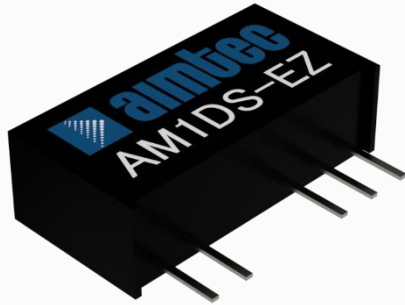


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## AM1DS-EZ



SIP7 Package

The AM1DS-EZ is a 1W SIP7 DC/DC converter that offers great cost savings thanks to an improved manufacturing process. It also features excellent reliability and performance while offering a standard input voltage range of 3.3-24VDC as well as an output voltage of -24 to 24V. This compact SIP7 design will surely benefit your new system design.

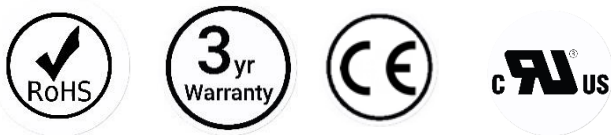
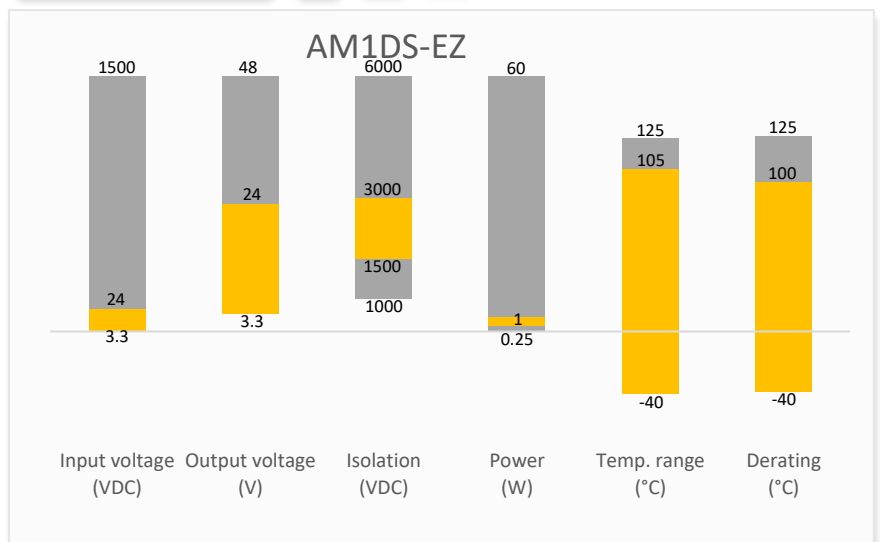
This new series offers great operating temperatures, from -40 to 105°C with full power up to 100°C. Also, an isolation of 1500VDC or 3000VDC for improved reliability and system safety as well as a great 3,500,000h MTBF come standard.

The AM1DS-EZ is suitable for many applications such as for instrumentation, industrial control, industrial applications, communication and IoT applications.

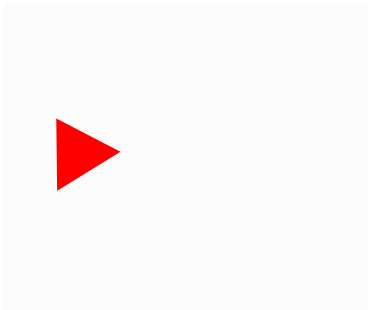
## Features

- Continuous Short circuit protection
- Operating Temp: -40 °C to +105 °C
- Industry standard SIP7 pin-out
- Efficiency up to 87%
- Unregulated output
- Certified: UL/cUL 62368-1
- Designed to Meet IEC/EN 62368-1
- Made in Taiwan

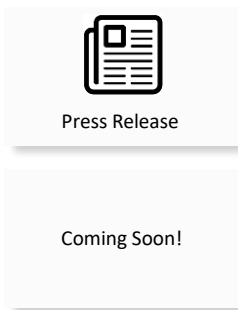
## Summary



## Training



Product Training Video  
(click to open)



