



**POWER MATE
TECHNOLOGY CO.,LTD.**

FKC08-SERIES

VER:05 1 / 2



UL E193009
TUV
CB
CE MARK

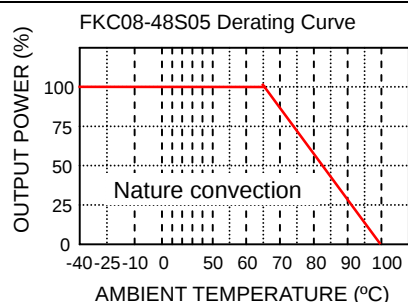
- 8 WATTS OUTPUT POWER
- 2:1 WIDE INPUT VOLTAGE RANGE
- INTERNATIONAL SAFETY STANDARD APPROVAL
- FIVE-SIDED CONTINUOUS SHIELD
- HIGH EFFICIENCY UP TO 85%
- STANDARD 24 PIN DIP PACKAGE & SMD TYPE PACKAGE
- FIXED SWITCHING FREQUENCY

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		20mAp-p
Start up time	Nominal Vin and constant resistive load	Power up	700mS max
		Remote ON/OFF	5mS max
Remote ON/OFF (Note 3)			
Remote off input current	DC-DC ON	Open or 3.5V < Vr < 12V	
	DC-DC OFF	Short or 0V < Vr < 1.2V	
	Nominal Vin		2.5mA



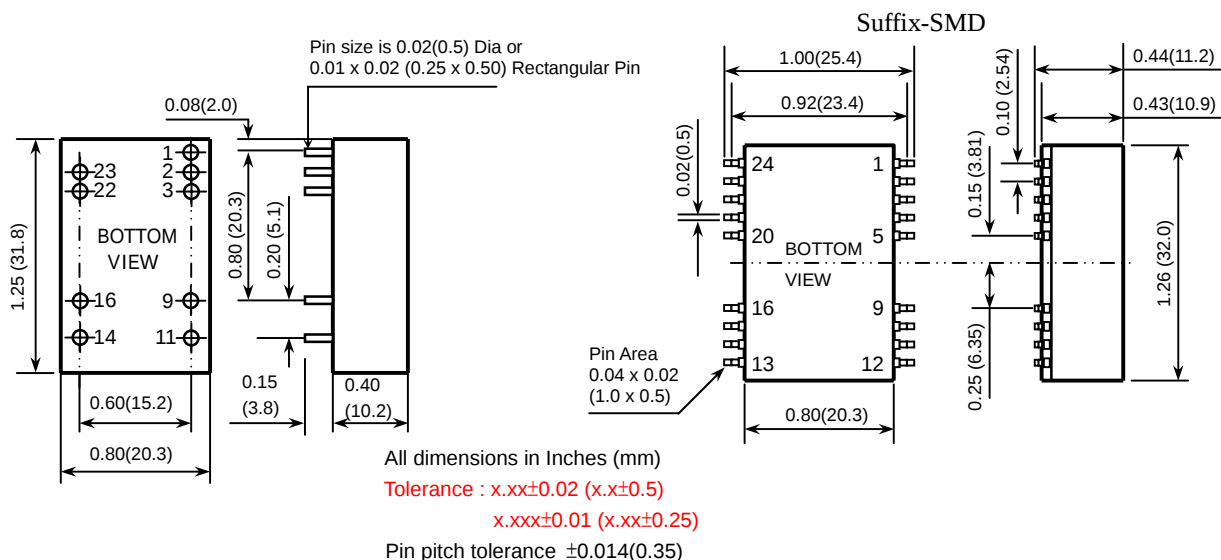
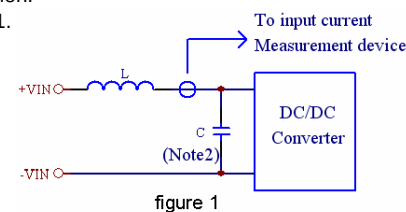
GENERAL SPECIFICATIONS			
Efficiency		See table	
Isolation voltage	Input to Output		1600VDC, min
	Input(Output) to Case	DIP SMD	1600VDC, min 1000VDC, min
Isolation resistance			10 ⁹ ohms, min
Isolation capacitance			300pF, max
Switching frequency			300KHz, typ
Approvals and standard		IEC60950-1, UL60950-1, 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 ⁶ 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	



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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. Please add an external filter at converter input terminals when measuring input reflected ripple, figure 1.
L : Simulated source impedance of 12 μ H C : Nippon chemi-con KMF series 47 μ F/100V
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. +VIN
(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. -VIN
7. 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