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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.

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6 Watts

JCE Series



- 2:1 Input Range
- DIP-24 Plastic Case
- Operating Temperature -40 °C to +100 °C
- Single & Dual Outputs
- Optional Metal Case
- 1500 VDC Isolation, 3000 VDC Option
- 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	• 20 mA pk-pk through 12 μH inductor and 4.7 μF capacitor
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
Under Voltage Lockout	• 12 V models on >8.5 V, off <8.0 V • 24 V models on >16.5 V, off <15.5 V • 48 V models on >34.5 V, off <33.5 V

Output

Output Voltage	• See table
Output Voltage Balance	• $\pm 2\%$ max, dual output models
Initial Set Accuracy	• $\pm 2\%$ max
Minimum Load	• No minimum load required
Line Regulation	• $\pm 0.5\%$ max
Load Regulation	• $\pm 1.2\%$ max, for single output and $\pm 5\%$ max for dual output from 10-100%
Cross Regulation	• $\pm 5\%$ max, on dual output models (see note 1)
Start Up Delay	• 20 ms typical
Ripple & Noise	• 80 mV pk-pk (100 mV for D24 models), 20 MHz bandwidth. See note 2
Transient Response	• 3% max deviation, recovery to within 1% in 300 μs for a 25% load change (4% max. deviation for S3V3 models)
Overload Protection	• 135% - 185% of full load
Short Circuit Protection	• Trip and restart (hiccup mode), auto recovery
Maximum Capacitive Load	• See table
Temperature Coefficient	• 0.02%/°C max

General

Efficiency	• See table
Isolation Voltage	• 1500 VDC Input to Output • For optional high isolation versions 3000 VDC Input to Output add suffix -H to model number • 1000 VDC Input to Case • 1000 VDC Output to Case
Isolation Capacitance	• 1000 pF typical input to output
Isolation Resistance	• $10^9 \Omega$
Switching Frequency	• 330 kHz typical
Power Density	• 15 W/in³
MTBF	• >800 KHrs to MIL-STD-217F at 25 °C, GB

Environmental

Operating Temperature	• -40 °C to +100 °C (see derating curve)
Case Temperature	• +100 °C max
Storage Temperature	• -55 °C to +125 °C
Cooling	• Convection-cooled
Operating Humidity	• Up to 95% RH, non-condensing

EMC

Emissions	• EN55022 Class A conducted
ESD Immunity	• EN61000-4-2, level 3, Perf Criteria B
Radiated Immunity	• EN61000-4-3, 10 V/m, Perf Criteria A
EFT/Burst	• EN61000-4-4, level 3 Perf Criteria A
Surge	• EN61000-4-5, level 2, Perf Criteria A*
Conducted Immunity	• EN61000-4-6, 10 Vrms, Perf Criteria A
Magnetic Field	• EN61000-4-8, 1 A/m, Perf Criteria A

* External input capacitor required, 220 μ F/100V (See note 7)

