

**SERIES:** VF-D250-DXXA | **DESCRIPTION:** AC-DC POWER SUPPLY

**FEATURES**

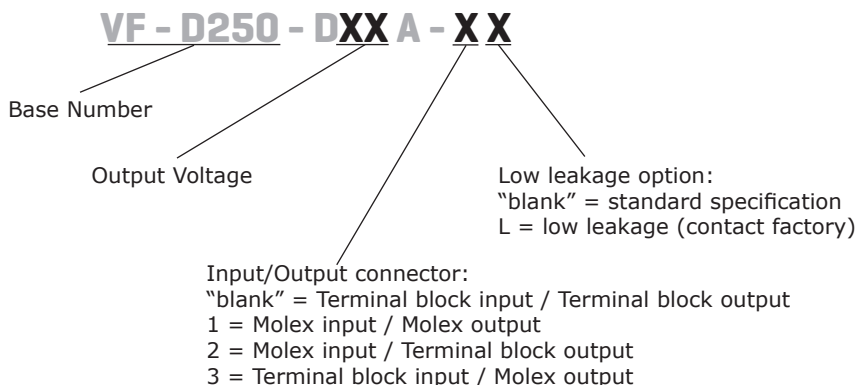
- up to 250 W continuous power w/ 16 CFM forced air
- 600 W peak power within 500  $\mu$ s duty duration
- passive power correction
- dual outputs
- power good signal
- remote on/off control
- 3,000 Vac isolation voltage
- over load, over voltage, over temperature, and short circuit protections
- UL/cUL, and TUV 60950-1 safety approvals
- efficiency up to 70%



MODEL	output voltage	output current		output power <sup>1</sup>		ripple and noise <sup>3,4</sup>	efficiency
	(Vdc)	max (A)	max w/ airflow <sup>2</sup> (A)	max (W)	max w/ airflow <sup>2</sup> (W)	max (mVp-p)	typ (%)
VF-D250-D312A	3.3	12	24	100	200	50	70%
	12	7	12				
VF-D250-D324A	3.3	12	24	100	200	50	70%
	24	4	6				
VF-D250-D512A	5	12	24	100	200	50	70%
	12	7	12				
VF-D250-D524A	5	12	24	100	200	50	70%
	24	4	6				
VF-D250-D548A	5	12	24	100	200	50	70%
	48	2	3				
VF-D250-D1224A	12	7	12	135	250	120	70%
	24	4	6				

- Notes:
1. Maximum total combined power
  2. With external 16 CFM fan
  3. 10% minimum load is required to maintain the ripple and regulation.
  4. Ripple and noise is measured from 10 KHz to 20 MHz at output terminals with a 0.1  $\mu$ F ceramic capacitor and a 22  $\mu$ F electrolytic capacitor in parallel.

**PART NUMBER KEY**



## INPUT

parameter	conditions/description	min	typ	max	units
voltage	90-132/180-264 auto selectable	90/180		132/264	Vac
frequency		47		63	Hz
current	at 110~120 Vac, cold start at 200~240 Vac, cold start			6 3	A A
inrush current	at 115 Vac, full load, cold start at 230 Vac, full load, cold start			35 70	A A
power factor	compliant to EN 61000-3-2 class A				
remote on/off	designated as RMSW on the CN1, requires a low signal to inhibit output, hiccup mode				

## OUTPUT

parameter	conditions/description	min	typ	max	units
line regulation	low line to high line		±5		%
load regulation	all other outputs		±5		%
temperature coefficient			0.25		mV/°C
transient response	Output voltage returns to within 1% in less than 2.5 ms for a 50% load change. Peak transient does not exceed 5%.				
start-up time	at 120 Vac			1	s
rise time		0.2		20	ms
hold-up time	at 120 Vac and 80% of rated maximum load	20			ms
adjustability			±5		%
power good	Designated as PG on the CN1. This signal goes high 100-500 mS after the output reaches regulation. It goes low at least 1 mS before loss of regulation.				
fan drive	12 Vdc / 400 mA for external fan				

## PROTECTIONS

parameter	conditions/description	min	typ	max	units
over voltage protection	AC input needs to be reset to restart the power supply			130	%
over current protection	automatically recovers		110	140	%
short circuit protection	short circuit can be continuous, recovers automatically upon removal of short				
over temperature protection	auto recovery			85	°C

## SAFETY & COMPLIANCE

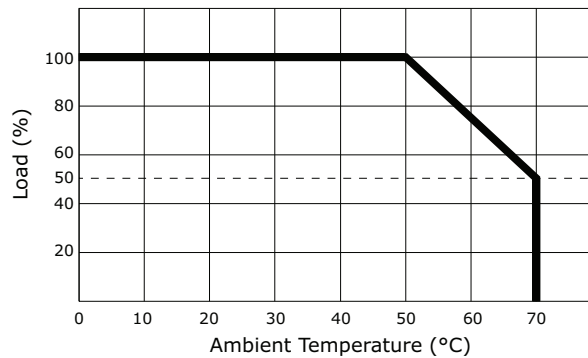
parameter	conditions/description	min	typ	max	units
isolation voltage	applied for 3 seconds at 10 mA max. primary to secondary primary to transformer core primary to earth chassis	3,000 1,500 1,500			Vac Vac Vac
safety approvals	UL 60950-1, CSA C22.2 No. 60950-1, TUV EN 60950-1 and CB				
EMI/EMC	CISPR 22/EN 55022 class B, EN 61000-3-2, 3, EN 61000-4-2, 3, 4, 5, 6, 8, 11, EN 55024 CE marked (LVD)				
leakage current	standard model at 264 Vac low-leakage model at 240 Vac low-leakage model at 120 Vac			1 500 300	mA µA µA
RoHS compliant	yes				
MTBF	according to MIL-HDBK-217 at 30 °C	100,000			hrs

