

FEATURES:

- Wide 2:1 input range
- Efficiency up to 90%
- Over Current Protection
- Continuous Short Circuit Protection
- Operating temperature -40°C to + 85°C
- Over voltage Protection
- Input / Output Isolation 1500VDC
- Soft Start

Models

Single output



| Model | Input Voltage (V) | Input current NL FL (mA) | Output Voltage (Vdc) | Output Current max (A) | Isolation (VDC) | Max Capacitive Load(μF) | Efficiency (%) |
|--------------|-------------------|----------------------------|----------------------|------------------------|-----------------|-------------------------|----------------|
| AM10T-1202SZ | 9-18 | 10 791 | 2.5 | 3 | 1500 | 2200 | 81 |
| AM10T-1203SZ | 9-18 | 10 1006 | 3.3 | 3 | 1500 | 2200 | 84 |
| AM10T-1205SZ | 9-18 | 10 992 | 5 | 2 | 1500 | 2200 | 86 |
| AM10T-1212SZ | 9-18 | 10 980 | 12 | 0.833 | 1500 | 820 | 87 |
| AM10T-1215SZ | 9-18 | 10 958 | 15 | 0.667 | 1500 | 470 | 89 |
| AM10T-2402SZ | 18-36 | 10 381 | 2.5 | 3 | 1500 | 2200 | 84 |
| AM10T-2403SZ | 18-36 | 10 497 | 3.3 | 3 | 1500 | 2200 | 85 |
| AM10T-2405SZ | 18-36 | 10 479 | 5 | 2 | 1500 | 2200 | 89 |
| AM10T-2412SZ | 18-36 | 10 485 | 12 | 0.833 | 1500 | 820 | 88 |
| AM10T-2415SZ | 18-36 | 10 485 | 15 | 0.667 | 1500 | 470 | 88 |
| AM10T-4802SZ | 36-75 | 10 191 | 2.5 | 3 | 1500 | 2200 | 84 |
| AM10T-4803SZ | 36-75 | 10 249 | 3.3 | 3 | 1500 | 2200 | 85 |
| AM10T-4805SZ | 36-75 | 10 242 | 5 | 2 | 1500 | 2200 | 88 |
| AM10T-4812SZ | 36-75 | 10 245 | 12 | 0.833 | 1500 | 820 | 87 |
| AM10T-4815SZ | 36-75 | 10 242 | 15 | 0.667 | 1500 | 470 | 88 |

Models

Dual output

| Model | Input Voltage (V) | Input current NL FL (mA) | Output Voltage (V) | Output Current max (A) | Isolation (VDC) | Max Capacitive Load(μF) | Efficiency (%) |
|--------------|-------------------|----------------------------|--------------------|------------------------|-----------------|-------------------------|----------------|
| AM10T-1212DZ | 9-18 | 10 980 | ±12 | ±0.416 | 1500 | ±220 | 87 |
| AM10T-1215DZ | 9-18 | 10 969 | ±15 | ±0.333 | 1500 | ±150 | 88 |
| AM10T-2412DZ | 18-36 | 10 485 | ±12 | ±0.416 | 1500 | ±220 | 88 |
| AM10T-2415DZ | 18-36 | 10 474 | ±15 | ±0.333 | 1500 | ±150 | 90 |
| AM10T-4812DZ | 36-75 | 10 245 | ±12 | ±0.416 | 1500 | ±220 | 87 |
| AM10T-4815DZ | 36-75 | 10 245 | ±15 | ±0.333 | 1500 | ±150 | 87 |

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 | 12 | 9-18 | | VDC |
| | 24 | 18-36 | | |
| | 48 | 36-75 | | |
| Filter | π (Pi) Network | | | |
| Startup time | Nominal Vin and constant resistive load | | 20 | ms |
| Absolute Maximum Rating | 12 Vin | -0.7-25 | | VDC |
| | 24 Vin | -0.7-50 | | |
| | 48 Vin | -0.7-100 | | |

| | | | | |
|---------------------------|--|----|-----|--------|
| Peak Input Voltage time | | | 100 | ms |
| Input reflected current * | | 20 | | mA p-p |

* The input reflected ripple current should be measured with connected 12µH inductor.

Isolation Specifications

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

Output Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|--------------------------------|---|--------------------|---------|--------|
| Voltage accuracy | | ±1 | | % |
| Cross Regulation (Dual Output) | 25% -100% load on one output, 100% load on second | ±5 | | % |
| Over voltage protection | | Zener diode clamp | | |
| Over current protection | Full Load | 150 | | % |
| Short Circuit protection | | Continuous, hiccup | | |
| Short circuit restart | | Auto recovery | | |
| Line voltage regulation | HL-LL | | ±0.5 | % |
| Load voltage regulation | 0% Load to Full Load , Single 5V / 12V / 15V Output | ±0.5 | | % |
| | 0% Load to Full Load, Other models | ±1.0 | | |
| Temperature coefficient | | ±0.02 | | %/°C |
| Ripple & Noise * | 20MHz Bandwidth | | 75 | mV p-p |

* Measured with 1µF CC.

General Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|------------------------------|------------------------------------|--|---------|-------|
| Switching frequency | 100% load | 330 | | KHz |
| Operating temperature | Full Load with derating above 60°C | -40 to +85 | | °C |
| Storage temperature | | -40 to +125 | | °C |
| Maximum case temperature | | | 100 | °C |
| Derating | Above 60°C | 2.5 | | %/°C |
| Cooling | | Free air convection | | |
| Humidity | | | 95 | % RH |
| Case material | | Nickel-coated Copper | | |
| Potting material | | UL94V-0 rated | | |
| Weight | | 17 | | g |
| Dimensions (L x W x H) | | 1.25 x 0.80 x 0.40 inches 31.75 x 20.32 x 10.16 mm | | |
| MTBF | | >1 000 000 hrs (MIL-HDBK -217F, Ground Benign, t _v +25°C) | | |
| Manual soldering temperature | 1.5mm from case for 10 sec | | 260 | °C |
| Transient recovery time | 25% load step (75%-50%-25%) | 200 | | µS |
| Transient recovery deviation | 25% load step (75%-50%-25%) | ±3 | | % |

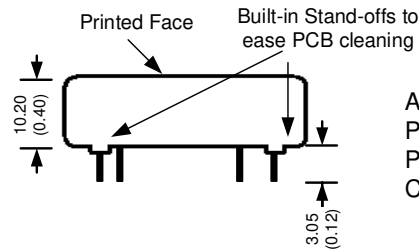
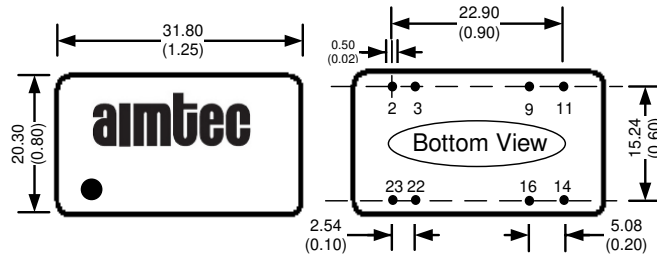
Safety Specifications

| Parameters | |
|------------------|---|
| Agency approvals | CE, UL |
| Standards | EN55032 Class A, with recommended 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 220µF/100V cap required) |
| | IEC61000-4-6, Perf. Criteria A |
| | IEC61000-4-8, Perf. Criteria A |
| | IEC/EN/UL 60950-1:2001 & IEC/EN/UL 62368-1 |

Pin Out Specifications

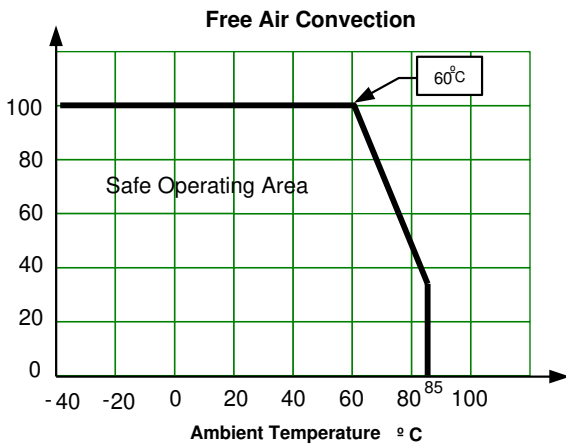
| Pin | Single | Dual |
|-----|-----------|------------|
| 2 | -V Input | -V Input |
| 3 | -V Input | -V Input |
| 9 | No pin | Common |
| 11 | N.C. | -V Output |
| 14 | +V Output | + V Output |
| 16 | -V Output | Common |
| 22 | +V Input | +V Input |
| 23 | +V Input | +V Input |

Dimensions



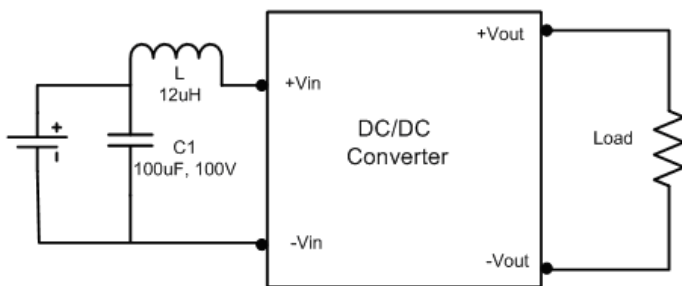
All dimensions are typical: millimeters (inches)
 Pin Diameter: 0.50 ± 0.05 (0.02 ± 0.002)
 Pin Pitch Tolerance: ± 0.35 (± 0.014)
 Case Tolerance: ± 0.5 (± 0.02)

Derating

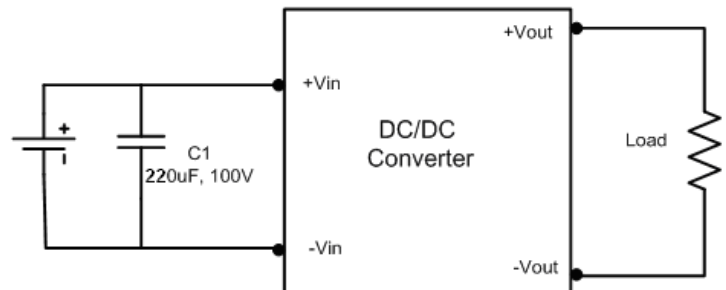


Test Circuits

Conducted Emissions:



Surge:



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