

## Excellent Integrated System Limited

Stocking Distributor

Click to view price, real time Inventory, Delivery & Lifecycle Information:

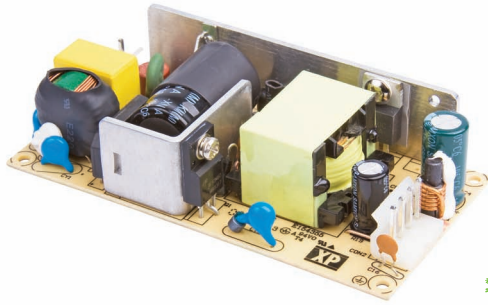
[XP Power](#)  
[VCT40US05](#)

For any questions, you can email us directly:

[sales@integrated-circuit.com](mailto:sales@integrated-circuit.com)

# 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 • 60 A max at 230 VAC, cold start at 25 °C
- Earth Leakage Current • 500 µA 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 • ±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 • ±0.5% max
- Load Regulation • ±1.0% max (see note 1)
- Transient Response • 4% maximum deviation, recovering to less than 1% within 500 µs 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 ±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

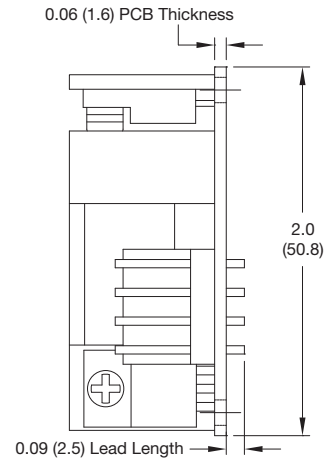
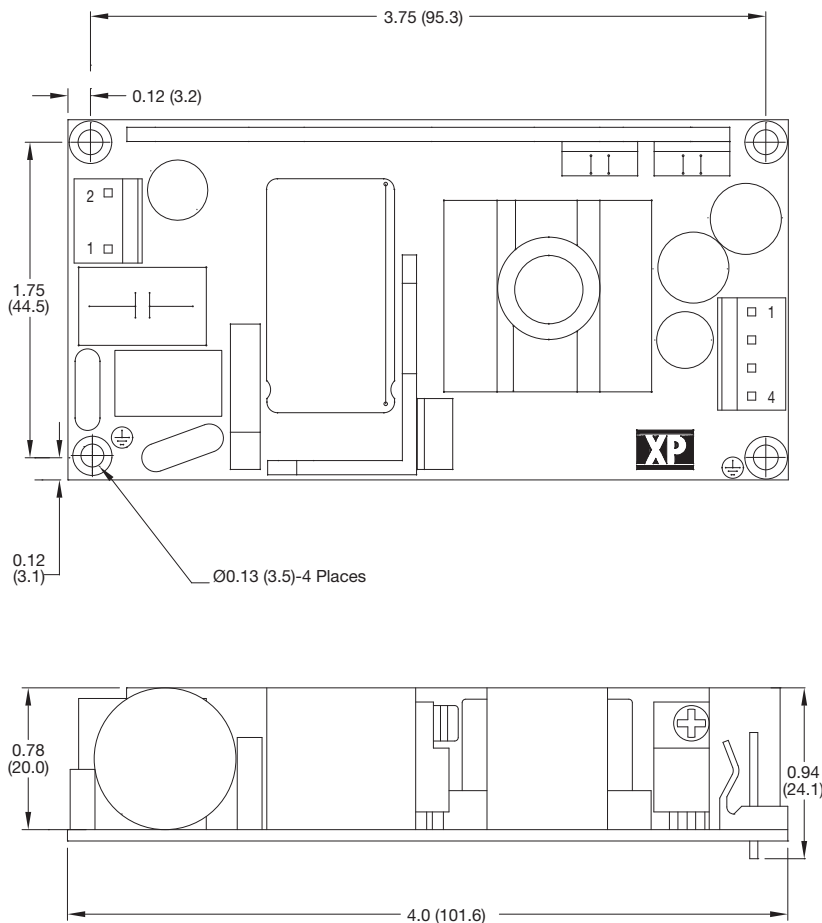
**VCT60 XP**

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% ±40% full load).
2. Measured at the output connector with a 0.1 μF ceramic capacitor and a 10 μF 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 ⊕ 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 = ±0.04 (x.x = ±0.1); x.xxx = ±0.2 (x.xx = ±0.5)