

**PFE1000F**

C251-01-01B

## SPECIFICATIONS

ITEMS		MODEL	PFE1000F-12	PFE1000F-28	PFE1000F-48
1	Nominal Output Voltage (*1)	V	12	28	48
2	Maximum Output Current	A	60	36	21
3	Maximum Output Power	W	720	1008	1008
4	Efficiency (Typ.) (*1)	%	80 / 82	84 / 86	84 / 86
5	Input Voltage Range (*2) (*3)	-	85 - 265 VAC		
6	Input Frequency (*2)	Hz	47 - 63		
7	Input Current (*1)	A	9.8 / 4.8	13.6 / 6.6	13.4 / 6.5
8	Power Factor (*1) (*3)	-	0.95 min		
9	Output Voltage Accuracy	%	+/-2		
10	Output Voltage Range	%	-20 / +20		
11	Maximum Ripple & Noise (*3)	mV	120	280	480
12	Maximum Line Regulation	mV	48	56	96
13	Maximum Load Regulation	mV	48	56	96
14	Over Current Protection (*4) (*5)	-	105% - 140%		
15	Over Voltage Protection (*5)	-	125% - 145% (Inverter shutdown method)		
16	In-rush Current (Typ.) (*1) (*3)	A	20A / 40A peak		
17	Remote Sensing (*6)	-	Possible		
18	Remote ON/OFF Control (*6)	-	Possible		
19	Parallel Operation (*6)	-	Possible		
20	Series Operation (*6)	-	Possible		
21	Operating Temperature (*7) (*8)	-	-40°C - +100°C (Baseplate)		
22	Operating Humidity	-	20 - 95%RH (No Dewdrop)		
23	Storage Temperature	-	-40°C - +100°C		
24	Storage Humidity	-	10 - 95%RH (No Dewdrop)		
25	Cooling (*9)	-	Conduction Cooled		
26	Withstand Voltage	-	Input-Baseplate : 2.5kVAC, Input-Output : 3.0kVAC for 1min. Output-Baseplate : 500VDC for 1min.		
27	Isolation Resistance	-	Output to Baseplate 500VDC more than 100MΩ (25°C, 70%RH)		
28	Vibration	-	At no operating, 10-55Hz (Sweep for 1min.) Amplitude 0.825mm constant (Maximum 49.0m/s <sup>2</sup> ) X, Y, Z 1 hour each		
29	Shock	-	196.1m/s <sup>2</sup>		
30	Safety	-	Approved by UL60950-1, CSA60950-1, EN60950-1		
31	Weight (Typ.)	g	500		
32	Size (W x H x D)	mm	100 x 13.4 x 160 (Refer to Outline Drawing)		

\* Read instruction manual carefully, before using the power module.

=NOTES=

\*1. At 100VAC/200VAC and maximum output power. (Baseplate Temperature = +25°C.)

\*2. For cases where conformance to various safety specs

(UL, CSA, EN) are required, input voltage range will be 100 - 240VAC(50/60Hz).

\*3. External components are needed for operation.

(Refer to basic connection and instruction manual.)

\*4. Constant current limiting.

(The unit automatically shutdown when left in OCP condition, with the output voltage less than the LVP level. Refer to instruction manual.)

\*5. Reset : Line off or Control off. (Refer to instruction manual.)

\*6. Refer to Instruction manual.

