8-10 Watts
JCJ Series

- 2:1 Input Range
- DIP-24 Metal Package
- Operating Temperature -40 °C to +100 °C
- Single & Dual Outputs
- Continuous Short Circuit Protection
- 1500 VDC Isolation
- 3 Year Warranty

Specification

Input

Input Voltage Range	• 12 V (9-18 VDC) 24 V (18-36 VDC 48 V (36-75 VDC)
Input Current	• See table
Input Filter	• Pi network
Input Reflected Ripple Current	• JCJ08: 35 mA, JCJ10: 20 mA pk-pk through 12 µH inductor, 5 Hz to 20 MHz
Input Surge	• 12 V models 25 VDC for 100 ms 24 V models 50 VDC for 100 ms 48 V models 100 VDC for 100 ms

Output

Output Voltage	• See table
Output Voltage Balance	• ±1% max, dual output models
Minimum Load	• No minimum load required
Initial Set Accuracy	• ±1% max
Start Up Delay	• <20 ms
Start Up Rise Time	• <10 ms
Line Regulation	• ±0.5% max
Load Regulation	• ±0.7% for 2.5-3.3 V models, ±0.5% for all other models, see note 2
Cross Regulation	• ±5% on dual output models, see note 3
Transient Response	• <3% max deviation, recovery to within 1% in 250 µs for a 25% load change
Ripple & Noise	• 75 mV pk-pk, 20 MHz bandwidth, see note 4
Overload Protection	• >150%
Short Circuit Protection	• Trip & restart (hiccup) with auto recovery
Maximum Capacitive Load	• See tables
Temperature Coefficient	• ±0.02/°C max

General

Efficiency	• See tables
Isolation	• 1500 VDC Input to Output 1000 VDC Input to Case 1000 VDC Output to Case
Isolation Capacitance	• 1200 pF max
Switching Frequency	• 330 kHz typical
MTBF	• >0.9 MHrs to MIL-HDBK-217F at 25 °C, GB

Environmental

Operating Temperature	• -40 °C to +85 °C, derate from 100% load at +60 °C to no load at +100 °C
Case Temperature	• +100 °C max
Storage Temperature	• -40 °C to +125 °C
Humidity	• Up to 95%, non-condensing
Cooling	• Natural convection

EMC

Emissions	• EN55022 Class A conducted & radiated with external components, see application note
ESD Immunity	• EN61000-4-2, 4 kV contact discharge Perf Criteria B
Radiated Immunity	• EN61000-4-3, 3 V/m Perf Criteria A
EFT/Burst	• EN61000-4-4, level 3 Perf Criteria B*
Surge	• EN61000-4-5, level 3 Perf Criteria B*
Conducted Immunity	• EN61000-4-6, 3 Vrms Perf Criteria A
Magnetic Field	• EN61000-4-8, 1 A/m Perf Criteria A

