## **HK150A**

## PA784-01-01F

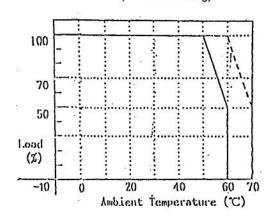
# **SPECIFICATIONS**

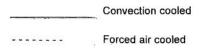
ITEMS	MOD	EL	HK150A-3	HK150A-5	HK150A-12	HK150A-15	HK150A-24
1 Nominal Output Voltage		V	3.3	5	12	15	24
2 Maximum Output Current		Α	30.0	30.0	12.5	10	6.5
3 Maximum Output Power		W	99	150	150	150	156
4 Efficiency (Typ)	(*1)	%	75	80	81	81	82
5 Input Voltage Range	(*2)	-		85-132VA	C (47-440Hz) or 1	10-175VDC	
6 Input Current (Typ)	(*1)	Α	2.2 3.2				
7 Inrush Current (Typ)		-			15A at 100VAC		
8 Output Voltage Range (T	yp)	-			±10%		
9 Maximum Ripple & Noise		mV	120	120	150	150	150
10 Maximum Line Regulatio	(*3)	mV	20	20	48	60	96
11 Maximum Load Regulation	(*4)	mV	40	40	96	120	150
12 Over Current Protection	(*5)	-			>105%		
13 Over Voltage Protection	(*6)	- [	115% - 135%				
14 Hold Up Time (Typ)	(*1)	-	20 ms				
15 Remote Sensing		-	Possible				
16 Remote ON/OFF Control		-	-				
17 Parallel Operation		-	-				
18 Series Operation		-	Possible				
19 Operating Temperature	(*8)	-	-10 - +50°C (100%), 60°C (50%)				
20 Operating Humidity		-	30% - 90% RH				
21 Storage Temperature		-	-30°C - +85°C				
22 Storage Humidity		-	10% - 95% RH				
23 Cooling		-	Convection cooled				
24 Temperature Coefficient		- 1	1% (Typ) at -10°C - +50°C				
25 Withstand Voltage	(*7)	-	Input - Chassis , Input - Output : 2kVAC (20mA) Output - Chassis : 500VAC (100mA) for 1min				
26 Isolation Resistance		-	More than 100MOhm at 25°C and 70% RH Output-chassis 500VDC				
27 Vibration		- 1	Less than 19.6m/s <sup>2</sup>				
28 Shock		-	Less than 196.1m/s <sup>2</sup>				
29 Safety		- 1	Approved by UL60950-1 & CSA C22.2 No.60950. Designed to meet DENAN				
30 Conducted Radio Noise		-	Designed to meet FCC class B, VCCI-B				
31 Weight		-	650g				
32 Size (W.H.D)		- 1	43mm X 93mm X 170mm (Refer to Outline Drawing)				

## NOTES:

- \*1 : At 100VAC and Maximum Output Power, Ta = 25°C.
- \*2 : For cases where conformance to varios safety specs (UL, CSA, VDE) are required, to be described as 100-120VAC 50/60Hz on name plate.
- \*3 : From 85 132VAC or 110 175VDC, constant load.
- \*4 : From No load Full load, Constant Input Voltage.
- \*5 : Current limiting with automatic recovery. (Refer to Instruction Manual for details)
- \*6: Inverter shutdown method, manual reset.
- \*7 : Refer to Instruction Manual for testing procedure.
- \*8 : Ratings Refer to Derating Curve on the right.
  - Load(%) is percent of Maximum Output Power or Maximum Output Current, whichever is greater.
  - Refer to Instruction Manual for further mounting details.

Derating Curve (Vertical Mounting)





## **HK150A**

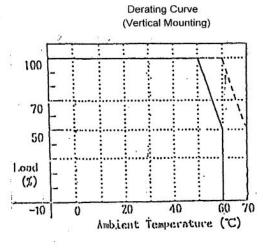
## PA784-01-02D

## **SPECIFICATIONS**

	ı	MODE	EL	HK150A-18
	ITEMS			
1	Nominal Output Voltage		V	18
2	Maximum Output Current		Α	8.5
3	Maximum Output Power		W	153
4	Efficiency (Typ)	(*1)	-	81%
	Input Voltage Range	(*2)	- 1	85-132VAC (47-440Hz) or 110-175VDC
	Input Current (Typ)	(*1)	A	3.2
	In-rush Current (Typ)		- 1	15A at 100VAC
	Output Voltage Range (Typ)		-	±10%
	Maximum Ripple & Noise		mV	150
	Maximum Line Regulation	(*3)	mV	72
	Maximum Load Regulation	(*4)	mV	140
	Over Current Protection	(*5)	-	>105%
	Over Voltage Protection	(*6)	_	115% - 135%
	Hold Up Time (Typ)	(*1)	-	20 ms
	Remote Sensing		-	r Possible
	Remote ON/OFF Control		-	-
-	Parallel Operation	220	- 1	-
-	Series Operation	-	-	. Possible
	Operating Temperature	(*8)	- 1	-10 ~ +50°C (100%), 60°C (50%)
	Operating Humidity		- 1	30% - 90% RH
	Storage Temperature	250		-30°C +85°C
	Storage Humidity		-	10% ~ 95% RH
	Cooling		-	Convection cooled
	Temperature Coefficient		- 1	1% (Typ) at -10°C ≈ +50°C
	Withstand Voltage	(*7)	- 1	Input - Chassis, Input - Output: 2kVAC (20mA)
		, ,		Output - Chassis: 500VAC (100mA) for 1min
26	Isolation Resistance		- 1	More than 100M ohm at 25°C and 70% RH
				Output-chassis 500VDC
27	Vibration		-	Less than 19.6m/s <sup>2</sup>
_	Shock		-	Less than 196.1m/s <sup>2</sup>
29	Safety		-	Designed to meet UL60950-1, CSA C22.2 No.60950 & DENAN
	Conducted Radio Noise		-	Designed to meet FCC class B, VCCI-B
	Weight		- 1	650g
	Size (W.H.D)		- 1	43mm X 93mm X 170mm (Refer to Outline Drawing)

