

# FDD12 SERIES



DC - DC CONVERTER  
12W TRIPLE OUTPUT

## FEATURES

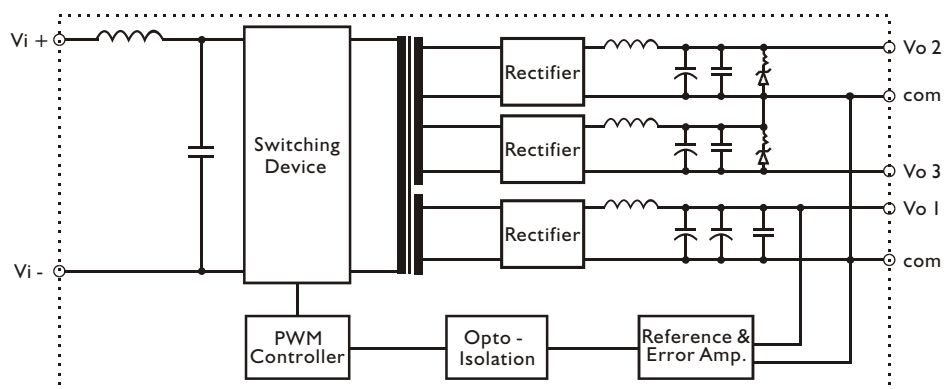
- LOW COST
- 4:1 WIDE INPUT RANGE
- I/O ISOLATION
- LC INPUT FILTER
- SHORT CIRCUIT PROTECTION
- HIGH PERFORMANCE
- 2 YEARS WARRANTY

## MODEL LIST

MODEL NO.	INPUT VOLTAGE	OUTPUT WATTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	EFF. (min.)
<b>Single Output Models</b>					
FDD12 - 0512T4	10~36 VDC	12 WATTS	+5 / $\pm 12$ VDC	1.5A / $\pm 0.2$ A	80%
FDD12 - 0515T4	10~36 VDC	12 WATTS	+5 / $\pm 15$ VDC	1.5A / $\pm 0.16$ A	80%
FDD12 - 0512T5	18~72 VDC	12 WATTS	+5 / $\pm 12$ VDC	1.5A / $\pm 0.2$ A	80%
FDD12 - 0515T5	18~72 VDC	12 WATTS	+5 / $\pm 15$ VDC	1.5A / $\pm 0.16$ A	80%

## CIRCUIT SCHEMATIC

Block diagram for FDD12 series with triple output



### SPECIFICATION

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

#### GENERAL

Characteristics	Conditions	min.	typ.	max.	unit
Switching frequency	$V_i$ nom, $I_o$ nom		200		KHz
Isolation voltage	Input / Output	1,500			VDC
Isolation resistance	Input / Output, @ 500VDC	1G			$\Omega$
Ambient temperature	Operating at $V_i$ nom, $I_o$ nom	-25		+ 71	°C
Case temperature	Operating at $V_i$ nom, $I_o$ nom			+ 95	°C
Derating	$V_i$ nom	See derating curve			% / °C
Storage temperature	Non operational	-40		+ 100	°C
M.T.B.F.	According to MIL-HDBK-217F, GF40		661,100		Hrs
Dimension	L50.8 x W50.8 x H11.9				mm
Cooling	Free air convection				
Case material	Metal				

#### INPUT SPECIFICATIONS

Characteristics	Conditions	min.	typ.	max.	unit
Input voltage range	$T_a$ min ... $T_a$ max, $I_o$ nom	10	24	36	VDC
		18	48	72	VDC
No load input current	$V_i$ nom, $I_o = 0$	24V models		22	mA
		48V models		15	mA
Input voltage w/o damage	$I_o$ nom	24V models		40	VDC
		48V models		75	VDC
Input filter	LC type				

