

10 Watts

- Regulated Single & Dual Output
- Wide 4:1 Input Range
- 1" x 1" Package
- 1500 VDC Isolation
- Operating Temperature -40 °C to +100 °C
- ITE Safety Approvals
- Remote On/Off
- Optional Heatsink
- Six Sided Metal Case
- 3 Year Warranty



Dimensions:

JWK10:

1.00 x 1.00 x 0.40" (25.4 x 25.4 x 10.16 mm)

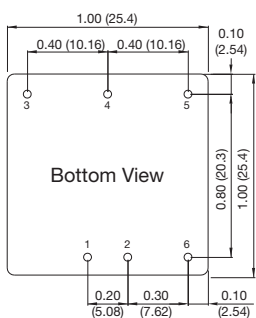
Models & Ratings

| Input voltage | Output voltage | Output current | | Input current ⁽³⁾ | | Maximum capacitive load ⁽²⁾ | Efficiency | Model number |
|---------------|----------------|----------------|---------|------------------------------|-----------|--|------------|--------------|
| | | Min | Max | No load | Full load | | | |
| 9-36 V | 3.3 V | 330 mA | 2.20 A | 30 mA | 350 mA | 560 µF | 86% | JWK1024S3V3 |
| | 5 V | 300 mA | 2.00 A | | 495 mA | 560 µF | 84% | JWK1024S05 |
| | 5.1 V | 300 mA | 2.00 A | | 505 mA | 560 µF | 84% | JWK1024S5V1 |
| | 12 V | 125 mA | 0.83 A | | 485 mA | 150 µF | 86% | JWK1024S12 |
| | 15 V | 100 mA | 0.66 A | | 475 mA | 150 µF | 87% | JWK1024S15 |
| | 24 V | 62 mA | 0.41 A | | 475 mA | 68 µF | 86% | JWK1024S24 |
| | ±5 V | ±150 mA | ±1.00 A | | 495 mA | ±220 µF | 84% | JWK1024D05 |
| | ±12V | ±62 mA | ±0.41 A | | 475 mA | ±100 µF | 86% | JWK1024D12 |
| | ±15V | ±50 mA | ±0.33 A | | 475 mA | ±100 µF | 87% | JWK1024D15 |
| 18-75 V | 3.3 V | 330 mA | 2.20 A | 20 mA | 180 mA | 560 µF | 85% | JWK1048S3V3 |
| | 5 V | 300 mA | 2.00 A | | 250 mA | 560 µF | 84% | JWK1048S05 |
| | 5.1 V | 300 mA | 2.00 A | | 255 mA | 560 µF | 84% | JWK1048S5V1 |
| | 12 V | 125 mA | 0.83 A | | 240 mA | 150 µF | 86% | JWK1048S12 |
| | 15 V | 100 mA | 0.66 A | | 235 mA | 150 µF | 87% | JWK1048S15 |
| | 24 V | 62 mA | 0.41 A | | 240 mA | 68 µF | 86% | JWK1048S24 |
| | ±5 V | ±150 mA | ±1.00 A | | 250 mA | ±220 µF | 84% | JWK1048D05 |
| | ±12 V | ±62 mA | ±0.41 A | | 240 mA | ±100 µF | 86% | JWK1048D12 |
| | ±15 V | ±50 mA | ±0.33 A | | 235 mA | ±100 µF | 87% | JWK1048D15 |

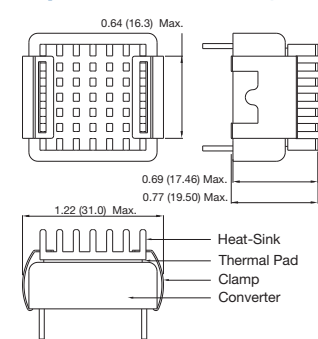
Notes

1. Input currents measured at nominal input voltage.
2. Input current is typically 10 mA at nominal input voltage when output is turned off using remote on/off.
3. Maximum capacitive load is per output.
4. Add suffix "-HK" for optional heatsink.

Mechanical Details



Optional Heatsink (-HK)



Pin Connections

| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 3 | +Vout | +Vout |
| 4 | No Pin | Common |
| 5 | -Vout | -Vout |
| 6 | Remote On/Off | Remote On/Off |

Notes

1. All dimensions are in inches (mm)
2. Weight: 0.03 lbs (15.0g) approx.
3. Tolerance: X.XX±0.01 (X.X±0.25) X.XXX±0.005 (X.XX±0.13)
4. Pin Tolerance: ±0.002 (±0.05)

Input

| Characteristic | Minimum | Typical | Maximum | Units | Notes & Conditions |
|----------------------|--|---------|---------|-------------|--------------------|
| Input Voltage Range | 9.0 | | 36 | VDC | 24 V nominal |
| | 18.0 | | 75 | VDC | 48 V nominal |
| Input Filter | Internal Pi type | | | | |
| Input Surge | | | 50 | VDC for 1 s | 24 V models |
| | | | 100 | | 48 V models |
| Undervoltage Lockout | ON at >8.5 V, OFF at <9 V | | | | 24 V models |
| | ON at >18 V, OFF at <17 V | | | | 48 V models |
| Remote On/Off | ON: Logic high (2.5-50 V) or open circuit OFF: Logic low (<1.0 V) or short pin 2 to pin 6 | | | | |

