

FDD05 SERIES

DC-DC CONVERTER 5 ~ 6W



FDD05 - 05 S 1

WATTAGE

- 03 : 3.3V OUT
- 05 : 5V OUT
- 12 : 12V OUT
- 15 : 15V OUT

- 1: 9~18V IN
- 2: 18~36V IN
- 3: 36~72V IN
- 4: 9~36V IN
- 5: 18~72V IN
- *: 20~60V IN

S : SINGLE OUTPUT
D : DUAL OUTPUT

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MODEL LIST

| MODEL NO. | INPUT VOLTAGE | OUTPUT WATTAGE | OUTPUT VOLTAGE | OUTPUT CURRENT | EFF. (MIN.) | CASE |
|-----------------------------|---------------|----------------|----------------|----------------|-------------|------|
| Single Output Models | | | | | | |
| FDD05 - 05S | 20~60 VDC | 5 WATTS | + 5 VDC | 1000 mA | 72% | FA |
| FDD05 - 12S | 20~60 VDC | 6 WATTS | + 12 VDC | 500 mA | 72% | FA |
| FDD05 - 15S | 20~60 VDC | 6 WATTS | + 15 VDC | 400 mA | 72% | FA |
| FDD05 - 05S1 | 9~18 VDC | 5 WATTS | + 5 VDC | 1000 mA | 63% | FA |
| FDD05 - 12S1 | 9~18 VDC | 6 WATTS | + 12 VDC | 500 mA | 68% | FA |
| FDD05 - 15S1 | 9~18 VDC | 6 WATTS | + 15 VDC | 400 mA | 68% | FA |
| FDD05 - 05S2 | 18~36 VDC | 5 WATTS | + 5 VDC | 1000 mA | 72% | FA |
| FDD05 - 12S2 | 18~36 VDC | 6 WATTS | + 12 VDC | 500 mA | 72% | FA |
| FDD05 - 15S2 | 18~36 VDC | 6 WATTS | + 15 VDC | 400 mA | 72% | FA |
| FDD05 - 05S3 | 36~72 VDC | 5 WATTS | + 5 VDC | 1000 mA | 72% | FA |
| FDD05 - 12S3 | 36~72 VDC | 6 WATTS | + 12 VDC | 500 mA | 72% | FA |
| FDD05 - 15S3 | 36~72 VDC | 6 WATTS | + 15 VDC | 400 mA | 72% | FA |
| FDD05 - 03S4 | 9~36 VDC | 5 WATTS | +3.3 VDC | 1500 mA | 70% | FA |
| FDD05 - 05S4 | 9~36 VDC | 5 WATTS | + 5 VDC | 1000 mA | 72% | FA |
| FDD05 - 12S4 | 9~36 VDC | 6 WATTS | + 12 VDC | 500 mA | 72% | FA |
| FDD05 - 15S4 | 9~36 VDC | 6 WATTS | + 15 VDC | 400 mA | 72% | FA |
| FDD05 - 03S5 | 18~72 VDC | 5 WATTS | +3.3 VDC | 1500 mA | 70% | FA |
| FDD05 - 05S5 | 18~72 VDC | 5 WATTS | + 5 VDC | 1000 mA | 72% | FA |
| FDD05 - 12S5 | 18~72 VDC | 6 WATTS | + 12 VDC | 500 mA | 72% | FA |
| FDD05 - 15S5 | 18~72 VDC | 6 WATTS | + 15 VDC | 400 mA | 72% | FA |



