

**FEATURES:**

- RoHS Compliant
- 4 Pin SMD Package
- Low Ripple And Noise
- High Efficiency up to 81%
- Operating Temperature -40°C to +85°C
- Input / Output Isolation 1000 and 3000VDC
- Pin Compatible with Multiple Manufacturers
- Continuous Short Circuit Protection



### Models

#### Single output

| Model           | Input Voltage (V) | Output Voltage (V) | Output Current Max (mA) | Isolation (VDC) | Input Current Full Load   No Load (mA) |    | Max Capacitive Load (μF) | Efficiency (%) |
|-----------------|-------------------|--------------------|-------------------------|-----------------|----------------------------------------|----|--------------------------|----------------|
| AM1SS-0505SZ    | 4.5-5.5           | 5                  | 200                     | 1000            | 267                                    | 55 | 100                      | 75             |
| AM1SS-0512SZ    | 4.5-5.5           | 12                 | 83.3                    | 1000            | 267                                    | 52 | 100                      | 75             |
| AM1SS-0515SZ    | 4.5-5.5           | 15                 | 66.6                    | 1000            | 173                                    | 50 | 100                      | 73             |
| AM1SS-1205SZ    | 10.8-13.2         | 5                  | 200                     | 1000            | 110                                    | 20 | 100                      | 76             |
| AM1SS-1212SZ    | 10.8-13.2         | 12                 | 83.3                    | 1000            | 107                                    | 23 | 100                      | 78             |
| AM1SS-1215SZ    | 10.8-13.2         | 15                 | 66.6                    | 1000            | 111                                    | 23 | 100                      | 75             |
| AM1SS-2405SZ    | 21.6-26.4         | 5                  | 200                     | 1000            | 54                                     | 15 | 100                      | 77             |
| AM1SS-2412SZ    | 21.6-26.4         | 12                 | 83.3                    | 1000            | 56                                     | 15 | 100                      | 75             |
| AM1SS-2415SZ    | 21.6-26.4         | 15                 | 66.6                    | 1000            | 51                                     | 12 | 100                      | 81             |
| AM1SS-0505SH30Z | 4.5-5.5           | 5                  | 200                     | 3000            | 267                                    | 55 | 100                      | 75             |
| AM1SS-0512SH30Z | 4.5-5.5           | 12                 | 83.3                    | 3000            | 267                                    | 52 | 100                      | 75             |
| AM1SS-0515SH30Z | 4.5-5.5           | 15                 | 67                      | 3000            | 173                                    | 50 | 100                      | 73             |
| AM1SS-1205SH30Z | 10.8-13.2         | 5                  | 200                     | 3000            | 110                                    | 20 | 100                      | 76             |
| AM1SS-1212SH30Z | 10.8-13.2         | 12                 | 83.3                    | 3000            | 107                                    | 23 | 100                      | 78             |
| AM1SS-1215SH30Z | 10.8-13.2         | 15                 | 66.6                    | 3000            | 111                                    | 23 | 100                      | 75             |
| AM1SS-2405SH30Z | 21.6-26.4         | 5                  | 200                     | 3000            | 54                                     | 15 | 100                      | 77             |
| AM1SS-2412SH30Z | 21.6-26.4         | 12                 | 83.3                    | 3000            | 56                                     | 15 | 100                      | 75             |
| AM1SS-2415SH30Z | 21.6-26.4         | 15                 | 66.6                    | 3000            | 51                                     | 12 | 100                      | 81             |

NOTE: All specifications 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                  | 5<br>12<br>24             | 4.5-5.5<br>10.8-13.2<br>21.6-26.4 |         | VDC    |
| Filter                         | Capacitor                 |                                   |         |        |
| Turn on Transient process time |                           |                                   | 25      | ms     |
| Start up time                  |                           | 200                               |         | ms     |
| Absolute Maximum Rating        | 5 Vin<br>12 Vin<br>24 Vin | 0-7<br>0-15<br>0-28               |         | VDC    |
| Peak Input Voltage time        |                           | 100                               |         | ms     |
| Input reflected Ripple current | with 12μH                 | 20                                |         | mA p-p |

### Isolation Specifications

| Parameters         | Conditions | Typical | Rated         | Units |
|--------------------|------------|---------|---------------|-------|
| Tested I/O voltage | 60sec      |         | 1000 and 3000 | VDC   |
| Resistance         |            | > 1000  |               | MOhm  |
| Capacitance        |            | 10      |               | pF    |

### Output Specifications

| Parameters               | Conditions | Typical | Maximum | Units |
|--------------------------|------------|---------|---------|-------|
| Voltage accuracy         |            | ±3      |         | %     |
| Short Circuit protection | Continuous |         |         |       |