Application Notes

## Applications



IoT



Industrial



Telecom



Portable Equipment

## Models & Specifications

### Single Output

| Model            | Input Voltage (VDC) | Output Voltage (VDC) | Output Current max (mA) | Isolation VDC) | Maximum capacitive Load (μF) | Efficiency Typ. (%) |
|------------------|---------------------|----------------------|-------------------------|----------------|------------------------------|---------------------|
| AM1DS-0303SEZ    | 3.3 (2.97-3.63)     | 3.3                  | 303                     | 1500           | 2400                         | 76                  |
| AM1DS-0305SEZ    | 3.3 (2.97-3.63)     | 5                    | 200                     | 1500           | 2400                         | 82                  |
| AM1DS-0309SEZ    | 3.3 (2.97-3.63)     | 9                    | 112                     | 1500           | 1000                         | 83                  |
| AM1DS-0312SEZ    | 3.3 (2.97-3.63)     | 12                   | 84                      | 1500           | 470                          | 84                  |
| AM1DS-0315SEZ    | 3.3 (2.97-3.63)     | 15                   | 67                      | 1500           | 330                          | 84                  |
| AM1DS-0324SEZ    | 3.3 (2.97-3.63)     | 24                   | 42                      | 1500           | 100                          | 85                  |
| AM1DS-0503SEZ    | 5 (4.5-5.5)         | 3.3                  | 303                     | 1500           | 2400                         | 76                  |
| AM1DS-0505SEZ    | 5 (4.5-5.5)         | 5                    | 200                     | 1500           | 2400                         | 82                  |
| AM1DS-0509SEZ    | 5 (4.5-5.5)         | 9                    | 112                     | 1500           | 1000                         | 83                  |
| AM1DS-0512SEZ    | 5 (4.5-5.5)         | 12                   | 84                      | 1500           | 470                          | 84                  |
| AM1DS-0515SEZ    | 5 (4.5-5.5)         | 15                   | 67                      | 1500           | 330                          | 84                  |
| AM1DS-0524SEZ    | 5 (4.5-5.5)         | 24                   | 42                      | 1500           | 100                          | 85                  |
| AM1DS-0903SEZ    | 9 (8.1-9.9)         | 3.3                  | 303                     | 1500           | 2400                         | 76                  |
| AM1DS-0905SEZ    | 9 (8.1-9.9)         | 5                    | 200                     | 1500           | 2400                         | 82                  |
| AM1DS-0909SEZ    | 9 (8.1-9.9)         | 9                    | 112                     | 1500           | 1000                         | 83                  |
| AM1DS-0912SEZ    | 9 (8.1-9.9)         | 12                   | 84                      | 1500           | 470                          | 84                  |
| AM1DS-0915SEZ    | 9 (8.1-9.9)         | 15                   | 67                      | 1500           | 330                          | 84                  |
| AM1DS-0924SEZ    | 9 (8.1-9.9)         | 24                   | 42                      | 1500           | 100                          | 85                  |
| AM1DS-1203SEZ    | 12 (9.6-14.4)       | 3.3                  | 303                     | 1500           | 2400                         | 78                  |
| AM1DS-1205SEZ    | 12 (9.6-14.4)       | 5                    | 200                     | 1500           | 2400                         | 82                  |
| AM1DS-1209SEZ    | 12 (9.6-14.4)       | 9                    | 112                     | 1500           | 1000                         | 85                  |
| AM1DS-1212SEZ    | 12 (9.6-14.4)       | 12                   | 84                      | 1500           | 680                          | 85                  |
| AM1DS-1215SEZ    | 12 (9.6-14.4)       | 15                   | 67                      | 1500           | 330                          | 87                  |
| AM1DS-1224SEZ    | 12 (9.6-14.4)       | 24                   | 42                      | 1500           | 220                          | 85                  |
| AM1DS-1503SEZ    | 15 (12-18)          | 3.3                  | 303                     | 1500           | 2400                         | 78                  |
| AM1DS-1505SEZ    | 15 (12-18)          | 5                    | 200                     | 1500           | 2400                         | 82                  |
| AM1DS-1509SEZ    | 15 (12-18)          | 9                    | 112                     | 1500           | 1000                         | 85                  |
| AM1DS-1512SEZ    | 15 (12-18)          | 12                   | 84                      | 1500           | 680                          | 85                  |
| AM1DS-1515SEZ    | 15 (12-18)          | 15                   | 67                      | 1500           | 330                          | 87                  |
| AM1DS-1524SEZ    | 15 (12-18)          | 24                   | 42                      | 1500           | 220                          | 85                  |
| AM1DS-2403SEZ    | 24 (19.2-28.8)      | 3.3                  | 303                     | 1500           | 2400                         | 78                  |
| AM1DS-2405SEZ    | 24 (19.2-28.8)      | 5                    | 200                     | 1500           | 2400                         | 82                  |
| AM1DS-2409SEZ    | 24 (19.2-28.8)      | 9                    | 112                     | 1500           | 1000                         | 85                  |
| AM1DS-2412SEZ    | 24 (19.2-28.8)      | 12                   | 84                      | 1500           | 680                          | 85                  |
| AM1DS-2415SEZ    | 24 (19.2-28.8)      | 15                   | 67                      | 1500           | 330                          | 87                  |
| AM1DS-2424SEZ    | 24 (19.2-28.8)      | 24                   | 42                      | 1500           | 220                          | 85                  |
| AM1DS-0303SH30EZ | 3.3 (2.97-3.63)     | 3.3                  | 303                     | 3000           | 2400                         | 76                  |
| AM1DS-0305SH30EZ | 3.3 (2.97-3.63)     | 5                    | 200                     | 3000           | 2400                         | 82                  |
| AM1DS-0309SH30EZ | 3.3 (2.97-3.63)     | 9                    | 112                     | 3000           | 1000                         | 83                  |
| AM1DS-0312SH30EZ | 3.3 (2.97-3.63)     | 12                   | 84                      | 3000           | 470                          | 84                  |
| AM1DS-0315SH30EZ | 3.3 (2.97-3.63)     | 15                   | 67                      | 3000           | 330                          | 84                  |
| AM1DS-0324SH30EZ | 3.3 (2.97-3.63)     | 24                   | 42                      | 3000           | 100                          | 85                  |
| AM1DS-0503SH30EZ | 5 (4.5-5.5)         | 3.3                  | 303                     | 3000           | 2400                         | 76                  |
| AM1DS-0505SH30EZ | 5 (4.5-5.5)         | 5                    | 200                     | 3000           | 2400                         | 82                  |

