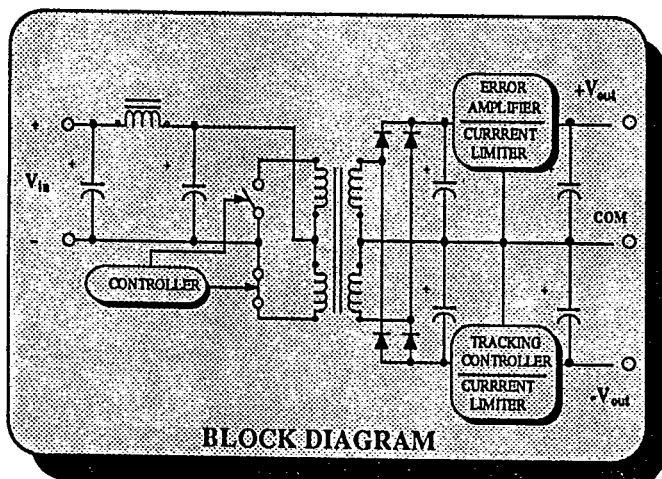




TO 6 WATT

FRD

T-57-11 SERIES



FEATURES:

- LOW .40 INCH PROFILE
- SIX-SIDED SHIELDING
- 500VDC ISOLATION
- 5, 12, 24, 28, AND 48 VDC INPUT

APPLICATIONS:

- A/D-D/A CONVERTERS
- TELECOMMUNICATIONS
- PROCESS CONTROL EQUIPMENT
- LOCAL POWER DISTRIBUTION

The FRD Series is a line of regulated, dual output DC/DC converters packaged in a miniature 2 x 2 x .40 inch metal case with six-sided EMI/RFI shielding. The FRD Series is available with input voltages of 5, 12, 24, 28, and 48 VDC. This Series provides .1% line & load regulation for applications where well regulated voltage is required. All models have short circuit protection with automatic restart upon removal of short circuit. An internal π (Pi) input filter is standard for all models to minimize reflected input ripple current for critical applications.

ELECTRICAL SPECIFICATIONS

All Specifications Typical @+25°C, Nominal Line, and Full Load Unless Otherwise Noted.

INPUT SPECIFICATIONS

Input Voltage Range See Table Below
Input Filter Π (Pi) Filter

OUTPUT SPECIFICATIONS

Voltage Accuracy $\pm 1.0\%$, max.
Line Regulation $\pm 0.1\%$
Load Regulation $\pm 0.1\%$
Ripple and Noise, 20 MHz BW 1 mV RMS, max.
20 MHz BW 40 mVp-p, max.
Average Voltage Temp. Coefficient $\pm 0.02\%/^{\circ}\text{C}$, max.
Short Circuit Protection Continuous
Short Circuit Restart Automatic

GENERAL SPECIFICATIONS

Efficiency See Table at Right
Isolation Voltage >500 VDC
Isolation Resistance $>10^9$ Ohms
Switching Frequency >20 KHz, typ.

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature Range -25°C to $+71^{\circ}\text{C}$
Surface Temp. Rise Above Ambient $7^{\circ}\text{C}/\text{Watt Diss.}$
Derating None
Storage Temperature Range -40°C to $+125^{\circ}\text{C}$
Humidity 20% to 95% R.H. (non-condensing)
Cooling Free-Air Convection
EMI/RFI Six-Sided Continuous Metal Case

PHYSICAL SPECIFICATIONS

Dimensions 2.0 x 2.0 x 0.40 Inches
(51 x 51 x 10.16 mm)
Weight 3.0 Oz. (61 g)
Case Material Black Coated Copper
(With Non-Conductive Header)

NOMINAL INPUT VOLTAGE	INPUT VOLTAGE RANGE @ RATED OUTPUT LOAD			
	50%	60%	80%	100%
5	4.3-6.0	4.4-5.7	4.55-5.6	4.65-5.5
12	10.3-15.0	10.4-14.6	10.6-13.6	10.9-13.2
24	20.4-30.0	20.6-29.0	21.0-27.0	21.6-26.4
28	24.2-36.0	24.5-34.0	24.9-31.8	25.2-30.8
48	41.3-60.0	42.0-58.0	42.3-54.4	43.2-52.8

DUAL OUTPUTS

INTERNATIONAL
POWER DEVICES



INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		% EFF	REGULATION		MODEL NUMBER
			NO/LOAD	FULL/LOAD		LINE	LOAD	
5VDC	±12VDC	±230mA	152mA	1680mA	65	±0.1%	±0.1%	FRD512
	±15VDC	±190mA	147mA	1707mA	66	±0.1%	±0.1%	FRD515
12VDC	±12VDC	±230mA	49mA	697mA	66	±0.1%	±0.1%	FRD1212
	±15VDC	±190mA	46mA	689mA	67	±0.1%	±0.1%	FRD1215
24VDC	±12VDC	±230mA	21mA	338mA	67	±0.1%	±0.1%	FRD2412
	±15VDC	±190mA	22mA	345mA	65	±0.1%	±0.1%	FRD2415
28VDC	±12VDC	±230mA	26mA	298mA	65	±0.1%	±0.1%	FRD2812
	±15VDC	±190mA	23mA	297mA	65	±0.1%	±0.1%	FRD2815
48VDC	±12VDC	±230mA	14mA	176mA	65	±0.1%	±0.1%	FRD4812
	±15VDC	±190mA	16mA	177mA	66	±0.1%	±0.1%	FRD4815

When Ordering Pinout "C", Please Add Suffix "C" at the End of a Part Number.
Example: FRD1205C

