



FEATURES:

- RoHS compliant
- 4 Pin SIP Package
- Ultra miniature package
- High efficiency up to 84%
- Operating temperature -40°C to + 70°C
- Input / Output Isolation 1000 and 3000VDC
- Pin compatible with multiple manufacturers

Models
Single Output
Input/Output Isolation 1000VDC

| Model | Input Voltage (V) | Output Voltage (V) | Output Current max (mA) | Capacitive load, max (μF) | Efficiency (%) |
|-------------|-------------------|--------------------|-------------------------|---------------------------|----------------|
| AM2S-0503SZ | 4.5-5.5 | 3.3 | 400 | 470 | 71 |
| AM2S-0505SZ | 4.5-5.5 | 5 | 400 | 470 | 77 |
| AM2S-0507SZ | 4.5-5.5 | 7.2 | 270 | 470 | 77 |
| AM2S-0509SZ | 4.5-5.5 | 9 | 220 | 470 | 80 |
| AM2S-0512SZ | 4.5-5.5 | 12 | 160 | 470 | 82 |
| AM2S-0515SZ | 4.5-5.5 | 15 | 130 | 470 | 82 |
| AM2S-0518SZ | 4.5-5.5 | 18 | 110 | 470 | 82 |
| AM2S-0524SZ | 4.5-5.5 | 24 | 80 | 470 | 82 |
| AM2S-1203SZ | 10.8-13.2 | 3.3 | 400 | 470 | 72 |
| AM2S-1205SZ | 10.8-13.2 | 5 | 400 | 470 | 78 |
| AM2S-1207SZ | 10.8-13.2 | 7.2 | 270 | 470 | 80 |
| AM2S-1209SZ | 10.8-13.2 | 9 | 220 | 470 | 82 |
| AM2S-1212SZ | 10.8-13.2 | 12 | 160 | 470 | 84 |
| AM2S-1215SZ | 10.8-13.2 | 15 | 130 | 470 | 84 |
| AM2S-1218SZ | 10.8-13.2 | 18 | 110 | 470 | 84 |
| AM2S-1224SZ | 10.8-13.2 | 24 | 80 | 470 | 82 |
| AM2S-2403SZ | 21.6-26.4 | 3.3 | 400 | 470 | 74 |
| AM2S-2405SZ | 21.6-26.4 | 5 | 400 | 470 | 80 |
| AM2S-2407SZ | 21.6-26.4 | 7.2 | 270 | 470 | 80 |
| AM2S-2409SZ | 21.6-26.4 | 9 | 220 | 470 | 84 |
| AM2S-2412SZ | 21.6-26.4 | 12 | 160 | 470 | 84 |
| AM2S-2415SZ | 21.6-26.4 | 15 | 130 | 470 | 84 |
| AM2S-2418SZ | 21.6-26.4 | 18 | 110 | 470 | 84 |
| AM2S-2424SZ | 21.6-26.4 | 24 | 80 | 470 | 84 |

Input/Output Isolation 3000VDC

| | | | | | |
|----------------|-----------|-----|-----|-----|----|
| AM2S-0503SH30Z | 4.5-5.5 | 3.3 | 400 | 470 | 71 |
| AM2S-0505SH30Z | 4.5-5.5 | 5 | 400 | 470 | 77 |
| AM2S-0507SH30Z | 4.5-5.5 | 7.2 | 270 | 470 | 77 |
| AM2S-0509SH30Z | 4.5-5.5 | 9 | 220 | 470 | 80 |
| AM2S-0512SH30Z | 4.5-5.5 | 12 | 160 | 470 | 82 |
| AM2S-0515SH30Z | 4.5-5.5 | 15 | 130 | 470 | 82 |
| AM2S-0518SH30Z | 4.5-5.5 | 18 | 110 | 470 | 82 |
| AM2S-0524SH30Z | 4.5-5.5 | 24 | 80 | 470 | 82 |
| AM2S-1203SH30Z | 10.8-13.2 | 3.3 | 400 | 470 | 72 |
| AM2S-1205SH30Z | 10.8-13.2 | 5 | 400 | 470 | 78 |
| AM2S-1207SH30Z | 10.8-13.2 | 7.2 | 270 | 470 | 80 |
| AM2S-1209SH30Z | 10.8-13.2 | 9 | 220 | 470 | 82 |
| AM2S-1212SH30Z | 10.8-13.2 | 12 | 160 | 470 | 84 |
| AM2S-1215SH30Z | 10.8-13.2 | 15 | 130 | 470 | 84 |
| AM2S-1218SH30Z | 10.8-13.2 | 18 | 110 | 470 | 84 |
| AM2S-1224SH30Z | 10.8-13.2 | 24 | 80 | 470 | 82 |
| AM2S-2403SH30Z | 21.6-26.4 | 3.3 | 400 | 470 | 74 |
| AM2S-2405SH30Z | 21.6-26.4 | 5 | 400 | 470 | 80 |
| AM2S-2407SH30Z | 21.6-26.4 | 7.2 | 270 | 470 | 80 |
| AM2S-2409SH30Z | 21.6-26.4 | 9 | 220 | 470 | 84 |
| AM2S-2412SH30Z | 21.6-26.4 | 12 | 160 | 470 | 84 |