MODEL LIST

| MODEL NO. | INPUT VOLTAGE | OUTPUT WATTAGE | OUTPUT VOLTAGE | OUTPUT CURRENT | EFF. (MIN.) | CASE |
|---------------------------|---------------|----------------|----------------|----------------|-------------|------|
| Dual Output Models | | | | | | |
| FDD05 - 05D | 20~60 VDC | 5 WATTS | ± 5 VDC | ± 500 mA | 73% | FA |
| FDD05 - 12D | 20~60 VDC | 6 WATTS | ± 12 VDC | ± 250 mA | 75% | FA |
| FDD05 - 15D | 20~60 VDC | 6 WATTS | ± 15 VDC | ± 200 mA | 75% | FA |
| FDD05 - 05D1 | 9~18 VDC | 5 WATTS | ± 5 VDC | ± 500 mA | 67% | FA |
| FDD05 - 12D1 | 9~18 VDC | 6 WATTS | ± 12 VDC | ± 250 mA | 70% | FA |
| FDD05 - 15D1 | 9~18 VDC | 6 WATTS | ± 15 VDC | ± 200 mA | 70% | FA |
| FDD05 - 05D2 | 18~36 VDC | 5 WATTS | ± 5 VDC | ± 500 mA | 73% | FA |
| FDD05 - 12D2 | 18~36 VDC | 6 WATTS | ± 12 VDC | ± 250 mA | 75% | FA |
| FDD05 - 15D2 | 18~36 VDC | 6 WATTS | ± 15 VDC | ± 200 mA | 75% | FA |
| FDD05 - 05D3 | 36~72 VDC | 5 WATTS | ± 5 VDC | ± 500 mA | 73% | FA |
| FDD05 - 12D3 | 36~72 VDC | 6 WATTS | ± 12 VDC | ± 250 mA | 75% | FA |
| FDD05 - 15D3 | 36~72 VDC | 6 WATTS | ± 15 VDC | ± 200 mA | 75% | FA |
| FDD05 - 05D4 | 9~36 VDC | 5 WATTS | ± 5 VDC | ± 500 mA | 73% | FA |
| FDD05 - 12D4 | 9~36 VDC | 6 WATTS | ± 12 VDC | ± 250 mA | 75% | FA |
| FDD05 - 15D4 | 9~36 VDC | 6 WATTS | ± 15 VDC | ± 200 mA | 75% | FA |
| FDD05 - 05D5 | 18~72 VDC | 5 WATTS | ± 5 VDC | ± 500 mA | 73% | FA |
| FDD05 - 12D5 | 18~72 VDC | 6 WATTS | ± 12 VDC | ± 250 mA | 75% | FA |
| FDD05 - 15D5 | 18~72 VDC | 6 WATTS | ± 15 VDC | ± 200 mA | 75% | FA |

FEATURES

- * LOW COST
- * 4:1 & 3:1 & 2:1 WIDE INPUT RANGE
- * I/O ISOLATION
- * SHORT CIRCUIT PROTECTION
- * HIGH PERFORMANCE

DESCRIPTION

THE FDD05 SERIES ARE 5WATTS & 6W WATTS SINGLE & DUAL OUTPUT DC/DC CONVERTERS. 4:1 & 3:1 & 2:1 WIDE INPUT RANGE WITH I/O ISOLATION AND SHORT CIRCUIT PROTECT FEATURES MAKE IT SUITABLE TO APPLICATION ON VARIABLE APPLICATIONS WITH LOW COST. ALL THE MODELS ARE PACKAGED IN L x W x H = 2" x 2" x 0.47". CONFIGURATION, AND PCB MOUNTABLE DIRECTLY.



SPECIFICATION

All Specifications Typical At Nominal Line, Full Load, 25°C Unless Otherwise Noticed

GENERAL SPECIFICATION

- * Switching frequency: >80KHz
- * Isolation voltage: 1,500VDC
- * Isolation resistance: 1G Ω (min.)
- * Operating ambient temperature: -25 to +71°C
- * Storage temperature: -40 to +100°C
- * Max. Case temperature: 90°C
- * M.T.B.F.: 661,000Hrs at @ GF40, according to MIL-HDBK-217F
- * Cooling: Free air convection
- * Temperature coefficient: $\pm 0.02\%$ / °C
- * Dimension: 50.8 x 50.8 x 12mm

