

AGH100 Series

Half Brick Fully Regulated DCDC Converter

Data Sheet

Output Power: 82.5 Watts
Input Voltage: 36 - 75 V
Single Output: 3.3 V

SPECIAL FEATURES

- 2:1 wide input range
- Optimised for high density, small space applications
- Low ripple and noise
- Fixed switching frequency
- High efficiency
- High capacitive load capability
- Basic insulation system
- Pre-bias start-up capability
- Openframe structure with Baseplate option

SAFETY

- UL, cUL: UL60950
- TUV/CE: IEC/EN60950



Electrical Specifications

| Input | |
|---------------------|---|
| Input range | 36 - 75 VDC |
| Input surge | 100 V for 100 ms |
| Efficiency | 92.4% (3.3 V) |
| Output | |
| Output voltage | 3.3 Vdc |
| Trim range | +10% to =20% Vout |
| Output current | 25 A |
| Noise/ripple | 45 mV pk-pk |
| Regulation | Load regulation 16.5 mV, Line regulation = 6.6 mV |
| Switching frequency | Fixed switching frequency 270 KHz |
| Isolation voltage | 2000 Vdc |
| Transient response | 80 mV deviation 80 μ s recovery (25% deviation from 50% Iout, 0.1 A/ μ s) typical |
| Control | |
| Enable | TTL compatible Positive or Negative enable |

Environmental Specifications

| | |
|-------------------------------------|---------------------------------------|
| Operating ambient temperature range | -40 °C to +85 °C |
| Storage temperature | -55 °C to +125 °C |
| OTP | 118 °C |
| MTBF @ 25 °C | 2 Million hours (Vin 48 V, Io = 20 A) |

Ordering Information

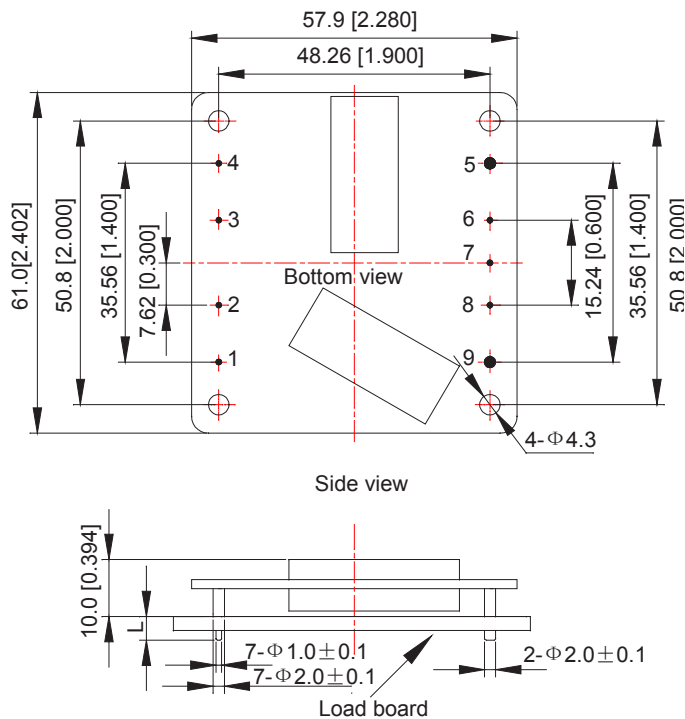
| Model number | Input voltage | Output voltage | Power | Efficiency |
|--------------------|---------------|----------------|-------|------------|
| AGH100-48S3V3P-4L | 48 V | 3.3 V | 25 A | 92.4% |
| AGH100-48S3V3-4L | 48 V | 3.3 V | 25 A | 92.4% |
| AGH100-48S3V3PB-4L | 48 V | 3.3 V | 25 A | 92.4% |
| AGH100-48S3V3B-4L | 48 V | 3.3 V | 25 A | 92.4% |

- Standard converter is Negative enable
- "B" = Baseplate option
- "-4" = 4.8 mm pin length
- "-P" = Positive remote control
- "-L" = RoHS 6 compliant

Pin Assignments

| Pin # | Function |
|-------|----------|
| 1 | +V in |
| 2 | Enable |
| 3 | Case |
| 4 | -V in |
| 5 | -V out |
| 6 | -Sense |
| 7 | Trim |
| 8 | +Sense |
| 9 | +V out |

Mechanical Drawing - Open Frame



Unit: mm[inch] Bottom view: pin on upside
 Tolerance: X.Xmm ± 0.5mm[X.X in. ± 0.02in.]
 X.XXmm ± 0.25mm[X.XX in. ± 0.01in.]

Notes:

- 20 MHz bandwidth. External 10 uF tantalum capacitor placed across +Vout and -Vout; 33 uF e-cap or equivalent placed across +Vin and -Vin.
- Efficiency measurements taken at full load and nominal line and Tamb = 25 °C
- All specifications taken at nominal line, full load and Tamb = 25 °C unless otherwise noted.
- Mechanical dimensions are for reference only. Dimensions are in MM. Mechanical tolerance = +/- 0.5 mm
- Technical reference notes should be consulted for detailed information when available.
- All specifications subject to change without notice.
- Warranty 2 years.
- The through-hole terminated modules are intended for wave-soldering process; special request for other manufacturing processes to be made to Artesyn.

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