ACUTE POWER INC.
CLEVER SOLUTIONS

25 WATT DC-DC

Integral Metal Substrate

Non-encapsulated, Six-Sided Shielding

SFP25 Series
Single & triple Outputs

Industry Standard Pinout
Six-sided Shielding
Wide Input Range 2:1
High Efficiency to 89%
Remote On/Off
External Trim
Under-Voltage Lockout
-40C To 105C Operation
Overvoltage & Short Circuit Protection
1500Vdc Isolation

The SFP25 series of DC-DC converters have been designed as an Industry Standard Pinout solution for a wide range of applications where light weight and ease of assembly are needed. Utilizing the latest thermal transfer techniques the SFP25 series packs up to 25 watts of power in 1.60" x 2.0" x .375" open frame construction and operating temperatures of -40c to + 105C. All models are designed to meet UL1950,CSA 950 and EN 60950.

Model Selection Guide

Input Voltage		Iin @ Vin nom.		Output	Output	Po	Output	Typical	Model Number
Nom.	Range	FL(A)	NL	V1 & V2/V3	Current(FL)	(W)	OVP	Efficiency	*
12Vdc	9-18Vdc	1.375	7mA	3.30	4	13.2	3.9V	80%	SFP25-12S3V3
12Vdc	9-18Vdc	2.008	7mA	5.00	4	20	6.8V	83%	SFP25-12S05
12Vdc	9-18Vdc	1.961	7mA	12.00	1.7	20	15V	85%	SFP25-12S12
12Vdc	9-18Vdc	1.916	7mA	15.00	1.4	20	18V	87%	SFP25-12S15
12Vdc	9-18Vdc	2.033	7mA	3.3 & +/-12.00	4.0 & +/-.625	20	3.9 (Vo1)	82%	SFP25-12T3D12*
12Vdc	9-18Vdc	2.033	7mA	3.3 & +/-15.00	4.0 & +/-.625A	20	3.9 (Vo1)	82%	SFP25-12T3D15*
12Vdc	9-18Vdc	2.008	7mA	5.0 & +/-12.00	3.5 & +/-.625A	20	6.8 (Vo1)	83%	SFP25-12T5D12*
12Vdc	9-18Vdc	2.008	7mA	5.0 & +/-15.00	3.5 & +/-.500A	20	6.8 (Vo1)	83%	SFP25-12T5D15*
24Vdc	18-36Vdc	0.859	7mA	3.30	5	16.5	3.9V	80%	SFP25-24S3V3
24Vdc	18-36Vdc	1.240	7mA	5.00	5	25	6.8V	84%	SFP25-24S05
24Vdc	18-36Vdc	1.211	7mA	12.00	2.1	25	15V	86%	SFP25-24S12
24Vdc	18-36Vdc	1.184	7mA	15.00	1.7	25	18V	88%	SFP25-24S15
24Vdc	18-36Vdc	1.255	7mA	3.3 & +/-12.00	4.0 & +/-.625	25	3.9 (Vo1)	83%	SFP25-24T3D12*
24Vdc	18-36Vdc	1.255	7mA	3.3 & +/-15.00	4.0 & +/-.625A	25	3.9 (Vo1)	83%	SFP25-24T3D15*
24Vdc	18-36Vdc	1.240	7mA	5.0 & +/-12.00	3.5 & +/-.625A	25	6.8 (Vo1)	84%	SFP25-24T5D12*
24Vdc	18-36Vdc	1.240	7mA	5.0 & +/-15.00	3.5 & +/-.500A	25	6.8 (Vo1)	84%	SFP25-24T5D15*
48Vdc	36-75Vdc	0.419	7mA	3.30	5	16.5	3.9V	82%	SFP25-483V3
48Vdc	36-75Vdc	0.613	7mA	5.00	5	25	6.8V	85%	SFP25-48S05
48Vdc	36-75Vdc	0.599	7mA	12.00	2.1	25	15V	87%	SFP25-48S12
48Vdc	36-75Vdc	0.585	7mA	15.00	1.7	25	18V	89%	SFP25-48S15
48Vdc	36-75Vdc	0.620	7mA	3.3 & +/-12.00	4.0 & +/-.625	25	3.9 (Vo1)	84%	SFP25-48T3D12*
48Vdc	36-75Vdc	0.620	7mA	3.3 & +/-15.00	4.0 & +/-.625A	25	3.9 (Vo1)	84%	SFP25-48T3D15*
48Vdc	36-75Vdc	0.613	7mA	5.0 & +/-12.00	3.5 & +/-.625A	25	6.8 (Vo1)	85%	SFP25-48T5D1212*
48Vdc	36-75Vdc	0.613	7mA	5.0 & +/-15.00	3.5 & +/-.500A	25	6.8 (Vo1)	85%	SFP25-48T5D15*

