



- 8 WATTS OUTPUT POWER
- 2:1 WIDE INPUT VOLTAGE RANGE
- INTERNATIONAL SAFETY STANDARD APPROVAL
- FIVE-SIDED CONTINUOUS SHIELD
- HIGH EFFICIENCY UP TO 85%
- STANDARD 24 PIN DIP PACKAGE & SMD TYPE PACKAGE
- FIXED SWITCHING FREQUENCY

The FKC08 series offer 8 watts of output power from a package in an IC compatible 24pin DIP configuration. FKC08 series have 2:1 wide input voltage of 9-18, 18-36 and 36-75VDC. The FKC08 features 1600VDC of isolation, short-circuit protection and as well as five sided shielding. All models are particularly suited to telecommunications, industrial, mobile telecom and test equipment applications.



**UL E193009**  
**TUV R3-50007936**  
**CB JPTUV-003641**  
**CE MARK**

## TECHNICAL SPECIFICATION

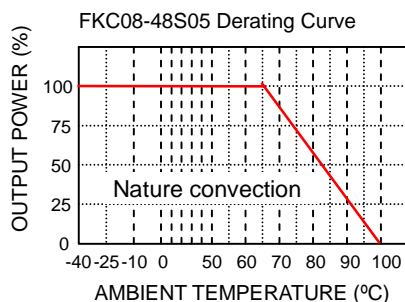
All specifications are typical at nominal input, full load and 25°C otherwise noted

OUTPUT SPECIFICATIONS			
Output power			8 Watts max
Voltage accuracy	Full load and nominal Vin		± 2%
Minimum load (Note 1)			10% of FL
Line regulation	LL to HL at Full Load		± 0.2%
Load regulation	10% to 100% FL	Single	± 0.5%
		Dual	± 1%
Cross regulation (Dual)	Asymmetrical load 25% / 100% FL		± 5%
Ripple and noise	20MHz bandwidth		50mVp-p
Temperature coefficient			±0.02% / °C, max
Transient response recovery time	25% load step change		200uS
Over load protection	% of FL at nominal input		150% typ
Short circuit protection		Continuous, automatics recovery	
INPUT SPECIFICATIONS			
Input voltage range	12V nominal input		9 – 18VDC
	24V nominal input		18 – 36VDC
	48V nominal input		36 – 75VDC
Input filter			Pi type
Input surge voltage 100mS max	12V input		36VDC
	24V input		50VDC
	48V input		100VDC
Input reflected ripple (Note 2)	Nominal Vin and full load		20mA <sub>p-p</sub>
Start up time	Nominal Vin and constant resistor load		600mS typ
Remote ON/OFF (Note 3)	DC-DC ON	Open or 3.5V < Vr < 12V	
	DC-DC OFF	Short or 0V < Vr < 1.2V	
Remote off input current	Nominal Vin		2.5mA

GENERAL SPECIFICATIONS			
Efficiency			See table
Isolation voltage	Input to Output		1600VDC, min
	Input(Output) to Case	DIP	1600VDC, min
		SMD	1000VDC, min
Isolation resistance			10 <sup>9</sup> ohms, min
Isolation capacitance			300pF, max
Switching frequency			300KHz, typ
Approvals and standard			IEC60950, UL1950, EN60950
Case material			Nickel-coated copper
Base material			Non-conductive black plastic
Potting material			Epoxy (UL94-V0)
Dimensions			1.25 X 0.80 X 0.40 Inch
			(31.8 X 20.3 X 10.2 mm)
Weight	DIP		16g (0.55oz)
	SMD		18g (0.62oz)
MTBF (Note 4)			3.053 x 10 <sup>6</sup> hrs

ENVIRONMENTAL SPECIFICATIONS			
Operating temperature range			-40°C to +85°C (with derating)
Maximum case temperature			100°C
Storage temperature range			-55°C to +105°C
Thermal impedance	Nature convection		20°C/Watt
Thermal shock			MIL-STD-810D
Vibration			10~55Hz, 2G, 30minutes along X,Y and Z
Relative humidity			5% to 95% RH

EMC CHARACTERISTICS			
Conducted emissions	EN55022		Level A
Radiated emissions	EN55022		Level A
ESD	EN61000-4-2		Perf. Criteria2
Radiated immunity	EN61000-4-3		Perf. Criteria2
Fast transient	EN61000-4-4		Perf. Criteria2
Surge	EN61000-4-5		Perf. Criteria2
Conducted immunity	EN61000-4-6		Perf. Criteria2