|                  |                |     |     |      |      |    |
|------------------|----------------|-----|-----|------|------|----|
| AM1DS-0509SH30EZ | 5 (4.5-5.5)    | 9   | 112 | 3000 | 1000 | 83 |
| AM1DS-0512SH30EZ | 5 (4.5-5.5)    | 12  | 84  | 3000 | 470  | 84 |
| AM1DS-0515SH30EZ | 5 (4.5-5.5)    | 15  | 67  | 3000 | 330  | 84 |
| AM1DS-0524SH30EZ | 5 (4.5-5.5)    | 24  | 42  | 3000 | 100  | 85 |
| AM1DS-0903SH30EZ | 9 (8.1-9.9)    | 3.3 | 303 | 3000 | 2400 | 76 |
| AM1DS-0905SH30EZ | 9 (8.1-9.9)    | 5   | 200 | 3000 | 2400 | 82 |
| AM1DS-0909SH30EZ | 9 (8.1-9.9)    | 9   | 112 | 3000 | 1000 | 83 |
| AM1DS-0912SH30EZ | 9 (8.1-9.9)    | 12  | 84  | 3000 | 470  | 84 |
| AM1DS-0915SH30EZ | 9 (8.1-9.9)    | 15  | 67  | 3000 | 330  | 84 |
| AM1DS-0924SH30EZ | 9 (8.1-9.9)    | 24  | 42  | 3000 | 100  | 85 |
| AM1DS-1203SH30EZ | 12 (9.6-14.4)  | 3.3 | 303 | 3000 | 2400 | 78 |
| AM1DS-1205SH30EZ | 12 (9.6-14.4)  | 5   | 200 | 3000 | 2400 | 82 |
| AM1DS-1209SH30EZ | 12 (9.6-14.4)  | 9   | 112 | 3000 | 1000 | 85 |
| AM1DS-1212SH30EZ | 12 (9.6-14.4)  | 12  | 84  | 3000 | 680  | 85 |
| AM1DS-1215SH30EZ | 12 (9.6-14.4)  | 15  | 67  | 3000 | 330  | 87 |
| AM1DS-1224SH30EZ | 12 (9.6-14.4)  | 24  | 42  | 3000 | 220  | 85 |
| AM1DS-1503SH30EZ | 15 (12-18)     | 3.3 | 303 | 3000 | 2400 | 78 |
| AM1DS-1505SH30EZ | 15 (12-18)     | 5   | 200 | 3000 | 2400 | 82 |
| AM1DS-1509SH30EZ | 15 (12-18)     | 9   | 112 | 3000 | 1000 | 85 |
| AM1DS-1512SH30EZ | 15 (12-18)     | 12  | 84  | 3000 | 680  | 85 |
| AM1DS-1515SH30EZ | 15 (12-18)     | 15  | 67  | 3000 | 330  | 87 |
| AM1DS-1524SH30EZ | 15 (12-18)     | 24  | 42  | 3000 | 220  | 85 |
| AM1DS-2403SH30EZ | 24 (19.2-28.8) | 3.3 | 303 | 3000 | 2400 | 78 |
| AM1DS-2405SH30EZ | 24 (19.2-28.8) | 5   | 200 | 3000 | 2400 | 82 |
| AM1DS-2409SH30EZ | 24 (19.2-28.8) | 9   | 112 | 3000 | 1000 | 85 |
| AM1DS-2412SH30EZ | 24 (19.2-28.8) | 12  | 84  | 3000 | 680  | 85 |
| AM1DS-2415SH30EZ | 24 (19.2-28.8) | 15  | 67  | 3000 | 330  | 87 |
| AM1DS-2424SH30EZ | 24 (19.2-28.8) | 24  | 42  | 3000 | 220  | 85 |