INPUT SPECIFICATIONS

- * Input voltage range: 9 ~ 18VDC for 12V
9 ~ 36VDC for 24V
18 ~ 36VDC for 24V
18 ~ 72VDC for 48V
20 ~ 60VDC for 48V
36 ~ 72VDC for 48V
- * Input filter: Pi type
- * No load input current: 40mA for 12V in
25mA for 24V in
15mA for 48V in
- * Max. Input voltage: 20VDC for 12V in
40VDC for 24V in
75VDC for 48V in

OUTPUT SPECIFICATIONS

- * Output voltage accuracy: $\pm 2\%$ at V_{o_nom}
- * Minimum load: No load for single output models
 $\pm 2\%$ at V_{o_nom} for dual output models
- * Line regulation: $\pm 1\%$ at V_{o_nom}
- * Load regulation: $\pm 2\%$ at V_{o_nom} for single output models
 $\pm 5\%$ at V_{o_nom} for dual output models
- * Ripple & noise: 150mV (max.)
- * Efficiency: Up to 75%, see model list
- * Derating: See table 1
- * Case material: Plastic

CONTROL AND PROTECTION

- * Input reversed: Shunt diode use external fuse
- * Output short circuit: Continuous

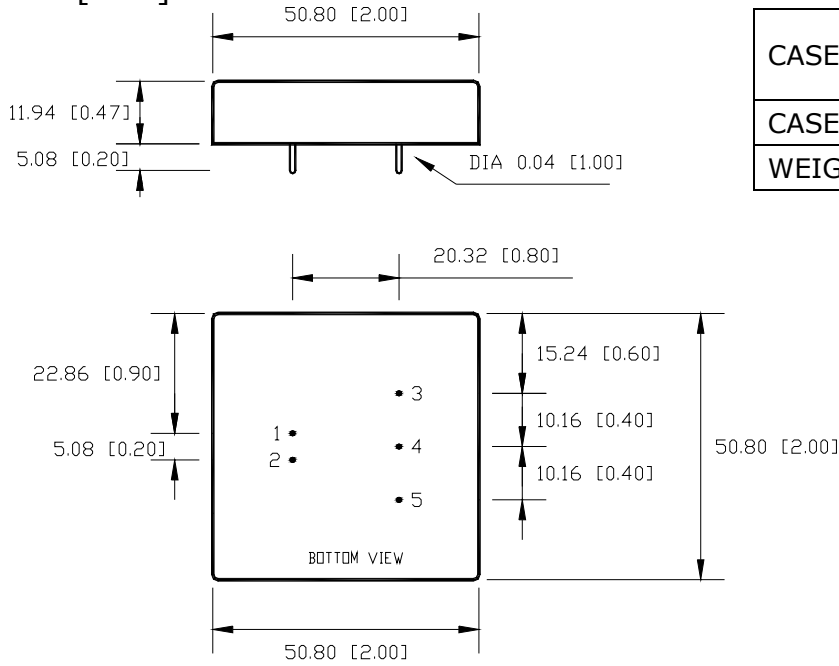


FDD05 SERIES

DC-DC CONVERTER 5 ~ 6W

MECHANISM & PIN CONFIGURATION

mm [inch]



PHYSICAL CHARACTERISTICS

| | |
|---------------|--|
| CASE SIZE | 50.8 x 50.8 x 12mm 2 x 2 x 0.47inches |
| CASE MATERIAL | Plastic |
| WEIGHT | 45 g |

PIN ASSIGNMENT

| PIN NO. | 1 | 2 | 3 | 4 | 5 |
|---------|-----|-----|-----|--------|-----|
| SINGLE | Vi+ | Vi- | Vo+ | NO PIN | Vo- |
| DUAL | Vi+ | Vi- | Vo+ | com | Vo- |

Derating:

[TABLE 1]

