TDK-Lambda

CPF1200F280/S

SPECIFICATIONS

CA835-01-01/S1-A

MODEL				CPF1200F280-14/S
ITEMS				
1	Nominal Output Voltage		V	14
2	Maximum Output Current		Α	86
3	Nominal Output Power		W	1204
4	Efficiency (Typ)	(*1)	%	86% @20% FL, 93% @50% FL, 92% @100% FL
5	Input Voltage Range		-	200 - 400VDC
6	Input Current (Typ.)	(*1)	Α	4.6
7	Output Voltage Accuracy	(*1)	%	+/-1
8	Output Voltage Range	(*9)	V	7.2 ~ 14
9	Maximum Ripple & Noise	(*9)	mV	140
10	Maximum Line Regulation	(*2,*6)		48
11	Maximum Load Regulation	(*3)	mV	48
12	Over Current Protection	(*4,*5)	-	105% - 140%
13	Over Voltage Protection	(*5)	V	14.88 ~ 18
14	Remote Sensing	(*8)	-	Possible
15	Remote ON/OFF Control	(*8)	-	Possible (SHORT:ON OPEN:OFF)
16	Parallel Operation	(*8)	-	Possible
17	Series Operation	(*8)	-	Possible
18	Operating Temperature	(*6)	-	-40°C - +100°C (Baseplate), -40°C - +85°C (Ambient)
19	Operating Humidity		-	5 - 95%RH (No Dewdrop)
20	Storage Temperature		-	-40°C - +100°C
21	Storage Humidity		-	5 - 95%RH (No Dewdrop)
22	Cooling	(*7)	-	Conduction Cooled
23	Temperature Coefficient (%)		-	0.02%/°C
24	Withstand Voltage		-	Input-Output: 3.0kVAC, Input-Baseplate: 2.5kVAC(20mA) 1min
			-	Output-Baseplate: 500VDC 1min
25	Isolation Resistance		-	Output to Baseplate 500VDC more than 100MΩ(25°C,70%RH)
26	Vibration		-	At No Operating, 10-55Hz (Sweep for 1min.)
			-	Amplitude 0.825mm Constant (Maximum 49.0m/s ²) X, Y, Z 1 hour each
27	Shock		-	196.1m/s^2
28	Weight (Typ.)		g	200
29	Size (W×H×D)		mm	61 x 12.7 x 116.8 (Refer to Outline Drawing)

*Read instruction manual carefully, before using the power supply unit.

=NOTES=

*1. At 280VDC, Nominal Output voltage, Maximum Output Current and Baseplate Temperature = +25°C.

At 350VDC for specification of Efficiency.

*2. 200 - 400VDC, Constant Load - Refer to Derating Curve (CA835-01-03/S1).

*3. No load - Full load, input voltage 200 - 400VDC - Refer to Derating Curve (CA835-01-03/S1). At light load, the power supply works in burst mode for energy saving, the maximum load regulation will be 96mV at no load, add a 100mA dummy load can achieve less than 48mV performance.

*4. Constant current limiting with automatic recovery.(The unit automatically shutdown when left in OCP condition, with the ouput voltage less than the LVP level.Refer to instruction manual.)

- *5. Inverter shutdown method, Manual Reset.
- *6. Ratings Refer to Derating Curve (CA835-01-03/S1).
 - Load(%) is Percent of Maximum Output Power.
- *7. Heatsink has to be Chosen According to Instruction Manual.
- *8. Refer to Instruction Manual.
- *9. External Components are Needed for Operation.

(Refer to Basic Connection and Instruction Manual)

At light load, the power supply works in burst mode for energy saving, the maximum ripple & noise will be 240mV at no load, add a 100mA dummy load can achieve less than 140mV performance.

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Load

Measurement point for Vo and load/line regulation Measurement point for output ripple & noise

(JEITA RC-9141 probe) Bandwidth of scope : 100MHz

50mm

C4

*5

_ C5 C6

2.2 μ F

+ C7

*4

0.022 μ Fx2

+S

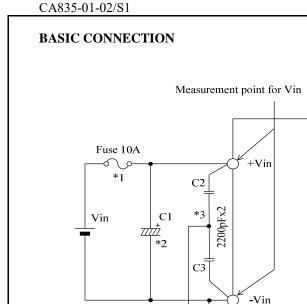
+V

-V

-S TRM

> PC IOG

AUX



*Read instruction manual carefully, before using the power supply unit.

Withstand Voltage

- *1. Use an external fuse (fast blow type or normal blow type) for each unit.
- *2. Put input capacitor.
 - $C1: \qquad \mbox{Electrolytic capacitor More than 450VDC, } 22\mu F$
 - 1) Use low impedance electrolytic capacitor with excellent temperature characteristics.
 - 2) Use two capacitors(450V, $22\mu F$) in parallel when ambient temperature is -20°C or lower to reduce ESR.
 - 3) If the impedance of input line is high, C1 capacitance must be more than above.

SG

CNT

BASE-PLATE

O

*3. Put FG capacitor.

C2, C3 : Put 2200pF capacitor between input lines and baseplate (More than 3.0kVAC).

*4. Put output capacitor.

C7: Electrolytic capacitor

14V: 25VDC, 1500µF x2 Parallel

1) Use low impedance electrolytic capacitor with excellent temperature characteristics.

2) Use more than twice recommended capacitor above in parallel when ambient temperature is -20 $^\circ$ C or lower to reduce ESR.



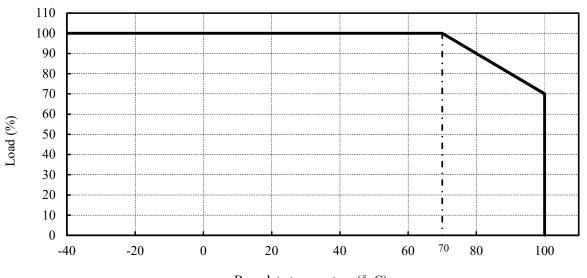
C4, C5 : Put $0.022 \mu F$ capacitor between output lines and baseplate $% 1000 \mu F$ (More than 500VDC).

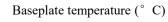
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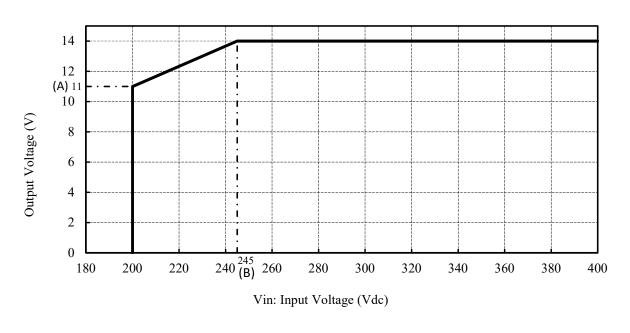
DERATING CURVE :

Derating Curve: Tb V.S Load









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