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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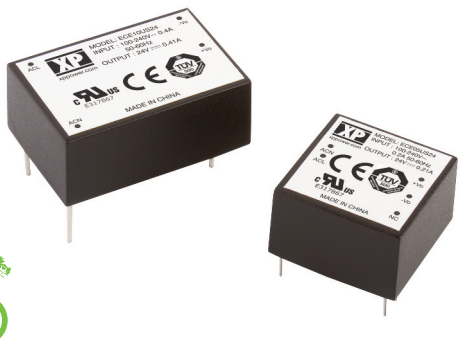
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

5/10 Watts
ECE Series



GREEN XP POWER

- Ultra Compact Size
- Single Outputs from 3.3 to 48 V
- Encapsulated PCB Mount
- <0.3 W No Load Input Power
- Peak Load Capability
- No External Components Required
- 3 Year Warranty

Specification

Input

Input Voltage	• 85-264 VAC (120-370 VDC) derate load from 100% at 90 VAC to 90% at 85 VAC
Input Frequency	• 47-63 Hz
Input Current	• ECE05: 0.1 A rms at 230 VAC ECE10: 0.2 A rms at 230 VAC
Inrush Current	• ECE05: 5 A at 115 VAC, 10 A at 230 VAC, ECE10: 10 A at 115 VAC, 20 A at 230 VAC cold start at 25 °C
Power Factor	• EN61000-3-2 Class A
Earth Leakage Current	• Class II construction no earth
No Load Input Power	• <0.3 W
Input Protection	• Internal T1 A/250 VAC fuse

Output

Output Voltage	• See tables
Initial Set Accuracy	• ±1%
Minimum Load	• No minimum load required
Start Up Delay	• 2 s max
Start Up Rise Time	• 25 ms max
Hold Up Time	• 8 ms/40 ms typical at full load and 115/230 VAC
Line Regulation	• ±0.5% max
Load Regulation	• ±1% max
Transient Response	• 4% max deviation, recovery to within 1% in 500 µs for a 25% load change
Ripple & Noise	• 3.3-5 V versions: 60 mV pk-pk, all other models 1% pk-pk max 20 MHz bandwidth
Overvoltage Protection	• 125-190%, 195-216% ECE10US03
Overload Protection	• 125-190%
Short Circuit Protection	• Trip and restart (hiccup mode)
Temperature Coefficient	• 0.05%/°C

General

Efficiency	• See tables
Isolation	• 4000 VAC Input to Output
Switching Frequency	• 130 kHz typical
Power Density	• ECE05: 8.3 W/In^3 ECE10: 11.1 W/In^3
MTBF	• >450 kHrs to MIL-HDBK-217F at 25 °C, GB

Environmental

Operating Temperature	• -25 °C to +70 °C, derate linearly from 100% at +50 °C to 50% at +70 °C
Cooling	• Convection-cooled
Operating Humidity	• 95% RH, non-condensing
Storage Temperature	• -40 °C to +85 °C
Operating Altitude	• 3048 m, 10,000 ft
Vibration	• 2 g, 10 Hz to 500 Hz, 10 mins/cycle, 60 mins each of 3 axes.

EMC & Safety

Emissions	• EN55022, level B conducted & radiated*
Harmonic Currents	• EN61000-3-2, EN61000-3-3
ESD Immunity	• EN61000-4-2, level 3 Perf Criteria A
Radiated Immunity	• EN61000-4-3, 10 V/m 80% mod 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 Vrms Perf Criteria A
Magnetic Fields	• EN61000-4-8, 10 A/m Perf Criteria A
Dips & Interruptions	• EN61000-4-11, 30% for 10 ms, 60% for 100 ms, 100% for 5000 ms Perf Criteria A, B, B
Safety Approvals	• EN60950-1, UL60950-1, CSA22.2 No. 234 per cUL

Notes

* If output is connected to GND, please contact applications engineering for further information.

Models and Ratings

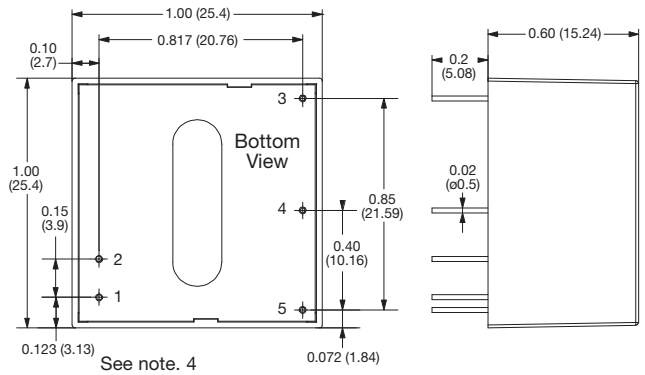
Output Power	Output Voltage	Output Current		Efficiency[3]	Model Number[2]
		Nominal	Peak[1]		
5.0 W	3.3 VDC	1.51 A	1.96 A	74%	ECE05US03
5.0 W	5.0 VDC	1.00 A	1.30 A	80%	ECE05US05
5.0 W	9.0 VDC	0.55 A	0.71 A	82%	ECE05US09
5.0 W	12.0 VDC	0.41 A	0.53 A	82%	ECE05US12
5.0 W	15.0 VDC	0.33 A	0.43 A	84%	ECE05US15
5.0 W	24.0 VDC	0.21 A	0.27 A	83%	ECE05US24
5.0 W	48.0 VDC	0.10 A	0.13 A	85%	ECE05US48
8.6 W	3.3 VDC	2.60 A	3.38 A	77%	ECE10US03
10.0 W	5.0 VDC	2.00 A	2.60 A	80%	ECE10US05
10.0 W	9.0 VDC	1.11 A	1.44 A	82%	ECE10US09
10.0 W	12.0 VDC	0.83 A	1.08 A	83%	ECE10US12
10.0 W	15.0 VDC	0.66 A	0.86 A	82%	ECE10US15
10.0 W	24.0 VDC	0.41 A	0.53 A	83%	ECE10US24
10.0 W	48.0 VDC	0.21 A	0.27 A	83%	ECE10US48

