

# 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:

<b>Input Voltage</b>	12VDC ( 9 ~18 ) 24VDC ( 18 ~ 36 ) 48VDC ( 36 ~75 )
<b>Input Filter</b>	Pi type
<b>Input Surge Voltage.</b> ( 100mS )	12V : 36VDC, 24V: 50VDC. 48V: 100VDC
<b>Input Reflected Ripple Current</b>	20mA pk-pk ( @ nominal input & 100% load
<b>Start Up time</b>	700mS constant resistive load
<b>Remote ON/OFF</b> ( 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
<b>Output power</b>	8 watts
<b>Voltage Accuracy</b>	±1%
<b>Minim Load</b>	Zero
<b>Line Regulation</b>	±0.2%
<b>Load Regulation</b>	Single ±0.5% , Dual ±1% ( 0% -100% load )
<b>Cross Regulation</b>	±5% Asymmetrical load: 25-100% load )
<b>Ripple &amp; noise</b>	See table. 20MHZ bandwith
<b>Temp. Coefficient</b>	±0.02% / °C
<b>Transient Response</b>	200uS ( 25% load step change )
<b>Overload Protection</b>	Typically 150% of load
<b>Short Circuit protection</b>	Continuous hiccup mode

<b>Efficiency</b>	Model dependant 83 ~ 87%
<b>Isolation</b>	1600VDC
<b>Isolation Cap.</b>	300pF
<b>Switching Freq.</b>	300KHz
<b>Safety</b>	EN60950-1, UL60950-1
<b>Case Material</b>	Nickel-coated copper
<b>Base Material</b>	Non-conductive black plastic
<b>Potting</b>	Epoxy UL94-V0
<b>Dimensions</b>	31.8 x 20.3 x 10.2mm
<b>Weight</b>	18g
<b>MTBF</b>	3.053 x 10 <sup>6</sup> Hrs
<b>Operating Temp</b>	-40°C to +85°C ( with derating )
<b>Case Temp</b>	+100°C maximum case temperare
<b>Thermal Impedance</b>	20°C / watt
<b>Thermal shock</b>	MIL-STD-810F
<b>Vibration</b>	10-55Hz, 10G, 30min along X, Y,Z
<b>Humidity</b>	5-95% RH
<b>EMC</b>	EN55022 Class A Consult office for Class B design
<b>ESD</b>	EN61000-4-2
<b>Radiated Immunity</b>	EN61000-4-3
<b>Fast Transients</b>	EN61000-4-4
<b>Surge</b>	EN61000-4-5
<b>Conducted Immunity</b>	EN61000-4-6

# FKC08 SERIES

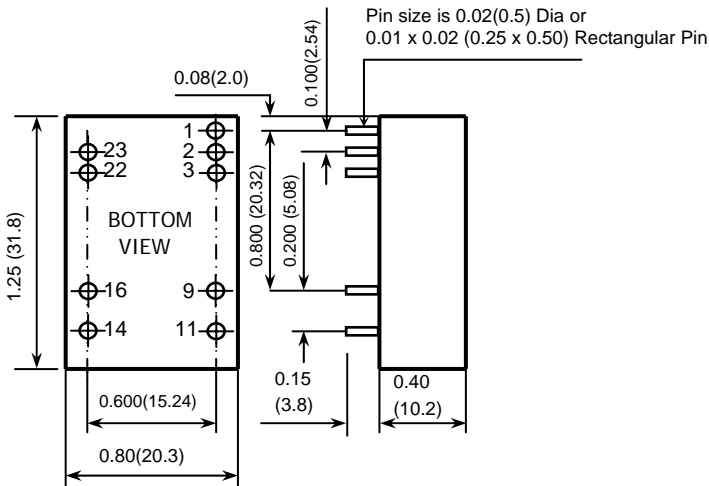
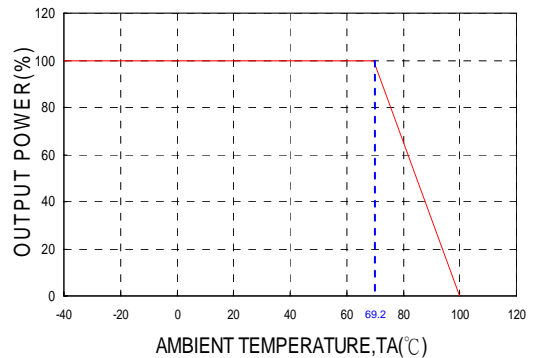
DC / DC Single & Dual Output: 8 Watts

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