

FDD03 SERIES

DC-DC CONVERTER

2.5 ~ 3W WITH REMOTE FUNCTION



FDD03 - 05 S 4 A

WATTAGE ————
 05: 5V OUT
 12: 12V OUT
 15: 15V OUT
 0505: DOUBLE 5V OUT
 1212: DOUBLE 12V OUT
 1515: DOUBLE 15V OUT

4: 9 ~ 36V IN
 5: 18 ~ 72V IN

S: SINGLE OUTPUT
 D: DUAL OUTPUT or
 DOUBLE OUTPUT

MODEL LIST

MODEL NO.	INPUT VOLTAGE	OUTPUT WATTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	EFF. (MIN.)	CASE
Single Output Models						
FDD03 - 05S4A	9~36 VDC	2.5 WATTS	+ 5 VDC	500 mA	67%	FC
FDD03 - 12S4A	9~36 VDC	3 WATTS	+ 12 VDC	250 mA	68%	FC
FDD03 - 15S4A	9~36 VDC	3 WATTS	+ 15 VDC	200 mA	68%	FC
FDD03 - 05S5A	18~72 VDC	2.5 WATTS	+ 5 VDC	500 mA	68%	FC
FDD03 - 12S5A	18~72 VDC	3 WATTS	+ 12 VDC	250 mA	73%	FC
FDD03 - 15S5A	18~72 VDC	3 WATTS	+ 15 VDC	200 mA	73%	FC
Dual Output Models						
FDD03 - 05D4A	9~36 VDC	2.5 WATTS	± 5 VDC	± 250 mA	66%	FC
FDD03 - 12D4A	9~36 VDC	3 WATTS	± 12 VDC	± 125 mA	68%	FC
FDD03 - 15D4A	9~36 VDC	3 WATTS	± 15 VDC	± 100 mA	68%	FC
FDD03 - 05D5A	18~72 VDC	2.5 WATTS	± 5 VDC	± 250 mA	72%	FC
FDD03 - 12D5A	18~72 VDC	3 WATTS	± 12 VDC	± 125 mA	72%	FC
FDD03 - 15D5A	18~72 VDC	3 WATTS	± 15 VDC	± 100 mA	75%	FC
Double Output Models						
FDD03 - 0505D4A	9~36 VDC	2.5 WATTS	5/5 VDC	250/250mA	66%	FC
FDD03 - 1212D4A	9~36 VDC	3 WATTS	12/12 VDC	125/125mA	68%	FC
FDD03 - 1515D4A	9~36 VDC	3 WATTS	15/15 VDC	100/100mA	68%	FC
FDD03 - 0505D5A	18~72 VDC	2.5 WATTS	5/5 VDC	250/250mA	72%	FC
FDD03 - 1212D5A	18~72 VDC	3 WATTS	12/12 VDC	125/125mA	72%	FC
FDD03 - 1515D5A	18~72 VDC	3 WATTS	15/15 VDC	100/100mA	75%	FC

REMARK:

LOAD 80% FL. (MAX.) WHEN INPUT VOLTAGE AT 9~11VDC (INPUT 9~36VDC MODELS) & 18~21VDC (INPUT 18~72VDC MODELS)



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FEATURES

- * 4:1 WIDE INPUT RANGE
- * DIP24 PACKAGE
- * I/O, O/O ISOLATION
- * SHORT CIRCUIT PROTECTION
- * HIGH PERFORMANCE
- * 2 YEARS WARRANTY

DESCRIPTION

THE FDD03 SERIES ARE 2.5-3 WATTS SINGLE & DUAL & DOUBLE OUTPUT DC/DC CONVERTERS. 4:1 WIDE INPUT RANGE WITH I/O, O/O ISOLATION AND SHORT CIRCUIT PROTECTION FEATURES MAKE FDD03 SUITABLE TO BE USED ON VARIABLE APPLICATION CIRCUITS WITH VERY LOW COST .ALL FDD03 MODELS ARE PACKAGED IN DIP24 L x W x H = 1.25" x 0.8" x 0.5" BLACK PLASTIC CASE. TWO KINDS OF PIN CONFIGURATIONS ARE AVAILABLE & PCB MOUNTABLE DIRECTLY.



SPECIFICATION

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

GENERAL SPECIFICATION

- * Switching frequency: >50KHz
- * 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.: 715,000Hrs at @ GF40, according to MIL-HDBK-217F
- * Cooling: Free air convection
- * Temperature coefficient: $\pm 0.02\%$ / °C
- * Dimension: 31.8 x 20.3 x 12.7mm

INPUT SPECIFICATIONS

- * No load input current: 9 ~ 36VDC for 24V
18 ~ 72VDC for 48V
- * Max. Input voltage: 8mA for 48V in
12mA for 24V in
- * Input voltage range / frequency: 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
 $\pm 20\%$ 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

- * Remote on/off: ON : open or 5 ~ 10VDC
OFF : -0.3 ~ 2VDC
- * Input reversed: Shunt diode use external fuse
- * Output short circuit: Continuous



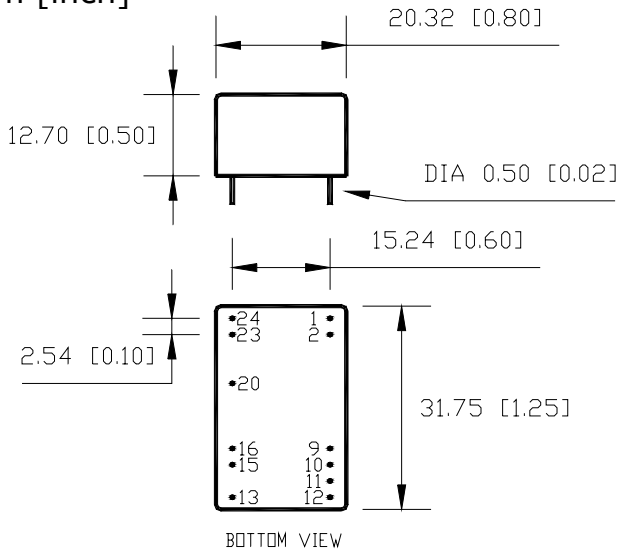
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MECHANISM & PIN CONFIGURATION

mm [inch]



PHYSICAL CHARACTERISTICS

CASE SIZE	31.8 x 20.3 x 12.7mm 1.25 x 0.8 x 0.5inches
CASE MATERIAL	Plastic
WEIGHT	15 g

PIN ASSIGNMENT

PIN NO.	1&2	9	10&11	12	13	15	16	20	23&24
SINGLE	Vi+	NO PIN	NO PIN	com	Vo+	NO PIN	NO PIN	S.D.	Vi-
DUAL	Vi+	NO PIN	com	NO PIN	Vo-	Vo+	NO PIN	S.D.	Vi-
DOUBLE	Vi+	Vo1-	NO PIN	Vo1+	Vo2+	NO PIN	Vo2-	S.D.	Vi-

S.D. : REMOTE ON/OFF

Derating:

[TABLE 1]