### Output Specifications (continued)

| Parameters              | Conditions           | Typical | Maximum | Units    |
|-------------------------|----------------------|---------|---------|----------|
| Short circuit restart   | Auto-Recovery        |         |         |          |
| Line voltage regulation | For 1% change of Vin | ±1.2    |         | % of Vin |
| Load voltage regulation | Load 20 – 100%       | ±10     |         | %        |
| Temperature coefficient |                      | ±0.02   |         | %/°C     |
| Ripple & Noise          | At 20MHz Bandwidth   | 100     |         | mV p-p   |
| Capacitive load         |                      |         | 100     | µF       |
| Rising time             |                      | 50      |         | ms       |

### General Specifications

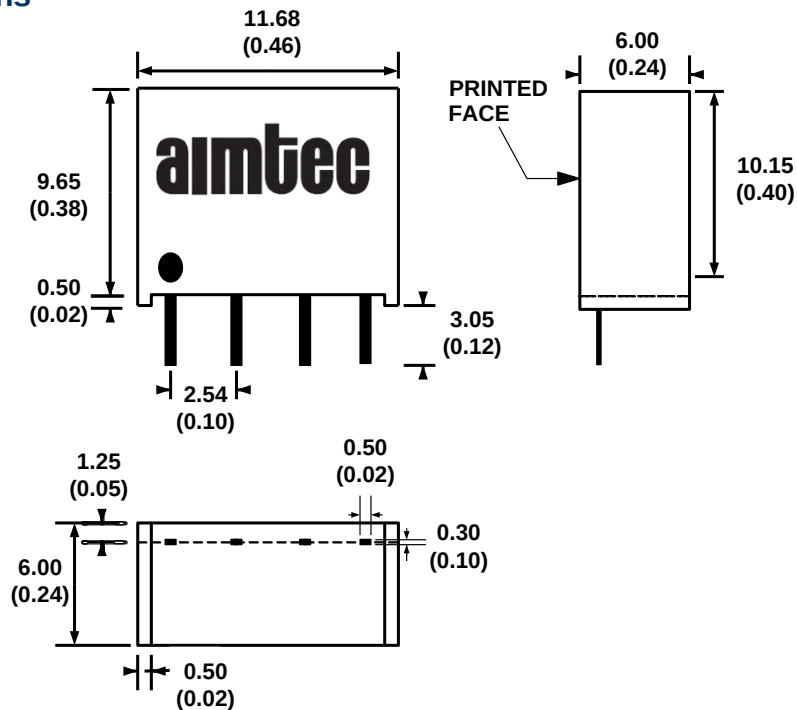
| Parameters             | Conditions                 | Typical                                                | Maximum                 | Units |
|------------------------|----------------------------|--------------------------------------------------------|-------------------------|-------|
| Switching frequency    | 100% load                  | 80                                                     |                         | KHz   |
| Operating temperature  | Full Load without Derating | -40to +85                                              |                         | °C    |
| Storage temperature    |                            | -40 to +125                                            |                         | °C    |
| Max Case temperature   |                            |                                                        | 100                     | °C    |
| Cooling                | Free air convection        |                                                        |                         |       |
| Humidity               |                            |                                                        | 95                      | %     |
| Case material          |                            | Non-conductive black plastic UL94-VO                   |                         |       |
| Weight                 |                            | 1.5                                                    |                         | g     |
| Dimensions (L x W x H) |                            | 0.46 x 0.24 x 0.40 inches                              | 11.68 x 6.00 x 10.15 mm |       |
| MTBF                   |                            | >1 121 000 hrs(MIL-HDBK -217F, Ground Benign, t=+25°C) |                         |       |

