

KEY FEATURES

- Switching Power Module for PCB Mountable
- Fully Encapsulated Plastic Case
- Universal Input Range 90-305VAC, 47-440 Hz
- Single and Dual Output
- Low Ripple and Noise
- Isolation Class II
- Maximum No-Load Watts < 0.3W
- CE and UL Approval
- 3-Year Product Warranty


ELECTRICAL SPECIFICATIONS

All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.

| Model No. (Single Output) | AOCH -3.3S | AOCH -5S | AOCH -8S | AOCH -9S | AOCH -12S | AOCH -14S | AOCH -15S | AOCH -24S | | | |
|---|--|-------------|---|-------------|--------------|--------------|--------------|--------------|-------|--------|--|
| Max Output Wattage (W) | 3.96W | 4W | 4W | 4W | 4W | 4W | 4W | 4W | | | |
| Input | Voltage | | | | | | | | | | |
| | 90-305 VAC or 120-430 VDC | | | | | | | | | | |
| | Frequency (Hz) | | | | | | | | | | |
| | 47-440 Hz | | | | | | | | | | |
| | Current (Full load) | | | | | | | | | | |
| | 110 mA max. (115 VAC) / 70 mA max. (230 VAC) | | | | | | | | | | |
| Inrush Current (<500us) | | | | | | | | | | | |
| 15 A max. (115 VAC) / 25 A max. (230 VAC) | | | | | | | | | | | |
| Leakage Current | | | | | | | | | | | |
| 0.25 mA max. | | | | | | | | | | | |
| External Fuse (recommend) | | | | | | | | | | | |
| 3.15 A slow blow type | | | | | | | | | | | |
| Output | Voltage (V.DC.) | | 3.3V | 5V | 8V | 9V | 12V | 14V | 15V | 24V | |
| | Voltage Accuracy | | ±2% | | | | | | | | |
| | Current (mA) max | | 1200 | 800 | 500 | 444 | 333 | 286 | 267 | 167 | |
| | Line Regulation (LL-HL) (typ.) | | | | | ±0.5% | | | | | |
| | Load Regulation (0-100%) (typ.) | | | | | ±1.5% | | | | | |
| | Minimum Load | | 0% | | | | | | | | |
| | Maximum Capacitive Load | | 5000uF | 4200uF | 1470uF | 1330uF | 680uF | 470uF | 330uF | 120uF | |
| | Ripple & Noise (Vp-p) max | | | <250mV | | | <200mV | | | <150mV | |
| | Efficiency | | 68% | 72% | 74% | 75% | 76% | 76% | 76% | 77% | |
| | Hold-up Time | | 15 ms min. | | | | | | | | |
| Protection | Over Power Protection | | Hiccup technique, auto-recovery | | | | | | | | |
| | Short Circuit Protection | | Hiccup mode, indefinite (automatic recovery) | | | | | | | | |
| Isolation | Input-Output (V.AC) | | 3000V | | | | | | | | |
| Environment | Operating Temperature | | -40°C...+70°C (with derating) | | | | | | | | |
| | Storage Temperature | | -40°C...+85°C | | | | | | | | |
| | Temperature Coefficient | | ±0.02%/°C | | | | | | | | |
| | Humidity | | 95% RH | | | | | | | | |
| | MTBF | | >450,000 h @ 25°C (MIL-HDBK-217F) | | | | | | | | |
| Physical | Dimensions (L x W x H) | | 1.46 x 1.08 x 0.69 Inches (37.0 x 27.5 x 17.5 mm) Tolerance ±0.5 mm | | | | | | | | |
| | Case Material | | Plastic resin (flammability to UL 94V-0) | | | | | | | | |
| | Weight | | 26 g | | | | | | | | |
| | Cooling Method | | Free air convection | | | | | | | | |
| Safety | Agency Approvals | | IEC / EN 60950, UL / IEC / EN 62368-1 | | | | | | | | |
| EMC | EMI (Conducted & Radiated Emission) | | EN 55032 class B | | | | | | | | |
| | EMS (Noise Immunity) | | EN 55024 | | | | | | | | |

ELECTRICAL SPECIFICATIONS

All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.

