

FEATURES:

- RoHS compliant
- High efficiency up to 76%
- Low profile plastic package
- 7 pin SIP package
- Operating temperature -40°C to +85°C
- Continuous short circuit protection
- Pin compatible with multiple manufacturers
- Up to 3000VDC Isolation



Models
Single output

| Model | Input Voltage (V) | Output Voltage (V) | Output Current max (mA) | Isolation (VDC) | Efficiency (%) |
|-------------------|-------------------|--------------------|-------------------------|-----------------|----------------|
| AM1DS-0303S-NZ | 3.0-3.6 | 3.3 | 303 | 1000 | 68 |
| AM1DS-0305S-NZ | 3.0-3.6 | 5 | 200 | 1000 | 70 |
| AM1DS-0505S-NZ | 4.5-5.5 | 5 | 200 | 1000 | 73 |
| AM1DS-0509S-NZ | 4.5-5.5 | 9 | 112 | 1000 | 73 |
| AM1DS-0512S-NZ | 4.5-5.5 | 12 | 83 | 1000 | 75 |
| AM1DS-0515S-NZ | 4.5-5.5 | 15 | 67 | 1000 | 75 |
| AM1DS-0524S-NZ | 4.5-5.5 | 24 | 42 | 1000 | 76 |
| AM1DS-1205S-NZ | 10.8-13.2 | 5 | 200 | 1000 | 73 |
| AM1DS-1209S-NZ | 10.8-13.2 | 9 | 112 | 1000 | 72 |
| AM1DS-1212S-NZ | 10.8-13.2 | 12 | 83 | 1000 | 75 |
| AM1DS-1215S-NZ | 10.8-13.2 | 15 | 67 | 1000 | 76 |
| AM1DS-1515S-NZ | 13.5-16.5 | 15 | 67 | 1000 | 75 |
| AM1DS-2403S-NZ | 21.6-26.4 | 3.3 | 303 | 1000 | 70 |
| AM1DS-2405S-NZ | 21.6-26.4 | 5 | 200 | 1000 | 70 |
| AM1DS-2412S-NZ | 21.6-26.4 | 12 | 83 | 1000 | 75 |
| AM1DS-2415S-NZ | 21.6-26.4 | 15 | 67 | 1000 | 76 |
| AM1DS-0305SH30-NZ | 3.0-3.6 | 5 | 200 | 3000 | 70 |
| AM1DS-0505SH30-NZ | 4.5-5.5 | 5 | 200 | 3000 | 73 |
| AM1DS-0512SH30-NZ | 4.5-5.5 | 12 | 83 | 3000 | 75 |
| AM1DS-0515SH30-NZ | 4.5-5.5 | 15 | 67 | 3000 | 75 |
| AM1DS-0524SH30-NZ | 4.5-5.5 | 24 | 42 | 3000 | 76 |
| AM1DS-1205SH30-NZ | 10.8-13.2 | 5 | 200 | 3000 | 73 |
| AM1DS-1212SH30-NZ | 10.8-13.2 | 12 | 83 | 3000 | 75 |
| AM1DS-2405SH30-NZ | 21.6-26.4 | 5 | 200 | 3000 | 70 |

