Power Supplies

CFK Series

DC to DC Converters Single/Multi Output, General-Purpose

FEATURES

- These DC to DC converters are highly efficient, even at low loads.
- These thin miniaturized converters have a maximum height of 3.5mm.
- Output terminal voltage of the CFK-0503P and CFK-N series is variable.
- Noise is suppressed by the use of ferrite plastic.
- Compatible with reflow soldering due to highly heat resistant molded package.

TEMPERATURE AND HUMIDITY RANGES

Temperature	Operating	-10 to +70°C[With derating over 50°C]			
range Storage		–40 to +85°C			
		95(%)RH max.			
Humidity range		[Maximum wet-bulb temperature:38°C]			

SHAPES AND DIMENSIONS



DERATINGS

Derating is necessary when operating environment temperature exceed 50°C.





CIRCUIT DIAGRAMS +OUTPUT TYPE CFK-P SERIES



- OUTPUT TYPE CFK-N SERIES



Ci: External input capacitor (10V, 22µF)

Co: External output capacitor(see table of electrical characteristics). RL: Load

2-OUTPUT TYPE CFK-W SERIES



TERMINAL CONNECTIONS

Туре	CFK-P	CFK-N	CFK-W
No.1	NC	NC	NC
No.2	+Vin	+Vin	+Vin
No.3	–Vin(GND)	–Vin(GND)	–Vin(GND)
No.4	NC	NC	NC
No.5	GND	GND	GND
No.6	Vset(0503P)	Vset	NC
No.7	NC	–Vout	–Vout
No.8	+Vout	NC	+Vout

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ELECTRICAL CHARACTERISTICS

Part No.	Input voltage Edc(V)	Output voltage*1 (V)	Output current (mA)	Output voltage stability(%) typ.			Output ripple*3	Efficiency*4	Output
				Input	Load	Temperature*2	Ep-p(mV)typ./max.	(%)typ.	capacitance Co.(µF)
CFK-0503P	+4.5 to 5.5	+3.3±5%	0 to 360	0.02	0.1	0.3	120/300	82	68
CFK-0512P	+4.5 to 5.5	+12±5%	0 to 100	1	1	3	140/350	85	22
CFK-0515P	+4.5 to 5.5	+15±5%	0 to 80	1	1	3	170/350	82	22
CFK-0505N	+4.5 to 5.5	-5±5%	0 to 160	0.02	0.1	0.3	100/250	72	47
CFK-0512N	+4.5 to 5.5	-12±5%	0 to 66	0.02	0.1	0.3	130/300	72	22
CFK-0515N	+4.5 to 5.5	-15±5%	0 to 53	0.02	0.1	0.3	130/300	72	22
CFK-0524N	+4.5 to 5.5	-24±5%	0 to 33	0.02	0.1	0.3	100/300	75	6.8
CFK-0512W	+4.5 to 5.5	±12±5%	(0 to 50)×2	0.5	1	3	40/100	80	33

*1 Output voltage includes fluctuations in the input(Vin:4.5 to 5.5V), load(0 to 100%) and temperature(-10 to +70°C).

*2 Variation value per 1°C.

*3 Measured with a 50MHz bandwidth.

Output ripple noise was measured after connection of the indicated external capacitor Co to the output terminals.

*4 Typical input voltage, maximum output current.

RECOMMENDED PC BOARD PATTERNS



PRECAUTIONS

- · Can not be operated in parallel to increase output current.
- Should design for as low an impedance as possible from the power supply input to the capacitor input terminal.
- Input fuse

A fuse should be connected to the input with a current rating 3 times that of the standard(normal) input current.

Reflow soldering conditions
Preheat temperature: 150±10°C, 1min max.
Peak heating: 240°C max., 10s max.

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