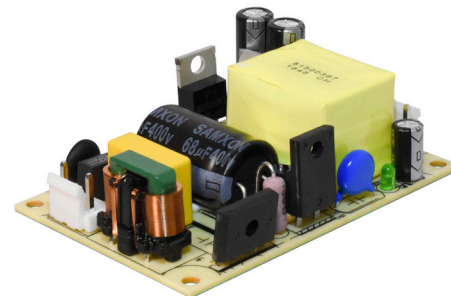




## SERIES: VOF-45C | DESCRIPTION: AC-DC POWER SUPPLY

### FEATURES

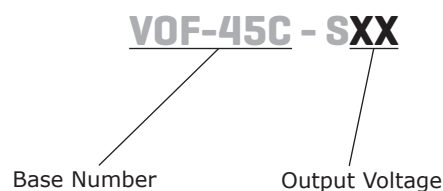
- universal input voltage range (85~264 VAC)
- 3 × 2 × 1.2 in (76.20 × 50.80 × 30.00 mm)
- class B EMI performance, meets CISPR32 / EN55032
- output short circuit, overcurrent & overvoltage protection
- safety certified: IEC/EN/UL 62368



MODEL	output voltage (Vdc)	output current		output power max (W)	ripple and noise <sup>1</sup> max (mVp-p)	efficiency <sup>2</sup> typ (%)
		min (mA)	max (mA)			
VOF-45C-S3	3.3	0	8000	26.4	100	76
VOF-45C-S5	5	0	8000	40	100	82
VOF-45C-S9	9	0	4444	40	100	84
VOF-45C-S12	12	0	3750	45	100	84
VOF-45C-S15	15	0	3000	45	100	86
VOF-45C-S24	24	0	1875	45	100	86
VOF-45C-S48	48	0	940	45	100	87

Notes: 1. At full load, nominal input, 20 MHz bandwidth oscilloscope, with 1  $\mu$ F ceramic and 10  $\mu$ F electrolytic capacitors on the output.  
2. At 230 Vac input.  
3. All specifications are measured at Ta=25°C, humidity <75%, nominal input voltage, and rated output load unless otherwise specified.

### PART NUMBER KEY



**INPUT**

parameter	conditions/description	min	typ	max	units
voltage		85		264	Vac
		100		370	Vdc
frequency		47		63	Hz
current	at 115 Vac			1200	mA
	at 230 Vac			700	mA
inrush current	at 115 Vac		35		A
	at 230 Vac		50		A
no load power consumption				0.5	W

**OUTPUT**

parameter	conditions/description	min	typ	max	units
capacitive load	3.3 Vdc output models			30,000	
	5 Vdc output models			20,000	
	9 Vdc output models			6,000	
	12 Vdc output models			4,000	μF
	15 Vdc output models			3,500	
	24 Vdc output models			1,000	
	48 Vdc output models			600	
initial set point accuracy	3.3 Vdc output models		±3		%
	all other models		±2		%
line regulation	at full load		±0.5		%
load regulation	from 0~100% load		±1		%
hold-up time	at 230 Vac, full load		50		ms
switching frequency			65		kHz
temperature coefficient			±0.02		%/°C

**PROTECTIONS**

parameter	conditions/description	min	typ	max	units
over voltage protection	output voltage clamp, auto recovery				
	3.3 Vdc output models			7.5	
	5 Vdc output models			9	
	9 Vdc output models			16	
	12 Vdc output models			20	Vdc
	15 Vdc output models			24	
	24 Vdc output models			35	
48 Vdc output models			60		
over current protection	hiccup, auto-recovery	150		300	%
short circuit protection	hiccup, continuous, auto-recovery				

**SAFETY & COMPLIANCE**

parameter	conditions/description	min	typ	max	units
isolation voltage	input to output electric strength test for 1 minute, leakage current <5 mA	3,000			Vac
safety approvals	IEC/UL/EN 62368-1 certified				
safety class	Class II				
conducted emissions	CISPR32/EN55032, Class B				
radiated emissions	CISPR32/EN55032, Class B				
ESD	IEC/EN61000-4-2, Contact ±6KV, Perf. Criteria B				
radiated immunity	IEC/EN61000-4-3 10V/m perf. Criteria A				

