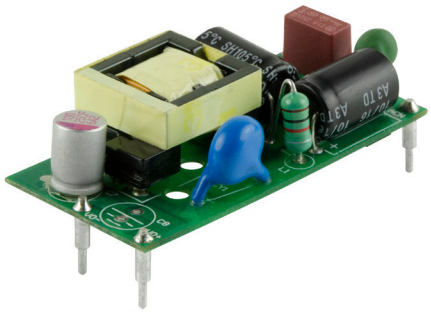
CUI INC
a bel group

SERIES: VOF-6B | DESCRIPTION: AC-DC POWER SUPPLY

FEATURES

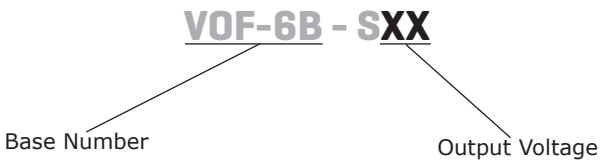
- up to 6 W continuous power
- universal input: 85~264 Vac
- compact open-frame design
- single output from 5 Vdc ~ 24 Vdc
- short circuit, over voltage protection, over current protection
- 4000 Vac isolation
- no load power consumption <100 mW



MODEL	output voltage (Vdc)	output current max (A)	output power max (W)	ripple and noise[1] typ (mVp-p)	efficiency typ (%)
VOF-6B-S5	5	1.2	6	100	75.18
VOF-6B-S9	9	0.67	6	100	79.03
VOF-6B-S12	12	0.5	6	120	79.03
VOF-6B-S15	15	0.4	6	150	79.03
VOF-6B-S24	24	0.25	6	240	79.03

Notes: 1. At full load, nominal input, 20 MHz bandwidth oscilloscope, output terminated with 10 µF electrolytic and 0.1 µF ceramic capacitors.
2. All specifications are measured at Ta=25°C, nominal input voltage, and 75% rated output load unless otherwise specified.

PART NUMBER KEY



INPUT

parameter	conditions/description	min	typ	max	units
voltage		85 120		264 370	Vac Vdc
frequency		47		63	Hz
current				0.25	A
inrush current	at 240 Vac, 25°C, cold start			40	A
leakage current				0.25	mA
no load power consumption				0.10	W

OUTPUT

parameter	conditions/description	min	typ	max	units
capacitive load	5 Vdc output model 9 Vdc output model 12 Vdc output model 15 Vdc output model 24 Vdc output model			1,200 670 500 400 200	µF µF µF µF µF
initial set point accuracy	at full load, 25°C 5, 9 Vdc output models 12 Vdc output model 15, 24 Vdc output models		 ±5 ±4 ±3		 % % %
line regulation	high line to low line at full load		±1		%
load regulation	10%~100% load 5, 9 Vdc output models 12 Vdc output model 15, 24 Vdc output models		 ±5 ±4 ±3		 % % %
hold-up time	at 115 Vac		12		ms
switching frequency		30		70	kHz
temperature coefficient			±0.05		%/°C

PROTECTIONS

parameter	conditions/description	min	typ	max	units
over current protection		110			%
short circuit protection	hiccup, auto recovery				

SAFETY & COMPLIANCE

parameter	conditions/description	min	typ	max	units
isolation voltage	input to output		4,000		Vac
safety approvals	IEC62368-1/60950-1, UL62368-1/60950-1				
safety class	class II				
EMI/EMC	EN 55032 Class B, FCC Part 15 Class B, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3, EN 55024, EN 61204-3, EN 61000-6-1				
MTBF	as per MIL-HDBK-217F, at 115 Vac, 25°C, GB	300,000			hours
life time	at 40°C, 75% load	3			years
RoHS	yes				

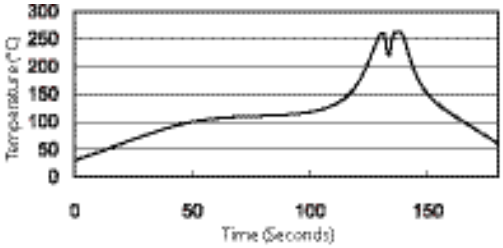
ENVIRONMENTAL

parameter	conditions/description	min	typ	max	units
operating temperature	see derating curve	-25		70	°C
storage temperature		-40		85	°C
operating humidity	non-condensing			93	%
operating altitude			3000		m

SOLDERABILITY

parameter	conditions/description	min	typ	max	units
wave soldering	see wave soldering profile			260	°C