\*7. Ambient Temperature min=-40°C

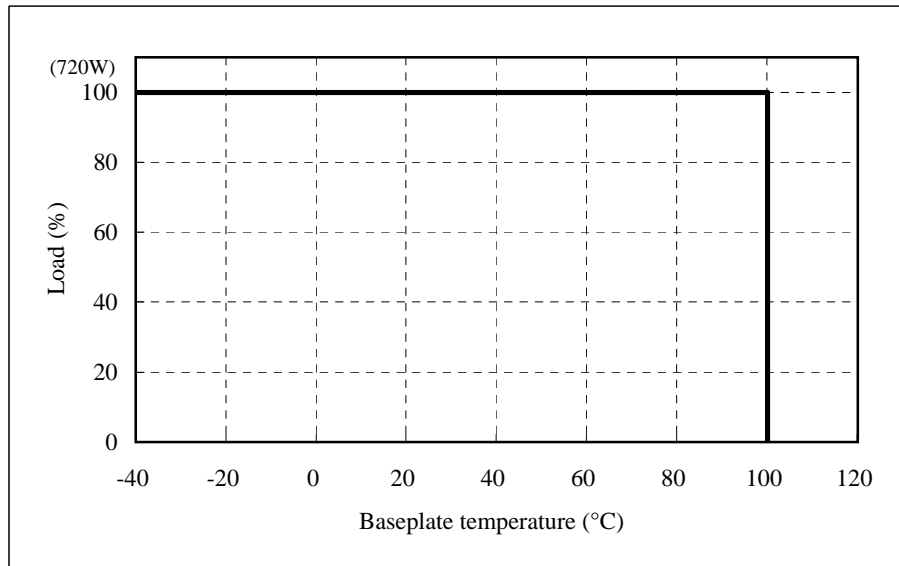
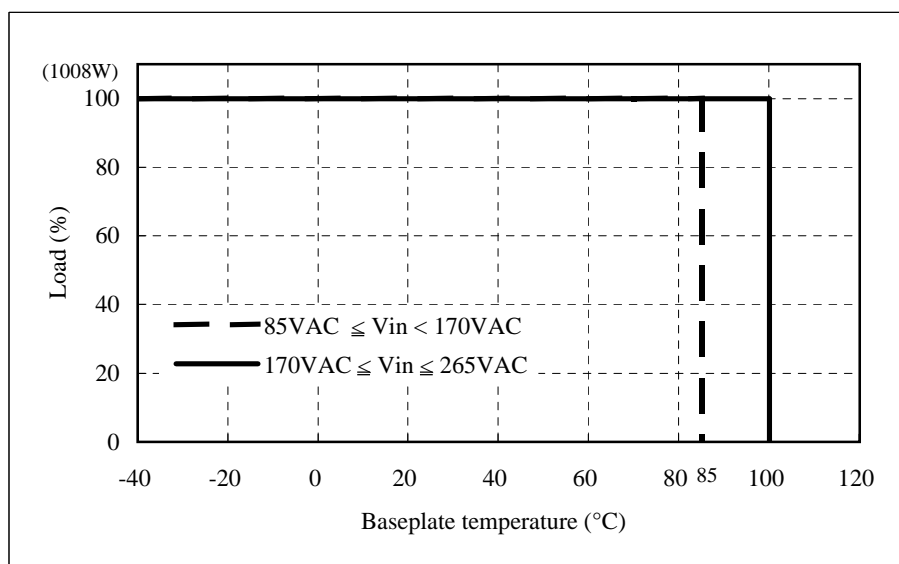
\*8. Ratings - refer to Derating Curve (C251-01-02\_).

\*9. Heatsink has to be chosen according to Instruction manual.