### Dual Output

| Model         | Input Voltage (VDC) | Output Voltage (VDC) | Output Current max (mA) | Isolation VDC) | Maximum capacitive Load (μF) | Efficiency Typ. (%) |
|---------------|---------------------|----------------------|-------------------------|----------------|------------------------------|---------------------|
| AM1DS-0303DEZ | 3.3 (2.97-3.63)     | ±3.3                 | ±151                    | 1500           | ±1200                        | 76                  |
| AM1DS-0305DEZ | 3.3 (2.97-3.63)     | ±5                   | ±100                    | 1500           | ±1200                        | 82                  |
| AM1DS-0309DEZ | 3.3 (2.97-3.63)     | ±9                   | ±56                     | 1500           | ±470                         | 83                  |
| AM1DS-0312DEZ | 3.3 (2.97-3.63)     | ±12                  | ±42                     | 1500           | ±220                         | 84                  |
| AM1DS-0315DEZ | 3.3 (2.97-3.63)     | ±15                  | ±34                     | 1500           | ±220                         | 84                  |
| AM1DS-0324DEZ | 3.3 (2.97-3.63)     | ±24                  | ±21                     | 1500           | ±47                          | 85                  |
| AM1DS-0503DEZ | 5 (4.5-5.5)         | ±3.3                 | ±151                    | 1500           | ±1200                        | 76                  |
| AM1DS-0505DEZ | 5 (4.5-5.5)         | ±5                   | ±100                    | 1500           | ±1200                        | 82                  |
| AM1DS-0509DEZ | 5 (4.5-5.5)         | ±9                   | ±56                     | 1500           | ±470                         | 83                  |
| AM1DS-0512DEZ | 5 (4.5-5.5)         | ±12                  | ±42                     | 1500           | ±220                         | 84                  |
| AM1DS-0515DEZ | 5 (4.5-5.5)         | ±15                  | ±34                     | 1500           | ±220                         | 84                  |
| AM1DS-0524DEZ | 5 (4.5-5.5)         | ±24                  | ±21                     | 1500           | ±47                          | 85                  |
| AM1DS-0903DEZ | 9 (8.1-9.9)         | ±3.3                 | ±151                    | 1500           | ±1200                        | 76                  |
| AM1DS-0905DEZ | 9 (8.1-9.9)         | ±5                   | ±100                    | 1500           | ±1200                        | 82                  |
| AM1DS-0909DEZ | 9 (8.1-9.9)         | ±9                   | ±56                     | 1500           | ±470                         | 83                  |
| AM1DS-0912DEZ | 9 (8.1-9.9)         | ±12                  | ±42                     | 1500           | ±220                         | 84                  |
| AM1DS-0915DEZ | 9 (8.1-9.9)         | ±15                  | ±34                     | 1500           | ±220                         | 84                  |