Models

Single Output (continued)

| Model | Input Voltage (V) | Output Voltage (V) | Output Current max (mA) | Capacitive load, max (μF) | Efficiency (%) |
|----------------|-------------------|--------------------|-------------------------|---------------------------|----------------|
| AM2S-2415SH30Z | 21.6-26.4 | 15 | 130 | 470 | 84 |
| AM2S-2418SH30Z | 21.6-26.4 | 18 | 110 | 470 | 84 |
| AM2S-2424SH30Z | 21.6-26.4 | 24 | 80 | 470 | 84 |

Input Specifications

| Parameters | Nominal | Typical | Maximum | Units |
|--------------------------------|-----------|-----------|-----------|-------|
| Voltage range | 5 | 4.5-5.5 | -0.7 - 7 | VDC |
| | 12 | 10.8-13.2 | -0.7 - 15 | |
| | 24 | 21.6-25.4 | -0.7 - 28 | |
| Filter | Capacitor | | | |
| Turn on Transient process time | | | 25 | ms |
| Start up time | | 200 | | ms |
| Absolute Maximum Rating | 5 Vin | 0-7 | | VDC |
| | 12 Vin | 0-28 | | |
| | 24 Vin | 0-15 | | |
| Peak Input Voltage time | | 100 | | ms |

Isolation Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|--------------------|------------|--------------|---------|-------|
| Tested I/O voltage | 3 sec | 1000 or 3000 | | VDC |
| Resistance | | > 1000 | | MOhm |
| Capacitance | | 60 | | pF |

Output Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|----------------------------------------------------|--------------------|------------------|---------|--------|
| Voltage accuracy | | ±3 | | % |
| Short Circuit protection | | Momentary (1sec) | | |
| Over current protection | | 110% Iout max | | |
| Line voltage regulation (Single) | For 1.0% of Vin | ±1.2 | | % |
| Load voltage regulation (Single) | 20...100% load | ±10 | | % |
| Load voltage regulation (Single) 3.3V output model | 20...100% load | ±20 | | % |
| Temperature coefficient | | ±0.02 | | %/°C |
| Ripple & Noise | At 20MHz Bandwidth | 150 | | mV p-p |
| Rising time | | 100 | | ms |

General Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|------------------------|------------------------------------------------------|---------------------------|------------------------|-------|
| Switching frequency | 100% load | 50 | | KHz |
| Operating temperature | | -40 to +70 | | °C |
| Storage temperature | | -40 to +125 | | °C |
| Max Case temperature | | | 100 | °C |
| Cooling | Free air convection | | | |
| Humidity | | | 95 | % |
| Case material | Plastic UL94-VO | | | |
| Weight | | 1.8 | | g |
| Dimensions (L x W x H) | | 0.46 x 0.29 x 0.38 inches | 11.68 x 7.50 x 9.65 mm | |
| MTBF | >668 000hrs (MIL-HDBK -217F, Ground Benign, t=+25°C) | | | |

NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.