** External input capacitor required, 220 µF/100 V.*

Models and Ratings

JCJ Series

Input Voltage	Output Voltage	Output Current	Input Current[1] No Load	Input Current[1] Full Load	Maximum Capacitive Load	Efficiency	Model Number
9-18 V	3.3 V	2.000 A	20 mA	0.69 A	3300 µF	80%	JCJ0812S3V3†^
	5.0 V	1.500 A	20 mA	0.76 A	2200 µF	82%	JCJ0812S05†^
	12.0 V	0.665 A	20 mA	0.78 A	470 µF	85%	JCJ0812S12†^
	15.0 V	0.535 A	20 mA	0.80 A	220 µF	83%	JCJ0812S15†^
	±5.0 V	±0.800 A	20 mA	0.81 A	±1000 µF	82%	JCJ0812D05†^
	±12.0 V	±0.335 A	20 mA	0.79 A	±220 µF	84%	JCJ0812D12†^
	±15.0 V	±0.265 A	20 mA	0.79 A	±100 µF	84%	JCJ0812D15†^
18-36 V	3.3 V	2.000 A	15 mA	0.34 A	3300 µF	80%	JCJ0824S3V3†^
	5.0 V	1.500 A	15 mA	0.38 A	2200 µF	82%	JCJ0824S05†^
	12.0 V	0.665 A	15 mA	0.39 A	470 µF	85%	JCJ0824S12†^
	15.0 V	0.535 A	15 mA	0.40 A	220 µF	84%	JCJ0824S15†^
	±5.0 V	±0.800 A	15 mA	0.41 A	±1000 µF	82%	JCJ0824D05†^
	±12.0 V	±0.335 A	15 mA	0.40 A	±220 µF	83%	JCJ0824D12†^
	±15.0 V	±0.265 A	15 mA	0.39 A	±100 µF	85%	JCJ0824D15†^
36-75 V	3.3 V	2.000 A	15 mA	0.17 A	3300 µF	80%	JCJ0848S3V3†^
	5.0 V	1.500 A	15 mA	0.19 A	2200 µF	82%	JCJ0848S05†^
	12.0 V	0.665 A	15 mA	0.20 A	470 µF	84%	JCJ0848S12†^
	15.0 V	0.535 A	15 mA	0.20 A	220 µF	84%	JCJ0848S15†^
	±5.0 V	±0.800 A	15 mA	0.20 A	±1000 µF	82%	JCJ0848D05†^
	±12.0 V	±0.335 A	15 mA	0.20 A	±220 µF	85%	JCJ0848D12†^
	±15.0 V	±0.265 A	15 mA	0.20 A	±100 µF	85%	JCJ0848D15†^
9-18 V	2.5 V	3.000 A	10 mA	0.79 A	2200 µF	81%	JCJ1012S2V5†^
	3.3 V	3.000 A	10 mA	1.01 A	2200 µF	84%	JCJ1012S3V3†^
	5.0 V	2.000 A	10 mA	0.99 A	2200 µF	86%	JCJ1012S05†^
	12.0 V	0.833 A	10 mA	0.98 A	820 µF	87%	JCJ1012S12†^
	15.0 V	0.667 A	10 mA	0.96 A	470 µF	89%	JCJ1012S15†^
	±12.0 V	±0.416 A	10 mA	0.98 A	±220 µF	87%	JCJ1012D12†^
	±15.0 V	±0.333 A	10 mA	0.97 A	±150 µF	88%	JCJ1012D15†^
18-36 V	2.5 V	3.000 A	10 mA	0.38 A	2200 µF	84%	JCJ1024S2V5†^
	3.3 V	3.000 A	10 mA	0.50 A	2200 µF	85%	JCJ1024S3V3†^
	5.0 V	2.000 A	10 mA	0.48 A	2200 µF	89%	JCJ1024S05†^
	12.0 V	0.833 A	10 mA	0.49 A	820 µF	88%	JCJ1024S12†^
	15.0 V	0.667 A	10 mA	0.49 A	470 µF	88%	JCJ1024S15†^
	±12.0 V	±0.416 A	10 mA	0.49 A	±220 µF	88%	JCJ1024D12†^
	±15.0 V	±0.333 A	10 mA	0.47 A	±150 µF	90%	JCJ1024D15†^
36-75 V	2.5 V	3.000 A	10 mA	0.19 A	2200 µF	84%	JCJ1048S2V5†^
	3.3 V	3.000 A	10 mA	0.25 A	2200 µF	85%	JCJ1048S3V3†^
	5.0 V	2.000 A	10 mA	0.24 A	2200 µF	88%	JCJ1048S05†^
	12.0 V	0.833 A	10 mA	0.25 A	820 µF	87%	JCJ1048S12†^
	15.0 V	0.667 A	10 mA	0.24 A	470 µF	88%	JCJ1048S15†^
	±12.0 V	±0.416 A	10 mA	0.25 A	±220 µF	87%	JCJ1048D12†^
	±15.0 V	±0.333 A	10 mA	0.25 A	±150 µF	87%	JCJ1048D15†^

Notes

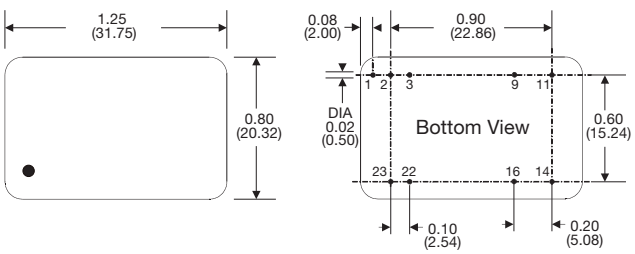
1. Input current measured at nominal input voltage.
2. From 10% to 100% load.
3. When one output is set at 100% load and the other varied between 25% and 100% load
4. Measured with 20 MHz bandwidth and 1 µF ceramic capacitor across output rails.

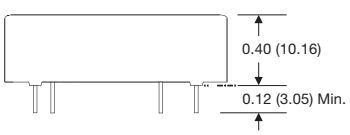
† Available from Farnell. See pages 266-269.
^ Available from Newark. See pages 270-272.

Mechanical Details and Application Note

All dimensions are in inches (mm)

Weight: 0.04 lbs (20 g) approx.





Notes:
1. Pin diameter: 0.02 ±0.002 (0.5 ±0.05)
2. Pin pitch tolerance: ±0.014 (±0.35)
3. Case Tolerance: ±0.02 (±0.5)
4. Package: 24 Pin DIL nickel-coated copper

Pin Connections					
Pin	Single	Dual	Pin	Single	Dual
2	-Vin	-Vin	14	+Vout	+Vout
3	-Vin	-Vin	16	-Vout	Common
9	No Pin	Common	22	+Vin	+Vin
11	Not Connected	-Vout	23	+Vin	+Vin

Input Filter