

FKCO8 SERIES

DC / DC Single & Dual Output: 8 Watts



Features

- 2:1 Input voltage range
- 4:1 Input option (**FKCO8W**)
- 12V, 24V & 48V input voltage options
- Single & Dual outputs
- Fixed switching frequency 300KHz
- Standard 24 pin DIP package
- **SMD** option
- High efficiency up to 85%
- Regulated output & Short circuit protection
- 1600V isolation
- Five sided continuous copper shield

Specifications:

Input Voltage	12VDC (9 ~18) 24VDC (18 ~ 36) 48VDC (36 ~75)	Efficiency	Model dependant 83 ~ 87%
Input Filter	Pi type	Isolation	1600VDC
Input Surge Voltage. (100mS)	12V : 36VDC, 24V: 50VDC. 48V: 100VDC	Isolation Cap.	300pF
Input Reflected Ripple Current	20mA pk-pk (@ nominal input & 100% load	Switching Freq.	300KHz
Start Up time	700mS constant resistive load	Safety	EN60950-1, UL60950-1
Remote ON/OFF (Positive logic)	DC-DC ON Open or 3.5V < Vr < 12V DC-DC OFF Short or 0V < Vr < 1.2V Input current of remote control pin: 0.5mA Remote off state input current: 2.5mA	Case Material	Nickel-coated copper
Output power	8 watts	Base Material	Non-conductive black plastic
Voltage Accuracy	±1%	Potting	Epoxy UL94-V0
Minim Load	Zero	Dimensions	31.8 x 20.3 x 10.2mm
Line Regulation	±0.2%	Weight	18g
Load Regulation	Single ±0.5% , Dual ±1% (0% -100% load)	MTBF	3.053 x 10 ⁶ Hrs
Cross Regulation	±5% Asymmetrical load: 25-100% load)	Operating Temp	-40°C to +85°C (with derating)
Ripple & noise	See table. 20MHZ bandwidth	Case Temp	+100°C maximum case temperare
Temp. Coefficient	±0.02% / °C	Thermal Impedance	20°C / watt
Transient Response	200uS (25% load step change)	Thermal shock	MIL-STD-810F
Overload Protection	Typically 150% of load	Vibration	10-55Hz, 10G, 30min along X, Y,Z
Short Circuit protection	Continuous hicc-up mode	Humidity	5-95% RH
		EMC	EN55022 Class A Consult office for Class B design
		ESD	EN61000-4-2
		Radiated Immunity	EN61000-4-3
		Fast Transients	EN61000-4-4
		Surge	EN61000-4-5
		Conducted Immunity	EN61000-4-6

FKC08 SERIES

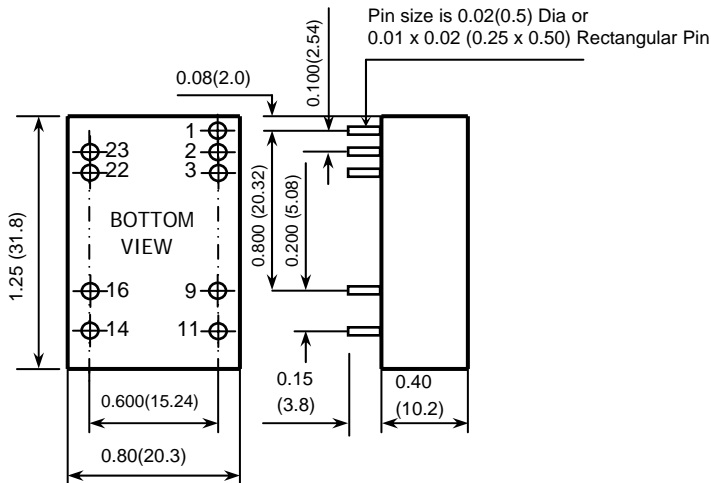
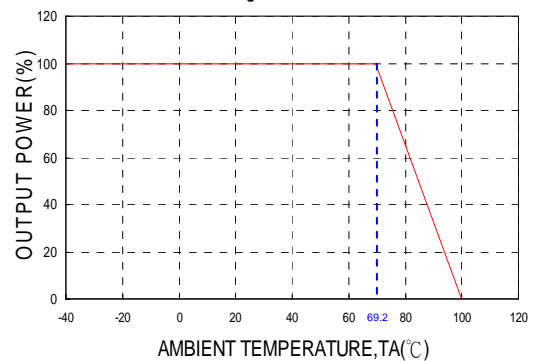
DC / DC Single & Dual Output: 8 Watts

