



FST30 SERIES

ENCAPSULATED DC/DC CONVERTER

30WATTS



Features

- High Efficiency
- 2:1 Input Range
- Six-sided Continuous Shield
- Standard Package & Pin Out
- Remote ON/OFF Control
- Fully Encapsulated Module

ELECTRICAL SPECIFICATIONS

Measured at 25°C with the condition of V_{in} = Nominal and Full Load. Specifications subject to change without notice.

Model No. (Single Output)	FST30S2.5/24	FST30S3.3/24	FST30S5/24	FST30S12/24	FST30S15/24	FST30S24/24
Max Output Wattage (W)	15W	19.8W	30W	30W	30W	30W
Input Voltage (VDC)	24V (18-36)	24 (18-36)	24V (18-36)	24V (18-36)	24V (18-36)	24V (18-36)
Output Voltage (VDC)	2.5V/6000mA	3.3V/6000mA	5V/6000mA	12V/2500mA	15V/ 2000mA	24V/ 1250mA
Efficiency (%)	84%	87%	90%	88%	88%	88%
Capacitor Load(max)	6800mF	6800mF	4700mF	680mF	680mF	120mF
Minimum Load	0%	0%	0%	1%	1%	0.5%

Model No. (Single Output)	FST30S2.5/48	FST30S3.3/48	FST30S5/48	FST30S12/48	FST30S15/48	FST30S24/48
Max Output Wattage (W)	15W	19.8W	30W	30W	30W	30W
Input Voltage (VDC)	48V (36-75)	48V (36-75)	48V (36-75)	48V (36-75)	48V (36-75)	48V (36-75)
Output Voltage (VDC)	2.5V/6000mA	3.3V/6000mA	5V/6000mA	12V/2500mA	15V/ 2000mA	24V/ 1250mA
Efficiency (%)	85%	88%	90%	88%	88%	88%
Capacitor Load(max)	6800mF	6800mF	4700mF	680mF	680mF	120mF
Minimum Load	0%	0%	0%	1%	1%	0.5%

INPUT SPECIFICATIONS

Input Filter	π Filter
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OUTPUT SPECIFICATIONS

Voltage Accuracy	±2%	
Line Regulation(LL-HL)typ	±0.5%	
Load Regulation(10-100%)typ	±1%	
Trim	±10%	
Switching Frequency	400kHz	
Ripple & Noise (V _{pk-pk})	100mV	0.5%

PROTECTION

Output Power Protection	Works over 120% of rating and recovers automatically
Output Voltage Protection	Zener Diode Clamp
Short Circuit Protection	Hiccup mode, auto-recovery

1. Output Ripple & Noise are measured at 20MHz of bandwidth with a 0.1uF & 47uF parallel capacitors

ISOLATION

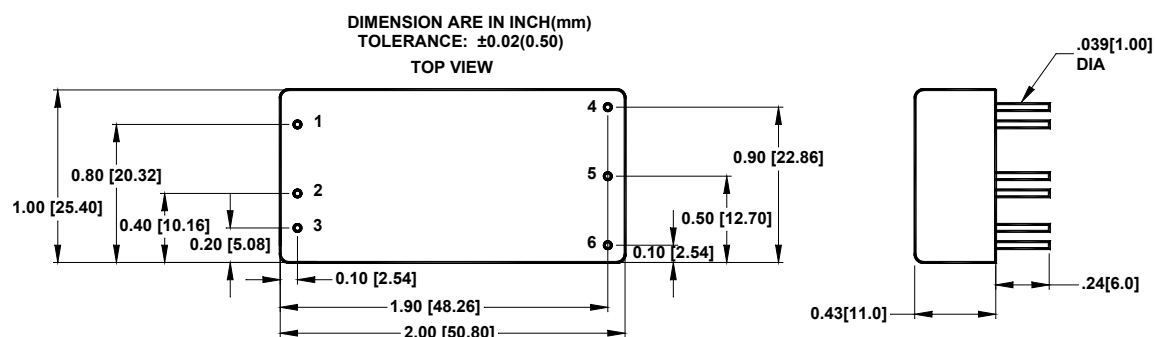
Voltage	1600VDC input to output
Resistance	10^8 ohms input to output
Capacitance	1000pF input to output

ENVIRONMENT

Operating Temperature	-40C to +85C (with derating, see Figure 1)
Storage Temperature	-55C to +105C
Case Temperature	+105C max.
Temperature Coefficient	$\pm 0.02\%/C$
Humidity	95% RH
MTBF	>550,000 h @ 25C (MIL-HDBK-217F)

PHYSICAL

Dimensions (L×W×H)	2.0 x 1.0 x 0.43 inches (50.8 x 25.4 x 11.0 mm)
Weight	33 grams, 1.16 ozs
Case Material	Five-sided shielding Aluminum with Non-Conductive base, Black Anodize
Cooling Method	Free air convection



Pin	Function
	SINGLE
1	CTRL
2	$-V_{IN}$
3	$+V_{IN}$
4	TRIM
5	$-V_{OUT}$
6	$+V_{OUT}$

Mechanical Specifications

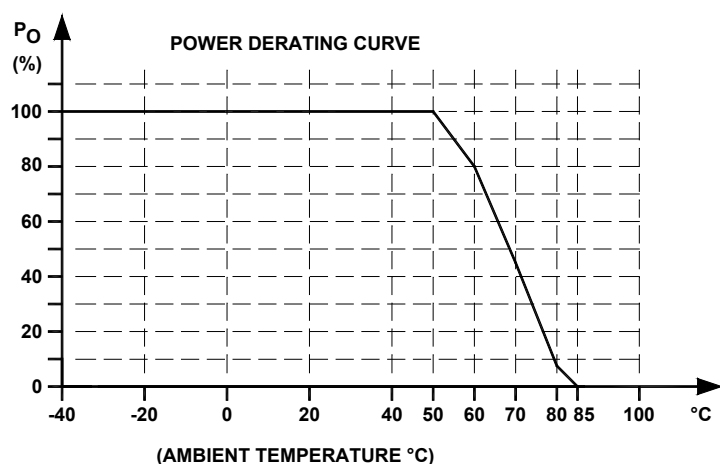


Figure 1. Power Derating Curve

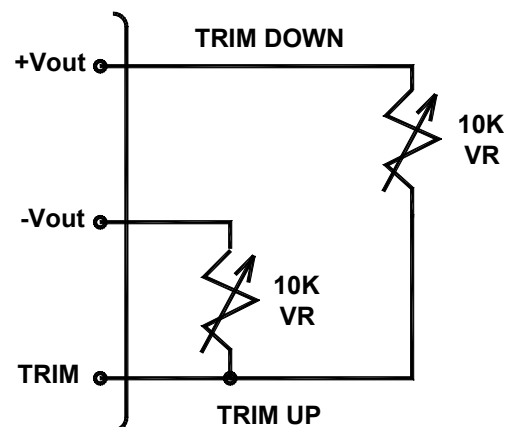


Figure 2. Remote ON/OFF Control & Trim