Output

| Characteristic | Minimum | Typical | Maximum | Units | Notes & Conditions |
|--------------------------|---------|---------|-----------|-------------|---|
| Output Voltage | 3.3 | | 30 | VDC | See Models and Ratings table |
| Initial Set Accuracy | | | ±2.0 | % | At full load |
| Output Voltage Balance | | ±1.0 | ±2.0 | % | For dual output with balanced loads |
| Minimum Load | | | | A | No minimum load required |
| Line Regulation | | | ±1.0 | % | From minimum to maximum input at full load |
| Load Regulation | | | ±0.5/±1.0 | % | Single / Dual output, from 0 to full load |
| Cross Regulation | | | ±5.0 | % | On dual output models when one load is varied between 25% and 100% and other is fixed at 100% |
| Transient Response | | 3 | 6 | % deviation | Recovery within 1% in less than 600 µs for a 25% load change. |
| Ripple & Noise | | 100 | | mV pk-pk | 20 MHz bandwidth. Measured using 0.47 µF ceramic capacitor. |
| Overload Protection | | 150 | | % | |
| Short Circuit Protection | | | | | Continuous Trip & Restart (Hiccup mode), with auto recovery |
| Maximum Capacitive Load | | | | | See Models and Ratings table |
| Temperature Coefficient | | | 0.02 | %/°C | |

General

| Characteristic | Minimum | Typical | Maximum | Units | Notes & Conditions |
|----------------------------|-----------------|-------------|---------|-------------------|------------------------------|
| Efficiency | | 86 | | % | See Models and Ratings table |
| Isolation: Input to Output | 1500/1800 | | | VDC | 60 s/1 s |
| Isolation Resistance | 10 ⁹ | | | Ω | At 500 VDC |
| Isolation Capacitance | | | 1500 | pF | |
| Switching Frequency | | 450 | | kHz | |
| Power Density | | | 50.8 | W/in ³ | |
| Mean Time Between Failure | | 350 | | kHrs | MIL-HDBK-217F, +25 °C GB |
| Weight | | 0.03 (15.0) | | lb (g) | |

Environmental

| Characteristic | Minimum | Typical | Maximum | Units | Notes & Conditions |
|-----------------------|---------|---------|---------|-------|---------------------|
| Operating Temperature | -40 | | +100 | °C | See Derating Curve. |
| Storage Temperature | -50 | | +125 | °C | |
| Case Temperature | | | +100 | °C | |
| Humidity | | | 95 | %RH | Non-condensing |
| Cooling | | | | | Natural convection |

Safety Approvals

| Safety Agency | Safety Standard | Notes & Conditions |
|---------------|----------------------|--------------------|
| UL | UL60950-1, UL62368-1 | ITE |

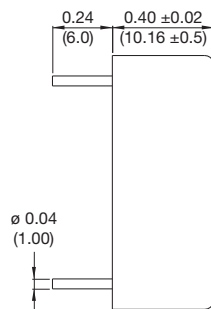
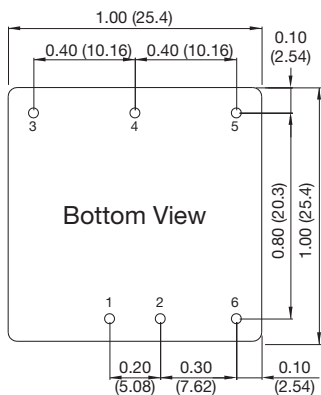
EMC: Emissions

| Phenomenon | Standard | Test Level | Notes & Conditions |
|------------|----------|------------|--------------------|
| Conducted | EN55022 | Class A | |

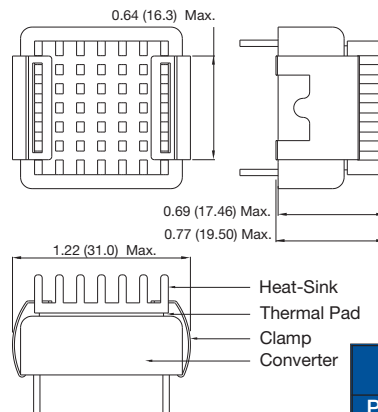
EMC: Immunity

| Phenomenon | Standard | Test Level | Criteria | Notes & Conditions |
|------------|-------------|------------------------------------|----------|--|
| ESD | EN61000-4-2 | ±8 kV air discharge, ±6 kV contact | A | |
| Radiated | EN61000-4-3 | 10 V/m | A | |
| EFT/Burst | EN61000-4-4 | ±2 kV | A | With external capacitor, suggested part is CHEMI-CON KY 330µF/100V |
| Surge | EN61000-4-5 | ±1 kV | A | With external capacitor, suggested part is CHEMI-CON KY 330µF/100V |
| Conducted | EN61000-4-6 | 10 V rms | A | |

Mechanical Details



Optional Heatsink (-HK)



Notes

- All dimensions are in inches (mm)
- Weight: 0.03 lbs (15.0g) approx.
- Tolerance: X.XX±0.01 (X.X±0.25)
X.XXX±0.005 (X.XX±0.13)
- Pin Tolerance: ±0.002 (±0.05)

Pin Connections

| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 3 | +Vout | +Vout |
| 4 | No Pin | Common |
| 5 | -Vout | -Vout |
| 6 | Remote On/Off | Remote On/Off |

Application Notes

Derating Curve