Models and Ratings

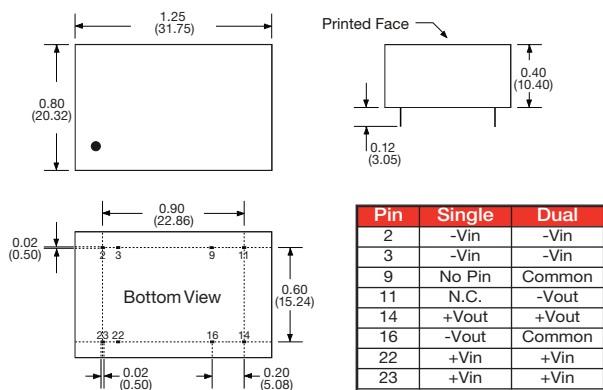
Input Voltage	Output Voltage	Output Current	Input Current ⁽¹⁾		Maximum Capacitive Load ⁽²⁾	Efficiency	Model Number ^(4,5)
			No Load	Full Load			
9-18 VDC	3.3 V	1400 mA	7 mA	513 mA	470 μ F	75%	JCE0612S3V3
	5.0 V	1200 mA	7 mA	633 mA	470 μ F	79%	JCE0612S05
	12.0 V	500 mA	10 mA	602 mA	100 μ F	83%	JCE0612S12
	15.0 V	400 mA	10 mA	595 mA	100 μ F	84%	JCE0612S15
	24.0 V	250 mA	20 mA	610 mA	47 μ F	82%	JCE0612S24
	± 3.3 V	± 909 mA	10 mA	658 mA	± 220 μ F	76%	JCE0612D03
	± 5.0 V	± 600 mA	10 mA	625 mA	± 220 μ F	80%	JCE0612D05
	± 12.0 V	± 250 mA	15 mA	602 mA	± 100 μ F	83%	JCE0612D12
	± 15.0 V	± 200 mA	20 mA	595 mA	± 100 μ F	84%	JCE0612D15
18-36 VDC	3.3 V	1400 mA	7 mA	260 mA	470 μ F	74%	JCE0624S3V3
	5.0 V	1200 mA	7 mA	316 mA	470 μ F	79%	JCE0624S05
	12.0 V	500 mA	7 mA	301 mA	100 μ F	83%	JCE0624S12
	15.0 V	400 mA	7 mA	301 mA	100 μ F	83%	JCE0624S15
	24.0 V	250 mA	10 mA	305 mA	47 μ F	82%	JCE0624S24
	± 3.3 V	± 909 mA	7 mA	329 mA	± 220 μ F	76%	JCE0624D03
	± 5.0 V	± 600 mA	7 mA	312 mA	± 220 μ F	80%	JCE0624D05
	± 12.0 V	± 250 mA	10 mA	301 mA	± 100 μ F	83%	JCE0624D12
	± 15.0 V	± 200 mA	15 mA	298 mA	± 100 μ F	84%	JCE0624D15
36-75 VDC	3.3 V	1400 mA	7 mA	128 mA	470 μ F	76%	JCE0648S3V3
	5.0 V	1200 mA	7 mA	154 mA	470 μ F	82%	JCE0648S05
	12.0 V	500 mA	7 mA	151 mA	100 μ F	84%	JCE0648S12
	15.0 V	400 mA	7 mA	151 mA	100 μ F	84%	JCE0648S15
	24.0 V	250 mA	7 mA	151 mA	47 μ F	84%	JCE0648S24
	± 3.3 V	± 909 mA	7 mA	162 mA	± 220 μ F	78%	JCE0648D03
	± 5.0 V	± 600 mA	7 mA	154 mA	± 220 μ F	82%	JCE0648D05
	± 12.0 V	± 250 mA	7 mA	151 mA	± 100 μ F	84%	JCE0648D12
	± 15.0 V	± 200 mA	7 mA	151 mA	± 100 μ F	84%	JCE0648D15
	± 24.0 V	± 125 mA	15 mA	158 mA	± 47 μ F	80%	JCE0648D24

Notes

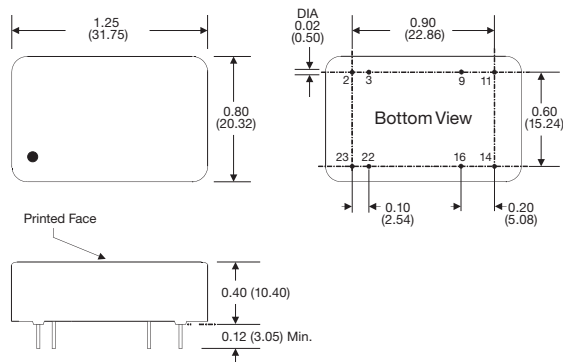
- When one output is set at 100% load and the other varies between 25% & 100% load.
- Measured with 20 MHz bandwidth and 1 μ F ceramic capacitor across output rails.
- Input current specified at nominal 12 V, 24 V or 48 V input.
- For optional 3000 VDC isolation add suffix -H to part number e.g. JCE0624S12-H
- For optional metal case version add suffix -M to part number e.g. JCE0612S24-M
- Maximum capacitive load is per output
- For surge immunity, external input capacitor required, 220 μ F/100 V. 24 V & 48 V input models are Perf Criteria A, 12 V input models are Perf Criteria B.

Mechanical Details

Plastic Case



Optional Metal Case



Notes

- All dimensions are in inches (mm)
- Weight: 0.03 lbs (13 g) for plastic case, 0.04 lbs (16.5 g) for metal case
- Pin diameter: 0.02 $\pm$ 0.002 (0.5 $\pm$ 0.005)
- Pin pitch and length tolerance: $\pm$ 0.014 ($\pm$ 0.35)
- Case tolerance: $\pm$ 0.02 ($\pm$ 0.5)
- Package: 24 pin DIL black plastic (UL94V-0) or optional nickel-coated copper.

Application Notes

Derating Curve

