

### 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)

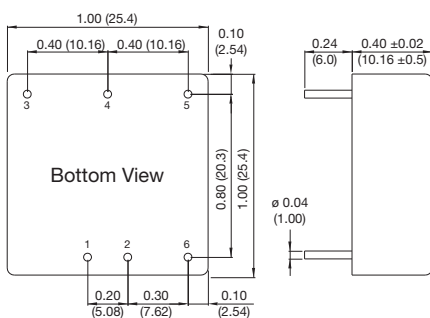
### Models & Ratings

| Input voltage | Output voltage | Output current |         | Input current <sup>(3)</sup> |           | Maximum capacitive load <sup>(2)</sup> | 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   |

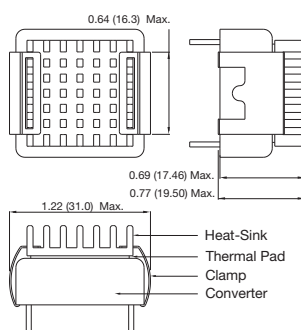
### Notes

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<br>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 <sup>9</sup> |             |         | Ω                 | At 500 VDC                   |
| Isolation Capacitance      |                 |             | 1500    | pF                |                              |
| Switching Frequency        |                 | 450         |         | kHz               |                              |
| Power Density              |                 |             | 50.8    | W/in <sup>3</sup> |                              |
| 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 |
|---------------|-----------------|--------------------|
| CB            | IEC60950-1      | ITE                |
| UL            | UL/cUL60950-1   | ITE                |

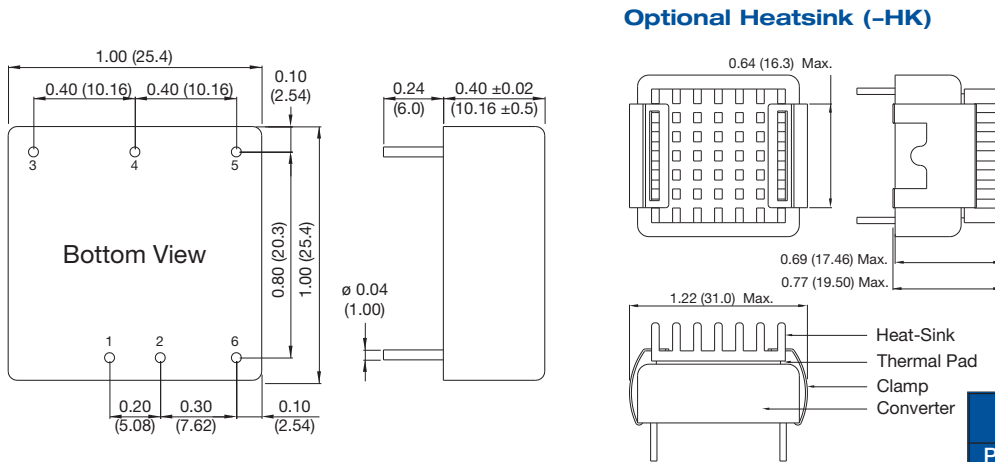
### EMC: Emissions

| 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



### 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

