

JTB03 Series



- 4:1 Input Range
- DIP-24 Metal Package
- Operating Temperature -25 °C to +100 °C
- Input Pi Filter
- Fully Regulated Single & Dual Outputs
- Optional 1500 VDC Isolation
- Continuous Short Circuit Protection

Specification

Input

- | | |
|---------------------|---------------------------------------|
| Input Voltage Range | • 24 V (9-36 VDC)
48 V (18-72 VDC) |
| Input Current | • See table |
| Input Filter | • Pi network |

Output

- | | |
|--------------------------|--|
| Output Voltage | • See table |
| Output Voltage Balance | • $\pm 1\%$ max, dual output models |
| Initial Set Accuracy | • $\pm 2\%$ max |
| Start Up Delay | • 30 ms max |
| Start Up Rise Time | • 35 ms typical |
| Line Regulation | • $\pm 0.5\%$ max (high line to low line) |
| Load Regulation | • $\pm 0.5\%$ max single output models,
$\pm 1.0\%$ max for dual output models |
| Cross Regulation | • 2.2% on dual output models |
| Transient Response | • <1.5% max deviation, recovery to within
1% in 200 μ s for a 50% load change |
| Ripple & Noise | • 100 mV or 1% pk-pk, whichever is
greater, 20 MHz BW |
| Overcurrent Protection | • >170% fold back |
| Short Circuit Protection | • Continuous with auto recovery |
| Maximum Capacitive Load | • 30,000 μ F |
| Temperature Coefficient | • $\pm 0.05/^\circ\text{C}$ max |

General

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|---------------------|--|
| Efficiency | • See table |
| Isolation | • 500 VDC Input to Output (1000 M Ω /80 pF)
Optional high isolation version,
1500 VDC Input to Output, add suffix '-H'
to model number |
| Switching Frequency | • Variable 100-700 kHz |
| MTBF | • 1,000 kHrs to MIL-HDBK-217F |

Environmental

- | | |
|-----------------------|---|
| Operating Temperature | • -25 °C to +100 °C (see derating curve) |
| Case Temperature | • +100 °C max |
| Storage Temperature | • -40 °C to +100 °C |
| Shock | • 30 g, half sine wave 18 ms pulse applied
3 times on each of 6 axes |
| Vibration | • 5-500 Hz, 3 g, for 10 mins on each
of 3 axes |

EMC

- | | |
|--------------------|--|
| Emissions | • EN55022, level A conducted & radiated
with external components - contact
technical sales |
| ESD Immunity | • EN61000-4-2, level 2 Perf Criteria A |
| Radiated Immunity | • EN61000-4-3, 3 V/m Perf Criteria A |
| Conducted Immunity | • EN61000-4-6, 3 V rms Perf Criteria A |

Models and Ratings

Input Voltage ⁽¹⁾	Output Voltage	Output Current	Input Current ⁽³⁾		Efficiency	Model Number ^(2, 4)
			No Load	Full Load		
9-36 VDC	3.3 VDC	600 mA	15.0 mA	117 mA	70%	JTB0324S3V3
	5.0 VDC	600 mA	15.0 mA	174 mA	72%	JTB0324S05
	12.0 VDC	250 mA	15.0 mA	165 mA	76%	JTB0324S12
	15.0 VDC	200 mA	15.0 mA	165 mA	76%	JTB0324S15
	±5.0 VDC	±300 mA	25.0 mA	179 mA	70%	JTB0324D05
	±12.0 VDC	±125 mA	25.0 mA	174 mA	72%	JTB0324D12
18-72 VDC	±15.0 VDC	±100 mA	25.0 mA	174 mA	72%	JTB0324D15
	3.3 VDC	600 mA	7.5 mA	58 mA	70%	JTB0348S3V3
	5.0 VDC	600 mA	7.5 mA	87 mA	72%	JTB0348S05
	12.0 VDC	250 mA	7.5 mA	81 mA	77%	JTB0348S12
	15.0 VDC	200 mA	7.5 mA	81 mA	77%	JTB0348S15
	±5.0 VDC	±300 mA	12.0 mA	88 mA	72%	JTB0348D05
	±12.0 VDC	±125 mA	12.0 mA	87 mA	72%	JTB0348D12
±15.0 VDC	±100 mA	12.0 mA	87 mA	70%	JTB0348D15	

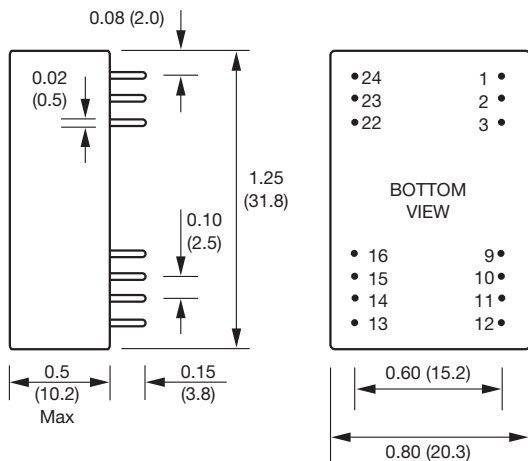
Notes

1. Nominal input voltage 24 or 48 VDC.
2. For optional 1500 VDC isolation add suffix '-H' to model number.
3. Input current is at nominal input voltage.
4. Surface mount versions with plastic case available in OEM quantities.

Mechanical Details

All dimensions are in inches (mm)

Weight: 0.04 lbs (20 g) approx.



PIN CONNECTIONS		
Pin	Single Output	Dual Output
1	+V input	+V input
2	N/C	-V output
3	N/C	Common
9	No pin	No pin
10	-V output	Common
11	+V output	+V output
12	-V input	-V input
13	-V input	-V input
14	+V output	+V output
15	-V output	Common
16	No pin	No pin
22	N/C	Common
23	N/C	-V output
24	+V input	+V input

OPTION '-H' PIN CONNECTIONS		
Pin	Single Output	Dual Output
1	No pin	No pin
2	-V input	-V input
3	-V input	-V input
9	N/C	Common
10	N/C	N/C
11	N/C	-V output
12	No pin	No pin
13	No pin	No pin
14	+V output	+V output
15	N/C	N/C
16	-V output	Common
22	+V input	+V input
23	+V input	+V input
24	No pin	No pin

Derating Curve

