.0 V</td>
<td>±42 mA</td>
<td>82%</td>
<td>IH1224S</td>
</tr>
<tr>
<td></td>
<td>10 mA</td>
<td>±3.3 V</td>
<td>±200 mA</td>
<td>58%</td>
<td>IH2403S</td>
</tr>
<tr>
<td></td>
<td>10 mA</td>
<td>±5.0 V</td>
<td>±111 mA</td>
<td>80%</td>
<td>IH2409S</td>
</tr>
<tr>
<td></td>
<td>10 mA</td>
<td>±9.0 V</td>
<td>±84 mA</td>
<td>82%</td>
<td>IH2412S</td>
</tr>
<tr>
<td></td>
<td>10 mA</td>
<td>±12.0 V</td>
<td>±66 mA</td>
<td>82%</td>
<td>IH2415S</td>
</tr>
<tr>
<td></td>
<td>10 mA</td>
<td>±15.0 V</td>
<td>±42 mA</td>
<td>82%</td>
<td>IH2424S</td>
</tr>
</tbody>
</table>

**Notes**

1. For DIP package, replace ‘S’ with ‘D’ in model number.
2. Add suffix ‘H’ to model number for 3000 VDC isolation. For higher VDC isolation, add suffix ‘Hx’ to model number where x=4 for 4000 VDC isolation, x=5 for 5200 VDC isolation and x=6 for 6000 VDC isolation.
3. Operation at no load will not damage unit but it may not meet all specifications.
4. When one output is set to 100% load and the other varies between 25%-100% load.
5. All dimensions in inches (mm).
6. Pin pitch tolerance: ±0.014 (±0.35)
7. Case tolerance: ±0.02 (±0.5)
8. Weight: SIP 0.004 lbs (2.2 g), DIP 0.005 lbs (2.4 g)