



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!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



JCP Series



- 2:1 Input Range
- Single, Dual & Triple Outputs
- -40 °C to +100 °C Operating Temperature
- High Efficiency up to 92%
- Six-sided Metal Case
- Fixed 350 kHz Switching Frequency
- 3 Year Warranty

Input

Input Voltage Range	<ul style="list-style-type: none"> • 12 VDC (9-18 VDC) • 24 VDC (18-36 VDC) • 48 VDC (36-75 VDC)
Input Current	<ul style="list-style-type: none"> • See table
Input Filter	<ul style="list-style-type: none"> • Pi network
Undervoltage Lockout	<ul style="list-style-type: none"> • Turn on >71% nominal input • Turn off <67% nominal input

Output

Output Voltage	<ul style="list-style-type: none"> • See table
Output Voltage Trim	<ul style="list-style-type: none"> • ±10%
Minimum Load	<ul style="list-style-type: none"> • See table
Line Regulation	<ul style="list-style-type: none"> • ±0.5% max for single & dual output, • ±1.0% max for V1 of triple output, • ±3.0% for aux of triple output
Load Regulation	<ul style="list-style-type: none"> • ±0.5% max single ±1.0% dual output, • ±1.0% max for V1 of triple output, • ±4.0% for aux of triple output
Setpoint Accuracy	<ul style="list-style-type: none"> • ±1.5% max single and dual • ±1.5% max for V1, ±3.0% of triple output
Voltage Balance	<ul style="list-style-type: none"> • ±2.0% max
Ripple & Noise	<ul style="list-style-type: none"> • 2.5, 3.3 & 5.0 V models 50 mV pk-pk max • 12.0 & 15.0 V models 75 mV pk-pk max (20 MHz bandwidth)
Transient Response	<ul style="list-style-type: none"> • 5% max deviation, recovery to within 1% in 300 μs for a 25% load change
Temperature Coefficient	<ul style="list-style-type: none"> • ±0.02%/°C
Overvoltage Protection	<ul style="list-style-type: none"> • 2.5 V models 3.6 V typical, • 3.3 V models 3.9 V typical, • 5.0 V models 6.2 V typical, • 12.0 V models 15.0 V typical, • 15.0 V models 18.0 V typical
Overcurrent Protection	<ul style="list-style-type: none"> • 110-140%
Short Circuit Protection	<ul style="list-style-type: none"> • Continuous, trip & restart (Hiccup mode)
Remote On/Off	<ul style="list-style-type: none"> • ON >3.5 to 75 VDC or open circuit • OFF <1.8 VDC
Thermal Protection	<ul style="list-style-type: none"> • Shuts down when case temperature measures +110 °C typical
Remote Sense	<ul style="list-style-type: none"> • Compensates for up to 10% voltage drop single output models only

General

Efficiency	<ul style="list-style-type: none"> • See table
Isolation Voltage	<ul style="list-style-type: none"> • 1500 VDC Input to Output • 1500 VDC Input to Case • Output return connected to case
Switching Frequency	<ul style="list-style-type: none"> • 350 kHz typical
MTBF	<ul style="list-style-type: none"> • >600 kHrs to MIL-HDBK-217F, GB at 25 °C
Isolation Resistance	<ul style="list-style-type: none"> • 10⁹ Ω min

Environmental

Operating Temperature	<ul style="list-style-type: none"> • -40 °C to +100 °C, derate from 100% load at +60 °C to 0% load at +100 °C
Case Temperature	<ul style="list-style-type: none"> • +100 °C max
Storage Temperature	<ul style="list-style-type: none"> • -55 °C to +125 °C
Cooling	<ul style="list-style-type: none"> • Convection-cooled
Operating Humidity	<ul style="list-style-type: none"> • Up to 90%, non-condensing
Shock	<ul style="list-style-type: none"> • 30 g, half sine wave 18 ms pulse applied 3 times on each of 6 axes
Vibration	<ul style="list-style-type: none"> • 5-500 Hz, 3 g, for 10 mins on each of 3 axes

EMC & Safety

Emissions	<ul style="list-style-type: none"> • EN55022 Level A conducted & radiated with external components - contact technical sales
ESD Immunity	<ul style="list-style-type: none"> • EN61000-4-2, Level 2 Perf Criteria A
Radiated Immunity	<ul style="list-style-type: none"> • EN61000-4-3, 3 V/m Perf Criteria A
Conducted Immunity	<ul style="list-style-type: none"> • EN61000-4-6, 3 V rms Perf Criteria A