#### OUTPUT SPECIFICATIONS

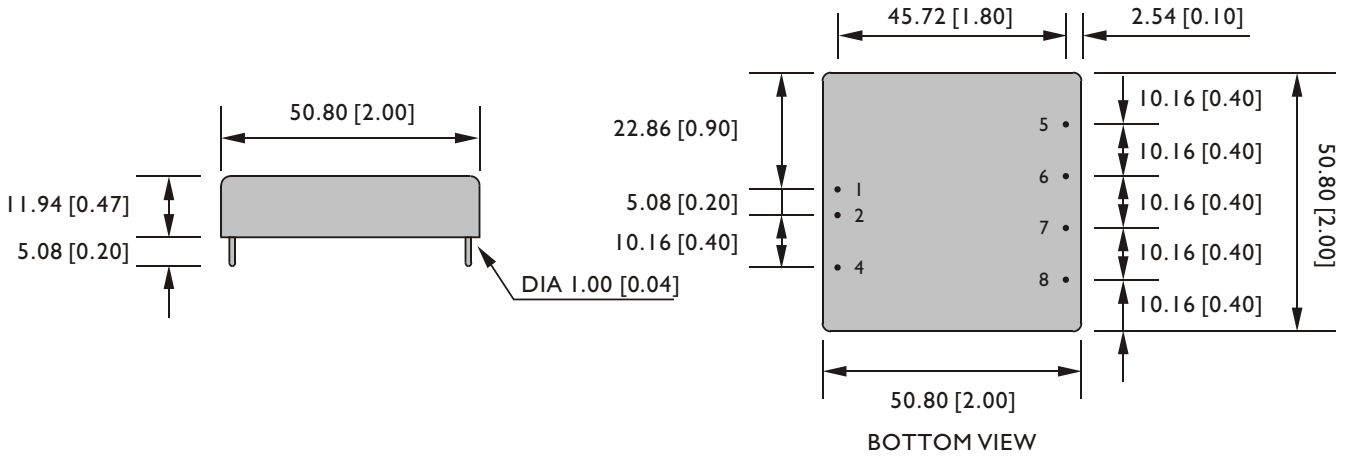
Characteristics	Conditions	min.	typ.	max.	unit
Output voltage accuracy	$V_i$ nom, $I_o$ nom	+ 5V		$\pm 2$	%
		$\pm 12V$ or $\pm 15V$		$\pm 6$	%
Minimum load	$V_i$ nom	+ 5V	10		%
		$\pm 12V$ or $\pm 15V$	20		%
Line regulation	$I_o$ nom, $V_i$ min ... $V_i$ max			$\pm 2$	%
Load regulation	$V_i$ nom, $I_o$ min ... $I_o$ nom	+ 5V		$\pm 2$	%
		$\pm 12V$ or $\pm 15V$		$\pm 6$	%
Transient recovery time	$V_i$ nom, $I_o$ nom ... 1/2 $I_o$ nom		500		$\mu$ S
Temperature coefficient	$V_i$ nom, $I_o$ nom			$\pm 0.02$	% / °C
Ripple & noise	$V_i$ nom, $I_o$ nom, BW = 20MHz			$V_{out} \times \pm 1\%$	mV
Efficiency	$V_i$ nom, $I_o$ nom, $P_o / P_i$	Up to 80%, See model list			

#### CONTROL AND PROTECTION

Remote ON / OFF	ON: opened or 8 ~ 10VDC applied, reference to input GND
	OFF: -0.3 ~ 2VDC applied, reference to input GND
Input reversed	Shunt diode built in, external fuse recommended
Output short circuit	Continuous

### MECHANISM & PIN CONFIGURATION

mm [inch]



### PHYSICAL CHARACTERISTICS

CASE SIZE	50.8 x 50.8 x 11.9 mm 2 x 2 x 0.47 inches
CASE MATERIAL	Metal
WEIGHT	70 g

### PIN ASSIGNMENT

GENERAL							
PIN NO.	1	2	4	5	6	7	8
TRIPLE	Vi+	Vi-	ON / OFF	Vo2 (+ OUT)	Vo1 (+ 5V)	com	Vo3 (- OUT)

### DERATING

