



FEATURES:

- RoHS compliant
- 24 Pin DIP Package
- High efficiency up to 83%
- Wide 4:1 input range
- Operating temperature -40 to + 85°C
- Input / Output Isolation 1500VDC
- 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) | Max Capacitive Load(uF) | Efficiency (%) |
|----------------|-------------------|--------------------|-------------------------|-----------------|-------------------------|----------------|
| AM4TW-2403S-RZ | 9-36 | 3.3 | 1200 | 1500 | 1000 | 75 |
| AM4TW-2405S-RZ | 9-36 | 5 | 800 | 1500 | 1000 | 79 |
| AM4TW-2407S-RZ | 9-36 | 7.2 | 555 | 1500 | 100 | 79 |
| AM4TW-2409S-RZ | 9-36 | 9 | 444 | 1500 | 220 | 83 |
| AM4TW-2412S-RZ | 9-36 | 12 | 333 | 1500 | 100 | 82 |
| AM4TW-2415S-RZ | 9-36 | 15 | 266 | 1500 | 220 | 82 |
| AM4TW-2418S-RZ | 9-36 | 18 | 222 | 1500 | 10 | 82 |
| AM4TW-2424S-RZ | 9-36 | 24 | 166 | 1500 | 220 | 82 |
| AM4TW-4803S-RZ | 18-72 | 3.3 | 1200 | 1500 | 1000 | 76 |
| AM4TW-4805S-RZ | 18-72 | 5 | 800 | 1500 | 470 | 79 |
| AM4TW-4807S-RZ | 18-72 | 7.2 | 555 | 1500 | 470 | 82 |
| AM4TW-4809S-RZ | 18-72 | 9 | 444 | 1500 | 330 | 83 |
| AM4TW-4812S-RZ | 18-72 | 12 | 333 | 1500 | 1000 | 80 |
| AM4TW-4815S-RZ | 18-72 | 15 | 266 | 1500 | 47 | 84 |
| AM4TW-4818S-RZ | 18-72 | 18 | 222 | 1500 | 10 | 84 |
| AM4TW-4824S-RZ | 18-72 | 24 | 166 | 1500 | 22 | 82 |

Models Dual output

| Model | Input Voltage (V) | Output Voltage (V) | Output Current max (mA) | Isolation (VDC) | Max Capacitive Load(uF) | Efficiency (%) |
|----------------|-------------------|--------------------|-------------------------|-----------------|-------------------------|----------------|
| AM4TW-2403D-RZ | 9-36 | ±3.3 | ±606 | 1500 | ±470 | 75 |
| AM4TW-2405D-RZ | 9-36 | ±5 | ±400 | 1500 | ±100 | 79 |
| AM4TW-2407D-RZ | 9-36 | ±7.2 | ±277 | 1500 | ±47 | 79 |
| AM4TW-2409D-RZ | 9-36 | ±9 | ±222 | 1500 | ±47 | 80 |
| AM4TW-2412D-RZ | 9-36 | ±12 | ±166 | 1500 | ±47 | 82 |
| AM4TW-2415D-RZ | 9-36 | ±15 | ±133 | 1500 | ±10 | 80 |
| AM4TW-2418D-RZ | 9-36 | ±18 | ±111 | 1500 | ±100 | 80 |
| AM4TW-2424D-RZ | 9-36 | ±24 | ±83 | 1500 | ±22 | 80 |
| AM4TW-4803D-RZ | 18-72 | ±3.3 | ±606 | 1500 | ±680 | 78 |
| AM4TW-4805D-RZ | 18-72 | ±5 | ±400 | 1500 | ±330 | 79 |
| AM4TW-4807D-RZ | 18-72 | ±7.2 | ±277 | 1500 | ±47 | 79 |
| AM4TW-4809D-RZ | 18-72 | ±9 | ±222 | 1500 | ±47 | 80 |
| AM4TW-4812D-RZ | 18-72 | ±12 | ±166 | 1500 | ±100 | 82 |
| AM4TW-4815D-RZ | 18-72 | ±15 | ±133 | 1500 | ±100 | 80 |
| AM4TW-4818D-RZ | 18-72 | ±18 | ±111 | 1500 | ±33 | 81 |
| AM4TW-4824D-RZ | 18-72 | ±24 | ±83 | 1500 | ±10 | 80 |

Input Specifications

| Parameters | Nominal | Typical | Maximum | Units |
|----------------------------------|----------------|---------------|---------|-------|
| Voltage range | 24 48 | 9-36 18-72 | | VDC |
| Filter | π (Pi) Network | | | |
| Input Reflected ripple current * | | 35 | | mA |

Input Specifications (continued)

| Parameters | Nominal | Typical | Maximum | Units |
|-------------------------|------------------|--------------------|---------|-------|
| Absolute Maximum Rating | 24 Vin 48 Vin | -0.7-40 -0.7-80 | | VDC |
| Peak Input Voltage time | | 100 | | ms |

* The input reflected ripple current should be measured with connected 12μH inductor and a 47μF capacitor.

Isolation Specifications

| Parameters | Conditions | Typical | Rated | Units |
|---------------------------------------|------------|---------|-------|-------|
| Tested I/O voltage | 60 sec | | 1500 | VDC |
| Tested case/Input & Output Resistance | 60 sec | | 1000 | VDC |
| Resistance | | > 1000 | | MOhm |
| Capacitance | | 500 | | pF |

Output Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|--------------------------|---------------------|---------------|---------|--------|
| Voltage accuracy | | ±1 | | % |
| Short Circuit protection | | Continuous | | |
| Short circuit restart | | Auto Recovery | | |
| Line voltage regulation | | ±0.5 | | % |
| Load voltage regulation | 3.3/±3.3Vout models | ±1.5 | | % |
| | Other models | ±0.5 | | % |
| Temperature coefficient | | ±0.02 | | %/°C |
| Ripple & Noise* | At 20MHz Bandwidth | 60 | | mV p-p |

* Measured with a 1μF CC.