Safety Specifications

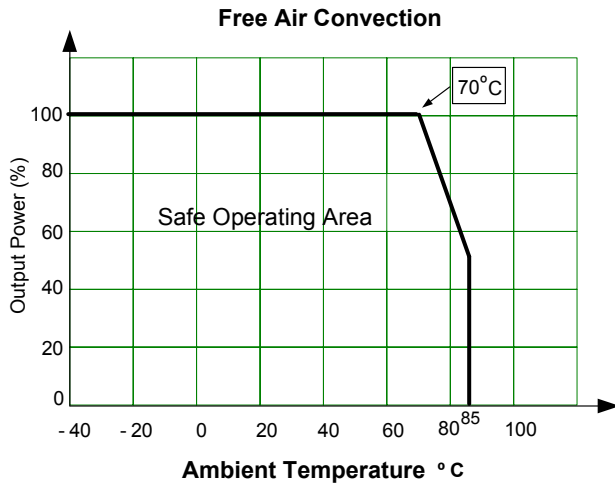
Parameters

| | |
|-----------------|--------------------------------------|
| Agency approval | CE (for 1000VDC Isolated models) |
| Standards | EN55022 (Radiated Emissions) class B |
| | EN55024 (Noise Immunity) |
| | IEC61000-4-2(ESD) |
| | IEC61000-4-3(Radiated immunity) |

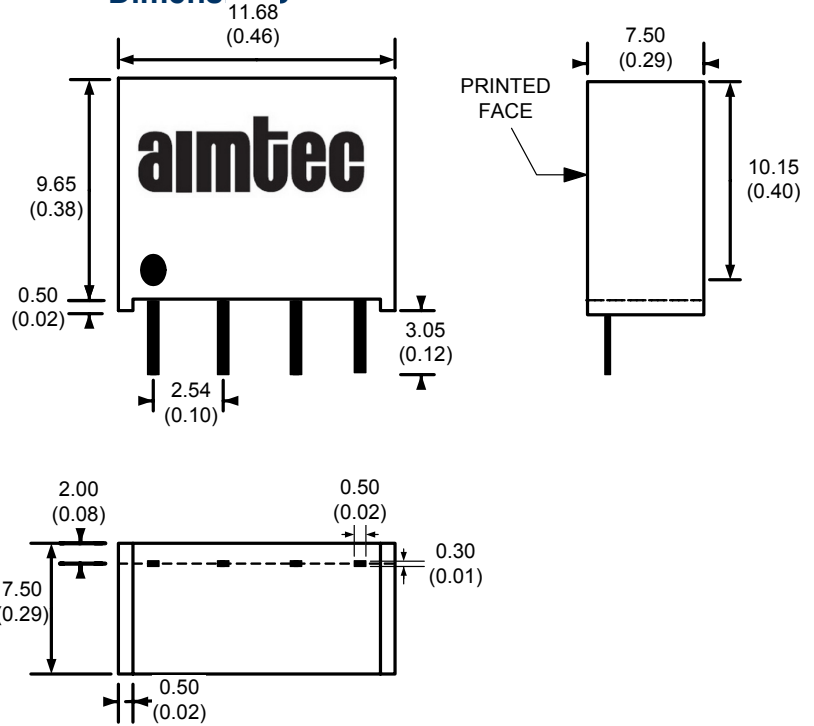
Pin Out Specifications

| Pin | 1000 and 3000VDC |
|-----|------------------|
| 1 | -V Input |
| 2 | +V Input |
| 3 | -V Output |
| 4 | +V Output |

Derating



Dimensions



NOTE: 1. Datasheets are updated as needed and as such, specifications are subject to change without notice. Once printed or downloaded, datasheets are no longer controlled by Aimtec; refer to www.aimtec.com for the most current product specifications. 2. Product labels shown, including safety agency certifications on labels, may vary based on the date manufactured. 3. Mechanical drawings and specifications are for reference only. 4. Aimtec may not have conducted destructive testing or chemical analysis on all internal components and chemicals at the time of publishing this document. CAS numbers and other limited information are considered proprietary and may not be available for release. 5. This product is not designed for use in critical life support systems, equipment used in hazardous environments, nuclear control systems or other such applications which necessitate specific safety and regulatory standards other the ones listed in this datasheet.