

ALQ12/AEQ12 Series

18 to 50.4 Watts

Total Power:

132 Watts (for the 3.3 Vo device)

48 Watts (for the 1.2 Vo device)

Input Voltage: 36 - 75 VDC

of Outputs: Single



Rev. 01.10.07
ALQ12/AEQ12 Series
1 of 2



Special Features

- Delivers up to 12 A output current (6.3 A for the 8 Vo)
- Basic Isolation
- Ultra High Efficiency
- Improved thermal performance: 12A (6.3A for the 8 V) at 55 °C at 1.5ms-1 (300LFM)
- High power density
- Low output noise
- Industry standard pinout
- 2:1 wide input voltage
- CNT function
- Remote sense
- Trim function: +10% / -20%
- Input under-voltage lockout
- Output over-current lockout
- Output over-voltage protection
- Over temperature protection
- RoHS Compliant

Safety

UL cUL
CSA
EN0950

Electrical Specifications

Input

| | |
|------------------------|--|
| Input Range | 36 to 75 VDC |
| Input Current (max.) | 1.6 A |
| Input Reflected-ripple | 20 mAp-p 5Hz to 20MHz: 12uH source impedance, TA=25 °C |

Current Output

Output

| | |
|------------------------|--|
| Output voltage | 8V, 3.3V, 1.8V, 1.5V nominal |
| Output Current | 12A (6.3 A for the 8 Vo) |
| Efficiency | >80% (See ordering information) |
| Line output regulation | 5 mV (3 mV Typical) : 1.5 V & 1.8 V device 10 mV (5 mV Typical) : 3.3 V device 15 mV (8 mV Typical) : 8.0 V device |
| Load Output Regulation | 10 mV max (5 mV Typ) : 1.5 V and 1.8 V device 20 mV max (10 mV Typ) : 3.3 V and 8.0 V device |
| Switching Frequency | 300 Khz |

Isolation

| | |
|-----------------------|-----------|
| I/O isolation | 1500 Vdc |
| Isolation Capacitance | 2200 pF |
| Isolation Resistance | >10 Mohms |

Environmental Specifications

| | |
|-------------------------------------|---|
| Operating ambient temperature range | -40 °C to 55 °C |
| Storage temperature | -55 °C to 125 °C |
| Temperature Regulation | 0.02 %Vo/°C |
| Calculated MTBF | 3.080 Million hours (typ.); Io=Io-max; Tc=25 °C |

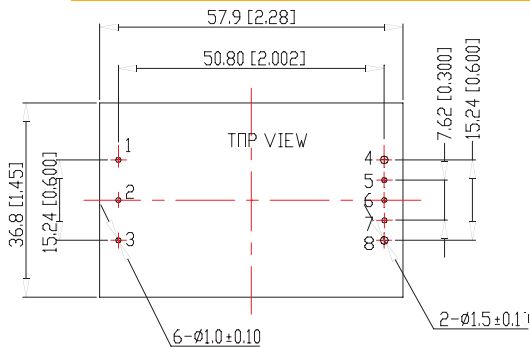


Ordering Information

| Vin (V) | Vout (V) | Iout (A) | Effy | Model Number |
|---------|----------|----------|------|---------------|
| 36-75 | 8 | 6.3 | 90% | AEQ06L48(N)-L |
| 36-75 | 3.3 | 12 | 88% | ALQ12F48(N)-L |
| 36-75 | 1.8 | 12 | 84% | AEQ12Y48(N)-L |
| 36-75 | 1.8 | 12 | 84% | ALQ12Y48(N)-L |
| 36-75 | 1.5 | 12 | 82% | AEQ12M48(N)-L |
| 36-75 | 1.5 | 12 | 82% | ALQ12M48(N)-L |

Note: Option "N" is for the negative enabled option, omit if converter is positive enabled.

Mechanical Drawing

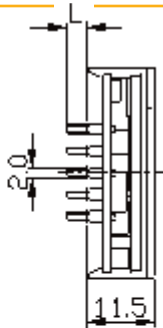
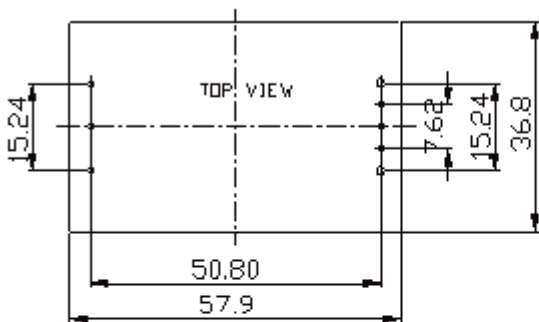


Open-Framed

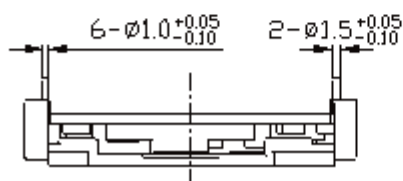
Pin Length Option

| Device Code Suffix | L |
|--------------------|----------------|
| -4 | 4.8mm+/-0.5mm |
| -6 | 3.8mm+/-0.5mm |
| -8 | 2.8mm+/-0.25mm |
| NONE | 5.8mm+/-0.5mm |

TOLERANCES : X.Xmm+/- 1.5mm



Baseplate



| | | | |
|-------|------|-------|--------|
| Pin 1 | +Vin | Pin 4 | +Vo |
| Pin 2 | CNT | Pin 5 | +Sense |
| Pin 3 | -Vin | Pin 6 | Trim |
| | | Pin 7 | -Sense |
| | | Pin 8 | -Vo |

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