|                  |                 |      |      |      |       |    |
|------------------|-----------------|------|------|------|-------|----|
| AM1DS-0924DEZ    | 9 (8.1-9.9)     | ±24  | ±21  | 1500 | ±47   | 85 |
| AM1DS-1203DEZ    | 12 (9.6-14.4)   | ±3.3 | ±151 | 1500 | ±1200 | 78 |
| AM1DS-1205DEZ    | 12 (9.6-14.4)   | ±5   | ±100 | 1500 | ±1200 | 82 |
| AM1DS-1209DEZ    | 12 (9.6-14.4)   | ±9   | ±56  | 1500 | ±680  | 85 |
| AM1DS-1212DEZ    | 12 (9.6-14.4)   | ±12  | ±42  | 1500 | ±330  | 85 |
| AM1DS-1215DEZ    | 12 (9.6-14.4)   | ±15  | ±34  | 1500 | ±220  | 87 |
| AM1DS-1224DEZ    | 12 (9.6-14.4)   | ±24  | ±21  | 1500 | ±100  | 85 |
| AM1DS-1503DEZ    | 15 (12-18)      | ±3.3 | ±151 | 1500 | ±1200 | 78 |
| AM1DS-1505DEZ    | 15 (12-18)      | ±5   | ±100 | 1500 | ±1200 | 82 |
| AM1DS-1509DEZ    | 15 (12-18)      | ±9   | ±56  | 1500 | ±680  | 85 |
| AM1DS-1512DEZ    | 15 (12-18)      | ±12  | ±42  | 1500 | ±330  | 85 |
| AM1DS-1515DEZ    | 15 (12-18)      | ±15  | ±34  | 1500 | ±220  | 87 |
| AM1DS-1524DEZ    | 15 (12-18)      | ±24  | ±21  | 1500 | ±100  | 85 |
| AM1DS-2403DEZ    | 24 (19.2-28.8)  | ±3.3 | ±151 | 1500 | ±1200 | 78 |
| AM1DS-2405DEZ    | 24 (19.2-28.8)  | ±5   | ±100 | 1500 | ±1200 | 82 |
| AM1DS-2409DEZ    | 24 (19.2-28.8)  | ±9   | ±56  | 1500 | ±680  | 85 |
| AM1DS-2412DEZ    | 24 (19.2-28.8)  | ±12  | ±42  | 1500 | ±330  | 85 |
| AM1DS-2415DEZ    | 24 (19.2-28.8)  | ±15  | ±34  | 1500 | ±220  | 87 |
| AM1DS-2424DEZ    | 24 (19.2-28.8)  | ±24  | ±21  | 1500 | ±100  | 85 |
| AM1DS-0303DH30EZ | 3.3 (2.97-3.63) | ±3.3 | ±151 | 3000 | ±1200 | 76 |
| AM1DS-0305DH30EZ | 3.3 (2.97-3.63) | ±5   | ±100 | 3000 | ±1200 | 82 |
| AM1DS-0309DH30EZ | 3.3 (2.97-3.63) | ±9   | ±56  | 3000 | ±470  | 83 |
| AM1DS-0312DH30EZ | 3.3 (2.97-3.63) | ±12  | ±42  | 3000 | ±220  | 84 |
| AM1DS-0315DH30EZ | 3.3 (2.97-3.63) | ±15  | ±34  | 3000 | ±220  | 84 |
| AM1DS-0324DH30EZ | 3.3 (2.97-3.63) | ±24  | ±21  | 3000 | ±47   | 85 |
| AM1DS-0503DH30EZ | 5 (4.5-5.5)     | ±3.3 | ±151 | 3000 | ±1200 | 76 |
| AM1DS-0505DH30EZ | 5 (4.5-5.5)     | ±5   | ±100 | 3000 | ±1200 | 82 |
| AM1DS-0509DH30EZ | 5 (4.5-5.5)     | ±9   | ±56  | 3000 | ±470  | 83 |
| AM1DS-0512DH30EZ | 5 (4.5-5.5)     | ±12  | ±42  | 3000 | ±220  | 84 |
| AM1DS-0515DH30EZ | 5 (4.5-5.5)     | ±15  | ±34  | 3000 | ±220  | 84 |
| AM1DS-0524DH30EZ | 5 (4.5-5.5)     | ±24  | ±21  | 3000 | ±47   | 85 |
| AM1DS-0903DH30EZ | 9 (8.1-9.9)     | ±3.3 | ±151 | 3000 | ±1200 | 76 |
| AM1DS-0905DH30EZ | 9 (8.1-9.9)     | ±5   | ±100 | 3000 | ±1200 | 82 |
| AM1DS-0909DH30EZ | 9 (8.1-9.9)     | ±9   | ±56  | 3000 | ±470  | 83 |
| AM1DS-0912DH30EZ | 9 (8.1-9.9)     | ±12  | ±42  | 3000 | ±220  | 84 |
| AM1DS-0915DH30EZ | 9 (8.1-9.9)     | ±15  | ±34  | 3000 | ±220  | 84 |
| AM1DS-0924DH30EZ | 9 (8.1-9.9)     | ±24  | ±21  | 3000 | ±47   | 85 |
| AM1DS-1203DH30EZ | 12 (9.6-14.4)   | ±3.3 | ±151 | 3000 | ±1200 | 78 |
| AM1DS-1205DH30EZ | 12 (9.6-14.4)   | ±5   | ±100 | 3000 | ±1200 | 82 |
| AM1DS-1209DH30EZ | 12 (9.6-14.4)   | ±9   | ±56  | 3000 | ±680  | 85 |
| AM1DS-1212DH30EZ | 12 (9.6-14.4)   | ±12  | ±42  | 3000 | ±330  | 85 |
| AM1DS-1215DH30EZ | 12 (9.6-14.4)   | ±15  | ±34  | 3000 | ±220  | 87 |
| AM1DS-1224DH30EZ | 12 (9.6-14.4)   | ±24  | ±21  | 3000 | ±100  | 85 |
| AM1DS-1503DH30EZ | 15 (12-18)      | ±3.3 | ±151 | 3000 | ±1200 | 78 |
| AM1DS-1505DH30EZ | 15 (12-18)      | ±5   | ±100 | 3000 | ±1200 | 82 |
| AM1DS-1509DH30EZ | 15 (12-18)      | ±9   | ±56  | 3000 | ±680  | 85 |
| AM1DS-1512DH30EZ | 15 (12-18)      | ±12  | ±42  | 3000 | ±330  | 85 |
| AM1DS-1515DH30EZ | 15 (12-18)      | ±15  | ±34  | 3000 | ±220  | 87 |
| AM1DS-1524DH30EZ | 15 (12-18)      | ±24  | ±21  | 3000 | ±100  | 85 |

