



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

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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10 Watts

JCH Series



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

Specification

Input

Input Voltage Range	• 12 V (9-18 VDC) • 24 V (18-36 VDC) • 48 V (36-72 VDC)
Input Current	• See table
Input Reflected Ripple Current	• 35 mA rms through 12 μH inductor
Input Filter	• Pi network
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
Voltage Balance	• $\pm 1\%$ ($\pm 2\%$ for dual output 3.3 V models)
Minimum Load	• No minimum load required
Line Regulation	• $\pm 0.5\%$
Load Regulation	• $\pm 0.5\%$ single outputs, $\pm 1.0\%$ dual outputs
Setpoint Accuracy	• $\pm 1.0\%$
Ripple & Noise	• 100 mV pk-pk for 3.3 V to 15 V models, 150 mV pk-pk for 24 V models, 20 MHz bandwidth
Transient Response	• 3% max deviation, recovery to within 1% in 250 μs for a 25% load change
Temperature Coefficient	• 0.02%/°C
Overload Protection	• 140% of full load
Short Circuit Protection	• Trip & restart (hiccup mode) with auto recovery
Maximum Capacitive Load	• See table
Start Up Delay	• <20 ms

General

Efficiency	• See table
Isolation Voltage	• 1500 VDC Input to Output • 1000 VDC Input to Case • 1000 VDC Output to Case
Isolation Capacitance	• 500 pF typical input to output
Isolation Resistance	• $10^9 \Omega$
Switching Frequency	• 200 kHz typical
Power Density	• 12.5 W/in³
MTBF	• >1.1 Mhrs to MIL-STD-217F at 25 °C, GB

Environmental

Operating Temperature	• -40 °C to +100 °C, derate from 100% load at +85 °C to 0% load at +100 °C
Case Temperature	• +100 °C max
Storage Temperature	• -40 °C to +125 °C
Cooling	• Convection-cooled
Operating Humidity	• Up to 95% RH, non-condensing

EMC

Emissions	• EN55022 Class A conducted & radiated with external components, see application note
ESD Immunity	• EN61000-4-2, 8 kV air discharge Perf Criteria A
Radiated Immunity	• EN61000-4-3, 3 V/m, Perf Criteria A

Models and Ratings

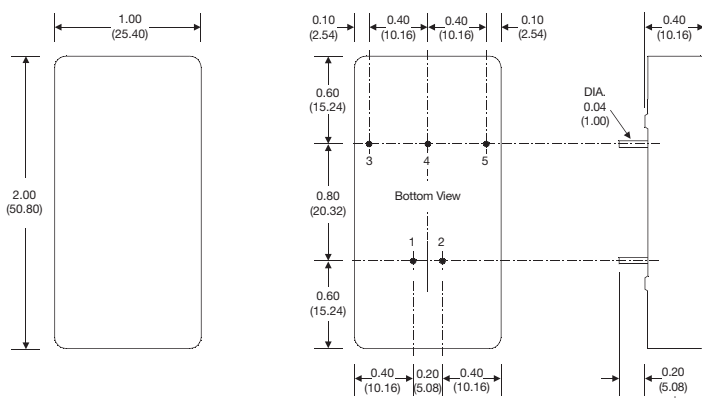
JCH10 **XP**

Input Voltage	Output Voltage	Output Current	Input Current ⁽¹⁾		Efficiency	Maximum Capacitive Load	Model Number
			No Load	Full Load			
9-18 VDC	3.3 V	2000 mA	30 mA	705 mA	78%	2200 μ F	JCH1012S3V3
	5.0 V	2000 mA	30 mA	1016 mA	82%	2200 μ F	JCH1012S05
	12.0 V	833 mA	30 mA	992 mA	84%	680 μ F	JCH1012S12
	15.0 V	666 mA	30 mA	992 mA	84%	470 μ F	JCH1012S15
	24.0 V	416 mA	30 mA	980 mA	85%	330 μ F	JCH1012S24
	± 3.3 V	± 1000 mA	30 mA	1068 mA	78%	± 1000 μ F	JCH1012D03
	± 5.0 V	± 1000 mA	30 mA	1016 mA	82%	± 1000 μ F	JCH1012D05
	± 12.0 V	± 416 mA	30 mA	992 mA	84%	± 470 μ F	JCH1012D12
	± 15.0 V	± 333 mA	30 mA	980 mA	85%	± 330 μ F	JCH1012D15
18-36 VDC	3.3 V	2000 mA	25 mA	352 mA	78%	2200 μ F	JCH1024S3V3
	5.0 V	2000 mA	25 mA	508 mA	82%	2200 μ F	JCH1024S05
	12.0 V	833 mA	25 mA	496 mA	84%	680 μ F	JCH1024S12
	15.0 V	666 mA	25 mA	490 mA	85%	470 μ F	JCH1024S15
	24.0 V	416 mA	25 mA	484 mA	86%	330 μ F	JCH1024S24
	± 3.3 V	± 1000 mA	25 mA	352 mA	78%	± 1000 μ F	JCH1024D03
	± 5.0 V	± 1000 mA	25 mA	508 mA	82%	± 1000 μ F	JCH1024D05
	± 12.0 V	± 416 mA	25 mA	496 mA	84%	± 470 μ F	JCH1024D12
	± 15.0 V	± 333 mA	25 mA	496 mA	84%	± 330 μ F	JCH1024D15
36-72 VDC	3.3 V	2000 mA	20 mA	176 mA	78%	2200 μ F	JCH1048S3V3
	5.0 V	2000 mA	20 mA	251 mA	83%	2200 μ F	JCH1048S05
	12.0 V	833 mA	20 mA	248 mA	84%	680 μ F	JCH1048S12
	15.0 V	666 mA	20 mA	248 mA	84%	470 μ F	JCH1048S15
	24.0 V	416 mA	20 mA	245 mA	86%	330 μ F	JCH1048S24
	± 3.3 V	± 1000 mA	20 mA	176 mA	78%	± 1000 μ F	JCH1048D03
	± 5.0 V	± 1000 mA	20 mA	254 mA	82%	± 1000 μ F	JCH1048D05
	± 12.0 V	± 416 mA	20 mA	245 mA	85%	± 470 μ F	JCH1048D12
	± 15.0 V	± 333 mA	20 mA	245 mA	85%	± 330 μ F	JCH1048D15
	± 24.0 V	± 208 mA	20 mA	242 mA	86%	± 220 μ F	JCH1048D24

Notes

1. Measured at nominal input voltage.

Mechanical Details



PIN CONNECTIONS

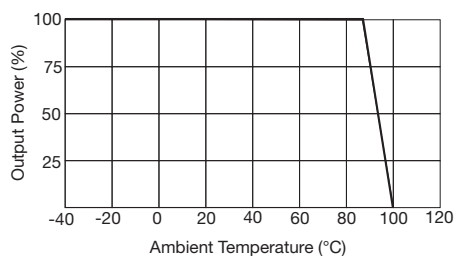
Pin	Single	Dual
1	+Vin	+Vin
2	-Vin	-Vin
3	+Vout	+Vout
4	No Pin	Com
5	-Vout	-Vout

Notes

1. All dimensions are in inches (mm)
2. Weight: 0.07 lbs (30 g)
3. Pin diameter tolerance: ± 0.002 (± 0.05)
4. Pin pitch tolerance: ± 0.014 (± 0.35)
5. Case tolerance: ± 0.02 (± 0.50)

Application Notes

Derating Curve



Input Filter