#### NOTES:

- \*1 : At 100VAC and Maximum Output Power, Ta = 25°C.
- \*2. For cases where conformance to varios safety specs (UL, CSA, VDE) are required, to be described as 100-120VAC 50/60Hz on name plate.
- \*3 : From 85 = 132VAC or 110 = 175VDC, constant load.
- \*4 : From No load Full load, Constant Input Voltage.
- \*5 : Constant current limiting with automatic recovery. (Refer to Instruction Manual for details)
- \*6 : Inverter shutdown method,manual reset.
- \*7: Refer to Instruction Manual for testing procedure.
- \*8 : Ratings Refer to Derating Curve on the right.
  - Load(%) is percent of Maximum Output Power or Maximum Output Current, whichever is greater.
  - Refer to Instruction Manual for further mounting details.



Convection cooled
Forced air cooled

## **HK150A**

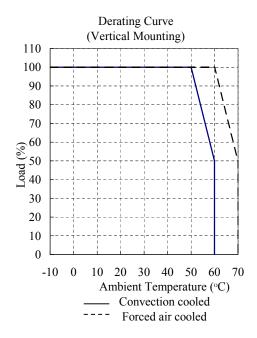
## **SPECIFICATIONS**

#### PA784-01-03B

	MODEL			HK150A-8
	ITEMS			8V
	Nominal Output Voltage		-	8 V 18.7 A
	Maximum Output Current		-	
	Maximum Output Power		-	149.6W
	Efficiency (Typ.)	(*1)	-	80%
	Input Voltage Range	(*2)	-	85 - 132VAC (47 - 440Hz) or 110 - 175VDC
6	Input Current (Typ.)	(*1)	-	3.2A
7	In-rush Current (Typ.)		-	15A at 100VAC
8	Output Voltage Range (Typ.)		-	±10%
	Maximum Ripple & Noise		-	150mV
	Maximum Line Regulation	(*3)	-	32mV
11	Maximum Load Regulation	(*4)	-	64mV
12	Over Current Protection	(*5)	-	>105%
	Over Voltage Protection	(*6)	-	115% ~ 135%
14	Hold-Up Time (Typ.)	(*1)	•	20ms
15	Remote Sensing		-	Possible
16	Remote ON/OFF Control		-	-
17	Parallel Operation		-	-
18	Series Operation		-	Possible
19	Operating Temperature	(*8)	-	-10°C - +50°C (100%), 60°C (50%)
20	Operating Humidity		-	30% - 90%RH
21	Storage Temperature		-	-30°C - +85°C
22	Storage Humidity		-	10% - 95%RH
	Cooling		-	Convection cooled
	Temperature Coefficient		-	1% (Typ.) at -10°C - +50°C
	Withstand Voltage	(*7)	-	Input - Chassis, Input - Output2.0kVAC 1min
	C	` ′		Output - Chassis500VAC 1min
26	Isolation Resistance		-	More than 100MΩ at 25°C and 70%RH
				Output - Chassis500VDC
27	Vibration		-	Less than 19.6m/s <sup>2</sup>
28	Shock		-	Less than 196.1m/s <sup>2</sup>
29			-	Designed to meet UL60950-1, CSA C22.2 No.60950 & DENAN
	Conducted Radio Noise		-	Designed to meet FCC class B, VCCI-B
31	Weight		-	650g
	Size (W.H.D)		-	43mm×93mm×170mm (Refer to Outline Drawing)

#### =NOTES=

- \*1: At 100VAC and Maximum Output Power, Ta = 25°C.
- \*2: For cases where conformance to various safety specs (UL, CAS, VDE) are required, to be described as 100 120VAC, 50/60Hz on name plate.
- \*3: From 85 132VAC or 110 175VDC, constant load.
- \*4: From No load ~ Full load, constant input voltage.
- \*5: Constant current limiting with automatic recovery. (Refer to Instruction Manual for details)
- \*6: Inverter shutdown method, manual reset.
- \*7: Refer to Instruction Manual for testing procedure.
- \*8: Ratings Refer to Derating Curve on the right.
  - Load (%) is percent of Maximum Output Power or Maximum Output Current, whichever is greater.
  - -Refer to Instruction Manual for further mounting details.



# **OUTPUT DERATING**

OPEN FLAM	E (NO COVER)	LOA	D(9/ )	
Ta(°C)	MOUNTING : A	MOUNTING : B	MOUNTING : C	MOUNTING : D
-10 ~ 20	100	100	100	100
	100	100	100	100
30				
40	100	100	100	100
50	100	60	40	40
60	50		-	-
WITH COVE	R (OPTION)			
		LΟΛ	D(%)	
Ta(°C)	MOUNTING : A	MOUNTING : B	MOUNTING : C	MOUNTING : D
-10 ~ 20	100	100	100	100
30	100	100	100	100
40	100	50	40	40
50	50			
60			-	-
<u> </u>	<u>-</u>		<u>-</u>	-
100 90 80 70 60 50 40 30 20 10 0	0 10 2	or: Open Frame Typ	50 60 70	Mounting : A  Mounting : B  Mounting : C, D
MOUNTING : A STANDARD MOUNTING)	MOUNTING : B	MOUNTING : C	MOUNTING : D	DON'T USE