ZWD150PAF/L SPECIFICATIONS

PA573-01-01/L-B

(This specifications sheet also apply to option model /JL, /TL.)

	ITEMS / MODEL			ZWD150PAF-0524/L	
				V1	V2
1	Nominal Output Voltage		V	5	24
2	Maximum Output Current		A	5	6
3	Peak Output Current (100/200VAC)	(* 1)	A	-	10 / 12
4	Total Average Output Power		W	150	
5	Maximum Peak Output Power	(* 1)	W	-	240 / 288
6	Total Peak Output Power (100/200VAC)	(* 1)	W	246 / 294	
7	Efficiency (100/200VAC)	(Typ) (* 2)	%	80 / 82	
8	Input Voltage Range	(* 3)	-	85 - 265VAC (47-63Hz) or 120 - 370VDC	
9	Input Current (100/200VAC)	(Typ) (* 2)	A	1.90 / 0.97	
10	Inrush Current	(Typ) (* 4)	-	15A at 100VAC, 30A at 200VAC, Ta=25°C, Cold Start	
11	PFHC		-	Designed to meet IEC61000-3-2	
12	Power Factor (100/200VAC)	(Typ) (* 2)	-	0.99/0.95	
13	Output Voltage Accuracy	(* 2)	V	4.9 - 5.1	23.52 - 24.48
14	Output Voltage Adjustable Range		V	4.5 - 5.5	22.8 - 27.6
15	Maximum Ripple & Noise	0≤Ta≤70°C	mV	120	150
	(* 5)	-10≤Ta<0°C	mV	160	180
16	Maximum Line Regulation	(* 5, 6)	mV	20	96
17	Maximum Load Regulation	(* 5, 7)	mV	40	150
18	Temperature Coefficient		-	0.02%/°C	
19	Over Current Protection	(* 8)	%	> 105	> 205
20	Over Voltage Protection	(* 9)	%	120 - 145	120 - 145
21	Hold-Up Time	(Typ) (* 2)	ms	40	20
22	Leakage current	(* 10)	mA	0.75 max (Low leakage current option available --> /FG. Refer to application note).	
23	Remote ON/OFF Control		-	-	Possible
24	Parallel Operation		-	Not possible	
25	Series Operation		-	Not possible	
26	Operating Temperature	(* 11)	-	- 10 to + 70 °C Convection: -10 to +50°C : 100%, +60°C : 50%, +70°C : 0%	
27	Operating Humidity		-	20 - 90 %RH (No dewdrop)	
28	Storage Temperature		-	- 30 to +85°C	
29	Storage Humidity		-	10 - 95%RH (No dewdrop)	
30	Cooling		-	Convection cooling	
31	Withstand Voltage		-	Input - Output : 3.0kVAC (20mA), Input - FG : 2.0kVAC (20mA) Output - FG : 500VAC (100mA) for 1min.	
32	Isolation Resistance		-	More than 100MΩ at Ta=25°C and 70%RH, Output - FG : 500VDC	
33	Vibration (Non-Operating)		-	10 - 55Hz (sweep for 1min) Less than 19.6m/s^2 Constant, X, Y, Z 1hour each	
34	Shock (In package)		-	Less than 196.1m/s^2	
35	Safety		-	Approved by UL62368-1, CSA62368-1, EN62368-1, UL60950-1, CSA60950-1, EN60950-1 (Expire date of 60950-1 : 20/12/2020), EN50178, Designed to meet DEN-AN at 100VAC only	
36	EMI		-	Complies with FCC-B, CISPR22-B, EN55032-B, VCCI-B	
37	Immunity		-	Designed to meet EN61000-4-2,-3,-4,-5,-6,-8,-11	
38	Weight (Typ)		g	775	
39	Size (W.H.D.)		mm	95 x 46 x 252 (Refer to Outline Drawing)	