**SAFETY & COMPLIANCE (CONTINUED)**

parameter	conditions/description	min	typ	max	units
EFT/burst	IEC/EN61000-4-4, ±2 kV, perf. Criteria B				
surge	IEC/EN61000-4-5, line to line ±1KV, perf. Criteria B				
conducted immunity	IEC/EN61000-4-6, 10 Vrms, Perf. Criteria A				
voltage dips & interruptions	IEC/EN61000-4-11 , 0%,70%, perf. Criteria B				
MTBF	as per MIL-HDBK-217F at 25°C	300,000			hours
RoHS	yes				

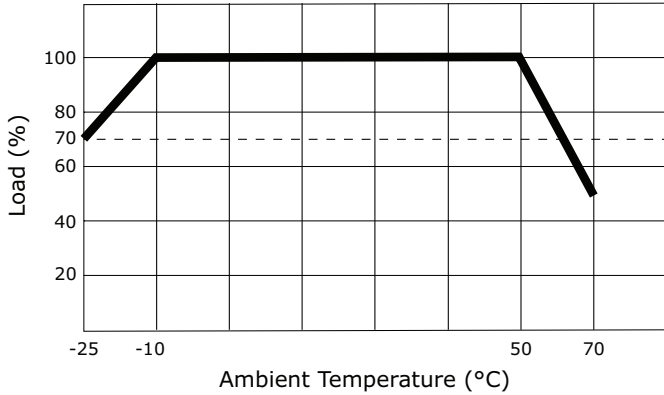
Notes: 4. The power supply is considered a component which will be installed into final equipment. The final equipment still must be tested to meet the necessary EMC directives.

**ENVIRONMENTAL**

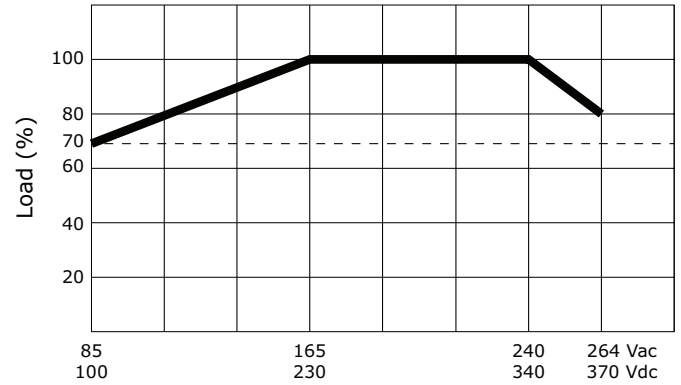
parameter	conditions/description	min	typ	max	units
operating temperature	see derating curves	-25		70	°C
storage temperature		-25		85	°C
storage humidity	non-condensing			90	%

## DERATING CURVES

Load vs. Ambient Temperature  
(at 85~264 Vac / 100~370 Vdc Input Voltage)

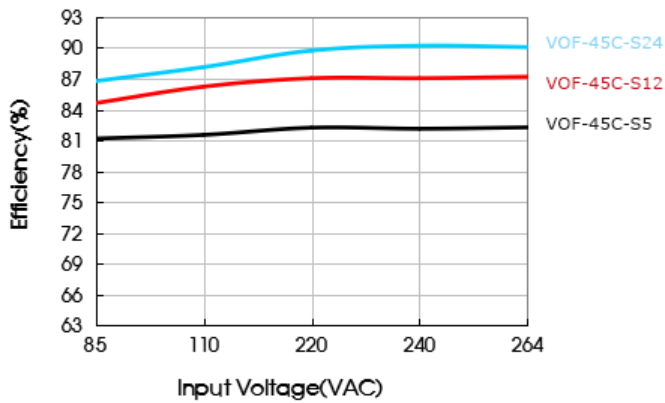


Load vs. Input Voltage  
(at 25°C Ambient Temperature)