Input Voltage	Output Voltage	Output Current		Input Current ⁽²⁾		Efficiency	Model Number ⁽¹⁾
		Min	Max	No Load	Full Load		
9-18 V	2.5 V	0 A	10.00 A	200 mA	2367 mA	88%	JCP4012S2V5
	3.3 V	0 A	10.00 A	200 mA	3090 mA	89%	JCP4012S3V3
	5.0 V	0 A	8.80 A	200 mA	3745 mA	89%	JCP4012S05
	12.0 V	0 A	3.33 A	200 mA	3703 mA	90%	JCP4012S12
	15.0 V	0 A	2.66 A	200 mA	3702 mA	90%	JCP4012S15
	±12.0 V	±0.09 A	±1.80 A	100 mA	4045 mA	89%	JCP4012D12
	±15.0 V	±0.07 A	±1.40 A	100 mA	3889 mA	90%	JCP4012D15
	3.3 V/±12.0 V	0.60 A/±0.04 A	6.00 A/±0.40 A	200 mA	2784 mA	88%	JCP4012T0312
	3.3 V/±15.0 V	0.60 A/±0.03 A	6.00 A/±0.30 A	200 mA	2727 mA	88%	JCP4012T0315
	5.0 V/±12.0 V	0.60 A/±0.04 A	6.00 A/±0.40 A	200 mA	3750 mA	88%	JCP4012T0512
5.0 V/±15.0 V	0.60 A/±0.03 A	6.00 A/±0.30 A	200 mA	3611 mA	90%	JCP4012T0515	
18-36 V	2.5 V	0 A	10.00 A	100 mA	1184 mA	88%	JCP4024S2V5
	3.3 V	0 A	10.00 A	100 mA	1545 mA	89%	JCP4024S3V3
	5.0 V	0 A	8.80 A	110 mA	1831 mA	91%	JCP4024S05
	12.0 V	0 A	3.33 A	100 mA	1811 mA	92%	JCP4024S12
	15.0 V	0 A	2.66 A	100 mA	1810 mA	92%	JCP4024S15
	±12.0 V	±0.09 A	±1.80 A	100 mA	1978 mA	91%	JCP4024D12
	±15.0 V	±0.07 A	±1.40 A	100 mA	1902 mA	92%	JCP4024D15
	3.3 V/±12.0 V	0.60 A/±0.04 A	6.00 A/±0.40 A	100 mA	1361 mA	90%	JCP4024T0312
	3.3 V/±15.0 V	0.60 A/±0.03 A	6.00 A/±0.30 A	100 mA	1333 mA	90%	JCP4024T0315
	5.0 V/±12.0 V	0.60 A/±0.04 A	6.00 A/±0.40 A	100 mA	1833 mA	90%	JCP4024T0512
5.0 V/±15.0 V	0.60 A/±0.03 A	6.00 A/±0.30 A	100 mA	1806 mA	90%	JCP4024T0515	
36-75 V	2.5 V	0 A	10.00 A	50 mA	585 mA	89%	JCP4048S2V5
	3.3 V	0 A	10.00 A	50 mA	764 mA	90%	JCP4048S3V3
	5.0 V	0 A	8.80 A	60 mA	926 mA	90%	JCP4048S05
	12.0 V	0 A	3.33 A	60 mA	916 mA	91%	JCP4048S12
	15.0 V	0 A	2.66 A	60 mA	906 mA	92%	JCP4048S15
	±12.0 V	±0.09 A	±1.80 A	50 mA	1000 mA	90%	JCP4048D12
	±15.0 V	±0.07 A	±1.40 A	50 mA	962 mA	91%	JCP4048D15
	3.3 V/±12.0 V	0.60 A/±0.04 A	6.00 A/±0.40 A	50 mA	688 mA	89%	JCP4048T0312
	3.3 V/±15.0 V	0.60 A/±0.03 A	6.00 A/±0.30 A	50 mA	690 mA	87%	JCP4048T0315
	5.0 V/±12.0 V	0.60 A/±0.04 A	6.00 A/±0.40 A	50 mA	938 mA	88%	JCP4048T0512
5.0 V/±15.0 V	0.60 A/±0.03 A	6.00 A/±0.30 A	50 mA	903 mA	90%	JCP4048T0515	

Notes

1. Add suffix ' -N' to model number for negative logic Remote On/Off.

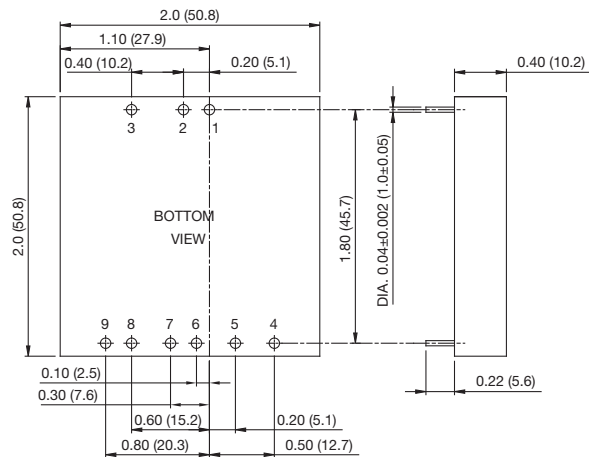
2. Input current measured at nominal input voltage.

Mechanical Details

All dimensions are in inches (mm), Tolerance: ±0.02 (±0.5)

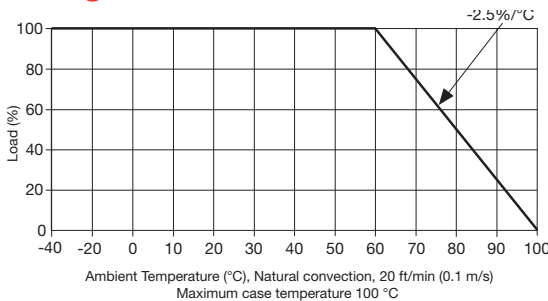
Weight: 65 g (0.14 lbs)

PIN CONNECTIONS			
Pin	Single	Dual	Triple
1	+V Input	+V Input	+V Input
2	-V Input	-V Input	-V Input
3	On/Off	On/Off	On/Off
4	NC	No Pin	+Aux. Output
5	-Sense	+V Output 1	Rtn
6	+Sense	Rtn	-Aux. Output
7	+Vout	Rtn	+V Output 1
8	Rtn	-V Output 2	Rtn
9	Trim	Trim	NC



Application Notes

Derating Curve



Remote On/Off Control

Standard ROF logic is positive.
 Output On >3.5 to 75 VDC or open circuit
 Output Off <1.8 VDC

Optional ROF logic is negative (' -N' version).
 Output On <1.8 VDC
 Output Off >3.5 to 75 VDC or open circuit

Remote Sense

If remote sense is not being used:
 +Sense should be connected to +Vout
 -Sense should be connected to Rtn.