Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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CUI INC®

SERIES: VF-S250-XXA | **DESCRIPTION:** AC-DC POWER SUPPLY

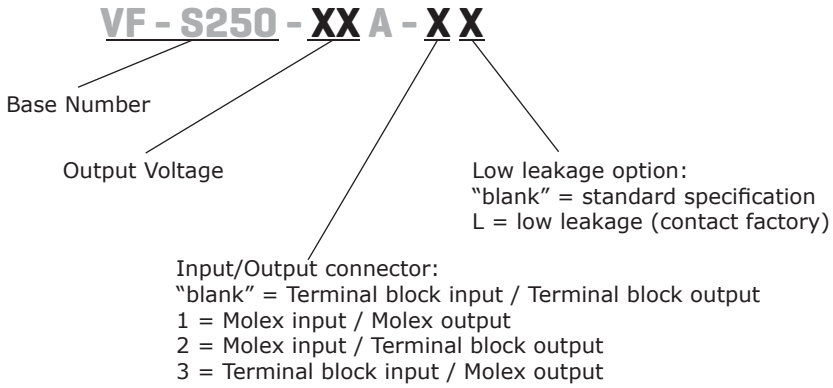
FEATURES

- up to 250 W continuous power
- 600 W peak power within 500 µs duty duration
- passive power factor correction
- power good signal
- remote on/off control
- 3000 Vac isolation voltage
- over load, over voltage, over temperature, and short circuit protections
- UL, cUL, and TUV 60950-1 safety approvals
- efficiency up to 85%

MODEL	output voltage (Vdc)	output current max (A)	output[1] power max (W)	ripple and noise [2,3] max (mVp-p)	efficiency typ (%)
VF-S250-05A	5	40	200	50	75%
VF-S250-09A	9	25	225	90	83%
VF-S250-12A	12	20.83	250	120	80%
VF-S250-15A	15	16.67	250	150	83%
VF-S250-18A	18	13.89	250	180	83%
VF-S250-24A	24	10.42	250	240	83%
VF-S250-28A	28	8.93	250	280	83%
VF-S250-36A	36	6.93	250	360	83%
VF-S250-48A	48	5.21	250	480	83%
VF-S250-54A	54	4.63	250	540	83%

Notes:
1. Maximum power must not exceed 135 W with convection cooling or 250 W for forced air. 5 and 9 V models maximum current listed.
2. 1% minimum load is required to maintain the ripple and regulation.
3. Ripple and noise is measured from 10 KHz to 20 MHz at output terminals with a 0.1 µF ceramic capacitor and a 22 µF 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, cold start at 230 Vac, 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		±1		%
load regulation	all other outputs		±1		%
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 maximim load	20			ms
adjustability			±5		%
power good	designated as PG on the CN1, signal goes high 100~500 ms after the output reaches regulation, signal goes low at least 1 ms before loss of regulation				
fan drive	12 Vdc / 300 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

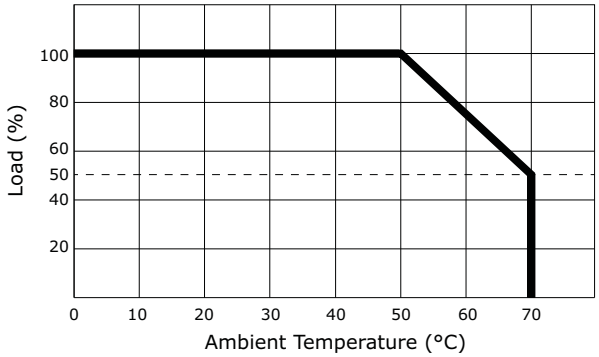
parameter	conditions/description	min	typ	max	units
isolation voltage	for 3 seconds at 10 mA max primary to secondary: primary to transformer core: primary to earth chassis:	 3,000 1,500 1,500			 Vac Vac Vac
safety approvals	UL 60950-1, CSA C22.2 No. 60950-1, TUV EN 60950-1 and CB				
EMI/EMC	CISPR 22/EN 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	at 240 Vac, (optional for 500 µA at 240 Vac, 300 µA at 120 Vac)			1.5	mA
MTBF	according to MIL-HDBK-217 at 30ºC	100,000			hrs
RoHS compliant	yes				