### Safety Specifications

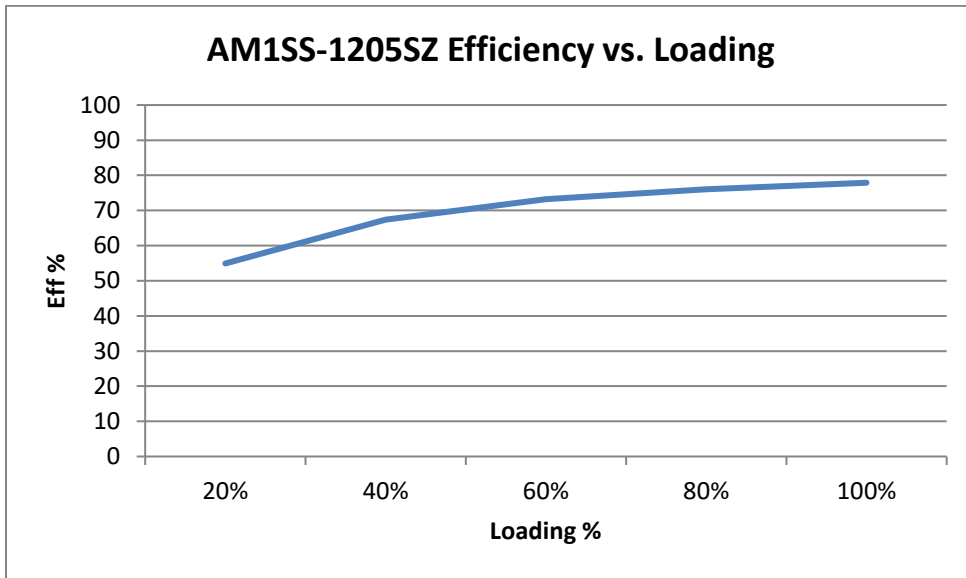
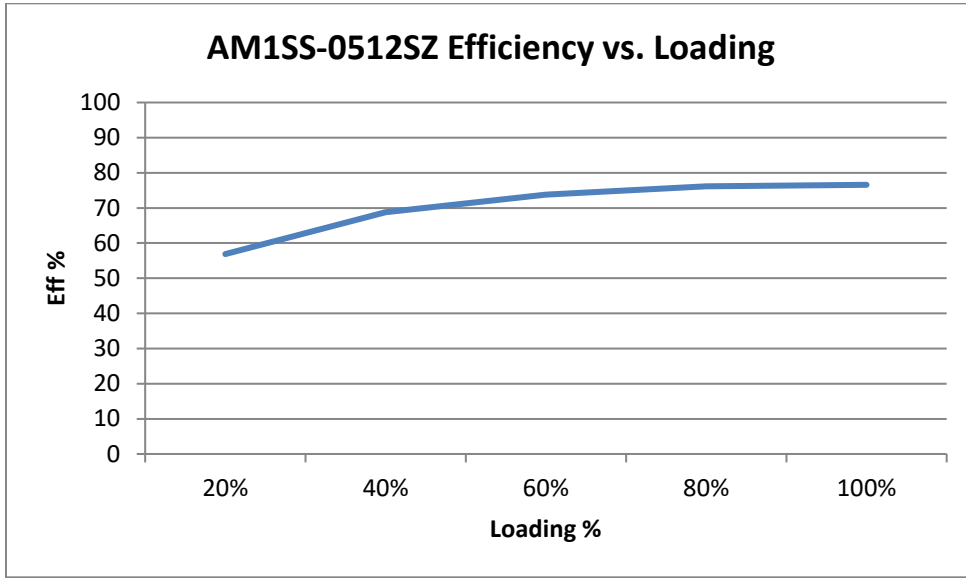
| Standards |                                |
|-----------|--------------------------------|
| Safety    | IEC 60950-1 (Designed to meet) |

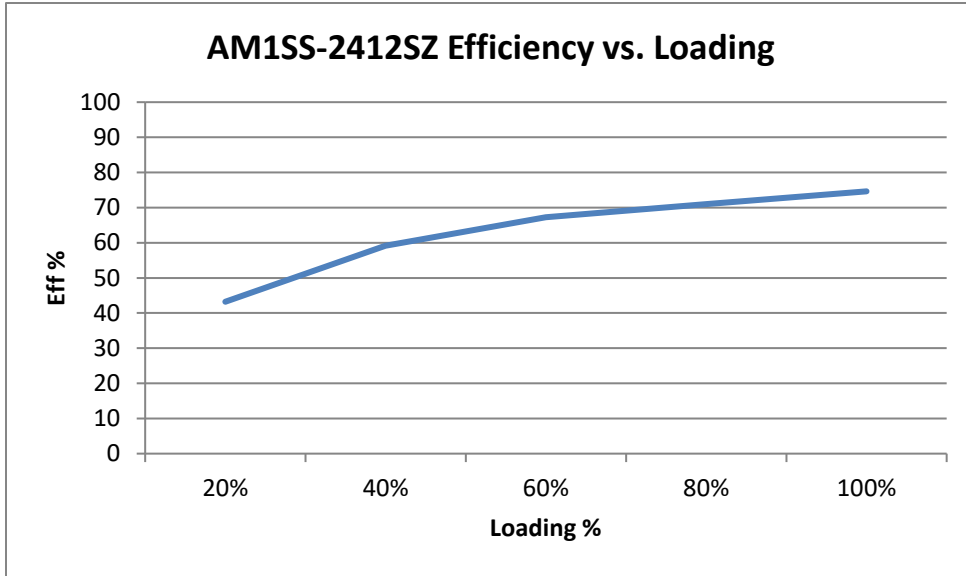
### Pin Out SpecificationsDimensions

| Pin | Single     |
|-----|------------|
| 1   | - V Input  |
| 2   | +V Input   |
| 3   | - V Output |
| 4   | +V Output  |



Typical Efficiency Example Charts





**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 than 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).