| Model No. (Dual Output) | AOCH-5S3.3S | AOCH-8S5S | AOCH-12S5S |
|--|---|-----------|-------------------------|
| Max Output Wattage (W) | 3.5W | 3.6W | 3.6W |
| Input | Voltage | | |
| | 90-305 VAC or 120-430 VDC | | |
| | Frequency (Hz) | | |
| | 47-440 Hz | | |
| | Current (Full load) | | |
| | 110 mA max. (115 VAC) / 70 mA max. (230 VAC) | | |
| Inrush Current (<500us) | | | |
| 15 A max. (115 VAC) / 25 A max. (230 VAC) | | | |
| Leakage Current | | | |
| 0.25 mA max. | | | |
| External Fuse (recommend) | | | |
| 3.15 A slow blow type | | | |
| Output | Voltage (V.DC.) | | Vo : 5V Vr : 3.3V |
| | Voltage Accuracy | | Vo : ±2% Vr : ±5% |
| | Current (mA) max | | 600 / 150 |
| | Line Regulation (LL-HL) (typ.) | | Vo : ±0.2% Vr : ±3% |
| | Load Regulation (25-100%) (typ.) | | Vo : ±0.5% Vr : ±5% |
| | Minimum Load | | 25% |
| | Maximum Capacitive Load | | Vo : 2500uF Vr : 1800uF |
| | Ripple & Noise (Vp-p) max | | <200mV |
| | Efficiency | | 72% |
| | Hold-up Time | | 15 ms min. |
| Protection | Over Power Protection | | |
| | Hiccup technique, auto-recovery | | |
| Short Circuit Protection | | | |
| Hiccup mode, indefinite (automatic recovery) | | | |
| Isolation | Input-Output (V.AC) | | |
| 3000V | | | |
| Environment | Operating Temperature | | |
| | -40°C...+70°C (with derating) | | |
| | Storage Temperature | | |
| | -40°C...+85°C | | |
| | Temperature Coefficient | | |
| ±0.02%/°C | | | |
| Humidity | | | |
| 95% RH | | | |
| MTBF | | | |
| >450,000 h @ 25°C (MIL-HDBK-217F) | | | |
| Physical | Dimensions (L x W x H) | | |
| | 1.46 x 1.08 x 0.69 Inches (37.0 x 27.5 x 17.5 mm) Tolerance ±0.5 mm | | |
| | Case Material | | |
| | Plastic resin (flammability to UL 94V-0) | | |
| Weight | | | |
| 26 g | | | |
| Cooling Method | | | |
| Free air convection | | | |
| Safety | Agency Approvals | | |
| IEC / EN 60950, UL / IEC / EN 62368-1 | | | |
| EMC | EMI (Conducted & Radiated Emission) | | |
| | EN 55032 class B | | |
| EMS (Noise Immunity) | | | |
| EN 55024 | | | |

NOTE

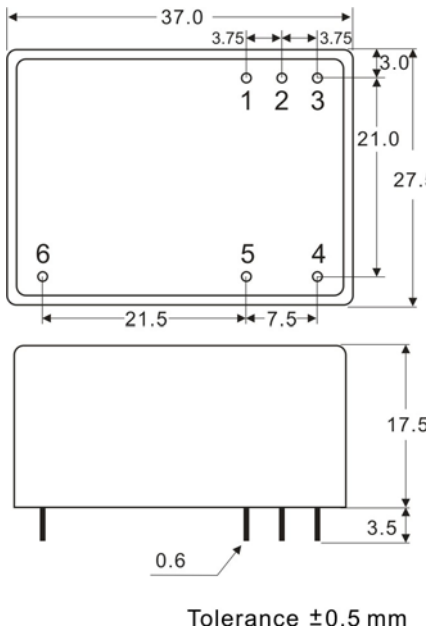
1. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
2. It's necessary Varistor 14S561K at L / N input side in parallel.
3. It's necessary 10R / 15φ thermistor at L input side in series connection.
4. Please refer to our PDF file "AC-DC Application" on our website: www.archcorp.com.tw



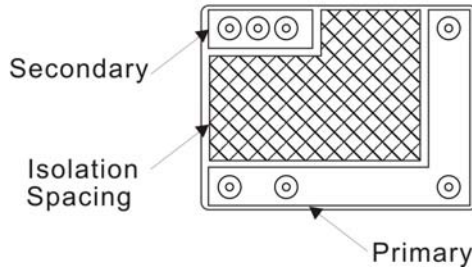
AOCH SERIES

4 Watts

MECHANICAL DIMENSIONS (Top View)



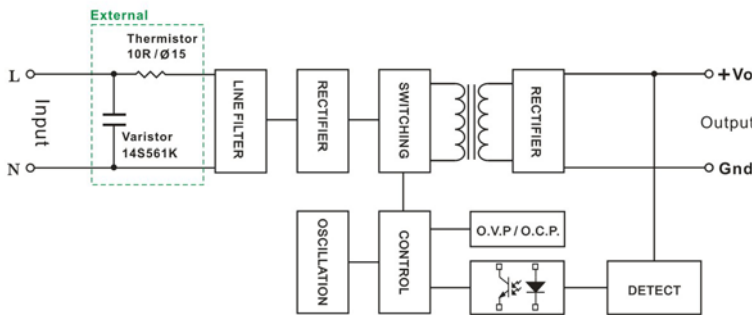
Isolation Bottom View



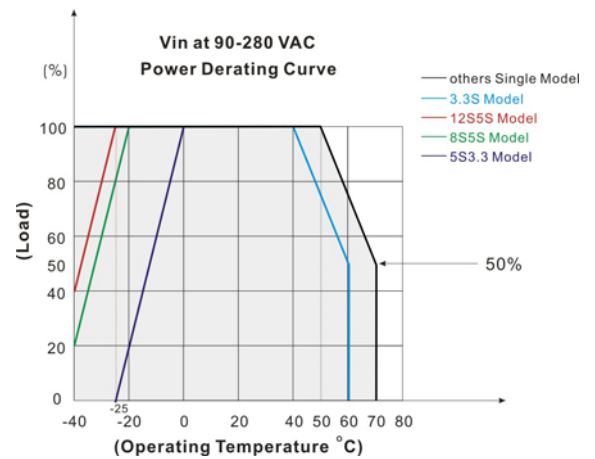
| PIN# | Single | Dual |
|------|-----------|-----------|
| 1 | +Vo | +Vo |
| 2 | GND | COM |
| 3 | NC | +Vr |
| 4 | AC IN (L) | AC IN (L) |
| 5 | AC IN (N) | AC IN (N) |
| 6 | NC | NC |

BLOCK DIAGRAM

Single Output



DERATING



Dual Output