**PFE1000F**

C251-01-02A

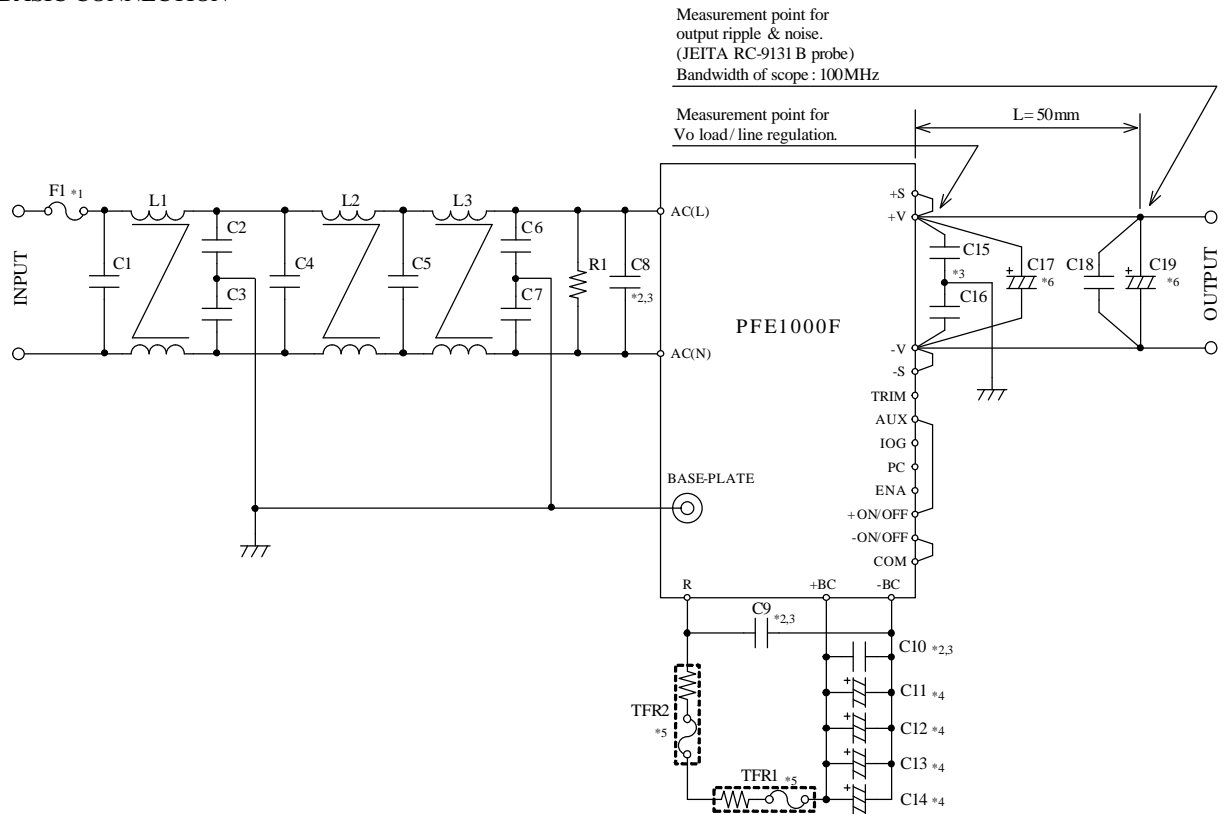
## Derating Curve

**PFE1000F-12****PFE1000F-28,48**

**PFE1000F**

C251-01-03

**BASIC CONNECTION**



F1	F25AH 250V	C15	0.033uF
C1	AC250V 1uF (Film)	C16	0.033uF
C2	470pF	C17	12V: 25V 1000uF (Elec.)
C3	470pF		28V: 50V 470uF (Elec.)
C4	AC250V 1uF (Film)		48V: 100V 220uF (Elec.)
C5	AC250V 1uF (Film)	C18	100V 2.2uF (Ceramic)
C6	4700pF	C19	12V: 25V 1000uF (Elec.)
C7	4700pF		28V: 50V 470uF (Elec.)
C8	AC250V 1uF (Film)		48V: 100V 220uF (Elec.)
C9	450V 1uF (Film)	R1	0.5W 470kΩ
C10	450V 1uF (Film)	TFR1	5.1Ω 139°C (Res., Thermal fuse)
C11	450V 390uF (Elec.)	TFR2	5.1Ω 139°C (Res., Thermal fuse)
C12	450V 390uF (Elec.)	L1	2mH
C13	450V 390uF (Elec.)	L2	2mH
C14	450V 390uF (Elec.)	L3	2mH

==NOTES==

- \*1. Use an external fuse of fast blow type for each unit.
- \*2. The allowable ripple current of capacitor must be more than 3A(rms).
- \*3. Put this capacitor near the terminal as close as possible.
- \*4. The maximum capacitance that can be used is less than 2300uF(Rated capacitance).  
Avoid the connection of capacitance which is more than above, else it will lead to module to damage.
- \*5. The inrush current at AC throw in can be suppressed by the external Resistor (Built-in thermal fuse) connected between the R and +BC terminals.
- \*6. If the ambient temperature is less than -20°C, use twice the recommended capacitor above.
- \*7. Refer to instruction manual for further details.