FKC05 (W) SERIES

DC / DC Single & Dual Output: 5 Watts

AMTEX ELECTRONICS PTY LTD
www.amtex.com.au
"DC Power Solutions...not just components"

Features

- 2:1 standard Input voltage range, 12V, 24V, & 48V
- 4:1 wide input (9-36 & 18-75) option (**W**) models
- Single & Dual outputs @ 5 watts
- 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
- **M1** option -40ºC to +85ºC (non-derating)
- **M2** option -40ºC to +85ºC (with-derating) **–W** models

Specifications:

Input Voltage	12VDC (9 ~18) 24VDC (18 ~ 36) 48VDC (36 ~75)
(Option W models)	24VDC (9 ~ 36) 48VDC (18 ~ 75)
Input Filter	Pi type
Input Surge Voltage. (100mS)	12V : 36VDC, 24V: 50VDC. 48V: 100VDC
Input Reflected Ripple Current	20mA pk-pk (@ nominal input & 100% load
Start Up time	450mS constant resistive load
Output power	5 watts
Voltage Accuracy	±1%
Minim Load	Zero
Line Regulation	±0.2%
Load Regulation	Single ±0.5% , Dual ±1% (0% -100% load)
Cross Regulation	±5% Asymmetrical load: 25-100% load)
Ripple & noise	See table. 20MHZ bandwith
Temp. Coefficient	±0.02% / ºC
Transient Response	200uS (25% load step change)
Overload Protection	Typically 150% of load
Short Circuit protection	Continuous hicc-up mode

Efficiency	Model dependant 83 ~ 87%
Isolation	1600VDC
Isolation Cap.	300pF
Switching Freq.	300KHz
Safety	EN60950-1, UL60950-1
Case Material	Nickel-coated copper
Base Material	Non-conductive black plastic
Potting	Epoxy UL94-V0
Dimensions	31.8 x 20.3 x 10.2mm
Weight	18g
MTBF	3.165 x 10^6 Hrs
Operating Temp	-25ºC to +85ºC (with derating) M1 option -40ºC to +85ºC (non-derating) M2 option -40ºC to +85ºC (with-derating) –W models
Case Temp	+100ºC maximum case temperature
Thermal Impedance	20ºC / watt
Thermal shock	MIL-STD-810F
Vibration	10-55Hz, 10G, 30min along X, Y,Z
Humidity	5-95% RH
EMC	EN55022 Class A
ESD	EN61000-4-2
Radiated Immunity	EN61000-4-3
Fast Transients	EN61000-4-4
Surge	EN61000-4-5
Conducted Immunity	EN61000-4-6