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

= NOTES=

* 1 : Operating period at peak output current (i) 6-10A: less than 10sec; Duty ≤ 0.35 (ii) 10-12A: less than 5sec; Duty ≤ 0.20.
(Average output power and current is less than Maximum output power and current)
For peak load derating method, please refer to instruction manual for details.
* 2 : At 100/200VAC and total average output power, Ta = 25°C.
* 3 : For cases where conformance to various safety specs (UL, CSA, EN) are required, to be described as 100 - 240VAC, 50 / 60Hz on name plate.
* 4 : Not applicable for the in-rush current to Noise Filter for less than 0.2ms.
* 5 : Please refer to Fig A for measurement of line & load regulation and output ripple voltage.
(Measure with normal probe)
* 6 : 85 - 132VAC and 170 - 265VAC, constant load.
* 7 : No load - Full load, constant input voltage.
* 8 : Current limiting with automatic recovery. Avoid to operate at overload or dead short for more than 30seconds.
* 9 : OVP circuit will shutdown output, manual reset. (Line recycle)
(OVP for V1, V1 & V2 shutdown, OVP for V2, only V2 shutdown)
*10: Measured by each measuring method of UL, CSA, EN and DEN-AN (at 60Hz).
*11: At standard mounting method, Fig B.
- Load(%) is percent of maximum output load (Item 2 and 4), do not exceed derating in both Maximum Output Current and Power.
-For other mountings, refer to derating curve PA573-01-02/L_
-When forced air cooling, refer to derating curve PA573-01-03/L_

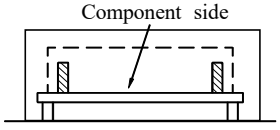


Fig. B

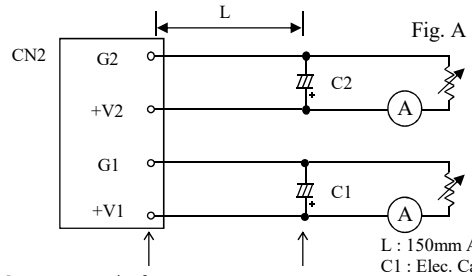


Fig. A

L : 150mm AWG#18
C1 : Elec. Cap. 22uF
C2 : Elec. Cap. 82uF
Bandwidth of scope : 20MHz

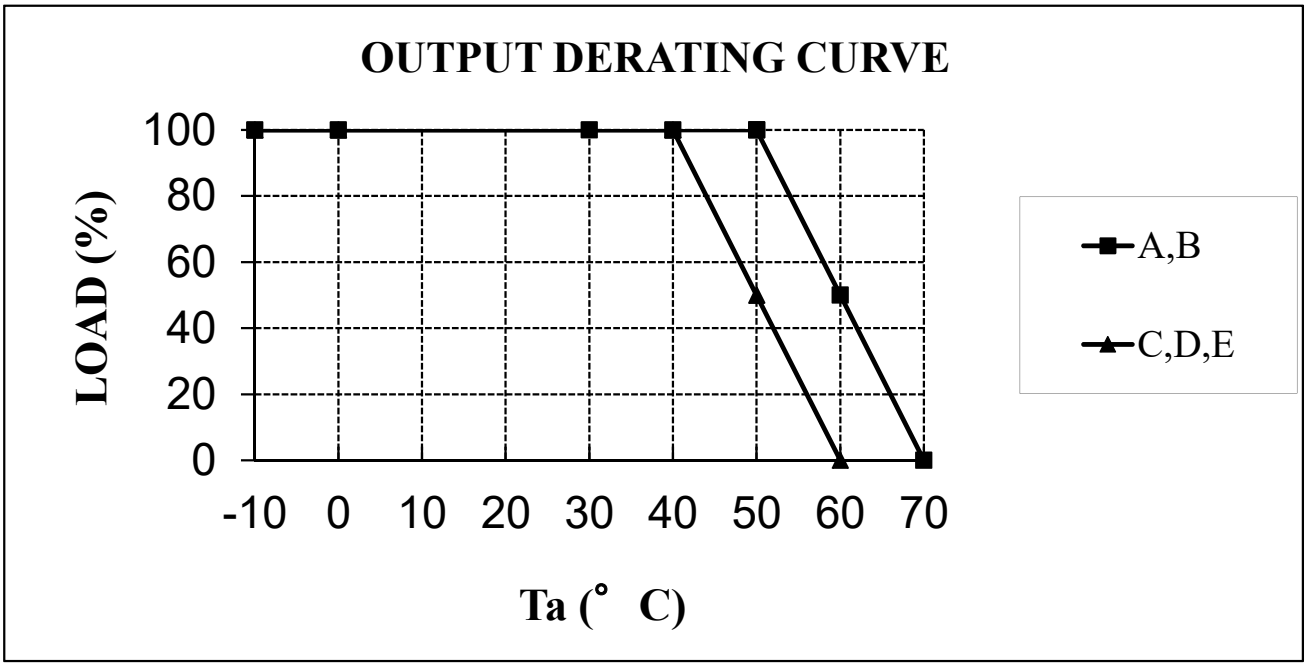
OUTPUT DERATING

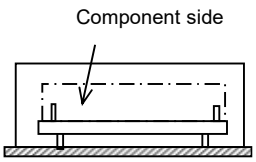
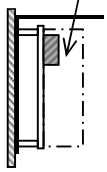
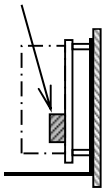
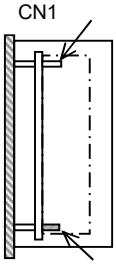
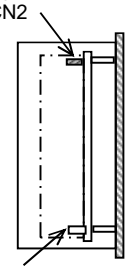
PA573-01-02/L
(This specifications sheet also apply to option model /JL, /TL.)