Models
Dual output

| Model | Input Voltage (V) | Output Voltage (V) | Output Current max (Ma) | Isolation (VDC) | Efficiency (%) |
|-------------------|-------------------|--------------------|-------------------------|-----------------|----------------|
| AM1DS-0505D-NZ | 4.5-5.5 | ±5 | ±100 | 1000 | 69 |
| AM1DS-0509D-NZ | 4.5-5.5 | ±9 | ±56 | 1000 | 73 |
| AM1DS-0512D-NZ | 4.5-5.5 | ±12 | ±42 | 1000 | 74 |
| AM1DS-0515D-NZ | 4.5-5.5 | ±15 | ±34 | 1000 | 74 |
| AM1DS-0524D-NZ | 4.5-5.5 | ±24 | ±21 | 1000 | 76 |
| AM1DS-1205D-NZ | 10.8-13.2 | ±5 | ±100 | 1000 | 70 |
| AM1DS-1212D-NZ | 10.8-13.2 | ±12 | ±42 | 1000 | 76 |
| AM1DS-1215D-NZ | 10.8-13.2 | ±15 | ±34 | 1000 | 76 |
| AM1DS-2405D-NZ | 21.6-26.4 | ±5 | ±100 | 1000 | 68 |
| AM1DS-2412D-NZ | 21.6-26.4 | ±12 | ±42 | 1000 | 76 |
| AM1DS-2415D-NZ | 21.6-26.4 | ±15 | ±34 | 1000 | 76 |
| AM1DS-0505DH30-NZ | 4.5-5.5 | ±5 | ±100 | 3000 | 69 |
| AM1DS-0512DH30-NZ | 4.5-5.5 | ±12 | ±42 | 3000 | 74 |
| AM1DS-0515DH30-NZ | 4.5-5.5 | ±15 | ±34 | 3000 | 74 |
| AM1DS-1212DH30-NZ | 10.8-13.2 | ±12 | ±42 | 3000 | 76 |

Models

Dual output (continued)

| Model | Input Voltage (V) | Output Voltage (V) | Output Current max (Ma) | Isolation (VDC) | Efficiency (%) |
|-------------------|-------------------|--------------------|-------------------------|-----------------|----------------|
| AM1DS-1215DH30-NZ | 10.8-13.2 | ±15 | ±34 | 3000 | 76 |
| AM1DS-2405DH30-NZ | 21.6-26.4 | ±5 | ±100 | 3000 | 70 |
| AM1DS-2412DH30-NZ | 21.6-26.4 | ±12 | ±42 | 3000 | 76 |

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.

Input Specifications

| Parameters | Nominal | Typical | Maximum | Units |
|-------------------------|-----------|-----------|---------|-------|
| Voltage range | 3.3 | 3.0-3.6 | | VDC |
| | 5 | 4.5-5.5 | | |
| | 12 | 10.8-13.2 | | |
| | 15 | 13.5-16.5 | | |
| | 24 | 21.6-26.4 | | |
| Filter | Capacitor | | | |
| Start up time | | | | ms |
| Absolute Maximum Rating | 3.3 | | 7 | VDC |
| | 5 | | 9 | |
| | 12 | | 18 | |
| | 15 | | 21 | |
| | 24 | | 30 | |
| Peak Input Voltage time | | | 1 | s |
| No Load Input Current | | | 50 | mA |

Isolation Specifications

| Parameters | Conditions | Typical | Rated | Units |
|--------------------|------------|---------|------------|-------|
| Tested I/O voltage | 60 sec | | 1000, 3000 | VDC |
| Resistance | | > 1000 | | MOhm |
| Capacitance | | 15 | | pF |

Output Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|--------------------------|------------------------|---------------|---------|----------|
| Voltage accuracy | | ±5 | | % |
| Short Circuit protection | | Continuous | | |
| Short circuit restart | | Auto recovery | | |
| Line voltage regulation | For 1.0% change of Vin | ±1.5 | | % of Vin |
| Load voltage regulation | load 10~100% | 20% | | % |
| Temperature coefficient | | ±0.03 | | %/°C |
| Ripple & Noise | 20MHz Bandwidth | 200 | | mV p-p |
| Minimum Load Current | | 10 | | % of Max |

General Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|--------------------------|------------|--|---------|-------|
| Switching frequency | 100% load | 100 | | KHz |
| Operating temperature | | -40 to +85 | | °C |
| Storage temperature | | -55 to +125 | | °C |
| Maximum case temperature | | | 100 | °C |
| Derating | | Not-Required | | %/°C |
| Cooling | | Free air convection | | |
| Humidity | | | 95 | % RH |
| Case material | | Non-conductive black plastic (UL94V-0 rated) | | |
| Weight | | 2.3 | | g |