Notes:
1. Soldering materials: Sn/Cu/Ni
2. Ramp up rate during preheat: 1.4°C/s (from 50°C to 100°C)
3. Soaking temperature: 0.5°C/s (from 100°C to 130°C), 60±20 seconds
4. Peak temperature: 260°C, above 250°C for 3~6 seconds
5. Ramp down rate during cooling: -10°C/s (from 260°C to 150°C)



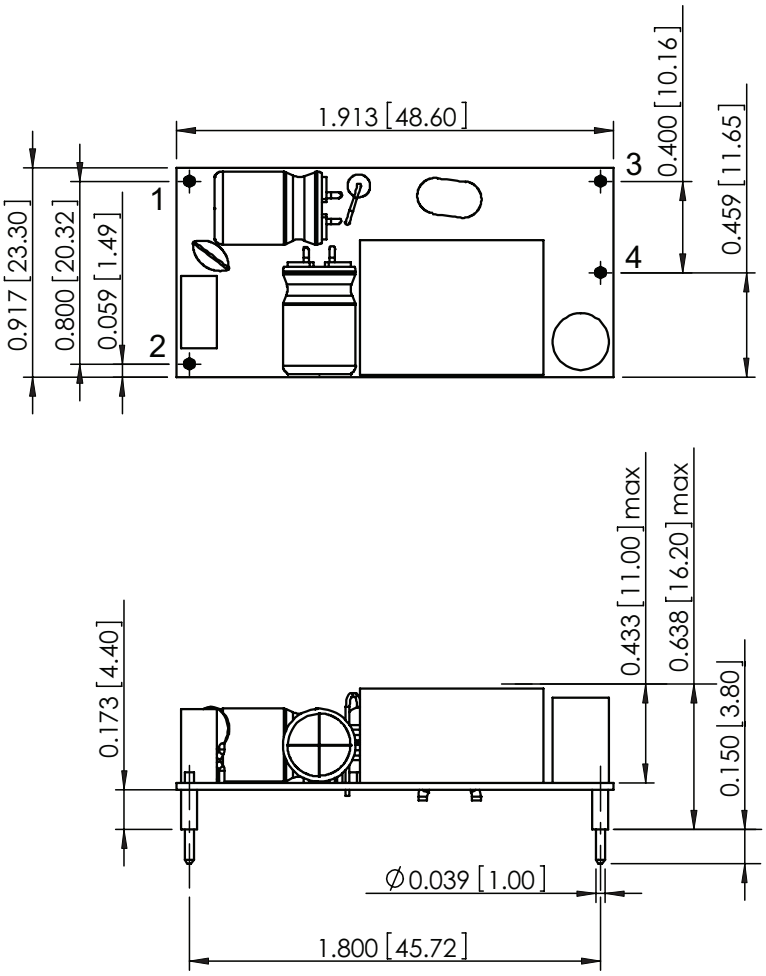
MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	1.913 x 0.917 x 0.638 (48.60 x 23.30 x 16.20 mm)				inch
weight			11		g
cooling	natural convection				

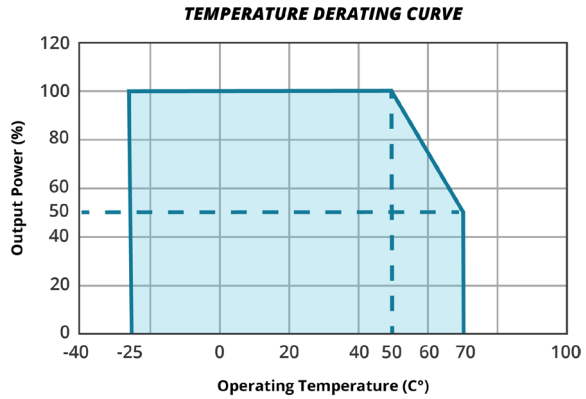
MECHANICAL DRAWING

units: inch [mm]
tolerance: X.XXX = ±0.020 [±0.50]

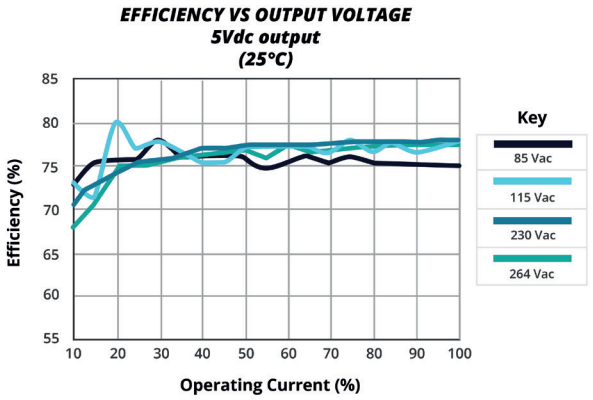
PIN CONNECTIONS	
PIN	Function
1	ACN
2	ACL
3	+Vout
4	-Vout