|                  |                |      |      |      |       |    |
|------------------|----------------|------|------|------|-------|----|
| AM1DS-2403DH30EZ | 24 (19.2-28.8) | ±3.3 | ±151 | 3000 | ±1200 | 78 |
| AM1DS-2405DH30EZ | 24 (19.2-28.8) | ±5   | ±100 | 3000 | ±1200 | 82 |
| AM1DS-2409DH30EZ | 24 (19.2-28.8) | ±9   | ±56  | 3000 | ±680  | 85 |
| AM1DS-2412DH30EZ | 24 (19.2-28.8) | ±12  | ±42  | 3000 | ±330  | 85 |
| AM1DS-2415DH30EZ | 24 (19.2-28.8) | ±15  | ±34  | 3000 | ±220  | 87 |
| AM1DS-2424DH30EZ | 24 (19.2-28.8) | ±24  | ±21  | 3000 | ±100  | 85 |

| Input Specification |                              |  |         |         |       |
|---------------------|------------------------------|--|---------|---------|-------|
| Parameters          | Conditions                   |  | Typical | Maximum | Units |
| Filter              | Capacitor                    |  |         |         |       |
| Voltage rating      | Vo, Io Nom @ Vin: 3.3V,5V,9V |  | ±10     |         | VDC   |
|                     | Vo, Io Nom @ Vin:12V,15V,24V |  | ±20     |         | VDC   |

| Isolation Specification |  |  |         |         |       |
|-------------------------|--|--|---------|---------|-------|
| Parameters              | Conditions                               |  | Typical | Maximum | Units |
| Tested I/O voltage      | 60 sec / 0.5mA, SEZ and DEZ models       |  | 1500    |         | VDC   |
|                         | 60 sec / 0.5mA, SH30EZ and DH30EZ models |  | 3000    |         | VDC   |
| Resistance              | 500VDC                                   |  | >1000   |         | MΩ    |
| Capacitance             | 100kHz/0.1V                              |  | 20      |         | pF    |

| Output Specification |                                  |  |         |         |          |
|----------------------|----------------------------------|--|---------|---------|----------|
| Parameters           | Conditions                       |  | Typical | Maximum | Units    |
| Voltage accuracy     | 100% full load                   |  |         | ±5      | %        |
| Line regulation      | Per 1% Vin change                |  | 1.2     |         | %        |
| Load regulation      | 10-100% load, 3.3Vout model      |  | 15      | 20      | %        |
|                      | 10-100% load, 5Vout model        |  | 10      | 15      | %        |
|                      | 10-100% load, 9Vout model        |  | 8       | 10      | %        |
|                      | 10-100% load, 12Vout model       |  | 7       | 10      | %        |
|                      | 10-100% load, 15Vout model       |  | 6       | 10      | %        |
|                      | 10-100% load, 24Vout model       |  | 5       | 10      | %        |
| Ripple & Noise*      | 3.3V, 5V, 9V, 12V, 15Vout models |  | 30      | 75      | mV pk-pk |
|                      | 24Vout model                     |  | 50      | 100     | mV pk-pk |

\* Ripple and Noise are measured at 20MHz bandwidth. Please refer to Typical test circuit.

| General Specifications   |   |  |             |         |       |
|--------------------------|---|--|-------------|---------|-------|
| Parameters               | Conditions  |  | Typical     | Maximum | Units |
| Switching frequency      | Full load, nominal input, @3.3V 5V Vin models       |  | 215/370     |         | KHz   |
|                          | Full load, nominal input, other Vin models          |  | 250         |         | KHz   |
| Short circuit protection | Continuous  |  |             |         |       |
| Operating temperature    | With derating                                       |  | -40 to +105 |         | °C    |
| Storage temperature      |   |  | -55 to +125 |         | °C    |
| Cooling                  | Free air convection                                 |  |             |         |       |
| Humidity                 | Non-condensing                                      |  |             | 95      | % RH  |
| Case material            | DAP   |  |             |         |       |
| Weight                   |   |  | 2.1         |         | g     |
| Dimensions (L x W x H)   | 0.77 x 0.24 x 0.39 inches (19.50 x 6.00 x 10.00 mm) |  |             |         |       |
| MTBF                     | 3 500 000 hrs (MIL-HDBK -217F, t=+25°C) / Full Load |  |             |         |       |

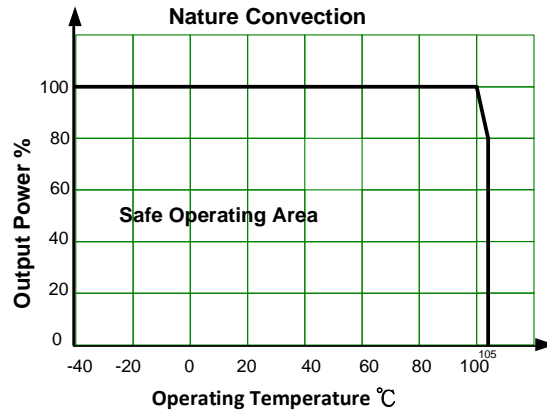
NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.