Customs and specials available, consult factory

* Total output power not to exceed 25W (20W) for 12Vin Models

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Specifications

All specifications Are Typical @ Nominal Input,Full Load & 25C Unless Otherwise Stated

Input

Input Voltage Range	…….	2:1
Note (3)	…….	9-18Vdc (12V Models)
	…….	18-36Vdc (24V Models)
	…….	36-75Vdc (48V Models)
Input filter	…….	Pi Type
Under Voltage Lockout	…….	8.5V (12V Models)
	…….	16.5V (24V Models)
	…….	32V (48V Models)
Remote :ON	…….	>3.5V or open, Ref. (-)Vi
:OFF	…….	<0.8V, Ref (-)Vin
Conducted Noise	…….	EN55022,level A (Note 5)

Output

Output Power	…….	25 W Continuous(Max)
Output Voltage/current	…….	See Model Table
Output Setting Accuracy		
Singles	…….	+/- 1% typ., +/- 1.5%max.
Aux	…….	+/-3%
Load Variation		
Singles(FL.-NL)	…….	+/- 0.5% Note (4),(6)
Aux (FL-10%L)	…….	+/-5%, V1 (10%-FL)
Line Regulation	…….	+/- 0.5% LL-HL
Total Error Band		
Singles	…….	+/- 3%, Line/Load&Temp.
Auxiliary outputs	…….	+/-10%(Io1,2&3 @ 10%-FL)
Ripple & Noise(20Mhz BW)	…….	100mV(Vo1),1%(Aux)
Transient Response (FL-1/2L)	…….	2 % Deviation, 200uS
Temperature Coefficient	…….	+/- .01%/c
Short circuit Protection	…….	Indefinite, Modulated, AutomaticRecovery

General

Efficiency	…….	See Model Table
Isolation Voltage	…….	1500Vdc (1Min)
Isolation Resistance	…….	100M
Switching Frequency	…….	350Khz
MTBF	…….	1.0M hrs.MIL-HDBK-217F Ground Benign @ 25C

Enviromental

Operating Temperature Range	…….	- 40C to + 105C (See Derating Curve)
	…….	-40C To + 65C @ FL
Storage Temperature Range	…….	-55C To + 125C
Maximum Case Temperature	…….	110 C
Humidity	…….	5% To 95% RH, Non-condensing
Cooling	…….	Natural Convection

Mechanical

Size	…….	1.60" X 2.00" X 0.375"
Weight	…….	24G
Case/Material	…….	Aluminum baseplate with Anodized aluminum case

Notes:

1) O.V.P. protection is across Vo1.

2) Consult factory for recommended reflow profile.

3) Typical start-up for 12Vin models is 9V. Maximum startup is 9.5V,with full operation down to 9.0V

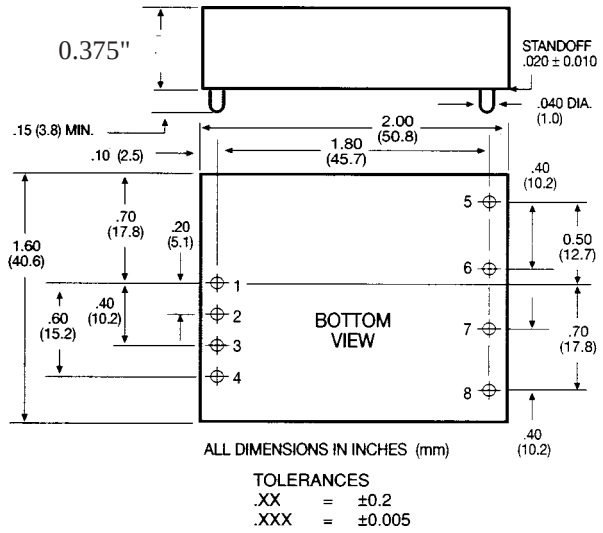
4) Operation is allowed to No-Load on single outputs, however operation below 10% load may cause ripple & noise to exceed spec.

5) External Capacitor required to meet conucted noise requirement.

6)Auxillary output regulation rely's on cross coupling of output channels. A 10% minimum load is required on Vo1 for regulation

7) Output currents are maximum for each output however, max power is not to exceed is rated power output (refer to table)

Mechanical Specifications



Pin Connections

Pin No.	Single	Triple
1	+Vin	+Vin
2	-Vin	-Vin
3	No Pin	No Pin
4	ON/OFF	ON/OFF
5	No Pin	+Aux
6	+V	+V1
7	-V	Com.
8	Trim	-Aux