

HIGH TEMPERATURE APPLICATIONS 48VIN, 20 WATT, REGULATED

Product Features

- High Temp Design, 100°C Operating Temp
- High Efficiency Operation, 86% typical
- Low Profile Mounting, 0.4 inch height
- Industry Compatible Pin Out, 1.6" x 2" Form Factor
- Remote On / Off, TTL
- Trim Capability Standard
- Short Circuit Protection
- No external Input or Output Filtering required
- Regulated Output, 1% Set Point Tolerance
- 1500VDC I/O Isolation, UL, CSA, TUV, CE Approvals pending



TYPICAL APPLICATIONS: 48VDC TELECOM, ON-BOARD DISTRIBUTED POWER, OUTDOOR UNITS (ODU), RUGGED ENVIRONMENT, LOW PROFILE & HEIGHT PCB, AND REMOTE MOUNTED UNITS

BRIEF OVERVIEW

The SF series is a family of highest performance DC/DC converters, incorporating single ended forward converter technology, including synchronous rectification to provide the highest possible efficiency. The DC/DC converter has been designed to meet especially the requirements in the telecom environment, which are size, efficiency, height, and the operating temperature. The footprint, i.e. input and output pins is industry compatible, the low profile case size is 1.60" x 2.0" x 0.40".

The converter family operates at a 400kHz fixed frequency and does not require external input/output filtering. The output power is rated at 20 Watts, utilizing also no-load operation. Other features include: under voltage lockout, short circuit protection, low ripple/noise, trim capability, optional temperature shutdown, over current protection, and remote on/off control.

SPECIFICATIONS: SF SERIES

All specifications apply @ +25°C ambient unless otherwise noted.

INPUT SPECIFICATIONS

Nominal Input.....48VDC (36-75VDC)

OUTPUT SPECIFICATIONS

Output Current.....6A @ 3.3VDC
 Voltage Tolerance.....±5 (nom. line, 100% load)
 Line Regulation:full line +/-0.5%
 Load Regulation:25-100% load +/-0.5%
 Ripple/Noise (20MHz BW).....<70mV p-p
 Short Circuit Protection.....continuous

GENERAL SPECIFICATIONS

Efficiency (typical).....86%
 Isolation Voltage.....>1500VDC
 Switching Frequency.....400kHz (fixed)

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature.....-40° to +100°C
 Storage Temperature.....-55 to +125°C
 Cooling.....Free air convection

PHYSICAL SPECIFICATIONS

Dimensions:2" x 1.6" x 0.4"
 Case Material.....Black painted Copper

Due to advances in technology, specifications subject to change without notice.

Specification	Method	Min.	Typ.	Max.	Units
INPUT VOLTAGE:	48V version	36	48	75	Volts
REMOTE ON/OFF	TTL				TTL logic
INPUT FILTER	Pi-Filter				
OUTPUT VOLTAGE			3.3VDC		Volts
OUTPUT VOLTAGE Set Point			+/- 0.5%		% of Vout
OUTPUT CURRENT			6000		mA
OVERCURRENT PROTECTION	Limiting		130%		% of Iout
OUTPUT RIPPLE	20MHz BW		<70mV p-p		mV peak/peak
SHORT CIRCUIT PROTECTION	continuous				
LINE REGULATION	full line		+/- 0.5%		
LOAD REGULATION	25-100% load		+/- 0.5%		
TRANSIENT RESPONSE	within +/- 1% Vout		<100u sec		
OUTPUT TRIM	external Res.		+/- 10%		% of Vout
EFFICIENCY	synch rectification		~86%		
ISOLATION VOLTAGE			>1500VDC		VDC / 10sec
ISOLATION RESISTANCE	In/Out/ >100MOhms				
SWITCHING FREQUENCY			400kHz fixed		
OPERATING TEMPERATURE		-40		+100	degree C
STORAGE TEMPERATURE		-55		+125	degree C
HUMIDITY	non-condensing	20		95	% R.H.
WEIGHT			~ 4 oz		
DIMENSIONS	case w/o pin		2"x1.6"x0.4"		inches
CASE MATERIAL					black painted Cu

PIN CONNECTIONS

Pin 1	+V in
Pin 2	- V in
Pin 3	Remote
Pin 4	+ V out
Pin 5	- V out
Pin 6	Trim

all case and pin-to-case dimensions are for reference only, unless otherwise noted.