### Safety Specifications

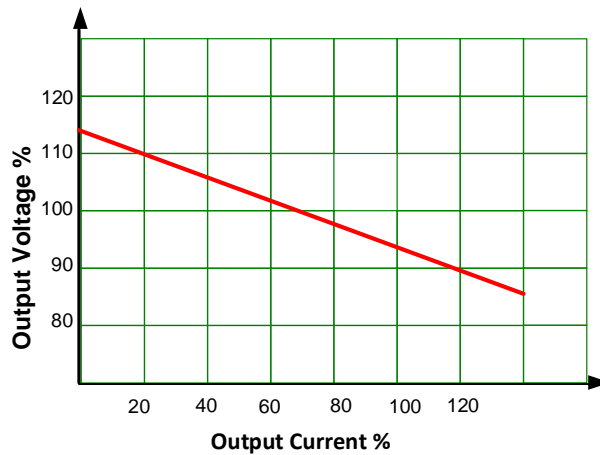
#### Parameters

|                  |                                       |   |
|------------------|---------------------------------------|---|
| Agency Approvals | UL/cUL 62368-1                        |   |
| Standards        | Information technology Equipment      | Design to meet IEC/EN 62368-1                           |
|                  | EMC - Conducted and radiated emission | CISPR32 / EN55032, class B. See Recommended EMC circuit |
|                  | Electrostatic Discharge Immunity      | IEC 61000-4-2 Air ±8KV, Contact ±6KV, Criteria B        |

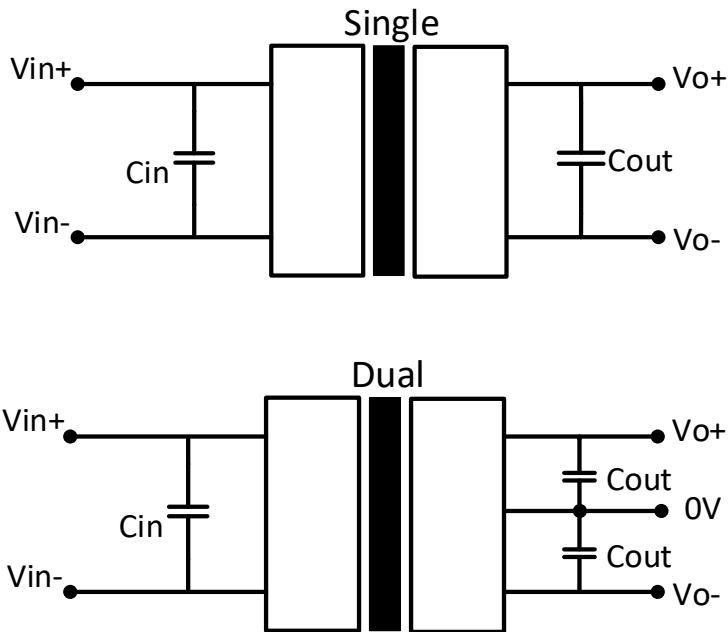
### Derating



### Tolerance Envelop Graph



## Typical test circuit

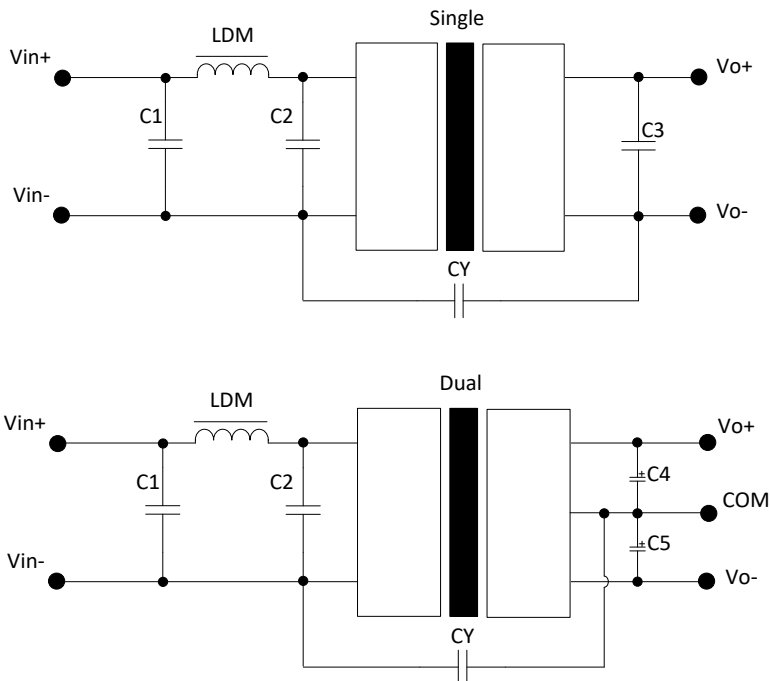


| $V_{in}$ | $C_{in}$        |
|----------|-----------------|
| 3.3VDC   | 4.7 $\mu$ F/25V |
| 5VDC     | 4.7 $\mu$ F/25V |
| 9VDC     | 4.7 $\mu$ F/25V |
| 12VDC    | 2.2 $\mu$ F/25V |
| 15VDC    | 2.2 $\mu$ F/25V |
| 24VDC    | 1 $\mu$ F/50V   |