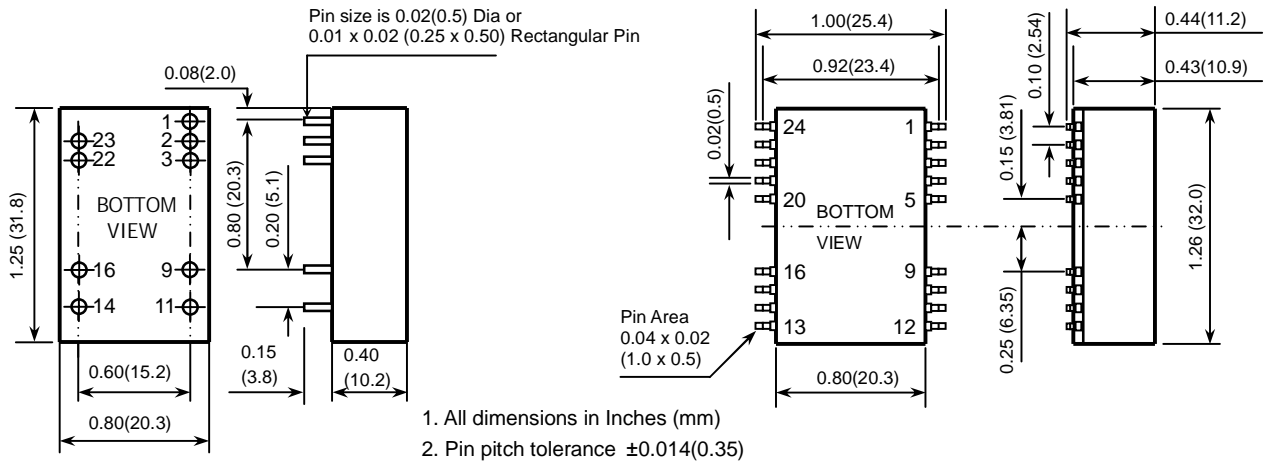




Model Number	Input Range	Output Voltage	Output Current	Input Current <sup>(5)</sup>	Eff <sup>(6)</sup> (%)	Capacitor <sup>(7)</sup> Load max
FKC08-12S33	9 – 18 VDC	3.3 VDC	2000mA	724mA	80	3300uF
FKC08-12S05	9 – 18 VDC	5 VDC	1500mA	801mA	82	1600uF
FKC08-12S12	9 – 18 VDC	12 VDC	666mA	833mA	84	350uF
FKC08-12S15	9 – 18 VDC	15 VDC	533mA	843mA	83	240uF
FKC08-12D05	9 – 18 VDC	± 5 VDC	± 800mA	843mA	83	± 1000uF
FKC08-12D12	9 – 18 VDC	± 12 VDC	± 333mA	833mA	84	± 160uF
FKC08-12D15	9 – 18 VDC	± 15 VDC	± 267mA	834mA	84	± 100uF
FKC08-24S33	18 – 36 VDC	3.3 VDC	2000mA	362mA	80	3300uF
FKC08-24S05	18 – 36 VDC	5 VDC	1500mA	396mA	83	1600uF
FKC08-24S12	18 – 36 VDC	12 VDC	666mA	416mA	84	350uF
FKC08-24S15	18 – 36 VDC	15 VDC	533mA	416mA	84	240uF
FKC08-24D05	18 – 36 VDC	± 5 VDC	± 800mA	427mA	82	± 1000uF
FKC08-24D12	18 – 36 VDC	± 12 VDC	± 333mA	422mA	83	± 160uF
FKC08-24D15	18 – 36 VDC	± 15 VDC	± 267mA	411mA	85	± 100uF
FKC08-48S33	36 – 75 VDC	3.3 VDC	2000mA	181mA	80	3300uF
FKC08-48S05	36 – 75 VDC	5 VDC	1500mA	198mA	83	1600uF
FKC08-48S12	36 – 75 VDC	12 VDC	666mA	208mA	84	350uF
FKC08-48S15	36 – 75 VDC	15 VDC	533mA	208mA	84	240uF
FKC08-48D05	36 – 75 VDC	± 5 VDC	± 800mA	211mA	83	± 1000uF
FKC08-48D12	36 – 75 VDC	± 12 VDC	± 333mA	206mA	85	± 160uF
FKC08-48D15	36 – 75 VDC	± 15 VDC	± 267mA	206mA	85	± 100uF

**Note**

1. The FKC08 series required a minimum 10% loading on the output to maintain specified regulation. Operation under no-load condition will not damage these devices, however they may not meet all listed specification.
2. Simulated source impedance of 12uH. 12uH inductor on series with + Vin.
3. The ON/OFF control pin voltage is referenced to negative input.
4. BELLCORE TR-NWT-000332. Case I: 50% Stress, Temperature at 40°C. (Ground fixed and controlled environment)
5. Maximum value at nominal input voltage and full load of standard type.
6. Typical value at nominal input voltage and full load.
7. Test by minimum Vin and constant resistor load.



DIP PIN CONNECTION					
PIN	SINGLE	DUAL	PIN	SINGLE	DUAL
1	CTRL	CTRL			
2	- INPUT	- INPUT	23	+ INPUT	+ INPUT
3	- INPUT	- INPUT	22	+ INPUT	+ INPUT
9	NC	COMMON	16	- OUTPUT	COMMON
11	NC	- OUTPUT	14	+ OUTPUT	+ OUTPUT

SMD PIN CONNECTION					
PIN	SINGLE	DUAL	PIN	SINGLE	DUAL
1	CTRL	CTRL			
2	- INPUT	- INPUT	23	+ INPUT	+ INPUT
3	- INPUT	- INPUT	22	+ INPUT	+ INPUT
9	NC	COMMON	16	- OUTPUT	COMMON
11	NC	- OUTPUT	14	+ OUTPUT	+ OUTPUT
Others	NC	NC	Others	NC	NC