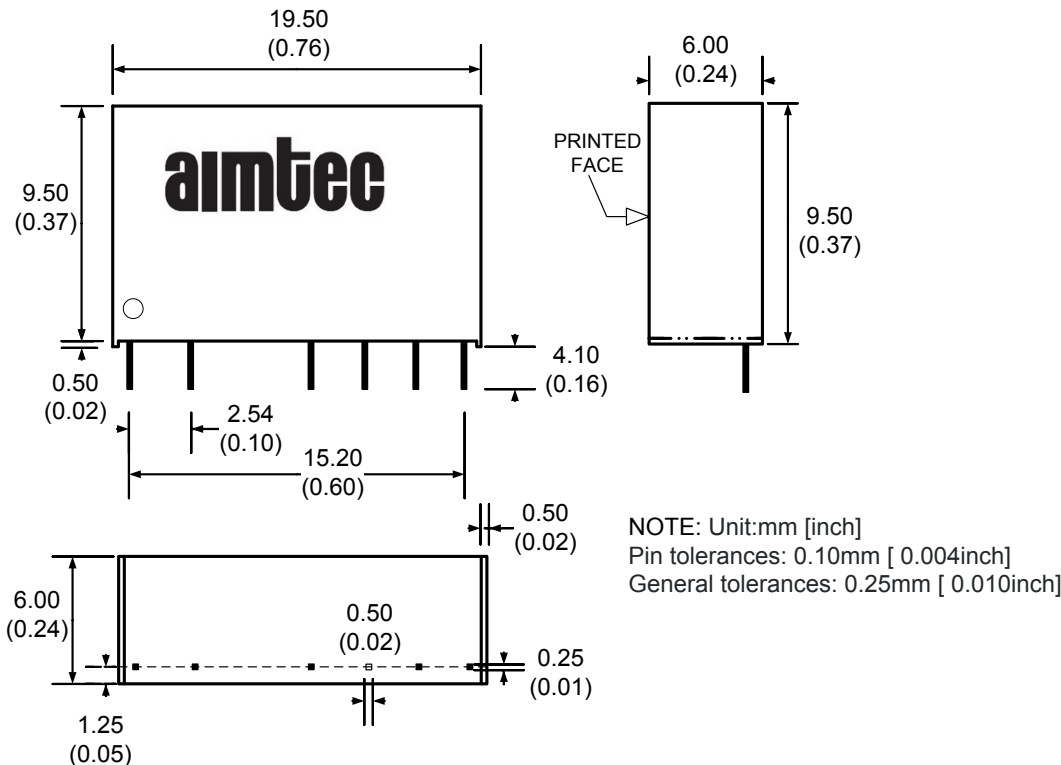
General Specifications (continued)

| Parameters | Conditions | Typical | Maximum | Units |
|-------------------------------|----------------------------|---|-----------------------|-------|
| Dimensions (L x W x H) | | 0.77 x 0.24 x 0.37 inches | 19.5 x 6.00 x 9.35 mm | |
| MTBF | | >1 940 000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C) | | |
| Maximum soldering temperature | 1.5 mm from case for 10sec | | 300 | °C |

Pin Out Specifications

| Pin | 1000 VDC | | 3000VDC | |
|-----|------------|------------|------------|------------|
| | Single | Dual | Single | Dual |
| 1 | + V Input | + V Input | + V Input | + V Input |
| 2 | - V Input | - V Input | - V Input | - V Input |
| 4 | - V Output | - V Output | No pin | No pin |
| 5 | No pin | Common | - V Output | - V Output |
| 6 | + V Output | + V Output | No pin | Common |
| 7 | No pin | No pin | + V Output | + V Output |

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. All specifications are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified. 5. 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. 6. 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. 7. Warranty is in accordance with Aimtec's standard Terms of Sale available at www.aimtec.com.