



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!



## Contact us

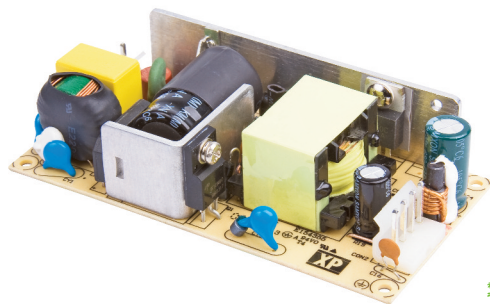
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# 60 Watts VCT Series



- Low Cost
- Single Outputs from 5 V to 30 V
- Peak Load Capability
- Convection-cooled
- <0.5 W No Load Input Power
- 2"x 4" Package
- Fits 1U Applications

## Specification

### Input

Input Voltage	• 85-264 VAC
Input Frequency	• 47-63 Hz
Input Current	• 1.7 A max at 115 VAC, 0.85 A max at 230 VAC
Inrush Current	• 80 A typ. at 230 VAC, cold start at 25 °C
Earth Leakage Current	• 500 $\mu$ A at 264 VAC /60 Hz
Power Factor	• EN61000-3-2, class A
No Load Input Power	• <0.5 W
Input Protection	• Internal T3.15A/250 V fuse in line

### Output

Output Voltage	• See table
Output Voltage Trim	• None
Initial Set Accuracy	• $\pm 2\%$ at 50 % load
Minimum Load	• No minimum load requirement
Start Up Delay	• 2 s max
Start Up Rise Time	• 8 ms typical
Hold Up Time	• 8 ms typical at full load and 115 VAC
Line Regulation	• $\pm 0.5\%$ max
Load Regulation	• $\pm 1.0\%$ max (see note 1)
Transient Response	• 4% maximum deviation, recovering to less than 1% within 500 $\mu$ s for 50% step load
Ripple & Noise	• 1% max pk-pk (see note 2)
Overvoltage Protection	• See table
Overload Protection	• 133-166%
Short Circuit Protection	• Trip and restart (hiccup mode)
Temperature Coefficient	• 0.02% /°C

### General

Efficiency	• See table
Isolation	• 3000 VAC Input to Output 1500 VAC Input to Ground 500 VDC Output to Ground
Switching Frequency	• 60 kHz $\pm 10$ kHz
MTBF	• >700 kHrs to Bell Core iss. 6

### Environmental

Operating Temperature	• -10 °C to +70 °C derate from 100% load at 50 °C to 50% load at 70 °C
Cooling	• Natural convection
Operating Humidity	• 5% to 90% RH, non condensing
Operating Altitude	• 3000 m
Storage Temperature	• -20 °C to +85 °C
Shock	• IEC68-2-6, 30 g, 11 mins half sine, 3 times in each of 6 axes
Vibration	• IEC68-2-27, 10-500Hz, 2 g 10 mins / sweep. 60 mins for each of 3 axes

### EMC & Safety

Emissions	• EN55022, level B conducted & radiated
Harmonic Currents	• EN61000-3-2 class A
Voltage Flicker	• EN61000-3-3
ESD Immunity	• EN61000-4-2, level 3, Perf Criteria A
Radiated Immunity	• EN61000-4-3, 10 V/m, Perf Criteria A
EFT/Burst	• EN61000-4-4, level 3, Perf Criteria A
Surge	• EN61000-4-5, installation class 3, Perf Criteria A
Conducted Immunity	• EN61000-4-6, 10 V, Perf Criteria A
Dips & Interruptions	• EN61000-4-11, 30% 10 ms, 60%, 100 ms, 100%, 5000 ms Perf Criteria A, B, B
Safety Approvals	• UL60950-1, IEC60950-1, EN60950-1

