



- 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

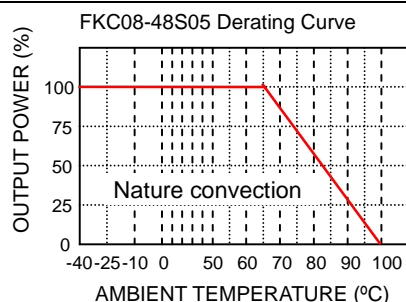
The FKC08 series offer 8 watts of output power from a package in an IC compatible 24pin DIP configuration. FKC08 series have 2:1 wide input voltage of 9-18, 18-36 and 36-75VDC. The FKC08 features 1600VDC of isolation, short circuit protection and as well as five sided shielding. All models are particularly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



## 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	± 1%	
Minimum load (Note 1)	10% of FL		
Line regulation	LL to HL at Full Load	± 0.2%	
Load regulation	10% to 100% FL	Single (DIP)	± 0.5%
		Single (SMD)	± 1%
		Dual (SMD,DIP)	± 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 resistive load	Power up	700mS max
		Remote ON/OFF	5mS max
Remote ON/OFF (Note 3)	DC-DC ON	Open or 3.5V < Vr < 12V	
Remote off input current	DC-DC OFF	Short or 0V < Vr < 1.2V	
	Nominal Vin	2.5mA	



GENERAL SPECIFICATIONS			
Efficiency	See table		
Isolation voltage	Input to Output	DIP	1600VDC, min
	Input(Output) to Case	SMD	1600VDC, min 1000VDC, min
Isolation resistance	10 <sup>8</sup> ohms, min		
Isolation capacitance	300pF, max		
Switching frequency	300KHz, typ		
Approvals and standard	IEC60950-1, UL60950-1, EN60950-1		
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, 10G, 30minutes along X,Y and Z		
Relative humidity	5% to 95% RH		

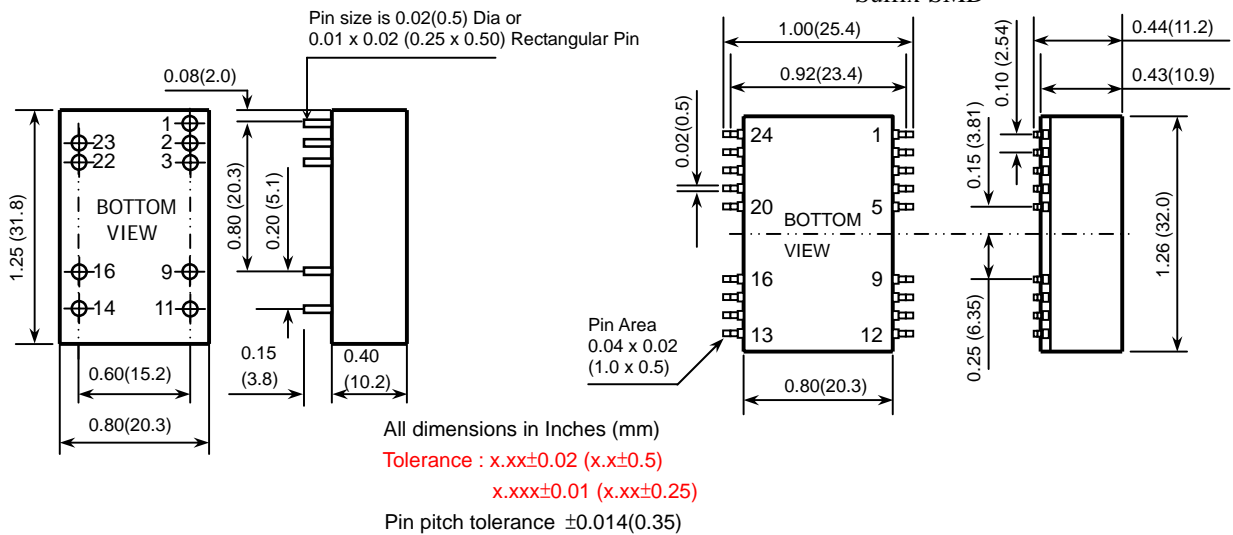
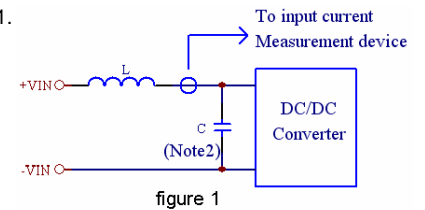
EMC CHARACTERISTICS			
Conducted emissions	EN55022	Class A	
Radiated emissions	EN55022	Class A	
ESD	EN61000-4-2	Perf. CriteriaB	
Radiated immunity	EN61000-4-3	Perf. CriteriaA	
Fast transient	EN61000-4-4	Perf. CriteriaB	
Surge	EN61000-4-5	Perf. CriteriaB	
Conducted immunity	EN61000-4-6	Perf. CriteriaA	



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	791mA	83	1600uF
FKC08-12S12	9 – 18 VDC	12 VDC	666mA	792mA	88	350uF
FKC08-12S15	9 – 18 VDC	15 VDC	533mA	802mA	87	240uF
FKC08-12D05	9 – 18 VDC	± 5 VDC	± 800mA	843mA	83	± 1000uF
FKC08-12D12	9 – 18 VDC	± 12 VDC	± 333mA	802mA	87	± 160uF
FKC08-12D15	9 – 18 VDC	± 15 VDC	± 267mA	824mA	85	± 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	406mA	86	350uF
FKC08-24S15	18 – 36 VDC	15 VDC	533mA	411mA	85	240uF
FKC08-24D05	18 – 36 VDC	± 5 VDC	± 800mA	427mA	82	± 1000uF
FKC08-24D12	18 – 36 VDC	± 12 VDC	± 333mA	406mA	86	± 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	203mA	86	350uF
FKC08-48S15	36 – 75 VDC	15 VDC	533mA	203mA	86	240uF
FKC08-48D05	36 – 75 VDC	± 5 VDC	± 800mA	205mA	85	± 1000uF
FKC08-48D12	36 – 75 VDC	± 12 VDC	± 333mA	200mA	87	± 160uF
FKC08-48D15	36 – 75 VDC	± 15 VDC	± 267mA	201mA	87	± 100uF

**Note**

- 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.
- Please add an external filter at converter input terminals when measuring input reflected ripple, figure 1.  
L : Simulated source impedance of 12 uH C : Nippon chemi-con KMF series 47uF/100V
- The ON/OFF control pin voltage is referenced to negative input.
- BELLCORE TR-NWT-000332. Case I: 50% Stress, Temperature at 40°C.  
(Ground fixed and controlled environment)
- Maximum value at nominal input voltage and full load of standard type.
- Typical value at nominal input voltage and full load.
- Test by minimum Vin and constant resistive 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