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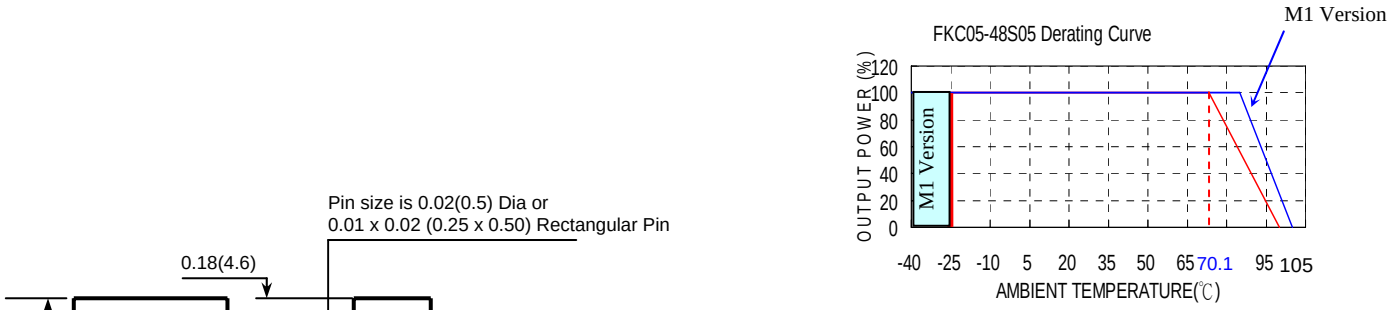
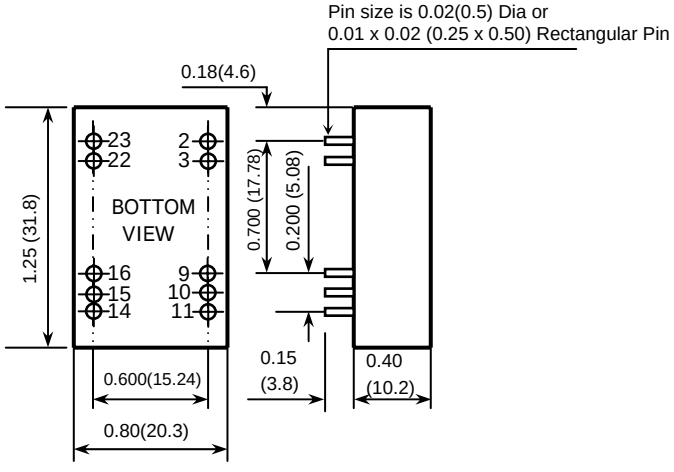
Model	Input V	Output V	Output A	Output Ripple & Noise	Input Current A No load	Input Current A Full load	Eff (%)	Capacitor Load max
FKC05-12S33	9 – 18 V	3.3 V	1000mA	50mVp-p	10mA	382mA	76	2200uF
FKC05-12S05	9 – 18 V	5 V	1000mA	50mVp-p	10mA	563mA	78	1000uF
FKC05-12S12	9 – 18 V	12 V	470mA	50mVp-p	10mA	603mA	82	220uF
FKC05-12S15	9 – 18 V	15 V	400mA	50mVp-p	10mA	649mA	81	150uF
FKC05-12D05	9 – 18 V	± 5 V	± 500mA	50mVp-p	15mA	563mA	78	± 680uF
FKC05-12D12	9 – 18 V	± 12 V	± 230mA	50mVp-p	20mA	597mA	81	± 100uF
FKC05-12D15	9 – 18 V	± 15 V	± 190mA	50mVp-p	15mA	594mA	84	± 68uF
FKC05-24S33 (W)	18 – 36 (9 – 36) V	3.3 V	1000mA	50mVp-p	10mA (5mA)	194mA (191mA)	75 (76)	2200uF
FKC05-24S05 (W)	18 – 36 (9 – 36) V	5 V	1000mA	50mVp-p	15mA (10mA)	285mA (278mA)	77 (79)	1000uF
FKC05-24S12 (W)	18 – 36 (9 – 36) V	12 V	470mA	50mVp-p	15mA (5mA)	305mA (305mA)	81 (81)	220uF
FKC05-24S15 (W)	18 – 36 (9 – 36) V	15 V	400mA	50mVp-p	15mA (10mA)	325mA (312mA)	81 (84)	150uF
FKC05-24D05 (W)	18 – 36 (9 – 36) V	± 5 V	± 500mA	50mVp-p	15mA (10mA)	274mA (282mA)	80 (78)	± 680uF
FKC05-24D12 (W)	18 – 36 (9 – 36) V	± 12 V	± 230mA	50mVp-p	20mA (10mA)	288mA (295mA)	84 (82)	± 100uF
FKC05-24D15 (W)	18 – 36 (9 – 36) V	± 15 V	± 190mA	50mVp-p	20mA (10mA)	308mA (297mA)	81 (84)	± 68uF
FKC05-48S33 (W)	36 – 75 (18 – 75) V	3.3 V	1000mA	50mVp-p	10mA (5mA)	98mA (100mA)	74 (73)	2200uF
FKC05-48S05 (W)	36 – 75 (18 – 75) V	5 V	1000mA	50mVp-p	10mA (10mA)	143mA (138mA)	77 (79)	1000uF
FKC05-48S12 (W)	36 – 75 (18 – 75) V	12 V	470mA	50mVp-p	10mA (10mA)	151mA (155mA)	82 (80)	220uF
FKC05-48S15 (W)	36 – 75 (18 – 75) V	15 V	400mA	50mVp-p	10mA (10mA)	162mA (160mA)	81 (82)	150uF
FKC05-48D05 (W)	36 – 75 (18 – 75) V	± 5 V	± 500mA	50mVp-p	10mA (10mA)	141mA (145mA)	78 (76)	± 680uF
FKC05-48D12 (W)	36 – 75 (18 – 75) V	± 12 V	± 230mA	50mVp-p	5mA (10mA)	147mA (151mA)	82 (80)	± 100uF
FKC05-48D15 (W)	36 – 75 (18 – 75) V	± 15 V	± 190mA	50mVp-p	10mA (10mA)	150mA (156mA)	83 (80)	± 68uF

Price & Stock Enquiry

Notes

1. Typical values at nominal input voltage and full load.
2. M1 version is more efficient, therefore, it can be operated in a more extensive temperature range than standard and M2 version.
3. An external filter capacitor is required if the module has to meet EN61000-4-5.
   The filter capacitor suggest: Nippon chemi-con KY series, 220μF/100V, ESR 48mΩ
4. There is no pin at PIN10 & PIN15 for FKC05-W series.





Pin Assignmnet					
Pin	Single	Dual	Pin	Single	Dual
2	- Input	- Input	23	+ Input	+ Input
3	- Input	- Input	22	+ Input	+ Input
9	NC	Comm	16	- Output	Comm
10	NC	NC	15	NC	NC
11	NC	- Output	14	+ Output	+ Output

- There is NO Pin 10 and 15 for –W models