## Models and Ratings

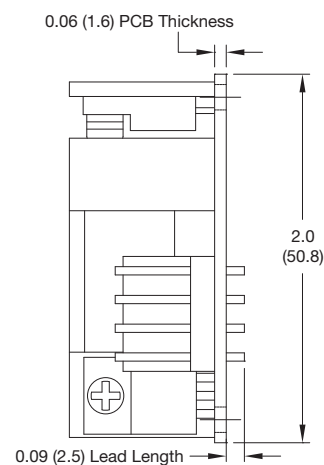
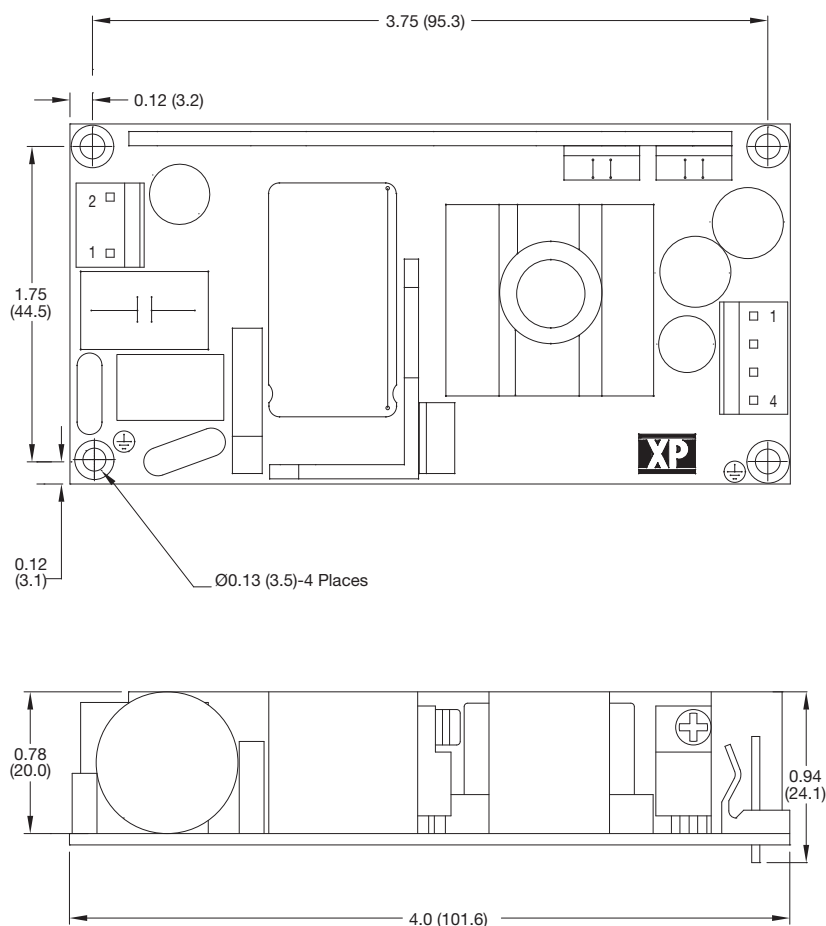
VCT60 **XP**

Output Voltage <sup>(6)</sup>	Output Current		OVP Setting <sup>(5)</sup>	Efficiency <sup>(4)</sup>	Model Number
	Nominal	Peak <sup>(3)</sup>			
5.0 V	8.00 A	10.0 A	7.0 V	82%	VCT40US05
12.0 V	5.00 A	6.3 A	13.0 V	87%	VCT60US12
15.0 V	4.00 A	5.0 A	17.0 V	87%	VCT60US15
24.0 V	2.50 A	3.1 A	29.0 V	88%	VCT60US24

## Notes

1. Load regulation is measured from 60% to full load and from 60% to 20% load (60%  $\pm$ 40% full load).
2. Measured at the output connector with a 0.1  $\mu$ F ceramic capacitor and a 10  $\mu$ F electrolytic capacitor.
3. Peak load lasting <30 s with a maximum duty cycle of 10%, average output power not to exceed nominal.
4. Average of efficiencies measured at 25%, 50%, 75% & 100% load and 230 VAC input.
5. Typical trip point.
6. Other voltages between 5 V and 30 V available on request, contact sales for details.

## Mechanical Details



Output Connector	
1	+Vout
2	+Vout
3	-Vout
4	-Vout

Mates with: Molex Housing  
09-50-3041 and Molex Series  
2878 crimp terminals.

Input Connector	
Pin 1	Neutral
Pin 2	Live

Mates with: Molex Housing  
09-50-3031 and Molex Series  
2878 crimp terminals.

Mounting holes marked with  $\oplus$  must be connected to safety earth

## Notes

1. All dimensions shown in inches (mm).
2. Weight 0.29 lbs (130 g) approx
3. Tolerance: x.xx =  $\pm 0.04$  (x.x =  $\pm 0.1$ ); x.xxx =  $\pm 0.2$  (x.xx =  $\pm 0.5$ )