

Excellent Integrated System Limited

Stocking Distributor

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

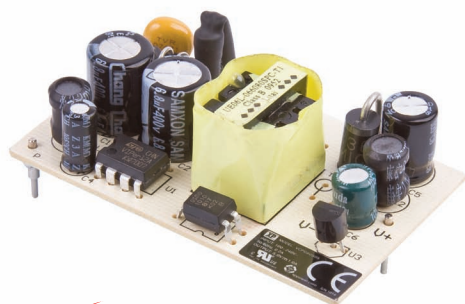
[XP Power](#)
[VCP05US05](#)

For any questions, you can email us directly:

sales@integrated-circuit.com

5 Watts

VCP Series



- Low Cost
- Universal AC Input
- Output Voltage from 5 to 15 V
- PCB Mount
- Class II Construction
- EN55022 Class B Emissions
- No Load Input Power <0.3 W



Specification

Input

- | | |
|---------------------|--|
| Input Voltage | • 90-264 VAC |
| Input Frequency | • 47-63 Hz |
| Input Current | • 0.2 A max at 90 VAC |
| Inrush Current | • 40 A max at 240 VAC, cold start at 25 °C |
| Power Factor | • EN61000-3-2, class A |
| No Load Input Power | • <0.3 W |
| Input Protection | • Internal T1.6A/250 V fuse in line |

Output

- | | |
|--------------------------|--|
| Output Voltage | • See table |
| Initial Set Accuracy | • ±5% at 50% load |
| Minimum Load | • No minimum load required |
| Start Up Delay | • 2 s max |
| Start Up Rise Time | • 100 ms typical |
| Hold Up Time | • 5 ms typical at full load and 115 VAC |
| Line Regulation | • ±0.5% max |
| Load Regulation | • 2% max, 0-100% load |
| Transient Response | • 10% max. deviation, recovery to <1% within 500 µs for a 50% step load change at 0.2 A/µs |
| Ripple & Noise | • See table |
| Overvoltage Protection | • See table |
| Overload Protection | • 120-180%, auto recovery |
| Short Circuit Protection | • Trip and restart (hiccup mode) |
| Temperature Coefficient | • 0.2 %/°C |

General

- | | |
|---------------------|--|
| Efficiency | • See table |
| Isolation | • 3000 VAC Input to Output |
| Switching Frequency | • 60 kHz typical |
| MTBF | • 250 kHrs to MIL-HDBK-217F at 25 °C, GB |

Environmental

- | | |
|-----------------------|---|
| Operating Temperature | • 0 °C to +70 °C, derate from 100% load at 50 °C to 50% load at 70 °C |
| Cooling | • Natural convection |
| Operating Humidity | • 10-90% RH, non-condensing |
| Storage Temperature | • -20 °C to +80 °C |
| Shock | • Able to survive 1 m drop onto concrete on each of 6 axes |
| Vibration | • 10-300 Hz, 2 g 15 mins/sweep. 30 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, ±4kV contact, ±8kV air, Perf Criteria A |
| Radiated Immunity | • EN61000-4-3, 3 V/m, Perf Criteria A |
| EFT/Burst | • EN61000-4-4, level 2, Perf Criteria A |
| Surge | • EN61000-4-5 installation class 3, Perf Criteria A |
| Conducted Immunity | • EN61000-4-6, 3 V, Perf Criteria A |
| Magnetic Field | • EN61000-4-8, 1 A/m, Perf Criteria A |
| Dips & Interruptions | • EN61000-4-11, 30% 10 ms, 60% 100 ms, 100% 5000 ms, Perf Criteria A, B, B |
| Safety Approvals | • EN60950-1, cUL60950-1, IEC60950-1 |

