



- ◆ Standard Half Brick Footprint
- ◆ 36-75VDC Input
- ◆ 1.2V 60A - 28V 16A Nominal Outputs
- ◆ Through Hole Mounting
- ◆ Low 12.7mm Profile
- ◆ 1500VDC Basic Isolation

iHA Series

72 - 448W Half Brick Converter

iHA Features and Benefits

Features

- ◆ High operating efficiency (up to 93.5%)
- ◆ Constant switching frequency
- ◆ Baseplate

Benefits

- ◆ Reduced system heating
- ◆ Easier system filtering
- ◆ Allows for improved thermal management with optional heatsink

Specifications

| MODEL | | iHA48 | | | | | | | | | |
|-------------------------------------|-----|--|-----------|-----------|-----------|-----------|-----------|-------------|-------------|-------------|--|
| ITEMS | | | | | | | | | | | |
| Nominal Output Voltage | VDC | 1.2 | 1.5 | 1.8 | 2.5 | 3.3 | 5 | 12 | 24 | 28 | |
| Input Voltage Range | VDC | 36 - 75 (28V/16A: 40 - 60) | | | | | | | | | |
| Input Current (max) | A | 2.6 - 12.8 Amps model dependent | | | | | | | | | |
| Output Voltage Tolerance | VDC | 1.16-1.24 | 1.46-1.55 | 1.75-1.85 | 2.43-2.58 | 3.20-3.40 | 4.84-5.15 | 11.64-12.36 | 23.28-24.72 | 27.16-28.84 | |
| Ripple & Noise (max) (pk to pk) (1) | mV | 60 | | 80 | 75 | 55 | 70 | 100 | 600 | 675 | |
| Line Regulation (max) | mV | 4 | | | 5 | 6 | 8 | 15 | 25 | 30 | |
| Load Regulation (max) | mV | 6 | | | 8 | 10 | | 25 | 50 | | |
| Overload Protection (typ) | % | Inception- 113-156% of rated output; Short circuit auto recovery | | | | | | | | | |
| Overvoltage Protection (typ) | VDC | 1.5 | 1.8 | 2.2 | 3.0 | 4.0 | 6.0 | 14.5 | 29.0 | 33 | |
| Remote Sense | - | Yes | | | | | | | | | |
| Remote On / Off | - | Positive or Negative Logic available, see Feature Set | | | | | | | | | |
| Temperature (operating) | °C | -40 to 115 Vo ≤ 5.0V; -40 to 110 for Vo ≥ 12V | | | | | | | | | |
| Temperature (storage) | °C | -55 to 125 | | | | | | | | | |
| Humidity (operating) | - | 20-95% RH Non condensing | | | | | | | | | |
| Humidity (storage) | - | 10-95% RH Non condensing | | | | | | | | | |
| Cooling | - | Convection or forced air | | | | | | | | | |
| Isolation Voltage | VDC | 1500V Input to output & baseplate, 500V Output to baseplate | | | | | | | | | |
| Vibration (non operating) | - | 5 to 50Hz @ 0.5g (4.9m/s ²), and 50 to 500Hz @ 1.5g (14.7m/s ²) per Bellcore TR-EOP-000063-5.4.4 | | | | | | | | | |
| Shock | - | 196.1m/s ² | | | | | | | | | |
| Safety Agency Approvals | - | UL60950 (US and Canada), VDE0805 (IEC60950), CB scheme (IEC60950), CE Mark (LVD) | | | | | | | | | |
| Weight (max) | g | 85 | | | | | | | | | |
| Size | mm | 57.9 x 61.0 x 12.7 | | | | | | | | | |
| Warranty | - | 3 years | | | | | | | | | |

