



FEATURES:

- RoHS Compliant
- Wide 2:1 input range
- High Efficiency up to 86%
- Continuous short circuit
- Operating Temperature -40°C to 85°C
- Input / Output Isolation of 500VAC
- No Tantalum capacitors used inside
- Over voltage protection

Models
Single output



| Model | Input Voltage (V) | Output Voltage (V) | Output Current max (mA) | Isolation (VAC) | Max Capacitive Load(uF) | Efficiency (%) |
|-------------|-------------------|--------------------|-------------------------|-----------------|-------------------------|----------------|
| AM6Q-0503SZ | 4.5-9 | 3.3 | 1000 | 500 | 1000 | 73 |
| AM6Q-0505SZ | 4.5-9 | 5 | 1000 | 500 | 1000 | 76 |
| AM6Q-0512SZ | 4.5-9 | 12 | 500 | 500 | 500 | 79 |
| AM6Q-0515SZ | 4.5-9 | 15 | 400 | 500 | 400 | 79 |
| AM6Q-1203SZ | 9-18 | 3.3 | 1000 | 500 | 1000 | 76 |
| AM6Q-1205SZ | 9-18 | 5 | 1200 | 500 | 1200 | 81 |
| AM6Q-1212SZ | 9-18 | 12 | 500 | 500 | 500 | 85 |
| AM6Q-1215SZ | 9-18 | 15 | 400 | 500 | 400 | 85 |
| AM6Q-2403SZ | 18-36 | 3.3 | 1200 | 500 | 1200 | 73 |
| AM6Q-2405SZ | 18-36 | 5 | 1200 | 500 | 1200 | 80 |
| AM6Q-2412SZ | 18-36 | 12 | 500 | 500 | 500 | 84 |
| AM6Q-2415SZ | 18-36 | 15 | 400 | 500 | 400 | 86 |
| AM6Q-4803SZ | 36-75 | 3.3 | 1200 | 500 | 1200 | 74 |
| AM6Q-4805SZ | 36-75 | 5 | 1200 | 500 | 1200 | 80 |
| AM6Q-4812SZ | 36-75 | 12 | 500 | 500 | 500 | 84 |
| AM6Q-4815SZ | 36-75 | 15 | 400 | 500 | 400 | 85 |

Models
Dual output

| Model | Input Voltage (V) | Output Voltage (V) | Output Current max (mA) | Isolation (VAC) | Max Capacitive Load(uF) | Efficiency (%) |
|-------------|-------------------|--------------------|-------------------------|-----------------|-------------------------|----------------|
| AM6Q-0512DZ | 4.5-9 | ±12 | ±250 | 500 | ±250 | 82 |
| AM6Q-0515DZ | 4.5-9 | ±15 | ±200 | 500 | ±200 | 82 |
| AM6Q-1212DZ | 9-18 | ±12 | ±250 | 500 | ±250 | 88 |
| AM6Q-1215DZ | 9-18 | ±15 | ±200 | 500 | ±200 | 88 |
| AM6Q-2412DZ | 18-36 | ±12 | ±250 | 500 | ±250 | 88 |
| AM6Q-2415DZ | 18-36 | ±15 | ±200 | 500 | ±200 | 88 |
| AM6Q-4812DZ | 36-75 | ±12 | ±250 | 500 | ±250 | 87 |
| AM6Q-4815DZ | 36-75 | ±15 | ±200 | 500 | ±200 | 88 |

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 | 5 | 4.5-9 | | VDC |
| | 12 | 9-18 | | |
| | 24 | 18-36 | | |
| | 48 | 36-75 | | |
| Filter | π (Pi) Network | | | |
| Start up time | | 20 | | ms |
| No Load Input Current | | 45 | | mA |
| Input reflected current | | 20 | | mA |

Isolation Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|--------------------|------------|---------|---------|-------|
| Tested I/O voltage | 3sec | 500 | | VAC |
| Resistance | | 50 | | MOhm |
| Capacitance | | 500 | | pF |

Output Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|---------------------------------------|---|---------------|---------|----------|
| Voltage accuracy | | ±1 | | % |
| Cross Regulation (Dual Output Models) | 25% load on one output – 100% load on the other output | ±5 | | % |
| Over voltage protection | Zener Diode Clamp | 5 | 6.2 | V |
| | | 12 | 15 | |
| | | 15 | 18 | |
| | | ±12 | ±15 | |
| | | ±15 | ±18 | |
| Over Current Protection | FL | 185 | | % |
| Short Circuit protection | | Continuous | | |
| Short circuit restart | | Auto Recovery | | |
| Line voltage regulation | LL-HL | ±0.5 | | % of Vin |
| Load voltage regulation | Load:0-100% unbalanced | ±1 | | % |
| Temperature coefficient | | ±0.02 | | %/°C |
| Ripple & Noise | 20MHz Bandwidth | 75 | | mV p-p |
| Minimum Load Current | | 0 | | % of Max |

General Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|------------------------------|---------------------|--|-------------------------|-------|
| Switching frequency | 100% load | 330 | | KHz |
| Operating temperature | Derating above 60°C | -40 to +85 | | °C |
| Storage temperature | | -40 to +125 | | °C |
| Maximum case temperature | | | 100 | °C |
| Cooling | | Free Air Convection | | |
| Humidity | | | 95 | % RH |
| Case material | | Nickel Coated Copper | | |
| Weight | | 25 | | g |
| Dimensions (L x W x H) | | 1.75 x 1.10 x 0.28 inches | 44.50 x 28.00 x 7.00 mm | |
| MTBF | | >1.28Mhrs (MIL-HDBK -217F, Ground Benign, t=+25°C) | | |
| Transient recovery deviation | | ±3 | | % |

Safety Specifications

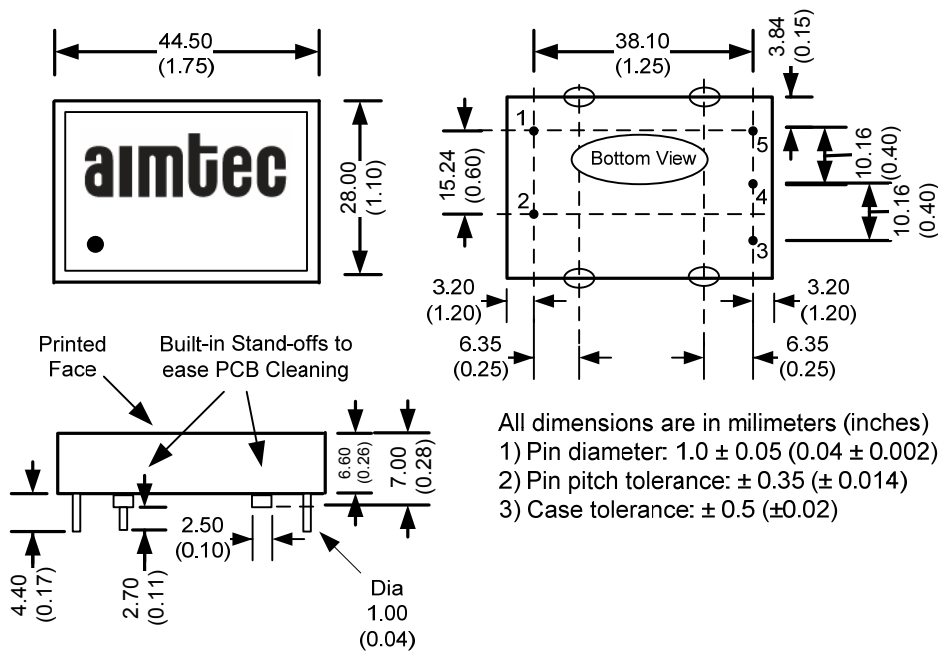
| Parameters | |
|------------|---------------------------------|
| Standards | Designed to meet IEC/EN 60950-1 |

Pin Out Specifications

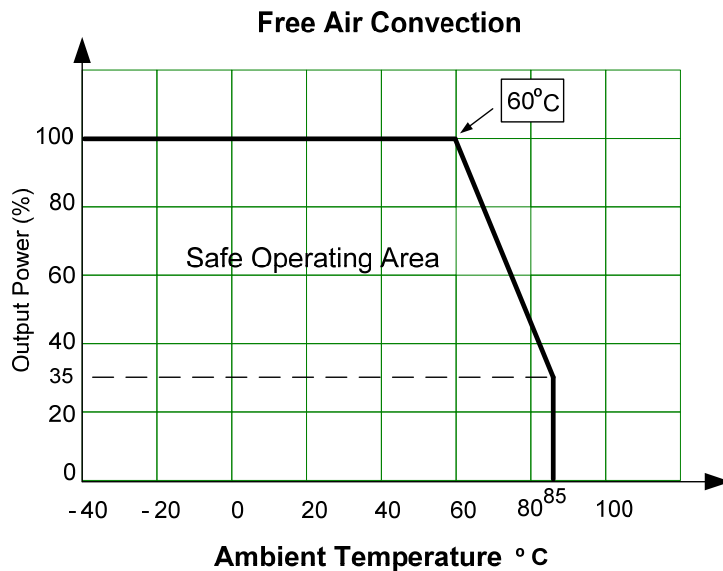
| Pin | Single | Dual |
|-----|-----------|-----------|
| 1 | -V Input | -V Input |
| 2 | +V Input | +V Input |
| 3 | +V Output | +V Output |
| 4 | NP | Common |
| 5 | -V Output | -V Output |

NP: Not Populated

Dimensions



Derating



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