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With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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6 Watts

JTE Series



- 4:1 Input Range
- DIP-24 Plastic Case
- Operating Temperature $-40\text{ }^{\circ}\text{C}$ to $+100\text{ }^{\circ}\text{C}$
- Single & Dual Outputs
- Optional Metal Case
- 1500 VDC Isolation, 3000 VDC Option
- 3 Year Warranty

Specification

Input

Input Voltage Range	<ul style="list-style-type: none"> • 24 V (9-36 VDC) • 48 V (18-75 VDC)
Input Current	<ul style="list-style-type: none"> • See table
Input Filter	<ul style="list-style-type: none"> • Pi network
Input Reflected Ripple	<ul style="list-style-type: none"> • 20 mA pk-pk through 12 μH inductor and 4.7 μF capacitor
Input Surge	<ul style="list-style-type: none"> • 24 V models 50 VDC for 100 ms • 48 V models 100 VDC for 100 ms
Under Voltage Lockout	<ul style="list-style-type: none"> • 24 V models on $>8.5\text{ V}$, off $<8.0\text{ V}$ • 48 V models on $>16.5\text{ V}$, off $<15.5\text{ V}$

Output

Output Voltage	<ul style="list-style-type: none"> • See table
Output Voltage Balance	<ul style="list-style-type: none"> • $\pm 2\%$ max, dual output models
Initial Set Accuracy	<ul style="list-style-type: none"> • $\pm 2\%$ max
Minimum Load	<ul style="list-style-type: none"> • No minimum load required
Line Regulation	<ul style="list-style-type: none"> • $\pm 0.5\%$ max
Load Regulation	<ul style="list-style-type: none"> • $\pm 1.2\%$ max for single output and $\pm 5\%$ max for dual output from 10-100%
Cross Regulation	<ul style="list-style-type: none"> • $\pm 5\%$ max on dual output models (see note 4)
Start Up Delay	<ul style="list-style-type: none"> • 20 ms typical
Ripple & Noise	<ul style="list-style-type: none"> • 80 mV pk-pk (100 mV for D24 models), 20 MHz bandwidth (see note 5)
Transient Response	<ul style="list-style-type: none"> • $<3\%$ max deviation, recovery to within 1% in 300 μs for a 25% load change (4% max. deviation for S3V3 models)
Overload Protection	<ul style="list-style-type: none"> • 135% - 185% of Full Load
Short Circuit Protection	<ul style="list-style-type: none"> • Trip & restart (Hiccup mode), auto recovery
Maximum Capacitive Load	<ul style="list-style-type: none"> • See table
Temperature Coefficient	<ul style="list-style-type: none"> • $\pm 0.02/^{\circ}\text{C}$ max

General

Efficiency	<ul style="list-style-type: none"> • See table
Isolation Voltage	<ul style="list-style-type: none"> • 1500 VDC Input to Output, for optional high isolation version 3000 VDC input to output add suffix '-H' to model number • 1000 VDC Input to Case • 1000 VDC Output to Case
Isolation Capacitance	<ul style="list-style-type: none"> • 1000 pF typical input to output
Isolation Resistance	<ul style="list-style-type: none"> • $10^9\Omega$
Switching Frequency	<ul style="list-style-type: none"> • 330 kHz typical
Power Density	<ul style="list-style-type: none"> • 15 W/in³
MTBF	<ul style="list-style-type: none"> • $>800\text{ kHrs}$ to MIL-HDBK-217F at $25\text{ }^{\circ}\text{C}$, GB

Environmental

Operating Temperature	<ul style="list-style-type: none"> • $-40\text{ }^{\circ}\text{C}$ to $+100\text{ }^{\circ}\text{C}$, derate from 100% load at $+60\text{ }^{\circ}\text{C}$ to no load at $+100\text{ }^{\circ}\text{C}$
Case Temperature	<ul style="list-style-type: none"> • $+100\text{ }^{\circ}\text{C}$ max
Storage Temperature	<ul style="list-style-type: none"> • $-55\text{ }^{\circ}\text{C}$ to $+125\text{ }^{\circ}\text{C}$
Cooling	<ul style="list-style-type: none"> • Natural convection
Operating Humidity	<ul style="list-style-type: none"> • Up to 95%, non-condensing

EMC

Emissions	<ul style="list-style-type: none"> • EN55022 class A conducted
ESD Immunity	<ul style="list-style-type: none"> • EN61000-4-2, Level 3 • 8 kV air discharge Perf Criteria B, • 6 kV contact discharge Perf Criteria B
Radiated immunity	<ul style="list-style-type: none"> • EN61000-4-3, 10 V/m, Perf Criteria A
EFT/Burst	<ul style="list-style-type: none"> • EN61000-4-4, level 3, Perf Criteria A*
Surge	<ul style="list-style-type: none"> • EN61000-4-5, level 2, Perf Criteria A*
Conducted Immunity	<ul style="list-style-type: none"> • EN61000-4-6, 10 Vrms, Perf Criteria A
Magnetic Fields	<ul style="list-style-type: none"> • EN61000-4-8, 1 A/m, Perf Criteria A