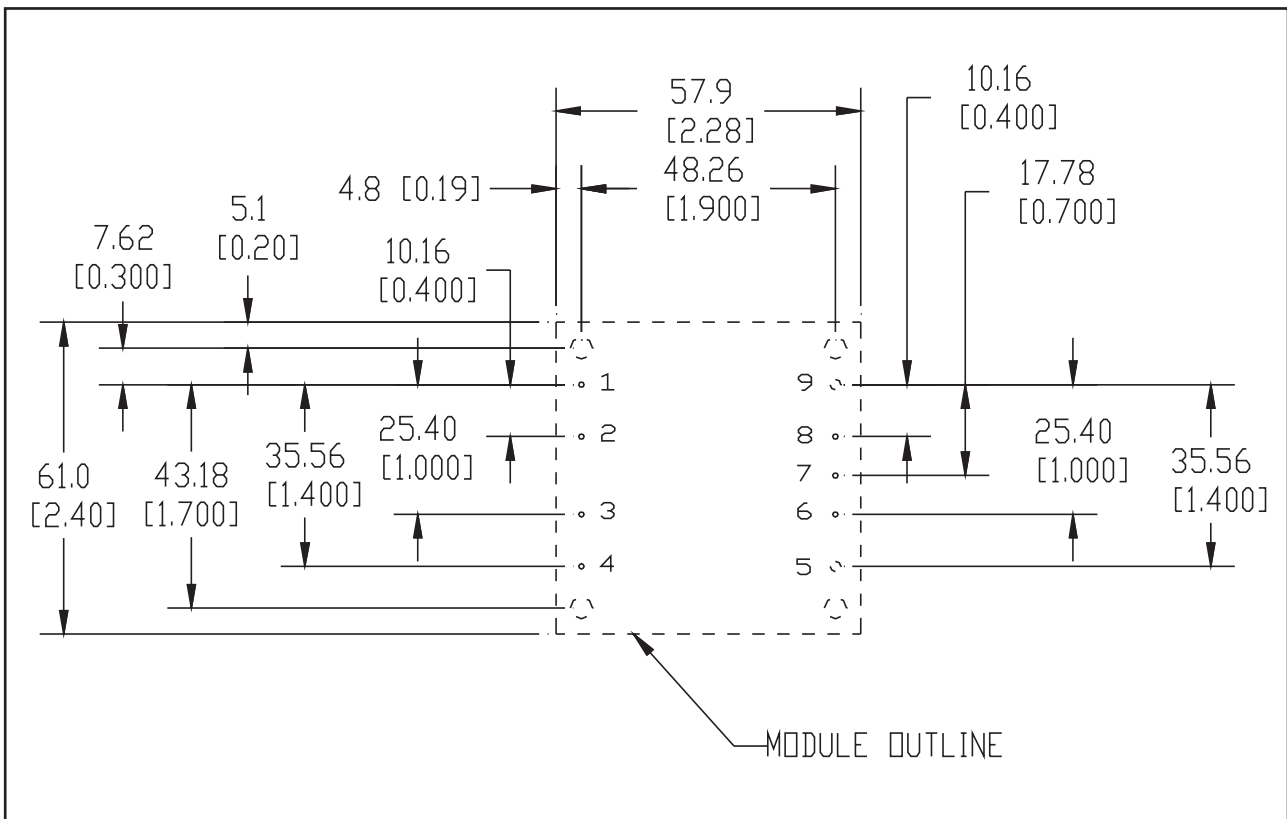
Notes:

- (1) Measured across 47uF + 1uF + 0.1uF ceramic caps for 1.2-5Vo, across 1uF + 0.1uF ceramic caps + 10uF Tan cap for 12Vo, across 200uF Al electrolytic + 10uF + 1uF + 0.1uF ceramic caps for 24-28Vo BW = 20MHz.

Model Selector

| Model | Voltage (V) | Adjust Range (V) | Max. Curr. (A) | Max. Output Power (W) | Efficiency at Full Load (%) |
|---------------------|-------------|------------------|----------------|-----------------------|-----------------------------|
| iHA48060A012V-001-R | 1.2 | .65 - 1.32 | 60 | 72 | 83 |
| iHA48060A015V-001-R | 1.5 | .81 - 1.65 | 60 | 90 | 86 |
| iHA48060A018V-001-R | 1.8 | 0.97 - 1.98 | 60 | 108 | 86.5 |
| iHA48060A025V-001-R | 2.5 | 1.35 - 2.75 | 60 | 150 | 88.5 |
| iHA48040A033V-001-R | 3.3 | 1.78 - 3.63 | 40 | 132 | 91.5 |
| iHA48060A033V-001-R | 3.3 | 1.78 - 3.63 | 60 | 198 | 90 |
| iHA48040A050V-001-R | 5 | 2.7 - 5.5 | 40 | 200 | 91 |
| iHA48025A120V-001-R | 12 | 6.48 - 13.2 | 25 | 300 | 91.5 |
| iHA48013A240V-001-R | 24 | 13 - 26.4 | 12.5 | 300 | 91 |
| iHA48011A280V-001-R | 28 | 15.12 - 30.8 | 11 | 308 | 91 |
| iHA48016A280V-001-R | 28 | 14 - 30.8 | 16 | 448 | 93.5 |

Recommended Footprint (Top View)



| Pinout | | | |
|---------------|------------------|-----|-----------|
| PIN | Function | PIN | Function |
| 1 | Vin (+) | 2 | On / Off |
| 3 | Case (Omit opt.) | 4 | Vin (-) |
| 5 | Vout (-) | 6 | Sense (-) |
| 7 | Trim | 8 | Sense (+) |
| 9 | Vout (+) | | |

| Feature Set | | | | |
|--------------------|----------------|------------|---------------|------------|
| Feature Set | On / Off Logic | Omit Pin 3 | Output OVP | Pin Length |
| 00 | Positive | No | Latching | 0.145 |
| 01* | Negative | No | Latching | 0.145 |
| 02 | Positive | Yes | Auto-Recovery | 0.145 |
| 03 | Negative | Yes | Auto-Recovery | 0.145 |
| 04 | Positive | No | Latching | 0.110 |
| 05 | Negative | No | Latching | 0.110 |
| 06 | Positive | Yes | Auto-Recovery | 0.110 |
| 07 | Negative | Yes | Auto-Recovery | 0.110 |

* Preferred feature set
 Model Number Example: iHA48040A050V-001-R

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| | |
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