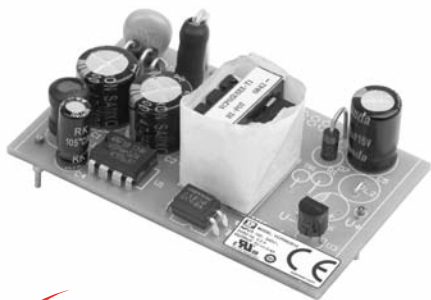


VCP05 Series



- Low Cost
- Output Voltages from 3 to 15 V
- PCB Mount
- ITE Approvals
- Class II Construction
- No Load Input Power <0.3 W
- EN55022 Class B Emissions



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
Power Factor	• Conforms to EN61000-3-2, class A
No Load Input Power	• <0.3 W

Output

Output Voltage	• See table
Initial Set Accuracy	• $\pm 2\%$ 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	• $\pm 0.5\%$ max
Load Regulation	• $\pm 5\%$ max
Transient Response	• 10% max. deviation, recovery to <1% within 500 μ s for a 50% step load change at 0.2 A/ μ s
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 %/ $^{\circ}$ C

General

Efficiency	• See table
Isolation	• 3000 VAC Input to Output
Switching Frequency	• 60 kHz typical
MTBF	• >250 kHrs per MIL-HDBK-217F

Environmental

Operating Temperature	• 0 $^{\circ}$ C to +50 $^{\circ}$ C
Cooling	• Natural convection
Operating Humidity	• 5-90% RH, non-condensing
Storage Temperature	• -20 $^{\circ}$ C to +60 $^{\circ}$ C
Shock	• Able to survive 1m 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

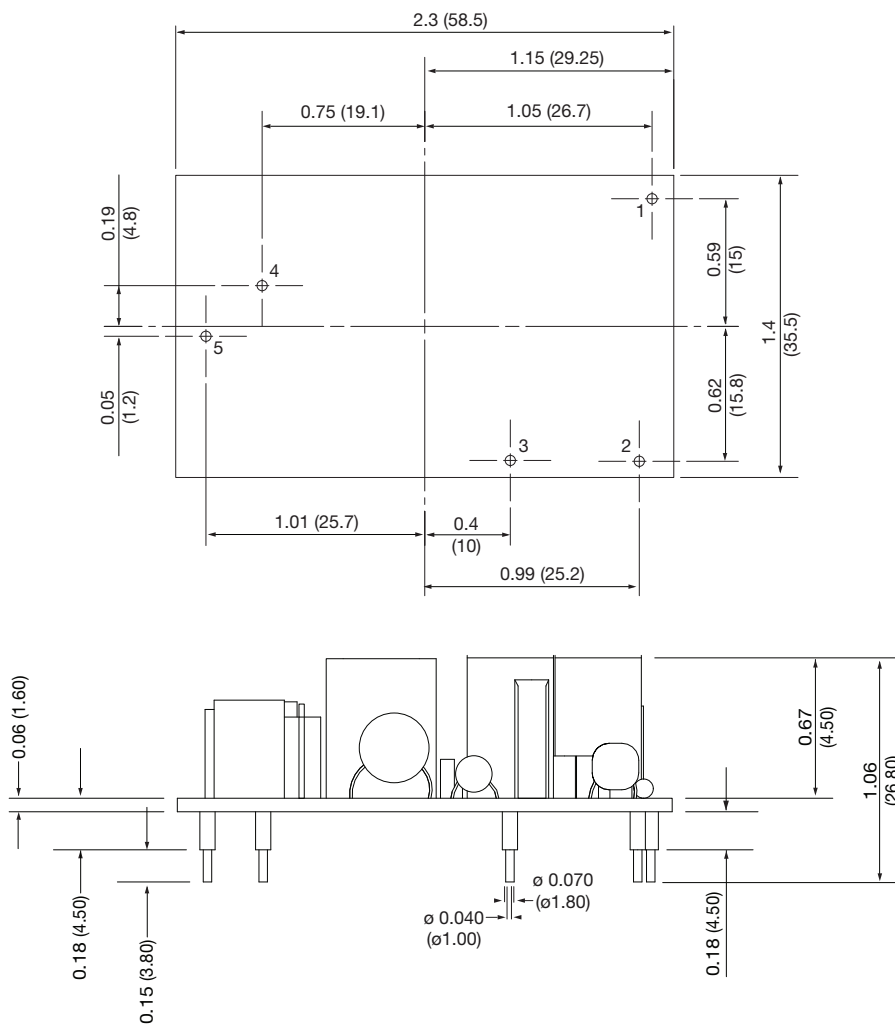
Emissions	• EN55022, level B conducted & radiated
Harmonic Currents	• EN61000-3-2, class A
Voltage Flicker	• EN61000-3-3
ESD Immunity	• EN61000-4-2, ± 4 kV indirect contact, ± 8 kV air, Perf Criteria A
Radiated Immunity	• EN61000-4-3, 3 V/m, Perf Criteria A
EFT/Burst	• EN61000-4-4, level 2, Perf Criteria A
Surge	• EN61000-4-5, level 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, cUL60950, IEC60950,

Output Power	Output Voltage	Output Current	Ripple & Noise ⁽¹⁾	Oversvoltage Trip ⁽³⁾	Efficiency	Model Number ⁽²⁾
4 W	3.3 V	1.2 A	150 mV	10 V	55%	VCP05US033
5 W	5 V	1 A	150 mV	10 V	57%	VCP05US05
5 W	9 V	0.55 A	150 mV	18 V	65%	VCP05US09
4.8 W	12 V	0.4 A	150 mV	20 V	65%	VCP05US12
4.5 W	15 V	0.3 A	150 mV	25 V	65%	VCP05US15

Notes

1. Measured using 20 MHz band width and 0.1 μF ceramic capacitor in parallel with 10 μF 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.

Mechanical Details



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

Notes

1. All measurements are in inches (mm).
2. Weight: 20g approx.