* External input capacitor required, 220 $\mu\text{F}/100\text{V}$

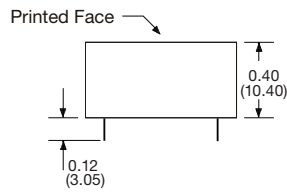
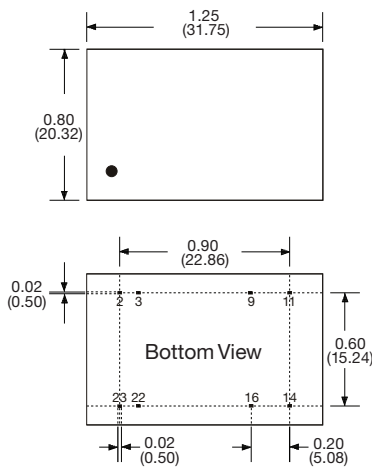
Input Voltage	Output Voltage	Output Current	Input Current ⁽²⁾		Maximum Capacitive Load ⁽³⁾	Efficiency	Model Number ^(1,4)
			No Load	Full Load			
9-36 V	3.3 V	1400 mA	10 mA	257 mA	470 µF	76%	JTE0624S3V3
	5.0 V	1200 mA	10 mA	316 mA	470 µF	80%	JTE0624S05
	12.0 V	500 mA	10 mA	301 mA	100 µF	84%	JTE0624S12
	15.0 V	400 mA	10 mA	301 mA	100 µF	84%	JTE0624S15
	24.0 V	250 mA	10 mA	301 mA	47 µF	84%	JTE0624S24
	±3.3 V	±909 mA	10 mA	324 mA	±220 µF	78%	JTE0624D03
	±5.0 V	±600 mA	10 mA	308 mA	±220 µF	82%	JTE0624D05
	±12.0 V	±250 mA	10 mA	301 mA	±100 µF	84%	JTE0624D12
	±15.0 V	±200 mA	15 mA	301 mA	±100 µF	84%	JTE0624D15
18-75 V	3.3 V	1400 mA	7 mA	128 mA	470 µF	76%	JTE0648S3V3
	5.0 V	1200 mA	7 mA	154 mA	470 µF	82%	JTE0648S05
	12.0 V	500 mA	7 mA	151 mA	100 µF	84%	JTE0648S12
	15.0 V	400 mA	7 mA	151 mA	100 µF	84%	JTE0648S15
	24.0 V	250 mA	7 mA	151 mA	47 µF	84%	JTE0648S24
	±3.3 V	±909 mA	7 mA	162 mA	±220 µF	78%	JTE0648D03
	±5.0 V	±600 mA	7 mA	154 mA	±220 µF	82%	JTE0648D05
	±12.0 V	±250 mA	7 mA	151 mA	±100 µF	84%	JTE0648D12
	±15.0 V	±200 mA	7 mA	151 mA	±100 µF	84%	JTE0648D15
	±24.0 V	±125 mA	10 mA	158 mA	±47 µF	80%	JTE0648D24

Notes

- For optional 3000 VDC isolation add suffix '-H' to model number.
- Input current measured at nominal input voltage.
- Maximum capacitive load is per output.
- Cross regulation for duals is ±5% when one output is at 100% and the other is varied between 25% and 100%.
- Ripple & Noise measured with 1µF ceramic capacitor across output pins.
- For optional metal case version, add suffix '-M' to part number e.g. JTE0624S12-M.

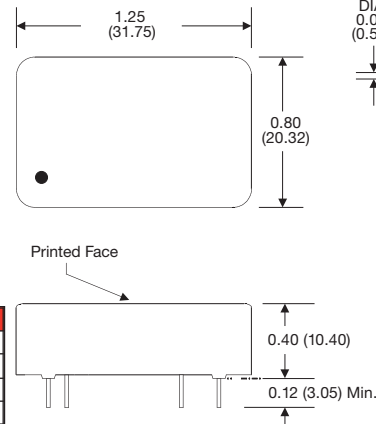
Mechanical Details

Plastic Case



Pin	Single	Dual
2	-Vin	-Vin
3	-Vin	-Vin
9	No Pin	Common
11	N.C.	-Vout
14	+Vout	+Vout
16	-Vout	Common
22	+Vin	+Vin
23	+Vin	+Vin

Optional Metal Case



Notes

- All dimensions are in inches (mm)
- Weight: 0.04 lbs (17 g) approx.
- Pin diameter: 0.02 ±0.002 (0.5 ±0.005)
- Pin pitch tolerance: ±0.014 (0.35)
- Case tolerance: ±0.02 (±0.5)

Application Note

Derating Curve