ENVIRONMENTAL

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

DERATING CURVE

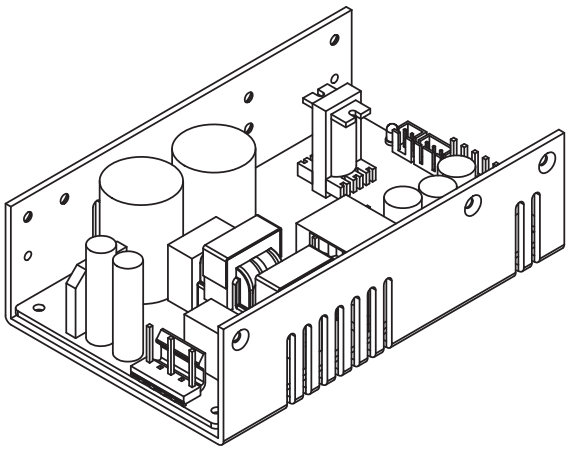
output power vs. ambient temperature

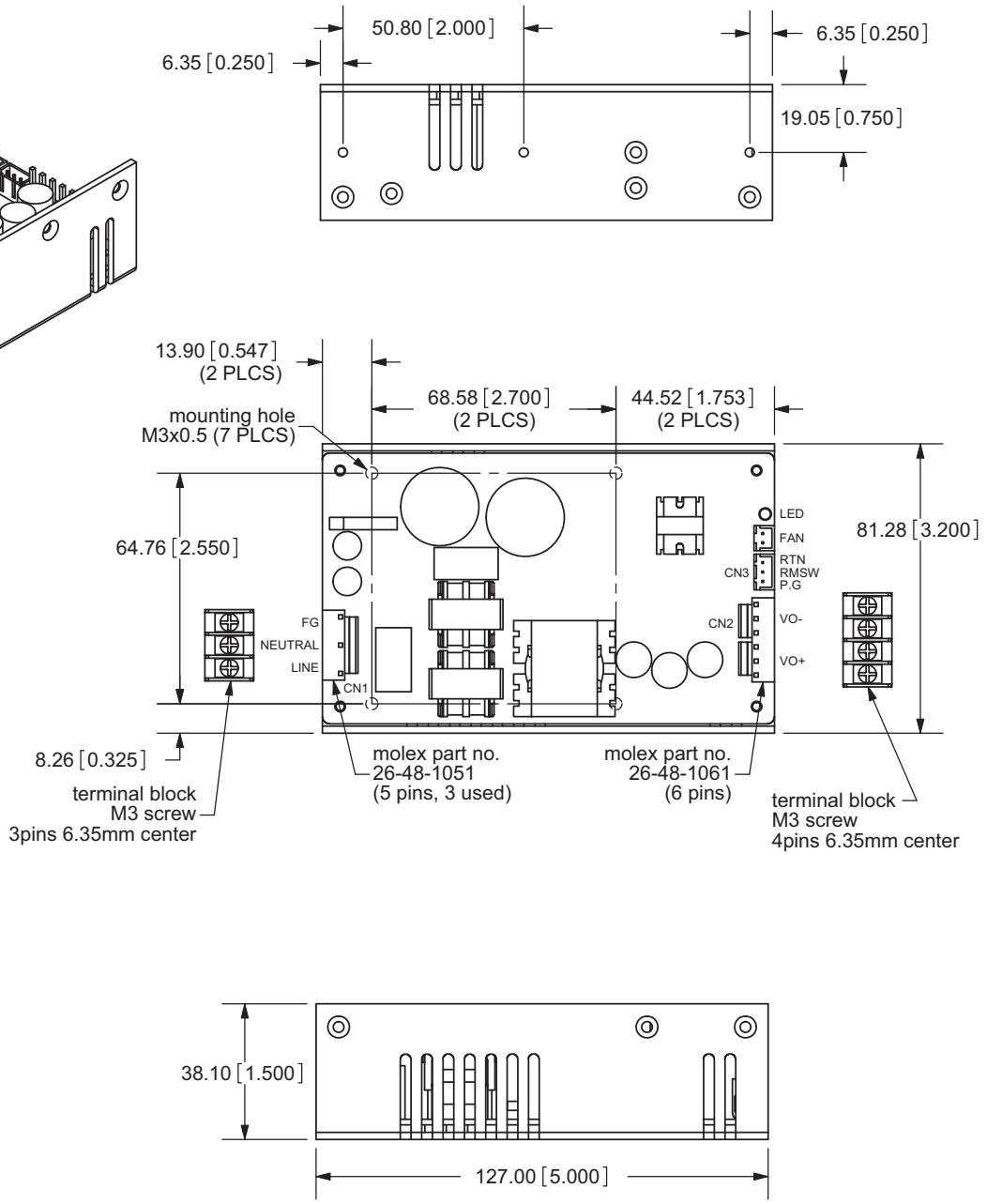


MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	127.00 x 81.28 x 38.10 (5 x 3.2 x 1.5 inch)				mm
weight			400		g

MECHANICAL DRAWING





CN1	
1	ground
2	ac neutral
3	ac line

CN2	
1	Vo+
2	Vo+
3	Vo+
4	Vo-
5	Vo-
6	Vo-

CN3	
1	Power Good
2	remote switch
3	RTN

Notes:
1. CN1 mates with molex part no. 09-93-0500 and molex 2478, 2578, 8818 crimp pins.
2. CN2 mates with molex part no. 09-93-0600 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.
5. Mounting hole maximum M3 screw depth 3.8mm

REVISION HISTORY

rev.	description	date
1.0	initial release	05/5/2009
1.01	new template applied	12/16/2011
1.02	V-Infinity branding removed	08/28/2012
1.03	updated Molex mating connector part numbers	07/11/2013
1.04	updated spec	08/13/2013

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

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