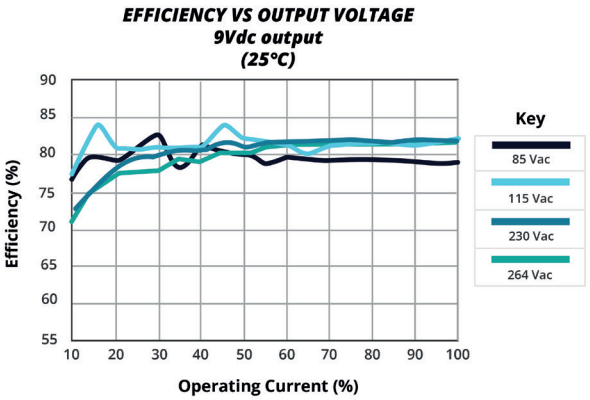


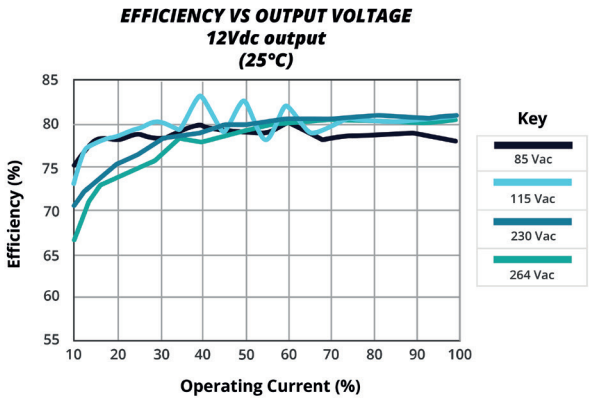
DERATING CURVE

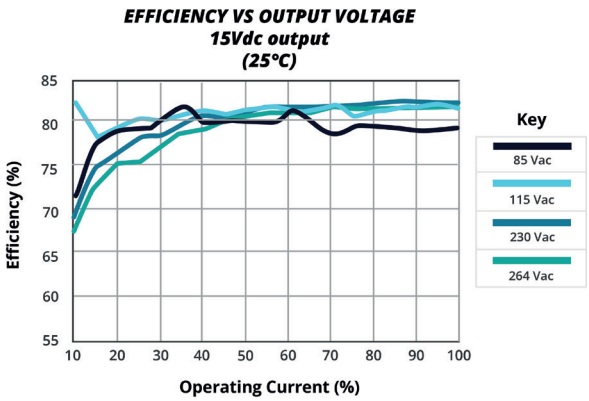


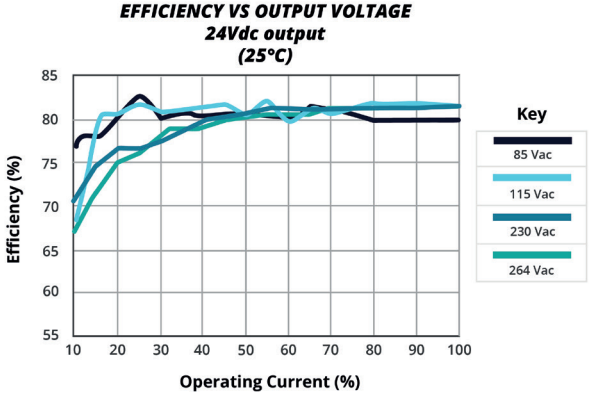
EFFICIENCY CURVES











REVISION HISTORY

rev.	description	date
1.0	initial release	02/23/2017
1.01	updated datasheet	01/08/2019
1.02	company logo updated	12/17/2020
1.03	derating and efficiency curves updated	03/26/2021

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

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CUI offers a two (2) year limited warranty. Complete warranty information is listed on our website.

CUI reserves the right to make changes to the product at any time without notice. Information provided by CUI is believed to be accurate and reliable. However, no responsibility is assumed by CUI for its use, nor for any infringements of patents or other rights of third parties which may result from its use.

CUI products are not authorized or warranted for use as critical components in equipment that requires an extremely high level of reliability. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.