General Specifications

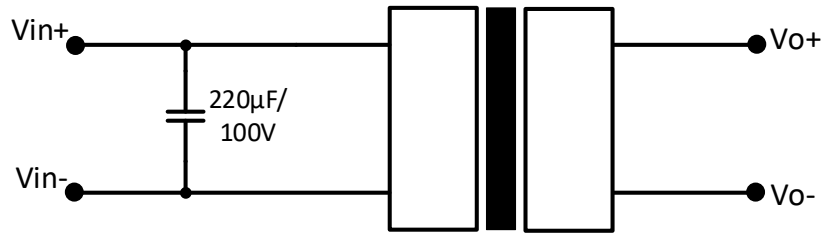
| Parameters | Conditions | Typical | Maximum | Units |
|-----------------------|-----------------------------------|---|---------|-------|
| Switching frequency | 100% load | 266 | | KHz |
| Operating temperature | Full Load without Derating | -40 to +85 | | °C |
| Storage temperature | | -40 to +125 | | °C |
| Max Case temperature | | | +100 | °C |
| Cooling | | Free air convection | | |
| Humidity | | | 95 | % |
| Case material | | Nickel coated copper | | |
| Weight | | 17 | | g |
| Dimensions(L x W x H) | Tolerance ±0.5 mm or ±0.02 inches | 1.25 x 0.8 x 0.4inches (31.75 x 20.32 x 10.16mm) | | |
| MTBF | | >1 121 000 hrs (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.

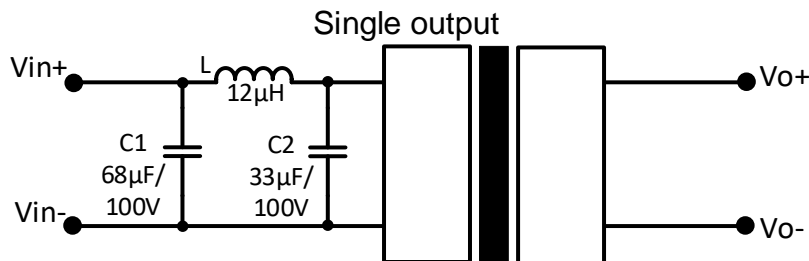
Safety Specifications

| Parameters | |
|--------------------------------|---|
| Agency Approval | CE |
| Safety | Designed to meet IEC/EN/UL60950-1, 62368-1 |
| | EN55032 Class A with recommended EMI circuit |
| | IEC61000-4-2, Perf. Criteria A |
| | IEC61000-4-3, Perf. Criteria A |
| | IEC61000-4-4, Perf. Criteria A |
| | IEC61000-4-5, Perf. Criteria A (external 220uF/100V cap required) |
| | IEC61000-4-6, Perf. Criteria A |
| IEC61000-4-8, Perf. Criteria A | |

Recommended Circuits
Surge



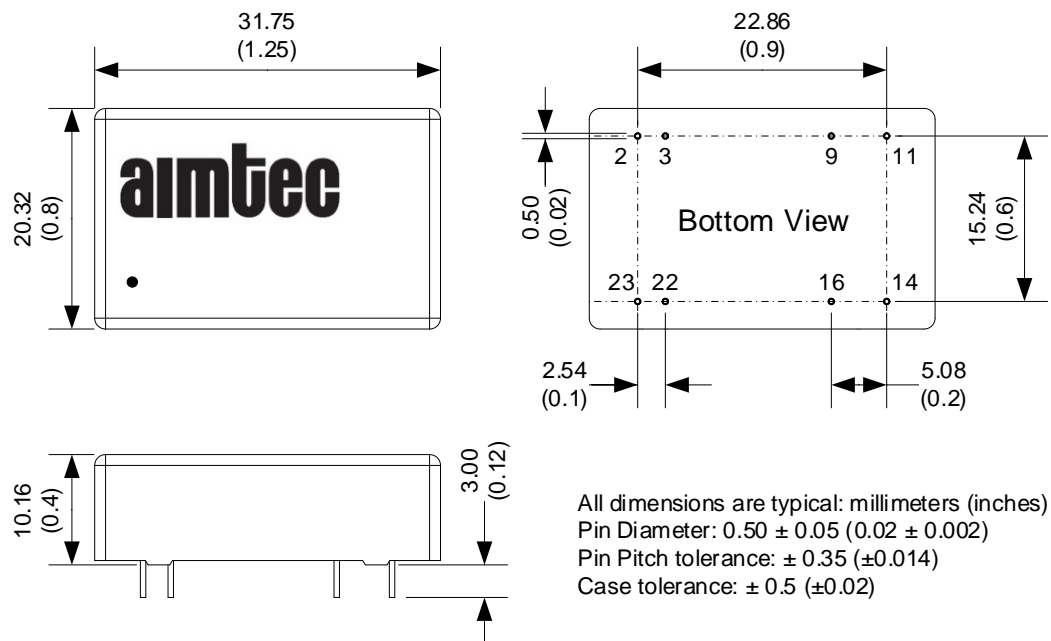
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Pin Out Specifications

| Pin | Single | Dual |
|-----|-----------|-----------|
| 2 | -V Input | -V Input |
| 3 | -V Input | -V Input |
| 9 | No pin | Common |
| 11 | N.C. | -V Output |
| 14 | +V Output | +V Output |
| 16 | -V Output | Common |
| 22 | +V Input | +V Input |
| 23 | +V Input | +V Input |

Dimensions



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