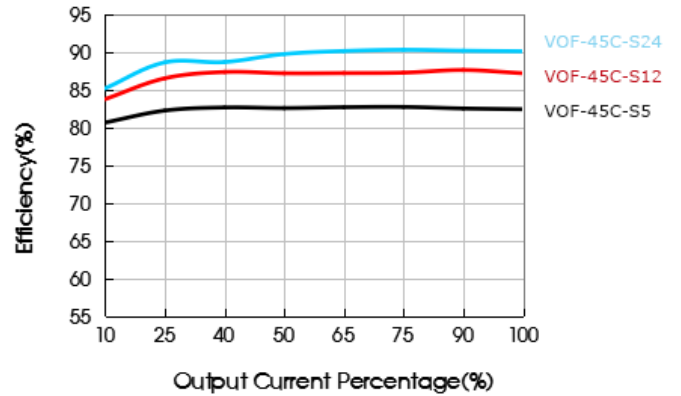


## EFFICIENCY CURVES

Efficiency vs. Input Voltage  
(at full load)



Efficiency vs. Load Current  
(at 230 Vac)



## MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	76.20 x 50.80 x 30.00				mm
weight			90		g

## MECHANICAL DRAWING

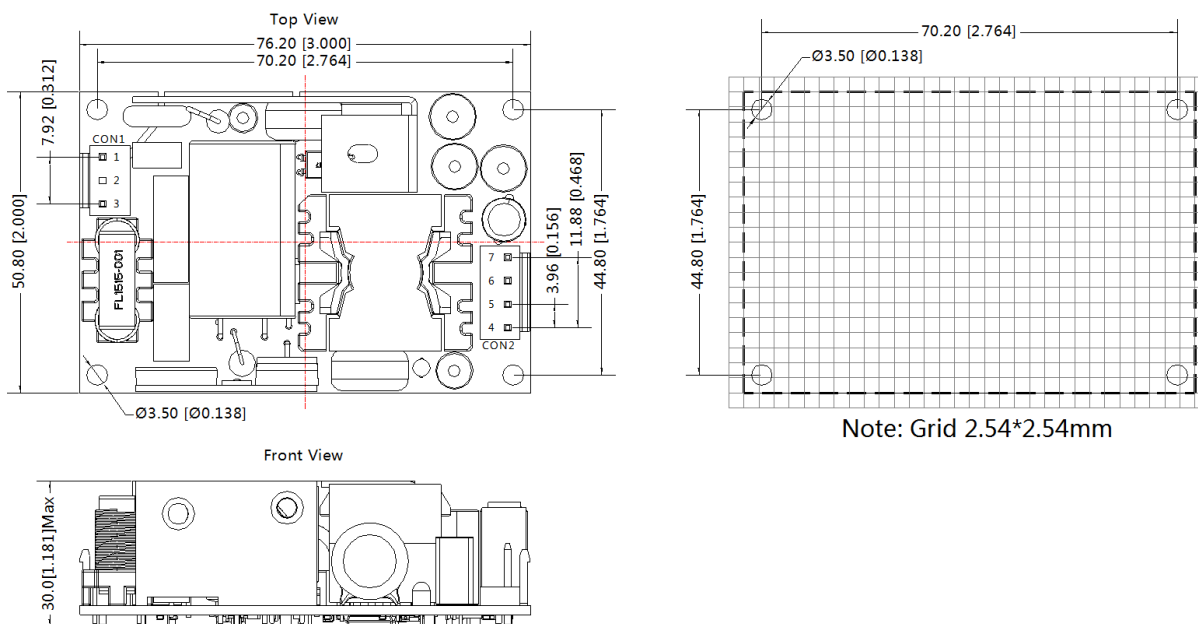
units: mm[inch]

tolerance: ±0.50[±0.020]

In CON1 model: VH-3A, Recommended terminal: VH-3Y

Out CON2 model: VH-4A, recommended terminal: VH-4Y

Mounting hole screwing torque: Max 0.4 N·m



PIN-Out			
PIN	Function	Connector	Terminal
1	AC(L)	VH-3A or B2P3-VH or the same Spec.	VH-3Y or VHR-3N or the same Spec.
2	NoPin		
3	AC(N)		
4	-Vo	VH-4A or B4P-VH or the same Spec.	VH-4Y or VHR-4N or the same Spec.
5	-Vo		
6	+Vo		
7	+Vo		

## REVISION HISTORY

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rev.	description	date
1.0	initial release	10/17/2019

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.

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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.