Model	Input V	Output		Ripple & Noise	Input Current		Eff (%)	Capacitor Load max	Power W
		V	A		No load	Full load			
FKC08-12S33	9 – 18V	3.3 V	2000mA	50mVp-p	10mA	724mA	80	3300uF	6.6W
FKC08-12S05	9 – 18 V	5 V	1500mA	50mVp-p	15mA	791mA	83	1600uF	7.5W
FKC08-12S12	9 – 18 V	12 V	666mA	50mVp-p	13mA	792mA	88	350uF	8W
FKC08-12S15	9 – 18 V	15 V	533mA	50mVp-p	20mA	802mA	87	240uF	8W
FKC08-12D05	9 – 18 V	± 5 V	± 800mA	50mVp-p	15mA	843mA	83	± 1000uF	8W
FKC08-12D12	9 – 18 V	± 12 V	± 333mA	50mVp-p	20mA	802mA	87	± 160uF	8W
FKC08-12D15	9 – 18 V	± 15 V	± 267mA	50mVp-p	20mA	824mA	85	± 100uF	8W
FKC08-24S33	18 – 36 V	3.3 V	2000mA	50mVp-p	10mA	362mA	80	3300uF	8W
FKC08-24S05	18 – 36 V	5 V	1500mA	50mVp-p	30mA	396mA	83	1600uF	6.6W
FKC08-24S12	18 – 36 V	12 V	666mA	50mVp-p	13mA	406mA	86	350uF	7.5W
FKC08-24S15	18 – 36 V	15 V	533mA	50mVp-p	15mA	411mA	85	240uF	8W
FKC08-24D05	18 – 36 V	± 5 V	± 800mA	50mVp-p	15mA	427mA	82	± 1000uF	8W
FKC08-24D12	18 – 36 V	± 12 V	± 333mA	50mVp-p	15mA	406mA	86	± 160uF	8W
FKC08-24D15	18 – 36 V	± 15 V	± 267mA	50mVp-p	13mA	411mA	85	± 100uF	8W
FKC08-48S33	36 – 75 V	3.3 V	2000mA	50mVp-p	7mA	181mA	80	3300uF	6.6W
FKC08-48S05	36 – 75 V	5 V	1500mA	50mVp-p	8mA	198mA	83	1600uF	7.5W
FKC08-48S12	36 – 75 V	12 V	666mA	50mVp-p	10mA	203mA	86	350uF	8W
FKC08-48S15	36 – 75 V	15 V	533mA	50mVp-p	10mA	203mA	86	240uF	8W
FKC08-48D05	36 – 75 V	± 5 V	± 800mA	50mVp-p	8mA	205mA	85	± 1000uF	8W
FKC08-48D12	36 – 75 V	± 12 V	± 333mA	50mVp-p	8mA	200mA	87	± 160uF	8W
FKC08-48D15	36 – 75 V	± 15 V	± 267mA	50mVp-p	7mA	201mA	87	± 100uF	8W

Note

1. Values specified at nominal input voltage and full load
2. The ON/OFF control pin voltage is referenced to -Vin.
3. The FKC08 series can meet EN55022 Class A with parallel an external capacitor to the input pins.
Recommend: 12Vin: 4.7µF/25V 1210 MLCC . 24Vin : N/A . 48Vin : N/A.
4. An external filter capacitor is required if the module has to meet EN61000-4-5.
5. The filter capacitor suggest: Nippon chemi-con KY series, 220µF/100V, ESR 48mΩ.

FKC08-48S05 Derating Curve



Pin Assignmet

Pin	Single	Dual	Pin	Single	Dual
1	Ctrl	Ctrl			
2	- Input	- Input	23	+Input	+Input
3	- Input	- Input	22	+Input	+Input
9	NC	COM	16	- Output	COM
11	NC	- Output	14	+Output	+Output