| Single $V_{out}$ | $C_{out}$       |
|------------------|-----------------|
| 3.3VDC           | 10 $\mu$ F/16V  |
| 5VDC             | 10 $\mu$ F/16V  |
| 9VDC             | 2.2 $\mu$ F/16V |
| 12VDC            | 2.2 $\mu$ F/25V |
| 15VDC            | 1 $\mu$ F/25V   |
| 24VDC            | 1 $\mu$ F/50V   |

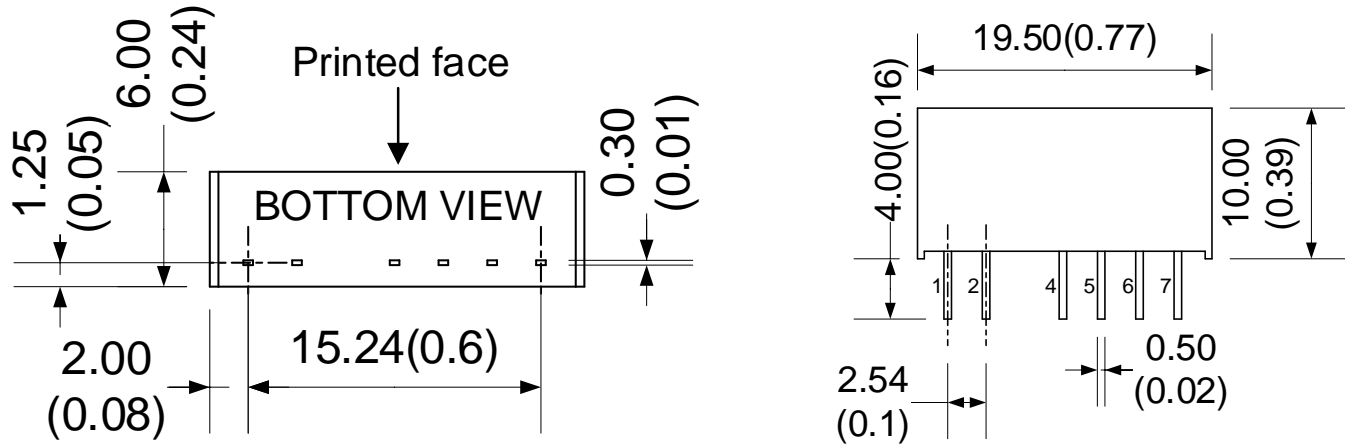
| Dual $V_{out}$ | $C_{out}$             |
|----------------|-----------------------|
| $\pm$ 3.3VDC   | $\pm$ 4.7 $\mu$ F/16V |
| $\pm$ 5VDC     | $\pm$ 4.7 $\mu$ F/16V |
| $\pm$ 9VDC     | $\pm$ 1 $\mu$ F/16V   |
| $\pm$ 12VDC    | $\pm$ 1 $\mu$ F/25V   |
| $\pm$ 15VDC    | $\pm$ 1 $\mu$ F/25V   |
| $\pm$ 24VDC    | $\pm$ 1 $\mu$ F/50V   |

## Recommended EMC circuit



| EMC recommended circuit value table |                            |
|-------------------------------------|----------------------------|
| C1                                  | 4.7 $\mu$ F/50V            |
| C2                                  | 4.7 $\mu$ F/50V            |
| C3,C4,C5                            | Refer Typical test circuit |
| LDM                                 | 6.8 $\mu$ H                |
| CY                                  | 1nF/4kV                    |

## Dimensions



Note:

Unit: mm(inch)

General tolerances:  $\pm 0.25(\pm 0.010)$

Pin Out Specifications

| Pin | 1.5KV isolation Single output | 1.5KV isolation Dual output | 3KV isolation Single output | 3KV isolation Dual output |
|-----|-------------------------------|-----------------------------|-----------------------------|---------------------------|
| 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                        | Com                         | -V Output                   | -V Output                 |
| 6   | +V Output                     | +V Output                   | No pin                      | Com                       |
| 7   | No pin                        | No pin                      | +V Output                   | +V Output                 |

**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](http://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](http://www.aimtec.com).