Models and Ratings

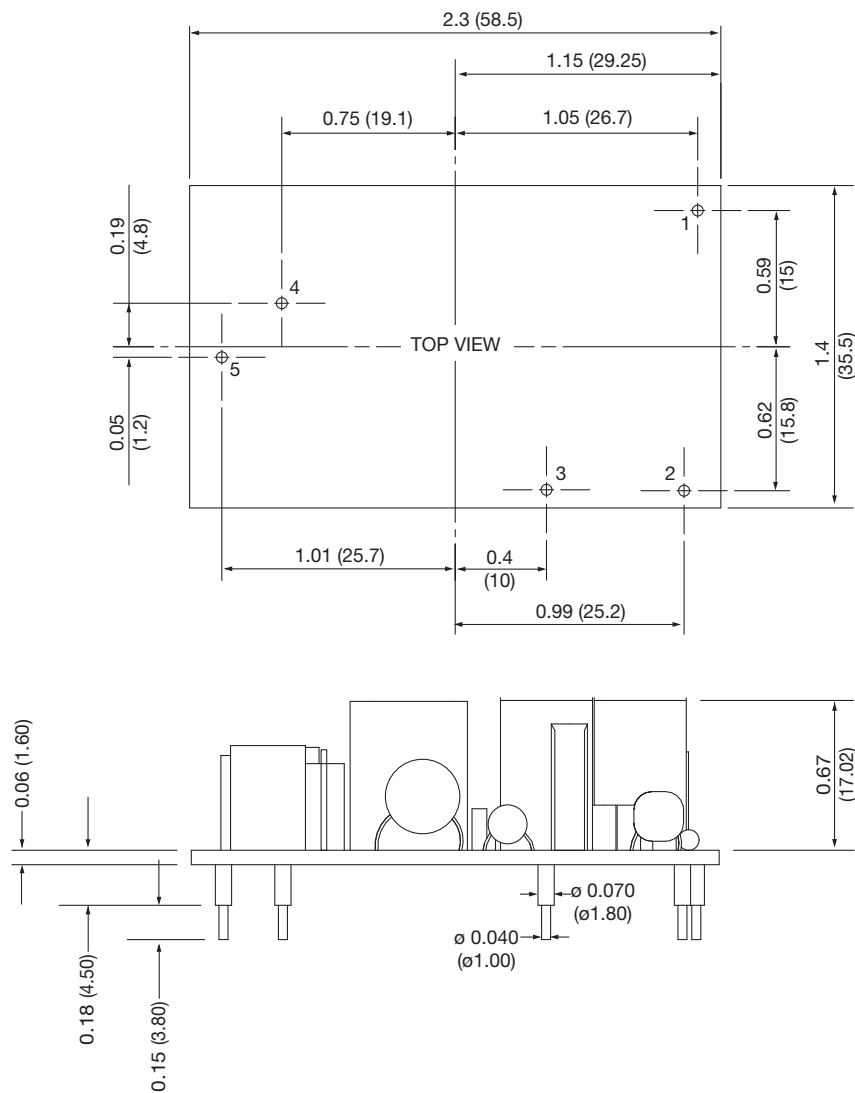
VCP05 XP

Output Power	Output Voltage ⁽²⁾	Output Current	Ripple & Noise ⁽¹⁾	OVP Setting ⁽³⁾	Efficiency ⁽⁴⁾	Model Number
5.0 W	5.0 V	1.0 A	150 mV	10.0 V	69%	VCP05US05
4.8 W	12.0 V	0.4 A	150 mV	20.0 V	69%	VCP05US12
4.5 W	15.0 V	0.3 A	150 mV	25.0 V	69%	VCP05US15

Notes

1. Measured at DC output connector using 20 MHz bandwidth and 0.1 μ F ceramic capacitor in parallel with 10 μ F electrolytic capacitor placed at connector terminals
2. Other voltages between 3.0 V and 15.0 V are available, consult sales for details.
3. Typical trip point.
4. Minimum average of efficiencies measured at 25%, 50%, 75% & 100% load and 230 VAC input.

Mechanical Details



Pin	Designation
1	No connection
2	Neutral
3	Live
4	Output -VE
5	Output +VE

Notes

1. All dimensions are in inches (mm).
2. Weight: 0.04 lbs (20 g) approx.
3. Tolerance: x.x = ± 0.04 (x.x = ± 1.0), x.xx = ± 0.02 (x.xx = ± 0.5)