# 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 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**: Trip and restart (hiccup mode)
- **Short Circuit Protection**: Trip and restart (hiccup mode)
- **Temperature Coefficient**: 0.02% /°C

### General
- **Efficiency**: See table
- **Isolation**: 3000 VAC Input to Output
- **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**: EN55032, 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, UL62368-1, EN62368-1, IEC62368-1

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Models and Ratings

<table>
<thead>
<tr>
<th>Output Voltage (V)</th>
<th>Output Current</th>
<th>OVP Setting (V)</th>
<th>Efficiency (%)</th>
<th>Model Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.0 V</td>
<td>8.00 A</td>
<td>10.0 A</td>
<td>7.0 V</td>
<td>82%</td>
</tr>
<tr>
<td>12.0 V</td>
<td>5.00 A</td>
<td>6.3 A</td>
<td>13.0 V</td>
<td>87%</td>
</tr>
<tr>
<td>15.0 V</td>
<td>4.00 A</td>
<td>5.0 A</td>
<td>17.0 V</td>
<td>87%</td>
</tr>
<tr>
<td>24.0 V</td>
<td>2.50 A</td>
<td>3.1 A</td>
<td>25.0 V</td>
<td>88%</td>
</tr>
</tbody>
</table>

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

Notes

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