

**SERIES:** EP5A 5W USB | **DESCRIPTION:** AC-DC POWER SUPPLY

**FEATURES**

- 5 W power
- universal input (90~264 Vac)
- single regulated 5 V output
- over voltage, over current, and short circuit protections
- UL/cUL, PSE safety approvals
- level V efficiency



| MODEL       | output<br>voltage<br>(Vdc) | output<br>current<br>max<br>(A) | output<br>power<br>max<br>(W) | ripple<br>and noise <sup>1</sup><br>max<br>(mVp-p) | efficiency<br>level |
|-------------|----------------------------|---------------------------------|-------------------------------|----------------------------------------------------|---------------------|
| EP5A050100U | 5                          | 1                               | 5                             | 350                                                | V                   |

Notes: 1. At full load, 20 MHz bandwidth oscilloscope, each output terminated with 10  $\mu$ F aluminum electrolytic and 0.1  $\mu$ F ceramic capacitors.

**PART NUMBER KEY**

**EP5A050100U - I38 - EJ - CXX**

Base Number  
example of 5 Vdc, 1 A

USB Type A inlet

Factory  
Designation

Reserved for Custom  
Configurations

## INPUT

| parameter       | conditions/description | min | typ | max  | units |
|-----------------|------------------------|-----|-----|------|-------|
| voltage         |                        | 90  |     | 264  | Vac   |
| frequency       |                        | 47  |     | 63   | Hz    |
| current         | at full load           |     |     | 0.15 | A     |
| leakage current |                        |     |     | 0.25 | mA    |

## OUTPUT

| parameter       | conditions/description          | min | typ | max | units |
|-----------------|---------------------------------|-----|-----|-----|-------|
| line regulation |                                 |     | ±5  |     | %     |
| load regulation | from +20% to +80% load          |     | ±10 |     | %     |
| start-up        |                                 |     |     | 2   | s     |
| hold-up         | at 115 Vac/50 Hz, 80% max. load | 10  |     |     | ms    |

## PROTECTIONS

| parameter                | conditions/description                  | min | typ | max | units |
|--------------------------|-----------------------------------------|-----|-----|-----|-------|
| over voltage protection  | output shut down                        |     |     |     |       |
| over current protection  | automatic power decrease, auto recovery |     |     | 200 | %     |
| short circuit protection | output terminal protected               |     |     |     |       |

## SAFETY & COMPLIANCE

| parameter            | conditions/description                        | min     | typ | max | units |
|----------------------|-----------------------------------------------|---------|-----|-----|-------|
| isolation voltage    | input to output at 10 mA for 2 seconds        | 3,000   |     |     | Vac   |
| isolation resistance | input to output at 500 Vdc                    | 10      |     |     | MΩ    |
| safety approvals     | UL/cUL, PSE, LPS                              |         |     |     |       |
| EMI/EMC              | FCC Part 15B Class B, CISPR22 EN55022 class B |         |     |     |       |
| MTBF                 | as per Telcordia SR-332 at full load, 25°C    | 300,000 |     |     | hrs   |
| RoHS compliant       | yes                                           |         |     |     |       |

## ENVIRONMENTAL

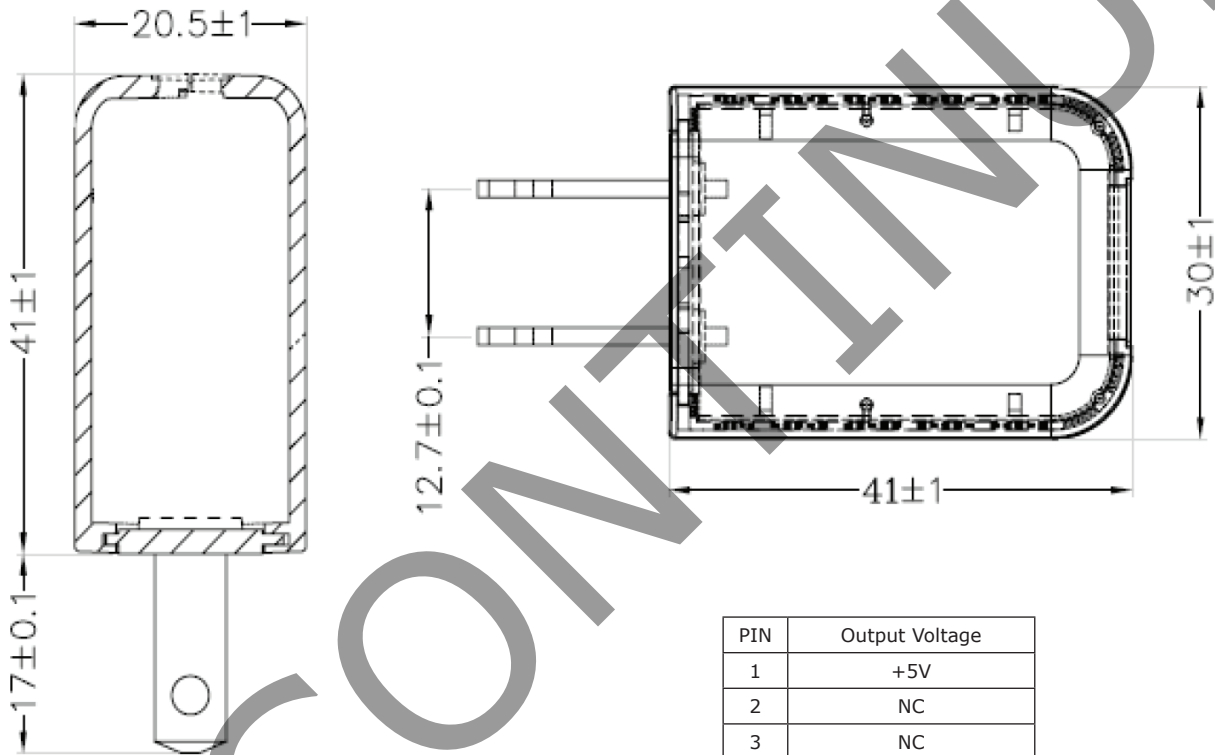
| parameter             | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature |                        | 0   |     | 40  | °C    |
| storage temperature   |                        | -25 |     | 85  | °C    |
| operating humidity    |                        | 10  |     | 95  | %     |
| storage humidity      |                        | 10  |     | 95  | %     |

MECHANICAL

| parameter  | conditions/description | min | typ | max | units |
|------------|------------------------|-----|-----|-----|-------|
| dimensions | 41 x 30 x 20.5         |     |     |     | mm    |
| input plug | US 2-pin               |     |     |     |       |

MECHANICAL DRAWING

units: mm  
tolerance: ±1



| PIN | Output Voltage |
|-----|----------------|
| 1   | +5V            |
| 2   | NC             |
| 3   | NC             |
| 4   | GND            |

|     |   |
|-----|---|
| +5  | 1 |
| GND | 4 |

## REVISION HISTORY

| rev. | description     | date       |
|------|-----------------|------------|
| 1.0  | initial release | 08/20/2013 |

The revision history provided is for informational purposes only and is believed to be accurate.

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This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

CUI offers a one (1) year limited warranty. Complete warranty information is listed on our website.

CUI reserves the right to make changes to the product at any time without notice. Information provided by CUI is believed to be accurate and reliable. However, no responsibility is assumed by CUI for its use, nor for any infringements of patents or other rights of third parties which may result from its use.

CUI products are not authorized or warranted for use as critical components in equipment that requires an extremely high level of reliability. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.