## ENVIRONMENTAL

parameter	conditions/description	min	typ	max	units
operating temperature	see derating curve	0		70	°C
storage temperature		-20		85	°C
operating humidity	non-condensing	5%		90%	%
storage humidity		5%		95%	%
vibration	acceleration $\pm 7.35 M/(SxS)$ , on X, Y and Z Axis	5		50	Hz

## DERATING CURVES

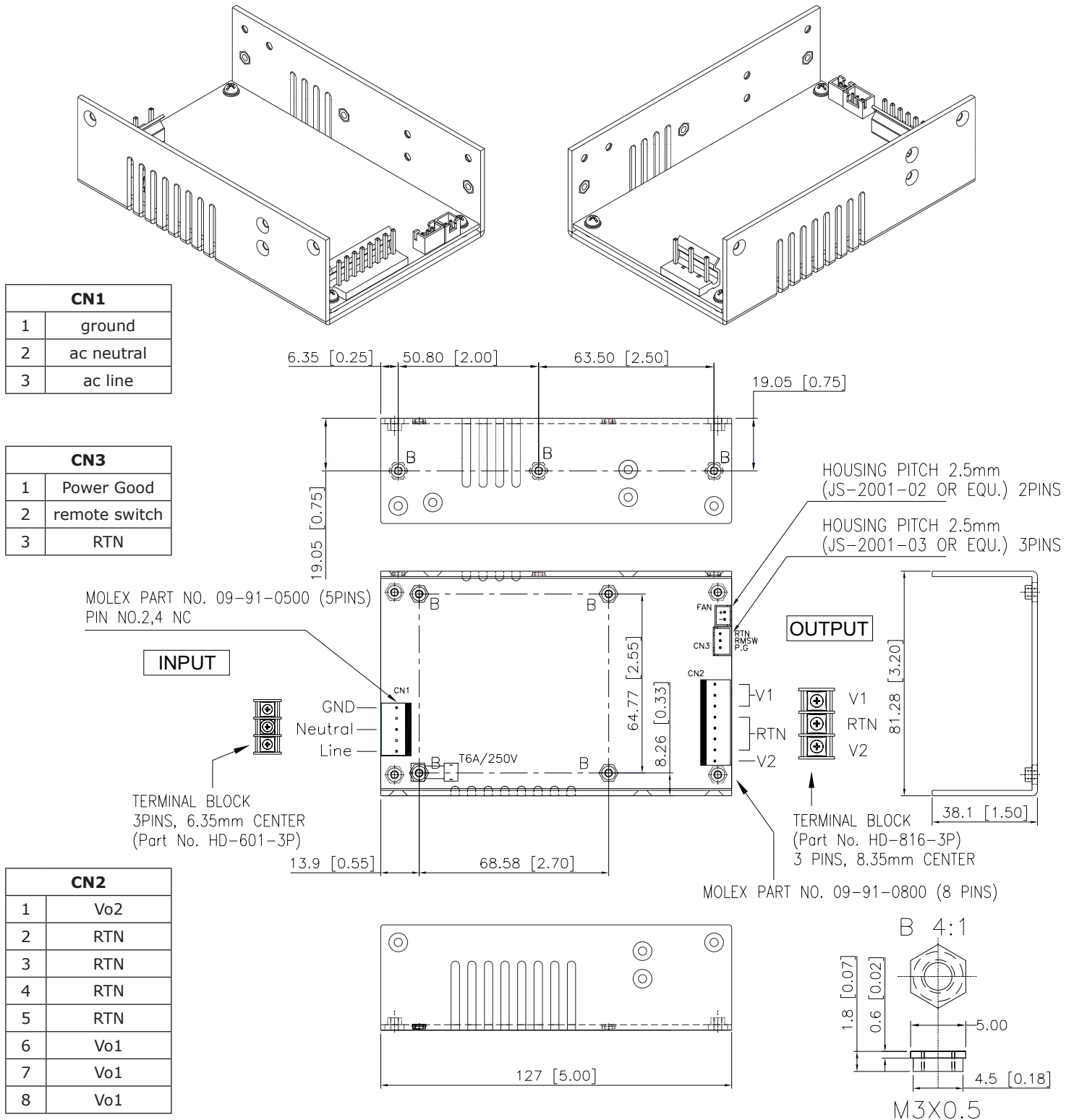
output power vs. ambient temperature



## MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	5(L) x 3.2(W) x 1.5(H)				inches
weight				450	g

## MECHANICAL DRAWING



- Notes:
1. CN1 mates with molex part no. 09-91-0500 or equivalent and molex 2478, 2578, 8818 crimp pins.
  2. CN2 mates with molex part no. 09-91-0800 and molex 2478, 2578, 8818 crimp pins.
  3. CN3 mates with JST part no. XHP-3 or equivalent (CHYAO SHIUNN JS-2001-03) and JST SXH-002T-P0.6 mating pins
  4. Fan drive connector mates with JST part no. XHP-2 or equivalent (CHYAO SHIUNN JS-2001-02).
  5. Mounting hole max depth 2.30mm

## REVISION HISTORY

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rev.	description	date
1.0	initial release	05/05/2009
1.01	new template applied	12/17/2011
1.02	V-Infinity branding removed	08/28/2012
1.03	updated spec	03/29/2013
1.04	updated spec	01/19/2018
1.05	updated datasheet	07/10/2018

The revision history provided is for informational purposes only and is believed to be accurate.



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