Notes

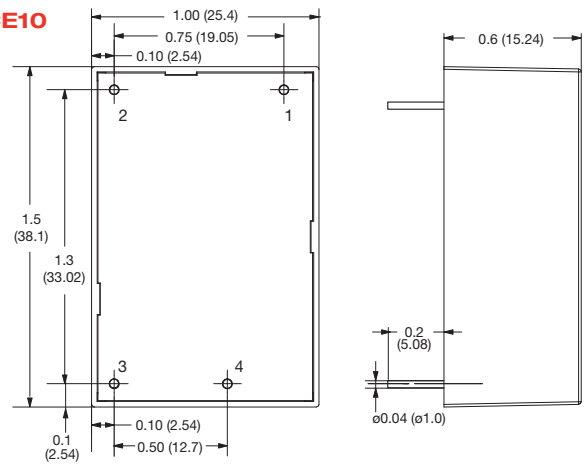
1. *Peak load lasting <30 s with a maximum duty cycle of 10%, average output power not to exceed nominal power.*
2. *Add suffix-P to model number to denote open frame version. Available for OEM quantities.*
3. *Efficiencies measured at 100% load with 115 VAC input.*

Mechanical Details

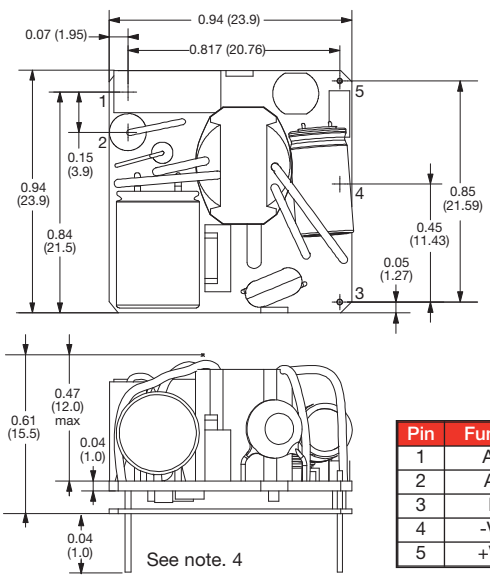
ECE05



ECE10

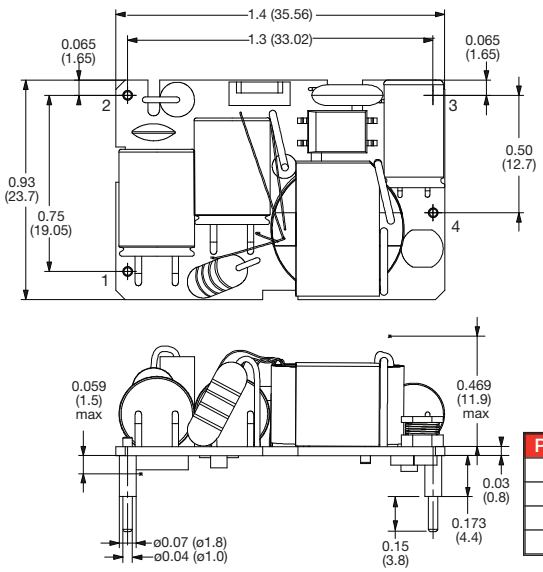


ECE05-P



Pin	Function
1	ACN
2	ACL
3	NC
4	-Vout
5	+Vout

ECE10-P



Pin	Function
1	ACN
2	ACL
3	-Vout
4	+Vout

Notes

1. All dimensions in inches (mm).
2. Weight: ECE05: 0.035 lbs (16 g) ECE10: 0.053 lbs (24 g)
   ECE05-P: 0.022 lbs (10 g) ECE10-P: 0.031 lbs (14 g)
3. Tolerances: x.xx = ± 0.02 (x.x = ± 0.5), x.xxx = ± 0.01 (x.xx = ± 0.25)
4. ECE05: The solder pads for pins 1 & 2 should have a maximum diameter of 1.3mm to ensure that the creepage requirements of IEC60950 are met.