ZWD150PAF-0524/L

***COOLING: CONVECTION COOLING**

Ta (°C)	LOADING CONDITION(%)	
	Mounting A,B	Mounting C,D,E
-10~40	100	100
50	100	50
60	50	0
70	0	-



(MOUNTING A)	(MOUNTING B)	(MOUNTING C)	(MOUNTING D)	(MOUNTING E)
(STANDARD MOUNTING) 				

OUTPUT DERATING

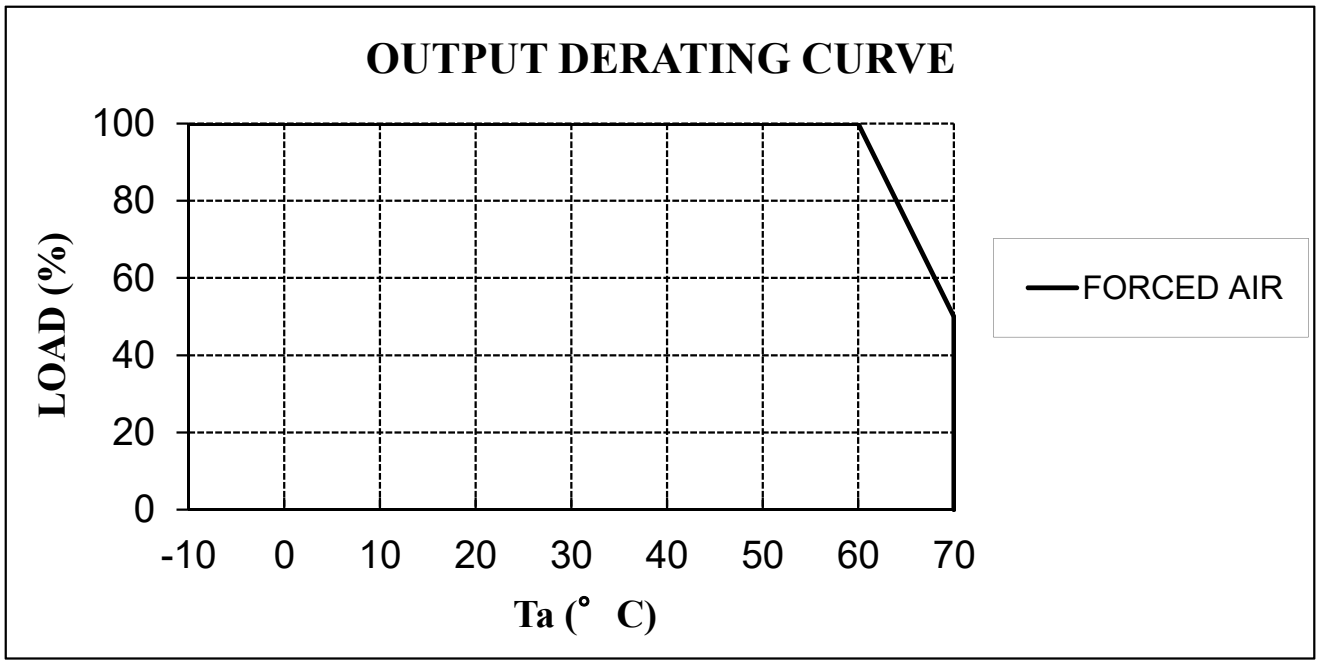
PA573-01-03/L
(This specifications sheet also apply to option model /JL, /TL.)

ZWD150PAF-0524/L

***COOLING: FORCED AIR COOLING**

	LOADING CONDITION (%)
Ta (°C)	Mounting A,B,C,D,E
-10~60	100
70	50

Recommended Minimum Air Velocity: 0.7m/s (Measured at component side of PCB, Air must flow through component side.)



(MOUNTING A)	(MOUNTING B)	(MOUNTING C)	(MOUNTING D)	(MOUNTING E)
(STANDARD MOUNTING) Component side	Input connector CN1	Input connector CN1	Input connector CN1 / Output connector CN2	Output connector CN2 / Input connector CN1